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CSXT-46

313148

BEFORE THE
SURFACE TRANSPORTATION BOARD

ENTERED
Office of Chief Counsel
November 18, 2026
Part of
Public Record

DOCKET NO. FD 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY
– CONTROL –
NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

COMMENTS OF CSX TRANSPORTATION, INC.

Michael S. Burns
John P. Patelli
Jason M. Marques
Steven Armbrust
R. Patrick Dover
CSX Transportation, Inc.
500 Water Street
Jacksonville, FL 32202
(904) 359-3276

John M. Scheib
Gentry Locke Attorneys
101 W. Main Street, Suite 705
Norfolk, VA, 23510
(757) 916-3511
scheib@gentrylocke.com

Louis E. Gitomer
Law Offices of Louis E. Gitomer, LLC
600 Baltimore Avenue, Suite 301
Towson, MD 21204
(410) 296-2250
Lou@lgraillaw.com

Kent A. Gardiner
Luke van Houwelingen
Drake Morgan
Connor J. Ahearn
Lauren Fleming
Crowell & Moring LLP
600 Fifth Street NW
Washington, DC 20001
(202) 624-2500
KGardiner@crowell.com
LvanHouwelingen@crowell.com
DMorgan@crowell.com
CAhearn@crowell.com
LFleming@crowell.com

Shawn R. Johnson
Fried, Frank, Harris, Shriver & Jacobson LLP
801 17th Street, NW
Washington, DC 20006
(202) 639-7000
Shawn.Johnson@friedfrank.com

Attorneys for CSX Transportation, Inc.

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EXECUTIVE SUMMARY

CSXT joins a broad cross-section of stakeholders—farmers, automakers, chemical producers and other key shippers; workers representing roughly three-fifths of UP and NS's employees; and a bi-partisan group of public officials—in opposition to allowing UP to control NS. It becomes clearer every day how pervasive the competitive harm would be, and how meager any public benefit would be in comparison. A combined UP/NS would raise rates on interline traffic to divert it to themselves and weaken competition, use leverage at its sole-served locations to influence shippers' routing decisions on competitive lanes, and short-haul other carriers to drive up their costs and capture all revenue possible. And this harm would compound over time to weaken competition not only on transcontinental service but also competition on regional service between CSXT and NS that exists today.

None of this would be in shippers' or the broader public's interests. Competing carriers like CSXT would be the first, most direct targets of these foreclosure strategies. But as shippers and other rail stakeholders are increasingly expressing, the ultimate victims would be the workers, producers, and consumers that rely on today's balanced rail network and competition among rail carriers.

The applicable statute and the Board's regulations provide that the Board can approve a transaction of this magnitude only if UP and NS have established that the merger would further the "public interest." That legal standard requires, among other things, evidence sufficient to demonstrate: (1) the impact on rail competition and shippers; (2) public benefits that not only outweigh any risk of harm but are only achievable through a permanent merger; and (3) to balance out inevitable but unfixable harm, proposals that "enhance competition." UP and NS have definitively failed to carry their burden on every one of these essential elements, and the record evidence supports denial.

1. Substantial harm to competition and shippers. Understanding in detail the adverse competitive impact on shippers is central to any responsible analysis of the UP/NS proposal, as the Board has made clear. Yet Applicants choose to rest on the categorical assertion that the specific concerns about anticompetitive vertical foreclosure repeatedly cited by this Board are somehow "not applicable" to the railroad industry. The recent decisions in *CP/KCS*, *CN/EJ&E*, and *CN/IANR* all rely on common sense, economic logic, and real-world railroad experience to conclude that end–to–end mergers can create the incentive and ability to worsen competing interline alternatives to the merged carrier's single-line service that depend on the merged carrier's participation. Indeed, UP made exactly the same point—very forcefully—in its comments on each of those previous transactions.

Here, the harms UP has previously articulated are far more potent, based on: UP's substantial western market position; the almost complete overlap between NS's and CSXT's rail networks in the East; the dependence of competing interline services on UP and NS; and the absence of an independent single-line competitor capable of even partially constraining a combined UP/NS network.

A combined UP/NS would have the undeniable ability and incentive to foreclose interline competition. Here that would mean raising interline rate factors, degrading service at gateways, and short-hauling interlining railroads, all of which would reduce competitive options shippers rely on today. Despite these very obvious, very real, and very serious competitive concerns, UP provides only the opinion of UP/NS's expert, Dr. Israel, and he conducts no direct empirical economic analysis to assess competitive harm; his models essentially assume it away. Applicants' failure to make anything close to a *prima facie* case on this key element of the public interest test is alone sufficient grounds to reject this merger.

UP and NS fare no better on the merits. UP—already the largest and strongest Class I railroad—is asking the Board to amplify that power by giving it control of NS. The competitive implications of their combination are inescapable, now confirmed by their own internal records, testimony, and ongoing conduct. The evidence submitted by CSXT along with these Comments establishes without a doubt that the transaction would result in great harm to competition and to the public interest. For example, the testimony of economist Julie Carey establishes that there is nearly {{ }} of rail traffic in the U.S. today that is vulnerable to an exercise of market power by a merged UP/NS, because a combined entity would have over a 50%—and often 80-90%—share in those corridors. For context, that is equal to more than the total annual U.S. rail revenues of CPKC and CN combined, and more than ten times the cost savings UP and NS claim would be generated by the merger.

Further, Ms. Carey also shows that the short-hauling UP/NS could engage in could divert as much as {{ }} of the revenue miles from CSXT on UP/CSXT traffic to or from locations CSXT sole-serves by rail, reducing its effectiveness as a competitive interline option for shippers. Dr. Ramsey Shehadeh has conducted the accepted economic analysis of the risk of foreclosure from this type of vertical merger, and found that a combined UP/NS would be expected to raise interline rate factors sufficiently to increase total rates on UP-CSXT and BNSF-NS lanes by up to {{ }}. Further, this merger would cause substantial horizontal competitive harm, in particular to what is now vigorous head-to-head competition in the East between CSXT and NS. Adding NS's footprint and scale would dramatically expand the number of UP sole-served shipper locations, giving it far greater leverage to threaten retaliation if shippers do not shift traffic on competitive routes away from CSXT, whether transcontinental or even fully within the East,

empowering UP to pressure shippers to shift eastern regional traffic from CSXT to NS through anticompetitive use of bundled contracts.

In this network industry, the impact such drastic changes would have on the current East/West balance is obvious and far-reaching. Shippers today have options and leverage, in a network that is balanced and comprised of carriers who work together to provide efficient interline services. Once a newly dominant transcontinental UP/NS acts on its anticompetitive incentives, the result would be that CSXT and other railroads would lose substantial traffic volumes and the linehaul revenue that comes with them. A merger of UP and NS would position them to foreclose CSXT with respect to an estimated {{ }} or more of all existing UP-CSXT interline traffic. And Dr. Shehadeh estimates that in the near term, the anticompetitive impacts of UP/NS foreclosure strategies would reduce total rail industry output by as much as {{ }} billion ton-miles.

Those anticompetitive effects on the rail network would expand and compound, as reduced density increases unit costs and diminishes the expected return from new service and capacity investments. Over time, that cycle could reduce service frequency, constrain network investment, and make CSXT and similarly situated railroads markedly less competitive, not only for interline moves, but for regional traffic. It is important to underscore the direct horizontal competitive harm arising from this ostensibly end-to-end merger: CSXT would become less able to be competitive against a merged NS, its head-to-head competitor for regional moves in the East. These potential dynamic effects, including reduced service frequency, higher unit costs, and a narrower set of investments that remain economically justified, as well as increasing UP/NS rates enabled by weakened competitive constraint, would be devastating for shippers.

UP has also made it clear that post-merger, it plans to pull back from an array of competition-enhancing cooperative arrangements with other railroads. Critical terminal railroads such as TRRA and BRC will be vulnerable to lost investment, reduced efficiency, and increased costs, as a combined UP/NS would either bypass or undermine them. Other pro-competitive cooperative ventures, like TTX and Conrail, would become susceptible to manipulation as a result of UP/NS's changed incentives and outsized influence. Cooperation among Class I railroads has been an essential contributor to the health, maintenance, and innovation of the U.S. rail network. UP and NS's post-merger dominance would threaten to severely reduce or eliminate such cooperation.

UP knows all this. That is why its own internal documents—starkly at odds with its new advocacy to the Board—describe in detail the potential competitive harm a major merger would pose to today's balanced network:

- UP bluntly describes the categorical loss of competitive optionality for shippers in the wake of such a merger: {{

  }} Ex. 32, UP_0039326 (Dep. Ex. 84).

- As UP management summarized for its Board of Directors when CP was proposing to acquire NS: {{

  }} Ex. 52, UP_1682669 at -674 (Dep. Ex. 105).

2. <u>Minimal benefits, mostly accruing to UP rather than shippers and the public</u>.

In contrast to the overwhelming evidence of harm to competition and shippers, the claimed public

benefits of this merger are small and growing smaller as the Application receives further scrutiny. UP began this process by extolling the benefits of single-line service, which the Board has recognized comes with some efficiency. But rather than credibly estimating those benefits, UP relies on exaggeration, assumption, and unreliable modeling, and importantly does not even attempt to identify which benefits could be achieved short of merger. Applicants ground their biggest claims in strengthening intermodal competition against truck, despite broad recognition that such traffic is already competitive and a major focus of currently successful interline collaboration efforts that did not require a merger.

As Dr. Kristen Monaco explains in her testimony, Applicants' prediction of massive truck-to-rail conversions is based on a deeply flawed model, is grossly overstated, and ignores the innovative intermodal service collaborations that the Class I railroads have engaged in over many years. Here again, NS's own internal analysis—not the one offered for the Board's consumption—agrees, concluding that {{

}} Ex. 97, NS_STB_00001421 at -423 (Dep. Ex. 355). Such admissions alone should doom this Application.

Competition is what drives railroads, like any other firm, to become more innovative, more efficient, more cost-effective, and to pass those benefits along to their customers. As UP/NS faces diminished competitive pressure from the non-merging railroads, UP/NS's need, and incentive, to pass on benefits to customers would likewise diminish. It would instead be able to raise rates and pocket that revenue as well as any cost savings from potential efficiencies.

3. **No enhanced rail competition**. The third prong of Applicants' legal burden—the identification of conditions that "enhance competition"—derives from the Board's concern that further Class I consolidation would permanently reduce indirect competition (including source,

product, and plant-siting competition) "in ways increasingly difficult to remedy directly," as well as cause serious service disruptions. Applicants utterly fail to address this requirement with conditions that would increase shippers' rail options, as the Board envisioned. Rather, they offer only general platitudes about the benefits of single-line service, which the Board was fully aware of when it established the merger regulations that would inevitably apply to any proposal for a first transcontinental merger. Applicants also make a half-hearted reference to their Committed Gateway Pricing program as enhancing competition, but they concede that CGP was not even designed to protect existing competition, much less create new options for shippers. And so, not surprisingly, CGP is so narrowly drawn as to apply to only about 12% of UP/NS traffic, and in fact would result in roughly three out of every four shippers being either worse or no better off.

All this to what end? Not increased rail efficiency that benefits shippers. To the contrary, UP already has assured Wall Street that rates are going up, not down. Already the nation's largest railroad by revenue and enjoying record financial success, UP seeks the Board's regulatory approval to make it much bigger and far more powerful by giving it control of NS. And its internal documents confirm its intention to exert that power.

Meanwhile, UP and NS's purported thesis for their merger—that the industry needs such "transformative" structural change to get out of a rut of declining share against trucks, especially to "unlock" the Watershed—has not survived even a year-and-a-half of marketplace reality. It is now clear that this supposed permanent stagnation was a snapshot of conditions in Applicants' chosen base year of 2023, a historically bad year for railroads and particularly for NS. UP, NS, and the broader industry are now thriving, having experienced several quarters of record growth against truck—all without any merger. In short, this proposed merger is a solution in search of a problem.

Finally, CSXT is firmly convinced that no conditions could meaningfully mitigate the permanent harm to competition, shippers, and the rail network that would result from this merger. The opportunities for anticompetitive conduct are too many, the impact too deep and long-lasting, and the Board's available remedies too limited. For example, Applicants propose an "open gateway" condition that did not work very well even as a "backstop" in a much smaller merger affecting one gateway, at which attempts at foreclosure might be disciplined by interline partners turning to alternative, unaffected gateways. Here, where every major mid-continent gateway would be compromised and there would be no unaffected alternatives, that condition would be a band-aid on a gaping wound. And relying on this or any other behavioral condition in an attempt to check UP foreclosure would saddle shippers and the Board with the permanent full-time job of policing UP's rates and service. Given that UP and NS have not even begun to make the necessary public interest case, and that the real-world evidence in this record all points toward severe damage to a sustainable, competitive rail network, the only correct outcome here is flat-out denial of the Application. The likelihood of permanent harm is far too great, and any benefits minimal at best.

The nation surely does not need this merger. Rejection would keep the six Class I railroads as they are today, competing vigorously both individually and through interline partnerships; collaborating on efficiency-enhancing joint ventures; and with sufficient traffic to continue innovating and investing. And it would preserve shippers' ability to compete railroads against each other as they do today, including up to four options for transcontinental service.

If the Board nevertheless determines that this merger should proceed despite the demonstrated harms to competition and shippers, CSXT discusses separately a discrete set of conditions for the Board's consideration. They would not come close to remediating the harm, recreating independent railroad options, undoing a combined and dominant UP/NS's new

incentives, or averting the havoc their merger would wreak on the U.S. rail network. But they may slow UP/NS's anticompetitive excesses for some period of time in some discrete areas, giving shippers at least temporary and partial relief.

CSXT's Comments are organized as follows. After describing the current, competitive, and balanced state of the U.S. rail industry, CSXT outlines the heavy burden UP and NS bear to prove their merger would benefit the public interest in Part I. CSXT shows how a combined UP/NS would cause great harm to competition and transform the rail industry for the worse, in Parts II through IV. CSXT addresses UP and NS's exaggerated, speculative, and non-merger specific benefits claims in Part V. Finally, CSXT addresses UP and NS's failure to satisfy the Board's enhanced competition standard, and the lack of conditions that could prevent the merger's pervasive and permanent harm, in Parts VI and VII.

CSXT'S COMMENTS ON UP'S APPLICATION FOR CONTROL OF NS

I. Background and Legal Standards.

A. Today's rail industry is "sustainable and balanced," and provides efficient nationwide transportation.

The stakes here could not be higher: will UP's proposed "transformative" acquisition of control over NS serve the public interest, or permanently harm it? Today, the U.S. railroad industry is healthy and robustly competitive—safely, reliably, and efficiently moving freight from coast to coast. Each day, thousands of carloads are exchanged between the Class I railroads in interline service, moving coal, grain, steel, chemicals and numerous other products from fields, mines, and manufacturing facilities to markets across the country.

Those movements are the result of the Board's efforts over decades to preserve and ensure a balanced and sustainable rail network that best serves the country's freight transportation needs. Since the Staggers Act, the ICC and then the Board have carefully managed a wave of consolidation that eliminated excess capacity and left the industry with a smaller number of financially strong carriers able to reinvest in their networks. *See* V.S. Carey at 10-12, 31-32. Today, the two eastern roads and two western roads, along with the two Canadian roads in the middle of the country, have every incentive to work together to provide interline transcontinental service and support the nationwide needs of shippers. The balanced nature of the industry ensures competitive options for shippers in both the East and the West, including up to four transcontinental interline options. *Id.* at 13-15, 25-41.

Many shippers benefit from the competitive options this structure provides. *Id.* at 13-15, 25-41. UP's former SVP of Technology and Strategic Planning and Grant Janke, AVP, Network Capital & Planning described these options when analyzing a potential transcontinental merger several years ago: {{

}}. Ex. 32, UP_0039326 (Dep. Ex. 84). This structure forces carriers to compete. Even if shippers are sole-served in the West, they benefit from competition from the eastern roads and vice versa. As Ms. Carey explains, statistical analysis confirms that interchange locations with an additional independent rail alternative result in lower rates by as much as {{ }}% for intermodal traffic and {{ }}% for all traffic types. V.S. Carey at 13-15.

Each of the Class I railroads organize and transport interline traffic through key gateway interchanges in the U.S. mid-continent region, including Chicago, East St. Louis, Memphis, and New Orleans. The Class I railroads have invested heavily in these critical gateways, and jointly own, operate, and invest in bridges, terminal railroads, and other shared assets that enable efficient and effective interchange activities.[1] For example, the Terminal Railroad Association of St. Louis (TRRA) owns and operates the Merchants and MacArthur Bridges over the Mississippi River, as well as a major switching facility in Madison, IL, east of St. Louis.[2] Thousands of rail cars are interchanged among the Class I railroads in East St. Louis every day. The Class I railroads jointly own and operate the TRRA, ensuring that they are each able to access reliable, safe, and non-discriminatory switching services at this key gateway.

The Class I railroads also have other shared assets and joint collaborations that support customer needs and make the existing rail system more efficient. For example, TTX is a domestic cooperative formed by the Class I railroads to maximize railcar efficiency. Supported by the full

[1] *Connecting the Nation*, Union Pacific, https://www.up.com/about-us/usguide (last visited Nov. 10, 2026).

[2] *TRRA History*, Terminal Railroad Association of St. Louis, https://terminalrailroadstl.odoo.com/history (last visited Nov. 10, 2026).

participation of all major railroads, TTX manages a pool of over 175,000 railcars, enabling their more efficient use by coordinating requirements across the Class I railroads and minimizing the backhaul of empty cars and non-revenue-generating trains. Indeed, because of the significant public benefits that TTX generates, the Board, not to mention shippers, ports, manufacturers, and others have overwhelmingly supported extending and expanding TTX's pooling authority.[3]

In addition to their collective investments, the Class I railroads also work together on a bilateral basis. CSXT, for example, not only interlines with UP to move over $1.8 billion worth of traffic annually, but has developed important collaboration with UP such as UMAX that manages a fleet of more than 40,000 domestic containers and offers access to more than 600 service lanes with door-to-door and ramp-to-ramp service. CSXT has also developed important transcontinental services with BNSF, including their recently announced direct domestic intermodal service connecting Southern California to Charlotte, NC and Jacksonville, FL. And CSXT recently worked with CPKC to establish the Southeast Mexico Express via a new Class I interchange in Myrtlewood, AL that significantly decreases transit times between shippers in Mexico and consumers in the Southeast. These types of partnerships and investments, none of which required a merger, are possible due to the balanced nature of the U.S. rail industry that the Board has fostered, in which each of the Class I railroads has an incentive to work together to best serve shippers.

Today, the rail industry is thriving. Rail is growing share against truck. *See* below, Part VI. The most recent three months have been the highest three months on record for U.S. rail intermodal traffic, with an all-time high in October 2026. *Rail Industry Overview*, Assoc. Am.

[3] *See TTX Co., et al.—Application for Approval of Pooling of Car Service with Respect to Flat Cars*, FD 27590 (Sub-No. 4) (STB served Oct. 1, 2014), slip op. at 6.

R.R.s, 1 (2026). Carload traffic is also broadly growing, with sixteen of twenty categories up year to date, and carloads of chemicals in particular likely to set an annual record. *Id*. at 2. Railroads together are supporting the resurgence of the U.S. manufacturing sector. *Id*.

It is critical that the Board evaluate the proposed merger not in a vacuum, but rather against this backdrop of how the interline-competitive, highly interdependent U.S. rail network serves shippers today. Single-line, transcontinental service from a UP/NS combination could well create some efficiencies and benefit some shippers. But at what cost?

B. UP and NS bear a heavy burden to prove their merger would benefit the public interest.

Determining whether UP's proposed acquisition of NS advances the public interest—without unduly damaging existing competition and service to shippers—begins with the Board's 2001 merger rules ("2001 Rules"). Those rules were grounded in the following principle:

> Although mergers of Class I railroads may advance our nation's economic growth and competitiveness through the provision of more efficient and responsive transportation, the Board does not favor consolidations that reduce the transportation alternatives available to shippers unless there are substantial and demonstrable public benefits to the transaction that cannot otherwise be achieved.

49 C.F.R. § 1180.1(a). The Board adopted the 2001 Rules' demanding framework because any further merger of Class I railroads could permanently alter the industry's structure, diminish competitive options that would be difficult or impossible to recreate, cause substantial service disruption, and precipitate still further consolidation. *Major Rail Consolid. Procs.* ("*2001 Rules*"), 5 S.T.B. 539, 546-48, 549-551, 554-58, 560, 581-82 (2001).

That framework imposes several distinct requirements, discussed in more detail below. Applicants bear the burden to prove that the transaction would produce substantial and demonstrable public benefits that outweigh its harms. 49 C.F.R. § 1180.1(a), (c). Claimed benefits must be supported by reliable evidence, measured on a net basis, and shown to be achievable only

through the proposed consolidation rather than through less harmful commercial arrangements. *Id.* §§ 1180.1(c), (c)(1). The Rules also require applicants to grapple with the damage to existing competition that their proposed merger would cause; to explain how the transaction would at least preserve existing competitive and market options; and to explain what the merging carriers would do to affirmatively enhance competition. *See id.* §§ 1180.1(c), (c)(2), (d). Finally, if the record does not permit the Board to find that the transaction, including any merger-specific benefits and effective conditions, would produce a net improvement in the public interest, the 2001 Rules require denial. *See 2001 Rules,* 5 S.T.B. at 550.

1. The 2001 Rules identify specific risks of harm UP and NS must address to carry their burden.

The 2001 Rules require major merger applicants to address potential harms in four key respects:

a. Competitive harm. The 2001 Rules "upgrad[ed] the importance of competition" in the Board's public interest assessment (*id.* at 552) and repudiated the notion that "end-to-end mergers" involving "little loss of direct competition ('2-to-1 points')" were unlikely to reduce competition (*id.* at 554-57). As the Board has explained, modern "economic understanding" and antitrust law increasingly recognize the potential for competitive harm from end-to-end (or vertical) mergers. *Can. Pac. Ry. Ltd.–Control–Kan. City. S. ("CP/KCS")*, Decision No. 35, FD 36500 (S.T.B. served Mar. 15, 2023), slip op. at 44-48.[4] The Board underscored this approach in its most recent Class I merger decision, stating explicitly that it will assess potential competitive harms such as

[4] UP itself has urged the Board to "adopt modern antitrust enforcement's more tailored approach" to assessing vertical effects and not rely on a "flawed and unsupported presumption" that such harm is unlikely. *Union Pac. R.R. Co.'s Comments and Req. for Conditions*, *CP/KCS*, FD 36500 (Feb. 28, 2022) ("UP *CP/KCS* Comments"), at 5-6, 34-35.

foreclosure on the facts of a particular transaction rather than by applying outdated categorical presumptions. *Id.*

In addition, the 2001 Rules express unambiguous concern that further Class I consolidation would reduce indirect competition in ways that are "increasingly difficult to remedy." *2001 Rules*, 5 S.T.B. at 554-56 (noting actual and potential geographic, build-in and build-out, transloading, plant-siting, and output-adjustment competition). In this, the Board shares modern antitrust law's concern with the long-run effects of permanent changes in market structure that result from mergers, and the dominant firm behavior mergers can enable.

b. The end-state of the industry. It is the Board's responsibility to "ensure balanced and sustainable competition in the railroad industry." 49 C.F.R. § 1180.1(a) (emphasis added). The Board thus built the 2001 Rules on its recognition that "from this point on any proposed major transaction would have a significant effect on the structure of the entire industry." *2001 Rules*, 5 S.T.B. at 581-82. The Board knew that the resulting changes to the industry structure would be irreversible, and harms to the public interest, even uncertain ones, could be irremediable. *Id.* at 560. Thus, the Board understood that its role, in assessing whether to approve any future major merger application, is to preserve a "rail industry structure that continues to provide at least the existing level of competitive options for shippers, and continues to make railroads pass on most of the beneficial results of their merger efficiencies to the shipping public." *Id.* at 549-50.

c. Service disruption. The 2001 Rules were prompted in part by concern for the period of intense service disruption that should be expected from combining Class I railroads. As the Board explained, through such service problems, major mergers have consistently produced concrete *harms* to shippers in the near term, undermining the logic of approving them based on "efficiency benefits" that are less certain and materialize slowly, if at all. *Id.* at 547-48, 547 n.8, 554. Worse,

by the time such service disruptions abate, anticompetitive effects could have produced unchallengeable dominance, turning any fleeting efficiency benefits into higher prices and inferior service. This confluence of near-term service disruption and long-term competitive harm poses serious risk of an outcome where shippers never benefit at all even if the merger creates "efficiencies" for the merging carriers.

d. Ineffectiveness of traditional remedies. The Board's 2001 Rules recognize that further network consolidation would magnify competitive harms and make them "increasingly difficult to remedy." *Id.* at 554-57. It explained that trackage rights and access might not restore direct competition, that having so few independent carriers inherently limited the indirect competition the Board had historically relied on, and that it could not assume conditions would be sufficient for carriers to build service that could effectively compete. *See id.* These concerns—which apply explicitly to "'end-to-end'" mergers—led the Board to doubt that its traditional remedies could preserve competition and presaged that future applicants would need to offer conditions that enhance competition to create net public interest benefits. *Id.* at 556-57.

Not only have Applicants made no effort to address these concerns, they have taken positions directly at odds with them. First, they argue they have no burden to submit evidence that their proposed conditions would in fact preserve interline competition if the Board has adopted those conditions in smaller past mergers not even subject to the 2001 Rules. *Applicants' Response Regarding Their Prima Facie Case* (UP-94/NS-93), *Union Pac. Corp.–Control–Norfolk S. Corp.* ("*UP/NS*"), FD 36873 (Aug. 26, 2026), at 18-21.[5] Second, UP and NS take the position that end-

[5] Indeed, Applicants seek to shift their burden altogether, suggesting the Board may not lawfully distinguish a transcontinental merger subject to the 2001 Rules from a union of smaller carriers at a single gateway, unless opponents specify a "particularized concern … support[ed] with evidence." *Id.* at 20.

to-end merger applicants automatically meet the enhanced competition requirement, no conditions necessary, because such mergers can create a more efficient, "single, integrated rail network." *See id.* at 21-25. And they go even further, saying they do not need to show that their merger enhances competition at all, because such a requirement would be outside the Board's statutory authority to impose. *Id*. at 22 n.20.[6] The Board should reject these efforts to sidestep the heightened burdens of the 2001 Rules.

2. The 2001 Rules define and heighten UP and NS's burden to prove their claims of merger benefits that outweigh the risks of harm.

The 2001 Rules also defined Applicants' burden for claims of public benefits:

a. "Efficiency" is not a magic bullet. The Rules specify that efficiencies generate public benefits only "[t]o the extent that a merged carrier continues to operate in a competitive environment." 49 C.F.R. § 1180.1(c)(1); *see 2001 Rules*, 5 S.T.B. at 549 ("[E]ffective competition … has forced [railroads] to pass on … efficiency gains[.]"). The Rules require applicants to prove this predicate separately. They specifically do not "take [it] for granted" or consider it "guarantee[d]" in another major consolidation. *Id*. at 549, 555.

Yet UP and NS ignore this critical point. They argue that end-to-end mergers inherently produce "public benefits," and that the enhanced efficiency of single-line service alone effectively carries their burden on almost every factor in the Board's public interest test. *See* Am. App. Vol. 1,

[6] As several state Attorneys General recently observed in response to this extraordinary position, "It's hard to say whether this is a veiled threat to challenge the STB's 2001 rules in court or an effort to persuade the STB to lower the bar. What can be said for certain is that this is a tell-tale sign that even UP and NS recognize that their proposed merger does not 'enhance' competition. Again, lawyer's trick—if you can't meet the required standard, argue for a lower standard." A. Knudsen, K. Kobach, B. Bird, J. Uthmeier & D. Wrigley, *Union Pacific's Proposal to Buy Norfolk Southern Is Not In the 'Public Interest'*, Flathead Beacon (Nov. 3, 2026), https://flatheadbeacon.com/2026/11/03/union-pacifics-proposal-to-buy-norfolk-southern-is-not-in-the-public-interest/.

at 19-29; *Applicants' Second Resp. to Decision No. 21* (UP-80/NS-78), *UP/NS*, FD 36873 (July 27, 2026), at 183-85; UP-94/NS-93, at 3-5. *See also* UP-94/NS-93, at 5-6, 24-25 (enhanced competition); *id.* at 11-13 (vertical competitive harm); *id.* at 28-35 (identification of merger-specific benefits); UP-80/NS-78, at 142-50 (geographic competition and industry structure). This argument—that any end-to-end transcontinental merger automatically benefits the public interest—is a frontal assault on the 2001 Rules.

b. Merger-specificity. The 2001 Rules require applicants to deduct from their claimed benefits any that could be achieved through means short of a permanent merger: they require proof of "substantial and demonstrable public benefits…that cannot otherwise be achieved." 49 C.F.R. § 1180.1(a). This requirement reflects the Board's recognition that non-merger arrangements "can produce many of the efficiencies of a merger while risking less potential harm to the public." 49 C.F.R. § 1180.1(c).[7] The Board explained that the fact that a merger produces incremental benefits above non-merger cooperation "does not mean that *all* of the claimed benefits require a merger," and it echoed "shipper concerns that a carrier might seek to gain enhanced market power through a merger, while claiming that this harm would be offset by efficiencies that could actually be achieved by means short of merger." *2001 Rules*, 5 S.T.B. at 559 (Board's emphasis). It therefore concluded, "[w]e need to have a full awareness of which of the claimed benefits are obtainable only through a merger so that we can fairly weigh them against potential harms." *Id.* (emphasis added). Thus, merger applicants must provide evidence from which the Board can determine the incremental extent of benefits only a permanent merger can provide.

[7] As UP's CEO stressed, prior consolidation had produced more "opportunities" to "more easily cooperate to provide quality interline service," and he argued railroads should be required to "explore these alternatives to mergers before we permanently change the railroad map again." Stmt. of Richard K. Davidson, *Public Views on Major Rail Consolids.*, EP 582 (Feb. 29, 2000) ("UP *2001 Rules* CEO Statement"), at 4.

c. Skepticism and substantiation. In the 2001 Rules, the Board confirms it will take a "more skeptical, 'show me' attitude toward claims of merger benefits" than ever before. *Id.* at 549; *see also id.* at 552 (adding that "[c]laims of improved carrier efficiency" in particular "will be scrutinized carefully").[8]

There are several reasons for this heightened skepticism. First, the extent of prior consolidation limits opportunities for future merger-specific efficiencies. *2001 Rules*, 5 S.T.B. at 551. *See also* Russell Pittman, *Railway Mergers & Railway Alliances: Competition Issues & Lessons for Other Network Industries*, EAG 09-2, Antitrust Div., U.S. Dep't of Justice 4 (May 2009) (economic literature suggests Class I carriers have reached the limits of possible economies of scale and density). Second, applicants have obvious "incentives" to overstate their benefits. *2001 Rules*, 5 S.T.B. at 560-61. Third, not surprisingly, similar claims in the past have consistently "over-promised and under-delivered." *Id.* at 560. *See UP/NS*, Decision No. 21, FD 36873 (S.T.B. served May 28, 2026), slip op. at 25 n.29 ("[T]here is a history of prior major mergers that have fallen short of truck-to-rail conversion projections[.]"). The Board's rules recognize UP and NS would not bear the risks if it approves their merger based on understated harms and overstated benefits; customers, industry stakeholders, and the U.S. economy would. *Cf. 2001 Rules*, 5 S.T.B. at 560-61.

[8] Both UP and NS urged this heightened scrutiny in view of the "size, significance and potential risks" of a "transcontinental" merger (Cmts. of Norfolk S. in Resp. to Notice of Proposed Rulemaking, *Public Views on Major Rail Consolids.*, EP 582 (Nov. 17, 2000), at 36) and expectation that "[m]ergers that are mostly end-to-end have fewer public benefits than parallel mergers" (UP *2001 Rules* CEO Statement, at 5).

C. The Board should reject UP and NS's effort to avoid scrutiny of their merger's harms by evading and shifting their burden.

In reviewing a major merger application, the Board must make specific findings applying specific considerations set forth in statute, rules, and relevant precedent. *See* 49 U.S.C. §§ 11324(b)-(c); *Union Pac. Corp.–Control–Chi. & Nw. Holdings Corp.* ("*UP/CNW*"), 9 I.C.C.2d 939, 950 (1993); *Rio Grande Indus.–Purchase–Soo Line R.R. Co*. ("*Rio Grande/Soo Line*"), Decision No. 14, 1990 ICC LEXIS 98, at *7-8, 8 n.10 (I.C.C. served Apr. 6, 1990). The Board has therefore developed rules and procedures to govern its fact-finding. *See R.R. Consolid. Procs.*, 363 I.C.C. 200 (1980); *R.R. Consolid. Procs. Exp'd Proc'g* ("*Exp'd Proc'g*"), 363 I.C.C. 767 (1980); *2001 Rules*, 5 S.T.B. 539. The need for these rules to ensure orderly presentation and consideration of evidence is particularly acute here because, as Member Kloster recognized, UP and NS have pursued "an apparent strategy of 'letting the line out slowly'" that undermines the Board's ability to "decide on [the] merits" of UP and NS's case. *UP/NS*, Decision No. 37, FD 36873 (S.T.B. served Sept. 18, 2026), slip op. at 5 (Kloster, M., concurring) ("Decision No. 37").[9]

Applicants bear a burden their Application must carry with affirmative evidence, which they have made a considered choice not to seriously engage with or try to meet. *See generally*, *CSX Transportation, Inc.'s Motion for Summary Denial* (CSXT-19), *UP/NS*, FD 36873 (Aug. 6, 2026), at 9-31.[10] Instead, UP and NS have sought to address the Board's requirements only

[9] In a similar vein, UP produced more than 31,000 additional documents since the Friday afternoon before the deadline for these Comments (including more just last night), leaving CSXT and its expert witnesses no meaningful opportunity to review and account for this voluminous discovery in their submissions. CSXT reserves the right to review and address these materials in this proceeding.

[10] Consistent with Decision No. 37, CSXT renews and incorporates by reference the arguments set forth in its Motion for Summary Denial (CSXT-19). Applicants have not made the *prima facie* case required by 49 C.F.R. § 1180.4(c)(8), and, as the evidence presented in these Comments confirms, they have not carried their burden under the 2001 Rules.

superficially, hoping to shift the burden to opponents to disprove UP's assertions. Then, they argue that any showing from competing railroads should not count because it is self-interested.[11] When shippers raise similar concerns, UP says they shouldn't count either unless, ironically, those same concerns have also been raised by competing railroads. *See* UP-94/NS-93, at 17 (dismissing concern identified by JSA because it was a "concern that neither [CSXT nor BNSF] raised"). And shippers' views, UP contends, should also be ignored if presented through their associations. *See*, *e.g.*, Transcript, Union Pacific Corp., Remarks of J. Vena at Special Call, *Fireside Chat* (Sept. 1, 2026), https://stockanalysis.com/stocks/unp/transcripts/740977-fireside-chat/ ("*UP Fireside Chat*"); Kenny Rocker, *Silence is Not Opposition*, "*Silence is Not Opposition*," (Oct. 6. 2026), https://www.up-nstranscontinental.com/letters/rocker-customer-support. Yet at the same time, as the Board is well aware, UP has engaged in efforts to dissuade individual shippers from expressing opposition to the proposed merger out of fear UP will exert its market power to punish them if they do. *See* Ex. 61, UP_3217794 at 52:10–52:41 (March 17, 2026 remarks by V. Vena at the Southwest

[11] *See* Ex. 23, J. Vena Dep. Tr. 193:10-11 {
}; *id.* at 320:7-8 {{(
)}}; *see also* Kenny Rocker, *I've Heard Enough – This Merger Doesn't Kill Competition. It Unlocks It.*, Union Pac. | Norfolk S. (June 8, 2026), https://www.up-nstranscontinental.com/featured/ive-heard-enough-this-merger-doesnt-kill-competition-it-unlocks-it-2/.

Certain former antitrust enforcers argue that competitors' opposition should be assumed to be bad faith that merely "claim[s] 'foreclosure!' when the real fear is … [a] more efficient rival," because competitors generally benefit from anticompetitive mergers. Cmts. of Former Sr. Antitrust Enforcers, FD 36873 (Aug. 12, 2026), at 3-6, 3 n.2 (quotations omitted). But as these comments reflect, the underlying theory they invoke expressly concerns horizontal mergers, for which the typical anticompetitive effect is to increase *all* competitors' market power, benefitting the complaining competitor as well. *See id.* (quoting Joseph Farrell & Carl Shapiro, *Horizontal Mergers: An Equilibrium Analysis*, 80 Am. Econ. Rev. 107, 114 n.15 (1990)); *Cargill, Inc. v. Monfort of Colo., Inc.*, 479 U.S. 104, 113-17 (1986). But a competitor foreclosed from competing by a vertical merger does not benefit; it is the party most immediately and directly harmed, and the reduction of its ability to compete against the merging parties is what harms consumers and the public in turn.

Association of Rail Shippers ("SWARS") 2026 annual meeting); *see generally UP/NS*, Decision No. 45, FD 36873 (S.T.B. served Nov. 4, 2026). Having failed to engage seriously with the Board's rules, UP's view is that no objection to their merger should be credited either.

That is not how this works. Fundamentally, recognition that all stakeholders come to these proceedings with self-interest—UP and NS first among them—is why the Board's burden allocation and evidentiary sequencing are important to full and fair development of the evidentiary record and the Board's ultimate decision. Indeed, the need for skepticism of applicant claims is especially pronounced here, where UP and NS—even their individual witnesses—have diametrically reversed their recent, consistent, and successful arguments and sworn testimony about such central issues as whether foreclosure is even possible in the rail industry. *See* CSXT-19, at 14-19. It is doubtful such direct contradictions of past testimony can even carry a party's burden on an issue; they certainly should not be reflexively credited.

The Board's process is to require all parties to substantiate their arguments with actual evidence, which CSXT does herein.

II. A Combined UP/NS Would Have an Overwhelming Incentive and Ability to Foreclose Both Interline and Local Competition, Harming Shippers.

Competitive harm is a central issue in the Board's assessment of a major consolidation. *See 2001 Rules*, 5 S.T.B. at 546, 550, 552, 554. In the largely end-to-end proposed combination of UP and NS, assessing that harm begins with the Board's precedent and basic economic theory of vertical foreclosure. Applying that framework to the evidentiary record here confirms two things: First, that a merged UP/NS would have the incentive and ability to wield its control over key inputs interline carriers would need to compete, and to marginalize them as competitive constraints on UP/NS's single-line service.

Second, given the sheer magnitude of the proposed merger, there is actually far more competitive, horizontal overlap between UP and NS than Applicants would have the Board believe. And the combined networks give UP substantially greater power to weaken CSXT as a competitive option for shippers not only on interline traffic but on eastern local traffic, depriving shippers of the vigorous CSXT-NS competition they enjoy today. Accordingly, the harm here is to both vertical and horizontal competition.

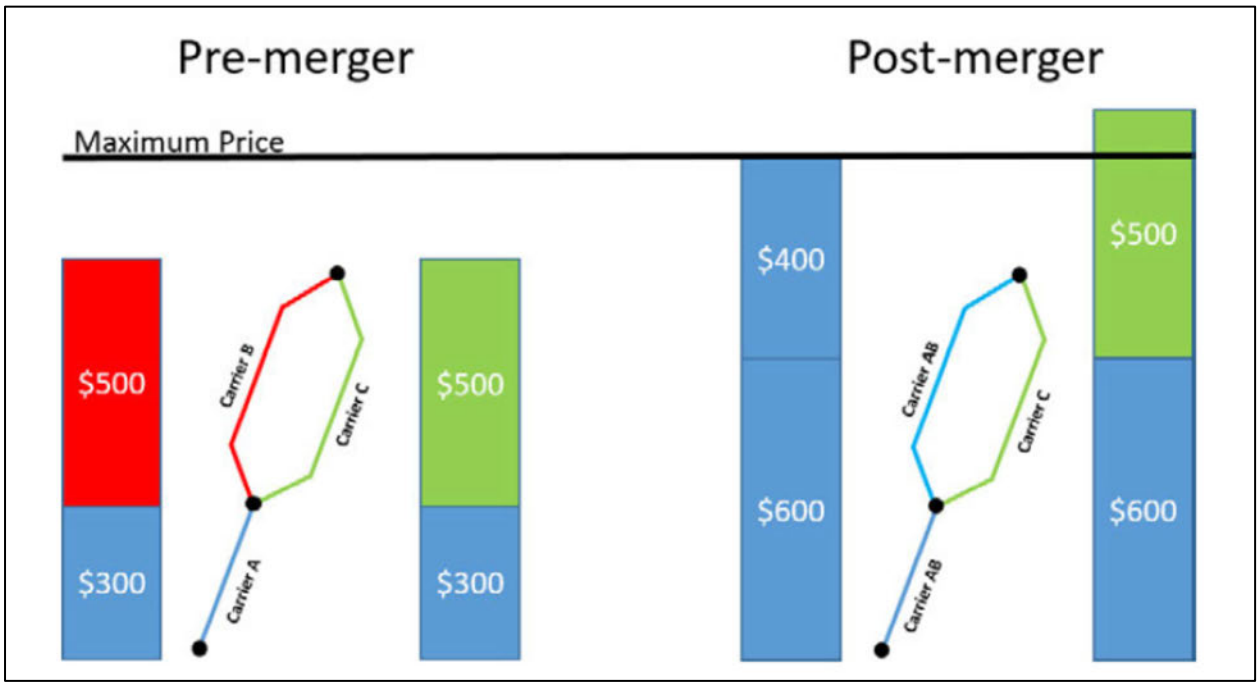
Given the stakes and the centrality of competitive harm from foreclosure to the Board's assessment, CSXT provides a thorough discussion of these issues in this Part II(A-D). Part II continues by examining the risk of harm from short-hauling (Part II(E)), presents a case study, using the Gulf Coast chemicals sector, of the proposed merger's threats to competition (Part II(F)), and closes (in Part II(G)) by explaining that a merger would give a combined UP/NS substantial market power across many traffic corridors, creating a risk of significant horizontal harm.

A. Board precedent and antitrust law recognize serious concern with vertical foreclosure in concentrated network industries.

1. "Vertical foreclosure" is the mechanism by which merging parties would make the alternatives competing against them worse.

The Board has recognized repeatedly that end-to-end rail mergers can result in vertical foreclosure by worsening the competing interline alternative to the merged railroad's single-line service. *See CP/KCS*, slip op. 65-66 (collecting proceedings). Under the current industry structure, CSXT and NS compete every day for interline traffic interchanging with UP, because UP has no structural reason to prefer one over the other unless one provides a more competitive option. Post-merger, UP would be able to make more money not just by capturing traffic on the merits of its single-line service, but by making the UP-CSXT interline alternative to it worse. *See id.* at 65 ("[A]dverse vertical competitive impacts can include diminished service and/or increased prices on interline movements.").

This worsening of interline alternatives would not depend on how competitive CSXT's (or others') rates or services would be, because UP could raise its own rates or degrade its own service on its portion of the interline move. Pre-merger, such conduct would only drive shippers to seek alternatives to UP's interline service. But post-merger, its single-line service would be that alternative. Making its interline service less competitive would thus drive traffic to its longer-haul single-line option. *See id.* at 65-66 ("These adverse impacts may arise where … a carrier that once provided neutral access to multiple competing railroads is then acquired by one of those competitors and has an incentive post-merger to favor its new single-line routing over interline alternatives."). Indeed, because the merged railroad competes against itself in this way, it may well be profitable for it to raise rates on both of the alternatives it offers, as UP illustrated in *CP/KCS*:



Union Pac. R.R. Co.'s Final Br. ("UP *CP/KCS* Br."), CP/KCS, FD 36500 (Oct. 21, 2022), at 22-23 (with "Maximum Price" representing "the maximum total interline price that rail carriers could charge without losing traffic").

Just like a horizontal merger that eliminates an independent option, the end-result of these changed incentives is a loss of competition between alternatives. Indeed, foreclosure may "not result just in the loss of one competitor, but essentially [several]." *Can. Nat'l Ry. Co.–Control–Iowa N. Ry. Co.* ("*CN/IANR*"), Decision No. 3, FD 36744 (S.T.B. served Jan. 14, 2025), slip op. at 9. Pre-merger, many shippers have up to four competing alternatives for a transcontinental movement, as even shippers who are sole-served on one end can often create competition between the carriers on the other side. To maximize profits, each participant is incentivized to develop competitive interline service through rate factors, interchanges, and service that maximize its benefits to shippers. But once a merged carrier has the ability to change the terms and service shippers receive from carriers that compete against it, the same profit-maximizing imperative would incentivize it to selectively worsen those terms "to direct its customers to one railroad"—itself—over all others. *Id.* And due to the network-dependent nature of rail competition, this foreclosure of transcontinental competition would have significant adverse impacts on head-to-head competition within a region, such as between NS and CSXT.

Board precedent thus establishes that, where it is profitable for the merged carrier to worsen its interline service, an end-to-end merger can foreclose competition and harm shippers, particularly those that could not readily switch to competitive alternatives that are independent from the merging carriers. *See CN/IANR*, slip op. at 7-11 (finding substantial lessening of competition because previously-neutral IANR would be "incentivized to extend the [CN] haul of traffic originating or terminating on IANR"); *Can. Nat'l Ry. Co.–Control–EJ&E W. Co*. ("*CN/EJ&E*"), Decision No. 16, FD 35087 (S.T.B. served Dec. 24, 2008), slip op. at 15 (Board sought to "protect[] … KCSM-dependent interline options" from "rate manipulation" driving shippers to CP-KCS single-line service); *id.* (CN could "impair the terms of trackage rights,

interchange, or service associated with competing line haul carriers" or "raise its rivals' costs" on "a line that currently provides neutral access to alternative line-haul railroads").

Applicants contend that the efficiency of their integrated operations outstrips any such competitive concerns. Though efficiency is a factor in Board merger review, the priority of its statutory scheme and merger policy is competition. *See* 49 U.S.C. §§ 10101(1)-(2) (Board to prioritize competition over direct price regulation); *id.* §§ 11324(b)(5), 11324(d) (competition is a primary statutory factor); 49 C.F.R. § 1180.1(a). Credible evidence that a merger would improve the merging firms' efficiency, costs, and service quality can be relevant to competition, but only to the extent the efficiency would cause the market to be more competitive. *See United States v. Anthem, Inc.*, 855 F.3d 345, 354-56 (D.C. Cir. 2017); *Fed. Trade Comm'n v. H.J. Heinz Co.*, 246 F.3d 708, 720 (D.C. Cir. 2001); *Fed. Trade Comm'n v. Univ. Health, Inc.*, 938 F.2d 1206, 1222, 1222 n.29 (11th Cir. 1991). Both antitrust law and this Board recognize that merging firms would just pocket any efficiency gains unless ongoing competition pressures them to pass some of those efficiencies on. *2001 Rules*, 5 S.T.B. at 549 & n.11. So the focus must be on how a merger, including any promised efficiencies, affects competition between alternatives, not on claims that reducing that competition would be more efficient.

2. Foreclosure and exclusionary conduct are uniquely likely and harmful in consolidated network industries.

The Board's foreclosure law is consistent with antitrust principles that foreclosure becomes more likely and harmful as network industries—like the rail industry—consolidate. There is likewise alignment that the vast array of tools by which dominant firms can exclude competition makes it essential to prevent anticompetitive mergers in the first place, rather than to attempt to police a dominant firm's conduct after the fact.

Basic antitrust doctrine and competition economics show that foreclosure of competition by vertically-integrating firms is more likely and more harmful as industries become more concentrated. *See* U.S. Dep't of Justice & Fed. Trade Comm'n, *Merger Guidelines* 14-16 (2023) ("*Merger Guidelines*"). Though vertical mergers are often procompetitive in unconcentrated markets, that is often not the case where integration would give one firm control over an outsized portion of a key input—particularly where unintegrated suppliers or distributors cannot independently meet competitors' or consumers' full needs. *See Illumina, Inc. v. Fed. Trade Comm'n*, 88 F.4th 1036, 1053 (5th Cir. 2023) (merger gave customers "nowhere else to turn"); *United States v. E. I. du Pont de Nemours & Co*, 353 U.S. 586, 595-96 (1957) (merger gave "the colossus of the … industry" control of input supplier accounting for much of industry's requirements); *Int'l Tel. & Tel. Corp. v. Gen. Tel. & Elecs. Corp.*, 449 F. Supp. 1158, 1179-83 (D. Haw. 1978) (relying in part on concentration and extent to which "captive buyers" accounted for overwhelming shares of production).

Increased concentration also makes the competitiveness of individual firms critical to competition overall. The distinction between protecting competition and protecting competitors may be sharp in unconcentrated or dynamic markets. *See McWane, Inc. v. Fed. Trade Comm'n*, 783 F.3d 814, 835-36 (11th Cir. 2015). But in highly-concentrated markets with high entry barriers, effective rivalry from existing competitors is the only source of competition that remains. *See id.*; *Spirit Airlines, Inc. v. Nw. Airlines Inc.*, 431 F.3d 917, 951 (6th Cir. 2005) ("[I]n a concentrated market with very high barriers to entry, competition will not exist without competitors."); *LePage's, Inc. v. 3M*, 324 F.3d 141, 159-61 (3d Cir. 2003) ("[E]ven the foreclosure of 'one significant competitor' from the market may lead to higher prices and reduced output."). Harm to competition is likely where vertical integration would cause those remaining sources of

rivalry to depend permanently on the merged firm to compete effectively against it. *See Fruehauf Corp. v. Fed. Trade Comm'n*, 603 F.2d 345, 352-53, 352 n.9 (2d Cir. 1979) (distinguishing foreclosure from simple realignments of supply relationships); *Ford Motor Co. v. United States*, 405 U.S. 562, 568-71 (1972) (finding loss of independent competitive forces would create rigid oligopoly); *United States v. Microsoft Corp.*, 253 F.3d 34, 49-50, 53-56 (D.C. Cir. 2001) (finding foreclosure targeted particular competitive threats).

Once a firm acquires dominance through an anticompetitive merger, it will wield its power to harm competition. *Merger Guidelines* at 15-17 (arguments that a merged firm would "avoid weakening the merged firm's rivals that do not align with the firm's incentives" are not credible). Antitrust law reflects that the tools and strategies dominant firms can use to effectively exclude competition are "myriad." *Verizon Commc'ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 414 (2004). Many such tools, like bundled contracting, are often procompetitive in more competitive markets but become powerful exclusionary strategies when dominant firms use them to block rivals. *McWane*, 783 F.3d at 819-22, 832-42 (bundled rebates deprived competitors of "critical market mass" and deterred investments needed to compete) (citations omitted); *United States v. Dentsply Int'l, Inc.*, 399 F.3d 181, 187 (3d Cir. 2005) ("Behavior that otherwise might comply with antitrust law may be impermissibly exclusionary when practiced by a monopolist."); *LePage's*, 324 F.3d at 151-52 ("[A] monopolist is not free to take certain actions that a company in a competitive (or even oligopolistic) market may take, because there is no market constraint on a monopolist's behavior.").

Participants in consolidated network industries like rail depend on scale and interconnection to compete but also rely on one another to provide collaborative services, and are thus particularly vulnerable to these strategies in the hands of a dominant firm. *See Microsoft*, 253

F.3d at 49-50; *United States v. Google LLC*, 778 F. Supp. 3d 797, 825, 832, 852-56, 858-64 (E.D. Va. 2025). For that reason, depriving rivals of network effects and scale economies necessary to compete is a particularly common—and effective—foreclosure strategy in such industries. *See Microsoft*, 253 F.3d at 70-71; *Google*, 778 F. Supp. 3d at 852-56, 858-64; *McWane*, 783 F.3d at 819-22.

Recent experience confirms vertical mergers have led to exclusionary conduct that effectively prevented competition against the merging firms and created long-term market power. *See* Verdict Form at 2-11, *New York v. Live Nation Ent., Inc.*, No. 1:24-cv-3973-AS (S.D.N.Y. Apr. 15, 2026), Dkt. No. 1417; *Google*, 778 F. Supp. 3d at 810; *Steves & Sons, Inc. v. JELD-WEN, Inc.*, 988 F.3d 690, 705-08 (4th Cir. 2021). This market power is especially dangerous where there is no opportunity for effective entry or disruption. *See Microsoft*, 253 F.3d at 49-50, 53-56 (foreclosure maintained market power by inhibiting technological disruption); *LePage's*, 324 F.3d at 162-63 (barriers to entry made exclusion of particular competitor particularly harmful); *IT&T*, 449 F. Supp. at 1183 (impossibility of "[l]arge-scale entry" excluded "any competitive, as opposed to regulatory, pressure on [foreclosing firm]"). Yet, once it is acquired through a merger, effectively policing such power through conduct rules is notorious in antitrust law as an intractable problem, given the need for concrete behavioral standards to comply with and the virtual impossibility of expeditious adjudication of whether conduct is anticompetitive. *See Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc.*, 555 U.S. 438, 443, 452-54 (2009).

B. UP and NS utterly fail to support their claim that the proposed combination would not cause vertical competitive harm from foreclosure.

UP and NS's entire case on foreclosure (Am. App. Vol. 1, at 22) consists of the opinion of economist Dr. Mark Israel that "theories of vertical foreclosure … are ill-matched to … the railroad industry." This, he says, is because of the nature of pricing practices prevalent between shippers

and interlining railroads. Am. App. Vol. 2, at 186 (V.S. Israel ¶ 14). All UP and NS's other evidence is either conclusory or refers back to Israel.

Dr. Israel's testimony is not a serious competition analysis. It does not analyze this transaction's specific facts, it ignores the impact on buyers' competing alternatives, and it directly contradicts established law and policy as well as his own client's prior statements and economic analyses presented to this Board. Considered against the actual record, the linchpin facts that Israel assumed to wave away competitive harm are all contradicted by real-world evidence. It should be no surprise that, as Dr. Ramsey Shehadeh shows, such an analysis "stands in contrast to" the "standard approach to evaluating foreclosure." V.S. Shehadeh ¶ 46.

1. On their own terms, the opinions Applicants rely on are contrary to law and policy.

Dr. Israel's opinion boils down to a single, categorical assertion about the industry as a whole: "[V]ertical foreclosure theories do not apply in the context of railroad pricing practices." Am. App. Vol. 1, at 22, 52. *See* Am. App. Vol. 2, at 186-89 (V.S. Israel ¶ 14) ("[T]heories of vertical foreclosure … are ill-matched to … the railroad industry."). The Board's precedent says otherwise. *See CP/KCS*, slip op. at 65-66; *CN/EJ&E*, slip op. at 15; *CN/IANR*, slip op. at 7-9. UP and NS do not dispute that Israel's position and reasoning contradict Board precedent. *See* UP-94/NS-93, at 16. The Board thus should make no mistake: Crediting Applicants' new economic opinions would require the Board to overrule itself and would mean the Board would have to approve essentially every end-to-end rail merger as categorically harmless.

It was UP and NS above all that (correctly) persuaded the Board in *CP/KCS* to make explicit that foreclosure is a serious concern in end-to-end rail mergers and cannot be excluded on economic theory alone. *See* CSXT-19, at 14-19. Now that they wish to merge, they have changed their argument. Not only do courts routinely reject such opportunistic reversals (*see id.*; *see also*

New Hampshire v. Maine, 532 U.S. 742, 749-51 (2001)) but Applicants' about-face here calls into question the credibility of the arguments they present—especially because it is not accompanied by any objective support to explain their change of position. Instead they suggest that the Board (along with UP, NS, and their experts) was led astray about the possibility of foreclosure in *CP/KCS* by a single academic paper (presented by UP) about "imperfect information" and the "One Lump Theory." *See* UP-94/NS-93, at 16 ("[Dr. Israel] provides expert economic analysis of the economic literature that informed the Board's concerns[.]") (citing Am. App. Vol. 2, at 190-92, 214-218 (V.S. Israel ¶¶ 15-19, 67-73)). *Compare* Am. App. Vol. 2, at 215-18 (V.S. Israel ¶¶ 67-73) (attacking Serge Moresi et al., *Vertical Mergers in a Model of Upstream Monopoly and Incomplete Information*, 59 Rev. of Indus. Org. 363 (2021) ("Moresi et al.")), *with CP/KCS*, slip op. at 46, 47 (citing Moresi et al.).[12] This attempt at revisionist history does not warrant reversing Board precedent.[13]

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[12] Dr. Israel purports to show that changing this paper's supposedly "extreme assumptions" changes its findings. App. Vol. 2, at 215-218 (V.S. Israel ¶¶ 67-73). As Dr. Shehadeh shows, Dr. Israel reached these different findings by designing a model with even more extreme assumptions that guarantee foreclosure is unprofitable, when whether foreclosure would be profitable is the very question he is purporting to address. *See* V.S. Shehadeh ¶¶ 96-98 & Appx. B (showing Israel's model requires the merged carrier to charge the same rate as the carrier that is the target of foreclosure, producing zero profit for the merged carrier if foreclosure excluded that target or raised its costs to prohibitively high levels).

[13] The Board's reasons for rejecting the One-Lump Theory in *CP/KCS* run more than four pages. It mentioned perfect information in three sentences, specifying the assumption to be an "example" of facts necessary for the theory to hold. Slip op. at 44-48. The Board gave numerous other reasons as well, and explained its vertical merger decisions had been inconsistent with the theory for twenty years, so its explicit rejection of a One Lump presumption only formalized its precedent. *See id.* That precedent predates the 2021 paper Applicants appear to claim singularly inspired it. So do UP's consistent positions that foreclosure is a risk in rail mergers, and much of the rich modern academic literature showing the Theory requires numerous extreme facts to be present for its simplifying math to work. *See*, *e.g.*, Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 Harv. L. Rev. 397 (2009); Philip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* at ¶ 1706b (2018).

2. Dr. Israel does not perform the ordinary economic analyses of foreclosure he himself has repeatedly explained are necessary to assess vertical merger effects.

The Board does not need to take CSXT's word for what Dr. Israel should have analyzed,[14] because he has answered the question countless times himself in his prior work. As he has long explained, including in his recommendations to the DOJ and FTC on merger guidelines, vertical mergers generally result in two opposing sets of incentives: "the incentive to reduce price created by a merged firm's insourcing of an intermediate good previously acquired at market prices," and "the incentive to foreclose rivals to drive sales towards the merged firm." Mark A. Israel et al., *Guidelines Lacking Guidance: Improving the FTC/DOJ Draft Merger Guidelines*, at 9 (2023) ("*Israel on Guidelines Lacking Guidance*").[15]

These countervailing incentives create "the central tradeoff faced by integrated firms" determining their post-merger conduct. *Israel on Guidelines Lacking Guidance*, at 11. The "insourcing" side, as he explains, can produce the potential benefits of a vertical merger—*i.e*., "raise output and increase efficiency"; the "foreclos[ure]" side can cause its potential harms—*i.e.,* "lower output and harm efficiency." *Id.* at 11.[16] These are the very same competing incentives that the Board has focused on in recent proceedings. *See CP/KCS*, slip op. at 46-48, 65-66. *Cf.*

[14] CSXT has previously explained how Dr. Israel's supposed refutation of foreclosure does not actually analyze foreclosure effects at all. *See* CSXT-19, at 22-26. As invited by the Board (Decision No. 37, slip op. at 4), CSXT renews these arguments for the Board's consideration.

[15] *See also* Dennis W. Carlton, Mark A. Israel & Allan L. Shampine, *Lessons from AT&T/Time Warner*, CPI Antitrust Chronicle 4 (July 2019) ("*Israel on Lessons from AT&T*") ("the … effects from efficiencies and the … effects from raising rivals' costs"); Mark A. Israel et al., *New Merger Guidelines Should Keep the Consumer Welfare Standard*, CPI Antitrust Chronicle 8 (Nov. 2022) ("*Israel on Consumer Welfare Std*.").

[16] *See also Israel on Lessons from AT&T* at 4 ("desirable" and "undesirable"); *Israel on Consumer Welfare Std*. at 8 ("procompetitive" and "anticompetitive").

CN/IANR, slip op. at 9; *CN/EJ&E*, slip op. at 15. They are the same incentives UP and NS have each described in detail in 20 years of filings to the Board. *See generally* CSXT-19, at 14-19.[17]

To even begin to seriously analyze the competitive effects of their vertical transaction, then, UP and NS's economic evidence must "weigh the efficiencies' effects against any incentive to raise prices in order to evaluate the net effect." *Israel on Lessons from AT&T* at 5.[18] "[T]he entire exercise depend[s] on accounting for" both sets of incentives "to determine the net effect of the merger." *Israel on Lessons from AT&T* at 4. To analyze or measure one without the other is to "assume away competing incentives" and reach a predetermined outcome regardless of a case's facts. *Israel on Guidelines Lacking Guidance* at 11. *See id.* at 9; *Israel on Consumer Welfare Std.* at 8. Dr. Israel's express position is that to analyze one side of the issue without the other reaches a preferred outcome "intentionally." *Israel on Consumer Welfare Std.* at 8.

Dr. Israel's opinion that no foreclosure can occur in the rail industry is precisely such a one-sided analysis. He quite plainly analyzes efficiencies but not foreclosure incentives. Specifically, he describes the economic theories by which efficiencies can manifest from the "merged firm's insourcing of an intermediate good previously acquired at market prices," in three types of rail industry pricing arrangements. *Israel on Guidelines Lacking Guidance* at 9.[19] But

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[17] UP has called the analysis of these competing incentives "the central issue" and "basic building block in any assessment of the competitive effects of [an end-to-end] transaction" that any merger applicant must "take the basic step of studying … and presenting … to the Board and interested parties." *Union Pac. R.R. Co.'s Reply to Canadian Pac. Petition to Reopen Decision No. 2*, *Kan. City S.—Control—Tex. Mex. Ry. Co.*, FD 34342 (July 17, 2003), at 2-3, 4.

[18] *See also Israel on Guidelines Lacking Guidance* at 11 (a merger's "competitive effects … depend on the relative importance of [these] distinct changes in incentives.").

[19] These are negotiated rates that reflect volume expectations, non-negotiated Rule 11 rates, and non-negotiated through rates. Am. App. Vol. 2, at 186-89 (V.S. Israel ¶ 14). With respect to negotiated contract rates, Israel describes only how vertical rail mergers can "get[] rid of the inefficiencies created by Ricardian rents." Am. App. Vol. 2, at 195-97 (V.S. Israel ¶¶ 23-30). With respect to non-negotiated Rule 11 rates, he describes only how vertical rail mergers can internalize "Cournot Complements externalities." *Id.* at 198-201 (V.S. Israel ¶¶ 34-38). Then,

absent from each of these analyses is any weighing of or accounting for a merging carrier's "incentive to foreclose rivals to drive sales towards the merged firm." *Id.* at 9. *See id.* at 10 ("a change in the merged firm's incentives that leads it to trade on worse terms with rivals").

For example, as to negotiated rates, Dr. Israel opines summarily that "the most efficient strategy" is for UP "to continue using CSX" rather than NS if its costs are lower, assuming away—not weighing or accounting for—UP's incentive to drive sales of eastern traffic towards the merged firm even when doing so reduces efficiency. Am. App. Vol. 2, at 271 (V.S. Israel at A-3). His opinion that it "still makes sense" for shippers to use CSXT if it is cheaper than NS similarly ignores UP's incentive to raise shippers' total costs on UP-CSXT traffic to foreclose it as an option. *Id.* at 196 (V.S. Israel ¶ 27). As to non-negotiated Rule 11 rates, Dr. Israel does not even consider that UP could raise its Rule 11 rates to drive interline traffic towards the merged firm's single-line service. *Id.* at 200-01 (V.S. Israel ¶¶ 36-37). And as to through rates, he offers no foreclosure analysis at all because he assumes sole-serving carriers could gain nothing from it because they earn monopoly profits already. *Id*. at 202-04 (V.S. Israel ¶¶ 41-45).

In short, UP's and NS's sole evidence on foreclosure is a one-sided, outcome-oriented analysis that "intentionally" finds no foreclosure by not considering foreclosure at all. *Israel on Consumer Welfare Std.* at 8.

3. UP and NS present no merger-specific evidence about vertical foreclosure or the impact on shippers' alternatives.

UP and NS's submission of general economic theory also cannot carry their burden because it contains no evidence about the particular combination of UP and NS. The Board's law is clear:

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only as to non-negotiated through-rate pricing—what he calls "a narrow sliver of all shipments"—Dr. Israel turns from efficiencies to the One-Lump Theory. *Id.* at 201-04 (V.S. Israel ¶¶ 39-46).

Arguments that foreclosure would not occur must be based on "the facts in an individual proceeding." *CP/KCS*, slip op. at 47. UP and NS's categorical economic theory about "the railroad industry" cannot qualify. Am. App. Vol. 2, at 186-89 (V.S. Israel ¶ 14).

UP and NS insist this industry-wide opinion is somehow the transaction-specific evidence Board law requires. *See* UP-94/NS-93, at 16. But as to all but a "narrow sliver of all shipments," Dr. Israel opines that foreclosure concerns can be "ruled out" as a matter of economic theory, not evidence. Am. App. Vol. 2, at 201, 203 (V.S. Israel ¶¶ 39, 43). As to that "sliver," he "reject[s]" "the theory of foreclosure" based on the One-Lump Theory without providing the evidence that this is the rare situation where it in fact applies. *Id.* at 203-04 (V.S. Israel ¶¶ 43-45). And even though the relevance of his analysis rests entirely on the applicability of his contrived modeling, Israel fails to conduct reliable empirical or qualitative analysis to test or support his foundational assumptions. V.S. Shehadeh ¶¶ 6, 46, 66; Ex. 8, M. Israel Dep. Tr. 204:7-206:16 (admitting that for all settings other than the sliver, opinions are "not based on empirical tests").[20]

[20] Dr. Israel further admitted he performed no empirical analyses to confirm numerous specific assumptions baked into his theoretical analysis. These include whether sole-serving carriers already earn all possible profits on through-rates or set prices consistent with the absence of direct rail competition (*id.* at 208:5-19, 213:9-16), the extent of pricing constraint at sole-served locations from indirect competition or STB rate regulation authority (*id.* at 215:9-17, 216:8-23), whether dual-serving carriers price at and just below the higher-cost carrier's costs (*id.* at 218:18-219:4), whether sole serving carriers produce optimal output through nonlinear pricing (*id.* at 219:5-14), whether sole-serving carriers use nonlinear pricing while dual-serving carriers use linear pricing (*id.* at 219:16-220:4), whether railroads and shippers have equal bargaining leverage and whether the UP-NS merger would impact their bargaining leverage or outside options (*id.* at 220:5-18, 222:14-223:24), the existence or magnitude of Ricardian rent inefficiencies (*id.* at 224:1-11), the applicability of the assumptions he used to change the Moresi model's results (*id.* at 227:4-228:20), whether exit is a relevant competitive consideration in railroads' pricing and bundling strategies (*id.* at 236:1-20), and whether BNSF and CSXT segments are less compatible in combination for at least some shippers or commodities (*id.* at 237:14-238:10).

UP and NS argue most specifically that Dr. Israel's resort to the One-Lump Theory "is precisely" the demonstration on "the facts in an individual proceeding" that is required because it is "empirical" and based on UP and NS's "waybill data." UP-94/NS-93, at 16-17 (citations omitted). But the Board has explained exactly what transaction-specific facts must be shown to rely on this defense: evidence "that a particular bottleneck carrier is already capturing the entire monopoly profit pre-merger." *CP/KCS*, slip op. at 47. Dr. Israel did not show this empirically; he assumed it before even starting his supposedly empirical exercise:

- First, he assumed all bottleneck carriers charge monopoly prices when negotiating through rates with shippers directly. Am. App. Vol. 2, at 202-03 (V.S. Israel ¶ 42) (reasoning as matter of theory that "nothing stops" it "from setting the monopoly price").
- Second, he purported to measure whether shippers prefer through rates other than the bottleneck carrier's (assumed monopoly) prices. *See id.* at 205-10 (¶¶ 44-55).
- Third, he purported to measure whether other through rates are systematically lower than the bottleneck carrier's (assumed monopoly) prices. *Id.* at 210-14 (¶¶ 56-64).

Even if credited, answering in the negative shows "empirically" only that there is no systematic difference between the through rates shippers negotiate with bottleneck carriers and with non-bottleneck carriers. But that is "tautologically true in *any* economic model where shippers search for the lowest rate available." V.S. Shehadeh ¶¶ 82-86. *See* Ex. 8, M. Israel Dep. Tr. 201:10-203:11 (admitting these findings are consistent with equalization from shippers switching between sides). Israel merely assumes that this makes them all monopoly prices. *See* V.S. Shehadeh ¶¶ 82-86; Ex. 8, M. Israel Dep. Tr. 208:5-210:18 (opinion that sole-serving side charges monopoly prices is not based on empirical tests). UP and NS thus present no evidence whatsoever regarding the likelihood of foreclosure on "the facts in [this] individual proceeding." *CP/KCS*, slip op. at 47.

Nor do UP and NS present any evidence about shippers' alternatives to the merged railroad or how a UP/NS merger would affect them. *See infra* Part II(A)(1). As the Board recognizes, this inquiry concerns "diminished service and/or increased prices on interline movements that have the

effect of foreclosing efficient competitive options." *See CP/KCS*, slip op. at 65. UP and NS's submission, however, concerns only purported improvements to their own services, not how the proposed merger would affect alternatives to that service:

Negotiated rates. Bargaining models analyze how a merger changes a shipper's and carrier's alternatives to each other. *See infra* n.29. UP and NS's analysis instead describes only improvements in the "pie" the shipper and merged carrier can bargain over. Am. App. Vol. 2, at 195-97 (V.S. Israel ¶¶ 23-30). *See also* V.S. Shehadeh ¶¶ 48-54. The only apparent rationale for ignoring the shipper's alternatives is Israel's assumption that it "still makes sense" post-merger for the shipper to use the carrier with the cheaper segment rate. Am. App. Vol. 2, at 196 (V.S. Israel ¶ 27). This literally assumes that the alternative—interlining—would remain unchanged. But the basic logic of foreclosure is that, by increasing *its own* interline rates, the merged firm would increase the *total cost* of interlining. *See CP/KCS*, slip op. at 65-66; *see also* V.S. Shehadeh ¶¶ 38-39, 104.

Worse, the analysis they present proceeds from the premise that having competitive alternatives harms shippers because monopolies are more efficient. *See* V.S. Shehadeh ¶¶ 47-50, 53-55, 57. Specifically, Israel's analysis assumes sole-serving carriers produce optimal output because they use "non-linear" pricing, but that carriers competing against rivals do not, which "creates an inefficiency and takes value away from shippers." Am. App. Vol. 2, at 195-96 (V.S. Israel ¶¶ 23-25). *See* Ex. 8, M. Israel Dep. Tr. 140:10-141:18 (explaining model assumes "efficient contracting" by sole-served carriers but that competing carriers "won't bargain any more" after they compete on price); V.S. Shehadeh ¶ 57 (explaining that this assumption "introduces an inefficiency which is assumed not to occur on the sole-serving leg"). Dr. Israel admitted in his deposition that without this assumption that competition produces "linear price" inefficiencies,

"there wouldn't be any Ricardian rent," "there would be no inefficiency," and "the merger would … have no benefit." Ex. 8, M. Israel Dep. Tr. 143:24-146:7. And Dr. Shehadeh shows that this assumption mathematically implies that eliminating shippers' competitive alternatives harms merging railroads by weakening their bargaining positions—here costing UP and NS {{ }} in foregone profits. V.S. Shehadeh ¶¶ 61-62 & Table 2. This artificial construct thus 'proves' that every lane should be both vertically integrated and fully horizontally monopolized to save shippers from the "inefficiency" of having rivals compete for their business. *See id.* ¶¶ 56-62. Such an opinion is plainly antithetical to competition policy and the entire purpose of these proceedings. *See id.*

Non-negotiated Rule 11 rates. Board proceedings regarding end-to-end mergers have repeatedly focused on whether merged carriers would raise their own Rule 11 rates to worsen interline alternatives to their single-line service. *See generally CP/KCS*, slip op. at 58-65; UP *CP/KCS* Br., at 22-23. UP and NS purport to show only that they could not stop offering Rule 11 service altogether. Am. App. Vol. 2, at 200-01 (V.S. Israel ¶¶ 36-37); *see also* V.S. Shehadeh ¶¶ 75-81. They offer no evidence about whether their merger would make that alternative worse.

Non-Negotiated through rates. UP and NS's analysis of through-rates directly assumes shippers they sole-serve do not even have alternatives, a necessary assumption for the One Lump Theory to apply. *See* App. Vol. 2, at 202-3 (V.S. Israel ¶¶ 41-42) ("nothing stops" them from earning monopoly profits). The assumption leads UP and NS to ignore outright how UP/NS could use the merger to foreclose shippers' alternatives. *See also* V.S. Shehadeh ¶¶ 82-86.

Even UP and NS's decision to present a competitive analysis through *seriatim* discussion of rate-setting mechanisms ignores the interaction of competing alternatives, because these mechanisms are alternatives *to each other*. As a result, "[t]otal movement rates for any price-

setting arrangement are constrained by the lowest rate available to shippers across any price-setting arrangement that they are free to utilize," and competitive forces affecting any one of these mechanisms affect the others. V.S. Shehadeh ¶¶ 87-89, 93. But in order to draw stark conclusions about each mechanism, Dr. Israel swings between contradictory assumptions: If, as his modeling assumes, sole-serving railroads always "split the surplus equally" with shippers when negotiating segment rates (Am. App. Vol. 2, at 270 (V.S. Israel at A-2)) but always extracted 100% of surplus by "earning all the profits possible" when offering through rates to shippers (*id.* at 202-03 (V.S. Israel ¶¶ 41-42)), shippers would turn to segment rates until the two equalized. *See* V.S. Shehadeh ¶¶ 87-89, 93; *see also* Ex. 8, M. Israel Dep. Tr. 197:19-200:21. Applying a "split the surplus equally" assumption to through rates, though, would disprove that UP and NS already earn a full "lump" on all their sole-served segments. As Dr. Shehadeh explains, picking and choosing whichever of these (and other) mutually-inconsistent assumptions is convenient for any given analysis "demonstrate[s] that Dr. Israel's modeling choices are not made to reflect industry reality but instead chosen to arrive at his preferred conclusion." V.S. Shehadeh ¶¶ 99-101.

Counting "independent" routes. Even when he purported to count the alternatives that would compete post-merger, Dr. Israel ignored Board precedent and bent the standard to avoid actually considering how a UP/NS combination affects the number. He purportedly analyzed independent rail options that would be affected by vertical integration and concluded that there were sufficient independent alternatives in every case to prevent competitive harm. Am. App. Vol. 2, at 220-24 (V.S. Israel ¶¶ 78-89). As economist Julie Carey explains in her statement, though, he did so only by ignoring Board requirements that a true independent routing excludes the merging parties entirely, and that such routings must be not just theoretical but economically feasible and attractive. V.S. Carey at 70-74. Applying the Board's standards reveals, not

surprisingly, a very significant reduction of independent routes, which of course reflects the reality that CSXT is and would continue to heavily rely on UP, as BNSF would on NS, for interline moves. *Id.* at 85-86.

4. Dr. Israel's opinion relies on unsupported assumptions that are disproved by the real-world evidence.

As explained, Dr. Israel's opinions assume away a combined UP/NS's incentives to worsen interline alternatives in order to drive traffic to their single-line service. To credit his opinions, Israel's reasons for assuming away these incentives would have to be treated as facts "essential to the application or that may affect [the Board's] decision." *Exp'd Proc'g*, 363 I.C.C. at 771. UP and NS would bear the burden to prove these "material facts." They did not even try. More than that, these necessary assumptions are contradicted by the real-world evidence.

Contrary to Dr. Israel's assumption that UP would still choose to interline with CSXT wherever "paying CSX will be cheaper than the cost of carrying the goods itself" (Am. App. Vol. 2, at 271 (V.S. Israel A-3)), the reality is that, like any company, railroads seek to maximize their profits, not simply to minimize their costs. *See*, *e.g.*, Ex. 11, M. McClellan Dep. Tr. 370:4-372:3 ({{

}}); Ex. 87, NS_00569895 at -917 (Dep. Ex. 412); Ex. 50, UP_1629179 at -180 ({{

}}). And the data demonstrate, as rail planners know well, that railroads capture greater profits when they contribute a greater portion of a movement's mileage. V.S. Shehadeh ¶ 71 ("In reality, profits grow [with] the railroads contribution to the haul."). As a result, railroads in practice seek consistently to maximize their length of haul to capture more revenue. *See, e.g.,* Ex. 11, M. McClellan Dep.

Tr. 317:16-318:1 (NS Chief Strategy Officer explaining {{

}}). NS's CEO testified specifically that {{

}} Ex. 4, M. George Dep. Tr. 125:7-125:20; *see also Burlington N., Inc.—Control & Merger—St. L.*, 360 I.C.C. 788, 936 (1980) ("*BN/SF*") ("Railroads compete with each other for the longest haul and maximum revenue on traffic.").

UP and NS executives have previously testified that this dynamic specifically leads a vertically-integrated carrier to prefer to carry traffic itself even where it results in a less efficient, costlier routing than interlining. *Comments of Norfolk S. Co. and Request for Conditions*, *V.S. M. McClellan*, *CP/KCS*, FD 36500 (Feb. 28, 2022), at 66 (explaining "traffic on these routes may be diverted to more circuitous CPKC routes"); *Union Pac. R.R. Co.'s Comments and Request for Conditions*, *V.S. Rocker-Turner* ("UP CP/KCS V.S. Rocker-Turner"), *CP/KCS*, FD 36500, (Feb. 28, 2022), at 11-14 (explaining profitable diversion to "a longer, slower route" that is "less efficient" and "almost certainly … higher" in cost). *See CN/IANR*, slip op. at 9 ("[O]nce IANR is part of the CN family of railroads … IANR and CN will be incentivized to extend the haul of traffic originating or terminating on IANR."). NS's Chief Strategy Officer here {{

}} Ex. 11, M. McClellan Dep. Tr. 408:13-413:2. It does not matter which is "cheaper."

The evidence also refutes Dr. Israel's related assumption that shippers would continue to "work with CSX," preventing its foreclosure, as long as its segment rate was "cheaper than the merged carrier … bearing NS's cost" in the East. Am. App. Vol. 2, at 196 (V.S. Israel ¶ 27). Shippers care ultimately about their total cost of moving traffic, not just the cost of one segment.

See Ex. 23, J. Vena Dep. Tr. 169:15-18 (UP's CEO explaining: "[I]t's the total end cost that they look at[.]"); V.S. Kenney at 4; V.S. Higgins ¶¶ 16, 34. UP and NS's testimony in past cases has explained how UP/NS could drive up shippers' total cost of working with CSXT to divert traffic to itself, even if CSXT's segment rates were cheaper than NS's segment-specific costs. UP *CP/KCS* V.S. Rocker-Turner, at 12-14.[21]

More broadly, UP's real-world policies and behavior contradict Dr. Israel's idealization of UP and NS as Platonic efficiency-seekers that can increase profits only through cost cuts that allow them to reduce price to expand volume. UP approaches shipper pricing negotiations with a clear management philosophy, set from the top, to prioritize maximizing price even to the sacrifice of volume growth. UP has been clear and consistent in management communications with Wall

[21] UP would likely seek to avoid even offering NS-only segment rates at dual-served locations for shippers to compare CSXT's to at all. But if forced to (for example under Rule 11), the relevant comparison would be between the total combined rates on UP-CSXT and UP-NS movements, not between CSXT's segment rate and "NS's cost." Am. App. Vol. 2, at 196 (V.S. Israel ¶ 27) (emphasis added). As UP's executives have previously explained, UP could even price any NS segment *below* its segment-specific cost when paired with UP service, while charging more on the UP segment to subsidize it (and to make the UP-CSXT option uncompetitive). UP *CP/KCS* V.S. Rocker-Turner, at 13; V.S. Higgins ¶ 17.

Street,[22] {{ }},[23] (though perhaps less so with the STB).[24] UP's pricing power and philosophy towards pressing it was on display to a roomful of shippers at the Southwest Association of Rail Shippers, in language that bears particular attention. Ex. 61, UP_3217794 at 52:10-52:41 (stating that rates will be raised "3 or 4 extra percent.").

This top-down direction is reflected in UP's sales and marketing policies. Those policies {{

}}. UP's {{

}} (Ex. 26, (Dep Ex. 30, at 19)), which it pursues primarily by {{

}} Ex. 15, A. Pfeifer Dep. Tr. 87:4-90:20. UP has specifically imposed a {{

[22] *E.g.*, Ex. 25, (Dep. Ex. 570 at -29) (Statement of K. Rocker on Sept. 19, 2024 UP Live Investor Road Show Tr.) ("We have always been very price disciplined. Meaning … the last to lower, the first to increase here"); Ex. 59, UP_3203700 at -701 (Dep. Ex. 574) ({{

}}).

[23] *E.g.*, Ex. 53, UP_1738096 at -098 (Dec. 12, 2024 email from K. Rocker to J. Vena, re: "Unsolicited Competitive Benchmarking Feedback": explaining {{

}}; Ex. 60, UP_3207599 at -601 (Dep. Ex. 569) (Aug. 8, 2024 report on senior staff meeting: {{ }}).

[24] *Compare* Ex. 25, (Dep. Ex. 570 at -29) (Statement of K. Rocker on Sept. 19, 2024 UP Live Investor Road Show Tr.) ({{

}}) *with* Transcript, Testimony of K. Rocker at *Hearing on Growth in the Freight Rail Industry*, (Sept. 16, 2024), https://www.stb.gov/wp-content/uploads/Growth-hearing-transcripts_12162024.pdf, Hr'g Tr. at 105:7-106:13, (testifying that UP "has a strong focus towards growth," "built around three things," safety, investing in its network, and innovating through technology and product development, with no mention of pricing).

}} (Ex. 31, UP_0024575 at -582 (Dep. Ex. 9)) on {{

}} Ex. 15, A. Pfeifer Dep. Tr. 212:1-214:10. UP's {{

}}. *See* Ex. 15, A. Pfeifer Dep. Tr. 177:6-179:20, 182:11-21, 186:15-19; Ex. 60, UP_3207599 (Ex. 569) (Aug. 8, 2024 report on senior staff meeting: {{

}}). The purpose of this compensation structure is {{ }} (Ex. 19, J. Thomas Dep. Tr. 164:20-165:16) {{ }} Ex. 12, D. McLaughlin Dep. Tr. 279:13-282:9; *see also* Ex. 15, A. Pfeifer Dep. Tr. 186:15-19.

Dr. Israel's logic requires a world where UP and NS would necessarily use the cheapest routing so they can cut price to increase volume. That is the opposite of what they actually do.

* * *

In sum, UP and NS—the parties that bear the burden on the risk of competitive harm—now assert, without transaction-specific support, that foreclosure just could not result from any railroad merger. They overtly decline to engage with the basic economic principles of foreclosure analysis or to offer any evidence about the actual facts of their particular combination. They do so in the face of clear, recent precedent from the Board and their own recent submissions about what their burden requires. As CSXT shows below, any good-faith engagement with the law and the facts makes the massive competitive harm their merger would cause undeniable.

C. There is abundant evidence UP and NS would foreclose competition by reducing or eliminating shippers' alternatives.

The Board, courts, and economists have long recognized the "myriad" actions a vertically-integrating firm such as UP/NS could take to foreclose competition by worsening its interline alternatives. *Illumina*, 88 F.4th at 1053; *Trinko*, 540 U.S. at 414. Here, these include strategies to "short-haul" interline partners to reduce their revenues and increase their costs (*infra* Part II(E)) and to degrade the joint facilities their rivals rely upon but UP/NS would not (*infra* Part III). CSXT here focuses on the basic mechanism that is the usual focus of Board foreclosure analysis: Increasing interline rate factors and degrading interline service to weaken competitive interline alternatives, and thereby divert traffic to the merged carrier. *CN/EJ&E*, slip op. at 15-16; *CP/KCS*, slip op. at 65-66; *CN/IANR*, slip op. at 9-10. All the real-world evidence in the record—ordinary course documents, deposition testimony, even UP and NS's past testimony—demonstrate that the proposed merger would result in widespread foreclosure. And applying economists' standard tools for assessing these issues confirms that UP/NS would have the incentive and ability to foreclose competition, with deleterious effects on both shippers and the broader rail industry.

1. The documentary and testimonial evidence confirms UP/NS's ability and incentive to foreclose competition.

Modern courts and competition authorities assess the likelihood and effects of foreclosure by "consider[ing] whether the merged firm will have the ability and incentive to foreclose rivals." *Illumina*, 88 F.4th at 1051. *See Merger Guidelines* at 14-15.

Ability to Foreclose. A firm's ability to foreclose is constrained chiefly by customers and rivals switching to independent alternatives in response to foreclosing behavior, so any factors that limit that switching will increase its ability to foreclose. *See*, *e.g.*, *Illumina*, 88 F.4th at 1051 ("Illumina was … the monopoly supplier of a key input."); *Merger Guidelines* at 14 (considering the "Availability of Substitutes" and the "Competitive Significance of the Related Product"). In

the rail context, assessing such ability involves asking whether, in response to worse rates or service on "dependent" interline service (for example, UP-CSXT), shippers could turn to similarly competitive "independent" interline service involving a different carrier (*e.g.*, BNSF-CSXT) rather than to the single-line service the foreclosure seeks to favor (UP/NS). The mere existence of an independent alternative on a segment (non-UP service) is not the issue though. What matters is whether, for any reason, foreclosing behavior would not induce sufficient selection of that alternative to deter such behavior. *See*, *e.g.*, *Dentsply*, 399 F.3d at 193 (independent distribution "pose[d] little threat"); *Microsoft*, 253 F.3d at 70 (rival was "relegated … to more costly and less effective methods" of competing).

UP and NS's documents and testimony confirm they believe they would have the ability to worsen interline alternatives where they have market power over an interline segment:

- UP's Director of Corporate Strategy testified { } its synergy planning reports identified (Ex. 66. UP-STB-D13-0000381 at -385 (Dep. Ex. 26)) consisted in part of {{ }} Ex. 6, M. Houston Dep. Tr. 267:21-268:12. The same document identifies {{t }} Ex. 66, UP-STB-D13-0000381 at -390 (Dep. Ex. 26).
- UP integration planning documents explain that {{ } Ex. 34, UP_0082686 at cell T179 (Dep. Ex. 48); Ex. 19, J. Thomas Dep. Tr. 196:18-22.
- In May 2025, NS's chief strategy officer Michael McClellan asked former CSXT employee Eric Hendrickson, then in NS's strategy department, {

}} Ex. 84, NS_00331509 at -510 (Dep. Ex. 415).

- UP's General Director of Corporate Strategy testified {{

}} Ex. 24, D. Welch Dep. Tr. 155:19-157:24. *See Merger Guidelines* at 14 (ability to foreclose increases "if … alternatives are differentiated in quality, price, or other characteristics").

UP's pricing director illustrates how simple it would be to use prices to direct shippers to UP-NS over UP-CSXT: {{

[

}} Ex. 15, A. Pfeifer Dep. Tr. 389:16-391:19. {{

}} Ex. 2, C. Elkins Dep. Tr. 49:9-50:12. A similar process would play out with essentially every shipper seeking UP service to or from CSXT-NS dual-served locations. And UP has already {{

}} Ex. 12, D. McLaughlin Dep. Tr. 153:8-13; Ex. 57, UP_2757847 at -853 (Dep. Ex. 310).

Likewise, NS's chief strategist explained how little UP would need to do to degrade CSXT's service to the point that CSXT ceased to be a competitive option for many shippers. {{

}} Ex. 11, M. McClellan Dep. Tr. 96:3-17. {{

}} *Id.* at 104:1-104:24. A merged UP would need to undermine

the consistency of UP-CSXT interline service only enough to fall short of these exacting standards to eliminate it as an intermodal option for large IMCs, leaving UP single-line service without rail competition.

The record evidence here thus corroborates UP executives' repeated testimony in past cases that merging rail carriers often have ample ability to raise prices or worsen service on many interline segments in order to divert traffic to its single-line service. UP *CP/KCS* V.S. Rocker-Turner, at 12-17; *Union Pac. R.R. Co.'s Comments*, *V.S. Gray* ("UP *KCS/TexMex* V.S. Gray"), *Kans. City Southern–Control–Kansas City Ry. Co. et al.* (*KCS/TexMex*), FD 34342 (Aug. 4, 2003), at 26-33.

Incentive to Foreclose. A merged carrier has an incentive to foreclose if foreclosing behavior would increase its total profits, accounting for any loss of profits on the dependent interline service (*e.g.*, UP-CSXT), any increase in profits from diversion to the single-line service (UP/NS), and any broader or long-run effects on competition (*e.g.*, weakening competitive constraints against that single-line service). *See*, *e.g.*, *Illumina*, 88 F.4th at 1052-53 (noting Illumina "was willing to suffer losses to [one product's] sales in order to accelerate the growth of [another product's] sales," because it would increase total profits in the long run).

The most obvious immediate source of incentive to foreclose—capturing CSXT's profits on UP-CSXT interline traffic by diverting it to UP/NS single-line service—is amply confirmed here. As Dr. Shehadeh shows, "[o]ver {{ }} of the approximately {{ }} CSXT generates on UP interline traffic is at eastern points where NS operates in the same BEA," making it potentially subject to diversion. V.S. Shehadeh ¶¶ 3, 32 & Fig. 4. Anticompetitive diversion of this traffic is likely to be profitable because CSXT earns significant revenue and contribution margin on this UP-CSXT interline traffic, even where it competes head-to-head against NS and

UP has market power on or sole-serves its segment. *See id.* ¶¶ 72-74; V.S. Higgins ¶¶ 27, 35-36. And this traffic is particularly vulnerable to foreclosure because CSXT and NS are particularly close competitors for many of these interline corridors, so shippers could readily switch between the two if UP made the CSXT interline option worse. V.S. Shehadeh ¶¶ 107, 114-16; V.S. Higgins ¶¶ 7, 11, 28-29, 31-32; V.S. Kenney at 10, 13-14.

Indeed, UP and NS's documentary evidence and deposition testimony here show that using UP's market power to convert CSXT revenues to UP-NS revenues would not only be profitable; it is one of their primary objectives in implementing this merger.

- The report of NS's chief strategist, Michael McClellan, to other senior NS managers of early merger talks with UP's chief strategist reflected that one of the core benefits UP perceived from a merger with NS was that it would provide {{ }}. Ex. 94, NS_STB_00001339 at -339 (Dep. Ex. 413) (emphasis added); Ex. 11, M. McClellan Dep. Tr. at 388:7-390:9.

- Consistent with that focus, UP's General Director of Business Planning testified {{ }} Ex. 19, J. Thomas Dep. Tr. 64:22-65:7.[25]

- As UP's {{ }} analysis documents show, { }}. Ex. 34, UP_0082686, at cell T182 (Dep. Ex. 48); Ex. 19, J. Thomas Dep. Tr. 204:12-205:7. Just the opportunities UP has identified for

[25] As an example, soon after UP entered its merger agreement with NS, it began efforts to {{ }}. Ex. 49, UP_1532212 at -214-215 (Sept. 23, 2025 K. Rocker email to J. Vena { }; Ex. 43, UP 1007320 at -320-321 (Dep. Ex. 579) ({{ }}). *See also* Rocker Dep. Tr. 303:22-312:03.

{{ }} (*i.e.*, CSXT-to-legacy-NS diversion)[26] involving what appear to be UP-sole-served locations or shortlines amount to {{ }}. Ex. 34, UP_0082686 at rows 15, 19, 22-23, 34, 69-71, 123, 131, 145, 181, 234, 240-41, 246, 250, 257-60, 263-65, 267, 271, 281-83, 285, 316, 320, 322.

- Mr. McClellan's {{

}}. Ex. 86, NS 00482221 at -223 (Dep. Ex. 409). NS's subsequent analysis evaluated that {{

}}. Ex. 69, NS_00109906 at -915.

- A September 2025 chat message from UP's General Director of Business Planning described {{ }}. Ex. 56, UP_2191397 at -397 (Dep. Ex. 306).

This recent clear evidence from UP's and NS's own files concerning their plans for this merger confirms UP's executives' sworn testimony that diverting profitable traffic and insulating single-line service from competitive pressure holds the promise of massive anticompetitive profits. UP *CP/KCS* V.S. Rocker-Turner, at 11 ("In shifting traffic to CPKC, allowing the merged carriers to earn additional profits north of the border, CPKC would deprive shippers of efficient UP-KCS service they enjoy today, and allow CPKC to increase its own rail rates to reflect the cost penalties it imposes on UP."); UP *KCS/TexMex* V.S. Gray, at 22-24 (similar).

Behind closed doors, NS's executives are even more explicit that the anticompetitive profits to be made by preventing rivals from accessing markets is a motivation for its mergers and other strategic initiatives.

- In deliberating whether to invest capital to secure permanent exclusive rights to use the Meridian Speedway for key traffic, {{

[26] *See* Ex. 19, J. Thomas Dep. Tr. 64:13-65:18, 110:9-111:2. As of March 26, 2026, {{ }} *See* Ex. 35, UP_0092795 at -799 (Dep. Ex. 45).

}

- As UP considered merger possibilities in early 2025, it highlighted {{ }} Ex. 33, UP_0078115, at -234. At roughly the same time, in January 2025, NS's Chief Strategy Officer advised NS's CEO {{ }}." Ex. 79, NS_00181115 at -116, 119 (Dep. Ex. 234).

- And in parallel to UP-NS merger talks, { }}—in other words, not for the revenue NS would gain from operating those shortlines, but in their value for maintaining its supracompetitive profits on NS's existing {{ }} by preventing rivals from better accessing NS's markets. {{ }}[27] Preempting their {{ }} could serve only to ensure other carriers could not compete more effectively against NS. Ex. 83, NS_00329517 at -518 (Dep. Ex. 414).

These overtly anticompetitive motives confirm common sense: Whatever their economists may say, UP and NS's executives know they stand to gain enormous profits from foreclosing CSXT.

"Trust Us"? UP Senior Vice President of Operations John Turner previously testified to vertically-merging carriers' "undeniable" incentive to foreclose competitors and the "broad and simple" ways they can do so effectively. UP *CP/KCS* V.S. Rocker-Turner, at 11-16. Yet when asked whether UP-NS would be able to do the same after their proposed merger, he answered simply {{

[27] {{ .}}

}} Ex. 22, J. Turner Dep. Tr. 68:11-72:13. Given control over NS's network, UP would have the ability to bring that same pricing focus to a much larger set of shippers.

The reality of course is that businesses have economic incentives and fiduciary duties to maximize profits. UP in particular does so by {{

}} Ex. 15, A. Pfeifer Dep. Tr. 88:2-89:16. It is not credible that UP would cannibalize its long-haul single-line business with shorter interline hauls that earn less profit. It could never reach its aggressive "Revenue Synergy" targets if it did. Indeed, as the Board has explained in the past, failing to act on these clear incentives would violate UP's duties to its investors and shareholders. *BN/SF*, 360 I.C.C. at 936. U.S. competition tribunals do not credit merging parties' statements of intent not to cause competitive harm. *See Fed. Trade Comm'n v. Tapestry, Inc.*, 755 F. Supp. 3d 386, 477-79 (S.D.N.Y. 2024); *Merger Guidelines* at 16-17. *Cf. Union Pac. Corp.–Control–Norfolk S. Corp.* ("*UP/NS*"), Decision 21, FD 36873 (S.T.B. served May 26, 2026), slip op. at 18-21 ("*Decision 21*").

2. The evidence abundantly rebuts the One-Lump Theory.

As explained above, UP's and NS's dismissal of foreclosure concerns resembles and in part relies on the One-Lump Theory, and they point to Dr. Israel's attempt to rehabilitate that theory as the way they substantively "engage" with the Board's foreclosure law. UP-94/NS-93, at 16-17. The Board has explained that, for UP and NS to rely on this categorical position, it must be "shown that a particular bottleneck carrier is already capturing the entire monopoly profit pre-merger." *CP/KCS*, slip op. at 47. The evidence disproves this predicate:

- Consistent with the longstanding regulatory judgments underpinning the 2001 Rules, sole-serving carriers consider *indirect competition* when pricing interline movements, such as build-in/build-out, transloading, geographic competition, product competition, site-selection, and output adjustment. Ex. 19, J. Thomas Dep. Tr. 314:15-317:9 ({{ }}); Ex. 2, C. Elkins Dep. Tr. 192:4-24, 204:2-207:16 ({{ , }}); Ex. 12, D. McLaughlin Dep. Tr. 250:2-251:20 ({{ }}). NS's Chief Marketing Officer explained for example that {{

}}. Ex. 2, C. Elkins Dep. Tr. 204:2-207:16. UP and NS witnesses confirm {{

}} (Ex. 12, D. McLaughlin Dep. Tr. 250:2-251:20).

- Interline service is generally profitable for CSXT (and other carriers) even on traffic over CSXT (or other) dual-served segments and UP (or other) sole-served segments. V.S. Higgins ¶¶ 27, 35-36; V.S. Kenney at 3-5; Ex. 2, C. Elkins Dep. Tr. 199:4-201:11 (NS Chief Marketing Officer explaining {{ }}). These alone are incremental profits UP could earn by diverting traffic on the dual-served segment from CSXT to NS through foreclosure. Ex. 19, J. Thomas Dep. Tr. 64:12-65:7 (UP General Director of Business Planning explaining {{ }}).

- In fact, {{ }}. *E.g.*, Ex. 34, UP_0082686 at rows 15, 19, 22-23, 34, 69-71, 123, 131, 145, 181, 234, 240-41, 246, 250, 257-60, 263-65, 267, 271, 281-83, 285, 316, 320, 322 (Dep. Ex. 48) (listing over 30 identified opportunities totaling {{ }} to achieve "Revenue Synergies" through {{ }} connecting CSXT-served eastern locations with what appear to be UP sole-served facilities or shortlines in the West); *id.* at row 15 (estimating {{ }} from a single such opportunity on a {{ }} lane).

- In the real world, sole-serving carriers do not price interline traffic by calculating the total monopoly price and subtracting their interline partner's break-even cost of participating in the movements. V.S. Higgins ¶¶ 35-36. {{ }} Ex. 2, C. Elkins Dep. Tr. 207:17-208:24. Rather, interline revenue divisions are determined by a multitude of competitive factors on both sides of the move, even where one of the carriers sole-serves its side and the other does not. *Id.* at 200:6-204:14. *See CP/KCS*, slip op. at 59, 59 n.94.

- In the real world, railroads compete on dimensions other than price. *See*, *e.g.*, Ex. 24, D. Welch Dep. Tr. 155:19-158:6; Ex. 6, M. Houston Dep. Tr. 95:13-96:20, 214:2-215:25; Ex. 15, A. Pfeifer Dep. Tr. 45:2-22; Ex. 11, M. McClellan Dep. Tr. 101:22-105:10. The One-

Lump Theory assumes dual-serving carriers have no non-price competitive edge permitting them to retain profits. Elhauge, 123 Harv. L. Rev. at 413 (theory assumes competing producers "always price at cost").

- In the real world, railroads are network businesses for which costs, prices, and profits from carrying traffic on one route are impacted by service on different routes. *See* Ex. 2, C. Elkins Dep. Tr. 73:19-23 (NS CMO explaining: {{ }}); Ex. 2, C. Elkins Dep. Tr. 81:22-82:17 ({{ }}); Ex. 11, M. McClellan Dep. Tr. 181:3-189:8 (NS's chief strategist, Michael McClellan, explaining { }}). The One-Lump Theory simplifies "all the profits possible" to serve interline movements in isolation, but railroads do not in practice cost out and price their traffic independently of network impact.

- In the same vein, rail competition depends on network benefits and density that cause effects on one route to affect the competitiveness of service on another. Ex. 20, Y. Thomas Dep. Tr. 19:20-22:3 (explaining that when problem-solving in his network design and optimization role, { }); Ex. 2, C. Elkins Dep. Tr. 94:1-5 (NS CMO explaining {{ }}). As a result, foreclosure of particular interline traffic can have anticompetitive effects on other traffic. *See* Ex. 11, M. McClellan Dep. Tr. 81:12-82:24 (NS's chief strategist, explaining {{ }}); Ex. 20, Y. Thomas Dep. Tr. 150:8-152:9 ({ }).

3. Standard economic tools eschewed by UP and NS clearly show the likelihood and adverse consequences of foreclosure.

There are many tools economists use to estimate the "relative importance of [the] distinct changes in incentives" a vertical merger would produce, as Dr. Israel has previously described the right analysis. *Israel on Guidelines Lacking Guidance* at 11. *See*, *e.g.*, Steven C. Salop & Daniel P. Culley, *Revising the US vertical merger guidelines: policy issues and an interim guide for practitioners*, 4 J. of Antitrust Enf't 1, 17-25 (April 2016) (explaining typical econometric tools) ("*Salop & Culley*"). They do this by modeling these incentives based on market-specific econometric data. *See Israel on Lessons from AT&T* at 4 (noting factors such as "profit margins

and the intensity of competition for final consumers").[28] Such tools are not crystal balls and of course depend on the quality of the data and any assumptions they rely on. But they are available, and they are the bread and butter of expert economists' analyses of mergers.

UP's and NS's economist Dr. Mark Israel did not use any of the standard econometric tools of vertical merger analysis to examine the facts of this proposed merger.[29] Dr. Ramsey Shehadeh did, in three steps. *See generally* V.S. Shehadeh Part V. First, Dr. Shehadeh determined the opportunities for diversion through foreclosure by identifying the actual traffic at issue and competition to serve that traffic. *See id.* Part V(C). Second, he applied standard economic tools to the specific facts of that traffic to estimate the concrete effects of the proposed merger on competition and shipper welfare. *See id.* Part V(D). Third, he considered the long-term and dynamic impacts of those effects on competition in the rail industry. *See id.* Part VI.

As Dr. Shehadeh demonstrated, the combination of widespread UP market power in the West and close CSXT-NS competition in the East presents the classic fact pattern likely to result

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[28] For example, basic tools such as "vertical arithmetic" use that data to determine roughly whether a merged firm would have more to gain from foreclosure than it would lose. *See* Russell Pittman, *Three Economist's Tools for Antitrust and Merger Analysis: Case Applications*, EAG 21-2, at 25-31 (2021). Tools like "vGUPPI" roughly quantify how this tradeoff affects its prices. *See* Josh Lustig et al., *Econ. Tools for Analyzing Vertical Mergers in Healthcare*, CPI Antitrust Chronicle (2020). More sophisticated tools like "merger simulation" account for both efficiencies and foreclosure effects—precisely what Dr. Israel says is necessary—to approximate the prices and output that would maximize the merged firm's profits post-merger. Salop & Culley, 4 J. of Antitrust Enf't 1, at 20-22; *Merger Guidelines* at 36.

[29] As CSXT has previously detailed, even Dr. Israel's reference to the "Nash bargaining" theory of rate negotiation does not analyze foreclosure, but merely opines that efficiencies would expand the "surplus." *See* CSXT-19, at 23-24; Am. App. Vol. 2, at 270-71 (V.S. Israel at A-2 - A-3). As Dr. Shehadeh shows, an actual bargaining analysis considers changes in (i) the "disagreement profit" that determines maximum and minimum prices, (ii) parties' "bargaining power" that determines how they split the difference, and (iii) "the contracts that are available." V.S. Shehadeh ¶ 51. Dr. Israel's "models" of pre- and post-merger bargaining assume each of these is literally unchanged, and the "bargain" he models assumes the negotiators have already agreed to the jointly "optimal volume" and only bargain over how to split its benefits, which means mathematically that "the Transaction cannot have a welfare effect." *Id.* ¶¶ 49-52.

in foreclosure. He thus identified corridors where CSXT-NS network overlap gives UP the potential to "recapture traffic now moving over UP-CSXT interline service, thereby making foreclosure or raising rivals' costs a plausible and profitable strategy," *id.* ¶¶ 114-16—to {{ }} CSXT revenue home to UP, in UP's own vivid analogy, *supra* at 40. This showed that {{ }} in CSXT revenue—approximately {{ }} of UP-CSXT interline traffic by revenue—is subject to diversion to UP through foreclosure immediately. *Id.* ¶ 116.

To estimate the effects of the proposed merger on this particular traffic, Dr. Shehadeh then developed a merger simulation, a standard tool in merger analysis. Merger simulations like Dr. Shehadeh's are regularly used for this purpose, and federal courts and agencies regularly rely on merger simulations to predict merger effects. *See*, *e.g.*, *United States v. Anthem, Inc.*, 236 F. Supp. 3d 171, 212 (D.D.C. 2017), *aff'd*, 855 F.3d 345 (D.C. Cir. 2017).

In two fundamental ways, Dr. Shehadeh's merger simulation addresses the specific facts of this proposed merger: First, merger simulations analyzes a transaction's net effect by accounting for both the anticompetitive effects of foreclosure and the potentially procompetitive effects of efficiencies.[30] *See* Salop & Culley, 4 J. of Antitrust Enf't 1, at 22; Sheu & Taragin, *Simulating Mergers in a Vertical Supply Chain with Bargaining,* at 2, 26-27 (2018). Because merger simulations estimate a merger's net effect, parties to vertical mergers often present such simulations to demonstrate that foreclosure incentives are small relative to efficiencies, preventing anticompetitive harm, *i.e.*, where the results are favorable to the merging parties. *See In the Matter of Comcast Corp. & Gen. Elec. Co.*, Mem. Op. & Order, MB Docket No. 10-56 (F.C.C. Jan. 18,

[30] This is precisely what Dr. Israel has previously said is necessary to assess vertical merger effects (*supra* Part II(A)(2)), and what Dr. Shehadeh does. *See* V.S. Shehadeh ¶¶ 110-11, 123.

2011) ("FCC *Comcast/NBCU* Order"), ¶¶ 59-64. Thus, it is telling that Dr. Israel presented no such analysis here.[31]

Second, merger simulation addresses a particular transaction's specific facts by incorporating economic characteristics and using econometric data from the industry and markets at issue. As Dr. Shehadeh explains, he incorporated industry-specific features such as strategic pricing, demand responsiveness, modal diversions, economies of scale and density, competitive repositioning, and short-hauling. *See* V.S. Shehadeh ¶¶ 110-11. He then calibrated the model with real-world data on prices, volumes, non-rail volumes, costs, profits, and margins from industry sources such as traffic tapes, Transearch data, URCS costing, R-1 filings, and quarterly RE&I filings. *See id.* ¶¶ 117-18 & Appx. E. Incorporating this real-world data accounted, among other facts, for the competitive effects of independent alternatives like BNSF-CSXT interline options that are critical to the assessment of foreclosure. *See id.* ¶¶ 126-27 (finding effects differ for distinct traffic depending on constraints from such alternatives). He then applied the model to the specific combination of UP's and NS's operations to estimate its fact- and transaction-specific effects on traffic flows, railroad profits, and shipper welfare, both overall and at the level of particular commodity groups and corridors. *See id.* ¶¶ 119-27. Dr. Israel's categorical conclusions about foreclosure did not incorporate these industry features, econometric data, or transaction-specific facts, in favor of theoretical algebra that reaches the same result no matter what data is used. *See supra* Part III(A)(2)-(3).

The results of Dr. Shehadeh's merger simulation are telling, indicating that a combined UP/NS would raise interline rates such that total movement rates on UP-CSXT and BNSF-NS

[31] In fact, Dr. Israel does use a similar model in his analysis, but only to quantify supposed benefits of the CGP mechanism. *See* V.S. Shehadeh ¶¶ 187-95.

interline movements would increase {{ }}, with {{ }} experiencing the highest interline rate increases. V.S. Shehadeh ¶ 120 & Table 4. Traffic on corridors in which CSXT operates would fall by {{ s}}. *Id.* In the near term, this would reduce CSXT's annual revenue by {{ }}, {{ }} *Id.* ¶ 121 & Table 5. Further, it would decrease CSXT's annual gross profits by {{ }} *Id.* ¶¶ 14, 121.

This harm would not simply be to CSXT, but to shippers and competition industrywide. Shippers that rely on CSXT, particularly in corridors where CSXT interlines with UP, would be directly harmed through higher rates, reduced output, and diminished competitive alternatives, and CSXT's loss of traffic density and increased system-level costs would in turn weaken the competitive constraint CSXT provides in other corridors, harming shippers throughout the network. *Id.* ¶¶ 14, 128. Just in the near term, total industry output would fall by {{ }}. *Id.* ¶¶ 13, 120 & Table 4.

D. UP and NS's open gateway commitment would be utterly inadequate to permanently preserve interline competition.

UP and NS argue summarily that, even if their proposed merger would give them overwhelming power and incentives to foreclose competition, their proposed open gateway conditions would prevent them from exercising that power. *See* Am. App. Vol. 1, at 52, 91; UP-94/NS-93, at 18-21. This is another affirmative factual claim for which UP and NS bear the burden of proof. On the merits, the Board must find that UP and NS have shown the conditions proposed would be "effective … to keep open major existing gateways" (*2001 Rules*, 5 S.T.B. at 563) and "sufficient … to ensure that a transaction is truly in the public interest" (*id.* at 569).

That is why the Board should require UP and NS to prove convincingly that their proposed gateway condition "w[ould] completely cure the anticompetitive harm" and "c[ould] be enforced effectively" without permanently "entangl[ing]" the Board in regulatory oversight of the basic operation of the market. U.S. Dep't of Justice, Antitrust Div., *DOJ Merger Remedies Manual*, at 13, 16 (2020).

1. UP's and NS's reliance on *CP/KCS* rewrites a fact-specific analysis conducted under a different standard as categorical law here.

UP and NS purport to have met their burden to show the effectiveness of their open gateway proposal, not through evidence, but through reliance on the Board's prior determination in *CP/KCS* that "standard" open gateway conditions are "robust and readily enforceable" means to preserve competition. UP-94/NS-93, at 18, 21 (citation omitted) (arguing "[t]hat fact alone" carries their burden). They also contend that the Board may not lawfully distinguish the effectiveness of a condition in one transaction from another unless it can point to "particularized" evidence of how differences between the two "would impact [its] efficacy." *Id.* at 20, 20 n.14. UP and NS's argument misunderstands the principles that guide the Board's analysis of conditions.

As the Board explained, the standards applicable in *CP/KCS*—but not here[32]—prohibited it from imposing conditions unless it made specific factual findings that the transaction "may produce harmful effects" and that the conditions' reduction of that harm would "outweigh[] any reduction to the public benefits produced by the merger." *CP/KCS*, slip op. at 20 (citation omitted). Any condition it adopted had to be "narrowly tailored to remedy the harm it is intended to address." *Id.* at 21 (for example, by being "confined to restoring" lost rail options). Applying these

[32] In contrast to *CP/KCS*, there is no presumption against conditions being applied here, *see* 49 C.F.R. §§ 1180.1(c)(2)(i), 1180.1(d), and conditions need not "only provide a specific fix to a specific problem." *2001 Rules,* 5 S.T.B. at 555.

standards, the Board found the evidentiary record there showed that "meaningful competitive pressures" would continue to prevent foreclosure at the lone affected gateway, which made competitive harm "speculative." *CP/KCS*, slip op. at 53-54. For these reasons it repeatedly called the open gateway condition a "safeguard[]" and "backstop" for a generally pro-competitive transaction. *Id.* at 54, 57, 64, 68. But that conclusion is not precedent that the conditions it adopted in that case are generally effective at preventing foreclosure in any transaction, much less a major transcontinental merger that would affect all mid-continent gateways at once.[33]

The reasoning that drove the Board's decision in *CP/KCS* does not apply here. The *CP/KCS* transaction, like most end-to-end mergers the Board has assessed, in practice concerned a single gateway (Laredo). Whether shippers could effectively turn to competitors using alternative gateways (Eagle Pass and El Paso) was a factual question the Board resolved in favor of CPKC. *See id.* at 49, 51-55; UP-94/NS-93, at 20 n.14 (citations omitted) ("[T]he 'meaningful competitive pressures' quote is actually from the Board's examination of the Laredo gateway and cross-border traffic in particular."). But here, if UP and NS foreclose competition at affected gateways, competitors could not provide meaningful competitive pressures for east-west rail traffic

[33] The same was true in *CSXT/PanAm*. The primary competitive issue was not whether CSXT's open gateway commitment would prevent foreclosure of the PAR system but whether the operator of the parallel PAS JV would have sufficiently independent incentives not to. *See*, *e.g.*, Hrg. Tr. (Jan. 14, 2022), *CSX Corp.—Control—Pan Am Sys., Inc.*, FD 36472 (S.T.B. served Mar. 16, 2022), at 761-67. With the structural condition of independent operation of PAS and PAS gateways, the only plausibly foreclosed carrier (NS) supported the merger, and other commenters disclaimed foreclosure concerns regarding PAR because PAS independence ensured their own long-haul routings parallel to CSXT's had alternative means of access. *See id.*; *id.* at 579-82, 595 (CP arguing the issues were primarily "horizontal" and surrounded PAS independence); Br. of Norfolk S. Ry. Co., *CSX Corp.—Control—Pan Am Sys., Inc.*, FD 36472 (S.T.B. Jan. 3, 2022). The Open Gateway condition was again a backstop to a generally procompetitive transaction, and one all parties found far less significant than the structural condition of independent PAS operation.

over unaffected gateways because no unaffected gateways would exist, depriving shippers of the ability to turn to such alternatives. These are the stakes here.

2. UP and NS offer no affirmative evidence that their open gateway commitment would actually prevent foreclosure in this case.

UP and NS offer no evidence whatsoever that their open gateways proposal would in fact be effective. Their impact analysis and traffic study explicitly declines to provide this evidence despite it being fundamental to their burden of proof. Am. App. Vol. 2, at 585-86 (V.S. Hunt at 198-99 n.217). Their sponsoring witness testifies he "understand[s]" the open gateways commitment to be a "competition-preserving" measure. *Id.* Their horizontal competition expert performed no economic analysis of whether this or any other UP/NS commitment would be effective at preserving competition. Ex. 1, Bailey Dep. Tr. 234:14-243:18. Their vertical competition expert opines only that simply offering this commitment—which they were required by law to do—demonstrates their "intention" not to foreclose. Am. App. Vol. 2, at 224-25 (V.S. Israel ¶¶ 90-92). Such "understandings" and "intentions" cannot meet UP and NS's burden. *Decision 21*, slip op. at 18.

As CSXT explained in its motion for summary denial, UP and NS's failure to present any evidentiary support is especially revealing because their conclusory assertions diametrically reverse their position and testimony in *CP/KCS*. CSXT-19, at 27 n.18. Kenny Rocker's description of the conditions UP and NS now propose as "robust and readily enforceable" is impossible to credit when he previously called the same basic proposal "illusory and unenforceable." *Compare* Am. App. Vol. 1, at 348 (V.S. Rocker-Elkins ¶ 163), *with* UP *CP/KCS* V.S. Rocker-Turner, at 17-20. UP and NS have attempted to rehabilitate Mr. Rocker's credibility by claiming he changed his mind once the condition "was significantly expanded … over the course of the proceeding and … in the Board's final decision," but this is directly contradicted by

the record. UP-94/NS-93, at 20-21. In fact, UP continued to call the "last-minute" expansion of the condition "entirely illusory" and "the same as no promise at all" in its final brief, specifying the exact reasons Mr. Rocker had previously given. UP *CP/KCS* Br. 14-15.[34]

3. All factual and economic evidence demonstrates UP and NS's open gateway conditions would fail to prevent foreclosure.

UP and NS's proposal to establish a "commercially reasonable" conduct standard enforceable through arbitration raises concerns about the effectiveness of this condition. Under certain circumstances, "structural" remedies such as divestiture and trackage rights can be "'simple, relatively easy to administer, and sure' to preserve competition." *Merger Remedies Manual,* at 4. By contrast, a "reasonable" conduct standard enforced by arbitration is a behavioral remedy that would attempt to override economic incentives with rules that "regulate the merged firm's post-merger business conduct or pricing authority" in ways contrary to its interests as a competitor. *Id. Cf.* 49 U.S.C. §§ 10101(1)-(2) (prioritizing competition over regulation). UP and NS make no effort to prove that this remedy would be effective here.

Indeed, the evidence in the record confirms UP and NS's proposed commitments would not effectively prevent the widespread foreclosure the proposed merger would produce. First, it is especially important in the context of such a transformational merger that any behavioral standard

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[34] In fact, Mr. Rocker explained in his deposition that he never changed his mind about the effectiveness of the {{ }} *See generally* Ex. 17*, K. Rocker* Dep. Tr. 262:21-265:7, 267:17-269:21. Specifically, he explained that {{ } *Id.* at 268:15-269:16. Thus, according to Mr. Rocker—but not otherwise shown in any traffic analysis or other evidence submitted by UP—what preserved UP as a competitive option for certain shippers was not the condition to keep the Laredo Gateway open but UP's use of Eagle Pass as {{ }} to the otherwise foreclosed Laredo gateway. *Id.* at 266:3-19. Notably, Mr. Rocker also admitted { }} *Id.* at 269:5-270:3.

is clear enough to be reliably enforceable. But the "commercially reasonable" standard of pricing and service is not defined or definable. V.S. Higgins at ¶¶ 64-65. So nebulous a standard cannot "disincentivize behavior that diminishes … competiti[on]," because UP and NS can easily evade a behavioral condition when shippers cannot even *determine* their rights, much less enforce them. V.S. Shehadeh ¶ 170; V.S. Higgins ¶ 65; Ex. 8, M. Israel Dep. Tr. 85:14-87:17 (no way to determine whether price increase is commercially unreasonable without considering "what's going on around it" such as "cost factors and so on"). As UP has explained, any remedy premised on such a standard is "illusory and unenforceable." UP *CP/KCS* V.S. Rocker-Turner, at 19. Moreover, such an open-ended standard, particularly one encompassing the many market factors affecting a given interline rate (*CP/KCS*, slip op. at 59 n.93, 60 n.97), would surely result in the type of costly and time-consuming enforcement proceedings the Board has sought for decades to streamline as a potential barrier to meritorious claims. *See*, *e.g.*, *Market Dominance Determs.—Prod. and Geog. Competition*, 3 S.T.B. 937, 941-49 (1998).

Second, a behavioral standard must fully prevent competitive harm to be effective, but even "commercially reasonable" conduct can foreclose competition. Rate reasonableness standards prevent the exploitation of shippers when competition fails to do so; an anti-foreclosure standard must prevent the exclusion of those shippers' alternatives from competition. *Cf.* 49 U.S.C. § 10101(1). Nothing stops UP/NS from raising interline rates to levels that may be viewed as "commercially reasonable" but uncompetitive enough that they divert substantial interline traffic to their single-line service and thereby enhance UP/NS's profits. V.S. Shehadeh ¶¶ 169, 171; Ex. 17, K. Rocker Dep. Tr. 265:8-267:7 (UP's contracts do not call for rates that are "commercially reasonable," and it focuses pricing on being "competitive, market competitive"); *see* UP *CP/KCS* V.S. Rocker-Turner, at 19-23. As UP has explained, the standard itself is too vague to ensure the

preservation of a competitively viable routing in the face of a merged carrier's strong incentives to force shippers to use single-line routings. UP *KCS/TexMex* V.S. Gray, at 41-42. Dr. Israel envisioned the condition as a form of constant "STB oversight" by which the Board would "step in" to evaluate costs and other factors. Ex. 8, M. Israel Dep. Tr. 304:24-307:07.

Third, a behavioral condition must be enforceable enough to deter or readily reverse its violation. But UP and NS's proposal includes no meaningful remedy when "unreasonable" conduct forecloses competition. Anticompetitive rates and service are extremely difficult to identify, particularly for shippers, because many shifting factors can affect them. *See* UP *CP/KCS* V.S. Rocker-Turner, at 10; Ex. 17, K. Rocker Dep. Tr. 267:8-16 (acknowledging railroads and shippers operating in good faith may disagree about whether a particular rate is "appropriate in light of market circumstances"). Dr. Israel thus recognized that actually disputing interline rate increases would resemble "quite expensive" rate reasonableness cases. Ex. 8, M. Israel Dep. Tr. 307:9-309:14. The cost and delay of obtaining a more competitive interline rate through that process would be factors worsening the interline alternative and raising shippers' costs to use it. V.S. Higgins ¶¶ 66-70. Worse, the nebulous standard would raise those costs further and make success uncertain, making relief a poor bet against the legal costs of arbitrating. *Id.* ¶ 65. And even if the shipper prevailed, that relief would not be "reasonable" rates or service—arbitrators would be forbidden from prescribing them—just a new round of negotiations. *Id.* ¶ 71.

Little wonder, then, that no shipper has ever enforced its rights under the *CP/KCS* open gateway condition. In view of the dilemma arbitration presents a shipper—accept a bad but perhaps tolerable single-line rate or undertake costly, time-consuming arbitration to marginally improve the interline alternative (*id.* ¶¶ 67-71)—it seems clear that the condition would provide little practical protection.

Fourth, there is substantial evidence that the open gateway commitments UP and NS propose were in fact unable to prevent foreclosure at Laredo and that the factor the Board recognized to be capable of preventing foreclosure there—potential alternative gateways—is precisely what is absent here. UP now admits {{

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Ex. 17, K. Rocker Dep. Tr. 267:17-271:6. The Board in *CP/KCS* reasoned that BNSF's similar exclusion from Laredo gateway traffic did not necessarily evidence actual foreclosure in part because competitors could have turned to the Eagle Pass and El Paso gateways as alternatives. Indeed, the Board reasoned specifically that evidence including BNSF's increase in Eagle Pass traffic after *KCS/TexMex* showed these alternative gateways had provided "meaningful competitive pressures" preventing foreclosure at Laredo. *CP/KCS*, slip op. at 48-49, 53-54.[35]

But that reasoning cannot apply here, because alternative gateways providing "meaningful competitive pressures" are exactly what is absent. UP/NS would combine at every East-West U.S. gateway; if UP would have the power and profit motive to worsen CSXT interline alternatives at St. Louis, there is no reason it would not do the same at Chicago and Memphis, too. And even if CSXT could adapt by moving other traffic, somewhere else, that is not the issue. The condition needs to protect competition, not competitors.[36] While UP could reallocate its own resources to

[35] This is precisely what UP's witness Kenny Rocker testified to: {{

}} *See* Ex. 17, K. Rocker Dep. Tr. 268:8-271:11. Thus, for that subset of traffic, UP's reduction in competitive access at {

} *Id.*

[36] This is another way UP misdirects the issue. Mr. Rocker {{

})

mitigate its losses at Laredo after *CP/KCS*, its witness confirms it did so by {{

}}. *See* Ex. 17, K. Rocker Dep. Tr. 268:8-271:11. The shippers in markets over Laredo lost UP as an effective alternative despite the open gateway condition, just as interline shippers would lose CSXT (and BNSF) as an effective option here. The condition did not protect competition.

E. UP/NS would weaponize short-hauling to eliminate rail competition.

Another foreclosure mechanism of particular concern here is that UP/NS would "short haul" CSXT on transcontinental interline movements. Rather than continuing to interchange traffic at traditional gateways (*e.g.*, Chicago, St. Louis, Memphis, and New Orleans), UP/NS could nominally keep those gateways "open," but induce or pressure shippers to route their interchange points deep into the East, to a location much nearer the ultimate customer on CSXT's network. The anticompetitive result would manifest through significantly reduced revenue and contribution for CSXT, lower traffic density, higher costs per mile, shrinking ability to invest, and diminished CSXT competitiveness on both interline and local traffic. V.S. Carey at 97-103, 106; V.S. Shehadeh ¶¶ 14, 129-33.

"Short-hauling" occurs when a connecting carrier is displaced from the long-distance segment of an interline movement and relegated to a much shorter portion of the same haul. This displacement carries serious economic consequences. Shorter hauls reduce the revenue available to cover origination, termination, interchange, and shared network costs that do not fall proportionately with mileage. V.S. Carey at 97-98; V.S. Shehadeh ¶¶ 40–41. Short hauling also increases movement-specific costs, including raising crew, locomotive, and switching costs per car. V.S. Carey at 99–101. The result is higher costs per mile and sharply reduced contribution margins. *Id.* at 100-08; V.S. Higgins ¶¶ 37-40, 44-47.

If the transaction were to be approved, UP/NS would have both the incentive and the practical ability to execute short-hauling at scale. Because the physical overlap between the NS and CSXT networks is pervasive, UP's acquisition of NS would substantially multiply the avenues through which a short-haul could be engineered. V.S. Carey at 94-97. UP/NS could achieve this result by structuring rates and service quality so that shippers have no real rational economic choice but to select the short-haul route. UP/NS could raise its interline rate factor to mid-continent gateways and then offer a lower per-mile rate for a deeper-East interchange, inducing shippers to select the routing that short-hauls CSXT. V.S. Higgins ¶¶ 42-43; V.S. Shehadeh ¶ 171. While some shippers may be attracted in the short run, the payoff would be illusory: the impact on CSXT of being systematically short-hauled is that its costs rise, and cannot be fully recaptured by raising rates on its shortened hauls. That in turn reduces CSXT's competitiveness against UP/NS, leading inexorably to UP/NS's ability to raise rates as competitive pressure abates. Many shippers thus recognize that the long-run impact is anticompetitive: as traffic diverts from legacy gateways, UP/NS would face less competitive pressure and have the leeway to increase rates over time. V.S. Higgins ¶¶ 31-33, 44-47; V.S. Carey at 93, 102-107; *Joint Shipper Associations' Motion for Summary Denial* (ACC-6 / ACD-6 / AFPM-6 / NITL-3 / TFI-6), *UP/NS*, FD 36873 (Aug. 6, 2026), at 44-45 ("The more traffic that [UP and NS] divert, the greater the harm to the other railroads, especially CSX and BNSF, their customers, and the national rail network.")

1. Short-hauling would fundamentally undermine CSXT's ability to remain competitive.

The economic consequences of forced short-hauling are real. UP/NS's ability to compress CSXT's route miles on interline movements would translate into revenue losses and a deterioration of CSXT's cost structure, and would weaken the competitive constraint CSXT can provide on both

interline and regional traffic.[37] UP and NS's own witnesses and documents recognize this dynamic. *See, e.g.*, Ex. 41, UP_0941173 ({{

}}); Ex. 4, M. George Dep. Tr. 125:10-20 ({{ }}).

As explained in further detail in Ms. Carey's Verified Statement, short-hauling of CSXT's joint line traffic would result in a material reduction in CSXT's revenues. For CSXT's sole-served locations, Ms. Carey's analysis indicates that the reduction in CSXT's linehaul would strip away approximately {{ }} of the revenue miles on those movements, with total revenue losses potentially reaching {{ }}.[38] V.S. Carey at 96–99.

Beyond direct revenue loss, such short-hauling would structurally distort CSXT's cost economics in a way that would make it a progressively less viable competitive option for shippers. And that adverse competitive impact would extend to both interline and local traffic. Origination, termination, and interchange costs would remain spread over fewer miles, while UP/NS would capture more of the linehaul contribution. *Id.* at 102-04; V.S. Shehadeh ¶¶ 40–41. Carey estimates total costs rising from roughly {{ }} to {{ }} per car-mile, with non-linehaul costs increasing from {{ }} to {{ }} of total costs per car. V.S. Carey at 100-01. Higher costs and lower density would further erode CSXT's ability to compete for remaining traffic. *Id.* at 102-03, 106-07, 130–33.

[37] Although this section focuses on impacts on CSXT, a combined UP/NS would have the same incentive and ability to short-haul BNSF, shifting interchange points for BNSF-NS interline traffic further into the West. As a result of short-hauling, both CSXT and BNSF's ability to provide a competitive alternative for the combined UP/NS would deteriorate significantly, including on intra-region single-line moves. V.S. Carey at 103-08, 129-33.

[38] Ms. Carey's Verified Statement also details the potential for UP/NS to short-haul CSXT for some customers that are dual-served by NS and CSXT. V.S. Carey at 103-07.

More than {{ }} in CSXT traffic by revenue is at risk from forced short-hauling, with {{ }} in combined lost contribution and additional cost burdens. *Id.* at 108. These figures represent more than a set of adverse financial outcomes on individual traffic lanes. At this scale, the harm would undermine CSXT's capacity to maintain the network investment, service quality, and competitive presence it needs to function as an effective counterweight to a combined UP/NS, for both east-west interline traffic and for local eastern traffic. *Id.* at 106.

These compounding, long-run effects would have major consequences for CSXT and its shippers. The degree to which CSXT acts as a competitive check on NS for eastern local traffic, and on UP/NS for east-west interline traffic, would deteriorate over time, further weakening the constraint on UP/NS's rates and incentives for UP/NS to innovate and operate efficiently. And in the long run, reduced density and contribution would limit CSXT's ability to make strategic investments in its competitiveness, and make it difficult to continue operating the same frequency and quality of service in the same corridors at the same rates. V.S. Carey at 130-39; V.S. Shehadeh ¶¶ 130–40; V.S. Kenney at 4-5.[39]

[39] These concerns about the anticompetitive impacts of systematic short-hauling of CSXT by UP/NS are also relevant to the Board's ongoing consideration of potential changes to 49 C.F.R. Part 1144. As CSXT noted in its Reply Comments in EP 788, a complete repeal of Part 1144, without appropriate guardrails that are consistent with Congress' broader statutory framework, would { }. *CSXT's Reply Comments*, *Eliminating Regulatory Barriers to Competition: Review of Part 1144*, EP 788 (April 24, 2026) at 7. The Board should therefore consider the unintended downstream implications of approval here and repeal of Part 1144: In a post-approval environment, regulated access remedies would not operate neutrally across the industry—particularly without an anticompetitive conduct filter or equivalent limiting principle. Non-merging carriers would suddenly face a competitive environment shaped by both the changed incentives of a dominant transcontinental UP/NS and relaxed standards for compelled access. UP/NS's scale, network reach, market power, and a broader regulated-access regime would give it the practical ability to target traffic where competing carriers are most exposed. A merged UP/NS could induce customers to seek prescriptions that move gateways, short-haul competing carriers, and divert traffic using the Board's authorities, including in particular 49 U.S.C. § 10705.

2. Standard merger conditions are insufficient to constrain anticompetitive short-hauling.

UP and NS's open gateway commitment would not prevent a combined UP/NS from using its market power to induce or pressure shippers to contract for different interchange points deeper in the East. Shippers would retain the formal ability to select gateways—meaning the gateways could theoretically remain open—but UP/NS could make the legacy mid-continent interchange economically unattractive through differential pricing or service for its western portion of the move. The Board has itself rejected the solution of "freezing gateways" as having anticompetitive consequences, expressing a preference for operational flexibility. *CN/EJ&E*, slip op. at 15-16. The Board has also declined to regulate interline rates or service to gateways for use by connecting carriers. CSXT therefore could not rely on conditions that protect its historic long-hauls or impose rate regulation as structural protection against short-hauling. In sum, the standard open gateway commitment does not provide CSXT meaningful protection. The scale and economic precision with which UP/NS could execute systematic short-hauling would place competitive harm well beyond the reach of existing legal and regulatory protections. Far from preserving competition, the cascading impacts would threaten the sustainability of the rail network as a whole.

F. The Gulf Coast chemical sector: a case study of the proposed merger's threat to competition and shippers in action.

The Gulf Coast is the epicenter of U.S. petrochemical and refinery production and among the most strategically significant rail corridors in the nation. V.S. Daniels ¶¶ 60-63; V.S. Carey at 117–19. The Gulf Coast and the rail corridors that transport these critical products to the East illustrate the proposed merger's competitive harm, including UP/NS's capacity to entrench its

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}, to the detriment of both interline and local rail competition, and the maintenance and improvement of the U.S. rail network.

existing dominant position and foreclose rival carriers, leaving shippers with diminished competitive options.

Gulf Coast chemical shippers often depend heavily on rail. Large volumes, specialized loading facilities, and rail-oriented plant infrastructure make switching modes costly or impractical. V.S. Daniels ¶ 62; V.S. Higgins ¶¶ 50-53; V.S. Carey at 119. Storage-in-transit (SIT) facilities also allow loaded cars to serve as inventory between continuous production and uneven customer demand. V.S. Daniels ¶ 74; V.S. Higgins ¶ 53.

1. The merger would amplify UP's existing Gulf Coast advantages and reduce eastern competitive options.

UP already holds a strong position in the Gulf Coast, built over decades of consolidation, which the proposed merger would further strengthen. V.S. Daniels ¶¶ 64, 66, 82; V.S. Higgins ¶¶ 50-53.

In the 1980s, UP went from having no rail presence along the Gulf Coast to acquiring the Missouri Pacific (and Western Pacific) railroads and subsequently the Missouri-Kansas-Texas Railroad. V.S. Daniels ¶ 69. The 1996 UP/SP merger, the most recent of several UP's acquisitions of railroads with significant Gulf Coast networks, was the pivotal event in establishing its entrenched position there. *Id.* at ¶ 69. That transaction transferred to UP a critical mass of track, terminal, and corridor assets across the region, including key routes connecting the Texas and Louisiana chemical production centers to the broader national network. *Id.* at ¶¶ 69-71, 73, 75.

In the three decades since the UP/SP merger, UP has compounded its inherited advantages, deepening the gap between its Gulf Coast chemicals network and those of its rivals. UP operates multiple classification yards serving the region, maintains dedicated SIT yard capacity at key points along the Gulf corridor, and has important routing and customer-access advantages over its

rivals. UP also has shorter, faster routes than BNSF to important eastern interchange gateways. V.S. Daniels ¶¶ 73–76; V.S. Higgins ¶¶ 55-57; V.S. Carey at 119-20.

For the chemical products that largely originate on the Gulf Coast, UP originates {{ }} of traffic moves involving eastern U.S. customers. V.S. Carey at 119-20. UP controls most of the traffic from the largest market (Houston, {{ }}]) and also carries a significant advantage ({{ }}) on the South Texas coast, including Corpus Christi, Lake Comfort, and Freeport, {{ }} in Lake Charles, and {{ }} in the Baton Rouge-New Orleans corridor. V.S. Daniels at ¶ 64. UP recognizes its competitive advantage over its {{ }} and actively seeks to protect it.[40]

Although it obtained trackage rights in connection with the UP/SP merger, BNSF remains dependent on UP for essential elements of Gulf Coast service. V.S. Daniels at ¶¶ 76-77. UP's control of critical infrastructure, switching, and dispatching, combined with superior storage capabilities and routing, gives UP advantages in service quality and operational flexibility that contractual access cannot replicate. *Id.* at ¶¶ 70, 72. Nor can BNSF realistically overcome these

[40] An internal UP presentation titled {{ } Ex. 39, UP 0703627 at -627, -629, -632 (Dep. Ex. 580) {{ }}); *see also* Ex. 16, J. Pincock Dep. Tr. 349:21-350:12 ({{ }}); Ex. 40, UP 0867519 at -520 ({{ }}). UP's own executives have agreed that UP {{ }} Ex. 12, D. McLaughlin Dep. Tr. 196:23-197:2.

disadvantages by building a comparable network: the costs, development constraints, and time required make independent replication commercially impracticable. *Id.* ¶¶ 82.[41]

2. The merger would enhance UP's ability to exclude competitors and disadvantage shippers in the Gulf.

Giving UP control of NS would significantly strengthen UP's existing Gulf Coast position and furnish the combined UP/NS with new and substantially more powerful mechanisms to foreclose competition and harm shippers. V.S. Daniels ¶¶ 66-67; V.S. Carey at 122–29.

Foreclosure of Gulf Coast traffic. One of the primary competitive threats posed by the proposed transaction is the loss of competitive alternatives to UP and NS for traffic moving in or out of the Gulf region. For example, today, chemical shippers originating traffic on UP's Gulf network who need to move product to or from eastern locations benefit from competition between CSXT and NS for the eastern leg of the move. If the transaction were approved, that competition would be impaired: UP/NS would have both the incentive and the ability to foreclose CSXT and direct Gulf interline traffic onto its own single-line NS routing, denying shippers access to the competition that they benefit from today. UP/NS could accomplish this through a variety of mechanisms, worsening rates or service for the UP-CSXT interline alternative, as discussed above in Part II(A)-(C). The Gulf Coast is particularly susceptible to this foreclosure dynamic because

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[41] UP and NS's own executives have acknowledged this competitive advantage over BNSF. *See* Ex. 2, C. Elkins Dep. Tr. 186:4-188:8 {{

}}; *see also* Ex. 4, M. George Dep. Tr. 113:2-114:7; Ex. 70, NS 00119427 at -436 (Dep. Ex. 212) {{

)}}; Ex. 73, NS 00125869 at -869 (July 14, 2025 message from David Lehlbach to Michael McClellan, {{

}. Ex. 12, D. McLaughlin Dep. Tr. 196:23-197:2.

of the high proportion of traffic that originates on UP's network, meaning UP/NS would control the origin of a disproportionate share of high-margin chemical moves and could therefore dictate routing terms to shippers. V.S. Carey at 122–29; V.S. Daniels ¶¶ 63-67.

Enhanced bundling leverage. Bundling, or "portfolio pricing," occurs when a railroad provides a shipper lower rates (in particular on their sole-served facilities) than it would otherwise charge, in exchange for the shipper's commitment to also contract with that railroad for its competitive, dual-served traffic.[42] While bundling can often be pro-competitive (where shippers derive genuine and lasting benefits from multi-route contracting), giving UP control of NS would dramatically increase its combined network footprint, the number of sole-served locations the combined entity would serve, and its resulting influence over multi-location shippers. That expansion of market power would give UP/NS substantially greater leverage to condition shippers' pricing for locations sole-served by UP/NS, pressuring them to direct their dual-served traffic to UP/NS even where a competing carrier would otherwise win that traffic on the merits. V.S. Carey at 109–17, 124–28.

This is not a theoretical concern. UP has already acknowledged in its internal documents that, post-merger, it intends to leverage its enhanced bundling power to convert CSXT interline business to UP/NS single-line service.[43]

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[42] Such bundling can occur not only across locations, but across commodities as well. *See*, *e.g.*, Ex. 45, UP_1117523 ({{

}}); *id.* at -524 ({{

}}).

[43] In a post-merger planning spreadsheet, UP detailed its intent to leverage existing UP customer relationships to convert {{ .}} Ex. 34, UP 0082686 (Dep. Ex. 48). In the context of a specific customer, the document states that {{

} *Id.* at cell T179, T180; *see also* Ex. 12, D. McLaughlin Dep. Tr.

As detailed further in Ms. Carey's Verified Statement, the Gulf Coast chemical sector illustrates precisely how this bundling dynamic would operate. The region contains a high concentration of chemical facilities that are solely served by UP. NS's legacy network provides complementary access to distribution and end-use facilities in the eastern United States. If the transaction were approved, UP/NS would be positioned to offer bundled pricing contracts that tie rates at sole-served Gulf facilities to commitments directing competitive eastern traffic exclusively to UP/NS. This ability would extend beyond new single-line lanes and would encompass intra-eastern lanes on which CSXT competes with NS today. V.S. Carey at 109–17, 124–128; V.S. Higgins ¶ 60.

Shippers would face significant pressure to accept such arrangements, including through UP retaliation in the form of high rates, even where doing so displaces CSXT from lanes it would otherwise win on the merits. CSXT would be foreclosed from competitive eastern movements not because it failed to offer superior rates or service, but because UP/NS leveraged its sole-served position in the Gulf Coast and its dramatically expanded network to extract system-wide commercial commitments. This dynamic would amplify UP's existing Gulf Coast advantage and reduce eastern competitive options, eliminating competition at locations where shippers today benefit from it. V.S. Carey at 112–17, 124–28; V.S. Higgins ¶¶ 25-26, 60-61. As UP's CEO has previously suggested, UP/NS will be able to dictate terms to shippers, and would continue to interline with CSXT only where UP/NS has no competitive service of its own.[44] For these reasons, chemicals shippers in the Gulf Coast region are particularly threatened by the proposed merger.

251:22-254:2, 257:15-258:16 ({{

}}).

[44] Jeff Stagl, *Vena off script at IANA: Entertaining, engaging and revealing*, Progressive Railroading (Sep. 18, 2026), https://www.progressiverailroading.com/RailPrime/Details/Vena-

G. The combination of UP/NS would result in very high shares and increased market power in significant traffic corridors.

In addition to the serious issues of vertical foreclosure, the Board also considers a merger's impact on various forms of horizontal competition. The Board's 2001 Merger Rules reflect concerns about the loss of horizontal competition not only when the merging railroads serve the same origins and destinations, but also, importantly, when there are broader effects on competition in specific "product and geographic markets." 49 C.F.R. § 1180.1(c)(2)(i). The Board has noted that "any railroad combination entails a risk that the merged carrier would acquire and exploit increased market power," and made clear that these include potential anticompetitive effects resulting from "end-to-end mergers." *Id.* As laid out above in Part II(C)(1), UP already wields its current market power to raise price more aggressively than the other Class I railroads. The Board is being asked to amplify that power by giving UP control of NS's large eastern network, resulting in unparalleled national reach. UP could wield that power, using bundled contracts to undermine head-to-head competition even on routes fully within the East. And over time, these dynamic effects will lessen CSXT's ability to constrain UP/NS, likewise for shippers within the East. The harm from this merger would thus be horizontal, too.

Whether their proposed merger would result in competitive harm through horizontal anticompetitive effects is a material fact for which UP and NS bear the burden, including through providing reliable evidence for the Board to use in its assessment. UP and NS purport to have proven, through the analysis of Dr. Elizabeth Bailey, that no horizontal competitive harm would result from their proposed merger. They have not.

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off-script-at-IANA-Entertainingengagingandrevealing--77775 (CEO Vena stating that he does not understand some of the comments about the UP-NS merger that pertain to future operations in certain areas because "we won't operate everywhere," such as some points in Florida. "That's CSX territory," he stressed.).

1. Dr. Bailey's "between-corridor" analysis contains numerous erroneous and unsupported assumptions and her conclusion on competitive harm does not satisfy the Board's standards.

Given the end-to-end nature of the transaction, the Board should carefully examine the potential for competitive harm across significant traffic corridors, as explained in Ms. Carey's Verified Statement. Dr. Bailey's "between-corridor" analysis purportedly evaluates reductions in options for shippers in origin and destination markets for specific commodities, through a 50/10 analysis. V.S. Carey at 50-51. Railroad mergers that give the combined entity more than a 50% share, where both parties contribute at least a 10% share, raise concerns about the combined entity's ability to exert market power. *Id.* For the areas that fail the 50/10 analysis, Dr. Bailey then conducts a critical loss analysis (CLA) to evaluate whether the shipper could replace the impacted traffic elsewhere, without relying on UP/NS. *Id.* at 51.

The flaws in Dr. Bailey's 50/10 analysis include the following:

Mismatch of commodities. Dr. Bailey uses a 4-digit STCC that combines a broad group of commodities, instead of 5-digit STCCs or 7-digit STCCs that are typically used in consolidation proceedings. *See* Am. App. Vol. 2, at 82 (V.S. Bailey at ¶ 173); V.S. Carey at 58-59. The problem with this broad aggregation is that economically distinct products are grouped with one another, and UP/NS's combined share is improperly diluted. V.S. Carey at 63.

Failure to analyze rail-only alternatives. Dr. Bailey also understates competitive effects by including non-rail transportation in her analysis. Am. App. Vol. 2, at 83 (V.S. Bailey ¶ 177); V.S. Carey at 56-58. This inclusion disregards historical STB practice that focuses on railroad competitors and railroad competition. *See, e.g.*, *Applicants' Railroad Control Application*, FD 36500 (Oct. 29, 2021), App. Vol. 2, at 53-54 (V.S. Majure ¶¶ 72-74) ("*CP/KCS* V.S. Majure"); *Applicants' Amended and Supplemented Application*, *CSX Transportation, Inc., et al.—Control and Merger—Pan Am Systems, Inc. et al.*, FD 36472 (July 1, 2021), at 550; *Applicants' Response*

to Comments and Requests for Conditions and Rebuttal in Support of Application, *CN/IANR*, FD 36744 (May 29, 2024), at 135. Rail-only analysis is critical here because it allows the Board to evaluate where rail only competes with rail for transcontinental traffic. V.S. Carey at 56-57.

Improper exclusion of exempt traffic types. Dr. Bailey's analysis also improperly excludes large segments of rail traffic—specifically intermodal and motor vehicles/parts—because they are exempt from rate regulation. V.S. Carey at 64-65. An exemption from filing a rate dispute before the STB because certain traffic may be viewed as competitive today does not mean that a major consolidation would not make it less competitive after. *See id.*

Unsupported assumption that interline railroad partners dependent on UP or NS would be effective competition. Dr. Bailey assumes, without support, that interline service that depends on UP or NS for part of the move would always provide effective competition to constrain UP/NS's market power post-transaction. *Id.* at 65-66. But Dr. Bailey's competitive assessment disregards the obvious competitive concern, described in detail above, that post-merger incentives would lead UP and NS to undermine the competitiveness of that service. *Id.*

Disregard of regions where neighboring areas are inadequate substitutes for each other. Dr. Bailey assumes, with no empirical support, that any given BEA is an adequate substitute for another and her analyses therefore provide an incomplete competitive assessment of the proposed merger. V.S. Carey at 67-69. Specifically, Dr. Bailey did not evaluate certain broader regions, such as the Gulf Coast, where UP has a much higher aggregate share as shown above than it does in each BEA. *See id.* Dr. Bailey's CLA is not only a last-minute addition not typically used in Board analysis, but is flawed for many of the same reasons as her 50/10 analysis, including because: (1) her definition of "Available Volume" incorrectly assumes that truck and water transportation would be effective competitors to a combined UP/NS on all routes and for all

products; and (2) she treats every individual BEA as a perfect substitute for another BEA. *See id.* at 69.

For the above reasons, UP and NS have not provided the Board with reliable analysis of the corridor level market power that would be created or entrenched by this merger.

2. Nearly {{ }} in revenue fails a corrected 50/10 screen, demonstrating the substantial potential for horizontal competitive harm.

When Dr. Bailey's between-corridor analysis is corrected in its entirety, and combined with other corridors that would see substantial concentration increases, the result is nearly {{ }} in rail traffic that would be vulnerable to horizontal competitive harm from the proposed merger. V.S. Carey at 79. For context, this {{ }} would be equivalent to the combined annual U.S. rail revenues of CPKC and CN, and ten times the cost savings UP and NS claim from their proposed merger. *Id.* at 149. These results demonstrate that the proposed transaction would substantially lessen source and destination competition, meaning that it would be very difficult for shippers in a destination geography to use alternative railroads to receive a product from multiple distinct origins and for shippers in an origin geography to use alternative railroads to ship a product to multiple distinct destinations. *Id.* at 79, 82-83. Ms. Carey further supplements Dr. Bailey's analysis to include areas where a combined UP/NS would have a very high 80-100% share post-transaction but one of the individual carrier's share is between 5% and 10%, which is just short of the 10% threshold for the 50/10 analysis. V.S. Carey at 83-84. In these instances, the exceedingly high concentration raises further concern about lessened source and destination competition from the proposed transaction. *Id.* In areas substantially controlled by a single firm with highly concentrated structures, even smaller incremental changes in share (*i.e.*, less than 10%) can significantly affect concentration and the ability to exercise market power, compared with unconcentrated areas. *Id.* In sum, Dr. Bailey's analysis of horizontal competition is unreliable,

and done properly the 50/10 analysis shows that significant harm to horizontal competition would result from this merger.

III. UP/NS Would Undermine or Manipulate Important Industry Collaborations and Jointly-Owned Assets that Today Provide Substantial Benefits to Competition.

The proposed merger would have immediate adverse consequences for the entire industry regardless of competitors' responses, because UP/NS's enhanced power and network reach would fundamentally alter its incentives. Since UP/NS would no longer need to rely on joint assets and interline collaborations to compete, it would have much weaker incentive to support, and in some cases an incentive to either weaken or manipulate the myriad collaborative arrangements that currently produce significant public benefits. Indeed, so long as their rivals would need to rely on these collaborations to compete against a combined UP/NS, the merged railroad would be incentivized to degrade them.

As explained above in Part I(B)(1), the Board's *2001 Rules* recognize that further Class I consolidation could permanently reduce numerous forms of indirect competition. That concern applies with full force here. The merger would jeopardize the decades of collaboration among railroads that have produced the physical infrastructure enabling efficient connections among carriers' networks and the commercial arrangements that have expanded the service options and competitive alternatives available to shippers. Railroads currently collaborate because each has a direct commercial interest in making the entire system function better. V.S. Carey at 25-32; V.S. Monaco ¶¶ 143-146. That commercial reality has deep roots, driving cooperative investment in shared physical infrastructure from the national network's earliest days to the interline alliances and service partnerships that define the industry today.

Shippers are the direct beneficiaries of that collaboration, gaining access to faster, more efficient service, lower rates, and competitive routing alternatives. Post-Staggers, as consolidation

reduced the number of major carriers and optimized the network's capacity, the Board has carefully preserved a competitive balance in which the remaining carriers have continued to develop new forms of collaboration—expanding interline alliances, pioneering run-through operations, and developing commodity-focused service partnerships that have extended the U.S. rail network's reach and reliability. V.S. Carey at 25-32.

The proposed merger threatens the collapse of that collaborative, interdependent system. A combined UP/NS could exercise outsized leverage over large swaths of the rail network and the shipper community it serves. *Id.* at 41-45. A combined UP and NS would immediately control {{ }} of total transcontinental traffic, representing approximately {{ }} in revenues, and would give the merged carrier access to {{ }} of U.S. Class I railroad customers, including {{ }} of CSXT's customers, while covering {{ }} of U.S. BEA areas. *Id.* at 41, 135. A carrier of that size and geographic reach would no longer depend as much, if at all, on the infrastructure, equipment, and technology collaborations that sustain the network today. Where each independent railroad currently benefits from making the entire system work better, a combined UP/NS would profit more by displacing collaborative arrangements—capturing traffic internally rather than sharing it, degrading the service options and competitive alternatives available to shippers, and leveraging its dominant network position rather than contributing to a system built on collaboration.

A. UP/NS would withdraw from efficient interline cooperation to maximize its profits at shippers' expense.

UP and NS claim that their proposed merger would integrate different parts of the U.S. rail network and achieve the purported dream of a coast-to-coast railroad. But the United States already has a coast-to-coast railroad. In effect, it has four: UP-NS, UP-CSXT, BNSF-NS, and BNSF-CSXT, as well as others involving CN, CPKCS, or shortline railroads that together reach

all regions of the country. And through collaborations like asset pooling, service alliances, and innovative interline arrangements, railroads have created transcontinental service options that provide shippers access to competitive alternatives, specialized equipment, and seamless end-to-end service. V.S. Carey at 32-41. These arrangements emerged from the recognition that cooperation among carriers could produce service and efficiency gains that benefited shippers, delivering faster transit times, broader geographic reach, greater reliability and redundancy, and more competitive pricing. And that by doing so, rail could grow its market share.

The proposed merger would upend that logic entirely. Where railroads today collaborate because each has a direct commercial interest in growing the pie, a combined UP/NS would profit more from capturing traffic internally than from sharing it.

1. **UMAX.** Consider UMAX, the transcontinental intermodal container program that UP and CSXT have operated together for over fifteen years. The UMAX pool currently comprises approximately {{ }} containers operating across hundreds of transcontinental lanes with truck-competitive service. UMAX has grown significantly since its launch, steadily expanding its lane offerings and container fleet. V.S. Kenney at 6-7. A good indicator of its benefits to shippers is its commercial success: in 2025 alone, CSXT, through UMAX, moved more than {{ }} intermodal units of which {{ }} units were interlined with UP, generating nearly {{ }} in revenue of which {{ } was derived from interline service. V.S. Kenney at 6-7. From the shipper's perspective, UMAX delivers a seamless product: one bill, one published end-to-end schedule, ramp-to-ramp and door-to-door options, with UP and CSXT handling coordination, balancing, and revenue splits entirely behind the scenes. V.S. Kenney at 7-8. Similarly, UP and NS jointly operate their own competing transcontinental intermodal container program called EMP, which likewise provides containers and seamless end-to-end service across

the network. NS's EMP experience highlights the benefits of collaboration to innovation. In a November 2025 presentation, NS's chief strategist, Michael McClellan, extolled the benefits of EMP, which he explained had {{ }} and {{ }}"[45] Beyond the specific service benefits, shippers also benefit from competition between these two programs over pricing on transcontinental intermodal lanes and service quality factors like transit times and reliability.

Notwithstanding public comments by UP executives supporting the continuation of UMAX,[46] UP/NS's financial incentives and {{ }} predict the {{ }}. For example, NS assumes that {{ quickly lead to the elimination of the UMAX program and that business would shift over to }}.[47] UP likewise assumes that the UMAX {{ }}[48] and has been {{

[45] Ex. 74, NS 00126066 at -074; *see also* Ex. 87, NS 00569895 at -917 (Dep. Ex. 412) ({ }}); Ex. 11, M. McClellan Tr. at 369:1-373:22 ({ }).

[46] Transcript, Union Pacific Corp., Q3 2025 Earning Call (Oct. 23, 2025), https://stockanalysis.com/stocks/unp/transcripts/366754-q3-2025/ (statement of K. Rocker) ("We're going to completely support UMAX. That product is a strong, viable product that our customers are utilizing … that's not going away."); Michael Angell, *Inland '25: NS merger won't limit access to other railroads: UP CEO* (Oct. 1, 2025) S&P J. of Com., (CEO Jim Vena stating, "We want to keep the UMAX program. There are certain things that are going to be better with the combined UP-NS. But if the customer says I want that service with the CSX and UMAX, that's what we'll do.").

[47] Ex. 93, NS_STB_00001303 at -322; *see also* Ex. 92, NS_STB_00001255 at -277 ({{ }}).

[48] Ex. 65, UP-STB-D13-0000349 at -358 (Dep. Ex. 38); *see also* Ex. 67, UP-STB-D13-0000430 at -436 (Dep. Ex. 128) ({{ }}); *id.* at 440 ({{ }}).

}}.[49] As a result, the shippers who depend on UMAX—and on the competitive discipline it imposes on EMP—would be left with one program, one set of rates, and no alternative.[50]

The specific harm to shippers is exemplified by UMAX's daily auto parts service. CSXT, UP, and FXE leverage UMAX to move just-in-time auto parts between manufacturing facilities in Mexico and Detroit-area assembly plants. This service is the most efficient routing available for that corridor, with FXE (or CPKC) carrying between Mexico and Eagle Pass, UP taking the middle segment, and CSXT carrying the traffic between Salem, IL to Detroit. *See* V.S. Kenney at 7. Daily service is made possible by the density that the UP-CSXT collaboration generates—without it, alternative routings are less efficient and may lack sufficient density to sustain a train-a-day frequency at all. UP and NS {{

}}.[51] And UP {{

}} In March 2025, just months before UP and NS agreed to merge, UP and CSXT

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[49] Ex. 62, UP 3353006 at -007 (Dep. Ex. 576) ({{

}); *see also* Ex. 63, UP_3353986 (Dep. Ex. 577) (Feb. 14, 2026 email from K. Rocker responding to request from J. Vena to {{

}}).

[50] UP understands that its customers value the UMAX service. When contacting its customers to seek support for the merger, numerous customers including {

}} Ex. 30, UP_0022580 at cells A716, A7, A54, A29, A123, A186, A187, respectively.

[51] Ex. 58, UP_2757848 at -851-854. UP apparently has not moved even faster to {

}). Ex. 62, UP_3353006 (Dep. Ex. 576) (November 24, 2025 K. Rocker email to E. Gehringer, J. Hamann et al., discussing {{ }}).

}} V.S. Kenney at 7-8; *see also* Ex. 64, UP_3375955 at -955-956 ({{

}}).

2. **TTX.** The same dynamic threatens TTX, the railcar pooling cooperative that supplies railroads with specialized flatcars, autoracks, and other equipment. As detailed in Part III(D) of CSXT's Comment Regarding Conditions, TTX's pooling model depends on cooperation and broad participation to keep cars moving efficiently across carriers' networks. Railroads voluntarily give up equipment they do not immediately need, for use by those that do. UP/NS, with its greatly enhanced fleets of equipment, could undermine that model by hoarding intermodal flatcars needed by other carriers rather than releasing equipment. Denied timely access to cars, CSXT and other pool participants could be unable to timely and cost-effectively serve customers, allowing UP/NS to foreclose competing service through control of essential equipment. In addition, UP/NS's combined scale could make continued participation in particular TTX or TTX-managed pools unnecessary, giving it an incentive to withdraw and reserve equipment for its own network. Such withdrawal would undermine the participation and shared efficiencies on which TTX depends, increasing remaining carriers' costs and impairing equipment availability for their shippers. V.S. Maffett at 22-23.

[52] *See* Ex. 54, UP_1777238 at -240 (Apr. 11, 2025 UP materials for upcoming CSXT-UP Commercial Interline Meeting, noting that UP and CSXT had {{

}}).

Like UMAX, this concern about UP/NS's anticipated anticompetitive behavior post-merger is not theoretical. Both carriers, apparently anticipating their merger, have already begun hoarding equipment beyond their needs. V.S. Maffett at 22-23.

Beyond these specific collaborations, UP/NS's sheer size and scale would mean that it would no longer have the same commercial incentive to interchange with rival railroads, much less to design the kind of innovative interline services that have expanded shipper options and driven rail's competitiveness over the past several decades. No matter how much less efficient and more expensive this would be for shippers, UP's prevailing motivation would be to dis-integrate the coast-to-coast rail network that exists today. The collaborative incentives that have defined the modern network—carriers working together because doing so enhances the competitiveness of rail—would give way, post-merger, to a simpler calculus: UP/NS would have less need to collaborate to share traffic, pool network resources, or innovate with the competitors it has displaced, and more incentive to injure its competitors by undermining cooperative endeavors.

B. A combined UP/NS would undermine or manipulate important jointly-owned assets.

1. **The BRC, IHB, and TRRA**. The UP/NS merger would pose an equally serious threat to the jointly owned terminal and switching railroads that carriers have built and maintained through decades of collaboration and through which they efficiently interchange freight at the nation's critical gateways. As detailed in Part III of CSXT's Comments Regarding Conditions, the merger would place a combined UP/NS in a dominant governance position across many of those shared facilities at precisely the moment its own reliance on, usage of, and financial contributions to those same assets would be dramatically diminished. V.S. Maffett at 13-22. That misalignment jeopardizes the shared incentives and neutrality on which these arrangements have depended since their founding.

The BRC and IHB in Chicago and the TRRA in St. Louis each emerged from the same collaborative premise, built and governed by rival carriers that understood efficient interchange at the nation's key gateways depended on shared infrastructure operated on neutral terms. Whatever the particulars of each facility's history, a common feature defines all three: governance structures specifically designed to ensure that no single owner could weaponize its position against the others, with voting and consent requirements calibrated to preserve neutrality and protect every participant's access.

UP/NS would hold an outsized combined ownership position across these facilities, giving it the ability to frustrate capital investment and operational improvements through its blocking power under supermajority and unanimity voting requirements—a dynamic UP's own Assistant Vice President for Joint Facilities and Interline Operations {{

}}[53]

The incentive to exploit that ability is equally clear and runs deeper than any single financial benefit. *See* V.S. Carey at 137-39. By internalizing traffic onto its own transcontinental network, UP/NS would reduce its reliance on these shared switching and terminal facilities and with it the usage fees it would otherwise owe, a financial benefit UP and NS tout in their own Application and internal documents.[54] Am. App. Vol. 2, at 809-10 (V.S. Gehringer/Orr ¶¶ 438-

[53] Ex. 37, UP 0344233 at -233 (Dep. Ex. 96) (Jan. 17, 2016 Email from David Hughes, stating ({{

}).

[54] Ex. 44, UP 1021428 at -428 (Dep. Ex. 429) (Feb. 27, 2025 Email from John Turner ({{

441). But the incentive extends well beyond avoided fees: reduced reliance means reduced commercial reason to support the maintenance, modernization, and capital investment these facilities require. UP/NS would have little reason to invest in assets it has already engineered around. That translates into higher costs for CSXT and BNSF, CN and CPKC. Moreover, UP/NS would affirmatively benefit from degradation of these facilities. As they became more expensive, less efficient, and less capable, the competing carriers who remained dependent on them would be disadvantaged while UP/NS, having already bypassed those assets with its own network, captured the competitive advantage. *See* V.S. Carey at 122-23.

2. **Conrail.** The Conrail Shared Assets Areas were designed to support competition between CSXT and NS. When approving the division of Conrail, the Board preserved arrangements under which Conrail would own, operate, and maintain shared infrastructure in North Jersey, South Jersey/Philadelphia, and Detroit for the benefit of both carriers. *CSX Corp.—Control—Conrail Inc.*, 3 S.T.B. 196, 228 (1998). Each carrier could serve customers throughout those areas while independently setting its rates and service terms. Collaboration between CSXT and NS regarding Conrail's service and infrastructure investment has created enormous benefits for shippers. Such collaboration has been grounded in the fundamental balance that exists today between CSXT and NS as eastern competitors that vie on an equal basis to provide interline optionality through joint line service with UP or NS. The proposed merger fundamentally alters that balance for the worse, in two ways:

First, by UP gaining NS's share of Conrail via the acquisition, UP/NS could then exploit Conrail to further its plans to foreclose CSXT from substantial traffic in the Shared Asset Area.

}}).

As traffic and revenue is diverted from CSXT via foreclosure and short-hauling, CSXT's ability and incentive to invest in Conrail infrastructure decreases, to the detriment of competition and shippers.

Second, and relatedly, Applicants now project an additional {{ }} daily intermodal trains over shared infrastructure in North Jersey and approximately {{ }} additional annual intermodal lifts at Croxton. That growth would place additional demands on a network constrained by heavily used shared trackage, movable bridges, and limited space for the long trains UP/NS propose to operate. UP/NS have neither identified nor committed to the necessary infrastructure improvements or explained who would bear the expense associated with them. *See, e.g.,* Ex. 11, M. McClellan Dep. Tr. 428:6-431:2, 432:7–11 ({{

}}); *see* UP-80/NS-78, at 161-164. And here again CSXT's reduced traffic revenue base will undermine CSXT's ability and incentive to support needed infrastructure investment in Conrail.

3. **Pan Am Southern**. The proposed merger could create imbalance at other jointly-owned assets, like Pan Am Southern. When CSXT acquired Pan Am Railways, it also acquired Pan Am's 50% interest in the separate Pan Am Southern joint venture, becoming NS's co-owner of the northern route through the Hoosac Tunnel. As part of a negotiated settlement, NS also obtained trackage rights over a southern route principally using CSXT's lines through Worcester to Ayer, enabling double-stack intermodal service that the Hoosac Tunnel Route cannot accommodate. UP/NS's workpapers assign substantial projected growth to the northern route route, including {{

}}. Accommodating that

growth could require significant investment in the jointly owned infrastructure. Their workpapers do not explain how their projected growth would be divided between the northern and southern routes, leaving unclear what additional investment would be required and who would bear its cost. And UP/NS would have an increased incentive to pursue any investment through the jointly-owned PAS, bearing only a portion of its cost while capturing the extended-haul revenues and principal commercial benefits of its expanded transcontinental service.

IV. UP and NS Fail to Show the Industry Structure that Would Result from Their Proposed Merger Would Be in the Public Interest.

A. Applicants present no evidence on the public interest merits of the "end-game" industry structure resulting from the merger, as required.

The Board's Rules are clear and mandatory: "[T]he Board cannot evaluate the merits of a major transaction in isolation. The Board must also consider the cumulative impacts and crossover effects likely to occur as rival carriers react to the proposed combination." 49 C.F.R. § 1180.1(i). This is why the Rules require UP and NS, not to judge the merits of "[d]ownstream merger applications," but instead to "explain how, taken together, these mergers, if approved, could affect the eventual structure of the industry and the public interest." 49 C.F.R. § 1180.6(b)(12)(i). As UP and NS insist (UP-94/NS-93, at 37, 37 n.32), the Board's analysis of how the potential industry structures resulting from the proposed merger would affect the public interest must be based on evidence. UP and NS would have provided the Board with sufficient evidence for it to "meet [its] responsibility" only if they had:

1. "[F]ile[d] their preliminary evidence about the evolving structure of the industry that would likely result from their proposal and other like it;"
2. "[A]ddress[ed] the merits of such a structure;"
3. "[P]rovide[d] their views on how to deal with potential problems that structure could cause to service, efficiency, and competition;" and

4. "[I]nitiate[d] a commentary" sufficient to permit "other affected parties [to] come in and express their concerns on a full record." *2001 Rules*, 5 S.T.B. at 582 (emphasis added).

But UP and NS have provided none of these things. They stand on asserting that future end-to-end mergers would enhance efficiency, adding only that successive mergers' efficiency enhancements may compound on each other. Am. App. Vol. 1, at 95-96; Am. App. Vol. 2, at 246-47 (V.S. Israel ¶¶ 143-45); UP-80/NS-78, at 143-50 ("In sum, efficiency strengthens competition, whether intermodal, intramodal, product, or geographic.").

Under the 2001 Rules, the Board's task is not limited to predicting the effects of particular "downstream" mergers. *2001 Rules*, 5 S.T.B. at 582 (distinguishing "arguments about likely future transactions" from those "about the future structure of the industry"). The Rules recognize the next phase of rail consolidation—whether one transaction or several—would necessarily be the "end-game" that produces the industry's permanent end-state. *Id*. at 560-61, 581-83. It recognized that the few "downstream mergers" still possible meant all potential end-states could be now identified without "speculation" and that analyzing those end-states would be "manageable." *Id.* at 581-82. The Board would thus analyze the public interest "merits" of the "rail industry structure" that would be produced by approving the proposed merger and "others like it." *Id.* at 549-50, 581-82.[55]

[55] Contrary to Applicants' suggestions that this requirement exceeds the Board's merger control authority (UP-80/NS-78, at 150-51), consideration of a merger's foreseeable effects on an industry's overall structure, including competitor reactions and changes in basic competitive dynamics, is an ordinary feature of competition analysis. *See*, *e.g.*, *Merger Guidelines* at 18-19, 22-23; *Fed. Trade Comm'n v. Procter & Gamble. Co.*, 386 U.S. 568, 577-79 (1967). A merger's long-term or second-order effects on how competition occurs in an industry are still effects of that merger. Applicants' argument to the contrary again redefine competition analysis as that of a merger's effects on the *merging companies' operations*, not of its effects on competition in relevant markets.

As UP and NS's own evidence confirms, there are only two "rail industry structure[s]" their proposed merger could produce: (1) A single transcontinental railroad facing only regional carriers and other modes; or (2) two transcontinental carriers. UP and NS do not address the public interest merits of either such structure with any evidence. Instead, their case is the incantation of a single conclusory mantra: "[A]n American rail network with two stronger, more efficient transcontinental carriers [would be] an outcome fully aligned with the public interest." Am. App. Vol. 1, at 97. *Accord* UP-94/NS-93, at 35-36 (repeating almost verbatim). UP and NS's filings have consisted almost entirely of defending their decision not to submit any evidence to support this assertion, primarily by arguing a responsive merger is not sufficiently "likely" so as to trigger a completeness burden. UP-94/NS-93, at 35-37 ("Opponents' claims regarding downstream mergers support Applicants' conclusion that responsive mergers are not likely."). But as to what the Board must determine on the merits, it has no evidence from UP and NS regarding whether the two industry structures that are the foreseeable consequences of their proposed merger would be better or worse for the public interest than the industry's structure today.

We analyze each of these downstream industry structures below.

B. A single, dominant transcontinental railroad would create long-lasting, if not permanent competitive harm to the U.S. rail network and to shippers.

The harm to competition and shippers from UP/NS as a single, dominant transcontinental railroad is reflected in the economic analysis of CSXT's experts, described in detail above. It includes the complete arsenal of anti-competitive behavior available to a dominant firm that controls a key input needed by its competitors. From raising rivals' costs to degrading service to bundling and short-hauling to undermining efficient cooperative industry joint ventures, a combined UP/NS would have the incentive and ability to impose severe consequences on its rivals

and on the shippers who rely on them. As explained above, this adverse impact on the rail network would be large and permanent; the network would be "balanced and sustainable" no longer.

While the eastern (CSXT versus NS) and western (BNSF versus UP) structures are both intensely competitive, the interline pairings are complementary, but not equivalent. BNSF's network is focused on intermodal, coal, and grain, and less on merchandise. UP is dominant for many of the higher-margin merchandise commodities (*e.g.*, chemicals), from which the contribution is so important to railroads' ability to support investment and innovation across their networks. Because of particular historical circumstances (*e.g.*, Conrail shared asset areas) and the smaller geography and greater density in the East, there are far more dual-served origins and destinations in the East.

That same asymmetry carries through to the direction and value of the traffic each network originates. More traffic flows west to east than the other direction: west-to-east transcontinental traffic represents about {{ }} of 2023 transcontinental revenue, with east-to-west movements comprising {{ }}. V.S. Carey at 19. Of these west-to-east flows, UP controls the origin of a large proportion of higher-value merchandise traffic. V.S. Kenney at 3-4. As a result of these dynamics, CSXT's current network and revenue profile is heavily reliant on UP-originated merchandise traffic, and CSXT competes vigorously for it. *Id.*

If the proposed merger resulted in a single, dominant transcontinental railroad it would destroy that balanced competitive structure. A combined UP/NS would have sweeping coverage of virtually the entire United States, covering {{ }} of US BEAs by revenue, with access to {{ }} of US Class I railroad shippers, including {{ }} of CSXT customers. V.S. Carey at 41, 135. A combined UP/NS would instantly have dominant shares in many commodities, and an unprecedented number of sole-served locations to wield as leverage over shippers that it can use

not only to divert traffic on those routes from CSXT but also bundle to gain additional traffic that would otherwise be competitive between CSXT and NS. *See id.* at 43-44, 109-17. The same UP executives who identified the four combinations of service currently available to dual-served shippers recognized that a transcontinental merger would reduce those options: {{

}} Ex. 32, UP_0039326 (Dep. Ex. 84).

C. The Board cannot treat a hypothetical downstream merger as a cure for the competitive harm of a combined UP/NS.

Turning to the second scenario, it is surprising that UP/NS do not offer more analysis of a second transcontinental merger, because their own executives authored internal predictions that this is exactly what would happen. UP and NS's{{

}} Ex. 32, UP_0039326 (Dep. Ex. 84); Ex. 55, UP_1860886.[56] Indeed, UP wanted to be the first to pick a merger partner so it could leave the rest of the field in a weakened state. *See* Ex. 68, UP-STB-D13-0000623 at 635 (March 26, 2024 {{

}}). And they foresaw, as any network map plainly shows, that {{

}} network. That explains of course that the pending UP/NS deal with CN should be viewed as the next step in a "creeping merger."

[56] *See also* Ex. 11, M. McClellan Tr. at 496:19-497:22 ({{

}}); Ex. 93, NS STB00001303 at 330-331 ({{

}).

The Board cannot treat a hypothetical downstream merger as a cure for the competitive harm from a UP/NS merger. The two western railroads have quite different networks, with comparatively fewer dual-served locations. And their business models are distinct in many ways, as explained above in Part IV(B). Had UP and NS been more responsive to the Board's request to describe their prior analysis of a second merger, they would have been compelled to point out that some shippers would have access to competing networks, but many would not. Shippers sole-served by UP in the West would have lost the benefit of two carriers competing for the eastern leg, and a BNSF/CSXT merger would not change that. Similarly, many shippers in the East sending traffic west would for the most part would not have two options on the western leg because there are comparatively fewer locations that would be dual-served by UPNS and BNSF.

Just because there would be two transcontinental rail networks in the country would not mean there would be two rail networks accessible to particular shippers or industries. Soda ash producers primarily in the southern Wyoming area would not have access to a BNSF-CSXT network. V.S. Higgins ¶ 14. Petrochemicals and plastics producers concentrated on the Gulf Coast could not realistically turn to a BNSF-CSXT network to meet their needs despite BNSF's nominal presence. *Id.* ¶¶ 15, 55-57. And CN's creeping integration with UP-NS would make it unlikely to provide agricultural shippers in Iowa competitive terms to access the BNSF-CSXT network.

For UP and NS to assert that two transcontinental railroads would be an unalloyed positive outcome without analyzing these sorts of obvious issues and determining the net effect is to deny the Board precisely the information it needs to assess the public interest merits of the "end-game" industry structure they propose.

V. UP and NS's Claimed Public Benefits Are Substantially Inflated, Speculative, and Largely Not Merger-Specific.

Given the substantial competitive harm the proposed merger would cause, it is difficult to imagine any amount of public benefits that could justify its approval. The Board has set a high bar for crediting public benefits in any merger of Class I carriers. *2001 Rules*, 5 S.T.B. at 549, 552. As explained above, the Board's heightened scrutiny reflects three reinforcing grounds: (i) the extent of prior consolidation makes merger-specific efficiencies presumptively more limited; (ii) similar public benefit claims have been "over-promised and under-delivered" in past major mergers; and (iii) applicants have every incentive to overstate benefits they will capture while shippers bear the full cost of any failure. Together, the 2001 Rules demand applicants for any further Class I consolidation do more than assert that a merger is efficient; they must present a clear case of concrete, merger-specific benefits that could justify disrupting today's balanced, competitive rail network in ways that would bring grave competitive harm. 49 C.F.R. § 1180.1(a), (c); 5 S.T.B. at 549, 552.

Applicants' proposed merger, in contrast, would be a "solution"—a very harmful one as shown in Part II, above—in search of a problem. To start, UP and NS's core thesis for the merger—that a stagnant rail industry needs consolidation to escape permanent share loss to truck—has not survived even the 15 months since they filed notice of their Application. Their story, told through Mr. Hunt and echoed in the Verified Statement of CMOs Rocker and Elkins, ends in Applicants' chosen base year of 2023, nearly three full years ago. Am. App Vol. 1, at 292-93 (V.S. Rocker/Elkins ¶ 45) ("Railroads continue to lose freight to trucks, and that gap keeps getting wider. Without structural change, that trend will accelerate."); *id.* at 293 (V.S. Rocker/Elkins Fig. 6), "Railroads Are Losing Market Share to Trucks" (charting modal market share trend lines ending in 2023). That year saw NS preoccupied with the East Palestine derailment, the closing of the

CP/KCS merger, and an industry still emerging from the havoc wrought by an unprecedented global pandemic. *See Comments of CSXT on Proposed Procedural Schedule* (CSXT-3), *UP/NS*, FD 36873 (Nov. 19, 2025) at 13-16 (identifying problems with relying on data from Applicants' chosen 2023 base year); Ex. 2, C. Elkins Dep. Tr. at 87:1-88:17 (agreeing that 2023 was a historically challenging year for NS); Ex. 3, E. Gehringer Dep. Tr. 115:16-119:21 ({{

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But the years since 2023 have seen record intermodal growth, particularly over the last 15 months. Ex. 27, Transcript, Union Pacific Corp. Q3 2026 Earnings Call (October 22, 2026) (Ex. 568), S&P Global, at 5-6 (statement of K. Rocker) ("Domestic Intermodal is on track to deliver its third consecutive record volume year supported by over the road conversions and our service product" with UP's Premium segment (including intermodal) reporting revenue of $2.1 billion, up 21% versus Q3 2025, on 9% volume growth); Ex. 11, M. McClellan Dep. Tr. 213:24-214:9 ({{

}}); Ex. 28, American Association of Railroads, *Rail Industry Overview* (Sept. 2026) (Dep. Ex. 408).[57] Rail has taken share from truck, and intermodal container utilization is high, causing Mr. Elkins to disavow as no longer accurate for NS the claims made in his verified statement just earlier this year. Ex. 2, C. Elkins Dep. Tr. at 112:03-114:20 (conceding that updated data would show NS "gaining relative market share" from trucks); *id*. at 158:10-159:10, 180:6-13.[58]

[57] UP has disclaimed that this growth can be explained away as just the result of fuel prices. Transcript, Union Pacific Corp. Q3 2026 Earnings Call (October 22, 2026) (Dep. Ex. 568), S&P Global, at 5-6 (statement of K. Rocker) ("[J]ust take a step back, remember, this volume growth has happened before we saw the inflection and the acceleration of these diesel prices. …[A]nd I said it in my comments, it's our fifth quarter of record growth.").

[58] In fact, in early 2023, {{

At the same time, despite repeated emphasis throughout the Application that the merger would "unlock" growth in the Mississippi River watershed region, *see*, *e.g.*, Am. App. Vol. 1 at 12-13, 97 ("[n]owhere will this transformation be more consequential than in … the 'watershed' markets"), UP's CMO has now downgraded this important premise for the merger, too. K. Rocker Dep. Tr. at 331:05-332:21 ({{

}}).

All to say, the claim that only a merger can cause diversion from truck is belied by the clear reality of the current marketplace. But even taken at its face value, UP and NS's Application has failed the Board's test for claimed benefits on every measure. They claim $6.4 billion in annual public benefits from four sources: shipper savings from diverting traffic from truck to rail ($3.505B; 55%); operating revenue from new single-line service ($1.758B; 28%); operating cost savings from combining operations ($965M; 15%); and capital expenditure savings ($133M; 2%). Am. App. Vol. 1, at 516, Table 4, as corrected in UP-80/NS-78, at 67; V.S. Monaco ¶ 4-5. Though UP and NS dubiously suggest these benefits would materialize regardless of whether a single carload is diverted, UP-80/NS-78, at 67, their largest benefits claims plainly depend on overstated projections of truck-to-rail diversion. As demonstrated below and explained by Dr. Monaco in her careful and thorough analysis, UP and NS fail the Board's requirements in three independent respects: (1) they make no effort to identify which specific benefits require a merger to achieve them; (2) the benefits they claim are substantially overstated, and if they materialized, would largely accrue to UP/NS rather than to shippers; and (3) UP and NS dramatically understate the service disruption risk that would offset whatever gains remain.

.}} Ex. 82, NS 00219451 (Dep. Ex. 250) at -456-58, -469. But NS {{

}}. Ex. 21, S. Tureman Dep. Tr. 426:20-429:12.

A. UP and NS make no effort to explain, much less prove, which claimed benefits require a full, permanent merger to achieve.

At the core of the Board's heightened standard is the requirement that, to be credited, any benefits must only be attainable through a merger that permanently alters the industry structure. *See* 49 C.F.R. § 1180.1(c). As Dr. Monaco explains, rather than proving why commercial alternatives cannot achieve many of the same results or quantifying "which of the[ir] claimed" $6.4 billion in benefits (*2001 Rules,* 5 S.T.B. at 559) would be available absent a permanent merger, UP and NS offer only categorical assertions, unsupported by any evidence or analysis.[59] V.S. Monaco ¶¶ 134–141. When pressed by the Board in Decision No. 21, UP and NS admitted they had not pursued joint-line agreements for any of the eight intermodal lane opportunities identified in their Application. UP-80/NS-78, at 114. Their explanation was not that they had tried and found commercial arrangements wanting. It was that they had never tried at all. *Id.*[60]

[59] Applicants' witnesses are both unanimous and entirely conclusory on this point. UP CEO Jim Vena asserts only that the benefits "cannot be achieved through mere partnership arrangements" and that partnerships "do not and cannot replicate the transformative benefits" of the merger, without identifying which benefits or explaining why. Am. App. Vol. 1, at 231 (V.S. Vena ¶ 49). Rocker and Elkins insist that single-line opportunities "cannot be replicated through commercial arrangements or isolated partnerships" and that "[o]nly by combining the two networks into a single, unified operating and marketing structure can these benefits be fully realized," again without analysis. *Id.* at 276 (V.S. Rocker & Elkins ¶ 4). NS CEO Mark George adds that "[r]ailroads cannot contract their way to a seamless network through alliances and marketing agreements," but offers no evidence that commercial partnerships could not deliver the specific benefits UP and NS claim here. *Id.* at 265 (V.S. George ¶ 58). Dr. Israel offers an economic argument for merger-specificity, asserting that common control is necessary to overcome investment coordination problems between independent carriers. Am. App. Vol. 2, at 227 (V.S. Israel ¶ 96). But that is an argument for why coordination is difficult, not impossible, and he too fails to identify which specific benefits require merger to achieve or quantify what share of the $6.385 billion claimed benefits would be unavailable absent full consolidation.

[60] Dr. Israel admitted he performed no analysis of additional interlining or operational improvements between UP and NS, and that his opinion that remaining benefits require a full merger rests on the assumption that profit-maximizing railroads have already captured everything achievable through interline and alliance arrangements over time—not on any case-specific study of what UP and NS have or have attempted to achieve short of merger—but purely on economic theory. *See* Ex. 8, M. Israel Dep. Tr. 268:14-271:03.

UP and NS's own behavior contradicts their position that all of their proposed benefits require a merger. Just 48 days after announcing the merger, UP and NS launched a new joint intermodal service connecting key western origins and Louisville, offering shippers "expanded market reach" with "truck-competitive transit times," made possible through "strategic investments" by both carriers.[61] During their merger negotiations, UP and NS contemplated an {{

}}[62] And after their merger announcement, UP strategized on the need to {{

}}[63] demonstrating that the merger is not required for UP and NS to design services in an attempt to divert traffic. Thus the evidence shows that that these types of initiatives are achievable through commercial arrangements. V.S. Monaco ¶¶ 139-140, 149.

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[61] *New Union Pacific and Norfolk Southern Intermodal Gateway Expands Market Access*, Union Pacific (Sept. 15, 2025), https://www.up.com/news/growth/louisville-intermodal-service-it-250915. Internal NS communications underscore the ability to design such service absent a merger. {

}}. Ex. 76, NS_00127059 (Dep. Ex. 356).

[62] Ex. 96, NS_STB_00001394 at -396 (Dep. Ex. 226) (Michael McClellan notes re June 10, 2025 meeting with UP**,** stating {{

}); *see also* Ex. 80, NS_00184207 at -208 (Dep. Ex. 246) (June 24, 2025 email from Yannik Thomas to Mark George, ({{

}}).

[63] Ex. 51, UP_1641826 (Dep. Ex. 140) (Nov. 6, 2025 email from Kenny Rocker to Jim Vena, Todd Rynaski, and Christina Conlin, {{ }}); *see also* Ex. 18, T. Rynaski Dep. Tr. 403:1-8 (testifying that he interpreted Mr. Rocker's directive as a {{

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CSXT, for its part, has collaborations with numerous railroads that navigate the impediments UP and NS claim to be insurmountable and has built long-standing and innovative new services that respond to emerging needs of shippers, including with UP. That those arrangements stop short of merger is not a weakness. Their non-permanence also makes them flexible and adaptable to the market. Carriers can move quickly to serve emerging shipper demand, and services that no longer make commercial sense can be adjusted or wound down without the irreversible competitive consequences that accompany a merger. V.S. Kenney at 6.

For example, as detailed above in Part III(A), UP and CSXT's UMAX container service and UP and NS's EMP container service are durable collaborations that provide shippers with access to a shared pool of containers and hundreds of lanes with a single bill, seamless service, and coast-to-coast coverage. V.S. Kenney at 7-8.

CSXT also has a nearly 20-year intermodal commercial haulage relationship with BNSF, as part of which BNSF locomotives run through onto the CSXT network with a step-on, step-off crew change requiring no terminal yarding and no rehandling. V.S. Kenney at 9. This partnership was most recently expanded in 2025, adding a new Phoenix-to-Atlanta service backed by investment in two new 10,000-foot sidings, along with faster schedules from Los Angeles to CSXT destinations across the Midwest and Northeast that reduce transit times by up to 52 hours.[64] BNSF and CSXT have also launched a transcontinental premium intermodal train linking Los Angeles and South Kearny, NJ, on a 100-hour schedule, which is 26 hours faster than the interline schedule

[64] *CSX, BNSF Announce New Intermodal Services, Offering Seamless Coast-To-Coast Rail Solutions*, CSX (Aug. 22, 2025), https://www.csx.com/index.cfm/about-us/csx-bnsf-announce-new-intermodal-services-offering-seamless-coast-to-coast-rail-solutions/.

the railroads introduced in November 2025. The train has converted 100 highway loads to rail daily since its October 5 launch and has room to grow based on its performance thus far.[65]

The CSXT-CPKC Southeast Mexico Express ("SMX") is another concrete example of Class I railroads committing capital and aligning incentives to address shipper needs; in this instance, connecting shippers in the Southeastern U.S. with markets in Texas and Mexico. V.S. Kenney at 8-9. CSXT and CPKC each independently acquired portions of the former Meridian & Bigbee Railroad and, through their coordinated investment, created a new interchange at Myrtlewood, Alabama. V.S. Kenney at 8-9.[66] The Dallas-to-Atlanta route is particularly notable, as it delivers truck-competitive service on a corridor that had no direct Class I intermodal product before, diverting trucks that previously had no competitive rail option available to them. V.S. Kenney at 9.

These are three examples drawn from CSXT's own commercial relationships, but they are not outliers. Across the industry, railroads operate today under haulage arrangements, interline agreements, container programs, and jointly-developed corridors that deliver to shippers the seamless service, coordinated capital investment, and long-term commercial commitment that UP

[65] Bill Stephens, *BNSF and CSX announce new joint domestic and international intermodal service*, TrainsPRO (Aug. 23, 2025), https://www.trains.com/pro/freight/intermodal/bnsf-and-csx-announce-new-joint-domestic-and-international-intermodal-service/.

[66] *CSX, CPKC upgrade Southeast Mexico Express with dedicated train, faster transit times*, CSX (May 6, 2026), https://www.csx.com/index.cfm/about-us/media/press-releases/csx-cpkc-upgrade-southeast-mexico-express-with-dedicated-train-faster-transit-times/ ("The upgraded SMX service demonstrates the long-term investments CSX has made to strengthen this corridor and provide more consistent, reliable service for our customers . . . By working closely with CPKC, we're expanding access and delivering meaningful improvements for shippers moving freight between the key markets of the Southeast U.S. and Mexico." (quoting Steve Angel, President and CEO of CSXT)).

and NS insist only a merger can produce. V.S. Monaco ¶¶ 141-142 (rebutting conclusory expert opinions of Dr. Bailey and Dr. Israel); V.S. Kenney at 6-9.

UP and NS's failure to engage with the merger-specificity requirement is a fundamental failure to provide the Board with the information it needs to do its job under the 2001 Rules. The Board cannot evaluate which benefits require a merger to achieve and which could be realized through the type of commercial arrangements already proven to work. Nor can the Board determine which of the claimed $6.4 billion in purportedly "net" public benefits would be unavailable absent full consolidation. UP and NS's choice not to provide that analysis is alone another reason to deny their Application.

B. UP and NS's claimed public benefits are substantially overstated and would not accrue to shippers.

UP and NS assert that their projected public benefits fall into four categories: purported "shipper benefits" from a combined UP/NS single-line service, including traffic diversions from other rail carriers and trucks; operating revenue benefits; operating cost benefits; and capital expenditure benefits. V.S. Monaco ¶ 4.

It is important at the outset to put the purported benefits flowing from new single-line service in context. To the extent single-line service can produce some benefits including cost savings and reduced transit time, they are valuable to the public only where there will be ongoing competitive pressure to pass those savings through to shippers. Indeed, in prior proceedings where the Board has credited public benefits flowing from the creation of new single-line service, it has done so in circumstances where at least one competing single-line option already existed and the merger was creating a second. That is not true here. The unprecedented nature of this merger makes the reliability of UP and NS's public benefits claims all the more critical. UP and NS's

claims do not withstand such scrutiny, and they fall far short of outweighing the significant harms that would result from this merger.

1. UP and NS's claimed single-line service advantages are overstated.

UP and NS's entire public benefits case rests on a single foundational premise: that, if the transaction were approved, UP/NS would offer single-line service that would divert freight from truck to rail, and substantial cost savings would be realized in the process. Single-line service can have some advantages yet does not eliminate all of the operational work that drives transit time and cost. V.S. Daniels ¶¶ 32, 38. Intermodal movements will still require crew changes, while carload traffic must be classified at various points in the network regardless of whether one or two carriers are involved. V.S. Daniels ¶¶ 35-38; V.S. Albright at 5. Manifest cars would still require sorting, switching, crew changes, and other operating work, which could move to different yards rather than disappear. V.S. Daniels ¶¶ 35-38; V.S. Albright at 5.

UP and NS's own Optimized Plan projects only a {{ }} net reduction in unit handlings. V.S. Daniels ¶ 39. Potential route-specific gains do not establish broad improvements in transit time or reliability. V.S. Daniels ¶ 42. Nor does the rate evidence establish an inherent single-line price advantage: Daniels's traffic-tape review and Shehadeh's corrections to Israel's regression both undermine that premise. *Id.* ¶¶ 46-47 & Ex. 5; V.S. Shehadeh ¶¶ 151–156; *see infra* n.72.

Applicants suggest that the merger's elimination of the need for interchange will cut transit time by approximately 20 to 24 hours, an estimate that is based solely on "Applicants' experience" for manifest trains in particular. *See*, *e.g.*, Am. App. Vol. 2 at 864 (Service Assurance Plan, ¶ 30).[67]

[67] In recent months, UP executives have stretched these claims further, asserting in a variety of public statements that elimination of interline interchange will save "24 to 48 hours." *E.g.*, *UP Fireside Chat*, *supra* at 12 (Vena: "[W]e will take out 24 to 36 to 48 hours on those touch points on the rail cars."); *I've Heard Enough* UP Article, *supra* at 12 (Rocker: "Our proposed merger [will eliminate] interchanges that today add 24 to 48 hours… .").

Mr. Hunt says that system average terminal dwell time (of 22 hours) "provides a good approximation" for the impact of interchanges on rail transit time, and that the issue "is most acute for intermodal, which is the most time-sensitive rail service product." Am. App Vol. 2, at 416-17 (V.S. Hunt at 29-30). In fact, CSXT and its interline partners already deliver interline service that is fast, reliable, and in many cases operationally indistinguishable from single-line service. V.S. Albright at 3-5 (explaining that majority of intermodal traffic is pre-blocked which enhances speed and efficiencies of interline service, and providing examples of efficient interchanges for intermodal and manifest traffic). The bulk of CSXT's interline intermodal traffic today, for example, is served by run-through trains for which interchange effectively consists of a step-on, step-off crew-change, generally accomplished in well under an hour. V.S. Albright at 3.[68]

Conversely, UP and NS's diversion estimates include lanes where rail transit time would stay the same or even increase if the merger were approved, and lanes that trucks serve within a day but carload rail would take multiple days to serve. V.S. Monaco ¶¶ 72–74. UP and NS have not demonstrated that removing an interchange would overcome those service disadvantages. V.S. Monaco ¶¶ 152, 179-180; V.S. Daniels ¶¶ 39-42. Nor have they established comparable time savings across the shipper population. V.S. Daniels ¶ 42.

2. UP and NS's claimed truck diversion prediction is deeply flawed and clearly overstated.

UP and NS's asserted truck diversion benefits account for approximately 55% of their total claimed public benefits. The flaws in Mr. Hunt's methodology fall into two broad categories: first, the model ignores commercial realities and factors that would materially impact whether shippers actually convert from truck to rail; and second, the underlying methodology is economically

[68] Hunt himself acknowledges in passing that his 22-hour estimate "exclude[es] cars on run-through trains." Am. App Vol. 2, at 416 (V.S. Hunt at 29).

unsound. As detailed in the Verified Statements of Dr. Kristen Monaco and Scott Daniels, Hunt's diversion estimates do not reflect the realities of how the transportation industry functions. V.S. Monaco ¶¶ 31–33, 99–109; V.S. Daniels ¶¶ 7-31. Indeed, Dr. Monaco concludes that "given the numerous problems documented with both the levels of diversions and associated shipper savings, the quantitative estimates of truck-to-rail diversion and supposed shipper savings provided by Applicants are invalid and should be disregarded in their entirety." V.S. Monaco ¶ 113.

Three features of Mr. Hunt's modeling are particularly revealing of its unreliability. First, Hunt's model yields unrealistically high levels of carload diversions in many lanes that have no rail presence today, relying on removing a single interchange to generate high levels of rail traffic. V.S. Monaco ¶¶ 63–71; V.S. Daniels ¶¶ 16-18, 20, 25; *id.* at ¶ 17 ({{ }} of Applicants' projected truck-to-carload diversion lanes had no rail traffic in the diverted commodity group in the base period). The notion that tens of millions of tons of freight that currently move entirely by truck will divert to rail simply because an interchange is eliminated does not align with reality. This presumes that an interchange is the only thing preventing large volumes from being transported on these lanes. As explained in further detail in Dr. Monaco's Verified Statement, this assumption is not based on shipper choice economics and is unrealistic. V.S. Monaco ¶¶ 63–71.

Second, Hunt's model assumes that shippers have or will develop direct access to rail. V.S. Monaco ¶¶ 53, 102; V.S. Daniels ¶¶ 10-15. More specifically, he assumes that the presence of a UP or NS station in a county means that truck traffic originating or destined for anywhere in that county, no matter how distant, can be served by rail, substantially overstating the reality of actual shippers' access to the rail network. V.S. Daniels ¶ 10; *see id.* at ¶¶ 11-15 & Ex. 1-2 (illustrating the problem Hunt's approach creates in the context of projected diversion of lumber and wood products in Bibb County, AL). Hunt acknowledged during his deposition that his underlying data

does not identify individual shippers or their facilities, and that the model simply assumes rail access exists. Ex. 7, D. Hunt Dep. Tr. 592:13-593:11, 603:5-605:12. In reality, many truck shippers lack direct access to rail today and would need to build it out or absorb the time and cost of transloading. V.S. Monaco ¶¶ 100, 102; V.S. Daniels ¶¶ 12, 14. This failure to account for shippers' switching costs not only biases diversions upward, it underestimates shipper costs and overestimates shipper savings. V.S. Monaco ¶¶ 99-109; V.S. Daniels ¶¶ 28-31; Ex. 7, D. Hunt Dep. Tr. 592:13-593:11 ("We did not know the details of what facilities [individual shippers] may or may not have" and "[w]e did not try to factor in a one-time cost for a switch"); Ex. 18, T. Rynaski Dep. Tr. 410:1-12 (the projected $3.5 billion in annual shipper savings from switching from truck to rail "does not take into account costs that shippers might incur" in making that switch).

Third, for both merchandise and intermodal diversions, Hunt includes truck traffic that is currently moving via private carriage, where a shipper has invested in and relies on its own trucks and personnel to transport its goods. These private carriage diversions represent roughly one-third of Hunt's total diversion estimates. V.S. Monaco ¶¶ 43–44, 84. Including private carriage tonnage as diverted freight assumes that shippers are prepared to quickly divest themselves of their transportation infrastructure and operations—which in many cases represent many years and many millions of dollars in investment—and would do so almost immediately and at most, within three years. This assumption is unsubstantiated and diverges sharply from how shippers and carriers actually make transportation decisions. V.S. Monaco ¶¶ 43–44, 84.

Beyond the commercial-reality check failures described above, Mr. Hunt's look-alike model is novel, untested, and not grounded in established shipper choice theory. V.S. Monaco ¶¶ 45–59. Mr. Hunt identified only the CPKC model as a prior merger application using a form of lookalike analysis. Ex. 7, D. Hunt Dep. Tr. 237:8-239:16 (admitting that other than the FTI model

in the CPKC merger proceeding which used "a form of a lookalike model," he was not aware of any other merger in which the applicants relied on a lookalike model). Rather than modeling individual shipper decisions, the look-alike model abstracts away from the shipper level and assumes homogeneity in decision-making across disparate shippers and markets, with no documented empirical link between service improvements and actual modal shift. V.S. Monaco ¶ 32 (assuming uniform decision-making across heterogeneous shippers); *id.* ¶ 57 (identifying no direct empirical link between relative transit times and diversion); *id.* ¶ 62 (applying modal shares across geographies and commodities without testing comparability).[69]

Applicants' diversion methodology is further undermined by UP's own internal truck-to-rail diversion projections, which {{ .}}[70] The Board should accord little, if any, weight to UP and NS's diversion-based public benefits claims. As Dr.

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[69] Compounding this concern, Mr. Hunt previously used a cost-based logistics regression to estimate diversions in the *CP/KCS* proceeding, a more conventional approach that directly considered relative truck and rail costs. He acknowledged

} Ex. 7, D. Hunt Dep. Tr. 251:24-253:18, 266:10-269:16. There is no record basis to conclude the look-alike model was chosen because it is more reliable. V.S. Monaco ¶ 110-113.

[70] *See* Ex. 10, D. Lehlbach Dep. Tr. 233:21-234:10 ({{ }), 286:14-287:7 ({{ }}); Ex. 11, M. McClellan Dep. Tr. 266:22-267:8 ({{ }); Ex. 18, T. Rynaski Dep. Tr. 293:4-24 ({{ }}); Ex. 19, J. Thomas Dep. Tr. 102:8-14 ({{ }}); Ex. 35, UP 0092795 at -799 (Dep. Ex. 45) {{(}; Ex. 42, UP 00994437 at -438 (Dep. Ex. 42){{(}.

Monaco concluded, the numerous "critical flaws" she identifies in Applicants' truck diversion analysis mean it "does not meet the Board's standard." V.S. Monaco ¶¶ 110–113.

3. Claimed private profits from rail-to-rail diversions are not public benefits.

UP and NS surprisingly include approximately $1.8 billion in claimed public benefits that actually represent incremental profits flowing solely to UP/NS from traffic diverted from competitors. V.S. Monaco ¶ 4; V.S. Carey at 144. As the Board has recognized, "traffic diversions, as such, are not public benefits; only the service improvements and cost savings associated with traffic diversions can be counted as public benefits." *Union Pac. Corp.—Control & Merger—S. Pac. Rail Co.* ("*UP/SP*"), 1 S.T.B. 233, 380 (Aug. 6, 1996) (citation omitted). This principle was reaffirmed in the CPKC merger decision, which confirmed that "private profits realized by the Transaction are not public interest benefits." *CP/KCS*, slip op. at 27. UP and NS offer no basis to depart from this settled principle here, and the Board should disregard this category of claimed benefits entirely.

4. Any real single-line efficiency gains would accrue primarily to UP/NS, not shippers.

Even if some portion of UP and NS's claimed efficiency benefits were credited, there is no basis to conclude that those benefits would flow to shippers rather than be pocketed by UP/NS. Efficiencies only generate public benefits if the merged carrier continues to operate in a competitive environment that forces it to pass along those benefits to shippers, in the form of lower costs or enhanced service. As the Board has noted: "Substantial rate decreases do not occur in the absence of competition." *2001 Rules*, 5 S.T.B. at 549 n. 11.

As a dominant rail carrier with the ability to marginalize its rivals, UP/NS would face diminished competitive pressure to pass its cost savings through to shippers in the form of lower rates, improved service, or increased investment. Rather, as a merged UP/NS succeeds in

diminishing competition by raising its rivals' costs and diverting traffic, it will be further empowered to exercise its dominance to the detriment of both shippers and the U.S. rail network alike. V.S. Daniels ¶¶ 45–46, 56–58, 67–68; V.S. Shehadeh ¶¶ 124.

Most tellingly, UP and NS have made no commitment to lower shipper rates. V.S. Daniels ¶ 44. Rocker testified that UP/NS {{

}}.[71] Thus, shippers should not expect UP/NS single-line service to translate into

[71] Ex. 17, K. Rocker Dep. Tr. 156:18-157:2 ({{

}}); *id.* at 239:8-10 ({

}}); Ex. 18, T. Rynaski Dep. Tr. 412:17-20 ({

}); Ex. 11, M. McClellan Dep. Tr. 60:19-62:8, 68:9-22, 71:16-72:14 (NS's Chief Strategy Officer {{

}}); *id.* at 282:7-14 ({{

}}); Ex. 19, J. Thomas Dep. Tr. 308:4-309:21 ({

}}); Ex. 9, G. Janke Dep. Tr. 346:13-347:4 ({{n

}}); Ex. 6, M. Houston Dep. Tr. 195:12-196:2 ({{

}}); Ex. 22, J. Turner Dep. Tr. 212:8-213:1 (has not heard of any commitment by UP to reduce rates or not raise prices post-merger); *UP Fireside Chat*, *supra* at 12 (Jim Vena responding to question "is there a lower price piece to the enhanced competition?", stating "if I went to a bank, I should tell them that if they merge, I'd like to have my fees dropped. That does not happen. It's the service that you sell. It's what you do. That's not the position that we're in. We adjust prices up and down. We need to, depending on what the market and where we are and what the capability of the customer is, short-term and long-term. We do that already. We're not changing this."); UP-80/NS-78, at 103-05 (responding to Board's question regarding "pricing adjustment[s]", Applicants said only that they "expect" to charge the "rates … in the marketplace" to the extent "competitive pressure" requires); Transcript, Norfolk Southern Corp., Transcript, Interview of J. Vena and M. George at Fox Business The Claman Countdown (July 29, 2025), https://www.sec.gov/Archives/edgar/data/100885/000119312525169499/d889576d425.htm (CEO Jim Vena responding to question "are you guys going to hike prices?" by expressly declining to "say we are going to stop having price increases," explaining that customer savings would result from having less inventory in the supply chain due to more efficient rail transport); Transcript, Union Pacific Corp., Remarks of J. Vena at Company Conference Presentation, Baird 55th Ann. Global Indus. Conference, S&P Global at 10 (Nov. 11, 2025), https://stockanalysis.com/stocks/unp/transcripts/411201-baird-55th-annual-global-industrial-

rate savings. V.S. Daniels ¶¶ 32-33, 42.[72] Without effective competitive constraints, any savings could instead be retained as private profit. V.S. Daniels ¶¶ 49, 67; V.S. Monaco ¶ 132.

C. UP and NS dramatically understate the risk and duration of post-merger service disruptions.

UP and NS's public benefits analysis fails to seriously address the potential service disruption risk that would accompany an integration of this complexity and scale. The Board's rules recognize that significant integration-related service problems can arise even after extraordinary precautions. 49 C.F.R. § 1180.1(c)(2)(iii). Large major rail mergers have historically produced severe and prolonged operational failures. V.S. Albright at 6. UP and NS not only understate this historical pattern; they propose an integration plan that, as structured, would create substantial new sources of operational fragility from the outset.[73]

Applicants' planned workforce reductions add to integration risk. Dr. Monaco identifies front-loaded cuts in NS network planning and operations, safety, technology, and customer support, including positions below director level. V.S. Monaco ¶¶ 118–122. Applicants have not

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conference/ ("Even if we just increase the rates at the regular whatever number it is that the market sort of will allow us to do that, [shippers are] going to benefit from that.").

[72] This would be consistent with UP's pricing for its interline and single-line service today. In contrast to Dr. Israel's claim that interline rates carry a premium of approximately 27-29%, Mr. Daniels performs an analysis that shows that, once outlier commodities are removed, UP's single-line service for merchandise traffic does not produce lower rates than interline service for UP shippers. *Id.* ¶¶ 46-47 & Ex. 5 (showing aggregate rate differentials by length of haul, excluding coal and transportation equipment). This is consistent with basic pricing economics and UP's approach of "pricing to the market." *Id.* ¶ 45; *supra* n.71.

[73] Applicants' July 27 supplement also added a "Targeted Access Program," which purportedly provides shippers options to switch carriers in the event the merged carrier experiences service disruptions during the implementation period. UP-80/NS-78, at 23-24. As the practical relief carrier in the East, CSXT is concerned that it could be required, likely on short notice, and at arbitrator-set rates, to absorb traffic diverted following UP/NS service failures. Such diversions could strain CSXT's equipment, terminal, and network capacity, impairing its ability to serve existing customers. The result would be to shift part of the operational burden of UP/NS's integration failures onto CSXT and its customers.

adequately explained how those reductions would preserve network fluidity and customer service during integration. V.S. Monaco ¶¶ 121, 133. The Application also reveals a structural circularity in UP and NS's integration plan that further undermines confidence in their claimed benefits. As Dr. Monaco explains, new services are contingent on freight volumes, yet Mr. Hunt's model assumes those new services already exist in order to support the projected diversions. "Absent adequate volumes of initial diversions, the new services on the growth plan will likely not materialize and, in turn, the time savings that Applicants use as evidence of benefits from improved service will also not be achieved, decreasing the likelihood of further diversions." V.S. Monaco ¶ 172.

The claimed public benefits depend entirely on a smooth and timely integration that the historical record of major railroad consolidations suggests is far from guaranteed. The Board should therefore heavily discount any projected benefits that rest on operational continuity that UP and NS have not credibly demonstrated they can maintain.

D. UP and NS's claimed public benefits do not adequately account for labor impacts.

Applicants ask the Board to credit as public benefits $130.8 million in net annual savings related to agreement-personnel (craft employees), while also accepting their promise of "jobs for life" for craft employees *and* a projected net gain of 1,173 craft jobs. Am. App. Vol. 1, at 513, 514 (V.S. Janke ¶ 56 & tbl. 3); Am. App. Vol. 1, at 538, 541 (V.S. Parkerson ¶¶ 3, 10). To address this tension, Applicants explain only that "[s]avings from reductions in personnel consist of avoiding salaries and benefits" and that, "[f]or the majority of non-executive positions, the savings will be achieved through retirements and normal attrition." Am. App. Vol. 1, at 514 (V.S. Janke ¶ 57). Applicants fail to explain how they can feasibly achieve craft employee-related savings while expecting to *increase* the number of craft jobs and guaranteeing a "job for life" for all craft

employees. *See, e.g.*, Ex. 9, G. Janke Dep. Tr. 152:7-23 (testifying that a "reduction in the number of people working relative to where we are today" contributes to the approximately $131 million in claimed savings.).

Applicants' lack of planning concerning labor impacts and resulting uncertainly do not stop there. They have provided insufficient detail to test whether their workforce projections are achievable. UP's Vice President of Labor Relations acknowledged that the figures in her verified statement were the "result of a modeling exercise" and that actual staffing numbers remained to be determined. Ex. 14, M. Parkerson Dep. Tr. 33:12-22.[74] She further explained that she was not aware if Applicants had even {{ }}. *Id.* at 258:2-17. Though Applicants state that they will comply with applicable requirements of collective bargaining agreements and labor protections, such as *New York Dock* (*see* Am. App. Vol. 1, at 542, 544 (V.S. Parkerson ¶¶ 11, 14)), Parkerson could not answer questions about {

}. *See, e.g.*, Ex. 14, M. Parkerson Dep. Tr. 76:22-80:13.

In addition, the elimination of UP-NS interchanges that Applicants tout as a source of efficiency and public benefits will necessarily result in fewer crew changes and handoffs at their previous interchange locations. Yet UP and NS have not accounted for the effects of eliminating those activities on crew assignments for craft employees. *See* Ex. 14, M. Parkerson Dep. Tr. 265:12-266:11 {{

}}. Nor have they shown where the resulting changes in crew requirements are reflected in their labor-impact analysis or personnel-

[74] *See also id*. at 53:4-13, 168:16-169:9 ("[T]he model tells us what the resulting traffic flows could be...we still have CBAs and our job-for-life commitment. And so operating decisions are going to have to be made in light of those commitments which are going to exist."); *see id.* at 227:4-228:6.

savings calculations. *See generally* Am. App. Vol. 1, at 535 (V.S. Parkerson); Am. App. Vol. 1 at 494 (V.S. Janke).

In short, Applicants have not provided sufficient accounting for the workforce consequences of their merger for the Board to credit their claimed operating benefits.

VI. UP and NS Do Not Satisfy the Enhanced Competition Standard.

Under the Board's 2001 Rules, any application for further Class I consolidation should demonstrate that the proposed transaction and its conditions not only preserve but affirmatively enhance competition. *See* 49 C.F.R. § 1180.1(c), (c)(1), (c)(2)(iv), (d); *2001 Rules*, 5 S.T.B. at 547. Applicants claim to satisfy this requirement in two ways: (1) the efficiencies of single-line service that result in truck-to-rail diversion; and (2) their Committed Gateway Pricing ("CGP") proportional rate mechanism. Neither is sufficient to satisfy the enhanced competition standard.

While the Board has not explicitly defined enhanced competition, it has made clear in discussing the concept that the focus should be on increasing shippers' rail options. To this end, the examples included in the merger rules are things that create new rail options for shippers, like trackage rights and the elimination of paper barriers. 49 C.F.R. § 1180.1(a), (c)(1), (c)(2)(iv), (d); *2001 Rules*, 5 S.T.B. at 547. In other words the Board's Rules equate "enhancing competition" with "new competition." *2001 Rules*, 5 S.T.B. at 554. As demonstrated below, neither of UP and NS's proffered enhancements come anywhere close to meeting that standard, and CGP is, by UP and NS's own admission, not pro-competitive at all.

A. UP and NS's inherent efficiency and truck diversion arguments do not constitute enhanced rail competition.

Applicants assert that their merger would inherently enhance competition via efficiency gains from converting interline into single-line service. UP and NS conflate "more efficient" and "pro-competitive" as interchangeable concepts, but the Board's Rules codify enhanced efficiency

and enhanced competition as distinct benefits. Improved efficiency only produces public benefits to the extent competitive pressures in a market compel the pass-through of resulting cost savings or other efficiencies, and as explained *supra* Part V(B)(4), there is every reason to expect that a combined, more powerful UP would not lower its prices after obtaining control of NS. Where prior cases credited end-to-end mergers as enhancing competition—for example, *CP/KCS* and *CN/Iowa Northern*—the rationale was that those mergers turned smaller railroads into stronger, more effective competitors against existing single-line service. This transaction would do the opposite; Applicants are asking the Board to take the largest, strongest Class I railroad and grant it far more power. *See* V.S. Carey at 12, 25, 41-45.

Applicants' asserted single-line efficiencies and truck diversions are both overstated and insufficient to establish enhanced rail competition. V.S. Monaco ¶¶ 28–33, 176–181; V.S. Daniels ¶¶ 31-50. The Rules recognize intermodal competition, but separately require Applicants to explain how their proposal would offset unmitigated harms through enhanced competition. 49 C.F.R. § 1180.1(c)(2)(i), (iv), (d). Merely relabeling projected efficiency gains as competitive enhancements would collapse that distinction. Nor do speculative truck diversions establish stronger rail alternatives for shippers facing foreclosure. V.S. Shehadeh ¶¶ 160–166.

B. CGP cannot satisfy the enhancement standard—and does not even clear the lower bar of preserving competition.

Proportional rate mechanisms like CGP are ordinarily proposed as competition-preserving conditions to address foreclosure at gateways—a category the Board's Rules explicitly distinguish from competitive enhancements. The most such conditions can do is try to replicate existing interline service. They cannot create new competing rail alternatives. 49 C.F.R. § 1180.1(c)(2)(iv), (d).

UP and NS's analogy to the I-5 Agreement from the UP/SP merger is inapt. What enhanced competition in UP/SP was BNSF's acquisition of a line that created a new single-line route. The I-5 Agreement was a competition-preserving condition designed to protect against foreclosure of the existing UP/BNSF interline option—not the source of the competitive enhancement itself. Ex. 18, T. Rynaski Dep. Tr. 60:14-64:24 ({{

}}). Applicants' own supplement distinguishes CGP's coverage from I-5. UP-80/NS-78, at 43.

But the deficiencies of CGP go further, because UP and NS have conceded that CGP would not even perform the more modest function of preserving competition. They admit it was not intended to address foreclosure or {{ }} Ex. 18, T. Rynaski Dep. Tr. 50:3-15; UP-80/NS-78, at 43. Merely calling CGP a source of "thousands of competitive options that never existed" does not change its substance. *Id.* at 18. It offers a rate for UP/NS's portion of an interline movement, not an alternative independent of UP/NS's control. UP-80/NS-78 at 15-16; V.S. Shehadeh ¶ 175.

CGP's exclusions leave most traffic unprotected. Eligibility is confined to manifest and bulk unit-train traffic involving specified sole-served facilities, four designated gateways, and BNSF or CSXT at the other end. That excludes automotive and intermodal traffic, facilities with multiple rail connections, other gateways, and other connecting carriers. Dr. Shehadeh estimates that eligible traffic represents only {{ }} of annual interline revenue involving UP or NS. V.S. Shehadeh ¶¶ 179–180. These exclusions hollow out CGP's purported significance, intentionally leaving most interline traffic involving UP or NS outside its reach.

CGP's pricing mechanism compounds those limitations. UP and NS have openly designed the CGP rate factor to be systematically higher than—and thus uncompetitive against—the rates they currently charge interline partners. They propose to set rate factors at the 70th percentile of what they charge shippers, with an explicit purpose not to generate a competitive rate but to make CGP useful only to "customers with the highest rates." UP-80/NS-78 at 42. In fact, approximately {{ }} of UP and NS's revenues for eligible movements already fall below this percentile. V.S. Shehadeh ¶¶ 181–83. Rates are grouped by commodity and broad mileage bands rather than calibrated to the competitive conditions, routing, costs, and service requirements of individual movements. Combining competitive and less competitive traffic means that the interline rate available under CGP will consistently be priced higher than UP/NS's single line service. V.S. Higgins ¶¶ 73-74. A rate structure engineered to be commercially inferior to the merged entity's own pricing cannot plausibly create meaningful competitive options for shippers. *Id.* The commitment also expires after only five years. Am. App. Vol. 1, at 23 ("[CGP] would remain in place until the end of the merger oversight period, unless extended by the Board."). Temporary protection cannot restore competition permanently removed by consolidation. V.S. Higgins ¶ 77. And CGP does not prevent service degradation or pricing and routing strategies that divert traffic or short-haul interline partners. These flaws are not matters of calibration: expanding CGP's eligibility or adjusting its parameters would not change that it offers only a UP/NS-controlled rate, not an independent competitive alternative.

UP and NS must demonstrate that competition will be preserved and enhanced. A temporary, selectively available pricing formula that leaves shippers with minimal competitive alternatives and other carriers dependent on the merged carrier does neither.

C. The absence of any genuine competitive enhancement in the context of such a major merger is fatal to the Application.

The enhanced competition standard exists precisely because the Board recognized, through its 2001 Rules, that the benefits historically promised by major rail consolidations had rarely materialized for shippers and the broader public, while the competitive harms proved lasting and difficult to remedy. A proposed transaction of this magnitude demands a particularly compelling and concrete showing of competitive enhancement. UP and NS have made no such showing. The failure to satisfy the enhanced competition standard is, on its own, a sufficient reason for the Board to deny UP and NS's proposed merger.

VII. No Set of Conditions Would Prevent the Merger's Pervasive Harm.

For all the reasons discussed above, granting UP control of NS would cause severe, pervasive harm to the public interest. The Board thus may not approve that control unless it is shown that particular conditions would be effective to prevent that harm and sufficient to "ensure that [the] transaction is truly in the public interest." *2001 Rules*, 5 S.T.B. at 569.

CSXT has carefully assessed whether any conditions could prevent UP and NS from foreclosing competition. To be effective for this purpose, a condition would have to perpetually and successfully reverse UP's and NS's ability and incentive to make all rail alternatives worse[75] by preventing a wide range of anticompetitive strategies and providing remedies that are timely, inexpensive, and definitive. CSXT has concluded that there are no such conditions that could not be readily evaded by UP/NS or which would be manageable to enforce. It is clear that no set of

[75] The competitive harm the UP-NS combination would cause would be network-wide, not an isolated loss of particular alternatives that an access- or trackage-based remedy in a specific geographic area could restore. Thus, while CSXT's Discussion of Conditions filed with these Comments include specific operating rights tailored to particular corridors, CSXT emphasizes that these would be insufficient to address the network-wide harms.

conditions can make the combination of these two carriers "truly in the public interest," and CSXT opposes UP's acquisition of NS outright. *Id.* To assist the Board's understanding of this position, in this Part VII CSXT walks through the conditions one might consider, and the reasons why each would be ineffective here.

A. Principles applicable to conditions to prevent foreclosure.

1. Conditions must preserve competition against foreclosure.

The overriding purpose of anti-foreclosure conditions is to prevent or reverse the exclusion of competitive forces from the market, not to replace them with regulation that directly protects shippers or other carriers from exploitation when that competition fails. *See 2001 Rules*, 5 S.T.B. at 569; *Ford Motor*, 405 U.S. at 573-74, 577-78. Likewise, their purpose is not to protect a competitor's revenues or traffic, but to ensure markets benefit from continued competition by the merging carriers' rivals.

Whether a given condition would achieve this purpose is a fact material to the Board's assessment of a major consolidation's competitive effects. *2001 Rules*, 5 S.T.B. at 569. The Board's disfavor of conditions that "broadly restructure the competitive balance among railroads with unpredictable results" (*CP/KCS*, slip op. at 20 (citations omitted)) cuts both ways: That unpredictable imbalance is exactly what the "transformative" combination of UP and NS would cause, making the consequences of minimizing conditions just as far-reaching and unpredictable as maximizing them. *See* 49 C.F.R. § 1180.1(a) (Board policy to "ensure balanced and sustainable competition"). The risk of erroneously finding that a condition would protect competition would fall entirely on shippers and the public interest, because parties to anticompetitive mergers *benefit* from ineffective remedies. Moreover, the "end-game" context of the current proceedings heightens these stakes. *2001 Rules*, 5 S.T.B. at 560-61. Loss of competition unremedied by

ineffective conditions would be permanent, and mitigated only through extreme measures like further consolidation, pervasive enforcement, and regulatory intervention. *See id.* at 549, 551.

The Board would thus be in error if it were to assume its task is to find the silver bullet solution that "eliminate[s] vertical foreclosure concerns without unreasonably impeding the Transaction's benefits" as it has described in transactions shown to be generally pro-competitive. *CP/KCS*, slip op. at 67. The Board's task here is to "carefully consider" whether a particular condition that has been proposed would be "effective" and "sufficient," not to assume there is a condition that would be. *2001 Rules*, 5 S.T.B. at 563, 569.

2. "Behavioral" conditions are often ineffective and cause collateral harm.

As explained above in Part II(D), a "behavioral" condition that directly "regulate[s] the merged firm's post-merger business conduct or pricing authority" may be ineffective or counterproductive even where it ostensibly prohibits the anticompetitive conduct at issue. *Merger Remedies Manual*, at 4. First, such remedies would not remove the anticompetitive "community of interest" that causes foreclosure. *Du Pont*, 366 U.S. at 331. Second, it is difficult to craft a standard that prohibits "all the many fashions" of foreclosing conduct. *Id.* at 333-34. Third, a condition that "depend[s] upon [an]often cumbersome and time-consuming" case-by-case enforcement would burden those harmed and may be ineffective against systematic conduct. *Id.* Fourth, policing conduct would entangle the Board perpetually "in the regulation of private affairs more deeply" than restoring the incentives of active rivalry. *Id.* at 334.[76]

[76] *See also* Makan Delrahim, Ass't Att'y Gen., Antitrust Div., Dep't of Justice, *Antitrust and Deregulation* at 5-8 (Nov. 16, 2017) (Behavioral remedies "supplant[] competition with regulation," "entangl[e] the [Board] in the operation of a market," and "allow the merger and then requir[e] the merged firm to ignore the incentives inherent in its integrated structure [which] is both paradoxical and likely difficult to achieve.").

For these reasons, though the DOJ and FTC have accepted behavioral remedies where a vertical transaction has presented minimal concern (as the Board concluded in *CP/KCS*), they have generally required that "the [merging] parties prove that: (1) [the] transaction generates significant efficiencies that cannot be achieved without the merger; (2) a structural remedy is not possible; (3) the conduct remedy will completely cure the anticompetitive harm; and (4) the remedy can be enforced effectively." *Merger Remedies Manual*, 16. *See* Delrahim, *Antitrust and Deregulation*, *supra* note 76, at 8.

The Board has further recognized that certain behavioral conditions have collateral consequences that can render them anticompetitive even if they would prevent foreclosing behavior. For example, the discredited "DT&I" conditions requiring rigid "rate equalization" and route preservation prevented rate foreclosure and gateway closures at the cost of preventing competitive changes to rates and routings that realize and pass on merger efficiencies. *See Rulemaking Concerning Traffic Protective Conditions in R.R. Consolid. Procs.* ("*Traffic Protective Conditions*"), 366 I.C.C. 112, 121-24 (1982); *2001 Rules*, 5 S.T.B. at 563. Similarly, the Board expressed concerns that "proportional rate" conditions can deter merging parties from competing aggressively, because they effectively subsidize competitors' services with the effects of merger efficiencies and compound merging firms' loss of revenue from single-line rate reductions. *See CP/KCS*, slip op. at 59-60.

B. Conditions to preserve rate competition at gateways.

To preserve the force of interline competition, an effective condition would have to prevent UP-NS from foreclosing interline alternatives by making their rates or service uncompetitive. To do that, the standard would have to be capable of identifying anticompetitive rate-setting, while providing a remedy that can restore competition.

1. Standards to preserve rate competition.

CSXT has explained why the "commercially reasonable" rates standard would not prevent rate-based foreclosure. The standard is illusory, it does not prohibit anticompetitive rates, and it is too uncertain to be readily enforced. *See supra* Part II(D)(3).

a. Objective standards for defining competitive rates.

CSXT has considered an alternative that would prohibit UP-NS from offering competitively unreasonable interline rates based on objective factors related to competition. The competitiveness of a rate and division of interline revenue, however, depends on a multitude of market- and movement-specific factors that would be extremely difficult to specify *ex ante* or weigh in any given case. *See*, *e.g.*, *CP/KCS*, slip op. at 59 n.94 (describing "the variety of factors" that affect revenue divisions). A standard and adjudicatory process that actually accounted for this complexity would involve very high compliance costs, require case-by-case enforcement based on extensive discovery and evidence and discovery, and likely lead to unpredictable outcomes. These costs, uncertainties, and limitations would swallow the value of such a standard in preventing systematic rate foreclosure, a concern the Board has expressed in other proceedings. *See Market Dominance Determs.*, 3 S.T.B. at 945-49; *Final Offer Rate Rev.*, EP 755, Final Rule (S.T.B. Dec. 19, 2022), slip op. at 3 ("[T]he litigation costs required to bring a case … can quickly exceed the value of the case."). By contrast, one that creates predictable outcomes and ready enforcement would not accurately "reflect[] applicable cost and market factors." *CP/KCS*, slip op. at 60 n.97. And either approach would essentially be a form of direct rate regulation.

b. Subjective standards for defining competitive rates.

CSXT has also considered several mechanisms that have been proposed for defining competitive interline rates subjectively, that is, based on market rates against which they would compete, such as proportional rate mechanisms. The Board has noted that these mechanisms can

create incentives that reduce competition rather than preserve it. *See CP/KCS*, slip op. at 59-60. In addition to the concerns raised by the Board, each of the "proportional rate" constructs CSXT has considered raise specific harms.

The CGP Proposal. CSXT has previously explained why the "CGP" mechanism would not produce competitive rates. Applicants concede it is not supposed to. UP-80/NS-98, at 43 ("CGP was not intended to create competition with post-merger single-line traffic."). Among other reasons, the categories of ostensibly "similar" traffic from which it would calculate the CGP rate use broad commodity groups and milage "bands" to aggregate traffic with very different competitive characteristics. As Applicants explain, the purpose of CGP's design is to benefit only "customers with the highest rates" and create rates that would not be competitive in competitive markets. *Id.* at 42-43. Critically, this means that even if carriers like CSXT might then be able to continue to earn revenue on some such traffic, that would marginally benefit a competitor but do almost nothing to protect competition.

The I-5 Agreement. By contrast, the purpose of the "I-5 Agreement" was specifically to generate "competitive rates" for use in interline service. UP *KCS/TexMex* Gray V.S. 42-43.[77] It sought to accomplish this by better distinguishing traffic, for example through narrower commodity categories and geography rather than crude length-of-haul bands. But this approach governed only traffic crossing a single gateway (Portland) and primarily a single geographic corridor—that is why it was named after the highway it paralleled.

This approach could not simply be transposed to all traffic crossing all gateways for two reasons. First, all Portland Gateway traffic had the same fundamental cost characteristics like the

[77] Because CSXT has no direct experience with the I-5 Agreement, it cannot comment directly on whether the result was, in fact, competitive interline service.

economics of the line and facilities used, and demand characteristics related to the north-south flow of commodities up and down the West Coast. Applying it to all traffic crossing the mid-continent gateways would aggregate much more heterogenous traffic, resulting (as CGP does by design) in competitively-effective alternatives only for shippers who have the highest rates already and the elimination of intense rate competition wherever interline options provide such competition today. Second, application to all interline traffic at all gateways would replace nationwide competition with nationwide central planning and prescribe every interline rate in the country by algorithm.

Automatic Rule 11 Cap. In *CP/KCS*, UP proposed a mechanism by which the maximum Rule 11 rate CPKC could offer a shipper to or from the Laredo (or Kansas City) Gateway would be the mileage-based prorate of the single-line rate CPKC charged or offered that shipper for that same movement. *See* UP *CP/KCS* Comment at 71-72. In theory, this would provide a perfect subjective reference point for the competitiveness of a given interline rate. Because the UP-NS combination threatens foreclosure in many markets rather than at a single gateway, however, UP-NS could evade its effects through more complex pricing practices such as rebates and bundling that would complicate the referenced "interline rate." It would also create winners and losers for certain traffic based on prevailing structural differences in the per-mile costs and rates of eastern and western carriers, for example due to differences in density and grade. Finally, though UP explained distinctions between this mechanism and DT&I conditions, it would resemble a rate equalization condition: UP's rates per mile could not differ between its interline and single-line traffic.

In sum, CSXT has concluded there is not a workable condition that would effectively identify anticompetitive interline rates and prevent UP and NS from using anticompetitive rates to

foreclose interline competition. Indeed, the solutions that could be even partially effective for this purpose could themselves produce anticompetitive consequences.

2. Enforcement issues as to rate remedies.

The process and remedy by which behavioral conditions are enforced are often their greatest weakness. As the Supreme Court explained long ago, "the public interest should not … be required to depend upon the often cumbersome and time-consuming injunctive remedy." *Du Pont*, 366 U.S. 333-34. As the former head of the DOJ Antitrust Division has explained, investigating and proving violations of behavioral conditions has been "onerous" and time-consuming even for the DOJ. Delrahim, *Antitrust and Deregulation*, *supra* note 76, at 8. This presents a fundamental challenge for remedies against foreclosure through strategies to raise the cost or degrade the quality of alternatives, because the cost and delay of enforcement becomes part of the effective cost and quality of the alternative it ostensibly protects. These effects are compounded where success is uncertain or would provide incomplete relief against systematic efforts to foreclose even if obtained.

As explained above, the "open gateway" condition proposed by Applicants, which depends on shippers to arbitrate the reasonableness of individual rate offers, would be wholly unenforceable for these reasons. *See* above at Part II(D)(3). Further, shippers have less at stake in an individual negotiation than competitors do from being systematically foreclosed from markets, making case-by-case enforcement by shippers an especially unlikely force to deter or reverse foreclosure. *See Final Offer Rate Rev.*, slip op. at 3. This is why consumer arbitration is not generally accepted as a foreclosure cure, only arbitration over intermediate commercial relationships between the merging firm and rivals it would foreclose, such as for video programming distribution.

CSXT has considered and would prefer for foreclosed carriers to be permitted to arbitrate over foreclosing conduct, but even this would not change the fundamental weaknesses of an

arbitration remedy. Its costs and delays would raise CSXT's costs of providing interline service and prevent CSXT from responding rapidly to market developments. Success would remain uncertain, and case-by-case challenges would be an ineffective defense against systematic foreclosure. Further, the Board has expressed concerns regarding "unintended negative effects on competition" that may result from carrier enforcement. *CP/KCS*, slip op. at 73.

C. Rules against service degradation

Service degradation is a notoriously difficult form of foreclosure to detect and police. *See*, *e.g.*, *Illumina*, 88 F.4th at 1053. Neither shippers nor connecting carriers would have visibility into the reasons for a particular service shortcoming, and even where the results speak for themselves, remedying it would necessarily involve extensive discovery, costly litigation over the cause, and counter-accusations that the foreclosed carrier is to blame. These problems arise under both the "commercially reasonable" service standard Applicants propose and non-discrimination standards that prevail in interline arrangements. The latter are seldom enforced for these very reasons, and it is the interlining carriers' mutual interest in providing the most competitive service possible that prevents service degradation, not their legal rights. V.S. Higgins ¶ 21, 23, 76. If this mutual interest is removed, arbitration over service standards is unlikely to provide meaningful relief where a motivated carrier worsens its interline service in order to divert traffic to its single-line options. Absent a competitive interest in maximizing service quality, only direct intervention through regulation would constrain the behavior. But this would require unacceptable pervasive intervention in the day-to-day activities of railroading.

CONCLUSION

For all of these reasons and more, the proposed acquisition of control by UP of NS is against the public interest and no set of conditions could prevent the pervasive harm to the nation's

transportation network that would result. The Board should deny UP's request for the right to own and control NS.

[Signature page follows.]

Respectfully submitted,



Kent A. Gardiner

Michael S. Burns
John P. Patelli
Jason M. Marques
Steven Armbrust
CSX Transportation, Inc.
500 Water Street
Jacksonville, FL 32202
(904) 359-3276

John M. Scheib
Gentry Locke Attorneys
101 W. Main Street, Suite 705
Norfolk, VA, 23510
(757) 916-3511
Scheib@gentrylocke.com

Louis E. Gitomer
Law Offices of Louis E. Gitomer, LLC
600 Baltimore Avenue, Suite 301
Towson, MD 21204
(410) 296-2250
Lou@lgraillaw.com

Kent A. Gardiner
Luke van Houwelingen
Connor J. Ahearn
Drake Morgan
Lauren T. Fleming
Crowell & Moring LLP
600 Fifth Street NW
Washington, DC 20001
(202) 624-2500
KGardiner@crowell.com
LvanHouwelingen@crowell.com
CAhearn@crowell.com
DMorgan@crowell.com
LFleming@crowell.com.

Shawn R. Johnson
Fried, Frank, Harris, Shriver & Jacobson LLP
801 17th Street, NW
Washington, DC 20006
(202) 639-7000
Shawn.Johnson@friedfrank.com

Attorneys for CSX Transportation, Inc.

CERTIFICATE OF SERVICE

I hereby certify that on this 18th day of November 2026, I have caused the foregoing document to be served electronically or by first-class mail, postage pre-paid, on the Secretary of Transportation, the Attorney General of the United States, Applicants' representatives, Administrative Law Judge Jenifer Soulikias, and all parties of record in this proceeding.



Kent A. Gardiner
CROWELL & MORING LLP

Exhibit Index

Exhibit No.	Description	Confidentiality
CSXT Witness Verified Statements		
	Verified Statement of Maryclare Kenney	Redacted/HC
	Verified Statement of Ryan Higgins	Redacted/C
	Verified Statement of Casey Albright	Redacted/HC
	Verified Statement of Christopher Maffett	Redacted/HC
Expert Witness Verified Statements		
	Verified Statement of Dr. Ramsey Shehadeh	Redacted/HC
	Verified Statement of Julie M. Carey	Redacted/HC
	Verified Statement of Kristen Monaco	Redacted/HC
	Verified Statement of Scott Daniels	Redacted/HC
Deposition Transcripts		
1.	E. Bailey Excerpts of Deposition Testimony	Public
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4.	M. George Excerpts of Deposition Testimony	Redacted/HC
5.	J. Hamann Excerpts of Deposition Testimony	Redacted/HC
6.	M. Houston Excerpts of Deposition Testimony	Redacted/HC/C
7.	D. Hunt Excerpts of Deposition Testimony	Redacted/C
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9.	G. Janke Excerpts of Deposition Testimony	Redacted/HC
10.	D. Lehlbach Excerpts of Deposition Testimony	Redacted/HC
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Deposition Exhibits and Other Documents		
25.	9/19/2024 Union Pacific Corporation Live Investor Road Show Transcript (Dep. Ex. 570)	Public
26.	1/23/2025 Union Pacific Corporation Q4 Earnings Call Transcript (Dep. Ex. 30)	Public
27.	10/22/2026 Union Pacific Corporation Q3 2026 Earnings Call Transcript (Dep. Ex. 568)	Public
28.	Sept. 2026 Rail Industry Overview (Dep. Ex. 408)	Public
29.	7/23/2026 Union Pacific Corporation Q2 Earnings Call Transcript (Dep. Ex. 460)	Public
30.	UP_0022580, 04/15/2026 Excel	HC
31.	UP_0024575, 2024 Presentation (Dep. Ex. 9)	HC
32.	UP_0039326, 6/12/2020 Email from G. Janke to J. Panzer (Dep. Ex. 84)	C
33.	UP_0078115, Presentation	HC
34.	UP_0082686, 3/15/2026 Excel	HC
35.	UP_0092795, 3/26/2026 Presentation (Dep. Ex. 45)	HC
36.	UP_0094437, 3/25/2026 Document (Dep. Ex. 42)	HC
37.	UP_0344233, 1/17/2026 Email from D. Hughes to G. Janke (Dep. Ex. 96)	C
38.	UP_0607355, 6/4/2025 Email from T. Rynaski to J. Hamann (Dep. Ex. 466)	HC
39.	UP_0703627, 3/11/2024 Meeting Invite from L. Knight (Dep. Ex. 580)	HC
40.	UP_0867519, 5/12/21 Email from J. Bendon to K. Rocker	HC
41.	UP_0941173, 3/9/23 Article	HC

42.	UP_00994437, 3/25/2026 Document (Dep. Ex. 42)	HC
43.	UP_1007320, 12/13/2025 Email from K. Rocker to P. Linden; B. Simmons; S. Sullivan (Dep. Ex. 579)	HC
44.	UP_1021428, 2/27/2025 Email from B. Whited to J. Turner; E. Gehringer; C. Garrison; J. Sheldon; J. Givens (Dep. Ex. 429)	HC
45.	UP_1117523, 2/17/25 Email from C. Kankousky to K. Rocker	HC
46.	UP_1133244, 5/3/24 Email from K. Rocker to E. Gehringer	HC
47.	UP_1456756, 6/13/2025 Email from G. Janke to J. Turner (Dep. Ex. 113)	HC
48.	UP_1464394, May 2021 Presentation	HC
49.	UP_1532212, 11/7/2025 Email from B. Simmons to K. Rocker; P. Linden; A. Stinebaugh	HC
50.	UP_1629179, 3/6/25 Email from H. Pham to B. Whited; J. Hamann; E. Gehringer; K. Rocker; C. Richardosn; C. Conlin; R. Jalali; J. Perkes	HC
51.	UP_1641826, 11/3/2025 Email from K. Rocker to J. Vena; T. Rynaski; C. Conlin re Privileged and Confidential - UP/NS Meeting (Dep. Ex. 140)	HC
52.	UP_1682669, 2/3/2016 Presentation (Dep. Ex. 105)	HC
53.	UP_1738096, 12/12/24 Email from K. Rocker to J. Vena; J. Hamann	HC
54.	UP_1777238, Document	HC
55.	UP_1860886, 2/3/26 Presentation	HC
56.	UP_2191397, 9/26/2025 Team Chat between J. Thomas; D. McLaughlin, A. Pfeifer (Dep. Ex. 306)	HC
57.	UP_2757847, Presentation (Dep. Ex. 310)	HC
58.	UP_2757848, Presentation	HC
59.	UP_3203700, 2/23/2024 Email from R. Gregory to H. Pham (Dep. Ex. 574)	C
60.	UP_3207599, 8/8/2024 Email (Dep. Ex. 569)	C
61.	UP_3217794, March 2026, Southwest Association of Rail Shippers, Keynote Address of Jim Vena	Public
62.	UP_3353006, 11/24/2025 Email from K. Rocker to E. Gehringer; J. Hamann; C. Conlin; R. Gregory (Dep. Ex. 576)	HC
63.	UP_3353986, 2/14/2026 Email from K. Rocker to J. Vena; J. Hamann; E. Gehringer; C. Gregory; C. Conlin; R. Jalali; J. Perkes; L. Knight (Dep. Ex. 577)	HC

64.	UP_3375955, 11/13/2025 Email from P. Lubbers to J. Urban	HC
65.	UP-STB-D13-0000349, 5/12/2025 Presentation (Dep. Ex. 38)	HC
66.	UP-STB-D13-0000381, 3/16/2025 Presentation (Dep. Ex. 26)	HC
67.	UP-STB-D13-0000430, 5/21/2025 Presentation (Dep. Ex. 128)	HC
68.	UP-STB-D13-0000623, 3/26/2024 Presentation (Dep. Ex. 494)	HC
69.	NS_00109906, Presentation	HC
70.	NS_00119427, Presentation (Dep. Ex. 212)	HC
71.	NS_00119544, Document	HC
72.	NS_00122764, 12/17/2025 Presentation	HC
73.	NS_00125869, 7/14/2025 Team Chat between D. Lehlbach and M. McClellan	HC
74.	NS_00126066, 11/21/2025 Presentation	HC
75.	NS_00126551, 5/11/2025 Presentation	HC
76.	NS_00127059, 8/25/2025 Email from D. Oltmann to Y. Thomas (Dep. Ex. 356)	HC
77.	NS_00134053, 12/22/23 Email from D. Lehlbach to M. McClellan	HC
78.	NS_00145813, 12/20/23 Email from Unknown to S. Tureman; Y Thomas; M. McClellan	HC
79.	NS_00181115, 5/15/2025 Email from M. McClellan to J. Morris (Dep. Ex. 234)	C
80.	NS_00184207, 8/1/2025 Email from M. George to J. Morris (Dep. Ex. 246)	HC
81.	NS_00188347, June 2025 Presentation	HC
82.	NS_00219451, 2/28/2026 Email from C. Luebbers to E. Elkins; M. George; J. Zampi; Y. Thomas; M. McClellan (Dep. Ex. 250)	HC
83.	NS_00329517, 10/28/2025 Email from D. Lehlbach to M. McClellan; S. Loeb (Dep. Ex. 414)	HC
84.	NS_00331509, 5/12/2025 Email from E. Hendrickson to M. McClellan (Dep. Ex. 415)	HC
85.	NS_00401440, 8/9/2024 Email from Y. Thomas to S. St. Clair (Dep. Ex. 365)	HC
86.	NS_00482221, 4/7/2025 Document (Dep. Ex. 409)	HC
87.	NS_00569895, Document (Dep. Ex. 412)	HC

88.	NS_00672649, 12/17/2025 Presentation (Dep. Ex. 202)	HC
89.	NS_00954122, 9/18/25 Verified Statement of Maryclare Kenney	HC
90.	NS_00954288, 9/18/25 Verified Statement of Julie Carey	HC
91.	NS_00961646, 7/26/2005 Presentation	HC
92.	NS_STB_00001255, 6/9/2025 June 9, 2025 Presentation	HC
93.	NS_STB_00001303, May 19 Presentation	HC
94.	NS_STB_00001339, 6/11/2025 Email thread from M. McClellan (Dep. Ex. 413)	HC
95.	NS_STB_00001343, June 2025 Presentation	HC
96.	NS_STB_00001394, Document (Dep. Ex. 226)	HC
97.	NS_STB_00001421, 6/10/2025 Email from M. Barr to Y. Thomas, M. Bonk; W. Deshazor, R. Hunt (Dep. Ex. 355)	HC

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY — CONTROL— NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

VERIFIED STATEMENT

OF

MARYCLARE KENNEY

I. Introduction and Qualifications.

My name is Maryclare Kenney. I am Senior Vice President and Chief Commercial Officer for CSX Transportation, Inc. ("CSXT"), a position I have held since October 2025. In this role, I lead CSXT's commercial organization and oversee its sales and marketing functions, including merchandise, intermodal, and coal business lines, as well as customer service, customer engagement, and business development. My responsibilities also include the commercial relationships and service arrangements CSXT maintains with connecting and interline railroads. I work closely with CSXT's network planning, operations, and finance teams to evaluate commercial opportunities and interline relationships.

I joined CSXT in 2011 as Director of Domestic Sales and have held positions of increasing responsibility since that time. My roles have included Assistant Vice President of Intermodal Sales and Head of Automotive, followed by Vice President of Intermodal and Automotive, where I led sales and marketing for intermodal customers and customers producing and transporting automobiles and auto parts domestically and internationally. I subsequently served as Vice President of Sales and Marketing, with responsibility for Merchandise Sales and Marketing, Total Distribution Services, Inc. ("TDSI"), Automotive Sales and Marketing, and TRANSFLO. Before joining CSXT, I spent four years at PepsiCo in sales leadership and strategy roles and served seven years in the U.S. Army, achieving the rank of Captain.

Through my various roles, I have gained firsthand familiarity with the competitive dynamics of the national rail network, how CSXT sets rates in practice, and the interline collaborations and customer relationships that shape CSXT's ability to compete for and retain traffic. As part of this, I am familiar with the direct and extensive competition between CSXT and Norfolk Southern ("NS") in the eastern United States, as well as the different commercial

strengths of CSXT's western interline partners, including Union Pacific ("UP") and BNSF Railway ("BNSF").

I submit this Verified Statement in support of CSXT's comments and requests for conditions concerning the proposed merger of UP and NS. I describe the competition that exists in the rail network today and how the proposed merger would undermine that competition. I also discuss CSXT's interline collaborations and the benefits they provide to shippers, as well as the commercial significance of the conditions CSXT identifies concerning the Kansas City–East St. Louis corridor, Eastern Pennsylvania, and Norfolk International Terminals.

II. The Existing Competitive Balance of the Rail Network Is Essential to Competition and Investment.

CSXT and NS compete directly and intensely for customers throughout the eastern United States, where our networks substantially overlap. Because CSXT does not operate lines in the West, we depend on interline partnerships with western railroads, including UP and BNSF, to serve transcontinental traffic. In my experience, the predominant flow of that traffic is from west to east, originating on a western railroad's network and moving through a gateway interchange before continuing to its eastern destination. At those midcontinent gateways, CSXT and NS compete to provide the eastern portion of the movement. Shippers benefit from that competition through better pricing or service, even when they are served by only one railroad at the western end of the movement.

The same degree of network overlap does not exist between UP and BNSF in the West. Although both railroads serve some of the same industries, such as coal, they also have distinct commercial strengths. UP is particularly strong in chemicals and other higher-margin merchandise commodities, while BNSF is particularly strong in intermodal and grain traffic.

These differences matter to CSXT's ability to compete: our network and revenue profile today are heavily reliant on UP-originated merchandise traffic, for which we compete vigorously.

The proposed merger would eliminate this competitive dynamic. Today, UP interchanges traffic with CSXT and NS, and we compete with NS to provide the eastern haul. A combined UP/NS would instead seek to keep that business on its own network rather than interchange it with CSXT, eliminating the competition for that traffic which shippers benefit from today. Even where UP continued to interchange some intermodal traffic with CSXT, I am concerned that UP/NS would degrade CSXT's competitiveness by converting existing steel-wheel interchanges (where containers remain on railcars), to rubber-tire interchanges (requiring truck transfers between terminals), claiming reduced densities as the justification. This could materially impact CSXT service and increase costs for some of its customers.

In my commercial experience, shippers choose between competing transportation alternatives based on a variety of factors, and different shippers prioritize those factors differently. Where minimizing cost is a priority, the shipper seeks the lowest total cost to move its freight from origin to destination. Even under Rule 11 pricing, where shippers can evaluate the rates for each railroad's portion of an interline movement separately, they do so in pursuit of a better end-to-end rate. Today, when both CSXT and NS can handle the eastern portion of a movement, CSXT can generally compete for that business by offering a competitive combined rate with a western partner that can compete for the movement.

A railroad's ability to compete depends on constant investment and reinvestment in its network and facilities. CSXT reinvests heavily simply to maintain its current competitiveness. We also make substantial strategic investments to improve service in many markets, including in connection with interline services. CSXT's ability to make those investments depends on cash

flow and earning revenues that provide a reasonable return on those investments. If CSXT's interline partners were to increase their rates, we would have to accept less revenue on our portion of the movement to keep the overall service price-competitive. That would reduce our ability to invest in those services. If our interline revenues in particular markets deteriorated and we could not restore them, we would have less incentive to make strategic investments to improve service in those markets and might ultimately reduce the service we provide.

If that deterioration occurred systematically across CSXT's interline business, it would seriously limit our commercial and competitive strategies. We could struggle to reinvest in our network while continuing to offer the same level and quality of service, in the same markets, at the same prices. Sustained reductions in revenue and competitiveness would compound one another and could lead us to focus on markets where we could remain competitive. Shippers in other markets would lose the benefits of CSXT's current competitiveness and strategic investments. For example, CSXT has direct experience seeking to convert truck freight to rail across our network. For many non-intermodal shippers, that conversion requires substantial upfront capital commitments, including constructing or expanding rail spurs and loading and unloading facilities. It can also require changes to supply-chain logistics and unwinding existing trucking contracts. These investments and changes can take years.

A single transcontinental carrier, such as UP/NS, would be able to impede competition from smaller regional carriers in a variety of ways. Regional Class I, Class II, and Class III carriers could not provide an effective competitive constraint on a transcontinental carrier motivated to exclude them. Competition from other modes would continue to offer some protection, but only for traffic that is already competitive with those modes today. Over time, regional railroads would have to reduce investment in the facilities and portions of their networks

serving markets from which they are being excluded. They would increasingly compete for a narrower set of markets and customers, many involving shorter hauls and sole-served customers. Rather than competing directly with a transcontinental carrier across the national network, their competitive influence would become limited to isolated parts of it.

III. Commercial Collaboration Can Deliver New Routes, Better Service, and Growth.

CSXT's collaborations and interline services with other railroads take different forms depending on the commercial needs they are designed to meet. The existence and success of these arrangements demonstrate that independent railroads can align their incentives and invest in services that expand market access and improve service quality without a merger. These arrangements also preserve the railroads' independence and flexibility to respond to emerging shipper demand and to adjust or wind down services that no longer make commercial sense, without the irreversible competitive consequences of a permanent merger. I discuss three examples below.

1. UMAX is a transcontinental intermodal container service that UP and CSXT have operated together for more than fifteen years. Through UMAX, shippers have access to more than {{ }} containers and truck-competitive service on more than 600 lanes. From the shipper's perspective, UMAX provides a seamless product: one bill, one published end-to-end schedule, and both ramp-to-ramp and door-to-door options. CSXT and UP handle the coordination, equipment balancing, and revenue divisions behind the scenes. Agreed pricing floors, revenue divisions, and balancing rules allow each railroad to market and sell the service independently while offering shippers end-to-end container service across both networks.

UMAX has been a commercial success, growing significantly since its inception in both the number of containers available and the lanes served. In 2025, CSXT, through UMAX, moved more than {{ }} intermodal units of which {{ }} units were interlined with UP,

generating nearly {{ }} in revenue, of which {{ }} was derived from interline service. UP also operates a competing intermodal container service with NS called EMP. UMAX often competes with EMP, and shippers benefit from that competition through lower prices and better service.

UMAX has been particularly successful in moving auto parts between factories in Mexico and assembly plants near Detroit. CSXT carries the traffic between Detroit and Salem, Illinois; UP handles the segment between Salem and Eagle Pass, Texas; and Ferrocarril Mexicano ("FXE"), or occasionally Canadian Pacific Kansas City ("CPKC"), completes the movement into Mexico. This is currently the most efficient routing available for this corridor. The combined traffic density generated by CSXT's and UP's collaboration supports daily service. Without that collaboration, alternative routings would be less efficient and would likely lack sufficient density to sustain daily service.

Despite the benefits of this partnership, I am concerned that a combined UP/NS would have an incentive to exclude CSXT from the auto parts business, even though UP and CSXT together offer shippers the most efficient route. UP and CSXT collaborated for two years to develop a joint UMAX solution {{

}} In my judgment, this conduct is

consistent with UP seeking to protect its future single-line business with NS at the expense of shippers who benefit from the UP/CSXT interline partnership. It also illustrates how readily UP can undermine existing interline competition against that future single-line service.

2. CSXT also has a 20-year intermodal commercial haulage relationship with BNSF, under which BNSF can market and sell service into CSXT's network. BNSF's locomotives and equipment run through onto our network, with CSXT crews taking over at the interchange point through a step-on, step-off crew change. This arrangement requires no terminal yarding or rehandling, avoiding the delays associated with those activities. From the customer's perspective, the service looks and feels like a single BNSF service through to CSXT-served markets, such as Atlanta and Northwest Ohio. The arrangement connects western and eastern markets with faster, more reliable service and gives shippers greater flexibility and market access.

Our partnership with BNSF has expanded several times to add lanes and improve service for shippers. In 2025, we launched new, coast-to-coast, direct domestic intermodal services between Southern California and Charlotte and Jacksonville, an offering that was under development well in advanced of UP and NS's merger announcement, a new Phoenix-to-Atlanta service backed by investment in two new 10,000-foot sidings between Phoenix and Flagstaff, as well as new and faster schedules from Los Angeles to CSXT destinations in the Midwest and Northeast, including Louisville, Philadelphia, and Northwest Ohio. Transit-time improvements reached as much as 52 hours. As part of this collaboration, CSXT and BNSF have designed compensation mechanisms that support both railroads' continued participation in the partnership.

3. The CSXT–CPKC Southeast Mexico Express ("SMX") is another example of independent railroads investing capital and aligning their incentives to create a new service corridor without a merger. CSXT and CPKC identified demand from shippers in the southeastern

United States for a competitive freight option connecting them with markets in Texas and Mexico. To meet that demand, each railroad independently acquired portions of the former Meridian & Bigbee Railroad. Through those coordinated investments, we established a direct Class I-to-Class I interchange near Myrtlewood, Alabama. SMX service launched on December 1, 2024, providing more efficient service for existing rail customers and diverting truck traffic to rail.

In May 2026, CSXT and CPKC upgraded SMX with a dedicated train service and a premium schedule offering truck-competitive transit times between Atlanta, Charlotte, and central Florida and markets in Texas and Mexico, including Dallas and Monterrey. These improvements were supported by investments in track, bridges, and signals on the former Meridian & Bigbee Railroad and continued investment across the corridor in Georgia, Alabama, Mississippi, Louisiana, and Texas. The upgrades reduced transit times on every previously available SMX option by approximately 20 to 45 percent, including service that is approximately one day faster between Atlanta and Dallas and two and a half days faster between Atlanta and central Mexico. The dedicated service now provides two-day service between Atlanta and Dallas, three-day service from Monterrey to Atlanta, and four-day service from central Mexico to Atlanta. The Dallas-to-Atlanta service is particularly notable because it offers a truck-competitive option on an important corridor and is successfully diverting truck traffic to rail.

IV. Commercial Significance of CSXT's Access Conditions.

In my commercial judgment, no set of conditions can restore the competitive balance the proposed merger would destroy or constrain the incentive and ability of a combined UP/NS to use its scale against independent carriers and the shippers they serve. CSXT has nevertheless identified certain conditions that would partially mitigate specific merger-related harms and preserve a degree of competition for some period of time. These conditions reflect identifiable

commercial opportunities CSXT could pursue to limit foreclosure, preserve shippers' interline options, and restore some of the competition that would otherwise be lost. They are not a substitute for denying the merger, and my testimony about their commercial significance should not be understood to suggest that they would fully resolve the harms I have described.

Today, UP and CSXT interchange significant volumes of traffic over the Kansas City–East St. Louis ("KC-ESL") corridor through the East St. Louis gateway. That interline service is the primary competitive alternative to NS's single-line service between Kansas City and destinations across the East. In my commercial experience, shippers value the UP–CSXT option because it gives them a meaningful alternative to NS and disciplines NS's pricing and service. If UP and NS merge, I expect UP to seek to divert traffic it currently interchanges with CSXT at East St. Louis to the combined carrier's service.

A. Access to Kansas City.

The UP and NS lines are the only direct routes between Kansas City and East St. Louis. CPKC's and BNSF's shortest available routings are longer and slower, leaving UP and NS as the only carriers able to provide the efficient service shippers using this corridor require. From a commercial perspective, CSXT's ability to compete for traffic between Kansas City and the East therefore depends on access to an efficient route over this corridor. Without that access, we could not offer shippers a competitive interline alternative to UP/NS, regardless of how aggressively we otherwise sought their business.

The condition giving CSXT access to Kansas City, together with the terminal and yard access necessary to support our operations, would create meaningful opportunities to compete for both intermodal and manifest traffic. It would also allow us to pursue a new interchange agreement with BNSF in Kansas City. Today, BNSF and CSXT interchange significant traffic over routes through Galesburg, IL, and either Chicago or Smithboro, IL. Those routes are very

indirect for many eastern destinations. Access to Kansas City would allow us to pursue more direct joint service with BNSF that better meets shippers' needs and provides an alternative comparable to existing NS and UP–CSXT service between Kansas City and points east.

I am aware that UP and CN entered into a Memorandum of Understanding on July 22, 2026, under which UP agreed to grant CN certain rights in the Kansas City area to address transaction-related harms. In my commercial judgment, CN's access to Kansas City would do little to preserve or restore competing options for eastern shippers that CN does not reach. CSXT's network, by contrast, substantially overlaps NS's network, positioning us to restore competitive options those shippers would otherwise lose as a result of the merger. CN does not have that same network footprint.

B. Access to Eastern Pennsylvania.

Eastern Pennsylvania is among the most important freight and intermodal regions in the country, serving as a gateway between East Coast metropolitan areas and the rest of the country. Its location within a day's drive of one-third of the U.S. population has made it a hub for distribution and logistics operations, with a significant concentration of warehouses and distribution facilities in and around Harrisburg and Allentown. Customers use these facilities to handle goods moving to and from the West, Midwest, Southeast, and other eastern markets.

Terminal location is important to these customers because the cost and time required to move a container between a terminal and a customer's facility can determine whether an intermodal service is commercially attractive. CSXT currently serves some Eastern Pennsylvania customers through our terminals in Chambersburg and Philadelphia. Although those terminals serve portions of the region, they do not provide a competitive solution for the vast majority of customers, particularly those with facilities in, around, and between Harrisburg and Allentown. We have sought to serve these customers through drayage to our existing terminals, but the

additional trucking cost and time make that service commercially unattractive for most of them. The issue is not simply whether a container can physically move through a CSXT terminal. We must offer an overall transportation solution that is competitive in cost, transit time, and reliability, and that fits the customer's operating requirements.

Our commercial objective in seeking this condition is to prevent foreclosure of Eastern Pennsylvania customers' interline options west of the Mississippi River and provide those customers with an additional, independent rail option. Today, NS interlines with both BNSF and UP to serve Eastern Pennsylvania and earns revenue on the eastern portion of the movement regardless of which railroad handles the western portion. After the merger, a combined UP/NS would have a financial incentive to shift traffic from BNSF–NS interline service to its own single-line service, capturing the western revenue as well as the eastern revenue. Without competitive CSXT access to the region, customers would lack a practical alternative eastern connection through which to maintain their BNSF service.

In my commercial judgment, NS's dominant position in Eastern Pennsylvania would give the combined carrier leverage to shift that traffic through pricing, service offerings, and the terms of interline cooperation. UP/NS would not need to refuse BNSF traffic outright. Less attractive joint rates, service schedules, or terminal availability could make BNSF's interline offering harder for customers to use even if the route technically remained open. Customers dependent on NS to reach the region would face pressure to move their western business to UP.

Trackage rights over NS, with access to Lehigh Valley Rail Management's independent Phoenix Rail terminal in Bethlehem, would allow CSXT to offer a competitive option to customers using that terminal. The service would also provide an attractive alternative for some customers currently using Harrisburg-area terminals whose facilities and transportation needs

would be better served through Bethlehem, as well as some customers currently relying on trucks. By connecting Eastern Pennsylvania with CSXT's network and western interchange partners, these rights would allow us to compete for both transcontinental and eastern regional traffic. CSXT's access to Phoenix Rail would give customers an additional rail choice and help preserve competitive interline options if the merger is approved.

C. Access to Norfolk International Terminal.

Norfolk International Terminal ("NIT") is one of the most strategically significant deepwater intermodal gateways on the East Coast, connecting the port with the Midwest and other inland markets. NIT is the largest of the four marine terminals that make up the Port of Virginia and one of the top five individual marine terminals in the country in rail-container throughput. The Virginia Port Authority's recent investments underscore NIT's growing importance and enhance its reach to Midwest markets and gateways. Only NS has direct on-dock rail access to NIT. CSXT's access to NIT relies on the Norfolk & Portsmouth Belt Line Railroad ("NPBL") and is {{

}}.

I am familiar with the Board's April 6, 2026 decision approving NS's acquisition of control of NPBL, the other related proceedings, and CSXT's efforts to obtain competitive on-dock access at NIT. Since that decision, CSXT has worked in good faith with NPBL and NS to restore our on-dock access. Under the Board's supervision, we have increased our on-dock presence from {{ }} to approximately {{ }} containers per week. Even so, we continue to rely on drayage subsidized by the Virginia Port Authority for much of our traffic.

Even during this period of Board supervision, NS has used its operational control over NPBL to create barriers to CSXT's service. NPBL's train-length restriction at Berkley Yard has forced CSXT to leave intermodal traffic behind rather than deliver it to NIT. NS has prioritized

its own operations at NIT over NPBL's switching service for CSXT, delaying our customers' traffic. The discontinued Connecting Line between NS Junction and Carolina Junction and restrictions on NPBL's access at QM Junction further impede efficient movements to and from NIT. Together, these operational and structural barriers prevent us from expanding our limited on-dock access into a commercially viable operation.

Following the merger, a combined UP/NS would have a financial incentive to further exploit its control over NPBL and its superior access to NIT. A condition granting CSXT trackage rights over NS and NPBL with on-dock access to NIT would therefore be commercially significant. In addition to helping prevent foreclosure of interline options, these limited rights would enhance competition by enabling CSXT to offer competitive on-dock service at one of the East Coast's most important ports. Shippers using NIT would benefit both from that additional competition and from the preservation of competitive interline service options.

VERIFICATION

I declare under penalty of perjury that the foregoing statement is true and correct to the best of my knowledge, belief, and information. Further, I certify that I am qualified and authorized to file this statement.

Executed this 18th day of November, 2026.

/s/ Maryclare Kenney
Maryclare Kenney

REDACTED VERSION – TO BE PLACED ON PUBLIC RECORD

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY — CONTROL— NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

VERIFIED STATEMENT

OF

RYAN HIGGINS

I. Introduction and Qualifications.

1. My name is Ryan Higgins. I am Vice President of Sales and Marketing – Industrial Products for CSX Transportation, Inc. ("CSXT"). In my current role, I lead all commercial activity across the Industrial Products business portfolio, which includes Chemicals, Energy, and Waste; Forest Products; and Metals & Equipment. My team drives all sales, marketing, and pricing activity in connection with customers across this large book of business for CSXT. I also oversee all commercial activity with CSXT's 240 shortline railroad connections, as well as the company's Joint Facilities and Intercarrier Strategy groups.

2. I have more than 26 years of experience in the railroad industry, which spans multiple companies and industry vantage points. I began my career as a Transportation Analyst with R.L. Banks & Associates, a niche railroad consultancy in Washington, D.C. in 2000, responsible for directing key freight and passenger railroad studies throughout North America for private and public sector clients at federal, state, and local levels. Included in those engagements were stand-alone rate cases representing shippers before the Surface Transportation Board.

3. I originally joined CSXT in 2007 as a Management Trainee. Subsequent to that position, I have held numerous roles across the CSXT system in Sales, Marketing, Pricing, Business Development, and Terminal Operations. These various assignments have spanned CSXT's Merchandise business, including Grain, Food, Fertilizer, Chemicals, Energy, Metals, Military, and Dimensional. Prior to my return to CSXT in early 2026, I held the role of Chief Commercial Officer at OmniTRAX, one of the largest privately held shortline groups in North America. During my time at OmniTRAX, I led all aspects of revenue, carload, and yield growth across the OmniTRAX network of railroads.

4. Over the course of my career in the rail industry, I have been engaged in numerous commercial deals across multiple markets and commodities. This has provided broad

commodity market knowledge and experience with differing interline arrangements, including traffic served under both Rule 11 and through rates over gateways. For example:

- I have worked extensively in Chemicals & Energy Sales, which centers on interline business originating at Gulf Coast sites largely dominated by UP, such as in Houston, TX.
- I have worked extensively in fertilizer markets, which are characterized by modal competition between barges and rail, as well as interline rates between online CSXT producers and offline destinations.
- I have worked extensively in metals, grain, and agriculture markets, for which carriers' specialized system equipment present distinct competitive dynamics.

5. I am submitting this Verified Statement in connection with CSXT's comments and conditions requests in the above-captioned proceeding concerning the proposed merger of Union Pacific ("UP") and Norfolk Southern ("NS"). The purpose of this Verified Statement is to provide factual testimony regarding interline arrangements, the effects of the UP/NS transaction on interline competition, the Gulf Coast chemicals complex, and certain conditions UP and NS have proposed.

II. Competition and Interline Service.

A. CSXT Serves Highly Competitive Markets.

6. Freight rail transportation is a complex, highly competitive industry. CSXT faces direct and indirect competition from many sources including other rail carriers and other modes of transportation, with distinctive competitive pressures and commercial considerations affecting different traffic.

7. CSXT's chief rail competitor is NS, especially where rail has significant competitive advantages over other modes like trucking. NS and CSXT overlap over almost their entire networks, and NS and CSXT can offer similar services on much of those networks. When

we win business currently moving by rail, it is most often from NS. When we lose business, it is most often to NS.

B. CSXT Has Invested to Build a Highly Competitive Interline Business with UP and Other Partners.

8. Interline services are an important part of CSXT's business and an important part of how CSXT competes. Energy, industrial chemicals, plastics, and a host of goods for everyday life are transported primarily from western origins to destinations in the eastern half of the country where two-thirds of the U.S. population lives. By design, CSXT's network connects western producers to major eastern population centers, providing a critical lifeline to deliver key products and raw materials where consumers and local producers need them. In shipments of Plastics, for example, CSXT accesses more than { } unique receivers across approximately { } destination cities in the East. Approximately { } of those shipments are received via the New Orleans, LA interchange from UP.

9. CSXT has invested heavily to better compete to provide this interline service, strategically investing in extensive facilities and network improvements geared towards interline traffic, and developing innovative products to attract interline business.

10. UP-CSXT interline business is a strong competitive option for shippers and an important part of CSXT's business. Like CSXT, UP has also built facilities and invested in itself specifically to serve UP-CSXT interline shippers better, and CSXT and UP have developed innovative products to provide competitive joint service.

11. UP-CSXT interline service competes directly against services involving NS, including UP-NS interline services and NS single-line service. Many customers view UP-CSXT interline service and UP-NS interline services as their two best options.

III. UP and NS Would Make More Money by Making UP-CSXT Interline Service a Less Attractive Option.

12. Like any business, UP seeks to maximize its profits. UP is a public company with a responsibility to its shareholders and specific business objectives to make the most money it can. UP cooperates with both CSXT and NS today because it does not lose revenue if one eastern carrier or the other carries the traffic in the east, so it makes the most money when both are as competitive as possible.

13. If UP acquires NS, what maximizes UP's profits would change overnight. UP would have strong reasons not to cooperate with CSXT as it has, because every dollar CSXT earns on UP-CSXT traffic is a dollar lost on UP-NS single-line traffic. UP would have reason to divert as much traffic as possible from UP-CSXT interline service to UP-NS single-line service in order to capture all the profits or make shippers pay UP extra if they use its interline service with CSXT.

A. There Is a Lot of Traffic for Which UP Could Make UP-CSXT Options Worse Without Losing Much Business to Non-UP Options.

14. In many interline corridors, shippers have no cost-effective rail alternatives to UP. In many, UP is the only rail carrier serving shipper facilities or interline segments that connect CSXT and NS in the east. Shippers in these corridors cannot turn to non-UP alternatives unless they are willing to accept inferior transportation solutions or contribute to large expenses, such as transload, build-in, or less efficient modes. For example, UP's soda ash franchise in the Green River, Wyoming area is mostly sole-served. This area is the world's largest natural source of trona, which is converted into soda ash, and UP owns all of the land surrounding Green River and leases the mineral rights to the soda ash producers. BNSF attempted to build into the area to provide an alternative, but I understand that the relevant geography made that a prohibitively expensive investment. If a combined UP-NS offered worse terms for UP-CSXT business to

destinations that are equally accessible by NS, it would divert much, if not all, of that business to their combined system and lock out CSXT.

15. In many other interline corridors connecting to CSXT and NS, UP has advantages that would prevent many shippers from switching to non-UP interline alternatives like BNSF-CSXT or CPKC-CSXT. Instead, I expect that UP-CSXT interline customers in these markets would typically switch to UP-NS service if UP-CSXT interline rates or service worsened. For example, UP's Chemical Coast franchise between the Houston and New Orleans area includes many facilities that are nominally dual-served by BNSF or CPKC, but these other carriers' routes have problems and they lack facilities the customers rely on. Just because a third carrier can "access" a customer does not make that access a good competitive alternative.

B. There Are Many Ways UP Could Make UP-CSXT Options Less Attractive.

1. UP could raise its interline rates.

16. Transportation is a cost of manufacturing a shipper's product. While customer organizations can differ greatly, common practice is for Logistics, Supply Chain and/or Procurement Teams to drive buying decisions, and a core part of the role of these Logistics or Procurement professionals is to support an "internal customer," which is commonly the commercial business unit responsible for manufacturing the product CSXT ultimately ships by rail. As effective agents of the business, Logistics Teams are pushed hard to secure the best deal to support the profitability of their business. Whether customers pursue Rule 11 or through rate commercial arrangements, at the end of the day, customers need a competitive total rate to move their products on CSXT, taking into account the costs of any railcar ownership, demurrage, and any other accessorial charges that may apply.

17. If UP controlled NS, it could easily increase the total price of UP-CSXT interline service relative to UP-NS single-line service. It could increase UP's rates to or from gateways,

while holding UP-NS combined rates the same or even increasing them as well. Doing so would effectively shrink the legacy-NS rate CSXT would have to compete against. But while CSXT would have to price its traffic to earn adequate revenues on that eastern segment, UP-NS could earn them on the UP side. For price-sensitive traffic, it would be easy to raise UP interline rates high enough that CSXT could not sustainably offer rates low enough to make UP-CSXT interline service a price-competitive alternative to UP single-line service, even if UP also increased its single-line rates.

2. **UP could undermine or neglect the quality of its interline service.**

18. Service quality is an important part of competing. Many shippers prioritize features like speed, reliability, safety, and timeliness when deciding where to send their business. Many others have minimum quality expectations that CSXT must meet in order to compete for their business at all.

19. Even a small deterioration in CSXT's service quality would fall outside the tolerances many shippers demand and seriously harm their businesses. Many shippers depend on consistent and predictable delivery because the cost of idling their facilities if shipments are late could be catastrophic. Many shippers, such as in the plastics manufacturing industry, operate on razor-thin margins that require plants to run 24/7, and a supply shortfall or inefficiency in the supply chain could cause significant financial disruption. Some, like automotive steel shippers, are especially sensitive to timing and require "just-in-time" delivery, which requires precise cycle times and inventory loads. And for some, like commodities shippers, whether a delivery occurs at the right time in a trading cycle is the difference between a profit and a loss.

20. In order to meet the needs of quality-conscious shippers, UP and CSXT currently cooperate, and UP provides reliable service in its interline partnerships. As an example, today, UP and CSXT collaborate on meeting the equipment resource needs of our customers, adjusting

fleet sizes to support the business in segments like steel pipe and plate, which employ various flatcar configurations to support customer needs. In a world with UP-NS, the incentive to cooperate with CSXT dries up, as in markets like steel where demand is strong, UP-NS will begin pushing equipment to what would become former NS locations.

21. If UP made its interline service less reliable, slower, or simply a lower priority, UP-CSXT interline service would not meet the needs of many quality-conscious shippers. Because UP fully controls operations on its side of interline movements, it could frustrate efficient operations on UP-CSXT traffic. CSXT has no visibility into UP's operations, and it is difficult to trace what part of complex movements such as individual cars on manifest trains have been negatively impacted. If UP made its interline service quality worse, CSXT would not be able to detect what UP actions made that service worse, and it would not be able to tell in a given case whether service deterioration was deliberate or any explanation given was pretextual. Even if CSXT believed UP was deliberately harming the quality of UP-CSXT service, there is little CSXT could do about it. Service non-discrimination provisions in interline arrangements, for example, are seldom enforced because violations are difficult and costly to prove.

22. UP could also reduce the service quality of UP-CSXT interline movements by simply withholding the resources and effort needed for interline service to be competitive. For example, UP could reduce its asset contributions in UP-CSXT lanes by supplying fewer locomotives in the pool, fewer crew resources, or fewer cars. UP could change its service plans in ways that increase terminal delays and intermediate handlings for UP-CSXT traffic. These actions would reduce speed and increase cycle times, effectively shifting costs onto interline shippers. Chemical shippers, for example, would need to decide whether it is worth it to

purchase more tank cars to maintain traffic flows on UP-CSXT interline business, or simply to shift traffic to single-line service instead.

23. What prevents UP from taking these actions is UP's shared competitive interest in maximizing the quality of joint UP-CSXT service. If UP acquired control of NS, UP's and CSXT's competitive interests would instead be in conflict, and I expect UP-CSXT shippers would receive worse service.

3. UP could force shippers to use it on NS/CSXT dual-served routes as a condition of receiving competitive rates and service on other routes.

24. Different rail customers have different preferences and needs in how they arrange transportation. Some customers, for example, prefer to have their freight billed Rule 11 in an effort to leverage relationships with multiple rail carriers. Others prefer the simplicity of a through rate. Technology and company systems can also be a barrier to more complex arrangements, as some customers simply do not have the ability to handle a separate rate for each rail carrier on each lane. Regardless of customer size, all wish to understand what their total transportation needs will cost their company.

25. UP could use its existing market position in the west as leverage in the east by bundling lanes sole-served by UP with lanes that may be accessible to multiple carriers, in order to pressure customers to use UP for shipments other carriers would otherwise compete for. UP would offer a more attractive rate on sole-served lanes provided the customer awards all its business to UP. If not all of the business is awarded, rates for these local lanes would be increased more substantially, creating a financial disincentive against awarding competitive business to CSXT.

26. Plastics, Energy and Chemicals traffic moving between the Gulf Coast of Texas and Louisiana to eastern markets on CSXT are good examples of how this bundling strategy

would be detrimental to competition long term. UP-NS would leverage UP's current footprint of local originated traffic, a major competitive advantage in the region, to severely punish customers who wished to ship products via CSXT as opposed to NS. The financial disincentives UP could deploy against customers who may otherwise prefer using CSXT could take a variety of forms, from rate escalations to ineligibility for volume incentive refunds. Each of these would effectively increase the cost a customer would have to pay UP if it failed to use UP-NS where it has other options. In order to present a good deal to the customer, CSXT would have to offset those extra costs rather than just competing on the merits.

C. UP-NS Would Make a Lot of Money by Making UP-CSXT Interline Service Less Attractive.

1. If UP made UP-CSXT service less attractive, profitable interline traffic would switch to UP single-line service.

27. CSXT's interline services with UP are profitable for CSXT, including where CSXT competes head-to-head with NS on the eastern segment and UP sole-serves or appears to dominate the western segment.

28. If UP increased its rate factors and Rule 11 rates on UP-CSXT interline traffic, many shippers would turn to their best alternative, UP-NS single-line service. Soda ash originating in Wyoming on UP and moving over interchanges to Chicago is a good example. UP-NS would simply raise rates for CSXT routes to make them uncompetitive. With many receivers in the Eastern U.S. having access to both CSXT and NS, the traffic can easily flow to former NS points.

29. If UP-CSXT interline service quality worsens, many quality-conscious shippers would turn to their best alternative, UP-NS single-line service. For example, key CSXT plastics customers ship from UP origins in the Gulf Coast (Houston area) over the New Orleans gateway today. Many of these customers have constructed deals with CSXT that include volume

commitments or other growth incentives like refunds. Should the quality of the transit time or other service plan factors degrade, plastics customers in this scenario, through no fault of their own, could fall short of the volumes that qualify for these incentives. This essentially drives up their costs and ultimately forces them to go with the single line UP-NS service, reducing customer options.

30. If UP made its service on NS/CSXT dual-served routes a condition of receiving competitive rates on other routes, many shippers would leave CSXT. Shipments of export plastics received by CSXT from UP are a good example of how customer options would become limited. There are { } major plastics packagers on the East Coast. { } of those facilities are dual served, either by CSXT and NS directly or via a shortline connection. UP-NS would essentially shut CSXT out of { } facilities, as the NS local destinations essentially get leveraged by UP-NS to secure the competitive traffic.

2. UP would make more money on single-line service by weakening UP-CSXT interline competition.

31. In my experience, railroads are like any businesses: They improve their rates and service because of the alternatives shippers have in the marketplace. Shippers that NS and CSXT both serve constantly play us against each other to obtain the best possible rate. If CSXT could not offer them competitive rates, NS would charge these shippers more.

32. In many situations, UP-CSXT interline service would be shippers' best alternative to UP single-line service. If the total cost of UP-CSXT options increased, UP could increase its single-line rates. If interline service involving CSXT were not a high-quality option, UP would face less pressure to improve its quality of service. And if UP made CSXT options less attractive in one market, it could use that market as one more source of leverage in shipper negotiations about bundling.

D. Oversimplifications Do Not Match the Real World.

1. Railroads prefer to single-line to capture revenue.

33. I understand that UP/NS claim they would still interchange traffic with CSXT if CSXT's costs to perform a movement were lower than UP/NS's costs on a competing former-NS segment. This does not reflect railroads' real-world calculations. Railroads are businesses. They do not simply perform whatever service is cheapest. If UP could offer a costlier service that was more profitable for it, without losing business to more efficient, cheaper competitors, that is what it would do.

34. I understand that UP/NS also claim that shippers would choose CSXT if CSXT's rates in the east were lower than NS's rates in the east. That does not reflect how cost-sensitive shippers think about interline rates. Shippers want the lowest total rate for the interline movement. UP could make the total cost of UP-CSXT service higher than the total cost of UP single-line service. Even if shippers forced UP to provide separate rates for the former UP side and former NS side, UP could subsidize an unsustainably low legacy NS rate by charging more on the former UP side.

2. Interline rate decisions are not formulaic.

35. Where CSXT competes against NS on one side of an interline movement and a western carrier sole-serves its side, the sole-serving carrier does not simply dictate the terms of the interline partnership.

36. Instead, interline revenue divisions are determined by many complicated factors that include costs, investments, the commodity transported, capacity utilization, and carriers' roles marketing the service. CSXT often provides superior routings or service shippers value, and CSXT often contributes greatly to the marketing of interline services. Factors like these ensure CSXT is able to receive value for the service it provides.

IV. UP and NS Would Make a Lot of Money by Short-Hauling CSXT to Make CSXT Less Efficient.

A. How Interline Revenue Economics Work.

37. CSXT operates a network of approximately 20,000 route miles, maintaining thousands of miles of track, bridges, signals, and other infrastructure that require billions of dollars in annual capital expenditure to sustain.

38. CSXT's non-linehaul costs are largely unavoidable regardless of haul length. This includes classification yard operations, local switching, car inspection, and crew overhead. It also includes more fundamental costs of operating railroad properties, like land costs, utilities, and labor.

39. On transcontinental interline movements, CSXT recovers these large upfront and unavoidable costs by spreading them across the greatest possible number of revenue miles. A longer haul means more miles over which fixed costs are amortized, producing a lower cost per car-mile and a meaningful contribution margin.

40. When a connecting carrier's haul length is compressed by short-hauling, fixed and semi-fixed costs remain constant while revenue-generating miles fall, causing cost per car-mile to increase dramatically.

B. What Short-Hauling Means in Practice.

41. Today, UP and CSXT interchange transcontinental interline traffic at traditional midcontinent gateways: principally Chicago, St. Louis, Memphis, and New Orleans. At these interchange points, CSXT takes possession of freight and carries it across its network to the customer's eastern destination, or it carries freight from its eastern origin and delivers it to interline partners at these interchange points.

42. Post-merger, UP/NS will have every incentive to shift the interchange point from a midcontinent gateway to a location deep in CSXT's eastern territory, stripping away the vast majority of CSXT's revenue miles and leaving CSXT with only the final miles of local service to the customer.

43. A combined UP/NS could accomplish this by raising its rate factor to the traditional midcontinent interchange, making that routing economically unattractive to the shipper, while simultaneously offering a lower per-mile factor for a deeper-east interchange. Shippers responding rationally to the pricing of the full through movement would select the route that short-hauls CSXT even if that outcome harms CSXT and, ultimately, the competitive landscape.

C. The Consequences for CSXT's Competitiveness and Shippers' Options.

44. A reduction in CSXT's haul could leave CSXT with a per-car-mile cost structure that is commercially non-viable.

45. This would make CSXT structurally uncompetitive: CSXT could not offer shippers an interline rate on the short-haul segment that covers its own costs while remaining competitive with the UP/NS single-line alternative, even before any rate increase by UP/NS.

46. This harm would compound over time. As short-hauling diverts traffic from CSXT's network, traffic density falls. Lower density means higher per-unit costs on remaining traffic, eroding CSXT's ability to price competitively on lanes unaffected by short-hauling.

47. Diminished revenue and deteriorating cost competitiveness would directly threaten CSXT's capacity to sustain the level of capital reinvestment that its customers require and that the rail network demands.

V. The Chemical Coast Franchise Is a Case Study in Foreclosure.

A. Gulf Coast Chemicals Business Is Important to Rail Competition and CSXT.

48. Gulf Coast facilities between the Houston, TX and New Orleans, LA areas account for much of the country's production of petrochemicals and related products.

49. CSXT participates in Gulf Coast chemical traffic primarily as the eastern connecting carrier. UP-CSXT Gulf Coast interline traffic is a large book of business and an important source of profits for CSXT, including on many corridors where UP sole-serves the Gulf Coast facility and CSXT and NS compete in the east. This traffic is commercially significant to CSXT not only because of its revenue contribution but because of the density it adds to CSXT's network on key eastern corridors, improving CSXT's cost structure and competitive positioning on those lanes more broadly.

50. Gulf Coast chemicals shippers predominantly rely on specialized rail transportation due to special requirements, safety risks, basic economics that require rail, and specialized equipment and infrastructure.

51. Gulf Coast chemical commodities include TIH/PIH materials such as chlorine that are transported in specialized tank cars purpose-built for rail. These cars cannot be loaded onto flatbeds, and highway transportation of shippers' full volumes of TIH/PIH materials would be prohibited or highly impractical under federal safety regulations. Even where a given commodity such as anhydrous ammonia can lawfully be transported over the road, doing so raises safety and practical concerns that make trucking at most a small part of most chemical shippers' transportation solutions.

52. Large petrochemical facilities require unit train and block-move capacity. Truck simply cannot service this volume. A single unit train move equivalent would require hundreds

of individual truck trips, which is commercially and operationally infeasible for continuous manufacturing operations.

53. Gulf Coast chemical shippers routinely use rail equipment as mobile storage: covered hopper cars staged at Storage-in-Transit ("SIT") yards serve as buffer inventory, allowing just-in-time manufacturing operations to absorb demand variability. This function cannot be replicated by truck.

54. Gulf Coast chemicals shippers are particularly reliant on New Orleans Gateway service. New Orleans Gateway routings are generally far preferable for chemicals shippers, and the New Orleans Gateway accounts for most east-west chemicals traffic.

B. UP's Chemical Coast Franchise Dominates the Gulf Coast Chemicals Industry.

55. UP's infrastructure position in the Gulf Coast chemical corridor is unmatched by any other carrier in the region. UP operates multiple classification yards and a network of SIT facilities strategically located throughout the Texas and Louisiana chemical producing areas, giving UP the ability to hold, stage, and deliver chemical cars with a flexibility and reliability that no competitor can replicate.

56. BNSF, despite holding certain access rights in the region dating back to the 1996 UP/SP merger, is at a significant practical disadvantage because it lacks the owned infrastructure and direct routing necessary to offer chemical shippers a service product genuinely competitive with UP's. As a result, chemical shippers in the Gulf Coast have limited competitive alternatives to UP, and UP commands a dominant share of the region's chemical rail traffic.

57. These advantages mean that, as a practical matter, other carriers are not viable alternatives for most Gulf Coast chemical shippers today. If UP were to raise its rates or reduce

the quality of its service post-merger, the majority of those shippers would have little practical choice but to continue shipping with UP rather than move their business to another carrier.

C. The UP/NS Merger Would Disable CSXT Competition for Gulf Coast Chemicals Traffic and Produce a Windfall for UP/NS.

58. If the proposed merger were approved, the commercial logic for UP to continue offering CSXT a meaningful interline opportunity on Gulf Coast chemical traffic would largely disappear. UP/NS would instead have every incentive to direct that traffic onto the combined UP/NS eastern network. CSXT's interline business with UP for east-bound chemicals traffic could be at risk if UP/NS were to make that interline connection less attractive or simply stop offering it on competitive terms.

59. The consequences for CSXT would extend beyond the lost revenue itself. Gulf Coast chemical traffic provides density and scale that makes CSXT's service through the New Orleans Gateway commercially viable. Without it, CSXT's ability to offer competitive rates and reliable service on other movements connecting through that gateway would be meaningfully undermined.

60. Post-merger, UP will have increased bundling power over chemical shippers which will compound this harm and extend it beyond the Gulf corridor itself. Large chemical companies typically operate multiple facilities across different regions, shipping a range of products over both east-west interline routes and intra-eastern lanes. Those shippers rely on competition between CSXT and NS for their eastern movements. Today, UP has no commercial reason to use its leverage in the Gulf Coast to influence how that intra-eastern competition plays out.

61. If the merger were approved, UP/NS could condition favorable pricing at a shipper's sole-served Gulf Coast facility on that shipper's agreement to direct its competitively

contested eastern traffic to UP/NS across the board. For a chemical company with facilities spread across both UP's Gulf network and CSXT's eastern territory, that kind of take-it-or-leave-it arrangement would be very difficult to refuse, even if accepting it means giving up a better deal from CSXT on the eastern end.

62. Ultimately, because Gulf Coast chemical shippers are such heavy users of rail and have so few practical alternatives, they would be in a poor position to push back against UP/NS's enhanced pricing power. The harm to those shippers would not be a one-time event. It would be structural and long-lasting.

VI. The Conditions UP/NS Propose Would Be Useless to Prevent them from Disabling UP-CSXT Interline Competition.

A. UP/NS's Promise To Be "Commercially Reasonable" to Interline Shippers Is Meaningless and Unenforceable.

63. I understand that in the CP/KCS merger, the Board imposed an "open gateways" condition that required CPKC to provide "commercially reasonable" rates and service at gateways where the merger gave them a longer possible haul. In my view, there are many reasons the CP/KCS open gateway condition would do very little here to protect shippers or keep interline options competitive.

1. A promise to be "commercially reasonable" means nothing.

64. "Commercial reasonableness" is a theoretical construct with no real-world meaning or indication what it should mean. It is not a standard that I have ever seen in an interline agreement or service contract. I am not aware of any standards or metrics established by law or regulatory decisions to define commercial reasonableness or even provide guidance on relevant factors.

65. When CSXT negotiates service or interline contracts, the language it uses to protect its rights is generally clearly defined and well-understood. If CSXT did not know what a

standard meant, CSXT could not know whether those rights were violated and would not be able to rely on arbitrators or judges to protect them. I would expect shippers to have the same difficulty.

2. Interline options that depend on arbitration would not be able to compete.

66. Another problem with a "commercial reasonableness" promise is that if a shipper thinks it is not receiving a commercially reasonable interline offer, it must go through the time, effort, and expense of arbitration to try to get a better one. This is completely unrealistic.

67. The arbitration process would be relevant for a shipper facing a specific dilemma: The shipper has received a UP single-line offer (or is receiving UP single-line service), and it has received a UP-dependent interline offer (or is receiving UP-dependent interline service) that the shipper thinks is commercially unreasonable. Generally, it would only consider arbitrating because its UP single-line option is bad, but the UP-dependent interline option is worse. In my experience, the terms of that single-line offer would have to be very bad for a shipper operating in real-world conditions to think arbitrating to try to improve the interline offer or service is a better option. I would expect the shipper to choose bad but tolerable single-line terms instead of arbitration almost every time. There are many reasons.

68. Arbitration is time-consuming. Rapidly settling on rates and resolving service issues is extremely important in rail negotiations and day-to-day rate offers.

- Shippers in commodity markets must make major decisions in a matter of hours. Scrap steel, for example, is highly transactional and the market resettles every 30 days, making end of month transactions especially impactful when markets move materially. I have had shippers in these markets express well-founded frustration if I did not respond to a rate quote request within an hour.
- Many shippers have facilities running 24/7 at extremely low margins, and they face losses if a supply disruption forces them to shut down even briefly. These shippers cannot afford to wait for arbitration to resolve a

dispute over whether a disruption in UP's interline service is commercially reasonable.

- Many of CSXT's customers are either commodity traders or are a part of a complex domestic or global supply chain. Oftentimes these domestic customer facility networks are intertwined from a production standpoint. As a result, decisions need to be made quickly to execute trades and/or avoid interruptions to manufacturing. For example, depending on prevailing conditions, a byproduct of a refinery such as sulfur can be either marketed as a byproduct or used at another facility owned by the same customer in the production of a different product such as fertilizer. In either case, it needs to be moved away from the refinery to avoid a shutdown, requiring a prompt decision and transportation toward one use or the other.

In my experience, shippers in situations like these would choose to keep the traffic moving on almost any terms rather than wait through arbitration to get a second option.

69. Arbitration would require shippers to dedicate significant efforts and resources shippers cannot afford to divert from their day-to-day operations. Procurement and logistics are short-staffed functions for many shippers' businesses. Many simply look to the numbers and act on them, and there is a trend towards algorithmic or AI-based decision-making in these areas. Even for shippers who negotiate more aggressively and can dedicate employee effort to making more strategic procurement and logistics decisions, supporting an arbitration effort would require vastly more of their labor and attention than they could typically afford.

70. Arbitration is expensive. If a shipper is cost-sensitive, the cost of that arbitration process would dissuade it from arbitrating over whether an interline option is "commercially reasonable." Besides, the expense of obtaining a "commercially reasonable" rate through arbitration would need to be added to that rate to calculate its real cost to the shipper. If arbitration costs are baked into interline rates in this way, they would logically be baked into the single-line rates that compete against them.

71. I also understand that in the UP/NS commitment the arbitrator would not be allowed to decide what would be commercially reasonable, only determine whether the existing offer is. That means the arbitrator would not actually resolve the dispute. All a decision could lead to is another interline offer that may be slightly better than the last, but almost certainly not to one that is preferable to UP's single-line terms, no matter how bad those terms are.

B. UP/NS's "Committed Gateway Pricing" Mechanism Is Useless to Protect Competition.

72. I understand that UP/NS have proposed a rate-quoting mechanism they call "Committed Gateway Pricing" or "CGP" that would set a rate CSXT would pay UP/NS to perform haulage to or from legacy-UP locations as part of a through service CSXT could market directly. I understand UP/NS do not claim that "CGP" would ensure interline service can continue to be competitive as an alternative to UP/NS service. I agree that it would not.

73. CGP's rate-setting mechanism is an elaborate theoretical construct with no pragmatic basis. The competitiveness of the CGP-based rate would depend on many specific, real-world circumstances that apply to a particular movement. CGP would ignore most of the specific circumstances that apply and instead refer to large groups of very diverse traffic to calculate a one-size-fits-all rate. Specifically:

- CGP rates would be based on broad groups of commodities for which competitive conditions in fact vary significantly. An example is vinyl acetate monomer (VAM) and caustic soda. Both are in the same CGP grouping but customers, production economics, transportation requirements, alternative supply options, and competitive conditions differ materially between the two products. VAM is a specialized chemical intermediate product used in adhesives, coatings, polymers, construction, and packaging, while caustic soda is a broader industrial commodity used in pulp and paper, alumina, detergents, textiles, and chemical processing. In addition, VAM is flammable and requires specialized bulk handling; caustic soda is corrosive and requires compatible tanks, piping, and specialized unloading equipment. VAM is primarily rail, while caustic soda can be rail, barge, pipeline, truck, or vessel, depending upon the market. A large portion of VAM output moves on CSXT received from

UP at the New Orleans gateway, while a much smaller portion of caustic soda output is received interline from UP.

- CGP rates would be based on broad "mileage bands" traveling different distances in different lanes to serve different markets. VAM and caustic soda again present good examples. These are transported to a wide variety of locations for a wide variety of uses. Market conditions in the different geographies and industries these commodities are shipped to can vary greatly regardless of whether their transportation would require roughly the same length of haul.

74. Even if the CGP rate-calculation mechanism provided CSXT a rate that was "normal" for these large comparison groups, that rate would be too high for CSXT to compete on price in many markets. That is because the comparison groups would combine traffic that is subject to more intense competition or less expensive to move with traffic subject to less intense competition or more expensive to move. That means the "normal" rate for the grouping would be higher than rates that prevail in more competitive, less-expensive markets. If CSXT attempted to win business in these markets, it would be forced to pay UP/NS a haulage fee so high it might price CSXT out of the market.

75. CGP would not even calculate the "normal" rate for these large commodity groups. It would calculate a "70th percentile" rate. UP-CSXT rates would always be higher than the rates for the large majority of traffic in these diverse groups, making them uncompetitive rates except for the most expensive traffic.

76. CGP would also do nothing to prevent the service quality problems on UP-CSXT interline traffic I explain would occur when UP's interests change. CGP-based service would depend on UP to operate it, so it would only be as competitive as a service product as UP wants it to be. I understand UP proposes applying supposedly "standard" non-discrimination rules to this traffic, but as I have explained above, such rules are difficult to enforce and are not what protects interlining carriers' interests in having their partners provide high-quality service. What

protects that interest is both sides' mutual interest in attracting traffic, and UP would have the opposite interest for CGP traffic.

77. CGP also expires. It would have to or else it would become a permanent form of price regulation that would set interline rates forever. But CGP does nothing at all after it expires. For this very reason, shippers are increasingly attempting to secure long-term contracts in order to lock in today's terms beyond when CGP expires, because they anticipate that UP-dependent interline service would become much more expensive once UP-NS can set interline rates however it wants.

VERIFICATION

I declare under penalty of perjury that the foregoing statement is true and correct to the best of my knowledge, belief, and information. Further, I certify that I am qualified and authorized to file this statement.

Executed this 18th day of November, 2026.

/s/ Ryan Higgins
Ryan Higgins

REDACTED VERSION – TO BE PLACED ON PUBLIC RECORD

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY — CONTROL— NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

VERIFIED STATEMENT

OF

CASEY ALBRIGHT

I. Introduction and Qualifications

My name is Casey Albright. I am Senior Vice President of Network Operations and Service Design for CSX Transportation, Inc. ("CSXT"). In that role, I oversee CSXT's Network Operations and Service Design group, which is focused on ensuring fluid traffic flow across CSXT's network by designing viable service plans that improve performance and meet customer needs. I joined CSXT in 1998 as a dispatcher, and throughout my career I have held positions of increasing responsibility in Service Planning, Locomotive Management, and Network Operations. I also served as the terminal superintendent in Louisville, KY and superintendent of train operations on CSXT's Jacksonville and Nashville divisions.

I am submitting this Verified Statement in connection with CSXT's comments concerning the proposed acquisition of Norfolk Southern Corporation and Norfolk Southern Railway Company ("NS") by Union Pacific Corporation and Union Pacific Railroad Company ("UP"). Based on my nearly three decades of railroad operating experience, I offer factual testimony on two subjects: (a) how interline service works in practice and how it compares to single-line service, and (b) the operational risks associated with integrating two large, independent Class I railroad systems, including the risk that disruptions during integration would propagate across the broader national rail network.

II. Interline Versus Single-Line Service

A. How Interline Service Works—And Why It Can Be Highly Efficient

Interline service is a coordinated movement in which a shipment travels over the networks of two or more railroads. In most circumstances, the originating carrier picks up the shipment, classifies cars or containers (often into destination-based blocks), and moves them toward a designated interchange point. At the interchange, the two railroads coordinate the physical transfer of equipment along with associated documentation, inspection, staging, and

formal acceptance by the receiving carrier. The receiving railroad then incorporates the shipment into its own operations, assembling it onto trains, moving it through its network, and completing final switching and delivery to the consignee.

In my experience, well-designed interline service can be highly efficient and, in many cases, indistinguishable from single-line service from a shipper's perspective. Interchange for much of the interline intermodal service CSXT provides with partner railroads at its key gateway locations is essentially a crew change: one crew gets off, another gets on, and the train continues moving under the same locomotive power, without any switching of equipment. This is true for all of CSXT's interchange of intermodal traffic at Myrtlewood, Alabama (with CPKC), Birmingham, Alabama (with BNSF), Memphis, Tennessee (with UP and BNSF), and for nearly half of its intermodal traffic interchanged with UP and BNSF at Chicago, Illinois. The interchange for these run-through trains is generally accomplished in well under an hour. Indeed, at CSXT we strive to limit the time required to interchange such trains to fifteen minutes or less.

Interchange for CSXT's interline bulk and unit train service is generally accomplished in under six hours.

Several existing interline products exemplify the efficiency that well-coordinated interline service can achieve:

1. **Chicago intermodal run-through train operations.** A significant portion of CSXT's eastbound intermodal traffic through Chicago—approximately {{ }}—moves on run-through trains requiring only a crew change at the interchange. This includes traffic originating with UP and BNSF.

   For example, UP builds a pre-blocked daily intermodal train on its network with blocks for eleven different destination intermodal terminals across CSXT's network in the eastern United States. UP brings those cars through Chicago, hands the train over to a CSXT crew, and CSXT takes it to CSXT's Northwest Ohio Terminal in North Baltimore, Ohio. There, the blocks are separated for onward delivery to destinations including

Detroit, Columbus, and other Midwest and eastern markets. This arrangement has been in continuous operation since 2011.

CSXT has a similar arrangement with BNSF for a daily intermodal run-through train that likewise requires only a crew change at the interchange. The pre-blocking done by these western carriers means that the entire train arrives sorted and ready for CSXT to process—a level of coordination that eliminates the interchange between carriers as a meaningful source of delay.

2. **BNSF haulage arrangements.** CSXT works with BNSF across multiple corridors on a hop-on/hop-off basis where the interchange is nothing more than a crew change. For example, CSXT and BNSF have collaborated to build a joint train originating at CSXT's Avon Yard in Indianapolis that moves to Smithboro, Illinois where there is a crew change and no switching whatsoever. The train then continues west on BNSF.

3. **Detroit/Mexico Auto Train.** The CSXT/UP Auto Train is a concrete example of efficient interline service that has operated seamlessly for decades. This daily intermodal train carries auto parts between manufacturing plants in Mexico and Detroit-area assembly plants. Depending on the direction, the UP crew or the CSXT crew gets off at the interchange point in Salem, Illinois and the other carrier's crew gets on, and the train then proceeds to its destination.

4. **UPS seasonal peak service.** Every year during peak season, a UPS train originates on the West Coast on BNSF, interchanges to CSXT, and moves all the way to New Jersey with loaded UPS containers. This interchange involves only crew change, with no container handling. UPS is a major customer that trusts two railroads to execute a seamless transcontinental move on a time-sensitive basis, and the interline partners consistently provide this fast service.

5. **Houston block via New Orleans.** CSXT builds a Houston-destined block of manifest traffic (consisting largely for chemical customers) for UP that is handed off in New Orleans. UP takes the entire block, without switching, all the way to Houston. This is another example where the elimination of switching at the interchange, in part as a result of pre-blocking, reduces transit times without any need to combine the two railroads.

B. Why Single-Line Service Is Not Categorically Superior

The advantages and benefits associated with single-line service are not uniform across all traffic types or routes, and UP and NS's characterization of single-line service as categorically better than interline service does not reflect operational reality.

As I described above, through pre-blocking and the use of run-through trains, interline partners working together to provide efficient intermodal service where density permits can

significantly limit the time required for interchange. Single-line service may offer some benefit for certain other intermodal movements. Because intermodal containers are lifted onto and off railcars and can be moved in blocks without the car-by-car decoupling required for manifest classification, a single-line intermodal movement may avoid certain terminal handlings and reduce the need to break down and reassemble blocks at an interchange gateway.

For manifest traffic, however, the benefits of single-line service are more limited. Manifest traffic must pass through a sequence of operational stages, including origination switch, local yard classification, network yard classification (often multiple times), operating stops for crew changes, refueling and inspections, destination yard classification, and final delivery switch. This is true regardless of whether one or two railroads perform the movement. The interline switch is only one step in that sequence, and removing it does not streamline the remaining steps.

The fundamental challenge for manifest traffic is density. The claimed single-line benefit for manifest movements presumes that a combined UP/NS can generate sufficient traffic density to build large, direct blocks that bypass intermediate classification. But that is not how most merchandise traffic works. Merchandise traffic comes from multiple origination points and goes to multiple destinations. At CSXT's Avon Yard in Indianapolis, Indiana, for example, approximately {{ }} per day pass through the yard en route to CSXT's terminal in Selkirk, New York. Those {{ }} cars originate from {{ }} different locations across the network. And when those {{ }} cars arrive in Selkirk, they disperse to {{ }} different final destinations. Single-line ownership does not eliminate the need to classify and sort traffic with that degree of geographic dispersal.

Single-line service also does not eliminate labor agreement constraints that determine how far, and over what territory, a crew may operate. Generally, extending existing crew routes can implicate significant labor constraints, as crews must be qualified on the territory over which they operate. UP and NS would presumably have analogous restrictions on their own networks. These constraints exist independently of corporate ownership.

III. Post-Merger Integration Risk

Integrating two large, independently-operated Class I rail systems is among the most operationally demanding undertakings in the freight transportation industry. Each railroad operates its own dispatching systems, operating plans, crew management protocols, blocking and classification schemes, IT infrastructure, and terminal operating procedures.

I am aware that UP undertook a project to rewrite its own operating systems. To my knowledge, that project took approximately 14 to 15 years to complete for UP's network alone. Extending that kind of systems integration to a second railroad of NS's scale would be an extraordinary undertaking, with meaningful risk of disruption during the transition period.

Historical experience confirms this risk. When UP acquired Southern Pacific in 1996, congestion developed in Houston and the Gulf Coast region and spread across the national rail network, with labor, dispatching, operating plan, and IT integration lagging behind traffic demands. Those disruptions ultimately resulted in a declared transportation emergency.

Because the U.S. freight rail system is interdependent, service failures on one railroad do not remain contained within its network. If a UP/NS integration generates congestion, yard backlogs, or operating plan breakdowns, those disruptions will propagate to connecting carriers. CSXT interchanges traffic with UP and NS at multiple gateway locations including Chicago, Memphis, New Orleans, Birmingham, and St. Louis. Congestion at any of those locations would impair CSXT's ability to deliver reliable service to its own customers.

VERIFICATION

I declare under penalty of perjury that the foregoing statement is true and correct to the best of my knowledge, belief, and information. Further, I certify that I am qualified and authorized to file this statement.

Executed this 18th day of November, 2026.

/s/Casey Albright
Casey Albright

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY — CONTROL— NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

VERIFIED STATEMENT

OF

CHRISTOPHER MAFFETT

I. Introduction and Qualifications

My name is Christopher Maffett. I am Senior Director, Joint Facilities & Intercarrier Strategy for CSX Transportation, Inc. ("CSXT"). In this role, I oversee CSXT's joint facilities and intercarrier contracts with other railroads, including Class I and short line railroads. My responsibilities include negotiating, administering, and monitoring the arrangements that govern CSXT's access to and use of facilities it does not own outright but depends upon to move traffic across its network. These include trackage rights agreements, participation in the governance of jointly owned entities, joint use arrangements, haulage agreements, and interchange arrangements. I work closely with CSXT's network planning, sales and marketing, and operations teams to identify, structure, and preserve these arrangements.

I joined CSXT in 2001 and have held positions of increasing responsibility since that time. More than eleven years of my career have been spent in roles focused on joint facilities and contractual matters involving other railroads. Earlier in my career, I served as Director of Marketing for Chemicals and, before that, Director of Marketing for Fertilizers, with responsibility for product development, pricing, freight rate negotiations, and market planning for those commodity portfolios. Before those positions, I served as Director of Freight Car Planning and Utilization, where I worked on fleet sizing for railroad-controlled and national pool equipment, was responsible for the distribution of national pool and non-national pool traffic, and worked with TTX Company ("TTX") on a variety of matters.

Through these roles, I have gained firsthand familiarity with the operational and commercial arrangements through which CSXT moves traffic in cooperation with other railroads. I am directly familiar with the joint facilities, dispatch arrangements, and the governance structures discussed in this Verified Statement. These include the arrangements

governing CSXT's interchange operations at the New Orleans gateway and the Villa Grove Subdivision, which CSXT and Union Pacific ("UP") jointly own, but UP dispatches.

I also oversee and manage CSXT's participation in jointly owned railroad assets. I am responsible for overseeing and managing CSXT's participation in jointly owned railroad assets, including the Terminal Railroad Association of St. Louis ("TRRA"), the Belt Railway Company of Chicago ("BRC"), and the Indiana Harbor Belt Railroad ("IHB").

Managing these relationships requires working alongside railroads that are both CSXT's operating partners and its competitors. That experience has given me a firsthand understanding of how ownership, governance rights, and operational control affect whether shared facilities serve their participating railroads on competitively neutral terms.

I submit this Verified Statement in support of CSXT's comments and requests for conditions concerning the proposed merger of UP and Norfolk Southern ("NS"). I explain the operational significance of dispatch control and how its exercise can affect a competing railroad's service. I discuss the specific concerns the proposed merger raises at the New Orleans gateway and on the Villa Grove Subdivision, as well as its implications for CSXT's interests in and reliance on TRRA, BRC, IHB, and TTX. I also explain the operational basis for CSXT's requested conditions concerning these facilities and arrangements and why those conditions would be workable.

II. Dispatch Control Can Affect a Tenant Railroad's Service and Competitiveness

A. Dispatch Decisions Affect Service and Competitiveness

The railroad that holds dispatch authority over a segment of track controls the movement of trains on that segment. Its dispatchers determine which trains move, in what order, and when. They set train priorities, sequence movements through junctions and bottlenecks, arrange meets and passes on single-track territory, assign siding use, and coordinate train movements with

maintenance windows. These are continuous, real-time operating decisions that affect the speed and reliability of service. A railroad ordinarily makes dispatching decisions to meet the needs of its own network, subject to passenger rail obligations and its contractual commitments to other users.

When another railroad depends on that track, dispatch decisions also affect that railroad's service and costs. Favoring the dispatching railroad's operations does not necessarily require a deliberate effort to harm a competitor. A dispatcher seeking to keep the railroad's own trains moving and protect its operating efficiency can make decisions that delay another railroad's trains or make their movements less predictable. Those operational effects can, in turn, weaken the other railroad's commercial position. The concern is therefore not limited to intentional discrimination or conduct unique to any particular railroad.

Train priorities and sequencing are important examples. Giving the dispatching railroad's trains priority can cause another railroad's trains to wait in sidings, lose their place at a junction, or move only when capacity remains available. The order in which trains are admitted to shared territory can have similar effects. Even where the governing arrangements call for first-come, first-served treatment, the timing of movements approaching and entering that territory can affect which train proceeds first. Modest differences repeated across many movements can produce meaningful differences in transit time and reliability.

The use of infrastructure and the scheduling of maintenance also matter. On single-track territory, the availability of sidings affects where trains can meet or pass and how long they must wait. Using a siding for car storage can reduce the flexibility available to another railroad's trains. Similarly, the timing of a maintenance outage can have different consequences for different users of a line. An outage scheduled during a period when another railroad needs to

move time-sensitive traffic can disrupt that railroad's service even if the dispatching railroad's own operations are less affected.

Operational approvals and control of interchange movements provide additional ways to affect a connecting railroad's service. Where approval of an operating plan is required before another railroad can begin or modify service, delays, additional conditions, or repeated requests for information can postpone the service and jeopardize a customer opportunity. At an interchange or junction, decisions about the sequence and priority of movements can delay connections between railroads. The resulting service may become less attractive to shippers even though no single decision is readily identifiable as discriminatory.

B. Contractual Protections Are Difficult to Enforce in Practice

Trackage rights and joint facility agreements commonly contain protections intended to prevent discriminatory treatment. Those protections may require first-come, first-served dispatching, prohibit undue preference, or require treatment no less favorable than that provided to the dispatching railroad's own trains.

These contractual protections, however, do not eliminate the practical difficulty of identifying and remedying unfavorable treatment. The railroad relying on another's dispatching generally does not have the same information about all movements and operating choices on the territory. It may see that its trains have been delayed without having the information needed to determine whether the decisions producing those delays were operationally justified. Establishing a pattern requires information about other trains and the circumstances surrounding individual decisions, much of which is controlled by the dispatching railroad. By the time a dispute is identified, documented, and resolved, customers may already have changed their shipping arrangements.

III. The New Orleans Gateway

A. New Orleans Is a Critical Gateway for CSXT's Interline Service

New Orleans is a critical gateway connecting eastern, western, and Canadian railroads. All six Class I railroads have a presence there, alongside a deepwater port and connections to the Mississippi River. For CSXT, the gateway is particularly important for traffic moving from Mexico, Texas, and Louisiana to destinations on our eastern network. That traffic includes chemicals from the Gulf Coast, transportation equipment from Mexico, and agricultural and industrial commodities. The gateway also supports traffic moving from the East, and in particular, the Southeast to destinations west of the Mississippi River.

B. The Merger Would Increase the Risks Associated with Dispatch Control.

The proposed merger would add a direct competitive incentive to these operational concerns. UP and NS currently have interline relationships that give them reasons to support CSXT's service over the facilities they dispatch. A combined UP/NS would instead have an incentive to shift traffic from competitors to its own service. Where that incentive is combined with control over facilities on which CSXT depends, a nondiscrimination provision alone would not provide adequate protection. The conditions CSXT identifies address that control directly rather than relying solely on disputes over individual operating decisions after the harm has occurred.

Railroads generally seek to move traffic over the most efficient available route because additional miles add cost. Other gateways and corridors can accommodate some traffic that moves through New Orleans. Those alternatives, however, are not equally effective for every origin and destination. For UP traffic moving between the Gulf Coast and the Southeast, the UP–CSXT route through New Orleans provides a more efficient connection than an indirect movement through a gateway farther north.

In 2023, CSXT interchanged approximately {{ }} carloads at New Orleans, including approximately {{ }} with UP, {{ }} with BNSF, {{ }} with CPKC, and {{ }} with CN. The vast majority of this traffic moved from west to east, originating on those railroads and continuing to destinations served by CSXT. CSXT is therefore predominantly a receiving carrier at this gateway. Our ability to serve those customers depends on reliable interchange with our connecting railroads.

Delays or uncertainty at the gateway affect our ability to make and keep service commitments, regardless of how well we operate our own network east of New Orleans. Degraded interchange service can also increase costs by leaving crews and equipment waiting rather than moving traffic. Reliable access through the gateway is thus important both to the service we offer shippers and to the efficiency of our operations.

C. CSXT Depends on Infrastructure Controlled by Other Railroads.

Interchange in New Orleans requires movements over a complicated network of facilities owned and controlled by different railroads. UP and BNSF approach the gateway from west of the Mississippi River, while CSXT's interchange locations are all east of the river. Two facilities are particularly important to east-west interchange: the Huey P. Long Bridge ("Long Bridge") and NS's Back Belt. The bridge provides the river crossing, and the Back Belt provides an efficient route across the city to the eastern railroads.

The New Orleans Public Belt Railroad ("NOPB") owns the Long Bridge, but UP dispatches train movements over it. UP also controls dispatching at West Bridge Junction, which UP owns, and East Bridge Junction, which CN owns. CSXT does not operate across the bridge or west of the Mississippi River in New Orleans and has no rights to operate over NOPB's tracks. The bridge's importance to CSXT instead arises from the movements of connecting railroads bringing traffic to and from our interchange locations east of the river.

NS owns, operates, and dispatches the Back Belt, which runs generally east to west across New Orleans toward East Bridge Junction. Significant portions are double-track, but the line is highly utilized and experiences congestion. CSXT and its connecting railroads depend on movements over the Back Belt to conduct important interchange operations. UP delivers eastbound traffic to CSXT at Gentilly Yard and receives westbound traffic at the I-10 interchange point on the Back Belt. BNSF delivers and picks up traffic directly at Gentilly Yard. CSXT interchanges with CN at Mays Yard via the Back Belt.

CSXT's interchange with CPKC uses a different arrangement. NOPB provides intermediate switching over the Front Belt, delivering and picking up traffic at Gentilly Yard. That existing use does not make the Front Belt an adequate substitute for the Back Belt. The Front Belt has size and speed restrictions and is heavily used for customer switching. It runs through the heart of the city, including the French Quarter, and is subject to numerous disruptions associated with Mardi Gras, French Quarter Fest, and major sporting events. Those limitations constrain its ability to accommodate additional traffic reliably. I have discussed with NOPB the possibility of handling additional traffic in connection with a potential shift of CSXT's operations. In those discussions, NOPB advised that it could not accommodate the required level of traffic.

D. The Merger Would Consolidate Control of Essential Interchange Facilities Under UP/NS.

Today, UP and NS separately control dispatching over the Long Bridge and the Back Belt. Their interline relationships give each railroad reasons to support traffic moving through the gateway. UP partners with both CSXT and NS for eastern service. Conduct that delayed BNSF's movements over the bridge could harm not only CSXT's service but also NS's interline service with BNSF. NS, in turn, relies on both UP and BNSF for western connections. Its use of

Back Belt dispatch authority can therefore affect relationships with railroads on which it depends.

The proposed merger would place dispatch control over both facilities in one combined railroad. At the same time, it would change the combined railroad's commercial incentives. Rather than earning revenue only on its portion of an interline movement, UP/NS could seek to retain the entire movement on its own network. Delaying or making CSXT's interchange service less reliable could then benefit UP/NS by encouraging shippers to use its single-line service. The separate interline relationships that currently constrain the exercise of dispatch authority would no longer provide the same protection.

As discussed in Section II, dispatch control provides numerous ways to affect the speed and reliability of another railroad's service without an overt refusal to handle its traffic. At New Orleans, longer waits, missed connections, and less predictable operating windows could undermine shippers' confidence in CSXT's service. The combined railroad would not have to make that service impossible to use. Persistent deterioration could be enough to cause customers to change their routing.

A loss of traffic would also affect the service CSXT could sustain through the gateway. Lower volumes would reduce the density supporting our operations into and out of New Orleans and could require adjustments to service frequency. Those adjustments could make the service less attractive to the customers who remain, producing further traffic losses. The resulting harm would extend beyond individual delayed trains and weaken CSXT's ability to compete with the legacy NS network for eastern movements.

E. Neutral Dispatching Would Address the Combined Railroad's Control.

The proposed merger would place dispatch control over both the Long Bridge and the Back Belt in the hands of a single railroad with a financial incentive to shift traffic from CSXT's

interline service to its own network. To address that risk, dispatch control over both facilities should be transferred to a neutral third party. The entity deciding which trains move, in what order, and when should have no commercial stake in whether shippers use UP/NS or a competing interline service.

Contractual nondiscrimination requirements would not adequately protect CSXT under those circumstances. The Back Belt trackage agreement already requires NS to "so far as may be practicable for it so to do, so operate the said railroad as to provide for the movement of freight trains of all parties upon the same with equal rights and without discrimination." But, as discussed in above, dispatch decisions can repeatedly favor the dispatching railroad's operations without any individual decision being readily identifiable as discriminatory. CSXT would experience the delays and service deterioration while facing substantial difficulty obtaining the information necessary to establish a violation. By the time a dispute could be resolved, customers could already have changed their shipping arrangements.

A commitment to nondiscriminatory treatment would therefore leave the underlying conflict intact. UP/NS would retain both the ability to affect CSXT's interchange service and the incentive to divert that traffic to its own network. Neutral third-party dispatching would address that conflict directly by placing train sequencing and interchange priority at both facilities in the hands of an entity that does not compete for the traffic moving through them.

IV. The Villa Grove Subdivision.

A. The Villa Grove Subdivision Is Critical to CSXT's Service Between Chicago and the Southeast.

The Villa Grove Subdivision runs between Dolton, Illinois and Woodland Junction, Illinois and is CSXT's primary corridor between Chicago and the Southeast. It supports traffic originating, terminating, and interchanging in Chicago and connects that traffic with our

southeastern network. In 2023, CSXT moved approximately {{ }} carloads and intermodal units over the subdivision, generating nearly {{ }} in revenue. That traffic includes service for major intermodal customers, including {{ }} and {{ }}, whose transportation requirements depend on reliable, on-time performance.

CSXT has limited other possible routings between Chicago and the Southeast and none provides an equivalent alternative in speed, capacity, and operating efficiency. The existence of another physical route does not mean we could shift Villa Grove traffic to it while maintaining competitive service. Deterioration in the reliability of our operations over the subdivision would therefore have consequences across the CSXT network.

B. The Merger Would Change UP's Incentives in Operating the Subdivision.

CSXT and UP each own a 50 percent interest in the Villa Grove Subdivision. UP nevertheless holds responsibility for dispatching, maintenance, and local service under the 1969 Joint Line Agreement between predecessor railroads to UP and CSXT. That agreement designates UP as the operating company with "management, direction and control of the operation and maintenance of Jointly Owned and Jointly Leased Facilities and of operations on Joint Line." It also requires the operating company's employees, supervisors, and managers to "attend to the business of each Party without preference or discrimination and shall be impartial and fair in the rendition of services and in the handling of business of both Parties."[1]

Historically, UP's responsibility for dispatching, maintenance, and local service on the Villa Grove Subdivision has not been a significant source of problems for CSXT. Although CSXT believes that UP occasionally prioritized its own trains in day-to-day dispatching, we have not experienced persistent, systematic conduct suggesting a deliberate effort to degrade our

[1] Agreement Between Chicago & Eastern Illinois Railroad Company and Louisville and Nashville Railroad Company, § I, art. 3(B), at 8–10 (June 5, 1969)

service. UP's interline relationship with CSXT helps explain that experience. Significant volumes of traffic moving over the subdivision interchange with UP in Chicago, giving UP an interest in reliable CSXT service. UP also lacks an eastern network of its own. Degrading CSXT's service between Chicago and the Southeast would therefore risk shifting traffic to NS rather than to UP.

The merger would change those incentives. A combined UP/NS would own the competing eastern network to which customers could turn if CSXT's service became less reliable. It would retain control over dispatching on the Villa Grove Subdivision while gaining a direct financial interest in attracting traffic away from CSXT. The operational decisions discussed in Section II would then be made by a railroad that could benefit commercially from their adverse effects on our service.

The consequences would extend beyond the customers whose traffic initially shifted. If unreliable service caused CSXT to lose volume, we could have to consolidate train slots, reduce departure frequencies, or extend transit times. Those changes would affect the shippers who continued to use CSXT and could make our service less competitive for additional traffic. Because the Villa Grove Subdivision is central to our Chicago–Southeast operations, persistent service deterioration would not be an isolated problem confined to one segment of track.

C. CSXT Should Be Made the Operating Company.

The appropriate condition is to reverse the operating responsibilities under the 1969 Joint Line Agreement so that CSXT becomes responsible for dispatching, maintenance, and local service. That would address the operational control giving rise to the concern rather than leave CSXT dependent on enforcing the agreement's impartial-treatment requirement after service had deteriorated.

Transferring those responsibilities to CSXT would not create an equivalent incentive to harm UP/NS. CSXT's network does not overlap UP's western and Mexico-bound network, and CSXT could not divert that traffic to a competing western service of its own. Unlike CSXT, UP/NS would retain multiple alternative corridors south from Chicago, including UP's existing trackage rights over the Joliet line running south through Bloomington to Springfield, and NS's principal Chicago-to-Southeast route running east out of Chicago to Fort Wayne and south to Atlanta, and those routes would remain available to the combined railroad regardless of who dispatches Villa Grove.

V. The Merger Would Threaten Joint Assets That Are Essential to the Rail Network.

The national freight rail network depends on shared facilities and collaborative arrangements that competing railroads have developed and maintained together over more than a century. Jointly owned terminal and switching railroads, including BRC, IHB, and TRRA, allow carriers to interchange traffic through shared infrastructure at major gateways. These facilities reduce the cost and delay of moving traffic between networks and support the interline service options that give shippers competitive choices.

The governance of these railroads reflects their shared purpose. Their ownership and voting arrangements are generally designed to prevent any single owner from exercising unilateral control, including through supermajority or unanimous voting requirements for certain decisions. Those protections help ensure that the facilities serve their participating railroads on equal terms rather than become tools through which one owner can disadvantage the others.

The proposed merger would change both the balance of governance power and the owners' incentives. UP/NS would combine the ownership interests and voting rights that UP and NS now hold separately, while becoming less dependent on some of the facilities those interests govern. That combination matters. A railroad with greater voting power but less operational

reliance on a shared facility can block or delay investments that other owners need without bearing the same consequences for its own operations.

That concern does not depend on UP/NS deliberately seeking to harm another railroad. A combined carrier that uses or needs a facility less may simply be less willing to support capital expenditures, maintenance, or operating improvements that remain important to the other users. Where its voting position allows it to prevent those expenditures, the result can be deferred maintenance, reduced capacity, higher costs, and degraded service for the carriers that continue to depend on the facility.

The same broader concern extends to collaborative arrangements such as TTX. TTX is a jointly owned freight car pooling company whose members include all Class I railroads. It supports equipment innovation and car availability across the network while reducing the capital each railroad would otherwise need to commit to its own dedicated fleet. Like shared terminal infrastructure, that collaboration provides benefits that depend on the participating railroads' continued support.

The combined ownership position and scale of UP/NS would therefore have consequences beyond the facilities it owns outright. The merger would also affect the governance and continued operation of shared assets on which competing railroads rely. In the following sections, I discuss the concerns presented by BRC, IHB, TRRA, and TTX and the conditions necessary to address them.

VI. The Merger Would Threaten BRC's Governance Balance and Financial Stability.

A. BRC Provides Essential Shared Infrastructure at the Chicago Gateway.

BRC is an intermediate switching terminal railroad operating more than 250 miles of track, including Clearing Yard in Chicago. Its facilities are critical to CSXT's freight interchange

and to the national rail network. BRC's infrastructure requires substantial ongoing investment, including anticipated expenditures on the BRC-owned bridges east of Clearing Yard.

All six Class I railroads own interests in BRC. CSXT and NS each hold 25 percent, BNSF and CN each hold approximately 16.67 percent, and UP and CPKC each hold approximately 8.33 percent. Board representation is proportional to ownership. The twelve-member board currently includes three representatives each for CSXT and NS, two each for BNSF and CN, and one each for UP and CPKC. Under the 1990 BRC Operating Agreement, capital improvements exceeding $100,000 require a two-thirds supermajority vote.

BRC funds its operations and investment through switching fees charged to the railroads whose traffic it handles. Its financial position therefore depends on the volume of traffic moving through its facilities. Maintaining sufficient revenue and securing the owners' support for necessary investment are both important to BRC's ability to provide reliable service.

B. UP/NS Would Consolidate Governance Power While Reducing Its Reliance on BRC.

The merger would combine NS's 25 percent interest and UP's approximately 8.33 percent interest, giving UP/NS approximately one-third of BRC's ownership and four of its twelve board seats. That would be the largest single voting bloc, exceeding CSXT's three seats. UP/NS would not hold a majority, but its ability to influence capital decisions would increase substantially, particularly if it aligned with another owner in opposing an expenditure requiring supermajority approval.

At the same time, Applicants project that their consolidation of Chicago operations would reduce intermediate switching demand at BRC by approximately 210 cars per day. That reduction would remove switching revenue on which BRC depends to fund its operations and

capital needs. UP/NS would thus gain the largest governance position while reducing the traffic it contributes to the facility.

The owners do not depend equally on every part of BRC's infrastructure. CSXT and NS are currently the most reliant on the numerous bridges east of Clearing Yard, which are expected to require significant capital expenditures. Owners with less need for those bridges have less incentive to support their rehabilitation. Following the merger, UP/NS's reduced reliance on BRC would weaken the alignment between its interest in funding the facility and the needs of carriers that continue to depend on it.

CN presents a particular concern in that respect. CN is among BRC's lowest-volume users, and UP has entered into an agreement providing operating rights over CN's Elgin, Joliet & Eastern Railway corridor through Chicago. Those circumstances create a potential alignment between owners with less reliance on BRC. They do not establish how CN would vote on any particular proposal, but an alignment between UP/NS and CN could block capital expenditures requiring a two-thirds vote. To the extent the combined railroad also shifted interchange with CN away from BRC, the resulting loss of switching revenue would compound the financial pressure.

The concern does not require an agreement to harm CSXT. Owners that need BRC less may simply oppose spending that remains necessary for those that depend on it. If a blocking coalition formed, CSXT could not compel the required investment merely because the bridges and other facilities remained essential to our operations. We would face the service consequences of deferred investment while continuing to rely on the jointly owned infrastructure.

C. Divestiture Would Be Necessary to Preserve Balanced Governance.

The Board should require UP/NS to divest a portion of its BRC ownership interest. That condition would address the increased concentration of governance power created by the merger

and preserve a more balanced ownership structure. A reduced interest would also be more consistent with the combined railroad's diminished operational reliance on BRC.

Without that condition, the railroads that remain dependent on BRC would face both a weaker revenue base and a greater risk that necessary investment could be blocked. Divestiture would not replace the switching revenue lost through consolidation, but it would prevent the merger from simultaneously concentrating governance authority in the railroad reducing its use of the facility. Preserving balanced governance is necessary to protect BRC's ability to maintain the infrastructure on which CSXT and other users rely.

VII. The Merger Would Undermine the Shared Governance That Protects IHB's Neutrality.

A. IHB's Governance Depends on Joint Direction by CSXT and NS.

IHB is a terminal switching railroad whose operations around Chicago connect Class I railroads interchanging traffic through the gateway. It is particularly important for steel, automotive, and oil-related traffic. CSXT depends on IHB for efficient interchange, and its operations contribute to traffic fluidity throughout the Chicago terminal.

IHB is owned 51 percent by Consolidated Rail Corporation ("CRC") and 49 percent by CPKC. CRC is held through the Conrail corporate structure, which CSXT and NS jointly control on a 50/50 basis. CRC's majority interest carries the right to elect four of IHB's seven directors, with CSXT and NS each appointing two. CPKC elects the remaining three directors.

{{

}}

That arrangement has worked because CSXT and NS have had broadly similar operational dependence on IHB. Both have needed a neutral, well-functioning switching railroad to support their Chicago operations, and both would bear the consequences of deteriorating service or infrastructure. Their shared reliance has provided an incentive to resolve disagreements and support the facility rather than use their governance rights to obstruct one another.

B. UP/NS Would Retain NS's Veto While Becoming Less Dependent on IHB

The proposed merger would change that relationship. UP would acquire NS's position in the Conrail ownership structure and its associated governance rights at IHB. The combined railroad would retain NS's ability to withhold agreement on CRC's exercise of its rights, but its combined UP/NS network would provide alternative routes through and around Chicago. UP/NS would therefore have less operational dependence on IHB than the independent NS has today, while retaining the same ability to prevent coordinated action through CRC.

Applicants also project a meaningful reduction in the volume of cars handled by IHB as they consolidate their Chicago operations. That reduction would diminish the switching revenue available to support IHB's operations and capital investment. IHB would thus face financial pressure at the same time that an owner with less need for the facility gained the ability to withhold support for decisions affecting its future.

CSXT would remain dependent on IHB without the same alternatives available to UP/NS. A governance arrangement premised on shared operational needs would instead give a less-dependent competitor the ability to prevent action through the majority owner. The practical

constraint that has supported cooperation between CSXT and NS would be weakened, leaving CSXT exposed to decisions about a facility it needs but cannot independently direct.

C. The Agreement Should Be Amended to Remove the Veto

The Board should require amendments to the IHB and CRC governance arrangements necessary to remove the effective veto that CSXT and NS each hold over action through CRC. Each party's two IHB board appointees should instead vote independently, with decisions made by majority vote across the full seven-member board.

Under that structure, CSXT and UP/NS would each retain two board appointees, and CPKC would retain three. No single owner would hold a majority or a unilateral veto. Decisions would require support from directors appointed by more than one owner, rather than allowing disagreement between CSXT and UP/NS to prevent CRC's representatives from acting.

That reform would preserve each owner's participation in IHB's governance without allowing UP/NS to use the veto it inherits from NS to prevent decisions needed to maintain the facility. That change would ensure that decisions about IHB's operations and investment are made by a majority of its board, rather than remain subject to a veto held by a competitor with less need for the facility.

VIII. TRRA

A. Effective Interline Competition Depends on an Efficient, Independent TRRA.

TRRA is a terminal and switching railroad at the East St. Louis gateway. The East St. Louis gateway is the most direct and efficient east-west connection to CSXT's network at middle latitudes and is critical to CSXT's interline service.

TRRA operates key facilities at the East St. Louis gateway including track, yards, and the Merchants and MacArthur Bridges over the Mississippi River. Both through and interchange

service in East St. Louis generally requires use of the facilities and services of TRRA, and CSXT depends on TRRA to provide competitive interline service.

TRRA is jointly owned by UP, NS, CN, BNSF, and CSXT. Its governance rules set the number of Board of Director seats each owner has and require supermajorities or unanimity for many decisions.

TRRA's finances and ability to reinvest in its facilities depend in part on usage-based revenues and in part on capital investments by its owners. For example, when it became necessary to substantially rehabilitate the Merchants Bridge, TRRA's owners agreed to contribute to capital needs based on their proportional usage of the bridge in the preceding years. TRRA and its owners anticipate a similar project to rehabilitate the MacArthur bridge will be necessary soon.

B. The Merger Would Enable UP and NS to Harm TRRA to Make Their Competitors Less Competitive.

Without any conditions, the merger would give UP/NS majority ownership and a Board majority, enabling it to control TRRA outright. Even if UP/NS divested NS's shares and Board seat to CN as they have proposed, UP/NS would be able to use its governance powers to harm TRRA and interline competition that relies on it.

If UP/NS's proposed conditions were approved, UP/NS and CN would be a voting bloc that would turn TRRA into an instrument of foreclosure. If UP/NS's and CN's related proposal to create trackage-and/or haulage-based CN through service over East St. Louis were approved, CN would not compete against UP/NS for east-west traffic, and it would not rely on interchanging traffic in East St. Louis. CN would therefore share UP/NS's interest in foreclosure and support actions that would raise the costs of and degrade the services and facilities needed for other carriers such as BNSF and CSXT to compete by interchanging there.

Even without a Board majority, UP/NS would have the ability to veto decisions essential to maintaining the competitiveness of service that relies on TRRA services and facilities. These include changes to rates and fees, which requires a unanimous Board vote; and capital expenditures above $50,000, which require a three-fourths supermajority Board vote.

In addition, UP/NS would have less reason to support significant investments in the efficiency and competitiveness of TRRA facilities, such as the coming rehabilitation of the MacArthur Bridge. UP/NS would be able to bypass St. Louis and, generally, to use the Merchants Bridge to reach it. UP previously resisted funding the Merchants Bridge because, at the time, it was a disproportionately low user, so only its rivals relied upon it to compete. After UP/NS reroute their traffic away from the MacArthur Bridge, they will resist necessary reinvestment in that facility.

Finally, TRRA's finances depend in part on usage-based fees. UP/NS already intend to route traffic away from the East St. Louis gateway in the immediate term, and their usage of TRRA facilities would likely decline further over time. This would undermine the ability of an independent carrier essential to interchange competition to maintain its efficiency and competitiveness.

C. The Board Should Amend TRRA's Governance Rules to Prevent UP from Harming TRRA.

To prevent these harms, the Board should take several steps.

First, the Board should reform TRRA's ownership and Board structure to ensure neither UP/NS nor a UP/NS-CN bloc with a shared interest in foreclosure can exercise majority control. If it declines UP/NS's hand-picked "remedy carrier" proposal, it should require the merged UP/NS to control two of five Board seats. If it approves that proposal, all owners would need to

control only one Board seat, and an additional independent party, such as CPKC, would need to be brought in to prevent a 2-2 deadlock.

Second, the Board should reform TRRA's governance rules so a Board majority can make competitively-essential decisions such as changes in rates and fees and capital expenditures without veto by UP/NS or UP/NS-CN.

Third, the Board should reform TRRA's governance rules so TRRA management can more freely act in the interests of TRRA and its users without requiring advance Board approval.

Fourth, the Board should require UP/NS to contribute to coming capital needs based on the historical UP and NS usage that has made them necessary.

IX. TTX

TTX is a railcar pooling company that supplies equipment used throughout the rail network, including intermodal flatcars, boxcars, autoracks, pipe flats, bulkhead flats, and gondolas. Pooling allows railroads to use equipment across their networks without routinely returning empty cars to their owners. This helps keep cars productive, reduces costs, and supports reliable customer service. The system depends on cooperation among participating railroads, including releasing equipment when other members need it.

I am concerned that the merger would weaken that cooperation in the intermodal flatcar pool. With increased frequency in recent months, UP has retained equipment above its entitlement—incurring and paying penalties rather than releasing the cars. Within the past month, NS also began engaging in similar behavior (which has been especially notable given it has historically been consistent and timely in releasing TTX pool equipment). After the merger, I believe that UP/NS would be even more incentivized to engage in this behavior and extend that approach across a larger network, keeping cars to protect its own business while leaving CSXT and others short, to the detriment of those carriers and their customers.

Withdrawal from pooling arrangements presents a separate concern. For example, UP and NS are major participants in the bi-level autorack pool. Their combined equipment holdings and broader network could make them less dependent on pooling and give them an incentive to withdraw from the pool altogether. If UP/NS withdrew, that would increase costs for the remaining pool participants and cause delays and service disruptions to those carriers' customers.

The Board should impose appropriate conditions to ensure equitable access to pooled equipment amongst the pool participants and ensure UP/NS's continued participation in the pools.

VERIFICATION

I declare under penalty of perjury that the foregoing statement is true and correct to the best of my knowledge, belief, and information. Further, I certify that I am qualified and authorized to file this statement.

Executed this 18th day of November, 2026.

/s/ Christopher Maffett
Christopher Maffett

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. FD 36873

UNION PACIFIC CORPORATION, ET AL. – CONTROL – NORFOLK SOUTHERN CORPORATION, ET AL.

IN SUPPORT OF CSX TRANSPORTATION, INC.'S COMMENTS

VERIFIED STATEMENT OF DR. RAMSEY D. SHEHADEH NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC. (NERA)

NOVEMBER 18, 2026

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I. INTRODUCTION

A. Assignment

1. I have been asked by CSX Transportation ("CSXT"), through its legal counsel, to provide an economic analysis regarding the competitive effects of the proposed acquisition of Applicant Norfolk Southern Railway Company ("NS") by Applicant Union Pacific Railroad Company ("UP") (hereafter "the Transaction") as set forth in the Application to the Surface Transportation Board ("the STB"), Docket No. FD 36873. In addition, I have been asked to review the Verified Statement of Dr. Mark A. Israel (hereafter "Israel Verified Statement") and provide an assessment of the analysis of the effects of the Transaction presented therein.

B. Executive Summary

2. Today, shippers can pick and choose among multiple rail options in the east and the west for much of their transcontinental traffic. The Transaction would fundamentally change that competitive dynamic. Put simply, a combined UP/NS would have the ability and incentive to degrade access to interline options that would compete with UP/NS single-line service and thereby harm competition. And as the impact on CSXT's competitiveness compounds, this harm would also result in a significant reduction in horizontal competition between the CSXT and legacy NS networks, which would be exacerbated over time.

3. The concern here involves straightforward economic logic. Today, when a shipper can use either CSXT or NS for the eastern leg, UP receives a similar revenue split for the western portion of the move. UP, therefore, has no structural reason to prefer CSXT or NS unless it provides a more competitive option. If the Transaction were to be approved, UP/NS would have a different profit-maximizing incentive. UP/NS would keep the profit on the entire movement for UP/NS single-line traffic, rather than only the western leg for UP-CSXT traffic. The Applicants would also have the ability to act on this incentive. {{REDACTED

}} This would provide the Applicants ample opportunity to capture existing interline traffic with its single-line option.

4. Across transcontinental movements where UP or BNSF can serve one end and interchange with CSXT or NS for the other, the Transaction would mean an effective four-to-two consolidation of distinct routing options, resulting in a loss of the competition that shippers can use to

obtain lower rates and higher-quality service.[1] While the Applicants have stated their intent to keep "all existing gateways open" and continue interlining with CSXT and BNSF post-Transaction, the anti-competitive mechanisms at issue do not require UP/NS to refuse to interline with CSXT or BNSF. A combined UP/NS could increase rate factors or degrade service quality on interline movements with CSXT or BNSF in order to preference its single-line option. Further, UP/NS could "short-haul" other Class I carriers by moving interchange points further east or west to capture a longer share of the move and associated contribution margin.[2] These strategies are instances of "raising rivals' costs," whereby a merged firm may impair a rival's ability to compete by increasing its cost of service.[3] For shippers, the near term effect is the degradation of competing transcontinental interline options, while longer term competition would be impaired more broadly.

5. The STB recognizes the potential for anti-competitive effects arising from railroad transactions and has stated that end-to-end mergers can cause "diminished service and/or increased prices on interline movements that have the effect of foreclosing efficient competitive options." [4] The STB identified this risk as particularly relevant where a railroad that once worked with all of its connecting partners on equal terms is acquired by one of them. The merged railroad then has an incentive to favor its own routes over those that interline with competing railroads.[5] In contrast, the Applicants have rejected the potential for such foreclosure effects, arguing that "the proposed transaction poses no concerns about vertical foreclosure" and that "vertical foreclosure theories do not apply in the context of railroad pricing practices."[6] Consistent with this position, the Applicants do not provide a meaningful economic analysis of foreclosure effects arising from the Transaction.

[1] Specifically, before the transaction, each of UP and BNSF has every incentive to interline with each of CSXT and NS, providing up to four combinations for interline service options; post-merger, the incentives of a combined UP/NS to interline with either of BNSF or CSX are informed by UP/NS's own incentives such that only two potential options—a UP/NS option and a BNSF/CSX option—are offered with independent regard for the interline service for the shipper.

[2] Such short-hauling encompasses both changing the available interchange points as well as changing prices in a manner that incentives shippers to choose different interchange points.

[3] Raising rivals' costs herein refers both to raising the cost of an input for a rival and, more generally, to taking actions that increase cost of a rival to compete in a manner that has the potential to reduce the welfare of shippers.

[4] *See* Canadian Pacific Railway Limited–Control–Kansas City Southern, Decision No. 35, Docket No. FD 36500, March 15, 2023 at pp. 65-66.

[5] Ibid.

[6] *See* Union Pacific Corporation and Union Pacific Railroad Company–Control–Norfolk Southern Corporation and Norfolk Southern Railway Company, Applicants' Second Response to Decision No. 21, Docket No. FD 36873, July 27, 2026 at p. 184. *See* Union Pacific Corporation and Union Pacific Railroad Company–

6. The Applicants rely on the work of their economist, Dr. Mark A. Israel, to support the categorical rejection of competitive harm. As I discuss in Section IV, the analysis of Dr. Israel does not materially engage with the potential for foreclosure effects arising from the Transaction. He reaches stark conclusions based almost entirely on theoretical arguments without performing the requisite empirical analysis to test the foundational assumptions of his modeling or quantify potential merger-specific impacts.[7]

7. The theoretical arguments relied upon by Dr. Israel have been previously rejected by the STB and are generally inconsistent with the economic logic of antitrust enforcement. Most prominently, Dr. Israel relies on a model of bargaining under *complete information* to conclude that shippers would not be harmed by the Transaction for "[t]he vast majority of the parties' interline traffic," which includes all movements "involv[ing] either long-term contracts, private quotes, or other non-tariff arrangements."[8] In the CP/KCS transaction, the STB found that it is "unlikely that [applicants] (or any rail carriers in comparable situations)" have "complete information on the costs and prices of [interline] moves."[9] Dr. Israel provides no evidence that his results extend to situations without complete information and therefore cannot be the basis for addressing the STB's stated concerns regarding foreclosure effects.

8. Further, Dr. Israel asserts that it is the burden of other parties predicting foreclosure to establish why the one-lump theory does not hold, arguing that "any economic theory of foreclosure has to explain why the sole-serving carrier was not earning monopoly profits pre-merger… and thus why it would have an incentive to foreclose the independent railroad post-merger."[10] The STB has previously rejected this reasoning, stating that "while merger applicants are free to argue that the facts in an individual proceeding warrant application of the one-lump theory, the STB concludes that the one-lump theory does not justify a presumption that an end-to-end

Control–Norfolk Southern Corporation and Norfolk Southern Railway Company, Amended Railroad Control Application, Second Errata, Docket No. FD 36873, September 4, 2026, Vol. 1 at p. 22.

[7] *See* Union Pacific Corporation and Union Pacific Railroad Company -Control- Norfolk Southern Corporation and Norfolk Southern Railway Company, Deposition of Mark. A. Israel, Finance Docket No. 36873, October 15, 2026. (Hereafter "Israel Deposition") at p. 206. "Q. You haven't conducted any empirical tests in your work on this case using the data available in this case to confirm that foreclosure doesn't apply or is exceedingly unlikely in those settings, correct? THE WITNESS: That's correct."

[8] *See* Israel Verified Statement at p. 13. *See* also, Israel Verified Statement at p. A-1: "shippers who negotiate nonlinear contracts with railroads in settings with complete information are not harmed."

[9] *See* Canadian Pacific Railway Limited–Control–Kansas City Southern, Decision No. 35, Docket No. FD 36500, March 15, 2023 at p. 46.

[10] *See* Israel Verified Statement at p. 22.

combination will not result in competitive harm."[11] As I establish in Sections IV.C and IV.D, Dr. Israel's theoretical arguments and limited empirical analysis are insufficient to rule out the potential for competitive harm or establish the relevance of the one-lump theory here.[12]

9. To support his divergence from prior STB decisions, Dr. Israel relies on a non-standard economic analysis that is undermined by his use of inconsistent and often contradictory theoretical models, with modeling choices that change depending on the situation he is attempting to address. For instance, while Dr. Israel relies on a model of efficient contracting with complete information between railroads and shippers to reject the potential of competitive harm, he rejects the premises of this model when arguing that asymmetric cost information (i.e., incomplete information) cannot lead to harm (e.g., "shippers likely have private information about their valuations for any given shipment" and "if shippers do in fact have a fixed reservation price… railroads surely do not know it"[13]) and when arguing that railroads cannot efficiently contract to achieve operational efficiencies short of a merger (e.g., "while economists may be able to talk of such 'complete contingent contracts,' they have no relation to industry reality"[14]). No attempt is made to justify or reconcile these different modeling choices and their conflicting implications.

10. Dr. Israel's modeling choices are inconsistent even within the same analysis, further undermining their credibility. In his model of negotiated contracts, Dr. Israel assumes that sole-serving railroads and shippers bargain over an efficient "non-linear" price, where contracts "specify an amount that will be charged for a given amount shipped,"[15] but assumes that the dual-serving railroad is "getting paid this linear price."[16] This difference is consequential, as his use of efficient non-linear prices in his model precludes anti-competitive harm but his use of a linear price generates a merger-specific efficiency (i.e., Dr. Israel's elimination of "Ricardian rents").[17] In fact, Dr. Israel

[11] *See* Canadian Pacific Railway Limited–Control–Kansas City Southern, Decision No. 35, Docket No. FD 36500, March 15, 2023 at p. 47.

[12] In fact, Dr. Israel analyzes models in his Verified Statement where the one-lump theory does not hold, demonstrating that the one-lump theory will not generally hold. *See* Israel Deposition at pp. 164-165. "Q. You're not going to have a sole-serving railroad obtaining the full monopoly profit in that situation? A. Right. The sole-serving railroad, I mean, this is a situation where you're not – where there's, again, linear pricing. It's not perfectly efficient bargaining. So you don't – the sole-serving railroad, in general, is not going to earn the same thing as the fully integrated outcome."

[13] *See* Israel Verified Statement at pp. 36-37.

[14] Ibid.

[15] *See* Israel Verified Statement at p. 7.

[16] *See* Israel Deposition at p. 143.

[17] Thus, reconciling his different assumptions about the nature of freight rail pricing—either by adopting nonlinear pricing through contracting assumption for both sides of the move or by adopting the linear pricing

concedes that in his model "the merger would cause no harm or have no benefit" if this asymmetry was removed as "[t]he pre-merger world would have gotten to the efficient outcome."[18] Again, no attempt is made by Dr. Israel to justify these discrepancies.

11. The economic models developed by Dr. Israel have implausible implications that are antithetical to antitrust enforcement, including the following:

i. competition between railroads often hurts shippers and decreases total welfare and output;

ii. movement volumes do not depend on the rates charged by the railroads;

iii. the presence of two railroads is sufficient to drive rates to marginal cost while the presence of only one railroad results in full monopoly profit;

iv. railroads and shippers can address all externalities through efficient contracting while railroads dealing with other railroads cannot; and

v. a merged firm would bargain with shippers from a weaker position than UP and NS do on an independent basis today.

I discuss each of these in detail in Section IV.

12. In short, the fundamental issue undermining Dr. Israel's analysis is that the potential for anti-competitive harm cannot be ruled out using stylized, theoretical models, and Dr. Israel makes no attempt to quantitatively measure the likelihood of competitive harm for what he identifies as the vast majority of interline volume. Dr. Israel had the opportunity to apply standard antitrust tools to the proposed Transaction and present a fulsome analysis that weighs any benefits against potential harm but chose not to do so.

13. To analyze the risk of anti-competitive harm resulting from the Transaction, I developed a merger-simulation model following standard methods in economics. Specifically, my analysis indicates that the Transaction would provide UP/NS with the ability and incentive to

assumption for both sides of the move—would imply either (i) no competitive benefit at all (welfare would remain unchanged) and no benefit to shippers would arise from the proposed transaction—or any such end-to-end rail transaction generally; or (ii) both competitive harm and competitive benefits could arise and they need to be empirically evaluated and weighed against each other—a data-driven exercise implicated by the Board's prior decisions and which neither Dr. Israel nor any other expert for the Applicants conducts.

[18] *See* Israel Deposition at p. 146.

disadvantage other Class I carriers, resulting in increased interline rate factors and a commensurate decrease in output. {{REDACTED

}} Associated with these price increases, movement volumes would decline. Both rate increases and associated declines in rail freight volumes on such interline traffic are harms to competition and shippers.

14. The extensive overlap between CSXT and NS in the east would cause the harm to shippers that currently utilize the CSXT system to be particularly acute. These shippers require CSXT to continuously invest in its system to meet their transportation needs. Harm arising through foreclosure and raising rivals' costs incentives would reduce the profitability of CSXT, hampering its ability to make these necessary investments.[20] {{REDACTED

}} This harm would compound over time, as the continual reduction in CSXT's profit and reduced ability to invest in its own network would weaken the competitive constraint it can impose on UP/NS. This erosion of the competitive constraint CSXT provides would harm not only transcontinental interline shippers but also shippers seeking service on regional moves where CSXT competes with NS today. In other words, I find that this competitive harm would also result in a significant reduction in head-to-head,

[19] {{REDACTED }}

[20] Unless otherwise indicated, foreclosure encompasses both partial and total foreclosure, including foreclosure via pricing conduct.

[21] A description of the merger simulation as well as the specifications used to calculate these ranges can be found in Appendix C. Additional specifications are included in the Appendix which explore the robustness of the conclusions to different modeling choices, such as incorporating the Applicants' purported efficiencies. {{REDACTED }}

horizontal competition in the East. I provide details on the merger simulation and my results in Section V and discuss the implications for future competition in Section VI.

15. Given the strong likelihood of anti-competitive harm, it is incumbent on the Applicants to demonstrate that benefits arising from the Transaction would offset the harm to competition. STB regulations explicitly state that "mergers serve the public interest only when substantial and demonstrable gains in important public benefits…outweigh any anti-competitive effects" and "Applicants shall make a good faith effort to calculate the net public benefits their proposed merger would generate."[22] However, the Applicants present no reliable economic evidence of benefits to shippers arising from the Transaction. The Applicants argue that the Transaction would bring pro-competitive benefits through the elimination of double marginalization, increased investment, and improved service, but Dr. Israel fails to quantify the magnitude of these purported effects, let alone establish that shippers would benefit from them. Further, the arguments made by the Applicants fail to demonstrate that any of the asserted benefits can only be achieved through a merger. [23] I discuss each issue in detail in Section VII.

16. The Applicants contend that the merger would put downward pressure on prices through the elimination of double marginalization but do not establish inefficiencies arising from double marginalization. In particular, I find that the empirical analysis employed by the Applicants' economist, Dr. Israel, is flawed and incorrectly identifies price differences where none exist. Further, the Applicants fail to provide any quantification of efficiency benefits likely to be realized by shippers or that non-merger alternative mechanisms, like collaboration between railroads, are unable to address inefficiencies arising from double marginalization.

17. The Applicants go on to argue that a merged firm would have a greater incentive to invest in its network, to the purported benefit of shippers, but do not establish the extent to which any resulting investment would be pro-competitive. Competitive harm from a merger increases the profits captured by the merged parties and, consequently, may result in increased investment intended to support the anti-competitive conduct. For instance, a combined UP/NS may invest in rail facilities necessary to capture diverted traffic after foreclosing CSXT or BNSF. Investment intended to

[22] *See* 49 C.F.R. § 1180.1. Major Rail Consolidation Procedures, 5 S.T.B. 539, (2001) at pp. 609-610.

[23] *See* 49 C.F.R. § 1180.1. Major Rail Consolidation Procedures, 5 S.T.B. 539, (2001) at p. 765. The STB's rules begin from the premise that non-merger cooperation can achieve many of the benefits claimed for a merger "while risking less potential harm to the public," and direct the STB to determine which claimed benefits actually require a merger, since only merger-specific benefits may be weighed against merger-related harms.

disadvantage a rival would be fundamentally anti-competitive as the investment would be redundant without providing shippers with additional competitive options. Further, the Applicants' analysis ignores the detrimental impact the proposed Transaction would have on the ability of other Class I railroads to invest in their system to remain competitive and the impact that would have on shippers.

18. The Applicants also argue that non-rail diversions to the UP/NS network demonstrate the pro-competitive benefits of the Transaction, attributing the predicted diversion to shipper preference for single-line rail options. Dr. Israel relies on estimates of rail-to-rail and truck-to-rail diversions calculated by David T. Hunt to establish this claim.[24] Mr. Hunt's rail-to-rail modeling is fundamentally different than the models Dr. Israel uses to analyze the potential for foreclosure effects.[25] However, even if the models employed by Dr. Israel and Mr. Hunt were economically coherent, Mr. Hunt's modeling is based on restrictive assumptions that do not account for the possibility of UP/NS raising rates on interline movements. Diversion that results from a merged firm raising rivals' costs is the exact competitive harm that would hurt shippers and yet is treated as a benefit in his model. Dr. Israel's argument that diversions are a reflection of pro-competitive benefits relies on Mr. Hunt's flawed calculations that inflate expected diversions to the UP/NS network and ignores that diversions may be a result of anti-competitive harm rather than shipper preference for a merged firm's service.

19. Mr. Hunt's truck-to-rail diversion model suffers similar defects and credits shippers with benefits that overstate their gains from switching from truck to rail.[26] A simple example demonstrates this violation: under the calculations presented in the Hunt Verified Statement, if a shipper today chooses to pay $5,000 to move a container across the U.S. via truck when rail service is available for $2,000, then Hunt credits the hypothetical truck to rail diversion with a shipper "benefit" of $3,000 ($5,000-$2,000=$3,000). However, economics recognizes (under the axioms of "revealed preference") that the shipper must be better off with its current choice than the alternatives available. If not, the shipper would have made a different choice. As such, the shipper only stands to benefit from the difference in the pre-merger rail quality-adjusted rate and the post-merger rail quality-adjusted rate, implying that Mr. Hunt's calculations grossly overstate any potential shipper

[24] *See* Israel Verified Statement at pp. 60-66.
[25] *See* Hunt Verified Statement at p. 31.
[26] *See* Hunt Verified Statement at pp. 30-31.

benefit, to the extent it exists at all. Dr. Monaco's Verified Statement explains additional deficiencies in Mr. Hunt's modeling in more detail.

20. The Open Gateway Commitments proposed by the Applicants are not sufficient to preserve the competition that would be lost due to a merger of this scale and permanence. Dr. Israel conducts no analysis, and the Applicants offer no other evidence, to demonstrate that the Open Gateway Commitments would preserve such competition here. They would not. Those Commitments place no meaningful constraint on the rates or service levels that a combined UP/NS could offer at the "preserved" existing interchanges. As a result, such Commitments do not and cannot address the incentive and ability of UP/NS to engage in anti-competitive behavior. I discuss additional details in Section VIII.

21. UP/NS's Committed Gateway Pricing ("CGP") proposal, which they purport to offer as a competition-enhancing mechanism, is a narrow, gateway-level pricing commitment that does nothing to ensure competitive interline options for shippers. CGP was explicitly not designed to be a remedy to anti-competitive foreclosure effects and consequently would not constrain the anti-competitive incentives created by the Transaction. Among its deficiencies:

i. A small subset of traffic is eligible for CGP, which by design excludes many high-value shipments from key commodity groups;

ii. CGP would only be binding for a small share of eligible traffic; and

iii. CGP does not consider or protect other railroads from partial diversions through short-hauling.

22. CGP would leave pervasive opportunities for raising rivals' costs and would not prevent the long-run erosion of rivals' scale, investment, and service quality. Such risks are confirmed by Dr. Israel, as his own results indicate that most shippers would see higher rates in a post-Transaction landscape under CGP.[27] The inconsistencies and deficiencies in Dr. Israel's CGP simulation render any prediction on the implications of CGP from his analysis unreliable. The details of my findings are found in Section IX.

[27] *See* the Israel Supplemental Verified Statement Workpapers.

C. Qualifications

23. I am a Senior Managing Director with National Economic Research Associates, Inc. ("NERA"). I received my master's and Ph.D. degrees in economics from Cornell University, where I conducted research with Alfred Kahn on topics including competition in the fields of energy and rail transportation. I specialize in the analysis of the competitive effects of mergers, acquisitions, and other business combinations through the economic subfields of industrial organization and regulation. I also focus on the quantitative application of economic research to these topics using advanced statistical modeling and econometrics. I have conducted research in these fields for thirty years, both publishing research in peer-reviewed journals and providing expert evidence and testimony on mergers, acquisitions, joint ventures, and other business combinations before regulatory agencies, competition authorities, courts, and arbitration panels in the United States, Canada, and Europe. I have a particular focus on transportation industries and have previously submitted opinions to the STB, including on matters relating to the acquisition of Kansas City Southern Railway by Canadian Pacific Railway, the most recent Class I rail merger. My Curriculum Vitae is attached as Exhibit 1.

D. Materials Considered

24. In preparing this report, I considered materials including economic literature, documents and data produced in discovery (including workpapers and supporting exhibits), deposition testimonies, and publicly available regulatory and financial filings. I also relied on data maintained by the STB, including the Confidential Carload Waybill Sample ("CCWS") and the Uniform Rail Costing System ("URCS"), on Class I Traffic Tapes, and the Centralized Station Master ("CSM") produced in this matter. In addition, I used multi-modal freight flow data relied upon by the Applicants. I also draw on my professional training and experience as an economist. Sources and construction of data are described in Appendix D and Appendix E.

25. Although I do not expect to change my methodology or general approach to my economic analysis, I reserve the right to revise my conclusions if additional information is provided to me or if additional research, reflection, or the correction of inadvertent errors leads me to update my current opinions. For example, UP made a significant document production just days before my report was required to be filed, some of which may be relevant to my analysis. If I am asked to do so

by counsel for CSXT, I also expect to respond, as appropriate, to any assertions made by UP or NS or their experts related to their Application.

II. BACKGROUND ON CSXT AND ITS RELATIONSHIP TO THE APPLICANTS

26. CSXT is a Class I railroad based in Jacksonville, Florida operating a network of over 20,000 route miles that span 26 states, the District of Columbia, Quebec, and Ontario.[28] CSXT offers a wide array of transportation services to thousands of shippers, offering access to intermodal terminals, ports, and major population centers across the eastern United States and Canada. CSXT connects over 70 ports and 50 intermodal terminals and links facilities through track connections with over 230 short line and regional railroads.[29] {{ REDACTED }} CSXT transports over 3.5 million carloads of products each year and operates 1,848 trains each day, on average.[31] CSXT's network is one of only two Class I systems serving the eastern United States, and it is a pivotal method of distributing goods throughout the broader country.[32]

27. To support this volume of freight and ensure efficient operations, CSXT invests heavily in its system each year. In 2024, CSXT invested approximately $2.5 billion in network maintenance and improvements.[33] CSXT also invests in projects to serve rail customers and placed 21 customer projects in service in Q1 of 2026, supporting $1 billion in capital investment.[34] Further, CSXT is actively progressing the National Gateway infrastructure initiative, investing over $850 million in freight rail infrastructure to facilitate transportation between East Coast ports and the

[28] *See Port Relations.* CSXT, n.d. https://www.csx.com/index.cfm/customers/industrial-development/port-relations/?mobileFormat=false. *See CSX System Map.* CSXT, n.d. https://www.csx.com/index.cfm/customers/maps/csx-system-map/.

[29] *See Port Relations.* CSXT, n.d. https://www.csx.com/index.cfm/customers/industrial-development/port-relations/?mobileFormat=false.

[30] {{REDACTED }}

[31] *See Network and Operations.* CSXT, n.d. https://www.csx.com/index.cfm/about-us/company-overview/network-and-operations/.

[32] *See* Carey Verified Statement for further discussion on the importance of CSXT and interline rail to the freight transportation industry.

[33] *See CSX 2024 Annual Report*. CSXT, n.d. https://www.csx.com/index.cfm/about-us/csx-2024-annual-report-showcases-resilience-innovation-and-strategic-growth/.

[34] *See CSX Industrial Development Newsletter – Q1 2026*. CSXT May 5, 2026. https://www.csx.com/index.cfm/customers/news/customer-news/csx-industrial-development-newsletter-q1-2026/.

Midwest.[35] A loss of traffic that reduces CSXT's revenue therefore translates directly into a reduced ability to sustain and invest in the system its shippers rely on.

28. {{REDACTED

}} Transcontinental shipments in particular travel on an interline movement involving both an eastern and western carrier. As one of the two primary eastern railroads, CSXT relies on interlining with western carriers, principally BNSF and UP, to serve customers in the western United States and Mexico. Maintaining these business relationships is crucial to supporting the current interline system, as interline service is not always simply a hand-off at a specific junction. For services that are highly valued by shippers, the Class I railroads have built joint products that facilitate interline service and operational coordination between carriers. Examples of such partnerships include CSXT, UP, and NS offering intermodal service connecting UP-served locations in Mexico with CSXT and NS destinations in the southeastern United States, [37] and CSXT and UP jointly providing "express lane" service that uses UP's refrigerated boxcar fleet to move perishables from UP shippers in California's San Joaquin Valley to CSXT-served destinations in the eastern part of the United States.[38] Such partnerships show that Class I railroads today are able

[35] *See National Gateway.* CSXT, n.d. https://www.csx.com/index.cfm/about-us/projects-and-partnerships/national-gateway/.

[36] {{REDACTED }}

[37] *See Domestic Intermodal Service from Mexico to Southeastern U.S.* Union Pacific. n.d. https://www.up.com/shipping/intermodal/mexico-to-canada/mexico-southeast. The Carey Verified Statement discusses the partnership between CSXT, NS, and UP to provide intermodal service among other examples of partnerships between Class Is. *See* Carey Verified Statement at p. 37. There are ample additional examples of partnerships amongst Class I carriers developed to facilitate rail transportation and address shipper needs. CSXT and BNSF recently announced new intermodal schedules that provide faster direct service between Los Angeles and eastern destinations. *See* Monaco Verified Statement at p. 8; *See* Carey Verified Statement at p. 36; *See CSX, BNSF Announce New Intermodal Services, Offering Seamless Coast-To-Coast Rail Solutions.* CSX. August 22, 2025. https://www.csx.com/index.cfm/about-us/csx-bnsf-announce-new-intermodal-services-offering-seamless-coast-to-coast-rail-solutions/. CSXT and CPKC offer a dedicated train to connect Mexican shippers with southeastern customers and have invested in tracks, bridges, and signal infrastructure to reduce transit time between the southeastern US and Mexico. *See CSX, CPKC Upgrade Southeast Mexico Express with Dedicated Train, Faster Transit Times.* CSXT, May 6, 2026. https://www.csx.com/index.cfm/about-us/media/press-releases/csx-cpkc-upgrade-southeast-mexico-express-with-dedicated-train-faster-transit-times/. As discussed in the Monaco Verified Statement, Conrail, the Alameda Corridor, the Belt Railway Company of Chicago, the Indiana Harbor Belt Railroad, TRRA, KCT, and the CREATE program all provide additional examples of partnerships between Class Is. *See* Monaco Verified Statement at p. 54-55.

[38] CSXT and UP provide "express lane" service to connect shippers of perishable goods in California's San Joaquin Valley, served by UP, to eastern CSXT-served areas using UP's refrigerated boxcar fleet. Express lane service created a new lane for honeydew melons from Turlock, CA to Hunts Point, NY. *See Perishables Bear Fruit for CSX's Growing Express Lane Business.* Progressive Railroading, September 13, 2002. https://www.progressiverailroading.com/rail_industry_trends/news/Perishables-bear-fruit-for-CSXs-growing-Express-Lane-business--4849.

to efficiently coordinate transcontinental shipments, meeting shipper demands through interline movements.

29. CSXT primarily interlines with UP to meet the needs of shippers moving products between the West and the East. The interline relationship between CSXT and UP is long standing and contains relationship-specific investments, including dedicated services connecting the West and Mexico to the East and 40,000 intermodal containers available under the jointly owned UMAX intermodal program.[39] {{REDACTED

}}

[39] *See UMAX Domestic Container Program.* Union Pacific, n.d. https://www.up.com/customers/premium/umax/.

[40] {{REDACTED }}

[41] {{REDACTED }} *See* CSXT 2023 Annual Report. CSXT, n.d. https://s2.q4cdn.com/859568992/files/doc_financials/2023/ar/2023-csx-annual-report.pdf.

[42] {{REDACTED }}

Figure 1: Total CSXT Revenue on UP-CSXT Interline Movements, 2019 – 2024 {{
REDACTED

}}

30. **Figure 2** compares the growth in UP-CSXT interline carloads against total U.S. carloads over the same period, with both indices set to a common base year in 2019 so that index values are interpreted relative to 2019 value. {{REDACTED

}} This divergence shows that CSXT's interline business with UP has grown even as the broader rail industry has contracted, which underscores how valuable this partnership has become to many shippers.

[43] {{REDACTED }}

Figure 2: Trend of Carloads on UP-CSXT Interline Movements Relative to Total U.S. Carloads, 2019 – 2024 {{

REDACTED

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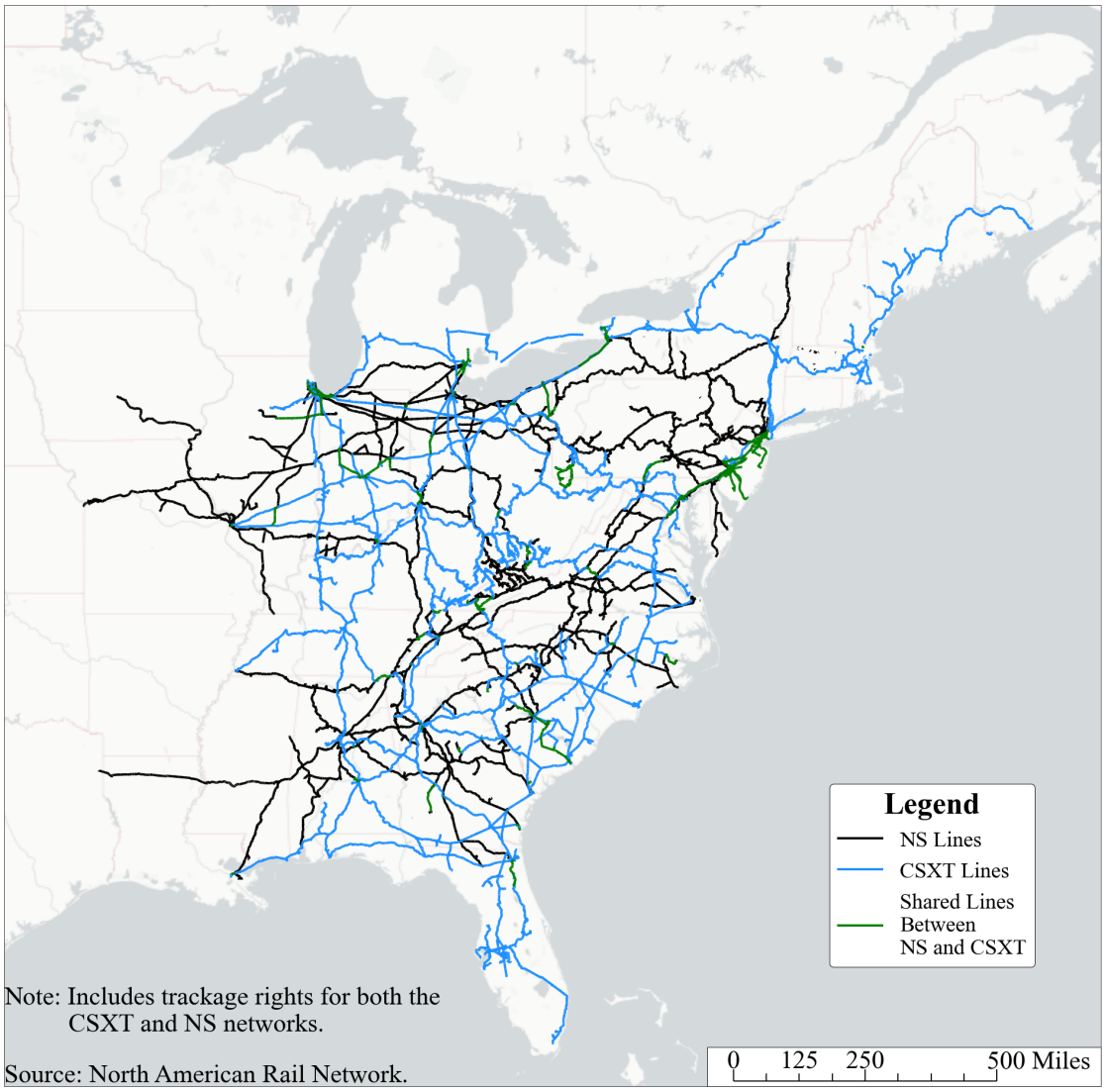
31. Within its service area, CSXT competes vigorously against other railroads and most directly with NS as they are the two principal Class I railroads serving the eastern United States. Shippers moving products in the East primarily choose between service from CSXT and NS, each of which has access to both western carriers through midcontinent interchange points. Thus, any harm to CSXT as a competitor would result in a loss of competition for a significant portion of U.S. rail traffic, to the detriment of shippers moving products in the East. **Figure 3** shows a map of network overlaps between CSXT and NS.[44] The extent of the overlap shows that NS can reach many of the areas CSXT does. As a result, NS is a present alternative for most CSXT traffic.

[44] Blue is the CSXT network, black is the NS network, and green is the shared network between CSXT and NS, including trackage rights. The map does not display shortlines, which extends the reach of the carriers and allows them to compete in additional regions.

Figure 3: Overlap of CSXT and NS Networks



32. {{REDACTED

[45] *See* **Figure 19** for a view of this overlap by SPLC as opposed to revenue.

REDACTED

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Figure 4: CSXT Revenue on UP-CSXT Interline Movements Where CSXT Originated or Terminated, 2023 {{

REDACTED

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33. As a result of this overlap, many shippers have access to efficient and competitively priced interline options today. Competition between CSXT and NS in the East supports a system that benefits shippers, where both seek to provide rates that win business from shippers and western carriers have incentives to work with both. As I explain below, the Transaction would fundamentally alter the rail alternatives, thereby harming competition.

[46] {{ REDACTED

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III. FORECLOSURE THEORIES OF HARM IMPLICATED BY THE PROPOSED TRANSACTION

34. As the STB has recognized, end-to-end mergers raise standard concerns of competitive effects arising from foreclosure. A combined firm would not only compete in the East, West, and Midcontinent with the remaining Class I carriers, but would also supply an "input" for interline movements, i.e., one of the movement legs. On an interline shipment, the "downstream" railroad must take the rate factor as an input from an "upstream" railroad when quoting an overall through rate to a shipper.[47] Thus, each carrier is dependent on the pricing actions of its interlining railroad partners, opening up the possibility of harm to the "downstream" railroad. When evaluating the competitive effects of an end-to-end rail merger, it is necessary to assess whether the merging parties would have the incentive and ability to degrade the competitiveness of interlining partners by impairing access to necessary inputs, also known as foreclosure. This conduct harms competition when it results in higher prices paid by shippers and a reduction in output. In the CP/KCS decision, the STB itself specifically acknowledged the relevance of foreclosure concerns, summarizing that adverse competitive impacts "may arise where … a carrier that once provided neutral access to multiple competing railroads is then acquired by one of those competitors and has an incentive post-merger to favor its own new single-line routing over interline alternatives."[48]

A. Raising Rivals' Costs to Reduce Competition and Harm Shippers

35. A central mechanism through which foreclosure harms competition is by raising rivals' costs ("RRC"), whereby the merging parties increase costs to their "downstream" competitors by raising prices or reducing service quality. For interline freight rail transportation, this may materialize as the newly merged railroad increasing interline rate factors to or from existing interchange points, degrading interline service, or moving the interchange point to decrease its interlining railroad partner's length of haul, a practice known as short-hauling. In turn, RRC strategies pose a risk to shippers by degrading route options and/or increasing prices. To gauge the

[47] Upstream prices may either be an explicit input, such as when rates are set via a through-rate mechanism or an implicit input, such as when rates are set via the Rule 11 mechanism. The competitive impacts of these scenarios are largely analogous.

[48] *See* Canadian Pacific Railway Limited; Canadian Pacific Railway Company; Soo Line Railroad Company; Central Maine & Quebec Railway US Inc.; Dakota, Minnesota & Eastern Railroad Corporation; and Delaware & Hudson Railway Company, Inc. – Control – Kansas City Southern; The Kansas City Southern Railway Company; Gateway Eastern Railway Company; and The Texas Mexican Railway Company Decision No. 35, Docket No. FD 36500, March 15, 2023 at pp. 65-66.

likelihood of RRC, it is necessary to determine whether the merging parties have the *ability* and *incentive* to engage in this conduct.[49]

36. The merging parties would have the ability to engage in RRC strategies if interlining railroad partners rely on them to serve shippers, for instance, by controlling a necessary input like one leg of the movement. The merging parties would have the incentive to foreclose their downstream competitors if the gross margin on recaptured sales exceeds the margin lost on the foreclosed movements. {{REDACTED

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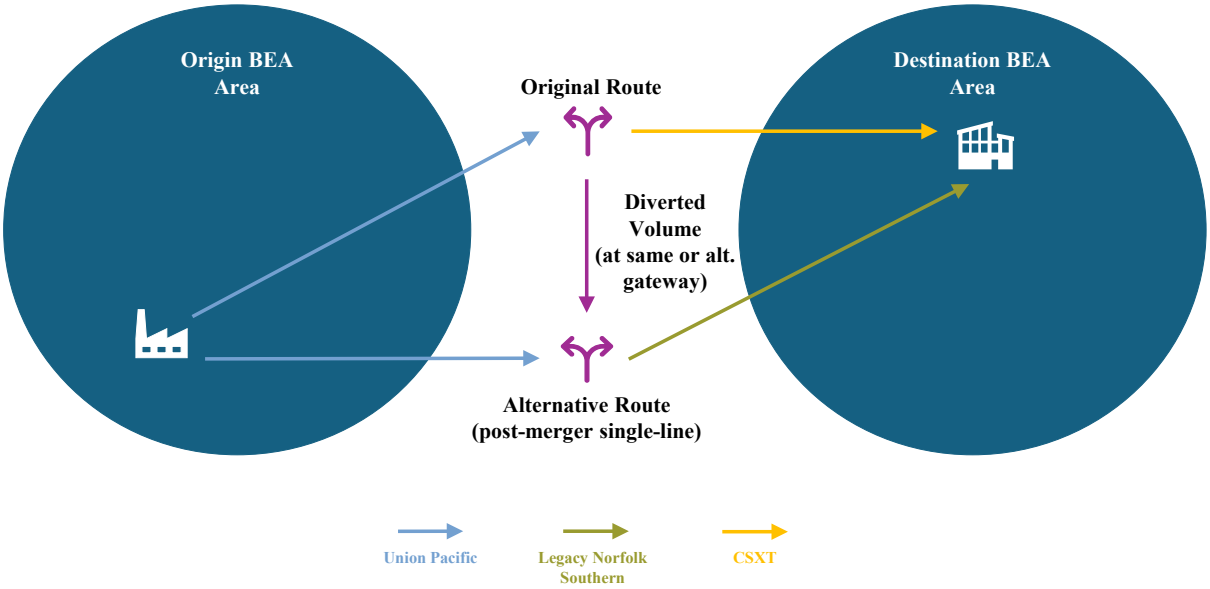
UP/NS would give up the profit that it generated on the legacy UP portion of the interline movement with CSXT but would capture the entire profit on any movements it recaptures on its single-line service. This mechanism does not rely on UP/NS refusing to quote a rate on CSXT interline movements but could be implemented by charging prohibitively high rates on the UP/NS portion of the interline movement with CSXT. This dynamic is demonstrated graphically in **Figure 5**.

[49] *See* 2023 *Merger Guidelines*. U.S. Department of Justice and Federal Trade Commission, December 2023 at pp. 13-15. https://www.justice.gov/d9/2023-12/2023%20Merger%20Guidelines.pdf (hereafter "2023 Merger Guidelines").

[50] {{REDACTED }}

Figure 5: Example of Foreclosure and Recapture



37. The assessment of foreclosure effects is determined by whether a combined firm could profitably recapture foreclosed sales. A combined firm would have a greater incentive to foreclose its competitors when gross profits per unit are large and when the firm anticipates recapturing a substantial share of the sales lost by its competitor. As such, foreclosure incentives have the potential to be particularly acute in the East, where CSXT and NS networks densely overlap, as this overlap would allow for a greater degree of recapture of foreclosed sales by a combined UP/NS.[51]

B. Mechanisms to Implement a Raising Rivals' Cost Strategy to Reduce Competition

1) Diversion of Entire Movements from Interlining Railroad Partners

38. A direct way to implement an RRC strategy in the rail industry is to increase rate factors for one leg of an interline movement. By increasing its rate factors on interline movements with CSXT and BNSF, a combined UP/NS would: a) generate a higher profit on retained moves at the expense of other Class I carriers and b) profit from any traffic diverted to the other routes it provides as a result of the anti-competitive price increase. UP's own expert in the CP/KCS case, Dr.

[51] {{REDACTED

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Salop, points to this as a potential anti-competitive harm arising from that end-to-end merger.[52] Reviewing the Applicants' (CP/KCS) claim that a merged carrier would win traffic through efficiencies, Dr. Salop found that their framing "essentially concedes an ability to foreclose," because if a merged firm "will be able to divert traffic by reducing its own cost…it could also divert traffic by increasing its rivals' costs through a foreclosure strategy."[53] An RRC strategy may be more profitable than a strategy that relies on complete foreclosure, as the upstream railroad does not lose the entirety of its upstream profit, and may generate a higher profit due to the price increase.[54]

39. Beyond foreclosure of competitively served stations by raising rates on interline movements, a combined UP/NS would have multiple other ways to raise its rivals' costs, including decreased service quality to interline partners. For all such joint shipments, CSXT and other railroads are dependent on upstream services provided by UP/NS. A combined railroad would have numerous ways to prioritize traffic on its own services, including crew assignment and timing, junction priority, and the organization of train services and schedules. A merged carrier could also decrease the frequency at which it runs trains on legacy routes in order to shift volume to its new single-line offering. These actions would serve to increase the quality-adjusted rate for shippers on interline movements and increase diversion to a UP/NS single-line route.[55] Further, increasing the quality-adjusted rate of interline options sufficiently high would result in a UP/NS single-line option being the only competitive alternative available to the shipper, resulting in a de facto bundling of the western and eastern legs of transcontinental movements.

[52] *See* Canadian Pacific Railway Limited; Canadian Pacific Railway Company; Soo Line Railroad Company; Central Maine & Quebec Railway US Inc.; Dakota, Minnesota & Eastern Railroad Corporation; and Delaware & Hudson Railway Company, Inc. – Control – Kansas City Southern; The Kansas City Southern Railway Company; Gateway Eastern Railway Company; and The Texas Mexican Railway Company, Verified Statement of Steven C. Salop, Finance Docket No. 36500, February 27, 2022. (hereafter "Salop Verified Statement") at p. 5.

[53] *See* Salop Verified Statement at p. 5 and Canadian Pacific Railway Limited; Canadian Pacific Railway Company; Soo Line Railroad Company; Central Maine & Quebec Railway US Inc.; Dakota, Minnesota & Eastern Railroad Corporation; and Delaware & Hudson Railway Company, Inc. – Control – Kansas City Southern; The Kansas City Southern Railway Company; Gateway Eastern Railway Company; and The Texas Mexican Railway Company, Union Pacific Railroad Company's Comments and Request for Conditions at p. 39.

[54] Other Class I Carriers interlining with UP/NS would face a choice: a) reduce their own rate to maintain customer rate neutrality or b) maintain their previous rate and harm consumers who would now face higher overall rates for the movement.

[55] Just as shippers benefit from quality improvements at the same price, shippers are worse off from quality degradation at the same price. The relevant rate for assessing competitive effects is the quality-adjusted rate, a fact that is noted by Dr. Israel. *See* Israel Verified Statement at pp. 52-53. "[The] merged railroad could choose to increase quality without raising prices, which is a reduction in the quality-adjusted prices."

2) Capturing Additional Mileage on Movements from Interlining Railroad Partners via Short-hauling

40. Even stations which are currently sole-served by CSXT may be foreclosed through "short-hauling".[56] Under short-hauling, a combined UP/NS would serve a previously UP-CSXT interline route beyond the current interchange and potentially until the last possible shared junction on the CSXT and legacy NS networks, leaving only the stub connection to the shipper to be served by CSXT. This would leave CSXT with the high fixed costs of originating or terminating the movement but allow a combined UP/NS system to capture a greater portion of the line haul and the profits. Shortening the length of haul inhibits the ability of the interline rail partner to provide efficient, competitive operations and allows the short-hauling railroad to capture a greater share of the movement profits by exposing the interline rail partner to additional, less efficient, competitive pressure from transloading and drayage. By reducing the length of haul of interlining Class I carriers, a combined UP/NS would decrease the profitability of these carriers. In turn, this would impair the ability of Class I carriers to invest in their own systems and harm shippers who are reliant upon those investments, as discussed below.

41. {{REDACTED

[56] *See* Carey Verified Statement at p. 93.

[57] The unit of observation is an interline movement, defined as a movement on which more than one Class I carrier reports positive revenue and mileage, and the sample of approximately 7.0 million movements excludes those on which a carrier has negative profits.

[58] *See 2023 Surface Transportation Board Carload Waybill Sample Reference Guide*. U.S. Surface Transportation Board. March 5, 2025. https://www.stb.gov/wp-content/uploads/2023-STB-Waybill-Reference-Guide.pdf at p. 63.

REDACTED

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Table 1: Impact of Class I Carrier's Movement-Distance Share on Its Profits for Interline Movements Between Class I Carriers, 2023 {{

REDACTED

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C. The Potential for Foreclosure Effects from End-to-End Rail Mergers Is Well Established by the STB and Rail Economics Literature

42. Each of these theories of foreclosure and their application to end-to-end mergers are well understood and developed in rail economics literature and in enforcement guidelines. In its Merger Rules, the STB explicitly expresses concern for anti-competitive effects from end-to-end mergers, stating that "[c]ompetition in product and geographic markets can also be eliminated or reduced by mergers, including end-to-end mergers."[59] Those Rules also remark that "[a]ny railroad combination entails a risk that the merged carrier would acquire and exploit increased market power." These concerns are well-founded due to the high degree of concentration within the rail industry. Upstream and downstream concentration tends to make foreclosure risks more acute, as it results in the two conditions that make foreclosure most profitable: high recapture rates and large

[59] *See* 49 C.F.R. § 1180.1. Major Rail Consolidation Procedures, 5 S.T.B. 539, (2001).

gross profits.[60] When the downstream market is concentrated, the merged firm would anticipate greater recapture of the sales lost by the foreclosed firm because there are few options for those sales to be diverted to. Additionally, the gross profits from these recaptured sales are likely to be significant as there is limited downstream competition to discipline profit margins. When the upstream market is concentrated, downstream firms have fewer options to turn to in the event of foreclosure and the alternatives that do exist are likely to be priced higher on average, impairing the ability of the foreclosed firm to compete.

43. The STB's acknowledgment of the potential for foreclosure effects, through mechanisms for foreclosure and RRC strategies, is consistent with the views of antitrust enforcers and the rail economics literature. Reflecting the economics literature, foreclosure mechanisms are also discussed in detail in the 2023 Merger Guidelines of the U.S. Department of Justice.[61] Grimm, Winston, and Evans (1992) demonstrate how foreclosure can arise in end-to-end rail mergers where the merged railroad controls a segment needed by an interline rival, allowing it to disadvantage or

[60] *See* e.g., 2023 Merger Guidelines at pp. 14, 16. "The merged firm is more able to limit access when there are few alternative options to the merged firm's related product, if these alternatives are differentiated in quality, price, or other characteristics, or if competition to supply them is limited." And "Limiting rivals' access to the related product will generally have a greater effect on competition in the relevant market if the merged firm and the dependent rivals face less competition from other firms. In addition, the merged firm has a greater incentive to limit access to the dependent firms when it competes more closely with them. Market share and concentration measures for the merged firm, the dependent rivals, and the other firms, can sometimes provide evidence about both issues."

[61] According to Salop and Scheffman (1983), vertical integration is one mechanism for RRC. By raising input costs to downstream rivals, the integrated firm can effectively disadvantage high-cost rivals and increase its profits immediately. *See* Salop, Steven C. and Scheffman, David T. "Raising Rivals' Costs." Ordover, Saloner, and Salop (1990) demonstrate that a vertically integrated firm can profitably raise input prices to downstream, unintegrated firms, thereby harming competition. This is analysis considers the benchmark case of two "upstream" firms and two "downstream" firms that set linear prices. *See* Ordover, Janusz A. et al. "Equilibrium Vertical Foreclosure." *The American Economic Review* 80, no. 1 (March 1990) at pp. 127-142. Rey and Tirole (2007)'s demonstrate mechanisms with which a vertically integrated firm can foreclose rivals to extend market power, such as refusal to deal or cooperate with rivals. *See* Rey, Patrick and Tirole, Jean. "A Primer on Foreclosure." Handbook of Industrial Organization 3, (2007) at pp. 2145-2220. Much economic literature also examines foreclosure in competitions that use bargaining to set prices and fees. Crawford, Lee, Whinston, and Yurukoglu (2018), for example, show that an integrated content owner may have incentives to disadvantage rival distributors by denying consumers access to content or by charging higher negotiated affiliate fees for those rivals, and estimate that, absent effective program rules to restrain such action, rival distributors would either be foreclosed entirely in some cases or pay substantially higher affiliate fees. *See* Crawford, Gregory S. et al. "The Welfare Effects of Vertical Integration in Multichannel Television Markets." Econometrica 86, no. 3 (2018) at pp. 891-954. Ho and Lee (2019) show that insurers may use narrow provider networks not just to steer patients, but also to improve their bargaining position and reduce negotiated reimbursement rates with the included providers. *See* Ho, Kate and Lee, Robin S. "Equilibrium Provider Networks: Bargaining and Exclusion in Health Care Markets." American Economic Review 109, no. 2 (2019) at pp. 473-522.

exclude the rival's interline service.[62] They further explain that foreclosure need not involve complete exclusion, but can also occur through partial foreclosure, such as a price squeeze that weakens the non-merged interline carrier.[63]

44. The work of Grimm, Winston, and Evans (1992) is built upon in UP's own expert's report in the CP/KCS transaction. Dr. Salop applied a similar foreclosure logic to rail interline movements, explaining that a merged carrier can raise rivals' costs by increasing rates charged for interline movements over a segment the merged firm controls.[64] Rail foreclosure is explained to be able to occur through higher divisions, higher Rule 11 rates, refusal to interline, delays, or other non-price tactics, meaning foreclosure is not limited to outright denial of access or strictly to pricing mechanisms.[65] UP's expert emphasizes that foreclosure need not be total, and that partial foreclosure through higher interline rates and difficult-to-detect non-price tactics may be the more realistic concern.[66] He additionally argues that the existence of an alternative carrier does not eliminate foreclosure concerns.[67]

45. In sum, the STB precedent, the economic literature, and UP's own expert in CP/KCS recognize that an end-to-end merger can give the merged firm the ability to raise rivals' costs by controlling an input to interline movements, that it will have the incentive to do so when recaptured profits exceeds lost profits, and that the conduct can take the form of higher rates, degraded service, or short-hauling rather than outright refusal to interchange.

IV. THE APPLICANTS' ANALYSIS OF FORECLOSURE EFFECTS FAILS TO ADDRESS THE POTENTIAL FOR COMPETITIVE HARM ARISING FROM THE PROPOSED TRANSACTION

46. The standard approach to evaluating foreclosure incentives stands in contrast to the Applicants' proffered analysis of foreclosure effects. As I demonstrate in this section, Dr. Israel's analysis is not informative about the competitive impact of the proposed Transaction due to flaws in his theoretical modeling and the lack of empirical support. For the category of contracting that Dr. Israel asserts covers the vast majority of freight rail shipments (i.e.., the almost 90% of traffic

[62] *See* Grimm, Curtis M. et al. "Foreclosure of Railroad Markets: A Test of Chicago Leverage Theory." *The Journal of Law & Economics* 35, no. 2 (October 1992) at pp. 298-299.
[63] *See* Grimm et al. (1992) at p. 305.
[64] *See* Salop Verified Statement at pp. 3-5.
[65] *See* Salop Verified Statement at p. 12.
[66] *See* Salop Verified Statement at pp. 32-35.
[67] *See* Salop Verified Statement at pp. 24-27.

covered by negotiated contracts), Dr. Israel provides no empirical evidence using any data at all, whether produced in this matter or from public sources, to evaluate or substantiate his modeling or its conclusions that it is impossible for anti-competitive effects to arise from this Transaction; the relevance of his analysis rests entirely on the assumed applicability of his contrived modeling.[68] To support his conclusions, Dr. Israel relies on multiple models without providing a clear economic rationale for what traffic any particular argument applies to or attempting to reconcile the internally inconsistent assumptions that determines his findings. {{REDACTED

[0]}}

[68] "Q. You haven't conducted any empirical tests in your work on this case, using the data available in this case, to confirm that foreclosure doesn't apply or is exceedingly unlikely in those settings, correct? THE WITNESS: That's correct." *See* Israel Deposition at p. 206.

[69] {{REDACTED

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[70] {{REDACTED

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And as stated by Dr. Israel, "basing policy and enforcement decisions on what might be possible in theory is a recipe for welfare-harming decisions."[71]

A. The Applicants' Model of Negotiated Pricing Is Incapable of Assessing the Likelihood of Foreclosure Effects Arising from the Proposed Transaction and Is Inconsistent with Empirical Evidence

47. To assess the potential for competitive effects for the "vast majority" of interline rail traffic, Dr. Israel develops a model of negotiated contracts between railroads and shippers which he asserts covers up to 90% of all UP/NS interline traffic.[72] He claims that of non-tariff traffic, "a very large percentage of these cases reflect negotiated non-linear contracts" and that "where shippers negotiate non-linear contracts, they will not be harmed."[73] I find that the applicability of Dr. Israel's model to these movements is unsubstantiated and incorrect.[74] Further, I find that the model is unreliable and does not inform the likelihood of foreclosure effects. Specifically, his conclusions are inconsistent with established principles of antitrust enforcement and the profit maximizing incentives of the Applicants. Dr. Israel uses inconsistent modeling choices, for the same movement, regarding how interline railroad partners negotiate with the shipper and what price structure they use. These inconsistencies have the effect of precluding the potential for competitive harm while simultaneously manufacturing a merger-related efficiency. Given that Dr. Israel's modeling choices are unmotivated by any quantitative evidence, I find that his analysis cannot be the basis to rule out foreclosure or establish merger-specific efficiencies.

1) Overview of the Applicants' Model of Negotiated Contracts

48. In modeling contract negotiations, Dr. Israel focuses on movements where one station is sole-served by a railroad, and the other station is competitively served by two railroads. As an illustrative example, he uses the case of UP sole-serving a station in the West and CSXT and NS

[71] *See* Israel Verified Statement at p. 7.
[72] *See* Israel Verified Statement at pp. 13-14.
[73] *See* Israel Verified Statement at p. 15.
[74] Dr. Israel does not include any empirical work to support this claim but rather relies on his "experience in the industry." He acknowledges that he is "not claiming that every contract, private quote, or other non-tariff arrangement reflect negotiation between shippers and railroads over non-linear pricing terms" and that "[i]n some of these cases, contractual terms may be quite simple- approximating linear pricing." *See* Israel Verified Statement at pp. 14-15. By not providing concrete evidence to support this key premise regarding the scope of his model, Dr. Israel fails to establish that his negotiated nonlinear pricing model applies to any movements, let alone the vast majority of relevant UP and NS interline movements. *See supra*, n.59. Further, my review of shipper railroad contracts provides evidence that his claim is inaccurate and should not be the basis to assess foreclosure effects.

dual-serving a station in the East. In this example, a shipper would negotiate with all three railroads to determine the price and quantity (i.e., number of carloads) for their movement. Dr. Israel assumes that prices are determined in different ways depending on whether the shipper negotiated with the sole- or dual-serving railroads. Specifically, Dr. Israel assumes that the sole-serving railroad bargains with shippers over efficient, nonlinear contracts (i.e., jointly determining price and quantity), while dual-serving railroads negotiate with shippers over inefficient, linear pricing. As I explain in detail below, these different modeling choices undermine the applicability of his analysis to assessing foreclosure effects.

a) Bargaining Between Shippers and Railroads at Sole-Served Stations

49. When the shipper negotiates with a sole-serving railroad, Dr. Israel adopts a model of bargaining based on complete information, referred to in economic literature as Nash bargaining.[75] Under such a model, Dr. Israel argues that "shippers and railroads will negotiate efficient contracts pre- and post-merger."[76] That is, shippers and railroads agree to ship the optimal volume based on the railroad's cost (and the rates the shipper receives from other interlining railroads) and then split the surplus from the move.[77] As such, the pricing structure is nonlinear in that the railroad and the shipper simultaneously bargain over the total output and the amount to be paid by the shipper. This is a central result for Dr. Israel's analysis because it implies that the Transaction cannot have a welfare effect for these movements.[78]

50. Dr. Israel's conclusions depend on two main assumptions that he imposes on his bargaining model. First, shippers have complete information about transportation costs. The assumption of complete information means that shippers know the cost of each railroad for a given movement and railroads know the shipper's willingness-to-pay for a movement. Second, bargaining outcomes are efficient. Assumed efficiency implies that the railroad and the shipper will exhaust all gains from trade. That is, railroads and shippers will continue negotiating until the total volume is set

[75] *See* Israel Verified Statement at p. A-1. "[S]hippers who negotiate nonlinear contracts with railroads in settings with complete information are not harmed and may benefit from the merger."

[76] *See* Israel Verified Statement at p. 11.

[77] The solution concept utilized by Dr. Israel is known as Nash bargaining, which implies that the shipper and the railroad split any gain from reaching an agreement. The gain from this agreement is the difference between the value the shipper places on the movement and the railroad's cost of providing transportation.

[78] The Transaction would have a welfare effect if it changes total shipper output. If efficient contracts are set pre- and post-merger, then the amount that shippers would move is the same before and after the Transaction, absent any impact on costs. The Transaction may have an impact on the split of surplus that is captured by the railroads and the shippers, resulting in a transfer.

at the efficient level (which is known by the assumption of complete information), and all available surplus is split between the parties. Rather than assessing whether the Transaction results in efficiencies, the model assumes an efficient bargaining outcome.

51. To be clear, bargaining models are often an appropriate tool for analyzing mergers; as with any analytical tool, they help focus antitrust enforcers on important competitive dynamics. O'Brien and Shaffer (2005) discuss the impacts that a merger may have in a standard bargaining framework:[79] (i) the transaction may change the disagreement profit of the merging firms and/or their customer, (ii) the transaction may change the bargaining power of parties, and (iii) the transaction may impact the contracts that are available to the parties to negotiate. Dr. Israel's use of Nash bargaining, however, is therefore non-standard in the context of the economics literature as it incorporates none of these competitive dynamics. The disagreement payoffs of railroads and shippers are assumed to be zero in his bargaining model and to be unimpacted by the Transaction.[80] Similarly, Dr. Israel assumes that the Transaction either does not impact or decreases the bargaining power of the merging carriers relative to the shipper, as discussed in more detail in this section and Appendix A. Finally, Dr. Israel assumes that the contracts available to all parties pre- and post-merger would not change. As such, Dr. Israel essentially assumes his conclusion and fails to engage with the actual economic content of the bargaining model his analysis relies on.

52. To demonstrate the material impact that these assumptions have on Dr. Israel's results, consider his treatment of disagreement payoffs. Disagreement payoffs represent the outside options of the railroad and the shipper. For instance, if a deal is not reached, the railroad could dedicate the capacity to another customer while the shipper could use another mode of transportation (e.g., truck). Note that the outside option of the railroad does not need to be a movement along the same route. It merely needs to be an alternative use of the same assets. For instance, the railroad dedicates the same car or track space to a shipment from a different origin or to a different destination. If the profitability of this alternative allocation increases (i.e., an increase in the

[79] *See* O'Brien, Daniel P. and Shaffer, Greg. "Bargaining, Bundling, and Clout: The Portfolio Effects of Horizontal Mergers." *The RAND Journal of Economics* 36, no. 3 (2005) at p. 9.

[80] *See* Israel Verified Statement at p. A-2, which implicitly assumes that the disagreement payoff for both the railroad and shipper is zero. This assumption is particularly egregious when applied to shippers negotiating contracts covering multiple origin/destination pairs. For example, the shipper may negotiate with UP-CSXT and BNSF-NS for transportation to or from different locations. If the shipper fails to reach an agreement with UP-CSXT, they may still receive competitive transportation from BNSF-NS (and vice versa), providing them with leverage during negotiations. However, post-Transaction, the shipper's outside option is zero because all movements involve UP/NS, leading to a loss in bargaining leverage.

disagreement payoff to the railroad), which the Applicants argue would be the case, then it would naturally increase the bargaining leverage of the merging carriers relative to shippers and other interlining Class I railroads. This is a straightforward implication of Dr. Israel's bargaining model. However, by assuming that disagreement payoffs are zero, Dr. Israel's model assumes away any potential change in the profitability of these outside options and, by extension, the resulting change in the merging carriers' bargaining power. With these flawed assumptions, it is unsurprising that Dr. Israel does not find any potential for competitive harm for this type of negotiation.

b) Bargaining Between Shippers and Railroads at Dual-Served Stations

53. When the shipper negotiates with railroads dual-serving a station, Dr. Israel assumes that prices are determined by the cost of the less efficient railroad ("[t]he winning lower-cost railroad will earn a margin roughly equal to the difference between the two railroad's [sic] costs."[81]). That is, the low-cost railroad wins the business and charges a price equal to its competitor's unit cost. Dr. Israel rationalizes this model of price formation by arguing that the shipper would "play the… railroads against each other" such that price is ultimately driven down to the unit-cost of the less efficient railroad.[82] He alleges that this process leads to inefficiency, designated as a "Ricardian rent," because the shipper pays a rate that is above the cost of the movement. This inefficiency arises because the railroad charges a linear price and the shipper chooses the desired level of output at that price. Because the price is above the railroad's marginal cost of providing transportation, the level of output chosen by the shipper is below the efficient level with downward sloping demand. Dr. Israel then argues that "the merged carrier correctly internalizes the actual cost of carrying the goods" and that the "Ricardian rents are eliminated."[83]

54. This rate setting mechanism may be justified through several different economic models, including a bargaining model, a second-price auction, or Bertrand price competition. Dr. Israel explicitly adopts the second-price auction interpretation in Appendix B of his Verified Statement (e.g., "the dominant strategy under the second price auction rule for each railroad is to bid marginal cost…"),[84] but appears to assume Bertrand price competition or bargaining in the main text

[81] *See* Israel Verified Statement p. 16.

[82] This outcome is equivalent to a second-price auction (which Dr. Israel also adopts in his report), whereby each railroad bids their unit-cost, and the shipper pays the higher of the two costs. *See* Israel Verified Statement at p. 16.

[83] *See* Israel Verified Statement at p. 16.

[84] *See* Israel Verified Statement at p. B-5.

(e.g., "the shipper will play the… railroads against each other…").[85] Regardless of which interpretation Dr. Israel believes is correct, the fact remains that Dr. Israel's results are an artifact of inconsistent modeling choices as I discuss next.

c) Dr. Israel's Conclusions Are a Result of Economically Inconsistent Modeling Choices

55. The lack of competitive harm and the purported merger-specific efficiency asserted by Dr. Israel is a direct result of the inconsistent choice of price structure used to model rate setting between shippers and sole- and dual-serving railroads for the same movement. The difference in modeling choice is not motivated by any quantitative or qualitative evidence, as confirmed by Dr. Israel's testimony.[86] As stated by Dr. Israel, if he allowed both the sole-serving and dual-serving railroads to negotiate nonlinear prices with the shipper, then the model would predict that "the merger would cause no harm or have no benefit… [t]he premerger world would have gotten to the efficient outcome."[87] Of course, a model that starts from an assumption of a pre-merger efficient outcome does not provide a reliable framework to assess the potential for foreclosure effects arising from a Transaction.[88]

[85] *See* Israel Verified Statement at p. 16.

[86] "Q. So in your model, why -- why does the dual-serving railroad charge a linear price rather than a nonlinear price, like the sole-served railroad? THE WITNESS: I mean, that was just the nature of the analysis that I did here was, suppose that what happens is the shipper plays the dual-served guys off against each other to get the best term he can, and then he brings that term with him to a negotiation with the upstream railroad. Q. So nothing prevents the low-cost dual-serving railroad from negotiating over nonlinear prices with the shipper, correct? THE WITNESS: No." *See* Israel Deposition at p. 144.

[87] *See* Israel Deposition at p. 146.

[88] Treating sole-served and dual-served railroads symmetrically and modeling the "Ricardian rent" as an outcome of efficient bargaining does not rehabilitate his analysis, as it requires starkly different model primitives depending again on whether the shipper is negotiating with the sole- or dual-serving railroad. Because Dr. Israel does not formalize his bargaining model or make explicit its underlying assumptions, I provide such a formalization in my Appendix A. The results of this exercise demonstrate that Dr. Israel's conclusions rely on two key unstated, unintuitive assumptions: the dual-serving railroads have all the bargaining power when negotiating with shippers and shippers have inelastic demand for rail movements. Dr. Israel explicitly and consistently rejects both assumptions throughout his analysis. However, both assumptions are necessary in order to generate his "Ricardian rent" in the context of a bargaining model. Given that his merger-specific efficiency arises due to the presence of Ricardian rents pre-Transaction and their elimination post-Transaction, the fact that they are inconsistent with his overall modeling framework implies that Dr. Israel has not reliably established one of his primary claimed merger efficiencies.

2) The Implications of the Applicants' Model Are Inconsistent with the Economic Logic of Merger Enforcement

56. Dr. Israel's bargaining model is inconsistent with the economic logic that underlies antitrust tools and ignores the change in incentives for the merging parties to do business with other carriers post-Transaction. By imposing restrictive bargaining and contracting assumptions, the model effectively presupposes merger neutrality rather than evaluating whether competitive harm is likely. As a result of these assumptions, Dr. Israel's model implies a set of conclusions that conflict with standard economics and observed industry facts:

a) The Applicants' Model Predicts that Competition Decreases Total Welfare

57. The modeling inconsistencies described in Section IV.F imply that competition reduces total welfare. Dr. Israel's model of negotiated contracts assumes that sole-serving railroads efficiently bargain with shippers over nonlinear rates while dual-serving railroads set linear prices that are determined by the cost of the less efficient railroad. This linear pricing introduces an inefficiency which is assumed not to occur on the sole-serving leg. Logical consistency then implies that removing the competition for the dual-serving leg would allow the shipper to negotiate with two sole-serving railroads (one in the East and the other in the West), and surplus would increase. That is, Dr. Israel's "Ricardian rent" would be eliminated by allowing a single railroad in the East and West to negotiate with shippers over non-linear prices. The counterintuitive implication of Dr. Israel's modeling is that even horizontal mergers frequently improve shipper welfare and are always total welfare improving. The STB precedent disagrees with this implication. In the STB's denial of a proposed CN-KCS voting trust, it expressed concern that these railroads "operate parallel lines…and compete for north-south traffic on these lines", concluding that "there would be a heightened risk of reduced incentive to compete for this business."[89]

b) Shipment Volumes Do Not Respond to Competition or Its Effect on the Prices Railroads Charge

58. Railroad rates in Dr. Israel's bargaining model only determine how surplus is split between the railroads and shippers. They do not impact the level of output that a shipper demands, which is instead determined by the shipper's willingness-to-pay and the railroad's marginal cost. In

[89] *See* Canadian National Railway Company – Control – Kansas City Southern, Decision No. 5, Docket No. FD 36514, August 31, 2021 at p. 28.

practical terms, this implies that railroads cannot capture additional business by lowering rates. Notably, this assumption is rejected elsewhere in Dr. Israel's Verified Statement ("shippers likely have private information about their valuations for any given shipment, which means that a shipper's expected purchases likely increase as price falls").[90] The implication for modeling competitive effects is that it removes any trade-off between increased rates and decreased quantity, implying a lack of strategic considerations via inelastic demand for market participants and an inability for the Transaction to impact standard indicia of competition (e.g., total output).

59. Removing the assumption that railroads and shippers have complete information would result in a model with linear pricing where railroads face a trade-off between increasing their rates and losing traffic volume. Dr. Israel acknowledges this in his testimony, where he states that "in models of imperfect information, usually -- we usually assume once we're in imperfect information, we're not going to have efficient contracting, and so generally, we move to linear pricing."[91] Dr. Israel clearly states that shippers have private information about their valuation, that private information precludes efficient contracting, and that scenarios with imperfect information are generally modeled with linear pricing, indicating that Dr. Israel's use of efficient contracts with nonlinear pricing to model the proposed Transaction is not appropriate. Adopting a model with linear pricing would introduce strategic pricing and the potential for competitive harm, as demonstrated in the merger simulation that I develop in Section V. As such, Dr. Israel adopts a model of efficient contracting with nonlinear prices that precludes competitive effects in direct contradiction to his testimony on the appropriate way to model pricing.

c) Sole-Serving Railroads Are Able to Extract the Maximum Available Profit but Competition from a Single Additional Railroad is Sufficient to Drive Price to Marginal Cost

60. Within Dr. Israel's negotiated pricing model, he argues that surplus is determined, in part, by whether the shipper is negotiating with a sole- or dual-serving railroad. In his model of negotiated rates between the shipper and the sole-serving railroad, he assumes that the railroad is able to extract all profit available to the railroad pre-merger. Meanwhile, in his model of negotiations between the shipper and the dual-serving railroads, he essentially relies on a model of Bertrand price competition, under which competition between two railroads drives prices to marginal cost. The

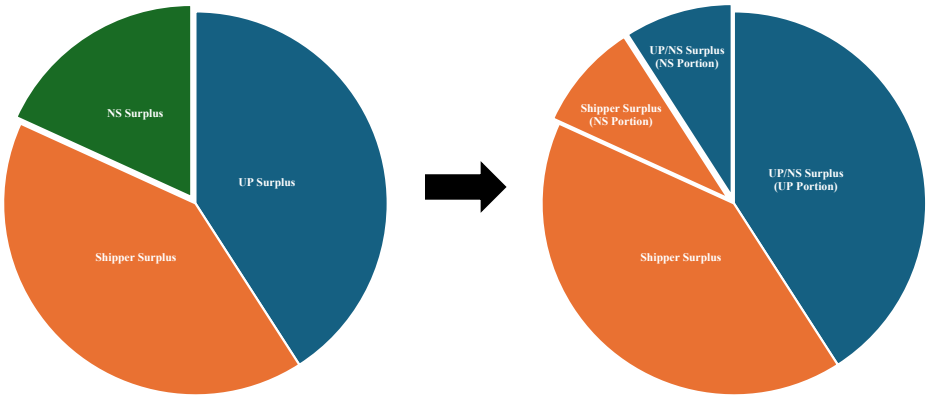
[90] *See* Israel Verified Statement at pp. 36-37.
[91] *See* Israel Deposition at p. 138.

implication is that the sole-serving railroad cannot capture additional profits from its dominant position on the sole-served leg and there are no profits to be captured on the dual-served leg, thereby assuming away the potential of foreclosure effects. Again, these modeling choices are unmotivated by evidence in his Verified Statement and subsequent testimony.

d) The Applicants Are Pursuing a Transaction That Would Purportedly Lower Their Combined Profit on Legacy Interline Movements

61. A direct implication of Dr. Israel's modeling is that any price reduction that the shipper receives because of the Transaction is due to a lessened bargaining position of a merged entity rather than an alignment of pricing incentives. **Figure 6** shows this in the context of the canonical model of splitting a pie for inelastic shipper demand. When there are three parties bargaining over a pie, the Nash bargaining solution is that each will get a share proportional to their bargaining weight. Removing a party from the negotiations results in the remaining parties splitting that surplus, subject to their relative bargaining weights.

Figure 6: Split of Surplus Based on the Nash Bargaining Solution



62. The implication is that a combined UP/NS would capture less profits together than they do separately on certain movements. Based on Dr. Israel's modeling, these include all movements set with contract/private document rates on routes that are:

i. UP sole-served to/from NS sole-served

ii. UP sole-served to/from NS/CSXT multi-served

iii. NS sole-served to/from UP/BNSF multi-served

In Dr. Israel's model, the implication is that the shipper benefits from a monopoly along each route (where it can capture the greatest surplus), while the railroads are jointly harmed due to a decreased bargaining position. {{REDACTED

}} A diminished bargaining position for UP/NS when negotiating with shippers is at odds with the profit maximizing incentives of the Applicants for the Transaction. This consequence of Dr. Israel's modeling is discussed in detail in Appendix A.

[92] These results are conservative, as they are based on margins derived from URCS (which already include a return on capital). Using operating costs from the Applicants' annual financial filings for the same traffic would lead to approximately a REDACTED for the combined firm. *See* **Table 16** for additional details and results.

Table 2: Implied Post-Transaction Gross Profit Loss by Movement Type on UP-NS Interline Movements, 2023 {{

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e) Railroads and Shippers Can Address Externalities Through Contracts to Achieve Efficient Outcomes, while a Merger Is Required for Efficiencies to be Achieved Between Railroads

63. Dr. Israel assumes that railroads and shippers write contracts that result in the efficient level of output. For instance, in Dr. Israel's negotiated contracts model, the shipper determines the volume it wants to ship based on the railroad's marginal cost of the service and then the railroad and shipper bargain over the surplus. No inefficiencies (such as incomplete information) that would allow for output to be below the efficient level are modeled, implying that Dr. Israel believes that the negotiation process between railroads and shippers is efficient.

64. His discussion of investment incentives, however, implies that mergers are necessary to realize similar efficiencies in collaboration between railroads. He provides the simplistic example where a railroad does not undertake a $60 investment that would increase joint profits by $100 because each railroad would only captures $50 of profit.[93] Since the cost outweighs the benefit of the incentive for the individual railroads, but the same does not occur for a merged railroad, Dr. Israel states that the efficient level of investment can be attained only by combining two complementary rail networks. Yet, it is straightforward to see how Dr. Israel's own bargaining model, if applied to this example, is an alternate way to achieve the efficient level of investment. In this application, the eastern and western railroads agree to incur the $60 investment (using the Nash assumption of

[93] *See* Israel Verified Statement at p. 58.

efficient outcomes underlying Dr. Israel's modeling) and then bargain over the $40 incremental profit from the action. Efficient bargaining over the incremental profit would justify investment for the individual railroads. Dr. Israel attempts to avoid this criticism by stating that "it is impossible to write a complete contingent contract that specifies how the two railroads must manage their interline business on a day-to-day basis" and that "each firm takes actions that are not fully observable."[94] But he never justifies why these facts only apply to railroad operations and not to interactions between railroads and shippers.

65. The incentives of shippers and railroads are generally not aligned while the incentives of interlining railroads generally are, implying shippers and railroads would be less likely to achieve efficient outcomes. That is, when bargaining, shippers and railroads have different goals. The shipper wants to pay as little as possible for a shipment while the railroad wants to maximize the rate paid by the shipper. The misalignment of incentives will generally make agreement less likely to occur. In contrast, the incentives of interlining railroads are generally aligned. As stated by Dr. Israel in Section IV of his Verified Statement, increased demand on one system will increase demand on the complementary system. This alignment of incentives will tend to make agreement more likely.

3) Foundations of the Applicants' Bargaining Model Are Contradicted by Empirical Evidence

66. When relying on theoretical models to assert a lack of competitive harm during a merger review, it is standard practice to provide empirical evidence substantiating the applicability of the model. Dr. Israel fails to provide any such evidence, opting instead to rely on his "experience in the industry" to assert the applicability of his model.[95] However, Dr. Israel's bargaining model rests on assumptions and has implications that may be empirically tested. First, rates set forth in contracts and private documents are nonlinear, in the sense that they specify a price for a given quantity. Second, that a railroad's profit is invariant to its share of the movement—an assumption embedded in the Nash-bargaining model that drives his efficiency conclusions. Third, two railroads cannot profitably serve traffic with the same movement characteristics. None of these claims are empirically tested and when they are, they refute Dr. Israel's assumptions.

[94] *See* Israel Verified Statement at p. 47.
[95] *See* Israel Verified Statement at p. 15.

a) Rail Contracts Do Not Support the Applicants' Model of Nonlinear Pricing

67. {{ REDACTED

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68. {{REDACTED

[96] Nearly all the documents explain or allude to the contract's pricing structure. Some are amendments that address other aspects of the contract or proposed agreements that do not clarify pricing, and in some the pricing is listed in an unattached appendix, although the structure can still be inferred.

[97] *See* REDACTED Appendix A at p. 15 (REDACTED).

[98] *See* REDACTED at pp. 4-5.

[99] In his testimony, Dr. Israel also discusses two-part tariffs, where the railroad would charge a rate equal to marginal cost and then the shipper pays a lump-sum fee to the railroad. While this is another nonlinear contract that would effect the efficient outcome asserted by Dr. Israel, I find no evidence that railroads and shippers contract using two-part tariffs. *See* Israel Deposition at p. 145.

[100] *See* REDACTED at p. 11; REDACTED at p. 2.

REDACTED

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69. {{REDACTED

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70. Under each of the structures described above, the shipper decides how much to ship in response to a per-car rate, and the railroad is effectively pricing off of the residual demand over some volume of output. A railroad in that position faces a trade-off between raising its rate to capture additional profit on inframarginal volume and losing profits on marginal sales. This is the same pricing structure that Dr. Israel uses to model railroads setting rates at dual-served stations and in his CGP simulation. It is consistent with Dr. Israel's own acknowledgment that some contracts are simple enough to approximate linear pricing.[106] However, the pricing structure is inconsistent with the efficient quantity-setting that his model assumes for negotiated contracts. Dr. Israel offers no evidence that the contracts at issue take the form his efficiency result requires.

[101] *See* REDACTED at p. 2; REDACTED at p. 2. Other adjustments, such as fuel surcharges, do not depend on volume. *See* REDACTED at p. 14.
[102] *See* REDACTED at p. 2.
[103] *See* REDACTED5 at Exhibit A.
[104] *See* REDACTED at Exhibit A.
[105] *See* REDACTED at Exhibit A.
[106] *See* Israel Verified Statement at pp. 14-15.

b) Profits of Class I Railroads Depend on their Contribution to a Given Movement

71. As discussed in Section III.B, the data demonstrate that railroads capture greater profits when they contribute to a greater portion of a movement's mileage, conditional on the total movement cost. This result contradicts a central behavioral assumption embedded in Dr. Israel's bargaining model—namely, he assumes that the a railroad's gross profit on a movement is essentially invariant to how much of the haul it supplies. That is, the only thing that determines UP's profits according to Dr. Israel's model is the shipper's willingness to pay and the total movement cost. In reality, profits grow the railroads contribution to the haul, conditional on the total movement cost (see **Table 1**). This implies a combined UP/NS would have an incentive to increase its mileage share post-Transaction to capture a greater share of movement profits. Because a combined UP/NS could both expand its mileage share and internalize more of the route profit, the Transaction creates a direct mechanism for RRC and recapturing diverted traffic. That mechanism is not accounted for in the simplified Nash-bargaining assumptions that Dr. Israel relies on to arrive at his key substantive result.

c) Multiple Railroads May Profitably Serve One Leg of a Route

72. Dr. Israel's model implies that both dual-serving railroads cannot profitably serve the same the same interline route. The low-cost railroad for a given opportunity is assumed to always win the business such that one would expect to see the same railroads to provide interline service for any particular route.[107] This is an important implication of Dr. Israel's model as it indicates that there is no way for a combined UP/NS to profitably divert traffic because if NS is not currently serving a route it is because NS is the high-cost railroad and would earn zero profit on that movement (as the rate received by CSXT is equal to NS' cost). If instead, both NS and CSXT would earn a positive margin interlining with UP for the same movement, then foreclosure incentives would appear.

73. To evaluate Dr. Israel's assumption, I analyzed how much traffic occurs with UP as the origin or destination railroad that could potentially be dual-served by CSXT and NS according to Dr. Israel's definition or is observed in the traffic tapes as dual-served by CSXT and NS, for the same CGP Product Category.[108] CGP Product Categories refer to product mappings from the Novak

[107] *See* Israel Verified Statement at p. A-2.

[108] My dual-served station definition applies a logic similar to Dr. Israel's definition for this analysis, but at the SPLC6 level. I utilized his Centralized Station Master ("CSM") to find overlapping SPLC6s where CSXT and

Verified Statement and adjustments to account for Intermodal, Finished Automobile, and TIH categories. **Table 3** shows that meaningful shares of UP's interline revenue and carloads are associated with eastern stations where CSXT and NS can both serve. This indicates that UP engages in transactions that require negotiating (or competing) with two different eastern providers, in contrast to Dr. Israel's implication that multi-provider eastern legs are rare or unprofitable.

{{REDACTED

}}

NS both have direct access to or can access via short lines (smaller, regional freight carriers). I then limited the traffic tapes to movements between a UP station and SPLC6s where both CSXT and NS have access to at least one station. I further limited these movements to SPLC6s where CSXT and NS both serve as an originating or terminating Class I Railroad, while UP serves the other end of the movement. I further limit to only observations with a CGP Product Category, accounting for our adjusted mapping. For a given adjusted CGP Product Category, origin SPLC6, and destination SPLC6 within this population, I calculated UP revenue and carloads where the eastern SPLC6 can be served by CSXT and NS. This route definition aligns with what is seen in Dr. Israel's CGP Simulation, in which for each CGP cell, he defines a route to be between an Origin SPLC6 and a Destination SPLC6. *See* Israel Verified Statement at p. C-14.

Table 3: UP Revenue and Carloads for Stations Dual-Served by CSXT and NS, 2019 – 2024 {{ REDACTED

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74. I emphasize these empirical features of the data because they directly refute the foundations of Dr. Israel's modeling *and* provide the intuition for why a combined UP/NS would have the incentive to foreclose other Class I railroads. The economic literature regarding foreclosure incentives under linear rates is well established and is consistent with the features of the rail industry. Because CSXT and NS often profitably serve the same station and a combined UP/NS would be able to increase its profits by capturing a greater share of each movement, the empirical evidence indicates contrary to Dr. Israel's opinion, that the proposed Transaction raises real concerns about the likelihood of foreclosure effects.

B. The Applicants' Analysis of Rule 11 Rate Setting Fails to Engage with the Economic Literature on Foreclosure and Does Not Provide a Valid Basis to Rule Out the Potential of Foreclosure Effects

75. Dr. Israel asserts that the Transaction would put "downward pressure" on rates and increase output under non-negotiated Rule 11 pricing. He argues that because UP and NS offer

complementary products, pre-merger, each railroad sets its leg's price without considering the effect of its price on other railroads and that the Transaction allows the integrated railroad to set prices to maximize joint profits, putting downward incentives on the combined prices.[109] This result is commonly known as the Cournot Complements effect. While the Cournot Complements effect is a standard result in the economics literature, Dr. Israel's application of this theory involves a narrow, selective reading of the economics literature and mischaracterizes central results.

76. Dr. Israel cites to three papers in the economics literature when stating that "a general conclusion is that mergers in this setting either reduce prices or leave them unchanged."[110] The work in Cournot (1838) focuses on the case of two monopolists independently supplying complementary products. In Dr. Israel's modeling, this is analogous to the case of "1*1 routes."[111] Dr. Israel does not consider this case in any of his other modeling, because "routes on which each segment is sole served… have no foreclosure risk."[112] As such, this research is irrelevant to him—by construction, it does not inform the potential for foreclosure. The other two papers cited by Dr. Israel to reject the potential for foreclosure provide, at best, weak evidence to support his claim. In particular, Dr. Israel cites to research authored by Dr. Steven Salop, the same expert hired by UP in the CP/KCS transaction who concluded that when "firms (or rail carriers) in vertically adjacent markets merge, the merger can involve foreclosure incentives that lead to upward pressure on prices".[113] Finally, the discussion in Vives (1999) does not cover mergers or foreclosure effects for complementary products, but merely states a result that (in a particular model) the equilibrium outcome results in output below what would be socially optimal.[114] As such, none of the research cited by Dr. Israel actually supports his blanket statement that a merger of complements would reduce prices or leave them unchanged.

77. In contrast, Dr. Israel's argument runs contrary to existing economic literatures on foreclosure risks arising through tying and bundling. In the present context, bundling relates to

[109] *See* Israel Verified Statement at p. 19.
[110] Ibid.
[111] *See* Israel Verified Statement at A-1.
[112] Ibid.
[113] *See* Salop Verified Statement at p. 17. Economides and Salop (1992) further state that their research assumes "that integrated firms do not price discriminate in favor of customers who purchase… the firm's own composite product." That is, this research does not apply to a scenario where a combined UP/NS would have the ability to price its single-line service differently than its interline service, which is of obvious interest in the current transaction.
[114] *See* Vives, Xavier. *Oligopoly Pricing: Old Ideas and New Tools*. MIT Press (MA), 1999.

UP/NS offering single-line service between an origin and destination but refusing to offer the individual legs of the route at competitive rates. The seminal work in Whinston (1990) shows that a monopolist can use such a pricing strategy to deprive rivals access to customers and scale, thereby reducing rivals' ability to supply customers and substantially impairing their ability to compete, including by inducing exit.[115] Similarly, Carbajo, de Meza, and Seidmann (1990) find that bundling may be profitable because it induces rivals to compete less aggressively, reducing the competitive constraints on the monopolist.[116] In addition, Choi and Stefanadis (2001) establish that tying of complementary products may also discourage innovation and investment.[117] Dr. Israel does not consider the applicability of any of these theories of harm to the railroad industry, opting instead to focus on one narrow result within the literature.

78. Dr. Israel does discuss the results of a recent paper, Kadner-Graziano (2023), which demonstrates how merger of complementary products may harm competition. However, in dismissing the applicability of this result to the rail industry, Dr. Israel misstates and misinterprets the research. Kadner-Graziano (2023) demonstrates that mergers of complements can harm consumers even without outright monopoly power, by weakening a rival's outside options through bundling.[118] Dr. Israel claims that the theories of harm developed in this paper are inapplicable because the underlying mechanism, i.e., bundling of complementary goods, does not "fit the economics of the rail industry" and that the cases studied by the author "are ill-suited to the railroad industry."[119] Neither of these claims are supported by economics or a proper reading of the paper.

79. As an initial matter, Dr. Israel asserts that Kadner-Graziano's research does not apply because the bundling of the eastern and western leg of a rail route is not possible due to the shipper's ability to break this strategy by forcing a Rule 11 rate. He claims that "the merged carrier must provide a Rule 11 rate if the shipper requesting the rate has arranged service from the competing railroad for the other leg."[120] This claim is incorrect as a matter of economics. Whether a Rule 11 rate

[115] *See* Whinston, Michael D. "Tying, Foreclosure, and Exclusion." The American Economic Review 80, no. 4 (September 1990) at pp. 837-859.

[116] *See* Carbajo et al. "A Strategic Motivation for Commodity Bundling." *The Journal of Industrial Economics* 38, no. 3 (March 1990) at pp. 283-298.

[117] *See* Choi, Jay Pil and Stefanadis, Christodoulos. "Tying, Investment, and the Dynamic Leverage Theory." *The RAND Journal of Economics* 32, no. 1 (2001) at pp. 52-71.

[118] *See* Kadner-Graziano, Alessandro S. "Mergers of Complements: On the Absence of Consumer Benefits." *International Journal of Industrial Organization* 89, (July 2023): 102935.

[119] *See* Israel Verified Statement at p. 20.

[120] *See* Israel Verified Statement at p. 20.

must be provided to the shipper is beside the point. What matters is whether a railroad provides a competitive rate, a rate that the shipper would accept. I know of no regulatory requirement that would prevent the sole-serving railroad from generally quoting a Rule 11 rate just high enough that a shipper would never choose the interline option. As such, pure bundling is always possible through an appropriate choice of the rate factor by the sole-serving railroad. This concern is not just theoretical but is observed in practice. For instance, the USDA's Rural Transportation Issues report frequent shipper allegations that "railroads can—and quite often do—price movements beyond the range of economic feasibility to discourage or eliminate traffic they want to avoid."[121]

80. Dr. Israel's claim that the theories of harm outlined by Kadner-Graziano (2023) are ill-suited to the rail industry is unconvincing as it does not engage with the content of the paper he is ostensibly analyzing. First, Dr. Israel states that it is "not a commonly held view in this industry" that entry is an "important competitive consideration."[122] This conclusion is a misreading of the research, as the author plainly states that the theory of harm is about "inducing a competitor to exit the market" rather than entry deterrence.[123] The potential exit of a railroad is a well-established competitive consideration within the railroad industry. Railroads have a history of abandoning tracks that are no longer profitable, with the total track mileage in the United States having decreased from 196,000 miles before the implementation of the Staggers Act to 91,000 miles today.[124] Given this pattern, a railroad potentially exiting a corridor is an important competitive consideration. Dr. Israel claims that "the other theory of harm requires that the BNSF and CSX... legs are systematically less compatible" and that he knows of "no evidence that this is true."[125] However, the results in Kadner-Graziano (2023) do not require BNSF and CSXT to be *systematically* less compatible, as they would apply to any scenario where BNSF and CSXT are less compatible for a particular move.

81. Regardless of whether these theories of harm apply, Dr. Israel attempts to cast doubt on their economic relevance by stating that the "welfare effects are ambiguous."[126] But that ambiguity is the entire basis for the merger review process. A merger changes incentives in ways that

[121] *See* "Rail Rate Relief Processes for Shippers." *U.S. Department of Agriculture Study of Rural Transportation Issues (RTI)* Chapter 11, n.d. https://www.ams.usda.gov/sites/default/files/media/RTIReportChapter11.pdf.

[122] *See* Israel Verified Statement at p. 21.

[123] *See* Kadner-Graziano (2023) at p. 8.

[124] *See System Mileage Within the United States*. Bureau of Transportation Statistics, n.d. https://www.bts.gov/content/system-mileage-within-united-states.

[125] *See* Israel Verified Statement at p. 21.

[126] Ibid.

may be both pro-competitive (e.g., Cournot Complements effect) and anti-competitive (e.g., inducing competitor exit). A proper merger review analyzes empirically and then weighs the pro-competitive benefits against the anti-competitive harm to determine the overall merit of the proposed transaction. Dr. Israel's analysis is tantamount to acknowledging only the potential pro-competitive effects of mergers and then stating that we should ignore the potential anti-competitive harm because the combined impact may be ambiguous. The generally accepted view is that this ambiguity is the entire motivation for undertaking a careful analysis of the evidence, which Dr. Israel has failed to do.

C. The Applicants' Empirical Tests Mischaracterize Standard Theories of Foreclosure and His Results are Consistent with Potential Competitive Harm

82. Dr. Israel acknowledges that "shippers who accept offers of through rates from railroads… could face traditional foreclosure concerns following a merger."[127] Because these concerns cannot be ruled out based on economic theory, he attempts to test the applicability of these theories of harm using empirical evidence. As I demonstrate in this section, the empirical evidence offered by Dr. Israel does not prove that there is no potential of competitive harm arising from the Transaction. In fact, I show that Dr. Israel's empirical results are tautologically true in any scenario where shippers search for the lowest rates.

83. For through-rate movements, Dr. Israel distinguishes between rates set by railroads at the competitive end (dual-served) of an interline movement and rates quoted by railroads at the non-competitive end (sole-served) of the movement. In the context of his argument, foreclosure is dependent on whether the contracting railroad is sole-serving or dual-serving. Dr. Israel dismisses the potential of anti-competitive foreclosure when through rates are solicited from the sole-served end of a movement because the railroad can "charge the monopoly rate for the movement and earn the monopoly profit prior to a merger."[128] For through rates from the dual-served end of a movement, Dr. Israel claims that two facts must hold if anti-competitive foreclosure is possible. First, that shippers should "primarily obtain [rates] from a railroad on the competitive end". Second, that "through rates obtained from the competitive end [are] lower than other rates."[129] These are a result of the two fundamental assumptions underlying his empirical test:

[127] *See* Israel Verified Statement at p. 22.
[128] Ibid.
[129] *See* Israel Verified Statement at p. 25.

i. The through rate received by the shipper from the sole-serving railroad are at or above the integrated monopoly price (i.e., the rate that would be charged post-Transaction);

ii. If through rates received from dual-serving railroads are below the integrated monopoly price then shippers would solicit the through rate from the dual-serving railroads instead, thereby getting a lower price.

84. Dr. Israel treats the first assumption as given, without providing any support. Dr. Israel's empirical evidence ostensibly rejects the second, allowing him to opine that anti-competitive foreclosure is not possible here either. However, brief reflection demonstrates that this test is not consistent with economic logic. A flaw in his reasoning comes from claim (i), that "nothing stops the sole-serving carrier from setting the monopoly price."[130] The primary constraint on the sole-serving railroad is exactly what the proposed Transaction would eliminate—competition. As stated by Dr. Israel, "[i]f shippers could get a lower price by seeking a through rate from customer facing duopolists, they would do so."[131] As such, the total movement rate quoted by *any railroad* will be constrained by the lowest rate available to the shipper.[132] If the shipper receives a total movement rate below the integrated monopoly rate when receiving a quote from a dual-serving railroad, then the sole-serving railroad could not profitably charge a higher rate—it would never be accepted by the shipper. As such, we would not expect to see a difference between total movement rates quoted to shippers depending on which railroad the quote was received from.

85. The implication is that if shippers do in fact select the lowest available rate, as claimed by Dr. Israel, there should be two empirical regularities in the data:

i. Shippers should demonstrate no preference for obtaining rates from a dual-serving or sole-serving railroad; and

ii. There should be no observed difference between the total interline movement rates charged by sole-serving and dual-serving railroads.

[130] *See* Israel Verified Statement at p. 22.

[131] *See* Israel Verified Statement at p. A-5.

[132] This logic is used by Dr. Israel himself in his modeling of Committed Gateway Pricing, where he states that "[a]lthough the CGP applies only when a shipper is negotiating a through rate with [CSX or BNSF], I assume that it will also constrain UP/NS's rate setting decision… when UP/NS sets the through rate or when the shipper is using Rule 11." *See* Israel Verified Statement at p. C-11.

86. This is, of course, exactly what Dr. Israel's empirical tests show, a fact that Dr. Israel acknowledged in his testimony.[133] The results displayed in Figure 3 of Dr. Israel's Verified Statement show that "shippers do not flock to getting through rates from a railroad on the competitive end; rather, it is right around {{REDACTED}}."[134] Similarly, Dr. Israel's Figure 7 shows that the difference in rates the shipper receives from the dual-serving and sole-serving railroads is a "small, positive number, and statistically indistinguishable from zero."[135] In summary, Dr. Israel's "empirical" results are an implication of rate setting in equilibrium and are therefore true by construction in *any* economic model where shippers search for the lowest rate available. As such, they cannot be the basis to rule out the possibility of foreclosure effects.

D. The Applicants' Assumed Shipper Behavior Undermines the Applicants' Competitive Analysis

87. It is worth elaborating on the implications of the prior results, because they undermine the foundations of Dr. Israel's entire competitive effects analysis. Even though this last test applies to a "narrow sliver of traffic" using through rates, its lack of validity does not salvage his overall assessment. Total movement rates for any price-setting arrangement are constrained by the lowest rate available to shippers across any price-setting arrangement that they are free to utilize. As long as a price-setting arrangement may result in a rate below the integrated monopoly rate, the proposed Transaction can result in anti-competitive foreclosure. Dr. Israel plainly states that he cannot rule out this possibility based on theory alone and identifies two types of circumstances where this may arise: "(i) when contracts are bilateral and private information, and/or (ii) when downstream firms have sufficient bargaining power."[136] Both of these are features of the rail industry. Dr. Israel

[133] *See* Israel Deposition at pp. 201-202. "Q. Over time, they'd, likewise, reach an equilibrium, where the rates received on either end are not meaningfully different from each other? THE WITNESS: I mean, if all else is equal, I think I agree, the ability of the shipper to move between these different rate institutions means those rates are going to tend to equalize. I mean, in this industry, it's an important option that the shippers have. So if all else is equal, it's going to tend to have that effect. Q. And that's consistent with the results you show on Figures 7 through 9, correct? THE WITNESS: Sure. I mean, I think Figures 7 through 9 are consistent with the importance of the shipper's ability to choose, equalizing those rates. I think that's fair."

[134] *See* Israel Verified Statement at p. 26. In fact, equilibrium reasoning would imply that any distribution of shipper rate solicitation is consistent with Dr. Israel's model of shipper behavior. If shippers are not receiving different rates between the dual- and sole-served ends (all else equal) then the share of shippers receiving rates from either end would be a random outcome.

[135] *See* Israel Verified Statement at p. 32.

[136] *See* Israel Verified Statement at p. A-4. *See* also Israel Deposition at p. 169. "Q. Okay. So I think what you're saying, you agree that the presence of bilateral contracting externalities in the rail industry can't be ruled out on theory alone, and so you've done this empirical analysis there? A. That's fair."

attempts to dispense with any concerns that they would imply the potential for anti-competitive foreclosure by pointing to his empirical tests, but these empirical "tests" cannot distinguish between any economic theory or model. As such, Dr. Israel has identified traffic for which rates may be below the integrated monopoly rate and for which he is unable to rule out the potential for anti-competitive foreclosure.

88. This highlights a fundamental flaw in Dr. Israel's approach to assessing the potential for foreclosure effects resulting from the proposed Transaction—the only way he can rule out the potential for foreclosure effects is by demonstrating that no economic model consistent with the rail industry can yield rates today below the integrated monopoly outcome. I have explained that Dr. Israel's theoretical analysis is deficient in establishing this conclusion. However, putting aside the validity of his theoretical arguments, the admission by Dr. Israel that anti-competitive pricing "cannot be ruled out as a matter of theory" when "the shipper receives [a] through rate from a railroad that faces competition" is also implicitly an admission that he cannot rule out such foreclosure effects for any other pricing arrangement based on theory alone.[137]

89. If rates set for through-rate traffic are below the integrated monopoly rate, they will discipline the rates set on all other traffic. This is the nature of competition. Each of the price-setting arrangements analyzed by Dr. Israel, including negotiated contracts and Rule 11 rates, would necessarily yield shippers a total movement rate at least as competitive as they could receive for through-rate traffic.[138] *And if that is the case, then all interline traffic between the Applicants and other Class I railroads would be at risk of foreclosure*. Dr. Israel's analysis does not rule out this possibility and is therefore uninformative about the potential foreclosure effects arising from the proposed Transaction. The repercussions for his analysis are wide-ranging and touch on virtually every argument in his Verified Statement. To illustrate, I elaborate on two claims that are central to Dr. Israel's conclusions.

[137] *See* Israel Verified Statement at p. 21.

[138] This is not to say that all pricing arrangements will yield the same rate factor. Shippers choose different pricing arrangements based on their circumstances and preferences. For instance, railroads and shippers may prefer a Rule 11 arrangement as the shippers receive more control over the movement while railroads are able to offload some administrative costs. Similarly, larger shippers may find it advantageous to bargain with railroads when they are able to achieve a lower average rate. However, if the shipper chooses one of these arrangements it is because they receive a lower rate than they would soliciting a through rate.

1) The Relevance of the One-Lump Profit Theory

90. As general statement, Dr. Israel claims that "any economic theory of foreclosure has to explain why the sole-serving carrier was not earning the monopoly profits pre-merger, how the merger will alter that situation, and thus why it would have an incentive to foreclose the independent railroad post-merger."[139] This claim is often known as the one monopoly profit theory in the economics literature and the one-lump theory in the rail industry. Two Nobel Prize winning economists, Oliver Hart and Jean Tirole, extensively developed arguments as to why the one-lump theory does not generally hold.

91. Hart and Tirole (1990) challenge a common argument about upstream monopolists:

> It is sometimes claimed that in this case U_1 would never have an incentive to merge with a downstream firm, D_1 say, because U_1 is already a monopolist in the upstream market. This claim is false unless enforceable exclusive-dealing contracts are feasible, or unless the offers of U_1 to D_1 and D_2 are public.[140]

92. They also draw out an implication for antitrust policy:

> … antitrust authorities should only be suspicious of vertical mergers that significantly harm rivals. Thus a merger between an upstream and a downstream firm that have had substantial dealings with outside firms is potentially more damaging than one between those that have primarily traded with each other and where the foreclosure effect on rivals will be small.[141]

93. If railroad rates are constrained for some pricing arrangements, strategic behavior by shippers implies that they will be similarly constrained across all price-setting arrangements.[142] And if the proposed Transaction relaxes these constraints, as it certainly would, the Transaction could lead to anti-competitive foreclosure across all UP or NS interline traffic. As such, explaining why sole-serving railroads are not able to earn the monopoly profit pre-merger and how the merger would change that situation is straightforward. Standard economic theories, including those endorsed by UP's expert in the CP/KCS transaction, provide ample basis to conclude that the one-lump theory does not hold on the facts of this Transaction. It is therefore up to Dr. Israel to establish why the one-lump theory holds in practice for any subset of traffic, which he has failed to do.

[139] *See* Israel Verified Statement at p. 22.
[140] *See* Hart and Tirole (1990) at p. 208.
[141] *See* Hart and Tirole (1990) at p. 213.
[142] Notably, Dr. Israel attempts to undermine the applicability of this research based only on his flawed empirical test, discussed above. *See* Israel Verified Statement at p. A-4, footnote 7. "as noted in the text, the fact that shippers choose the 2*1 arrangement much more frequently than the 1*2 arrangement rejects the presences of these effects."

2) Price Externalities and Merger-Specific Efficiencies

94. A key efficiency that Dr. Israel states as an argument for the proposed Transaction is the "Cournot Complements" effect. Specifically, he claims that for Rule 11 rates this externality "typically cause[s] independent railroads to price higher than they would as a merged firm" and that a merger solves this externality "leading to downward pricing pressure."[143] The argument is that Rule 11 rate setting leads to a total movement rate above the integrated monopoly's optimal rate pre-merger and the merger would result in total movement rates falling to the integrated monopoly-level. An unstated assumption is that the shipper cannot achieve a lower total movement rate using a different pricing arrangement pre-merger. As previously discussed, Dr. Israel identifies circumstances in which this is not true. As such, Dr. Israel's analysis is uninformative about whether the elimination of this pricing externality would be realized and therefore should be credited to the merging parties as a merger-specific efficiency.

95. These examples highlight the inherent unreliability of analyzing a merger without a coherent economic framework. The economic arguments used to argue merger benefits (e.g., merger efficiencies from aligning pricing incentives) will not necessarily be consistent with the arguments used to assuage concerns of merger harm (e.g., the one-lump theory). In order to judge the merits of the proposed Transaction it is necessary to weigh the relevant costs and benefits, but by introducing conflicting economic theories and failing to quantify their relative importance, Dr. Israel has failed to do so.

E. The Applicants' Model of Price Setting with Private Information Assumes Away the Potential for Foreclosure

96. UP's expert in the CP/KCS transaction, Dr. Steven Salop, provides an extensive analysis of the inapplicability of the one-lump theory to the rail industry and of why profitable foreclosure may arise from an end-to-end rail merger. Notably, Dr. Israel generally avoids addressing the issues raised by Dr. Salop, opting instead to assert different assumptions about the rail industry without any empirical or factual basis.[144] The principal exception is that Dr. Israel attempts to

[143] *See* Israel Verified Statement at p. 19.

[144] For instance, Dr. Salop describes reasons why rail services are heterogenous, including differences "with respect to distance from a shipper's business to the origin and destination stations, the speed of the shipment, frequency and reliability, customer service, the likelihood of damage, payment terms, and so on." *See* Salop Verified Statement at p. 16. Dr. Israel does not address the ways in which rail services may be differentiated, instead asserting that "railroads' services are generally homogeneous." *See* Israel Supplemental Verified Statement at p. 29.

address a narrow argument in Dr. Salop's analysis of imperfect information. Dr. Salop's argument, which was sponsored by UP, is that "a monopoly carrier with imperfect information about the other carriers' costs and rates cannot obtain its "single monopoly profit" because it cannot set its own rate to ensure that the through-rate is equal to, but does not exceed, the shipper's reservation price" and that after the merger, "the merged carrier will have increased incentives to act on its ability to foreclose by setting a high rate for interline service (or revenue requirement)."[145] In support of this particular conclusion, Dr. Salop cites to the research of Moresi et al. (2021).[146] In an apparent rebuttal of Dr. Salop's analysis, Dr. Israel purports to demonstrate that the results of Moresi et al. (2021) depends on "extreme assumptions" and therefore are not general.[147] However, as I discuss in this section, Dr. Israel's own modeling relies on an even more extreme assumption which rules out the potential for profitable foreclosure by construction. Specifically, Dr. Israel assumes throughout his analysis that an integrated railroad can only be profitable if the unintegrated dual-serving railroad can offer a competitive rate. In the context of this transaction, this would imply that a combined UP/NS can only be profitable serving a CSXT/NS dual-served shipper if CSXT is able to provide a competitive rate to the shipper. If CSXT were unable to do so (e.g., because it was foreclosed by UP/NS), then Dr. Israel assumes a combined UP/NS would earn zero profit from the shipper. Because of this flawed assumption, his analysis provides no basis for assessing the potential for, or the implications of, foreclosure effects.

97. Dr. Israel models several different "cases" depending on whether the shipper receives a through rate or Rule 11 rate, and whether the shipper solicits a quote from a sole-serving or dual-serving railroad.[148] I focus on the case where the shipper receives a through rate from a railroad on the competitive end, as the unfounded assumption is most transparent. Pre-merger, Dr. Israel assumes that the sole-serving railroad provides a rate factor to each of the dual serving railroads. These railroads then submit quotes to the shipper, who selects the railroad with the lowest bid but pays the

[145] *See* Salop Verified Statement at pp. 15-16.

[146] *See* Moresi, Serge, Reitman, David, Salop, Steven C., and Sarafidis, Yianis. "Vertical Mergers in a Model of Upstream Monopoly and Incomplete Information," *Review of Industrial Organization* 59, no. 2 (2021): 363–380.

[147] *See* Israel Verified Statement at p. 37.

[148] As I describe in Section IV.C, treating these cases distinctly is not appropriate if shippers behave strategically. However, this point is not central to understanding the other flaws in Dr. Israel's critique of the Moresi et al. (2021) paper.

amount of the highest bid.[149] Post-merger, Dr. Israel assumes that an integrated railroad provides the unintegrated railroad a rate factor and then both railroads submit a quote to the shipper for the entirety of the movement.[150] Once again, the shipper would choose the railroad that offers the lowest bid, but would pay an amount equal to the highest bid. By structuring his model in this way, Dr. Israel ensures that the integrated railroad can only be profitable if the unintegrated railroad chooses to participate in the bidding process.

98. If the unintegrated railroad has a total cost (conditional on the rate factor it receives from the integrated railroad) that exceeds the shipper's choke price[151], then it will not participate in the bidding process.[152] If this occurs, Dr. Israel states "in this case, the joint profit of the merged railroad is… 0."[153] The reason is that the integrated railroad charges a rate equal to the shipper's choke price which, by definition, means that the shipper chooses a quantity of zero. Because the shipper opts to make no movements, the profit captured by the integrated railroad is zero. In reality, a combined UP/NS would not be constrained to charge the shipper's choke price on movements that an unintegrated railroad cannot profitably serve. In particular, if the unintegrated railroad could not compete, then nothing would prevent the integrated railroad from charging the monopoly price. As I show in Appendix B, there is a range of costs for which the integrated railroad would find it profitable to not quote a rate to the unintegrated rival. As importantly, there is a range of costs where the interlining railroad is the low-cost option, but the integrated railroad still chooses to foreclose it. This implies not only that foreclosure could be profitable but that it would also harm competition. The only reason that Dr. Israel does not find this result is that he assumes that the integrated railroad gets zero profit if there is no downstream competition, rather than the more natural assumption that it would capture the monopoly profit. I address technical details in Appendix B.

[149] To be precise, Dr. Israel assumes that the railroads compete via a second-price auction. However, the result of the auction corresponds to what is stated above.

[150] *See* Israel Verified Statement at p. B-10. "The merged railroad chooses the sole-served side price *p* and the duopoly side bids *b* to maximize the expected joint profit of the merged railroad."

[151] The choke price is the price at which shipper demand for transportation services is zero.

[152] *See* Israel Verified Statement at p. B-30. Dr. Israel states that if the total cost to the unintegrated railroad is above the shipper's choke price then "the unintegrated duopolist does not participate in the auction and the integrated [railroad] always wins."

[153] Ibid. *See* also Israel Deposition at pp. 149-157.

F. Dr. Israel's Use of Varied and Inconsistent Modeling Choices Undermines Any Conclusions He Purports to Reach

99. Section IV.A describes the inconsistent modeling choices within Dr. Israel's analysis of negotiated contracts between railroads and shippers and demonstrates how these modeling choices manufactured his primary result. As I discuss in this section, this issue pervades the entirety of his arguments. In particular, Dr. Israel's choice of pricing structure (e.g., take-it-or-leave-it linear, bargaining over non-linear prices) and modeling of rail substitutes change, for the same traffic, depending on the effect he is analyzing. These inconsistencies demonstrate that Dr. Israel's modeling choices do not reflect industry reality.

100. As discussed, Dr. Israel asserts that the vast majority of interline rail movements should be modeled using nonlinear prices. However, in modeling the effects of Committed Gateway Pricing ("CGP"), which covers the exact same interline traffic, Dr. Israel assumes that railroads use linear prices.[154] The reason for this modeling change is straightforward. If negotiations result in the efficient level of output, as claimed by Dr. Israel, then moving from a nonlinear price to a linear price would necessarily decrease total welfare. The only way for Dr. Israel to generate a welfare improving output expansion from the introduction of CGP is if shippers have greater demand as prices decrease, something that is only possible with linear prices. Using a model of negotiations between shippers and railroads over nonlinear prices would necessarily leave output, and therefore total welfare, the same or lower it. Because this would not be competition enhancing, Dr. Israel is forced to adopt a different model when modeling CGP.

101. Relatedly, the relevance of rail substitution changes depending on which result Dr. Israel is attempting to establish. In his model of negotiated contracts, Dr. Israel asserts that if merger efficiencies lower the cost of a UP/NS single-line option sufficiently then shippers would substitute from the legacy UP-CSXT interline to this option and be made better off. However, when modeling CGP, Dr. Israel holds the route choice fixed to shut down substitution between rail options. This precludes any sort of profitable recapture that would lead to UP/NS pricing strategically post Transaction and potential vertical effects. However, Dr. Israel then asserts that his CGP results understate the welfare gains from CGP because "CSX can unilaterally compete against UP/NS for a

[154] *See* Israel Deposition at p. 137: "THE WITNESS: But you're right here that the model of CGP here assumes, at least within some range, that they can purchase more at the new price. So at least within that range, you're right that that assumes there's linear pricing in that range."

sole-served UP shipper for movement to a CSX destination, in potential geographic competition against a UP/NS alternative."[155] No attempt is made to establish why substitution is relevant for geographic competition but not for competition on a particular route. As such, Dr. Israel only credits substitution between rail options when it is convenient to do so and assumes away this substitution when it may result in competitive harm.

102. In short, I find that Dr. Israel's foreclosure effects analysis does not reliably evaluate potential harm to competition from the Transaction. He misreads economic literature to develop a novel economic framework unsupported by empirical evidence. As a result, the conclusions from his framework are uncorroborated by evidence from the rail industry. Altogether, Dr. Israel offers an uninformative and inadequate assessment of prospective harm to competition. To assess the scope of this possible harm, I develop a merger simulation model that incorporates several of the competitive effects Dr. Israel fails to adequately address.

V. AN EMPIRICAL EVALUATION OF FORECLOSURE INCENTIVES INDICATES THAT THE PROPOSED TRANSACTION BETWEEN UNION PACIFIC AND NORFOLK SOUTHERN WOULD RESULT IN ANTI-COMPETITIVE EFFECTS AND HARM SHIPPERS

103. To analyze the potential for vertical harm arising from the Transaction, I conduct a merger simulation that assesses the impact of the merger on competitors and shippers.[156] Merger simulation is a standard tool used in assessing the competitive impact from a transaction.[157] Antitrust enforcement agencies, including the Department of Justice and the Federal Trade Commission, frequently rely on merger simulations in their evaluation of the competitive effects of a merger.[158]

[155] *See* Israel Verified Statement at p. 86.

[156] While described with reference to a vertical transaction, in general the reference applies more generally to foreclosure.

[157] *See* Bjornerstedt, Johan, and Verboven, Frank. 2014. "Merger Simulation with Nested Logit Demand." *Stata Journal* 14(3): 511–540. *See* Sheu, Gloria and Taragin, Charles. "Calibrating the AIDS and Multinomial Logit Models with Observed Product Margins." *US Department of Justice, Antitrust Division, Economic Analysis Group Discussion Papers EAG* 12, no. 7 (October 2012). *See* Sheu, G. and Taragin, C. "Simulating Mergers in a Vertical Supply Chain with Bargaining." *The RAND Journal of Economics* 52: 596-632. (August 2021). *See* Davis, Peter, and Garcés-Tolon, Eliana. "Quantitative Techniques for Competition and Antitrust Analysis." *Princeton University Press* (December 2009).

[158] In 2017, the U.S. District Court for the District of Columbia blocked Anthem's proposed acquisition of Cigna and Aetna's proposed acquisition of Humana, with both decisions relying in part on evidence derived from merger simulation. In *United States of America, et al. v. Anthem, Inc., et al.*, the court observed that the "merger simulation resulted in a calculation of $219.7 million of static harm in the fourteen Anthem states." *See* Memorandum Opinion, Civil Action No. 16-1493 (D.D.C. Feb. 21, 2017), at p. 58. In *United States of America, et al. v. Aetna Inc., et al.*, the court considered merger simulation evidence submitted by both parties and found the technical implementation of both simulations to be reliable, while ultimately concluding that the plaintiffs' analysis

Dr. Israel has also relied on merger simulation methods in other matters to assess the competitive effects of proposed mergers.[159] The model I develop to assess the potential vertical effects is built on the standard tools used in the antitrust economics literature.

104. If the Transaction were approved, a combined UP/NS would have the ability to raise its rivals' costs on interline movements. CSXT relies on the western portion of the network (the legacy UP network) to serve shippers across the West Coast, Mountain West, Southwest, and Plains. Likewise, BNSF relies on the eastern portion of the combined network (the legacy NS routes) to serve eastern customers. UP/NS would have the ability to raise rate factors on existing interline movements or otherwise degrade the service it provides on these movements, diminishing the competitiveness of interline options. In particular, a combined UP/NS could charge a prohibitively high rate for its leg of an interline service, such that the shipper instead chooses its single-line service. This conduct hurts shippers who rely on interline service because it reduces competitive constraints and allows for a combined UP/NS to more broadly raise rates.

105. My merger simulation models how industry structure impacts the incentives faced by railroads and how changes in industry structure and incentives resulting from the merger impact the choices made by the railroads. I modeled how the introduction of a new single-line service would impact the incentive of the merging railroads to facilitate interlining with the other Class I carriers. Industry data are used to determine the model parameters such that the model replicates pre-merger outcomes (e.g., output and prices). The merging parties are then combined, and the model calculates how industry outcomes would change.

106. As I describe later in this section, the merger simulation captures many features of the railroad industry and is therefore indicative of the near-term impacts of the proposed Transaction. However, the merger simulation presented here does not capture every feature of the industry or

was more persuasive considering the relevant product market. *See* Memorandum Opinion, Civil Action No. 16-1494 (D.D.C. Jan. 23, 2017). Likewise, in 2018, in granting the FTC's request for a preliminary injunction against Wilhelmsen Maritime Services' acquisition of Drew Marine Group, the same court stated that the "GUPPI analysis and merger simulation model strengthen the FTC's prima facie case that the Transaction will substantially lessen competition in the relevant antitrust market." *See Federal Trade Commission v. Wilh. Wilhelmsen Holding ASA, et al.*, Memorandum Opinion, Civil Action No. 18-cv-00414-TSC (D.D.C.), at p. 46.

[159] *See* "Rebuttal Testimony of Mark A. Israel on Behalf of Joint Applicants." California Public Utilities Commission, Docket Nos. A.18-07-011 and A.18-07-012, January 29, 2019. at pp. 11, 19. Here, Dr. Israel states that "[m]erger simulation is a commonly used workhorse economic tool for making predictions about the effects of a proposed merger on competition and consumer welfare" and that the opposing expert "simply assumes his result, while I demonstrate the contrary by implementing an economic model."

every strategy that a combined UP/NS could use to disadvantage competing service. For instance, the simulation focuses on competition to provide linehaul service between an origin and destination and so abstracts away from the impact of geographic competition. Further, my simulation does not consider the incentives of a combined UP/NS to foreclose or short-haul other Class I carriers besides CSXT. It additionally does not capture the incentive that a combined UP/NS would have to modify its operations to disadvantage its interline partners. As such, the results of my merger simulation are conservative and understate the full impact of the proposed Transaction.[160]

107. Within the features captured by the model, the first question is to assess the potential scope of foreclosure on CSXT. To do so, I identify corridors in which a combined firm could profitably divert traffic from UP-CSXT interline movements to its own UP/NS single-line or integrated routes. A natural approach is to define a corridor according to its origin BEA area, its destination BEA area, and STB service category (e.g., General Merchandise, Bulk, Intermodal, and Automotive).[161] Using BEA areas captures several of the sources of direct and indirect competition that determine rail rates and are consistent with the freight rail economics literature. This includes competition from other railroads at the same station, transloading and drayage, shortlines and build-in/build-out.[162] {{REDACTED

[160] Other features of the rail industry may discipline rail rates, such as rate regulation by the STB. I do not incorporate rate regulation into the merger simulation. To the extent that rate regulation is an important factor disciplining railroad prices, accounting for it would exacerbate the competitive harm arising from the Transaction. For instance, if rate regulation constrains UP's rates in the west (such that UP wants to increase prices further but is unable to) but NS is unconstrained in the east, the end-to-end merger would allow UP/NS to circumvent the price ceiling by increasing rates on the NS leg of the movement. UP/NS could use non-price mechanisms (e.g., reducing service quality) to divert traffic to its single-line service where it would be able to charge a higher combined rate.

[161] This definition of a corridor is consistent with the rail economics literature. *See* Pittman, Russell. "Railroads and Competition: The Santa Fe/Southern Pacific Merger Proposal." *The Journal of Industrial Economics* 39, no. 1 (1990) at pp. 31-32. "My judgment is that for nearly all commodities and locations, all railroads serving a particular county need to be included among the competitive options facing shippers, and that for most commodities and locations the net must be cast even wider, to groupings of counties such as the Commerce Department's Business Economic Areas (BEAs). In what follows I will use the BEA as the unit of origin and destination for all but the bulkiest of commodities; for the latter I will use counties." *See* also Chen Yanyou. "Network Structure and the Efficiency Gains from Mergers: Evidence from U.S. Freight Railroads." *The RAND Journal of Economics* (2026) at p. 13, which states "In accordance with the Surface Transportation Board, a market is defined as an origin-destination pair where the origins and destinations correspond to the Bureau of Economic Analysis (BEA) economic areas." This definition is also consistent with the Applicants' use of BEA areas to calculate shares. *See* Bailey Verified Statement at p. C49.

[162] *See* Pittman, Russell. "Railroads and Competition: The Santa Fe/Southern Pacific Merger Proposal." *The Journal of Industrial Economics* 39, no. 1 (1990): 25-46 at p. 31. "[W]hile many shippers have immediate access to two or more rail carriers at their plant or mine sites… even those who do not may be able to substitute among rail carriers if they can move their product by truck to a rail carrier serving nearby points." *See* also comments from UP's subsidiary, Loup: "[j]ust about any product can be transloaded between trains and trucks and back again," This includes bulk products like sand, plastic pellets, and soda ash. It also discusses door-to-door

REDACTED

}} The substantial share of CSXT revenue that UP/NS could foreclose indicates the potential for significant anti-competitive harm.

108. Applying the merger simulation to this traffic demonstrates how that potential would translate into competitive harm, including higher interline rates for shippers and reduced output. It shows that a merged UP/NS would have incentives to raise rates on interline movements in order to shift traffic away from competing interline service to its single-line option, increasing its own revenue. As a result, shippers would face higher rates on UP/NS traffic and reductions in shipment volumes within these corridors. {{REDACTED

}} These effects account for potential industry expansion by UP/NS (i.e., truck-to-rail diversions), indicating that the shipper benefits claimed by the Applicants, even if accurate, would not offset the competitive harm. As such, shippers would face adverse effects, as they experience large rate increases and sharp output reductions. Overall, the simulation finds that the Transaction would weaken competition and reduce shipper welfare across the entire rail network.

109. {{REDACTED

}} This competitive harm would impair CSXT's long-term ability to invest in its rail network and serve customers at the pre-Transaction level. Reduced profitability and a loss in traffic density would diminish CSXT's return on capital and increase its cost of capital (e.g., by lowering its growth rate), weakening incentives to undertake infrastructure and service investments necessary to maintain competitive operations. In addition, the Transaction would weaken incentives for investment across the rail industry, as well as incentives for

transloading, where neither the origin or destination has access to rail. *See What is Transloading?* Loup Logistics. 2018. https://www.louplogistics.com/resource-center/what-is-transloading.html. *See* also comments from Stefan Loeb, Vice President Business Development and First and Final Mile Markets for Norfolk Southern: "Bringing together Union Pacific and Norfolk Southern can amplify today's first- and final-mile infrastructure using a seamless network spanning more than 50,000 route miles across 43 states. Customers utilizing transload facilities, bulk terminals and/or short line railroads wouldn't simply gain access to another railroad, they would gain more direct access to markets." *See Beyond the Main Line: Unlocking Rail Growth Through First- and Final-Mile Connectivity.* UP-NS Transcontinental. 2026. https://www.up-nstranscontinental.com/news-details/beyond-the-main-line-unlocking-rail-growth-through-first-and-final-mile-connectivity/.

shared rail infrastructure, reducing system compatibility for interline movements and diminishing competition over time (See Section VI). The overall reduction in investment by industry would worsen interline options, making it difficult for other railroads to provide an effective competitive constraint on UP/NS.

A. Merger Simulation Captures the Competitive Forces Resulting from a Merger to Predict Its Impact on Competition

110. Any analysis of the effects of an end-to-end merger should incorporate the different channels through which the Transaction may impact competition. The model I developed incorporates several core institutional and economic features of competition in the rail industry. These features are necessary to evaluate how the Transaction would affect rates, traffic flows, railroad profitability, and shipper welfare. In particular, the model accounts for the strategic pricing of interline service, the responsiveness of shipper demand to price, and the role of economies of scale and density in determining railroad costs. These features translate into several competitive dynamics that my model accounts for, through which the Transaction may benefit or harm competition and shippers:

i. **RRC and the elimination of double marginalization:** A combined UP/NS could optimally choose the rates it charges on interline movements to maximize overall profits post-Transaction. This could result in upward pressure on price for interline movements with other Class I carriers and divert traffic to UP/NS routes.[163] It could also result in downward pressure on prices as a combined UP/NS internalizes pricing incentives on legacy UP/NS interline routes. Importantly, elimination of double marginalization and RRC effects arise from the same incentives, so an acknowledgment of one effect implies the other exists in some form. Dr. Salop made this point in his analysis of the CP/KCS merger, stating that "if an integrated firm with monopoly power on one segment can divert traffic by reducing its own cost, then it normally could also divert traffic by raising its rivals' costs. Reducing its own cost allows the firm to gain traffic by decreasing prices, while raising rivals' costs allows the firm to gain traffic by causing rivals to increase their prices."[164] The Applicants' expert

[163] *See* Salop Verified Statement at p. 5.
[164] *See* Salop Verified Statement at p. 27.

in this current matter, Dr. Israel, states that due to the elimination of double marginalization, the proposed Transaction would put "downward pressure on prices relative to the case with no merger," essentially conceding the presence of the upward pressure effects that he fails to analyze.[165]

ii. **Competitive repositioning within the industry:** If interline rate factors are raised to other Class I carriers by a combined UP/NS, they could adjust rates on non-foreclosed routes (e.g., on a BNSF-CSXT interline route that currently competes with a UP-CSXT and UP-NS route). Where available, this may allow the disadvantaged carriers to recapture some of the otherwise lost movements.

iii. **Short-hauling of interline movements:** UP/NS would also have the incentive to short-haul CSXT, seeking to move interchange points further east or west. This conduct would be anti-competitive to the extent it forces the shipper to rely on a less desirable alternative or pro-competitive to the extent UP/NS can provide the move at a lower cost.

iv. **Changes in economies of scale and density:** The change in total volume on each Class I's system would impact its system-wide costs. Railroads that lose scale would become less competitive.

111. Each of these channels are incorporated into my merger simulation model, so the simulated outcomes reflect the net effect of pro-competitive and anti-competitive effects rather than any single channel in isolation. I provide additional technical details of the model in Appendix C. The following example illustrates how these channels interact within a corridor.

B. Illustrative Example of RRC in the Merger Simulation

112. To demonstrate how these channels interact, consider general merchandise shipments from Houston, TX to Albany, GA (**Figure 7**), a corridor in which all four East-West pairings compete: UP-CSXT, UP-NS, BNSF-CSXT, and BNSF-NS. UP/NS would find it profitable to increase rates on UP-CSXT and BNSF-NS movements, as its single-line route still recaptures sales lost on these interline movements while simultaneously generating greater profits on the retained interline movements. BNSF and CSXT may attempt to lower rates on BNSF-CSXT interline

[165] *See* Israel Verified Statement at p. 53.

movements in order to recapture some of the lost sales on interline movements with UP/NS. However, the strong competitive position of UP in the Gulf Coast indicates that this strategy would not be able to offset the harm affected by UP/NS anti-competitive conduct.

113. Beyond rate increases, the example corridor demonstrates how UP/NS could short-haul CSXT. CSXT provides transportation to a sole-served customer in Fitzgerald, GA, in the northeast of the Albany, GA BEA area. This customer is within 65 miles of Valdosta, GA, which both NS and CSXT serve and has access to short lines and transload facilities. A merged UP/NS would be able to increase the length of its haul from New Orleans, LA to Valdosta, GA. This would not only increase CSXT's costs and deprive it of revenue and contribution margin, but would expose CSXT to the possibility of additional competitive pressure from non-rail modes of transportation. The profitability of foreclosure or RRC in this corridor depends on the existence of an NS-based alternative through which a combined UP/NS firm could recapture traffic now moving over UP-CSXT interline service. In the next subsection, I identify the corridors that meet this criterion and size the population of CSXT traffic vulnerable to foreclosure.

Figure 7: Corridor: General Merchandise from Houston, TX to Albany, GA {{
REDACTED

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C. Evaluating the Population of UP-CSXT Interline Traffic Immediately Vulnerable to Foreclosure

114. Foreclosure incentives like those in the Houston-Albany corridor arise wherever a merged firm would have an NS-based alternative to a UP-CSXT route. Therefore, I identified and sized the population of CSXT traffic that would be vulnerable to foreclosure, or related cost-raising strategies, following the Transaction. The extent of overlap between NS and CSXT in the East implies that a broad share of UP-CSXT interline traffic would be exposed to foreclosure. In particular, I examined the set of UP-CSXT interline movements for which a combined UP/NS firm would likely have the incentive to divert traffic away from CSXT and onto routes on which a merged firm would participate more directly. This exercise serves as a corridor-level screen of the traffic most immediately exposed to competitive harm and therefore provides a conservative measure for the population of traffic at risk. This estimate likely understates the true population at risk because it is based on currently observed service patterns and does not fully capture the extent to which a

combined UP/NS firm could continue to expand its operations in ways that would create additional substitution opportunities after the Transaction.

115. To implement this screen, I used the Class I traffic tapes to identify existing UP-CSXT interline traffic. For each corridor in which UP-CSXT provide an interline movement, I classify the corridor as "foreclosable" if the corridor contains at least one alternative movement involving NS at any point between 2019 and 2024. [166] Given that NS predominantly interchanges at the same gateways as CSXT with the western carriers, this approach assesses whether a combined UP/NS would have an existing NS-based alternative through which it could recapture traffic now moving over UP-CSXT interline service, thereby making foreclosure or RRC a plausible and profitable strategy (See Section III.A).

116. This exercise demonstrates that a substantial share of CSXT's existing interline business with UP could be foreclosed. {{REDACTED

}} While this screen establishes the scope of immediately foreclosable traffic, it does not provide the scope of harm. Understanding whether UP/NS would act on these incentives and how much rates and output would change requires the merger simulation.

[166] I identify alternative movements involving NS using the 2019-2024 Class I traffic tapes and alternate routes identified in the Hunt Verified Statement using Mr. Hunt's Quantanet model. *See* Hunt Verified Statement Workpapers.

Figure 8: CSXT Revenue in Foreclosable Corridors, 2023 {{
REDACTED

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D. Merger Simulation Demonstrates How the Transaction Would Harm Competition

117. To quantify these effects, I calibrate the model using waybill data provided by the Class I railroads ("traffic tapes") to calculate prices and volume for rail options. Additionally, I use data from Transearch provided by the Applicants to calibrate non-rail volumes for each corridor and PC*Miler to assess route mileage. In line with the Applicants' inclusion and treatment of Transearch to assess outside volumes, I rely on tons to assess shares of rail vs. non-rail volumes. I construct Class I–specific costs using the Uniform Rail Costing System ("URCS") and combine costs with the pricing information in the traffic tapes to calculate profits for each interlining railroad in a lane. Further details on the construction of the calibration dataset are described in Appendix E.

118. I use the firms' profit-maximizing conditions derived from my model to calibrate the model parameters for each corridor.[167] With the calibrated parameters, I then model the Transaction between UP and NS and estimate updated shipment volumes, railroad rates, and system costs for the merged parties. I then model the impact of the Transaction on railroad profits and shipper welfare and compare the results to the pre-Transaction values. The total welfare effect is the combined change in railroad profits and shipper welfare.[168]

119. {{REDACTED }} The results of the merger simulation demonstrate that the Transaction would result in significant harm to competition. The magnitude of the effect varies based on the model parameters, but the conclusion remains consistent across specifications: the Transaction would weaken the position of competing Class I railroads, raise rates on affected traffic, and reduce output. This would result in harm to shippers. The results of all specifications may be found in Appendix C. The consistency in results across models implies that my conclusions are robust to alternative modeling choices.

120. {{REDACTED }} These results account for output effects resulting from trucks, barges, and pipelines diverting to rail. As such, the merger simulation predicts that the truck diversions are unlikely to offset the harm resulting from anti-competitive conduct. The interline rate factor increases and reduction in corridor output implies significant harm to competition and a reduction in shipper welfare. These results are summarized in **Table 4**. Column

[167] *See* Israel Verified Statement at p. C-2. "I calibrate the parameters of the model using shipment data, railroads' margins, based on a set of optimality equations implied by the pre-merger equilibrium of the model."

[168] Consistent with Dr. Israel's approach, the consumer welfare effect is defined as the change in shipper welfare from the Transactions. *See* Israel Verified Statement at p. 81.

[169] {{REDACTED }}

[170] Ibid.

(a) of the table summarizes the simulated percentage change in rates on UP-CSXT and BNSF-NS interline movements.[171] Column (b) reports the simulated change in rail volume across all corridors, and column (c) reports the simulated change in volume in corridors in which CSXT operates, both reported in billions of ton-miles. I address technical details of these results in Appendix C.

Table 4: Impact of Foreclosure Effects on Interline Rates, Industry Volume, and Volume in CSXT Corridors, 2023 {{

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121. **Table 5** shows the near-term impact that the Transaction would be expected to have on CSXT. Column (b) summarizes the overall simulated change in CSXT profit and column (c) the overall simulated change in CSXT revenue, both in millions of dollars. The share row expresses each change as a percentage of CSXT's 2023 total in the second row, using totals reported in CSXT's 2023 Annual Report ($5,561 million in profit and $14,657 million in revenue)[172]. {{REDACTED

[171] UP-CSXT and BNSF-NS interline movements here are limited to corridors without foreclosure effects.

[172] *See* CSX 2023 Annual Report. *CSXT, n.d.* https://s2.q4cdn.com/859568992/files/doc_financials/2023/ar/2023-csx-annual-report.pdf.

REDACTED

}} Such a reduction in operating income would have an impact on CSXT's ability to invest in its system and remain an effective competitive constraint on the merging parties. As a result of CSXT's diminished competitive position, as well as that of other Class I railroads, a combined UP/NS would be empowered to further raise rates and engage in anti-competitive conduct.

Table 5: Impact of Foreclosure Effects on CSXT Profit and Revenue, 2023 {{
REDACTED

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122. These estimates are likely conservative, for several reasons. Shares are calibrated based on only 2023 data and therefore may not reflect the competitive significance of unobserved alternatives. If most movements within a corridor are under long-term contracts, shares would overstate the significance of the chosen alternative. For instance, CSXT and NS may be close substitutes for an interline movement with UP within a corridor. However, if CSXT wins a three-year contract for the primary shipper within the corridor that is operative for all of 2023 then it would have an overstated share in the analysis. The large share would make it appear that the UP-CSXT interline movement is highly favored by shippers and therefore the model would predict limited

[173] {{REDACTED }}

diversion to other routes in the event of foreclosure or an RRC strategy. This would understate the true foreclosure incentives, and therefore the model will tend to understate the potential competitive harm arising from competitive effects.

123. Additionally, the model explicitly incorporates double marginalization pre-merger, crediting the merging parties with a merger-specific efficiency. As discussed previously, empirical analysis in rail literature has found evidence that inefficiencies resulting from double marginalization on interline rail movements may be marginal, as railroads are able to contract around this inefficiency. This implies that the merger simulation model may attribute too much in terms of efficiencies to the Transaction. Removing the elimination of double marginalization would result in the model predicting even greater harm to shippers through higher prices and reduced output.

124. Finally, the model provides a near-term prediction of harm resulting from the merger and does not incorporate the compounding harm that would result from a combined UP/NS expanding its operations to further disadvantage other Class I carriers. A combined UP/NS may find it profitable to further expand its footprint in order to better implement a foreclosure strategy and capture additional scale. To the extent that the alternative offered by UP/NS is no better than the current interline partnership with CSXT, this would result in harm from the foreclosure as well as wasted resources dedicated to this anti-competitive expansion.

Figure 9: Complete Simulated Effects as a Share of CSXT Revenue by Service Type {{
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125. **Figure 9** presents the simulated percentage change in CSXT revenue by each service type due to the competitive impacts of the Transaction. CSXT revenue declines for each commodity group, with the largest relative reductions in general merchandise and finished automobile.

126. General merchandise and finished automobiles see a higher share of the simulated harm from competitive impacts of the Transaction. This outcome reflects the competitive structure of these segments. General merchandise contains the largest number of corridors in which UP/CSXT and UP/NS interline routes overlap, and BNSF is a less significant competitive constraint for most such corridors. Finished automobiles have fewer overlapping corridors, but BNSF similarly does not participate in most of them. In corridors where BNSF and other Class I carriers impose a limited competitive constraint, a combined UP/NS would have a stronger incentive to foreclose CSXT following the Transaction, to reduce the bargaining leverage that CSXT had pre-merger.

127. By comparison, the simulated effects on bulk and intermodal traffic are more modest. Bulk traffic has limited exposure to interline competition which constrains the scope for foreclosure. Intermodal traffic is interlined more frequently, but BNSF accounts for a significant portion of the traffic in overlapping intermodal corridors, providing a more substantial competitive constraint. In addition, intermodal margins are considerably lower, compared with other service type traffic, which reduces both UP/NS's incentive to foreclose and the revenue CSXT has at risk.

128. The results from the merger simulation have three principal implications. First, shippers would be harmed by the Transaction through higher rates and reduced output. Second, the Transaction would cause system-wide harm to CSXT and other Class Is due to the decline in traffic density, resulting in cost increases and weakened ability to compete across their networks. Finally, shippers that rely on CSXT, particularly in corridors where CSXT interlines with UP, would be harmed through diminished competitive alternatives, higher rates, reduced output, and a diminished ability of CSXT to invest in its system.

VI. ANTI-COMPETITIVE HARM FROM THE PROPOSED TRANSACTION WOULD REDUCE THE ABILITY OF OTHER RAILROADS TO INVEST IN AND INTEGRATE THEIR SYSTEMS, AMPLIFYING THE PROPOSED TRANSACTION'S HARM TO FUTURE COMPETITION

129. The foregoing analyses explain how the proposed Transaction likely would reduce competition by allowing a merged UP/NS to divert traffic, not because it offers superior service or merger-specific efficiencies, but because it would be able to disadvantage rival interline options on which shippers currently rely. A merged firm would have both the ability and incentive to foreclose rival carriers, raise their costs, degrade the service quality of interline movements, or short-haul them, each of which would reduce the competitiveness of alternatives available to customers. Due to the capital-intensive nature of rail transportation services, serving customers often requires shipper-specific investments and the maintenance of facilities that are tied to a particular route. Harm inflicted by a combined UP/NS upon other Class I railroads would impair their ability to make these investments, further reducing competition. I additionally find that a combined UP/NS would have weaker incentives to support interline compatibility and future innovation, that the Transaction would diminish "geographic competition," including shipper siting and long-term facility decisions, and that neither rival repositioning, nor customer switching is sufficient to offset these harms.

A. The Proposed Transaction Would Impair CSXT's Ability to Achieve the Return Necessary to Maintain Current Levels of Investment

130. Post-Transaction, CSXT's ability to invest in its system would be impaired by the loss in scale and profitability due to anti-competitive foreclosure and RRC effected by a combined UP/NS. This reduced profitability would result in CSXT no longer being able to achieve the rate of return necessary to maintain its current level of investment and any decline in investment would impair CSXT's ability to serve its customers at the pre-Transaction level. As such, the negative impact that the Transaction would have on CSXT's ability to invest would further reduce the competitive pressure that CSXT would be able to apply to the merging parties, for both transcon and regional service, and thereby further harm competition.

131. Importantly, even moderate changes in profitability may have significant impacts on investment decisions. The rail economics literature finds that it is not the case that railroads will undertake every investment activity that has positive expected value in the long run.[174] Economic theory demonstrates that firms only undertake those investments that compensate for the uncertainty over future profits.[175] The more uncertain future profits are, the less investment a firm will take in the present period as it waits for the uncertainty to resolve and thereby avoid negative outcomes. The ultimate impact is to increase the expected rate of return necessary for otherwise welfare improving investments to remain economically viable. Due to the foreclosure incentives arising from the Transaction and the resulting loss in scale, investments that would otherwise meet this threshold may no longer do so, which could lead CSXT to defer investments it otherwise would have undertaken. To the extent that the Transaction increases uncertainty around its profits, CSXT would have even less incentive to undertake potentially welfare-improving investments. The lack of such investments needed to preserve service quality, reliability, and competitive discipline would translate into medium- and longer-term harm to shippers.

132. In a network industry, the deleterious effect on investment arising from foreclosure does not remain localized but is propagated throughout the system. As acknowledged by Dr. Israel, "[r]ailroads operate as integrated networks such that increase in utilization of one part of the

[174] *See* Burton, Mark and Charles Sims "Understanding Railroad Investment Behaviors, Regulatory Processes, and Related Implications for Efficient Industry Oversight" Review of Industrial Organization 49 (2016) at pp. 263-288.

[175] *See* Dixit, Avinash and Pindyck, Robert. *Investment Under Uncertainty*. Princeton University Press (NJ), 1994, at ch. 1.

network… can require investments at distant locations to maintain efficient and fluid flows of traffic throughout the system."[176] The corollary to this statement is that diminished investment in one part of CSXT's system will adversely affect other areas of its system, reducing overall efficiency and utilization. A combined UP/NS would recognize that depriving its competitors of scale would disadvantage them everywhere the railroads compete, and it therefore would have an incentive to inhibit the ability of CSXT and other Class Is to effectively invest.

133. These immediate reductions in investment incentives are important not only because they weaken competing railroads in the short run, but also because they create a mechanism through which the Transaction's initial harm can compound over time. The impact of distorted investment incentives on competition is exactly what was cited by the Applicants to argue in favor of the time limitation for their Committed Gateway Pricing proposal.[177]

B. The Proposed Transaction Would Remove the Incentive to Invest in Increased System Compatibility

134. The railroad industry has historically benefited from increased system integration and compatibility. Joint ventures, such as the TTX Company, have over time developed to decrease barriers related to internetwork compatibility. Similarly, railroads have expended significant resources to better coordinate operations, such as the operations desk in Chicago. The Chicago Integrated Rail Operations Center (CIROC), developed as part of the broader Chicago Region Environmental and Transportation Efficiency (CREATE) Program, coordinates rail traffic throughout the region, using 24/7 monitoring of rail networks, sensors, and analytics to improve efficiency in rail operations.[178] More broadly, CREATE involves both joint infrastructure investment and operational coordination across Class I railroads, demonstrating an incentive to collaborate to create a more efficient rail system. Switching terminal railroads, like the Terminal Railroad

[176] *See* Israel Verified Statement at p. 58.

[177] "As Dr. Israel explains in his Supplemental Verified Statement, there are significant, well-recognized, long-term concerns with price ceilings; namely, they distort market signals, causing misallocation of resources and investment. Shippers and customers paying below-market rates will be incentivized to produce and consume inefficiently high amounts of affected goods. Railroads transporting goods for below-market rates will not be incentivized to invest in the assets needed to transport the goods. The resulting patterns of overproduction and underinvestment are not in the public interest. Placing a time limitation on CGP helps limit concerns about the long-term effects of interfering with market signals." *See* Union Pacific Corporation and Union Pacific Railroad Company – Control – Norfolk Southern Corporation and Norfolk Southern Railway Company, Applicants' Second Response to Decision No. 21 at p. 40.

[178] *See CREATE Program: Improving Chicago Rail Efficiency.* Association of American Railroads, n.d. https://www.aar.org/wp-content/uploads/2023/06/AAR-CREATE-Fact-Sheet.pdf

Association of St. Louis, exist at interchange points to facilitate efficient interchanges between Class I railroads.[179] The pursuit of system compatibility is consistent with economic theory, which finds that system compatibility may allow firms to take advantage of economies of scale and benefit consumers by giving them greater variety from which to choose.[180]

135. The Transaction would reduce the incentive of a combined UP/NS to invest in system compatibility with other Class I railroads. Dr. Israel's theory emphasizes a focus on internal alignment over inter-railroad compatibility, stating that "only a merger that brings the railroads under common control can fully align incentives to maximize joint profits."[181] This would negatively impact the success of future railroad cooperatives and technology alliances, which would ultimately harm shippers and consumers. While Dr. Israel claims that "[b]usiness cases for investments may fail to pass muster when only one firm's profits are included"[182], well-founded economic theory predicts that firms will invest to increase compatibility when their products are complements and each firm specializes in a particular component (e.g., different legs of an transcontinental movement, the pre-Transaction status quo).[183] However, if one firm has an outsized scale (e.g., single-line transcontinental routes, which only a combined UP/NS would possess), it may eschew compatibility and even spend resources to avoid it.

136. Economic theory also demonstrates how mergers can remove this incentive for joint investment. In fact, the Transaction may give the Applicants the opposite incentive, namely, to reduce or withhold investments that make CSXT a more effective interline partner and competitive constraint. In the rail context, such compatibility includes not only technical interoperability, but also the commercial and operational coordination that makes interline service an effective substitute for single-line service. In practice, this could include reducing support for shared equipment programs such as UMAX[184], declining to maintain or improve coordinated interline service lanes, failing to

[179] *See Our History.* Terminal Railroad Association of St. Louis, n.d. https://terminalrailroadstl.odoo.com/.

[180] *See* Katz, Michael L. and Carl Shapiro. 1994. "Systems Competition and Network Effects." *Journal of Economic Perspectives* 8 (2) at p. 109. "[W]hen the components of different systems are interchangeable, there may be greater opportunities to take advantage of economies of scale" and "compatibility also enhances variety by allowing consumers to mix and match (differentiated) components from various systems."

[181] *See* Israel Verified Statement at p. 47.

[182] *See* Israel Verified Statement at p. 58.

[183] *See* Katz, Michael L. and Carl Shapiro. "Systems Competition and Network Effects." *Journal of Economic Perspectives* 8, no. 2 (1994) at pp. 93-115.

[184] *See* UMAX Domestic Container Program. Union Pacific, n.d. https://www.up.com/customers/premium/umax/.

invest in gateway efficiency and schedule coordination, or withholding investments in information-sharing and operating systems that improve the reliability and transparency of interline service. By making interline service with CSXT less seamless and less attractive to shippers, a merged UP/NS could reduce CSXT's scale and weaken its ability to compete. In the presence of network effects and scale economies, that loss of scale can itself further weaken CSXT's competitive position, creating a feedback loop in which reduced compatibility leads to reduced traffic, reduced investment, and still weaker competitive discipline. The resulting reduction in competition would ultimately harm shippers through higher prices long-term, reduced service quality, and diminished incentives for future innovation and network improvement.[185]

137. Evidence produced during these proceedings indicates that this concern is more realistic than theoretical. In several documents, UP and NS have expressed using the Transaction as an opportunity to decouple from other Class I carriers, replacing existing interline movements with single-line service, reducing reliance on interchange-based service with other Class I railroads, and allowing traffic to bypass traditional gateways.[186] Additionally, Dr. Bailey in her Verified Statement describes alliances, partnerships, and joint pricing arrangements as "generally fragile and prone to inefficiency," with transaction costs that are "simply too high".[187] Put differently, the record indicates that the Applicants understood the Transaction as creating an opportunity to retreat from existing interline coordination and instead capture that traffic on their own combined network. Regardless of whether single-line efficiencies materialize after the Transaction, the parties could use their hypothetical existence to justify an anti-competitive decoupling of the rail system. The competitive significance of these reduced compatibility incentives is not limited to existing traffic flows; they also affect the future choices available to shippers deciding where to locate facilities and how to structure long-term transportation arrangements.

[185] *See* Katz, Michael L. and Carl Shapiro. 1994. "Systems Competition and Network Effects." Journal of Economic Perspectives 8 (2) at pp. 103-106, 110-111. Katz and Shapiro explain that, in markets with network effects, incompatibility can deprive rivals of scale and reinforce the competitive position of the stronger system; noting that "if one firm has a distinctly superior overall package, including its product offering, its installed base, and its reputation, that firm is likely to prefer incompatibility and may in fact spend resources to block compatibility," id. at p. 110, and that "if a firm is confident it will be the winner, that firm will tend to oppose compatibility," id.; further explaining that "because compatibility prevents one firm from gaining control of the market, it tends to intensify competition later in the product life-cycle," id. at p. 111).

[186] {{REDACTED

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[187] *See* Bailey Verified Statement at p. 71.

C. The Transaction Would Reduce Incentives for Future Innovation

138. The Transaction would also disincentivize further innovation in the rail industry. The merging parties would have an outsized and nationally integrated presence post-Transaction which would lead to a reduced incentive to undertake investment that would reduce the overall cost of rail transportation. The primary reason being that these investments tend to replace current operations and provide little prospect of winning over additional market share from rivals.[188] As stated in Shapiro (2012), "a firm that will make substantial sales even if it does not innovate… has muted incentives to innovate."[189] Because there is no viable entry threat due to the high fixed costs of the rail industry, the diminished competitive standing of the remaining Class I railroads means this effect is likely to dominate that of market-expanding investment.

139. There is a long tradition of historical innovation driven through cross-compatibility between U.S. railroads. For instance, consider the TTX Company, founded to standardize rail TOFC practices and interoperability and now jointly owned by all major North American railroads.[190] A combined UP/NS would have reduced incentive to support future investments in shared facilities like TTX, as well as cooperative infrastructure that principally benefits interline service, including belt railroads, jointly used gateways, and other common assets that improve interoperability among Class I carriers. Similarly, Class I railroads have also long coordinated to run dedicated services, giving shippers more routing options and long-range competitive choices. Should a combined UP/NS instead prioritize its single-line service, interline connections and services would degrade, harming shippers reliant on those operations.

140. This would also harm potential development of future rail services. As the total American system mileage has fallen for decades[191], increases in rail service must instead come from novel routings and services across and between existing networks. A post-Transaction UP/NS would lack this incentive to innovate, instead focusing on its existing operations and making the national rail system less responsive to future shipper growth and needs. This change would reduce choice for

[188] This is known as the Arrow replacement effect in the economics literature. *See* Arrow, Kenneth J. "Economic Welfare and the Allocation of Resources for Invention." In The Rate and Direction of Inventive Activity: Economic and Social Factors, 609–626. Princeton, NJ: Princeton University Press, 1962.

[189] *See* Shapiro, Carl "Competition and Innovation: Did Arrow Hit the Bull's Eye?" at p. 364.

[190] *See* "About TTX." *TTX*, n.d., https://www.ttx.com/about/who-we-are/.

[191] *See* "Class I Railroad System Mileage and Ton-Miles." Bureau of Transportation Statistics, n.d. https://www.bts.gov/browse-statistical-products-and-data/info-gallery/class-i-railroad-system-mileage-and-ton-miles.

shippers and harm both shipper and consumer welfare as a result. Though UP and NS could argue that their system would be more innovative leading to enhanced, more efficient services, many such improvements often can be achieved through commercial agreements without a merger, largely benefit only UP/NS's single-line network while reducing the aggregate innovation capacity of the industry, and in any event are unlikely to occur as competitive pressure is reduced.

D. The Transaction Would Impair Future Competition Through Reduced Competition for Shipper Siting

141. An additional dynamic of rail competition comes through the negotiation of long-term contracts with shippers. The large majority of rail rates are governed by private documents or contracts, negotiated directly between the shipper and the railroad, though the prevalence of contracted movements varies substantially by commodity.[192] Direct competition between railroads gives shippers the ability to play railroads off each other to secure favorable terms for these contracts, which may lock in competitive rates for many years.

142. The Applicants share overlapping networks that pose horizontal concerns post-Transaction. Within the Mississippi watershed, both UP and NS own parallel networks serving major metropolitan and industrial areas in Illinois, Missouri, and Louisiana. These networks currently compete to move products towards major gateways, the coasts, or connections with other carriers. The Transaction would eliminate this direct competition and leave these shippers sole-served by a single railroad. Beyond the shippers directly served by both carriers, the regional presence of multiple competing railroads restrains expected rates for prospective shippers looking to build or expand facilities with rail access. As railroads compete for the business of these shippers, they may offer competitive contract terms with long durations in exchange for the shipper building a facility on their system. Thus, even a sole-served shipper may benefit from contractual and rate terms negotiated because of rail competition which would be eliminated post-Transaction.

143. Loss of competition for access to new shippers would produce a large and growing drag on shipper surplus compared to a world without the Transaction. The ability of new shippers to make siting decisions in a competitive environment and, in the limit, of existing shippers to threaten

[192] *See* U.S. Government Accountability Office, Freight Rail Pricing: Contracts Provide Shippers and Railroads Flexibility, but High Rates Concern Some Shippers, GAO-17-166. GAO reports that most freight moves under contract and that the share varies by commodity. In 2014, approximately 85% of chemical ton-miles and 94% of coal ton-miles were shipped under contract.

new facilities on nearby competing railroads is an important competitive constraint on rail rates. Accordingly, the loss of competition through siting would impair future competition by weakening the ability of current and prospective shippers to use alternative rail locations and buildout opportunities as a constraint on rates and service. The result would be harm not only to those shippers making future siting decisions, but also to existing customers, who would face weaker competitive discipline, less favorable contract terms, and higher quality-adjusted prices over time.

E. Competitor and Customer Counter Strategies Are Insufficient to Counteract the Anti-competitive Effects of the Transaction

144. When CSXT and other interlining railroads are foreclosed by a combined UP/NS, they may attempt to adjust rates on routes that were not foreclosed (e.g., on a BNSF-CSXT interline route that currently competes with a UP-CSXT and UP-NS route). But the principle of revealed preference shows why such repositioning cannot fully offset the underlying harm to competition. Shippers currently moving on a UP-CSXT route have already demonstrated that, at prevailing rates and service levels, they prefer that route to the BNSF-CSXT alternative and to other available options. Thus, to induce switching, rival carriers would need to offer meaningfully better pricing or service than they currently provide, which itself confirms that the original competitive option has been impaired and that shipper welfare has been reduced.

145. Customer switching is likewise insufficient to eliminate the harm. The merger simulation presented in Section V allows for customer substitution across available alternatives, and the results nevertheless are that output falls following the Transaction. The simulation indicates that, even after allowing for switching, the Transaction is expected to reduce traffic and harm welfare. This reflects the reality that shippers cannot entirely mitigate the harm imposed on them when the number and quality of competitive alternatives are reduced. The loss of interline options weakens the shipper's bargaining position in contract negotiations, and alternative routes may differ in transit time, reliability, interchange complexity, or overall suitability for the shipper's needs.

146. Switching is further constrained by the location- and rail-specific investments that shippers have already made in their current routings in the form of loading facilities, transload arrangements, and plant and distribution-center siting decisions calibrated to a particular carrier pairing. Those investments are often sunk and cannot be readily redeployed in response to worsened competitive conditions. Dr. Bailey in her Verified Statement herself describes such "asset

specificity" as a source of substantial switching costs for the customer that "cannot be redeployed … without substantial cost or loss of value".[193] As a result, even if some traffic can be shifted to another route, shippers may still face higher transportation costs, reduced service quality, or a decline in the value of prior investments made in a more competitive environment.

147. Accordingly, neither competitor repositioning nor customer switching would be sufficient to counteract the Transaction's anti-competitive effects. At most, such responses may reduce some immediate traffic losses, but they do not restore the lost bargaining leverage, replace the foreclosed or degraded routing options, or prevent the resulting harm to shippers through fewer effective alternatives, weaker service, and higher quality-adjusted prices.

VII. THE APPLICANTS OVERSTATE THE PRO-COMPETITIVE BENEFITS OF THE TRANSACTION AND FAIL TO ESTABLISH THAT THOSE BENEFITS WOULD BE REALIZED BY SHIPPERS

148. The Applicants fail to demonstrate that there are merger-specific benefits resulting from the Transaction and that the merger-specific benefits would outweigh the harm to competition. This issue is primarily addressed in the Verified Statement of Dr. Kristen Monaco, and I offer the following supplement to her analysis. Dr. Israel argues that pro-competitive benefits from the merger would come from the elimination of double marginalization, increased investment incentives, and diversions to a merged UP/NS network. Each of these arguments is flawed as explained below.

A. The Applicants' Analysis of the Elimination of Double Marginalization is Flawed and Their Empirical Analysis is Inconsistent with Established Economic Literature

149. Dr. Israel asserts that the Transaction would bring merger-specific pro-competitive benefits through the elimination of double marginalization.[194] Double-marginalization can arise when each firm that participates in producing a good or service charges a separate markup over its marginal cost, resulting in prices too high and output too low relative to an integrated firm. For instance, in a vertical supply chain, when the customer facing firm (i.e. downstream firm) optimally chooses its price, it considers the trade-off between increased revenue and the profit lost on sales due to the price increase. However, it may not consider the profits lost by all other firms in the supply chain due to customer attrition. As such, the downstream firm would set prices too high, and there

[193] *See* Bailey Verified Statement at p. 33.
[194] *See* Israel Verified Statement at p. 52.

would be a commensurate reduction in output. Vertical integration could eliminate this externality because the integrated firm would supply upstream inputs to itself at cost and maximize total profits across the supply chain. This tends to benefit firms and consumers; as overall prices decrease, output increases, and total profits increase.

150. While an end-to-end merger may result in the elimination of double marginalization, there are also reasons why this effect may not materialize in this proposed Transaction. First, double marginalization is not a necessary feature of all vertical supply chains, but merely a potential outcome. Efficient contracting between firms and upstream or downstream competition may discipline pricing without the need for vertical integration.[195] Second, the elimination of double marginalization is inconsistent with the one monopoly profit theory (i.e., "one-lump theory").[196] Under the one-lump theory, a firm with monopoly power in one market can already extract the full integrated profit through pricing instruments, leaving no additional margin for a vertical merger to capture. If an upstream firm can extract the entire monopoly profit within a market, then there will be no second margin to eliminate. As such, a claim that the one-lump theory is operative in the railroad industry is a concession that the Transaction would not provide efficiencies through the elimination of double marginalization. By arguing that "any economic theory of foreclosure has to explain why the sole-serving carrier was not earning monopoly profits pre-merger, how the merger will alter that situation, and thus why it would have an incentive to foreclose the independent railroad post-merger," Dr. Israel is essentially conceding that double marginalization may not be materially important in the rail industry. [197] Given this tension in his analysis, it would be appropriate to quantify the importance of the elimination of double marginalization, which he fails to do.

B. The Applicants' Regression Analysis Provides No Support for the Elimination of Double Marginalization and Is Inconsistent with the Economics Literature

151. To test for the presence of the elimination of double marginalization and/or cost efficiencies when moving from single-line to interline routes, Dr. Israel regresses the rate per car-

[195] Because there are solutions to double marginalization aside from vertical integration, the merger is not necessary to achieve the benefit of the elimination of double marginalization. Dr. Israel's argument that the merger would achieve the elimination of double marginalization is not sufficient to convey that the merger is necessary.

[196] *See* Bowman, Ward S. 1957. "Tying Arrangements and the Leverage Problem." 67 *Yale L.J.* 19 at p. 21. "A monopolist cannot necessarily improve his position-increase his monopoly revenue-by imposing restrictions on his customers. A monopolist who is charging a price which maximizes his return under given demand and cost conditions is still confronted by the problem of imposing an additional restriction on his customers-the equivalent of a higher price-without giving up as much as he gains."

[197] *See* Israel Verified Statement at p. 22.

mile (in logarithms) on a series of controls and indicator variables identifying whether a movement was single-line, interline Rule 11, or interline through rate. {{REDACTED

}} However, as I discuss below, Dr. Israel's results are an artifact of under-weighting the most common movements and over-weighting infrequent shipments.

152. Dr. Israel does not run his regression at the waybill or car-level, but instead uses an input data "aggregated to the following unit of observation: railroad, route, commodity, shipper, year-month, car type, car owner, pricing document type, and unit train flag."[199] As such, a row in Dr. Israel's regression dataset does not correspond to a carload; rather multiple movements that have the same characteristics are rolled up into a single observation and the calculated price is an average rate per car-mile across all movements within his unit of observation. Aggregating the data in this way eliminates potentially important variation in price, artificially improving the fit of his model.

153. Additionally, in his regressions, Dr. Israel does not weight by carloads to reflect the importance of any given movement type.[200] {{REDACTED

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[198] *See* Israel Verified Statement at p. 54.

[199] *See* Israel Verified Statement at p. 30.

[200] By way of example, if there are 99 carloads of interline traffic from Los Angeles, CA to New York, NY and one carload for footwear from Denver, CO to Albany, GA, Dr. Israel aggregates the 99 carloads into a single observation, so that his dataset would have two rows—one row for each movement type. Though each row has a different number of carloads, Dr. Israel's regressions assign them with the same importance.

[201] His regressions also do not account for the potential endogeneity between the movement type (i.e., interline movement) and unobserved determinants of rail rates (such as the shipper's value of a movement), which causes biased results. To illustrate, consider an interline movement that originates at the Port of Los Angeles and ends in the New York metropolitan area. This move faces limited competition from non-rail modes of transportation, giving railroads greater ability to raise prices. Similarly, these tend to be moves that are highly valued by shippers, such that shippers are willing to pay more on a car-mile basis than for a comparable short-haul movement, specifically for movements involving chemicals, coal, or grains, as such segments have the highest markups for longer movements. Neither of these factors depends on the presence of double-marginalization or cost differences (in per-mile terms) between single-line and interline movements. However, because they are not controlled for in Dr. Israel's regression analysis, the positive correlation between the unobserved determinants of

154. To illustrate the impact that aggregation has on Dr. Israel's results in Figure 10 of his Verified Statement, I update his regression to weight by the number of carloads associated with each unit of observation in Dr. Israel's regression data. The results of these modifications are presented in **Table 6**. {{REDACTED

}} The stark change in outcomes from a minor modification of his regression specification demonstrates that his results are not robust and do not provide evidence of potential efficiencies arising from the Transaction.

Table 6: Modifications to Dr. Israel's Test for the Presence of Double Marginalization in Interline Rates, 2019 – 2024 {{
REDACTED

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155. Of note, these corrected results are consistent with the rail economics literature. In a recent paper, Alexandrov et al. (2024) demonstrate that single-line movements do not generate materially lower prices than interline movements, directly implying that there is limited scope for the

demand and whether a movement requires interline service necessarily results in an upward bias in Dr. Israel's results.

efficient elimination of double marginalization as a result of a merger.[202] As noted by the authors, "results suggest that an end-to-end railroad merger would not be needed to fix a Cournot or double-marginalization-like pricing issue" and "that analyses of the competitive implications of vertical mergers should not begin with the assumption that such mergers will create efficiencies through the elimination of double marginalization."[203] Unlike the analysis in Dr. Israel's Verified Statement, the methodology employed in Alexandrov et al. (2024) seeks to control for and limit the influence of unobserved determinants of demand and ultimately concludes that prices on interline movements are not materially higher than an equivalent single-line movement (after controlling for variable costs).[204] In particular, the authors conduct a robustness check on the impact of the ATSF and BN merger (current day BNSF) on prices for routes where the parties provided end-to-end service and found that there was no price reduction resulting from the merger for coal, grain, and lumber and wood products.

156. {{REDACTED

}} However, this contradicts the Applicants' and experts' analyses. Cost savings for single-line compared to interline movements would come primarily through savings on interchanges. The Boyles-Mathur Verified Statement estimates total operating cost savings of only $77.5M annually from the merger. [205] {{REDACTED

}} It indicates that the business team at UP does not expect significant cost reductions from EDM.

[202] *See* Alexandrov, Alexei et al. "Double Marginalization in the Pricing of Complements: The Case of U.S. Freight Railroad." *Journal of Economics & Management Strategy* 34, no. 2 (2024): 403-427 at p. 404.

[203] Ibid.

[204] The authors use propensity scoring to control for potential endogeneity bias.

[205] *See* Boyles-Mathur Verified Statement at p. 29.

[206] {{REDACTED

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C. The Applicants Have Not Established That the Asserted Benefits Are Merger-Specific

157. For the proposed Transaction to enhance competition, at a minimum, the benefits arising from the merger must outweigh the anti-competitive harm. Dr. Israel claims that there are merger-specific benefits through the elimination of double marginalization, increased investment incentives, and operational efficiencies. However, he fails to show that any of these benefits are merger-specific. As discussed in Sections VII.A and VII.B, Dr. Israel fails to establish that the Transaction would benefit shippers through the elimination of double marginalization. His analysis does not demonstrate the presence of double marginalization or prove that the Transaction would reduce prices through the elimination of double marginalization without causing anti-competitive harm. The same is true of investments in the rail network and operational efficiencies.

158. Dr. Israel also claims that increased investment incentives from UP/NS are a pro-competitive benefit of the Transaction.[207] However, as discussed in Section VI, the Transaction would diminish the ability of CSXT and other Class I carriers to invest in their networks due to reduced profitability and lower return on investment. Despite his claim that increased investment is a pro-competitive benefit of the Transaction, Dr. Israel has not quantified the shipper benefit arising from said investment and weighed it against the harm from reduced investment by other Class Is. The Carey and Monaco Verified Statements demonstrate that the investments identified by Dr. Israel either are not contingent on the merger or are already in progress.[208] The Applicants already have joint investments in their intermodal network in progress throughout the US.[209] The Transaction would not change the Applicants' ability to invest, nor do they lack the incentive to invest in their networks under current circumstances. Dr. Israel has not shown that the Transaction is necessary to achieve the investment increases he describes.

159. Dr. Israel discusses improvements to scheduling and operations as a benefit of the merger, but fails to address ways in which some or even most of these operational benefits could be achieved short of a merger.[210] As further evidence that rail partnerships may address operational needs, UP recently announced an agreement with CN to improve rail connectivity by accessing CN's

[207] *See* Israel Verified Statement at p. 58.
[208] *See* Carey Verified Statement at p. 9. *See* Monaco Verified Statement at p. 54-44.
[209] Ibid.
[210] *See* Israel Verified Statement at pp. 56-58.

EJ&E corridor through Chicago while offering CN rights to UP's network between Memphis, TN and Eagle Pass, TX.[211] The stated rationale of the deal is to give UP access to a line to avoid congestion in Chicago.[212] This agreement provides an example of UP's willingness to collaborate with other carriers through means other than consolidation, and both UP and NS have previously entered into agreements with other Class I carriers to provide operations that best serve shippers. Agreements like this one are common in the rail industry and demonstrate that the railroads can cooperate to streamline operations without consolidation. Dr. Israel does not explain how the asserted improvements to operations from the Transaction would benefit shippers in a way that could not be achieved without a merger. In Section IV.B of his Verified Statement, Dr. Israel mentions a number of potential pro-competitive benefits from the Transaction. However, as explained here, he does not provide evidence or analysis that any of these benefits are merger-specific.[213]

D. The Approach Taken by the Applicants to Model Rail-to-Rail and Truck-to-Rail Diversions is Inconsistent with the Applicants' Foreclosure Effects Modeling

160. Dr. Israel relies on Mr. Hunt's analysis of modal shares and diversions to argue that shippers would benefit from the proposed Transaction. Dr. Israel incorporates Mr. Hunt's diversion estimates into his model calculating shipper savings, and thus Mr. Hunt's diversion models provide context as to how Dr. Israel's model overstates the pro-competitive benefits of the Transaction.[214] Mr. Hunt claims that in selecting freight modes and carriers, shippers "consistently report three factors as particularly important: price, reliability, and transit time."[215] To estimate rail-to-rail diversions, Mr. Hunt uses a logit model of route choice.[216] For truck-to-rail diversions, Mr. Hunt groups lanes into archetypes and does not directly estimate how shippers in the lane respond to

[211] *See Union Pacific and CN Announce Agreement to Improve North American Rail Connectivity.* Union Pacific, July 22, 2026. https://www.up.com/press-releases/growth/up-cn-connectivity-260722.

[212] CEO of UP, Jim Vena, expressed the benefit of the agreement, stating that "I've seen the benefits first-hand of what the EJ&E route around Chicago can do for a railroad, and we look forward to having access to the quickest way around Chicago." *See Union Pacific and CN Announce Agreement to Improve North American Rail Connectivity.* CN. July 22, 2026. https://www.cn.ca/en/news/2026/07/union-pacific-and-cn-announce-agreement-to-improve-north-america/.

[213] The STB's statement on major rail consolidation procedures states that Applicants must "demonstrate that the transaction would enhance competition where necessary to offset negative effects of the merger." Given that the benefits resulting from the Transaction are achievable without the merger, it would not be necessary to risk anticompetitive harm in the pursuit of these benefits. *See* 49 C.F.R. § 1180.1(c); Major Rail Consolidation Procedures, 5 S.T.B. 539, (2001).

[214] *See* Israel Verified Statement at pp. 60-66.

[215] *See* Hunt Verified Statement at p. 23.

[216] *See* Hunt Verified Statement at p. 31.

changes in price, reliability, and transit time. Instead, observed shares from lanes with the same archetype drive diversion predictions.[217] Neither model directly estimates how shippers respond to changes in price or transit time, nor does either account for post-Transaction pricing changes when estimating diversions.[218] This inconsistency is significant because Dr. Israel incorporates Mr. Hunt's diversion estimates into his own modeling of foreclosure effects while relying on incompatible assumptions about pricing. Dr. Monaco addresses many flaws in Mr. Hunt's model, and I add additional points below.

161. A shortcoming of Mr. Hunt's modeling approach is that it is unable to differentiate between true shipper preferences for single-line movements and price differences that are due to strategic behavior by firms (e.g., raising rivals' costs). For instance, if railroads increase the rate factor on interline movements to favor their single-line movements pre-Transaction, then Mr. Hunt's model will rationalize this behavior by estimating that shippers have a strong preference for single-line movements. Because he is not explicitly modeling price and uses impedance and junction frequency as "practical proxies for the underlying factors that drive shipper preference on price, reliability, and transit time," one cannot disentangle the impact of true single-line preference from strategic pricing in his results.[219] This has a material impact on interpreting the rail-to-rail diversion predictions of his model. For instance, because his model assigns shares based solely on impedance and junction frequency, routes with similar characteristics in those two respects will receive similar pre-merger shares regardless of pricing differences, for instance due to differences in costs due to local system scale.

162. Consider a corridor where a combined UP/NS has similar characteristics to UP-CSXT in terms of mileage and interchange frequency, but where the UP-NS route is priced lower due to a lower per-unit cost. The UP-NS route may already be capturing most traffic in the corridor, even though Mr. Hunt's model would ascribe them equal pre-merger shares. Post-Transaction, a combined UP/NS would maintain its cost advantage but there would be little diversion of traffic. However, Mr. Hunt's model would predict significant diversion, as the 50% pre-merger share estimated for CSXT declines to 0%. If the rail-to-rail diversions are driven by these modeling artifacts rather than genuine shipper preference, then these diversions are not evidence of merger efficiencies.

[217] *See* Hunt Verified Statement at pp. 30-31.
[218] Ibid.
[219] *See* Hunt Verified Statement at p. 31.

163. In short, Dr. Israel is incorrect when he states that "diversions of traffic to the merged carriers from… other rail carriers [are] a demonstration of the pro-competitive effects of the merger."[220] This conclusion only holds if the diversion is a result of merger efficiencies rather than anti-competitive conduct, like foreclosure or raising rivals' costs. As will be discussed in Section VII.E, Mr. Hunt's modeling approach is unable to disentangle the effect of strategic pricing from true shipper preference for single-line service. If the predicted diversions reflect railroads raising the cost of interline alternatives rather than genuine improvements in service quality, Dr. Israel's adoption of these figures as evidence of merger efficiencies is unfounded. Taken together, the limitations in Mr. Hunt's diversion models and the incompatible assumptions in Dr. Israel's competitive effects framework mean that Dr. Israel's conclusions about merger efficiencies are overstated and cannot be relied upon as evidence of consumer benefit from the proposed transaction.

E. Revealed Preference of Shippers Currently Selecting Truck Transportation Implies Hunt's Estimated Transportation Cost Savings Overstate Shipper Benefits

164. Another shortcoming of Mr. Hunt's modeling is that his truck-to-rail diversion model fails to address revealed preference and grossly overstates diversions as a result. The concept of revealed preference dictates that customer preferences are revealed by their purchasing habits given prices and their income. A customer will choose whichever goods or services align best with their preferences among all options available. Applied to the transportation industry, revealed preference indicates that shippers determine how to best ship their products based on individual circumstances and preferences, given costs of various shipping options. The shipper may choose to ship using a certain mode of transportation or service provider because that option appeals to its preferences, regardless of cost. If a shipper chooses a more time-consuming or more expensive shipping option when presented with multiple choices, that would indicate that there is another driver of shipper choice beyond time and price. Mr. Hunt's modeling, however, overlooks these additional drivers.

165. As discussed in the Monaco Verified Statement, Mr. Hunt's truck-to-rail diversion model is a lookalike analysis that fails to address shipper preferences.[221] The model claims shipper benefits from diversions to the UP/NS network in cases where the shipper would be unlikely to switch to rail as a result of the Transaction. As a result, Mr. Hunt overstates shipper gains from truck-to-rail diversions. For example, under the calculations presented in the Hunt Verified Statement, if a

[220] *See* Israel Verified Statement at p. 60.
[221] *See* Monaco Verified Statement at p. 21.

shipper today chooses to pay $5,000 to move a container across the U.S. via truck when rail service is available for $2,000, then Mr. Hunt credits the hypothetical truck to rail diversion with a shipper "benefit" of $3,000 ($5,000-$2,000=$3,000). However, the axiom of revealed preference indicates that the shipper must be better off with its current choice than the alternatives available. Otherwise, the shipper would have chosen rail initially. As such, the shipper only stands to benefit from the difference between the pre-merger rail rate and the post-merger rail rate, implying that Mr. Hunt's calculations grossly overstate any potential shipper benefit, to the extent it exists at all. In this example, if the post-merger rail rate were $1,000, the shipper would potentially benefit $1,000 ($2,000 pre-merger rail rate - $1,000 post-merger rail rate). The shipper would only achieve this benefit if they chose to switch to the post-merger rail service rather than continuing to ship via truck. If the post-merger rail rate were not lower than the pre-merger rail rate, the shipper would not benefit at all.

166. Revealed preference is a powerful tool used to evaluate merger outcomes. As stated by Dr. Israel, observed choices "are known as 'revealed preference' and are a well-known way to demonstrate the benefits from a transaction such as a merger."[222] The corollary is that revealed preference is a well-known way to establish a lack of benefits as well. The fact that Mr. Hunt's estimates overstate the potential shipper benefits is supported by Dr. Israel's own analysis. {{ REDACTED }} The above calculation merely emphasizes that the Applicants' claimed merger benefits are not supported by Dr. Israel's own analysis.

[222] *See* Israel Supplemental Verified Statement at p. 33.
[223] *See* Israel Verified Statement at p. 64.
[224] {{(REDACTED

}}

VIII. THE SCALE AND PERMANENCE OF THE PROPOSED TRANSACTION REQUIRE MORE THAN OPEN GATEWAY COMMITMENTS TO MAINTAIN COMPETITION

167. The Open Gateway Commitments offered by the Applicants as a remedy to potential competitive harm are insufficient in these circumstances to maintain interline competition in either the short or long term. They do not address the permanent changes to a combined UP/NS's underlying incentives. The most efficient way to ensure that shippers are not harmed would simply be to maintain the current competitive balance of the industry, as opposed to attempting enhanced regulatory oversight to approximate it.

F. The Open Gateway Commitments Are Not Sufficient to Maintain Competition

168. The Applicants have proposed a series of commitments intended to maintain the continued availability of existing gateways following the Transaction, which is referred to as "Open Gateway Commitments". As described by Dr. Israel, this is a commitment by UP/NS to: (i) "keeping all existing gateways open in perpetuity on commercially reasonable terms (including both rates and service) for both existing and new traffic;" (ii) "offering connecting carriers commercially reasonable rate divisions and negotiating in good faith regarding any disagreements;" (iii) "ensuring no new regulatory bottlenecks that could limit STB rate review"; (iv) "providing (upon request) written justification for price increases in excess of inflation; and" (v) "submitting monthly reports on interchange volumes at gateways during the oversight period."[225]

169. There are a variety of ways in which a merged carrier could raise rates on traffic through the gateways while remaining within the terms of the Open Gateway Commitments. First, most rates already exist below the published tariff rate, which is generally higher than negotiated contract rates. This indicates that UP/NS likely has room to raise rates to the tariff level while still characterizing the increase as "commercially reasonable". Similarly, the wide dispersion of rates observed at a gateway could allow UP/NS to increase rates to the highest observed rate factor, which similarly could be defended as "commercially reasonable."

170. Further, the Open Gateway Commitments depend on shippers to challenge rates they believe are not "commercially reasonable." The time, cost, and uncertainty of this process would

[225] *See* Israel Verified Statement at p. 45.

likely deter most challenges to unreasonable rates. As such, UP/NS could implement commercially unreasonable rates that shippers may still hesitate to challenge.

171. Rates can also be structured in a way to induce a desired behavior in shippers. That is, UP/NS does not need to explicitly foreclose a gateway or refuse to interline with CSXT or BNSF at a gateway; it could simply structure rates such that a shipper would logically choose to use a different gateway, one that, for example, would be further into the eastern half of the U.S., which would effectively short-haul CSXT and yield UP/NS a larger profit. Such behavior would appear to remain within the bounds of the Open Gateway Commitments as described by Dr. Israel.

172. Regardless of whether a gateway is kept open to existing traffic or not, new traffic has no effective protection. A commitment by UP/NS to provide written justification regarding price increases more than inflation would do nothing for new traffic that has no baseline for comparison. As such, a shipper would not be able to receive a justification for a high rate that, if quoted high enough at the outset could discourage the shipper from going through a given gateway in favor of another, which would once again be an example of the combined firm being able to induce shipper behavior. Additionally, given that inflation is the benchmark and that the competitive nature of the rail industry may have kept prices actually below inflation for specific gateways, UP/NS could implement a rate increase that could not have been possible pre-Transaction due to competitive constraints pre-Transaction. That increase would not be one the shipper could request justification for.

173. If a merged company reduces service quality (i.e., through reduced train frequency, longer transit times, or deprioritized dispatch) on interline movements with CSXT at the midcontinent gateways, shippers experience worse service on the interline route without necessarily a corresponding rate increase. A shipper facing slower and less reliable interline service would have an incentive to shift its business to UP/NS single-line service, or through another gateway without similar issues. Nothing in the Open Gateway Commitment's commercially reasonable service standard would prevent from this anti-competitive behavior.

174. In each instance above, the Applicants could try to justify such service quality decreases or price increases (which may push shippers towards more favorable gateways for the Applicants) by merely stating that they are the result of merger efficiencies. For instance, any reduction in volume flowing through the midcontinent gateways post-Transaction could be

characterized by the merging carriers as them streamlining operations and moving volume through alternative interchange points. In doing so, the merging carriers may reduce the number of trains they run each week from a given origin or destination to the gateway.[226] Such claims would not change the end result that such choices would serve to improve UP/NS's bottom line at the expense of both CSXT and shippers alike.

IX. THE COMMITTED GATEWAY PRICING PROPOSAL IS NEITHER DESIGNED TO NOR CAPABLE OF PRESERVING COMPETITION

175. Committed Gateway Pricing ("CGP"), as defined in the Novak Verified Statement[227], is a proposed set of committed ceilings on the rates UP/NS could charge for its segment of eligible interline movements. CGP is made available at specific interchanges for CSXT and BNSF traffic moving between the eastern and western networks. The stated aim of CGP is to enable certain interline movements to remain available and competitive post-Transaction. However, the proposal cannot, and is not designed to, restore any lost competition arising from the Transaction. The scope of traffic covered by CGP is exceedingly narrow, implying minimal shipper benefits, where they exist. Additionally, any gains from CGP are concentrated among a small number of shippers at the expense of most UP/NS shippers. Finally, I find that Dr. Israel's simulation model overstates the potential benefits arising from CGP by ignoring the effects of competition.

A. CGP Was Not Meant To Be Nor is a Remedy for Foreclosure Effects

176. CGP was not proposed to be a remedy for the competitive effects of the Transaction. The Applicants' position is that no such effects would arise from the merger, as Dr. Israel concludes that there is "no realistic prospect for material harm to competition from vertical foreclosure."[228] The Applicants have instead been explicit that CGP is their response to the STB's Merger Rules, which call for conditions enhancing competition to address lost geographic competition and potential transitional service disruptions.[229] Claiming there is no possibility for any material harm from lost geographic competition, the Applicants "focused on the second 'potential harm' that motivated the

[226] *See* Union Pacific Corporation, et al. Norfolk Southern Corporation, et al., Verified Statement of Eric Gehringer and John F. Orr, STB Docket No. FD 36873, April 29, 2026.

[227] *See* Union Pacific Corporation and Union Pacific Railroad Company -Control- Norfolk Southern Corporation and Norfolk Southern Railway Company, Applicants Second Submission in Response to Decision No 21, Section II.A and Verified Statement of Katherine N. Novak, Docket No. FD 36873, April 29, 2026 (hereafter "Novak Verified Statement").

[228] *See* Israel Verified Statement at p. 8.

[229] *See* Novak Verified Statement at pp. 17-18.

STB to request proposed conditions to enhance competition-transitional service disruptions."[230] A limited pricing commitment inherently cannot be an effective remedy for a harm that its creators maintain does not exist.

177. Given that the Applicants describe CGP as an alleged solution solely to transitory concerns, and thus not to the change in pricing and routing incentives that the Transaction creates, the foreclosure effects I describe in Sections III and IV would not dissipate once the firms are integrated. Indeed, they would be expected to continue for as long as the ownership of complementary networks persists. A pricing commitment calibrated to simply bridge a transition and expire after oversight ends would do nothing to restore the competition that the Transaction would permanently remove.

1) Only a Very Limited Subset of Traffic is Eligible for and Constrained by CGP

a) Traffic Eligible for CGP

178. Eligible CGP traffic is limited to manifest traffic and bulk unit trains moving to or from facilities solely served by UP/NS (or a short line interchanging traffic solely with UP/NS), interchanging in Chicago, St. Louis, Memphis, or New Orleans, and served by BNSF or CSXT at the other end.[231] This leaves out a large share of interline traffic that is not solely served by UP in the west or NS in the east and leads to a proposal applicable only to a limited share of rail volume.

179. The narrowness of the proposal is apparent when evaluating the population of movements that are eligible for CGP in comparison to the broader rail landscape. {{REDACTED

[230] *See* Union Pacific Corporation and Union Pacific Railroad Company – Control – Norfolk Southern Corporation and Norfolk Southern Railway Company, Applicants' Second Response to Decision No. 21, Docket No. FD 36873, July 27, 2026 at p. 38.

[231] *See* Israel Supplemental Verified Statement at pp. 5-6 and Novak Verified Statement Appendix A for a description of the restrictions.

ii. REDACTED

}}

Figure 10: Traffic Eligible for Committed Gateway Pricing, 2023 {{
REDACTED

}}

180. {{REDACTED

}}

[232]{{REDACTED }}

b) Traffic on Which CGP Would Constrain UP/NS Rates

181. {{REDACTED }} Because CGP rates are determined by the 70th percentile of observed rates among the movements used to determine CGP (the "input" data), the rate ceiling sits above prevailing rates for a substantial share of eligible movements (the "application" data). {{REDACTED }} The small share of movements that are CGP-eligible is therefore further diminished by the share of movements that the rate ceiling would constrain. {{REDACTED }}

[233] {{REDACTED }}

Figure 11: Summary of US Interline Movements and CGP-Eligible US Interline Movements relative to CGP-Eligibility and Constrained Status, 2023 {{

REDACTED

}}

B. CGP Fails to Constrain the Anti-competitive Incentives and Abilities Created by the Transaction

1) CGP Does Not Address the Ability or Incentive of UP/NS to Raise Rivals' Costs

182. Nothing in the CGP proposal would prevent UP/NS from raising interline rate factors on CGP-eligible movements currently priced below the applicable CGP rate ceiling. {{REDACTED

Figure 12 below demonstrates the distribution of CGP-eligible interline movements relative to the difference between the CGP ceiling prop rate and the current UP/NS rate.

[234] {{REDACTED }}

Figure 12: Distribution of Percent Differences in CGP-Eligible UP-CSXT and NS-BNSF Movements Between the CGP Ceiling Prop Rate and the Current UP/NS Rate, 2023 {{

REDACTED

}}

183. {{REDACTED

}}

[235] *See* **Figure 20** in Appendix F for a more detailed look at the average percent differences between the CGP ceiling and the prevailing UP/NS Rates.

2) CGP Does Not Prevent Diversions from Current Interlining Partners Through Foreclosure Effects

184. The merged firm would have significant opportunities and incentives to divert traffic away from interline railroad partners through various foreclosure strategies. These strategies include partial diversions through short-hauling (described in Section III.B). {{REDACTED

}} CGP does nothing to address this as it would constrain how UP/NS routes a movement or where it may hand off a movement to BNSF or CSXT.

185. Dr. Israel's own description of CGP further confirms that it operates alongside, rather than replaces, UP/NS's broader pricing and routing discretion and thus does not constrain anti-competitive strategies as described above. According to Dr. Israel, a shipper may still negotiate "a rate below the CGP rate using Rule 11 or as part of a through rate for the movement."[237] CGP therefore does not prevent a combined UP/NS from using pricing and routing incentives to divert traffic away from current interline partners for traffic that is unconstrained by CGP, which is the vast majority of interline traffic.

186. Continuing, CGP is established by the Applicants to be time-limited and set to expire at the end of the oversight period unless extended by the STB.[238] The issues and harm described above, however, are not temporary. They would arise due to the ownership of a network upon which other Class I carriers rely. This harm would be expected to persist as long as that ownership does. The potential for an extension mechanism, which may only pertain to certain "particular customers or lanes," is not a suitable safeguard as it does not explicitly define proof of competitive harm during the oversight period. Instead, an extension would be evaluated vaguely on large losses of

[236] *See* **Figure 3**, which additionally shows a map of the mentioned overlap. The extent of the overlap shown in this figure entails that, for the large majority of the traffic CSXT interlines with UP, NS is typically a present alternative that can reach many of the areas CSXT already does. As such, if the Transaction were to yield foreclosure incentives, this geographical overlap could enable UP/NS to act on them.

[237] *See* Israel Supplemental Verified Statement at p. 7.

[238] *See* Novak Verified Statement at pp. 17-18.

competition, determined by "facts and circumstances."[239] If CGP were to expire, even its limited constraint would disappear while the harm described above would remain unchanged or worsen.

C. The Applicants' CGP Analysis Is Flawed and Predicts That CGP Harms More Shippers Than It Benefits

187. Dr. Israel's analysis does not provide reliable evidence that shippers would benefit from CGP. His theoretical approach relies on internally inconsistent, contradictory, and selectively applied assumptions that do not reflect real-world contracting or routing. Notably, Dr. Israel acknowledges that while CGP creates a price ceiling, it also creates a situation where "it is advantageous for UP/NS to set rates on routes in the input set to increase the CGP price in order to reduce the effect of this cap" [240] on some routes. He concludes that any such harm is outweighed by purported benefits to shippers. This conclusion depends entirely on the reliability of Dr. Israel's simulation framework, which I find to be insufficient to support his conclusions.

1) Dr. Israel's CGP Simulation Fails to Account for Competitive Dynamics

188. Due to the structure of its design, CGP carries the risk of a feedback loop which could increase rates, a possibility acknowledged by Dr. Israel.[241] Because the rate ceiling is recalculated annually from rates on traffic that is not itself CGP-eligible, UP/NS can raise the ceiling by raising rates in the input dataset. The loop itself is thus straightforward as higher rates would raise the CGP ceiling, which in turn permits higher rates on CGP-eligible movements. With nothing to prevent this, the obvious result would be higher rates across the board when combined with the influence of competitive harm associated with the Transaction.

189. Crucially, in his modeling of the effects of CGP, Dr. Israel does not allow for shippers to substitute between routing options in a given corridor. This modeling choice assumes away the possibility that a combined UP/NS would recapture lost volume in the event of the implementation of RRC strategies. Such strategies would likely result in rate increases on UP-CSXT and NS-BNSF interline movements. In Dr. Israel's model, the only impetus for a rate increase on CGP-eligible movements would be an increase in the CGP rate cap. Allowing newly single-line UP/NS movements to recapture business lost on interline movements with other Class I carriers

[239] *See* Novak Verified Statement at p. 18.
[240] *See* Israel Supplemental Verified Statement at p. 29.
[241] *See* Israel Verified Statement at pp. 76-77.

would introduce a greater incentive for rate increases in the input dataset used to calculate CGP rates, resulting in a self-reinforcing upward pricing pressure mechanism. By disregarding shippers' basic ability to substitute between shipping options, these effects are absent from the Applicants' simulated CGP results, even though they would undoubtedly exacerbate the feedback effect of CGP.

2) Dr. Israel's CGP Simulation Produces Pathological Results and Fails to Rationalize the Data

190. A further indication that Dr. Israel's calibration is unreliable is the fact it implies negative unit costs for a substantial share of the traffic on which his estimated benefits depend. Because his procedure holds UP's or NS's unit cost fixed for a given commodity-distance cell and then backs out the interline partner's unit cost residually from an assumed demand curve, nothing in the procedure constrains the resulting cost estimate to be positive.[242]

[242] *See* Israel Verified Statement at pp. C-14-C-15.

Figure 13: Share of Calculated Benefits by Dr. Israel Associated with Negative Costs {{ REDACTED

}}

191. **Figure 13** reports, for each CGP cell, the share of consumer surplus that Dr. Israel calculates in the CGP application data that come from movements modeled in his simulation with implied negative costs for CSXT/BNSF in interlines with UP/NS. {{REDACTED

}} Clearly, negative unit costs are not economically meaningful and serve to help amplify the modeled shipper benefit artificially in an unrealistic manner. Ultimately, it is clear that Dr. Israel's model is unable to rationalize the pricing and profitability associated with interline rail movements and therefore cannot be the basis for assessing the efficacy of CGP.

3) CGP Would Harm Most Shippers According to Dr. Israel's Analysis

192. Setting aside the unreliability of the framework, Dr. Israel's own results predict that most shippers using UP/NS interline movements would not benefit from CGP. {{REDACTED

}}

Figure 14: Shippers Harmed, Unimpacted, Benefiting from CGP {{
REDACTED

}}

193. {{REDACTED
}} Compounding the risk is the fact that these results are derived inside a framework that assumes no anti-competitive effects arise from the Transaction and that there is no impact of RRC on unconstrained traffic. Any anti-competitive response by UP/NS in the post-merger scenario could therefore skew this ratio even farther in favor of harmed shippers. {{REDACTED

[243] *See* the Israel Supplemental Verified Statement Workpapers.

REDACTED

.}}

194. Dr. Israel acknowledges that the population of traffic used to calculate rates for CGP is larger than the population of traffic that CGP applies to and may benefit.[244] This population of movements is, by Dr. Israel's own account, also the population of movements in which the merging parties would have an incentive to raise rates in order to raise the CGP price and thus reduce the effect a CGP ceiling on price may have.[245] As such, the majority of shippers may be harmed by CGP as a result of the incentive UP/NS would have to raise rates on movements that do not qualify for CGP but are used to create rates. That is, the majority of shippers may see an anti-competitive rate increase on traffic for which CGP does not apply or even where it may apply, while only a few may ultimately see rate decrease.

195. Dr. Israel does not attempt to contend otherwise and rather claims that in the aggregate, quantities will net out in a way in which the benefits of CGP would outweigh the harm.[246] That conclusion, however, obscures the skewedness of the distribution of those alleged effects. As mentioned earlier, Dr. Israel's own results indicate that the ratio of shippers that use UP/NS interline movements that would either face higher rates or remain unaffected, compared to those seeing lower rates is approximately 3:1. Taken together with the fact that the population of movements used to construct CGP rates is broader than the population eligible to benefit from CGP, which is a population Dr. Israel himself states there would be an incentive for rate hikes on, shows that CGP is not protecting the majority of shippers, and may instead expose a large group to higher rates than they would have seen previously prior to the Transaction. In summary, CGP cannot be relied upon to preserve meaningful interline competition in this Transaction, either now or over the long term.

X. CONCLUSIONS

196. The evidence in this report shows how the proposed UP/NS Transaction would likely materially weaken competition in transcontinental rail service, particularly on traffic that currently depends on CSXT as an interline partner. The Transaction would create both the ability and incentive to foreclose rivals, raise rivals' costs, short-haul rivals, and degrade service quality in ways that

[244] *See* Israel Supplemental Verified Statement at p. 22.
[245] *See* Israel Supplemental Verified Statement at p. 29.
[246] *See* Israel Supplemental Verified Statement at p. 29 and Israel Verified Statement at pp. 78-79.

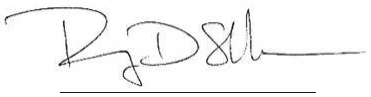
would harm shippers. Economic evidence indicates that the Transaction would harm shippers through increased rates and results in lower industry output. Further, the Transaction would reduce the revenue and profits of other Class I carriers, impairing their ability to invest and resulting in further deterioration of competition within the rail industry.

197. The Applicants have not shown that their proposed conditions would preserve the level of competition that currently disciplines rates and service. Open Gateway Commitments and Committed Gateway Pricing would not eliminate the anti-competitive incentives created by the Transaction and are too narrow to protect the broad population of traffic exposed to foreclosure for the indefinite future.

VERIFICATION

I, Ramsey D. Shehadeh, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed this 18th day of November, 2026.



Ramsey D. Shehadeh

XI. APPENDIX A

The intent of this appendix section is not to offer or endorse a model of bargaining over nonlinear rates. Rather, it is to demonstrate that Dr. Israel makes no attempt to justify the modeling choices he makes, explore the tensions that these choices create, or make explicit how his choices presuppose his conclusions. There are two ways to rationalize the results of Dr. Israel's highly-stylized model. The first is to artificially restrict the space of contracts available to the shipper and the dual-serving railroads during negotiation. That is, allow the sole-serving railroad to negotiate fully nonlinear rates with the shipper but force the dual-serving railroads to quote linear rates to the shipper. This mirrors Dr. Israel's discussion in Appendix A of his Verified Statement. Alternatively, one can treat bargaining between railroads and shipper symmetrically and demonstrate that his results are at best a knife-edge case of a more general model.

A. Formalizing the Applicants' Bargaining Model

Following Dr. Israel, I consider an interline movement between the West and the East, such that UP provides the western leg of the movement and CSXT and NS compete to provide the eastern leg. We consider the case where CSXT has a higher unit cost to provide the service. That is, CSXT has a unit cost of c_x and NS has a unit cost of c_n, with $c_n < c_x$. The shipper negotiates simultaneously with each of the railroads. As in Dr. Israel's model of negotiations between the shipper and the sole-serving railroad, I assume that the result of the negotiations is the Nash bargaining solution. My principal point of departure from Dr. Israel's modeling is that I model the bargaining process symmetrically, where the shipper and the low-cost dual-serving railroad also negotiate over nonlinear prices and are able to reach the Nash bargaining solution as well. In contrast, Dr. Israel assumes that the dual-serving railroads are constrained to contracts with linear prices and the outcome is equivalent to that of a second price auction. Importantly, his results are nested in the more general model, allowing for an analysis of the implicit assumptions his results rely on.

Let *u* index Union Pacific, *n* index NS, *x* index CSXT, and *s* index the shipper. Define the gross bargaining weight as β_i for $i \in \{u, n, x, s\}$, such that on a route the weights satisfy $\sum_i \beta_i = 1$ and bilateral bargaining between a railroad *i* and the shipper uses the weights $\alpha_i = \frac{\beta_i}{\beta_i + \beta_s}$.[247] Pareto

[247] Given this definition, and without outside options, the share of surplus captured by each participant is given by the bargaining weight. The bargaining weight is an exogenously given parameter that is not policy

efficiency requires that the railroads and the shipper negotiate over the output level that maximizes the total surplus. This output level is the amount that the shipper demands if the price of the movement was the lowest combined marginal cost attainable by the railroads. Let $Q(\cdot)$ represent the shipper's demand at each price level, such that the shipper demands $Q(c_n + c_u)$ when price is equal to the marginal cost of an interline movement between NS and UP. Let $V(\cdot)$ represent the value the shipper receives at any quantity level. For instance, the value to the shipper of $Q(c_n + c_u)$ movements is given by $V\big(Q(c_n + c_u)\big)$. Further, let $v(\cdot)$ denote the per-unit value that a shipper receives, i.e., $v(\cdot) = \frac{V(Q(\cdot))}{Q(\cdot)}$.

1) Bargaining Between the Shipper and the Sole-Serving Railroad

Following Dr. Israel, assume that if the shipper and UP do not reach an agreement, then each receives nothing, i.e., the value of the outside option is zero.[248] As such, negotiations between UP and the shipper solves

$$\max_{p_u} \ ((p_u - c_u)Q(\cdot))^{\alpha_u}(V(Q(\cdot)) - (p_u + p_n)Q(\cdot))^{1-\alpha_u}$$

At any quantity level $Q(\cdot)$. This is equivalent to solving

$$\max_{p_u} \ (p_u - c_u)^{\alpha_u}(v(\cdot) - (p_u + p_n))^{1-\alpha_u}$$

Note that this problem depends on the output of negotiations between NS and the shipper (which determines p_n). However, UP and the shipper take the NS rate as given while negotiating.[249] The solution to this optimization problem is given by

$$p_u^* = (1 - \alpha_u)c_u + \alpha_u(v(\cdot) - p_n)$$

Multiplying through by $Q(\cdot)$ yields an expression for the total payment to UP

$$P_u^* = (1 - \alpha_u)c_u Q(\cdot) + \alpha_u\big(V(\cdot) - p_n Q(\cdot)\big)$$

And an associated profit of

$$P_u^* - c_u Q(\cdot) = \alpha_u\big(V(\cdot) - (p_n + c_u)Q(\cdot)\big)$$

invariant. Put more simply, the bargaining weight changes based on the merger, and how that weight is assumed to change has a significant impact on the potential for foreclosure incentives.

[248] As discussed in Section IV, this is an extreme assumption that I only make here to be consistent with Dr. Israel's modeling. Incorporating an outside option will result in greater shipper harm arising from the transaction.

[249] *See* Collard Wexler, Allan, Gowrisankaran, Gautam, and Lee, Robin S. "Nash-in-Nash" Bargaining: A Microfoundation for Applied Work." Journal of Political Economy 27, no. 1 (2019): 163-195, explaining what is known as the Nash-in-Nash solution. This is implicitly assumed in Dr. Israel's modeling, as he assumes the price of the eastern leg is held fixed while UP negotiates with the shipper.

Letting $\alpha_u = \frac{1}{2}$, $c_x = p_n$, and evaluating this expression at $Q(c_u + c_x)$ results in an expression identical to Dr. Israel's solution.[250]

2) Negotiations Between the Shipper and the Low-Cost Dual-Serving Railroad

Dr. Israel does not provide a formalized model of rate setting on the dual-served end. He merely states that "the shipper will play CSX and NS against one another to determine the price for the eastern leg," resulting in an outcome where the low-cost dual-serving railroad wins the opportunity and receives a rate that is equal to the cost of the high-cost dual-serving railroad.[251] This outcome may be rationalized in several different ways, including using a second-price auction (which is used by Dr. Israel in Appendix B of his Verified Statement) and through a bargaining model. I present a model based on each to demonstrate the inconsistencies in Dr. Israel's modeling.

a) Shipper Uses a Second-price Auction to Select the Winning Dual-Serving Railroad

The shipper solicits a linear rate from CSXT and NS at which it may move any amount of volume. The shipper will select the railroad with the lowest bid but will pay the railroad the greater of the two bids. It is a dominant strategy for CSXT and NS to submit their unit cost of transportation. By assumption, NS is the low-cost railroad and therefore wins the bid. The rate that NS receives is equal to $p_n = c_x$. This is a "per-unit price" that does not depend on the amount of output chosen by the shipper.[252]

b) Bargaining Between the Shipper and the Low-Cost Dual-Serving Railroad

Alternatively, the shipper and NS bargain over the total surplus from an agreement, taking the rate charged by UP as given. However, the outside option of the shipper is no longer zero as they would be able to replace NS with CSXT at the marginal cost of CSXT if an agreement was not reached.[253] This implies that the shipper's outside option is given by $v(\cdot) - c_x - p_u$ and that the shipper and NS will bargain over

$$\max_{p_n} \ (p_n - c_n)^{\alpha_n}(c_x - p_n)^{1-\alpha_n}$$

[250] *See* Israel Verified Statement at p. A-2.
[251] Ibid.
[252] Ibid.
[253] *See* Ho, Kate and Lee, Robin S. "Equilibrium Provider Networks: Bargaining and Exclusion in Health Care Markets." *American Economic Review* 109, no. 2 (2019): 473-522, overview of literature on bargaining with replacement.

with the solution to this problem given by

$$p_n^* = (1 - \alpha_n)c_n + \alpha_n c_x$$

Note that this solution does not depend on the price charged by UP or the value that the shipper places on the movement, as NS is constrained by the availability of CSXT as an option. Having CSXT as an option allows the shipper to capture a greater share of the total surplus. The total profit captured by NS is given by

$$P_n^* - c_n Q(\cdot) = \alpha_n (c_x - c_n) Q(\cdot)$$

It is clear what conditions must be satisfied for these results to hold:

i. Shipper demand must be inelastic, i.e., $Q(c_u + \boldsymbol{c_x}) = Q(c_u + \boldsymbol{c_n})$. Because $c_n < c_x$, this implies that demand is not downward sloping. That is, the shipper wants to transport a fixed number of carloads, and the amount of carloads does not depend on the marginal cost of the movement. This condition is at odds with the explicit assumptions he makes elsewhere in the paper, namely that output expands as rates decline.[254]

ii. The eastern railroad has all of the bargaining power relative to the shipper, i.e., $\alpha_n = 1$. This implies that only the eastern railroad's gain from trade factors into the shipper's negotiations with the dual-serving railroad. Contrast this with the assumption Dr. Israel makes regarding negotiations between the shipper and the sole-serving railroad. There, the bargaining weight of the sole-serving railroad is the same as the shipper's, $\frac{1}{2}$. That is, the western (sole-serving) railroad has less bargaining weight than competing eastern railroads. *This result has the counter-intuitive implication that the eastern railroad may easily have greater profits than the western railroad.*[255]

As such, letting $\alpha_n = 1$ and evaluating this expression at $Q(c_u + c_x)$ results in the profits captured by NS in Dr. Israel's modeling.

[254] *See* Israel Verified Statement at pp. 83-84.

[255] For instance, if the cost of the second highest railroad is sufficiently high, then the lower cost railroad will charge up to the shipper's reservation price. This would leave no remaining surplus for the western railroad to negotiate over, resulting in zero profit.

3) Implicit Assumptions Underlying Dr. Israel's Results

As stated at the beginning of this section, Dr. Israel's results either depend on assuming that sole-serving and dual-serving railroads have different constraints in the contracts available during negotiations or have different bargaining positions. Regardless of which modeling assumption Dr. Israel believes is correct, the point is that *his results are predicated on asymmetric treatment of the sole-serving and dual-serving legs*. Either he believes that the sole-serving railroad can negotiate over efficient outcomes with shippers but dual-serving railroads cannot. In this case, he has provided no theoretical or empirical evidence that this would be the case in the rail industry. Or he believes that sole-serving railroads and dual-serving railroads can both negotiate over efficient outcomes with shippers, but that shippers have inelastic demand the railroads have different bargaining power relative to the shipper (with the dual-serving railroad paradoxically having the greater bargaining power).

4) Implications of the Assumptions Underlying Dr. Israel's Results

a) UP/NS and the shipper split the profit NS accrued pre-Transaction

Consider the case where shipper demand is perfectly inelastic and denoted by Q. According to Dr. Israel, the profits accruing to NS pre-Transaction are given by $\pi_n = (c_x - c_n)Q$. The profits accrued to UP/NS are given by $\pi_u = \beta(V(Q) - (c_x + c_u)Q)$. The total profits generated by railroads are then given by

$$\pi_u + \pi_n = \beta(V(Q) - (c_x + c_u)Q) + (c_x - c_n)Q = \beta(V(Q) - (c_n + c_u)Q) + (1 - \beta)(c_x - c_n)Q$$

Post Transaction, Dr. Israel claims that the profits of UP/NS would be given by

$$\pi_{un} = \beta(V(Q) - (c_n + c_u)Q)$$

Comparing the two expressions, it is clear that the combined profits of the railroads are lower post Transaction than they are pre-Transaction. That is

$$\pi_{un} \leq \pi_u + \pi_n$$

with equality only if NS and CSXT have identical unit costs. That is, in a benchmark case of perfectly inelastic demand, Dr. Israel's model implies that a combined UP/NS would have lower profits on all current interline movements as a result of the merger.

Dr. Israel attempts to address this issue by invoking downward sloping demand. In this case, $Q(\cdot)$ will increase as the transfer price decreases, resulting in a greater surplus to negotiate over.

However, Dr. Israel incorrectly asserts that this will make UP/NS better off.[256] A combined UP/NS would only be better off if its share of the change in joint surplus is in excess of the fraction of NS profits it loses to the shipper post Transaction. As demonstrated above, for sufficiently inelastic demand, UP/NS would have lower profits than the combined profit of UP and NS pre-Transaction. As such, the impact of the merger on UP/NS profits is ambiguous in Dr. Israel's model and he has provided no support that the merger would be profitable in the context of his own modeling. Importantly, the diversions estimated by the Applicants provide no basis to empirically test this issue, as the methodology is flawed and inconsistent with the Dr. Israel's modeling of foreclosure effects (see Sections VII.D and VII.E for additional details).

b) Symmetric treatment of firms eliminates the Ricardian rent

For any set-up with downward sloping demand and where the dual-serving railroad does not have complete bargaining power (i.e., $\alpha_i \neq 1$), the dual-serving railroad and the shipper will have the incentive to bargain over the quantity determined by charging a rate equal to the railroad's marginal cost. This follows by the exact same reasoning relied on by Dr. Israel to model the sole-serving side ("the quantity that maximizes their joint surplus is the quantity the shipper would purchase if it paid a price equal to UP's cost").[257] Making the symmetric assumption that $\alpha_u = \alpha_n = \frac{1}{2}$ would then result in a solution where the quantity demanded is given by $Q(c_u + c_n)$ (which is greater than $Q(c_u + c_x)$ because demand is downward sloping and $c_n < c_x$) and joint surplus is maximized. By allowing the dual-serving railroad to negotiate nonlinear contracts with the shipper, we arrive at the result that the inefficiency identified by Dr. Isarel does not exist.[258] A merger will have no impact on output because the efficient level of output was achieved pre-merger. I state this not to endorse the result, but instead to highlight that it is not a reasonable model to assess the potential for anti-competitive effects. It demonstrates that Dr. Israel is assuming efficient outcomes both pre- and post- merger. It further demonstrates that Dr. Israel's modeling is not general, but at best a knife-edge case of a more general model.

[256] *See* Israel Verified Statement at p. A-2, footnote 3.
[257] *See* Israel Verified Statement at A-2.
[258] *See* Israel Verified Statement at pp. 16-17.

B. The Applicants' Bargaining Model May Lead to Profitable Foreclosure

Intuitively, the merger would impact UP's willingness to interline with CSXT. Pre-merger, the shipper benefits from having CSXT as an outside option and uses this to capture a greater share of the joint surplus at the expense of NS. Because UP's profits are the same whether the shipper interlines with NS or CSXT, it has no incentive to foreclose CSXT as an option to the shipper.[259] Post-merger, the situation changes. A combined UP/NS would recognize the constraint that CSXT imposes on the eastern leg and would refuse to interline with CSXT. The outcome of this foreclosure depends on how the bargaining positions of the parties change post-Transaction.

Dr. Israel assumes that the post-Transaction relative bargaining weight of the parties is equal to the pre-Transaction relative bargaining weight of the sole-serving railroad. That is, he assumes that $\alpha_u = \frac{1}{2}$ (i.e., UP's pre-Transaction bargaining weight) and $\alpha_{un} = \frac{1}{2}$ (where α_{un} is the relative bargaining weight of a combined UP/NS). This implies that the gross bargaining weight of a combined UP/NS is equal to the pre-Transaction gross bargaining weight of UP. So, if NS had any bargaining weight pre-Transaction, Dr. Israel assumes that it contributes to zero post-Transaction.

By way of example, consider the outcome of his bargaining model for a move where UP and NS are both sole-serving carriers. Output is determined by the marginal cost of the interlining railroads and each railroad negotiates with the shipper for its portion of the move. Consistent with Dr. Israel's modeling, assume that the bargaining weights of the railroads relative to the shipper are $\frac{1}{2}$. The Nash-in-Nash bargaining solution is that the railroads and the shipper each get one-third of the total surplus of the move. However, post-Transaction, Dr. Israel assumes that UP/NS and the shipper split the total surplus evenly.[260] In summary, the railroads captured two-thirds of the joint surplus pre-Transaction but a combined UP/NS only captured half, post-Transaction. This result is not due to any efficiency and there is no output expansion effect. It is merely an unfounded assumption that a combined UP/NS would have a reduced bargaining position relative to the shipper. A more reasonable assumption is that a combined UP/NS would be able to maintain the same profit for the

[259] This is a consequence of UP's rate being held fixed in negotiations between NS and the shipper. If negotiations between the shipper and NS broke down and the shipper chose its outside option (i.e., using CSXT at cost for the same movement volume) UP would get the same profits from the move.

[260] If the relative bargaining weight of the pre-merger, this implies that

$$\frac{\beta_u}{\beta_u + \beta_s} = \alpha_u = \alpha_{un} = \frac{\beta_{un}}{\beta_{un} + \beta_s'}$$

which implies that $\beta_{un} < \beta_u + \beta_n$. That is, the gross bargaining weight of a combined railroad is less than the gross bargaining weight of the railroads pre-merger.

same quantity post-Transaction. This would imply that the relative bargaining weight of a combined UP/NS would increase to $\frac{2}{3}$ rather than be equal to $\frac{1}{2}$ as is assumed by Dr. Israel.

The fact that a merger may change bargaining weights is well established in the literature. For instance, O'Brien and Shaffer (2005)[261], Adilov and Alexander (2006)[262], and Loertscher and Marx (2022)[263] all consider the impact of a change in bargaining weights on merger effects. Dr. Israel has previously rejected results that rely on changes in bargaining weights, citing to the same literature and saying that "claims that a transaction will change the split of the surplus are atheoretical and thus make no clear prediction on the effects of a merger on bargaining outcomes" and therefore that "economic theory provides no general prediction regarding the direction of merger effects."[264] Dr. Israel makes a similar assertion in the present Transaction[265] Of course, logical consistency implies that one can no more rely on economic theory to support claims of efficiencies that rely on bargaining weights being fixed post-Transaction. As noted in Adilov and Alexander (2006), "[u]ltimately, the relationship between firm size and bargaining power is empirical, which implies a need for careful case-by-case studies of merger applications."[266] Dr. Israel has failed to do this empirical work, choosing instead to rest his analysis on an unsubstantiate, knife-edge model with dubious implications.

1) Impact of the Merger on Bargaining Weights

Dr. Israel assumes that the relative bargaining weight between a combined UP/NS and the shipper is the same as UP's relative bargaining weight pre-merger.
Absent outside options, this would imply that UP/NS would expect to have a lower post-merger revenue on their interline movements due to the merger than they had individually pre-merger. This

[261] *See* O'Brien, Daniel P. and Shaffer, Greg. "Bargaining, Bundling, and Clout: The Portfolio Effects of Horizontal Mergers." *The RAND Journal of Economics* 36, no. 3 (2005): 573-595.

[262] *See* Adilov, Nodir and Alexander, Peter J. "Horizontal Merger: Pivotal Buyers and Bargaining Power." *Economic Letters* 91, (2006): 307-311.

[263] *See* Loertscher, Simon and Marx, Leslie M. "Incomplete Information Bargaining with Applications to Mergers, Investment, and Vertical Integration." *American Economic Review* 112, no. 2 (2022): 616-649.

[264] *See* Israel, Mark A. "Economic Analysis of the Effect of the Comcast-TWC Transaction on Broadband: Reply to Commenters." Redacted Version Commission File No. for Registration Statement on Form S-4 filed by Comcast Corporation: 333-194698 (2014).

[265] *See* Israel Deposition at p. 162. "The bargaining split is taken as an economic – what we call an economic primitive, but an economic variable that is determined by fundamentals of the market. It's not just something that changes, including with a merger. So, otherwise, we could just say every merger might change the bargaining leverage and always use that as our theory of harm."

[266] *See* Adilov, Nodir and Alexander, Peter J. "Horizontal Merger: Pivotal Buyers and Bargaining Power." *Economic Letters* 91, (2006): 307-311 at p. 310.

is a key assumption in generating Dr. Israel's results. By assuming that a combined UP/NS loses bargaining power relative to the shippers, he is able to find that shipper surplus would increase. However, this assumption is not implied by economic theory, but merely one potential modeling choice that should be analyzed for its reasonableness.

An alternative assumption is that $\beta_{un} = \beta_u + \beta_n$. This would imply that absent a change in competitive considerations (e.g., changes in outside options), the post-merger profits of UP/NS are the same as the combined pre-merger profits of UP and NS. However, note this then implies that foreclosure becomes profitable. If UP refuses to interline with CSXT, then it earns revenue equal to

$$P_{un}^{*} = (1 - \beta_n - \beta_u)(c_u + c_n)\bar{Q} + (\beta_u + \beta_n)\bar{V}$$

where $\bar{Q}$ and $\bar{V}$ are the total quantity demanded and shipper value when the unit cost of transportation is $c_u + c_n$. This is greater than the pre-merger combined revenues by a factor $\beta_n \left(\underline{V} - c_x \underline{Q} - P_u^{*}\right)$ where $\underline{Q}$ and $\underline{V}$ are the total quantity demanded and shipper value when the unit cost of transportation is $c_u + c_x$. Intuitively, a combined UP/NS is able to remove interlining with CSXT as an outside option for the shipper and is therefore able to capture additional surplus that previously went to the shipper. More succinctly, a combined UP/NS would have incentive not to interchange with CSXT and would make shippers worse off. Foreclosure becomes profitable.

2) Incorporating Disagreement Payoffs Into the Applicants' Model Demonstrates that the Proposed Transaction Would Likely Harm Shippers

As discussed in Sections IV.A and IV.B, Dr. Israel does not consider how the outside options of the shipper and the railroad impact the bargaining outcome. Shippers will only choose to negotiate with the sole-serving railroad if they receive a lower total movement rate relative to their other alternatives. For instance, this would imply that the total movement rate achieved from negotiating a contract should be lower than the tariff rate. Contrary to Dr. Israel's modeling, which assumes that the outside option for both parties is zero if they do not reach an agreement, the value of the outside option for the sole-serving railroad is its profits from the lowest non-negotiated rate and the value to the shipper is their associated surplus from the move.

A fundamental feature of the Nash bargaining model used by Dr. Israel in his modeling is that the value of outside options determines (in part) the surplus captured by the negotiating parties. As disagreement becomes more valuable to one of the parties, they will capture more of the total surplus. Note that the disagreement payoffs for shippers and railroads are negatively related. If the lowest available non-contract rate increases, this will increase the profits to the sole-serving railroad

and decrease the surplus captured by the shipper. The combined effect is to advantage the sole-serving railroad and allow it to command higher rates during negotiations. So, if the proposed Transaction were to increase the lowest non-contract rate available to the shipper, the shipper would pay more on contract rates as well. Importantly, this effect is a feature of Dr. Israel's modeling framework without any modifications. The only adjustment necessary to arrive at this conclusion is to remove his assumption that disagreement payoffs are zero. The availability of tariffs and the common carrier status of railroads directly imply that this is a reasonable adjustment.

Determining whether shippers pay higher rates in the context of Dr. Israel's bargaining framework would then require determining whether the proposed Transaction would increase the lowest non-contract rate available to shippers. Given the flaws in his empirical test (see Section IV.C) Dr. Israel fails to reliably demonstrate that the Transaction would not raise rates on this traffic and therefore cannot rule out that rates would increase on contract traffic as well.

XII. APPENDIX B

A. The Critique of Moresi et al. (2021) is Uninformative About Potential Competitive Effects[267]

As I show in this section, Dr. Israel's results rely on an implicit assumption that the monopoly railroad cannot profitably foreclose its downstream competitor. This assumption is a direct implication of Dr. Israel employing a second-price auction to model price formation when a shipper is served by two railroads. Relaxing this restriction results in a range of costs for which foreclosure is profitable and welfare reducing.

1) Dr. Israel's use of a second-price auction is not a reasonable choice with downward sloping demand

In a second price auction, each duopoly railroad would submit a bid to the shipper. The shipper then selects the railroad with the lowest bid. However, the shipper pays a rate equal to the higher bid. This stands in contrast with a first-price auction, where each duopoly railroad would submit a bid and, if they won, would receive the amount that they bid. While first price auctions are potentially more reflective of how rates are set in the rail industry, Dr. Israel attempts to rationalize

[267] *See* Moresi, S. et al. "Vertical Mergers in a Model of Upstream Monopoly and Incomplete Information," *Review of Industrial Organization* 59, no. 2 (2021): 363–380.

his use of a second price auction by stating that "shippers will play the railroads off against each other" driving price down to the cost of the higher cost railroad.

A standard result in the economics literature is that both railroads will bid their cost if participating in a second price auction. If they win the bid it will be because they are the lower cost railroad and the rate that they will receive is the cost of the losing railroad. Another standard result is known as "revenue equivalence". This states that the price that a shipper would expect to pay under either a first price or second price auction is the same, when the shipper has demand for a single movement. If shipper demand is downward sloping (as is assumed by Dr. Israel throughout his report), this equivalence breaks down in a meaningful way.

To understand, consider the model of shipper demand employed by Dr. Israel. He assumes that shippers have downward sloping demand and that there is a price at which the shipper would have zero demand for rail transportation services. For instance, at a rate of $1,000 per carload the shipper may substitute away from rail but would demand 5 carloads at a rate of $800 per carload. Assume that the high-cost eastern railroad has a per carload cost of $1,000 (such that it can never profitably serve this shipper) and assume that the low-cost eastern railroad has a per carload cost of $700. Now, consider the second price auction used by Dr. Israel. Both railroads would submit a bid equal to their cost. The shipper would select the low-cost railroad, which would then receive a price of $1,000 per carload. Of course, at this rate, the shipper would substitute away from rail and the low-cost railroad would receive zero profits. If instead the low-cost railroad and the shipper could agree to a rate of $800 per carload, then the shipper would demand 5 carloads and the low cost-railroad would earn a profit of $500, making both parties better off. Dr. Israel's modeling choice explicitly rules out this pricing arrangement, resulting in the counterintuitive (and economically wrong) result that the low-cost railroad can only be profitable if its competitor can also profitably serve the same shipper.

While this result may appear esoteric, it directly rules out the potential for foreclosure or raising rivals' cost effects. Modify the prior example such that both eastern railroads are quoting a through rate to the shipper and require a rate factor from a sole-serving railroad in the west. Post-merger, the integrated railroad cannot profitably increase its rate factor to the unintegrated duopolist railroad to exclude it from the market. If the integrated railroad increased its rate such that the total cost of the move to the unintegrated duopolist was above the shipper's choke price, then the

integrated monopolist would drive its own profits to zero. This is precisely what occurs in Dr. Israel's model.[268]

The implication of this modeling choice is that foreclosure will never be profitable as the presence of the competing railroad is necessary to generate a profit. As such, the integrated railroad will always have a greater incentive to ensure that the competing duopoly railroad may compete and charge a commercially viable rate. This is not a standard modeling choice in antitrust review. In traditional economic models used in antitrust enforcement, the presence of competition constrains the ability of a firm to earn monopoly profits, and when such competition is removed, the firm is better able to achieve the monopoly outcome. In Dr. Israel's modeling, the removal of competitive alternatives results in the profit of the integrated railroad converging to zero. This is not a credible modeling choice and it permeates through the Applicants' analyses.

2) The monopoly railroad would not participate in the second price auction

In Dr. Israel's model, the integrated firm would prefer to not participate in the second price auction if it had the chance. To see this result, compare the expected profit that the integrated railroad derives from participating in the second-price auction, conditional on its known cost draws:[269]

$$E[\pi^{Joint,Post}(p^{M,Post}, b^{D,Post})|c_1] = 2c_1^2\frac{\sqrt{4c_1^2+1}}{3} - \frac{1}{2}c_1 - \frac{4}{3}c_1^3 + \frac{\sqrt{4c_1^2+1}}{6}$$

Compare this expression to the monopoly profit that the integrated railroad would receive, conditional on c_1, with certainty if it foreclosed its downstream competitor:

$$\pi_M = \frac{(1-c_1)^2}{2}$$

If the monopoly profit (which it receives with certainty) is greater than the expected profit from not foreclosing, then the integrated firm will opt to only provide its single-line service. **Figure 15** below plots these two curves. Note that the curves intersect at 0.55, implying that for 55% of cost draws, the integrated firm will find it more profitable to foreclose the competing eastern railroad and collect the monopoly profit and for 45% of cost draws, the monopolist would participate in the second-price auction. The monopoly railroad could effectuate this strategy by offering $p^M = 1$ on the western leg and providing the monopoly price for its newly single-line movement when its costs are

[268] *See* Israel Verified Statement at p. B-30. "If c_2 [the unintegrated railroad's cost] > 1 – p^M [residual demand given the sole-serving railroad's rate factor], then the unintegrated duopolist does not participate in the auction and the integrated duopolist always wins and… the joint profit of the merged railroad is… 0."

[269] *See* Israel Verified Statement at p. B-11.

below 0.55 and otherwise implement the bid that Dr. Israel derives when its costs are above 0.55. The reason that this result does not occur in Dr. Israel's analysis is because it would require the integrated railroad to charge an implicit rate for the eastern movement that is negative. That is, the monopoly rate for its single-line service is less than 1 but the rate it charges for only the western leg is 1. The only way that Dr. Israel's result would hold is if the shipper could force the integrated railroad to offer separate Rule 11 rates for the western and eastern legs and that the rate on the eastern leg could not be used to subsize the rate on the western leg. There is nothing to indicate that this would occur post-Transaction.

Figure 15: Expected Profits of Integrated Railroad's Under the Auction Model and Monopoly Profit {{

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Importantly, there are cost draws for which the interlining railroad partner is the efficient eastern carrier, but for which integrated railroad would still prefer foreclosure. For instance, when the interlining partner has a cost near zero but the integrated railroad has a cost less than 0.55, the integrated railroad would prefer welfare harming foreclosure.

XIII. APPENDIX C

A. Demand for Rail Transportation

Modeling demand for transportation services has been extensively studied in economic literature. I follow an approach consistent with that used in Chen (2026), who models demand for freight railroad transportation between BEA areas utilizing a logit-family discrete choice model.[270] The logit-family discrete choice models capture substitution patterns across different options in a parsimonious form. Specifically, I use a nested logit demand function so that my model allows rail options to be closer substitutes to each other than to non-rail options. This modification is most similar to the approach presented in Coublucq, et al. (2019), who estimate demand for freight services offered by different railroad firms using a nested-logit demand model for two sets of options (*i.e.*, two "nests"): (a) rail options and (b) non-rail options.[271] This modeling choice is also consistent with the approach taken by UP's expert in the CP/KCS transaction in order to demonstrate the potential for foreclosure effects that could arise from an end-to-end rail merger.[272] The nested logit approach also has been widely used in modeling demand for different modes of consumer transportation.[273]

Let c index a corridor, defined as an origin BEA area, a destination BEA area, and a commodity group. For instance, movements from Los Angeles, CA to New York, NY for general merchandise would constitute a corridor. Let g index the modes of transportation serving the corridor (i.e., rail and non-rail) and let $j = 1, \ldots, J$ index the route options (e.g., an interline between UP and CSXT) within a corridor. Finally, let i index the shipper. I assume that shippers value a mode of transportation according to

[270] *See* Chen, Yanyou. "Network Structure and the Efficiency Gains from Mergers: Evidence from U.S. Freight Railroads." *The RAND Journal of Economics*, (2026) at Section 5.1.

[271] *See* Coublucq, Daniel et al. "The Static-Dynamic Efficiency Trade-off in the US Rail Freight Industry: Assessment of an Open Access Policy." *The Review of Network Economics* 17, no. 4 (2019) at Section 3.1. This approach was utilized in Ivaldi and McCullough (2005) as well. *See* Ivaldi, Marc and McCullough, Gerard. "Welfare Tradeoffs in U.S. Rail Mergers." Working Paper, (2005): 1-29.

[272] *See* Salop Verified Statement at p. 21. "The model follows the railroad literature by assuming that the shippers' demand has a logit demand structure."

[273] For modeling ridership demand sensitivity to changes in service, *see* Forinash, Christopher V. and Koppelman, Frank S. "Application and Interpretation of Nested Logit Models of Intercity Mode Choice." *Transportation Research Record* 1413, (1993): 98-106; For modeling activity scheduling behavior, *see* Gangrade, Sachin et al. "A Nested Logit Model of Commuters' Activity Schedules." *Bureau of Transportation Statistics*, (2011). https://www.bts.gov/archive/publications/journal_of_transportation_and_statistics/volume_05_number_23/paper_02/index.

$$u_{ij,c} = \underbrace{\delta_{j,c} - \alpha p_{j,c}}_{v_{j,c}} + \zeta_{g(j),c} + (1-\sigma)\epsilon_{ij,c}$$

where $\delta_{j,c}$ represents non-price characteristics of a move that shippers value (e.g., fast transit times, low junction frequency), $p_{j,c}$ represents the movement rate (the sum of rates of all interlining railroads), $\zeta_{g(j),c}$ is an idiosyncratic preference the shipper has that is common to all options within the same mode of transportation (e.g., rail) that follows a Cardell distribution, and $\epsilon_{ij,c}$ captures idiosyncratic preferences of shippers for each option and assumed to be distributed Type-I extreme value. For each corridor, the parameter σ captures the degree to which shipper preferences for the different rail route options are correlated with each other as opposed to the outside option. Shippers choose the method of transportation for which $u_{ij,c}$ is maximized.

Integrating over the random variables yields the standard nested-logit demand system. The probability that a shipper will choose option j within transportation mode g has the following decomposition

$$s_{j,c} = s_{j|g,c} \cdot s_{g,c}$$

The probability of choosing option i conditional on choosing mode g takes the standard logit functional form

$$s_{j|g,c} = \frac{e^{v_{j,c}/(1-\sigma)}}{\sum_{k \in B_g} e^{v_{k,c}/(1-\sigma)}}$$

where B_g is the set of indices of options within mode g. The probability of choosing mode $g$also takes the standard logit functional form

$$s_{g,c} = \frac{e^{(1-\sigma)\, I_{g,c}}}{1 + \sum_l e^{(1-\sigma) I_{l,c}}}$$

where $I_{g,c} = ln\left(\sum_{j \in B_g} e^{v_{j,c}/(1-\sigma)}\right)$ is the inclusive value of the nest.[274] As usual, the value of the outside option is normalized to have a value of 0. The total potential demand for transportation within corridor c is given by M_c, such that the quantity demanded for route j is given by $q_{j,c} = s_{j,c} M_c$.

[274] *See* Train, Kenneth. *Discrete Choice Methods with Simulation*. Cambridge University Press, 2022. https://eml.berkeley.edu/books/train1201.pdf.

B. Model of Supply

To model supply, I assume that each customer-facing railroad sets total movement rates for its routes to maximize its total profits within a given corridor. The rate-setting railroads consider the interdependence of demand across the various route options when choosing optimal rates. For instance, the railroads internalize that when raising rates on an interline route demand may be diverted to its single-line option. For each route, the customer-facing railroads negotiate with their interline railroad partners to determine rate factors. Negotiations depend on the competitive position of each railroad in the route (captured by their bargaining weight) and the outside options available to each interline railroad partner.[275] Following the merger simulation literature, I assume that total movement rates are set at the same time that the interline rate factors are determined such that the customer-facing railroad takes the interline rate factors as fixed when determining the total movement rate. Additionally, I assume that all negotiations occur simultaneously such that interline railroads treat the outcomes of other negotiations as fixed.[276]

Within each corridor, there are $f = 1,2, \dots, F$ railroads and $j = 1, \dots, J$ routes, where a railroad f may participate in multiple routes. For each route, one railroad sets the total movement rate, $p_{j,c}$ (i.e., the railroad is customer facing). Let Γ_c^f be the set of full routes for which the railroad is responsible for determining rates in a corridor. Again, each railroad determines these rates to maximize profits. Let the index of this railroad be given by $\alpha(j)$. Let $t_{j,c}^f$ denote the interline rate factor for railroad f on route j. Finally, define $t_{j,c}^{\alpha(j)} = p_{j,c} - \sum_{n \in R_j \backslash \{\alpha(j)\}} t_{j,c}^n$ where R_j is the index of all of the railroads participating in a route and $R_j \backslash \{f\}$ is the list of railroads, excluding f. The customer-facing railroad therefore solves

[275] I assume that the same outcome is achieved whether or not rates are set via through rates or Rule 11. This is consistent with Dr. Israel's modeling of CGP and is also consistent with strategic shipper behavior resulting in rate equalization across the different rate-setting mechanisms (see the discussion in Section IV.C). *See* also Israel Deposition at p. 198. "Q. Do you agree that if shippers can choose whether to solicit Rule 11 or through rates for a particular movement, then, all else equal, the rates they receive through both pricing arrangements should not be materially different? A. I suppose if, literally, all else was equal, so they could move freely, then economics would predict the prices would equalize." As such, the negotiation process may be viewed as an exact representation of the through rate setting process and synecdoche for Rule 11 rates. This model of supply corrects a counterfactual implication of Dr. Israel's modeling of CGP, which predicts that all interline railroad partners receive the same gross profit on a given move. Under this bargaining framework, railroads generate different gross profits on a move depending on their bargaining position.

[276] These assumptions are called *simultaneous downstream pricing* and *simultaneous negotiations*, respectively. *See* Sheu, G. and Taragin, C. "Simulating Mergers in a Vertical Supply Chain with Bargaining." *The RAND Journal of Economics* 52: 596-632. (August 2021).

$$\max_{\{p_{j,c} \in \Gamma_c^f\}} \sum_{j \in B_r} \left(t_{j,c}^f - c_{j,c}^f\right) s_{j,c}(p_{j,c})\, M_c$$

and the J first-order conditions are given by

$$s_{j,c} + \sum_{k \in B_r} \left(t_{k,c}^{\alpha(j)} - c_{k,c}^{\alpha(j)}\right) \frac{\partial s_{k,c}}{\partial p_{j,c}} = 0$$

The profits captured by railroad f in corridor c if an agreement is reached on all routes is given by

$$\pi_c^f = \sum_{j \in B_r} \left(t_{j,c}^f - c_{j,c}^f\right) s_{j,c}(p_{j,c})\, M_c$$

The disagreement payoff is given by

$$d_c^f(B_r \backslash \{j\}) = \sum_{j \in B_r \backslash \{j\}} \left(t_{j,c}^f - c_{j,c}^f\right) s_{j,c}^{(-j)}(p_{j,c})\, M_c$$

Let $\beta_{j,c}^f$ denote the gross bargaining weight of railroad f on route j and normalize the weights to sum to one. For each route the interline rail factors t_j^k for $k \neq \alpha(j)$ and $k \in R_j$ are the solutions to the following optimization problem

$$\max_{t_{j,c}^k} \left(\pi_c^{\alpha(j)} - \mu_j\, d_c^{\alpha(j)}(B_r \backslash \{j\})\right)^{\frac{\beta_j^{\alpha(j)}}{\beta_j^{\alpha(j)} + \beta_j^k}} \left(\pi_c^k - \mu_j\, d_c^k(B_r \backslash \{j\})\right)^{\frac{\beta_j^k}{\beta_j^{\alpha(j)} + \beta_j^k}}$$

where μ_j is a route-specific switching cost that determines the importance of the outside option during negotiations. Substituting terms yields

$$\max_{t_{j,c}^k} \left(\left(p_{j,c} - c_{j,c}^{\alpha(j)} - \sum_{n \in R_j \backslash \{\alpha(j)\}} t_{j,c}^n\right) s_{j,c} - \phi \sum_{l \neq j} \left(t_{l,c}^{\alpha(j)} - c_{l,c}^{\alpha(j)}\right) s_{l,c}\, \kappa_{j,c}\right)^{\frac{\beta_{j,c}^{\alpha(j)}}{\beta_{j,c}^{\alpha(j)} + \beta_{j,c}^k}} \left(\left(t_{j,c}^k - c_{j,c}^k\right) s_{j,c} - \phi \sum_{l \neq j} \left(t_{l,c}^k - c_{l,c}^k\right) s_{l,c}\, \kappa_{j,c}\right)^{\frac{\beta_{j,c}^k}{\beta_{j,c}^{\alpha(j)} + \beta_{j,c}^k}}$$

where ϕ is a conduct parameter that determines the extent to which railroads consider their outside options when bargaining on a route.[277] The term $\kappa_{j,c}$ is the scaling factor such that $s_{l,c}\,\kappa_{j,c}$ is the change in route share when removing option j.[278] If $k \notin R_j$ then impose that $c_{j,c}^k = \beta_{j,c}^k = 0$ and ensure that $t_{j,c}^n = 0$ if $k \notin R_j$. The solution is given by

$$t_{j,c}^n = c_{j,c}^n + \phi \frac{\kappa_{j,c}}{s_{j,c}} \sum_{l \neq j} \left(t_{l,c}^n - c_{l,c}^n\right) s_{l,c} + \beta_{j,c}^n \left(p_{j,c} - \sum_{k \in R_j} c_{j,c}^k - \phi \frac{\kappa_{j,c}}{s_{j,c}} \sum_{k \in R_j} \sum_{l \neq j} \left(t_{l,c}^k - c_{l,c}^k\right) s_{l,c} \right)$$

This is a linear system in t_j^n and can be solved exactly. I provide the solution in the section on solving the model.

1) Railroad Cost Function

I model each railroad as having a unit cost function that depends on the system volume (measured in ton-miles) that exhibits economies of scale. Railroads treat unit costs as fixed within a corridor when determining optimal rates. However, scale spillover effects lead to changing unit costs within the corridor, indirectly impacting the rate-setting decisions of the railroads. Following the suggestion in Chen (2026), I let $c_{k,c}^f(Q) = \bar{c}_{k,c}^f \left(\frac{Q}{Q_0}\right)^\tau$, where $\bar{c}_{k,c}^f$ is the pre-merger unit cost of transportation and Q_0 is a normalization based on the pre-merger level of output.[279] In this specification, $\tau < 0$ implies that there are economies of scale and density. To see, define the total cost of transportation for f as $C^f(\boldsymbol{q}) = \sum_j \bar{c}_{j,c(j)}^f \left(\frac{Q^f}{Q_0^f}\right)^\tau q_j$.

Following Panzar and Willig (1977)[280], the multi-output economies of scale and density are given by

$$S = \sum_j \frac{\partial C^f(\boldsymbol{q})}{\partial q_j} \frac{q_j}{C^f(\boldsymbol{q})}$$

Note that

[277] This parameter is equal to $\phi = \frac{\mu_j \frac{\bar{s}^{(-j)}}{\bar{s} - s_j} - 1}{\frac{\bar{s}^{(-j)}}{\bar{s} - s_j} - 1}$.

[278] That is $s_{l,c}^{(-j)} - s_{l,c} = s_{l,c}\,\kappa_{j,c} = s_{l,c}\left(\frac{\bar{s}^{(-j)}}{\bar{s} - s_{j,c}} - 1\right)$, where $\bar{s}^{(-j)}$ is the total share of inside options after removing route j, and $\bar{s}$ is the total share of inside options including j.

[279] *See* Chen, Yanyou. "Network Structure and the Efficiency Gains from Mergers: Evidence from U.S. Freight Railroads." *The RAND Journal of Economics*, (2026)) at Appendix D.

[280] *See* Panzar, John C. and Willig, Robert D. "Economies of Scale in Multi-Output Production." *The Quarterly Journal of Economics* 91, no. 3 (1977): 481-493.

$$\frac{\partial C^f(\boldsymbol{q})}{\partial q_j} = \bar{c}^f_{j,c(j)}\left(\frac{Q^f}{Q^f_0}\right)^{\tau} + \tau \sum_k \bar{c}^f_{k,c(k)}\left(\frac{Q^f}{Q^f_0}\right)^{\tau-1}\frac{q_k}{Q^f_0}$$

or equivalently

$$\frac{\partial C^f(\boldsymbol{q})}{\partial q_j} = \bar{c}^f_{j,c(j)}\left(\frac{Q^f}{Q^f_0}\right)^{\tau} + \tau\, \bar{c}^f_{k,c(k)}\left(\frac{Q^f}{Q^f_0}\right)^{\tau-1}\frac{Q^f}{Q^f_0}$$

Such that

$$S = \sum_j \frac{\partial C^f(\boldsymbol{q})}{\partial q_j}\frac{q_j}{C^f(\boldsymbol{q})} = \sum_j \left(\bar{c}^f_{j,c(j)}\left(\frac{Q^f}{Q^f_0}\right)^{\tau} + \tau\, \bar{c}^f_{k,c(k)}\left(\frac{Q^f}{Q^f_0}\right)^{\tau-1}\frac{Q^f}{Q^f_0}\right)\frac{q_j}{C^f(\boldsymbol{q})} = 1 + \tau$$

2) Solving for the Optimal Rates in the Bargaining Model

Let

$$\bar{p} \in \mathbb{R}^{\mathbb{J}\times\mathbb{1}}, \quad c \in \mathbb{R}^{\mathbb{J}\times\mathbb{F}}, \quad \beta \in \mathbb{R}^{\mathbb{J}\times\mathbb{F}}, \quad \delta \in \mathbb{R}^{\mathbb{J}\times\mathbb{1}}, \quad \alpha \in \mathbb{R}^{\mathbb{J}\times\mathbb{1}}$$

Define the share mapping function as

$$s = \mathcal{S}(\delta, \bar{p}, \alpha) \in \mathbb{R}^{\mathbb{J}}$$

and write s_j for its jth component. Also define the total inside share

$$\bar{s} \;=\; \mathbf{1}^{\top}\mathbf{s}$$

Leave-one-out shares and $\boldsymbol{\zeta}$: For each product $j \in 1, \dots, J$, define the index set excluding j, $\mathcal{J}_{-j} = \{1, \dots, J\} \setminus \{j\}$, and the leave-one-out share vector

$$s^{(-j)} \;=\; \mathcal{S}\left(\delta_{\mathcal{J}_{-j}}, \bar{p}_{\mathcal{J}_{-j}}, \alpha_{\mathcal{J}_{-j}}\right) \in \mathbb{R}^{\mathbb{J}-\mathbb{1}}$$

$$\bar{s}^{(-j)} = \mathbf{1}^{\top}\mathbf{s}^{(-\mathbf{j})}$$

I defined $\zeta \in \mathbb{R}^{\mathbb{J}}$ elementwise as

$$\kappa_j \;=\; 1 - \frac{\bar{s}^{(-j)}}{\bar{s} - s_j}$$

Then define $\eta \in \mathbb{R}^{\mathbb{J}}$ such that $\eta_j \;=\; \frac{\kappa_j}{s_j}$.

Exclusion-weighted share matrix $\boldsymbol{B}$: Let $E = \mathbf{1}\mathbf{1}^{\top} - I_J \in \mathbb{R}^{\mathbb{J}\times\mathbb{J}}$ be the matrix with ones off-diagonal and zeros on-diagonal and construct the matrix

$$B \;=\; E \odot (s^{\top})$$

and let $D_\eta = \mathrm{diag}(\eta)$. Form the $JF \times JF$ block matrix

$$\mathcal{B} \;=\; \text{blkdiag}\big(D_\eta B,\; D_\eta B,\; \ldots,\; D_\eta B\big) \;\in\; \mathbb{R}^{\mathbb{JF}\times\mathbb{JF}}$$

i.e. F identical diagonal blocks, each equal to $D_\eta B$.

Participation matrix $\boldsymbol{M}$: Define the participation indicators

$$m_{jf} = \mathbf{1}\{C_{jf} > 0\}$$

For each f, let $D_f = \text{diag}\big(m_{1f}, \ldots, m_{Jf}\big) \in \mathbb{R}^{\mathbb{J}\times\mathbb{J}}$. Then construct

$$M \;=\; \text{blkdiag}(D_1, \ldots, D_F) \in \mathbb{R}^{\mathbb{JF}\times\mathbb{JF}}$$

Aggregation matrix $\boldsymbol{A_W}$: For each f, let $w_f = W_{:f} \in \mathbb{R}^{\mathbb{J}}$ and $D\big(w_f\big) = \text{diag}\big(w_f\big)$. Build the block matrix $A_W \in \mathbb{R}^{\mathbb{JF}\times\mathbb{JF}}$ whose fth block row is

$$\big[\,D\big(w_f\big)\; D\big(w_f\big)\; \cdots\; D\big(w_f\big)\,\big] \in \mathbb{R}^{\mathbb{J}\times\mathbb{JF}}$$

Equivalently, for block indices $f, g \in 1, \ldots, F$,

$$(A_W)_{(f,g)} \;=\; D\big(w_f\big) \in \mathbb{R}^{\mathbb{J}\times\mathbb{J}}$$

Right-hand side vector $\boldsymbol{d_1}$: Let $\bar{c_j} = \sum_{f=1}^{F} c_j^f \in \mathbb{R}^{\mathbb{J}}$ be the row-sum of costs. Define the $J \times F$ matrix

$$D \;=\; \beta \odot (\bar{p} - \bar{c})$$

and vectorize it column-wise:

$$d_1 \;=\; \text{vec}(D) \in \mathbb{R}^{\mathbb{JF}}$$

Linear system and solution: Define the matrix

$$d_2 \;=\; A_W\, M\, \mathcal{B} \;-\; M\, \mathcal{B} \in \mathbb{R}^{\mathbb{JF}\times\mathbb{JF}}$$

and then solve for the optimal rates (conditional on aggregate route rates, costs, and bargaining weights) by

$$t \;=\; \big(I_{JF} - d_2\big)^{-1} d_1 \;+\; \text{vec(c)} \in \mathbb{R}^{\mathbb{JF}}$$

C. Calibrating the Model Inputs

1) Defining the Outside Option

An important consideration when estimating a nested-logit demand model is how to define the "outside option". The outside option reflects the actual volume of movements that each route option could supply for a corridor in a given year. Following Chen (2026) and Coublucq et al. (2019), I define the outside option as the volume of freight transported by non-rail options. As such, shippers are assumed to be inelastic in their demand for freight transportation overall and only opt to

substitute across different modes of transportation in response to price changes. Given this procedure and observed rail and non-rail volumes within each corridor, I am able to recover each railroad's corridor share and the share of the outside option for the vast majority of railroad corridors.[281]

2) Calibration of the Costs and Cost Parameters

I use variable costs from the Uniform Rail Costing System ("URCS") to calibrate movements costs per ton. These are the same costs that are reported in the Confidential Carload Waybill Sample ("CCWS") and that are used by Dr. Israel in his simulation of Committed Gateway Pricing.[282] Dr. Israel states in his deposition: URCS is "a source of cost information that we tend to have in railroad cases", and goes on to explain "[i]n my experience, I haven't seen data from railroads that gets closer to true marginal costs."[283] Using URCS, I calculate movement costs at a waybill-level, using movement characteristics from the traffic tapes provided by the Class I railroads. I then use these waybill-level costs to calculate a corridor-level average cost per ton for each railroad for each lane that it participates in. For numerical stability, where URCS costs imply an operating margin below 10%, I set the railroad's route cost to generate a 10% operating margin.[284] For intermodal movements, I set each railroad's cost using its system-average intermodal margin rather than movement-level URCS costs.

I calibrate the parameter τ based on estimates in the economics literature. With multi-product production, scale economies are taken to be the inverse sum of elasticities of cost to a change in each output, i.e., $S = \frac{1}{\sum_j \frac{Q_j}{C}\frac{\partial C}{\partial Q_j}}$. As derived above, the economies of scale and density associated with the specified cost function are given by $S = 1 + \tau$. The estimates in Bitzan and Karanki (2021) imply a value of $\tau = -0.36$.[285] This estimate is consistent with the broader economic literature estimating economies of scale and density within the rail literature as detailed in **Table 7** below.

[281] A limitation to this approach is that the estimating equation cannot be applied to corridors where rail provides 100% share of transported volumes and demand cannot be used to model price setting by a railroad that contributes to every movement in the corridor. In these cases, there is no diversion to an outside option and economic modeling would imply that prices can be increased without bound. As such, I focus my results on corridors where the inside share is less than 99%.

[282] *See* Israel Verified Statement at Appendix C.III.

[283] *See* Israel Deposition at p. 233.

[284] This methodology is analogous to the process adopted by Dr. Israel in his simulation analysis of CGP. *See* Israel Verified Statement at F12. "If the calibrated marginal cost implies a markup of less than $0.01 per car-mile for a particular shipment, due to an unusually low observed rate per car-mile, I recalibrate the marginal cost for that shipment such that the UP's (of NS's) margin of that shipment is equal to m_{UP} (or m_{NS})."

[285] *See* Bitzan, John and Karanki, Fecri. "A Look at Railroad Costs, Scale Economies, and Differential Pricing." USDA Report, (February 2021): 29. Page 30 reports that economies of density that are approximately

Table 7: Economies of Scale Estimated in Rail Literature

Study	Cost Elasticity	Date Range of Data
(a)	(b)	(c)
Berndt et al. (1993)	0.64	1974 - 1986
Wilson (1997)	0.75	1978 - 1989
Ivaldi and McCullough (2001)	0.61	1978 - 1997
Bitzan and Keeler (2007)	0.63	1983 - 2001
Bitzan and Karanki (2021)	0.64	1984 - 2016

Notes: Rail density pertains to the concentration of output over a network of a fixed size. A translog cost function is a flexible functional form, typically used to model how a firms total cost depends on input prices and output levels. Note that for Wilson (1997), the post Staggers Act cost elasticity is shown. The elasticity above can be interpreted as stating that a 1% increase in outputs is associated with an X% increase in costs, where X is the cost elasticity. A cost elasticity under 1 would indicate an economy of density.

3) Calibration of Demand Parameters

I rely on the economic literature to calibrate the value of σ. Estimates for σ in the rail literature are approximately 0.48.[286] I calibrate the mean utility that shippers generate following from a given route based on observed route shares and the standard Berry (1994) inversion.[287]

To calibrate the bargaining weights, I first calculate the total unit profits on a route. This is calculated as the movement rate less the joint costs of the railroads. Inverting the bargaining solution across all routes in a corridor then recovers the calibrated value for $\beta_{j,c}^{f}$.[288]

To calibrate the price coefficients (α_j) on each route, I use the first order conditions to the railroad's profit maximizing condition and select the α_j that rationalizes the observed prices. My

equal to $\frac{0.7438}{1.15814}$, which implies a value of $\tau = -0.36$. I explore other values of τ to determine the sensitivity of my results to this parameter. *See*, for instance, Bereskin, C. Gregory. "Railroad Economies of Scale, Scope, and Density Revisited." *Journal of the Transportation Research Forum* 48, no. 2 (2009): 34.

[286] *See* Table 2 of Coublucq et al. (2019) at p. 282.

[287] *See* Berry, Steven T. "Estimating Discrete-Choice Models of Product Differentiation." *The RAND Journal of Economics* 25, no.2 (1994): 242-262.

[288] If a bargaining weight is calculated to be negative, which would happen if a railroad receives a sufficiently high profit on an alternative route with a low corridor share, the route is addressed through the recalibration procedure described below.

calibrated aggregate elasticity across the industry simulates to approximately -2.3, which aligns fairly closely with values seen in other rail literature, such as the -1.77 seen in Beuthe et al. (2001).[289]

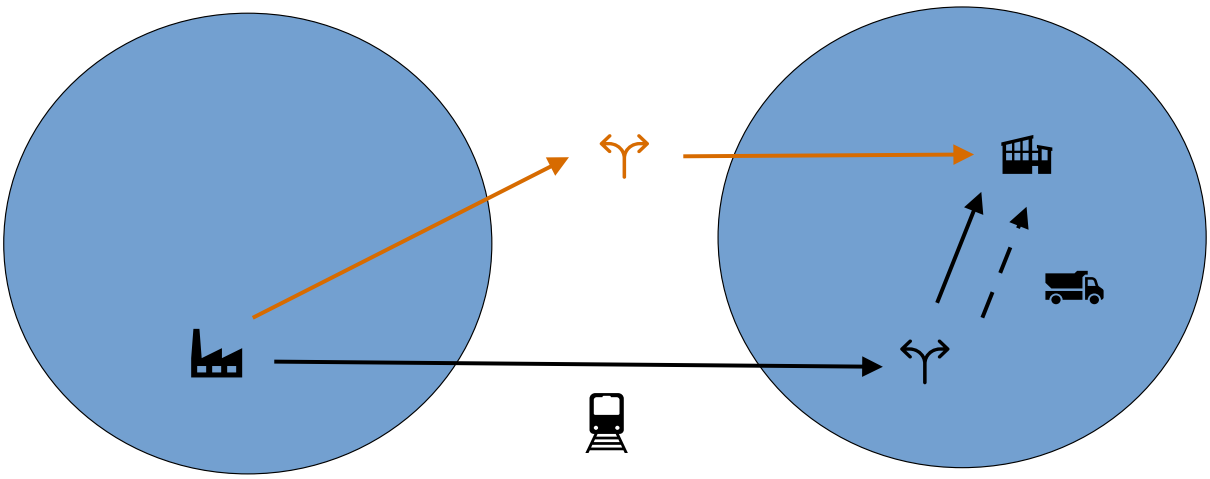
a) Impact of distance on bargaining weights and residual elasticities

A feature of the data is that railroad profits are increasing in the magnitude of the distance that a railroad contributes to a movement. This may occur for several reasons. Consider the scenario shown in **Figure 16** depicting route choices between an origin BEA area and destination BEA area from a sole-served station to another sole-served station. The orange route represents an interline movement between an eastern and western railroad with an interchange at a midcontinent gateway. The black solid route shows an interline movement between the same railroads but with an interchange in the destination BEA area. The dashed route depicts a trucking option that can compete for the shorter eastern movement. As the length of haul becomes shorter, truck becomes more competitive for these movements.[290] For instance, the western railroad may deliver to a transloading facility that is near the sole-served station and let truck perform the last-mile delivery. This results in a more elastic residual demand curve for the eastern railroad and constrains the rate that it may charge on these shorter movements.

[289] *See* Beuthe, Michel et al. "Freight Transportation Demand Elasticities: A Geographic Multi-Modal Transportation Network Analysis," *Transportation Research Part E: Logistics and Transportation Review* 37, no. 4 (2001) at pp. 253-266. {{REDACTED }}

[290] *See* Carey Verified Statement at p. 57.

Figure 16: Elasticities Decrease in Magnitude Based on Distance



Another potential rationale for this modeling choice is that STB regulations are effective at constraining the rates that railroads may charge sole-served customers for short-haul movements. That is, the rates charged by railroads must be commensurate with the costs incurred for the movement. This is not to say that railroads cannot practice differential pricing, but that railroads cannot charge the same rate (per carload) for a short-haul movement as they do for a long-haul movement. In effect, this makes prices appear more elastic for shorter movements. Regardless of which explanation is most impactful, empirical evidence demonstrates that shorter movements have more elastic demand.

To capture this dynamic, I model railroad-route-level bargaining weights under short-hauling as having the following functional form (I drop the route and corridor indices for notational convenience):

$$\beta = \frac{\exp(\phi_1^0 + \phi^2 m_1)}{\exp(\phi_1^0 + \phi^2 m_1) + \exp(\phi_2^0 + \phi^2 m_2)}$$

where m_f are the respective mileages of the interlining railroads, and ϕ_f^0 are route level determinants of relative bargaining weights, and ϕ^2 determines the elasticity of the bargaining weight to the mileage contribution. Rearranging this equation yields

$$\beta = \frac{1}{1 + exp(\phi_2^0 - \phi_1^0 + \phi^2(m_2 - m_1))}$$

and

$$1 - \beta = \frac{exp(\phi_2^0 - \phi_1^0 + \phi^2(m_2 - m_1))}{1 + exp(\phi_2^0 - \phi_1^0 + \phi^2(m_2 - m_1))}$$

For dual-served routes

$$\frac{\beta}{1-\beta} = exp(\phi_1^0 - \phi_2^0 + \phi^2(m_1 - m_2))$$

Pre-merger, I calibrate the coefficient

$$c = \phi_1^0 - \phi_2^0 = ln\left(\frac{\beta}{1-\beta}\right) - \phi^2(m_1 - m_2)$$

Post-merger bargaining weight is given by

$$\beta' = \frac{1}{1 + exp(-c + \phi^2(m'_2 - m'_1))}$$

where m'_j is the post-merger mileages after a combined UP/NS short-hauls CSXT.

4) Recalibrating for Numerical Stability

Small route movements may lead to calibrated values that do not make economic sense for a given corridor. Where calibration yields a negative bargaining weight or a positive price elasticity, I remove the route with the lowest volume and recalibrate, repeating until all values are within parameter bounds. This process removes approximately 2% of total volume across all rail corridors.

D. Solving the Full Merger Simulation Model

1) Numerical algorithm to solve the full model

I use the following procedure to solve the full simulation model which relies on two loops. The outer loop calculates the impact of changes in economies of density and scale by calculating a scaling factor η^f for each railroad. In the first iteration, this is normalized to 1. For subsequent iterations, it takes the value $\eta^f = \left(\frac{Ton-miles_{post}}{Ton-miles_{pre}}\right)^{\tau}$. The inner loop solves for optimal rates for each railroad within each corridor. The inner loop includes the following steps. For each corridor:

i. Use observed shares, prices, margins, and the railroad optimality conditions to calibrate $\alpha_{j,c}$ for each route j. As necessary, calibrate the outside option share $s_{0,c}$ using the methodology from Werden and Froeb (1994).[291]

ii. Calibrate $v_{j,c} = \ln(s_j) - \ln(1 - \sum_j s_j) - \sigma \ln(s_{j|g})$ and $\delta_{j,c} = v_{j,c} + \alpha_{j,c}(p_{j,c})$.

[291] *See* Werden, Gregory J., and Froeb, Luke M. "The Effects of Mergers in Differentiated Products Industries: Logit Demand and Merger Policy." *Journal of Law, Economics, and Organization* 10, no. 2 (1994): 407-426.

iii. Simulate a merger between UP and NS by combining the unit costs of UP-NS, movement distances, and the profit-sharing weights, $\beta_c^{upns} = \beta_c^{up} + \beta_c^{ns}$.

iv. Apply the appropriate scaling factor η^f to each railroad's unit cost accounting for changes in economies of density and scale.

v. Identify interline movements between UP-NS and CSXT and test UP-NS profits under three outcomes, no change, short-hauling CSXT, and foreclosure, and select the most profitable outcome that yields a valid equilibrium. Under foreclosure, CSXT loses the full contribution of the movement; under short-hauling, CSXT retains only its short-haul segment.

vi. To calculate profits, iterate over each firm in the corridor, solving the optimality conditions based on calibrated parameters and the current guess of optimal rates. Continue this process until rates converge and all optimality conditions are satisfied.

vii. Corridors are excluded where rates do not converge, any railroad's interline rate falls below -$1.

This process is repeated until the scale parameters calculated in the outer loop (η^f) converge.

2) Data Limitations and Coverage

I make the following limitations to my merger simulation dataset:

i. The simulation is modeled on a population of U.S. traffic, and so excludes any intra-Canada and intra-Mexico movements.

ii. The demand model requires some traffic to move via an outside, non-rail option. Where rail carries all, or nearly all, of a corridor's volume, there is no diversion to an outside option, and the model would imply that rates can rise without limit. I therefore exclude corridors where rail's share of transported volume is 99% or more. This removes approximately 16% of movements by total volume.[292]

iii. As described above, I remove the lowest-volume routes in corridors where calibration yields a negative bargaining weight or a positive price elasticity, and recalibrate until the corridor yields positive bargaining weights and a negative

[292] {{REDACTED }}

price elasticity for all remaining routes. This removes approximately 2% of movements by total volume.[293]

iv. After the Transaction is simulated, I exclude corridors where rates don't converge to a stable equilibrium, where any railroad's interline rate falls below -$1 per ton. These outcomes indicate the model has no economically meaningful solution for the corridor. This removes approximately 0.2% of movements by total volume.[294]

In total, the simulation covers approximately 82% of total volume in the calibration data. To report system-level effects, I scale aggregated changes in revenue, profit and volume by the ratio of total rail volume to volume in simulated corridors.[295] This accounts for traffic excluded through the data restrictions, recalibration, and convergence requirements described above. [296] In addition, in corridors with both CSXT-UP and NS-UP interline routes, I scale simulated changes by 1.56 to account for effects associated with corridors where NS operates but was not observed in the 2023.[297]

E. Simulation Results

1) Impact of the Modal Correlation Parameter

The modal correlation parameter controls the degree of substitution across nests. In this case, it determines how close rail options are to non-rail options (i.e., the outside good). The baseline correlation parameter was chosen to match magnitudes reported in the economics literature (see the section on calibrating demand-side parameters). A lower correlation parameter corresponds to easier substitutions between rail and non-rail modes of transportation, while a higher correlation parameter implies that any diverted traffic is likely to remain on rail. **Table 8** and **Table 9** report results varying the correlation parameter from 0.3 to 0.7. As non-rail modes of transportation become closer

[293] Ibid.
[294] Ibid.
[295] Ibid.
[296] This factor is approximately 1.22 (1/0.82), reflecting approximately 18% of total volume excluded from the simulation.
[297] The scale factor of 1.56 reflects the ratio of CSXT's foreclosable revenue in corridors in which NS participated to the CSXT revenue captured in the simulation for those corridors. Approximately $1.4 billion of foreclosable CSXT revenue is in corridors where NS participated from 2019 to 2024,as shown in **Figure 8**. Approximately $900 million of CSXT revenue on UP-CSXT interline movements in simulated corridors contained both a UP-CSXT and a UP-NS interline route. Because the simulated data does not capture all of this NS-related traffic, I scale the simulated changes in these corridors by 1.56 (≈ $1.4 billion ÷ $0.9 billion).

substitutes to rail, the price and output effects resulting from RRC are less severe as an increasing share of traffic is diverted to the non-rail options rather than being recaptured by UP/NS. {{ REDACTED }} The decrease in output is more muted because shippers are calibrated to be more inelastic. In all scenarios, prices are expected to increase and output is expected to decrease due to RRC effects.

Harm to CSXT will be greatest when non-rail modes of transportation are close substitutes, as any interline rate factor increase on CSXT interlines instigated by UP/NS would result in greater diversion away from CSXT. When non-rail options are more distant substitutes, less traffic is anticipated to switch away from the CSXT interline options because demand is inelastic. This illustrates a common trade-off in the calibrated results—harm to interline railroad partners and near-term output effects tend to be inversely correlated. Because reduced profitability would impair the ability of competing Class I carriers to remain as competitive constraints in the mid to long term, the results imply that the harm arising from the Transaction is robust to the calibration, it is merely the channel through which the harm arises that changes.

Table 8: Impact of Foreclosure Effects on Interline Rate, Industry Volume, and Volume in CSXT Corridors Across Modal Correlation Parameter Settings, 2023 {{ REDACTED

}}

Table 9: Impact of Foreclosure Effects on CSXT Profit and Revenue Across Modal Correlation Parameter Settings, 2023 {{

REDACTED

}}

2) Impact of the Elasticity of Bargaining Weights to Mile Contribution

The elasticity of bargaining weights to the length of haul cannot be directly estimated in the data. As such, I explore a range of parameter values to determine how results are impacted as they change. **Table 10** and **Table 11** present the results, once again showing the inverse relationship between harm to CSXT and near-term output effects. {{REDACTED

}}

Table 10: Impact of Foreclosure Effects on Interline Rate, Industry Volume, and Volume in CSXT Corridors Across Elasticity of Bargaining Weight Settings, 2023 {{
REDACTED

}}

Table 11: Impact of Foreclosure Effects on CSXT Profit and Revenue Across Elasticity of Bargaining Weight Settings, 2023

Specification	Change in CSXT Profit	Change in CSXT Revenue
	----(Millions of Dollars)----	
(a)	(b)	(c)
Low Elasticity	$ -401	$ -617
Medium Elasticity	-625	-837
High Elasticity	-674	-866

Notes: Elasticity here refers to phi, the sensitivity of a railroad's bargaining weight in regards to mileage.
Low elasticity, medium elasticity, and high elasticity are defined as phi of .001, .005, and .01 respectively.
Simulated changes in volume are scaled by approximately 1.22 to reflect 18% of unaccounted industry tons in the underlying data.
Limited to movements to, from, or within the U.S. in 2023.
Short-hauling represents a combined UP/NS's ability to replace UP-CSXT interline movements with UP/NS-CSXT interline movements, relegating CSXT to handle only the short final leg to CSXT sole-served customers.

REDACTED

{{ }}

3) Impact of Economies of Scope and Density

Economies of scope and density propagate competitive harm arising in overlapping corridors to non-overlapping corridors through higher-unit transportation costs. Lower values lead to less propagation of anticompetitive effects. The economies of scale and scope used for the baseline calibration are derived from the most recent estimates available (see the section on calibrating the cost function). **Table 12** and **Table 13** show the impact of using the smallest estimate in the literature, from Wilson (1997) and the largest estimate in the literature from Ivaldi and McCullough (2005).[298] {{REDACTED

[298] *See* Wilson, Wesley W. "Cost Savings and Productivity in the Railroad Industry." *Journal of Regulatory Economics* 11, no. 1 (1997): 21-40 and Ivaldi, Marc and McCullough, Gerard. "Welfare Tradeoffs in U.S. Rail Mergers." Working Paper, (2005): 1-29.

REDACTED

}}

Table 12: Impact of Foreclosure Effects on Interline Rate, Industry Volume, and Volume in CSXT Corridors Across Scale Economies Parameter Settings, 2023 {{

REDACTED

}}

Table 13: Impact of Foreclosure Effects on CSXT Profit and Revenue Across Scale Economies Parameter Settings, 2023 {{
REDACTED

}}

4) Impact of UP/NS Cost Efficiencies

As established in the Carey and Monaco Verified Statements, the Applicants fail to establish that the Transaction would result in any merger-specific efficiencies. However, even assuming the merging parties generate interline cost efficiencies would not eliminate the harm resulting from the proposed Transaction. Further, harm to CSXT is at its highest, implying that CSXT would be most diminished as a competitive constraint. See **Table 14** and **Table 15** below.

Table 14: Impact of Foreclosure Effects on Interline Rate, Industry Volume, and Volume in CSXT Corridors With UP/NS Cost Efficiencies, 2023 {{
REDACTED

}}

Table 15: Impact of Foreclosure Effects on CSXT Profit and Revenue With UP/NS Cost Efficiencies, 2023 {{
REDACTED

}}

5) Impact of Short-hauling on Competitive Effects

To assess how results depend on the combined firm's ability to capture additional route miles, I simulate output effects both with and without short-hauling. In the short-hauling scenario, a combined UP/NS may reroute a CSXT interline movement through a different interchange, increasing its share of the haul and reducing CSXT's. In the "no short-hauling" scenario, existing routings are held fixed. **Figure 17** presents the simulated change in industry ton-miles under each scenario, and **Figure 18** presents the corresponding change in UP-CSXT and BNSF-NS interline rates.

{{REDACTED

}} Under short-hauling, the increase in profits on legacy UP-CSXT interline routes reduces the incentive for UP/NS to effect complete diversion away from these routes, resulting in smaller price effects and a lower output reduction. However, short-hauling impairs the ability of the interlining rail partner to invest and continue competing, to the long-term detriment of competition.

Figure 17: Simulated Change in Industry Volume Post UP/NS Transaction, 2023 {{
REDACTED

}}

Figure 18: Simulated Change in UP-CSXT and BNSF-NS Price Effects Post UP/NS Transaction, 2023

{{

REDACTED

}}

XIV. APPENDIX D

MATERIALS CONSIDERED

Bates Ranges
NS_00002650 – NS_00887316
NS_STB_00000001 – NS_STB_00001483
UP_0000001 – UP_3608038
UP-STB-D13-0000001 – UP-STB-D13-0000671

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Union Pacific Corporation and Union Pacific Railroad Company – Control – Norfolk Southern Corporation and Norfolk Southern Railway Company, Verified Statement of Elizabeth M. Bailey, Ph.D., STB Docket No. 36873, April 27, 2026.

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Highly_Confidential_CN_Traffic_2019.csv - Highly_Confidential_CN_Traffic_2022.csv, WB Exc Canada Domestic 2023 Q1.xlsx - WB Exc Canada Domestic 2023 Q4.xlsx, Highly_Confidential_CN_Traffic_2024.csv

HIGHLY_CONFIDENTIAL_CPKC_2019_Traffic_Tapes.txt - HIGHLY_CONFIDENTIAL_CPKC_2024_Traffic_Tapes.txt

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XV. APPENDIX E

A. Data Sources

Class I Traffic Tapes (2019–2024):[299] Provided by Class I carriers (CSXT, UP, NS, BNSF, CN, and CPKC), these files contain individual waybills with shipment identifiers, dates, car/equipment identifiers, origin and destination station codes (SPLC/FSAC/SCAC), commodity codes (STCC), reported revenues by reporting carrier, and other movement attributes. I used these to construct a consolidated waybill, which I will describe in the following section.

Railinc - Centralized Station Master ("CSM"):[300] This dataset is a comprehensive dataset of station attributes that I used to perform mappings between station identifiers (SPLC, FSAC, SCAC) and geographic units (county/BEA area).

[299] {{REDACTED }}
[300] {{REDACTED }}

S&P Global Market Intelligence – Transearch (2023).[301] I use this dataset for freight volume and revenue for non-rail modes (rail, truck, air, water, pipeline, other). I access this dataset from the Applicants' workpapers.[302]

STB - Uniform Rail Costing System ("URCS"): I used URCS to calculate movement costs for the Class I carriers. I validated my implementation of URCS against that utilized by the STB for the Confidential Carload Waybill Sample ("CCWS").[303]

Class R-1 Reports Submitted to the STB: I used the Quarterly Report of Revenues, Expenses, and Income (RE&I), the Annual Report of Cars Loaded and Cars Terminated, and Schedule 755 of the Annual R-1 Reports to validate the consolidated waybill and perform robustness checks for analyses.

B. Construction of the Consolidated Waybill

This section presents the steps to standardize the Class I traffic tapes and construct the consolidated waybill used to evaluate the competitive effects of the Transaction.

1) Cleaning and Data Limitations

In order to identify and merge common waybills across the individual Class I carriers' traffic tapes, I standardized key identifier fields (SPLC, FSAC, SCAC), commodity codes (STCC), car initials/number formats, and weight fields across traffic tapes. Where a traffic tape omitted an attribute (for example, originating FSACs in some BNSF records), I populated that attribute using the CSM crosswalk and publicly available official abbreviations.

For BNSF and CPKC, I constructed a route field based on the carrier and junction information provided in the data. Prior to route construction for BNSF, I standardized junction spelling using materials provided by the Applicants. For traffic tapes with existing route fields, I applied standard route cleaning. As done by the Applicants, I cleaned the CN route field to remove the "-DELY" suffix from routes. For NS, I pulled car type assignments from Dr. Bailey's NS traffic tapes to fill in instances where my provided NS traffic tapes were missing AAR car type.

After applying the above adjustments to each railroad's traffic tapes, I applied source-specific exclusions prior to consolidation to eliminate spurious or non-commercial observations:

[301] {{REDACTED }}
[302] *See* the Bailey Verified Statement Workpapers.
[303] *See* Workpaper "STBRailroadCostProgram_2006-2023.xlsm."

i. UP: excluded observations with "Net_Wgt" = -99, "LE_Code" = E (empty car records), and where UP was not a line-haul carrier ("UP_Tar_Flag_Ind" is empty)
ii. CPKC: excluded observations with "Billed Weight" = 25 tons and zero freight revenue
iii. NS: excluded "LD_SRC_GRP" = Unbilled observations where "REBILL_CODE" = Non-Revenue, excluded "LD_SRC_GRP" = Unbilled when the same movement appeared as a "LD_SRC_GRP" = Billed observation as well.

Consistent with the Applicants, I additionally dropped empty cars from each Class I tape. Empty cars were identified with source specific columns, zero net weight, or STCC numbers indicating empty shipments.[304]

2) Consolidation of Traffic Tapes Across Class I Rail Carriers

Consolidation (record linkage) across traffic tapes used the canonical four-key match: waybill date, waybill number, car/equipment number, and car/equipment initial. BNSF reports multiple waybill numbers under a single "ACCTG_WB_ID," so I additionally use the "ACCTG_WB_ID" field to consolidate BNSF traffic tapes with the other Class I traffic tapes. I began with BNSF as a base tape and incrementally merged the other Class I tapes on the four-key combination, performing outer merges so that all movements reported by any Class I carrier would appear in the consolidated build.

To avoid artificially inflating movement counts, records that were duplicated only on the four keys within a given traffic tape and after source-specific exclusions were excluded from the outer merges. These movements contained distinct information in non-key columns and were instead added after the completion of all outer merges. For the purposes of combining the traffic tapes, CP and KCS entries in the CPKC tape are recorded as distinct observations and were treated as separate reporting railroads distinguished by the CPKC source field.

The final consolidated waybill dataset is the union of: (i) merged subsets where a movement had matching four-key records across two or more Class I tapes, (ii) remaining single-tape waybills that did not merge with any other tape, and (iii) the small set of observations duplicated on the four keys.

[304] *See* Bailey Verified Statement at p. C6.

3) Standardization Across Traffic Tapes

For each consolidated movement I produced a single, standardized set of key movement attributes (movement route, origin & destination SPLC/FSAC/SCAC, STCC, movement tonnage, movement revenue, and reported mileage). The selection rules are:

i. If tapes report different route lengths, select the route from the tape with the longer route, i.e., the route that reports the most interchanges.

ii. If route lengths are identical:

   a. Case A: if the first railroad on the route is a Class I, select that railroad's tape values;

   b. Case B: otherwise, select the tape with the higher reporting railroad revenue; if revenues are tied, select the tape with higher reported tons.

Movement mileage was computed using PC*Miler on the standardized origin SPLC, standardized route, and destination SPLC. If PC*Miler could not generate mileage for an input route, I used the railroad-reported mileage from the relevant traffic tape (except for CSXT reported mileage, which reports the sum of online and offline mileage and is not comparable to other Class I reported mileage). As in Dr. Israel's report, CSXT mileage relies solely on PC Miler.[305]

Since the Class I Traffic Tapes were at different levels of granularity (e.g. BNSF reports on the car level and CN reports on the waybill level), I grouped the consolidated movements to the waybill level before performing any analyses. The waybill level was identified by waybill date, waybill number, Standardized SPLC/FSAC/SCAC/STCC fields, and service type[306].

After grouping to the waybill level, there were instances of multiple weights or routes coming from observations within the same waybill. In cases of multiple weights, I relied on the weight from the source railroad for the standardized set of key movement attributes. If the same source reported multiple weights, I assigned weight using the Applicants' priority system: UP, NS, CSXT, BNSF, CP, KCS.[307]

[305] *See* Israel Verified Statement at p. 79, "I find CSXT waybill distances to be unreliable, and substitute in distances for CSXT from PC Miler, which is a rail freight routing software that is commonly used in the industry."

[306] I used crosswalks from the Applicants and the definitions from the STB to assign service type. In the consolidated waybill, I use numbers to assign service type: 1: General Merchandise, 2: Intermodal, 3: Bulk, and 4: Automotive. *See 2023 Surface Transportation Board Carload Waybill Sample Reference Guide*. U.S. Surface Transportation Board. March 5, 2025. https://www.stb.gov/wp-content/uploads/2023-STB-Waybill-Reference-Guide.pdf at p. 63. {{REDACTED }}

[307] *See* Bailey Verified Statement at p. C33.

In instances of multiple route fields coming from observations within the same waybill, I chose the longest route first. If routes were the same length, I used the route from the source railroad for the standardized set of key movement attributes. If the same source reported multiple routes, I assigned route using the Applicants' ton priority system: UP, NS, CSXT, BNSF, CP, KCS.[308] The Applicants use a different priority system to assign tons and route information. I relied on their ton priority system over their route priority system to keep information consistent within a waybill.

C. Transearch Data

To obtain multi-modal flows between BEA areas and STCC4 commodity groups, I utilized the 2023 Transearch dataset, as supplied by the Applicants, for non-rail modes and combined it with the 2023 consolidated waybill for rail to form a modal stack by origin BEA area, destination BEA area, STCC4, and service type.[309] The Transearch dataset supplied by the Applicants does not include service type. I assigned the intermodal and automotive service types based on STCC4s defined as intermodal or automotive analogously to the process employed by the Applicants and grouped remaining STCC4s into a combined general merchandise and bulk category.

1) Cleaning and Aggregation

I assigned origin and destination BEA area names then aggregated by mode (rail, truck, air, water, pipeline, other), origin BEA area, destination BEA area, STCC4, and the intermodal, automotive, and combined general merchandise/bulk service type categories, summing revenue and mileage. I performed the same aggregation on the 2023 consolidated waybill then stacked the two datasets to create a combined modal dataset to evaluate cross-mode demand estimation and diversions.

D. Short-haul Routes and Mileage

I relied on data from the Carey Verified Statement Workpapers to identify routes that could be short-hauled, i.e. the portion of CSXT's mileage on a movement that could be diverted to NS, and to identify the short-haul junction where NS and CSXT would interchange post-Transaction.[310] Based on the short-haul junction, I prepared a post-Transaction route where the CSXT portion of the movement would be partially diverted to NS. CSXT retained the short haul between the interchange with NS and the CSXT sole-served origin or destination. To assign the post-Transaction short-haul

[308] *See* Bailey Verified Statement at p. C33.
[309] *See* Bailey Verified Statement at p. C48.
[310] {{REDACTED }}

route for each diverted movement, I selected a candidate UP/NS route through one of the major mid-continent interchange points, including Chicago, New Orleans, East St. Louis, Memphis, Shreveport, and Kansas City. I identified all possible routes between the origin and destination SPLC where UP and NS could interchange at these six mid-continent interchange points and where NS and CSXT interchange at the short-haul junction identified in the Carey Verified Statement.[311] If the original route included shortlines, they retain their original segment of the movement. I assigned mileage to all constructed short-haul routes using the PC*Miler distance for each segment of the route.[312] For each UP-CSXT interline movement that could be short-hauled, I chose the short-haul route between the origin and destination with the minimum total route mileage and retained the short-haul mileage for UP, NS, and CSXT, individually.

E. URCS

1) Recreating URCS Variable Costs

I implemented the URCS movement costing methodology programmatically by reproducing the STB's Excel-based URCS logic to estimate variable costs efficiently across the consolidated waybill. Inputs were drawn from the consolidated traffic tapes where available (car weights, owner type, segment type) and from lookups aligned to STB standard forms (car type mappings, commodity descriptions). When URCS required mileages or segment classifications not directly present in a tape, I used PC*Miler mileages and the route standardization described above. To assign segment type as described by the STB[313], I rely on the origin and destination SCACs in the consolidated waybill. I assign shipment size in the following manner: if the shipment car type is a TOFC/COFC flat car, the shipment is intermodal. For non-intermodal shipments, I follow the STB's definition of shipment size.[314]

The consolidated waybill is aggregated by waybill number, waybill date, movement route, origin and destination FSAC, SCAC, SPLC, STCC code, and inputs to the URCS calculation, including car type, car owner type, railroad, segment type, commodity description, then costs are

[311] {{REDACTED }}
[312] {{REDACTED }}
[313] *See* Workpaper "STBRailroadCostProgram_2006-2023.xlsm."
[314] Shipments with greater than or equal to 50 cars are unit trains, those with between six and 50 cars are multi-unit shipments, and those with less than six cars are single-unit shipments. *See* Workpaper "STBRailroadCostProgram_2006-2023.xlsm."

calculated individually for each railroad on a given movement. The segment, railroad, and distance inputs are defined individually for each railroad.

For short-haul movements, I calculate costs for each carrier, relying on the post-Transaction short-haul mileages for UP, NS, and CSXT as the distance input to the URCS function. Post-Transaction short-haul mileages come from the short-haul route assignment described above. All other short-haul URCS inputs are assigned in the same manner as the original movement. The segment type for each of UP, NS, and CSXT reflects the updated short-haul route.[315]

2) Validation Against STB's CCWS URCS

To validate the programmatic URCS implementation, I compared my calculated variable cost estimates to the STB's URCS variable costs available in the Confidential Carload Waybill Sample ("CCWS"). The CCWS contains the STB input treatment and URCS outputs, enabling record-level comparison.

{{REDACTED

}} Cost differences reflect undisclosed STB preprocessing choices and edge cases in mileage treatment; those differences are immaterial to the aggregate cost and margin patterns used in subsequent analysis.

F. Construction of the Calibration Dataset

This section lays out the construction of the calibration dataset used in the merger simulation.

1) Data Limitations

To construct the calibration dataset, I imposed data limitations at the waybill level. I limited the waybill to valid routes, defined as routes starting and ending in a SCAC. I also excluded waybills with non-positive movement revenue, defined as the sum of Class I reported revenues, and waybills with non-positive tons.

[315] The calculated costs on the CSXT portion of the movement potentially understates the trues costs that would be incurred by CSXT, as it would still incur movement specific costs that do not depend on the movement mileage.

[316] {{REDACTED }}

For the purposes of the merger simulation, I excluded inconsistent observations, defined as observations reporting positive miles and no revenue on a waybill or observations reporting non-zero revenue and no miles on a waybill. I additionally limited the dataset to valid STCC codes and excluded movements where the railroads reflected in the route do not align with the railroads that report revenue and mileage on the movement.

Consistent with the treatment in the Hunt Verified Statement, I excluded intranodal moves in which origin and destination FSAC/SCAC combinations are identical. Lastly, to avoid movements understating reported movement revenue or mileage, waybills containing non-Class I SCACs from the company groupings identified in the Hunt Verified Statement are excluded apart from KCS/KCSM and CP/CPRS. [317]

2) Additional Fields and Aggregation

To this limited data, I merged theoretical post-Transaction mileages for the relevant parties and costs calculated with URCS. I then grouped the remaining waybills such that each row is identified by a corridor and a list of Class I railroads on the route; I averaged mileage and summed revenue and costs. Corridors are defined by origin BEA area, destination BEA area, and STB service type. As a result of grouping the data by the list of Class I railroads on the route, interline routes between a Class I railroad and a non-Class I railroad are grouped into single-line routes for that Class I. I calculate rates per ton using each Class I's revenue and total tonnage in the grouping of corridor, and list of Class I railroads. Non-Class I revenues and costs are not included in my analyses, and I do not calculate rates for non-Class Is. If a non-Class I railroad does not change its rate in response to changes in Class I rates, the non-Class I rate would not be meaningful for understanding the effects of the merger.

[317] *See* the Hunt Verified Statement Workpapers.

XVI. APPENDIX F

A. Additional Tables and Figures

Figure 19: Count of CSXT Origins/Destinations Overlapping with NS on UP-CSXT Interline Movements, 2023 {{

REDACTED

}}

Table 16: Implied Post-Transaction Gross Profit Loss by Movement Type on UP-NS Interline Movements, 2023 {{

REDACTED

}}

Figure 20: Average Percent Difference Between CGP Ceiling and Prevailing UP/NS Rates, 2023 {{

REDACTED

}}

Exhibit 1

Ramsey D. Shehadeh
Senior Managing Director

NERA
2112 Pennsylvania Avenue, NW
Washington, DC 20037
212-345-6089
Ramsey.Shehadeh@nera.com

Overview

Dr. Shehadeh's economic research addresses the competitive effects of mergers and acquisitions and business conduct raised in the context of government and regulatory investigations. His research evaluates the economics of firm and industry performance, pricing, business investment and innovation. He specializes in the application of statistical modeling and econometrics to these areas.

Dr. Shehadeh has presented his research before enforcement agencies including the U.S. Federal Trade Commission, U.S. Department of Justice, U.S. Commodity Futures Trading Commission, Federal Energy Regulatory Commission, state attorneys general, members of Congress, European Commission, and the Canadian Competition Bureau, among others. He also has testified in state and federal courts, before arbitration panels and in international proceedings.

Dr. Shehadeh has conducted research in industrial organization and econometrics and published his research in peer-reviewed journals. He has spoken and lectured frequently on antitrust economics with a focus on the evaluation of the competitive effects of mergers and acquisitions, and on the application of economics in complex commercial litigation. Dr. Shehadeh received his M.A. and Ph.D. degrees in Economics from Cornell University, where he specialized in industrial organization, regulation and econometrics.

Education

Cornell University
Ph.D., Economics 1998
M.A., Economics 1996

University of Wisconsin at Madison
B.S., Mathematical Economics 1990

Professional Experience

NERA
Senior Managing Director 2003 - Present
Chair, NERA Global Antitrust Practice, 2011 – 2016
NERA Board of Directors, 2014 – 2016
NERA Investment Committee, 2004 – 2011, Chair 2008-2011

Vice President 2000 - 2003
Senior Consultant 1999 - 2000
Consultant 1998 - 1999
External Consultant 1993 - 1998
Economic Analyst 1991 - 1993

Department of Economics, Cornell University 1993 - 1998
Instructor for Mathematical Economics
Research Assistant in Industrial Organization

Professional Activities

Associate Member, American Bar Association

Vice Chair, Economics Committee, Antirust Law Section, 2010-2015.

Member, American Economic Association

Adjunct Member, Antitrust Committee, ABCNY, 2001-4, 2007-10.

Referee, *International Journal of Industrial Organization*

Selected Consulting Engagements

Seismic Software
Assessed the competitive effects of the acquisition by Seismic Software, Inc. of Highspot Inc.

Roku
Assessed the competitive effects of the acquisition of Roku Inc. by Fox Corporation.

GATX and Brookfield
Assessed the competitive effects of the acquisition of Wells Fargo Rail by a rail car and locomotive joint venture of GATX and Brookfield Infrastructure.

Valvoline
Assessed the competitive effects of the acquisition of Oil Changers by Valvoline.

MRC Global
Assessed the competitive effects of the acquisition of MRC Global by DNOW.

Global Payments
Assessed the competitive effects of the acquisition by Global Payments of Worldpay and the sale of Global Payments' TSYS division to FIS.

Energy Transfer
Assessed the competitive effects of the acquisition by Energy Transfer of terminaling assets from PBF.

Capital One and Discover
Assessed the competitive effects of the acquisition by Capital One of Discover Financial.

Boston Scientific
Assessed the competitive effects of the acquisition by Boston Scientific of Bolt Medical.

Nano Dimension
Assessed the competitive effects of the acquisitions by Nano Dimension of Markforged and Desktop Metal.

ChampionX
Assessed the competitive effects of the sale of ChampionX to SLB.

Republic Services
Assessed the competitive effects of the acquisition by Republic of Shamrock Environmental.

BlackRock
Assessed the competitive effects of the acquisition by BlackRock of HPS Investment Partners.

Phillips 66
Assessed the competitive effects of the acquisition by Phillips 66 of EPIC NGL.

Marsh McLennan Companies
Assessed the competitive effects of the acquisition by MMC of McGriff.

ConocoPhillips
Assessed the competitive effects of the acquisition by ConocoPhillips of Marathon Oil.

Boston Scientific
Assessed the competitive effects of the acquisition by Boston Scientific of Axonics.

Chesapeake
Assessed the competitive effects of the acquisition by Chesapeake of Southwestern and the formation of Expand on natural gas supply.

Squarespace
Assessed the competitive effects of the sale by Squarespace of Tock Platform to American Express.

Cleveland Cliffs
Assessed the competitive effects of the acquisition by Cleveland Cliffs of Stelco Holdings.

Diamondback Energy
Assessed the competitive effects of the merger of Diamondback Energy, Inc. and Endeavor Energy Resources, L.P.

BlackRock
Assessed the competitive effects of the acquisition by BlackRock of Global Infrastructure Partners.

Neiman Marcus Group
Assessed the competitive effects of the combination of Saks and Neiman Marcus by Hudson's Bay Company, with investment from Amazon.

Koch Industries
Assessed the competitive effects of the acquisition by Koch Ag & Energy Solutions of OCI Global's Wever fertilizer operations.

ExxonMobil
Assessed the competitive effects of the acquisition by ExxonMobil of Pioneer Natural Resources.

BlackRock
Assessed the competitive effects of the acquisition by BlackRock of Preqin.

Sunoco LP
Assessed the competitive effects of the acquisition by Sunoco LP of NuStar.

Enbridge
Assessed the competitive effects of the acquisition by Enbridge of the natural gas distribution assets of Dominion Resources.

Flexera
Assessed the competitive effects of the acquisition by Flexera of Snow.

KinderMorgan
Assessed the competitive effects of the acquisition of certain Eagle Ford and Permian Basin pipeline assets from NextERA.

Subway
Assessed the competitive effects of the acquisition by Roark Capital of Subway.

Chevron
Assessed the competitive effects of the acquisition by Chevron of PDC Energy.

L3Harris and Aerojet Rocketdyne
Assessed the competitive effects of the acquisition by L3Harris of Aerojet Rocketdyne.

iRobot
Assessed the competitive effects of the acquisition by Amazon of iRobot.

GFL
Assessed the competitive effects of the acquisition by GFL of Capital Waste Services.

Cummins Inc.
Assessed the competitive effects of the acquisition by Cummins of certain Faurecia diesel exhaust aftertreatment businesses of Forvia.

Tyson Foods
Assessed the competitive effects of the acquisition by Tyson Foods, Inc. of Williams Sausage Company.

Republic Services
Assessed the competitive effects of the acquisition by Republic of certain Rockies operations of GFL.

Finance of America
Assessed the competitive effects of the acquisition by Finance of America of American Advisors Group on the supply of reverse mortgages and home equity access.

Cummins Inc.
Assessed the competitive effects of the acquisition by Cummins of Teksid Hierro de Mexico, S.A. de C.V. and Teksid, Inc. from Stellantis.

KaMin LLC and IMin Partners
Assessed the competitive effects of the acquisition by KaMin of BASF Kaolin Minerals on competition in the supply of kaolin.

Cummins Inc.
Assessed the competitive effects of the acquisition by Cummins of Jacobs Vehicle Systems from Altra Industrial Motion Corp.

Summit Health
Assessed the competitive effects of the sale of Summit Health to Walgreens' VillageMD.

BlackRock
Assessed the competitive effects of the acquisition by BlackRock of eFront.

Blackstone
Assessed the competitive effects of the sale by Blackstone of The Cosmopolitan Las Vegas to MGM Resorts.

Republic Services
Assessed the competitive effects of the acquisition by Republic of US Ecology.

Rentokil Initial plc and *Terminix Global Holdings, Inc*
Assessed the competitive effects of the acquisition by Rentokil of Terminix.

S&P Global
Assessed the competitive effects of the acquisition by S&P of IHSMarkit.

Oracle Corporation
Assessed the competitive effects of the acquisition of Cerner on EHR technologies.

Marathon Petroleum Corporation
Assessed the competitive effects of the sale of Speedway to Seven & i Holdings Co.

Charles Schwab Corporation
Assessed the competitive effects of the acquisition of TDAmeritrade.

Marsh McLennan Companies
Assessed the competitive effects of the acquisition by MMC of Jardine Lloyd Thompson (JLT) Group.

Spotify
Assessed the competitive effects of the acquisition of Megaphone by Spotify.

KPS Capital Partners
Assess competitive effects of acquisitions by portfolio company including Dexko.

Refinitiv
Assessed the competitive effects of the acquisition of Refinitiv by LSE Group.

AltaGas
Assessed the competitive effects of the acquisition by AltaGas of selected midstream assets and interests from Petrogas and others.

HollyFrontier
Assessed the competitive effects of the acquisition by HollyFrontier of refining assets from Sinclair Petroleum.

Pembina
Assessed the competitive effects of the acquisition by Pembina of Kinder Morgan Canada and Cochin Pipeline.

Chevron Corporation
Assessed the competitive effects of the acquisition of Noble Energy by Chevron.

Raytheon
Assessed the competitive effects of the combination of Raytheon and UTC.

Tenaris
Assessed the competitive effects of Tenaris acquisitions including of IPSCO.

Chevron Corporation
Assessed the competitive effects of the potential acquisition of Anadarko by Chevron.

PBF
Assessed the competitive effects of the acquisition by PBF Energy of Shell's Martinez refinery.

RedHat
Assessed the competitive effects of the acquisition by IBM of RedHat.

Liberty Media
Assessed the competitive effects of acquisitions by Liberty (including related to its interest in SiriusXM) of interests in Pandora and iHeartMedia.

Metso and Outotec
Assessed the competitive effects of the combination of Metso and Outotec mining and processing equipment and infrastructure.

Nexeo
Assessed the competitive effects of the acquisition by Nexeo of Univar.

Hornblower
Assessed the competitive effects of the acquisition of selected entertainment properties.

HollyFrontier
Assessed the competitive effects of the acquisition by HollyFrontier of Sonneborn.

CDK
Assessed the competitive effects of the acquisition by CDK of ELEADS1.

Marathon Petroleum and Andeavor
Assessed the competitive effects of the acquisition by Marathon Petroleum of Andeavor/Tesoro.

Cohu
Assessed the competitive effects of the acquisition by Cohu, Inc. of Xcerra Corporation.

Discovery
Assessed the competitive effects of the acquisition by Discovery Communications of Scripps Networks Interactive.

Penn National
Assessed the competitive effects of the acquisition by Penn National of Pinnacle.

GFG Alliance
Assessed competitive effects of acquisition by GFG Alliance company Liberty Steel USA of Keystone Consolidated Industries Inc. from Contran Corp.

CDK
Assessed the competitive effects of the potential acquisition by CDK of Automate.

Grupo Bimbo
Assessed the competitive effects of the acquisition by Bimbo of Bay's English muffins.

Holly Energy
Assessed the competitive effects of the acquisition by Holly of selected crude oil pipeline interests of Plains All American Pipeline.

Pembina
Assessed the competitive effects of the acquisition by Pembina of Veresen related to midstream services in Western Canada.

Showa Denko
Assessed the competitive effects of the acquisition by SDK of the graphite electrode business of SGL.

Tesoro
Assessed the competitive effects of the acquisition by Tesoro of selected Flyer's petroleum marketing assets.

Tesoro
Assessed the competitive effects of the acquisition by Tesoro of Western Refining.

Conagra
Assessed the competitive effects of the acquisition by Conagra of Thanasi Foods.

Clayton Dubilier & Rice/Brand Energy & Infrastructure
Assessed the competitive effects of the acquisition by Brand of Safway on infrastructure services.

Valspar
Assessed the competitive effects of the acquisition by Sherwin-Williams of Valspar on the supply of paints, stains, colorants and related products.

BC Partners/PetSmart
Assessed the competitive effects of the acquisition by PetSmart of Chewy.com.

TTM
Assessed the competitive effects of the acquisition by TTM of Anaren on competition in printed circuit board manufacturing.

Joy Global
Assessed the competitive effects of the acquisition by Komatsu of Joy Global on the supply of mining equipment.

The Dow Chemical Company
Assessed the competitive effects of the combination of Dow and DuPont on competition in specialty chemicals, materials sciences, crop protection, seeds and other areas.

TDAmeritrade
Assessed the competitive effects of the acquisition by TDAmeritrade of Scottrade on competition in financial trading platforms and financial advisor technology services.

CBOE
Assessed the competitive effects of the acquisition by CBOE of BATS on competition in financial trading platforms and traded index products.

Couche-Tard
Assessed the competitive effects of the acquisition by Alimentation Couche-Tard Inc. of selected convenience store and refined products marketing assets of ExxonMobil's Imperial Oil.

Terex and Konecranes
Assessed the competitive effects of the acquisition by Konecranes of selected port handling businesses of Terex.

Electronic Funds Source
Assessed the competitive effects of the acquisition by WEX Inc. of Electronic Funds Source LLC on competition in fleet cards.

PBF
Assessed the competitive effects of the acquisition of midstream assets by PBF Logistics from Plains All American.

Air Liquide
Assessed the competitive effects of the acquisition by Air Liquide of Airgas.

Target Corporation
Assessed the competitive effects of the acquisition by CVS of Target's pharmacy and clinic operations.

KeyBank
Assessed the competitive effects of the acquisition of First Niagara by KeyBank.

Halliburton
Assessed the competitive effects of the potential acquisition of Baker Hughes by Halliburton.

Energy Transfer
Assessed the competitive effects of the acquisition by Energy Transfer of Williams on the supply of midstream oil and gas services.

Western Digital Corporation
Assessed the competitive effects of the acquisition by Western Digital of SanDisk.

Western Digital Corporation
Assessed the competitive effects of the removal of the MOFCOM hold-separate related to Western Digital's HGST division on the supply of storage solutions in China.

Bekaert and Ontario Teachers' Pension Plan
Assessed the competitive effects of the merger of the global ropes and advanced cords businesses of Bekaert and Bridon.

Mattress Firm Holding Corp.
Assessed the competitive effects of the acquisition by Mattress Firm of HMK Mattress Holdings LLC (Sleepy's).

Platform Specialty Products Corporation
Assess competitive effects of the acquisition by Platform of Alent plc.

ArcLight
Assessed the competitive effects of the acquisition by ArcLight of selected Mid-Atlantic and Northeast terminaling and marketing assets of Gulf.

Markit
Assessed the competitive effects of the acquisition by Markit of CoreOne Technologies on the supply of financial integration and trading software.

Intel
Assessed competition in the supply of semiconductor fabrication tools.

Teva
Assess the competitive effect of the potential acquisition by Teva of Mylan.

Alstom
Assessed the competitive effects of the acquisition by General Electric of Alstom power assets.

AbbVie
Assessed the competitive effects of the acquisition by AbbVie of Pharmacyclics on the supply of blood cancer therapies.

STERIS
Assessed the competitive effects of the potential acquisition by STERIS of Synergy on the supply of sterilization services.

Chevron Phillips Chemical Company
Assessed the competitive effects of the acquisition by Solvay Specialty Polymers of Chevron Phillips Chemical's polyphenylene sulfide business.

TTM

Assessed the competitive effects of the acquisition by TTM of Viasystems Group, Inc. on competition in printed circuit board manufacturing.

Post Cereal
Assessed the competitive effects of the acquisition by Post Holdings and its Post Foods division of the ready-to-eat cereal operations of MOM Brands.

DKK
Assessed the competitive effects of the acquisition by DKK (Denka) of the neoprene business of DuPont.

Family Dollar
Assessed the competitive effects of the potential acquisitions of Family Dollar by Dollar Tree or by Dollar General on retail competition.

Merck KGaA
Assessed the competitive effects of the acquisition by Merck of Sigma Aldrich on competition in life sciences research tools.

Medtronic
Assessed the competitive effects of the acquisition by Covidien of Medtronic on competition in the development and supply of medical devices.

Infineon Technologies AG
Assessed the competitive effects of the acquisition by Infineon of International Rectifier.

Kraton Performance Polymers, Inc.
Assessed the competitive effects of the proposed acquisition by Kraton of LCY Chemical Corp.'s styrenic block copolymer operations.

Marathon Petroleum Corporation
Assessed the competitive effects of the acquisition by Marathon of the motor fuels marketing assets of Hess.

CVS Caremark and Cardinal Health
Assessed the competitive effects of the generic drug purchasing joint venture formed between CVS and Cardinal.

Direct Energy and Hess Corporation
Assessed the competitive effects of the acquisition by Direct Energy, a Centrica plc company, of Hess Energy Marketing on the supply of natural gas and electricity.

Tradeweb Markets

Assessed the competitive effects of selected acquisitions by Tradeweb in bond trading platforms including BondDesk.

Magellan Midstream Partners LP
Assessed the competitive effects of Magellan's acquisition of the Rocky Mountain Pipeline System of Plains All American Pipeline, L.P.

Louisiana-Pacific Corporation
Assessed the competitive effects of the proposed acquisition by LP of Ainsworth of the supply of wood structural panels.

BP
Assessed the competitive effects of the sale of BP's Los Angeles (Carson) refinery to Tesoro.

Swissport
Assessed the competitive effects of the acquisition of Servisair International by Swissport on ground logistics for air travel.

Google
Assessed the competitive effects of the acquisition by Arris Group of Google's Motorola Home division.

EQT Corporation and Peoples Natural Gas
Assessed the competitive effects of the sale to Peoples of the Equitable Gas Company, and the simultaneous sale to EQT of certain Peoples midstream operations.

FiServ
Assessed the competitive effects of the acquisition by FiServ of Open Solutions, Inc. on the supply of financial institution software solutions.

Oracle Corporation
Assessed the competitive effects of business combinations in B2B transaction and exchange platforms.

Primedia
Assessed the competitive effects of the acquisition by Primedia of Rent.com from eBay.

Marubeni Corp. and Gavilon
Assessed the competitive effects of the acquisition by Marubeni of Gavilon on competition in supply of logistics for agricultural products, including elevators, export terminals and rail.

Marathon Petroleum and BP
Assessed the competitive effects of the acquisition by Marathon Petroleum Corp. of BP's Texas City Refinery.

Nuance Communications, Inc.
Assessed the competitive effects of acquisitions of speech recognition and transcription technology providers, including Transcend Services.

ArcelorMittal and Nippon Steel & Sumitomo Metal
Assessed the competitive effects of the joint acquisition by ArcelorMittal and Nippon Steel & Sumitomo Metal Corporation of ThyssenKrupp Steel USA.

Dover Corporation
Assessed the competitive effects of the acquisition by Dover's Hill Phoenix business of Anthony International on the supply of commercial refrigeration.

United Technologies Corporation and Goodrich Corporation
Assessed the competitive effects of the acquisition by United Technologies of Goodrich on the supply of aerospace engines, components and technologies.

Hilcorp
Assessed the competitive effects of the acquisition by Hilcorp of the Cook Inlet (Alaska) assets of Marathon Oil.

Kinder Morgan Inc. and El Paso Corporation
Assessed the competitive effects of the acquisition by Kinder Morgan of El Paso on the supply of natural gas pipeline transportation services.

Western Digital Corporation
Assessed the competitive effects of the acquisition of Hitachi Global Storage Technologies by Western Digital on the supply of storage solutions.

Maple Group
Assessed the competitive effects of the combination of the TMX (including the Toronto Stock Exchange) and Alpha on securities listings and trading.

Temple-Inland Incorporated
Assessed the competitive effects of the acquisition of Temple-Inland by International Paper on the supply of linerboard and corrugated boxes.

Google and MMI

Assessed the competitive effects of the acquisition of Motorola Mobility (MMI) by Google on the supply of mobile communication devices, operating systems and technology.

Puma Energy
Assessed the competitive effects of the acquisition by Puma of Chevron's supply and marketing operations in Puerto Rico.

Google and Admeld
Assessed the competitive effects of the acquisition of Admeld by Google on internet advertising intermediation.

ExxonMobil Corporation and Puma Energy
Assessed the competitive effects of the acquisition of ExxonMobil's Latin American refining and marketing assets by Puma.

DENTSPLY International
Assessed the competitive effects of the acquisition of AstraZeneca's Astra Tech on the supply of dental implants and digital dentistry.

Sumitomo Metal Industries, Ltd.
Assessed the competitive effects of the acquisition of Standard Steel by SMI on the supply of freight and passenger rail wheels.

Ebro Foods SA
Assessed the competitive effects of the acquisition by Ebro Foods SA of SOS's rice operations including American Rice Incorporated.

Verigy, Inc.
Assessed the competitive effects of the acquisition by Advantest of Verigy on the supply of automated test equipment for semiconductor manufacturing.

Holly Corporation and Frontier Oil Corporation
Assessed the competitive effects of the merger of Frontier Oil and Holly on the supply of light petroleum productions in PADDs III and IV.

NYSE Euronext, Inc.
Assessed the competitive effects of the proposed acquisition of NYSE Euronext by Nasdaq OMX, including on competition in trading, listings, trade reporting, and data.

AMB Property Corporation and ProLogis
Assessed the competitive effects of the merger of AMB and ProLogis on the supply of commercial real estate.

Dollar Thrifty Automotive Group
Assessed the competitive effects of the proposed acquisition of Dollar Thrifty by either of Hertz or Avis.

Verigy, Inc.
Assessed the competitive effects of the acquisition by Verigy of LTX-Credence on the supply of automated test equipment for semiconductor manufacturing.

7-Eleven
Assessed the competitive effects of the acquisition of selected ExxonMobil marketing assets in Florida by Seven & I Holding Co.'s 7-Eleven convenience store division.

Quanex Building Products Corporation
Assessed the competitive effects of the acquisition by Quanex's Truseal Technologies division of Lauren Industries' Edgetech I.G. division on the supply of insulated glass components.

McAfee, Inc.
Assessed the competitive effects of the vertical acquisition of McAfee by Intel.

Alliance Energy
Assessed the competitive effects of the acquisition of selected ExxonMobil marketing assets in New England by Alliance.

Nighthawk Radiology Services
Assessed the competitive effects of the acquisition of Nighthawk by Virtual Radiologic on the supply of teleradiology services.

BHP Billiton
Assessed the competitive effects of the proposed acquisition of Potash Corporation of Saskatchewan by BHP on the supply of potash.

Enbridge Energy
Assessed the competitive effects of the acquisition by Enbridge of selected Anadarko gas gathering and processing assets of Atlas Pipeline.

Tyco International/ADT and Broadview Security/Brinks Home Security
Assessed the competitive effects of the acquisition by ADT of Broadview, combining the two largest providers of home security systems and monitoring services.

PBF Energy
Assessed the competitive effects of the acquisition of Valero's Paulsboro refinery by PBF.
Global Partners LP

Assessed the competitive effects of the acquisition by Global of selected ExxonMobil marketing assets in the Northeast.

Hart InterCivic
Assessed the competitive effects of the consummated acquisition by Election Systems & Software, Inc. of Diebold's Premier Election Solution, Inc. on the supply of voting equipment systems and technologies.

Global Partners LP
Assessed the competitive effects of the acquisition by Global of the Warex Newburgh terminal.

Energy Transfer Equity, L.P./Energy Transfer Partners, L.P. and GE Energy Financial Services, Inc./Regency Energy Partners LP
Assessed the competitive effects of the acquisition by Energy Transfer Equity of natural gas assets from GE EFS and Regency Energy Partners.

SenoRx
Assess competitive effects on the supply of oncology related medical devices of the acquisition of SenoRx by Bard.

Yellow Pages Group/Yellow Media
Assessed the competitive effects of the acquisition by Yellow Pages Group/Yellow Media of Canpages on the supply of local search advertising services.

Fidelity National Information Services, Inc. and Metavante Technologies
Assessed the competitive effects of the merger of FIS and Metavante on the supply of financial institution IT/IS, including bank core processing software.

Pilot Travel Centers LLC
Assessed the competitive effects of Pilot's acquisition of the truck stop and travel center operations of Flying J.

Merck & Co.
Assessed the competitive effects of Merck's acquisition of Avecia Biologics Limited on the supply of biologics process development, scale-up, and contract manufacturing, and the supply of innovator and follow-on biologics.

Lyondell Chemical Company
Assessed business performance and industry supply and demand conditions in the chemicals and refining sectors for a solvency assessment related to the merger of Lyondell and Basell.

Terra Industries
Assessed the competitive effects of the acquisition by Yara International of Terra.

Chevron Corporation
Modeled efficiency of auction mechanisms for allocating pipeline capacity.

Merck & Co.
Assessed the competitive effects of the merger of Schering-Plough Corporation and Merck on the supply of pharmaceuticals and animal health technologies.

Holly Corporation
Assessed the competitive effects of Holly's acquisition of Sunoco's Tulsa refinery and Sinclair's Tulsa refinery.

Sun Microsystems
Assessed competitive effects of the acquisition of Sun Microsystems by Oracle.

Magellan
Assessed the competitive effects of the acquisition by Magellan of the Longhorn Pipeline assets out of the Flying J bankruptcy.

Magnesium Elektron
Assessed the competitive effects of the acquisition by Magnesium Elektron of Revere International's magnesium operations.

Faurecia S.A. and EMCON Technologies LLC
Assessed competitive effects of the acquisition of EMCON by Faurecia on the supply of automobile muffler and exhaust assemblies.

Credit Suisse and Deutsche Bank
Assessed chemical industry business conditions for purposes of assessing changes in business conditions following the announcement of the proposed acquisition of Huntsman by Hexion.

Canadian Competition Bureau
Assessed the competitive effects of the merger of Suncor and Petro-Canada.

Terra Industries
Assessed the competitive effects of the potential acquisition by CF Industries of Terra.

NetApp
Assessed the competitive effects of the potential acquisition by NetApp of Data Domain.

Mitsubishi Rayon Corporation
Assessed competitive effects of the acquisition by Mitsubishi Rayon of Lucite International on competition in the supply of specialty chemicals.

Sanofi-Aventis
Assessed competitive effects of potential acquisitions and contracts on supply of active pharmaceutical ingredients.

The Dow Chemical Company/Morton Salt
Assessed competitive effects of the acquisition by K+S/ISCO of TDCC's Morton Salt division.

Chrysler Corporation/Cerberus Capital Management
Assessed competitive effects of potential transactions and regulatory issues on competition in the supply of automobiles.

AEA Investors/Houghton International
Assessed competitive effects of the acquisition by Houghton of DA Stuart on competition in the supply of metalworking fluids.

Waste Management
Assessed competitive effects of potential acquisitions of waste hauling and disposal operations.

The Dow Chemical Company and Rohm and Haas Company
Assessed competitive effects worldwide of the acquisition by Dow of Rohm and Haas on competition in the supply of chemicals.

Fresenius Medical Care Ag & Co. KGaA's
Assessed vertical competitive effects of Fresenius's license of intravenous iron drug Venofer from Luitpold Pharmaceuticals on the pricing to dialysis clinics and CMS reimbursement.

Ashland Inc. and Hercules Inc.
Assessed the competitive effects of the acquisition of Hercules by Ashland on competition in the supply of specialty chemicals.

Selected Steel Manufacturers
Assessed the competitive effects of changes in the supply of iron ore on iron ore prices faced by steel manufacturers.

Invitrogen Corporation
Assessed the competitive effects of the acquisition of Applied Biosystems Inc. by Invitrogen and the formation of Life Technologies Corp. on competition in the supply of systems and consumables for life sciences applications.

Marathon Petroleum Company
Assessed the competitive effects of the proposed acquisition by Marathon of CITGO pipeline and terminal interests in Ohio.

BP Corp., CITGO Petroleum Corp., ExxonMobil Corp., Marathon Oil Co., Shell Oil Co.
Assessed competition in gasoline refining, distribution and marketing related to plaintiff's claims regarding unfair pricing. Assessed plaintiffs' expert claims during class certification proceedings regarding class-wide methods to assess existence and magnitude of impact.

Comtech Telecommunications Corporation and Radyne Corporation
Assessed the competitive effects of the acquisition of Radyne by Comtech on competition in the supply of satellite and terrestrial communications equipment and software.

BEA
Assessed the competitive effects of the acquisition of BEA by Oracle on competition in the supply of middleware and SOA software and systems.

Ralcorp
Assessed the competitive effects of the acquisition of Kraft's Post cereal division by Ralcorp, including econometric evaluation of pricing competition between and among brands.

Greenbrier
Assessed the competitive effects of the acquisition of American Allied Railway Equipment Company by Greenbrier on the supply of railcar wheel sets.

ConocoPhillips
Assessed likely pass-through of environmental compliance costs and implications of emission allowance distribution on competitiveness of U.S. refiners.

Chevron
Assessed Plaintiffs' claims related to liability and damages associated with alleged competitive effects of Unocal gasoline patents in relation to California's gasoline standards.

California Electric Power Supplier
Assessed the price effects of power trading strategies in an investigation by CAISO and FERC.

Henkel
Assessed the competitive effects of acquisition by Henkel of ICI (National Starch) adhesives.

Calumet Specialty Products and Penreco
Assessed the competitive effects of the acquisition of Penreco, a specialty petroleum-based lubricant and solvent joint venture of ConocoPhillips and ME Zuckerman, by Calumet.

CommScope and Andrew Corporation
Assessed the competitive effects of the acquisition of Andrew by CommScope on the supply of telecommunications products, including partial ownership of Andrew in certain joint ventures.

ExxonMobil Corp.
Assessed the outlook for the prices of oil and natural gas for reserves in Australia for determination of damages.

3M
Assessed the competitive effects of the acquisition by 3M of Standard Abrasives.

URS Corporation and Washington Group International
Assessed the competitive effects of the acquisition by URS of Washington Group on the supply of systems engineering and program management, including to the Department of Defense.

Websense and Surf Control
Assessed the competitive effects of the acquisition by Websense of Surf Control on the supply of internet security management software.

Chemtura
Assessed competitive effects of acquisitions of chemicals additives for plastics manufacture.

Universal Music Group and Bertelsmann Music Group
Assessed the competitive effects of the acquisition by UMG of BMG's music publishing group.

Mortgage Guaranty Insurance Corporation and Radian
Assessed the competitive effects of the proposed merger of MGIC and Radian on the supply of credit enhancement, including mortgage insurance.

JDA Software
Assessed competitive effects of potential software acquisitions.

Western Refining and Giant Industries
Assessed the competitive effects of the proposed acquisition of Giant by Western on the supply of light petroleum products in the Southwest, including Albuquerque.

Siemens and Nokia
Assessed the competitive effects of the joint venture of the telecommunications equipment divisions of Nokia and Siemens on the supply of and innovation in mobile telephony equipment, software and systems.

Men's Wearhouse
Assessed the competitive effects of the acquisition by Men's Wearhouse of After Hours retail operations.

Building Materials Manufacturer
Assessed competitive effects of potential acquisitions of selected materials manufacturers.

Chevron
Assessed the competitive effects of the proposed acquisition of USA Petroleum by Chevron.

Coal Mining Company
Assessed the competitive effects of potential acquisitions in the supply of Appalachian coal, including evaluation of the extent of competition between Appalachian coal and alternatives.

Hyundai Oilbank
Evaluated incentive effects of potential contractual structures governing transfers of intermediate feedstocks between Hyundai refinery and petrochemical joint venture.

Polycom
Presentations and submissions to the Department of Justice and European Commission with regarding the competitive effects of the acquisition by Cisco of Tandberg.

Kindred Healthcare
Assessed the competitive effects of the joint venture and IPO of the institutional pharmacy businesses of Kindred and AmerisourceBergen (PharMerica).

ADP
Assessed the competitive effects of potential acquisitions in business process software.

Service Corporation International
Assessed the competitive effects on the provision of funeral and cemetery services of the acquisition by SCI of Alderwoods Group.

Carlson Wagonlit
Assessed competitive effects of acquisition by Carlson Wagonlit of TQ3Navigant on the provision of corporate travel services.

Alon USA
Assessed the competitive effects on refining of Alon USA's acquisition of Paramount and Apex's Edgington refinery.

GATX
Assessed competitive effects of acquisition by GATX's American Steamship Company of selected waterborne cargo vessels of Oglebay Norton's Marine Services.

Marathon Petroleum Company
Assessed presence and extent of alleged market manipulation of certain crude oil index prices in response to Commodity Futures Trading Commission investigation.

ConocoPhillips and Burlington Resources
Assessed the competitive effects of acquisition by ConocoPhillips of Burlington Resources, including on the supply of natural gas.

Pitney Bowes
Assessed the competitive effects of Pitney Bowes's proposed acquisition of business automation software publisher First Logic.

Elpida Memory, Inc.
Assessed affected commerce associated with alleged price fixing in DOJ DRAM investigation.

Holly Corporation
Assessed competitive effects of certain downstream acquisitions.

Honeywell Corporation
Assessed liability and damages claims related to manipulation of contract prices for petrochemical feedstocks under index-based, long-term pricing.

Grupo Cementos de Chihuahua
Assessed the competitive effects of joint ventures in cement, aggregate and concrete.

Sumitomo Metals Industries
Assessed the competitive effects of potential mergers and acquisitions in ingot, plate and fabricated products.

ConocoPhillips
Assessed the competitive effects of the formation of joint ventures between ConocoPhillips and EnCana related to exploration and development in the Canadian oilsands and U.S. refining.

Valero Energy Corporation
Assessed damage allocation mechanisms related to MTBE contamination in mass torts litigation.

NDCHealth
Assessed allegations of monopolization, predation, foreclosure, tying and other actions against NDCHealth related to healthcare claims administration software.

Valero Energy Corporation and Premcor Incorporated
Assessed the competitive effects of the acquisition by Valero of Premcor, including effects of the combination on refining, transportation, distribution and marketing of petroleum products.

NeighborCare
Assessed economic evidence related to the existence of bid-rigging and volume of commerce.

Koch Industries
Assessed the competitive effects of the acquisition by Oneok of Koch's natural gas liquids fractionation, storage, transportation and purity products businesses.

JP Morgan's One Equity Partners/Mauser-Werke and Russell-Stanley
Assessed the competitive effects of the acquisition by One Equity Partners/Mauser-Werke of Russell-Stanley on industrial packaging, including IBCs and drums.

Chevron Corporation and Unocal Corporation
Assessed the competitive effects of the acquisition by Chevron of Unocal, including the effects of the combination on exploration, production, processing, transportation and marketing of crude oil, natural gas, petroleum products and petrochemicals.

CrossMatch Technologies, Inc. and Smiths Heimann Biometrics (Smiths Group plc)
Assessed the competitive effects of the acquisition by Cross Match Technologies, Inc. of Smiths Heimann Biometrics on competition in the supply of biometric technologies and software.

Columbia Gulf Transmission Company
Assessed the competitive effects of certain straddle and transmission contracts, rate stacking, interconnection policies and related activities in natural gas pipeline transportation.

Hanson PLC
Assessed competitive effects of potential acquisitions of precast concrete product manufacturers.

Valero L.P and Kaneb
Assessed the competitive effects of the formation of NuStar through acquisition by Valero of Kaneb, including the effects of the combination on refining, transportation, distribution and marketing of petroleum products.

Constellation
Assessed the competitive effects of the acquisition by Constellation Brands of Mondavi.

Enbridge, Inc. and Devon Energy Corporation
Assessed the competitive effects of the acquisition by Enbridge of selected North Texas gas gathering assets of Devon.

NeighborCare
Assessed the competitive effects of Omnicare's acquisition of NeighborCare on the supply of institutional pharmacy services.

Plains All American Pipeline
Assess competitive effects of selected crude pipeline acquisitions by Plains.

Blackstone Group/Graham Packaging
Assessed the competitive effects of Blackstone/Graham's acquisition of the plastics packaging division of Owens-Illinois.

ConocoPhillips
Assessed the competitive effects of the acquisition by ConocoPhillips of an interest in Lukoil, and the formation of joint ventures between Lukoil and ConocoPhillips.

Enbridge
Assessed the competitive effects of acquisition by Enbridge of Shell's Stingray pipeline and related Gulf of Mexico offshore interests.

TEPPCO
Assessed the competitive effects of potential natural gas pipeline acquisitions.

Hanson PLC
Assess competitive effects of potential acquisition by Hanson of selected Sherman Industries cement and concrete manufacturing facilities.

Pitney Bowes
Assessed the competitive effects of the acquisition by Pitney Bowes of Group One Software on the supply of data quality and postal sorting product software and technologies.

Agfa-Gevaert
Assessed the competitive effects of the acquisition by Agfa of Microgran/Lastra on the supply of prepress printing equipment and technologies.

ConocoPhillips
Assessed the competitive effects of the acquisition of selected E&P interests.

ConocoPhillips
Assessed the competitive effects of the sale of Northeast marketing assets to Sunoco.

Odfjell
Assessed the competitive effects of the acquisition of selected terminaling assets.

ConocoPhillips
Assessed the competitive effects of the acquisition of selected refining assets.

L'Air Liquide
Assessed the competitive effects of the acquisition by Air Liquide of the industrial gases assets of Messer Group.

ConocoPhillips
Assessed the competitive effects of the disposition of ConocoPhillips's Mid-Atlantic marketing assets to Lukoil/Getty.

ADP
Assessed the competitive effects of potential acquisitions of business process technology services and software providers.

Koch Industries and E. I. Du Pont De Nemours
Assessed the competitive effects of the acquisition by Koch Industries of Invista, the synthetic fibers business of Du Pont.

Holcim
Assessed the competitive effects of potential joint venture involving cement, aggregate and concrete production.

McKee
Assessed the competitive effects of acquisition by McKee foods of various portions of Hostess, including Drake's Cakes.

Thomson Financial
Assessed the competitive effects of the acquisition by Thomson of CCBN, a provider of business information, software and technology.

Koch Industries
Assessed the competitive effects of acquisitions in petrochemicals, especially synthetic fibers.

ADP
Assessed the competitive effects of potential acquisitions of government technology and automation, including software.

Morris Materials Handling
Assessed the competitive effects of combinations in industrial cranes and related services.

ConocoPhillips and Cumberland Farms/Gulf Oil

Assessed the competitive effects of the acquisition by Cumberland Farms/Gulf of the New York and New England motor fuel marketing assets of ConocoPhillips.

ADP
Assessed the competitive effects of the acquisition by Automatic Data Processing of ProBusiness on human resources and business process technology services and software.

MMC Norilsk Nickel and Stillwater Mining Company
Assessed the competitive effects of the acquisition by Norilsk of Stillwater on the mining, supply and trading of platinum group metals.

ConocoPhillips
Assessed the competitive effects of potential combinations on crude supply and refining, marketing and transportation of petroleum products.

Marathon Ashland Petroleum
Assessed the competitive effects of the proposed acquisition by Pilot Travel Centers of Williams Travel Centers from The Williams Companies.

Koch Industries
Assessed the competitive effects of the Koch acquisition of Farmland's nitrogen fertilizer assets.

IDC
Assessed the competitive effects, including on iron ore, coal, PGMs, steel, manganese, and zinc, of the acquisition by Anglo American of interests in Kumba and Avmin.

Marathon Ashland Petroleum
Assessed the competitive effects of refinery acquisitions.

ConocoPhillips
Assessed claims of private plaintiff regarding the competitive effects of the merger of Conoco and Phillips Petroleum on the supply of gasoline.

TransCanada Corporation
Assessed the competitive effects of acquisitions of natural gas pipelines.

Tesoro Petroleum Corporation and Ultramar Diamond Shamrock Corporation
Assessed the competitive effects of the acquisition by Tesoro of a UDS refinery.

Greenbrier
Assessed the competitive effects of business combinations in the rail and rail freight car manufacturing and leasing businesses.

Conoco Inc. and Phillips Petroleum Company
Assessed the competitive effects of the merger of Conoco and Phillips Petroleum, including the effects of combinations in refining, marketing and transportation of petroleum products and petrochemicals; in midstream gas gathering, processing and fractionation; and other areas.

The Shaw Group
Assessed the competitive effects of mergers in engineering services, metal and plant fabrication, and construction management.

Valero Energy Corporation
Assessed the potential competitive effects of refining and marketing acquisitions by Valero.

Marathon Ashland Petroleum
Assessed the competitive effects of proposed pipeline joint ventures.

Phillips Petroleum Company and Tosco Corporation
Assessed the competitive effects of the acquisition by Phillips Petroleum of Tosco, including the horizontal effects of combinations in refining, marketing and transportation, petrochemicals, and the vertical effects of combinations of refining and crude oil supply.

Marathon Ashland Petroleum
Assessed the competitive effects of Marathon Ashland's truck stop joint venture with Pilot.

American Commercial Barge Lines
Assessed the competitive effects of joint ventures in barge manufacturing and services.

New Zealand Commerce Commission
Assessed competitive effects of horizontal merger, asset divestiture and vertical restraints on the sale of cigarettes in New Zealand.

Bombardier
Assessed the competitive effects, including the effects on procurement bidding, on the supply of railcars of the acquisition by Bombardier Transportation of DaimlerChrysler's Adtranz.

Ultramar Diamond Shamrock
Assessed the competitive effects of the acquisition by Ultramar Diamond Shamrock of selected California refinery assets of Tosco Corporation.

Sasol
Assessed competitive effects of Sasol's acquisition of Condea, the chemicals division of RWE Aktiengesellschaft, including on the supply of surfactants and surfactant inputs.

Bayer AG
Assessed the effects of patent protection, generic entry, and settlements of patent litigation on competition among pharmaceutical therapies for cardiovascular diseases.

Burmah Castrol PLC
Assessed the competitive effects of proposed acquisitions on the blending and marketing of consumer, commercial and industrial lubricants, including the sale to BP.

Marathon Ashland Petroleum LLC and Ultramar Diamond Shamrock Corporation
Assessed the competitive effects of the acquisition by MAP and disposition of the Michigan refining, pipeline, transportation, terminaling, marketing assets of UDS.

AAVID Corporation and Bowthorpe PLC
Assessed the competitive effects of the acquisition by AAVID of a Bowthorpe subsidiary on the supply of computer, communications and electrical power components.

Western Atlas
Assessed competitive effects of acquisitions in oilfield services, particularly surveys, well-logging and completion services, and reservoir description and management.

Coastal and TransOK
Assessed competitive effects of sale of natural gas processing plant and gas gathering assets of ANR Field Services, a subsidiary of Coastal, to Transok, an affiliate of Tejas and Shell.

Heidelberg/Heidelberger Druckmaschinen
Assessed competition in offset press printing, and pre- and post-press software and technologies.

GrantPrideco
Assessed the competitive effects of the merger of Grant and Prideco on the supply of drilling pipe, bits and technology, and the acquisition by GrantPrideco of the drill string business of TCA.

Sundstrand Corporation and Westinghouse Corporation
Assessed the competitive effects of the acquisition by Sundstrand of the WESD Division of Westinghouse on the manufacture of aircraft components systems.

Selected Testimony, Speeches, Presentations and Reports

Declaration of Ramsey D. Shehadeh (December 29, 2025), Reply Declaration of Ramsey D. Shehadeh (January 20, 2026), *Reply Declaration of Ramsey D. Shehadeh* (January 27, 2026), Federal Energy Regulatory Commission in Five-Year Review of the Oil Pipeline Index (Docket No. RM26-6-000).

Deposition Testimony (October 19, 2023), *Expert Rebuttal Report of Ramsey Shehadeh* (October 7, 2024), *Expert Rebuttal Report of Ramsey Shehadeh* (November 7, 2025), Deposition Testimony (December 2, 2025), *Expert Rebuttal Report of Ramsey Shehadeh* (December 19, 2025), *Pacific Steel Group v. Commercial Metals Company, et al.,* Case No. 22-cv-0892-L-DEB, United States District Court, Southern District of California.

Declaration of Ramsey D. Shehadeh (November 26, 2024), Federal Energy Regulatory Commission in *Supplemental Review of the Oil Pipeline Index* (Docket No. RM25-2-000).

Expert Report of Ramsey Shehadeh (May 31, 2024) and Hearing Testimony (November 13-14, 2024)*, Dow Chemical Canada ULC and Dow Europe GmbH v. Nova Chemical Corporation,* Court of Queen's Bench of Alberta, Canada (0601-07921).

Expert Rebuttal Report of Ramsey Shehadeh (September 22, 2023), Deposition Testimony (October 19, 2023), and Trial Testimony (October 31, 2024), *Pacific Steel Group v. Commercial Metals Company, et al.,* Case No. 4:20-cv-07683-HSG, United States District Court, Northern District of California, Oakland Division.

Verified Statement of Ramsey Shehadeh (July 12, 2022), *Presentation* (September 26, 2022) on behalf of CSX in U.S. Surface Transportation Board Finance Docket No. 36500, Canadian Pacific Ry. – Control – Kansas City Southern.

Declaration of Ramsey D. Shehadeh (January 4, 2022) and Hearing (January 6, 2022), *Aaron Hagele, Andrew Sarcinella, Jr., and AASH Services, LLC. v. Shell Oil Company, PMI Services North America, Inc., and Deer Park Refining Limited Partnership,* Case No. 4:21-cv-04103, United States District Court for the Southern District of Texas.

Expert Report of Ramsey Shehadeh (July 1, 2021) and Trial Testimony (December 9-10, 2021)*; Expert Report of Ramsey Shehadeh* (January 20, 2014), *Expert Surrebuttal Report of Ramsey Shehadeh* (September 23, 2014) and Testimony (September 22-25, 2015), *Dow Chemical Canada ULC and Dow Europe GmbH v. Nova Chemical Corporation,* Court of Queen's Bench of Alberta, Canada (0601-07921).

Declaration of Ramsey D. Shehadeh (August 17, 2020); *Reply Declaration of Ramsey D. Shehadeh* (September 11, 2020), *Affidavit of Ramsey D. Shehadeh in Support of Request for Rehearing of the Association of Oil Pipe Lines* (January 19, 2021), to Federal Energy Regulatory Commission in *Five-Year Review of the Oil Pipeline Index* (Docket No. RM20-14-000).

Expert Report of Ramsey Shehadeh, (December 11, 2020) and Deposition Testimony (January 6, 2021) in *Persian Gulf Inc. vs. BP West Coast Products LLC; Chevron U.S.A. Inc.; Tesoro Refining & Marketing Company LLC; Equilon Enterprises LLC (D/B/A Shell Oil Products US); ExxonMobil Refining & Supply Company; Valero Marketing and Supply Company; ConocoPhillips; Alon USA Energy, Inc.*, Case No. 3:15-cv-01749-TWR-AGS, Case No. 3:18-cv-01374-TWR-AGS.

Expert Report of Ramsey D. Shehadeh (November 5, 2018) and Deposition Testimony (February 5, 2019), *Commonwealth of Kentucky, Ex Rel, Andy Beshear, Attorney General v. Marathon Petroleum Company LP, et al.*, Case No. 15-CV-00354-DJH.

Expert Report of Ramsey D. Shehadeh (September 21, 2018) and Deposition Testimony (January 16, 2019), *Commonwealth of Kentucky, Ex Rel, Andy Beshear, Attorney General v. Marathon Petroleum Company LP, et al.*, Civil Action No. 07 CI 00751.

Expert Report of Ramsey D. Shehadeh (May 2, 2018), Deposition Testimony (May 14, 2018) and Trial Testimony (June 15, 20, 21, 2018), *In the Matter of Tronox Limited, National Industrialization Company (TASNEE), and National Titanium Dioxide Company Limited (Cristal), and Cristal USA Inc.;* Trial Testimony (August 8, 2018), *Federal Trade Commission v. Tronox Limited, et al,* Civil Action No. 18-CV-01622-TNM.

Declaration of Ramsey D. Shehadeh (January 19, 2017) to Federal Energy Regulatory Commission in *Advance Notice of Proposed Rulemaking: Revisions to Indexing Policies and Page 700 of FERC Form 6 (*Docket No. RM17-1-000) on behalf of Association of Oil Pipe Lines.

Expert Report of Ramsey Shehadeh (August 22, 2016) and Deposition Testimony (September 20, 2016) in *SD3, LLC and SawStop, LLC v. Black & Decker (U.S.), Inc., et al*, United States District Court, Eastern District of Virginia, 1:14-cv-00191.

Expert Report of Ramsey Shehadeh (May 20, 2016), BP Products North America Inc. (Maryland) v. NARL Refining Limited Partnership, American Arbitration Association, Case No. 01-15-0006-0192.

Declaration of Ramsey D. Shehadeh to Federal Energy Regulatory Commission in *Five-Year Review of Oil Pipeline Pricing Index* (Docket No. RM15-20-000) on behalf of Association of Oil Pipe Lines, August 24, 2015; *Reply Declaration of Ramsey D. Shehadeh,* September 21, 2015; and *Answering Declaration of Ramsey D. Shehadeh,* October 16, 2015.

Initial Expert Report of Ramsey Shehadeh (June 22, 2015) and *Supplemental Expert Report of Ramsey Shehadeh* (November 23, 2015), *SunPower Technology, Ltd. v. AU Optronics Singapore Pte. Ltd., AU Optronics Corporation, and AUO SunPower Sdn. Bhd.; also, AU Optronics Singapore Pte. Ltd. and AU Optronics Corporation v. SunPower Technology, Ltd. and SunPower Corporation in the International Court of Arbitration of the International Chamber of Commerce* (ICC Case No. 20391).

Selected Publications

Contributor, ABA Section of Antitrust Law, *Econometrics: Legal, Practical and Technical Issues,* 2nd ed. (2014), Chapter 11 (with T. Watts).

"The Emerging Role of Open-Source Software in Merger Analysis," *European Competition Law Review*, Issue 7, 2011 (with C. Biggio, S. Sher, and J. Lutinski).

"The Effect of Financial Distress on Business Investment: Implications for Merger Reviews" (with I. Gotts and J. Larson), *Antitrust*, Vol. 23, No. 2, Spring 2009.

Contributor, ABA Section of Antitrust Law, *Federal Statutory Exemptions from Antitrust Law* (2007).

"A Comparison of Market Tests for Evaluating Patent Damages Claims and Antitrust Counterclaims" (with Joseph P. Cook and Susan C.S. Lee), *Economic Approaches to Intellectual Property Policy, Litigation, and Management*, Gregory K. Leonard; Lauren J. Stiroh (eds.), 2005.

"The Role of Economics and Economists in Antitrust Law," *Columbia Business Law Review*, 2004(2): 419-458 (with Joseph Larson and Lawrence J. White).

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BEFORE THE

SURFACE TRANSPORTATION BOARD

STB DOCKET NO. FD 36873

UNION PACIFIC CORPORATION, ET AL. – CONTROL – NORFOLK SOUTHERN CORPORATION, ET AL.

VERIFIED STATEMENT OF JULIE M. CAREY

NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC.

(NERA)

November 18, 2026

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I. Introduction and Overview

Introduction

My name is Julie M. Carey. I am an economist and Senior Managing Director with National Economic Research Associates, Inc. ("NERA"). I specialize in the application of economic and financial analysis to the transportation, energy, and regulated industries, including the analysis of competitive effects in rail merger and control proceedings before the Surface Transportation Board ("STB" or "Board"). I have substantial railroad industry experience, and I frequently present evidence in commercial and regulatory disputes involving a wide range of rail economic issues. I have worked on dozens of railroad specific matters and presented evidence before the Board on many occasions over my nearly 30-year consulting career. My work experience also includes frequently analyzing competition in the energy industry before the Federal Energy Regulatory Commission.

In addition to my economic consultancy practice, I have been an Adjunct Professor at Georgetown University since 2016, where I teach a graduate-level course in energy economics and policy, which includes instruction on transportation economics and regulation.

My Curriculum Vitae is attached as Appendix 1.

I have been asked by CSX Transportation, Inc. ("CSXT") to evaluate the proposed transaction between Union Pacific Corporation/Union Pacific Railroad Company and Norfolk Southern Corporation/Norfolk Southern Railway Company ("UPNS").[1]

Summary of Opinions

[1] I note that Union Pacific produced nearly 31,000 additional documents on the Friday afternoon and 50 additional documents on Tuesday immediately preceding this submission. This included additional rail service contracts, including with important customers potentially impacted by the Transaction, and numerous documents related to railroad competition, corporate strategy, infrastructure investments, financial analysis, operational planning, and other important topics that relate to my assessment of the Transaction and this Verified Statement. I reserve the right to review and address this material in this proceeding

The Board has stated that its goal is to "ensure balanced and sustainable competition in the railroad industry." Through many Board decisions, both relating to transactions and other matters, the industry's overall competitive balance has been protected and maintained. As I explain in Section II, this balance matches two very large railroads in the West (UP and BNSF) with two modest-sized railroads in the East (NS and CSXT), and has fostered regional competition with two independent railroad alternatives for much of the traffic in the East and the West, and up to four collaborative interline offerings for transcon service between regions, all to the benefit of both shippers and the U.S. rail industry. The Class I railroads currently work together to provide efficient and effective transcon service to meet customers' needs. As the Board, railroads, and shippers all know, and as demonstrated by my analysis below, the benefits of ensuring continued competitive balance in the industry are clear: independent railroad options at transcon gateways and interchange locations are associated with lower prices and enhanced service for shippers.

As I detail in Section III, the Proposed Transaction would upset this competitive balance. Combining UP and NS would fundamentally change existing dynamics and, by altering the incentives that sustain it, would put at risk much of today's collaboration among the Class I railroads that helps maintain the existing competitive balance in the U.S. rail system. The Proposed Transaction would result in UPNS reaching virtually the entire U.S., covering {{ }} of BEAs by revenue and reaching approximately {{ }} of customers across the U.S.

The large consolidation of customers in the East and West regions that UPNS could serve post-Transaction would give UPNS enormous, unrivaled influence over shippers, who would find it virtually impossible to avoid relying on UPNS. Lessened competition results from the

reduced independent rail options on these corridors. Simply put, customers would have far fewer choices with a combined UPNS. And, even where some of a shipper's locations could receive service from a different regional railroad (e.g., CSXT, BNSF), UPNS could leverage the many other locations where that customer is dependent upon it to influence the shipper's overall business and to eliminate existing competition on one side or the other of their movement.

Post-Transaction, UPNS would control critical rail assets, including those necessary for interchange at numerous key transcon gateways. Specifically, UPNS would have substantial ownership in key terminal railroads, rail lines, bridges, and other facilities that are critical to facilitate transcon traffic moves and effective interchange. As detailed in Section III, UPNS would have both the incentive and the ability to raise its rivals' costs and degrade service quality across the entire supply chain for interline transcon service.

A UPNS consolidation would also result in BNSF and CSXT becoming largely dependent interline carriers. Today, interline shippers have at least two independent routes in the East and the West. Interline routes that are independent of competing routes compete more effectively than routes that depend on the service of a direct competitor. Post-Transaction, shippers would have far fewer independent railroad routing alternatives, as I discuss in more detail in Sections IV and V, since both CSXT and BNSF would depend on UPNS for the eastern or western portion of {{REDACTED}} of interline moves. In the past, the Board has correctly expressed concern about transactions that significantly reduce the number of truly independent rail options for shippers.

Despite these clear and obvious competitive concerns, Applicants did not produce reliable evidence to allow the Board to assess those concerns and quantify the competitive harm to shippers. Specifically, as discussed in Section IV, Applicants' experts, Dr. Bailey and Dr.

Israel, present unsupported and unreliable economic analyses that are fundamentally flawed and do not provide evidence that would allow the Board to assess Applicants' assertions that no harm would result from the merger.

Dr. Bailey's "between-corridor" analysis purportedly evaluates reductions in rail transportation options for shippers in origin areas and receivers in destination areas for specific commodities, but it relies upon incorrect and unsupported assumptions. For example, Dr. Bailey fails to provide a rail-only 50/10 analysis (consistent with Board practice in other mergers) and does not even attempt to prove the sufficiency of truck and other intermodal competitors to act as a constraint on UPNS. In addition, Dr. Bailey's analysis relies upon 4-digit STCC categories that group together many different and specialized products, fatally undermining its accuracy and distorting its output. Lastly, Dr. Bailey assumes, without support, that traffic exempt from rate regulation today could not face a lessening of competition from the Proposed Transaction tomorrow.

Dr. Bailey's "within-corridor" analysis claims to evaluate reductions of corridors where the merging parties have rail segment overlaps of competing routes, which includes many of the same or similar faulty and incomplete assumptions as her "between-corridor" analysis.

Dr. Israel's analysis erroneously concludes that the Proposed Transaction raises no risk of vertical harm, a conclusion that is directly at odds with STB precedent. Among other flaws, Dr. Israel fails to analyze the Proposed Transaction's full impact on independent rail options, limiting his analysis to only a small portion of the overall traffic at issue. And the analysis that Dr. Israel does conduct for that traffic is inconsistent with STB precedent, which requires a true independent routing option on every leg of the traffic move, excluding the merging parties entirely (an exercise Dr. Israel failed to perform) and lacks support of economically feasible

railroad alternatives. He fails to address short hauling and bundling-related risks post-Transaction. Dr. Israel also opines that sole-served customers pay rates no higher than dual-served customers, a conclusion contrary to the rail economic analysis I present below and the studies I have completed over many years in this industry.

After explaining the flaws in both Dr. Bailey's and Dr. Israel's analyses, in Section V, I correct Applicants' experts' analyses and provide the outcome of the corrected analyses to provide the Board an accurate assessment of the extent of the harm to competition that would result from the Proposed Transaction. As discussed in detail in Section V, the actual harm to competition from the Proposed Transaction would be significant and would impact substantial amounts of traffic. Specifically, my analysis shows:

(1) The Proposed Transaction would result in approximately {{ }} in rail traffic facing reduced geographic competition from the corrected between-corridor analysis.[2]

(2) The Proposed Transaction would lessen corridor-specific harm to competition (horizontal and vertical) with up to {{ REDACTED}} in traffic revenues.[3]

- (1) Approximately {{ REDACTED}} in traffic revenues on corridors where UPNS would have rail segment overlaps on competing routes from the corrected within-corridor analysis.
- (2) {{ REDACTED}} in traffic revenue would face a loss of independent rail options (defined appropriately to entirely exclude UPNS from any portion of the route) and/or no demonstration of economically feasible railroad alternatives.[4]

Critically, the substantial lessening of geographic competition results in many markets facing exceedingly high rail shares and concentration, raising heightened concern for the extent of harm that would result. This harm would create structural and systemic changes to the overall rail industry. It would affect the entire supply chain and result in shippers being unable to avoid

[2] The {{ }} is out of approximately {{ }} in Class I traffic revenues for origin and destination areas that UP or NS serve.
[3] There may be some duplication between the two specific analyses.
[4] This includes additional UP or NS traffic revenues and Dr. Israel's initial {{ }} estimate which is unsupported.

UPNS to get many products used by businesses and consumers that need to be shipped by rail. A surgical remedy cannot address this harm to competition.

The Proposed Transaction's unprecedented scale would put Applicants in a position to foreclose and short haul their existing interline partners, reflecting the loss of as much as {{ }} of CSXT route miles, for example, which could fundamentally undermine the competitiveness of other railroads, as I explain in greater detail in Section VI. My analysis shows the harm to CSXT shippers that could result from the Proposed Transaction with respect to short hauling[5]:

(1) Approximately {{ REDACTED }} in traffic revenue on CSXT's system would be exposed to short hauling and much higher costs, with approximately {{ REDACTED }} in higher costs for remaining shippers and a significant reduction in contribution margins for short-hauled traffic. CSXT and other regional railroads that may be similarly impacted would be relegated to shorter, lower-margin segments of moves they handle today.

Section VI also discusses how the Proposed Transaction would enable Applicants to use their enhanced market power to engage in bundled contracting strategies and other pricing strategies to cause competitive harm. Due to the huge increase of common customers between UP and NS, shippers representing at least {{ REDACTED }} in combined UPNS merchandise revenue[6] would face potential loss of competition resulting from UPNS's ability to use bundling and other strategies to make it uneconomic for rivals to compete. Approximately {{ }} of this traffic involves sole-served locations (i.e., served by one railroad) and {{ }} involves dual-served locations (i.e., served by two or more railroads). My analysis shows the harm to CSXT shippers that could result from the Proposed Transaction with respect to bundling, including[7]:

[5] Other railroads would be impacted as well.
[6] I looked at the top 150 UP and NS merchandise customers.
[7] Other railroads would be impacted as well.

(1) The competitive harm that could be effectuated by a bundling pricing strategy is approximately {{ REDACTED }} in CSXT Eastern U.S. dual-served revenue, which includes any Eastern U.S. moves where either the origin or destination is CSXT dual served.

(2) The competitive harm that could be effectuated by a pricing strategy involving UPNS's traffic for common customers that have both sole-served UPNS locations and CSXT transcon dual-served customers is approximately {{ REDACTED }}.

Furthermore, the exposed traffic revenue susceptible to bundling would increase in the future with any consolidations of industries that use rail. This type of harm cannot be addressed with a surgical remedy because it arises from the scale and scope of a combined UPNS network rather than from any discrete route or facility, and because multi-location contracting is commonplace rail industry practice.

The Gulf Coast offers a particularly instructive example of Applicants' experts' failure to provide the Board with reliable competitive analyses, as well as of the reduced geographic competition[8] and exposure to vertical foreclosure harms[9] that would result from the Proposed Transaction in a key region of the U.S. and an important chemical industry, as I explain in Section VII.[10]

Beyond these immediate, direct impacts of the Proposed Transaction detailed in this Verified Statement, there would be medium and long-term adverse effects from the Proposed Transaction on competition in the rail industry. As I explain in Section VIII, the Proposed Transaction would cause further harm to competition and shippers because CSXT, the only alternative to UPNS in the East, would face higher movement-specific fixed costs and higher fixed system costs resulting from the erosion of traffic volumes to a combined UPNS due to:

[8] Traffic corridors for chemical products representing {{ REDACTED }} in revenue fail my modified 50/10.
[9] {{ REDACTED }} in CSXT interline traffic revenues involving chemical moves with UP would be exposed to vertical foreclosure, with a small {{ } rate increase on other moves for the same customers that depend on UP, when incorporating numerous levers available to a combined UPNS.
[10] There are other specific at-risk areas including terminal and short line railroads, and traffic with ports, Mexico and other areas.

lower traffic densities; reduced ability and opportunity to invest in full-scale network maintenance and improvements and customer-specific projects; and reduced collaborative innovation.

(1) CSXT may face up to {{ REDACTED }} in higher movement-specific fixed costs across its network from exposure to the erosion of traffic volumes from a combined UPNS, making it increasingly harder to effectively compete. Shorter trains with fewer cars immediately increase the per-car costs for locomotives expenses, crew wages, and results in smaller block sizes in the aggregation of cars and increased locomotive time and labor at yards in order to sort the cars. I estimate a {{ }} increase in these unit costs.[11]

(2) CSXT may face up to a {{ }} per-car increase in fixed system-wide costs because of fewer remaining customers post-Transaction and the loss of substantial traffic volumes that are needed to spread fixed system costs. This would diminish CSXT's ability to ensure a robust and sustainable network over the long-term period.

(3) Reduced services such as train frequency and railcar velocity on specific routes with lower traffic density could also erode service to the point that the route becomes uneconomic. The railroad would then face the tradeoff of either creating shorter trains with fewer cars or offering a less frequent, lower-quality rail service.

(4) The anticompetitive effects of the Proposed Transaction would also affect investment in new and expanded customer opportunities. As a combined UPNS diverts traffic away from CSXT, the resulting loss of traffic and contribution would constrain the resources available for major system projects, including development projects—such as new customer sites—that attract new and existing customers. Shippers would lose the benefit of two independent Eastern railroads competing to win new customers and new customer locations with competing investment proposals.

(5) The historical balance of two Western railroads and two Eastern railroads, and their common incentive to invest, collaborate, and enhance services for customers, would be eliminated. These collaborations, which take multiple forms, including physical assets including cars and networks, data standards and information services, and even innovation collaboration for frontier technologies, depend on balanced and aligned incentives, which would be fundamentally undermined by the creation of a new, dominant UPNS.

Another direct impact of the competitive harm from the Proposed Transaction would be extraordinary gains for UPNS, which could extend the current UP ROI in excess of 17% for

[11] This estimate does not include movement away from steel wheel interchanges to rubber tire interchanges, which would further increase movement-specific fixed costs and delay deliveries.

2025 to be much higher, with potentially {{REDACTED}} in additional operating income above the STB's calculated industry cost of capital. At the same time, the Proposed Transaction would shift contribution away from the other Class I railroads, with implications for the overall balance and financial health of the industry, as I discuss in Section IX.

As I explain in Section X, and as more fully analyzed by Dr. Monaco, UPNS's public benefits claims are overstated and flawed for many reasons and are comprised of very limited durable public benefits to the rail system. Specifically:

(1) UPNS's claimed rail cost savings benefits, which is the Board's primary focus in evaluating proper public benefits, are extremely low as compared to other past Major Transactions, and do not justify the Proposed Transaction.

(2) Applicants erroneously include $1.8 billion of claimed public benefits that are actually private benefits to Applicants (i.e., UPNS). These are simply incremental profits and not public benefits, as the Board has well recognized in past transactions including CPKC and UPSP.

(3) UPNS's claimed benefits are substantially achievable through partnerships that are commonplace in the railroad industry, particularly for IM service, instead of through the Proposed Transaction. IM-related claimed benefits account for more than 50% of all UPNS's claimed benefits.

(4) Applicants include unsupported truck shipper savings and truck-to-rail diversions, which are substantially comprised of non-transaction-specific benefits (as the rail-specific interchange cost savings is less than {{ REDACTED }}.)

UPNS provides no evidence that any portion of the estimated cost savings would be passed on to its customers. This is not surprising, as it degrades interline competition, it would face little competitive pressure to do so. Notably absent from this Transaction are the real, material procompetitive benefits of prior Major Transactions, such as CPKC, which created a new single-line competitor to UP and BNSF.

In considering whether Union Pacific and Norfolk Southern should be allowed to merge, despite the substantial evidence of harm to competition and shippers and the lack of durable public benefits to the railroad system that would result, the Board should also take seriously the

threat that the Proposed Transaction poses to the balanced structure of the railroad industry. More specifically, the Board should consider the Proposed Transaction's effect on the Board's ability to ensure "a competitive, efficient, and reliable national rail system." For all of these reasons, the Board should deny this Application.

II. Current Competitive Balance in the Railroad Industry Has Benefited Shippers by Offering Efficient Transcon Service Through Cooperative Interline Arrangements

A. The Board recognizes the importance and success of the U.S. railroad industry.

As the Board is aware, freight rail has long played an integral role in the U.S. economy. Rail is a strategic asset that fuels economic growth and prosperity while delivering many types of benefits.[12] In 2024, total U.S. rail traffic reached 25 million carloads and intermodal (IM) units,[13] equal to approximately 1.5 billion tons,[14] representing finished goods valued at hundreds of billions of dollars.[15] Indeed, rail drives substantial economic activity, accounting for $233.4 billion in total economic output in a single year (2023) and more than $50 billion in direct value-add to GDP.[16] Rail transportation is thus critical to the U.S. economy, especially for key industry sectors such as agriculture, automotive, and chemicals.

The railroad industry's historical success since 1980 is not guaranteed in the future. In fact, the U.S. Staggers Act of 1980 made a revival of the U.S. railroad sector possible by

[12] American Council for Capital Formation, "New Report: Freight Rail Is a Strategic Economic Asset Essential to U.S. Growth and Security," August 4, 2026, available at https://accf.org/new-report-freight-rail-is-a-strategic-economic-asset-essential-to-u-s-growth-and-security/.

[13] Railway Age, "AAR: U.S. Rail Volume Up for 2024," January 3, 2025, available at https://www.railwayage.com/freight/class-i/aar-u-s-rail-volume-up-for-2024.

[14] American Society of Civil Engineers, "2025 Report Card for America's Infrastructure: Summary," obtained on November 2, 2026, available at https://infrastructurereportcard.org/cat-item/rail-infrastructure/.

[15] American Association of Railroads, "Rail Transportation and the U.S. Economy: Fueling Growth, Trade, and Opportunity," February 28, 2025, at pp. 11-12, available at https://www.aar.org/wp-content/uploads/2025/02/AAR-PE-Economic-Impact-Report-2025-FINAL.pdf.

[16] Total economic output is an economic measure for the economic activity and the value of the finished goods and services produced. The economic effect of railroads includes direct, indirect and induced benefits to the economy. American Association of Railroads, "Rail Transportation and the U.S. Economy: Fueling Growth, Trade, and Opportunity," February 28, 2025, at pp. 11-12, available at https://www.aar.org/wp-content/uploads/2025/02/AAR-PE-Economic-Impact-Report-2025-FINAL.pdf.

changing the regulatory framework to let competition govern railroad rates to the greatest extent possible.[17] The tangible gains from competition include expanded output, greater economies of scale, improved operational efficiency, reduced unit costs, and the most productive value service at the lowest cost.[18] Rail service options keep transportation costs competitive for shippers, and helps maintain affordability for end-consumers.

Today's U.S. rail network includes two very large railroads in the West (UP and BNSF) and two smaller, equivalently-sized railroads in the East (NS and CSXT). These carriers currently offer long-haul service through cooperative interline arrangements. For purposes of this paper, I define "transcon" service to include not only coast-to-coast service, but all relatively long-haul traffic movements over substantial distances that involve interchanging traffic between one of the two Eastern railroads and one of the two Western railroads.[19] The Western railroads generally originate or terminate transcon traffic West of the Mississippi and interchange with the Eastern railroads to move traffic to or from the Eastern U.S. Many customers rely on this transcon service today as a robust and substantial offering, which generates approximately {{ REDACTED }} in rail industry revenue.[20] By comparison, that revenue is slightly more than each of NS's and CSXT's total 2023 revenue and is almost {{ }} larger than the U.S. business of CPKC, the smallest Canadian railroad, as Figure 1 below shows. The success of transcon

[17] *See* Surface Transportation Board (STB), "A Study of Competition in the U.S. Freight Railroad Industry and Analysis of Proposals That Might Enhance Competition," November 2009, available at https://prod.stb.gov/wp-content/uploads/files/docs/competitionStudy/Executive%20Summary.pdf.

[18] *See* STB, "A Study of Competition in the U.S. Freight Railroad Industry and Analysis of Proposals That Might Enhance Competition," November 2009 at p. 38, available at https://prod.stb.gov/wp-content/uploads/files/docs/competitionStudy/Executive%20Summary.pdf.

[19] Canadian railroads are involved in a small percentage of the U.S. railroad business and even less so in transcon and are mostly limited to north and south routings in the middle of the country connecting to their primary networks in Canada (and Mexico).

[20] {{REDACTED}} carloads. *See* Carey HC-WP-Transcon_Traffic.xlsx. Carloads are averaged across each pair of interline railroads to account for double counting. Revenue represents each railroad's respective revenue for its portion of the move.

service is also observable through large historical growth: cumulative growth of approximately {{ }} has been achieved since 2019.[21]

Figure 1: Transcon Service versus Class I Railroads, 2023 Total Revenues[22] ($ Billions) {{
REDACTED

}}

Excluding transcon from each railroad's total revenues highlights that such traffic would rival the entirety of the remaining business of four of the individual Class I railroads, with revenue well above NS's business and only below the remaining business of the Western railroads.[23]

B. This vital transcon service has succeeded because of the competitive balance that the Board has developed and nurtured over time.

Today, transcon movements rely on coordination and cooperation among railroads that have an incentive to collaborate with one another. The two major Eastern railroads work with the two major Western railroads, along with the two Canadian carriers that operate in the middle of the country, to establish sophisticated gateways where the carriers exchange traffic via joint

[21] Carey HC-WP-2019_Transcon_Traffic.xlsx. Dr. Bailey asserts that revenue in the combined waybill data build is not reliable. Bailey Amended VS at para 101. I have confirmed that the revenue is not significantly different than is reported by Class I railroads in their 2023 Form R-1s.

[22] *See* Carey HC-WP-Transcon_Traffic.xlsx. Revenue reported from STB R-1 Annual Report, Schedule 210.

[23] *See* Appendix 2 – Current and Future Competitive Balance.

assets and facilities and coordinate their movements to maximize operational efficiency. This interline cooperation is possible because of the competitive balance that exists among the railroads, which generates competitive options for rail customers. With this competitive balance, shippers today have as many as four rail options for transcon moves (e.g., UP-NS, UP-CSX, BNSF-NS, BNSF-CSX) and can play these options off one another to negotiate competitive rates and service.

Generally, two Eastern and two Western railroads operate at the major midcontinent gateways; at other times, two Eastern railroads and one Western railroad are available, or vice versa. This highly competitive inter-region dynamic gives shippers access to transcon service through numerous partnerships and collaborations between Western and Eastern railroads.

In my prior work submitted to the Board, I have demonstrated the benefits that shippers derive from having access to more than one independent rail alternative. In particular, statistical analysis of competition in IM traffic and additional traffic corridor rate comparisons confirms that interchange locations with an additional independent railroad alternative are associated with lower railroad rates for IM service.[24] I have expanded upon that analysis in this Verified Statement, estimating the effect of competition at an interchange for both IM traffic as well as for merchandise traffic, based on the broader CWS dataset. For rail rates where multiple railroads compete at a gateway, I have relied on 2023 CWS traffic moves with Class I rail carriers that involve at least one interchange and at least one Class I railroad that originates or terminates the move.[25] I included railroad factors that represent the physical characteristics of

[24] CSX Transportation, Inc.'s Response to Comments and Responsive Applications, STB FD No. 36500, Canadian Pacific—Control—Kansas City Southern, July 12, 2022, at pp. 169-175 and Appendix E.

[25] IM is defined where traffic is reported for trailers and containers. *See* Appendix 2 – Current and Future Competitive Balance for more details.

the individual moves, using variables for shipment distance, weight, and railroad ownership.[26] To capture the economic effects of regional and commodity-level variation, I also included variables for the origin and destination regions of the traffic move (determined at the state level) as well as a five-digit STCC code that captures the commodity effect.[27] These variables capture differences in regional transportation areas, including network characteristics, operating conditions, and demand, as well as commodity-specific pricing practices.

Based upon this analysis, I continue to find that an additional independent railroad option is associated with lower railroad rates for IM service. Specifically, my analysis shows that for IM traffic, shippers at gateways with two rail alternatives, including transcon gateways, pay a rate as much as {{ }} lower than at gateways with only one railroad option. The analysis has strong explanatory power, reflected in an R-squared statistic of 58%.[28] This statistic shows how well the regression explains the changes (referred to as variation) in the specific data under analysis; in other words, it describes how much variation the independent variables in the econometric model capture and explain.[29,30]

[26] Shipment distance and weight are all included in log form, capturing the expectation that changes in these factors have diminishing marginal effects on rates as they increase. *See* Appendix 2 – Current and Future Competitive Balance for more details.

[27] A focused study of certain commodities could be accomplished on a 7-digit STCC level. I did not include a model with 7-digit STCC codes due to high dimensionality. The Rail Inc. commodity code dictionary shows that for codes active in 2023, there is about a 10x increase in unique commodities when moving from a 5-digit to a 7-digit STCC. Including such a large number of commodity controls could result in categories with few observations, reducing the precision of estimates and potentially introducing estimation challenges.

[28] In simple terms, the R-squared statistic represents the explanatory power of the regression analysis with values ranging from 0% to 100%: higher values indicate greater reliability (or fit) of the overall regression, and lower values indicate less reliability (and fit). I report the adjusted R-squared to give a measure of overall model fit that accounts for the number of explanatory variables. *See* Appendix 2 – Current and Future Competitive Balance.

[29] Stock and Watson, Introduction to Econometrics (Pearson, 2020), at pp. 153-54, available at https://www.sea-stat.com/wp-content/uploads/2020/08/James-H.-Stock-Mark-W.-Watson-Introduction-to-Econometrics-Global-Edition-Pearson-Education-Limited-2020.pdf.

[30] The impact of additional railroad competitors is understated due to data deficiencies with the CWS in capturing transcon traffic. I include heteroskedasticity-robust standard errors to ensure valid statistical inference even if the error variance differs across shipments.

Moreover, for all traffic types, I conducted a statistical analysis confirming that interchange locations with an additional independent rail alternative are associated with lower railroad rates for shippers by as much as {{ }}.[31] For this majority-merchandise traffic rate analysis, which also relies on 2023 CWS traffic, I similarly limited the data to moves that originated or terminated with Class I railroads to better capture transcon traffic for the broader dataset. I used distance variables that capture the nonlinear relationships between rates and distances,[32] and a five-digit STCC to capture the specific customer circumstances associated with different commodity types. I also included a dummy variable for whether traffic is IM or not.

These quantitative analyses demonstrate the real public benefits that shippers receive from today's competitive balance and benefits to rail customers: two independent railroad options in the East, two in the West, and often four interchange partner alternatives for transcon service. Robust economic analysis across many different types of routes demonstrates that multiple independent rail alternatives on either or both sides of transcon gateway interchanges are associated with lower rail rates for transcon shippers.

C. One key benefit of that balance has been increasingly effective interline service supporting shippers in critical lanes for transcon movements.

Transcon movements via interline service include not only coast-to-coast moves, but also key inter-regional traffic. Substantial traffic originates or terminates in the interior Eastern or Western regions, including the East and West Central regions and the Mountain region (as well as Mexico).[33] These interior regions trade with the coastal regions and occasionally with each

[31] My R-squared for this model is 53%. *See* Appendix 2 – Current and Future Competitive Balance for calculations.
[32] *See* Appendix 2 – Current and Future Competitive Balance for more details.
[33] For the regions, I started with the U.S. Census Regions and Divisions of the U.S and made a few adjustments. Specifically, I split Montana (MT), Idaho (ID) and Wyoming (WY) from Mountain into "Mountain North" and designated the remaining states as "Mountain South." I recategorized Virginia (VA), West Virginia (WV), Maryland (MD), Delaware (DE), and the District of Columbia (DC) into the "Middle Atlantic" region, and lastly, I assigned Wisconsin (WI) into West North Central and Kentucky (KY) into East North Central. *See* U.S. Census Bureau, "Census Regions and Divisions of the U.S, obtained on November 3, 2026, available at https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf.

other. Transcon traffic interlined totaled {{ REDACTED }} in 2023.[34] To visualize the geographic scope of today's transcon moves, Figure 2 below shows the interregional traffic flows between Eastern and Western regions (based on total revenue).

Figure 2: Transcon Traffic Flows between Regions, 2023 Total Revenue[35,36]{{ REDACTED

}}

These transcon movements are critical to numerous shippers and numerous transportation corridors. Below, I present the top 20 lanes (i.e., origin to termination BEA pairs) for transcon traffic, which comprise only approximately {{ }} of the total.

[34] *See* Carey HC-WP-Transcon_Traffic.xlsx.

[35] *See* Carey HC-WP-Transcon_Traffic_Pacific_Specific.xlsx. Depicts the top 25 corridor moves. Mexico traffic is limited to moves with UP or BNSF and CSXT or NS. Numerous states have overlapping regions. Illinois has Eastern and Western railroads. NS has rail tracks in Missouri and trackage rights on rail lines in Iowa. NS has joint-line ownership of the Meridian in Shreveport, Louisiana (LA) and access to routes in Texas (TX).

[36] There is some geographic overlap between the Western and Eastern railroads, particularly in Illinois. NS observes the most overlap into the Western region because its network stretches further West into Kansas City and has trackage and other assets extending into Iowa.

Figure 3: Top 20 Transcon Traffic Moves, 2023[37] {{
REDACTED

}}

Figure 4 below presents today's transcon traffic revenue, with aggregate regional flows side by side to show the scale of each region's business. It also separately depicts the coastal and interior U.S. portions of this traffic. For example, the Figure shows that Western revenue comprises about {{REDACTED }} of traffic revenue involving the interior Western regions and {{REDACTED }} involves coastal Pacific regions.[38] For the East, the interior accounts for {{ }} and the coast accounts for {{ }}, respectively, of the total traffic revenue.[39]

[37] *See* Carey HC-WP_Transcon_Traffic.xlsx.

[38] *See* Carey HC-WP-Transcon_Traffic_Pacific_Specific.xlsx. {{REDACTED .}}

[39] *See* Carey HC-WP_Transcon_Traffic_Pacific_Specific.xlsx. {{REDACTED .}}

Figure 4: Transcon Traffic Flows between Regions, 2023[40] ($ Billions in Total Revenue)[41] {{ REDACTED

}}

By total revenue, the Pacific region (which includes CA, OR, and WA) ranks largest with approximately {{REDACTED }}. The Pacific region's top customers include {{REDACTED }}, with IM being the largest industry. Other regions post the following totals: West South Central, about {{ }} with chemicals as the largest industry and {{REDACTED }} being the largest customers; Middle Atlantic, about {{ }} with {{REDACTED }} as the largest customers and IM the top industry; East North Central, about {{ }} with Transportation Equipment as the top industry and {{REDACTED }} the largest customers; and South Atlantic, about {{ }} with IM and Chemicals as the two largest industries and {{REDACTED }} as the top customers. These

[40] *See* Carey HC-WP-Transcon_Traffic_Pacific_Specific.xlsx. Depicts top corridor flows. Numerous states have overlapping regions. Illinois has Eastern and Western railroads. NS has rail tracks in Missouri and trackage rights on rail lines in Iowa. NS has joint-line ownership of the Meridian in Shreveport, Louisiana (LA) and access to routes in Texas (TX). Mexico-reported traffic only includes the revenue from the U.S. side of the traffic moves due to limitations in UPNS reported data.

[41] *See* HC-WP-Transcon Traffic_Pacific_Specific.xlsx.

figures demonstrate the diversity of regions and shippers reliant on transcon movements.

Turning to the directional flows of transcon traffic, in Figure 5, the left chart presents transcon traffic moving from West to East, and the right chart shows transcon traffic moving from East to West. West-to-East transcon traffic movements account for approximately {{ }} of 2023 transcon total revenue, and East-to-West movements make up about {{ }} of 2023 transcon total revenue.[42] These directional proportions hold even when the analysis is limited to merchandise-only products (i.e., excluding IM).[43] The Pacific and West South Central regions generate the largest share of Eastward traffic flows.

Figure 5: Transcon Traffic Revenue: West-East vs. East-West, 2023[44] {{ REDACTED

}}

Numerous industries rely heavily on interline movements to connect sources and consumers. Examples include chemical intermediates moving from the Gulf Coast to production facilities in the Northeast, produce moving from the San Joaquin Valley to East Coast

[42] *See* Appendix 2 – Current and Future Competitive Balance.

[43] *See* Appendix 2 – Current and Future Competitive Balance.

[44] *See* HC-WP-Transcon_Traffic_Pacific_Specific.xlsx. The chart shows the top 25 routes for each direction and excludes {{REDACTED }} in revenue for West-East direction (less than {{ }} of combined West-East revenue) and {{ REDACTED}} in revenue for East-West direction (less than {{ }} of combined East-West revenue). The chart also excludes {{ REDACTED }} of combined transcon total revenue, largely merchandise) for moves that are not clearly West-East or East-West, e.g., those that are East-East or West-West.

consumers, coal moving from the Powder River Basin to electric generation stations in the Southeast, steel moving from Pennsylvania to the West Coast, and automotive parts moving from Mexico to production facilities in Michigan.

Figure 6 below presents the three largest regional corridors (one direction) by revenue for the four largest transcon commodity types (IM, Chemicals, Transportation Equipment, and Food). For three out of these four commodity types, the top three regional routes comprise {{ }} of total 2023 transcon revenue.

Figure 6: Top 3 Transcon Routes for Top 4 Transcon Commodities, 2023[45] ($ Billions) {{ REDACTED

}}

IM traffic generates the largest share of transcon revenue, representing approximately {{ }} of the total in 2023.[46] IM consists of containerized freight (and trailers) that moves by rail for the long-haul portion of the journey and by a short truck move for the first and last mile between the local business and the IM terminal distribution center. IM traffic includes numerous

[45] IM service is defined as flat cars. *See* Carey HC-WP-Transcon_Traffic.xlsx. The {{ }} of Transport also includes Mexico to East North Central for {{ REDACTED }} but is not shown as a separate bar in the Figure.

[46] *See* Carey HC-WP-Transcon_Traffic.xlsx and Appendix 2 – Current and Future Competitive Balance. {{ REDACTED}}. Some of the IM containers reported in figure below are double stacked on a single carload.

key products such as transportation equipment, food/kindred products, apparel or other textile products, and small packaged freight shipments.

IM traffic flows mostly Eastward, with {{REDACTED}} of IM transcon revenue originating in the Pacific region.[47] For IM, the top regional routes by revenue run from the Pacific to the Middle Atlantic, followed by Pacific to South Atlantic and Pacific to East North Central; combined, these routes generated {{REDACTED}} of transcon IM revenue in 2023.[48] Top IM customers in these regions include {{REDACTED .}}

After IM, the top three merchandise commodities utilizing transcon service today are Chemicals, Transportation Equipment, and Food or Kindred Products[49], which together account for approximately {{ }} of 2023 transcon total revenue (and {{REDACTED }} of transcon merchandise revenue).[50] These four product categories (IM, Chemicals, Transportation Equipment, and Food) combined account for approximately {{ }} of 2023 transcon total revenue.[51]

Chemicals, the second largest product category, originate predominantly in the West South-Central region, home to the Gulf Coast, which is a critical global hub for chemical manufacturing. The top regional routes for chemicals by revenue run between the West South-Central region and the South Atlantic, Middle Atlantic, and East North Central regions;

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[47] *See* Carey HC-WP-Transcon_Traffic.xlsx. {{REDACTED }}. *See* Appendix 2 – Current and Future Competitive Balance.

[48] *See* Carey HC-WP-Transcon_Traffic.xlsx. {{REDACTED }}. {{REDACTED }}.

[49] *See* Carey HC-WP-Transcon_Traffic.xlsx and Appendix 2 – Current and Future Competitive Balance. Ranked by carloads and total revenue.

[50] *See* Carey HC-WP-Transcon_Traffic.xlsx and Appendix 2 – Current and Future Competitive Balance. {{REDACTED }}. Using carloads instead, the top 3 account for approximately {{REDACTED }} or {{ }} of merchandise = {{REDACTED}}.

[51] *See* Carey HC-WP-Transcon_Traffic.xlsx and Appendix 2 – Current and Future Competitive Balance. {{REDACTED }}. Using units instead, the top four product categories represent approximately {{ }} of total transcon volumes, where {{REDACTED }}.

combined, these account for {{REDACTED}} of transcon Chemicals revenue in 2023.[52] The largest chemicals customers in these regions include {{REDACTED

}}

Transportation Equipment, the third largest product category, originates largely in the East North Central region. For Transportation Equipment, the top regional routes by revenue run from East North Central to Pacific, followed by East North Central to West South Central, then East North Central to Mountain South and Mexico to East North Central; combined, these account for {{REDACTED}} of transcon Transportation Equipment revenue in 2023.[53] Top transport customers in these regions include {{REDACTED .}}

Finally, the fourth largest product category, Food or Kindred products, originates mainly in the West. The top regional routes by revenue for this product category include West North Central to Middle Atlantic, Pacific to Middle Atlantic, and Pacific to South Atlantic; combined, these account for approximately {{ }} of transcon Food or Kindred products revenue in 2023.[54] The largest food customers in these regions include {{REDACTED

.}}

Many Large Customers Rely on Transcon Service

The top 50 largest transcon customers generated approximately {{ REDACTED}} in combined transcon revenue, representing approximately {{ }} of the 2023 total.[55] These customers fall within categories including IM, Transportation Equipment, Coal, and Chemicals,

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[52] *See* Carey HC-WP-Transcon_Traffic.xlsx. {{REDACTED }}. {{REDACTED }}.

[53] *See* Carey HC-WP-Transcon_Traffic.xlsx. {{REDACTED }}. {{REDACTED }}.

[54] *See* Carey HC-WP-Transcon_Traffic. {{REDACTED }}. {{REDACTED }}.

[55] *See* Carey HC-WP-Transcon_Traffic.xlsx and Appendix 2 – Current and Future Competitive Balance. {{ REDACTED}}.

as well as Food, Pulp or Paper, and Primary Metal Products. {{REDACTED}} an IM company, ranks as the largest transcon customer, generating approximately {{ REDACTED }} in 2023 transcon revenue. {{REDACTED }}, a Transportation Equipment customer, ranks next with approximately {{ REDACTED }} in 2023 transcon revenue, followed by {{REDACTED }}, an IM customer, with {{ REDACTED }}, and Transportation Equipment companies {{REDACTED }}, with {{ REDACTED }} and {{ REDACTED }}, respectively.[56]

Breaking down the largest customers,

Figure **7** below shows the top 10 customers for the four largest categories of transcon traffic (by 2023 revenue): IM, Chemicals, Transport, and Food. The top 10 IM customers collectively generate approximately {{ }} of IM transcon revenue in 2023 and include {{ REDACTED .}} The top 10 chemicals customers together generate approximately {{ }} of Chemicals 2023 transcon revenue and include {{REDACTED .}} The top 10 Transport Equipment customers generate approximately {{ }} of Transport 2023 transcon revenue and include {{REDACTED .}} And the

[56] *See* Carey HC-WP-Transcon_Traffic.xlsx and Appendix 2 – Current and Future Competitive Balance.

top 10 Food customers account for about {{ }} of Food transcon revenue and include {{REDACTED }}

Figure 7: Top Ten Shippers for the Largest 4 Commodities for Transcon Service, By Total Revenue, 2023[57] {{

REDACTED

}}

D. Interline service is successful today because of ongoing collaboration among the railroads, each of which has an incentive to make the entire system work better.

Today, transcon movement is a vibrant and critical rail service for many shippers, and it embodies ongoing collaboration, especially among the four larger Class I railroads. Figure 8 below depicts the aggregate revenue and carload traffic volumes for the two Western carriers

[57] *See* Carey HC-WP-Transcon_Traffic.xlsx. {{REDACTED }}. I discuss further in Appendix 5 – Specific At-Risk Areas.

(UP and BNSF) and the two Eastern carriers (CSXT and NS) in 2023. This figure shows UP's prominent position in transcon service, which is appreciably larger than all the others. Specifically, UP revenue alone represented approximately {{ }} of total transcon traffic revenue in 2023, and total revenue for interline moves involving UP (i.e., with CSXT and NS) represented approximately {{ }} of the transcon service provided to customers in 2023.[58]

Figure 8: Total Revenue and Carloads for Current Transcon Moves, 2023[59] {{ REDACTED

}}

The Western and Eastern railroads work together to provide transcon service for customers. Specifically, each railroad organizes traffic in its respective geographic area for movement to (or from) the key gateway interchange locations in the midcontinent region of the U.S. The vast majority of transcon traffic relies on these critical gateways along the midcontinent region where the major Class I railroads intersect, specifically Chicago, East St. Louis, and New Orleans, as Figure 9 below shows. As I discuss below, in many cases the

[58] See Carey HC-WP-Transcon_Traffic.xlsx. {{REDACTED }}.

[59] Total revenue generating carloads. IM reports containers/trailers. See Carey HC-WP-Transcon_Traffic.xlsx.

railroads use specialized agreements and prioritization methods to facilitate the handoff and interchange of blocks of cars of even entire trains, minimizing time and effort. At other times, the railroads use terminals in or near the interchange location to organize and sort carloads and aggregate carloads into trains bound for various geographic locations.

Figure 9: Map of Transcon Traffic by Interchange Location, 2023 Total Revenue[60] {{ REDACTED

}}

Figure 10 below reports the total revenue and carloads for transcon traffic that the Western and Eastern railroads interchange at each midcontinent location. Transcon traffic involving Chicago, St. Louis, and New Orleans represents approximately {{ }} of total revenue and {{ }} of total carloads using 2023 data.[61]

[60] Carey HC-WP-Transcon_Traffic.xlsx. Trackage/haulage agreements identified include: all CSXT trackage/haulage, CPKC/NS Meridian Speedway, UP/BNSF's joint line between Houston-NOLA, BNSF trackage granted in the UP/SP merger conditions, and UP and NS trackage in the Iowa-Illinois-Missouri area.

[61] *See* Carey HC-WP-Transcon_Traffic.xlsx. {{REDACTED .}} This includes Chicago, New Orleans, and East St. Louis (along with Salem, IL which also relies on East St. Louis).

Figure 10: Transcon Traffic by Interchange[62] {{

REDACTED

}}

At these key Chicago, St. Louis, and New Orleans gateways, bridges, terminal railroads, and other jointly owned assets play a critical role in the effective and efficient interchange of transcon traffic.[63]

Chicago is the largest and most complicated interchange location, with numerous terminal railroads and other facilities that transcon providers use to interchange traffic. As an example, the vast majority of CSXT interchanges with Western railroads occur at myriad yard locations, including Bedford Park, 59th Street, Cicero, Clearing, and McCook, IL.[64] Additionally, UP and CSXT currently collaborate on a jointly owned line from Dolton to Woodland Junction (the "Joint Line"), with UP dispatching the traffic over this line. As a condition of Missouri Pacific's (now UP) acquisition of Chicago & Eastern Illinois (later split between UP and CSXT predecessors) in 1965, the ICC required Missouri Pacific to provide Louisville & Nashville (now CSXT) with 50% ownership or trackage rights over the Joint

[62] *See* Carey HC-WP-Transcon_Traffic.xlsx. The total volumes do not add up to the sum of individual railroad reporting because volumes are carried by both joint line railroads involved in the move.

[63] UP, "Connecting the Nation", obtained on November 3, 2026, available at https://www.up.com/about-us/usguide.

[64] Carey HC-WP-Chicago_Yard_Movements.xlsx.

Line.[65] The ICC also required negotiations for Louisville & Nashville to obtain ownership or trackage rights between Evansville and Woodland Junction, preserving its competitive access to Chicago.[66] There is ongoing investment in the Joint Line through the Dolton Interlocking project.[67]

A substantial amount of traffic is also interchanged in the East St. Louis area (IL/MO), where all Class I railroads interconnect. Much of the interchange required to provide transcon service relies on local terminal railroads.[68] Founded in 1910 and now a subsidiary of UP, the Alton & Southern Railway ("ASR") connects to all Class I railroads East of St. Louis.[69] Established in 1889, The Terminal Railroad Association of St. Louis (TRRA) operates approximately 170 miles of track, including the Merchants and MacArthur bridges across the Mississippi River and Madison Yard, also providing interchange access to all six Class I railroads.[70] The TRRA also owns and operates a switching facility in Madison, IL, East of St. Louis.[71] The TRRA is actively investing in major trackage and infrastructure projects to expand

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[65] I.C.C. (Volume 327) FD No. 21775, Missouri Pacific Railroad Company—Control—Chicago & Eastern Illinois Railroad Company, February 16, 1965.

[66] Federal Register, Vol. 34, No. 106, "Louisville and Nashville Railroad Co. Authorization to Operate Over Certain Trackage of Belt Railway Company of Chicago and Certain Trackage of Chicago and Western Indiana Railroad Co.," June 4, 1969, at p. 8921, available at https://www.govinfo.gov/content/pkg/FR-1969-06-04/pdf/FR-1969-06-04.pdf.

[67] This project will "upgrade and reconfigure the CSX/Indiana Harbor Belt(IHB)/UP connections at Dolton Interlocking including the replacement of a Norfolk Southern (NS) connection between the IHB and CSX. A third main line with direct access from CSX and Barr Yard to the UP mainline will be constructed and will include crossovers between two mainline IHB tracks. This will upgrade the connection between IHB and UP and automate Dolton Tower for remote control." Chicago Region Environmental and Transportation Efficiency Program, "Dolton Interlocking," obtained on October 29, 2026, available at http://createprogram.org/projects/dolton-interlocking/.

[68] *See* UP, "Terminal Railroad Association of St. Louis TRRA #757," obtained on October 29, 2026, available at https://www.up.com/customers/shortline/lines/trra/.

[69] Alton and Southern Railway, "Switching and Terminal Tariff (2023)," obtained on October 30, 2026, available at https://www.altonsouthern.com/wp-content/uploads/2023/11/als8002-o-tariff.pdf. Alton and Southern Railway, "About Alton & Southern," obtained November 3, 2026, available at https://www.altonsouthern.com/about/.https://www.altonsouthern.com/wp-content/uploads/2023/11/als8002-o-tariff.pdf.

[70] *Ibid*.

[71] Terminal Railroad Association of St. Louis, "TRRA History," obtained on October 29, 2026, available at https://terminalrailroadstl.odoo.com/history. In 1912, the Supreme Court found TRRA's control of essential terminal facilities violated the Sherman Antitrust Act and required nondiscriminatory access for competing railroads. Justia, "United States v. Terminal Railroad Ass'n, 224 U.S. 383 (1912)," obtained November 3, 2026, available at https://supreme.justia.com/cases/federal/us/224/383/.

storage capacity, ease bottlenecks, and support regional freight demand.[72] The TRRA anticipates significant continued infrastructure investments, including further renovation or replacement of the MacArthur Bridge, in future years.

The BNSF Lindenwood Yard and UP Dupo yards are located toward the West and south of St. Louis, respectively,[73] while CSXT's Rose Lake Yard is slightly East of St. Louis. CSXT gained access to Rose Lake Yard from Conrail.[74] CSXT has invested heavily in the Rose Lake Yard since its acquisition, to facilitate transcon traffic.[75] In addition, CSXT also uses its Avon yard for interline traffic with the west which recently underwent substantial upgrades.[76] CSXT's interchanges with the Western railroads at the East St. Louis interchange often use TRRA and/or ASR facilities.[77]

Finally, the New Orleans interchange area provides direct routing from UP and BNSF at their separate yards in Avondale, LA. Rail traffic crossing the Mississippi River at New Orleans

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[72] This includes the Merchants Bridge reconstruction with $222m in project value, improvements to the MacArthur Bridge ($75m in investments), and an ongoing Madison Yard expansion project to increase capacity from 2,500 to 3,000 cars. New Civil Engineer, "Refurbishment of oldest rail structure over Mississippi River completed," September 21, 2022, available at https://www.newcivilengineer.com/latest/refurbishment-of-oldest-rail-structure-over-mississippi-river-completed-21-09-2022/. Progressive Railroading, "St. Louis region's pipeline of rail-served sites expands by 300 acres," May 29, 2025, available at https://www.progressiverailroading.com/short_lines_regionals/news/St-Louis-regions-pipeline-of-rail-served-sites-expands-by-300-acres--74627. Progressive Railroading, "At the Terminal Railroad Association of St. Louis, a capacity upgrade is a catalyst for growth," available at https://www.progressiverailroading.com/RailPrime/details/Atthe-Terminal-Railroad-Association-of-St-Louis-a-capacity-upgradeis-a-catalyst-for-growth--77725.

[73] St. Louis Regional Freightway, "Intermodal Terminals & Manifest Terminals", obtained on October 30, 2026, available at https://www.thefreightway.com/why-stl-region/intermodal-terminals/.

[74] Decision No. 89, STB FD No. 33388, CSX Corporation and CSX Transportation, Inc.—Control and Operating Leases/Agreements—Conrail Inc. and Consolidated Rail Corporation, July 20, 1998, available at https://www.stb.gov/wp-content/uploads/BV-3-Jan98-Dec98-196.pdf. *See also* "Memorandum and Order Following Bench Trial," Union Pacific v. Kansas City Southern, United States District Court for the Southern District of Illinois, Case No. 07-CV-00320-MJR, August 12, 2009, available at https://cases.justia.com/federal/district-courts/illinois/ilsdce/3%3A2007cv00320/37381/132/0.pdf at p. 5 ("in 1991, Rose Lake yard was owned by Conrail") and at p. 15 ("Conrail sole Rose Lake Yard to CSX").

[75] "CSX was making significant capital expenditures in the Rose Lake Yard and wanted to be able to handle additional traffic and interchange with UP." Union Pacific Railroad Co. v. Kansas City Southern Railway Co., No. 07-CV-00320-MJR, Memorandum and Order Following Bench Trial, at 17 ¶ 86 (S.D. Ill. Aug. 12, 2009), https://cases.justia.com/federal/district-courts/illinois/ilsdce/3%3A2007cv00320/37381/132/0.pdf (accessed Nov. 11, 2026). The judicial finding addresses investment associated with increased interchange in the 2004 period; no CSXT dollar figure is given.

[76] *See* Appendix 4 – Other Harm.

[77] CSXT traffic movement data. Carey HC-WP-CSX_Movement_Data_East_St._Louis.xlsx. *See also* UP, "Terminal Railroad Association of St. Louis TRRA #757," obtained on October 29, 2026, available at https://www.up.com/customers/shortline/lines/trra/.

uses the Huey P. Long Bridge, which is owned by the New Orleans Public Belt Railroad (NOPB).[78] UP controls train movements over the bridge and through West Bridge Junction.[79] CSXT's interchanges currently occur on the connected trackage referred to as the Back Belt, near CSXT's Gentilly yard. The New Orleans Back Belt was originally developed by the New Orleans Terminal Company and became part of the Southern Railway (now NS) system following Southern's acquisition of the New Orleans & Northeastern Railroad in 1916.[80] Today, NS owns and dispatches the Back Belt, which provides a key East-West rail connection across New Orleans, including providing access to CSXT.[81] UP controls dispatching over the Huey P. Long Bridge crossing of the Mississippi River, while CN controls certain connecting junctions.[82] CSXT has invested in its own facilities at New Orleans, particularly its yard in Gentilly, LA.[83]

The Western and Eastern railroads have each invested heavily in these critical gateways of Chicago, East St. Louis, Memphis, and New Orleans to improve speed, spur innovations—such as "run through power"—and foster IM alliance.

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[78] Rebuttal of New Orleans Public Belt Railroad Commission for the Port of New Orleans, STB NOR No. 42175, National Railroad Passenger Corp.—Complaint and Petition for Investigation—Substandard Performance of Sunset Limited Trains 1 and 2, February 21, 2025, at p. 1, available at https://dcms-external.s3.amazonaws.com/DCMS_External_PROD/1740743461875/309293.pdf.

[79] "Union Pacific controls the interlocker at East Bridge Jct. pursuant to a 2019 agreement with CN intended to improve operations through the area." Union Pacific Railroad Company's Reply Statement and Evidence, STB NOR No. 42175, Complaint and Petition of the National Railroad Passenger Corp. for Substandard Performance of Amtrak's Sunset Limited Trains 1 and 2, December 23, 2024, available at https://dcms-external.s3.amazonaws.com/DCMS_External_PROD/1734999621323/309045.pdf;

[80] Southern Railroads, "Southern Railway Historical Timeline," obtained on October 30, 2026, available at https://southern-railroads.org/southern-railway/history-of-the-southern-railway/southern-railway-historical-timeline/.

[81] Railway Age, "Who Dispatches the Back Best," August 24, 2026, available at https://www.railwayage.com/freight/switching-terminal/who-dispatches-the-back-belt/.

[82] CLR, "CLR Announces Intention to Form the New Orleans Terminal Railroad to Create a Neutral Rail Gateway in New Orleans," September 4, 2026, available at http://clrail.com/post/clr-announces-intention-to-form-the-new-orleans-terminal-railroadto-create-a-neutral-rail-gateway-in.

[83] "CSXT at its Gentilly Yard, CN at its Napoleon Avenue Yard, and UP at its Avondale Yard." La. Department of Transportation & Development, Louisiana State Rail Plan 146 https://dotd.la.gov/media/o1ymdwoy/2020-louisiana-rail-plan.pdf (accessed Nov. 11, 2026).

Railroads require substantial ongoing investment given the high capital costs of the system. For example, UP and NS have each acknowledged making substantial ongoing investments: UP invested over {{ }} in the past five years to support long-term growth,[84] and NS has invested upwards of {{ REDACTED }} since 2021.[85] CSXT and BNSF have similarly made significant investments in maintaining and improving their networks, and their ability to continue doing so is critical to ongoing competitiveness. CSXT and BNSF have reported $2.2 billion[86] and $3.3 billion[87] in total infrastructure capital expenditures in 2025.[88] These investments highlight the importance of sustaining competitive investment across the network, and the Transaction-related impacts described in this Verified Statement would reduce the contribution available to fund such investment by railroads other than UPNS.

Improvements to Operational Efficiency

In its current structure, the railroad industry focuses on methods to improve operational efficiency, particularly for time- and price-sensitive customers. All railroads have worked together to improve the efficiency of interchanges over time. Multiple Class I railroads also provide substantial transcon service today through partnerships and joint ventures, and at times in coordination with short-line railroads. These partnerships, particularly for IM service, are increasingly common and provide the most efficient and effective transcon service to meet customer needs.

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[84] Rocker and Elkins Amended VS at para 28.

[85] Rocker and Elkins Amended VS at para 29.

[86] CSX reported $2,239 million of "Total Infrastructure" capital expenditures in 2025. CSX Corp., Annual Report on Form 10-K for 2025, p. 39 (filed Feb. 12, 2026), https://www.sec.gov/Archives/edgar/data/277948/000027794826000006/csx-20251231.htm (accessed Nov. 11, 2026).

[87] BNSF reported $3,272 million of "Capital expenditures excluding equipment" in 2025. Burlington Northern Santa Fe, LLC, Annual Report on Form 10-K for 2025, Consolidated Statements of Cash Flows, https://www.sec.gov/Archives/edgar/data/934612/000093461226000004/bni-20251231.htm (accessed Nov. 11, 2026).

[88] "The Company is committed to maintaining and improving its existing infrastructure and to positioning itself for long-term, profitable growth." CSX Corp., Annual Report on Form 10-K for 2025, at 39 (filed Feb. 12, 2026), https://www.sec.gov/Archives/edgar/data/277948/000027794826000006/csx-20251231.htm (accessed Nov. 11, 2026).

An example of efficiency in transcon traffic involves "steel-wheel" interchanges, where cars remain on the rail tracks without unloading when traffic is handed off from one railroad to another. This process improves efficiency and train speed, helping products reach markets faster.[89] Steel-wheel interchanges can occur where two railroad networks meet, or where a terminal railroad or switching yard can facilitate the interchange function.

An advanced method of steel-wheel interchange that enables the most efficient and timely transcon service relies on the use of "run-through trains" or "run-through power." This run-through rail service involves one railroad using another railroad's locomotives on its system, sometimes referred to as "foreign locomotives." These partnerships create seamless interline transit, enabling transcon service to move freight even more efficiently between the Western and Eastern U.S. Collaboration using a foreign locomotive can eliminate the time and resources associated with uncoupling and removing cars from the train and swapping out locomotives and unnecessary dwell time.[90] NS highlights this offering as an "enhanced service" for its partnership with BNSF that involves a single crew swap for all interchange traffic to one location.[91] Trackage agreements may also avoid a change in train crews, letting one railroad run its trains with its own crew over another railroad's tracks. These types of collaborations allow railroad partners to avoid substantial delays, save time, and prevent logistical bottlenecks and costly delays.

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[89] InTek Logistics, "A Shipper's Comprehensive Guide to Intermodal Operations," March 21, 2025, available at https://www.inteklogistics.com/blog/shippers-guide-intermodal-operations.

[90] BNSF, "Glossary of Railroad Terminology & Jargon," obtained on November 3, 2026, available at https://www.bnsf.com/bnsf-resources/pdf/ship-with-bnsf/pricing-and-tools/glossary.pdf.

[91] "At Norfolk Southern, we're focused on delivering smart, customer-centric solutions—and this enhanced service from the Pacific Northwest to the Midwest is exactly that," per Shawn Tureman, Vice President Intermodal Automotive Commercial. "By collaborating with BNSF and the Northwest Seaport Alliance, we're offering a faster, more reliable rail option that helps shippers reduce transit time, cut costs, and streamline supply chains heading into 2025 and beyond." BNSF, "BNSF, NS, NWSA redesign faster service from PNW to Chicago and beyond," April 2, 2025, available at https://www.bnsf.com/news-media/news-releases/newsrelease.page?relId=bnsf-ns-nwsa-redesign-faster-service-from-pnw-to-chicago-and-beyond.

UP touts its current use of run-through service to eliminate bottlenecks, reduce transit times, and avoid delays caused by sorting cars at yards.[92] NS's joint run-through agreements with CN involving interline service routes traffic from Western Canada directly through NS's Elkhart Yard in Indiana, saving days of handling within Chicago's terminal infrastructure.[93]

CSXT also uses run-through trains, particularly when transcon traffic moves involve UP and BNSF. In aggregate, UP and BNSF foreign locomotives account for {{REDACTED }},[94] respectively, of the total locomotive movements on CSXT's entire system. Since transcon traffic makes up only a portion of each railroad's overall business, the proportion of run-through power rises appreciably as a percentage of transcon traffic, reaching at least approximately {{REDACTED }} for UP and BNSF, respectively.[95]

Specialized services developed through transcon partnerships can increase efficiency through a variety of different methods. For example, it could target more effective aggregation of trains at centralized yards, streamline trains moving through interchange locations, and aid traffic moves to or from specific locations that may serve a single customer location or many customers through a large terminal. Below I discuss examples of efficient transcon service achieved through partnerships at interchange locations, as well as through direct, customer-specific services for IM and merchandise traffic that use run-through trains. In fact, many of these examples involve UP and CSXT directly, the type of collaboration that is most at risk due to the UPNS transaction[96].

Examples of Railroad Partnerships Involving Interchange Locations

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[92] UP, "Types of Trains," obtained on November 3, 2026, available at https://www.up.com/about-us/funstuff/rrtalk/train-types.

[93] Freight waves, "CN, NS launch new joint service aimed at reducing transit times around Chicago," October 30, 2017, available at https://www.freightwaves.com/news/cn-ns-launch-new-joint-service-aimed-at-reducing-transit-times-around-chicago.

[94] Carey HC-WP-CSX_Movement_Data_Locomotive_Movements.xlsx.

[95] Carey HC-WP-CSX_Movement_Data_Locomotive_Movements.xlsx.

[96] See also Casey Albright's VS for additional discussion of achievable efficiency and well-coordinated interline service.

- UP-CN (Chicago, IL): In July 2026, UP and CN announced that they had signed a binding Memorandum of Understanding to strengthen rail service across North America and improve both railroads' ability to serve customers.[97] Specifically, the "agreement provides [UP] with expanded operating rights over CN's Elgin, Joliet & Eastern Railway (EJ&E) corridor through Chicago, while granting CN new rights over Union Pacific's network between Memphis, Tennessee, and Eagle Pass, Texas, to support freight movements between Canada and Mexico."[98]

- UP-CSXT (Salem, IL): Run-through service for UP to CSXT's Salem, IL yard hands off gathered carloads and consolidates CSXT's system-wide carload traffic to UP, letting UP build trains that complete the Western portion of the transcon move.[99] This yields operational efficiency gains that translate to lower costs.

- UP-FXE (Mexico/Eagle Pass, TX): Run-through trains with a streamlined crew change routinely operate between UP and Ferromex (FXE), providing seamless, cross-border freight services connecting the U.S. and Mexico. These trains bypass congested border interchanges by keeping the same locomotive consistent across the border with alternating crews,[100] transporting IM, grain, and automotive products under standardized interline routing agreements.

- BNSF-CSXT (McCook, IL): A connecting track enables run-through trains between BNSF and CSXT, and the McCook connection also links CSXT, BNSF, and the Indiana Harbor Belt (IHB).[101] This freight corridor, added in 2009, has increased passthrough speeds from 10 to 25 miles per hour, and relieved congestion.[102] As of 2022, 76 BNSF and CSXT freight trains reportedly benefit from the McCook connection each day.[103]

- Belt Railway of Chicago ("BRC"): The BRC is the largest switching railroad in the U.S. and is jointly owned by the major Class I operators. A Western railroad, such as BNSF, pulls a train into the BRC's massive Clearing Yard, where the BRC switches the railcars

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[97] UP, "Union Pacific and CN Announce Agreement to Improve North American Rail Connectivity," July 22, 2026, available athttps://www.up.com/press-releases/growth/up-cn-connectivity-260722.

[98] *Ibid.* "'I've seen the benefits first-hand of what the EJ&E route around Chicago can do for a railroad, and we look forward to having access to the quickest way around Chicago," said Jim Vena, CEO of Union Pacific."

[99] Carey HC-WP-CSX_Movement_Data_Foreign_Train_Passthrough_Stations.xlsx. Based on the CSXT train movement data, UP is frequently utilizing CSXT's Salem yard to build its merchandise trains.

[100] UP, "Union Pacific Aims to Drive Safer, More Fluid Operations at Southern Border," May 23, 2025, available at https://www.up.com/news/safety/safer-border-operations-it-250523.

[101] RT&S, "CREATE completes strategic rail connection in McCook, Ill," December 29, 2009, available at https://www.rtands.com/news/create-completes-strategic-rail-connection-in-mccook-ill/.

[102] *Ibid*.

[103] CREATE, "McCook Connection", January 2022, available at https://create-program-wp-assets.s3.us-east-2.amazonaws.com/wp-content/uploads/B6.pdf.

onto a different track for an Eastern railroad, such as CSXT or NS, to hook up and pull away. The BRC alone handles approximately 8,500 steel-wheel car swaps per day.[104]

- CSXT, CPKC, and the Meridian & Bigbee Railroad, L.L.C. (MNBR) (Myrtlewood, AL): A direct CPKC-CSXT interchange connection in Alabama established a freight corridor for shippers connecting Mexico, Texas, and the Southeast U.S. CSXT operates the 93.7-mile line East from Myrtlewood toward Burkeville, Alabama, and both CSXT and CPKC use run-through power over this segment.[105]

- NS–Florida East Coast Railway (FEC): A steel-wheel interchange in Jacksonville that operates in both directions and expands service for customers moving traffic through South Florida. Luis Hernandez, Vice President of Intermodal for FEC, stated: "For us in [Florida East Coast Rail], reaching additional markets and providing customers with options to ship into the primary markets in Florida is key to our development. We are committed to providing a fast, reliable and top of class service into the ports and partnering with Norfolk Southern provides a consistent and most efficient solution."[106]

Examples of IM Transcon Traffic Partnerships

A substantial amount of IM transcon service involves collaborations that have become increasingly common in recent years. Examples are listed below.

- In 2018, CSXT announced a partnership with BNSF to enhance Western access into the Ohio Valley via the Northwest Ohio Intermodal Terminal, including a new haulage agreement with BNSF.[107] BNSF touts step-on, step-off haulage interchange took 36 minutes.[108] {{REDACTED .}}[109]

- BNSF and CSXT provide direct IM service to the deep Southeastern U.S., connecting Southern California to Eastern regions including Charlotte, NC and Jacksonville, FL, as

[104] Transport Geography, Intermodal Rail Yards in the Chicago Metropolitan Area, obtained on October 30, 2026, available at https://transportgeography.org/contents/chapter6/rail-terminals/intermodal-rail-yards-chicago-area/.

[105] CSXT, "Railroads Reach Agreement to Create New Direct Connection and Corridor Linking Mexico, Texas and the U.S. Southeast" June 28, 2023, available at https://investors.csx.com/news-and-events/news/news-details/2023/Railroads-reach-agreement-to-create-new-direct-connection-and-corridor-linking-Mexico-Texas-and-the-U.S.-Southeast. Trains.com, "CPKC and CSX detail their plans to connect their networks via Meridian & Bigbee short line," August 6, 2025, available at https://www.trains.com/pro/freight/class-i/cpkc-and-csx-detail-their-plans-to-connect-their-networks-via-meridian-bigbee-shortline/.

[106] Norfolk Southern, "Florida East Coast Railway further expand intermodal service for customers," March 4, 2024, available at https://norfolksouthern.mediaroom.com/2024-03-05-Norfolk-Southern,-Florida-East-Coast-Railway-further-expand-intermodal-service-for-customers.

[107] CSX, "CSX announces new growth initiatives for Northwest Ohio Intermodal Terminal", October 2, 2018, available athttps://www.csx.com/index.cfm/about-us/media/press-releases/csx-announces-new-growth-initiatives-for-northwest-ohio-intermodal-terminal/.

[108] Video can be found at BNSF Railway, Los Angeles, Chicago, Northwest Ohio, Two railroads. One seamless trip, November 13, 2026, available at https://www.linkedin.com/posts/los-angeles-chicago-northwest-ohio-ugcPost-7526767992156860416-r6mv/.

[109] Carey HC-WP-CSX_Movement_Data_Foreign_Train_Passthrough_Stations.xlsx.

well as a Phoenix –Atlanta route.[110] The service, expanded in 2025, also provides international IM service between the Port of New York and New Jersey and Norfolk, Virginia, and Kansas City.[111]

- In October 2023, NS and CN launched a collaboration for domestic IM service, linking CN-served areas in Canada with NS-served Kansas City and Atlanta. The carriers use IM steel-wheel interchanges in Detroit and Chicago to operate as a single-line IM product.[112]

- UP partnered with GrupoMexico and Canadian National Railway to connect IM service from Canada, through the U.S., to Mexico, which is claimed to be the best-in-class Mexico–U.S.–Canada service with an unbeatable schedule between the Mexico border and Chicago.[113]

- UP collaborates with NS, CSXT, Florida East Coast Rail, and GrupoMexico to connect IM services in the Southeastern U.S. with Mexico.[114]

- UP and NS previously collaborated with Hapag Lloyd, a large international steamship IM customer, on transcon IM international port traffic.[115] This collaboration, known as the OceaNS Bridge Express, was described as "a first-of-its-kind service. It originates at the Norfolk International Terminal at the Port of Virginia and interchange[s] with Union Pacific in Chicago, with connections to West Coast markets."

  A few specific examples of UP-CSXT services include:

- UMAX, a domestic interline container service offered by UP and CSXT Intermodal, provides access to a fleet of more than 40,000, 53-foot domestic containers and demonstrates both carriers' commitment to maximize customers' shipping options while

[110] Jacksonville Daily Record, "CSX announces nationwide intermodal service agreement with BNSF," August 22, 2025, available at https://www.jaxdailyrecord.com/news/2025/aug/22/csx-announces-nationwide-intermodal-service-agreement-with-bnsf/.

[111] *Ibid*.

[112] Norfolk Southern, "Norfolk Southern and Canadian National Railway now offering new Canadian – U.S. Intermodal Service," September 11, 2023, available at https://norfolksouthern.mediaroom.com/Norfolk-Southern-and-Canadian-National-Railway-now-offering-new-Canadian-U-S-Intermodal-service.

[113] Railpace, "CN, UP, and GMXT Announce New Transformational Mexico-US-Canada Intermodal Service," April 25, 2023, available at https://railpace.com/cn-up-and-gmxt-announce-new-transformational-mexico-us-canada-intermodal-service/.

[114] UP, "New Domestic Intermodal Services from Mexico to Southeast U.S.," October 4, 2023, available at https://www.up.com/customers/announcements/premium/allpremium/PR2023-117.html. "Effective October 4, 2023, Union Pacific will offer the following services originating on GMXT from both Monterrey, NL and Silao, GJ: Atlanta, GA, Central Florida ILC, Charlotte, NC, Ft. Lauderdale, FL, Ft. Pierce, FL, Jacksonville, FL Miami, FL. Titusville, FL."

[115] Freight Waves, "Norfolk Southern connecting East, West coasts with expedited intermodal service," June 13, 2022, available at https://www.freightwaves.com/news/norfolk-southern-connecting-east-west-coasts-with-expedited-intermodal-service. Food Logistics, "Rail, Port Partnership Gives Shippers Access to West Coast Markets", June 8, 2022, available at https://www.foodlogistics.com/transportation/rail-intermodal/news/22262927/norfolk-southern-corp-rail-port-partnership-gives-shippers-access-to-west-coast-markets.

offering truck-competitive service.[116] UMAX officially launched on March 29, 2010, and was touted as providing "extensive market access and expanded capacity across a nationwide intermodal network," with "truck-competitive schedules that maximize the benefits and efficiencies of rail intermodal."[117] The program also features ramp-to-ramp and door-to-door service and web-based container reservations and billing.

- Railex was a refrigerated rail logistics service that used UP in the West and CSXT in the East to move perishables between the West and East Coasts.[118] Railex owned and operated the loading and unloading centers and managed product handling and distribution at both ends.[119] For shippers, the main benefit was that Railex provided "container consolidation and deconsolidation services, [brought] a new opportunity to U.S. importers to move perishable goods from coast-to-coast," and offered "a robust suite of additional 3PL services, including 5-days of free storage, long-term storage solutions, real-time inventory control, freight-forwarding, and just-in-time delivery."[120] Railex touted a five-day rail transit model, sealed nonstop railcars, and customer inventory and distribution tools.[121] UP acquired Railex's refrigerated and cold-storage assets in Delano, Wallula, and Rotterdam in 2017, describing Railex as a "refrigerated rail service and third-party logistics leader, [that] plays a key role in UP's Food Network transporting fruits, vegetables and other temperature-sensitive cargo across the US," serving food shippers from Delano, California and Wallula, Washington into the Midwest and Northeast via CSXT.[122]

Beyond individual railroad partnerships, TTX is a well-recognized, industry-wide collaboration that has proven to be a game changer. TTX operates a pooling mechanism for IM flatcars, a shared resource that all Class I railroads use universally. Through joint ownership by all Class I railroads and strong collaboration, TTX has realized the full array of achievable public

[116] UP, "UMAX Domestic Container Program," obtained on November 3, 2026, available at https://www.up.com/customers/premium/umax/; UP, "UMAX Domestic Container Program," obtained on November 3, 2026, https://www.up.com/shipping/intermodal/umax.

[117] Heavy Duty Trucking, "CSX, Union Pacific Come Together For Domestic Interline Container Program," February 24, 2010, available at https://www.truckinginfo.com/news/csx-union-pacific-come-together-for-domestic-interline-container-program.

[118] The original 2006 service moved perishables from Wallula, Washington to Albany/Rotterdam, New York, with a Chicago interchange between UP and CSXT.

[119] CSXT's 2005 announcement notes the service targeted 124-hour/fifth-morning service by keeping the train intact as a dedicated unit train. CSX, "Union Pacific and CSX to Introduce a New Produce Service in 2006," August 2, 2005, available at: https://investors.csx.com/news-and-events/news/news-details/2005/Union-Pacific-and-CSX-to-Introduce-a-New-Produce-Service-in-2006/default.aspx.

[120] Railex, "Railex Opens Jacksonville, Florida Servies in June 2014," May 7, 2014, available through webarchive at: https://web.archive.org/web/20140728224341/http://railex.com/news/railex-opens-jacksonville-florida-services-june-2014/.

[121] Railex, "Railex General Presentation to Union Pacific Railroad," 2007, available at https://www.nymtc.org/portals/0/pdf/presentations/archive/Railex_toUnion_Pacific_Railroad.pdf.

[122] Brotherhood of Locomotive Engineers and Trainmen, "UP Acquires Railex LLC Assets," January 4, 2017, available at https://blet.org/news/up-acquires-railex-llc-assets/.

benefits and has played a major role in the ongoing evolution of the doublestack car.[123] The Board has also recognized the great technological innovation achieved from the TTX collaboration.[124] TTX enables efficient use of resources through the substitutability of flatcars, avoiding the costs that individual railroads would otherwise incur maintaining their own IM flatcar fleets, and it coordinates the backhaul of empty cars and non-revenue-generating trains—costs that would otherwise absorb rail density that could instead carry valuable customer shipments at lower cost.

Given the large public benefits TTX generates, shippers, ports, manufacturers, suppliers, and others overwhelmingly supported extending the pooling arrangement's term: "In this proceeding, over 80 interested parties—DOD (through SDDC), shippers, ports, car parts suppliers, car manufacturers, and others— have written in support of continuing the TTX flatcar pool for another 15 years."[125] Indeed, following ongoing and successful reviews by the STB, the TTX's authorization for flatcar pooling—which had an initial five-year term—was extended for successive 10- and 15-year terms.[126]

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[123] *See* "TTX Company – Application for Approval of Pooling of Car Service With Respect to Flatcars," STB FD No. 27590, September 30, 2014, at p.6.

[124] *Ibid*.

[125] *See* "TTX Company – Application for Approval of Pooling of Car Service With Respect to Flatcars," STB FD No. 27590, September 30, 2014, at p. 6.

[126] *See* "TTX Company – Application for Approval of Pooling of Car Service With Respect to Flatcars", STD FD No. 27590, January 16, 2014 at pp. 17-18, and "TTX Company – Application for Approval of Pooling of Car Service With Respect to Flatcars," STB FD No. 27590, September 30, 2014, at p. 6. The STB's views on TTX are explained as follows:

> On the record before us, TTX has shown that the pooling of flatcars promotes research and development of new and innovative equipment, permits standardized fleet repair and maintenance to reduce costs for the participating railroads, allows the participating railroads to spread the risk of investment in equipment, enables the participating railroads collectively to respond effectively and efficiently to the dynamics of the North American railroad network, and produces substantial capital savings by maximizing the efficient use and distribution of pooled equipment. That record reflects and the industry's many years of experience with the pool confirms that the full array of benefits achieved through flatcar pooling cannot readily be achieved through any other means.
>
> The benefits of pooling also clearly outweigh any anticompetitive effects that may flow from the arrangement. Based on the record, the Board believes that such anticompetitive effects (to the extent they exist) are likely to be minimal. We are aware of no alternative mechanism that would entail less restraint on competition.

Examples of Merchandise Transcon Traffic Partnerships

Merchandise traffic is more complex than IM traffic and faces greater challenges to partnerships because individual customer locations are less able to achieve the scale needed to support a separate direct service rather than one integrated into the overall merchandise traffic aggregation and delivery system. Nonetheless, many examples of working collaborations exist between the transcon railroads, as listed below.

- BNSF–NS PRB Coal for Plant Scherer, GA: BNSF operates unit coal trains bound for Georgia Power's Plant Scherer (near Juliette, GA) under a joint haulage agreement. BNSF transports low-sulfur coal from the Powder River Basin to Memphis, TN, where the train, and usually the BNSF locomotives, are handed off to NS for the final leg East.[127]

- BNSF–NS Automotive for Ashland: NS and BNSF implemented service improvements under which the two carriers deliver all interchange traffic to a single location (NS-Ashland) for a single crew swap before moving toward inland areas in Ohio, Pennsylvania, and beyond.[128]

- BNSF-CSXT PRB Coal for West Olive, MI: BNSF operates unit coal trains bound for West Olive, MI.[129] BNSF trains load coal in the Powder River Basin before CSXT crews take over and move it through Illinois to the J.H. Campbell Power Plant in Michigan.[130] This BNSF–CSXT partnership delivers one loaded coal train per day to the power plant.[131]

- UP–CSXT, Frac Sand for Fairmont, WV: UP moves {{REDACTED }} to a CSXT-owned TRANSFLO facility in Fairmont, WV.[132] The TRANSFLO facility accepts frac sand deliveries for storage and subsequent truck delivery to the surrounding region.[133]

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[127] Florida Power and Light, "Florida PSC Docket 100001-E1 Staffs 1st set of Interrogatories," March 4, 2010, at p. 1, available at https://www.floridapsc.com/pscfiles/library/filings/2010/01468-2010/01468-2010.pdf.

[128] "By collaborating with BNSF and the Northwest Seaport Alliance, we're offering a faster, more reliable rail option that helps shippers reduce transit time, cut costs, and streamline supply chains heading into 2025 and beyond." BNSF News Press, "BNSF, NS, NWSA redesign faster service from PNW to Chicago and beyond," April 2, 2025, available at https://www.bnsf.com/news-media/news-releases/newsrelease.page?relId=bnsf-ns-nwsa-redesign-faster-service-from-pnw-to-chicago-and-beyond.

[129] Smart Union, "Coal trains roll as Michigan power plant gets a lifeline," June 3, 2025, available at https://www.smart-union.org/coal-trains-roll-as-michigan-power-plant-gets-a-lifeline/.

[130] *Ibid*.

[131] *Ibid*.

[132] UP trains at Fairmont, WV supported by CSX movement data, see Carey HC-WP CSX Movement Data Foreign Train Passthrough Stations.

[133] Progressive Railroading, "U.S. Silica, CSX's TRANSFLO open frac sand storage facility in West Virginia," September 11, 2013, available at https://www.progressiverailroading.com/logistics/article/US-Silica-CSXs-TRANSFLO-open-frac-sand-storage-facility-in-West-Virginia--37669.

- BNSF -NS Automotive in Plant Lincoln, AL: Historically, BNSF and NS operated run-through trains carrying automotive vehicles to serve the Honda Manufacturing of Alabama assembly plant in Lincoln, AL, under a BNSF/NS joint haulage agreement.[134] Today, CSXT serves this location, though the service does not appear to be run-through; rather, it originates at CSXT's hub in Talladega, AL and interchanges in Birmingham, AL.[135]

In sum, the Class I railroads currently work together to provide efficient and effective transcon service to meet customer needs. Combining UP and NS would fundamentally change these dynamics for the worse. The proposed UP/NS Transaction would put at risk much, if not all, of today's collaboration among the Class I railroads that helps maintain the existing competitive balance in the rail system.

III. The Historic Balance In the Railroad Industry Would Be Upset by the UPNS Transaction

A. The Proposed Transaction would create a new railroad that would have outsized leverage and power over large swaths of the rail network and the shipper community it serves.

The Proposed Transaction would result in UPNS blanketing virtually the entire U.S., with stations located in {{ }} of U.S. BEAs by revenue (see Figure 11 below), and reaching approximately {{ }} of customers across the U.S. A UPNS Transaction would materially impact transcon shippers, who today generate approximately {{ REDACTED }} in revenue. Simply combining UP and NS would immediately account for {{ }} of total transcon traffic and approximately {{ REDACTED }} in transcon revenues.[136]

Among other anticompetitive effects, this Transaction would substantially reduce

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[134] Progressive Railroading, "BNSF begins serving Honda's Alabama automotive plant," January 12, 2004, available at https://www.progressiverailroading.com/rail_industry_trends/news/BNSF-begins-serving-Hondas-Alabama-automotive-plant--3753.

[135] Association of American Railroads, "Automotive Facility Guide," January 1, 2025, available at https://www.aar.com/standards/pdfs/2025%20AAR%20Terminal%20Guide%201.01.2025.pdf; WBMA ABC 33/40, "Virginia Transportation unveils new electric truck for Alabama Honda plant car transport," August 26, 2024, available at https://abc3340.com/news/local/alabama-talladega-county-lincoln-virginia-transportation-unveils-new-pilot-program-that-will-electrify-transportation-of-cars-with-electric-powered-tractorspeterbilt-579ev-model-transport-newly-built-honda.

[136] {{REDACTED .}} *See* Carey HC-WP-Transcon_Traffic.xlsx.

geographic competition: customers would find it increasingly difficult to access multiple rail options in supply regions, and shippers would find it increasingly difficult to serve destinations without UPNS. The absence of sufficient independent railroad options would therefore affect the entire supply chain.

Figure 11: UPNS Customers as Compared to Other U.S. Class I Railroad, 2023[137] {{
REDACTED

}}

Today, UP and NS revenues from sole-served locations for the top 150 common merchandise customers traffic are approximately {{ REDACTED}} and {{ REDACTED}}, respectively in 2023.[138] If combined, UPNS revenues from sole-served locations for the same top 150 common merchandise customers would be approximately {{ REDACTED}}, which is markedly larger than either individual railroad's revenues from sole-served locations currently. Similarly, a combined UPNS also would have substantially more revenue from dual-served locations than before the Transaction. In total, around {{ }} of UPNS revenue involves (to

[137] Carey HC-WP-Customer_Counts.xlsx.

[138] Numbers are for top 150 common customers as discussed in Section VI. *See* Carey HC-WP-Bundling.xlsx.

or from) a sole-served location, which is around {{ }} CSXT's revenue involving dual-served locations for those same customers.[139]

Figure 12 below shows the UPNS stations and customers (green dots = NS; gold dots =UP) on its future combined network, with shaded regions denoting geographic economic areas referred to as BEAs.[140] The darker blue shading in regions indicates higher revenues into or out of the region and shows that UPNS would have access to the largest revenue BEAs in both the West and East. In total, UPNS would operate in the vast majority of U.S. BEAs, which account for approximately {{ }} of total Class I railroad revenue business.[141]

Figure 12: UPNS Served Stations and Class I Railroad's Revenues by BEA, 2023[142] {{ REDACTED

[139] See Section VI where I discuss UPNS bundling.

[140] BEA = Bureau of Economic Analysis areas.

[141] 2023 {{REDACTED }} based on 1995 geographic area BEAs (*see* Appendix 2 – Current and Future Competitive Balance for equivalent 2004 calculation). Carey HC-WP-Revenue_by_BEA.xlsx. Revenue allocated 50/50 between origin BEA and destination BEA for a given move and aggregated by BEA. It excludes stations that UP and NS access via short lines.

[142] Carey HC-WP-Revenue_by_BEA.xlsx. Based on the 1995 geographic area BEAs consistent with the CWS reporting. 2004 BEAs approximately the same revenue statistic (approximately {{REDACTED}}). Considers 2023 US Class I Revenue assigned based on BEA-BEA moves. UPNS serves the BEA if they have at least one station in the BEA according to the Centralized Station Master.

REDACTED

}}

The large consolidation of customers in the East and West regions that UPNS could serve would give UPNS enormous, unrivaled influence over shippers, who would find it virtually impossible to avoid UPNS. Therefore, even where some of a shipper's locations could receive service from a different regional railroad (e.g., CSXT, BNSF), UPNS could leverage the many other locations where that customer depends on it to influence the shipper's overall business. Bundling and other pricing strategies applied on this unprecedented scale would divert substantial traffic from CSXT and BNSF, reducing their ability to act as a competitive constraint

on UP.[143] A combined UPNS would, in aggregate, account for approximately {{ }} of all sole-served customer-SPLC locations.[144]

UPNS would also control critical rail assets, including those necessary for interchange at numerous key transcon gateways. Post-Transaction, UPNS would have substantial ownership or control over key bridges, terminal railroads, other rail lines, and facilities (such as dispatching) that are critical to facilitate transcon traffic moves via effective interchange.[145] Currently, UP and CSXT interchange substantial quantities of traffic at East St. Louis, Chicago and New Orleans, which constitute approximately {{ }} of CSXT revenue from UP-CSXT interline traffic moves.[146] For CSXT's interline traffic with BNSF, the {{REDACTED}} of traffic uses the three gateways of East St. Louis, Chicago, and New Orleans.[147] Thus, UPNS-owned or controlled assets/operations at these three gateways would affect the vast majority of CSXT's transcon traffic.

UPNS would be the only railroad that serves all six major Mexico gateways in operation today,[148] along with a seventh gateway in progress.[149] UP owns 25% of FXE, one of the two

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[143] These circumstances include large amounts of customers that are entirely sole served by UPNS, as well as others that may be sole served on one end and dual served on the other. These customers have less ability to avoid UPNS who would be involved in the lion's share of these moves for customers. As discussed below in Section VI, UPNS would have additional levers to employ pricing strategies with customers with moves on its network that might also be involved in interline traffic moves with UP and CSXT today.

[144] *See* Appendix 2 – Current and Future Competitive Balance.

[145] UP, "Connecting the Nation", obtained on October 30, 2026, available at https://www.up.com/about-us/usguide.

[146] {{REDACTED }} This includes Salem IL traffic that UP/CSXT traffic originated from Salem IL and moved through St. Louis to Western locations. *See* Carey HC-WP-Transcon_Traffic.xlsx.

[147] {{REDACTED)}} for revenue. *See* Carey HC-WP-Transcon_Traffic.xlsx.

[148] UP, "Connecting the Nation," obtained on October 30, 2026, available at https://www.up.com/about-us/usguide.

[149] The seventh gateway under construction is in Presidio Texas, interchanging between FXE and US Short line Texas Pacifico, see Texas Pacifico, "Route Map," obtained on November 4, 2026, available at http://www.texaspacifico.com/routeMap.html. UP, "Texas Pacifico Transportation, LTD TXPF #57," obtained on November 10, 2026, available at https://www.up.com/shipping/short-line/lines/txp. Texas Rail Advocates, "Keep your eye on this Texas-Mexico rail link: test trains are running on the South Orient Line, federal CRISI grant announced," obtained on November 10, 2026, available at https://texasrailadvocates.org/post/Keep-your-eye-on-this-Texas-Mexico-rail-link-test-trains-are-running-on-the-South-Orient-Line.html.

railroads in Mexico. According to UP, its ownership of FXE gives it "access into Mexico like nobody else…. which expands our reach differently than any other railroad."[150]. The sizeable and growing Mexico traffic exceeds {{ REDACTED}} in revenue today, up {{ }} since 2019, with UP or FXE earning a {{REDACTED}} of revenue and {{ }} of revenue on entire traffic moves with other interline partners.[151] {{ REDACTED}} of the traffic revenue involves Eastern U.S. locations with CSXT or NS (about {{ }} of total Mexico traffic revenue).[152]

B. The UPNS Transaction would result in the remaining two carriers–BNSF and CSXT–becoming largely "dependent interline" providers.

Pre-Transaction, an independent UP has no incentive to impede interline moves in the Eastern U.S., or to favor one Eastern carrier over the other. In fact, each Class I railroad currently has an incentive to deal with each of its interline partners (particularly those it does not compete with) collaboratively or at least non-discriminatorily. Post-Transaction, UPNS would have both the incentive (i.e., profit) and the ability to deprioritize or disadvantage traffic it would otherwise interchange with Eastern and Western rail carriers (CSXT and BNSF) to advantage its single-line traffic moves. UPNS would have the incentive and ability to raise its rivals' costs and degrade service quality across the entire supply chain for interline transcon service.[153]

A combined company's reach would significantly reduce the number of independent routes available to shippers. Today, interline shippers have at least two independent routes in the East and the West. Independent railroad options for routes, interchanges, and customer locations

[150] TrainsPro, "The Trains Interview: Union Pacific CEO Jim Vena talks service, growth, competition, and steam," August 6, 2025, available at https://www.trains.com/pro/freight/class-i/the-trains-interview-union-pacific-ceo-jim-vena-talks-service-growth-competition-and-steam.

[151] 2024 figures. *See* Appendix 5 – Specific At-Risk Areas: Gulf Coast and Beyond.

[152] *Ibid*.

[153] For example, the BNSF route between Kansas City and East St. Louis must traverse a segment governed by NS "rules" and "time table" see my accompanying VS's in CSXT's Responsive Application. For other examples, see also and Section VII and Ex. 12A, V.S. Kenney.

all benefit shippers.[154] Independent interline routes provide more effective competition than routes that depend on the service of a direct competitor. Post-Transaction, shippers would have far fewer independent railroad routing alternatives, as I discuss in more detail in Sections IV and V below, since both CSXT and BNSF would depend on UPNS for the other portion of {{REDACTED}} of interline moves.[155] Indeed, the vast majority of the entire {{ REDACTED }} transcon traffic faces reduced independent rail options.[156,157]

Post-Transaction, customers that ship from the Eastern U.S. to the Western U.S. would see significant rail option reductions at every major gateway.[158] Many shippers using the Chicago Gateway currently have four independent routing options, BNSF-CSXT, BNSF-NS, UP-CSXT, and UP-NS, which would be reduced to two post-Transaction, BNSF-CSXT and UPNS. Shippers at the St. Louis and New Orleans gateways would see the same reductions. Shippers in Kansas City would be even worse off—currently, the two Western alternatives both connect to NS for a transcon move to the East; post-Transaction, a combined UNPS would dominate this gateway.[159] Lastly, shippers using Memphis would have only the independent rail options of UPNS or a circuitous BNSF-CSXT gateway.

Figure 13 below depicts the reduced rail optionality for Eastern U.S. shippers who today rely on UP in the West but have CSXT and NS as available independent rail options in the East.

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[154] These true independent rail options enable negotiations for rates and service and other customer preferences (whether or not they switch carriers). Simply put, rail options ensure that the robust benefits of competition are achieved, which are common and well understood economic benefits. The absence of an independent rail option to negotiate with eliminates the benefits of competition. It underpins many STB decisions to ensure at least two rail options and sometimes three are maintained post-transaction.

[155] Carey HC-WP-2023_Traffic_Summary.xlsx

[156] Except potentially sole-served UP-CSXT or BNSF-NS today is approximately {{ REDACTED }} for transcon revenue. Carey HC-WP-Sole_and_Dual_Analysis.xlsx.

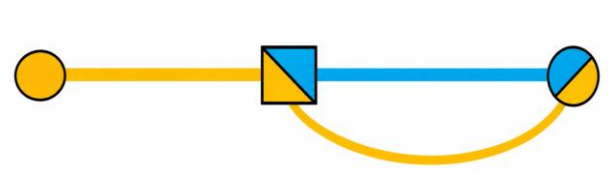
[157] Israel workpaper "03. Independent Routes.R" and Carey HC-WP-Independent_Routes_Overlap_Analysis.xlsx.

[158] Some Eastern shippers may continue to receive service from a Canadian Class-1 railroad, but this is the minority.

[159] UP's proposed settlement with CN does not alleviate this problem because CN does not have the Eastern network to provide the independent competitive alternative that shippers in the East need.

The elimination of rail optionality in the Eastern U.S. would result in a dependent interline as the sole alternative option to UPNS post-Transaction.

Figure 13: Post-Transaction Reduced Independent Railroad Options for UP Shippers with Dual-Served CSXT and NS Locations in the East[160]



More than {{REDACTED}} carloads of merchandise traffic would lose the rail optionality of Eastern CSXT and NS railroads or Western BNSF and UP railroads and would be left with only a limited dependent interline arrangement.[161] The UPNS Transaction would subject an unprecedented number of shippers to dependent railroad routes (i.e., eliminating the robust Eastern U.S. rail optionality they have today). In fact, the UPNS Transaction would create many more dependent interline situations than exist today.

No other recent transaction created so many dependent railroad routes. For example, as shown in Figure 14 below, the CPKC transaction created fewer dependent interline routes. 2023 saw only {{REDACTED}} CPKC dependent interline cars,[162] which is only about {{ }}[163] of the {{REDACTED}}[164] carloads on dependent interline routes that a combined UP and NS would create.

[160] Similarly in the Western U.S., customers also face reduced rail optionality who today rely on NS in the East but have UP and BNSF as available independent rail options in the West.

[161] *See* Appendix 2 – Current and Future Competitive Balance and Carey HC-WP-Sole_and_Dual_Analysis.xlsx. This includes combined CSXT and NS revenue from UP sole-served or ineffective competition to CSXT or NS dual-served, and UP and BNSF revenue from NS sole-served to BNSF or UP dual-served. This approximate {{ REDACTED}} in dual-served solely dependent interline traffic revenues (e.g., CSXT or BNSF interline with UP or NS). This does not consider potential reductions in IM related service.

[162] Carey HC-WP-Interline_Shares.xlsx.

[163] {{REDACTED }}

[164] *See* Appendix 2 – Current and Future Competitive Balance and Carey HC-WP-Sole_and_Dual_Analysis.xlsx.

Figure 14: New Dependent Interline Merchandise Carloads by Transaction[165] {{

REDACTED

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I conducted an analysis of traffic movements on specific corridors (O-D combinations) involving single-line competitors and interline competitors. This analysis examines interline competitors that depend on the single-line competitor (i.e., that involve the post-Transaction single-line competitor for one leg of the route, such as a West-East move with UP as the first leg) and those that comprise two independent railroads (such as BNSF and CSXT in a West-East move).

2023 historical traffic data shows that dependent interline competitors fare worse than independent interline competitors in terms of rail shares. The analysis based on 2023 data may even understate the issue, since there is limited data to conduct the analysis and the West and East do not have the full combination of single-line, dependent and independent interline situations. Specifically, when at least one Class I railroad single-line competitor operates on a corridor, the single-line option achieved a {{ }} share of traffic when it competed against a

[165] 2023 from analysis from CPKC TT, {{ }} traffic volumes on routes where they participated as a dependent interline option and a single line option. However, since CPKC may be one of many SL options, this number is conservative and distinct from UPNS. Carey HC-WP-Interline_Shares.xlsx.

dependent interline carrier, but only a {{ }} share of traffic when it faced an independent interline competitor.[166] That share differential translates into {{ REDACTED }} of traffic diverted to the single-line service.[167]

C. Conclusion.

No one can foresee, much less quantify, all the potential harm that could result from this combination. An unprecedented transaction of this magnitude is likely to have many unintended consequences. But I show below that Applicants did not produce reliable evidence to address the Board's concern about competitive harm to shippers. I then provide additional analysis, both to correct what Applicants' experts did present and to add other data quantifying the billions of dollars of rail traffic that this Transaction would expose to anticompetitive behavior.

IV. Applicants Do Not Provide Meaningful Economic Analysis of UPNS Dominance

A. Introducing Applicants' analyses from Dr. Bailey and Dr. Israel.

Applicants have put forward two analyses that purportedly assess the risk that the Transaction would create a dominant player and cause competitive harm in specific corridors or certain geographic areas, and specific commodities. They conclude that no such harm would result. Both experts' analyses are fundamentally flawed, as described in detail below.

Dr. Bailey conducts two primary analyses to assess the potential for "adverse horizontal competitive effects" at a BEA level, plus one customer-level analysis at the facility and BEA level.[168] Dr. Bailey's "within-corridor" analysis purportedly analyzes the scope for adverse

[166] *See* Appendix 2 – Current and Future Competitive Balance.

[167] Carey HC-WP-Interline_Shares.xlsx.

[168] Bailey Amended VS at para. 88.

competitive effects resulting from the potential loss of horizontal competition from the Proposed Transaction, as discussed in further detail in Appendix 3.

Dr. Bailey's "between-corridor" analysis ostensibly evaluates reductions in rail transportation options for shippers in origin areas and customers in destination areas for specific commodities. This geographic competition evaluation asks whether a rail merger would reduce a shipper's practical ability to discipline rail rates or service by sourcing the same commodity from a different place (or selling it to a different destination) that has access to another carrier or mode. In summary:

- Source competition: Evaluates whether a customer in a destination geography could use alternative railroads to receive a product from multiple distinct origins.
- Destination competition: Evaluates whether a shipper in an origin geography could use alternative railroads to ship a product to multiple distinct destinations.

A reduction in horizontal geographic competition between corridors due to an increased share of the combined firm would increase that firm's ability and incentive to profitably raise prices or reduce service quality for specific products across corridors and in geographic areas.

This between-corridor analysis starts with the 50/10 screen, which flags as a "failure" any geographic area in which a combined UPNS would hold at least a 50% share and where each individual railroad holds at least a 10% share. The Board has accepted,[169] and as Applicants acknowledge by submitting Dr. Bailey's analyses, that railroad combinations that result in the combined company holding more than 50% combined share raise substantial concerns about the combined entity's market power and its ability and incentive to raise prices above competitive

[169] *See* Decision No. 3, STB FD No. 36744, Canadian National Railway Company—Control—Iowa Northern Railway Company, January 13, 2025.

levels and/or lower service quality in those impacted corridors.[170] When one entity holds a large share (50% or more) and combines with another entity holding a smaller share (10% or more), share concentration increases substantially."[171]

For these 50/10 failures, Dr. Bailey in her amended VS adds a secondary test called a "critical loss analysis" (CLA) to evaluate whether the customer or shipper could replace the impacted traffic elsewhere without using UPNS.[172] She concludes the CLA demonstrates that the Transaction would not harm competition.[173]

Dr. Israel, meanwhile, ostensibly analyzes reductions in independent rail options on corridors affected by vertical integration. He focuses on a limited universe of only {{ REDACTED }} in traffic revenues, entirely omitting from his analysis, without meaningful explanation, the traffic Dr. Bailey analyzes.[174] He also conducts regression analysis to support his opinion that there is virtually no risk of foreclosure from the Transaction, based on through-rate traffic, which represents a minority of UP and NS traffic.[175]

B. Summary of Dr. Bailey's analyses.

Dr. Bailey's within-corridor and between-corridor analyses are not reliable evidence for the Board to use in evaluating whether a combination of UP and NS would produce substantial

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[170] In the initial application Dr. Bailey only submitted a 50/10 analysis and relied solely on this analysis.

[171] As discussed later (*see* Section V), there are many areas with very high market concentration. In a highly concentrated market, even a small change in share causes a large change in HHI and is therefore indicative of a significant risk of pricing above competitive levels. *See* DOJ, Merger Guideline 2.1, obtained November 10, 2026, available at https://www.justice.gov/atr/merger-guidelines/applying-merger-guidelines/guideline-1.

[172] The 50/10 is a relevant analysis on its own and does not require a secondary test critical loss analysis in all instances. The facts and circumstances of this case with UPNS having substantial geographic scope and significantly high shares in a majority of areas make the 50/10 alone the more informative test.

[173] The STB routinely considers geographic analysis without reliance on a CLA. *See* Decision No. 3, STB FD No. 36744, Canadian National Railway Company—Control—Iowa Northern Railway Company, January 13, 2025.

[174] *See* Israel Amended VS at pp. 42-44 and Appendix D, Israel workpaper "03. Independent Routes.R." *See* Carey HC-WP-Independent_Route_Analysis.xlsx. Note that this figure is based on Dr. Israel's average annual calculation which he uses in his VS and Appendix.

[175] Israel Amended VS at p. 23.

horizontal anticompetitive effects. Before explaining the flaws in Dr. Bailey's analyses and the corrected results once I remedy the errors, I first summarize the analysis Dr. Bailey claims to conduct in her VS.[176]

Within corridor 3-to-2 and 2-to-1 analysis[177]

Dr. Bailey's within-corridor analysis identifies reductions in options available to shippers along specific origin-destination corridors, limited to overlapping rail segments between UP and NS.[178] Specifically, the analysis first identifies corridors where the current options are either UP and NS only (resulting in a 2-to-1 reduction post-Transaction) or UP, NS, and one other carrier (resulting in a 3-to-2 reduction post-Transaction) for the originating segment, terminating segment, or bridge segment of the move.[179] She applies the following exclusions by commodity:

1) Excludes traffic where non-rail volume accounts for 50% or more of the combined freight tonnage for rail and non-rail for that commodity on that corridor,[180] and
2) Excludes IM and motor vehicle traffic.[181]

Dr. Bailey purportedly analyzed over 1,000 corridors where both UP and NS operate and concluded that zero corridors would lose competition from reducing the number of railroads on a segment of a route from 2 to 1.[182] Dr. Bailey further finds that there are only 15 corridors, representing {{REDACTED}} total carloads, at most, where there may be a loss of competition from reducing the number of railroads from 3 to 2.[183] It contains many of the same or similar flaws as

[176] I also discuss her incomplete analysis of stations in Appendix 3 – Horizontal Harm.

[177] A detailed analysis of Dr. Bailey's flawed within corridor 3-to-2 and 2-to-1 analysis is in Appendix 3 – Horizontal Harm.

[178] Dr. Bailey qualifies that she deviates from precedent in focusing on horizontal overlaps, i.e., overlaps at segments of the route, rather than reductions of options for the whole corridor. *See* Bailey Amended VS at para. 153.

[179] The results of this analysis are presented in Dr. Bailey's Amended VS Exhibit 12 and Bailey Amended VS at Section 4.3.1.

[180] Bailey Amended VS at para. 139.

[181] Bailey Amended VS at Section 4.4.2, para. 137.

[182] Bailey Amended VS at paras. 132, 141.

[183] Bailey Amended VS at paras. 121, 133, and Exhibit 12.

I discuss below regarding the "between-corridor" analysis. Moreover, Dr. Bailey did not analyze the 4-to-3 rail segment overlaps where the Proposed Transaction could lessen competition. These overlaps could affect many corridors, such as KC-ESL, where UP and NS currently compete head-to-head and account for the majority of traffic volume.[184] This analysis is detailed in Appendix 3.

Between corridor 50/10 analysis

Given the end-to-end nature of the Transaction, the Board should examine the significant risk of harm that would affect horizontal geographic competition. For this analysis, Dr. Bailey first conducts a 50/10 test followed by a CLA. Dr. Bailey's 50/10 analysis screens origin and destination geographies separately for competitive concern based on a set of conditions. BEA-commodity pairs fail the 50/10 screen if:

1) For a given end of the move, UP and NS combined originated, terminated, or participated in at least 50% of the traffic, and
2) For a given end of the move, UP and NS each originated or terminated at least 10% of the traffic.

These shares are calculated from the total of rail, truck, and water tons for a given BEA-commodity set, where a commodity is defined at the 4-digit STCC level.[185]

In her Amended VS, Dr. Bailey added a CLA after the 50/10 analysis.[186] The CLA purports to determine whether sufficient alternatives exist for the failed 50/10 geography-commodity pairs to rule out competitive concerns from the Proposed Transaction. In simple

[184] I discuss corrections in the Appendix 3 – Horizontal Harm and have additional information in my VS for the accompanying Responsive Application.

[185] For the participating screen, there is an additional check "whether the combined participating share of UP and NS is more than 10 percentage points higher than the share of either UP or NS individually." Bailey Amended VS at Appendix G at para. 10.

[186] Bailey Amended VS at Section 4.4.2.2.

terms, for the failed 50/10 screen, a CLA considers whether other supply points could replace the {{REDACTED}} carloads Dr. Bailey identifies as impacted by the Proposed Transaction, or whether those carloads could reach other destinations unaffected by the Proposed Transaction. Essentially, the analysis asks whether shippers or customers could avoid a combined firm if it attempts to exercise market power. See Appendix 3 for further information on the CLA.

Under her test, if either definition of Available Volume exceeds Affected Volume, Dr. Bailey concludes there is no competitive concern.[187] Dr. Bailey includes truck and water traffic in her definition of "Available Volume."

For both source and destination competition, Dr. Bailey concludes that, although the 50/10 analysis flagged certain corridors, the CLA unflags 100% of those origin-commodity pairs.[188] In other words, according to her definitions of Available Volume, customers could obtain sufficient alternative supply and have sufficient alternative demand for a given commodity from locations other than the origin or destination being evaluated. Accordingly, Dr. Bailey concludes that the Proposed Transaction poses no competitive harm, because all corridors flagged in the 50/10 analysis pass the CLA.[189]

C. Fundamental flaws in Dr. Bailey's analyses.

Dr. Bailey's horizontal analysis significantly understates competitive concerns from the Proposed Transaction, despite the highly concentrated areas where UPNS would have participating rail shares of over 50% (and in some cases, over 80-100%).[190] This section

[187] Bailey Amended VS at Appendix G, pages G6-G10. She also includes truck volumes as "available volumes" for shippers and receivers to use to avoid UPNS for transcon service.

[188] Bailey Amended VS at Exhibit 14.

[189] Bailey Amended VS at paras. 189-192 and Exhibit 16.

[190] As a preliminary point, the 50/10 analysis excludes from consideration any area in which one of the entities has an individual share between 5 and 10%. In other words, the standard 50/10 analysis does not address all areas where UPNS would hold a very high share of 80-100%. For example, fiberboard (2631117) originating in Atlanta would have a UPNS participating share of

summarizes various erroneous and unsupported assumptions in Dr. Bailey's 50/10 analysis, which she completed at a BEA level. Appendix 3 – Horizontal Harm includes further explanation, examples, and data for the issues identified below. The flaws discussed in this section are substantial, however, and this discussion does not address additional harm associated with combined BEAs for the Gulf Coast region, discussed in Section VII below. Nor does it address the harm associated with the within-corridor analysis, which is flawed for many of the same reasons discussed below with respect to the between-corridor analysis.

Flaws in Dr. Bailey's 50/10 analysis for between corridor

Failure to analyze rail-only alternatives: Dr. Bailey assumes, without providing any evidentiary support, that trucking and water transport compete with rail in all cases, failing to evaluate differences in service quality, specialized customer needs for transport at the 7-digit STCC level, and other factors. By including non-rail transportation such as trucking in her analysis, Dr. Bailey understates competitive effects.[191] She does not address the economics of trucking (lacking analysis and evidence) to support its inclusion in the horizontal analyses.[192] By including non-rail transportation, Dr. Bailey also disregards the STB's historical practice of focusing on railroad competitors and railroad competition. For example, in the most recent Class I railroad transaction, CPKC presented screens using only rail shares.[193] Dr. Bailey does not explain this deviation from standard STB practice.

{{ }}; sheet steel (3312332) originating in Huntsville, AL would have a UPNS participating share of {{ }}. *See* Appendix 3 – Horizontal Harm.

[191] Bailey Amended VS at para. 177.

[192] Notably, Dr. Bailey indicates that the UPNS Proposed Transaction would divert traffic ***from*** trucking to rail. *See e.g.* Bailey Amended VS at paras. 13, 20, 49, 85, inter alia. (Emphases added) She states she is an expert in trucking industry. *See* Bailey Amended VS at para. 2.

[193] CP-KCS Application, STB FD 36500, October 29, 2021, Majure VS at p. 50. Other examples also exist. CSXT-PAS, STB FD 36472, CSXT Amended and Supplemented Application, July 1, 2021, at p. 550; CN-IANR, STB FD 36744, CN-IANR Comment May 29, 2024, at p. 135. Cases where rail-only shares are not presented are the exception, and Dr. Bailey provides no explanation or evidence to justify deviation from the typical STB presentation.

The rail-only analysis evaluates competitive concerns where rail competes only with rail, which is a particular concern for transcon traffic. Rail typically competes only with rail for long-haul transcon service in many instances, which raises a large competitive concern in the UPNS Transaction given the unprecedented share of transcon traffic a combined UPNS would control; blurring distinct transportation services makes it impossible to evaluate the competitive impact on products and shippers for which rail competes only with rail.

For instance, Dr. Bailey assumes that trucking—which typically travels no more than approximately 500 miles—could place competitive pressure on a single-line transcon movement often extending 1,000-2,000 miles, without any support. The data show that shippers use trucks less frequently for long-haul transcon moves.[194] Further support confirms that distances generally under 500 miles face greater susceptibility to truck diversion, including evidence from NS representatives.[195] Further, the competitiveness of trucking alternatives to rail is most acute for IM movements, while trucking may face additional barriers to replace rail in merchandise traffic, further limiting the ability of the truck volumes in Dr. Bailey's analysis to act as true competitive constrains.

Dr. Bailey's assumption of trucking is unsupported in other ways. Including within-BEA moves for auto traffic (like STCC 3711) and other commodities with IM service (non-STCC 46 commodities) reflect moves to or from a local rail terminal; therefore, it is a double count and should be removed. Moreover, analysis of within-BEA truck moves and between-BEA truck moves includes a mismatch of 4-digit and 7-digit commodities where truck traffic may service a

[194] Bernstein, North American Transportation, "Game of Rails: The addressable market for rail is growing +14%, making it easier to underwrite growth in 2022 & beyond," December 1, 2021, at p.1, Exhibit 5.

[195] Verified Statement of Julie M. Carey, STB FD No. 36836, Norfolk Southern Corporation & Norfolk Southern Railway Company—Acquisition of Control—Norfolk & Portsmouth Belt Line Railroad Company, September 18, 2025, at p. 18. *See also* NS-1, McCellan VS at p. 14. It is well understood that trucking competes most effectively with rail for movements below 500 miles.

different 7-digit STCC commodity than the rail traffic and therefore the two do not compete (as I discuss in the subsection). The full extent of the truck-related STCC mismatch is not identifiable and cannot be corrected.

Dr. Bailey's inclusion of trucking for traffic moves between BEA areas is flawed for additional reasons. First, it results in double counting, as truck moves to and from terminals just across a BEA boundary line (but within the same metropolitan area) are already captured in the geographic competition analysis, with rail competitors moving between BEAs for IM service (STCC 46 or other commodities) and auto traffic (STCC 37). Second, truck moves between BEAs also include just-in-time services—which are specialized trucking services that rail cannot provide—or involve private carrier/in-house-owned trucks that are dedicated to companies. Third, the very small remaining traffic involves short-distance truck moves of approximately 250 miles, which is traffic that is not a competitive constraint on the vast majority of longer-haul rail traffic affected by the Proposed Transaction.

I provide further explanation and analyses of the above in Appendix 3 – Horizontal Harm.

Mismatch of commodities: Dr. Bailey assumes, without any evidentiary support, that 4-digit level commodity groups are good substitutes for 7-digit level products,[196] ignoring the specific customer uses that differentiate these products at the most granular level. Dr. Bailey admits in her deposition that she "pro rata" allocated 4-digit truck data to the 7-digit commodity level without actually conducting analysis to determine if products were close substitutes at the 7-digit level.[197] By grouping economically distinct products, Dr. Bailey greatly understates areas

[196] *See* Bailey Amended VS at para. 173. Dr. Bailey performs a sensitivity analysis using a 7-digit STCC.
[197] Bailey Deposition at 259:25–260:8.

of competitive concern, because the economic realities visible at a more granular level become masked at an aggregate level. Instead of starting with 7- or 5-digit STCC commodities, as is typical in my experience, Dr. Bailey combines a broad group of commodities at the 4-digit STCC level as the primary analysis underlying her conclusions.[198]

The geographic competition analysis performed by Dr. Bailey is meant to identify reduced geographic competition for a given product at issue from the Proposed Transaction.[199] However, by relying on a 4-digit STCC for her primary analysis to make the determination that there is competition for a given product, Dr. Bailey is implicitly under the assumption that 7-digit STCC products can substitute for one another in end use when, in fact, many cannot. Therefore, when products are aggregated and evaluated at a higher, 4-digit STCC level, there may appear to be geographic competition when, in fact, there may be zero geographic competition at a more granular, 7-digit STCC level.

For example, a customer that obtains peanuts from one location cannot substitute steak from a different location if there were an attempt to exercise market power at the source of

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[198] A 5-digit and 7-digit STCC has been used in prior control proceedings. Products that vary on the 5-digit STCC level can be analyzed together, including for example various types of vegetable oils. *See* Verified Statement of W. Robert Majure, STB FD No. 36500, Canadian Pacific Railway Limited—Control—Kansas City Southern, October 29, 2021, at pp. 37-39. In certain past cases, a 7-digit STCC code was used with the 4 or 5-digit STCC as further analysis. *See* Verified Statement of Christopher A. Vellturo, STB FD No. 35087, Canadian National Railway Company—Control—EJ&E West Company, October 30, 2007, at p. 151. *See also* Supplement Verified Statement of John H. Williams, STB FD No. 35081, Canadian Pacific Railway Company—Control—Dakota, Minnesota & Eastern Railroad Corp., December 5, 2007, at p. 11. Dr. Bailey claims a 7-digit sensitivity analysis does not change her conclusions, even though her Amended VS Exhibit 16 shows there are carloads that remain flagged for adverse competitive effects even after the critical loss analysis when she analyzes commodity at the 7-digit level. Dr. Bailey acknowledges in her deposition she conducted no analysis of trucking use for 7-digit STCCs and just assumed trucking share would match the rail share for a given corridor/commodity in her sensitivity. Bailey Deposition at 259:25–260:8. See Appendix 3 Horizontal Harm for more details.

[199] "Geographic competition is a restraint on rail pricing stemming from a shipper's or receiver's ability to get the product to which the rate applies from another source, or ship it to another destination." Market Dominance Determinations, 365 I.C.C. 118 (1981) (MD Guidelines I), aff'd sub nom. Western Coal Traffic Leave v. United States, 719 F.2d 772 (5th Cir. 1983) (en banc), cert. denied, 466 U.S. 953 (1984), modified, Product and Geographic Competition, 1 I.C.C.2d 1 (1985) (MD Guidelines II) at 2 I.C.C.2d at 3, 22.

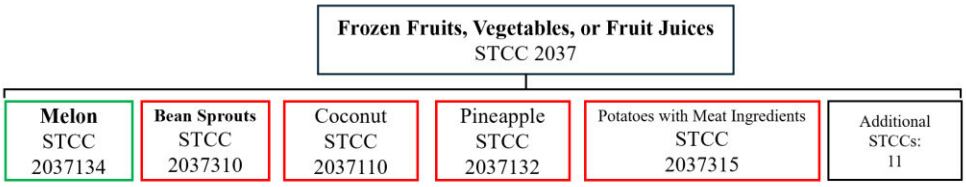
"In examining the effect of the proposed transaction on geographic competition, the Board examines the effect of the transaction on source competition, when two carriers can transport the same product to the same destination but from different origins, or conversely when two carriers transport the same product from the same origin to two different destinations." Decision No. 16, STB FD No. 35087, Canadian National Railway Company and Grand Trunk Corporation—Control—EJ&E West Company, December 24, 2008, at p. 14.

peanuts.[200] What guides in determining the appropriate level of STCC for the geographic competition analysis is the customer's ability to substitute the products. In the rail business, customers are highly specialized industrial users who depend on receipt and shipment of specific products. For instance, in the simplified example, a peanut butter factory obviously would not substitute meat in its processing of peanuts into peanut butter.

The STCC family trees below provide several examples of 7-digit STCC products within a 4-digit STCC that are not close substitutes in end use.

Regarding Figure 15 below, bean sprouts are not a close substitute for a melon. Consider a food preparation and packaging plant that has contracts to produce pre-packaged cut melon. Bean sprouts from a different source geography would not place effective competitive pressure on an attempt to exercise market power by a railroad at a location originating melons. Additional 7-digit STCCs falling within the same 4-digit STCC include potatoes without meat ingredients, frozen vegetable juice, and citrus fruit pulp.

Figure 15: Product Range within STCC 2037: Frozen Fruits, Vegetables, or Fruit Juices

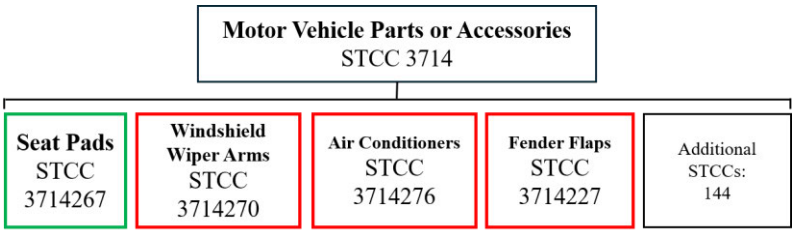


Regarding Figure 16 below, while these are all components of a car, the products at a 7-digit STCC are not substitutable in end use. A windshield wiper arm could not be used in place

[200] This is an example meant to illustrate groupings and does not refer to specific 4-and 7-digit STCCs. Actual examples referring to 4-digit and 7-digit STCCs are included in Appendix 3 – Horizontal Harm.

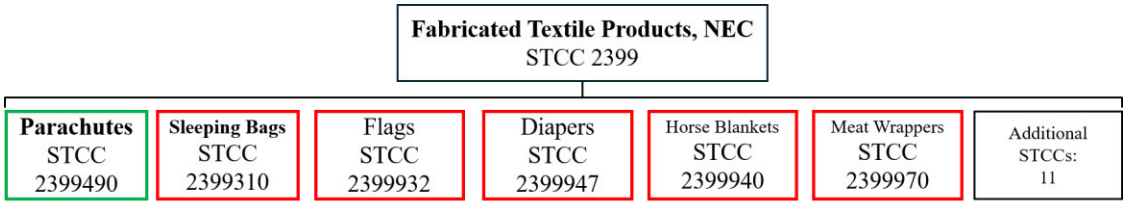
of a seat pad. Additional 7-digit STCCs in this 4-digit STCC category include brake drums, oil filter cartridges, and body panels.

Figure 16: Product Range within STCC 3714: Motor Vehicle Parts of Accessories



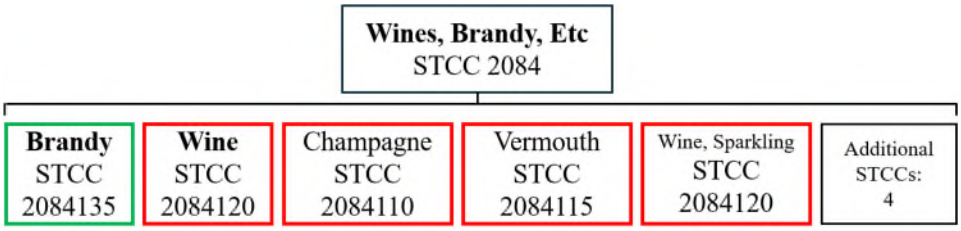
Regarding Figure 17 below, a pilot could not use a meat wrapper or diaper to substitute for a parachute when jumping out of an airplane. Fabricated textile products at the 4-digit STCC level encompass a wide range of products across unrelated industries. Additional 7-digit STCCs that all fall within this 4-digit STCC include auto seat covers, belts/straps, bandoleers/pouches, and fender cloths.

Figure 17: Product Range within STCC 2399: Fabricated Textile Products, NEC



And finally, regarding Figure 18 below, a brandy vendor cannot substitute pinot grigio wine for its product, and thus, transportation of wine from a source geography cannot exert competitive pressure on the transportation of brandy from another location due to the lack of demand side substitution. Additional 7-digit STCCs in this category include champagne, vermouth, and alcohols and spirits.

Figure 18: Product Range within STCC 2084: Wines, Brandy, Etc.



A more detailed discussion about the lack of substitutability of products at a 4- and 7-digit STCC, including more examples of the absurdity that results from Dr. Bailey's use of a 4-digit STCC rather than a 7-digit STCC, is included in Appendix 3 – Horizontal Harm.

Figure 19 below provides a high-level summary of the commodities that failed the 50/10 (as part of a BEA-7-digit STCC pair and the Gulf Coast) when rail-only shares are calculated.[201] The commodities analyzed represent approximately of originating Class I revenue for origin BEAs and Gulf Coast that failed the 50/10 test for destination competition, and approximately of terminating Class I revenue for destination BEAs that failed the 50/10 test for source competition.

Figure 19: 50/10 Failures – Commodities Representing Approx. 70% Class I Revenue (2023) Carey Source and Destination Competition[202] {{

REDACTED

}}

Furthermore, as Dr. Bailey acknowledges in her Amended VS (after neglecting to address this issue in her Initial VS), the more granular 7-digit STCC code further delineates different

[201] This includes the other changes that I discuss in my VS.

[202] Carey HC-WP-4_v_7_Dig_STCC_Mismatch.xlsx.

types of rail cars, reflecting distinct services. UPNS participates differently in the traffic moves for distinct products within a given 4-digit STCC. Therefore, aggregating traffic shares inappropriately at a 4-digit STCC level could dilute UPNS's apparent aggregate share compared to the more granular commodities where it participates more heavily, thereby understating competitive effects. Knowing the issue with aggregating STCCs to 4 digits, one must ask why Dr. Bailey tried to use 4-digit STCCs. It appears she did so to try to match to trucking data that uses only 4-digit STCCs and show no competitive harm. In other words, she did not seek to first understand where and why trucks could compete with rail; rather, she just assumed any and all trucks are competitive constraints to rail and disregarded distinct 7-digit commodities.

In her analysis, Dr. Bailey attempts to allocate Transearch trucking data, which is only available at the 4-digit STCC level, to a 7-digit STCC level based on rail movements to/from BEAs.[203] First, any allocation method of trucking data to attempt to force 4-digit STCCs into a 7-digit STCC products is arbitrary and lacks real world evidence to support truck volumes equal to the rail proportion assumed at 7-digit STCC commodity. In fact, trucks and rails perform differently for different products. Second, as she herself acknowledges in her report,[204] 4-digit products are not always substitutes for 7-digit products. For example, under fertilizers (STCC 2871), products under STCC 28712, "Monoammonium Phosphate," are non-hazardous[205] and therefore easier to transport by truck. Products under STCC 28713, meanwhile, which contains Ammonium Nitrate fertilizers, are potentially hazardous and therefore better suited for rail transport.[206] Both fall under the same 4-digit STCC but pose vastly different transport risks,

[203] Bailey WP "Source-Destination Competition."

[204] Bailey Amended VS at p. 75.

[205] "MAP has good storage and handling properties." Crop Nutrition, "Monoammonium Phosphate (MAP)", obtained on October 30, 2026, available at https://www.cropnutrition.com/resource-library/monoammonium-phosphate-map/.

[206] Yara, "Fertilizer safety and security", obtained on October 30, 2026, available at https://www.yara.us/crop-nutrition/fertilizer-handling-and-safety/fertilizer-security-and-safety/.

which the ACC (American Chemistry Council) has acknowledged rail is better suited to handle.[207] Economically, Dr. Bailey's flawed approach masks the lessening of destination and source competition by assuming truck and rail compete the same on a 4-digit STCC level as a 7-digit STCC level.

Improper exclusion of exempt traffic types: Dr. Bailey assumes without support that traffic exempt from rate regulation faces no risk of reduced competition from the Proposed Transaction. Her analysis excludes certain traffic types exempt from rate regulation (IM and motor vehicles/parts) and therefore does not analyze the potential lessening of competition from the Proposed Transaction on shippers in those segments. Furthermore, Dr. Bailey excludes certain commodities from her analysis, claiming they do not represent a "distinct 'product.'"[208] When asked in her deposition why she excluded both buckets of traffic, Dr. Bailey provided no additional support for her assumption that these commodities should be excluded from analysis for competitive harm. She simply restated the citations in her report.[209] While rail regulators have barred shippers of certain types of traffic from filing rate disputes before the STB, because that traffic is viewed to be competitive today, that exemption does not guarantee those traffic types would remain competitive following this Transaction.[210] Dr. Bailey should still analyze IM, automotive, and all other types of excluded traffic in detail for potential competitive harm.

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[207] "Rail is widely recognized as the safest way to transport hazardous materials by land." American Chemistry Council, "ACC Stresses Importance of Addressing Freight Rail Challenges", September 17, 2024, available at https://www.americanchemistry.com/chemistry-in-america-industry-innovation-impact/news-trends/press-release/2024/acc-stresses-importance-of-addressing-freight-rail-challenges.

[208] Bailey Amended VS at para. 174. "These commodity codes include 4611 Freight of All Kind, 0119 Miscellaneous Field Crops, 0129 Miscellaneous Fresh Fruits or Tree Nuts, 2818 Miscellaneous Industrial Organic Chemicals, 1092 Miscellaneous Metal Ores, 4711 Small Packaged Freight Shipments, among others." Bailey Amended VS at FN 159.

[209] Bailey Deposition at 94:8-15.

[210] Dr. Bailey asserts that the ICC exempted certain products from rate regulation as they face competition from motor carriers and geographic competition. *See* Bailey Amended VS at para. 140 and fn. 127. It is not appropriate to assume away competitive conclusions in a competition analysis for a major merger by excluding certain products from the analysis. The documents Dr. Bailey cited are not in context of a substantial transcon merger and are very dated. For instance, she cites the following documents (*see* Bailey Amended VS at fn 127 and Appendix B): "Surface Transportation Board, 'Rail General Exemption Authority—Transportation Equipment,' Ex Parte No. 346 (Sub-No. 27), ICC Decided December 30, 1992 (9 I.C.C. 2d);"

Notably, Dr. Bailey selectively excludes IM and motor vehicles from her horizontal analysis but not other types of rate-regulation-exempt traffic.[211] Yet when supporting a different point, Dr. Bailey points to procompetitive aspects of the Proposed Transaction, such as cost savings and traffic diversions, pointing to that same IM and motor vehicle/parts traffic that she omitted.[212] Dr. Bailey provides limited explanation for why she selectively includes or excludes a subset of traffic across the two analyses, depending on whether inclusion or exclusion supports her showing. The economics of the traffic and analysis specific to the impact from the Proposed Transaction should guide inclusion or exclusion, not the effect on the outcome and conclusion of the analysis.

I am unaware of any rail transaction in which an Applicants' economists assumed away any possible merger-related competitive effects from a specific commodity without conducting an analysis to support the claim that exemption from rate regulation is a sufficient showing.

Unsupported assumption that interline railroad partners dependent upon UP or NS for part of the move would provide effective competition: Dr. Bailey assumes without support that interline competitors always provide effective competition to a single-line transcon railroad.[213] Dr. Bailey's competitive assessment disregards the obvious competitive concern that UPNS foreclosure would render post-Transaction interline service that depends on UP or NS uncompetitive.[214] Such dependent service would not be able to constrain UPNS's market power

"Surface Transportation Board, 'WTL Rail Corporation Petition for Partial Revocation of Exemption,' Ex Parte No. 230 (Sub-No. 9), STB Decided February 15, 2006;" and "Surface Transportation Board, 'Rail General Exemption Authority—Exemption of Hydraulic Cement,' Ex Parte No. 346 (Sub-No. 34), STB Decided December 4, 1996."

[211] For example, *see* 49 C.F.R. § 1039.10, which exempts STCC 01 Farm Products except 0113 grain, 01144 soybeans, and 0114940 sunflower seeds from rate regulation. However, Dr. Bailey's Exhibit 15 identified STCC 0114 for analysis. *See* Bailey Amended VS at paras. 184-185 and Exhibit 15.

[212] Bailey Amended VS at paras. 73-77.

[213] Bailey Amended VS at para. 45.

[214] As discussed in Section VI.

post-Transaction. Separately, Dr. Bailey and Dr. Israel point to a BNSF-CSXT competitive independent railroad alternative, implying it is sufficient to act as a competitive constraint against UPNS.[215] She has not demonstrated that BNSF-CSXT would be able to provide cost-competitive service of equal quality or that they could even serve the same customers as UPNS; in other words, her conclusions rest on the presumption that any competitive alternative suffices to ensure robust competition, disregarding the quality of that alternative.[216]

Understatement of competitive harm due to assignment of shares to short haul carriers instead of long-haul rail carriers: Dr. Bailey's primary analysis considers short line or other rail carriers that carry the move only short distances at the beginning or end of a movement within the origin or termination BEA. Assigning originating or terminating volumes to these short distance carriers masks and therefore understates the economic presence of the Class I carriers exiting or entering the BEA, who are the meaningful carriers for the long-haul portion of the move, which are the relevant carriers due to the long-haul interline nature of the movements considered under the Proposed Transaction.[217] For example, a railroad that does not deliver outside the BEA without UPNS is not competing with UPNS for the long-haul segments of the move. In other words, if the short-line carrier is facilitating competition, then the adjustment is unlikely to result in new 50/10 screen failures. If the short-line carrier is in fact dependent on a single Class I carrier, this dependency would now be accurately reflected in the volumes used to

[215] "The other theory of harm requires that BNSF and CSX (the non-merging railroads) legs are systematically less compatible with one another (in providing interline service) than are other combinations. I know of no evidence that this is true, and, given that Eastern and Western railroads all interchange at common gateways, it is unlikely to hold, meaning this theory is also ill-suited to the railroad industry." Israel Amended VS at para. 37. In her conclusions of no horizontal harm to competition, Dr. Bailey assumes that "[a]fter the proposed merger, both BNSF and CSXT will continue to compete with the combined railroad to carry freight across the United States." Bailey Amended VS at para. 45.

[216] A BNSF-CSXT competitive independent railroad alternative would be limited.

[217] Dr. Bailey herself is aware of this issue and presents a sensitivity which removes this issue; however, she does not address the concerns revealed by this modification. *See* Bailey Amended VS at paras. 186-188, Exhibit 16.

calculate shares.[218,219] A more detailed discussion and examples of affected traffic is included in Appendix 3 – Horizontal Harm.

Disregard of regions where neighboring individual BEAs are inadequate substitutes for each other: Dr. Bailey assumes, again without support, that any given BEA is a substitute for any other. Dr. Bailey's 50/10 and CLA, which rely on BEA-level geographic areas, provide an incomplete competitive assessment of the UPNS Transaction. Dr. Bailey's analysis assumes that every individual BEA is a perfect substitute for another and could readily serve as an alternative supply source for shippers to use in response to an attempt by UPNS to raise prices above competitive levels.

One result of this flaw is that Dr. Bailey did not evaluate certain broader regions, like the Gulf Coast, where a collection of BEAs face the same ineffective rail competition today. As I discussed in Section III, BNSF today must compete with UP by relying on ineffective UPSP Transaction conditions and use corridors that are dependent on UP. That means CSXT could not turn to BNSF to offer fully independent interline competition to UPNS for Gulf Coast traffic. Since the adjacent BEAs in the Gulf Coast region face substantially the same situation, BNSF is not an independent competitor to UPNS.[220]

For example, as Figure 20 shows, a Southeastern U.S. chemical company located in Savannah, GA[221] that purchases input products from a Houston BEA chemicals supplier could not turn to the neighboring Beaumont/Port Arthur BEA suppliers to replace Houston-area supply

[218] This correction does not create a double count in the participating share used to calculate the share for the analysis. This is because the 50/10 analysis is completed in its entirety after modifying the routes. In other words, the modified volumes are not simply added to the old sum, but rather all volumes for the entire OBEA or DBEA are reevaluated.

[219] I discuss other instances where I remove within-BEA volumes in Appendix 3 – Horizontal Harm.

[220] See Section VII and Appendix 5 related to Specific-At Risk Areas: Gulf Coast and Beyond.

[221] For example, STCC 2821142. *See* Carey HC-WP-GC_Chem_Analysis.xlsx.

if transportation from this BEA (i.e., UPNS) prices above competitive levels.[222] In this case, both customers use the same joint line owned by UP/BNSF and the New Orleans interchange, which UP would largely control post-Transaction, and the best direct alternative route north is UP's route, on which BNSF relies for trackage.

Figure 20: Houston BEA and Beaumont BEA Eastern U.S. Chemical Customer[223] {{ REDACTED

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Considering a collection of individual BEAs is particularly relevant to the chemicals products predominantly produced in the Gulf Coast region (Louisiana and Texas), as discussed in further detail in Section VII below.

Flaws in Dr. Bailey's CLA for between-corridor analysis

Various erroneous aspects of Dr. Bailey's CLA similarly render its conclusions unreliable.

[222] Houston/Galveston BEA originates {{REDACTED }} of chemical products and utilizes the same routes as nearby Beaumont/Port Arthur BEA, which originates {{REDACTED }}. Based on 2023 carloads/IM units. See Carey HC-WP-GC_Chem_Analysis.xlsx.

[223] Carey HC-WP-GC_Chem_Analysis.xlsx.

First, Dr. Bailey's available volume assumes without support that trucking and water transportation could effectively compete with a transcon UPNS for all routes and products. See above. Second, Dr. Bailey assumes any BEA perfectly substitutes for another BEA, failing to account for the realities of the rail network that relies on specific routes, interchange locations, and source regions as I discussed in Section III. Third, Dr. Bailey assumes that any geography-commodity that passes the critical loss test raises no competitive concern (i.e. does not complete any specific economic analysis of the affected traffic). This disregards that the STB has approved prior cases without CLA; both the CSXT-Pan-Am Transaction and the NS-D&H Transaction applications featured competition analysis focused on 50/10 solely.[224] Further it disregards the very high rail-only shares and concentration from a combined UPNS.[225] As discussed in Section V below the CLA does not address switching limitations including contractual agreements and it is not a measure of uncommitted capacity and therefore there is no way to discern if the capacity is contracted with other suppliers and is therefore unavailable.

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In sum, Dr. Bailey's analysis of horizontal competition issues is unreliable and does not give the Board the evidence it needs to analyze whether serious competitive harm would result. I correct her between-corridor analysis and present the outcome of my updated analysis below, in Section V.

[224] In NSR-D&H the Transaction was approved upon "two voluntary commercial agreements" to "preserve shippers' access" (among other conditions). Application for a Minor Transaction, Volume I, STB FD No. 35873, Norfolk Southern Railway Company—Acquisition and Operation—Certain Rail Lines of the Delaware and Hudson Railway Company, Inc., November 17, 2014; corresponding Decision No. 6, STB FD No. 35873, May 15, 2015, at pp. 18-19. CSXT proposed a short line involved to serve end customers. Amended and Supplemented Verified Statement of Dr. David Reishus, STB FD No. 36472, CSXT et al.—Control and Merger—Pan Am Systems et al., July 1, 2021; corresponding Decision, STB No. FD 36472, April 14, 2022, at p. 7.

[225] I discuss further below in Section V and Appendix 3 – Horizontal Harm.

D. Overview of Dr. Israel's analysis.

Dr. Israel opined that no risk of vertical harm would result from this Proposed Transaction, a conclusion inconsistent with STB precedent.[226]

Failure to Analyze Independent Rail Options: As part of this remarkable conclusion, Dr. Israel ostensibly analyzed reductions in rail options affected by vertical integration and concluded that all of them have "independent" railroad alternatives sufficient to prevent competitive harm.[227]

Dr. Israel's analysis is flawed because he uses routes as substitutes that are not independent of UPNS. The STB decision in the IANR-CN case makes clear that a true independent routing alternative (on every leg of the traffic move) requires excluding the merging parties entirely.[228] In performing his analysis, Dr. Israel ignores the STB's view on these issues and instead relies on a significantly different approach that fails to address the fact that a combined UPNS would act with a unified incentive and ability to harm competition instead of as pre-Transaction neutral interline partners. As such, his analysis is fundamentally flawed and should be disregarded.

Moreover, STB precedent on independent railroad route options requires more than assuming that any theoretically available independent railroad alternative route is sufficient; one must show that the route is economically feasible and economically attractive.[229] A

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[226] Dr. Israel argues that neither the standard theories of foreclosure nor the edge cases he evaluates propose any real risk of harm from the Transaction. Section III.D.2. and Section III.E. CPKC Decision, STB FD No. 36500, March 15, 2023, at p. 59, 65-66.

[227] "I take this statement to express a concern that access to multiple 'independent routes'—i.e., routes with no carriers in common—in a corridor creates competition on the corridor that could be diminished as the result of a *vertical merger*. I further understand that CPKC's concern focuses on those corridors in which UP and NS serve different legs of the movement, so I limit my analysis to corridors in which UP and NS do not overlap at either end." Israel Amended VS at para. 78.

[228] Decision No. 3, STB FD No. 36744, Canadian National Railway—Control—Iowa Northern Railway, January 13, 2025, at p. 23. Verified Statement of Julie M. Carey, STB FD No. 36744, Canadian National Railway—Control—Iowa Northern Railway, May 29, 2024, at pp. 8-17.

[229] The CN evidence and the subsequent STB decision in the IANR-CN case make clear that a true independent routing alternative (on every leg of the traffic move) requires it to exclude the merging parties entirely (e.g. CN and IANR in that case

demonstration of an economically attractive option matters because an unused independent railroad route with different railroads not carrying traffic today may lack a competitive price or quality of service, and therefore may not constrain competition tomorrow.[230] Dr. Israel does not even attempt such a demonstration.

Dr. Israel's analysis further suffers from two fundamental flaws: (1) he fails to analyze the impact of the full universe of the affected rail routes, and (2) he conducts no analysis of economically feasible and economically attractive rail options independent of UP and NS necessary for robust competition post-Transaction.

Dr. Bailey and Dr. Israel's analyses ostensibly evaluate reductions in independent options for routes involving UP and NS. However, both experts inappropriately fail to analyze where there is potential overlap between their competitive concerns. Dr. Bailey's within-corridor analysis evaluates only reductions in horizontal competition on route segments,[231] while Dr. Israel evaluates harm from reductions in rail options, i.e., reductions of full routes. Thus, the reduction in route segment competition that Dr. Bailey analyzes is a separate economic issue from the route-level rail option reduction that Dr. Israel claims to be analyzing. Therefore, Dr. Israel inappropriately excludes {{ REDACTED }} in rail options that should be considered in his analysis of affected traffic and whether they have "independent" route options.[232] Dr. Israel's

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and UP and NS in this case). Decision No. 3, STB FD No. 36744, Canadian National Railway—Control—Iowa Northern Railway, January 13, 2025, at p. 23; Verified Statement of Julie M. Carey, STB FD No. 36744, Canadian National Railway—Control—Iowa Northern Railway, May 29, 2024, at pp. 8-17. Dr. Majure presented "independent" routes including the merging parties. Verified Statement of W. Robert Majure, STB FD No. 36500, Canadian Pacific Railway Limited—Control—Kansas City Southern, October 29, 2021, at Section IV and subsequent STB Decision No. 3, Docket No. FD 36514.

[230] In fact, this phenomenon is born out in the largest examples of traffic moves assumed to be hypothetically served by BNSF instead of UP from Mexico traffic handed off by UP's subsidiary at Eagle pass or from San Antonio where UP has a better route to Chicago and for which BNSF is subject to using UP/SP granted trackage rights over the southern segment lacking an entirely independent railroad lines. The UP/SP trackage agreement has proven ineffective today and for which has spillover effects for the transaction as discussed in Appendix 5 - Specific At-Risk Areas Gulf Coast and Beyond.

[231] Through the within corridor analysis. She also analyzes origin and destination areas for geographic competition for commodities.

[232] Carey HC-WP Independent_Routes_Overlap_Analysis.xlsx.

{{ REDACTED }} in affected traffic (3-to-2 and 2-to-1 reductions post-Transaction)[233] excludes a complete evaluation of the reduction in independent rail options that would include a full horizontal and vertical evaluation of all routes involving UP or NS and is therefore incomplete.

Within his more limited identification of the {{ REDACTED }} in affected traffic, Dr. Israel further does not define independent routes to exclude both UP and NS on the entire route.[234] These traffic moves include corridors where UP or NS serve as rail options today on part of or the entire move. Specifically, for {{REDACTED }}, UP or NS is the only rail option on every route (i.e., either UP or NS or both).[235] Therefore, post-Transaction, no truly independent rail option excluding UPNS (as the Board requires) would exist on any leg of the move in those situations. For the remaining approximately {{ REDACTED }} in affected traffic revenue moves, UP or NS are involved in the majority of rail options used today, with only a few routes—mostly small volume traffic moves—involving a potentially truly independent (non-UPNS) railroad option.[236]

Additional economic analysis specifically demonstrates about {{ REDACTED }} in traffic revenue for corridors with reduced independent rail options that are heavily reliant on UP and/or

[233] Relies on Class I railroad interline partners.
[234] Dr. Israel defines independent routes as routes "with no carriers in common," with no conditions on whether UP or NS is in those routes. *See* Israel Amended VS at para. 78.
[235] Today, every route option uses UP or NS or both. *See* Carey HC-WP-Independent_Route_Analysis.xlsx.
[236] For example, for the largest route options for {{REDACTED , }} *See* Carey HC-WP-Independent_Route_Analysis.xlsx. and Israel VS Table D-3.

NS for which Dr. Israel did not capture and failed to evaluate whether any alternative rail route options are economically feasible competitors.[237]

Historical experience shows that shippers thrive when they have the option of independent railroad alternatives for routes, interchanges, and customer locations. These independent rail options enable shippers to negotiate more competitive rates, service, and other preferences, whether or not they switch carriers. Simply put, rail options secure the robust benefits of competition, benefits that are common and well understood in economics.[238]

Because UP or NS are involved on at least one leg of every route in the vast majority of corridors today, these routes lack the robust independent railroad options needed to compete with UPNS post-Transaction. Dr. Israel effectively acknowledges this lack of independent route options, inserting theoretical, hypothetical, and unused rail options (non-UP/NS) into his analysis and arguing that these newly identified, currently nonexistent rail options provide sufficient competition.[239] A hypothetical, robust independent railroad route competing against a UPNS interline service would need substantially comparable scale and traffic density to UPNS (or

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[237] Corridors approaching 50% or greater UPNS share post-Transaction. Relies on the 2022-2025 period I used to correct Dr. Bailey's analyses.

[238] The absence of an independent rail option to negotiate with eliminates the benefits of competition. It is for this reason that many STB decisions ensure at least two rail options and sometimes three are maintained post-transaction. *See* the Section II analysis of benefits from more than one railroad options to interchange traffic.

[239] See Israel Amended VS, pg. 42, para. 83: "Specifically, as I describe below, the method needs to be modified so that the counting algorithm more accurately accounts for shippers' actual viable options, such as routes created by connecting established rail segments at common gateways, because those are competitive options, even if they are not observed in the railroads' movement data. Because carriers serving different segments of a corridor at a common gateway can connect (even if such a connection is not observed in the Waybill data) to create a route in the corridor, I treat those connections as alternative viable routes in my analysis. When I augment the set of routes considered by the counting algorithm in this way, I find that there are no longer any corridors losing an independent route as a result of the merger." (emphasis added). *See also* Israel Amended VS at para. 87: "However, it is also worth understanding why the entire independent routes approach is not a meaningful way to assess the competitive effects of the proposed merger. Put simply, counting the number of independent routes does not provide a reliable measure of competition: Even if the merger were to reduce the number of independent routes in a corridor, that does not mean that all shippers—or any particular shipper—has worse competitive options due to the merger." (emphasis added) *See also* Israel Amended VS at para. 88: "The algorithm would identify this as a 2-to-1 reduction in independent routes (because each post-merger route has one carrier in common with each of the other two routes). But taking this reduction to mean that shippers are in a weaker competitive position post-merger ignores the fact that, post-merger, a shipper can threaten to exclude any one of the railroads, including UPNS. For example, a shipper could seek Rule 11 quotes from BNSF and CSXT and then ask UPNS if it would undercut BNSF's price or CSXT's price. BNSF and CSXT would each be induced to compete to avoid being the carrier that gets none of the shipper's business, and UPNS would compete to win the shipper's business." (emphasis added).

better) to achieve costs that could compete with the higher-quality, lower-cost single-line UPNS.[240] Circumstances are unlikely to align such that an unused, hypothetical independent railroad could compete effectively against an exclusive single-line UPNS service.[241]

Failure to Address Vertical Foreclosure Risk: The second fundamental flaw in Dr. Israel's analysis is his conclusion that negotiated rates in most instances could not experience reduced competition from the Transaction.[242] This conclusion lacks support: taken to its logical extreme, it effectively suggests that a transaction combining all Class I railroads' end-to-end service would raise no concern for lessening competition, so long as the railroads negotiate contracts. But the obvious reality is that, if UPNS consolidates, shippers would negotiate within an entirely different competitive dynamic. As explained above, UPNS would have nationwide (plus Mexico) geographic scope with unprecedented coverage of customer locations, corridors, interchanges, and other railroad facilities. Many customers would lose independent railroad options or otherwise face ineffective competition. Such customers would always have to negotiate with UPNS—either alone for its single-line service, or as an interline partner with CSXT or BNSF.

Dr. Israel's analysis and conclusions implicitly assume that railroads charge the maximum rate on all existing routes today.[243] However, he presents no evidence for this assumption. He also does not contemplate the circumstances that would arise from the sheer size

[240] Inspection of Dr. Israel's proposed hypothetical route options does not demonstrate proper economic circumstances enabling a interline carrier to compete with the single line UPNS. For example, the new railroad route he assumes for {{REDACTED }} longer route miles than UPNS single line service for the same route. *See* Carey HC-WP-Independent_Route_Analysis.xlsx.

[241] UPNS would have no incentive or necessity to maintain efficient interline routes post-Transaction, as UPNS interline revenue for IM and merchandise may be a {{REDACTED }} of its business, reducing it from the {{REDACTED }} by converting all potential interline to single line service. *See* Appendix 4 – Other Harm.

[242] Israel Amended VS at pp. 15-17.

[243] Israel Amended VS at p. 16 discusses price setting just below the alternative railroad's cost, which assumes that the lower cost railroad would price to the maximum extent possible.

and scale of a combined UPNS (and the huge increase in common customers with different competitive circumstances),[244] nor does he analyze the many levers a combined UPNS could use to implement strategic pricing—including the various types of bundled discounts (not route-specific) it could offer—and does not consider that many customers would rely heavily on UPNS for different services, including where they have locations exclusive to UPNS.[245] I demonstrate the many levers UPNS has that may be used to harm competition in subsequent sections of this VS.

Dr. Israel also explicitly assumes complete information in his analysis, which does not reflect the commercial reality of the railroad industry.[246] He recognizes that arrangements may vary depending on "whether railroads have private cost information."[247] Asymmetric information, along with various frictions and other factors present in imperfect contracting, could produce outcomes that do not maximize potential rates. Accordingly, Dr. Israel's assumption of complete information, and its associated implications, rests on an unreliable foundation.

Dr. Israel's conclusion of virtually no potential for vertical foreclosure[248] rests in part on a regression analysis that he claims demonstrates that rates negotiated by a shipper at a sole-served location are not statistically significantly higher than rates negotiated by a shipper at a

[244] This exacerbates asymmetry of information as UPNS would have a never-before view of the entire U.S. rail system through operations in every corner of the U.S. and Mexico.

[245] *See, e.g.*, Master Intermodal Transportation Services Agreement, UP_3377119, December 16, 2022, at UP_3377126 and Confidential Statement Communication, UP_3301754, February 14, 2026, at UP_3301757.

[246] "[S]hippers who negotiate nonlinear contracts with railroads in settings with complete information are not harmed and may benefit from the merger." Israel Amended VS at Appendix A, p. A-1.

[247] Israel Amended VS at Appendix A, p. A-1.

[248] "Thus, potential theories of foreclosure come down to a single, narrow case—prices that are not part of negotiated non-linear contracts, are not Rule 11, and are not through rates set by the sole-served carrier but rather are through rates received from one of the railroads on the competitive end…and [I]show that they do not hold." Israel Amended VS at p. 23.

competitively served location.[249] Dr. Shehadeh provides a more detailed theoretical discussion of the flaws in Dr. Israel's analysis on this point.

Dr. Israel's empirical approach to evaluating the Transaction also focuses on individual corridors in isolation. Dr. Israel claims this corridor restriction lets him "fully account for all differences across routes … holding constant the origin and destination…" of the move.[250] But he provides limited support for this work.[251] This approach results in a poorly constructed model, because it both overstates and understates route-level differences. For example, the method bundles factors like route distance into "route level" variation rather than directly controlling for that factor. Meanwhile, it disregards rail industry dynamics, such as shippers with multiple locations across different geographies with distinct circumstances relating to rail competition, and therefore fails to account for different circumstances within a route pair.[252] The approach also disregards the resulting enhanced market power from substantial customer consolidation of {{REDACTED}} in traffic revenue for the largest 150 merchandise customers common to UPNS (many of which are sole-served customers),[253] which I discuss further and provide rail industry analysis for below.

Furthermore, Dr. Israel's fixed-effect method largely explains why the competition variable shows no statistical significance. At a high level, this result occurs because the sole-served status that the competition variable is based on and the corridor routes (i.e., origins and destinations) are both defined similarly at a station level, leaving little variation in the rates

[249] Israel Amended VS at Figures 7-9.

[250] Israel Amended VS at p. 30.

[251] Fixed effects analysis is useful when attempting to discern unmeasured bias within a data set. A classic example would be measuring the effect of hours studied on student test scores. If the same students appear multiple times in the data set, you may wish to account for the "fixed effects" of each individual student.

[252] Other factors may exist, such as distinct railroad costs (e.g., mountainous terrain versus a low-grade route without curvature).

[253] See Section VI.

analyzed. He defined a model in which the competition variable had no variation, so the estimates simply reaffirmed that lack of variation.[254] More specifically, the regression estimates the effects of quoting a rate from a competitive- or sole-served end of the move based only on variation within each origin-destination group, defined at the 6-digit SPLC level.[255] This type of self-reinforcing or circular analysis does not demonstrate true differences in prices across customer locations and different competitive circumstances.

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As explained above, the two economic statements that Applicants provide for the Board are unreliable and, as a result, Applicants have not carried their burden of proving that the Transaction would not cause competitive harm in specific corridors, geographic areas, or for specific commodities. Dr. Bailey and Dr. Israel conducted analyses in manners inconsistent with STB precedent and fail to demonstrate that the Proposed Transaction would not result in significant competitive harm.

V. Corrections to Dr. Bailey's and Dr. Israel's Analysis

A. Overview of corrections to Dr. Bailey's between-corridor 50/10 analysis.

This subsection identifies the corrections to, and presents the results of correcting, Dr. Bailey's erroneous assumptions in her between-corridor 50/10 analysis and CLA. Correcting Dr. Bailey's analyses reveals a substantial competitive concern from the Proposed Transaction

[254] More technically, when a fixed effect model is used, the variation which determines the coefficient estimates is not the variation across every data point in the sample, but rather the variation within each factor grouping in the model. Dr. Israel uses the "areg" command with the "absorb" specification to incorporate fixed effects for origin-destination pairs at the six-digit SPLC level. *See* Israel Section III Regressions workpaper. *See also* Cheng, Stata, "In the spotlight: So many fixed effects, so little time", obtained on November 5, 2026, available at https://www.stata.com/stata-news/news40-4/absorb-multiple-categorical-variables.

[255] "Fixed effects soak up all between-group action…The remaining predictors (e.g., price) in your model explain the within-group action in your data." Dranove, David, "Practical Regression: Fixed Effects Models," Kellog School of Management (2012), at p. 9, available at https://canvas.northwestern.edu/files/1812456/download?download_frd=1&verifier=wrroazw7eYoNieV6Sl0FhyVzkbqat1iPWvK4d0Hk.

related to destination and source competition, far greater than what Dr. Bailey reports in her Amended VS.

I made the following corrections to Dr. Bailey's 50/10 analysis:

(1) calculating rail-only shares to account for situations where non-rail options (mainly trucks) are not valid alternatives;

(2) using 7-digit STCC codes rather than the inaccurate 4-digit STCC codes that Dr. Bailey uses;

(3) correcting for Dr. Bailey's inexplicable exclusion of certain rate-regulation-exempted traffic (IM and motor vehicles/parts);

(4) including Gulf Coast region combinations of BEAs that face ineffective competition today;[256]

(5) calculating shares using cars/IM units instead of tonnage;

(6) limiting the study period to 2022-2024 to remove abnormalities resulting from the pandemic; and

(7) modifying the routes to assign within-BEA rail movements to the long-haul Class I railroad instead of the short line or other intra-BEA carrier.[257]

B. Outcome of updated analysis after correcting Dr. Bailey's between-corridor 50/10 analysis and CLA.

Correcting Dr. Bailey's between-corridor analyses identifies nearly {{REDACTED}}[258] in rail traffic revenue that would be vulnerable to competitive harm from the loss of destination and source competition from the Proposed Transaction, as Figure 21 shows.

Figure 21: Corrections to Dr. Bailey's 50/10 Between-Corridor Analysis, Class I Revenue ($MM)[259] [260] {{

[256] *See* Section VII and Appendix 5 – Specific at Risk Areas: Gulf Coast and Beyond for more details of my Gulf Coast 50/10 and CLA analysis.
[257] See Appendix 3 – Horizontal Harm for a discussion of my exclusion of within-BEA moves, consistent with Dr. Bailey's sensitivity analysis.
[258] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[259] Carey HC-WP-Source_&_Destination_Competition.xlsx. Dr. Bailey presented carload statistics. The Gulf Coast-related 50/10 failures are presented in Section VII.
[260] Fail CLA is a subset only of areas that fail the 50/10 screen. A CLA analysis was not performed as a secondary analysis to the 50/5-9.

}}

This total accounts for:

(1) corrections to Dr. Bailey's 50/10 analysis of individual BEA regions;

(2) combined Gulf Coast BEAs-Chemicals that face ineffective competition and transaction-related spillover effects, which the individual BEA analyses do not address; and

(3) Additional BEA-commodity analysis for areas where the individual carrier's share falls just below the 10% threshold for the 50/10 analysis, which I refer to as the 50/5-9 analysis. The vast majority of these are areas where a combined UPNS would hold an 80-100% share post-Transaction. In areas substantially controlled by a single firm, even smaller incremental changes in share from a transaction (i.e., less than 10%) could significantly affect concentration and the combined entity's ability to exercise market power.

Across both BEA-commodity-level analyses (50/10 and 50/5-9), UPNS would have a rail-only participating share exceeding 80% in {{ }}[261] of the areas, representing {{

[261] Carey HC-WP-Source_&_Destination_Competition.xlsx. Includes {{ }} of areas for Destination Competition and {{ }} of areas for Source Competition.

}}[262] in annual traffic revenue, which indicates extremely high[263] concentration and heightened concern for competitive harm from the Proposed Transaction.[264] See Figure 22 below for the number of areas that fail the 50/10 and 50/5-9, and the UPNS rail-only participating share in those areas, which shows only {{ }} of the areas are in the 50-60% share range.

Figure 22: UPNS Shares Associated with 50/10 and 50/5-9 Failures for BEA/Commodities (2023)[265]{{

REDACTED

}}

My reporting revenues associated with affected traffic are a conservative measure of the total revenue for the traffic moves that would face lessening of competition post-Transaction

[262] Carey HC-WP-Source_&_Destination_Competition.xlsx. Includes {{REDACTED }} of originating revenue for Destination Competition and {{REDACTED }} in terminating revenue for Source Competition.

[263] UPNS holds a rail-only participating share exceeding {{ }} in {{ }} of the areas, representing {{REDACTED }}. Carey HC-WP-Source_&_Destination_Competition.xlsx.

[264] Large amounts of traffic would face very high rail concentration levels well understood to raise concerns for anticompetitive behavior as discussed further in Appendix 3 – Horizontal Harm.

[265] Participating shares that are calculated on a carload/unit basis and reflect UP and NS traffic moves into or out of the BEA areas for the specific commodity. Carey HC-WP-Source_&_Destination_Competition.xlsx.

because I only report the 50/10 failures of the origin and destination areas for each commodity.[266]

Furthermore, my presented shares that use carloads/IM units are a conservative measure relative to calculations based on revenue.[267] Originating and terminating shares calculated based on revenue would demonstrate higher UPNS shares due to longer routes with higher revenues in the Western U.S.[268]

*50/10 failures: {{*REDACTED *}}[269] in revenue*

All 50/10 failures indicate significant competitive concern resulting from the Proposed Transaction, given the extremely high rail shares and concentration in these areas.

As discussed in Section IV, the CLA simply identifies whether at least one alternative option to the UPNS-affected location (a source of supply or receiver destination) could volumetrically replace carloads for a given BEA-commodity. In this way, it can be viewed as a knife edge result; one cannot simply conclude there is no competitive problem despite a passing of the CLA. The CLA is a hard standard to fail and only considers hypothetical movements. It does not address switching limitations including contractual agreements and it is not a measure of uncommitted capacity and therefore there is no way to discern if the capacity is contracted with other suppliers and is therefore unavailable.[270] Consequently, I find that the {{ }}[271] in revenue that pass the CLA but fail the 50/10 are of significant competitive

[266] I did not report failure participating only flags and in many instances, a participation-only flag is failed along with an origin BEA commodity or destination BEA commodity. To the extent that a participating-only failure has a higher revenue associated with the traffic, the reported revenue associated with 50/10 failures is higher.

[267] Dr. Bailey calculates shares based on tonnage of traffic. However, she presents originating and terminating carloads affected. *See* Bailey workpaper "Source-Destination Competition.py."

[268] Carey HC-WP Unit_Rev_Share_Comparison.xlsx.

[269] Carey HC-WP-Source_&_Destination_Competition.xlsx. The totals in this subsection include the Gulf Coast failures, which are adjusted to include the 50/5-9 threshold as well, as discussed in Section VII and Appendix 5 – Specific At-Risk Areas.

[270] Volumes may be contracted by multiple parties in the supply chain for any given location.

[271] Carey HC-WP-Source_&_Destination_Competition.xlsx.

concern, as the revenue reflects traffic with extremely high rail shares and concentration for a combined UPNS. The remaining {{REDACTED}} fail both the 50/10 and CLA.

The Proposed Transaction would substantially lessen source and destination competition by reducing independent railroad alternatives, given the extremely high rail-only shares for a combined UPNS. Specifically, the {{REDACTED }} that pass the CLA[272] show a UPNS post-Transaction rail-only participating share ranging much higher than 50% and often between {{REDACTED}}, indicating high concentration.[273] In these areas substantially controlled by a single firm with a combined share of 80% or greater most often and at least 10% for each UP and NS, the UPNS Transaction would significantly increase concentration, substantially increase the ability to exercise market power, and lessen source and destination competition. Indeed, these high rail shares are indicative of the virtual elimination of independent rail options that are crucial to a necessary competitive dynamic.[274]

While the CLA failures raise significant competitive concern, even the areas that pass the CLA—and could therefore draw replacement volumes from locations with routes that do not require UPNS—raise competitive concerns due to the extremely high rail-only shares and concentration.[275] These areas represent approximately {{REDACTED }} in revenue, and UPNS would have a substantial portion of very high rail-only participating share of 80-100% for most of those carloads.[276] A combination of UP and NS raises economic concerns about lessened

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[272] Carey HC-WP-Source_&_Destination_Competition.xlsx. Destination {{REDACTED }} and source {{ }}.

[273] Carey HC-WP-Source_&_Destination_Competition.xlsx. Concentration statistics consider BEA-Commodity areas only.

[274] I discuss further in Appendix 3 – Horizontal Harm.

[275] In other words, it is the entirety of the 50/10 analysis failures (and the 50/5-9 failures) that are most instructive when considering the heightened concern for diminished competition from the Proposed Transaction, not just the subset that fails the CLA.

[276] Carey HC-WP-Source_&_Destination_Competition.xlsx. The {{REDACTED }} that passes the CLA includes 50/10 and Gulf Coast revenue, but it does not include 50/5-9 revenue. {{REDACTED }}.

source and destination competition, which Dr. Bailey does not address, in areas with substantial concentration.

*50/5-9 BEA-commodity failures: {{*REDACTED *}}*[277] *in annual revenue*

The standard 50/10 analysis misses additional areas, including those where UPNS would hold a very high participating share well above 50%, and include many 80-100% areas.

To analyze the potential horizontal competitive effects from a combination of UP and NS, I conducted an additional 50/5-9 sensitivity analysis to evaluate areas affected by the Proposed Transaction where a combined UPNS would have at least 50% share and one of the individual railroads has between 5% and 10% rail share, instead of only 10% or more. I apply this sensitivity specifically because of the exceptional concentration this Transaction would create—in the majority of these areas, a combined UPNS would hold an 80-100% share—and not as a substitute for the Board's established 50/10 screen.

In these instances, the exceedingly high concentration raises further concern about lessened source and destination competition from the Proposed Transaction. In areas substantially controlled by a single firm with highly concentrated structures, even smaller incremental changes in share (less than 10%) could significantly affect concentration and the ability to exercise market power, compared with unconcentrated areas. This occurs because the entity that substantially controls the area becomes further entrenched and gains an even greater ability to cause competitive harm when combined with smaller incremental railroad assets.

My 50/5-9 analysis expands the 50/10 analysis to test a lower minimum share threshold for individual carriers, between 5% and 10%, alongside a combined entity share exceeding 50%

[277] Carey HC-WP-Source_&_Destination_Competition.xlsx.

rail-only share. In total, an additional {{REDACTED }}[278] of annual traffic revenue involves screen failures in BEA areas for destination and source competition for areas, where UP and NS together would hold over 50% share and at least one railroad holds a 5-10% share. Of the {{ REDACTED }} in additional revenue, approximately {{ }} is associated with areas with a combined share over {{ }}.[279]

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Approximately {{REDACTED }} of annual rail traffic revenues face significant potential concern for horizontal competitive harm to shippers that rely on transcon corridors (within corridor) [280] and on source and destination competition (between corridor) achievable today through a competitively balanced railroad sector that gives customers independent railroad options for shipping out of an origin or into a destination.[281] In short, the results demonstrate that the Proposed Transaction would make it very difficult for shippers to avoid UPNS on transcon corridors or to access different locations for supply into destinations or out of origins. This would lead to many markets with exceedingly high shares and concentration, heightening concern for the extent of harm and likelihood for the lessening of geographic competition.

This type of competitive harm is intractable and would have a dramatic effect on the rail industry structure. The Board's past practices of instituting remedies would not address the

[278] Carey HC-WP-Source_&_Destination_Competition.xlsx.

[279] Carey HC-WP-Source_&_Destination_Competition.xlsx.

[280] *See* Appendix 3 – Horizontal Harm for discussion of within corridor concern totaling {{REDACTED }} related to within corridor traffic.

[281] The Gulf Coast 50/10 analysis comprises {{REDACTED }}. Carey HC-WP-Source_&_Destination_Competition.xlsx.

substantial harm resulting from the Proposed Transaction. Therefore, implementing a surgical remedy would not work.

C. How to correct Dr. Israel's analysis.

Corrections to Dr. Israel's Independent Route Analysis: As discussed in Section IV, Dr. Israel's independent route analysis fails to analyze the many rail routes at risk of facing vertical harm from the Transaction because Dr. Bailey only evaluates overlapping route segments and disregards the entire route.[282] Therefore, Dr. Israel inappropriately excludes {{REDACTED }}[283] in rail routes which should be considered for reduction in vertical competition in his analysis. A complete evaluation of reduction in independent rail options would include a vertical evaluation of all routes involving UP or NS in conjunction with the horizontal analysis, which both experts' analyses fail to do.

Also as discussed in Section IV, the historical STB precedent of independent railroad route options requires one to show that a theoretically available independent railroad alternative route not only excludes the merging parties entirely (e.g., CN and IANR in that case and UP and NS in this case) but also is economically feasible and economically attractive.[284]

Correcting Dr. Israel's errors shows a reduction in independent rail options for approximately {{REDACTED }} on corridors that comprise the {{REDACTED }} Dr. Israel fails to evaluate.[285]

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[282] Israel Amended VS at p. 40 FN 37: "I understand that Dr. Bailey's Verified Statement covers routes where UP and NS overlap at one or both ends of a corridor, I exclude these from my analysis."

[283] *See* Carey HC-WP-Independent_Routes_Overlap.xlsx.

[284] In my CN-IANR report, I discuss the importance of maintaining an independent routing alternative to "provide a competitive restraint" against the consolidated firm post-Transaction (Verified Statement of Julie M. Carey, STB FD No. 36744, Canadian National Railway—Control—Iowa Northern Railway, May 29, 2024 at pp. 8-17), and the STB Decision that supported my conclusions acknowledges that I identified independent routing options that did not include the merging parties and that I analyzed "economically attractive routes." Decision No. 3, STB FD No. 36744, Canadian National Railway—Control—Iowa Northern Railway, January 13, 2025, at p. 24.

[285] {{REDACTED }}, where the {{REDACTED }} is corridor revenue in which there are reduced independent rail options that Dr. Israel failed to evaluate. *See* Carey HC-WP-

Moreover, as discussed above, the majority of Dr. Israel's {{REDACTED }} in affected traffic (3-to-2 and 2-to-1 reductions post-Transaction) involves traffic moves that include either UP, NS, or both and therefore do not have an independent route alternative.[286]

Corrections to address additional issues with Dr. Israel's Vertical Analysis: Dr. Israel's conclusion of "virtually no potential" for vertical foreclosure[287] ignores the many levers that post-Transaction UPNS could use to lessen competition, including but not limited to: the ability to short haul CSXT on existing UP-CSXT interline lanes, thereby raising CSXT costs to serve existing traffic (see Section VI); specific impact to Gulf Coast chemical customers involving UP and CSXT transcon traffic (see Section VII); and the use of bundling with UPNS/CSXT common customers where UPNS could bundle traffic and lessen competition involving Eastern U.S. CSXT traffic moves and the Eastern leg of UP/CSXT transcon traffic (see Section VI).

D. Outcome of updated regression analysis after accounting for only some of Dr. Israel's errors.

I performed a sensitivity analysis that removes Dr. Israel's assumption that it is only appropriate to measure variation within a route and also incorporates some corrections to his econometric model by adding relevant railroad economic variables to explain rates. This analysis yields results that contradict Dr. Israel's conclusions. I removed route-level fixed effects and added a variable for shipment length, because mileage affects rail rates. Explicitly controlling for route distances, rather than relying on route-level fixed effects, creates a better-constructed model by specifically controlling for a characteristic that any given route has in

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Independent_Routes_Overlap_Analysis.xlsx and Carey HC-WP-Independent_Route_Analysis.xlsx. {{REDACTED }} only includes revenues from routes containing UPNS. Full corridor revenues for this affected traffic would approach {{REDACTED }}

[286] *See* Carey HC-WP-Independent_Route_Analysis.xlsx.

[287] "Thus, potential theories of foreclosure come down to a single, narrow case—prices that are not part of negotiated non-linear contracts, are not Rule 11, and are not through rates set by the sole-served carrier but rather are through rates received from one of the railroads on the competitive end…and [I]show that they do not hold." Israel Amended VS at p. 23.

common across waybills (distance), while letting the model draw information about rail prices from similar moves at multiple locations. This change allows the model to consider shippers who have multiple locations across different geographies with distinct rail competitive circumstances, as I describe elsewhere in my VS (see Section IV). Additionally, removing route-level fixed effects allows for variation within the model; in other words, the model no longer relies on artificially limited within-route variation to explain the sole-served carrier's effect on prices.

The adjustments I made to Dr. Israel's analysis contradict Dr. Israel's proposition that sole-served customers pay rates no higher than dual-served customers. The results are statistically significant for the competition variable in question: when the sole-served carrier sets the through rate for a sole-served-to-dual-served move, the rate runs about {{ }} higher than when the competitive-end carrier sets the through rate.[288] This analysis yields results that contradict Dr. Israel's claim that sole-served carriers do not charge higher prices when they set through rates.

After controlling for the relevant rail economic factors that Dr. Israel disregards and evaluating competition across corridors, not just within them, where the primary difference is whether a customer was sole-served or competitively served, both the econometric analysis and economic logic support the conclusion that a customer with competitive alternatives secures a lower rate than a customer with no alternatives.

Customers facing head-to-head competition could reasonably expect lower prices than customers solely served by a railroad. These sole-served customers do not have a reasonable alternative for their demand for the specific railroad service regardless of whether the railroad

[288] *See* Carey HC-WP Israel Competition Regression

rate rises or falls. The degree of price responsiveness may vary with customer-specific circumstances and could produce higher elasticity (price responsiveness) when railroad movement costs make up a higher percentage of the total cost of service. In short, Dr. Israel fails to present reliable evidence from which the Board can assess the risks of competitive harm.

The concern regarding higher prices for sole-served customers does not only apply to the narrow case of non-negotiated through rate traffic for which Dr. Israel defines foreclosure theory and purports to be testing in his analysis of through-rate traffic.[289] Dr. Israel's argument that a Rule 11 shipper is unaffected by a sole-served part of the move because it could negotiate with a separate railroad for a separate part of the move does not address the shipper's burden of negotiating with a sole-served carrier. Therefore, the sole-served carrier's presence on the route is still relevant to the price paid by the shipper. Furthermore, Dr. Israel's stated theories of foreclosure for Rule 11 traffic ignore the ability of the sole-serving railroads to bundle rates for customers at multiple locations, as I discuss in Section IV. It follows that Rule 11 customers are still at risk of competitive harm. Further, Rule 11 moves would account for about {{ REDACTED }} of a combined UPNS interline carloads[290] in Dr. Israel's analysis, and Dr. Israel has not substantiated removing them from his analysis. Presently, there are many reasons, including a lack of information, regulatory risk, and other asymmetries, that an existing sole-served rate is not set at the maximum possible rate.[291] However, post-Transaction, these reasons could be obviated to harm shippers in the form of lessened geographic competition and other anticompetitive concerns, particularly with a combined UPNS with up to {{REDACTED}} in

[289] Israel Amended VS at pp. 22 and 30.

[290] Dr. Israel's own data build also treats Rule 11 as part of the relevant dataset. His interline flag keeps UP–NS Rule 11 moves, and his code defines a category called "Rule 11 UP/NS: Monopoly (One End)/Competition (Other End)", which he fails to analyze. *See* Israel Amended VS at pp. 18-21.

[291] *See* Carey HC-WP Israel Competition Regression

traffic revenue for common customers who are substantially sole-served.[292] Dr. Israel disregards the implications of their enhanced market power.

Thus, I completed an additional analysis that includes Rule 11 and all "through rate" traffic[293] from all railroads, and my corrections to Dr. Israel's sole-served assignments.[294] I make some corrections to the Israel VS specification without route-level fixed effects (and with distance) and create a new competition variable that compares fully competitive moves to moves with a sole-served carrier on one or both ends.[295] This analysis demonstrates that interline traffic moves involving at least one sole-served carrier are priced {{REDACTED}} higher than competitively served traffic.[296] Using this same approach with Dr. Israel's definition of sole-served reaches the same conclusion that a move with a sole-served component has a rate that is {{REDACTED}} higher than competitively served traffic.[297] I have not addressed all railroad economic factors such as distinctive railroad costs. This result is consistent with other analyses I have completed that show that two railroads at an interchange are associated with lower rail rates {{REDACTED }}.[298], and it underscores the significance of the Transaction's reduction in independent rail options.

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In conclusion, the corrected analyses of Dr. Bailey and Dr. Israel show that a combined UPNS would have substantial incentive and ability to harm competition through both general

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[292] *See* Section VI.

[293] I conducted my analysis on all through rate traffic that includes non-contract and tariff traffic.

[294] I corrected Dr. Israel's station level customer sole-served assignments to customer specific assignments. I included a UP/NS-only sensitivity analysis which shows the same direction and statistical significance as the sample including all railroads. *See* Carey HC-WP Israel Competition Regression.

[295] This model includes the same independent variables discussed above. *See* Carey HC-WP Israel Competition Regression for additional details.

[296] *See* Carey HC-WP Israel Competition Regression.

[297] These results are statistically significant at the 1% level. *See* Carey HC-WP Israel Competition Regression.

[298] *See* Appendix 2 – Current and Future Competitive Balance.

pricing power and a range of cross-corridor pricing strategies. Substantial concentration and high UPNS shares post-Transaction would facilitate these strategies.

VI. Select Examples of Mechanisms of Competitive Harm from Combining UP and NS

A. Introduction.

The Transaction would fundamentally reshape the U.S. railroad industry, posing unprecedented risks to shippers, railroads, and the health of the U.S. rail network.

In addition to the previously discussed extensive lessening of geographic competition and reduction in corridor-specific competition (within corridor and reduced independent rail options) that would harm shippers and railroads alike, the Transaction would also directly impact competition in three primary ways: (1) by providing Applicants the ability and incentive to raise rivals' costs or degrade interline service;[299] (2) by creating largely "dependent" interline service that would put Applicants in a position to short haul their existing partners, which could fundamentally undermine the competitiveness of other railroads; and (3) by allowing Applicants to use their enhanced market power to engage in bundling strategies and other pricing strategies to cause competitive harm. The risk that these strategies would harm competition is compounded by the concentrated nature of the railroad industry, the high entry barriers, and all

[299]For example, the BNSF route between Kansas City and East St. Louis must traverse a segment governed by NS "rules" and "time table"; see my accompanying VS's in CSXT's Responsive Application. For other examples, see also and Section VII and Ex. 12A, V.S. Kenney.

of the harm created from the reduced geographic competition and independent rail route options discussed in the sections above.

B. Vertical foreclosure.

One substantial direct effect of a UPNS transaction on transcon traffic would be the significant risk of vertical foreclosure on the downstream segment of the business. Dr. Shehadeh discusses this vertical foreclosure risk resulting from a UPNS transaction in more detail.

Foreclosure concerns could arise from vertical combinations in which the vertically integrated firm supplies a critical upstream input to a downstream rival. When the integrated firm competes in the downstream market, it has an incentive to use its position to favor itself or its downstream affiliate through access or pricing strategies that disadvantage rivals by making the integrated firm's product or service more competitive to buyers than the rival's offering.

In the context of the Proposed Transaction, a combined UPNS could divert traffic away from interline routes shared with competitors (e.g., CSXT or BNSF) toward single-line routes controlled by UPNS, thereby harming dependent interline railroads and shippers who benefit from competitive options. Foreclosure of CSXT in the Eastern U.S. and/or foreclosure of BNSF in the Western U.S. would be possible through controlling access points such as gateways, or through anti-competitive pricing of critical upstream services and inputs. For instance, UPNS could pursue a pricing strategy in which UPNS would raise the interline rates it quotes to CSXT or BNSF to discourage the joint-line movement in favor of UPNS's own single-line service. This would foreclose CSXT and/or BNSF from competing on that movement.

In summary, given its substantial geographic scope and its leverage over the majority of U.S. rail customers at multiple locations, UPNS would have options to harm shippers and rival railroads through various strategies, including vertical foreclosure.

C. Short hauling.

The Proposed Transaction would create a railroad with such broad reach as to raise serious concerns about UPNS's ability to make CSXT and other interline partners accept "short-hauled traffic." This anticompetitive conduct would affect CSXT locations that are sole served by rail[300] and could even affect some of the CSXT locations that are dual served by NS and CSXT. The same is true of BNSF sole and dual-served locations in the West, though the risk is more pronounced in the East. While some shippers might see some benefit in the short term, the Board has recognized the danger of short hauling to the viability of other railroads over time.[301]

Post-Transaction, UPNS would have the incentive and ability to extend UP's current traffic segment for UP-CSXT moves beyond the existing gateways. Currently, traffic is generally interchanged along the Mississippi divide (Chicago, St. Louis, Memphis, and New Orleans). Post-Transaction, UPNS could instead move the interchange to a location on NS's existing rail network much further East and closer to the ultimate customer on CSXT's network.[302] This short hauling would be possible because the UPNS network overlaps in virtually every geography in which CSXT operates.

For example, consider a movement originating in Denver, Colorado on UP's system. Today, the move is interchanged with CSXT in East St. Louis and terminates at a sole-served CSXT location near Cleveland, Ohio, as Figure 23 below shows. Post-Transaction, however, UPNS could attempt to shift the interchange to a CSX-NS junction location near Cleveland

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[300] References to sole-served shippers refer to sole served by rail, where only one railroad serves the customer through its own line with no other railroad serving through any means (its own line, trackage or haulage).

[301] Under federal law (49 U.S.C. § 10705), the STB has historically protected railroads against being "short hauled" by regulators—meaning the Board generally avoids forcing a railroad to give up traffic to a competitor if the originating railroad could carry it much farther on its own lines. However, this creates tension in two directions.

[302] The same short-hauled traffic move issue exists for westward traffic. {{REDACTED

}}

instead. The transition to that interchange would eliminate a significant portion of the revenues on the CSXT movement, while imposing many of the same costs and expenses associated with terminating the traffic at its destination.

Figure 23: Example of Potential CSXT Short-Haul to a Cleveland, OH Sole-Served Customer[303] {{

REDACTED

}}

The risk of short hauling is greater post-Transaction

CSXT's network overlaps with a combined company in virtually every geography it would operate, giving UPNS both the incentive and the ability to short haul CSXT virtually anywhere on its network. Past transaction decisions have held that the STB will not restrict a merging company from selecting the gateway for its own moves—here, that discretion would let UPNS short haul CSXT.[304] Because the NS and CSXT systems overlap extensively, with many junctions in close proximity, and because a combined UPNS network offers many interchange routes, UPNS would have multiple ways to effectuate a short haul with only slight changes to a

[303] Routes and distances from PC Miler Rail.

[304] In the CN EJE Decision, the Board indicated that it would not limit the merging entities authority to select the gateway of its choosing with a desire to not constrain the applicant's potential benefits achievable from the Transaction. Decision No. 16, FD No. 35087, Canadian National Railway Company—Control—EJ&E West Company, December 24, 2008, at p 16.

proposed route. UP's acquisition of NS therefore materially increases the likelihood of short hauling.

Methodology

I conducted an economic analysis of the potential impact of UPNS short hauling on CSXT joint-line traffic moves. I present a range of route-mile impacts reflecting two scenarios: (1) UPNS establishes an interchange at the nearest available NS-CSXT junction relative to the existing CSXT sole-served origin or destination[305]; and (2) UPNS instead interchanges with CSXT at a designated car-handling location or yard identified in the UPNS operating plan.[306]

Post-Transaction, UPNS short hauling would substantially reduce CSXT's car-mile volumes, revenue, and contribution margin, impairing its ability to reinvest in its network. Short hauling harms shippers and competition both directly (by cutting the revenue and contribution margin CSXT needs to invest in network quality, thereby reducing shipper options) and indirectly (by pushing CSXT toward higher rates for other customers on the affected corridors, the broader network, and the shortened downstream segment, to help offset the loss).

Impact on CSXT sole-served customers

The map in Figure 24 illustrates the impact of pushing the existing Mississippi River gateways eastward for CSXT sole-served locations. The blue dots show the current revenue associated with UP-CSXT interline moves at existing interchange locations, sized by relative revenue; East St. Louis and Salem are the largest existing interchange points, with New Orleans, Chicago, and Memphis also being significant interchange points. The green dots show the

[305] The analysis identifies the SPLC of the CSXT origin/destination and the SPLC of the existing UP-CSXT junction. It then identifies the NS-CSXT junction nearest to the CSXT sole-serve location by evaluating all potential NS-CSXT junctions in the given state/adjacent states and selecting the closest one by rail distance according to PCM. This SPLC is used as a new interchange.

[306] *See* Gehringer and Orr Amended Joint VS. The specific threshold is that UPNS projects to have carload handlings at a given interchange location on a given route. *See* Orr WP HC Yard Details T2 vFinal.xlsx and Carey HC-WP-Shorthauling_Sole.xlsx.

potential CSXT-NS interchange point nearest each CSXT sole-served location, with the corresponding estimated CSXT revenue.

Figure 24: UP-CSXT Transcon Traffic Moves to/from CSXT Sole-Served Locations (and Nearest NS/CSXT Junction)[307] {{

REDACTED

}}

For CSXT sole-served shipper locations,[308] UPNS would have both the incentive and the ability to erode longstanding long-haul customer traffic on CSXT's network. On average, CSXT's line-haul distance could be reduced by up to {{REDACTED}} miles.[309] This would cut CSXT's line haul on sole-served traffic moves by over {{ }}, down to approximately {{ }} miles.[310] The scenario leaving {{ }} miles on CSXT's system reflects NS seeking the

[307] Carey HC-WP-Shorthauling_Sole.xlsx. Current interchange gateway revenue between CSXT-UP (blue) and short hauled CSXT revenue between CSXT-UP (green). Chicago/Chicago Height and Salem/Woodland/Watseka/Danville shown together.

[308] The effect could also potentially exist for dual-served locations. However, that is not quantified in this section.

[309] Carey HC-WP-Shorthauling_Sole.xlsx.

[310] Appendix 4 – Other Harm. This is the largest possible route reduction by selecting the nearest interchange location instead of the existing gateway location (e.g. East St. Louis, New Orleans, Chicago, Memphis). Carey HC-WP-Shorthauling_Sole.xlsx.

longest haul possible near the CSXT customer location where the two railroads meet. The scenario leaving CSXT with an average of {{ }} miles assumes that the interchange occurs at a location or specialized yard already identified in the UPNS operating plan.[311]

The same risk potentially extends to some of CSXT's dual-served customers that currently interline with UP. Short hauling may be more profitable for a merged UPNS at dual-served CSXT locations depending on operational and pricing issues as discussed below.

Financial impact of short hauling on sole-served customers

Artificially shortening the CSXT line haul on existing UP-CSXT moves—forcing CSXT to carry a smaller share of the move—would substantially decrease CSXT's revenue on this traffic, negatively impact CSXT's ability to invest, and raise the cost of serving the shippers who remain on CSXT's network.

I conducted an economic analysis of the revenue, cost, and contribution impact of potential UPNS short hauling on current interline, sole-served CSXT customers in the Eastern U.S., comparing revenue and variable cost for the existing line hauls (interchange at Chicago, East St. Louis, and New Orleans) against estimates under the two short-haul scenarios described above.[312]

Today, UP traffic to or from CSXT sole-served by rail locations accounts for approximately {{REDACTED }} of CSXT revenue (2023).[313] The largest impacted commodities include chemicals, automotives, and food products, which collectively account for

[311] This method preserves a longer version of the CSXT route and relies on stations in which UPNS is already planning to handle traffic rather than the closest possible UPNS station. The method is described in detail below. See Carey HC-WP-Shorthauling_Sole.xlsx.

[312] For the estimated CSXT variable costs in both movement categories, I estimate the variable cost based on the specific characteristics of the traffic move (commodity, car type, length of haul etc.) as required by URCS. The move characteristics are collected from confidential waybill information.

[313] All figures discussed are annual figures. See Carey HC-WP-Shorthauling_Sole.xlsx.

about {{ }} of all revenue[314]—as well as pulp and paper, petroleum, farm, primary metals, clay/concrete/glass/stone, and lumber and wood products. My analysis estimates that short hauling could cost CSXT the majority of this revenue, reflecting the loss of approximately {{REDACTED}} of route miles on a mileage-prorate basis. In absolute terms, this could mean revenue losses as high as {{REDACTED

}}, as shown in Figure 25, presented as a high and low range.[315]

Figure 25: Short Hauling Potential Lost Revenue (Sole-Served by Rail CSXT Customer Locations), ($Millions)[316] {{

REDACTED

}}

Short hauling also would have a large impact on movement-specific fixed costs. Shortening the CSXT line haul spreads the fixed costs of origination, termination, and interchange cost across fewer route miles, which increases the cost per carload and pushes rates

[314] *See* Carey HC-WP-Shorthauling_Sole.xlsx.

[315] I discuss my two methods (1) nearest network interchange locations and (2) closest designated handling location by UPNS where it has or may interchange traffic with other railroads in Appendix 4 – Other Harm.

[316] *See* Appendix 4 – Other Harm. *See* Carey HC-WP-Shorthauling_Sole.xlsx.

per mile higher for the customer—the same economic principle as increasing volumes to spread fixed costs across more units, applied in reverse. Both shortening the length of haul and lowering traffic volumes deny the railroad the contribution margin it needs to recover its costs and invest in its network. Basically, shorter moves leave CSXT bearing the same fixed termination, origination, and interchange costs while UP retains the highest-margin portion of the move by extending its own haul over more miles.

To compare typical CSXT costs for UP-interline moves to sole-served CSXT customers, I began with the URCS system-wide unit costs for the specific characteristics of these moves (train type, car type, origination/termination on the CSXT system, interchange type, commodity type, and route distance), then estimated the URCS cost of the same moves using the shortened mileage from short hauling.

I made two further adjustments to these URCS costs. First, because CSXT would be interchanging fewer UP movements and therefore fewer cars with UP,[317] there would be less aggregation on the CSXT system. Therefore, CSXT would likely need shorter trains with fewer cars, raising locomotive and crew costs per car; this effect alone increases costs by approximately {{ }} per car.[318] Second, reduced carload density prevents CSXT from aggregating shipments, requiring smaller blocks sent to more interchange points rather than larger blocks to fewer points; I therefore analyzed the cost difference between "single car" and "multi-car" shipments in URCS. This adjustment indicates costs today are approximately {{ }} lower than they would be under short hauling.[319]

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[317] Rather than large interchanges at the midcontinent facilities, there would be smaller multiple interchanges at the designated locations.

[318] This approach relies on train type designation in the STB URCS costing system. Carey HC-WP-Shorthauling_Sole.xlsx.

[319] URCS considers a multicar movement to have half the switch engine minutes of a single-car move. I applied the reduced switch engine minutes in the previously created URCS cost estimate, which then had the effect of altering costs associated with interchange. I also note that URCS uses a "jurisdictional add-on" for single-car moves that impacts clerical, origin and termination, and internal handling costs. I also removed these costs from the costing of current data. STB, "Uniform Rail

As Figure 26 shows, short hauling reduces route miles, while the large, unavoidable non-line-haul costs (termination, origination, and interchange) remain with CSXT and its shippers.[320] Because short hauling eliminates the higher-margin portion of the move, the total cost per mile for CSXT shippers rises dramatically—by roughly {{REDACTED}} times, from {{ }} to {{ }} per car-mile.[321]

Figure 26: Higher CSXT Costs / Car-mile on Sole-Served Short-Hauling Traffic Moves[322]

{{
REDACTED

}}

This movement-specific fixed cost impact is also visible in reported non-line-haul costs per car, which rise from just {{ }} of total costs today to a {{REDACTED }} share after short hauling, as Figure 27 shows.

Figure 27: Higher CSXT Percentage Unavoidable Costs on Sole-Served Short-Hauling Traffic Moves[323]

{{
REDACTED

}}

Costing System (URCS)," obtained on November 6, 2026, available at https://www.stb.gov/reports-data/uniform-rail-costing-system/.

[320] Includes the array of terminal and interchange costs, including yard handling switch engine minutes, and clerical costs, all associated with "single car" moves. *See* Carey HC-WP-Shorthauling_Sole.xlsx and STB, "Uniform Rail Costing System (URCS)," obtained on November 6, 2026, available at https://www.stb.gov/reports-data/uniform-rail-costing-system/.

[321] {{REDACTED }}.

[322] *See* Appendix 4 – Other Harm and Carey HC-WP-Shorthauling_Sole.xlsx.

[323] *See* Appendix 4 – Other Harm and Carey HC-WP-Shorthauling_Sole.xlsx.

Additional Fixed System and Movement-Specific Fixed Costs for Remaining Customer

Removing these short-haul volumes from existing midcontinent facilities would also create additional cost burdens for CSXT and remaining customers, which would include fixed system costs and additional movement-specific fixed costs.

For additional movement-specific fixed costs for remaining customers, I estimate approximately {{REDACTED }} in additional costs from underutilized midcontinent interchange services from the elimination of what is currently interchanged between UP and CSXT at midcontinent interchange location. Specifically, post-Transaction, CSXT must spread forgone fixed movement-specific costs associated with yard-specific costs[324] related to locomotive, car use, and administrative functions over fewer remaining volumes, leading to higher costs per carload for the remaining interchange traffic customers at the midcontinent location.[325]

In addition, for remaining customers, CSXT interline traffic that continues to use the midcontinent facilities is subject to operational inefficiencies from the reduced volumes that results in shorter trains (i.e., fewer cars per train; movement away from steel wheel interchanges to rubber tire interchanges), and smaller blocks of cars for which to group by destination. These

[324] The cost calculated is the implied fixed cost portion (i.e., inverse of the URCS reported variability percentage) of origination, termination, and interchange costs that do not vary by linehaul length.

[325] *See* Carey Shorthauling_Sole.xlsx and Carey HC-WP-Shorthauling_Dual.xlsx. {{REDACTED }} The cost categories involve Interchange Cost, Origination and Termination Cost, Interswitch Cost, and Yard Car costs. The variability percentages of these cost categories were determined using URCS Phase II data, therefore implying the fixed cost percentage. *See* Carey HC-WP-Shorthauling_Sole.xlsx. The impact flows through CSXT yards used for transcon interchanges, including the recently expanded Avon yard. CSXT, "CSX Completes Avon Yard Hump Lead Extension, Boosting Rail Efficiency and Capacity," January 28, 2026, available at https://www.csx.com/index.cfm/about-us/csx-completes-avon-yard-hump-lead-extension-boosting-rail-efficiency-and-capacity/.

operational changes would result in increased movement-specific fixed costs and inferior service. I estimate these costs as having approximately {{REDACTED }} in customer impact.[326]

Finally, short-hauled traffic that face new interchanges at locations on CSXT's network that are deeper into the East would face additional costs, as they would face movement-specific fixed costs related to interchange activities, such as the yard-specific costs described above, which were previously handled at the mid-continent facilities. I estimate these costs to be {{ REDACTED }}.[327]

Risk of short hauling on CSXT sole-served (and dual-served) customers

Post-Transaction, UPNS could dictate the interchange location as part of a short-hauling strategy it could not implement pre-Transaction—when UP's incentives favored collaborating with CSXT to serve shippers via transcon interline service, and when UPNS could not effectively choose the interchange location.[328] In the EJ&E decision, the STB recognized that CN's acquisition of EJ&E would allow it to route traffic over its own network rather than interchange with competing carriers at existing locations in order to effectuate the merger's goals.[329] By contrast, currently, a standalone NS cannot force UP to interchange traffic at a location that would short haul CSXT. A combined UP and NS would have a unified incentive and ability to divert traffic deep into the Eastern network on the former NS system.

As shown above, UP-CSXT interline service to sole-served CSXT locations today could readily be diverted onto former NS routes for a substantial portion of the movement, pushing the

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[326] I have not included an estimate of the amount of new rubber tire interchanges that would occur that would require additional drayage and terminal costs for all affected carloads. {{REDACTED }} *See* Carey HC-WP-Rate_Impact.xlsx. *See also* Carey HC-WP-Shorthauling_Sole.xlsx and Carey HC-WP-Shorthauling_Dual.xlsx.

[327] {{REDACTED }} *See* Carey HC-WP-Shorthauling_Sole.xlsx and Carey HC-WP-Shorthauling_Dual.xlsx. The cost calculated is the implied fixed cost portion (i.e., inverse of the URCS reported variability percentage) of origination, termination, and interchange costs, which do not vary by linehaul length.

[328] Decision No. 16, FD No. 35087, Canadian National Railway Company—Control—EJ&E West Company, December 24, 2008, at p 16.

[329] *Id.* at pp. 15-16.

gateway dramatically closer to the customer in the Eastern U.S. and reducing CSXT's route miles by approximately {{REDACTED }}.[330] These out-of-route movements could also be longer, more circuitous, and lower quality than CSXT's current routing.[331]

Every additional mile UPNS extends its line haul East raises the per-car-mile cost of the CSXT move while lowering the per-car-mile cost of the UPNS move. Short hauling would ultimately make CSXT's cost {{REDACTED}} times higher per car-mile on the short-hauled segment, due to the large, unavoidable terminating and interchanging costs of the traffic move—dramatically higher than the UPNS rate per mile on its extended Eastern haul.[332,333] While this phenomenon likely has the largest impact on CSXT given the nature of the rail network and the direction of traffic flows, the same incentives and capabilities exist between UPNS and any other long-haul carrier that serves similar areas as the merged entity (e.g., BNSF). As such, any other railroad could potentially be short hauled and experience similar effects.

[330] This is the largest possible route reduction by selecting the nearest interchange location instead of the existing gateway location (e.g. East St. Louis, New Orleans, Chicago, Memphis). See Carey HC-WP-Shorthauling_Sole.xlsx

[331] Carey HC-WP-Shorthaul_Foreclosure.xlsx.

[332] {{REDACTED }}.

[333] Carey HC-WP-Shorthaul_Foreclosure.xlsx.

Figure 28: CSXT Higher Shipper Movement-Specific Costs from Sole-Served Short Hauling Are Uncompetitive with UPNS, $ per car-mile[334] {{

REDACTED

}}

Because the inevitable cost increases alone would make CSXT uncompetitive on sole-served UP interline moves, UP and NS would have little need to adjust their own revenue or prices to capture most of the {{REDACTED }} in CSXT revenue associated with this traffic.[335] This figure excludes the additional movement-specific costs discussed above.

Further, the same factors that could cause a post-Transaction CSXT's movement-specific fixed costs to increase could also work in the opposite direction for a combined UPNS to reduce UPNS's movement-specific fixed costs, which would then facilitate its ability to foreclose CSXT. For example, increased car length and car density could result in longer trains and larger blocks of cars, which could reduce average movement-specific fixed costs and lead to further foreclosure opportunities by UPNS.

[334] Carey HC-WP-Shorthauling_Sole.xlsx.

[335] Carey HC-WP-Shorthauling_Sole.xlsx.

These CSXT revenue losses would also raise the costs CSXT must bear to operate the remaining traffic. Under short hauling to a designated NS car-handling or yard location, CSXT would lose approximately {{REDACTED }} in contribution margin, plus roughly {{ }} in additional fixed system costs and reduced volumes.[336] Cost increases of this scale would put upward pressure on rates for remaining shippers or reduce the contribution available for network investment.

Moreover, sole-served customers play an outsized role in any railroad network: because differential pricing reflects different competitive circumstances, sole-served traffic accounts for the lion's share of the network's capital contribution, creating additional risks to CSXT. For UP-CSXT interline moves, sole-served traffic accounts for more than {{ }} of the contribution margin used to fund fixed network investment.[337] Losing that contribution margin would reduce the investment across CSXT's entire network, since that burden could not readily be shifted to customers at competitive locations.

For the shortened rail segment between the new UPNS interchange location and the customer (formerly served by the NS junction), the high movement-specific fixed cost of originating or terminating traffic, combined with the reduced rate CSXT would receive on the last-mile move, would materially weaken the economics of serving that segment.

The risk of short hauling is not limited to sole-served customers; a similar tactic is also possible for some dual-served customers. The dual-served nature of these routes means that a combined UPNS often would find it most profitable to divert the traffic from CSXT; however, depending on the nature of the future UPNS system and its optimal routings, as well as other

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[336] *See* Carey HC-WP-Shorthauling_Sole.xlsx and Carey HC-WP-Rate_Impact.xlsx.

[337] {{REDACTED }} *See* Carey HC-WP-Shorthauling_Sole.xlsx and Carey HC-WP-Shorthauling_Dual.xlsx.

factors such as whether UPNS would have the full ability to deliver the traffic, UPNS may seek to implement a short-haul strategy to increase CSXT's costs on a shorter distance move. As with sole-served locations, if CSXT reduced to shorter moves, its costs would increase. This could prevent CSXT from profitably serving the dual-served customer even absent full vertical foreclosure and UPNS could use it as a strategic lever for particular circumstances and customers.[338] There are multiple reasons this could be a profitable strategy for UPNS; for example, UPNS might not wish to commit a locomotive to an infrequently-used branch line, there might be a congested terminal that unprofitably adds car days, there might be capital expenditure on a branch line that UPNS wishes to avoid, or there might be a mismatch between the crew and equipment needed to handle delivery, making it more profitable to avoid that segment entirely. More generally, NS's focus on the longer linehaul portion of the move that ends at a terminal location may increase profits by avoiding certain termination or origination associated with yard-specific costs that are shifted to CSXT.

If UPNS offers a shipper a rate to a designated UPNS handling location where it interchanges with other railroads (or with itself), the remaining CSXT short-haul segment's movement-specific cost could {{REDACTED }}, making CSXT uncompetitive on the entire move relative to UPNS's extended Eastern haul. CSXT risks losing some significant portion of {{REDACTED }} in revenue from short hauling at dual-served locations, including {{REDACTED }} in contribution margin.[339]

[338] *See* Appendix 4 – Other Harm.

[339] *See* Carey HC-WP-Shorthauling_Dual.xlsx.

Combined potential impact

As Figure **29** shows, the substantial additional CSXT costs, including lost contribution margin, which could be passed on to shippers from departing UPNS traffic total over {{ }},[340] which are associated with more than {{REDACTED }} in at-risk revenue from short hauling of CSXT sole-served and some dual-served customers.[341]

Figure 29**: Total Short Haul Impact and Costs for Remaining CSXT Shippers[342] {{** REDACTED

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Given the necessary movement-specific fixed costs involved, CSXT shippers may reasonably be expected to bear some portion of these higher costs in the form of higher rates. In fact, the above short-haul analysis is a conservative estimate because it does not capture the full CSXT network system impact. As an example, the estimates are limited to the impact on remaining transcon customers. However, CSXT's system involves the commingling of transcon traffic within Eastern U.S. region traffic through the aggregation process at hump yards and IM hubs at numerous terminals, including Avon yard and Rose Lake yard.[343]

[340] There are additional avenues for these effects that have not been analyzed in this report, including improved network size, which allows for reduced shipment circuity, improved empty/load factors, decreased car hire needs, and a reduced average number of locomotives per train.

[341] *See* Carey HC-WP-Shorthauling_Sole.xlsx.

[342] *See* Carey HC-WP-Shorthauling_Sole.xlsx.

[343] *See* Appendix 4 – Other Harm.

The public interest implications are significant, both for CSXT shippers and for the economic stability of CSXT's railroad operations—consequences that flow directly from the UPNS Transaction and would not otherwise exist.

D. Bundling – multi-location customers.

Bundling is a pricing strategy by which a firm offers two or more products together as a package.[344] Competitive concerns arise when a firm with a dominant position in one product bundles its products in a way that makes it uneconomic for rivals to compete. In a railroad context, railroads often bid for business on multi-lane contracts with customers that have numerous locations across various products, a practice that ordinarily benefits shippers. The concern here is that a firm with the unprecedented scope of a combined UPNS could use its dominant position at sole-served locations to threaten retaliation with even higher prices at those locations if the shipper does not agree to use that railroad at its other, multi-served locations.[345] While such bundling could be pro-competitive in a balanced market, it becomes extremely anticompetitive in concentrated markets where rivals could not match the leverage.

To consider the potential harm that could arise from a bundling strategy implemented by a combined UPNS, I investigate UPNS's increased access to common customers post-Transaction. UPNS's increased customer access could include one or many of a customer's rail locations in both the Eastern and Western U.S. and would enable new types of service in those regions. Below, I explore the changes to UPNS's control of multi-location customers and the

[344] Scherer and Ross, "Industrial Market Structure and Economic Performance", (Houghton Mifflin Company, 1990) at pp. 565-568. Bundling can take different forms such as pure bundling and mixed bundling, including various discounting methods in the pricing strategy. David S. Evans and Michael Salinger "Why Do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law", Yale Journal on Regulation (2005) at FN 18.

[345] *See* Appendix 4 – Other Harm for a few examples.

different traffic services available to UPNS post-Transaction that would create an undue advantage to a combined entity.

An effective bundling strategy would require post-Transaction UPNS to maintain access to freight rail customers with both sole-served and dual-served customer locations throughout the U.S. Therefore, I begin my analysis by identifying the potential increase in revenue at each type of access (sole-served and dual-served) for large UPNS customers.

UP and NS each individually have billions in revenue from merchandise customers[346] that maintain both sole- and dual-served locations across the U.S. When considering only the top 150 merchandise customers served by both UP and NS in the present (i.e., common customers), UP has {{REDACTED }} and NS has {{REDACTED }} in revenue. Together, they have revenue of approximately {{REDACTED }}.[347]

Of the {{REDACTED }} in combined revenue, approximately {{ }} involves sole-served locations (i.e., served by one railroad) and {{ }} involves dual-serve locations (i.e., served by two or more railroads). The UP and NS sole-served traffic is comprised of moves in the Eastern U.S., Western U.S., as well as transcon moves.[348] The consolidation of customers in the East and West regions served by UPNS post-Transaction would enable UPNS to influence shippers and impose harm on customers through pricing strategies that leverage varying competitive circumstances across customer locations.

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[346] For this and all figures that follow, customer totals are summarized based on the "freight payer" field due to the contract holder.

[347] Carey HC-WP-Bundling.xlsx. A slightly different revenue split applies with more traffic revenue at sole-served locations when considering locations in the Gulf Coast that face ineffective competition. UPNS would have five more locations that are sole-served by rail based on Dr. Bailey's analysis. Bailey Amended VS at p. 51.

[348] NS has approximately {{REDACTED }} of revenue relating to Eastern U.S. sole-served customers and {{REDACTED }} of revenue relating to transcon sole-served movements. Meanwhile, UP has approximately {{REDACTED }} of revenue relating to Western U.S. sole-served customers and {{REDACTED }} of revenue relating to transcon sole-served movements. *See* Carey HC-WP-Bundling.xlsx.

Next, I investigate the top 150 UPNS merchandise customers that are also served today by CSXT (i.e., common customers to UPNS and CSXT) to evaluate the potential for bundling for customers that CSXT also serves. The same economic effect would exist for all other railroads. CSXT revenue for the post-Transaction {{REDACTED }} common customers would be approximately {{REDACTED }}, or about {{ }} of the total UPNS revenue.[349] Further, {{ }} of the CSXT revenue involves sole-served locations and {{ }} is from dual-served locations.[350]

Today, among these common customers, CSXT is comparable in size to NS, with {{REDACTED }} NS revenue as compared to {{REDACTED }} CSXT revenue. This may indicate that customers appreciate the benefits of competition achievable with the existing competitive balance in Eastern U.S. rail service. Post-Transaction, CSXT would face a competitor three times its size with enough customer access to implement a bundling pricing strategy that is currently unavailable to NS pre-Transaction. The shippers with sole-served locations are practically unable to avoid UPNS.[351] Therefore, the dual-served locations become opportunities for the pricing strategies discussed below.

The scope for such bundling is substantial. Currently, only accounting for the top 150 common customers exposed to bundling risk, UPNS's total of {{REDACTED }} in sole-served customer access could be leveraged against CSXT dual-served locations serving approximately {{REDACTED }} in revenue.[352]

Next, I will explain the anticompetitive bundling strategies with different traffic types.

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[349] Carey HC-WP-Bundling.xlsx.

[350] *See* Appendix 4 – Other Harm.

[351] As well as those shippers facing ineffective competition.

[352] Carey HC-WP-Bundling.xlsx. CSXT's {{REDACTED }} number only accounts for CSXT's dual-served revenue.

When a dominant railroad services a sole-served shipper at one specific location but faces competition in rail service at a different customer location, then that railroad may engage in a bundling strategy that eliminates competition in the competitive location. This bundling strategy would effectively require the shipper to purchase rail service from the firm (instead of a rival) in order to obtain a favorable rate at the sole-served location.[353] Post-Transaction, UPNS could engage in such a strategy to bundle movements to/from sole-served locations[354] with those movements to/from dual-served locations and therefore economically coerce customers to use UPNS at dual-served CSXT or BNSF locations.[355] The unprecedented geographic scope of the Proposed Transaction would create expanded geographies where this strategy could be applied. Post-Transaction, UPNS may have lower fixed costs from scale economies; however, benefits from these cost efficiencies would not be passed on to customers because there would be no comparable competitor to UPNS's national railroad that reaches every corner of the U.S.[356]

The conditions for a bundling strategy require that the target bundling customer must be a common customer of both CSXT and UPNS or of both BNSF and UPNS, etc. A common customer's dependence on UPNS in sole-served locations is also needed to effectuate the bundling strategy. In other words, the common customer's dependence would provide UPNS

[353] To force multi-location customers to use UPNS at dual-served locations, it could effectively engage in a pure bundling strategy which is an all or nothing strategy where UPNS would quote a much higher rail rate at captive locations unless the customer agrees to use UPNS at dual served locations. *See* Scherer and Ross, Industrial Market Structure and Economic Performance (Houghton Mifflin Company, 1990) at pp. 565-568. *See also* David S. Evans and Michael Salinger "Why Do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law," Yale Journal on Regulation (2005) at FN 18.

[354] There are various reasons why current rates may not be at the highest level pre-Transaction including incomplete information. The broader geographic scope of facilities post-Transaction and increased concentration would allow for further pricing optionality, including further price increases.

[355] As an example, a small rate increase on the sole-served locations could achieve a lower rate by forcing diversion away from the rival's competitively-served location. *See* Appendix 4 – Other Harm.

[356] Bundling is problematic (and not procompetitive) because UPNS is able to use its extensive scale and scope and unique single line service (almost everywhere) to engage in a pricing strategy that harms shippers through its multi locations (i.e., raise rates on single line/ineffective competition and lower rate where dual served). Procompetitive benefits from bundling associated with the Proposed Transaction could be achieved under a less restrictive alternative that includes trackage rights and partnerships.

with leverage to bundle sole- and dual-served movements. Today, the existing network balance of the U.S. Class I freight rail system, with independent Eastern and Western railroads of comparable scale, constrains the reach of any such system-wide pricing strategy. However, the Proposed Transaction would create a very large railroad (with about {{ }} of total U.S. Class I rail traffic[357]) with unprecedented access to customers across the U.S.,[358] which would be capable of leveraging both its expanded sole-served customers and expanded geographic footprint to destabilize the current balance in the system (with a combined UPNS having {{ }} in traffic revenues for large common customers with about {{ }} sole-served customers).

If UPNS has a large amount of a specific customer's traffic, particularly traffic that is sole-served, then it would have significant leverage to effectively force that customer to bundle all its dual-served traffic with UPNS. Post-Transaction, UPNS could threaten much higher rates on the customer's sole-served traffic in order to influence a customer's routing choices at its competitive locations. Customers that depend on UPNS at locations where they are sole served or face ineffective competition would rationally respond to this strategy by moving competitive traffic away from another carrier like CSXT to UPNS. This dynamic may erode interline carriers' traffic revenue and volumes for both transcon and non-transcon service to these multi-location customers. The STB would be limited in its ability to stop punitive UPNS actions post-Transaction and is aware of the potential for retaliatory behavior in other contexts.[359]

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[357] *See* Section III.

[358] As I discuss in Section VIII, post-Transaction for the Eastern U.S. shippers, UP and NS would have access to nearly {{ }} of the CSXT's railroad customers – i.e. the vast majority of CSXT's customers are common customers with UPNS and served by UPNS elsewhere on their system. Carey HC-WP-Customer_Counts.xlsx.

[359] The STB has raised concern about retaliation of threats or actual rate increases, cutbacks in local service and refusals to provide new service upon request related to STB regulatory proceedings. Statement of Robert. E Primus on Railroad Retaliation, Np. 25-04, 1/16/25, available at https://www.stb.gov/wp-content/uploads/PR-25-04.pdf.

UPNS's unprecedented footprint post-Transaction would allow for an immense scope of bundling combinations. As shown in Figure 30 below, the Proposed Transaction would create new and unique combinations of customers and geographies where UPNS could effectuate this type of strategy, all in addition to its current opportunities. Specifically, a combined UPNS would be able to bundle an expanded group of transcontinental customers to divert dual-served customers in the East. Meanwhile, instead of two comparably sized Eastern railroads fighting for Eastern business or business with Western transcon partners, CSXT would instead face a railroad three times its size capable of bundling sole-served Western customers and sole-served Eastern customers to divert dual-served business from CSXT (either Eastern originating/terminating traffic or the Eastern side of a transcon move). In the Appendix, I show two figures that illustrate sample bundling strategies that UPNS could implement post-Transaction.[360]

Figure 30: Conditions and Strategy for Post-Transaction Bundling Risks to Customers on CSXT (Eastern U.S. O/T or Eastern U.S. Transcon Segment)[361]

Sole Serve Customer	Bundling Target	Pre-Transaction	Post-Transaction
West O/T or West Transcon Traffic	East O/T Traffic		X
West O/T or West Transcon Traffic	East Side Transcon		X
East O/T or East Transcon Traffic	East O/T Traffic	X	X
East O/T or East Transcon Traffic	East Side Transcon	X	X

In short, UPNS may effectively require the use of its services at dual-served locations through its leverage over sole-served locations. UPNS's control would allow it to condition discounts and pricing decisions on the customer's purchasing behavior at the dual-served location. The rival at the dual-served location (i.e., CSXT) would have difficulty matching the

[360] See Appendix 4 – Other Harm.

[361] While not discussed, the expanded group of bundling strategies would also be available in reverse for Western shippers.

offer because it would lack the revenue stream, scale, or sole-served traffic base from which the discount is funded.[362] In addition, due to UPNS's scope and dominant position across many areas in which it may employ a bundling strategy, it could achieve a targeted discount at dual-served locations or incur short-run costs from a below-cost pricing strategy if it weakens its rivals and later charges higher prices or worsens terms.[363]

A compounding effect of a reduction in network balance and independent route options is UPNS's significant potential to bundle non-transcon services with transcon services for customers who rely on transcon routes, heightening the risk facing dependent interline carriers such as CSXT and BNSF at dual-served locations. Large customer groups span these commodities: the top 150 customers alone[364] generate nearly {{REDACTED }} in total UPNS revenue from many sole-served locations.[365] Because UPNS provides non-transcon services to the same customers that require transcon service today, it would have a unique opportunity to use bundling to exclude CSXT or BNSF on transcon movements, harming both customers and their rival railroads.

An example of how UPNS could realize the effect of bundling across substantial transcon and non-transcon traffic is a situation where UPNS and CSXT compete for a transcon shipment from the West to Destination A in the East, and the same customer also ships to Destination B on a different Western U.S. route where the UPNS location is sole served or faces ineffective

[362] The DOJ has noted that in bundled-pricing settings an efficient rival may be unable to profitably match or beat the dominant firm's offer. "By bundling together either different products or multiple units of the same product, a firm with market power may be able to make offers on which it stands to make money, yet efficient rivals may not be able profitably to match or better these offers." *See* DOJ, "The Common Law Approach to Improving Standards for Analyzing Single Firm Conduct", October 23, 2003, at p. 24, available at https://www.justice.gov/atr/file/518776/dl.

[363] As I show in my GC chemical vertical foreclosure analysis for UP and CSXT transcon moves, UP could raise rates elsewhere on its network for a customer that also uses the transcon service.

[364] Commodities include Transport equipment, Chemicals, Food, Metals, Pulp/Paper, Lumber, Farm, Nonmetallic Ores/Fuels, Petroleum or Coal, and Clay/Concrete/ Glass/Stone. *See* Carey HC-WP-Bundling.xlsx.

[365] Appendix 4 – Other Harm and Carey HC-WP Bundling.xlsx.

competition. Because the customer relies on UPNS for traffic to Destination B, UPNS could raise rates on that traffic to recoup a price decrease on the downstream segment of the transcon move to Destination A–the segment where CSXT serves as the dependent interline carrier. Through this strategy tied to the Destination B traffic, UPNS could price CSXT out of its leg of the Destination A move entirely, and CSXT would lose the business.

I analyzed UPNS's top 150 customers' merchandise traffic, including its numerous sole-served locations, and confirmed that UPNS would have substantial sole-serve revenue, giving it the ability to raise rates on these large customers across most commodities by enough to offset lower UPNS rates on CSXT's routes. [366]

In the appendix, I also provide a detailed analysis of the Eastern U.S. origination/ termination ("O/T") CSXT customer bundling risk and the Eastern U.S. transcon segment CSXT customer bundling risk. I estimate approximately {{REDACTED }} in CSXT Eastern U.S. dual-serve revenue and approximately {{REDACTED }} in CSXT transcon dual-serve revenue, for a total of approximately {{REDACTED }} that could result in competitive harm effectuated by a bundling pricing strategy.[367]

In conclusion, as shown above, bundling poses a substantial risk of competitive harm for today's shippers. This type of competitive harm is intractable and very hard to remedy. For example, an open gateway commercially reasonable rate protection does not address the full array of traffic moves for common customers that could be used to implement bundling strategies for transcon traffic or Eastern U.S. O/T moves. Furthermore, the rail industry is not static in nature. Therefore, an even greater impact may exist for tomorrow's shipper from

[366] *See* Carey HC-WP Bundling.xlsx and Carey HC-WP-Sole Serve Process and Identification.docx for an explanation of the sole-served identification process.

[367] *See* Appendix 4 – Other Harm.

additional consolidation of industries that rely on the railroad network, creating increased bundling opportunities.

VII. Specific At-Risk Areas: Gulf Coast and Beyond

There are certain areas, industries, and stakeholders at particular risk of competitive harm from the Proposed Transaction. In this section I will discuss the Gulf Coast and the important chemical sector. In the appendix to this section, I discuss other specific at-risk areas including terminal and short line railroads, and traffic involving ports and Mexico, and other areas.

A. Overview of the Gulf Coast and why it is important.

The Gulf Coast offers a particularly instructive example of Applicants' experts' failure to provide the Board with reliable competitive analyses, as well as of the harms that would result from the transaction in a key region of the U.S.

The Gulf Coast is one of the most critical energy hubs in the world, producing approximately 80% of the nation's primary petrochemicals and shipping more than $117 billion in chemical products annually from Texas alone.[368] The Gulf Coast is home to many specialized chemical producers that supply much of the U.S., particularly the Eastern U.S. For specific products that have Eastern-terminating carloads, the proportion of units that originate in the Gulf Coast are extremely high. In fact, there are {{ }} products accounting for {{REDACTED}} carloads/IM units, of which more than {{REDACTED}} of Eastern-terminating volumes originate in the Gulf Coast (7-digit STCC level).[369] These Gulf Coast chemical commodities are essential inputs for important products used across numerous industries.[370]

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[368] Houston Energy Transition Initiative, "Recap and Key Takeaways: Strengthening the Gulf Coast's Competitiveness in Energy and Chemicals, obtained on November 6, 2026, available at https://htxenergytransition.org/newsroom/key-takeaways-gulf-coast-competitveness-energy-chemicals/.

[369] Carey HC-WP-GC_Chem_Analysis.xlsx.

[370] For example, vinyl chloride (STCC 2813966), which is the raw material building block of PVC plastic, originates in the Gulf Coast. Another example of a chemical produced in the Gulf Coast is methanol (STCC 2818426), which is highly important to

Chemical-related transcon rail traffic involves {{REDACTED }} in revenue, making it the largest sector for transcon moves between the Eastern and Western U.S.[371] For UP Western moves involving customers with two rail options in the East, the majority of chemical traffic is sourced from the Gulf Coast.[372] UP traffic also serves a pocket of unique soda ash chemical traffic in Utah and a smaller number of chemical producers in the Midwest. As discussed below and elsewhere, many of these chemical customers, despite benefiting from two independent rail options in the Eastern U.S., are dependent on UP today due to ineffective competition in the important Gulf Coast region.[373]

In addition, chemical traffic movements involving the Gulf Coast region typically involve longer route miles, network system designs with SIT[374] services for customer-specific needs, and scaled service that make trucking an ineffective alternative, meaning customers are heavily reliant on railroad transportation for moves into the Eastern U.S.[375]

Trucking is not an effective competitive alternative to rail for many types of chemical products, particularly for longer-haul traffic moves. In addition, chemicals products transported via truck would face switching costs to be transported via rail, as well as different loading/unloading and distinct service quality considerations (e.g., trucks are often used for expedited service), as discussed in Appendix 3 – Horizontal.

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the production of industrial formaldehyde: over 90% is produced via the selective oxidation of methanol. Yujie Zhan et al., "Unveiling the catalytic active sites of iron-vanadium catalysts for the selective oxidation of methanol to formaldehyde," Chinese Journal of Catalysis (2025), available at https://www.sciencedirect.com/science/article/pii/S1872206724602792.

[371] Carey HC-WP-Shipper_Rail_Options.xlsx. Traffic revenue for UP sole-served or ineffective competition customers with moves involving CSXT and NS dual-served locations.

[372] *See* Appendix 5 – Specific At-Risk Areas.

[373] *See* Appendix 5 – Specific At-Risk Areas and Subsection VII.C below discussing vertical foreclosure of Gulf Coast chemical customers.

[374] SIT stands for "storage in transit."

[375] *See* Appendix 5 – Specific At-Risk Areas for additional discussion.

CSXT's largest business with UP transcon is also the chemicals sector, with {{ }} out of {{REDACTED }} in revenue in 2023–approximately {{ }} of the UP-CSXT interline moves, and an even higher share of CSXT's contribution margin on UP-CSXT traffic moves.[376]

B. UP's Substantial Presence in the Gulf Coast.

Today, UP is the dominant rail transportation provider for chemical traffic in the Gulf Coast, touting the "best Gulf Coast network in the industry"[377] and the "premier SIT network" with twice the amount of SIT capacity as the next largest railroad. SIT capacity is an important need for the chemical industry, which has limited on-site storage for customers receiving chemical shipments. For a group of chemical products that largely originate in the Gulf Coast region, UP originates {{ }} of traffic moves involving Eastern U.S. customers.[378] UP has substantial advantages over its primary competitor in the Gulf Coast, BNSF,[379] including direct rail routes to the Eastern U.S. on its own network, plus substantial SIT yard and customer access infrastructure.[380] In contrast, BNSF is unable to effectively compete in the Gulf Coast region due to its lack of facilities and the inadequacy of the UPSP trackage conditions. As a result of UP's advantages and BNSF's disadvantages in the region, BNSF could not replace UP as an independent rail partner for CSXT for transcon Gulf Coast service.[381]

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[376] Carey HC-WP-Transcon_Traffic.xlsx.

[377] UP, "Chemicals & Plastics," obtained on November 6, 2026, available at https://www.up.com/shipping/chemicals.

[378] *See* Appendix 5 – Specific At-Risk Areas.

[379] CPKC and CN have modest access to customers.

[380] UP invested $3.1 billion in the past 10 years in the Gulf Coast chemicals sector, leading to 28% growth from 2015-2025. UP, "Investor Pitchbook," November 2026, at p. 37, available at https://investor.unionpacific.com/static-files/b5a6e0dc-550e-4305-90b2-fc930350533d.

[381] Appendix 5 – Specific At-Risk Areas. The ATK VS discusses certain Gulf Coast assets.

C. UPNS could use its market power over lanes in the Gulf Coast to exacerbate current competitive dynamics in the region and cause competitive harm.

Competitive dynamics in the Gulf Coast

UPNS's stronghold in the Gulf Coast post-transaction would not be effectively captured by Dr. Bailey's flawed 50/10 analysis and CLA. Dr. Bailey's 50/10 analysis and CLA rely on BEA-level geographic areas and provide an incomplete competitive assessment of the transaction because they assume every individual BEA readily serves as an alternative supply source for shippers responding to any attempt by UPNS to raise prices above competitive levels. Dr. Bailey did not evaluate broader regions, such as the Gulf Coast area around Houston, where a collection of BEAs face the same ineffective competition today, nor did she evaluate the competitive impact of the UPNS transaction on this key area.

My analysis combines the Gulf Coast regional BEAs and evaluates chemical products for the potential lessening of destination competition from a combination of UP and NS.[382] For the Gulf Coast chemical analysis, I focused on destination competition rather than source competition, because the supply of chemical feedstocks located in the Gulf Coast is shipped predominately to Eastern destinations. By contrast, due to local production of these chemical products, the Gulf Coast is not a large importer of chemical products from other geographies. Therefore, geographic competition concerns are more relevant for destination competition than for source competition.

[382] I otherwise apply the similar assumptions discussed above for my BEA-level analysis discussed above – 2022-2024 period, carload shares, include all commodities, and exclude within-BEA movements. I use a one-year study period (2023) for my Gulf Coast-specific analysis. As I discuss in Appendix 3 – Horizontal Harm, the exclusion of within-BEA movements allows for volumes to be appropriately attributed to the long-haul carrier and eliminates double-counts of moves to distribution centers for exports.

As shown below at Figure 31, traffic corridors for chemical products representing {{REDACTED }}[383] in revenue fail my modified 50/10[384] analysis for Gulf Coast destination competition for chemical products. Thus, Post-Transaction, the Gulf Coast region would experience reduced geographic competition for chemical products and would be at risk of harm from UPNS exercising pricing power because UP substantially controls the supply chain and transportation alternatives with a share of over 50%. These results are masked by Dr. Bailey's assumption that all BEAs are substitutable, rendering her analysis incomplete and unreliable for identifying competitive concerns. See Figure 31 below, which shows the carloads and revenue associated with 50/10 failures in the Gulf Coast region.

Figure 31: Summary of UPNS Destination Competition for Gulf Coast (2023)[385] {{

REDACTED

}}

UPNS could use its market power to raise rivals' costs, impose additional costs, raise linehaul rates, undermine interline service, engage in short hauling, and engage in bundling.

Post-Transaction, UP's dominant position in the Gulf Coast would be enhanced by the acquisition of NS, which has significant chemical traffic in the East. UPNS could use its market

[383] Carey HC-WP-Source_&_Destination_Competition.xlsx.

[384] My reported failed Gulf Coast chemical commodities include products that fail the 50/5-9 test, which I describe in more detail in Section V and Appendix 3 – Horizontal Harm. *See* Appendix 5 – Specific At-Risk Areas for results of my Gulf Coast CLA analysis.

[385] Carey HC-WP-Source_&_Destination_Competition.xlsx. *See* Appendix 5 – Specific At-Risk Areas.

power to engage in one or more of the following foreclosure methods against dual-served Eastern chemical customers whose traffic involves sole-served UP origins in the Gulf Coast area (or locations facing ineffective competition).

UPNS could raise rivals' costs and degrade ancillary gateway services necessary for successful UP-CSXT interline service in order to advantage UPNS single-line service, as Gulf Coast traffic substantially uses the St. Louis and New Orleans gateways for interchange.[386] For example, post-Transaction, UPNS could use its control of TRRA and ALS[387] to increase rates, and/or impede or degrade service for rivals' use of (1) TRRA switching railroad facilities,[388] (2) Merchant's Bridge in St. Louis (which is necessary for interline traffic with the West), (3) St. Louis-area yards used for switching and interchange operations, and (4) New Orleans area yards, such as the Avondale, Gouldsboro, and Livonia yards,[389] and its dispatching control in New Orleans.[390]

UPNS could also increase storage and demurrage-related charges for railcars held at UP-controlled SITs in the Gulf Coast,[391] and raise rates to move rail carloads to SIT yards (moves

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[386] For example, the BNSF route between Kansas City and East St. Louis must traverse a segment governed by NS "rules" and "time table" see my accompanying VS's in CSXT's Responsive Application. For other examples, see also and Section VII and Ex. 12A, V.S. Kenney.

[387] *See* Appendix 5 – Specific At-Risk Areas. UP owns the Alton and Southern Railway ("ALS") and its gateway yard. Alton and Southern, "A&S History," obtained on November 7, 2026, available at https://www.altonsouthern.com/about/.

[388] *See* Appendix 5 – Specific At-Risk Areas. Post-Transaction, UPNS would own 42.8% of TRRA (3/7). *See* NS_99143956.txt, {{REDACTED

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[389] "Avondale, New Orleans … Gouldsboro, New Orleans … Livonia." La. Department of Transportation & Development, Louisiana State Rail Plan 39, tbl. 2-21 (prepared by University of New Orleans Transportation Institute, Aug. 25, 2020), https://dotd.la.gov/media/o1ymdwoy/2020-louisiana-rail-plan.pdf (accessed Nov. 11, 2026). Avondale and Gouldsboro are listed as New Orleans yards.

[390] "Norfolk Southern dispatches the New Orleans Terminal Back Belt Line, and Union Pacific dispatches the Mississippi River crossing at the Huey P. Long Bridge." County Line Railroad Interests, LLC, CLR Announces Intention to Form the New Orleans Terminal Railroad to Create a Neutral Rail Gateway in New Orleans (Sept. 4, 2026), https://www.clrail.com/post/clr-announces-intention-to-form-the-new-orleans-terminal-railroadto-create-a-neutral-rail-gateway-in (accessed Nov. 11, 2026).

[391] Rail demurrage fees may run $75-$300+ per car per day and an extra day delay plus higher charges could lead to an increase cost of $700 plus, greatly increasing the total cost of the eastern portion of the interline move. As an example, 50 railcars per month who averages just one extra day of demurrage per car would total $3,750 to $15,000 in monthly charges. Steel Wheel Logistics, "Rail Demurrage Fees in 2026: $75-$300/Day + Free Calculator," March 17, 2026, available at https://steelwheellogistics.com/blog/rail-demurrage-fees-guide.

that often originate from facilities in the Gulf Coast and are typically reported as separate waybill movements, i.e., separate from the Gulf Coast to Eastern U.S. traffic move).[392] UPNS could bundle these moves with other transcon moves from the SIT yard to the Eastern location, imposing additional costs on those moves.

In order to block rivals, UPNS could raise reciprocal switch fees for the independent railroad option (e.g., BNSF in the Gulf Coast) with BNSF in the Gulf Coast, including Houston chemicals moves advantaging the UPNS single-line service. Finally, UPNS could increase fuel surcharge fees (where not addressed by negotiated agreements).[393] All of these impede competitive rail service and raise revenues for UPNS due to its outsized market power and lack of competitive balance which kept rivals in check.[394]

UPNS could also eliminate customer discounts and increase linehaul rates on both the Western (UP) portion of the UP-CSXT interline rate and sole-served customer rates or rates facing ineffective competition for customers with multiple locations. I provide examples of multi-location contracts and customer-level discounts in my appendices.[395] This would allow UPNS to decrease NS's rate on the Eastern portion of the formerly dual-served CSXT interline move with UP. This is especially a risk for chemical products originating in the Gulf Coast.

Further, a combined UPNS would have the incentive and ability to degrade service on UP-CSXT interline moves through the gateways—for example, through the timing of maintenance relative to a competitor's time-sensitive commitments, or through train sequencing

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[392] *See* Appendix 3 – Horizontal Harm for examples of SIT locations. *See* Appendix 5 Specific At-Risk Areas for examples of contracts with separately reported SIT moves.

[393] See UP_0077513_HIGHLY_CONFIDENTIAL.xlsx {{REDACTED
}}

[394] Competitive balance where each railroad must rely on other railroads for certain access or interline needs is a natural constraint on behavior due to the reliance on each other. With a combined UPNS, there would be limited need for reliance on the remaining railroads.

[395] *See* Appendix 4 – Other Harm and Appendix 5 – Specific At-Risk Areas.

and dispatching prioritization decisions affecting CSXT's entry into joint territory.[396] The risk of service degradation is greatest at locations where CSXT relies on infrastructure controlled by UP; for example, UP dispatches all train movements over the Long Bridge at the New Orleans gateway.[397]

As described above, UPNS could also short haul CSXT sole or dual-served transcon chemical customers, or offer bundled pricing for multi-location customers, for whom UP-CSXT provides interline service in the East and UP provides single-line service in the West.[398] Taken together, post-Transaction UPNS would have both the ability and the incentive to raise rates and degrade service for shippers that currently benefit from competition between CSXT and NS on interline traffic moves with UP. Pre-Transaction, UP had an incentive to work constructively with CSXT; post-Transaction, it would not.

One of UPNS's unique levers in the Gulf Coast chemicals context stems from chemical-industry contracting practices, in which rail rates often are bid, negotiated, and ultimately set across a combination of customer locations—including both sole-served UP or NS locations and competitively served locations on other rail networks.[399] Figure 32 below shows the current Eastern locations and interchange gateways for existing UP-CSXT chemical customers: the green dots identify CSXT revenue from interline moves with UP by customer location, and the blue dots identify revenue by current interchange location. Most UP-CSXT chemical traffic

[396] Maffett VS at Section III.B.

[397] Maffett VS at Section III.B.

[398] Sole-served customer or customer facing ineffective competition. Often chemical customers have specific rail transportation contracts that include many different traffic moves on a single railroad network as well as joint line moves with other railroads, including different competitive circumstances. These chemical customer agreements also often have a customer level discount that does not specify any specific traffic move. See Appendix 5 – Specific At-Risk Areas.

[399] See, for example, {{REDACTED
}}.

between the Gulf Coast and Eastern U.S. interchanges through the New Orleans and East St. Louis gateways.[400]

Figure 32: CSXT Chemical Customer Locations Participating in Sole-Served UP–Dual-Served CSXT Gulf Coast Interline Moves, 2023[401] {{

REDACTED

}}

The vast majority of UP-CSXT interline chemical traffic involves customers for whom UP also provides sole-served rail service in the Western U.S. and midcontinent. In fact, UP often moves more Western traffic for this group than UP-CSXT interline traffic. This group of UP-CSXT interline customers with sole-served UP – dual-serve CSXT Gulf Coast chemicals traffic currently represents approximately {{REDACTED }} in CSXT revenue. For traffic from

[400] Specifically, traffic moves into the southeastern US region are typically routed through the New Orleans interchange locations and interchanged with NS or CSXT on the interchange location referred to as the back belt. See discussion of UPNS-owned assets at key interchanges in Appendix 5 – Specific at Risk Areas.

[401] Map shows all chemical customers and is not limited to customers where foreclosure is possible. Carey HP-WP Chem_Foreclosure_Analysis.xlsx.

UP sole-served locations or areas with ineffective competition (Gulf Coast), UP has {{ }} in non-transcon revenue moves, of which approximately {{REDACTED }} involves Gulf Coast traffic movements.[402] Examples of chemical UP-CSXT customers include {{ REDACTED }}

Figure 33 below shows the current Western locations of existing UP-CSXT chemical customers; the yellow dots represent UP chemical customer revenues, reported on the same scale as the CSXT revenues in the prior figure.

Figure 33: UP Chemical Customer Locations Participating in Sole-Served UP–Dual-Served CSXT Gulf Coast Interline Moves[403]{{

REDACTED

}}

Further, in addition to the Western interline portion of a transcon move, UP also has Western single-line chemical traffic[404] moves on its system, which have much longer hauls than the UP-CSXT interline chemical traffic moves—approximately {{REDACTED

[402] *See* Appendix 5 – Specific At-Risk Areas.

[403] Map is not limited to customers where foreclosure is possible. Carey HC-WP Chem_Foreclosure_Analysis.

[404] *See* Appendix 5 – Specific At-Risk Areas for UP single-line traffic.

REDACTED }}—enabling UP to spread cost increases over more carloads and more miles.

I analyzed the potential for UPNS to use a few of the numerous available pricing strategies to sufficiently increase customer rates so that CSXT could not discount its Eastern U.S. interline segment enough to profitably win the traffic (e.g., enabling an effectively lower rate on the NS segment for the Eastern U.S. traffic moves for dual-served chemical customers from UP sole-served origins or origins with ineffective competition). Specifically, I evaluated UPNS's increased revenue associated with: (1) modestly higher rates on other UP sole-served rail moves for the same chemical customers;[405] (2) higher rates on the former UP segment of the UP-CSXT interline move;[406] and (3) reduced customer-level discounts[407] to offset a rate decrease on the former NS, ensuring that CSXT could not profitably serve the customer (i.e., a rate no higher than CSXT's long-term variable costs for the move).[408] This analysis disregards the many other levers UPNS could use to increase revenue across the supply chain.

Based on my analysis, UPNS could use its market power to substantially foreclose CSXT from competing by eliminating customer-level discounts and increasing UPNS's average rail rates on its sole-served moves (unrelated to transcon) and the UP segment of the UP-CSXT interline move by only an average of approximately {{ }}, in order to reduce the rate on the NS segment to a level approximating CSXT's long-run variable costs. With that relatively small price increase on its customers' sole-served traffic moves (typically Western U.S.), UPNS could

[405] This includes many chemical and other non-chemical traffic moves.

[406] Maintaining the same contribution margin, including reduced avoided interchange costs accomplished with single line service.

[407] Currently estimated at {{ }}. *See* Appendix 5 – Specific At-Risk Areas for examples of contracts.

[408] I develop variable cost estimates using URCS (Uniform Rail Costing System). URCS calculates estimates of costs the specific moves from origin location to destination location at the station level, factoring in distance, car type, car ownership type, car weight, and number of cars. I use URCS system average variable cost estimates in this calculation. Since these moves traverse a wide array of CSXT network and comprise a large amount of traffic, in aggregate, it reasonably supports the use of a system average cost metric.

divert most of these customers' chemical traffic away from CSXT to UPNS single-line service. The majority of CSXT's {{REDACTED }} in revenue from dual-served interline chemical customers involving UP would thus be at risk of foreclosure by UPNS.[409] This foreclosure is achievable because chemical shippers have many locations across the U.S. and use contracting practices that bundle sales for a customer across all or many of its locations.

VIII. Medium and Long-Term Adverse Effects on Competition in the Rail Industry

A. The UPNS Transaction carries substantial long-term economic implications.

Beyond the impacts already discussed, a UPNS Transaction would cause the following harms to competition and shippers because CSXT is the only alternative to UPNS in the East:

1. Competitive disadvantage and high fixed costs and negative service-related effects for remaining customers;
2. Diminished ability and opportunity for CSXT to invest in network and systems maintenance and improvements; and
3. Reduced collaborative innovation.

Indeed, the total harm to competition from a UPNS Transaction would be substantial and impact significant amounts of traffic absent conditions. For example, {{REDACTED }} in traffic would face reduced geographic competition from just the between-corridor analysis, with CSXT only totaling {{REDACTED }} in the Eastern U.S.[410] {{REDACTED }} in traffic would face reduced within-corridor competition due to reduction in independent rail options for segments where UP and NS overlap.[411] Approximately {{REDACTED }} in Class I traffic revenues face a loss of independent rail options (defined

[409] *See* Appendix 5 – Specific At-Risk Areas.

[410] *See* Appendix 3 – Horizontal Harm. Carey HC-WP-Rate_Impact.xlsx. The contribution margin estimates are calculated based on the total revenues less URCS long-run variable cost for the specific traffic.

[411] *See* Section V and Appendix 3 – Horizontal Harm.

appropriately to entirely exclude UPNS from any portion of the route).[412] {{REDACTED }} of traffic on CSXT's system would be exposed to short hauling and much higher costs, with about {{REDACTED}} in higher movement-specific fixed costs and lost contribution margin.[413] And {{REDACTED }} in dual-served CSXT traffic would be exposed to bundling-related harm, with approximately {{REDACTED }} in CSXT contribution margin for moves within the Eastern U.S.[414]

This section discusses the further impact and harm to competition that would ripple from the aforementioned harms from a UPNS Transaction over the medium- and longer-term.

B. Substantial erosion of CSXT customers from a combined UPNS results in higher fixed costs and negative service-related effects.

It is a fundamental principle of railroad economics that the loss of density on a route will increase the unit cost of service, with fewer cars per train and higher fixed costs spread over fewer carloads. Reduced volume would inevitably reduce CSXT's and other railroads' ability to aggregate traffic, which would in turn reduce the ability to operate efficient, frequent train-load service. Fewer trains over a corridor leave more fixed corridor-specific and network-wide system costs unsupported, impacting all remaining customers that use CSXT's network. The Proposed Transaction would negatively and directly impact CSXT interline routes but would also impact many other routes within the Eastern network, as a result of bundling and other vertical foreclosure strategies, reduction in geographic competition, and the resulting reduction in traffic. Due to the networked nature of the railroad industry, in which operations aggregate

[412] *See* Carey HC-WP-Independent_Routes_Overlap_Analysis.xlsx and Carey HC-WP-Independent_Route_Analysis.xlsx.

[413] *See* Section VI and Carey HC-WP-Rate_Impact.xlsx.

[414] *See* Section VI and Carey HC-WP-Rate_Impact.xlsx. There is also potential bundling of transcon traffic that I have excluded to ensure there is no double count.

various different traffic moves, the Proposed Transaction would significantly impact many other routes as well.

These factors would have a compounding effect over time. As overall network density decreases and movement-specific fixed costs and fixed system-wide costs rise for remaining customers, regional railroads would face pressure to raise rates to recover system-wide network costs, yet higher rates are difficult to sustain for traffic from shippers who are price-sensitive, require high-quality, time-sensitive service, or have viable competitive alternatives.

To provide more specific quantification of the exposure to harm and associated impact from UPNS Transaction-related harms, I start with the CSXT traffic volumes that may face up to a {{ }} reduction[415] that could lead to a {{REDACTED }} traffic volumes resulting in higher movement-specific fixed costs and CSXT's fixed system-wide costs.[416]

Movement-specific fixed costs would increase across CSXT's system due to shorter trains with fewer cars, which immediately increases the per car costs for locomotives expenses, crew wages and smaller block sizes in the aggregation of cars, as well as increased locomotive time and labor at yards needed to sort the cars. I base my CSXT network-wide impact on my short haul analysis that quantified an over {{REDACTED }}[417] in costs per carload[418] for the remaining transcon customers' movement-specific fixed costs. I apply the {{ }} higher movement-specific fixed costs to the total variable costs on a CSXT system-wide basis (CSXT's R1 filing) for all remaining customers post-Transaction {{REDACTED }}. In sum, I

[415] This includes short-haul sole-served traffic moves that are dramatically affected.

[416] Carey HC-WP-Rate_Impact.xlsx. *See also* Appendix 4 – Other Harm for details of the volume reductions.

[417] See Section VI.C and Appendix 4 – Other Harm. The additional movement-specific fixed cost estimates do not account for new rubber tire interchanges instead of steel wheel interchanges which would require additional drayage and terminal costs for all affected carloads.

[418] *See* Appendix 4 – Other Harm.

estimate the higher movement-specific fixed costs at {{REDACTED }},[419] which is a conservative estimate.[420]

Higher movement-specific fixed costs from eroded traffic due to a UPNS Transaction would have a material impact on all remaining customers that use CSXT's network. With the reduced traffic densities and higher fixed costs, it is immediately more challenging to compete as a higher cost provider, and CSXT traffic would likely shift to competitors if CSXT attempted to raise rates as needed to offset the increase in total system costs and higher movement specific costs.

Similarly, fixed system-wide costs would increase because of fewer remaining customers post-Transaction. In fact, I estimate that CSXT's fixed system costs per car would increase by as much as {{ }} per car due to loss of {{ }} traffic volumes.[421] I base this calculation on CSXT's total fixed costs (reported on its R1 filing) and calculate the cost per carload with pre- and post-Transaction estimated volumes.[422] The effect of fewer carloads/units available to spread fixed system costs would directly diminish CSXT's ability to ensure a robust and sustainable network over the long term.

Likewise, compounding negative service-related effects would also be expected. Reduced services such as train frequency or railcar velocity on specific routes with lower traffic density could erode service to the point that the route becomes uneconomic. CSXT would then face the tradeoff of either creating shorter trains with fewer cars and smaller blocks, which would

[419] *See* Carey HC-WP-Rate_Impact.xlsx.

[420] This effect of eroded traffic from the Proposed Transaction would be even more pronounced if a rate increases was applied only to the individual customers on specific rail lines exhibiting the reduced density, including those lines that emanate from the key transcon gateways (Chicago, St. Louis, Memphis and New Orleans) and interconnect into the rest of the CSXT network.

[421] *See* Appendix 4 – Other Harm.

[422] *See* Appendix 4 – Other Harm.

increase its movement-specific fixed costs, or offering a less frequent, lower-quality rail service.[423] Concern would then arise about the viability of the rail service and whether service on some routes could be sustained at all. This could have consequential effects for not just those customers on that lane, but also for those customers who require service across multiple routes rather than a single lane. For example, IM, auto, chemical, and other customers often require multiple routes.[424] With interrelated business across the network, the reduced service quality of operating at a less efficient level risks the erosion of time-sensitive customers, and reduced CSXT rail service on a particular lane could also lead to additional departing customers.

The long-term cost effects flowing from the competitive harm of a combined UPNS would erode the economic efficiency gains that CSXT has achieved for its customers through extensive efforts to scale its business and improve its operational and service performance over the past decades. This same result would play out across the entire railroad industry. Higher movement-specific fixed costs and overall system fixed costs would leave would-be competitors disadvantaged as compared to UPNS, ultimately leaving customers worse off.

C. Diminished ability and opportunity for CSXT to invest in system improvements and customer-specific projects.

Revenue losses would adversely affect CSXT's customer-specific investment

Railroading is among the most capital-intensive industries: Class I railroads invest $25 billion of their own capital annually to maintain and improve their networks—nearly $185,000 per track mile per year—a capital intensity six times that of a typical manufacturer as a share of

[423] There are additional avenues for these effects that have not been analyzed in this report, including improved network size, which allows for reduced shipment circuity, improved empty/load factors, decreased car hire needs, and reduced average number of locomotives per train, among others.

[424] As an example, certain IM customers such as international steamship customers who use U.S. ports, desire service over multiple lanes. *See* MSC 2021 Contract, UP_1032201, May 2021, at UP 1032204 and UP_1032206. *See also* Master Intermodal Transportation Services Agreement, UP_3377119, December 16, 2022, at UP_3377133.

revenue.[425] Each railroad therefore needs massive, ongoing investment. In its Application, UPNS reported substantial investments in recent years.[426]

This ongoing investment supports not only the overall system costs needed to maintain a well-functioning, properly scaled network, but also a railroad's ability to compete for new and expanded customers, since winning customers often requires substantial customer-specific investment in tailored railroad assets. Industrial rail customers today have a strong opportunity to leverage their geographic location and infrastructure to pit competing freight railroads—in the Eastern U.S., two independent options—against each other for their business.

The anticompetitive effects of an UPNS Transaction would reduce CSXT's ability to invest in new customer opportunities in the East. As UPNS diverts traffic away from CSXT, the reduced contribution from that traffic would constrain investment in major system projects, including development projects—such as new customer sites—that attract new and existing customers. Because overhead-related fixed system costs must be covered first, less would remain for the larger investments needed to attract and retain customers, weakening the competitive investment rivalry that benefits Eastern shippers today.[427]

UPNS would hold significant advantages over CSXT for new and expanded customers

A fundamentally changed competitive balance would make it more difficult for CSXT to win new and expanded customers in competition with a combined UP and NS, which would hold at least three significant advantages over CSXT:

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[425] Association of American Railroads, "Who Pays for Freight Rail Infrastructure?" obtained on November 7, 2026, available at https://www.aar.org/issue/freight-rail-investments/.

[426] UP reported over $3.4B in the last five years ($3.4 B/5 = $680 MM /year) on investments to support long term growth. Rocker and Elkins VS at para. 29. NS invested upwards of $9 billion since 2021 ($9 billion /4 = $2.25 billion /year). Rocker and Elkins Amended VS at para. 28.

[427] As an example, CSXT made an investment related to a new coal mine customer at the Appalachian fields for a new mine and the Leer complex which included a large capital investment in dedicated, high-capacity rail loadout spurs served by CSXT https://investors.corenaturalresources.com/2025-06-30-Core-Natural-Resources-Provides-Update-on-Ongoing-Efforts-to-Resume-Longwall-Operations-at-Leer-South.

1. Post-Transaction, UPNS's investment capacity would become unmatched, while the traffic diversions described above would reduce the contribution available to CSXT for investment. Existing and new customers would have to cover all the additional fixed system costs that departing traffic no longer supports.

2. UPNS would have extensive access to Eastern U.S. rail customers, serving at least one location for {{ }} of CSXT's current customers.[428] Because many of these customers are also UP or NS customers today, UPNS would inherit their existing business relationships and have ready access to business development opportunities with them.

Figure 34: UPNS vs NS U.S. Rail Customers, 2023[429]{{
REDACTED

}}

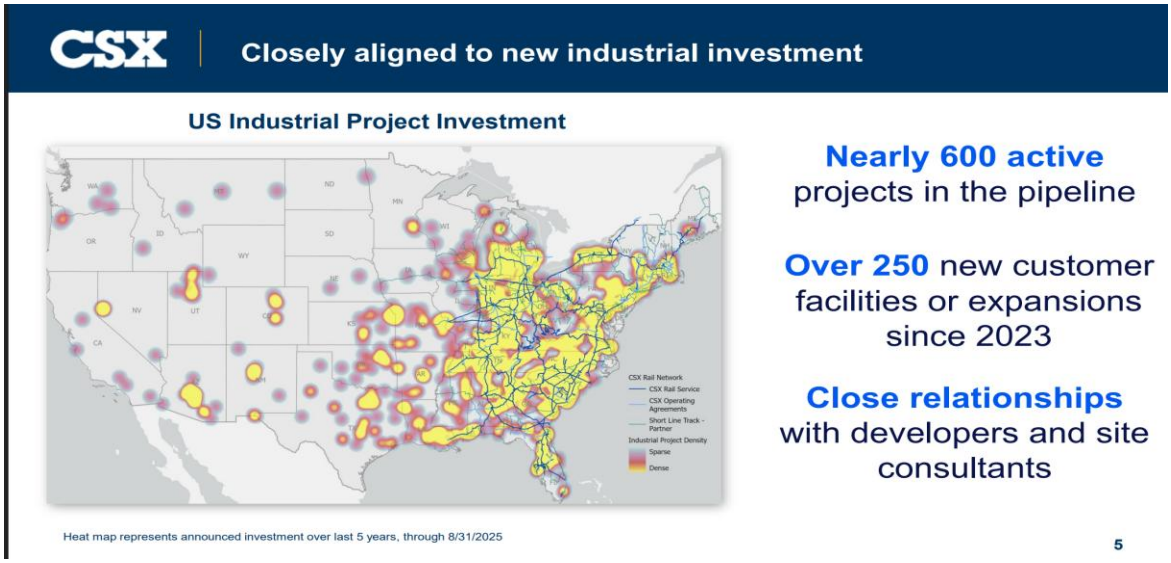
3. UPNS's increased number of sole-served shipper locations—and the increased overall number of rail customers and locations ({{REDACTED }} in traffic revenues for common UPNS customers)—would create opportunities to bundle services on an unprecedented scale. UPNS rail stations would sit in BEAs covering {{REDACTED}} of U.S. Class I freight revenue today, giving it a reach that no U.S. railroad could match under a single-transcon industry structure.[430] That imbalance would further exacerbate the risk of traffic loss for CSXT and other Eastern railroads.

Figure 35 below depicts recent U.S. industrial project investments that are targets for rail service and it indicates that CSXT has 600 active projects in its pipeline that require substantial Eastern U.S. investments, as well as many up and down the midcontinent region.[431] Post-Transaction, UPNS would have substantially expanded common customers in Eastern locations and far deeper pockets (as compared to NS pre-Transaction)[432] to leverage for new and expanded

[428] *See* Carey HC-WP-Customer_Counts.xlsx. This reports the percentage of unique customers that was identified through consolidating all Class I customer names.
[429] *See* Carey HC-WP-Customer_Counts.xlsx.
[430] See Section III.
[431] "CSX added 85 new or expanded rail-served facilities in 2025, with approximately 600 customer related development projects in various stages of engagement across our network. We also expanded our competitive reach through new intermodal and interchange agreements with partner railroads, giving customers broader access to destinations across North America." CSXT 2025 Annual Report, at page 3, available at https://s2.q4cdn.com/859568992/files/doc_financials/2025/ar/2025-csx-annual-report.pdf.
[432] Instead of two equally sized railroads in the East, UPNS is {{ }} the size of CSXT.

rail service and industrial development. Further, UPNS would have diminished incentive to collaborate with CSXT on behalf of Eastern U.S. customers who need investment on both legs of their traffic moves.[433,434] For example, analysts predict that the joint investment of CSXT and UP in intermodal UMAX containers could degrade due to the merger.[435]

Figure 35: New CSXT and U.S. Industrial Project Investment, as of 8/31/2025[436]



Post-Transaction, CSXT would face a structural disadvantage in competing for projects that require investment in both the West and the East. UPNS would have business development personnel in the Western and Eastern regions helping to meet customer needs. CSXT, by contrast, would be limited in its investments and would have limited ability to offer viable solutions because UPNS would have little incentive to provide a Western investment solution

[433] Regarding customer specific investments, UP has touted involvement with approximately 400 industrial development projects and more than 600 project leads during mid 2024-2025. *See* Rail Market News, "Union Pacific begins rail service for Roehm's petrochemical facility in Texas," November 7, 2025, available at https://railmarket.com/news/freight-rail/36116-union-pacific-begins-rail-service-for-roehm-s-petrochemical-facility-in-texas.

[434] UP also has a large group of economic and industrial development experts (10 regional leads) to support rail project management. *See* UP, "Economic & Industrial Development Contacts," obtained on November 7, 2026, available at https://www.up.com/customers/ind-dev/contacts/.

[435] *See* Freightwaves, "UP-NS merger puts intermodal giants on the wrong side of the map", available at https://www.freightwaves.com/news/up-ns-merger-puts-intermodal-giants-on-the-wrong-side-of-the-map.

[436] CSX, "JP Morgan US All Stars Conference, September 17, 2025, at p.5, available at https://s2.q4cdn.com/859568992/files/doc_events/2025/Sep/17/CSX-JPM-All-Stars-Conference-Presentation-09-17-2025-FINAL.pdf.

that CSXT could combine with its Eastern one. Where UPNS competes with its own single-line service against a CSXT interline option that depends on UPNS for the Western leg, shippers would effectively lose an independent competitive alternative for these projects.

D. Reduced collaborative innovation.

The historical competitive balance the railroad network created a strong incentive for collaboration on industry developments that benefit all railroads and that no single railroad could achieve alone. These innovations take multiple forms, including collaborations in physical assets including cars and networks, collaboration in data standards and information services, and even innovation collaboration for frontier technologies.

Rail carpooling with TTX[437] is perhaps the clearest example of productive freight rail collaboration. Through TTX, railroads share the ownership of freight cars[438] such that car supply can easily respond to market dynamics rather than deal with returning empty cars or with fees for hosting foreign cars on a rail network. TTX maintains nearly 175,000 rail cars and spends about $800 million per year on maintenance.[439]

Jointly owned terminal railroads are another longstanding form of collaboration. While the exact structure of these collaborations differs from the BRC to the TRRA, the Kansas City Terminal Railway, the Houston Port Terminal Railroad, and the NOPB, there is a longstanding history of joint ownership and operation of midcontinent belt and terminal railroads. Applicants themselves have acknowledged that the Transaction would require remedies for some of these joint entities. These arrangements depend on aligned incentives among their owners, and a

[437] I discuss TTX and other joint rail ventures in Subsection II.D.

[438] Mostly flat cars and IM contain wells, but also boxcars and gondolas. *See* TTX, "Equipment," obtained on November 7, 2026, available at https://www.ttx.com/about/equipment/.

[439] *See* TTX, "Heavy Duty Equipment Guide," 2024, at p. 3, available at https://www.ttx.com/wp-content/uploads/2024/06/heavy-duty-book-2024.pdf.

combined UPNS would have materially different incentives than the independent railroads that formed them. An inexhaustive list of jointly owned terminal railroads involving UP or NS includes: Conrail Shared Assets Areas,[440] Longview Switching Company,[441] Central California Traction Company,[442] Alameda Belt Line,[443] Wichita Terminal Association,[444] and many others.

Some of the most important collaborations between railroads do not involve physical assets at all. PTC-220 LLC is a spectrum consortium created to facilitate Positive Train Control (PTC) and it is owned by each of the Class-1 railroads.[445] PTC-220 was created so that the Class I freight railroads could acquire and use interoperable spectrum for interoperable PTC, which is a necessary component for communication and safety while handling complex PTC schedules.

These examples show how railroads can share physical assets, network assets, and even airwaves. Each collaboration depends on the same condition: a shared system that works only as long as its participants keep agreeing to it. Post-Transaction, UPNS would be less likely to pursue such collaborative efforts, because it would have greater ability to achieve these goals on its own due to its unmatched scale and other advantages compared to its rivals. This outcome would harm the broader railroad industry's need for innovation and advancement, particularly as major technological developments—such as autonomous vehicles and AI—are now underway.

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[440] Conrail, "About Conrail," obtained on November 7, 2026, available at https://conrail.com/about-conrail/.

[441] Longview Switching Company operates switching on behalf of the Columbia & Cowlitz Railway Company. *See* UP, "Columbia & Cowlitz Railway Company CLC #163," obtained on November 7, 2026, available at https://www.up.com/shipping/short-line/lines/clc.

[442] UP, "Central California Traction Company CCT #112," obtained on November 7, 2026, available at https://www.up.com/shipping/short-line/lines/cct.

[443] Alameda Belt Line, "Who We Are," obtained on November 7, 2026, available at https://ablrail.com/.

[444] Wichita Terminal Association, "What We Do," obtained on November 7, 2026, available at https://wtarr.com/.

[445] PTC 220, "What is PTC 220," obtained on November 7, 2026, at https://www.ptc220.org/.

IX. The Transaction Would Have Profound Implications for the Railroad Industry for Competing Railroads' Ability to Invest in the Network

The Board has an important mandate to consider the future state of the railroad industry and ensure that it thrives. As a result, the Board appropriately set a very high standard for any transaction to ensure that the future structure of the railroad industry is consistent with the public interest standard.[446] The major consolidation rules acknowledge the goals of maintaining "a stable and balanced rail transportation system"[447] and to ensure that "mergers . . . strengthen [and] not undermine the ability of the rail network to advance the nation's economic growth and competitiveness both domestically and internationally."

In its ongoing stewardship of the industry, the Board also has a mandate to measure and evaluate railroads' revenue adequacy.[448] The Staggers Act and subsequent regulatory decisions establish a framework to ensure the collective railroad carriers earn revenues adequate as part of its overall framework to provide a "safe and efficient rail transportation system."[449] This is important because railroads are high fixed costs assets that require continuous investment. The STB must balance this revenue adequacy policy and reliance on competition.[450] The Board's implementation of the Staggers Act succeeded in large part by ensuring rail carriers earned

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[446] "Because there are so few remaining Class I carriers and the railroad industry constitutes a network of competition and complementary components, the Board cannot evaluate the merits of a major transaction in isolation. The Board must also consider the cumulative impacts, and crossover effects likely to occur as rival carriers react to the proposed combination. The Board expects applicants to explain how additional Class I mergers would affect the eventual structure of the industry and the public interest." Decision, STB Ex Parte No. 582 (Sub-No. 1), Major Rail Consolidation Procedures, June 11, 2001, at p 43, available at https://www.stb.gov/wp-content/uploads/BV-5-Sep00-Dec01-539.pdf.

[447] *Ibid* at p. 8.

[448] 49 U.S.C. § 10704(a)(2), obtained on November 6, 2026, available at https://www.law.cornell.edu/uscode/text/49/10704.

[449] The Railroad Transportation Policy ("RTP") at 49 U.S.C. § 10101(3), obtained on November 6, 2026, available at https://www.law.cornell.edu/uscode/text/49/10101.

[450] The STB's revenue adequacy analysis is imperfect, since it relies on accounting profit rather than economic profit— specifically, the STB revenue adequacy determinations use accounting net book values— but it is a useful metric for assessing CSXT's competitiveness post-Transaction.

adequate returns, which let the rail carriers invest with confidence and improve infrastructure for everyone's benefit.

Taken together, the Transaction-related harms would shift substantial contribution margin away from CSXT and other railroads, an effect the Board should weigh in assessing the Transaction's impact on the balance and financial health of the rail industry.

The STB may properly consider a transaction's impact on other railroads' financial health when evaluating that transaction.[451] In the transaction guidelines proceeding, NS itself argued that the rail transaction review process should consider revenue adequacy, stating that it should produce "reasonable rate levels that generate adequate revenues necessary to sustain the system in the long term."[452] When evaluating a transaction, the STB should consider whether opposing railroads would be financially and competitively able to withstand the projected loss of traffic to the consolidated system.[453]

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[451] Decision, STB Ex Parte No. 582 (Sub-No. 1), Major Rail Consolidation Procedures, June 11, 2001, at p 24. Regional railroad networks serve many sole-served customers by CSXT and other railroads. "In a proceeding under this section which involves the merger or control of at least two Class I railroads" the Board shall consider among other factors "whether the proposed transaction would have an adverse effect on competition among rail carriers in the affected region or in the national rail system," 49 U.S. Code § 11324, obtained November 6, 2026, available at https://www.law.cornell.edu/uscode/text/49/11324.

[452] "[S]eek to promote the development and maintenance of a sound rail transportation system capable of providing safe, efficient, and reliable transportation services that satisfy the needs of the shipping public, and reasonable rate levels that generate adequate revenues necessary to sustain the system in the long term." Decision, STB Ex Parte No. 582 (Sub-No. 1), Major Rail Consolidation Procedures, June 11, 2001, at p. 164.

[453] "Potential harm from a proposed consolidation may occur from a reduction in competition, 49 CFR 1180.1(c)(2)(i), or from harm to a competing carrier's ability to provide essential services, 49 CFR 1180.1(c)(2)(ii). In assessing the effects of a rail transaction, we must evaluate whether opposing railroads will be financially and competitively able to withstand the projected loss of traffic to the consolidated system. In assessing the probable impacts and determining whether to impose conditions, however, our concern is the preservation of essential services, not the survival of particular carriers. It is not our duty to ensure preconsolidation levels of traffic or the survival of competitors; we are concerned only with the preservation of the essential services they provide. An essential service, for this purpose, is a service for which there is a sufficient public need, but for which adequate alternative transportation is not available. 49 CFR 1180.1(c)(2)(ii)." Decision No. 44, STB FD No. 32760, Union Pacific Corporation—Control and Merger—Southern Pacific Rail, August 6, 1996, at p. 366, available at https://www.stb.gov/wp-content/uploads/BV-1-Jan96-Dec96-233.pdf.

The Proposed Transaction's impact on Class I railroads' traffic revenue and the contribution margin they earn would be significant.[454, 455]

Conversely, the Proposed Transaction could lead to extraordinary gains for UPNS through the gains it derives from competitive harm, extending UP's ROI in excess of 17% in 2025 to potentially {{REDACTED}} above its {{REDACTED }} in excess operating income above the STB's calculated industry cost of capital.[456] As discussed in Section X, there is no comparable single-line railroad competitor to force UPNS cost savings to be passed along to shippers.[457] These large gains from a combined UPNS are highly distinct from other past transactions, such as CPKC.

The Proposed Transaction also has implications for CSXT and other similarly situated Class I railroads. The potential range of CSXT's lost contribution margin of {{REDACTED }}[458] from the Proposed Transaction exceeds {{REDACTED }}, which represents the amount above the STB calculated industry cost of capital.[459]

Furthermore, since a combined UPNS would result in substantial gains to its operating income on one side of the equation and heightened risk of other railroads no longer being

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[454] Carey HC-WP-Rate_Impact.xlsx. While I do not explicitly calculate all impacts from higher fixed costs, which are much larger, as part of short hauling I estimate lost fixed costs from midcontinent facilities.

[455] Contribution margin calculated using 2023 CCWS URCS costs estimated on a per car-mile basis at the five-digit STCC level. Where five-digit STCC data is unavailable, four-digit or three-digit STCC-level costs are used instead.

[456] Carey HC-WP-Rate_Impact.xlsx. STB's determined composite railroad industry cost of capital was 9.79% as compared to its CSXT calculated cost of capital of 11.40%. UP's cost of capital was 17.09%. Decision, STB EP No. 552 (Sub-No. 30), Railroad Revenue Adequacy—2025 Determination, October 8, 2026, available at https://dcms-external.s3.amazonaws.com/DCMS_External_PROD/1791480529151/53261.pdf.

[457] As such, other railroads' exposure to competitive harms and other diversions result in gains to UPNS.

[458] The exposed traffic to potentially reduced volumes or affected moves (i.e., short haul) would result in lost contribution margin and higher costs. In addition, this loss of contribution margin range could be higher by {{REDACTED }} if additional traffic susceptible to diversion is included, such as of BNSF Dual-CSXT Dual traffic. See Carey HC-WP-Sole_and_Dual_Analysis.xlsx. The economic effect of such losses would raise the railroad's cost of capital. Carey HC-WP-Rate_Impact.xlsx.

[459] The STB's industry cost of capital (WACC) reflects the return required by investors, rather than the returns actually earned by railroads (ROI/ROIC). The merger-related changes in risks, expected cash flows and financing could somewhat change the future benchmark, higher or lower. Analysis assumes no change in fixed operating costs (i.e., impact only from contribution margin).

revenue adequate on the other side of the equation, the railroad industry as a whole is not better off as a result of the Proposed Transaction.

Indeed, the impact could be far greater than estimated, with the many substantial deleterious effects to specific at-risk areas, compounded by the creation of a single-line transcon with no comparable service competitor.[460] The Proposed Transaction would fundamentally alter today's competitive network balance that has provided long-lasting and sustainable competition for decades.

It is my understanding that the Board has broad authority to impose conditions on mergers,[461] although, as explained in CSXT's Comments, no conditions could fully remedy the competitive harms the Proposed Transaction would cause.

X. Public Benefits

UPNS public benefits claims are overstated and flawed, erroneously include private profits, and rely on unreliable truck to rail diversions and claimed shipper benefits that are not transaction specific. UPNS's claimed rail related cost savings benefits, which is the Board's primary focus in evaluating proper public benefits, are extremely low as compared to other past major transactions. Moreover, UPNS provides no evidence or measures to ensure that any portion of those cost savings would be passed on to its customers and, as a single-line provider, it would lack a comparable service competitor to ensure that they would be. The Proposed Transaction is distinct in this way from past transactions such as CPKC and CNIANR, which created pro-competitive benefits through new single-line services to compete against existing

[460] And therefore, approval of the merger is not plausibly in the public interest.
[461] For example, "…open new gateways, to establish new single-line service, to preserve the integrity of an important switching carrier, to preclude diversion of traffic, to compensate partially a railroad for its anticipated traffic losses, to protect railroads even though they will not suffer serious anticompetitive harm, and to aid railroads not likely to be harmed by the transaction…" 51 See 360 I.C.C. 788, 950.

single-line competitor(s)[462], thereby ensuring that cost savings would be passed on to shippers and consumers.

A. Applicants' Claimed Private Benefits from Diversions are Incremental Profits to UPNS and Not Public Benefits

Applicants include $1.8 billion of claimed public benefits that represent private benefits to Applicants (i.e., UPNS) which is simply incremental profits (revenue above the UPNS rail costs).[463] These private benefits arise from claimed net operating revenue possible from their estimate of 1.9 million truck-to-rail and rail-to-rail carloads/IM container diversions that UPNS assumes it would accomplish post Transaction.[464] IM service is the largest category of private profits, accounting for approximately $1 billion as discussed further below.

From an economic perspective, public benefits should not include incremental profits accruing solely to Applicants because the public would not derive a benefit from the company's increased profits. Indeed, the STB expressed similar regulatory guidance in the past, indicating that Applicants' private benefits, comprised of potential incremental profits accruing solely to Applicants from traffic diversions from competitors, are not a public benefit.[465] For example, in the UPSP merger, the STB stated the following.

> "[**m]any merger-related traffic gains just represent neutral revenue transfers from other carriers**: Traffic diversions, as such, are not public benefits; only the service improvements and cost savings associated with traffic diversions can be

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[462] For CP-KC, potential diversions of traffic included long haul routes of 1,000 miles or longer that may include at least 2 single-line carriers on the route. Many routes included Dallas to and from Chicago, as well as Laredo to/from Chicago where UP and BNSF also competed on the routes. Additionally, there was substantial IM and auto traffic traversing Mexico, Texas, and the Upper Midwestern corridor. Verified Statement of Richard W. Brown and Nathan S. Zebrowski, STB FD No. 36500, October 29, 2021, at pp. 16 and 22, Table 7; Appendix B, at pp. 63-68. For CN-IANR, many customers in the IANR territory who previously could use a UP single-line service (via haulage agreement) for traffic moves between the IANR territory and Chicago and other locations now would be able to use CN-IANR. Verified Statement of Julie M. Carey, STB FD No. 36744, Canadian National Railway Company—Control—Iowa Northern Railway Company, May 29, 2024, at pp. 16, 18-20, and 22.

[463] Janke Amended VS at p. 21.

[464] .314mm merchandise, 1.532mm IM, 31,000 bulk, 58,000 automotive. 1.934mm Total gross diversions. Hunt Amended VS at p. 18.

[465] UP/SP Decision, STB FD No. 32760, August 6, 1996, at pp. 375-376 and 379-380, available at https://www.stb.gov/wp-content/uploads/BV-1-Jan96-Dec96-233.pdf.

counted as public benefits."[466] (emphasis added)

In addition, the STB further recognized that these private benefits may or may not reflect any cost savings from reduced overhead costs, reduced rates, or service improvements to shippers associated with the diverted traffic, and which would flow directly to the customer and therefore are not in and of themselves a public benefit.[467]

Many past transactions focused on cost savings to the rail network, including Conrail-CSXT, Conrail-NS and CN-Illinois Central.[468] More recently in the CPKC merger decision touched on this issue and reaffirmed that "**private profits realized by the Transaction are not public interest benefits.**"[469] Instead the Board focused on cost savings and efficiencies and expanded traffic that yielded positive net benefits from a qualitative perspective (as discussed further below).

The STB's regulatory guidance since 1996 clarifies that Applicants' private benefits, incremental profits which accrue solely to Applicants from traffic diversions from competitors,

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[466] UP/SP Decision, STB FD No. 32760, August 6, 1996, at p. 80, available at https://www.stb.gov/wp-content/uploads/BV-1-Jan96-Dec96-233.pdf.

[467] "Cost savings in rail consolidations can come from a variety of sources, including elimination of interchanges, internal reroutes, more efficient movements between the two merging parties, reduced overhead, and elimination of redundant facilities. These benefits, in varying degrees depending on competitive conditions, are passed on to most shippers as reduced rates and/or improved services. When cost reductions from the merger are passed on to shippers, public benefits are extended and shipper benefits are increased. Benefits to the combining carriers that are the result of increased market power, such as the ability to increase rates at the same or reduced service levels, are exclusively private benefits that detract from any public benefits associated with a control transaction." UP/SP Decision, STB FD No. 32760, August 6, 1996, at pp. 363-364, available at https://www.stb.gov/wp-content/uploads/BV-1-Jan96-Dec96-233.pdf.

[468] These decisions reflect a qualitative consideration of network-wide cost savings rather than requiring all claimed benefits accumulate privately to the railroad. UP/SP Decision, STB FD No. 32760, August 6, 1996 at pp. 363-364 and 375-384; Decision, CSX Corporation and CSX Transportation, Inc., Norfolk Southern Corporation and Norfolk Southern Railway Corporation and Norfolk Southern Railway Company – Control and Operating Leases/Agreements – Conrail Inc and Consolidated Rail Corporation, FD No. 33388, Decision No. 89, 3 STB, July 20, 1998 at pp. 333-341, available at https://www.stb.gov/wp-content/uploads/FD-33388-CSX-NS-Conrail-July-20-1998-Decision.pdf; Decision, Canadian National Railway Company, Grand Truck Corporation, and Grand Trunk Western Railroad Inc., – Control – Illinois Central Corporation, Illinois Central Railroad Company, Chicago, Central and Pacific Railroad Company, and Cedar River Railroad Company, FD No. 33556, Decision No. 37, May 21, 1999 at pp. 167-169, available at https://www.stb.gov/wp-content/uploads/FD-33556-CN-IC-May-21-1999-Decision.pdf.

[469] CPKC Decision, STB FD No. 36500, March 15, 2023, at p. 27.

are not a public benefit from an economic perspective.[470] Traffic increases due to a transaction are simply shifting revenue from one industry railroad carrier to another.[471] They may or may not reflect any cost savings from reduced overhead costs, or reduced rates, or service improvements to shippers associated with the diverted traffic, and which would flow directly to the rail customer and therefore are not themselves a public benefit.[472] Accordingly, Applicants' incremental profit estimates from diverted traffic are private benefits to a combined railroad and not public benefits.[473] The regulatory guidance developed in the Major Consolidation Decision regarding "public interest considerations" is a helpful guide.[474]

Accordingly, Applicants' incremental profit estimates from diverted traffic are private benefits to a combined railroad and not public benefits and should be excluded.

B. Unsupported Truck Shipper Savings and Truck-to-Rail Diversions

The Amended Application includes a new claim of benefits to new truck shippers who switch to rail equal to $3.5 billion; UPNS assumes 1.4 M truck-to-rail carload/container diversions would be accomplished post Transaction and assumes shipper savings with lower rail costs versus truck.[475] Specifically, UPNS estimates $3.9 billion in total rail costs (with drayage)[476] as compared to $7.2 billion in costs for existing moves associated with long haul

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[470] UP/SP Decision, FD No. 32760, August 6, 1996, at pp. 375-376 and 379-380, available at https://www.stb.gov/wp-content/uploads/BV-1-Jan96-Dec96-233.pdf.

[471] UP/SP Decision, FD No. 32760, August 6, 1996, at pp. 379-380, available at https://www.stb.gov/wp-content/uploads/BV-1-Jan96-Dec96-233.pdf.

[472] UP/SP Decision, FD No. 32760, August 6, 1996, at p. 380, available at https://www.stb.gov/wp-content/uploads/BV-1-Jan96-Dec96-233.pdf.

[473] The Application "Summary of Benefits" reports "Operating Revenue Benefits" with "Revenue Increase from Traffic Gains" minus "Cost of Handling Additional Traffic" equaling "Net Operating Revenue Benefits (EBITDA)." Application, STB FD No. 36873, Union Pacific Corporation and Union Pacific Railroad Company – Control – Norfolk Southern Corporation and Norfolk Southern Railway Company, September 4, 2026 at App. Vol. 1, p. 120 (Appendix B, p. 1).

[474] Decision, Major Rail Consolidation Procedures, STB Ex Parte No. 582 (Sub-No. 1), June 7, 2001, at pp. 553-559, available at https://www.stb.gov/wp-content/uploads/BV-5-Sep00-Dec01-539.pdf.

[475] Hunt Amended VS at pp. 18 and 95-96.

[476] "3.4 billion in replacement costs for rail linehaul and $0.4 billion for first- and last-mile intermodal drayage trucking." Hunt Amended VS at p. 96.

trucking.[477]

Applicants' scant two-page supporting discussion of its novel presentation before the STB[478] that rail offers dramatically lower costs—almost {{ }} lower than trucking as Transaction related benefit. The large truck diversions and claims of {{REDACTED }} cost savings should be viewed with great skepticism.[479]

Applicants claim $3.5 billion in merger-specific benefits relating to the difference between the cost of truck vs. rail service for their projected traffic diversions, but the only rail-specific cost savings associated with those diversions is less than {{REDACTED }} I estimate would result from the reduction in interchange costs for the new rail service.[480]

Second, past experience has shown that truck to rail diversions have not materialized and are not reliable. In the CN-IANR acquisition, the STB disregarded Applicants claimed truck diversions.[481] In CPKC, the board only qualitatively considered the possibly of truck-to-rail diversions to yield real rail network benefits.[482] CPKC's post transaction experience shows limited truck-to-rail diversions. CPKC identified approximately 29,600 truck-to-rail diversions (less than 1/5 of the 192,000 diversions projected).[483]

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[477] Hunt Amended VS at p. 96.

[478] Hunt Amended VS at p. 95-96.

[479] {{REDACTED }}. Hunt Amended VS at pp. 95-96.

[480] *See* Appendix 6 – Public Benefits

[481] "Applicants also assert that 14,619 truck shipments annually will be diverted to a combined CN-Iowa Northern. However, the significant cost savings and operational changes CN claims will support the projected diversions are not substantiated." Decision No. 3, STB FD No. 36744, Canadian National Railway Company—Control—Iowa Northern Railway Company, January 13, 2025, at p. 12.

[482] "Other, more qualitative public benefits may include 'enhanced opportunities for single-line service preferred by shippers and more vigorous competition that may result from a transaction,' as well as truck-to-rail diversions." Decision No. 35, STB FD No. 36500, Canadian Pacific Railway Limited—Control—Kansas City Southern, March 14, 2023, at p. 19.

[483] *See* Appendix 6 – Public Benefits. The estimates do not account for rail losses to truck. In the STB's accepting of the UPNS Application, "[t]he Board notes that there is a history of prior major mergers that have fallen short of truck-to-rail conversion projections on past applicants' timelines. For example, in the most recent Class I merger, Canadian Pacific – Kansas City Southern, the applicants forecasted converting 64,000 trucks per year from highway to rail. See Canadian Pac. Ry.—Control—Kan. City S., FD 36500 et al., slip op. at 21 (STB served Mar. 15, 2023). Three years after consummation, that goal has not yet been realized. See CPKC's Jan. 2026 Traffic Diversion Submission 6, Canadian Pac. Ry.—Control—Kan. City S. (Gen. Oversight), FD 36500 (Sub-No. 6) (filed Jan. 15, 2026)." Decision, STB FD No. 36873, Union Pacific—Control—Norfolk Southern Corporation, May 26, 2026, available at https://www.railwayage.com/wp-content/uploads/2026/05/53052.pdf.

Additional discussion of concerns with the truck-to rail diversions is provided by Dr. Monaco and included in Appendix 6 – Public Benefits.

C. UPNS Claimed Public Benefits are Substantially from IM Service that is Achievable Absent the Transaction.

As I explain in Section II.D, partnerships are commonplace in the railroad industry and demonstrate that UPNS could achieve many of the claimed benefits through collaborative arrangement, particularly for the IM service, instead of through a Transaction.[484] Dr. Monaco also discusses IM service achievable without the Transaction.

I analyzed the effect of removing IM related service benefits from UPNS's claimed public benefits analysis, accounting for each different category of its benefits showings, including private profits from rail-to-rail diversions, claimed truck-rail shipper cost savings and IM related operational cost reductions. As shown in Figure 36 below excluding IM related claimed public benefits results in approximately {{ }} reduction, approximating {{ }}[485]

[484] "In addition, when evaluating the public interest, the Board will consider whether the benefits claimed by applicants could be realized by means other than the proposed consolidation. The Board believes that other private-sector initiatives, such as joint marketing agreements and interline partnerships, can produce many of the efficiencies of a merger while risking less potential harm to the public." Decision, STB EP No. 582 (Sub-No. 1), Major Rail Consolidation Procedures, June 11, 2001, at pp. 71-72.

[485] *See* Appendix 6 – Public Benefits for details. *See* also Carey HC-WP-UPNS_Public_Benefits.xlsx.

Figure 36: UPNS Claimed Public Benefits Removing IM Related Benefits [486] {{ REDACTED

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D. UPNS's Cost Savings Benefits Are Lower than Other Transactions.

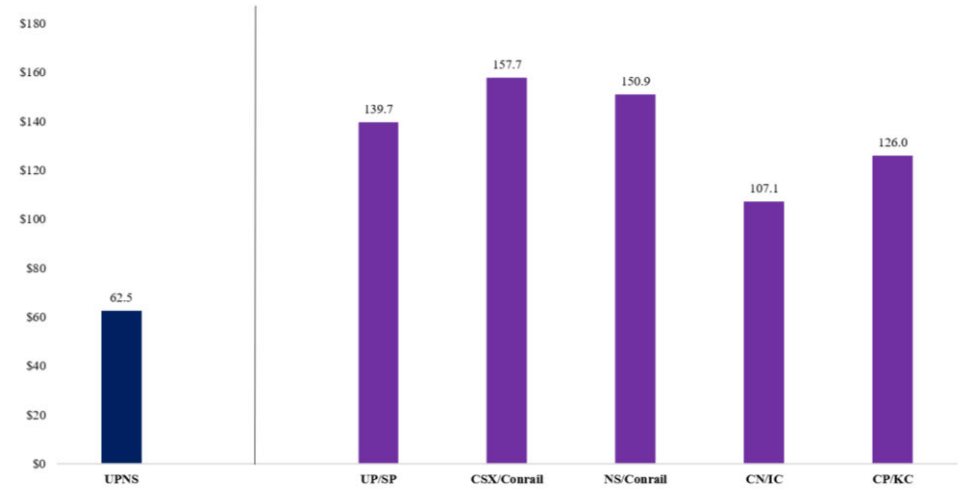
The Board's decisions regarding public benefits have historically focused on rail cost savings benefits. Applicants claim {{REDACTED }} in 2023 dollars of rail cost saving[487] from the transaction which includes all of the operating, personnel, and general and administrative (G&A) savings for the combined network improvements.[488] As demonstrated by Figure 37 below UPNS cost savings on a carload basis presented in its Application are much lower than other past major transactions. Comparing cost savings per carload enables comparison across very different railroad businesses and transactions.

[486] *See* Appendix 6 – Public Benefits.

[487] Janke Amended VS at pp. 20-21.

[488] Janke Amended VS at p. 21. Janke also reports {{REDACTED }} net capital expenditure benefits which Dr. Monaco explains there is no support for this claimed benefit. See Monaco VS at Section III.B.

Figure 37: UPNS Rail Cost Savings per Carload vs Other Transactions[489]



Notes
1. Public benefits does not include incremental net revenue from diverted traffic.
2. Current year values adjusted by RCAF (current year = 2023).
3. UPNS Application; CN IANR Application; CN 2023 Annual Statistics; CN Investor Factbook; CP Annual Report; CSXT 2021 Annual Report; CSXT PAS Application; CN EE Application; UP Form 10-K,1999; CSXT Form 10-K, 1998; NS 1998 10Q form; CPKC STB Form 54; CN Investor Factbook

Dr. Monaco's analysis shows that UPNS's initial cost savings estimates are half the level of the final estimates used in the Application (which is summarized in Figure 37 above).[490]

In sum, the vast majority of UPNS claimed public benefits are not long run durable benefits to the rail network, such as improved service and greater economic efficiency, and/or are otherwise realizable without the proposed consolidation. UPNS provides no evidence or measures to ensure that some portion of those savings would be passed through to shippers in the form of lower rates, improved service, increased output, or other tangible benefits, and, absent a comparable single-line competitor, it would face little competitive pressure to do so. Indeed, Dr. Israel implicitly acknowledged that railroads tend to price just below the next best competitive alternative.[491] There is no economic incentive for UPNS to further lower rates below the amount

[489] Carey HC-WP-Cost_Savings_Per_Carload.xlsx.

[490] See Monaco VS at Section III.B.

[491] Israel Amended VS at p. 16 ("Now consider the post-merger situation. Suppose first that CSX is the lower cost Eastern railroad. It still makes sense for the shipper to work with CSX and pay it a price just below NS's cost—that option is cheaper than the merged carrier shipping the goods itself and bearing NS's cost, which is higher than a price just below NS's cost. Therefore, the merger does not alter the factors that determine price.")

needed to win the business from its competitor who has a higher cost and less efficient interline service than the UPNS single-line offering.

The Board has made clear in other proceedings that applicants who simply assert that a transaction would lower costs have not shown that those savings would be passed on to customers.[492] Consequently, they are not economically appropriate to weigh against anticompetitive effects and other transaction-related harm, especially for the first proposed merger to be considered under the Major Rail Consolidation Rules.[493]

[492] Decision No. 3, STB FD No. 36744, Canadian National Railway Company—Control—Iowa Northern Railway Company, January 13, 2025, at p. 12.

[493] Decision, STB EP No. 582 (Sub-No. 1), Major Rail Consolidation Procedures, June 11, 2001, at pp. 57-58.

VERIFICATION

I, Julie M. Carey, declare under penalty of perjury that I have read the foregoing Verified Statement, that I know the facts asserted therein, and that the same are true as stated. Further, I certify that I am qualified and authorized to submit this Verified Statement.

Executed on November 18, 2026



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Appendix 1 – Carey CV

JULIE M. CAREY
SENIOR MANAGING DIRECTOR

Julie M. Carey is a Senior Managing Director at NERA Economic Consulting. She has substantial experience with energy and transportation sectors, providing expert evidence in commercial and regulatory disputes, as well as international arbitrations. She has more than 25 years of experience addressing economic issues in energy, pipelines and railroad sectors. Ms. Carey is recognized as a leading energy expert (2019-2025) and a leading arbitration expert (2021-2025) by Who's Who Legal.

In addition to her expert consultancy assignments, Ms. Carey is also an adjunct professor at Georgetown University where she teaches a graduate level course in energy economics and policy, which includes instruction on economics of energy products and transportation and regulatory economics.

Ms. Carey routinely provides expert consulting and testifying services in regulatory matters before the U.S. regulators (FERC, STB, etc.) as well as Canadian federal and state/provincial regulatory agencies. Ms. Carey's work also includes commercial disputes before U.S. courts, and within arbitrations including the American Arbitration Association (AAA), as well as international arbitration venues.

Ms. Carey has substantial expertise in economic analyses of energy and transportation markets. She routinely conducts economic analyses of energy and transportation markets to understand historical and forecasted market conditions (supply, demand and prices), as well as to evaluate competition, claims of market manipulation, and other anticompetitive acts. She has conducted these analyses many dozens of times for the purposes of the regulatory approval of mergers and acquisitions, market-based rate authority, market rules, negotiated rates, as well as within investigations and commercial disputes. Her work includes evaluation of the reasonableness of rates and whether market participant bidding, trading and other behavior is discriminatory or otherwise manipulative, and whether prices reflect competitive market prices. Ms. Carey's work includes a variety of other regulatory economic analysis including affiliate relationships, cost of service and forward-looking costs, among others.

Within her commercial dispute work, Ms. Carey has been involved in many claims of breach of contract including oil and gas, pipelines, coal, power, renewable, and railroad transportation. She has also been involved in cases concerning partnership disputes, delayed plant operations, diminished value claims, replacement power, antitrust and manipulation claims, clean air act, and bankruptcy, among others. Ms. Carey has substantial experience with economic damages (historical and future lost profit analyses) and conducts asset valuation analyses. She has assessed and quantified economic damages and valuations in dozens of cases which include breach of contract, antitrust, class action, and other types of disputes.

Ms. Carey also has experience with environmental analysis (e.g., greenhouse gases and other types of emissions) and macroeconomic modeling (i.e., jobs, GDP, taxes) in which she studies the impact of energy infrastructure construction and operations on the economy for regulatory and business decision-making.

EDUCATION

- **Pennsylvania State University**
  Doctoral Studies Program Coursework/M.A., Economics, 1993
- **Allegheny College**
  Bachelor of Science, Economics, 1991

PROFESSIONAL EXPERIENCE

2020-Present	**NERA Economic Consulting** – Senior Managing Director (and Managing Director)
2017-2019	**NERA Economic Consulting** - Director
2016-Present	**Georgetown University (Washington, DC) -** Adjunct Professor
2011-2017	**Navigant Consulting, Inc. (Washington, DC) -** Director
2004-2010	**LECG, Inc. (Washington, DC) -** Principal
2000-2004	**FTI Consulting, Inc. (Washington, DC) -** Director, Manager
1996-2000	**LECG, Inc. (Washington, DC) -** Economist, Senior Associate, Associate
1994-1996	**American Public Power Association (Washington, DC) -** Research Analyst

CERTIFICATIONS, MEMBERSHIPS, AND AWARDS

- Leading Energy Expert by Who's Who Legal (2019-2025)
- Leading Arbitration Expert by Who's Who Legal (2021 and 2025)
- International Association for Energy Economists
- U.S. Association for Energy Economists

SELECTED RAILROAD PROJECT EXPERIENCE

Railroad

- Expert reports, deposition and hearing testimony for economic analysis for a confidential arbitration involving a dispute regarding interchange, switching and transportation agreements between Class 1 railroad and a short line railroad.
- Expert reports before the Surface Transportation Board (STB) and analysis of the impact on competition from the transaction of request for Norfolk Southern to control a short line railroad Norfolk and Portsmouth Belt Railroad and an underlying concern for claimed exclusionary behavior.
- Expert reports in a regulatory proceeding and a commercial court case involving the appropriate economic rate for a trackage-related service.
- Expert report and analysis of horizontal and vertical competitive effects from a railroad acquisition. Economic analysis of traffic, competition and market power evaluation involving acquisition of Iowa Northern Railroad by Canadian National.
- Expert reports and hearing testimony regarding vertical competitive effect analysis of a railroad merger and a joint venture agreement, including analysis of economic terms of the long-term contract, price effect analysis and analysis of railroad costs and profitable pricing strategy as well as public benefits for an STB merger review of the Canadian Pacific and Kansas City Southern Railroad. Assets included US, Canada, and Mexico.
- Economic analysis and expert testimony in an arbitration regarding a reasonable railroad linehaul rate and coal transportation in Western Canada including long term forecasts and valuation related analyses.

- Expert report before the STB addressing economic and regulatory aspects of the appropriate rate to use for trackage rights fees, including numerous valuation methodologies.
- Expert report and expert testimony in an arbitration regarding multiple breach of contract claims for joint-line transportation service, and financial, economic and regulatory considerations regarding the contracts, negotiations and the financial and economic impact and economic damages.
- Expert consultation analyzing economics of containerized freight transportation, including intermodal rail and competition with alternative transportation modes in a transportation contract dispute and claims of anticompetitive behavior for a commercial arbitration.
- Expert report in STB proceeding regarding the potential introduction of indirect competition analyses within market dominance determinations for coal transportation rates to utility generation facilities.
- Expert evidence in numerous STB regulatory proceedings involving rail transportation rate disputes for coal, including evaluation of appropriate regulatory economic approach to assess the reasonableness of a rate, evaluation of transportation agreement pricing and service provisions, long term forecasts of coal deliveries, coal-power plant heat rate and performance, transportation rates (all modes), and revenue attribution methodologies for shared facilities.
- Economic analysis of transportation and coal market and damages in claimed breach of coal sales agreement, including analysis of replacement coal, environmental attributes, and costs.

SELECTED EXPERT AFFIDAVITS AND TESTIMONY

FERC Docket No. ER11-47, Change in Status Market Based Rate Authority for American Electric Power Company, et al. in the Southwestern Power Pool region, Affidavit of Julie M. Carey and Julia Nunez, October 2025.

No. 24-2-309232-3 SEA Superior Court of the State of Washington in and for King County, Amazon Energy LLC, Plaintiff, V. Chestnut Westside, LLC, Westlands Solar Blue, LLC, Castanea Project, LLC, Westlands Solar Blue (OZ) Owner, LLC, CIM GROUP, LLC, And DOES 1–10, Defendants. Expert Report Of Julie M. Carey September 25, 2026.

FERC Docket No. EC26 NextEra Energy, Inc. and Dominion Energy, Inc. Affidavit of Julie M. Carey and Timothy Watts, September 18, 2026.

Klesch Group Holdings Limited, Klesch Refining Denmark A/S, Kalundborg Refinery A/S v. Kingdom of Denmark, ICSID Case No. ARB/23/48, Klesch Group Holdings Limited, Raffinerie Heide GmbH v. The Federal Republic of Germany ICSID Case No. ARB/23/49, Klesch Group Holdings Limited, Klesch Refining Denmark A/S, Kalundborg Refinery A/S, Raffinerie Heide GmbH v. The European Union ICSID Case No. ARB(AF)/23/1, Expert Report of Julie Carey (With Marco Schönborn) July 18, 2025, Rebuttal Expert Report, July 31, 2026.

Cause No. MDL 2022 CI 02879, In re CPS Energy Litigation in The District Court of Bexar County, Texas, 407th Judicial District, Cause No. 2021- CI-05138, In the District Court Of Harris County, Texas, 407th Judicial District CPS Energy, Plaintiff/Counter-Defendant v. Houston Pipeline Company LP and Oasis Pipeline, LP, Defendant/Counter-Plaintiff, Expert Report of Julie M. Carey, November 8, 2023, Deposition Testimony February 1, 2024, Trial Testimony April 14, 2026.

FERC Docket, OR25-7-000, Application Mustang Pipe Line LLC for Market-Based Rate Authority, Supplemental Direct Testimony of Julie M. Carey (and Julia Williams Nunez), February 9, 2026, Direct Testimony, March 11, 2025, Affidavit, June 11, 2025.

In the Matter of a Commercial Arbitration, Confidential Parties, Railroad Transportation, Switching, Interchange and Transportation Agreement dispute; Expert Report of Julie Carey; March 10, 2025, Deposition Testimony, May 8, 2025, Hearing Testimony, November 14, 2025.

Surface Transportation Board (STB), Docket No. FD 36836, Norfolk Southern Railway Acquisition of Control of Norfolk & Portsmouth Belt Railroad Company, Verified Statement of Julie Carey, February

26, 2025, Reply Verified Statement June 20, 2025. Reply Verified Statement September 18, 2025, Deposition Testimony October 21, 2025.

In the Matter of an Arbitration under the Rules of the ADR Institute of Canada, Confidential Parties Confidential parties; Arbitration Act, RSA 2000, c A-43; Carbon Credits Agreement Dispute, Expert Report of Julie Carey and Sugandha Tuladhar; November 30, 2024, Reply Expert Report, June 17, 2025, Hearing Testimony, September 10, 2025.

FERC Docket, OR25-10-000, Application for Colonial Pipeline for Market Based Rates (Baltimore), Direct Testimony of Julie M. Carey, July 31, 2025.

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Klesch Group Holdings Limited, Klesch Refining Denmark A/S, Kalundborg Refinery A/S v. Kingdom of Denmark, ICSID Case No. ARB/23/48, Klesch Group Holdings Limited, Raffinerie Heide GmbH v. The Federal Republic of Germany ICSID Case No. ARB/23/49, Klesch Group Holdings Limited, Klesch Refining Denmark A/S, Kalundborg Refinery A/S, Raffinerie Heide GmbH v. The European Union ICSID Case No. ARB(AF)/23/1, Expert Report of Julie Carey (With Marco Schönborn) July 18, 2025.

U.S. District Court Northern District of Illinois Eastern Division, No. 1:25-cv-2439, Commuter Rail Division of The Regional Transportation Authority v The Union Pacific Railroad Company, Declaration June 17, 2025. Reply Declaration, June 25, 2025.

FERC Docket, OR25-7-000, Application of Mustang Pipe Line LLC for Market-Based Rate Authority, Direct Testimony of Julie M. Carey and Julia Williams Nunez, March 11, 2025, Affidavit, June 11, 2025.

STB, Docket No. FD 36844, Commuter Rail Division of The Regional Transportation Authority d/b/a Metra —terminal trackage rights- and The Union Pacific Railroad Company, Verified Statement of Julie Carey June 3, 2025.

In the Matter of a Commercial Arbitration Confidential Transportation Agreement; Expert Report of Julie Carey; February 26, 2025, Response Report, May 28, 2025.

U.S. District Court for the Eastern District of Michigan, Consumers Energy Company and DTE Electric Company, Plaintiff, v. Toshiba America Energy Systems Corporation and Toshiba Corporation, Expert Report of Julie M. Carey, November 1, 2024, Deposition Testimony January 17, 2025.

FERC Docket No. ER11-47, Change in Status Market Based Rate Authority for American Electric Power Company, et al. in the Southwestern Power Pool region, Affidavit of Julie M. Carey and Julia Nunez, January 2025.

Colorado Air Pollution Control Division's Proposed GHG Emissions Reduction Rule for the Midstream Sector by CDPHE Air Pollution Control Division, Hearing Testimony of Julie Carey and Sugandha Tuladhar, December 19, 2024.

Confidential parties; Arbitration Act, RSA 2000, c A-43; Carbon Credits Agreement Dispute, Expert Report of Julie Carey and Sugandha Tuladhar; November 30, 2024.

U.S. District Court for the Western District of Washington, No. 2:23-cv-00542 Bio Energy (Washington) LLC, a Delaware limited liability company, v. King County, Washington, Expert Report of Julie M. Carey, July 8, 2024, Rebuttal Expert Report August 7, 2024, Deposition Testimony August 23, 2024, Supplemental Rebuttal Expert Report, October 21, 2024.

FERC Docket No. ER11-47, Triennial Update for Market Based Rate Authority for American Electric Power Company, et al. in the Southwestern Power Pool region, Affidavit of Julie M. Carey and Julia Nunez, June 28, 2024.

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In the Matter of Application of TransAlta Corporation (TA), for Recovery of Decommissioning Costs for

Sundance A Units from the Balancing Pool, Alberta Utility Commission, Expert Report of Julie Carey and Kurt Strunk, March 11, 2022, Reply Report April 26, 2024, Hearing Testimony May 11-12, 2024.

In the Matter of an Arbitration under the Rules of the International Centre for Settlement of Investment Disputes, ICSID Case No. Arb/21/54, Kelag-Kärntner Elektrizitäts-Aktiengesellschaft, Ki-Kelag International Gmbh, Windfarm Mv I S.R.L., Kelavent Charlie S.R.L., Kelavent Echo S.R.L. V. Romania, Expert Report of Julie Carey (with Chris Dippon), March 29, 2023, Rebuttal Report of Julie M. Carey, December 6, 2023, Hearing Testimony, March 13-14, 2024.

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In The United States Court Of Appeals For The Fifth Circuit Inhance Technologies LLC (Petitioner) V. Environmental Protection Agency, et al., Respondents, On Appeal from Order of the Environmental Protection Agency, Declaration of Julie M. Carey, December 6, 2023.

In the Matter of Arbitration, under the London Court of International Arbitration ("LCIA") 2020 Arbitration Rules, Confidential Parties, Hearing Testimony of Julie Carey, March 16, 2023, Reply Expert Report, December 15, 2022; Expert Report, April 8, 2022.

Confidential parties; Arbitration Act, RSA 2000, c A-43; Expert Report of Julie Carey and Willis Geffert; June 17, 2022; Hearing testimony October 27, 2022.

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Shady Hills Energy Center, LLC, V. Seminole Electric Cooperative, Inc., Shady Hills Energy Center, LLC, Counter-Defendant, EFS Shady Hills Expansion Holdings, LLC, EFS Shady Hills, LLC, General Electric Credit Corporation Of Tennessee, Inc., GE Capital Us Holdings, Inc., Ge Capital Global Holdings, LLC, Case No. 8:20-CV-00081-WFJ-JSS US District Court Middle District of Florida (Tampa Division. Expert Report of Julie M. Carey, April 1, 2022; Deposition Testimony June 21, 2022.

Equinor Marketing & Trading (US) Inc. v. Mustang Pipe Line LLC. FERC Docket No. OR21-5-001 Prepared Answering Testimony of Julie Carey, May 3, 2022.

Highly Confidential Commercial Arbitration regarding solar power project development agreements, Japan Commercial Arbitration Association Rules, Expert Report of Julie M. Carey, January 12, 2022, Supplemented March 28, 2022.

FERC, Change in Status Filing for Market Based Rate Authority for American Electric Power Company, et al. in the Southwestern Power Pool region, Affidavit of Julie M. Carey (with Al Bremser), March 17, 2022.

Surface Transportation Board ("STB"), FD 36500, Canadian Pacific Railway Limited; Canadian Pacific Railway, Company; Soo Line Railroad Company; Central Maine & Quebec; Railway Us Inc.; Dakota, Minnesota & Eastern Railroad Corporation; And Delaware & Hudson Railway Company, Inc. – Control – Kansas City Southern, The Kansas City Southern Railway Company, Gateway Eastern Railway Company, And The Texas Mexican Railway Company, Verified Statement of Julie M. Carey (with A. Bremser), February 28, 2022.

Texas PUC Docket Numbers 52321and 52322; Application of The Electric Reliability Council of Texas, Inc. For A Debt Obligation Order Under Pura Chapter 39, Subchapter M And N, And Request for A Good Cause Exception, Reply Expert Report of Julie M. Carey, August 12, 2021.

Highly Confidential Commercial Arbitration regarding Railroad Transportation Rate, Expert Report of Julie M. Carey, May 26, 2021, Expert Testimony July 9 and 12, 2021.

FERC Docket No. ER11-47, Triennial Update for Market Based Rate Authority for American Electric Power Company, et al. in the Southwestern Power Pool region, Affidavit of Julie M. Carey and Al Bremser, June 29, 2021.

STB, FD 32760 (Sub-No. 46), BNSF Railway Company – Terminal Trackage Rights – The Kansas City Southern Railway Company and The Union Pacific Railroad Company, Opening Verified Statement (VS) of Julie M. Carey, January 26, 2021; Reply VS on April 12, 2021 and Rebuttal VS on May 11, 2021.

FERC Docket Nos. OR18-7-002, et al. (Consolidated), Epsilon Trading, LLC, Chevron Products Company, and Valero Marketing and Supply Company v. Colonial Pipeline Company, In Market-Based Rate Proceeding, Prepared Answering Testimony of Julie M. Carey to Complainants, January 24, 2020; Prepared Answering Testimony to Trial Staff, April 6, 2020. Trial Testimony - December 3, 4, 7-9, 2020.

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FERC Docket No. OR20-5-000, NGL Supply Wholesale, LLC v. Phillips 66 Pipeline LLC and Phillips 66 Company, Affidavit of Julie M. Carey, January 2, 2020.

In the Matter of Arbitration, under the London Court of International Arbitration ("LCIA") Arbitration Rules, LCIA Case No. 183933, Between Hemlock Semiconductor Pte. Ltd, Claimant and Yingli Green Energy International Trading Limited, Respondent, Expert Report, May 9, 2019.

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Canadian National Energy Board Hearing Order RHW-002-2017, File OF-Tolls-Group2-T309-2017-01 01, TEML Westspur Pipelines Limited, Notice of Complaint pursuant to Part IV of the National Energy Board Act by Crescent Point Resources Partnership, Reply to Sur-Reply Expert Report of Julie M. Carey, November 23, 2018. Reply Expert Report of Julie M. Carey (submitted jointly with other subject matter experts), August 31, 2018.

FERC Docket No. ER11-47, Triennial Update for Market Based Rate Authority for American Electric Power Company, et al. in the Southwestern Power Pool region, Affidavit of Julie M. Carey and Laura Olive, June 27, 2018.

In the Matter of Arbitration Proceeding Concern disputes with respect to a share purchase agreement dated June 26, 2014 Between Pacer Construction Holdings Corporation, Pacer Construction Management Corporation, Pacer Mamisiwin Corporation, Pacer Construction Corporation, Pacer Foundations Corporation, Pacer Projects Corporation, FTI Consulting Canada Inc. (in its capacity as receiver and manager of Pacer Promec Energy Corporation and Pacer Promec Energy Construction Corporation) and Mastec, Inc. and Richard Pelletier holdings Inc., Richard Pelletier, Resman holdings ltd., Don Taylor, 592652 Alberta ltd., and John Simpson; Testimony of Julie M. Carey and Bradley A. Heys, June 18, 2018.

Millennium Bulk Terminals - Longview, LLC, A Delaware Limited Liability Corporation V. Washington Department of Ecology, An Agency of The State of Washington; Superior Court of Washington For Thurston County, Case No. 17-2-06442-34, Declaration of Julie M. Carey, May 9, 2018.

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of Indianapolis d/b/a Chicago, Fort Wayne & Eastern Railroad; the Columbus & Ohio River Railroad Company; First Coast Railroad Inc.; Golden Isles Terminal Railroad, Inc.; Indiana & Ohio Railway Company; Marquette Rail, LLC; Meridian & Bigbee Railroad, LLC; Mid-Michigan Railroad, Inc. d/b/a Michigan Shore Railroad, Inc.; and Riceboro Southern Railway, LLC, Testimony of Julie M. Carey, April 20, 2018.

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Appendix 2 –Current and Future Competitive Balance (Sections II and III)

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1. Traffic Revenue and Volume Summaries

1.1. Transcon Traffic

Many customers rely on transcon service as a robust and substantial offering, which generates approximately {{REDACTED } in rail revenue industry-wide.

Figure 1: Total Revenue and Units for Current Transcon Moves, 2023[1] {{

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Excluding transcon from each railroad's total revenues highlights that such traffic would rival the entirety of the individual railroads' remaining business, with transcon revenue well above NS's remaining business and only below the Western railroads' remaining business.

Figure 2: Transcon Revenue Compared to Class I Railroad Revenue excl. Transcon ($B), 2023[2] {{

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[1] Carey HC-WP_Transcon_Traffic.xlsx.

[2] Carey HC-WP_Transcon_Traffic.xlsx.

Figure 3: Transcon Traffic Revenue By Commodity Type ($B), 2023[3] {{
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Figure 4: Top 5 Customers for Transcon Traffic for Other Commodities (Ranked 5 and Below[4]), 2023[5] {{
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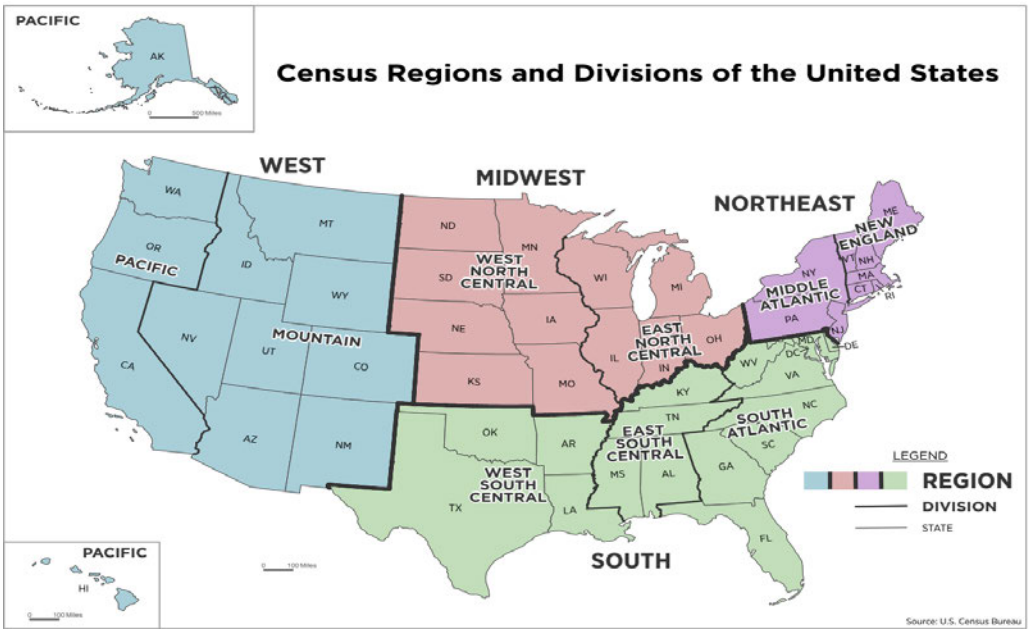
[3] Carey HC-WP_Transcon_Traffic.xlsx.

[4] "Ranked 5 and Below" is in reference to the commodities ranked by revenue size in Figure 3 and Figure 11, above and below, respectively.

[5] Carey HC-WP_Transcon_Traffic.xlsx.

1.2. US Census Map

Figure 5: U.S. Census Map[6]



The following adjustments to the U.S. census map's (Figure 5) regional definitions are as follows[7]:

- In the West Region:
  - States Idaho (ID), Montana (MT) and Wyoming (WY) are separated from the **"Mountain"** region into a "**Mountain North**" region.
- In the Midwest Region:
  - State Wisconsin (WI) is moved from **"East North Central"** to **"West North Central"** region.
- In the South Region:
  - State Kentucky (KY) is moved from **"East South Central"** to **"East North Central"** region.
  - States West Virginia (WV), Virigina (VA), Maryland (MD), Delaware (DE) and the District of Columbia (DC) are separated from **"South Atlantic"** into a **"Middle Atlantic"** region.

1.3. Geographic Visualizations

The following table is the backup data for both **Figure 2: Transcon Traffic Flows between Regions, 2023 Total Revenue** and the flowchart **Figure 4: Transcon Traffic Flows between Regions, 2023 ($ Billions in Total Revenue)** in the report.

[6] U.S. Census Bureau, "Census Regions and Divisions of the United States," obtained on November 3, 2026, available at https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf.

[7] *See* sheet "Census Geographic Regions" in Carey HC-WP-Transcon_Traffic.xlsx.

Figure 6: Summary of Merchandise and IM Traffic for Transcon, By Regional Corridor Both Directions, Top 25 by Revenue, 2023[8] **{{**

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}}

[8] Carey HC-WP-Transcon_Traffic_Pacific_Specific_Side.xlsx.

Figure 7: Top 5 Customers and Top 3 Commodities for Top Regions, Based on Combined Origin and Destination Transcon Revenue, 2023[9]**{{**

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The following table is the backup data for **Figure 5: Transcon Traffic Revenue: West-East vs. East-West, 2023** in the report.

[9] Carey HC-WP-Transcon_Traffic.xlsx.

Figure 8: Summary of Merchandise and IM Traffic for Transcon, By Regional Route One Direction, Top 25 by Revenue, 2023[10] {{

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[10] Carey HC-WP-Transcon_Traffic.xlsx.

Figure 9: Transcon IM and Merchandise Traffic, By Origin and Destination Census Region, 2023[11] {{

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Figure 10: Transcon Merchandise Traffic, By Origin and Destination Census Region, 2023[12]{{

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[11] Carey HC-WP-Transcon_Traffic.xlsx.

[12] Carey HC-WP-Transcon_Traffic.xlsx.

}}

1.4. Key Commodities in Transcon

Figure 11: Transcon Largest Commodities, 2023[13]{{
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Figure 12: Summary of IM Container Traffic, By Origin Census Region, 2023[14]{{
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}}

[13] Carey HC-WP-Transcon_Traffic.xlsx.

[14] Carey HC-WP-Transcon_Traffic.xlsx.

1.5. Large Customers in Transcon

Figure 13: Top 50 Transcon Customers, By Revenue, 2023[15] {{
REDACTED

}}

2. Revenue by BEA

Figure 14: 2023 Class I Revenue by BEA Region[16] {{

REDACTED

[15] Carey HC-WP-Transcon_Traffic.xlsx.

[16] Carey HC-WP-Revenue_by_BEA.xlsx.

}}

Figure 15: UPNS Served Stations and Class I Railroads' 2023 Revenues by 2004 BEA[17] {{ REDACTED

}}

3. Interline Shares Comparison

Figure 16: Unique Route / BEA Pair Combinations, 2023[18] {{ REDACTED

}}

[17] Carey HC-WP-Revenue_by_BEA.xlsx.

[18] Carey HC-WP-2023_Traffic_Summary.xlsx

Figure 17: UPNS as Percent of Total Sole-Served Customer-SPLC Locations[19] {{
REDACTED

}}

Figure 18: Interline Shares in with Dependent vs. Independent Options, 2023[20] {{
REDACTED

}}

Figure 19: Dependent Carloads by Merger Transaction[21] {{

REDACTED

[19] HC-WP-UPNS_%_Sole_Serve_Customer_SPLC.xlsx.

[20] Carey HC-WP-Interline_Shares.xlsx.

[21] Carey HC-WP-Interline_Shares.xlsx.

}}

Figure 20: Share Differential: [22] {{

REDACTED

}}

4. Interchange Competition Analysis

4.1. Data Preparation

2023 Confidential Waybill Sample

My analysis evaluating the impact of an increase in interchange competition on the freight rail rate begins with the 2023 Confidential Waybill Sample (CWS), produced by the Surface Transportation Board (STB). The CWS is a "stratified sample of carload waybills for all U.S. rail traffic submitted by those rail carriers terminating 4,500 or more revenue carloads annually."[23] The CWS is considered a reliable source for data on the rail industry.[24,25] The 2023 CWS is used because 2023 is the base year of analysis in this Transaction.[26] Model specification was considered after a review of existing literature on the effect of competition on the rail rate.[27]

Rebill Adjustments

The STB's CWS reference guide explains the rebilling process and the complications it can create for analysis. In certain instances, movements reported under Rule 11 are received from carriers as separate records even though the records represent segments of a broader through

[22] Carey HC-WP-Interline_Shares.xlsx.

[23] STB, "Carload Waybill Sample," obtained on November 9, 2026, available at https://www.stb.gov/reports-data/waybill/.

[24] U.S. Department of Transportation, "Comprehensive Truck Size and Weight Limits Study – Modal Shift Comparative Analysis Technical Report," February 22, 2017, available at https://ops.fhwa.dot.gov/freight/sw/map21tswstudy/technical_rpts/mscanalysis/app_c_cost_model.htm.

[25] *See* STB, "Carload Waybill Sample Reference Guide," December 23, 2020, available at https://www.stb.gov/wp-content/uploads/2019-STB-Waybill-Reference-Guide.pdf.

[26] *See* Bailey Amended VS.

[27] *See* Babcock, Michael W., "Impacts of Intramodal Competition on 2012 Railroad Rates for Wheat," Kansas State University (2015), available at https://www.k-state.edu/economics/about/staff/websites/babcock/Intramodal_Railroad_Competition_Impacts_on_Railroad_Wheat_Rates%2010-2015.pdf. *See also* Harbor, Anetra L., "An Assessment of the Effect of Competition on Rail Rates for Export Corn, Soybean, and Wheat Shipments," Journal of Food Distribution Research (2009). *See also* MacDonald, James M., "Competition and rail rates for the shipment of corn, soybeans, and wheat," RAND Journal of Economics (1987).

movement. I therefore adjusted the rebilled observations so that the analytical records more closely reflect the underlying end-to-end shipments.

The adjustment process began by dividing the observations into four categories:

(1) Rebill Code = 0: local shipment
(2) Rebill Code = 1: Originated-Delivered
(3) Rebill Code = 2: Received-Delivered
(4) Rebill Code = 3: Received-Terminated

Observations with rebill code 0 required no modification.

I used a PCMiler SPLC-to-junction crosswalk to identify the junction at each end of a rebilled segment. This made it possible to distinguish records rebilled at a junction from those rebilled elsewhere. Records that did not match successfully to the crosswalk were treated as rebilled local movements; where the remainder of the route contained no interchange, the single-line indicator was reassigned to one. Origin and termination access measures were revised at the same time. For the end of a rebilled segment that was not the shipment's true origin or destination, I assigned the average access associated with the same carrier, calculated from non-rebilled movements. A small number of records could not be assigned because the relevant junction or short-line carrier did not appear in the non-rebilled sample; those records were excluded from estimation.

For records rebilled at a junction, I increased the interchange count by one and repositioned the interchange-competition measures according to the rebill code. If a junction-rebilled record had previously been identified as a single-line movement, that indicator was reset to zero. For termination rebills, the competition measures were shifted one position toward the origin; for origin rebills, they were shifted one position toward the destination. Because the ultimate destination of a termination-rebilled record was not observed with certainty, I also calculated average competition by origin Bureau of Economic Analysis (BEA) area and junction using non-rebilled CWS observations. The competition measures described above were then assigned to the applicable junctions as the first-interchange value for termination-rebilled records.

Records with rebill code 2 were excluded because they could not be assigned reliably to an origin or termination grouping. These records represented less than 1% of the observations.

Final Dataset

The estimation was performed on moves containing at least one Class I carrier at either the origin or termination point. This was done to ensure that the estimation data most closely represented the study data.

4.2. Interchange Regression

a. Variables

The CWS was used to generate the following variables:

i. Car Ownership

Car ownership is included as a control to account for costs associated with using rail cars. The CWS identifies three different types of car ownership: Privately owned, Railroad-owned, and Third party-owned.

ii. Number of Interchanges

The number of interchanges was determined at the individual level by counting the number of non-missing values using the Interchange Rule 260 1-6 fields provided by the CWS.

iii. Route Distance

PCMiler Rail was used to determine route distances. 98% of all moves in the CWS returned one route distance and the remaining 2% were assigned the shortest possible route. Distance was included in log form for data smoothing. For the "All Traffic" regression model (described below), the log of distance was included with its squared term to capture the relationship that rates increase at a slower rate as they move away from the average distance of shipment. This variable is included in only the "All Traffic" model since that model contains longer-distance moves. In the "All Traffic" model, both distance variables are demeaned to avoid multicollinearity issues.

iv. Weight

Billed weight of the shipment was included in log form for data smoothing to capture the impact of weight on rates.

v. Revenue Per Car-Mile[28]

Revenue per car-mile calculated at the individual route level based on the following formula:

$$RPC_i = \frac{ETR_i + FS_i}{(EC_i * RD_i)}$$

Where RPC_i is the revenue per car-mile, ETR_i is the Expanded Total Revenue, FS_i is the fuel surcharge revenue, EC_i is the expanded carloads, and RD_i is the route distance.

vi. Five-Digit STCC Code

I include a factor variable to capture commodity price differences at the five-digit STCC level using the first five digits of the commodity code variable in CWS.

vii. Carrier Options at Interchange 1

Interchange competition was constructed in stages. The CWS records were first separated into four groups according to whether a route contained zero, one, two, or three interchanges.

Within this structure, single-line movements (the routes assigned zero interchanges under item (ii)) were assigned a value of zero for competition at the first, second, and third interchange positions.

For routes with one interchange, the measure was developed by grouping observations by the first interchange location and the terminating BEA area, and then counting the distinct carriers serving the termination side of that grouping.

Routes with two or three interchanges required an additional step. Values derived from one-interchange movements were mapped to the final interchange-termination BEA combinations observed on multi-interchange routes so that the measure reflected feasible routing alternatives.

[28] Revenue reported in the CWS total revenue field may be masked. Railroads are permitted to substitute a calculated figure for actual contract revenue because contract terms are commercially sensitive; the reported revenue is derived from the relationship between tariff and contract rates at the three-digit STCC level, and affected records are identified by a flag in the waybill record. *See* 49 C.F.R. § 1244.3; STB, "Carload Waybill Sample Reference Guide," December 23, 2020, available at https://www.stb.gov/wp-content/uploads/2019-STB-Waybill-Reference-Guide.pdf at Note 3. I have not made any adjustments to the CWS revenue; however, the regressions below include two-digit STCC control variables, which absorb systematic commodity-level differences in reported revenue.

For example, a two-interchange route with a final Chicago-to-Atlanta segment received the value calculated from one-interchange routes that interchanged in Chicago and terminated in Atlanta. When a final interchange appeared only among routes with multiple interchanges, its value was calculated using the same grouping and distinct-carrier count applied to one-interchange routes. Separate measures were also developed for the segments between successive interchanges by grouping two- or three-interchange routes on adjacent Rule 260 interchange fields and counting distinct carriers at the downstream interchange. The complete measures for routes with two and three interchanges were then calculated on a record-by-record basis using the formulas below:

Two Interchange Moves:

$$Options\ at\ 1st\ Interchange = max\{Comp_{1,2}, Comp_{1,term}\}$$

$$Options\ at\ 2nd\ Interchange = Comp_{2,term}$$

Three Interchange Moves:

$$Options\ at\ 1st\ Interchange = max\{Comp_{1,2}, Comp_{1,3}, Comp_{1,term}\}$$

$$Options\ at\ 2nd\ Interchange = max\{Comp_{2,3}, Comp_{2,term}\}$$

$$Options\ at\ 3rd\ Interchange = Comp_{3,term}$$

Where $Comp_{i,j}$ is the competition between interchange *i* and point *j*, which can be either another interchange or the termination BEA area.

viii. Origin & Termination Region

To control for any unobserved impacts of network density for different regions of North America, I include factor variables for origin and destination region. *See* **Figure 5** above and associated description for regions.

b. Regression Estimation Methodology

I ran two regressions, one on intermodal data[29], then one on all traffic types with an intermodal control. The general form of these equations is:

$$Rate_i = \alpha + \beta_1\ interchange_1_competition_i + \sum_{k=1}^{n} \gamma_k x_i + \varepsilon_i$$

Where $Rate_i$ is the revenue per car-mile for route i, β_1 is our treatment of interest, and the vector $\sum_{k=1}^{n} \gamma_k x_i$ is a vector of controls depending on the model specification.

I estimate the effect of an additional competitor at a given interchange with respect to the shipment's destination to evaluate the real competitive constraints for a given move. Specifically, interchange competition reflects the number of alternative carriers available at the interchange that could move the traffic toward the shipment's termination geography, rather than simply the total number of carriers physically present at the interchange. The coefficient on interchange competition therefore measures how rates vary with greater destination-relevant carrier choice at the interchange, holding these observed shipment, route, commodity, and geographic characteristics

[29] Intermodal traffic is defined where TOFC/COFC > 1 in the CWS data; i.e. where traffic is reported for containers and trailers.

constant. A negative coefficient indicates that greater availability of alternative carriers capable of serving the destination market is associated with lower revenue per car-mile.[30]

c. Results

Figure 21: Rate Decreases from Additional Competitors at the First Interchange[31]{{
REDACTED

}}

I estimate the effect of an additional competitor at the first interchange using All Traffic model (which includes all commodity and car types) and find that the effect of moving from one to two competitors corresponds to a reduction of {{ }} from the median rate per car-mile of {{ .}}[32] Specifically, the estimated coefficient of {{ }} implies that moving from one to two competitors is associated with an approximately {{ }} reduction in revenue per car-mile.[33]

[30] The specification was designed to include the variables that capture the economics of interchange, including route distance, the number of interchanges, shipment weight, car ownership, commodity group, and origin and destination region. As a result, the shipment, route, and market characteristics that may otherwise produce correlated residuals among observations sharing an interchange or a corridor are captured by the covariates themselves rather than left in the error term. Because these sources of common variation are modeled directly, clustering is not required for reliable inference. I use heteroskedasticity-robust standard errors.

[31] Carey HC-WP-Interchange_Analysis.R.

[32] Carey HC-WP-Interchange_Analysis.R.

[33] {{ REDACTED }}. The coefficient of first interchange competition is expressed in logarithmic form. Accordingly, increasing the number of available carriers at the first interchange from one to two increases log competition by ln(2), or approximately {{ }}.

I then estimate the effect of an additional competitor at the first interchange using intermodal-only traffic and find that an additional competitor corresponds to a reduction of {{ }} from the median rate per car-mile of {{ }}.[34] Specifically, the estimated coefficient of {{ }} implies an approximately {{ }} reduction in revenue per car-mile.[35]

The results from both models indicate that the addition of a second carrier option at the first interchange is associated with lower rail rates, holding the other variables in the model constant.

5. Interline Partnerships

Evidence for vibrant interline rail service comes in part from my analysis of car, train, and locomotive movement data. These data show passthrough and interchange activity at key locations at a higher level of detail than railroad traffic tapes.

Support for the myriad CSX interchange yards in Chicago and East St. Louis comes from Movement Data, in Figures **22** and **23** below, respectively. In particular, East St. Louis features yards that are operated by TRRA.[36]

Figure 22: Illinois Carload Interchanges at CHGO – CSX Car Movement Data (2023)[37]{{
REDACTED

}}

[34] Carey HC-WP-Interchange_Analysis.R.

[35] {{ REDACTED }}

[36] St. Louis Regional Freightway, "Non-Interstate Truck Corridor Study," July 2023, at p. 2-3, available at https://www.thefreightway.com/wp-content/uploads/2023/10/Non-InterstateTruck-Corridor-Study_July_2023.pdf.

[37] Carey HC-WP-Chicago_Yard_Movements.xlsx. Carloads included interchange with UP or BNSF at CHGO R260 and are located in Illinois.

Figure 23: Illinois Carload Interchanges at ESTL – CSX Car Movement Data (2023)[38]{{
REDACTED

}}

Passthrough traffic is shown in CSXT locomotive data. This information can be linked with car movements to identify when foreign power is used at CSX stations, where foreign power is a locomotive owned by an entity other than CSXT moving on CSXT's network. The amount of foreign trains visiting a CSXT station is calculated by the amount of foreign locomotives that appear at a station divided by the average number of locomotives per train at that station. Figures 24 and 25 below show the number of UP, BNSF, or other foreign trains powered by foreign locomotives at CSXT stations in aggregate for 2023 and the number of trains per month at each station. Trains with very high "passthrough" are locomotives at interchange yards, such as those described above. However, certain stations are identified as featuring passthrough power, such as Fairmont, WV, in the body of my report.

Trains that passthrough on CSXT's network between once a day and once a month show support for the vibrancy of interline service and instances where interchange is not needed for economic interline service.

[38] Carey HC-WP-CSX-Movement_Data_East_St._Louis.xlsx. Carloads included interchange with UP or BNSF at CHGO R260 and are located in Illinois.

Figure 24: CSXT Stations with Monthly Passthrough – UP (2023)[39]{{
REDACTED

}

[39] Carey HC-WP-CSX-Movement_Data-Foreign_Train_Passthrough.xlsx.

Figure 25: CSXT Stations with Monthly Passthrough – BNSF (2023)[40]{{
REDACTED

}}

[40] Carey HC-WP-CSX-Movement_Data-Foreign_Train_Passthrough.xlsx.

Finally, locomotive data is used to support the share of passthrough power used for transcon traffic, see Figures 26 and 27 below:

Figure 26: Foreign Locomotives on CSXT's Network (2023)[41]**{{**

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}}

Figure 27: Foreign Powered Transcon on CSXT's Network – Cars/IM Units (2023)[42]**{{**

REDACTED

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[41] Carey HC-WP-CSX-Movement-Data-Locomotive_Movements.xlsx.

[42] Carey HC-WP-CSX-Movement-Data-Locomotive_Movements.xlsx.

Appendix 3 – Horizontal Harm

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1. Overview

This appendix provides further detail, data, and explanations on certain topics covered in the Harm section of my Verified Statement. It is organized as follows:

Section 2 summarizes my corrections to Dr. Bailey's within-corridor analysis. I present corrections to her assumptions and identify the scope of the harm created by lessening of horizontal competition. Section 3 describes the flaws in Dr. Bailey's customer analysis. Section 4 presents detailed source and destination competition findings of my corrections to Dr. Bailey's between-corridor analysis. Section 5 covers additional details on flaws in Dr. Bailey's between-corridor assumptions: (1) I provide additional details on Dr. why Dr. Bailey's assumption regarding the substitutability between products at a 4-digit level is fundamentally flawed, and why my correction to a 7-digit STCC level is appropriate; and (2) I show that including within-BEA interchange does not reflect the competitive realities of long-haul rail competition. Section 6 explains why the inclusion of truck competition in Dr. Bailey's between-corridor analysis is flawed, both for inter and intra-BEA moves, as I analyze key lanes featuring traffic subject to horizontal harm and show that trucking is not actually competing with rail for the commodities on these lanes. Finally, Section VII includes a demonstration of Dr. Bailey's critical loss analysis ("CLA") for destination and source competition.

2. Dr. Bailey's Within-Corridor Analysis

2.1. Overview of Dr. Bailey's within-corridor analysis.

Dr. Bailey's within-corridor analysis purports to examine the Proposed Transaction's potential impact on horizontal competition; specifically, the within-corridor analysis is designed to identify reductions in the options available to shippers along specific origin-destination corridors. Dr. Bailey limits her analysis to rail segments in which UP and NS directly overlap and omits from her analysis any consideration of the Transaction's broader within-corridor impact.[1]

Dr. Bailey's analysis first identifies corridors where either UP and NS alone (a 2-to-1 reduction), or UP, NS, and one other carrier (a 3-to-2 reduction) operate the originating segment, terminating segment, or bridge segment of the move.[2] She evaluates "corridors" for reductions in shipper options across all years from 2019-2024 as origin-destination sets (commodity-agnostic), but applies the following by commodity:

1) excludes traffic where non-rail volume accounts for 50% or more of the combined freight tonnage by rail and non-rail for that commodity on that corridor;[3] and
2) excludes IM and motor vehicle traffic.[4]

These exclusions form part of Dr. Bailey's further assessment of whether the identified corridors can be unflagged (i.e., disregarded as posing competitive concern) because she believes some of the traffic is protected from competitive harm by non-rail competitive alternatives, intermodal

[1] Dr. Bailey qualifies that she deviates from precedent in focusing on horizontal overlaps, i.e., overlaps at segments of the route, rather than reductions of options for the whole corridor. *See* Bailey Amended VS at para. 153.
[2] The results of this analysis are presented in Dr. Bailey's Amended VS Exhibit 12 and Bailey Amended VS at Section 4.3.1.
[3] Bailey Amended VS at para. 139.
[4] Bailey Amended VS at Section 4.3.4, para. 140.

alternatives, customer access agreements, or other interline options.[5]

Dr. Bailey analyzed over 1,000 corridors where both UP and NS operate and found zero corridors with a loss of competition from reducing the number of railroads on a segment from 2-to-1.[6] She finds at most 15 corridors, representing {{ }} carloads, where competition may be lost from reducing the number of railroads from 3-to-2.[7]

2.2. Fundamental flaws in Dr. Bailey's within-corridor analysis.

As a preliminary matter, I note that Dr. Bailey's analysis does not address the reduction in independent railroad options that would result post-Transaction. I discuss in Sections IV and V of my VS Dr. Israel's limited and flawed independent rail option analysis. A reduction in independent rail options results in a lessening of horizontal competition. Dr. Bailey's analysis of overlap segments is insufficient to address the substantial reduction in independent rail options resulting from a combined UPNS.

Lack of consideration of differentiation between rail and truck: As discussed in my VS, Dr. Bailey assumes that every truck traversing a transcon route competes with rail in her within-corridor analysis. This assumption fails to address the differentiated customer needs and service quality (including transit time needs).

An analysis at the 4-digit STCC level cannot properly capture the differences in service quality for specific products when evaluating truck competition. Dr. Bailey's within-corridor analysis excludes traffic based on a 50%-or-more non-rail threshold measured at the 4-digit commodity level, presumably because the truck volume data is only available at that level. As discussed in my VS, however, the use of 7-digit STCC codes is necessary for proper competition analysis; for example, certain 7-digit products within a 4-digit grouping could rely entirely on trucks with no rail, or vice versa. Furthermore, trucks do not serve as effective competitors to all transcon moves, and where they might compete, a robust evaluation of service-quality competition for 7-digit products is required—an evaluation Dr. Bailey has not conducted.

Improper exclusion of auto (motor vehicles/parts) and IM traffic: As explained in my VS, Dr. Bailey omits carloads for IM and automotive commodities. Her within-corridor analysis suffers from the same flaws on this point as her analysis for between-corridor that I discuss in my VS (Section IV).

Lack of analysis to support conclusion of no lessening of competition on 4-to-3 corridors: As explained in my VS, Dr. Bailey did not evaluate the potential lessening of competition from 4-to-3 corridor.[8] As an example, there are routes that involve the Kansas City to East St. Louis rail segment with the 2 independent railroad options to UP and NS (BNSF and CPKC) that have longer distance and inefficient circuitous rail routing.[9] Currently, UP acts as a neutral interchange partner with CSXT for joint line moves traversing the KC-ESL corridor and UP and NS have the shortest and most

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[5] Bailey Amended VS at paras. 120 and 135-152. Dr. Bailey unflags various corridors by assuming that shippers and customers can use theoretical routes instead. These theoretical routes are not currently used and are reasonably expected to be disadvantaged, thus they do not ameliorate concerns over reductions in competitive options. *See* Section IV.

[6] Bailey Amended VS at paras. 121 and 132.

[7] Bailey Amended VS at paras. 121 and 133 and Exhibit 12.

[8] "At least two other carriers also operate single-line service on the corridor so Kansas City - St. Louis is not flagged for further review." Bailey Amended VS at para. 128.

[9] In my accompanying VS to the responsive application regarding corridors that rely on the Kansas City – East St. Louis rail segment, I discuss the substantial traffic affected by the UPNS transaction and the inadequacy of the CN remedy.

efficient routes (enabling faster train speeds).[10] Post-Transaction, shippers would lose an independent rail option needed to ensure robust negotiations that would be required for effective competition from a combined UP and NS and the redundancy of the KC-ESL rail segments.

Other issues identified:

- Dr. Bailey includes in her final analysis corridors with at least 365 carloads annually,[11] but calculates this threshold after excluding traffic for IM and automotive commodities, as well as carloads where non-rail volume accounts for 50% or more of the combined volume on the corridor for a given commodity.[12] The result is that some corridors were not presented in her final tables as potential harm when they would be in a rail-only analysis.
- Dr. Bailey analyzes 2019-2024 data,[13] which would include anomalies associated with the pandemic.

2.3. How to correct Dr. Bailey's within-corridor analysis.

I made the following corrections to Dr. Bailey's within-corridor analysis:

(1) Include all traffic types: remove the exclusions of motor vehicles/parts and IM traffic types and analyze all rail traffic;

(2) Include 4-to-3 corridors;

(3) Include corridors based on all carloads: apply Dr. Bailey's 365-carload check to all traffic types, without the exclusions discussed above; and

(4) Limit the analysis to the 2022-2024 period[14]: update to a more recent period to better reflect post-pandemic market dynamics and remove oddities associated with the pandemic.

2.4. Outcome of updated analysis after correcting Dr. Bailey's within-corridor errors.

Correcting Dr. Bailey's flawed within-corridor analysis reveals {{REDACTED }} in revenue and over {{REDACTED}} carloads across 2-to-1, 3-to-2, and 4-to-3 corridors.[15] For 2-to-1 and 3-to-2 corridors, {{REDACTED }} in revenue is from {{ }} competitively impacted routes and over {{REDACTED}} carloads across.[16]

In addition, there is about {{REDACTED }} in traffic revenues with 4-to-3 corridors with UP and NS rail segment overlaps (that were not investigated by Dr. Bailey).[17] Nearly REDACTED }} of the affected corridors include the KC-ESL rail segment. [18]

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[10] I discuss further in my VS accompanying CSXT's Responsive Application involving the KC-ESL line.
[11] Bailey Amended VS at paras. 85 and 103.
[12] Bailey Amended VS at Section 4.4.2, paras. 139-140.
[13] Specifically, she considers routes competitive if "the combined waybill data contains records of shipments with that routing, in either direction, in any year between 2019 and 2024." Bailey Amended VS at para. 127.
[14] Specifically, the 50/10 test must fail in all three years from 2022-2024 to be considered a "fail."
[15] Carey HC-WP-Within_Corridor_Analysis.xlsx.
[16] Carey HC-WP-Within_Corridor_Analysis.xlsx.
[17] Carey HC-WP-Within_Corridor_Analysis.xlsx.
[18] I discuss further in my VS accompanying CSXT's Responsive Application involving the KC-ESL line.

This total reflects railroad reductions across {{ }} 2-to-1 corridors, {{ }} 3-to-2 corridors, and {{ }} 4-to-3 corridors.[19]

In short, shippers on these corridors would face a reduced number of independent rail options that is critically important to ensure effective competition. The Board's historical reliance on independent rail options for effective competition requires true independent rail options on all route segments that would face a lessening of competition from the Proposed Transaction. **Figure 1** below provides a summary of my revised within-corridor analysis.

Figure 1: Revised Dr. Bailey Within-Corridor Analysis, All Rail Traffic Included (2023)[20] {{

REDACTED

}}

[19] Dr. Bailey asserts that revenue in the combined waybill data build is not reliable. Bailey Amended VS at para 101. I have confirmed that the revenue is not significantly different to what is reported by Class I railroads in their 2023 Form R-1s. *See* Carey HC-WP-Interchange_Traffic_Analysis.xlsx.

[20] Carey HC-WP-Within_Corridor_Analysis.xlsx. Analysis period is 2022-2024. Figures presented are for 2023.

3. Customer Analysis

3.1. Overview of Dr. Bailey's customer analysis.

In her Amended VS, Dr. Bailey presents an analysis of access to customers served by both UP and NS to determine whether the Proposed Transaction would create scope for adverse competitive effects.[21] Her analysis evaluates the Proposed Transaction's effect on (1) direct access to customer facilities and (2) geographic areas (BEAs) to identify reductions in the number of railroads accessible to the customer facing a 2-to-1 or 3-to-2 situation. Her Initial VS did not present this customer-level analysis.

Dr. Bailey's access-to-customer-facilities analysis assesses direct access, including reciprocal switching arrangements.[22,23] She concludes that the Proposed Transaction affects only a {{REDACTED}} of customer stations and that, given Applicants' commitments to allow other Class I railroads access, it would leave no facilities affected.[24]

Dr. Bailey's geography-based analysis repeats this facility-based analysis on a BEA level. She concludes that no BEAs go from 3-to-2 or 2-to-1 railroads post-Transaction.[25]

3.2. Errors in Dr. Bailey's customer analysis.

Dr. Bailey's customer-level analysis summarized above also relies on SCRS data to identify affected customers. This data source has data integrity issues that require additional analysis with the traffic tapes and other UP and NS data sources regarding customer locations accessible that is likely contained within UP and NS (including the business development groups for specific product lines, in order to be able to guarantee that no additional customer locations are affected. [26] She did not perform such further work. I have concerns about the reliability of the customer-level analysis.

Dr. Bailey's customer-level analysis does not evaluate the lessening of competition that may arise from the elimination of access from an additional Class 1 railroad to specific customers (instead including short line railroads which have networks with more limited geographic scope). For this reason, an evaluation of the customer impact on 2-to-1s and 3-to-2s associated with Class 1 railroads access should be evaluated.[27]

Furthermore, Dr. Bailey did not consider customers that face 4-to-3 reductions in railroads, which can also be expected to lessen competition in the critical watershed areas where Eastern, Western, and Canadian railroads overlap, including a substantial overlap today by UP and NS.[28] As Figure 2 below identifies, {{ } customers face reduced railroad access options from 4-to-3, and, in

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[21] Bailey Amended VS at Section 4.2.

[22] Dr. Bailey begins with the Serving Carrier Reciprocal Switch (SCRS) data and modifies to remove certain facilities from the list of facilities experiencing a 2-to-1 or 3-to-2 reduction from the Proposed Transaction based on the Novak VS's determination of errors and incomplete information in the SCRS data. *See* Bailey Amended VS at paras. 108-110.

[23] The customer facility-based analysis relies on SCRS data (i.e., does not use any additional information from the companies or traffic tapes) and therefore is not reliable. Bailey Amended VS at para. 108. Results presented in Exhibit 11. By UP's own admission, SCRS data is "not a definitive source of information regarding access rights." Novak Amended VS at para. 53.

[24] Bailey Amended VS at paras. 107-116.

[25] Bailey Amended VS at paras. 117-119.

[26] NS did produce certain information on sole served locations. UP did not.

[27] Carey HC-WP-4-to-3_SCRS_Customers.xlsx. When limited to Class 1 railroads, there are 15 2-to-1s and 26 3-to-2s.

[28] Bailey Deposition at 21:11-30:24.

many instances, lose independent railroad options for traffic moves when they consider options across the U.S.

Figure 2: Stations Facing Class I Reductions in Railroad Options[29] {{ REDACTED

}}

[29] Carey HC-WP-4-to-3_SCRS_Customers.xlsx.

4. Details on Source and Destination Competition Results for Dr. Bailey's Between-Corridor Analysis

4.1. 50/10 failures and share calculations.

The first test for Dr. Bailey's between-corridor analysis is the 50/10 screen. Dr. Bailey's 50/10 screen can fail based on any of the originating, terminating, or participating shares for both origin and destination BEAs.[30]

- The originating share reflects an individual carrier's share of originating carloads for a given BEA-commodity.
- The terminating share reflects an individual carrier's share of terminating carloads for a given BEA-commodity.
- The participating share reflects an individual carrier's share of carloads anywhere along the route that ships to or from the designated BEA-commodity.

The 50/10 failures reflect cases where, for any of these three types of shares, a combined UPNS's share would be over 50% and each individual carrier's share would be at least 10%.[31] For the participating test, there is an additional condition that the change in combined share must be at least 10%. The combined share for the screen is simply the sum of the UP and NS shares.[32] NERA has maintained these assumptions.

4.2. Results of corrections for destination competition – 50/10 analysis and CLA on a BEA-commodity level.

This subsection details the corrected results for Dr. Bailey's 50/10 analysis and CLA on a BEA-commodity level for destination competition. As Figure 3 below shows, when evaluating only individual BEAs:

- Corridors accounting for approximately {{REDACTED }} in revenue fail the corrected 50/10 screen across {{ }} geographic areas;[33] and

[30] Bailey Amended VS at paras. 164-166. *See* also Bailey Amended VS at Appendix G, paras. 3-8.

[31] Bailey Amended VS at Appendix G, paras. 3-10.

[32] Bailey Amended VS at Appendix G, para. 10. The combined share in the test as Dr. Bailey conducts it includes interline volumes from UP and NS in the calculation of the "combined" share. NERA has adopted Bailey's participating share test, which has a threshold for minimum 10% change in individual railroad share to account for double counting in interline traffic. Vellturo mentions that he avoids double-counting interline volumes in the CN-EJ&E Application. *See* Verified Statement of Christopher A. Vellturo, Ph.D., STB FD No. 35087, Canadian National Railway—Control—EJ&E West Company, October 30, 2007, at p. 95. Dr. Majure in the CPKC Application also removes double counting for the 50/10 test. *See* Verified Statement of W. Robert Majure, STB FD No. 36500, Canadian Pacific Railway—Control—Kansas City Southern, October 29, 2021, at p. 54.

[33] Carey HC-WP-Source_&_Destination_Competition.xlsx. {{REDACTE }} of this is STCC 20 (Food), which entails substantial amounts of vertically integrated, user-specific investment that implies those customers not being able to effectively respond to price increases. Carey HC-WP-Source_&_Destination_Competition.xlsx. *See also* Section X – Public Benefits for a discussion of unreliable merchandise diversions.

- In {{ }} of these areas ({{ }}),[34] UPNS would have a participating share of {{ }}, representing {{REDACTED }} in originating revenue, with the substantial majority having shares greater than {{ }}.[35]

The substantial amount of affected traffic and high rail-only shares indicate the potential for a combined UP and NS to exercise market power and lessen destination competition for shippers.

The STB has a strong history of ensuring that independent rail options are available for shippers (as discussed in Sections III, IV, and V of my main VS). The origin and destination areas that exhibit concentration well above 50% and often in the 70% and above range (including substantial 90% shares) pushes the competitive dynamic to one most closely exhibiting effectively no or very limited independent rail options for a shipper.

Figure 3: Destination Competition – 50/10 Fails - Area Count and Revenue by UPNS Rail Only Participating Share (2023), BEA-Commodities Level[36] {{

REDACTED

}}

A subset of the geographic areas that fail the corrected 50/10 analysis also fail the CLA. In a destination competition context, this CLA failure means that, for an origin-commodity pair, routes that do not include UPNS offer either insufficient alternative supply to receivers[37] or insufficient demand for shippers (or both).[38] As Figure 4 below shows:

- Corridors accounting for approximately {{REDACTED }} in revenue fail both the corrected

[34] {{REDACTED }} Carey HC-WP-Source_&_Destination_Competition.xlsx.
[35] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[36] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[37] Dr. Bailey's "CLA2/Supply Available to Receivers" prong of Available Volume. Bailey Amended VS at Appendix G para. 17.
[38] Dr. Bailey's "CLA1/Demand Available to Shippers" prong of Available Volume. Bailey Amended VS at Appendix G para. 16.

50/10 screen and the CLA across {{ }} geographic areas;[39] and

- In {{ }} of these areas, UPNS has a participating share of {{REDACTED}}, representing {{REDACTED }} in originating revenue.[40]

Figure 4: Destination Competition – 50/10 Fails and CLA Fails - Area Count and Revenue by UPNS Rail Only Participating Share (2023), BEA-Commodities Level[41] {{
REDACTED

}}

An example of a failed 50/10 and CLA area is the Casper, WY BEA with the soda ash commodity (STCC 2812322). UP originates { }} of soda ash shipped from Casper, WY, which accounts for nearly all U.S. soda ash production.[42] Consequently, post-Transaction, current soda ash receivers in destination locations would have no alternative geographic supply location that lets them use an independent railroad instead of UPNS to obtain the soda ash they need. Economically, this screen failure means that the geographic area lacks the independent railroad alternative to UPNS that receivers would need if UPNS raised prices above competitive levels.

The substantial majority of these geographic areas ({{ }})[43] and originating revenue ({{ }})[44] show that a combined UPNS would have a very high participating share ranging from {{REDACTED}}.

The remaining 50/10 failures pass the CLA despite very high concentration. Passing the CLA in a destination competition context means that, for an origin-commodity pair, routes not requiring UPNS offer sufficient alternative supply for receivers and/or sufficient alternative demand for

[39] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[40] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[41] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[42] "Wyoming has the world's largest deposit of trona, supplying about 90% of the nation's soda ash." *See* Wyoming Mining Association, "About Wyoming Trona," obtained on November 9, 2026, available at https://wyomingmining.org/trona/.
[43] {{REDACTED }}. Carey HC-WP-Source_&_Destination_Competition.xlsx.
[44] {{REDACTED }}. Carey HC-WP-Source_&_Destination_Competition.xlsx.

shippers. Yet UPNS's extremely high share in these geographic areas heightens competitive concerns from the Proposed Transaction, as discussed in my VS in Section VI. As Figure 5 below shows:

- Corridors accounting for approximately REDACTED }} in revenue fail the corrected 50/10 screen but pass the CLA across {{ }} geographic areas;[45] and
- In {{ }} of these areas, UPNS would have a participating share of {{REDACTED}}, representing {{REDACTED }} in originating revenue.[46]

The substantial majority of the geographic areas ({{ }}) and their revenue show UPNS having a very high participating share of {{REDACTED}}.[47] These high shares raise substantial concern for diminished competition from the Proposed Transaction.

Figure 5: Destination Competition – 50/10 Fails and CLA Passes - Area Count and Revenue by UPNS Rail Only Participating Share (2023) , BEA-Commodities Level [48] {{

REDACTED

}}

4.3. Additional results of the 50/5-9 analysis for destination competition.

The 50/10 analysis assumes that a {{ }} increase in the combined firm's share may raise competitive concern, as a structure with a firm having a {{ }} share or higher can produce increased prices and decreased product quality. However, additional areas beyond the 50/10 screen where a combined firm's share would increase by {{ }}[49] can also raise concern for diminished competition, particularly when one firm already has a significantly high participating share of {{

[45] Carey HC-WP-Source_&_Destination_Competition.xlsx.

[46] Carey HC-WP-Source_&_Destination_Competition.xlsx.

[47] For analysis of shares of {{ }}, presented in all figures, I am relying on a version of the "Combined Participating" share (UP present on the route share plus NS present on the route share) that does not count interline volumes so total UPNS share is less than or equal to 100%.

[48] Carey HC-WP-Source_&_Destination_Competition.xlsx.

[49] While I refer to this as a 50/5-9 analysis, it captures when an individual carrier share is between 5 and 10%. E.g. 9.9%, 9.99%. As in the 50/10 analysis, for the participating screen it is required that at least one of the carriers has between 5 and 10% individual share.

}} before the combination.[50] This approach is consistent with the DOJ/FTC Merger Guidelines, which use the HHI to flag mergers of a smaller firm with a dominant one. For instance, combining a firm with a {{ }} share and another with more than an {{ }} share increases HHI concentration by nearly {{ }} points,[51] which is {{REDACTED }} point threshold the antitrust agencies use to flag possible competitive concerns.[52] Negative competitive effects can arise in concentrated areas when a dominant firm acquires a rival, regardless of the rival's size.[53,54]

As Figure 6 below shows:

- Corridors accounting for approximately {{REDACTED }} in revenue fail the 50/5-9 screen in {{ }} geographic areas;[55] in {{ }} of these areas, UPNS would have a participating share of {{REDACTED}}, representing {{REDACTED }} in originating revenue;[56] and

- Approximately ({{ }})[57] of the geographic areas where UPNS would have a combined share of above {{ }} and one firm would have an individual share of {{ }}[58] are areas where UPNS would substantially control the area with a participating share of {{ }}.

For all these reasons, these high UPNS shares would raise competitive concern in addition to the areas of concern already identified in the 50/10 analysis, whether they pass or fail the CLA.[59]

[50] This is not limited to an {{ }} range. Shares above 50% can be concerning for diminished competition. I flag the {{ }} range because these are exceptionally high shares in highly concentrated areas and comprise a large portion of the area evaluated in this case.
[51] Carey HC-WP-Market_Concentration.xlsx.
[52] U.S. Department of Justice and Federal Trade Commission, "Merger Guidelines," December 18, 2023, at Sections 2.1.
[53] Nancy L. Rose and Carl Shapiro, "What Next for the Horizontal Merger Guidelines?" Antitrust Magazine (2022) at pp. 7-9.
[54] David T. Scheffman and Mary Coleman, "Quantitative Analyses of Potential Competitive Effects from a Merger," U.S. Department of Justice (2003), available at https://www.justice.gov/archives/atr/quantitative-analyses-potential-competitive-effects-merger. Regarding unilateral effects, increased prices can arise when the merger transaction enhances the ability of the dominant firm to raise prices vis a vis reduction in supply available from fringe competitors or less elastic supply from fringe competitors.
[55] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[56] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[57] {{REDACTE }} Carey HC-WP-Source_&_Destination_Competition.xlsx.
[58] While I refer to this as a 50/5-9 analysis, it captures when an individual carrier share is between 5 and 10%. E.g. 9.9%, 9.99%.
[59] The CLA analysis was not performed as a secondary analysis to the 50/5-9.

Figure 6: Destination Competition – 50/5-9 Fails - Area Count and Revenue by UPNS Rail Only Participating Share (2023) , BEA-Commodities Level [60] {{
REDACTED

}}

4.4. Results of corrections for source competition – 50/10 analysis and CLA on a BEA-commodity level.

As Figure 7 below shows, for the source competition BEA-commodity analysis:

- Corridors accounting for approximately {{REDACTED }} in revenue fail the corrected 50/10 screen in {{ }} geographic areas;[61, 62] and
- In {{ }} of these areas ({{ }}), UPNS has a rail-only participating share of {{ }}, representing {{REDACTED }} in terminating revenue.[63]

The vast majority of these areas and their revenue are ones in which UPNS would have a very high share, ranging from {{REDACTED}}, and {{REDACTED }} in most, indicating a substantial concern for diminished competition from the Proposed Transaction.

[60] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[61] Carey HC-WP – Source_&_Destination_Competition.xlsx.
[62] {{REDACTED }} of this is STCC 20 (Food) which entails substantial amounts of vertically-integrated, user-specific investment that implies those customers not being able to effectively respond to price increases. Carey HC-WP-Source_&_Destination_Competition.xlsx. *See also* Section X – Public Benefits for a discussion of unreliable merchandise diversions.
[63] {{REDACTED }} Carey HC-WP-Source_&_Destination_Competition.xlsx.

Figure 7: Source Competition – 50/10 Fails - Area Count and Revenue by UPNS Rail Only Participating Share (2023), BEA-Commodities Level [64] {{

REDACTED

}}

A subset of the areas that fail the corrected 50/10 analysis also fail the CLA. In a source competition context, this CLA failure means that, for a destination-commodity pair, shippers lack sufficient demand available without using UPNS[65] and receivers lack sufficient alternative supply.[66] As Figure 8 below shows:

- Corridors accounting for approximately {{REDACTED }} in revenue fail both the corrected 50/10 screen and the CLA in {{ }} geographic areas;[67] and
- In {{ }} of these areas, UPNS has a participating share of {{REDACTED}}, representing {{REDACTED }} in terminating revenue.[68]

The substantial majority of the areas ({{ }})[69] and their revenue ({{ }})[70] are ones in which UPNS would have a very high participating share ranging from {{REDACTED}}. In such highly concentrated areas substantially controlled by a single firm (UPNS), the concern is that too few rival firms would remain to check an attempt by UPNS to raise prices or lower service quality.

Figure 8: Source Competition – 50/10 Fails and CLA Fails - Area Count and Revenue by UPNS Rail Only Participating Share (2023) , BEA-Commodities Level [71] {{

[64] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[65] Dr. Bailey's "Demand Available to Shippers (CLA 1)" prong of Available Volume. Bailey Amended VS at Appendix G, para. 21.
[66] Dr. Bailey's "Supply Available to Receivers (CLA 2)" prong of Available Volume. Bailey Amended VS at Appendix G, para. 22.
[67] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[68] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[69] {{REDACTED }}. Carey HC-WP-Source_&_Destination_Competition.xlsx.
[70] {{REDACTED }}. Carey HC-WP-Source_&_Destination_Competition.xlsx.
[71] Carey HC-WP-Source_&_Destination_Competition.xlsx.

REDACTED

}}

The remaining 50/10 failures pass the CLA. Passing the CLA in a source competition context means that, for a destination-commodity pair, sufficient available volume exists for shippers to ship the commodity without using UPNS. But again, it is important to note the extremely high UPNS share in these areas. As Figure 9 below shows:

- Corridors accounting for approximately {{REDACTED }} in revenue fail the corrected 50/10 screen and pass the CLA in {{REDACTE}} geographic areas;[72]
- In {{ }} of these areas, UPNS would have a participating share of {{REDACTED}}, representing REDACTED }} in terminating revenue;[73] and
- The substantial majority of the geographic areas ({{ }})[74] and their revenue show UPNS would have a very high participating share ranging from {{REDACTED}}.

Figure 9: Source Competition – 50/10 Fails and CLA Passes - Area Count and Revenue by UPNS Rail Only Participating Share (2023) , BEA-Commodities Level[75] {{

[72] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[73] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[74] {{REDACTED }}. Carey HC-WP-Source_&_Destination_Competition.xlsx.
[75] Carey HC-WP-Source_&_Destination_Competition.xlsx.

REDACTED

}}

4.5. Additional results of the 50/5-9 analysis for source competition.

Finally, as with destination competition, the standard 50/10 analysis does not address areas where UPNS would have a very high participating share of {{REDACTED}} that would {{REDACTED in concentration that also heightens concern for competitive harm from the transaction.

As Figure 10 below shows:

- Corridors accounting for approximately {{REDACTED }} in revenue fail the 50/5-9 screen in {{ }} geographic areas;[76] and

- In {{ }} of these areas, UPNS would have a participating share of {{REDACTED}}, representing {{REDACTED }} in terminating revenue.[77]

Over {{ }}[78] of the areas where UPNS would have a combined share above {{ }} and one firm has an individual share of {{REDACTED}} are areas where UPNS would substantially control the area with a share of {{REDACTED}}, indicating a highly concentrated area.

[76] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[77] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[78] Carey HC-WP-Source_&_Destination_Competition.xlsx.

REDACTED

}}

4.6. Harm to CSXT customers from 50/10 and 50/5-9 commodity-BEA failures.

Separately, to assess the possible harm to CSXT from the loss of geographic competition, I calculated CSXT's revenue from the 50/10 and 50/5-9 failures at locations where CSXT competes head-to-head with NS today (i.e., dual-served locations). They represent CSXT revenue of approximately {{REDACTED}} and contribution of at least {{REDACTED }}.[80] See Section VIII of my VS for more discussion of harm to CSXT caused by diminished geographic competition.

Examples of mid-continent areas with high concentration.

Post-Transaction, a combined UPNS would have extremely high shares for certain commodities. As an example, in St. Louis (see Figure 11 below), UPNS would have very high post-Transaction shares for commodities including: {{REDACTED }}. Post-Transaction in the Chicago area (Figure 12 below), meanwhile, UPNS would have a {{REDACTED }}, and an origin share for steel sheets in coils of {{ }}.

Figure 11: UPNS St. Louis Origin/Destination Rail Shares (2023)[81]{{

[79] Carey HC-WP-Source_&_Destination_Competition.xlsx.
[80] Carey HC-WP-CSXT Traffic Screen Fails.xlsx. {{REDACTED }} in revenue corresponds to the 50/10 failures and {{REDACTED }} corresponds to the 50/5-9 failures. {{REDACTED }} in contribution corresponds to the 50/10 failures and {{REDACTED }} corresponds to the 50/5-9 failures. Contribution is likely understated because certain routes for which CSXT did receive contribution are omitted from the analysis, as PCMiler is unable to assign mileages to those routes.
[81] Carey HC-WP- Source_&_Destination_Competition.xlsx.

REDACTED

}}

Figure 12: UPNS Chicago Origin/Destination Rail Shares (2023)[82] {{
REDACTED

}}

For example, for corridors involving the Fort Wayne, IN BEA for Steel Sheet in Coils (STCC 3312332), UPNS could divert CSXT traffic to UPNS by lowering rates on dual-served lanes (e.g., Fort Wayne - Minneapolis) and increase rates on other lanes where UPNS is the predominant railroad (e.g., Fort Wayne - Pittsburgh).

[82] Carey HC-WP-Source_&_Destination_Competition.xlsx.

Figure 13: Fort Wayne (Origin BEA 66) - Steel Sheet in Coils: Railroad Participating Share of Each Route on Corridors that CSXT Serves (2023)[83] {{

REDACTED

}}

[83] Carey HC-WP- Source_&_Destination_Competition.xlsx.

In addition, Dr. Bailey did not evaluate whether and to what extent an independent railroad competitor would have the ability to reach customer locations (with tracks or reciprocal switch access) in these areas.[84] This would be necessary for both Eastern and Western railroads' interline service to compete with a UPNS single-line service. Instead, Dr. Bailey assumes that within each BEA origin and destination market, independent railroads can serve each customer. However, the examples in Figures 11 and 12 show that where UP and NS in combination would serve origin or destination BEAs, independent railroads would be unable to serve a substantial number of customers.

Lastly, in the body of my Verified Statement, I explain that there are many distinct types of commodities within commodity groups that were not analyzed by Dr. Bailey where UPNS would have sizeable shares. As shown in Figure 14 below, with the broad geographic scope of UPNS, there would be substantial consolidation in traffic across the U.S. for the largest commodities.

Figure 14: UPNS Share of Revenues for Major Commodities vs Share of Next Largest Railroad, 2024[85] {{

REDACTED

}}

5. Additional Details of Corrections to Dr. Bailey's Between-Corridor Analysis

5.1. Mismatch of commodities: Dr. Bailey's use of 4-digit STCCs instead of 7-digit STCCs (continued).

Flawed mixing and matching of commodities lead to inaccurate UPNS share dilution

Details of the 7-digit STCCs for products that Dr. Bailey groups with the 4-digit STCC and related UPNS traffic shares are shown below in Figure 15 and in Figure 16.

[84] Dr. Bailey appears to have only evaluated customer access for her SRCS-identified customers as well as the Columbia, MO BEA. *See* Bailey Amended VS at FN 109.
[85] Carey HC-WP-2024_STCC_Rev_and_Carloads.xlsx.

Figure 15: Chemical Traffic Commodities within STCC 2812 and Geographic Origin Regions, 2023[86] {{

REDACTED

}}

The results demonstrate that on a 4-digit STCCs {{ }} Potassium Chloride dilutes the {{ }} share of Soda Ash and {{ }} share of Caustic Sodium for these products that are moving into or out of the same origin or destination area. A 7-digit share shows the true share of a carrier moving the product.

In addition, Soda Ash shows no alternative supply locations beyond the Western region and UP. Sodium and Sodium Hydroxide have some limited alternative supply locations beyond the Gulf Coast region, but are also highly limited to UP, which indicates that geographic competition is inadequate. Meanwhile, Potassium Chloride has substantial supply originating in Western regions with limited UP role. Therefore, combining Potassium Chloride with the other 2812 STCCs dilutes UP's competitive presence and thereby gives a false impression of the competitiveness for supply locations for these important commodities.

Another example of Dr. Bailey's insufficient analysis of the competitive implications from the Proposed Transaction by using 4-digit STCCs is in metal products. Specifically, STCC 3312 includes distinct commodities, such as iron or steel plates, iron or steel bars, iron or steel pipes or tubes, and structural shapes or piling products. This spans commodities from bolts (3312870) to wires (3312447). The products in this STCC have distinctive supply chains with limited UP locations producing all or almost all units for certain products. Meanwhile, for the STCC 3312, 27 products totaling {{ REDACTED }} are {{REDACTED}} originated by UP in the Gulf Coast and western locations

[86] Carey HC-WP-GC_Chem_Analysis.xlsx.

including Portland, OR, Davenport, IA, Idaho Falls, ID, Omaha, NE, and Reno, NV.[87] For these products there is essentially no supply alternative. Therefore, there are lower UPNS shares on some 7-digit products within this 3312 STCC that dilute the much higher shares UPNS would have for these 27 products.

Figure 16 below shows eight additional examples from products that are inappropriate to evaluate at the 4-digit STCC level, as Dr. Bailey does in her primary geographic competition analysis. The carloads and revenue associated with these 50/10 failures are in columns [b] and [c]. Column [e] describes the total mismatch in aggregating products at a 4-digit level due to the inclusion of several distinct commodities within a 4-digit group, and column [g] describes the unique end uses of each 7-digit product.

[87] *See* Carey HC-WP-Horizontal_Comp.py

Figure 16: Selected Examples of 4-Digit vs 7-Digit Commodity Mismatches in Bailey vs. Carey 50/10 Failures (2023)[88] {{

REDACTED

}}

5.2. IM traffic.

Intermodal traffic (IM) is identified through the type of freight car used as the mode of transportation and therefore is not reflective of any specific commodity being moved. Nonetheless, some IM traffic reports the specific commodity carried by the containers while the majority is reported without specific commodity information as the STCC 4611110 "All Freight Rate Shipments," also referred to as "freight all kinds." This commodity code represents shipments when the commodity is unknown. However, because the types of commodities are known for many IM moves, we can use that data as a guide for the type of commodities that are likely to be included in the IM "freight of all kind" movements.

As shown in Figure 17 below, there are many commodities that fail the 50/10 screen that are identified as IM shipments, including goods like wine, machinery, and dry goods (Not Elsewhere Classified Other Than Cotton). These IM commodities that use IM services do not have substitutable end uses. Since STCC 4611110 traffic is also an IM service (as shown on row 4 below), the products carried may overlap with the types of commodities that report the use of IM service currently that failed the 50/10 screens. This evidence supports the fact that it is inappropriate to assume that any one shipment of this STCC category can be substituted with any other.

[88] Carey HC-WP-4_v_7_Dig_STCC_Mismatch.xlsx.

Figure 17: Top 20 Commodities Reported for Intermodal (IM) Service that Fail the 50/10 Screen (2023)[89]{{

REDACTED

[89] Carey HC-WP-Intermodal_Traffic.xlsx.

}}

5.3. Short-line versus long-haul rail carrier treatment in geographic competition analysis (50/10).

Summary of short-line treatment

There is an issue with how Dr. Bailey treats interline movements in her base horizontal analysis regarding the inclusion of within-BEA rail moves that are typically short-line railroads. This approach understates the real risk of competitive harm resulting from the Proposed Transaction. In her sensitivity analysis, Dr. Bailey removes within-BEA movements from her geographic competition analyses.[90] I consider it more economically appropriate to remove these within-BEA movements from the base analysis and include these adjustments in my correction to her work.

One aspect of Dr. Bailey's sensitivity analysis involves modifying the carriers included within the route when the carrier interchanges the movement within the same BEA from which it has originated or terminated the movement.[91] Specifically, when the short line originates and terminates within the same BEA and is interchanged with a Class I carrier, the route is modified to only reflect the presence of the Class I carrier, dropping the short line's presence from the route.[92,93]

This correction is best understood as an adjustment for the competitive role of the Class I long-haul carrier in the move. Without this adjustment, the short-line carrier is attributed as the originating or terminating carrier in the move, and the Class 1 carrier who provided the long-haul portion of the move is not considered. This consideration is relevant for the current competitive analysis due to the substantial long-haul interline nature of many movements relevant to the Proposed Transaction.[94] Failing to account for the long-haul carrier inaccurately presents relevant competition as between the long-haul carrier and the short-line carrier.[95]

Further, to the extent that the short-line carrier is capable of interchange with multiple partners, the adjustment will preserve this competition in the modified routes, as the volumes will be distributed to the long-haul carriers with which the short-line carriers are interchanging. In other words, if the short-line carrier is facilitating competition, then the adjustment is unlikely to result in new 50/10

---

[90] *See* Bailey Amended VS at para. 186. Dr. Bailey provides extremely little discussion or explanation of this "alternative specification" describing it only as a "within BEA movement." One must critically examine her workpapers in order to understand the importance of the specification she has provided. *See* Bailey workpapers ex 14-16 and "Source-Destination Competition.py."

[91] Bailey workpapers "Within BEA Route Build.py" and "Within BEA analysis.py" which together create "Crosswalk_Routes_to_Between_BEA_Routes.csv."

[92] Bailey workpapers "Within BEA Route Build.py" and "Within BEA analysis.py" which together create "Crosswalk_Routes_to_Between_BEA_Routes.csv."

[93] For ease of exposition, I call this adjustment the "Short Line" treatment, but the adjustment can also affect within-BEA interchanges between two Class I carriers. Figure 18 below shows an example of a Class I to Class I interchange being modified, and detailed tables in Figures 20 and 21 show further examples.

[94] This differs from two entities that participate in a regional origination and termination that were seeking to merge.

[95] Prior to this adjustment, the long-haul carrier is already recorded in the route combination, and therefore already a part of the participating share screen. However, the BEA-STCC pair under analysis can newly fail a 50/10 origination or termination screen without having previously failed a 50/10 participating screen due to the extra requirements in a 50/10 participating screen. Specifically, because the participating share can lead to a double count when both UP and NS are on a route, the screen requires that "the combined participating share of UP and NS is more than 10 percentage points higher than the share of either UP or NS individually" rather than simply greater than 10 percentage points for each UP and NS specifically. *See* Bailey Amended VS at Appendix G, p. G5.

screen failures. If the short-line carrier is, in fact, dependent on a single Class I carrier, then this dependency will now be accurately reflected in the volumes used to calculate shares.[96]

On a functional level, Dr. Bailey reassigns volumes in the 50/10 analysis by adjusting her route field to remove a carrier from the route when that carrier originates or terminates the move while simultaneously interchanges the traffic within the same BEA for which it originated or terminated the move. The 50/10 analysis is fully recalculated after the route adjustment is made. In other words, the change is upstream of the 50/10 analysis and does not change the mechanics of the 50/10 in any way. This adjustment is meant to better reflect the long-haul carriers on the move.

For example, shown at Figure 18 where {{REDACTED

}}. This is an appropriate adjustment because, again, BNSF is not the long-haul carrier and is used instead for customer access.

Figure 18: {{REDACTED }}[97]

REDACTED

Finally, consider Figure 19 below where {{ REDACTED

[96] This correction does not create a double count in the participating share used to calculate the shares for the analysis. This is because the 50/10 analysis is completed in its entirety after modifying the routes. In other words, the modified volumes are not simply added to the old sum, but rather all volumes for the entire OBEA or DBEA are reevaluated.

[97] Routes from PC Miler Rail. *See also* Carey HC-WP-Within_BEA_Routes.xlsx.

REDACTED }}. This route, too, would be adjusted by Dr. Bailey's methodology to remove FEC, which is an appropriate adjustment because FEC is not the long-haul carrier and is used instead for customer access.

Figure 19: {{REDACTED

}}[98]

REDACTED

The removal of short-line volumes reflects the true economic circumstances of the movement, which is that the Class I carrier is moving out of the market and the existence of the short line does not constitute a separate competitive option for a customer.

Affected routes from short-line treatment

Below are two tables that show the effects of removing short-line volumes.

Figure 20: and Figure 21 show the BEA-Commodities that fail the 50/10 screen when short lines are removed for source and destination competition. It is often the case that the adjustment only causes a small reallocation of volumes and therefore results in a large revenue group to be reallocated. Figures 20 and 21 show that {{REDACTED }} in revenue fails the 50/10 screen when the short-line volumes are removed. Additionally, after adopting the additional exclusion of moves within a BEA to eliminate short-distance moves that are not true exports from a BEA, there is a de minimis effect on 50/10 competition. Compared with the {{REDACTED }} that fails the 50/10 screen when short-line volumes are removed, the associated incremental revenue from removing within-BEA traffic is }}.[99,100]

[98] Routes from PC Miler Rail. *See also* Carey HC-WP-Within_BEA_Routes.xlsx

[99] Carey HC-WP - Within_BEA_Routes.xlsx.

[100] This includes moves featuring iron plates and stearic acid in Chicago, IL iron plates in Mobile, AL petroleum coke in Houston, TX and radioactive materials in Salt Lake City, UT which do not leave their respective BEAs.

Figure 20: NERA 50/10 Fails Commodities – Short Line Route Treatment for Interchanges Within a BEA - Destination Competition (2023)[101]{{

REDACTED

[101] Carey HC-WP-Within_BEA_Routes.xlsx.

Figure 21: NERA 50/10 Fails Commodities – Short Line Route Treatment for Interchanges Within a BEA - Source Competition (2023) [102]**{{**

REDACTED

}}

[102] Carey HC-WP-Within_BEA_Routes.xlsx.

Within BEA rail moves to SITS (that are double counts with long-haul rail out of the BEA area)

Another type of move that results in the Chemical-related SIT moves are examples of a double count in Dr. Bailey's analysis, as she includes the rail move into and out of the BEA area as well as a within-BEA rail or truck move.

SIT moves go to the SIT from the origin area by rail or truck. These moves show how it is inappropriate to consider short-distance rail moves for a 50/10 screen, given their economic circumstances. Figure 22 below shows within-BEA rail moves at Houston and Baton Rouge, which no longer fail the 50/10 screen if within-BEA moves are permitted for analysis. The data show that nearly all these moves are to SIT locations, and not to final destinations. Including these moves in a competition analysis is inappropriate because the within-BEA movement is not to the commodities' actual destination.

Figure 22: Within BEA Traffic – Originating or Terminating at SIT yards[103][104] (2023) {{

REDACTED

}}

[103] For plastic resins (STCC 2821), documented barge movements between the Port of Freeport and the Port of Houston occur within a supply chain in which resin pellets typically move by rail hopper car from production plants to storage-in-transit yards and packaging facilities.
[104] Carey HC-WP-Within_BEA_Routes.xlsx. These statistics are accounted for by the short line adjustment.

6. Dr. Bailey's Unsupported Inclusion of Truck as a Competitor to Rail in Her Between-Corridor Analysis

As discussed in my VS in Sections IV and V, Dr. Bailey's inclusion of truck as a competitor to rail in all circumstances is unsupported and erroneous.

6.1. Within-BEA trucking.

Dr. Bailey assumes, without support, that truck moves within a BEA area compete with rail moves into or out of the BEA area. She presents no analysis to support her conclusion that trucks are an economically feasible competitor to rail.

As shown below in Figure 23, more than half of the truck traffic within a BEA as reported by the Transearch data that Dr. Bailey relies on reflects IM (STCC 46 or 44) or auto traffic (STCC 37) that moves to or from a local rail terminal. Consequently, the truck moves are already captured in the geographic competition analysis through the rail carriers into and out of the BEA area and therefore any within-BEA trucking for IM traffic would be a "double-count."[105] Including auto traffic (STCC 37) and other commodities with IM service (non-STCC 46 commodities) reflects moves to or from a local rail terminal, l and therefore it is a double count with rail traffic and should be removed.

Figure 23: Within-BEA Truck Tons by STCC Group for Top 50 Highest-Revenue Destination and Origin BEA-Commodities that Fail the Carey 50/10 BEA Analysis (1000s of Tons)[106]{{
REDACTED

[105] Including trucking for intermodal traffic within a BEA would be a double count because most of the truck moves are already captured in the geographic competition analysis through the rail carriers with rail competitors moving between BEAs for IM service (including STCC 46 and other commodities). Because I included intermodal service that Dr. Bailey erroneously excluded, I needed to make an adjustment for the intermodal service to remove what otherwise would have been a double count. This is shown in the row "Removed to Prevent Double Count" in Figure 23.

[106] This accounts for 70% of the failed 50/10 screens. Carey HC-WP-Highest_Rev_Truck_Evidence.xlsx.

}}

Rail is the primary long-haul mode for new vehicles: according to the Association of American Railroads, freight rail moves nearly 75% of the new cars and light trucks purchased in the U.S.[107] The typical flow involves a vehicle leaving the assembly plant or its port of entry and is most likely delivered to a railroad-managed automotive facility to continue its journey.[108] Getting vehicles to those facilities frequently involves a short truck move. For example, at UP's Centreville, IL facility, about 10 miles from St. Louis, DaimlerChrysler planned to truck new vehicles from its Fenton, MO plant to the facility for loading onto rail cars bound for distribution points across the U.S., Canada, and Mexico.[109]

As I discuss in my VS, Dr. Bailey incorrectly excludes several STCC codes related to IM and auto traffic because the ICC exempted them from rate regulation as they face competition from motor carriers and geographic competition.[110,111]

Based on my review of the remaining truck moves within a BEA, many of these truck moves involve commodities that have a mismatch between 7-digit and 4-digit commodities, such that rail moves involve a different 7-digit commodity than the truck moves.

To the extent that certain other volumes may include a small amount of waterborne traffic that is utilized for international movements involving exports to other countries outside the U.S.'s transportation jurisdiction, the STB has no line of sight into any of these movements to determine if they are constraints to rail. Moreover, it has no regulatory oversight of such international services.

6.2. Inter-BEA trucking (BEA to BEA).

Similar to what I described above for within-BEA-trucking, Dr. Bailey also assumes, without support, that inter-BEA trucking is sufficient competition for rail moves. But it is well understood that trucks do not and cannot directly compete with rail on all routes for all commodities, especially for longer routes, and therefore are not a competitive constraint to rail.

As I describe elsewhere in my Verified Statement and other experts cover in their respective Verified Statements, there are many reasons that trucks on a route do not compete with rail, including different service quality, specific customer requirements (no access to rail), and private carrier trucking that is in-house of companies.

Truck and rail double-count

[107] The Star, "What's with all the General Motors vehicles at former Auburn Auction Part," August 3, 2023, available at https://www.kpcnews.com/thestar/article_75d41e7f-094a-518c-a477-82cf167b8c49.html.

[108] UP, "From the Auto Factory to Your Local Dealership", July 28, 2020, available at https://www.up.com/news/service/tr050520-auto-factory-to-dealership.

[109] Progressive Railroading, "UP accommodates auto moves at St. Louis-area distribution facility," July 9, 2001, available at https://progressiverailroading.com/rail_industry_trends/news/UP-accommodates-auto-moves-at-St-Louisarea-distribution-facility--3326.

[110] *See* Bailey Amended VS at para. 140 and FN 127. Dr. Bailey's 50/10 calculation does still include some automotive STCC codes, like 3711 which includes mostly fully set up vehicles, but she does not report auto or IM carloads in her final "affected" carloads. *See* Bailey Amended VS at Exhibits 14-16 and associated workpapers.

[111] *See* Bailey Amended VS at Exhibits 14-16 and associated workpapers.

There is double counting in Dr. Bailey's analysis because truck moves to and from terminals that cross a BEA boundary within an area are already captured in the geographic competition analysis with rail competitors moving between BEAs for IM service (STCC 46 or other commodities) and auto traffic (STCC37).[112] Just over {{REDACTED}} tons of inter-BEA trucking volume are short hauls between adjacent BEAs related to truck moves to a distribution facility that ultimately uses rail long-haul traffic into or out of the BEA.

4-digit truck and 7-digit rail STCC mismatch

In addition, these truck moves between BEAs also wrongly include a mismatch of 4-digit and 7-digit STCCs as explained above and in my VS. Further, the truck moves between BEAs include private cars or just-in-time service that reflect specialized and distinct trucking service needs that make them inadequate to be served by rail and therefore cannot act as a competitive constraint.[113] Lastly, the small remaining traffic involves short-distance truck moves of approximately 250 miles that cannot provide a competitive constraint to the vast majority of rail traffic.

Instead of performing an analysis as to whether commodities at a 7-digit STCC level are actually close substitutes, Dr. Bailey simply assumed a 4-digit-STCC-based analysis and completed a sensitivity at the 7-digit level. In her deposition, Dr. Bailey describes that she allocates truck volumes "pro rata" from her 4-digit trucking data down to the 7-digit STCC level.[114] From her workpapers, I observe her calculation involves allocating truck volumes based on rail volumes for a given corridor and commodity.[115]

Dr. Bailey provides no analysis or other support for her assumption that the trucking volumes should be assigned to a 7-digit STCC based on the rail 7-digit STCC proportion. Rail volumes for any individual 7-digit STCC are based on many product and rail specific factors. Truck volumes would be more limited and based on few possible 7-digit STCCs that may have some trucking under limited circumstances (e.g., no rail service and short-distance moves). The table below illustrates the math presented by Dr. Bailey for 7-digit STCCs in 2821 and shows a {{ REDACTED }} on a 4-digit level compared to varying rail shares at the 7-digit level resulting from the unsupported assumption by Dr. Bailey to simply assign estimated trucking volumes at a 4-digit STCC code to the proportion of rail volumes at the 7-digit level. She assumes that trucks and rail always compete at the same proportion with no supporting evidence or analysis.

[112] Carey HC-WP-Highest_Rev_Truck_Evidence.xlsx

[113] CSXT Evidence and Argument in Opposition to the NS Control Application, STB FD No. 36836, Norfolk Southern—Acquisition and Control—Norfolk & Portsmouth Belt Line Railroad Company, September 18, 2025, at p. 65.

[114] Bailey Deposition at 259:25–260:8.

[115] Bailey workpaper "Source & Destination.py."

Figure 24: Illustration of Dr. Bailey's Calculation of 7-digit Truck Volumes Assuming Rail Share of 7-digit STCC {{

REDACTED

}}

I identified numerous examples to illustrate the impact of a 4-digit and 7-digit STCC mismatch for corridors between BEAs. I identified inter-BEA corridors for rail shipments that failed a 50/10 screen that substantially involved traffic with a specific 7-digit commodity, where there were also high volumes of 4-digit truck shipments. I evaluated county-level data[116] for both truck and rail and conducted research to discern the type of 7-digit STCC for the truck moves.[117] Based on the above, I identified numerous examples where the truck move involved a different 7-digit STCC commodity than the rail shipment, which means the truck and rail shipments are not competitive at the 7-digit STCC level even if they appear to be shipments of the same commodity at the 4-digit level.

The select examples presented in Figure 25 below show how truck volumes on the same BEA corridors as rail volumes are, in fact, not competitive with each other at a more granular STCC level, as about {{REDACTED}} tons of truck volume cannot be compared to rail traffic at a 7-digit STCC level. The full extent of the 4 to 7-digit STCC mismatch is not identifiable or able to be corrected.

The following examples illustrate the STCC mismatch issue:

- Rail transports frac sand (STCC 1441317) for {{REDACTED }}. On the same BEA corridor, trucks transport substantial STCC 1441 sand, stone, and gravel volumes from the identified NY counties, and major producers such as {{ }} use their own fleets and do not produce frac sand.

[116] Dr. Bailey's Transearch dataset did not contain county-level data, therefore I used Mr. Hunt's. I compared the two datasets and found volumes between the two datasets to be highly similar and have no reason to believe Dr. Bailey's dataset would lead to a different conclusion.

[117] Transearch truck data is available at the county level, while rail data includes SPLCs which can be mapped on to counties.

Although the rail transportation of frac sand appears to compete with trucking, the trucked commodity is distinct at a 7-digit level, as gravel and frac sand do not substitute.

- Rail transports passenger vehicles (STCC 3711120) from the Columbus BEA to New Jersey counties within the New York BEA. {{ }} accounts for {{REDACTED}} rail carloads and reports shipping most U.S. vehicles by rail. {{ }} of truck shipments on this BEA corridor originate in {{ }}, {{REDACTED }} Class 8 trucks, which are freight vehicles, and not {{ }} passenger vehicles. Thus, most truck shipments are freight vehicles that do not compete with the rail shipments of passenger vehicles on this corridor.

- Rail transports mixed loads of canned goods (STCC 2099511). {{REDACTED }}, a producer of canned restaurant products, serves as an illustrative shipper. Other regional food producers and distributors handle different products: {{ }} specializes in fresh refrigerated foods, while {{REDACTED }} distribution route supports mixed groceries and grocers' supplies (STCC 2099515). These shipments fall under different 7-digit STCC codes and are therefore distinct from the observed rail movement of canned goods.

Figure 25: Evidence of a 4-Digit Truck Reflecting a Distinct 7-Digit Commodity than Rail (2023 County-Level Truck and Rail Data)[118]{{

REDACTED

[118] Carey HC-WP-Highest_Rev_Truck_Evidence.xlsx.

REDACTED

}}

Differences in service quality of trucking (including just-in-time delivery and limited storage for rail volumes and insufficient volumes for rail service)

Dr. Bailey also does not adequately consider service quality differences between truck and rail, as many trucking services are providing a premium product that requires a faster delivery time than rail can provide. A substantial amount of truck traffic between BEA areas involves specialty service such as expedited or just in-time service that either requires a faster delivery time or because there is insufficient space on customer premises for bulk rail deliveries. In addition, small volume customers often do not have adequate scale to use rail services and therefore are limited to trucking-related sized transportation. Such services are differentiated from rail service and do not directly compete.

Below is a description of the relevant specialized service for the commodities involved in trucking moves between BEA areas.

- STCC 4611 - (IM) "Mixed shipments" is a commodity category that can contain many different products but is associated with intermodal shipments. These products are often destined for retail stores and often require expedited service due to business needs. As the Congressional Research Service explains, as supply chains have moved to just-in-time delivery models, "trucks can typically offer greater reliability and flexibility than rail."[119]

- STCC 3711 - Motor vehicle products require faster service due to their place in the supply chain, as the finished vehicles must be distributed to a geographically diverse dealership network and auto parts must arrive just in time due to the complex manufacturing process in the auto industry. A case study of the General Motors supply chain found that inbound auto parts move chiefly by truck because "the industry's famously demanding, just-in-time production environment precludes use of rail for inbound auto parts."[120]

- STCC 3312 - Steel mill products shipped by truck typically move in truckload quantities to smaller manufacturers or over short distances. Reliance, the largest metals service center company in North America, reports that most of its sales "are to small machine shops and fabricators, in small quantities with frequent and often just-in-time deliveries."[121]

- STCC 2821 and 2812 - Chemical products, including "Alkalies and chlorine" and "Plastics materials and synthetic resins," can also be shipped by truck. Like steel mill products, these intermediate goods are often in used in the process of creating a finished product and can require specialized truck trailers to deliver. Similarly, these products may require truckload shipments due to lower storage or capacity abilities at the manufacture. Univar, a leading global chemical distributor serving thousands of customers, including small and medium-sized businesses, stores bulk chemicals "for sale and distribution in smaller, less-than-truckload quantities," and provides services such as "just-in-time delivery."[122]

  Additionally, many of Olin's facilities rely heavily on rail transport for its chlor-alkali production facilities.[123] In addition, trucking chemicals products would face switching costs to

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[119] Cong. Rsch. Serv., R48594, *Surface Freight Transportation: Modal Options* (July 9, 2025), available at https://www.everycrsreport.com/reports/R48594.html.

[120] I-95 Corridor Coalition, Freight Performance Measurement: Measuring the Performance of Supply Chains Across Multistate Jurisdictions, White Paper (Mar. 2016) at 3-9, available at https://tetcoalition.org/wp-content/uploads/2016/03/FR1_I95CC_Freight_Performance_Measurement_White_Paper_Final-20160406.pdf.

[121] Reliance, Inc., Annual Report (Form 10-K) (Feb. 2026) at 6, available at https://www.sec.gov/Archives/edgar/data/861884/000110465926020651/rs-20251231x10k.htm.

[122] Univar Inc., Annual Report (Form 10-K) (Feb. 2019), Item 1, available at https://www.sec.gov/Archives/edgar/data/1494319/000149431919000006/unvr-12312018x10k.htm ("We buy and inventory chemicals and ingredients in large quantities such as barge loads, railcars or full truck loads . . . .").

[123] *See* Appendix 5 – Specific At-Risk Areas Complaint, STB NOR No. 42164, Olin Corporation v. Union Pacific Railroad Company, July 8, 2019 at p. 1: Olin produces "chlorine and caustic soda, both of which are transported in tank cars." The complaint alleges UP is over-charging on its use of private tank cars required to ship Olin's products. Decision, STB NOR No. 42164, Olin Corporation v. Union Pacific Railroad Company, September 27, 2019 at p. 3. Other examples include synthetic plastic powder, plasticizers. Decision, STB Docket No. 42099, E.I. du Pont de Nemours and Company v. CSX Transportation, Inc., June 27, 2008 at p.1

use rail, different loading/unloading, as well as include distinct service quality considerations than rail where trucks are often used for expedited service.[124]

Figure 26 below shows truck tons among inter-BEA corridors that fail a 50/10 screen. {{ }} of inter-BEA truckloads are attributable to one of the above commodities that require a specialized service quality, meaning the majority of trucked traffic under consideration requires a differentiated service from rail.[125]

Figure 26: Commodities Requiring Service Quality of Trucking as a Share of Inter-BEA Truck Tons (2023) [126]{{

REDACTED

IM traffic example at Port of Virginia to Midwest locations with limited truck

As an additional example, trucks only compete for a small percentage of movements of international IM traffic volumes between the Port of Virginia terminal and the Midwestern U.S., such as Chicago, IL, Columbus, OH, Detroit, MI, Cleveland, OH, Louisville, KY, Cincinnati, OH, St. Louis, MO, Kansas, MO, and these are predominantly for time-sensitive traffic and higher-value items. Trucks otherwise lack sufficient economic scale to compete for the majority of the international IM customers on these corridors between the Midwest and the Port of Virginia. In fact, trucking competitors have a {{ }} share of the combined Midwestern corridors for all Port of Virginia traffic (see Figure 27 below).

[124] First Amended Complaint, STB Docket No. NOR 42099, E.I. du Pont de Nemours and Company v. CSX Transportation, Inc., October 30, 2007 at Appendix A pp. 2-5.

[125] The comparison between truck and rail tons can never be perfect as it is unknown how the commodity tons for trucks at a 4-digit level would be distributed to a 7-digit level.

[126] Carey HC-WP-Highest_Rev_Truck_Evidence.xlsx.

Figure 27: Rail and Trucking Traffic with Port of Virginia (2023) [127] {{ REDACTED }}

Private carriers (in-house) trucking service cannot readily divert to rail

Many shippers have vertically integrated into transportation by maintaining in-house trucking private carriers. This vertical integration means that they would require switching costs to use rail and are not immediately available to compete with rail.

Regarding private carrier trucking, Figure 28 below shows examples where private carrier trucks comprise a substantial amount of the traffic on the particular corridors between BEA areas, averaging {{ }} and ranging from {{REDACTED}}.

[127] Carey HC-WP-Port of Virginia Conditions.xlsx.

Figure 28: Origin and Destination BEA Fail Lanes and Associated Private Carrier Trucking Lane Shares[128]{{

REDACTED

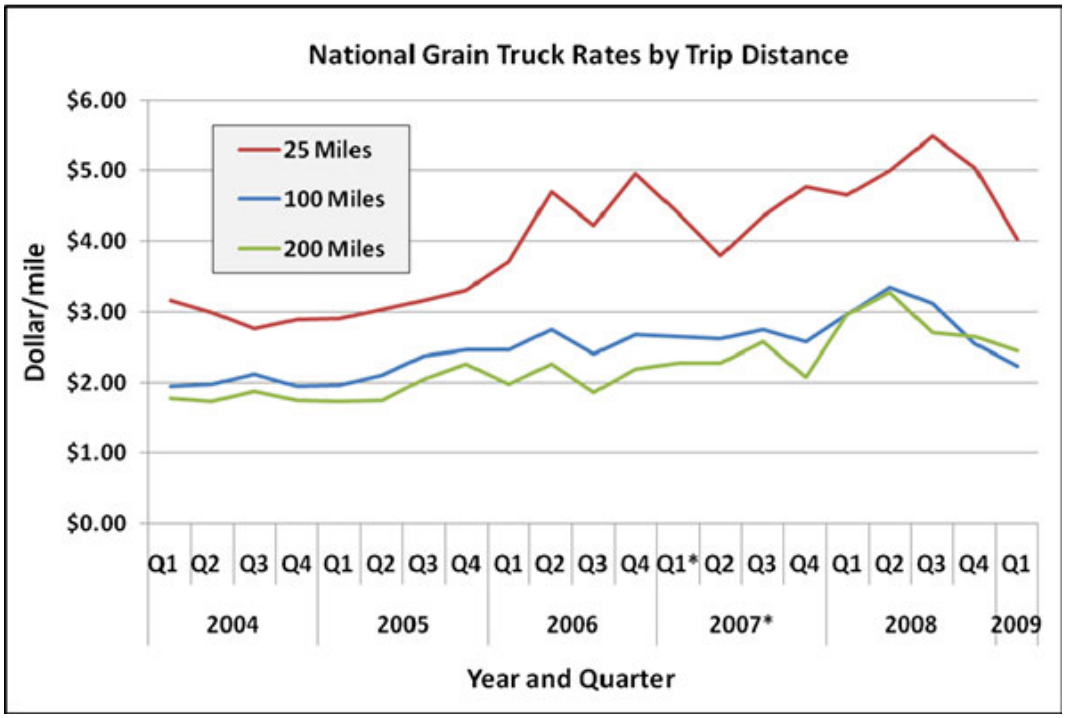
Trucking moves are typically for shorter distances and rail moves are for longer distances

Dr. Bailey provides no analysis or direct evidence of trucking feasibility for competing with long-haul rail. Dr. Bailey relies on a USDA study to support trucking competitiveness, saying customers in corridors with trucking alternatives have "numerous competing truck options in addition to rail."[129] However, graphics in this study indicate 100- to 200-mile moves are the longest-range moves that were analyzed (see Figure 29 below), which does not cover the majority of trucking

[128] Carey HC-WP-50_10_BEA_Fails_PVT_Trucking_Results.xlsx.
[129] Bailey Amended VS at para. 137.

competitors that Dr. Bailey includes in her between-corridor and within-corridor analyses. There is no supporting evidence that trucks can compete on transcon moves spanning 500-2,000 miles or more.[130]

Figure 29: Dr. Bailey Source Document Claimed to Support Trucking Competitors – USDA Study Showing Truck Rates by Trip Distance, Between 50 and 200 Miles[131]



CSXT's interline traffic with other Class I railroads primarily involves very long-haul rail moves that make truck competition unrealistic. As shown in Figure 30 below, UP-CSXT interline moves have an {{REDACTED }} share of long-haul routes with {{REDACTED }}.[132] For all CSXT interline traffic, approximately {{REDACTED }}. For IM interline traffic, the traffic category for which truck competes most often with rail, {{REDACTED }}.

[131] USDA, "Study of Rural Transportational Issues, Chapter 13: Truck Transportation," obtained on November 12, 2026, at pp. 428-429, available at https://www.ams.usda.gov/sites/default/files/media/RTIReportChapter13.pdf.

[132] *Ibid* at p. 429.

Figure 30: CSXT Overall and CSXT-UP Interline Traffic 2023, by Mileage Band[133]{{
REDACTED

In Dr. Bailey's analysis, {{REDACTED}} inter-BEA truck tons are on BEA lanes less than 500 miles, suggesting none of this traffic is competitive with the long-distance interline traffic shown in Figure 30 above.

In fact, Dr. Bailey's analysis includes many longer-haul rail moves. For example, Figure 31 below shows the average distance of Auto and IM rail moves that terminate in BEAs facing decreased source competition and show the high average miles for these moves, with {{REDACTED }} on average for Auto and IM respectively. These are very long hauls and not well suited for truck traffic.

Figure 31: Average Distance of Automotive (STCC 37) Moves and Intermodal Moves (Moves Thaat Are More Than 50% Intermodal for the Corridor Based on Car Type) That Fail the 50/10 Screen for Source Competition (2023)[134]{{
REDACTED

}}

[133] Carey HC-WP-CSXT_All_Traffic_Summary.xlsx at tab "CSXT_milage_alt."
[134] Carey HC-WP-50-10_Source_Comp._Auto_&_IM_Fails.xlsx.

Appendix 4 – Other Harm

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1. Short-Haul

1.1. Sole-Served Short-Hauling Analysis Process

As discussed in Section VI, CSXT and its customers face potential harm from the UP-NS transaction due to short-hauling of existing CSXT interline traffic. The risk to CSXT traffic potentially exists for both CSXT sole-served traffic and to some extent for dual-served traffic. The below describes the process by which short-haul moves were identified and analyzed.

Sole-Served Short-Hauling Route Distance Identification

Using the CSXT traffic tapes,

1) all interline movements between UP and CSXT are considered.
2) Routes are compiled such that all movements which contain the same route characteristics are considered together.[1] For each unique set of route characteristics, the car type and ownership are derived from the most frequently occurring values for that route set.[2] Moves for which the ultimate customer is solely served by CSXT are selected for analysis.[3]
    a. Sole-served customers are defined as a customer for which only one railroad serves the customer through its own line with no other railroad serving through any means (its own line, trackage or haulage).[4]
3) For these sole-served moves, the CSXT origin/destination location SPLC is identified using the route information in the CSXT traffic tapes. The on/off junction SPLC between CSXT and UP is also identified.[5]
    a. PC Miler is then used to determine the CSXT route distance for the specified move, where the route distance is the distance between he CSXT origin/destination and the CSXT on/off junction.[6]

To estimate the CSXT miles for a potential short-haul move, two methods are undertaken.

1) Method 1: Shortest possible CSXT short-haul move post-transaction.
    a. SPLC of the CSXT origin/destination is compared to a list of all junction stations served by both NS and CSXT.[7]
    b. PC Miler software is used to identify the rail miles between the identified CSXT origin/destination to all junctions within the state and the adjacent states.[8]

[1] Includes origin SPLC, origin BEA, shipper, payer, consignee, destination SPLC, destination BEA, routing, on and off junction(s) for CSXT, AAR mode, car owner mode, and intermodal flag.

[2] Carey HC CSXT Sole and Dual.R

[3] Carey HC CSXT Sole and Dual.R

[4] See Sole Serve Process and Identification.docx.

[5] For some moves, CSXT has both an on junction and an off junction. However, these moves may still be identified as sole-served if the short line carrier only serves CSXT.

[6] Processed in PCMiler Rail Batch Pro.

[7] PCMRAIL31_0_GeocodeFile.csv, filtered for SPLCs served by at least CSXT and NS.

[8] Carey HC-WP-Closest_Junction_Analysis.R. For each CSXT-UP interline move, using the CSXT-side SPLC, pull from the PCMRAIL Geocode file all SPLCs in the same or bordering/adjacent states as candidate closest junctions. Then, process all candidate junctions in PCMiler Rail Batch Pro to identify distance between each. Closest junction identified as the candidate SPLC with the smallest distance to the CSXT SPLC. The CSXT-side SPLC is defined as the furthest location CSXT currently originates or terminates a move.

c. The closest junction by rail route to the current origin/destination is selected as the new UPNS-CSXT interchange location, and PC Miler is again used to determine the CSXT route distance.[9]

2) Method 2: also considers the operating plan in the UPNS application.[10] The operating plan is used to determine the rail stations in which UPNS projects to have car handling events, including external and internal interchanges and origination and termination events.

a. Locations in which UPNS would handle interchange carloads with foreign railroads are identified.[11]

b. From that selection, the nearest CSXT-NS junction which the operating plan projects to handle traffic is selected as the potential short-haul location.[12] PC Miler is again used to determine the CSXT route distance.[13]

Below, the route miles of these three groups of routes are shown:

1) the original CSXT route miles,

2) the CSXT route miles from the "nearest junction" location and,

3) the moves from the "nearest handling location."

From scenario 1 to scenario 2, CSXT miles are reduced by an average of {{ }}[14] miles. From scenario 1 to scenario 3 CSXT miles are reduced by an average of {{ }}[15] miles. The routes are organized by the original UP-CSXT junction which is currently used before short-hauling.

Figure 1: CSXT Line Haul Miles for UP-CSXT Moves to Sole-Served Location by Scenario and Current UP-CSXT Interchange location[16]{{

REDACTED

}}

[9] Processed in PCMiler Rail Batch Pro.

[10] See UP/NS Application, Operating Plan (Exhibit 13), Joint Verified Statement of Eric Gehringer and John F. Orr.

[11] See Orr WP HC Yard Details T2 vFinal. Operating plan stations are converted to SPLC in order match traffic data. This is done by combining data in the operating plan, UPNS movement data, and the Centralized Station Master from Rail Inc. In seven instances, an operating plan station name was not matched to an SPLC by any method. A location was determined by manual estimation for these limited instances.

[12] The specific threshold is that projected interchange carloads are at least 1 interchange carload at that location.

[13] Processed in PCMiler Rail Batch Pro.

[14] {{REDACTED }} Carey HC-WP-Shorthauling_Sole.xlsx.

[15] {{REDACTED }} Carey HC-WP-Shorthauling_Sole.xlsx.

[16] Carey HC-WP-Shorthauling_Sole.xlsx.

1.2. Sole-Served Short-Hauling URCS Variable Cost Estimates

Using CSXT traffic tape data for the identified sole-served CSXT-UP movements, the variable cost for existing CSXT-UP sole-served moves and potential short-haul moves are estimated using the STB's Uniform Railroad Costing System.[17]

Specifically, the URCS costing system requires

1) understanding the railroad operating the movement;
2) the distance of the move;
3) the segment type of the move;
4) the freight car type;
5) the number of cars;
6) car ownership;
7) the weight of the shipment;
8) the commodity type; and
9) the shipment size.

To estimate CSXT's variable cost[18]:

1. PC Miler distance of the move between the current junction/selected short-haul junction and the origin/destination of the move is used as route miles.
2. Segment type based on the actual CSXT O/D, this can mean that CSXT receives and terminates the move or that CSXT originates and delivers the move.[19]
3. Freight car type is converted from AAR car type in the CSXT traffic tape data to a car type usable in URCS. A crosswalk provided by the STB URCS handbook is used.[20]
4. The number of cars, car ownership, weight of the move, and commodity type are all taken from CSXT traffic tape data for that specific movement.[21]
5. All moves are considered a shipment size of "single.[22]"

[17] STB, "Uniform Rail Costing System," available at https://www.stb.gov/reports-data/uniform-rail-costing-system/.

[18] Carey HC-WP-Shorthauling_Sole.xlsx and Carey HC-WP-Shorthauling_Dual.xlsx

[19] In a few rare instances, CSXT is both receiving the carloads from another carrier and delivering them to another carrier. These moves are determined to be solve served by CSXT because the short line which directly accesses the customer only maintains an interchange with CSXT.

[20] STB, "Carload Waybill Sample Reference Guide," January 30, 2023 at p. 168, available at https://www.stb.gov/wp-content/uploads/2021-STB-Waybill-Reference-Guide-V2.pdf.

[21] Commodity type is converted from the STCC code provided in the CSXT traffic tapes to a STCC format readable by the URCS costing system. Carey HC-WP-Shorthauling.xlsx and Carey HC-WP-Shorthauling_Dual.xlsx. See also Bureau of Transportation Statistics, "Standard Transportation Commodity Classification Code Information," available at https://www.bts.gov/archive/publications/commodity_flow_survey/1993/state_summaries/appendix_d.

[22] It may be the case that, currently, some movements involve unit trains or larger "multi-car" block movements, which are also shipment size categories in URCS. Further, to the extent that large blocks or unit trains are currently handled at major interchange points, the devolution of the UPNS-CSXT interchange into more, smaller locations would result in converting some unit or large block movements into single car movements. Finally, the change from multi-car to single-car shipments can also impact car day and car mile costs in URCS. Therefore, accounting for these changes would only increase the impact of short-hauling on CSXT.

As seen below in Figure 2, Post Transaction, in both scenarios, almost every cost category on a per car mile basis increases. Interchange and station costs increase by a factor of almost {{ }}. Similarly, linehaul costs would increase from {{ }} to {{ }}, and other costs would increase from {{REDACTED}}.

Figure 2: Change in Movement Costs due to Longhaul Route Mile Loss: Sole-Served Short-hauling (All Traffic Types) [24] **{{**

REDACTED

}}

Another cost arises due to time sensitive deliveries required by many shippers. Post Transaction, the shipper will continue to require the current timely train speeds and delivery times; however, post Transaction CSXT would have fewer UP and BNSF interline movements to aggregate. Therefore, under short-hauling, CSXT would likely be required to use shorter trains with fewer cars per train. These shorter trains require higher locomotive and crew costs per car to operate. This difference in cost profile was estimated by adjusting the proportion of "way train" and "through train" miles in the costing system by the same distance by which the CSXT route was reduced in the short-haul scenario. In URCS, a through train is a train which is "operated between two or more major concentration or distribution points" while a way train moves from smaller locations to those concentration points.[25] Eventually, updating this field results in train mile cost increases relating to operation, deprecation, and crew costs.[26]

[23] {{REDACTED }} Carey HC-WP-Shorthauling_Sole.xlsx.

[24] Carey HC-WP-Shorthauling_Sole.xlsx.

[25] STB, "The Railroad Cost Program (Microsoft Excel Version)," at p. 37, available at https://www.stb.gov/wp-content/uploads/STBRailroadCostProgram_ManualForExcel.pdf.

[26] See STB Uniform Rail Costing System. See also Carey HC-WP-Shorthauling_Sole.xlsx.

Specifically, the modification to the URCS cost is:

1. All miles in the movement are allocated to "way train miles" and through train miles are moved to zero.
2. This results in crew cost increases at URCS cost lines Unit Cost Per Train Crew
3. This results in train mile cost increases at URCS cost lines Unit Cost Per Train Mile

Additionally, the loss of network density on the CSXT network means that CSXT would have fewer total cars for interchange with UP and BNSF for transcontinental moves, and therefore fewer carloads to aggregate on its network. Because short-hauling entails going from a handful of very large interchanges in the middle of the country between UP and CSXT, to many smaller interchanges between CSXT and UPNS at various Eastern Locations, there are fewer large groupings of cars which can be shipped together to common locations.

As such, the modeling specification for short-hauled moves of "single" car shipments described above is appropriate for the short-haul scenarios. However, an adjustment is made to the cost of present moves to account for the prevalence of multi-car shipments. As such, I adjusted the switch engine minutes for industry switches and the car day and mile factors for industry switches to match a multi-car move.[27] I applied this change in cost output to the current moves. I also note that URCS uses a "jurisdictional add-on" for single car moves that impacts clerical, origin and termination, and internal handling costs. I also removed these costs from the costing of current data. In total, these changes result in present costs which are about {{ }} lower than estimated using the short-haul procedure.

Once the CSXT variable cost is determined for each scenario, linehaul and non-linehaul specific cost are also identified.

1) The STB URCS output includes the variable cost of specific movement components in addition to the total variable cost.
2) Cost items applicable to linehaul cost and cost items applicable to non-linehaul components are identified.[28]
    a. Specifically, the URCS cost groupings associated with Interchange, Origination and Termination, Car Yard Miles and Time, and Station clerical costs.[29]

On a per-car mile basis, movement costs would also increase substantially as a result of sole-served short-hauling as seen in Figure 3. Non-linehaul movement costs would increase from {{ }} per carmile (or {{ }} from handling short-haul). After cost adjustments, these costs would increase from {{REDACTED}} per car mile, or to {{ }} from short-haul handling.

[27] See STBRailroadCostProgram_2006-2023 (10).xlsm, tab "URCS Inputs."

[28] See Carey HC-WP-Shorthauling_Sole.xlsx.

[29] For specific URCS categories, please see Carey HC-WP-Shorthauling_Sole.xlsx.

Figure 3: Change in CSXT Cost per Car Mile Movement Costs Due to Sole-Served Short-hauling[30] {{

REDACTED

}}

The CSXT Revenue in each short-hauling scenario is estimated to decrease proportionally to the length of the CSXT linehaul.

To determine the current CSXT revenue and cost to CSXT, I followed the same steps as I have outlined above, with two important distinctions.

1. No changes made to the CSXT revenue as compared to the revenue reported in the traffic tapes.
2. Under each short-haul scenario, CSXT revenue was decreased in proportion to the estimated decrease in CSXT route miles.

As seen in Figure 4, revenue decreases by {{REDACTED }} (or by {{REDACTED }} in the alternate moves short-hauling) due to short-hauling. The contribution margin {{REDACTED REDACTED }}

Figure 4: Contribution Margin Reduction for Sole-Served Short-Haul Moves[33] {{

[30] Carey HC-WP-Shorthauling_Sole.xlsx.

[31] {{REDACTED }} Carey HC-WP-Shorthauling_Sole.xlsx.

[32] {{REDACTED }} Carey HC-WP-Shorthauling_Sole.xlsx.

[33] Carey HC-WP-Shorthauling_Sole.xlsx.

REDACTED

}}

1.3. Dual-Served Short-Hauling Analysis Process

As noted in the VS, it may be more profitable for a combined UP/NS to short-haul some CSXT traffic for operational or other reasons even when UP/NS can serve the shipper location directly. I therefore calculated the total traffic that potentially could be exposed. Using the CSXT traffic tapes,

1) All interline movements between UP and CSXT are considered.
2) Routes are compiled such that all movements which contain the same route characteristics.[34] For each unique set of route characteristics, the car type and ownership are derived from the most frequently occurring values for that route set are considered together.[35] Moves for which the ultimate customer is dual-served by CSXT are selected for analysis.[36]
    a. Dual-served customers are defined as a customer for which more than one railroad serves the customer; customers who are not otherwise identified as sole-served.[37]
3) For these dual-served moves the CSXT origin/destination location SPLC is identified. The on/off junction SPLC between CSXT and UP is also identified.
    a. PC Miler is then used to determine the CSXT route distance for the specified move.[38]

To estimate the CSXT miles for a potential short line move, the following method is undertaken.

1) Considers the operating plan in the UPNS application.[39]

[34] Includes origin SPLC, origin BEA, shipper, payer, consignee, destination SPLC, destination BEA, routing, on and off junction(s) for CSXT, AAR mode, car owner mode, and intermodal flag.

[35] Carey CSXT Sole and Dual.R

[36] Carey CSXT Sole and Dual.R

[37] See Sole Serve Process and Identification.docx.

[38] Processed in PCMiler Rail Batch Pro.

[39] See UP/NS Application, Operating Plan (Exhibit 13), Joint Verified Statement of Eric Gehringer and John F. Orr

a. Locations in which UPNS believes would handle interchange carloads with foreign railroads are identified.[40]
b. From that selection, the nearest CSXT-NS junction which the operating plan projects to handle interchange traffic (intermediate handlings, block swap handlings, interchanges to/from other railroads) that is 50% of the CSXT-UP route carloads is selected as the potential short-haul location.
c. A UPNS operation plan junction can only be eligible if the associated projected carload count is at least half of the 2023 CSXT dual-served carloads for the CSXT SPLC.
    i. This comparison is made against the aggregated carload count for all current dual-served CSXT originations/terminations at a given CSXT SPLC for 2023.[41]
d. PC Miler is again used to determine the CSXT route distance.[42]

Below, the route miles of these three groups of routes are shown:

1) the original CSXT route miles,

2) the CSXT route miles from the "nearest junction" location and,

3) the moves from the "nearest handling location."

From the original movement to the short-haul movement scenarios, CSXT miles are reduced by an average of {{ }} miles. The routes are organized by the original UP-CSXT junction which is currently used before short-hauling.

Figure 5: CSXT Line Haul Miles for UP-CSXT Moves to Dual-Served Location by Scenario and Current UP-CSXT Interchange Location[44]{{

REDACTED

}}

[40] See Orr WP HC Yard Details T2 vFinal. Operating plan stations are converted to SPLC in order match traffic data. This is done by combining data in the operating plan, UPNS movement data, and the Centralized Station Master from Rail Inc. In seven instances, an operating plan station name was not matched to an SPLC by any method. A location was determined for these extremely limited instances.

[41] The specific threshold is that projected interchange carloads are at least 1 interchange carload at that location.

[42] Processed in PCMiler Rail Batch Pro.

[43] {{ REDACTED }} Carey HC-WP-Shorthauling_Dual.xlsx.

[44] Carey HC-WP-Shorthauling_Sole.xlsx

1.4. Dual-Served Short-Hauling URCS Variable Cost Estimates

There are no further differences in the methodologies between the two short-haul distance scenarios. All subsequent steps are taken for both sets of short-haul routes.

Using CSXT traffic tape data for the identified sole-served CSXT-UP movements, the variable cost for existing CSXT-UP dual-served moves and potential short-haul moves are estimated using the STB's Uniform Railroad Costing System.[45]

Specifically, the URCS costing system requires

1) understanding the railroad operating the movement;
2) the distance of the move;
3) the segment type of the move;
4) the freight car type;
5) the number of cars;
6) car ownership;
7) the weight of the shipment;
8) the commodity type; and
9) the shipment size.

To estimate CSXT's variable cost[46]:

1. PC Miler distance of the move between the current junction/ selected short-haul junction and the origin/destination of the move is used as route miles.
2. Segment type based on the actual CSXT O/D, this can mean that CSXT receives and terminates the move or that CSXT originates and delivers the move.[47]
3. Freight car type is converted from AAR car type in the CSXT traffic tape data to a car type usable in URCS. A crosswalk provided by the STB URCS handbook is used.[48]
4. The number of cars, car ownership, weight of the move, and commodity type are all taken from CSXT traffic tape data for that specific movement.[49]
5. All moves are considered a shipment size of "single.[50]"

As seen below in Figure 6, Post Transaction, almost every cost category on a per car mile basis increases. Interchange and station costs increase by a factor of almost {{ }}[51].

[45] STB, "Uniform Rail Costing System," available at https://www.stb.gov/reports-data/uniform-rail-costing-system/.

[46] Carey HC-WP-Shorthauling_Dual.xlsx

[47] In a few rare instances, CSXT is both receiving the carloads from another carrier and delivering them to another carrier. These moves are determined to be solve served by CSXT because the short line which directly accesses the customer only maintains an interchange with CSXT.

[48] STB, "Carload Waybill Sample Reference Guide," January 30, 2023 at p. 168, available at https://www.stb.gov/wp-content/uploads/2021-STB-Waybill-Reference-Guide-V2.pdf.

[49] Commodity type is converted from the STCC code provided in the CSXT traffic tapes to a STCC format readable by the URCS costing system. Carey HC-WP-Shorthauling_Sole.xlsx and Carey HC-WP-Shorthauling_Dual.xlsx. See also Bureau of Transportation Statistics, "Standard Transportation Commodity Classification Code Information," available at https://www.bts.gov/archive/publications/commodity_flow_survey/1993/state_summaries/appendix_d.

[50] It may be the case that, currently, some movements involve unit trains or larger "multi-car" block movements, which are also shipment size categories in URCS. Further, to the extent that large blocks or unit trains are currently handled at major interchange points, the devolution of the UPNS-CSXT interchange into more, smaller locations would result in converting some unit or large block movements into single car movements. Therefore, accounting for these changes would only increase the impact of short-hauling on CSXT.

[51] {{REDACTED }}

Figure 6: Change in Movement Costs due to Longhaul Route Mile Loss: Dual-Served Short-hauling (All Traffic Types){{

REDACTED

}}

Another cost arises due to time sensitive deliveries required by many shippers. Post Transaction, the shipper would presumably continue to require the current timely train speeds and delivery times; however, post transaction CSXT would have fewer UP and BNSF interline movements to aggregate. Therefore, under short-hauling, CSXT would likely be required to use shorter trains with fewer cars per train. These shorter trains implicitly require higher locomotive and crew costs per car to operate. This difference in cost profile was estimated by adjusting the proportion of "way train" and "through train" miles in the costing system by the same distance by which the CSXT route was reduced in the short-haul scenario. In URCS, a through train is a train which is "operated between two or more major concentration or distribution points" while a way train moves from smaller locations to those concentration points.[52] Eventually, updating this field results in train mile cost increases relating to operation, deprecation, and crew costs.[53]

In other words, short-hauling would mean that:

1) CSXT would have fewer total cars for interchange with UP and BNSF for transcontinental moves, and therefore fewer carloads to aggregate on its network.
2) Because short-hauling entails going from a handful of very large interchanges in the middle of the country between UP and CSXT, to many interchanges at many Eastern locations between CSXT and UPNS, there are fewer large groupings of cars which can be shipped together to common locations.

[52] STB, "The Railroad Cost Program (Microsoft Excel Version)," at p. 37, available at https://www.stb.gov/wp-content/uploads/STBRailroadCostProgram_ManualForExcel.pdf.

[53] See STB Uniform Rail Costing System. See also Carey HC-WP-Shorthauling_Dual.xlsx

As such, the modeling specification for short-hauled moves of "single" car shipments described above is appropriate. However, an adjustment must be made to the cost of present moves to account for the prevalence of multi-car shipments. As such, adjusted the switch engine minutes for industry switches and the car day and mile factors for industry switches to match a multi-car move. I applied this change in cost output to the current moves. I also note that URCS uses a "jurisdictional add-on"[54] for single car moves that impacts clerical, origin and termination, and internal handling costs. I also removed these costs from the costing of current data. In total, these changes result in present costs which are about {{ }} lower than estimated using the short-haul procedure.

Once the CSXT variable cost is determined for each scenario, linehaul and non-linehaul specific cost are also identified.

1) The STB URCS output includes the variable cost of specific movement components in addition to the total variable cost.
2) Cost items applicable to linehaul cost and cost items applicable to non-linehaul components are identified.[55]
    a. Specifically, the URCS cost groupings associated with Interchange, Origination and Termination, Car Yard Miles and Time, and Station clerical costs.[56]
3) URCS Phase II variability percentages[57] for each of the categories previously listed are used to determine the implied fixed cost percentage for each of those movement characteristics.[58]

On a per-car mile basis, movement costs would also increase substantially as a result of sole-served short-hauling as seen in Figure 7. Non-linehaul movement costs would increase from {{ }} per car mile. After cost adjustments, these costs would increase from {{REDACTED}} per car mile.

Figure 7: Change in Cost per Car Mile Movement Costs Due to Dual-Served Short-hauling[59]{{

REDACTED

}}

[54] STB, "Uniform Rail Costing System," available at https://www.stb.gov/reports-data/uniform-rail-costing-system/.

[55] See Carey HC-WP-Shorthauling_Dual.xlsx

[56] For specific URCS categories please see Carey HC-WP-Shorthaul_Dual.xlsx.

[57] "During [URCS Phase II], the Board calculates system average variable unit costs from R-1 and other data filed by the railroads. It is run annually using railroad information specific to that year." See https://www.stb.gov/reports-data/uniform-rail-costing-system/.

[58] I.e. if $75 is allocated to variable "interchange costs" and it is said to have a variability of 75%, then it is implied that 25% of "interchange costs" are fixed and that there are $25 in fixed costs. See Carey HC-WP-Shorthaul_Dual.xlsx.

[59] See Carey HC-WP-Shorthaul_Dual.xlsx.

The CSXT revenue in each short-hauling scenario is estimated to decrease proportionally to the length of the CSXT linehaul.

To determine the current CSXT revenue and cost to CSXT, I followed the same steps as above, with two important distinctions.

1. No changes were made to the CSXT revenue as compared to the revenue reported in the traffic tapes.
2. Under each short-haul scenario, CSXT revenue was decreased in proportion to the estimated decrease in CSXT route miles.

As seen in Figure 8, revenue decreases by {{ }} due to shorthauling. The contribution margin {{REDACTED }}

Figure 8: Contribution Margin Reduction for Dual-Served Short-Haul Moves[61] {{

REDACTED

}}

1.5. CSXT Fixed Costs

The movement-specific fixed variable cost for both dual-served and sole-served movements was calculated to determine the cost impact at midcontinent facilities and the new CSXT interchange terminals. The previously discussed separation between line haul and non linehaul costs was used. Notably, between each URCS short-haul scenario, the cost of these fixed-variable costs does not change, while the line haul cost numbers fluctuate. Specifically, the non-linehaul costs are: [62]

[60] {{REDACTED }} Carey HC-WP-Shorthauling_Dual.xlsx.

[61] Carey HC-WP-Shorthauling_Dual.xlsx.

[62] Carey HC-WP-Shorthauling_Dual.xlsx

1. Interchange Cost, excluding intra-network switching.
2. Industry Switch Cost
3. Jurisdictional add-ons for industry Switch and interchange for non-unit train moves
4. Switch Mileage and Switch Time
5. Carloads Origianted, Terminated, and Received addons for station clerical costs and "other than clerical" costs.

URCS Phase II variability percentages[63] for each of the categories previously listed are used to determine the implied fixed cost percentage for each of those movement characteristics.[64]

1. For car costs, the ratio of cars in the short-haul is used.
2. For switching and industry costs, the weight between operating, depreciation and ROI are spread across the categories of Road operations, yard operations, and switch track ownership and maintenance.
3. Finally, for Carloads Originated, Terminated, and Received, variability percentages are pulled directly from the URCS Phase II workbook.

This analysis reveals the movement specific fixed variable costs below.

Figure 9: Estimated Existing CSXT Fixed Variable Cost Components in Existing Moves (Sole-Serve Short-haul) {{

REDACTED

}}

Figure 10: Estimated Existing CSXT Fixed Variable Cost Components in Existing Moves (Dual-Served Short-haul) {{

[63] "During [URCS Phase II], the Board calculates system average variable unit costs from R-1 and other data filed by the railroads. It is run annually using railroad information specific to that year." See https://www.stb.gov/reports-data/uniform-rail-costing-system/.

[64] I.e. if $75 is allocated to variable "interchange costs" and it is said to have a variability of 75%, then it is implied that 25% of "interchange costs" are fixed and that there are $25 in fixed costs. See Carey HC-WP-Shorthaul.xlsx

REDACTED

}}

The CSXT total R1 fixed cost is {{REDACTED}} and the 2023 loaded carloads from the CSXT R1 is {{REDACTED}}. This is equal to {{REDACTED}} in fixed costs per car ({{REDACTED }}). The estimated decrease in CSXT carloads is {{REDACTED}} resulting in {{REDACTED}} in fixed costs per carload ({{ REDACTED }}).

Figure 11: CSXT Fixed Cost per Car, 2023 vs. Post Transaction Future State[65] {{ REDACTED

}}

[65] Carey HC-WP-CSXT_Carloads.xlsx

Figure 12: 2023 CSXT Operating Expenses[66]

Line No.		Cost ($)
1	**Variable Costs**	
2	Train Operations	$2,550,959,000
3	Yard Operations	$466,645,880
4	Train and Yard Operations Common	$43,789,000
5	Specialized Service Operations	$717,940,000
6	Locomotive Maintenance and Repairs, Excluding Depreciation	$409,993,000
7	Freight Car Maintenance and Repairs, Excluding Depreciation	$528,066,000
8	Other Equipment Maintenance and Repairs, Excluding Depreciatio	$44,018,000
9	**Subtotal**	**$4,761,410,880**
10	**Fixed Costs**	
11	Maintenance of Way and Structures, Excluding Depreciation	$829,450,000
12	Roadway Structures Depreciation	$1,012,653,000
13	Locomotive Depreciation	$209,871,000
14	Freight Car Depreciation	$97,830,000
15	Other Equipment Depreciation	$80,456,000
16	Administrative Support Operations	$99,010,000
17	General and Administrative	$1,530,318,000
18	**Subtotal**	**$3,859,588,000**
19	**Total Operating Expense**	**$8,620,998,880**

Notes

1. CSXT Annual Report Financial Data, available at https://www.stb.gov/reports-data/economic-data/annual-report-financial-data/.

1.6. CSXT Avon Yard and Rose Lake Yard

The following discussion shows how CSXT's Avon Yard and Rose Lake Yard integrate Eastern traffic and Transcon traffic.

CSXT Avon Yard (Avon, Indiana)

The CSX Avon Yard (historically known as the Big Four Yard) is located roughly 13 miles west of downtown Indianapolis in Avon, Indiana. It is one of CSX's five primary network hump yards, and this facility functions as a core filter for freight running through the Midwest.[67]

The yard substantially captures and filters massive interchange traffic flowing East and West from the St. Louis gateway. Avon Yard sorts and consolidates inbound railcars into outbound trains by destination and provides locomotive and freight car maintenance services. Located west of Indianapolis along the Cleveland–St. Louis corridor, the yard connects to other rail lines via the mainline, Belt, and Crawfordsville Branch.[68] The mixed freight is destined for major manufacturing and distribution centers across the Eastern United States.

Recent Flow Upgrades: CSX completed a significant infrastructure upgrade that extended the yard's hump lead from 6,400 feet to 8,000 feet. This allowed the yard to process full-length incoming trains in a single cut, cutting down car dwell times and introducing an incremental volume bump of 10% to 15% (adding an extra 200–300 cars handled daily).[69]

[66] Carey HC-WP-CSXT_Costs.xlsx

[67] See CSX, "CSX Investments in Indiana Yard Set to Boost Efficiency and Traffic Capacity," July 1, 2025, available at https://www.csx.com/index.cfm/about-us/csx-investments-in-indiana-yard-set-to-boost-efficiency-and-traffic-capacity/.

[68] Indianapolis Metropolitan Planning Organization, "Freight Transportation Study," September 21, 2010 at pp. 7-9, available at https://d16db69sqbolil.cloudfront.net/mpo-website/downloads/Regional/Regional-Freight/Task1_FreightRailOverview.pdf.

[69] See CSX, "CSX Completes Avon Yard Hump Lead Extension, Boosting Rail Efficiency and Capacity," January 28, 2026, available at https://www.csx.com/index.cfm/about-us/csx-completes-avon-yard-hump-lead-extension-boosting-rail-efficiency-and-capacity/. CSX, "CSX Investments in Indiana Yard Set to Boost Efficiency and Traffic Capacity," July 1, 2025, available at https://www.csx.com/index.cfm/about-us/csx-investments-in-indiana-yard-set-to-boost-efficiency-and-traffic-capacity/.

Avon Yard specifically serves as a major classification terminal for merchandise traffic as well as an intermodal hub for regional freight distribution, and the yard processes around 2,000 to 3,000 railcars per day.[70]

Core Rail Lines & Traffic Flows

- East-West Flow (The St. Louis Line / Indianapolis Line): This is the primary pipeline running through the yard. Traffic flows West toward St. Louis and East toward Cleveland, Buffalo, and Albany via CSX's major Northeast corridors.[71]
- North-South Connections: While the immediate corridor is East-West, traffic routes through nearby interlockings and subdivisions (such as the Crawfordsville and Frankfort Subdivisions) north toward Chicago and south via the Louisville and Indiana Railroad (LIRC) or CSX lines toward Louisville and Cincinnati.[72]
- Intermodal and Transload Traffic: The facility operates as a key TOFC/COFC (Trailer/Container on Flat Car) terminal, moving intermodal containers from rail to highway via proximity to I-465 and I-74.[73]

CSXT Rose Lake Yard

Traffic flows at CSX Rose Lake Yard in East St. Louis, Illinois, consist predominantly of through freight traffic, supplemented by vital local inbound and outbound intermodal cargo. As a primary terminal on CSX's Southeastern Corridor—which links crucial Midwestern and Southern gateways—the facility's operational dynamics and layout structure its regional traffic.[74]

Rail Traffic & Corridor Dynamics

- Through Traffic Dominance: The majority of rail flows moving through Rose Lake Yard consist of through-freight traffic traversing the St. Louis Line Subdivision. This acts as a

Progressive Railroading, "CSX to boost Indiana rail yard's capacity, efficiency," July 2, 2025, available at https://www.progressiverailroading.com/csx_transportation/news/CSX-to-boost-Indiana-rail-yards-capacity-efficiency--74853.

[70] See CSX, "CSX Investments in Indiana Yard Set to Boost Efficiency and Traffic Capacity," July 1, 2025, available at https://www.csx.com/index.cfm/about-us/csx-investments-in-indiana-yard-set-to-boost-efficiency-and-traffic-capacity/.

[71] See Mid-America Freight Coalition, "CSX East St. Louis, IL," available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-east-st-louis-il/ (Rose Lake Yard located on the St. Louis Line Subdivision; part of CSX's Southeastern Corridor with gateways in Chicago, St. Louis, and Memphis); Mid-America Freight Coalition, "CSX Indianapolis, IN," available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-indianapolis-in/ (Indianapolis Terminal Subdivision connects to the St. Louis Line just outside the Avon facility).

[72] Louisville & Indiana Railroad Company—Trackage Rights Exemption—CSX Transportation, Inc., STB Finance Docket No. 35445, Federal Register Volume 75, Number 227, Doc. 2010-29740, November 26, 2010, available at https://www.govinfo.gov/content/pkg/FR-2010-11-26/html/2010-29740.htm (trackage rights over CSXT's Indianapolis Terminal Subdivision and Crawfordsville Branch to the west end of Avon Yard); Indianapolis Metropolitan Planning Organization, Freight Transportation Study, Task 1: Freight Rail Overview and Passenger Rail Coordination Issues, September 21, 2010, available at https://d144uep0xgc2gz.cloudfront.net/downloads/Regional/Regional-Freight/Task1_FreightRailOverview.pdf (LIRC trackage rights over CSXT's Indianapolis Terminal Subdivision to Avon Yard, where it interchanges traffic with CSXT); Louisville & Indiana Railroad, LIRC Trackage Rights Map, May 13, 2022, available at https://www.anacostia.com/wp-content/uploads/2023/01/LIRC-Map-051322.pdf (CSX routes from Indianapolis to Frankfort, Chicago, Cincinnati, and St. Louis; LIRC to Louisville).

[73] Mid-America Freight Coalition, "CSX Indianapolis, IN," available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-indianapolis-in/ (Avon terminal at 501 S County Road 800 E; interstate access via I-465/I-74; Highway 360/Rockville Road connector; container (COFC) traffic); CSX Intermodal, Indianapolis, IN Terminal Details, available at https://www.intermodal.com/index.cfm/channel-partners/locations-served/terminal-details/?terminal_id=23&Core=true.

[74] Mid-America Freight Coalition, "CSX East St. Louis, IL," Rail Network Inventory – Intermodal Facilities, available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-east-st-louis-il/; St. Louis Regional Freightway, "Intermodal Terminals & Manifest Terminals," available at https://www.thefreightway.com/why-stl-region/intermodal-terminals/.

trunk line connecting Indianapolis (Avon Yard) to the greater St. Louis metropolitan rail network.[75]

- Intermodal Gateways: As one of CSX's core intermodal hubs in Illinois, the yard processes inbound and outbound container flows. It connects freight seamlessly along the I-55, I-64, and I-70 freight corridors, moving a vast mix of consumer goods and industrial commodities.[76]
- Network Interchange: Traffic routes directly west out of Rose Lake Yard to interchange with the Terminal Railroad Association of St. Louis (TRRA), allowing freight to transition across the Mississippi River into western rail networks.[77]

IM Gate & Truck Traffic Logistics

- Interstate Access: Highway freight flows funnel directly into the facility's main gate at 3900 Rose Lake Road, East St. Louis, IL via immediate access from I-55/I-70.[78]

Rose Lake Yard (also spelled Roselake Yard), operated by CSX Transportation in East St. Louis/Fairmont City, IL, functions primarily as a major intermodal freight hub and key terminal on CSX's Southeastern Corridor.[79]

Traffic flows through the yard are structured by the following core components:

Rail Traffic & Corridor Routing

- Primary Route: The yard sits at the western terminus of the CSX St. Louis Line Subdivision, which runs west-southwesterly from Indianapolis (Avon Yard) to East St. Louis.[80]
- Gateway Hub: Rose Lake serves as a critical interchange gateway connecting major freight flows between Chicago, St. Louis, and Memphis. It interfaces directly with the Terminal Railroad Association of St. Louis (TRRA) to move traffic further west across the Mississippi River.[81]

[75] See Mid-America Freight Coalition, "CSX Indianapolis, IN," available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-indianapolis-in/ (Indianapolis Terminal Subdivision connects to the St. Louis Line just outside the Avon facility); Mid-America Freight Coalition, "CSX East St. Louis, IL," Rail Network Inventory – Intermodal Facilities, available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-east-st-louis-il/.

[76] Mid-America Freight Coalition, "CSX East St. Louis, IL," Rail Network Inventory – Intermodal Facilities, available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-east-st-louis-il/; St. Louis Regional Freightway, "Intermodal Terminals & Manifest Terminals," available at https://www.thefreightway.com/why-stl-region/intermodal-terminals/.

[77] See Terminal Railroad Association of St. Louis, tariff naming switching rates, November 7, 2025, available at https://terminalrailroadstl.odoo.com/web/content/4736?unique=f82e2a9a93452e26a76da5ec0ed33429e635e06c&download=true (East St. Louis switching limits include CSX Rose Lake Yard; track connections with CSX).

[78] See Mid-America Freight Coalition, "CSX East St. Louis, IL," available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-east-st-louis-il; CSX Intermodal Terminals, Inc., "Terminal Detail: East St. Louis, IL."

[79] See St. Louis Regional Freightway, "Intermodal Terminals & Manifest Terminals"; Mid-America Freight Coalition, "CSX East St. Louis, IL," Rail Network Inventory – Intermodal Facilities, available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-east-st-louis-il/.

[80] See Mid-America Freight Coalition, "CSX East St. Louis, IL," available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-east-st-louis-il/ (Rose Lake Yard located on the St. Louis Line Subdivision; part of CSX's Southeastern Corridor with gateways in Chicago, St. Louis, and Memphis); Mid-America Freight Coalition, "CSX Indianapolis, IN," available at https://midamericafreight.org/index.php/rfs/network-inventory/rail/intermodal-facilities/csx-indianapolis-in/ (Indianapolis Terminal Subdivision connects to the St. Louis Line just outside the Avon facility).

[81] See St. Louis Regional Freightway, "Intermodal Terminals & Manifest Terminals."

- Freight Volumes: The facility handles both domestic and international intermodal container freight, averaging an annual volume of 60,000 to 70,000 lifts.[82]
- Flow Types: While the facility generates and terminates local regional freight, through-traffic (manifest and intermodal trains passing through the St. Louis gateway to western carriers) constitutes the vast majority of total rail flows.

2. Bundling

As discussed in Section IV C, I conducted an analysis to assess the potential risk of an anticompetitive bundling strategy by a combined UPNS.

To begin my work, I identify sole-served railroad customers through a multi-step process combining railroad discovery materials, the SCRS database, 2023 railroad traffic tapes, and geographic analysis. The process begins by standardizing customer names and incorporating Norfolk Southern's (NS) discovery classifications, treating customers designated "LOCAL" as initially sole-served unless traffic tape evidence indicates competitive service. For customers not resolved by the discovery file (UP produced no comparable list), I apply three sequential tests: (i) whether the customer is served by only one railroad based on its CIF13 identifier; (ii) whether the associated station FSAC is consistently designated as closed access; and (iii) whether the station is located more than 1.5 miles from another railroad. Additional sole-served customers are identified using traffic tape evidence of exclusive railroad service at origin or destination, supplemented by CSXT-provided customer-access data. Potential sole-served short-line locations are separately evaluated based on whether the short-line connects exclusively to a single Class I railroad, including manual map network and trackage-rights checks.

I subsequently validate and refine the preliminary sole-served lists by removing customers with evidence of competitive service, including duplicate classifications across railroads, competitively served Wyoming coal mines, certain Virginia/Maryland ports, Canadian locations, and any customers Dr. Bailey identifies as 3-to-2 or 2-to-1. Automotive facilities receive a separate assessment of competition, generally based on the availability of alternative automotive terminals within 250 miles in the U.S., while Mexican automotive facilities are evaluated based on direct accessibility by both KCSM and FXE. IM traffic is treated as competitive despite a limited number of terminals lacking nearby alternatives (given their minimal relevant traffic with Eastern U.S. railroads). The resulting consolidated dataset identifies sole-served customers by railroad and location, using multiple independent data sources and validation checks to minimize the inclusion of customers with existing competitive alternatives.

For a more detailed discussion of the sole serve identification process, see the document Carey HC-WP-Sole Serve Process and Identification.docx.

Figure 13 below presents the total revenue of the Top 150 UPNS common merchandise customers.

Figure 13: Top 150 UPNS Merchandise Common Customers, Total Revenue ($MM, 2023)[83]

{{

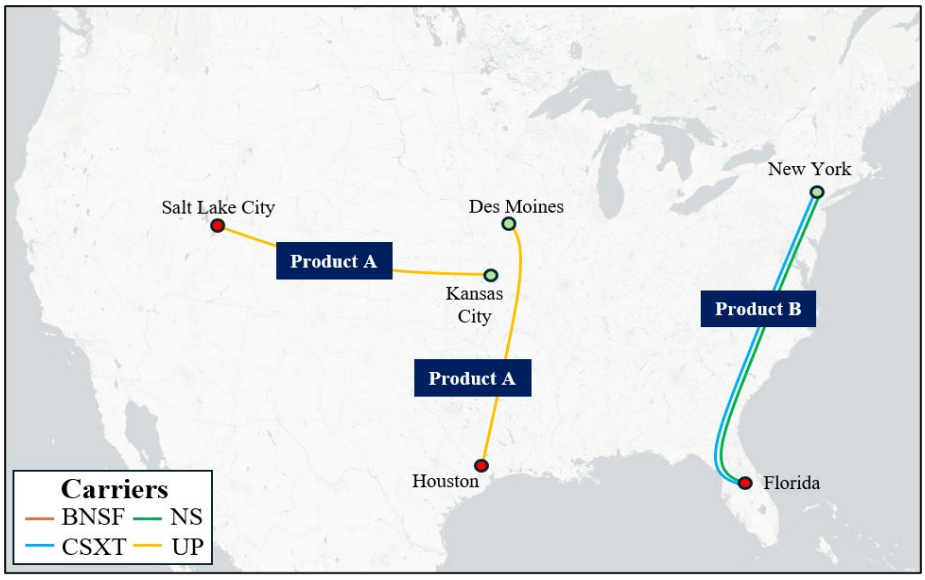
[82] See St. Louis Regional Freightway, "Intermodal Terminals & Manifest Terminals."

[83] Carey HC-WP-Bundling.xlsx.

{{

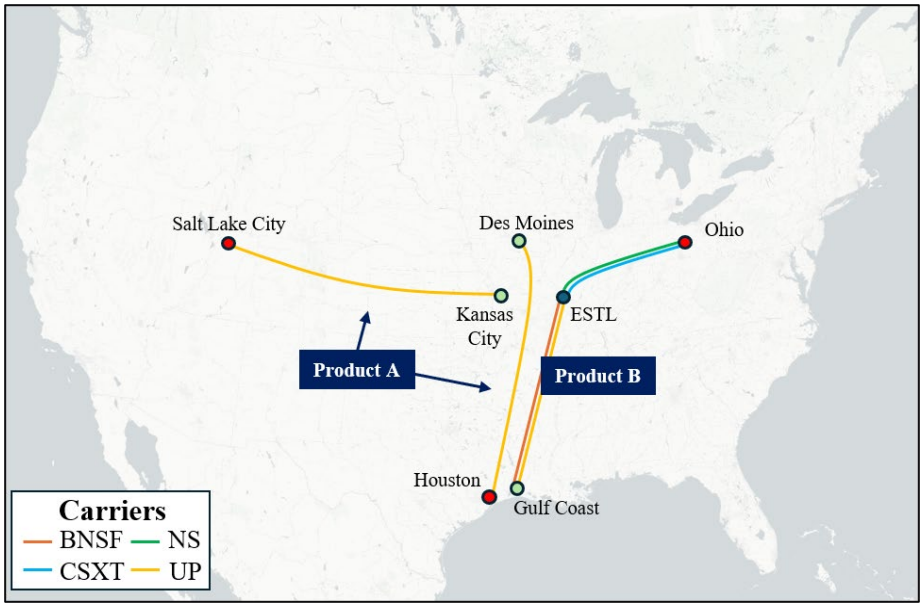
To illustrate the potential different traffic moves that a combined UPNS can use in a bundling strategy I developed a few figures. First is an Eastern bundling strategy where post-transaction, UPNS could induce a dual-served customer in the East to use its service for competitive traffic (Product B) by offering a discount on rates for that customer's sole-served traffic (Product A). The second strategy shown at Figure 15 is similar but involves the Eastern U.S. transcon interline segment from the Gulf Coast via East St. Louis to Ohio as Product B. This example involves the same bundling and pricing strategy as the first example, as applied from the Gulf Coast where there is ineffective competition between UP and BNSF. Post-transaction, UPNS could condition a discount on the sale of sole-served moves (Product A) on the use of UPNS for dual-served traffic (Product B).

Figure 14: Illustration of Eastern U.S. O/T Bundling Strategy[84]



[84] All other locations and moves on UP or NS's network could be used as Product A in this illustration.

Figure 15: Illustration of Eastern U.S. Transcon Interline Segment Bundling Strategy[85]



Eastern U.S. origination/termination ("O/T") CSXT customer bundling risk

To investigate a potential bundling strategy that UPNS can implement against shippers that also rely on CSXT, I analyzed the common customers that a combined UPNS has with CSXT. Specifically, Figure 16 below presents this revenue in context with CSXT's revenue with these same customers. UPNS has about {{ }} the revenue with common customers that CSXT has.

Figure 16: Top 150 UPNS Merchandise Common Customers, Total UPNS Revenue Compared to CSXT Revenue ($MM, 2023)[86]{{

REDACTED

}}

Figure 17 below presents totals for UPNS Eastern O/T traffic, which presents a CSXT customer bundling risk. The revenue is drawn from the largest 150 merchandise common customers exposed to bundling.[87] The UPNS total of {{REDACTED}} sole-served revenue represents both UP and NS transcon and East O/T or West O/T revenue for the top 150 common merchandise customers exposed to bundling risk. The competitive harm that can be effectuated by a bundling pricing strategy is approximately {{REDACTED}}.[88]

The {{REDACTED}} in CSXT Eastern U.S. dual-served revenue includes any Eastern U.S. moves in which either the origin or destination is CSXT dual-served.[89] As Figure 17 below shows, the

[85] Due to the ineffective competition, the movement from Gulf Coast to Ohio could be considered as Product A in this illustration.

[86] Carey HC-WP-Bundling.xlsx.

[87] This means that the conditions for bundling are met.

[88] I.e. a strategy involving UPNS's common customer traffic where those customers have both sole-served UPNS locations and CSXT eastern dual-served customers.

[89] Carey HC-WP-Bundling.xlsx. This traffic is mostly dual- to dual-served moves involving CSXT.

top 5 commodity products represent approximately {{ }} of risk of harm to CSXT and include chemicals, auto, primary metals, pulp/paper, and food.[90]

Figure 17: Eastern U.S. O/T Bundling Risks of Harm to CSXT from UPNS Common Merchandise Customers Post-Transaction, By Commodity[91]{{

REDACTED

}}

The following figure (Figure 18) shows the top 10 CSXT customers with risk of harm from Eastern U.S. O/T bundling. The top 10 customers together account for approximately {{ }} of the total potential harm to CSXT,[92] including customers across primary metal products, auto, pulp/paper products, chemicals and food.

Figure 18: Eastern U.S. O/T Bundling Risks of Harm to CSXT Merchandise Customers Post-Transaction, Top 10 Customers[93] {{

REDACTED

}}

[90] {{REDACTED }} Carey HP-WP-Bundling.xlsx.

[91] Carey HC-WP-Bundling.xlsx.

[92] {{REDACTED }} Carey HP-WP-Bundling.xlsx.

[93] Carey HC-WP-Bundling.xlsx.

Eastern U.S. transcon interline CSXT customer bundling risk

Figure 19 below presents the total Eastern U.S. CSXT transcon interline customers subject to bundling risk. The UPNS total of {{REDACTED}} sole-served revenue is combined UP and NS transcon and East O/T or West O/T revenue.[94] The competitive harm to CSXT customers that can be effectuated by a pricing strategy involving UPNS's traffic for common customers that have both sole-served UPNS locations and CSXT transcon dual-served customers is approximately REDACTED}}.[95]

For the approximately {{REDACTED}} involving CSXT transcon dual-served revenue,[96] as shown in Figure 19 below, the top 3 commodity products represent approximately {{ }} of risk of harm to CSXT[97] and include chemicals, auto and food.

Figure 19: Eastern U.S. Transcon Interline Segment Bundling Risks of Harm to CSXT from UPNS Common Merchandise Customers Post-Transaction, By Commodity[98] {{

REDACTED

}}

The following table shows the top 10 customers with risk of harm to CSXT from Eastern U.S. Transcon Interline segment bundling. The top 10 customers together account for approximately {{ }} of the total potential harm to CSXT.[99]

Figure 20: Eastern U.S. Transcon Interline Segment Bundling Risks of Harm to CSXT Merchandise Customers Post-Transaction, Top 10 Customers[100] {{

[94] Again, using the largest 150 merchandise UPNS common customers exposed to bundling.

[95] With analysis of only a modest rate increase required. Carey HC-WP-Bundling.xlsx.

[96] Carey HC-WP-Bundling.xlsx. This traffic is mostly dual- to dual-served moves and predominantly CSXT-UP.

[97] {{REDACTED }} Carey HP-WP-Bundling.xlsx.

[98] Carey HC-WP-Bundling.xlsx. CSXT Transcon Dual Serve excludes approximately {{REDACTED}} in CSXT-BNSF Transcon moves where BNSF origin or termination location is BNSF sole-served.

[99] {{REDACTED }} Carey HP-WP-Bundling.xlsx.

[100] Carey HC-WP-Bundling.xlsx.

REDACTED

}}

2.1. Contract Examples

A combined UP and NS would have an ability to use multi-location contracts that are commonplace to effectuate a bundling strategy. Below are a few examples and the rest are in the HC-Carey WP rail contracts.doc.

2.1.1. Confidential Rail Example 1

{{REDACTED

[101] Carey HC-WP All_sole_customers_final.xlsx

REDACTED

}}

1.1.1. Confidential Rail Example 2

{{REDACTED

[102] Carey HC-WP All_sole_customers_final.xlsx

REDACTED

REDACTED

REDACTED

REDACTED

}}

1.1.1. Confidential Rail Example 3

{{REDACTED

REDACTED

}}

[103] Carey HC-WP All_sole_customers_final.xlsx

2. Reduced Independent Rail Options

Below, I investigate the reduced rail options involving UP customers with CSXT and NS rail options for large customers in the largest commodity sectors that rely on Transcon service. These are transport equipment, IM, chemicals, and food sectors. As discussed below all these customers face reduced independent rail options from a combined UP and NS.

For the auto/transportation equipment sector, many of today's Transcon customers that use UP in the West (red dots) have two independent rail options in the Eastern U.S. (blue CSXT and green NS), as shown in Figure 21 below.[104] These traffic moves involve {{REDACTED}} in revenue.[105] In the West, substantial traffic volumes are either sole-served UP areas or located where BNSF is unable to effectively compete today (Mexico, Texas, Louisiana, Northern California).[106]

In the East, a substantial consolidation of auto traffic involves the Conrail joint area in Michigan where today CSXT and NS are competitive. Other transport equipment rail services exist at the many locations scattered through the Eastern system (Northeast and Southeast) where CSXT and NS compete head-to-head. Much of the Northern traffic would be interchanged at East St. Louis or Chicago with both CSXT and NS having strong rail route options available today for these Eastern U.S. customers.

Figure 21: UP Transcon with Dual-Served CSXT and NS Locations Shipper Rail Options for STCC 37 (Transport Equipment) [107]**{{**

REDACTED

}}

UP transport equipment customers that use these Chicago and St. Louis gateways have optionality today to use CSXT or NS, two independent rail options. Specifically, {{REDACTED}}

[104] The figure shows all UP customers with carloads of traffic moves to CSXT and NS dual-served locations.

[105] Carey HC-WP-Shipper_Rail_Options.xlsx

[106] { REDACTED

} See Competitive Imbalance Section and Appendix for demonstration of inferior longer routes on BNSF owned rail lines and ineffective UPSP trackage conditions.

[107] Carey HC-WP-Shipper_Rail_Options.xlsx

is interchanged at the St. Louis or Chicago regions.[108] This Eastern U.S. rail optionality is observable from Figure 22 below which is a close-up map of the Eastern U.S. with highlights the robust rail optionality in the Eastern U.S. from major midcontinent gateways (ESL and Chicago and others) that exists today.

Post-Transaction transport equipment sector customers face reduced independent rail options from these interchange gateways to the many Eastern locations served by CSXT and NS today. Many of these customers would have insufficient rail options with just UPNS exclusive single line or UP with CSXT (i.e. a dependent interline). UP competing against itself is not a winning proposition for shippers who would have no entirely independent rail option to a combined UPNS.

Figure 22: Eastern US Shipper Rail Options for UP Transcon Dual-Served CSXT and NS Locations, STCC 37 (Transport Equipment) {{

REDACTED

}}

Chemical customers are another major shipper group that faces a substantial reduction in independent rail options in the Eastern U.S. from a combined UP and NS. These chemical-related Transcon traffic moves represent {{REDACTED}}in revenue.[109] As shown in Figure 23 below for UP Western moves involving customers with 2 rail options in the East, the majority of chemical traffic is sourced on the US Gulf Coast which contains large amounts of many distinct chemical products. In addition, UP traffic moves also include a modest pocket of unique chemical soda ash in Utah and a smattering of chemical products in the Midwest. As I discuss below and elsewhere in my VS[110], many of these chemical customers who benefit from two independent rail options in the Eastern U.S. are dependent on UP today due to the ineffective competition in the Gulf Coast region.

[108] Carey HC-WP-Shipper_Rail_Options.xlsx.

[109] Carey HC-WP-Shipper_Rail_Options.xlsx. Traffic revenue for UP sole-served or ineffective competition customers with moves involving CSXT and NS dual-served locations.

[110] See Section VII – Specific At-Risk Areas: Gulf Coast and Beyond.

Figure 23: Reduced Shipper Rail Options for UP Transcon (Sole-Served or Ineffective Competition) with Dual-Served CSXT and NS Locations, STCC 28 (Chemicals) [111] {{ REDACTED

}}

The many Eastern U.S. customers who rely on UP for transcon service for essential chemical products would lose the rail optionality available today, and eliminate the independent Eastern U.S. rail option from the key midcontinent gateways of New Orleans, St. Louis, and Chicago shown in a close-up map in Figure 24 below. A substantial amount of chemical traffic today involves the New Orleans or St. Louis interchange areas, about {{REDACTED}} and {{ }} [112], respectively.

[111] Carey HC-WP-Shipper_Rail_Options.xlsx.

[112] Carey HC-WP-Shipper_Rail_Options.xlsx

Figure 24: Eastern US Shipper Rail Options for UP Transcon (Sole-Served or Ineffective Competition) Chemical Products with Dual-Served CSXT and NS Locations, (STCC 28){{
REDACTED

}}

This extensive Eastern U.S. rail optionality disappears tomorrow with a combined UP and NS where chemical customers are left with either UPNS exclusive single-line or UP with CSXT and no entirely independent rail option.

Intermodal customers that use UP in the West for transcon service also often have two independent rail options in the Eastern U.S. today, as shown in Figure 25 below. [113] These traffic moves involve {{REDACTED}}revenues.[114] The Eastern customers are fairly spread out among locations with a bit more density in the rust belt (Ohio, Indiana, Michigan), NY/NJ/PA, Atlanta, GA and Jacksonville, FL. Substantial IM traffic is interchanged at Chicago ({{REDACTED }}revenues where CSXT and NS heavily compete. Traffic moves between the Southwest and Southeast regions observe competition through the Memphis gateway where both CSXT and NS reach and Shreveport where NS accesses. Tomorrow's IM sector customers lose the rail optionality for multiple independent railroad options, including where there is competition between interchange gateways.

[113] The figure shows all UP customers with traffic moves to CSXT and NS dual-served locations.

[114] Carey HC-WP-Shipper_Rail_Options.xlsx.

Figure 25: Reduced Shipper Rail Options for UP Transcon with Dual-Served CSXT and NS Locations, STCC 46 (Intermodal Mixed Shipments)[115] {{

REDACTED

}}

Food and kindred customers that use UP in the West for transcon service also often have two independent rail options in the Eastern U.S. today, as shown in Figure 26 below. [116] These traffic moves involve {{REDACTED}} revenues.[117] The eastern customers are fairly spread out among locations with a bit more density in the rust belt (Ohio, Indiana, Michigan) NY/NJ, Atlanta GA. The majority of food/kindred products are interchanged at Chicago, with {{REDACTED}} revenues where CSXT and NS heavily compete.

With a combined UP and NS, many food and kindred sector customers are left with either UPNS exclusive single-line or UP with CSXT resulting in no entirely independent rail option to UPNS. In the West, substantial traffic volumes are either sole-served UP areas or located in Northern California (and a lesser extent in Texas) where BNSF is unable to effectively compete.[118] The rail optionality available today for shippers going through Chicago and other gateways vanishes with a combined UPNS.

[115] Carey HC-WP-Shipper_Rail_Options.xlsx.

[116] The figure shows all UP customers with carloads of traffic moves to CSXT and NS dual-served locations.

[117] Carey HC-WP-Shipper_Rail_Options.xlsx

[118] {{REDACTED}}. See Appendix 5 – Specific At-Risk Areas Gulf Coast and Beyond.

Figure 26: Reduced Shipper Rail Options for UP Transcon with Dual-Served CSXT and NS Locations, STCC 20 (Food or Kindred Products) [119] {{

REDACTED

}}

The above discussion highlights four large, affected customer groups from a combined UPNS that are located in the Eastern U.S. However, there are many other types of customers impacted.

- **Eastern customers in other commodities are also affected:** primary metal products, petroleum/coal products, pulp/paper/allied, lumber/wood products, and coal respectively.[120] Cumulatively these commodities involve {{REDACTED}} in revenue for Transcon service for traffic movements between UP to CSXT/NS dual-served customers.[121] The most significant interchange location for these customers, Chicago, comprises {{REDACTED}} in revenue, where CSXT and NS both serve. All interchange locations for these commodities comprise {{REDACTED}} in revenue.[122]
- **Western customers** also face reduced independent rail options for BNSF-NS traffic moves.

Interline Pre and Post Transaction

UPNS Has No Incentive or Necessity to Maintain Efficient Interline Routes

To highlight the substantial nature of transcon interline traffic today, in 2023, interline revenue averaged approximately {{ }} of total merchandise revenue across all US Class 1 railroads.[123] This statistic shows the high interdependency of Class 1 railroads in today's network

[119] Carey HC-WP-Shipper_Rail_Options.xlsx.

[120] STCC 33, 29, 26, 24, and 11.

[121] Carey HC-WP-Shipper_Rail_Options.xlsx.

[122] Carey HC-WP-Shipper_Rail_Options.xlsx.

[123] Carey HC-WP Combined_Interline_Analysis.xlsx. Approximately {{ }} for combined merchandise and IM revenue. Interline moves exclude traffic interchanged with short lines

balance. It also signifies the benefits to individual customers' railroads, the sector and the overall economy from collaborations made possible with a balanced competitive landscape,

> UP and NS's current interline revenue for merchandise traffic is approximately {{REDACTED }} of total revenue. However, the percentage of Class 1 interline traffic could drop to {{ }} or less if combined.[124] The same order of magnitude impact can be expected for IM and merchandise traffic.[125]

In short, UPNS could go it alone for a significant amount of traffic and no longer need other railroads.

[124] See Carey HC-WP Combined_Interline_Analysis.xlsx. Analysis based on each railroad's 2023 total revenue for merchandise traffic. UP portion of CSXT interline and NS portion of BNSF interline moves are assumed single line, and CSXT s pre-Transaction interline revenue with UP as well as BNSF's pre-Transaction interline revenue with NS is assumed diverted.

[125] Post Transaction UPNS interline revenue for IM and merchandise may be a {{REDACTED }} of its business, reducing it from {{REDACTED }} by converting all potential interline to single line service. Carey HC-WP Combined_Interline_Analysis.xlsx.

Appendix 5 – Specific At-Risk Areas: Gulf Coast and Beyond

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1. Overview

The below Appendix presents information on specific at-risk areas affected by the UPNS Transaction, including the Gulf Coast, short lines and terminal railroads, ports, Mexico, and others.

2. Gulf Coast

As discussed in my VS, the Gulf Coast is a major chemical production hub, and certain 7-digit commodities are produced almost entirely in that region (*see* Figure 1 below). UP's stronghold in the Gulf Coast raises concern for foreclosure of interline traffic with the Eastern U.S. post-Transaction.

Figure 1: Chemical Products (STCC 28) with Eastern Destinations (2023) 7-Digit STCCs with 90% or More Units (Carloads + IM Units) Originating in the Gulf Coast[1] {{

REDACTED

}}

As discussed in Section VII of my VS, UP originates {{ }} of Gulf Coast rail movements involving chemical products with Eastern destinations.

Figure 2: Chemical Products Where 50% or More of the Eastern-Terminating Volumes Originate in the Gulf Coast (Aggregate 2023 Carloads + IM Units)[2] {{

REDACTED

}}

For chemical moves with UP-CSXT interline customers in the Gulf Coast, I estimate that eliminating customer-level discounts and increasing UPNS's average rail rates on its sole-served moves (i.e. mostly O/T on UP's network) would only take approximately {{ }}, in order to

[1] Carey HC-WP-GC_Chem_Analysis.xlsx.

[2] Carey HC-WP-GC_Chem_Analysis.xlsx.

foreclose the majority of CSXT's {{ REDACTED }} in revenue for this group of customers as shown in Figures 3 and 5 below. This is possible due to UP's substantial chemical volumes unrelated to transcon moves, as shown below.[3]

Figure 3: Traffic Affected by UPNS Foreclosure of CSXT Interline Dual-Served Chemicals Traffic (STCC 28), 2023[4] {{

REDACTED

}}

Figure 4: 2023 UP Non-Transcon Chemical Moves (STCC 28)[5] {{

REDACTED

}}

[3] The linehaul revenue is used in the analysis. Other revenue generally reflects additional costs passed through such as fuel surcharge, but which are not necessarily accurately accounted for in the STB URCS variable cost.

[4] {{ REDACTED }} of [c] is Gulf Coast traffic. *See* Carey HC-WP_Chem_Foreclosure_Analysis.xlsx.

[5] Carey HC-WP_Chem_Foreclosure_Analysis.xlsx.

Figure 5: Aggregate Rate Increase by UPNS to Foreclose CSXT Competition for Chemicals Traffic (STCC 28), 2023 UP-CSXT Interline Chemicals Customers to/from UP Sole-Served or Locations with Ineffective Competition to/from Dual-Served CSXT Locations[6] {{

REDACTED

}}

As mentioned in the body of my report, Figure 6 below shows revenue associated with 50/10 failures in the Gulf Coast region, and the CLA failures associated with that traffic. The vast majority of traffic that fails the 50/10 screen in the Gulf Coast also fails the CLA.

Figure 6: Gulf Coast 50/10 Failures and CLA Failures, Revenue ($MM), 2023[7]{{

REDACTED

}}

[6] Carey HC-WP-GC_Chem_Foreclosure_Analysis.xlsx.

[7] Carey HC-WP_Source_&_Desti nation_Competition.xlsx

2.1. Customer Level Discounts

Customer level discounts and multi-location contracts in agreements may be used in an foreclosure strategy. Below are a few examples of customer level discounts. Examples of multi-location contracts are reported in Appendix 4 and additional contract examples are in the HC-Carey WP rail contracts.doc.

2.1.1. Example 1

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REDACTED

}}

2.1.2. Example 2

{{ REDACTED

REDACTED

}}

2.1.3. Example 3

{{REDACTED

[8] {{REDACTED }}

REDACTED

}}

2.1.4. Example 4

{{ REDACTED

}}

2.1.5. Example 5

{{REDACTED

}}

2.1.6. Example 6

{{REDACTED

[9] {{ }}

REDACTED

}}

2.1.7. Example 7

{{REDACTED

}}

2.1.8. Example 8

{{REDACTED

}}

2.1.9. Example 9

{{REDACTED

}}

3. BNSF Cannot Replace UP Routes for Eastern Railroads' Transcon Service

UPNS experts claim that BNSF would readily replace UP with CSXT, so there would be no harm to competition. For example, Dr. Israel states "[t]he other theory of harm requires that BNSF and CSX (the non-merging railroads) legs are systematically less compatible with one another (in providing interline service) than are other combinations. I know of no evidence that this is true, and, given that eastern and western railroads all interchange at common gateways, it is unlikely to hold, meaning this theory is also ill-suited to the railroad industry."[10] I discuss concerns with vertical foreclosure risk in Section IV. Here, I focus on the routing-related claims.

First, many UP-CSXT and UP-NS shippers are unable to substitute BNSF for UP. They face UP sole-served or ineffective competition in the West and two independent railroad options in the East (CSXT and NS). Post-Transaction, shippers would have two options, including (1) UPNS single-line, and (2) a dependent interline option of UP-CSXT.

Second, UP is a highly successful transcon service provider, and more so than BNSF, particularly as a CSXT partner, as depicted in Figure 7 below with recent traffic density of UP-CSXT (left chart) and BNSF-CSXT (right chart).

Figure 7: Traffic Density for CSXT Transcon Service with UP and BNSF, By Route[11]

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The UP-CSXT figure (on left) highlights the UP routes across the vast Western region. Notably, two of the key UP routes with large density—Dallas-St. Louis and Houston-New Orleans—that are efficient, direct routes with fewer miles that carry substantial regional traffic to interchange with CSXT in the East. These routes are unique to UP.

BNSF (right chart above) demonstrates that it has no comparable routes with owned rail lines and it has trivial volumes over the advantaged-UP routes (Dallas-St. Louis and Houston-New

[10] Israel Amended VS at p. 21.

[11] Provided by client.

Orleans) where it was granted trackage rights as a condition of the UPSP merger.[12] Despite being the shortest, most direct routes for certain Gulf Coast traffic, BNSF has been largely unsuccessful in competing with UP for transcon traffic.[13]

The lack of BNSF volumes on these UP routes supports the conclusion that ineffective competition resulted from the UPSP trackage rights merger conditions. The UP-advantaged routes are consistent with the economics of revealed preferences that we observe through the very high interline traffic for CSXT with UP. In other words, observed behavior and self-selection to use these routes in these circumstances demonstrate their preference for the UP-CSXT routing (as well as UP-NS).

The dependency of BNSF's network on UP trackage from the UPSP merger conditions is observable by a map that solely depicts the owned BNSF rail lines, as shown in Figure 8 below (left) as compared to a map that includes the lines dependent on UPSP merger conditions (right).

Figure 8: BNSF Owned Railroad Lines vs its Network with UPSP Trackage and Other Agreements[14]



There are large observable gaps in the BNSF rail network throughout the Gulf Coast, including in Texas and Louisiana, as well as in Arkansas and Missouri that impede traffic moves to the East through the major gateways (New Orleans, Memphis/St. Louis, and Chicago) and the

[12] "BNSF will receive approximately 3,968 miles of trackage rights over UP/SP (1,727 miles on UP and 2,241 miles on SP) … The trackage rights that BNSF will receive include rights extending between Oakland, CA, and Denver, CO, between Houston (Algoa), TX, and Brownsville, TX, between Houton, TX, and Iowa Junction, LA, and between Houston, TX, and Bridge Jct., AR (just west of Memphis, TN)." Decision No. 44, STB FD No. 32760, Union Pacific—Control and Merger—Southern Pacific Rail, August 6, 1996, at p. 17, available at https://www.uprr.com/aboutup/history/decision.pdf.

[13] "[W]e [the STB] are expanding BNSF's access to certain traffic moving from and to Lake Charles, West Lake Charles, and West Lake." BNSF also received trackage rights between Houston and Bridge Junction, AR, which is just west of Memphis, TN. Decision No. 44, STB FD No. 32760, Union Pacific—Control and Merger—Southern Pacific Rail, August 6, 1996, at pp. 12 and 17, available at https://www.uprr.com/aboutup/history/decision.pdf.

[14] Decision No. 44, STB FD No. 32760, Union Pacific—Control and Merger—Southern Pacific Rail, August 6, 1996, at p. 21, available at https://www.uprr.com/aboutup/history/decision.pdf. Part of UPSP trackage rights granted to BNSF is now part of a UP-BNSF joint line between TX-LA. *See* Decision, STB FD No. 33630, The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company—Acquisition Exemption—Lines between Dawes, TX, and Avondale, LA, September 29, 1998. *See also* U.S. Department of Transportation, "North American Rail Network Lines," available at https://geodata.bts.gov/datasets/usdot::north-american-rail-network-lines/about.

midcontinent area connecting Northern California, Nevada, Utah, and Colorado.

To understand the economic implications of the Proposed Transaction in this context, since the mid-1990s, UP has had an undue advantage in its network arising from inadequate trackage conditions from the UPSP merger. This has enhanced its ability to achieve and maintain its position in the key Gulf Coast geographic area.

The long-term dynamic effect of such ineffective merger conditions since 1996 has resulted in substantially one-sided investment in UP's chemical supply chain from its large chemical customers and advantaged network,[15] which has led to and exacerbated ineffective competition in the Gulf Coast today. First, BNSF has claimed that UP deliberately impedes BSNF's operation rights in the Gulf Coast by engaging in discriminatory dispatching that violates the requirement to provide equal dispatching to BNSF.[16] This claimed discriminatory dispatching means that UP's trains are prioritized over BNSF's trains (that may be otherwise obstructed by UP), which confers a competitive benefit to UP over BNSF. Additionally, there are capacity and capital investment limitations on incremental traffic for competitors. For instance, at the end of the rail line from the Gulf Coast to Corpus Christi at Angleton Subdivision, BNSF lacks a classification yard and therefore has insufficient capacity to accommodate competitor traffic. [17] Moreover, the trackage rate that BNSF pays to UP is high relative to the UP rate, which causes customers to favor using UP over BNSF. [18] Therefore, with regard to CSXT's partnership with UP for interline service on Gulf Coast chemical traffic moves, there are spillover effects from the preexisting ineffective competition from UPSP trackage conditions that would be exacerbated by a UPNS Transaction.

Transcon traffic would be impacted by this Transaction. In short, CSXT should be able to turn to BNSF as a potential interline partner and alternative but cannot. The Gulf Coast, which produces approximately 80% of the nation's primary petrochemicals and ships more than $117 billion in chemical products annually from Texas alone, is one of the most critical energy hubs in the world.[19]

In total, BNSF has about 4,000 miles of trackage rights granted from the UPSP merger and the joint line.[20] Despite this significant condition to help BNSF compete with UP, with regard to

[15] UP claims it has the best Gulf Coast network in the industry serving the chemical sector and touts itself as the premier SIT network, with 2X the capacity of the next largest railroad. UP has invested a massive $3.1B in the past 10 years in the Gulf Coast chemicals sector, leading to more than 28% growth from 2015-2025. UP, "Investor Pitchbook," November 2026, available at https://investor.unionpacific.com/static-files/b5a6e0dc-550e-4305-90b2-fc930350533d at p. 37.

[16] BNSF Railway Company's Petition for Review, Enforcement, and Modification of the UP/SP Merger Conditions, STB FD No. 32760 (Sub-No. 52), BNSF Railway Company—Petition for Review—UP/SP Merger Conditions, November 28, 2025 at pp. 22-27 and associated exhibits requiring UP to provide equal dispatch.

[17] The connection between BNSF Railway and Angleton, Texas primarily involves regional rail junctions and nearby industrial corridors where BNSF tracks and trackage rights interface with the UP Angleton Subdivision and local chemical and logistics facilities. *See* Trains.com, "Union Pacific to build a branch line to reach Texas petrochemical plant served by BNSF," September 25, 2025, available at https://www.trains.com/pro/freight/class-i/union-pacific-to-build-branch-line-to-reach-texas-petrochemical-plant-served-by-bnsf/; Geography Tool Shed, "Angleton/Galveston (BNSF) Junction," obtained on November 13, 2026, available at https://geography.brucemyers.com/rails/feature/4585.

[18] BNSF has claimed that UP has attempted to drive up the cost of its access to the rail network through rate increases on trackage, haulage, and switching rights from the UP/SP merger conditions. *See* BNSF Railway Company's Petition for Review, Enforcement, and Modification of the UP/SP Merger Conditions, STB FD No. 32760 (Sub-No. 52), BNSF Railway Company—Petition for Review—UP/SP Merger Conditions, November 28, 2025 at pp. 8-9.

[19] Houston Energy Transition Initiative, "Recap and Key Takeaways: Strengthening the Gulf Coast's Competitiveness in Energy and Chemicals," obtained on November 13, 2026, available at https://htxenergytransition.org/newsroom/key-takeaways-gulf-coast-competitveness-energy-chemicals/.

[20] Decision No. 44, STB FD No. 32760, Union Pacific—Control and Merger—Southern Pacific Rail, August 6, 1996, at p. 17, available at https://www.uprr.com/aboutup/history/decision.pdf.

traffic with CSXT, substantial UP traffic but trivial BNSF traffic materialized over those exact routes, as shown above in the CSXT density maps and Figure 9 below for the CSXT-BNSF map with arrows marking the specific UPSP granted access (showing a dearth of traffic volumes).

Figure 9: Traffic Density for CSXT BNSF Transcon, with UPSP Granted Trackage/Joint Line[21] {{

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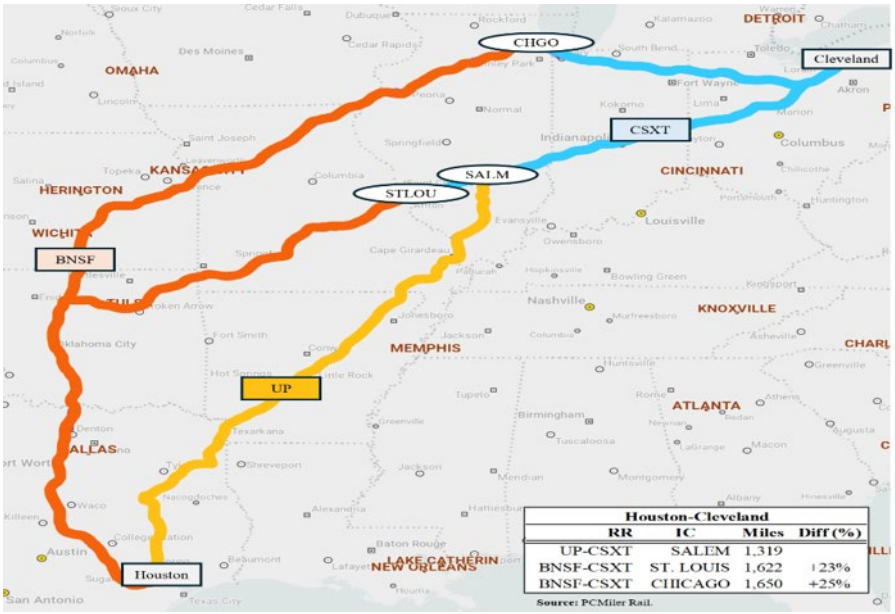
Using BNSF's owned rail lines in each of the areas where trackage rights exists would require traffic to be moved via inefficient circuitous routes. As an example from the Houston area, instead of heading East, BNSF would move West through Dallas before moving North and eventually East.

Substantially longer route distances on BNSF's owned rail network vs UP's routes between Houston and Salem and Chicago interchanges by as much as 23-25% more miles (as shown in Figure 10 below) demonstrate the inadequacy of the BNSF-owned rail network to compete. Longer routes of this order of magnitude would result in substantially slower and less competitive rail service.[22]

[21] Provided by client.

[22] *See* Appendix 2 – Current and Future Competitive Balance for additional examples.

Figure 10: UP vs BNSF with CSXT Route Miles from Houston to Cleveland, via Chicago and Salem, IL Gateways[23]



In addition to routes North out of Texas to Northern interchange gateways, the joint line ownership of UP/BNSF between Houston-New Orleans, which also shows ineffective competition in the Gulf Coast today, is not serviceable by BNSF with its own network that relies on the joint line.[24] Similarly, the vast Mountain region lacks independent BNSF rail lines, impacting routes from Northern California through Utah and Denver, and the Midwest where BNSF relies exclusively on UPSP trackage rights from UPSP merger conditions.[25] Lastly, BNSF has no independent rail line for traffic between Mexico through Texas (via Houston to Laredo or Eagle Pass).[26]

Indeed, UP frequently touts the speed of service on routes out of Mexico as a large advantage of its network, and on its website claims the shortest and fastest route between Mexico and Chicago that also offers daily service,[27] which is the same route shown above that UP uses for Gulf Coast traffic (and BNSF UPSP trackage rights).

BNSF's leg of an interline route does not need to be "systematically less compatible" as Dr. Israel suggests[28] but instead, can have issues on specific corridors (as is observed from the BNSF-CSXT interline traffic moves).

[23] Routes from PC Miler Rail.

[24] Any traffic moves involving more southern Texas locations and Mexico, where UPSP trackage rights were also granted south of Houston down to Corpus Christi as well as between San Antonio and Eagle Pass would be similarly disadvantaged. Decision No. 44, STB FD No. 32760, Union Pacific—Control and Merger—Southern Pacific Rail, August 6, 1996, at p. 258, available at https://www.uprr.com/aboutup/history/decision.pdf.

[25] Decision No. 44, STB FD No. 32760, Union Pacific—Control and Merger—Southern Pacific Rail, August 6, 1996, at p. 258, available at https://www.uprr.com/aboutup/history/decision.pdf.

[26] Decision No. 44, STB FD No. 32760, Union Pacific—Control and Merger—Southern Pacific Rail, August 6, 1996, at p. 260, available at https://www.uprr.com/aboutup/history/decision.pdf.

[27] UP, "How to Ship by Rail," obtained on November 13, 2026, available at https://www.up.com/shipping/how-to-ship-by-rail.

[28] Israel Amended VS at p. 21.

For chemical traffic originating in Texas and Louisiana that uses UP-CSXT interline moves today and approximates {{REDACTED }}[29] the UP portion of these moves are {{REDACTED }} in revenue.[30] In addition, UP-CSXT interline traffic moves involving Mexico through Southern Texas, as well as Northern California through Utah and Denver, are all similar in that they have no direct routing option independent of UP, which represents approximately {{REDACTED}} in CSXT revenue for UP-CSXT interline.[31] The UP portion of these moves are {{REDACTED }} in revenue.[32]

Moreover, as discussed in my VS, interchange locations are heavily dependent on UP, which influences the competitive dynamic post-Transaction, removing UP's incentive to work collaboratively with CSXT where it has the ability to degrade service and raise its rivals' costs.[33]

BNSF has discussed ways in which the UPSP trackage conditions impede competition, including creating operational challenges, such as UP prioritizing its own trains and other aspects. For example:

> "Among other things, over the past three decades, UP has denied BNSF access to customers through a variety of delay and deny strategies, reducing the options available to those customers. In addition, UP has imposed unreasonable operational demands that make it harder for BNSF to exercise its rights and have refused to engage in the administrative maintenance – such as updating trackage rights agreements and granting new ones – necessary to ensure the [Restated and Amended Settlement Agreement]'s conditions are effective and enduring."[34]

> "UP consistently imposes obstacles in its administration and negotiation of trackage rights agreements with BNSF that undermine shippers' access to competitive services and flout obligations under the UP/SP merger conditions."[35]

The small subset of UP-CSXT routes not impeded by ineffective competition can reasonably expected to be advantaged as compared to the BNSF-CSXT alternative, because they are being used today on the UP leg of the route instead of the BNSF interline segment. This is consistent with revealed preference theory, which explains that consumers preferences are observed

[29] The {{REDACTED}} of 2023 CSXT revenue on UP interline traffic moves with origin at GC comprises approximately {{ }} of CSXT-UP interline traffic today, with the vast majority of that (approximately {{REDACTED }} going through one of East St. Louis, Memphis, or New Orleans. Chemical traffic comprises about {{REDACTED }}. {{REDACTED }}. Carey HC-WP-Sole_and_Dual_Analysis.xlsx.

[30] *Ibid*, sheet "UP_GC Origin." The {{REDACTED}} of 2023 UP revenue on CSXT interline traffic moves with origin at GC comprises approximately {{REDACTED }} of UP-CSXT interline traffic today, with the vast majority of that approximate {{REDACTED)}} going through one of East St. Louis, Memphis or New Orleans. Chemical traffic comprises about {{REDACTED }}. {{REDACTED }}

[31] Carey HC-WP-Sole_and_Dual_Analysis.xlsx.

[32] Ibid.

[33] *See* Appendix 2 – Current and Future Competitive Balance.

[34] BNSF Railway Company's Petition for Review, Enforcement, and Modification of the UP/SP Merger Conditions, STB FD No. 32760 (Sub-No. 52), BNSF Railway Company—Petition for Review—UP/SP Merger Conditions, November 28, 2025 at p. 8. "As a result of UP's conduct, BNSF has been forced to file more than a dozen petitions with the Board against UP to enforce the Board's conditions under the RASA. These petitions have included, among other things, requests for the Board to enforce or clarify BNSF's trackage rights, prevent UP from structuring transaction to evade its merger obligations, resolve UP's tactics which obstruct the customer election process, and grant BNSF emergency service when UP blocks access." *Ibid* at p. 9.

[35] Ibid at p. 17.

through their prior purchasing behavior.[36]

For all of these reasons, it is not surprising that BNSF-CSXT interline movements make minimal use of the UPSP trackage rights lines and the joint line and instead are forced to use less efficient routing options. Such ineffective competition and UPSP trackage rights cannot be expected to adequately compete with a combined UPNS, as a combined UPNS would compound the ineffective competition that resulted from the UPSP merger conditions. The consequence is that CSXT would not be able to readily replace UP with BNSF, contrary to Dr. Israel's claims.

3.1. BNSF Trackage from UPSP Decision

Figure 11: BNSF Ineffective Competition Regions Overview[37]

BEA/Region	UPSP Trackage Granted
Sacramento–Arden-Arcade–Truckee, CA	BNSF receives trackage rights over SP between Weso, NV, and Oakland, CA (via the Cal-P line through Sacramento), and over UP between Weso, NV, and Stockton, CA. Bridge rights for overhead traffic only, except local access to industries served only by UP and SP at Johnson Industrial Park (Sacramento), Farmers Rice (West Sacramento) and the Port of Sacramento.
Reno-Sparks, NV	BNSF receives bridge trackage rights over UP and SP between Alazon, NV, and Weso, NV (paired track). Local access to UPSP-only industries at Reno, NV (intermodal and automotive only), Herlong, CA, and points on the paired track between Weso and Alazon.
Salt Lake City-Ogden-Clearfield, UT	BNSF receives trackage rights over UP between Salt Lake City and Ogden, UT, and between Salt Lake City, UT, and Alazon, NV; and over SP between Ogden and Little Mountain, UT. Local access to UPSP-only industries at Provo, Salt Lake City, Ogden, Clearfield, Woods Cross and other listed
Denver-Aurora-Boulder, CO	BNSF receives trackage rights over SP between Denver, CO, and Salt Lake City, UT, creating a new Central Corridor trunk line between Northern California and Denver. Bridge rights for overhead traffic only.
San Jose-San Francisco-Oakland, CA	BNSF receives trackage rights over SP between Weso, NV, and Oakland, CA, and between Oakland and San Jose, CA. Local access to UPSP-only industries at points between Oakland and San Jose (incl. Warm Springs, Fremont, Elmhurst) and San Jose, plus access to the Oakland Joint Intermodal Terminal (JIT) when built.
Eugene-Springfield, OR	Direct access to UPSP granted trackage. Inefficient/uneconomic to travel longer alternate route option in North.
Texas	Southern Texas: BNSF receives trackage rights over UP (incl. Houston–Brownsville, Odem–Corpus Christi, Ajax–San Antonio, Temple–Waco/Taylor) and SP (San Antonio–Eagle Pass; El Paso–Sierra Blanca), with local access at Brownsville, Harlingen, Corpus Christi, San Antonio and Waco. Eastern Texas: SP Houston–Iowa Jct., LA and Dayton–Baytown, with local access at Baytown, Orange and Mont Belvieu. Houston–Memphis: SP Houston–Fair Oaks, AR.
Louisiana	BNSF receives trackage rights over SP between Houston, TX, and Iowa Jct., LA; over UP between Avondale and West Bridge Jct., LA, and to the Westwego, LA, intermodal facility; and over SP between Avondale and West Bridge Jct. Local access at Harbor, LA. Gives BNSF its own line to
Mexico	BNSF receives trackage rights over SP between San Antonio and Eagle Pass, TX (Mexican border crossing), and between El Paso and Sierra Blanca, TX. Bridge rights for overhead traffic only.

Notes
1. UPSP Decision, available at https://www.stb.gov/wp-content/uploads/BV-1-Jan96-Dec96-233.pdf

4. Other Specific At-Risk Areas

Certain specialized areas, such as joint service areas, terminal railroads, short lines, ports, and Mexico-related traffic, among others, are specific-at risk areas that could face lessened competition due to a UPNS transaction. There exist direct and indirect effects that threaten competition from a combined UPNS, particularly in the Eastern U.S. where CSXT, specifically, would face a competitor that is 3X larger.

4.1. Terminal and Short-Line Railroads

Terminal railroads and their customers could well be affected by a UPNS transaction including facing reduced independent rail options and a higher fixed costs burden from eliminated

[36] Chambers and Echenique, Revealed Preference Theory, (Cambridge University Press, 2016).

[37] Carey HC-WP-Ineffective_Competition_Locations.xlsx.

UPNS interchanges. Terminal railroad areas, such as those in the midcontinent divide (TRRA, BRC, KCT, NOPB) [38] and many other locations designed to service the railroad industry in its entirety, are economically attractive for customers who seek a balanced and sustainable competitive landscape. Many terminal railroads also facilitate interchanges between Western and Eastern railroads and directly serve many customers. For example, TRRA serves more than 70 industrial customers, including major companies such as Anheuser-Busch, Amtrak, Ameren UE, Amsted Rail, and Advantage Metals Recycling, among others.[39]

The result of reduced interchanges involving midcontinent terminal railroads post-Transaction would be a direct increase in the fixed costs borne by all remaining railroad customers.[40] Even if UPNS shed some of its ownership shares, terminal railroads like TRRA, BRC, KCT, and NOPB would face less density of interchange volumes to share fixed system costs, resulting in higher costs for remaining customers. Class I railroads generated {{REDACTED}} in revenue from moves involving BRC, TRRA, and KCT.[41] It is possible that these traffic moves are not reported on waybill traffic tapes, and therefore, the reported volumes may be understated.

Figure 12: Class I Traffic involving Terminal Railroads[42] {{

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Short-line railroad customers could also be harmed by a UPNS transaction, as many dual-served short-line railroads that have unique direct access to independent railroad options (on one or both ends of traffic moves) that would be reduced post-Transaction. UPNS would serve as the primary interconnecting carrier (i.e., sole-served connection) to the rest of the U.S. rail network.

[38] Post-Transaction, UPNS would have 57.1% ownership of Terminal Railroad Association of St. Louis (TRRA) and 33.3% of Belt Railway of Chicago (BRC), both of which are integral for interchange of transcon traffic. (UP 42.84%, NS 14.29% of TRRA). UPNS would also own about 50% of Kansas City Terminal Railway (KCT). (UP 41.67%, NS 8.33%.) Applicants' First Submission in Response to Decision No. 21, STB FD No. 36873, Union Pacific—Control—Norfolk Southern, July 7, 2026, at pp. 5 and 41.
[39] TRRA serves over 70 industrial customers across the St. Louis metropolitan region in both Missouri and Illinois. TRRA, "Our History," obtained on November 13, 2026, available at https://terminalrailroadstl.odoo.com/; TRRA, "Local Freight Tariff," January 1, 2026, available at https://terminalrailroadstl.odoo.com/tariffs.
[40] *See* discussion of fixed costs in Section VI.B (Short Hauling).
[41] Carey HC-WP-At_Risk_Areas.xlsx.
[42] Carey HC-WP-At_Risk_Areas.xlsx.

For example, Iowa Interstate Railroad (IAIS),[43] Ag Valley Railroad (AVRR), Chicago Port Railroad Company (CPC), Three Twenty-Five Route Thirty-One Railroad (TGRD), and many other short lines would face reduced rail options with a combined UPNS.[44]

As shown below in Figure 13, many customers rely on short lines to originate, terminate or participate in traffic moves, with approximately {{REDACTED}} in Class I railroads. UPNS would have {{ }} of traffic revenues with short lines.[45]

Customers on short lines could face lessened competition post-Transaction. For example, in the Western U.S., {{REDACTED}} of traffic are associated with sole-served customers that only UP accesses.[46] Therefore any traffic moves from these UP sole-served to dual-served locations, including those in the Eastern U.S., would face reduced independent rail options.[47] Moreover, UP and NS connect to many short-line railroads that often have a short-line owner of a portfolio of short-line railroads; where some would be sole-served and entirely dependent on UPNS to reach the rest of the rail network and others would have access to two Class I railroad connections.[48] Post-Transaction, these short lines could face UPNS pressure to advantage UPNS where it competes with other railroads, or risk retribution where it is entirely dependent on UPNS to connect to the broader rail network. The short lines that would be affected by the Transaction include:

- Union Pacific connects with approximately 180 direct and 350 indirect short-line and regional railroads across its 23-state western U.S. network. These Class III short-line partners originate or terminate roughly 25% of all Union Pacific freight carloads.[49]

- Norfolk Southern connects directly with over 260 short-line and regional railroads (and maintains working relationships with over 350 others). [50]

[43] A 580-mile regional railroad running East-West across Iowa (serving Council Bluffs, Des Moines, Iowa City, and Davenport) and into Illinois, connecting with both UP and NS (and seeking expanded joint trackage rights in the proposed UP-NS merger). Trains.com, "Iowa Interstate to seek trackage rights over UP, NS as part of merger," September 16, 2026, available at https://www.trains.com/pro/freight/short-lines-regionals/iowa-interstate-to-seek-trackage-rights-over-up-ns-as-part-of-merger/.
[44] For additional short lines with reduced options, *see* Carey HC-WP-ClassI_Railroad_Access.xlsx. RailInc, "Circular No. OT-10," November 1, 2026, available at https://public.railinc.com/sites/default/files/documents/OT-10.pdf.
[45] {{REDACTED }}
[46] Carey HC-WP-At_Risk_Areas.xlsx.
[47] The same reduction of independent rail options occurs in the Western US. *See* Appendix 4 - Other Harm for a depiction of reduced independent rail options on one end of the move.
[48] Genessee and Wyoming is one example of a short line railroad that owns a portfolio of short lines. *See* G&W, "Our Railroads," obtained on November 13, 2026, available at https://www.gwrr.com/railroads.
[49] UP, "Union Pacific Partners with Short Line Railroads, Spurring Growth and Economic Development," October 24, 2023, available at https://www.up.com/shipping/short-line.
[50] RailPrime, "Looking for growth, Norfolk Southern taps into short-line gumption," obtained on November 15, 2026, available at https://www.progressiverailroading.com/RailPrime/Details/Looking-for-growth-Norfolk-Southern-taps-into-short-line-gumption--74699.

Figure 13: Class I Traffic involving Shortlines[51] {{
REDACTED

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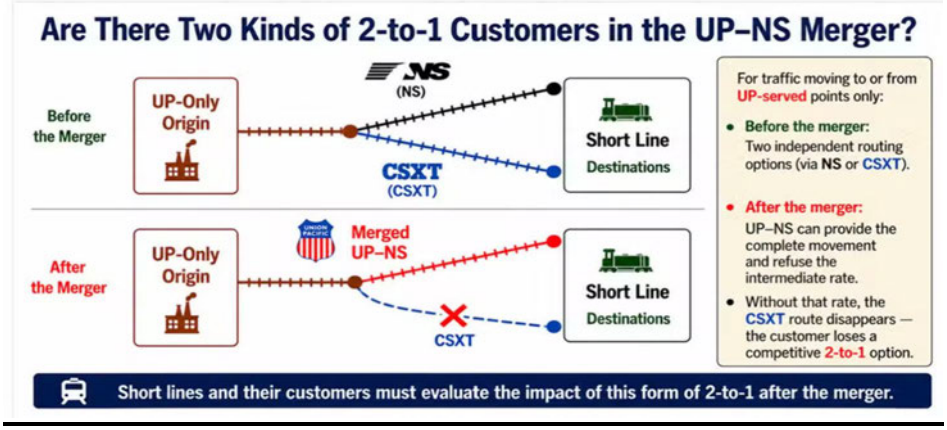
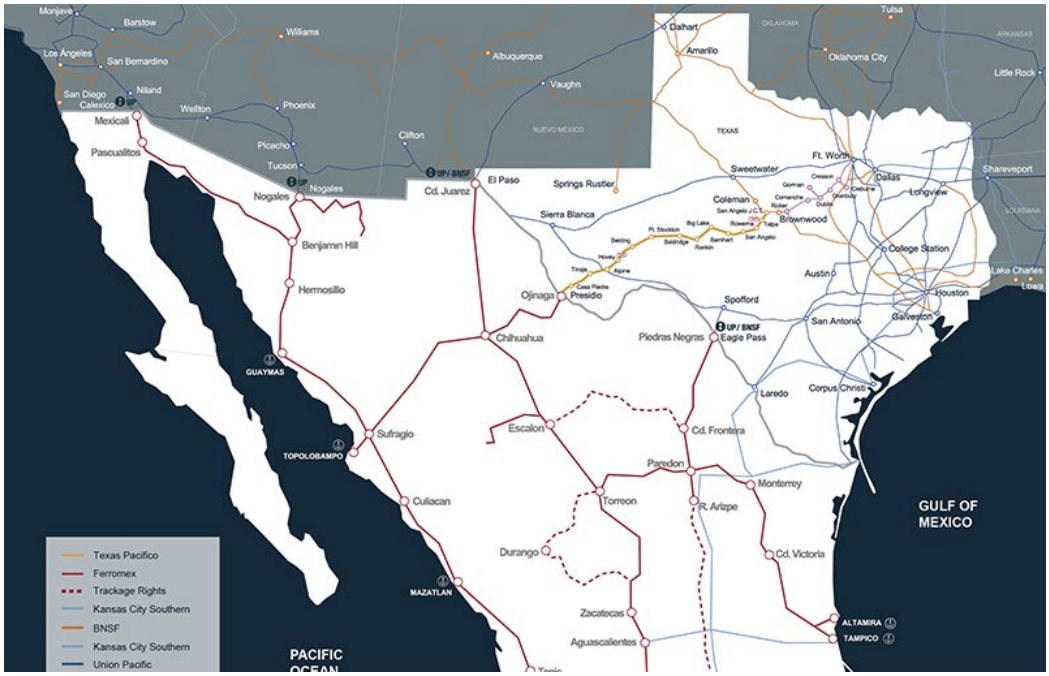
Figure 14: 2-to 1 from UPNS Transaction, involving Short-Line Railroads [52]



[51] Regarding short lines, revenue associated with these short lines is likely understated in the figure above. A move in the traffic tape may not report a short line as involved with the movement. This is consistent with the gap between the 2.7 million short line originated carloads in a ASLRRA analysis of Railinc compared against the 4.25 million in Railinc's 2023 Short Line and Regional Traffic Index, and a large difference between short lines' share of carloads touched (about 1/5th) and their share of industry revenue (about 6%). Railway Age, "The Volume Needle Needs to Move," December 11, 2025, available at https://www.railwayage.com/freight/short-lines-regionals/the-volume-needle-needs-to-move; Railinc, "Several Commodities End 2023 on High Note in December Short Line Index," obtained on November 15, 2026, available at https://public.railinc.com/about-railinc/blog/several-commodities-end-2023-high-note-december-short-line-index; ASLRRA, "Statement for the Record," January 18, 2024, available at https://www.aslrra.org/aslrra/document-server/?cfp=aslrra%2Fassets%2FFile%2Fpublic%2Fnews%2F2024%2F2024_01_18_ASLRRA+Statement+for+the+Record_House+TI+Rail+Sub_Crossings_FINAL.pdf. *See also* Carey HC-WP-At_Risk_Areas.xlsx.

[52] Railway Age, "Two Kinds of 2-to-1 Customers in the UP-NS Merger?," September 8, 2026, available at https://www.railwayage.com/regulatory/two-kinds-of-2-to-1-customers-in-the-up-ns-merger/.

Figure 15: Texas Pacifico Transportation Map[53]



TXPF has trackage rights over UP between Alpine Junction and Paisano Junction and operates from Paisano Junction to International Bridge near Presidio, TX. TXPF has connections with UP, FXE, BNSF, and FWWR. Union Pacific interchanges with TXPF via the Fort Worth and Western Railroad (FWWR) at San Angelo JCT, TX. FWWR provides a bridge move for Union Pacific and does not appear in the waybill routing.[54]

4.2. Joint Service Areas and Jointly Owned Lines

Joint service areas**,** historically desired for "shared" access under the presumption that dual access to two railroads of similar scale and geographic scope (tucked within an overall balanced railroad competitive dynamic) will yield effective competition, would no longer hold with a combined UPNS. The Transaction could reduce the independent rail options for shippers, including some solely limited to dependent interline competitors that would be amplified by reduced geographic competition and many bundling and other pricing strategies available.

- CSXT-NS shared Conrail assets in the East (Michigan and PA/NY/NJ) is one example of a joint service area, with about {{REDACTED}} in total Class I revenue[55] in 2023 for local customers' traffic moves, and with joint ownership areas well recognized as procompetitive by the STB.[56] {{REDACTED}} in CSXT and NS traffic revenues involve UP western sole-served or ineffective competition and dual-served Conrail areas.[57]

[53] Texas Pacifico, "Route Map," obtained on November 15, 2026, available at http://www.texaspacifico.com/routeMap.html.

[54] UP, "Texas Pacifico Transportation, LTD TXPF #57," obtained on November 15, 2026, available at https://www.up.com/shipping/short-line/lines/txp.

[55] Carey HC-WP-At_Risk_Areas.xlsx.

[56] "After pursuing competing bids individually to acquire all of Conrail, CSX and NS reached an agreement to acquire Conrail jointly. The transaction they are proposing will result in a procompetitive restructuring of rail service throughout much of the Eastern United States." Decision No. 89, STB FD No. 33388, CSX, NS—Control and Operating Leases/Agreements—Conrail, July 20, 1998 at p. 247, available at https://www.stb.gov/wp-content/uploads/FD-33388-CSX-NS-Conrail-July-20-1998-Decision.pdf.

[57] Carey HC-WP-Sole_and_Dual_Analysis.xlsx.

Figure 16: Conrail Asset Area Summary[58] {{

REDACTED

}}

Figure 17: UP Sole-Served or Ineffective Competition from/to Conrail Assets CSXT and NS Revenue, 2023 ($MM)[59] {{

REDACTED

}}

Jointly owned lines raise similar diminished competition concerns as they were designed with today's competitive balance network in mind. For example:

- The UP/CSXT jointly-owned Chicago line dispatched by UP, which is integral to CSXT's network serving its Southeastern U.S. customers. Post-Transaction a UP independent collaborator would turn into a competitor. There is {{REDACTED}} in traffic revenues that use this line, including {{REDACTED}} involving sole-served UP locations and dual-served CSXT customers.[60]
- Joint owned lines in the Southern gateways connecting the Eastern and Western U.S. regions would face diminished independent route options from the Transaction, including the UP/BNSF joint line (Texas to New Orleans) that UP dispatches. Alternative routes, including (1) Meridian Speedway involving NS jointly-owned lines and (2) BNSF trackage use over UPs Northeastern flowed rail lines into the Houston area, are ineffective for interline traffic involving the Eastern and Western U.S. regions.

Figure 18: Revenue for Traffic Moves on the Chicago CSXT-UP Joint Line[61]{{

[58] Carey HC-WP-At_Risk_Areas.xlsx.

[59] Carey HC-WP-Sole_and_Dual_Analysis.xlsx.

[60] Carey HC-WP-At_Risk_Areas.xlsx.

[61] Carey HC-WP-At_Risk_Areas.xlsx.

REDACTED

}}

NS and KCS transported over {{ }} revenue loads over the Meridian Speedway in 2022[62] and traffic involved with the Houston-New Orleans joint line comprises {{REDACTED }}.

Figure 19: Class I Traffic, Houston-NOLA Joint Line[63]{{

REDACTED

}}

[62] NS Letter, STB FD No. 36500 (Sub-No. 6), Canadian Pacific—Control—Kansas City Southern, September 30, 2025 at p. 3, available at https://dcms-external.s3.amazonaws.com/DCMS_External_PROD/1759263971833/310133.pdf.

[63] Carey HC-WP-At_Risk_Areas.xlsx.

4.3. Port Waterway Access

A combined UPNS would have access to more than 100 ports,[64] including all "major" West Coast, East Coast and Gulf Coast ports, with UP active on the West and East Coast[65] and NS serving "every major ocean port on the East Coast between New York City and Jacksonville, Fla.," as well as the Gulf Coast ports in Louisiana and Alabama.[66]

The total affected traffic of port-related traffic is large, and it would impact many global supply chains for key industrial products, which is outside STB regulation. To illustrate the size of the impact, for just 1 single commodity for the top 10 international ocean freight carrier's container traffic, the 4 major Class 1 railroads annually handle {{REDACTED}} in revenues for traffic moves to and from major US ports (West, East, and Gulf Coasts).[67] A combined UPNS would have a {{ }} share of rail IM traffic for the 10 largest international ocean container freight carriers.[68]

Figure 20: International Shipping Customer IM Revenue by Class I Railroad - $MM (2023)[69]

{{

REDACTED

}}

Railroads and ports have a reasonable competitive balance today for each region (e.g., Western ports access by Western railroads and Eastern port access by Eastern railroads), with major ports being served by two large Class Is in most instances that would face reduced independent rail options post-Transaction. Further, port traffic could be readily shifted among other ports and post-Transaction, UPNS could force consolidation at certain ports, with fewer combinations of competing port/railroad options serving inland areas. Some diversions could involve more West Coast ports for ships to and from Asia instead of East Coast ports[70] or

[64] UP, "Creating America's First Transcontinental Railroad: Union Pacific and Norfolk Southern's STB Merger Application Details Enhancements to Competition and Public Benefits," December 19, 2025, available at https://www.up.com/press-releases/growth/stb-merger-application-enhances-competition-251219.

[65] UP, "Connecting the Nation," obtained on November 15, 2026, available at https://www.up.com/about-us/usguide.

[66] NS, "Ports & International," obtained on November 15, 2026, available at https://www.norfolksouthern.com/en/ship-by-rail/our-rail-network/ports-international.

[67] Carey HC-WP-International Port_Revenue.xlsx.

[68] {{REDACTED }} There is a substantial potential for port traffic diversions to UPNS particularly for international waterborne traffic. For example, Asian shippers could utilize UPNS West Coast ports to deliver to the Ohio Valley and Eastern U.S., thereby avoiding costly waterborne routes through the Panama Canal.

[69] Carey HC-WP-International_Port_Revenue.xlsx.

[70] 62% vessel short tons imported into the US from Asia (63 million VST from China, Vietnam, and Korea) involved West Coast ports in 2023. U.S. Department of Transportation, "Bureau of Transportation Statistics," available at

consolidation of customers among the East and Gulf Coasts for any interior locations, thereby lessening competition for combined port and rail service on many lanes. The port industry has already raised great concern regarding the Transaction's reduction of two of the four major remaining competitors offering IM rail service at U.S. ports, which would limit choices for shippers and might remove the competitive pressure required to maintain high-quality IM service.[71]

Post-Transaction, UPNS would also have access to approximately 100 ports in the U.S., extending from the West Coast, East Coast, and Gulf Coast.[72] It would also have the largest and most extensive set of all types of facilities needed to conduct railroad business across every commodity sector.

There have been no prior STB rail transactions that have had such a substantial impact on port waterway access. The benefits of competition have been achieved in the current rail network due, in part, to the network balance of the regional ports and railroad competitors. A combined UP and NS would remove that network balance with overwhelming U.S. port access and exclusive single-line transcon that could readily divert imports or exports from any port in the U.S.

4.4. Mexico

Mexico traffic involving U.S. customers would face reduced competition, particularly in the Eastern U.S. Rail (and truck) transportation with Mexico is also substantial. For the important and growing Eastern U.S.-Mexico traffic by rail and truck, the total revenue was approximately {{ }} in 2022 and expected to substantially grow to approximately {{REDACTED}} by 2030.[73]

Mexican rail traffic includes {{REDACTED}} in revenue (on the U.S. portion of the move) currently, up {{ }} since 2019, with UP capturing a {{ }} of revenue on all Mexico traffic, including with other interline partners.[74] UP and FXE are associated with {{ }} of Mexican rail volumes interchanging with the U.S., see Figure 21 below. UP has a {{ }} of revenue on all traffic that excludes interline partners in Mexico like CPKC, see Figure 22 below.

https://explore.dot.gov/views/ImportsbyCountryandU_S_Port/Tables?%3Aembed=y&%3Ais. Carey HC-WP-Port_Imports_2023.xlsx.

[71] "NAWE member companies handle over 90% of our nation's import and export containerized trade, much of the nation's breakbulk and automobiles, and manage the loading and unloading of almost all cruise ship operations." National Association of Waterfront Employees, "Letter to STB," December 1, 2025, available at https://www.nawe.us/docs/12.1.25_-_NAWE_STB_Letter_on_Rail_Merger.pdf.

[72] UPNS, "Bringing Together Two Railroads to Power America's Economy," obtained on November 15, 2026, available at https://www.up-nstranscontinental.com/.

[73] {{REDACTED }}.

[74] Carey HC-WP-Mexican_Interchange.xlsx. Traffic moves with other interline partners includes traffic with CPKC.

Figure 21: Traffic at Mexican Interchanges – UP/FXE Share (2019 and 2024)[75] {{
REDACTED

}}

Figure 22: Traffic at Mexican Interchanges – UP/FXE Share – Including and Excluding CPKC (2019 and 2024)[76] {{
REDACTED

}}

NS captures {{REDACTED}}, or {{ }}, of traffic revenue with Mexico, see Figure 23 below.[77]

[75] Carey HC-WP-Mexican_Interchange.xlsx.

[76] Carey HC-WP-Mexican_Interchange.xlsx.

[77] Carey HC-WP-Mexican_Interchange.xlsx.

Figure 23: Traffic at Mexican Interchanges – NS Share (2019 and 2024)[78] {{

REDACTED

}}

These revenue statistics exclude UP's 26% ownership of the Mexican railroad FXE (Ferromex), which operates a large railroad network with over 6,835 miles[79] (11,000 km of track across Mexico). FXE has more than a 60% rail share in the country.[80,81] UP's ownership in FXE increases UPNS's share of participation as shown in Figure 21 above.[82] According to UP, its ownership of FXE gives it "access into Mexico like nobody else … which expands our reach differently than any other railroad."[83] UP's partner, Grupo México Transportes (GMXT), which owns the remaining 74% of FXE, has the largest rail coverage and connectivity ("best level of connectivity in Mexico"[84]) with other U.S. and Mexican assets:[85]

- Ferrosur (Ferrocarril del Sureste, S.A. de C.V.), FSRR southeastern Mexico railroad.
- Texas Pacífico Transportation (TXPF), a short-line railroad in West Texas that operates 382 miles of tracks that will soon reinstate a Mexico interchange through Paisano Junction.[86]

[78] Carey HC-WP-Mexican_Interchange.xlsx.

[79] 11,000 km / 1.609. Grupo Mexico "Transportation," obtained on November 15, 2026, available at https://www.gmexico.com/en/transportation/.

[80] "Union Pacific is the leading provider of rail transportation services in the U.S. and Mexico." UP, "Union Pacific de Mexico," obtained on November 15, 2026, available at https://www.up.com/shipping/intermodal/de-mex.

[81] UP, "Investor Pitchbook," May 2025, at p. 39, available at https://investor.unionpacific.com/static-files/00d87ee9-03af-4c35-952e-1f85d6226818.

[82] Among traffic interchanged between Mexico and US Class I carriers {{REDACTED }} with KCSM and {{ }} with Ferrosur. Carey HC-WP-Mexican_Interchange.xlsx.

[83] TrainsPro, "The Trains Interview: Union Pacific CEO Jim Vena talks service, growth, competition, and steam," October 19, 2023, available at https://www.trains.com/pro/freight/class-i/the-trains-interview-union-pacific-ceo-jim-vena-talks-service-growth-competition-and-steam.

[84] Florida East Coat, "Grupo México Transportes acquires Florida East Coast Railway," July 7, 2017, available at https://fecrwy.com/uncategorized/blog-grupo-mexico/. It has a presence in 24 states, with over 6,300 miles of track, 5 border crossings, and 8 deepwater ports in Mexico.

[85] GMXT, "Grupo Mexico Transportes," obtained on November 15, 2026, available at https://gmxt.mx/en/companies/.

[86] Union Pacific, Texas Pacifico Transportation, LTD TXPF #57, available at https://www.up.com/shipping/short-line/lines/txp. TXPF has trackage rights over UP between Alpine Junction to Paisano Junction and operates from Paisano Junction to International Bridge near Presidio, TX. TXPF has connections with UP, FXE, BNSF and FWWR. Union Pacific interchanges with TXPF via the Fort Worth and Western Railroad (FWWR) at San Angelo JCT, TX. FWWR provides a bridge move for Union Pacific and does not appear in the waybill routing. See also http://www.texaspacifico.com/routeMap.html.

- Florida East Coast Railroad (FEC), a Class II regional railroad that owns all of the 351-mile mainline track from Jacksonville, FL to Miami, FL.[87]
- CG Railway, LLC (CGR) Shortline and port-related assets in Mobile, AL. GMXT holds a 60% indirect ownership interest.[88]
- Copper Basin Railway, Inc. (CBRY), a Class III rail carrier in Arizona.[89]

UP's and GMXT's ownership of FXE raises concerns for the potential for lessening of competition with a combined UPNS. Currently, UP and its GMXT partner are collaborators with CSXT. Post-Transaction, the prior UP/GMXT collaborator with CSXT would turn into a competitor for any existing and future moves within Mexico (which are beyond STB regulation and oversight). It would reduce the independent rail options between Mexico and the Eastern U.S. It would also affect rates and behavior within Mexico and at gateway interchanges. Mexico's railroad rate regulatory regime provides pricing flexibility with price caps by commodity type and distance[90] which could be used by UP/FXE/NS to foreclose rivals in the Eastern U.S. (i.e., CSXT) post-Transaction. Such harm could be exacerbated in the future with any further developments by UP in Mexico with its GMXT partner, which could be accomplished entirely without any STB oversight or approval to protect U.S. shippers. The U.S. portion of Mexico moves involve {{ }} of traffic revenue in Eastern U.S. locations with CSXT or NS[91], see Figure 24 below.

[87] Florida East Coast Railroad, available at https://fecrwy.com/. Grupo Mexico, Grupo México Transportes acquires Florida East Coast Railway, available at https://fecrwy.com/uncategorized/blog-grupo-mexico/. GMXT touts FECR's exclusive access to three major ports in South-eastern Florida.

[88] CGR is a specialized rail-and-ferry operator. CGR is a Class III terminal railroad facilitating direct interchanges with major Class I railroads and has access to the rail infrastructure within the Port of Mobile, Alabama to transfer freight directly from U.S. rail lines. Federal Register, Grupo México, S.A.B. de C.V. and GMéxico Transportes, S.A.B. de C.V.-Acquisition of Control Exemption-CG Railway, LLC, available at https://www.federalregister.gov/documents/2024/08/13/2024-18030/grupo-mxico-sab-de-cv-and-gmxico-transportes-sab-de-cv-acquisition-of-control-exemption-cg-railway Reuters, Grupo Mexico buys 60% of two companies involved in US-Mexico trade, December 26, 2023, available at https://www.reuters.com/markets/deals/grupo-mexico-buys-60-two-companies-involved-us-mexico-trade-2023-12-26/.

[89] In 2024, Grupo México, S.A.B. de C.V. (GM), a noncarrier holding company, filed a verified notice of exemption pursuant to 49 CFR 1180.2(d)(2) for after-the-fact authority to acquire control of Copper Basin Railway, Inc. (CBRY), a Class III rail carrier that owns and operates a rail line in Arizona. According to a supplemental filing by GM, CBRY's line consists of a 54.6-mile main line between Magma Junction, at milepost 948.9, and Winkleman, at milepost 1003.5; a four-mile branch line from Ray Junction, at milepost 987.8, to Ray; and a two-mile branch line from Hayden Junction, at milepost 1000.2, to Hayden Smelter. Federal Register, Grupo México, S.A.B. de C.V.-Acquisition of Control Exemption-Copper Basin Railway, Inc., June 14, 2024, available at https://www.federalregister.gov/documents/2024/06/14/2024-13159/grupo-mxico-sab-de-cv-acquisition-of-control-exemption-copper-basin-railway-inc.

[90] OECD, "Review of the Regulation of Freight Transport in Mexico," January 9, 2017, at pp. 84-86, available at https://www.oecd.org/en/publications/review-of-the-regulation-of-freight-transport-in-mexico_9789264268364-en.html. Art. 46 of LRSF, June 8, 2016, available at https://www.gob.mx/cms/uploads/attachment/file/198048/Ley_Reglamentaria_del_Servicio_Ferroviario.pdf.

[91] Carey HC-WP-Mexican_Interchange.xlsx.

Figure 24: Traffic at Mexican Interchanges – CSXT and NS Share (2019 and 2024)[92] {{ REDACTED

}}

The Eastern U.S. has many important and growing businesses that rely on rail to/from Mexico, particularly the auto sector (Michigan, Tennessee, Kentucky)[93] and the Southeastern U.S. (Georgia, Florida, North and South Carolina).[94] Moreover, {{REDACTED}} in CSXT and NS revenue are UP sole-served or involve ineffective competition from/to dual-served locations that currently have access to CSXT and NS but would face reduced independent rail options post-Transaction, see Figure 25 below.[95]

Figure 25: UP Sole-Served or Ineffective Competition from/to Mexico, CSXT and NS Revenue, 2023 ($MM)[96] {{ REDACTED

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With UP's substantial ownership in the largest Mexican railroad, Eastern U.S. traffic movements with Mexico would be at risk for economic foreclosure or other means to degrade service by UPNS post-Transaction.

Furthermore, concerns for GMTX assets in the Eastern U.S. exist where two owned short lines connect to CSXT and NS currently (FEC system and CGR assets) and Eastern shippers would lose an independent route option post-Transaction. FEC and CGR have {{REDACTED}} and {{ }}[97], respectively, of total Eastern U.S. traffic moves that interchanges and interlines with CSXT or NS involving the Port of Mobile. See Figure 26 below.

[92] Carey HC-WP-Mexican_Interchange.xlsx.

[93] UP, "Union Pacific's Newest Offering Removes Full Day of Transit Between the U.S., Mexico and Canada, Creating Unmatched Service for Customers," September 12, 2023, available at https://www.up.com/press-releases/service/unmatched-intermodal-services-nr-230912.

[94] S&P Global, "Union Pacific launches Mexico-Southeast service to meet growing demand," October 4, 2023, available at https://www.joc.com/article/union-pacific-launches-mexico-southeast-service-to-meet-growing-demand-5234451.

[95] {{REDACTED }}.

[96] Carey HC-WP-Sole_and_Dual_Analysis.xlsx.

[97] Carey HC-WP-Mexican_Interchange.xlsx. These figures only account for the Class 1 railroad revenue and not short line.

Figure 26: Traffic Interchanged with FEC and GCR – NS and CSXT Cars and Revenue (2019 and 2024)[98] {{

REDACTED

}}

Figure 27 below shows the total carloads/units that interchange between Class I carriers and Mexico, broken down by year between 2019 and 2024. Totals are shown in terms of the interchanging Mexican carrier: FXE, KCSM, or Ferrosur (FSRR).

[98] Carey HC-WP-Mexican_Interchange.xlsx.

Figure 27: FXE, KCSM, and FSRR Interchange with U.S. Class I Railroads (2019 and 2024)[99] {{

REDACTED

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[99] Carey HC-WP-Mexican_Interchange.xlsx.

4.5. Joint/Mid-Continent Assets

At the key Midwest gateways of Chicago, St. Louis, and New Orleans, post-Transaction, UPNS would have substantial ownership shares in key bridges and terminal railroads and other rail lines and facilities that are critical to facilitate transcontinental traffic moves.

St. Louis is a substantial gateway used for a substantial amount of transcontinental freight rail traffic. Specifically, the region is the 2nd largest freight rail interchange location in the nation and the 3rd largest freight rail interchange location by tonnage.[100]

The Terminal Railroad Association of St. Louis (TRRA)[101] is an important switching and terminal railroad that owns and operates the Merchants Bridge, the MacArthur Bridge, a rail switching facility in Madison, IL and several key rail routes in St. Louis, MO, Madison and the E. St. Louis, IL area that are key infrastructure for East and West traffic movements over the Mississippi River. [102] TRRA bridges and yards handle over 40 million tons of freight annually.[103]

Today, UP has a 3/7 (approximately 42.8%) ownership share of the TRRA, while NS has a 1/7 (approximately 14.3%) share, which would result in a 57.1% ownership share post-Transaction.[104] The other railroad owners include BNSF, CSX, and CN (who each separately own a 14.3% share and collectively hold a 42.9% ownership share).

The Alton and Southern Railway ("ALS") operates primarily as a terminal switching short line in East St. Louis and is wholly owned by UP.[105] ALS does not own the Mississippi River bridges, but it controls significant yard facilities such as Gateway Yard, which is essential for switching and interchange operations.[106] ALS facilitates movement and interchange of freight for UP and other railroads in the St. Louis area.[107]

UP, as the sole owner of ALS and a co-owner of TRRA alongside NS, leverages these consolidated facilities and bridges to efficiently route major freight flows across the Mississippi River at East St. Louis. Post-Transaction, UPNS would have increased influence and control which would increase its incentive and ability to disadvantage CSX and others for switching/interchanging through the important St. Louis Gateway.

Figure 28 provides a closeup of the facilities and trackage owned by the entities operating in the area, including TRRA, ALS, UP, and NS. As an example, the Merchants Bridge, shown near the bottom of the map, is owned by TRRA and is used by CSXT and BNSF for interchange. The

[100] St. Louis Regional Freightway, "2023 Priority Freight Projects," May 27, 2022, at p. 3, available at https://www.thefreightway.com/wp-content/uploads/2022/05/FW220201-Priority-Freight-Projects-Fact-Sheet.pdf.

[101] Terminal Railroad Association of St. Louis, "Our History," obtained on November 15, 2026, available at https://terminalrailroadstl.odoo.com/.

[102] St. Louis Regional Freightway, "2023 Priority Freight Projects," May 27, 2022, at pp. 3-4, available at https://www.thefreightway.com/wp-content/uploads/2022/05/FW220201-Priority-Freight-Projects-Fact-Sheet.pdf.

[103] St. Louis Regional Freightway, "2023 Priority Freight Projects," May 27, 2022, at pp. 3-4, available at https://www.thefreightway.com/wp-content/uploads/2022/05/FW220201-Priority-Freight-Projects-Fact-Sheet.pdf.

[104] Applicants' First Submission in Response to Decision No. 21, STB FD No. 36873, Union Pacific—Control—Norfolk Southern, July 7, 2026, at p. 5.

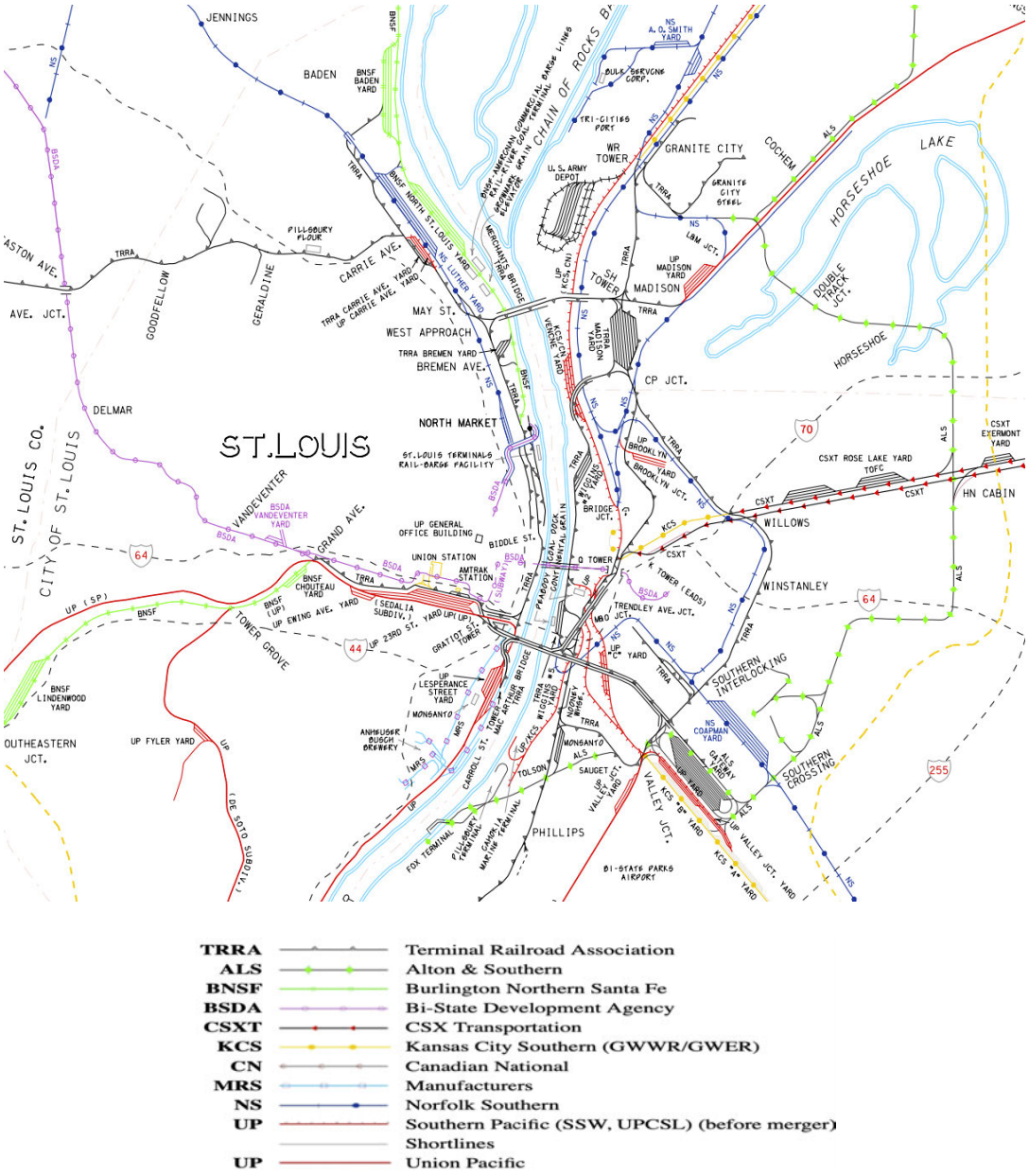
[105] American Rails, "Alton and Southern Railway: A St. Louis Terminal Line," September 2, 2024, available at https://www.american-rails.com/als.html.

[106] Alton and Southern, "A&S History," obtained on November 15, 2026, available at https://www.altonsouthern.com/about/.

[107] *Ibid*.

figure further illustrates the extensive overlapping of rail lines required for interchange and movement in and around St. Louis. Because traffic moving between Eastern and Western railroads must pass over these intersecting routes, bridges, and yards, control over TRRA and ALS facilities would give UPNS influence over how efficiently, and on what terms, other railroads could interchange and move freight through the region.

Figure 28: Terminal Railroad Association of St. Louis Map [108]



Chicago has a substantial amount of transcontinental traffic traveling through the Chicago area that facilitates joint-line traffic moves between Eastern and Western railroads.

[108] Terminal Railroad Association of St. Louis, "TRRA Map," obtained on November 15, 2026, available at https://terminalrailroadstl.odoo.com/maps.

The Belt Railway of Chicago (BRC) is integral to such interchange traffic in the Chicago area.[109] BRC separates, classifies, and re-blocks trains for cross-country departure. It currently dispatches on a service-driven basis more than 8,400 rail cars per day[110] through its Clearing Yards just south of Midway International Airport and operates 28 miles of mainline track with more than 300 miles of switching track.[111]

Currently, BRC is owned by BNSF, CN, CPKC, CSXT, NS and UP.[112] Each railroad owns 1/6 share and therefore, post-Transaction, UPNS would own 33.33% (16.6% each) and therefore have an increased influence and control over BRC, which could enable it to disadvantage CSXT and others for switching/interchanging in Chicago.

In New Orleans, post-Transaction UPNS would effectively control the artery exclusively used by CSXT today to interchange Transcon Traffic through New Orleans. Specifically, NS owns the Back Belt, which is the only direct route connecting CSXT, CN, BNSF, and UP, running from Elysian Fields to East Bridge Junction (owned by CN but dispatched by UP). West Bridge Junction is controlled by UP and provides access to both UP's and BNSF's Avondale Yards.

Post-Transaction, UPNS would control the entire flow of important New Orleans interchanged traffic between Texas and Louisiana and the Eastern U.S. through its combined dispatch control of these facilities.

Figure 29: New Orleans Interchange[113] {{

REDACTED

}}

[109] Belt Railway of Chicago, "Home," obtained on November 15, 2026, available at https://beltrailway.com/.

[110] *Ibid*.

[111] Freight Waves, "Former CN and CP executive to lead Belt Railway of Chicago," March 5, 2025, available at https://www.freightwaves.com/news/former-cn-and-cp-executive-to-lead-belt-railway-of-chicago.

[112] Belt Railway of Chicago, "About," obtained on November 16, 2026, available at https://beltrailway.com/about-2.

[113] Carey HC-WP NOLA.pptx.

4.6. Reciprocal Switching

The Proposed Transaction would result in the substantial consolidation of reciprocal switching access to certain customer locations. Reciprocal switching provides a customer with access from an alternative railroad as a result of agreements between the serving railroad and the competing railroad. The serving railroad is used to carry the freight to and from the customer facility and the tracks of the competing railroad.

The Proposed Transaction would result in a substantial consolidation of reciprocal switching access to certain customer locations. Specifically, post-Transaction UPNS would control approximately {{ }} in total {{REDACTED}} of locations, with existing reciprocal switch access agreements, including the rate and service.[114] This would give UPNS the ability to degrade service or charge a prohibitively high reciprocal switch rate to foreclose competition.

In many of the existing reciprocal switch locations, access was granted to a railroad that did not compete with the existing railroad. As an example, for approximately { }} stations mostly in the Eastern U.S., NS restricts CSXT's customer access that would be uniquely impacted by the Transaction where switching rights are granted only to traffic moves involving off-NS network locations (i.e., origin or destination points not served by NS). Therefore, competitive concern would arise because pre-Transaction, UP (NS) controls the customer and any reciprocal switching access from another railroad that typically is not a competitor. However, post-Transaction, UPNS would have the incentive to degrade service and/or raise rivals' costs because in many cases, the former UP would newly compete with CSXT and the former NS would newly compete with BNSF.

Railroads sometimes voluntarily agree to a reciprocal switching arrangement with another carrier. They are not required to do so in the ordinary course.[115] Reciprocal switching rates for commodities at customer locations were negotiated or agreed to in some manner and therefore reasonably represent market-based outcomes. Historically, the STB has recognized existing reciprocal switching arrangements as competitive options that it will continue to make available in the future.[116] In so doing, the STB recognizes that rates were most often set by the competitive market forces of commercial relationships typically through negotiated and market-based reciprocal switch rates for access to certain customer locations.

The importance of the role of reciprocal switch access negotiations as part of the competitiveness of the railroad sector has been addressed in various policy matters.[117] However,

[114] The consolidation of such reciprocal switch access customers is heavily concentrated in three geographic areas (Chicago, St. Louis and the Gulf Coast (TX and Louisiana). Carey HC-WP-Class_1_Reciprocal_Switching_Rate_Analysis.xlsx.

[115] The STB is allowed to require railroads to comply with reciprocal switching.

[116] The exception was a STB EP No. 711 (Sub-No. 2), Reciprocal Switching for Inadequate Service, April 30, 2024 decision by the board that sought to provide such access more broadly, which the U.S. Court of Appeals for the Seventh Circuit vacated. *See* Grand Truck Corporation v. Surface Transportation Board, United States Court of Appeals for the Sevent Circuit, Docket No. 24-1811, Decided July 8, 2025.

[117] As example, within the STB EP No. 711 case, UP and the other railroads also explained that the historical STB competitive regime of real-world market-based reciprocal switching rates is integral to the investment to rationalize the entire railroad network and the provision of the highest quality service to customers. UP touted the success of such carrier negotiated reciprocal switching rates based within a competitive regime based on past "…regulatory policies that we have relied on over many years in investing to rationalize our network and improve our service to customers." Reply Comments and Evidence of Union Pacific Railroad Company, STB EP No. 711 (Sub-No. 1), Reciprocal Switching, January 13, 2017. BNSF also reiterated the same point: "BNSF believes that the Board must allow market forces to govern the commercial relationships between railroads and their shippers, and

the dynamics of negotiations that are needed for competitive market outcomes, are affected by statute, bargaining leverage, and a variety of other economic factors.[118] Post-Transaction, UPNS's national network and the resulting competitive imbalance would enable UPNS to disadvantage CSXT and other railroads for any future reciprocal switching negotiations. It also provides increased incentives and ability for UPNS to disadvantage other railroads' access (rates, service or both) to these reciprocal switch access customers for joint line service where a post-Transaction UPNS could just provide single-line service.

Specifically, through review of the reciprocal switching books by the major Class I carriers, I identified an estimated sample of switching locations potentially relevant to the Transaction of approximately {{ }} customers that have reciprocal switching access to another carrier. As shown below in Figure 30, post-Transaction, UPNS would control approximately {{ }} of these customer locations[119] and therefore approximately {{ }} in total.[120]

Figure 30: UPNS Select Customer Locations with Reciprocal Switch Access for Competing Railroads vs Other Class 1 Railroads, 2024/2025[121]**{{**

REDACTED

}}

must not create standards that allow unnecessary Board intervention in properly functioning markets." Opening Comments of BNSF Railway Company, STB EP No. 711 (Sub-No. 1), Reciprocal Switching, October 26, 2016.

[118] Cooter and Ulen, Law & Economics (Addison Wesley Longman, 2000) at pp. 43, 206-207. In addition, if transaction costs associated with certain negotiations are too high, some mutually beneficial transactions may fail to occur. *See* Ronald Coase, "The Problem of Social Cost," Journal of Law and Economics (1960), at p. 7, available at https://www.law.uchicago.edu/sites/default/files/file/coase-problem.pdf.

[119] {{REDACTED }}. Carey HC-WP-Class_1_Reciprocal_Switching_Rate_Analysis.xlsx.

[120] {{REDACTED }}. BNSF switch books are not publicly available. Therefore, I was not able to estimate their presence at these locations. Carey HC-WP-Class_1_Reciprocal_Switching_Rate_Analysis.xlsx.

[121] Carey HC-WP-Class_1_Reciprocal_Switching_Rate_Analysis.xlsx.

Post-Transaction, UPNS would control other railroads' access to nearly {{ }} existing customer locations with existing reciprocal switch access agreements, including the rate and service.

Further, UPNS would have an impact on any potential negotiations for reciprocal switch access agreement at other locations that do not have such agreements in place currently (including new customer locations). Any future negotiations post-Transaction about another railroad's access, rates, and service to these customer locations would have a different competitive dynamic where UPNS would have an ability to provide single-line service throughout much of the U.S. and no incentive to provide such access to a competing railroad. This is distinct from the current competitive dynamic where many of these customer locations have alternative railroad options, in part, because there is a need for another railroad or railroads to provide traffic moves to geographic regions not served by the local railroad serving the specific customer.

The consolidation of such reciprocal switch access customers would be heavily concentrated in three geographic areas (Chicago, St. Louis and the Gulf Coast (TX and Louisiana)) where UPNS would have {{ }} customer locations.[122] These are all currently key gateway interchange locations for transcon Traffic. Post-Transaction, UPNS would have an increased incentive and ability to disadvantage CSXT and other railroads for reciprocal switching access to these customers.

4.7. Other Examples

- **UP subsidiary Loup Logistics** bundles door-to-door transportation solutions and assists with supply logistics and other specialized services,[123] working on last-mile solutions that combine rail and truck service in IM and auto sectors.[124] It is one of UP's largest IM customers.[125] The relationship with Loup would extend a combined UPNS's vertical integration to another level upstream and downstream of the rail movement, which would turn Loup/UP from a CSXT collaborator to a competitor. If left unchecked, this affiliate relationship could be used to harm competition post-Transaction, including at locations not currently served.

[122] {{REDACTED }} Carey HC-WP-Class_1_Reciprocal_Switching_Rate_Analysis.xlsx.

[123] *See* Loup, "What We Do," obtained on November 15, 2026, available at https://www.louplogistics.com/what-we-do/index.html.

[124] "Loup is uniquely positioned to bring the benefits of rail transport to the auto remarketing industry as a natural extension of Union Pacific's network for new car distribution." Loup, "About Us," obtained on November 15, 2026, available at https://www.shipcarsnow.com/aboutus/index.html. In late 2021 Loup purchased Precision Components Inc.'s (PCI Reload) which is the largest transloading facility in Phoenix and offers storage, transload, and trucking solutions. *See* UP, "Loup Logistics Acquires Big Footprint in Hot Arizona Market," March 3, 2022, available at https://www.up.com/news/service/loup-pci-acquisition-it-220303.

[125] Carey HC-WP-Bundling.xlsx. In this workpaper, Loup Logistics has been consolidated to UP. *See* Carey HC-WP-Customers_Consolidated_Final.xlsx.

Appendix 6 – Public Benefits

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1. Rail-Related Cost Savings in Truck-to-Rail Diversions

The only rail-specific cost savings associated with truck-to-rail diversions is the less than {{REDACTED}} that I estimate would result from the reduction in interchange costs for the new rail service as shown in Figure 1 below. This incremental cost difference from the Proposed Transaction is the entirety of the cost that should be considered a public benefit.

Figure 1: Interchange Costs for Estimated Truck to Rail Diversions[1] {{

REDACTED

}}

In addition, Applicants provide no support for their claimed high value in benefits from truck customers for, at most, a {{ }} shortened rail transit time, which is a small fraction of the route miles and involves slower service than many of the truck moves that Applicants believe would shift to rail, as I discuss below.

2. Truck-to-Rail Diversions

Figure 2 below reports claimed truck savings, which are mostly IM traffic ({{ }}) and merchandise traffic ({{ }}). It also reports traffic distance and trip statistics that shows faster truck service especially for merchandise, with average trip hours about {{REDACTED }}[2] Many of these truck-to-rail diversions involve long distance traffic moves of about {{REDACTED}}, which typically are less competitive with rail.[3] These faster truck

[1] Carey HC-WP-Shorthauling_Sole.xlsx.

[2] {{REDACTED }} *See* Carey HC-WP-T2R_Diversion_Analysis.xlsx.

[3] *See* Carey HC-WP-T2R_Diversion_Analysis.xlsx.

moves for long distance movements may be of time-sensitive nature, and a differentiated service not comparable to rail.[4] Further, {{REDACTED }} in claimed truck savings involve private truck carriers.[5]

Figure 2: UPNS Truck Shipper Cost Savings from Truck Rail Merchandise and IM Diversions[6] {{

REDACTED

}}

For merchandise traffic, Mr. Hunt forecasts large truck diversions for routes that have negligible volumes today and include unreliable diversions involving moves that could be accomplished today or require fast delivery business needs. For Intermodal Traffic the lion share include IM service would involve farm products, food and rubber/miscellaneous plastics and clay/concrete from lanes that do not ship such products by rail today with long haul routes that have expedited delivery times on rail for fresh farm and food and kindred service that often rely on private carrier trucking with refrigerated services or quick delivery times for just in time service needs for restocking.

Figure 3 below shows the Hunt-proposed, wildly large truck diversions as a percentage of traffic that range about {{REDACTED}}[7] The real-world traffic volumes by rail, which only comprise a scant few percentage points in most of the traffic moves (ranging from {{ }}), requires an increase by as high as a factor of {{ }} to achieve Applicants' projection.[8] Therefore, UPNS's forecast is unrealistic.

[4] Nothing in Mr. Hunt's approach evaluates this type of traffic move. Average truck trip time is {{ }} hours, whereas average rail trip time is {{ }} hours, with truck time therefore being {{ }} faster. *See* Carey HC-WP-T2R_Hunt_Diversion_Analysis.xlsx.

[5] The "truck savings" estimate assumes shippers pay a truckload or TL carrier for their services and is not based on an estimate of the in-house costs for transporting their own freight for shippers engaged in private carriage.

[6] Carey HC-WP-T2R_Hunt_Diversion_Analysis.xlsx. Train transit times for intermodal diversion traffic is based on assumptions as identified and implemented by Hunt, which includes first and last mile trucking time components (door-to-door). Orr, in his Amended VS, calculates only the rail component of IM transit times. *See* Hunt Amended VS at pp. 90 and 140; Orr WP Transcon Lane Level Transit Time & Comps.xlsx; *see also* BNSF Workpaper Questions, STB FD No. 36873, Union Pacific Corp.—Control—Norfolk Southern Corp., August 21, 2026.

[7] Carey HC-WP-T2R_Hunt_Diversion_Analysis.xlsx, Hunt Workpaper dataset "fnl_2026.t2r_lane_level_diversions_final."

[8] {{REDACTED }}.

Figure 3: UPNS Merchandise Traffic, Share of Rail Pre vs Post Transaction [9] {{

REDACTED

}}

Additional supportive tables and examples are contained within HC WP Public Benefits Figures.doc.

[9] The comparison is based on county-to-county traffic flows on a 2-digit STCC basis. Carey HC-WP-T2R-Hunt-Diversion-Analysis.xlsx. Hunt workpaper dataset "fnl_2026.t2r_lane_level_diversions_final".

BEFORE THE

SURFACE TRANSPORTATION BOARD

DOCKET NO. FD 36873

UNION PACIFIC CORPORATION, ET AL. – CONTROL – NORFOLK SOUTHERN CORPORATION, ET AL.

CSXT TRANSPORTATION, INC.'S COMMENTS AND REQUEST FOR CONDITIONS

VERIFIED STATEMENT OF

DR. KRISTEN MONACO

NOVEMBER 18, 2026

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I. OVERVIEW AND KEY FINDINGS

1. In its decision on Major Rail Consolidation Procedures, the Surface Transportation Board provided not just its final rule on the regulatory language on major mergers, but insightful background on key concepts integral to the Board's decision to revise its regulations. The Board made it clear that the revised policy "disfavors mergers that reduce competitive options for shippers absent substantial overriding public benefits."[1] In their Amended Application, Applicants substantially overestimate public benefits.

2. The Board appeared to understand this would be a risk in future merger filings. Part 1180.1(c)(1) states, "Applicants shall make a good faith effort to calculate the net public benefits their proposed merger would generate, and the Board will carefully evaluate such evidence." The Board provided further guidance in its decision, "strongly cautioning applicants not to exaggerate their benefits projections" and indicating "we will take particular care to scrutinize future claims of merger benefits and associated timeframes to determine whether the applicants' projections are well-documented and reasonable."[2]

3. As the revised rules transitioned to a more quantitative approach to evaluating the impact of a merger, the Board stated, "it is important that we carefully calculate the net public benefits a merger would generate, and, to do so, the applicants must provide detailed and accurate data."[3]

4. Applicants claim $6.335B in annual "benefits" from merger, attributed to four primary sources: "operating revenue increases" ($1.757B; 28%); "operating cost reductions" ($965M; 15%); "capital expenditures" ($133M; 2%); and "shipper truck-to-rail savings"

[1] EP 582 (Sub-No. 1) decision, June 11, 2001, p. 13.
[2] P. 22.
[3] P. 58.

($3.480B; 54%).[4] Applicants provide a multitude of data-focused workpapers in their supporting materials that purportedly support their claims of substantial public benefits from the transaction. Most of these numbers do not stand up to scrutiny and, in the case of the diversion materials and estimates of shipper costs, the results fail the standard of accuracy.

5. Applicants state in their July 27, 2026, Supplement that: "The transaction's significant public benefits are driven by the creation of a new single-line service, which will benefit UP/NS's existing customers and the broader transportation marketplace regardless of whether a single carload is diverted."[5] This does not align with their summary of benefits, which is heavily weighted towards truck diversions and claims of potential shipper savings. Both the estimated diversions and the associated shipper savings are critically flawed due to data limitations and significant modelling errors. While the Board provided numerous opportunities to correct Application materials and develop estimates that align with operational realities and shipper modal choice, Applicants chose not to do so. In fact, the "shipper savings" estimate was not part of the original application and was added to the amended application, with minimal associated documentation, despite the importance of these numbers in Applicants' public benefits estimates.

6. Multiple other itemized benefits likewise lack substantial evidence, particularly savings attributed to technology and procurement. Applicants' estimate of headcount reductions in non-agreement labor (in percentage terms) far exceeds what was proposed in the most recent major merger (CPKC) and involves substantial cuts to positions that support operations and shipper services. Nowhere in the Application do Applicants explain how such a large reduction in headcount (slated to occur within 3 years) aligns with their projected increase in volumes

[4] Second Errata Amended Railroad Merger Application Appendix B, as corrected September 4, 2026.
[5] P. 67.

(likewise slated to occur within 3 years). Finally, Applicants plan to cut union jobs, while also touting an increase in overall union employment resulting from growth due to diversions. Absent substantial diversions, the net effect would be a decrease in union employment for the merged carrier.

7. In addition to overstated and unsupported public benefits, Applicants fail to explain which benefits are potentially achievable without merger. Applicants were provided with multiple opportunities to properly address this requirement but simply cite their operations and economic experts stating that railroads cannot coordinate as well under separate ownership structures. While UP and NS may not be able to perfectly coordinate absent merger, they certainly could coordinate a significant amount and, in fact, have already done so. Likewise, UP also recently announced an agreement with CN that will involve coordination. The Class I railroads have a long history of collaboration that belies oversimplified statements by Bailey and Israel that coordination short of merger is not possible. The Board recognized the importance of assessing the incremental benefits from mergers in the revised merger rules and in the detailed public benefits questions (specifically PB-6, PB-7, and PB-8) posed to Applicants in the Board's May 26, 2026, Decision. The Applicants' failure to address this issue in a robust manner substantially weakens their merger justification. This Verified Statement will assess each of these issues.

A. Key Findings

1) Diversions and "Shipper Savings"

8. Given the many data and modeling issues with Applicants' diversion study, the quantitative estimates should not be considered valid and should either be seriously discounted or ignored entirely in the benefit calculation. The diversion estimates and the associated shipper savings are neither well-documented nor reasonable.

9. The data used in the diversion model matches shipment-level rail data with county-level truck data without any corrections for the different levels of aggregation. Similarly, the commodity data is less granular in the truck data, without consideration for how these mismatches affect comparability.

10. Hunt's models do not align with economic or supply chain theories of shipper choice.

11. The simple lookalike model yields unrealistically high levels of carload diversions in many lanes that have no rail presence today, relying on removing a single interchange to generate high levels of rail traffic, without accounting for shipper investments/contracts, rail access, or relative prices. Counter-intuitive results are seen in the carload diversions, including diversions assumed on low volume lanes, lanes where a truck move can be completed in a single day, and lanes where rail mileage increases post-merger. For IM diversion estimates, there is no relationship between the factors that their own expert deems important to his model and the model's predicted results. In multiple cases the estimates from the "lookalike" lanes are not used to estimate diverted traffic and a higher value is used without explanation.

12. The intermodal (IM) diversion model fails to properly account for drayage time and cost in major urban areas where drayage prices exceed Hunt's estimate and road congestion yields drayage times far in excess of what is predicted. These failures bias the total IM cost downward.

13. Switching costs, equipment costs, and accessorials are not factored into "shipper savings."

14. Pricing to shippers is based on an average that does not account for how UP prices freight.

15. No sensitivity analysis is performed. Providing a point estimate for diversions implies precision where it does not exist. This is evident from the many revisions submitted by Applicants. While the underlying Transearch data and lookalike models may not directly contain measures of reliability, that does not mean they lack uncertainty. There are multiple approaches to correct for this in practice and Applicants fail to do so. Had they done so, perhaps the issues with the diversion models would have been more readily apparently to Applicants.

2) Operating Cost and Capital Expenditure Benefits

16. Applicants only document 15% of their costs savings and even these are not quantitatively tied to public benefits in terms of concrete reductions in rates for shippers. Absent any evidence that some portion of the remaining cost savings would be passed on to shippers, operating cost and capital expenditure benefits accrue to Applicants and should not be included in public benefits calculations.

17. Applicants provide very little justification for their proposed cuts in Agreement Labor categories. Their 12.5% reduction in non-agreement labor includes key centers such as customer service, transportation, and safety.

18. Applicants provide little evidence supporting their technology and procurement savings. For the former, they assume spending on software as a service and comparable categories will decline substantially, without any evidence of such. For the latter, they assume that UP can achieve better procurement results from NS without explaining the perceived inefficiencies in NS's procurement.

19. Applicants treat cost savings from the optimized network in a very different manner than cost increases from the growth model.

3) Possibilities Absent Merger

20. Applicants fail to seriously engage with the question of incremental gains from a merger. Their operational experts simply assert a merger is necessary for full realization of merger's potential, which does not address the Board's merger criteria. Their economic experts, likewise, appear to overlook the extensive collaboration among Class I carriers and fail to identify any **marginal** benefits specific to the merger.

21. There is a history of collaboration among Class I carriers. This includes equipment, facilities, billing, and data. While Applicants state that collaboration is more difficult absent merger, which may be true to an extent, they ignore the long, well-documented history of Class I carrier collaboration. This failure to fully align argumentation based on economic theory with the realities of how railroads have behaved over time substantially weakens general assertions that all or even certain merger benefits are only obtainable with a merger.

22. The bulk of the Application's public benefits are derived from projected truck to IM rail diversions. In the following section, I find that these diversions are implausible; however, if Applicants contend that they are feasible, they also need to identify why these new IM levels cannot be supported by a partnership between UP and NS. They fail to do so. IM partnerships have proven to be successful. Indeed, Applicants use BNSF-CSX IM service as evidence of a pro-competitive response to the merger application. Nowhere do they explain why UP-NS could not likewise offer such services (in fact, they have one) without a merger. This contradicts the operational realities of IM service and evidence from discovery {{REDACTED
}}.

23. Absent convincing evidence that IM diversions cannot be achieved absent merger, they should not be considered when evaluating public benefits.

24. Applicants focus on investment that they say would not occur absent the merger, while including investment projects that were clearly planned pre-merger and would have occurred absent merger. This includes most of the UP-track capacity increases, as well as the NS PTC projects and efforts to improve speed on certain segments of the NS network. Applicants also state that they have nearly all the capacity now to accommodate growth, which contradicts the economist testimony that the investment can only happen with a merger.

25. Applicants do not address support for rail access investment, which is the investment category most likely to rely on a merger.

4) Lack of Supporting Materials in Other Areas of Public Benefits

26. Applicants fail to provide support for their three-year timeline for fully achieving the claimed benefits from the merger.

27. Applicants fail to respond to the Board's request to analyze the competitive response to potential diversions. Applicants contend that the lookalike models incorporate the competitive responses from single-line service.[6] But, in addition to the fact that the "lookalike" models are inherently flawed from the perspective of providing reliable estimate of diversions, they are incapable of incorporating market responses to changes in the competitive landscape. There are no appropriate controls for price, trucking capacity, intramodal competition, service reliability, waterway access, geographic differences, shipper characteristics, or specific commodity.

28. Due to these critical flaws, the quantitative analysis supporting the Application's statement of benefits does not meet the Board's standards for a major merger. Additionally, there is sparse qualitative support for public benefits. While detailed service improvements are

[6] Applicants' Response to the Board, p. 67.

presented for IM service, these new, faster services could be achieved at least to some extent through non-merger collaboration and are estimated to produce high levels of diversions that are unlikely to materialize. For carload service, Applicants tout improved service without identifying specifically how much faster a shipper can expect the service to be. Applicants provide no marketing plan or other supporting materials to explain how shippers will be attracted away from trucking to rail to achieve long-run growth that could not otherwise be achieved through collaboration.

29. Absent rigorous quantitative or qualitative presentation of public benefits from a merger in excess of the likely anticompetitive effects, the Board's rules require that the Application be rejected.

II. DIVERSIONS AND SHIPPER SAVINGS

30. The public benefits claimed by Applicants rest primarily on truck-to-rail diversions and associated "shipper savings." IM truck-to-rail diversions, estimated by Applicants as 1.2 million units, comprise 80% of the total diversions. But the numerous successful IM collaborations that exist today and the trends in IM volumes are evidence that new IM services and any associated benefits could be achieved absent merger. Therefore, they should be excluded entirely from any merger-related benefits.

31. Setting that aside, there are numerous data and methodological problems with Hunt's approach to measuring both carload and IM diversions that make the estimates improbably high. The unrealistic assumptions span the data, models, and imputed prices and lead to bias in the results, with important feedback loops that exacerbate the inaccuracy. The improperly considered "savings" from shifting from truck to rail both overstates the likelihood of diversion and the "shipper benefit" from doing so.

32. In practice, any actual diversions would depend on decisions made by shippers. Shippers are heterogeneous and shipping decisions are complex, as recognized by Hunt,[7] however, Hunt's models do not incorporate these complex decisions, because Hunt's models are not rooted in the individual decisions of shippers. Hunt's models abstract away from the shipper level to aggregated trucking data and rely on "lookalike" models that assume homogeneity in decision-making across disparate shippers. This leads to unrealistic estimates of diversions.

33. Further, ignoring key costs faced by shippers, assuming away shipper rail access and transloading issues, and underestimating drayage costs leads to overestimates of the savings shippers would experience from switching from truck to rail, compounding the overestimate of public benefits.

A. The Transearch Database Has Substantial Limitations as a Proxy for Truck Shipper Choices

34. It is important to understand the underlying data that Applicants use for their diversion analysis. Hunt, Bailey, and Israel rely on both Waybill (CCWS) and traffic tape data for their analysis, but Hunt and Bailey, in particular, also rely on Transearch data for non-rail traffic flows without providing key information on Transearch source data, estimation procedures, and data limitations. In fact, Hunt devotes a larger share of his amended VS to explaining how his initial and final results change by switching from CCWS to the full traffic tapes than he does discussing the underlying Transearch data, despite the fact that these data are the backbone of his diversion estimates and underpin the majority of Applicants' public benefits estimates.

35. While CCWS and traffic tape data are fairly well understood by STB stakeholders, Transearch is somewhat of a black box. It is produced by S&P Global and access

[7] P. 39.

requires payment. Documentation on the underlying Transearch database is sparse, and Hunt's supplied documents provides only rudimentary information on the various Transearch codes (such as geographies), as opposed to the underlying Transearch data and methods.

36. Similar to the publicly available Freight Analysis Framework (FAF), Transearch data is built on a framework that links output and freight movement between geographic areas. FAF relies on the Commodity Flow Survey (CFS) for this piece of its underlying model. Transearch relies on production-consumption models that it checks against other data sources, such as the CFS. The primary intent of Transearch is not to model shipment-level data by mode; it tracks production and consumption flows by commodity largely at the county-level and then uses supplemental data to assign these to transportation modes. This is similar in many ways to the FAF, but the FAF public files have less granularity for commodity and geography (though county-level experimental data are now available) because the FAF is a government statistical product and is therefore required to protect its underlying source data according to disclosure protocols. It is also required to adhere to established procedures for statistical reliability in presenting data (estimates with variance above a certain level are not published). Finally, as a statistical product, the FAF's methodology is public.

37. As a private product, Transearch is not subject to these requirements, though they use some data sources in common with FAF, including railroad waybill data. Importantly, like the FAF, Transearch results are based on modeling, though that is not acknowledged in Applicants' description of these data and the models that use these data. For example, when allocating freight to modes, Transearch first allocates flows to non-truck modes and then assigns the residual to trucking. Within trucking, Transearch relies on their non-statistical sample of

truck flows to assign truck segments (truckload, less-than-truckload, and private carriage) and truck equipment type.

38. Also, because Transearch is modeling production to consumption flows, they do not necessarily capture intermediate stops. So, for example, if finished food products are shipping from California to a warehouse in Indiana and then from that warehouse to grocery stores in multiple states including Illinois and Michigan, Transearch may see this as freight flows from California to IL and MI. The FAF would model this as distinct moves (but also tend to overcount the traffic).[8]

39. This is not to suggest that Transearch data lack value. It is a sophisticated product that has grown in scope and utility over time and benefits from data that S&P collects across its different operations. However, it is critical to understand the source and purpose of the data used in modeling, particularly when it is being used to model something somewhat out of scope. Transearch data is widely used in transportation planning models, which are focused on understanding freight volumes, mode, trends, and forecasts. In Applicants' models, however, Transearch data is being used as a proxy for shipper decisions, which is not the intent of the data, as it is not collected and modeled at the shipper level, and requires assumptions that are untested in the Application.

1) <u>There Are No Corrections for Different Levels of Detail/Aggregation between the Rail and Truck Data</u>

40. Hunt's diversion models rely on combining rail shipment data (CCWS and, in the Amended Application, traffic tapes) with trucking data from Transearch. The traffic tape data are very granular, as they are essentially at the shipment level. Transearch data is at a much higher

[8] Florida Department of Transportation, "Statewide Commodity Flow Analysis," 2021; RS&H, Inc. "SWOT Analysis of Transearch and FAF Data," 2016; Donnely, Rick, "Best Practices for Incorporating Commodity Flow Survey and Related Data into the MPO and Statewide Planning Process," NCHRP Project 08-26, Task 65, 2010.

level of aggregation – county-to-county commodity freight flows (4-digit STCC level) that are intended to estimate flows between origins and destinations by mode.

41. Unlike rail traffic tape data, Transearch trucking data are not a census of freight movements; they are estimates of county truck flows and several of the included variables are assigned through a modelling/imputation process. This includes data on trucking segment and equipment type. Hunt uses trucking segment, commodity hauled, and equipment type as key variables in assigning truck freight to either carload or IM segments and to assign equipment type for carload traffic. Failing to acknowledge that the data on trucking segment and equipment type are estimates leads to the impression that the data underlying Hunt's model do not have inherent variability.

42. The Transearch data are at the 4-digit STCC, which for most commodity groups is still fairly heterogeneous. Hunt's models further aggregate to the 2-digit STCC level, but he provides no evidence whether different levels of aggregation lead to different results, despite a near certainty that they would. A 4-digit STCC from a single county likely represents many diverse shippers and, without further controls for shipper characteristics, there is an underlying assumption that these shippers will make decisions identical to shippers in the traffic tape data set, despite the likelihood of serving different customers and shipping very different products. This inaccurate generalization is exacerbated at the 2-digit STCC level. While there is no alternative data set on offer to achieve more granularity than the 4-digit STCC, this limitation should be acknowledged and incorporated into the models.[9] At a minimum, sensitivity analysis should be performed to determine the potential impacts.

[9] It is also surprising that Hunt relies on 2-digit STCC for diversion lanes, given that he assigned commodities to IM versus carload using 4-digit STCC, demonstrating that he recognizes there are significant differences in commodity within 2-digit STCCs.

2) Private Carriage Truck Tonnage Is Included and Treated as Identical to For-Hire

43. Finally, for both the merchandise and IM diversions, Hunt includes truck traffic that is currently moving via private carriage. Private carriage encompasses trucking services that the shipper is providing for their own benefit. It represents roughly {{REDACTED}} of Hunt's diversion estimates. Including private carriage tonnage as diverted freight assumes that shippers are prepared to quickly divest themselves of their transportation infrastructure and transportation operations, as the diversions are assumed to occur by year three post-merger. There is no justification in Hunt's VS for including freight moving via private carriage and treating it as essentially identical to for-hire trucking.[10]

44. Likewise, there is no evidence provided elsewhere in the Application to support assuming large quantities of private carriage diversions to rail, either in the economic analysis or in letters from shippers provided in support of the Application.

B. Hunt's Methods Are Ad Hoc and Lack Operational or Economic Justification

1) Hunt Assigns Truck Traffic to Carload and IM Services Using an "All or Nothing Approach."

45. Hunt separates truck data into IM versus non-IM (bulk/merchandise and automobiles) based on whether the majority of CCWS tonnage at the 4-digit STCC shipped in something other than a container or trailer on flat car. This resulted in 87 4-digit commodity groups classified as potential carload diversions, regardless of whether a substantial portion of that traffic actually moved in a container.[11] This likely results in overclassification of potential

[10] Hunt (Second Errata VS, p. 117) describes intentionally aggregating the trucking data "to remove extraneous detail (e.g. private versus for-hire trucking)." Thus, grouping private carriage with for-hire freight is a deliberate choice, which overlooks the fact that that these are distinct markets and distinguishing between them is not "extraneous."

[11] Hunt WP "STCC4-CLvsIM.xlsx".

carload divertible traffic for multiple commodities. For example, in STCC 20 (food), which is the largest 2-digit STCC group for carload diversions, 35.5% of STCC 2025 (cheese and specialty dairy), 13.7% of STCC 2033 (canned fruits), and 12.6% of STCC 2085 (distilled or blended liquors) are currently transported via IM rail in the CCWS, but Hunt's model assigns all truck traffic in these commodity groups to potential carload diversion, not IM.[12]

46. It could be argued that the same issue affects the universe of potentially divertible IM traffic, so there is a "wash out" effect in terms of divertible traffic. However, it is logistically "easier" to divert truckload freight to IM than to carload freight, since the shipper is already operationally configured to load and move a certain amount of freight in 53' containers, as opposed to carloads. This is not meant to state that truckload-to-IM freight is easily diverted (this is addressed later in this VS), but that the base carload estimates of divertible traffic includes tons that are highly unlikely to divert to carload since substantial amounts of freight in that STCC4 is moving via IM today, not via carload.

2) Hunt's Models Are Atheoretical and Ignore Existing Literature

47. There is a fair amount of literature on freight modal choice. A survey of this literature appears in an OECD article cited in Hunt, however, neither Hunt nor Applicants' economic experts engage with this literature in their market evaluations.[13] The OECD article cited both references and contains similar analysis as Oum et al.[14] Two major themes are important:

[12] Important, but not the focus of this VS, is that the detailed commodities within these STCCs are varied, tend to travel in different car types, and have very different revenue profiles, as is evident from the rich data published by the STB in their Commodity Revenue Stratification Reports (https://www.stb.gov/reports-data/economic-data/commodity-revenue-stratification-reports/).
[13] OECD International Transport Forum (ITF), "Mode Choice in Freight Transportation," 2022, https://www.oecd.org/en/publications/mode-choice-in-freight-transport_3e69ebc4-en.html.
[14] Tae Hoon Oum, W. G. Waters II and Jong-Say Yong, "Concepts of Price Elasticities of Transport Demand and Recent Empirical Estimates: An Interpretative Survey," Journal of Transport Economics and Policy, Vol. 26, No. 2 (May 1992), pp. 139-154, https://www.jstor.org/stable/20052976.

(1) The level of aggregation is important for understanding modal choice and responsiveness of own-price and cross-price elasticities in freight transportation.

(2) Cross-price elasticities between rail and non-rail freight transportation (particularly in disaggregated studies) tend not to be symmetric.

48. First, initial models of mode choice (typically pre-deregulation) were conducted on an aggregate level and were largely atheoretical. Formal economic models were later developed and applied to explain the underlying modal shares, relying on deriving transportation demand from economic cost models. As more disaggregated data on shipper choice became available, the underlying models shifted to incorporate an indirect utility function, using revealed preferences to infer the relationship between the characteristics of different modes and the mode selected by the shipper.[15] In other words, if a shipper uses trucking rather than rail, then trucking must have higher utility for the shipper. As different studies had different underlying models and data, the results of these studies vary considerably.[16] Importantly, the estimates of how shippers respond to changes in prices are systematically different depending on the level of data aggregation used.

49. Second, studies find that own-price elasticities are higher in absolute values than cross-price elasticities. This means that the demand for rail, generally, is more responsive to a change in rail price than changes in the prices of other modes (trucking or waterway). More importantly, cross-price elasticities are not symmetric:

50. The demand for rail, inland waterway transport, and coastal shipping is relatively responsive to changes in the price associated with road transport. This is not the case the other

[15] See Winston, Clifford, "The Demand for Freight Transportation: Models and Applications," Transportation Research, Part A," 1983, Vol. 17, No. 6, pp. 419-427, for a review of different modelling approaches.
[16] ITF, pp. 21-2; Oum pp. 151-2.

way around: the demand for road transport is insensitive to the cost of the alternative freight transport modes.[17]

51. Both of these well-studied facts about modal choice have implications for Hunt's models and interpreting his findings and will be addressed in turn.

The Variables Included and Level of Data Aggregation Matters

52. It is difficult to properly model diversions, since there is limited data at comparable levels of granularity. Rail traffic tapes contain information on the decisions of certain shippers to use rail on certain routes. And one could certainly perform this analysis over multiple years to generate estimates of the responsiveness of shippers to changes in rail service, prices, seasonality, etc. This was not done by UP's experts.

53. As previously addressed, the data on truck flows is not available at the same level of granularity as the rail data. There is no information on specific shippers, detailed location, detailed commodity, or access to rail facilities. Further, Hunt's models coarsen the trucking data by aggregating to broader commodity groupings, which combines dissimilar commodities.

54. Hunt opts to aggregate data when more detailed data is available and would be appropriate. For example, the estimated speed of carload trains is based on an all-carrier average for 2023, as opposed to UP- and NS-specific speeds. Likewise, terminal dwell (used to estimate time savings) is estimated as an average, while it varies across the networks.[18] In sum, when there is an opportunity to use more detailed data to refine certain measures, Hunt opts not to do so.

[17] ITF, p. 23.
[18] See Appendix B for charts from EP 724 data (WP script "ServiceData724_speed_dwell.R". Additional detailed service data for Applicants' reference year are also available on the STB website through EP 770 data reports.

55. Hunt recognizes that service reliability matters, but instead of using available data for reliability, his models assume that one less car handling for carloads or potential impedance point for IM are the proper proxies. On-time performance data exist and could be used to refine the model for this variable. Public data are available for Applicants' chosen reference period. UP and NS also have more granular internal on-time performance metrics for their services.[19] Hunt uses neither.

Hunt's Models Are Atheoretical

56. Hunt's models to estimate diversions are not derived from shipper choice theory in any documented manner.[20] The models clearly involve a large amount of data processing and analysis, however, he never links this model directly to shipper choice in a fashion that demonstrates the relationship between the economics of shipper choice, the model and data used, and the diversion estimates. It is largely a black box, reliant on accepting Hunt's untested and unsupported assertions that his archetypes generate appropriate estimates based on "lookalikes" and forcing stakeholders to painstakingly trace the methods through multiple workpapers.

57. Likewise, there is no direct empirical link provided between relative truck/rail transportation times and diversion. What we simply see are very large levels of diversions assumed on certain lanes among existing shippers who have already chosen to use trucking. The atheoretical model does not provide any explanation of the mechanism by which shippers' preferences switch from truck to rail. It cannot be relative prices, as there is no evidence from Applicants that rail prices will actually decrease. It is not speed and reliability of services,

[19] https://www.stb.gov/reports-data/rail-service-data/ (EP 770 compilation data are available for download at the bottom of the page).

[20] While the focus of this section has been primarily on the freight transportation economics literature, another excellent resource for understanding different approaches for modeling freight transportation is available from the US Department of Transportation: https://ops.fhwa.dot.gov/publications/fhwahop18003/index.htm.

because measures of route reliability and speed are not directly incorporated. The stripped-down lookalike models make a lot of assumptions of comparability when there is no proof these shipments are comparable. The underlying factors that drive large estimates of diversions from truck to rail are important, given the results across multiple peer-reviewed studies that truck demand tends to be inelastic.[21]

58. Trucking has a number of advantages over rail: flexibility, solid customer service, transparent pricing, fairly reliable delivery times, and generally excess capacity. When these break down, one sees a modal shift. For example, cuts in truckload capacity in 2026 and concurrent sharp increases in diesel prices caused a major shift in IM traffic from truck to rail.[22] This aligns with the transportation economics literature. Changes ongoing in IM rail volumes appear to be driven more by challenges in the trucking industry than by incremental rail improvements. And if the truckload capacity and fuel prices revert to the norm, some of the freight that moved intermodally during expensive/limited capacity trucking cycles will move back to trucking.

59. Evidence from the CPKC post-merger reporting demonstrates that the levels of diversions predicted by similar atheoretical models far exceed actual levels. And this is not surprising. These are not models of shipper choice and therefore estimates from these models are very unlikely to align with the actual choices of shippers. Not surprisingly, Hunt's models lead to implausible and counter-intuitive results, explored in more detail in the following sections.

[21] ITF, Oum.
[22] https://www.trains.com/pro/freight/intermodal/intermodal-traffic-sees-boost-as-trucking-takes-hit/; https://www.trains.com/pro/freight/intermodal-volume-sets-record-in-third-quarter/?utm_source=omeda&utm_medium=email&utm_campaign=Email-News0-TIN-261016-TNFR00-Newsletter&oly_enc_id=5178A6155745E6Z.

C. Hunt's Carload Models Lead to Implausible Levels of Diversion

1) Hunt's Lookalike Models Overestimate Potential Carload Diversions

60. Hunt's carload diversion data refinement and methods (detailed explanation at pp. 148-157) include the following:

(1) Eliminate short lanes (<=250 miles), some specialized truck traffic, counties with no rail service post-merger, and lanes where rail price is not at least 10% better than truckload estimated price.

(2) Create lanes of traffic based on origin, destination, commodity, and allocated to equipment type. This results in a final dataset where observations are county-county-STCC2-equipment.

(3) Create lookalike "archetypes" of comparable county-to-county routes. The archetypes are based on rail miles, rail transit time, rail price, and single line/interline:

a. Rail miles are binned in 250-mile increments.

b. Transit hours are binned in 15-hour increments.

c. Rail price is based on pre- and post-merger rail price by equipment type.

(4) Refine estimated diversions based on volumes (two railcars per week at origin).

(5) Refine estimated diversions based on feasibility of service and whether service is "better" post-merger. Better is defined as improvements in distance, price, and/or service duration.[23]

61. Hunt relies on a "lookalike" model to identify potential market share and then applies these estimated to STCC2-origin-destination combinations. Hunt contends that this analysis "naturally incorporates the key drivers of shipper choice – price, reliability, and transit time;"[24] however, this assumes that these underlying characteristics are identical across the

[23] Hunt Second Errata VS, p. 38. Although the phrasing from Hunt uses "and/or" the constraint appears to have been implemented as an "or" since there are many cases in his data sets where diversions occur when one of the conditions does not hold. This is described in more detail later in this VS.
[24] Hunt Second Errata VS, p. 31.

"lookalike routes" or close enough to the average of all comparable lanes averaged by volume (tons) in the lookalike analysis. Tests of the validity of these assumptions are not included in Applicants' materials.

62. Applicants do acknowledge that the lookalike model requires an assumption of geographic homogeneity – if shippers use a certain modal share in the aggregate on a segment of a certain length (say 500-750 miles) in the upper Midwest for STCC 20 (food and kindred products), then they would have that same share for STCC 20 across all geographies and actual commodities that fall under STCC 20. Hunt fails to present tests for whether this assumption holds; for example, he could use lookalikes from the east and compare them to those from the west for a certain commodity segment to see if this assumption is valid. Or he could evaluate at the more appropriate, but still over-aggregated, 4-digit STCC level. Neither of these are included in his analysis.

63. More problematic, the model relies on "lookalikes" in specific lanes where shippers are moving relatively high shares via rail and is imposing these shares on lanes that have nearly no rail share pre-transaction, even though rail is currently a hypothetical option. This presumes that an interchange is the only thing preventing large volumes from being transported on these lanes, which is unrealistic. In Hunt's Exhibit 2-2[25], the difference between modal share across lengths of haul differs significantly between single-line and interchange service, but not at the levels he estimates as the incremental change estimated from his lookalike models for merchandise/bulk traffic.

[25] Hunt Second Errata VS, p. 16.

64. As can be seen in Figure 1, the difference between pre- and post-merger rail shares estimated by Hunt are substantial, ranging from {{REDACTED}} and increasing by factors of {{REDACTED}}.[26]

{{

REDACTED

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65. Evaluating by 2-digit STCC likewise demonstrates the high levels of diversions predicted and the commodity categories that are assumed to have particularly large levels of diversion, though in some cases nearly all the commodity was moved in 2023 by truck.[27]

[26] While the individual observations in the dataset are based on STCC 4, origin, destination, and Hunt's equipment classification, the numbers presented are weighted by Hunt's measure of total market size (tons moved) to capture the density on certain corridors. Unweighted estimates produce substantially lower pre-merger rail shares, reflecting a disproportionate share of lanes with low levels of freight (rail and truck) traffic. WP "t2r_mdse_09232026.R" (output from code block 5).
[27] WP "t2r_mdse_09232026.R" (output from code block 6).

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REDACTED

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66. These results are an indicator that the model is producing flawed results and requires calibration. The "lookalikes" in many cases likely represent a small number of shippers of a specific commodity or set of commodities. And these are averaged by equipment type and distance bands to extrapolate to county-level truck moves at the 2-digit STCC level. Hunt performs the lookalike estimation using equipment type and fails to evaluate whether the results would hold by commodity. The ability to perform this analysis is likely limited by the number of possible "lookalikes" available at the 2-digit or 4-digit level. If there are an inadequate number of available "lookalikes" for certain commodities, this serves as further evidence that the aggregation may be leading to inaccurate results, since the comparisons are based on different underlying commodities.

67. Hunt's archetypes are based on lanes where there are substantial shares of rail service; to be in an archetype group for rail, information must exist to populate the model. As a

result, the archetypes are created based on having some share of rail freight and then applied to many lanes where there is currently no rail. Some of the archetypes are likely heavily reliant on captive traffic, resulting in the high rail share of certain archetypes and an upward bias of the estimates.

68. There is substantial academic literature on the impact of intramodal and intermodal competition on rail's share of freight transportation for certain commodities. For example, Prater et al. demonstrate a substantial rail share of grain products in the upper Midwest and Great Plains due to limited IM competition; inland waterways are not nearby and trucking is feasible, but not practical. Therefore, there is a high density of rail used for these commodities, but these routes would not be realistic "lookalikes" for lanes that are truck dominant.[28]

69. Relatedly, a substantial share of carload diversions is expected by Hunt on fairly long lanes of traffic that are currently truck dominant. Among origin-destination-STCC2 combinations that had truck and post-merger rail mileage greater than or equal to 1,500 miles, Hunt's diversion model assumes {{REDACTED}} of this freight will divert from truck to rail ({{REDACTED}} rail carloads). There are two commodity groups that dominate these diversions:

- STCC 20, Food and Kindred, comprise {{REDACTED}}.
- STCC 32, Clay, Concrete, Glass, Stone, comprise {{REDACTED}}.

70. Across all commodity groups for this distance identified, the pre-merger rail tonnage is {{REDACTED}}.[29]

[28] Prater, Marvin, Ken Cassavant, Eric Jessup, Bruce Blanton, Pierre Bahizi, Danial Nibarger, and Isaac Weingram, "Rail Competition Since the Stagger Act," Journal of the Transportation Research Forum, Vol. 49, No. 3, 2010, pp. 111-132.
[29] "Monaco_WP_T2R_Merchandise_Tables_HIGHLY_CONFIDENTIAL.xlsx", « Long Hauls » tab.

71. This is a strong indicator that this freight is not easily converted from trucking to carload rail service. It is well-accepted that truck and rail are most easily substituted on lanes greater than 1,000 miles and rail has an advantage on the longest routes (1,500 miles or more). If freight on the longest routes identified by Hunt is currently nearly all truck-based, the obvious explanation is that there are some particular characteristics of the shipper or freight that cause trucking to dominate. In the case of food and kindred commodities, it may be the case that the shipments need to get to market quickly before spoiling. For the others, the customer's production schedule or some characteristic of the freight/supply chain likely necessitate that it moves by truck. Hunt explores none of these issues.

2) A Substantial Amount of Carload Diversions Feature Short Lengths of Haul and Noncompetitive Rail Transit Times

72. Hunt identifies approximately {{REDACTED}} million tons diverted from truck to rail carload post-merger, roughly 191,000 carloads.[30] In addition to the data limitations described above, there are issues with the scope and implementation of the model. First, because post-merger "improvements" are defined as improvements in price **or** miles **or** time, there are substantial amounts of diversions expected in lanes where the actual service time is longer post-merger. Approximately {{REDACTED}} million tons ({{REDACTED}} carloads) of diverted freight is on lanes where transit time either is the same or increases post-merger.[31]

73. While Hunt filters on routes that are 250 miles or less, he leaves in freight moving 250-500 miles. This is freight that would typically move via truck in a single day but takes multiple days to move via carload rail service. Roughly {{REDACTED}} million tons of diversions ({{REDACTED}} carloads) are on lanes that involve a single-day truck move. [32]

[30] WP "t2r_mdse_09232026.R" (output from code block 3).
[31] WP "t2r_mdse_09232026.R" (output from code block 11).
[32] WP "t2r_mdse_09232026.R" (output from code block 11).

74. Finally, Hunt includes diversions on lanes where rail takes at least 5 times longer than truck, post-merger. He does not include any explanation for why this freight would shift from truck to rail. Adding all three filters to Hunt's estimated diversions (presented stepwise in Appendix A) reduces the estimated carloads diverted by {{REDACTED}}.

3) Carload Diversions Are Assumed at Origins with Small Freight Volumes

75. Hunt deems freight as potentially divertible if there are at least 2 railcars per week at an origin for a single 2-digit STCC.[33] This initially might seem plausible since there needs to be a minimal level of volume in order to justify providing service to an area; however, this is likely not the correct floor of volume to apply for two reasons. First, applying this *before* the diversion model is run leads to fractional carloads predicted for many STCC2-origin county combinations, since not all freight will divert. And this is evident in Hunt's diversion data. There are roughly {{REDACTED}} OFIPS-STCC2 combinations in his data, of which {{REDACTED}} have less than one car **per year** in rail diversion.[34] And each of these had zero rail tons at origin before the potential diversions, meaning that pre-merger there are inadequate levels of freight currently to offer service in this area, per Hunt's own assumption. Over half, {{REDACTED}} OFIPS-STCC2 combinations have less than one car **per week** assumed to be diverted and each of these have either zero or de minimis levels of rail tonnage currently. Adding these, roughly {{REDACTED}} tons of diverted traffic is assumed for STCC2-OFIPS combinations that do not meet the criteria of at least one car per week from the county for that aggregate commodity.[35]

[33] Hunt Second Errata VS, p. 38.
[34] "Monaco_WP_T2R_Merchandise_Tables_HIGLHLY_CONFIDENTIAL.xlsx", tab « FIPS_STCC2_Diversions ».
[35] "Monaco_WP_T2R_Merchandise_Tables_HIGLHLY_CONFIDENTIAL.xlsx", tab « FIPS_STCC2_Diversions ».

76. The second issue with Hunt's assumption on the conversion of truckload freight to carload traffic comes from the shipper perspective. For freight to divert from truck to carload and to apply carload rates, the carload must be full. This means an individual shipper has enough freight at a given cadence to fill a carload. Less than full carload service is a possibility; however, it is far less common than in the past and tends to be service that requires working with a third-party logistics provider to consolidate traffic, as opposed to the shipper's current practice of filling and shipping a full 53-foot trailer.[36] And this would cost more money than a full carload. Since Hunt did not incorporate a premium price for the traffic in his carload diversion model, the underlying assumption must be that the shipper has adequate freight to fill a carload at a regular cadence. But this is not borne out by the data. As explained earlier, Transearch does not have data at the shipper level. But if we use the 4-digit STCC (which is still abstracting away from a shipper to a more aggregated level), we find that there are {{REDACTED}} STCC4-OFIPS combinations in Hunt's data, of which {{REDACTED}} have less than one full carload a week (52 over the course of a year), amounting to roughly {{REDACTED}} million tons of diverted freight, ({{REDACTED}} carloads). Absent an explanation for why a shipper would choose a substantially less frequent shipping mode or shift from truckload to a less-than-carload rail choice, it is very unlikely that these diversions would happen.[37]

4) Hunt's Carload Pricing Assumptions Are Unrealistic and Untested

77. Hunt's carload pricing assumptions raise issues with respect to the likelihood of diversion **and** the projected shipper savings from diversion. Hunt's pricing model for the diverted traffic is explained in detail in his VS Appendix B.6. While he relies on the full traffic

[36] Bearing in mind that Hunt excludes LTL trucking from his analysis.
[37] "Monaco_WP_T2R_Merchandise_Tables_HIGLHLY_CONFIDENTIAL.xlsx", tab « FIPS_STCC4_Diversions ».

tape data for his diversion quantities, his price estimates are based on the CCWS. Due to the CCWS data exhibiting some unusual patterns in the relationship between distance and revenue per ton-mile, he develops a revised predicted revenue per ton mile by regressing revenue on distance for three different groups of records: those with single-line service, those with a single junction, and those with more than one junction. The sample is further restricted to freight moving on merchandise trains and freight that is not billed as Rule 11. These modifications are sensible.

78. To adjust for commodity-specific pricing differentials, Hunt incorporates adjustments at the STCC2 level using both CCWS and Freight Commodity Statistic (FCS) adjustments. The exact use of the FCS is unclear, as the FCS presents data on carloads and tons, but not ton-miles. Presumably it is weighted to ton-miles in some fashion using the CCWS, but this calculation is not presented in the Appendix and cannot easily be determined from the workpapers. Regardless, while it is important to incorporate commodity into the estimated price per ton-mile, it is not clear why Hunt applied this at the 2-digit level. The CCWS and FCS allow for this to be done at the 4-digit STCC level, which would be more appropriate.

79. Even this, however, does not fully forecast a price. Using what is essentially a rate per ton-mile that is averaged across 2-digit STCCs and all Class I railroads is unlikely to lead to an accurate rail rate. Particularly for carload traffic, rail rates are determined by commodity, volume, density, and equipment. This is not controlled in Hunt's model, which appears to count on it averaging out across all diversions.

80. But this is unrealistic. As noted, a substantial share of the assumed diversions are likely small shippers (based on volumes from origin), who are unlikely to own equipment or have volume commitments that generate competitive rail rates. Benchmarking their projected

rates to existing rail traffic, which has a large share of contract rates and shippers who, in many cases, either own equipment or can leverage their volumes to negotiate lower cost equipment, is likely understating their rail costs. Further, as is clear from the small shares of freight moving via rail in these corridors pre-merger, there is no reason to believe that this carload freight will be priced competitively.

81. It is also unusual to project rates based on an all-carrier average. Presumably Applicants have a pricing model that they could apply to the proposed freight. This would be considered commercially sensitive information but could be factored into the model in some fashion to convey a more realistic sense of rail price. Assuming the carload price per mile is simply a factor of distance and STCC2 is unrealistic and likely understates the rates that shippers would face in practice. This will lead to a lower likelihood of diversion.

82. In sum, there are several testable assumptions in the carload diversion models that Applicants opt not to examine. Basic sensitivity tests of these hypotheses show diversions are likely biased upwards by millions of tons, as documented in prior sections. Removing implausible traffic from Hunt's estimated diversions drops the diversion estimates from 191,000 carloads to roughly {{REDACTED}}.[38] Eliminating combinations with very low levels of volumes further drops the number below {{REDACTED}}. And these should not be thought of as quantified diversions, but merely a refinement of divertible freight. The extent to which diversions might actually result from this base depends on shipper choice, which is not accounted for in Hunt's model.

[38] Lanes here refers to Hunt's origin-destination-STCC2 combinations.

D. Hunt's IM Assumptions Are Unrealistic and His Model Contains Substantial Errors

1) Hunt's IM Model Contains Untested and Unrealistic Assumptions

83. The IM diversion model shares some of the same underlying assumptions and processes as the truck to carload model but has its own set of problematic assumptions:[39]

(1) Shippers make modal decisions "consistently" across different regions. This is the same underlying assumption as the carload diversion model and is not tested for accuracy.

(2) "Shippers would evaluate their mode choices in the same way as they do for similar current-state lanes today."[40] This implies that, on average, shippers generally make the same decisions, since the Transearch trucking data does not include shipper-level information. As in the case of the carload model, different shippers of different commodities are assumed to have identical modal shares.[41]

(3) The IM model incorporates mileage (linehaul plus drayage miles) and "impedance factors." Impedance factors account for coordination among carriers and for the fact that IM interline movements are inherently different than carload, as they are less complex and tend to involve less work (crew change, setting out/picking up blocks of cars). Impedance is assumed to be a proxy for shipper preferences, based only on an aggregate result that traffic shares tend to be highest on routes with limited impedance factors.[42] However, finding that routes with limited impedance have higher rail shares is not equivalent to modelling shipper preferences and no additional analysis is provided to justify this assumption.

(4) The IM model is a "grey box" and does not consider the Intermodal Marketing Company (IMC) or current trucking partner. Treating the IMC as a grey box assumes that all IMCs will be working with Applicants in the future. This does not align with Applicants' supporting materials or {{REDACTED}}[43].

The largest asset-based IMC is J.B. Hunt, who currently partners with BNSF.[44] There is no evidence provided by Applicants that J.B. Hunt plans

[39] Hunt VS pp. 137-143.
[40] P. 138.
[41] Recall that Hunt assigns potential divertible trucking freight to carload or IM based on 4-digit STCC. Thereafter, he does not control for commodity in his IM analysis.
[42] Exhibit 3-7, p. 33.
[43] {{REDACTED}}.
[44] https://www.jbhunt.com/shippers/intermodal.

to move their partnership to UP/NS or that other asset-based IMCs will commit to the UP/NS network who do not already use UP as a provider.[45] Because IMCs, particularly asset-based IMCs, establish multi-year partnerships with specific railroads, assuming a grey box is problematic without supporting materials from IMCs that they are prepared to partner with the UP/NS network at the levels that Applicants are forecasting and cease agreements with non-Applicant carriers. For large shippers who are currently using for-hire truckload carriers, it is a safe assumption that they may be willing to convert some of their freight to IM, however, it is not clear that they would switch to a different carrier's IMC to do so.

(5) Transit time assumptions are presented on page 140 of Hunt's VS and make standard assumptions for trucking speed and hours of service time calculations, as well as linehaul rail time, but also include problematic assumptions for drayage time when the dray occurs in a major metro area (and most of the IM diversions hit a major metro area at origin or destination). Hunt assumes 50 MPH drayage and 2 hours minimum drayage time. The mileage for drayage is generated based on a "centroid" approach and results in inaccurate estimated dray miles in certain large metropolitan areas containing rail ramps, including the greater Los Angeles metro area.

The assumed speed for drayage trucks does not align with publicly available data. The Bureau of Transportation Statistics provides data on truck speeds in major metropolitan areas.[46] These are substantially lower than the 50 MPH assumption of Hunt, including San Francisco/Bay Area (36 MPH), New York/New Jersey (35.3), and Los Angeles (30.9). Likewise, American Trucking Association lists their top truck bottlenecks and several of these are at key intersection points in the metro areas with large projected increases in IM drays.[47] While Hunt adds a minimum time to the drays, these floors are still unrealistic for these areas.

84. As in the carload diversion analysis, a substantial portion of diversion is assumed from private carriage trucking. Nearly {{REDACTED}} of IM diversions are assumed to come from freight currently transported by a private carrier.[48] There is no separate explanation for the

[45] Schneider National announced a shift from CSX to NS as their eastern railroad partner in October 2026. Their Class I partners will be UP, NS, and CPKC. They used BNSF in the past.
[46] https://www.bts.gov/browse-statistical-products-and-data/freight-facts-and-figures/average-truck-speeds-select.
[47] https://truckingresearch.org/2025/02/top-100-truck-bottlenecks-2025/.
[48] Analysis of "Transearch_FIPS_T2R_IM_Diverted_Trucks.csv," using WP script "T2R_IM_transearch_analysis_09262026" at block 5.

decision-making process that private carriers would follow in moving over {{REDACTED}} truckload shipments from their own trucking operations to rail IM service.

85. Much like the carload diversion analysis, the IM diversion analysis assumes large levels of truck diversions on very long lanes. The population of trucking routes to which the diversion model is applied follows a bi-modal distribution.[49]

{{

REDACTED

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86. The share of trucks diverted to IM service generally increases with length of haul, ranging from {{REDACTED}} to {{REDACTED}} for lanes exceeding 2,000 miles.[50]

87. The large levels of diversions are predicated on claims of new, faster IM services from the merged railroad, but, particularly for time-sensitive traffic moving long-distances via truck currently, the mechanism by which a relatively short reduction in the transit time (once a

[49] Analysis of "Transearch_FIPS_T2R_IM_Diverted_Trucks.csv," using WP script "T2R_IM_transearch_analysis_09262026" at block 4.
[50] "Monaco_WP_T2IM_Transearch_Tables_HIGHLY_CONFIDENTIAL.xlsx", tab "Truck_Mileage".

more appropriate drayage duration is considered) drives large shifts from truck to rail is not explained. For many of these lanes, IM service exists today. The merger is not "unlocking" new lanes of traffic for many of the IM units; they could move through existing IM service today, but, instead, the shippers are using trucking services (often their own trucking services). There is nothing in Hunt's model to explain the incentive behind switching, aside from removal of a second carrier's involvement in the IM move.

2) Hunt's Estimates of Drayage Miles, Time, and Costs Are Unrealistic

88. Although Hunt uses the term "drayage economics" to describe the way he purports his model represents an understanding of drayage operations,[51] his model does not properly incorporate drayage within major transportation centers. He simply assumes basic drays from shipper to rail ramp at origin and the opposite at destination, without accounting for the underlying dynamics of drayage operations at either end.

89. This is caused in large part by the geographic limitations of the Transearch trucking data, which has county-level truck flows that need to be mapped to domestic IM rail ramps. Hunt uses a county centroid approach that maps the centroid to either rail activity or population centers, if the rail data is sparse/absent. However, this likely does not map well to the location of shippers, which tend to be located outside the population centroid and some distance away from the center of rail activities as well. Essentially, if there is an IM truck ramp in a particular FIPS, then the drayage to that ramp is assumed to be nearly zero miles for a shipment in the same FIPS. In Hunt's Transearch trucking file used as the basis for the IM diversion estimates, roughly {{REDACTED}} diverted IM movements are assumed to have zero drayage

[51] See p. 127.

miles at the origin.[52] And while Hunt's final model assigns all drays, even zero mileage drays, a duration of at least 2 hours and cost of at least $200, this likely does not reflect the actual dray duration and cost for these zero mileage drays. This will result in incorrect IM time and price estimates.

90. Over {{REDACTED}} of these zero mileage origin drays is on truck freight that originates in the Los Angeles FIPS. Moving from the FIPS level to the BEA level, another {{REDACTED}} IM containers are assumed to originate in the Los Angeles BEA ({{REDACTED}} total) with an overall average dray of {{REDACTED}} miles.[53] The Los Angeles BEA is very large and the domestic IM ramp identified in the operating plan for multiple growth IM services (IEIT) is actually located in San Bernardino County. The dray miles and times are drastically underestimated for this area. And the reverse happens for freight destined for Southern California, which is assumed to comprise {{REDACTED}} newly diverted IM containers with an average dray of {{REDACTED}} miles in Hunt's Transearch data.[54] Similar issues are present for Houston, New York, and Northern California. Not only do these BEAs represent large metropolitan areas, but they are also characterized by traffic congestion and high demand for drayage service. Hunt's assumed drayage time within these areas is substantially understated, leading to downward bias in the rail IM transport time estimates.

[52] Analysis of Hunt's "Transearch_FIPS_T2R_IM_Diverted_Trucks.csv," using WP script "T2R_IM_transearch_analysis_09262026" at block 6A. Note that the intermediate data file provided by Hunt does not precisely add to his final diversions total. Hunt does not provide an alternate file at the same level of aggregation that can be validated to his totals. Therefore, my numbers represent estimates, with some margin of error, but likely less than 2.5 percent (which is the amount by which the total number of IM loads in the file deviate from his final numbers.

[53] Analysis of "Transearch_FIPS_T2R_IM_Diverted_Trucks.csv," using WP script "T2R_IM_transearch_analysis_09262026" at blocks 7A and 7B. Average dray miles by Origin BEA are presented in "Monaco_WP_T2IM_Transearch_Tables_HIGHLY_CONFIDENTIAL.xlsx", tab "Origin_BEA".

[54] " Monaco_WP_T2IM_Transearch_Tables_HIGHLY_CONFIDENTIAL.xlsx", tab "Destination_BEA".

3) Hunt's IM Model Does Not Actually Incorporate the Factors that Hunt States Are Important

91. An obvious option upon noting the myriad poor assumptions in Hunt's model would be to change the assumptions and re-run his model to see how the results would change. This is not feasible because Hunt's IM model does not actually work the way it is represented in the VS.

92. Hunt states that the key factors to include in his model are length of haul, single/interline, transit time, and price difference. Hunt does not cite literature to back up his choice of key variables and several variables that existing literature finds important are excluded. Hunt states that "when intermodal can offer transit times of truck plus one day and offer a 10% lower price than truck, a shipper is likely to consider intermodal as a competitive substitute for truck."[55] Thus, he takes two of his key factors and coarsens them. The price difference does not enter in levels or percentages, but in buckets of less than, equal to, or greater than ten percent. Transit time likewise does not enter as a difference measured in hours or percentages, but in buckets of within 24 hours, 72 hours, or more than 72 hours.

93. Then he applies his "lookalike" algorithm. In the manner it is applied, there is actually little basis to use the term "lookalike," as many of his lanes do not have matching archetypes. Hunt uses a series of approximations to identify an alternate archetype, which does not match on length, price, **and** transit time, even in the coarsened categories used.

94. This is not surprising; there are {{REDACTED}} IM routes that Hunt uses to develop his archetypes and he is trying to estimate IM units on {{REDACTED}} FIPS origin

[55] Hunt Second Errata VS, p. 58. Also similarly worded in same document, p.138. The "source" for this is "Oliver Wyman's collective experience."

and destination pairs.[56] It is clear from Hunt's IM model WP, "Segmentation" tab, that most of the categories lack "valid" archetypes that match on all characteristics.[57]

95. Table 1 presents the final predicted share that Hunt applies to the IM traffic for two of the three transit time categories. Figures in bold are based on averages from existing single-line lanes that have at least 3 matching IM routes on broad length of haul, transit time, and price categories. As is evident, most do not match. They are imputed from "related" archetypes, based on dropping one of the matching criteria, often price.[58]

96. More concerning, there are at least four groupings for which there are an adequate number of archetypes that match; however, these percentages are not used and are instead swapped for a higher projected share (denoted by an asterisk in the table below). This includes:

- routes 500-1000 miles, with service estimated within 24 hours of truck, and price within 10% of truck, where the lookalike predicts {{REDACTED}} based on {{REDACTED}} comparable routes and Hunt adjusts this to {{REDACTED}}.
- routes with 1500-2000 miles with service estimated within 24 hours of truck. The lookalike model predicts {{REDACTED}} share when IM is price more than 10% better than truck and {{REDACTED}} when IM is priced within 10% of truck. In both cases, Hunt replaces these shares with {{REDACTED}}. And in both cases, the number of comparable archetypes exceeds the thresholds set by Hunt and, in fact, far outnumber the number of archetypes used to impute the value.
- routes 2000+ miles, with service estimated within 24 hours of truck, and IM price is 10% better than truck, where the lookalike model predicts {{REDACTED}} and Hunt replaces this with {{REDACTED}}.

[56] Hunt WP "HC_Intermodal Diversions Model vFinal.xlsx" (from September 4, 2026, submission).
[57] "Segmentation" tab (column L) from Hunt WP "HC-Intermodal Diversions Model vFinal.xlsx."
[58] Hunt VS Figure B-14 (p.142) suggests more completeness in the groupings than actually exists. His figure does not include all the possible combinations. Additionally, there is a mismatch between some of the market counts in Figure B-14 and the counts found in "Segmentation" tab, Column K in his WP "HC-Intermodal Diversions Model vFinal.xlsx."

{{

REDACTED

}}[59]

97. It is not surprising, given the manipulation of the numbers as well as the imputed values for certain groupings, that the model produces implausible results. The only consistent relationship is a positive relationship between distance and the assumed IM share. For most categories there is no relationship between price and IM share, and, in several cases, transit time is not related to IM share. There are not a large number of diversions expected in the T+72 categories in Hunt's results, however, the fact that his model predicted high shares of diversions in services that take substantially longer than truck should have been a flag that the underlying model was not giving sensible results.

98. Thus, even if it were appropriate for stakeholders to adjust Hunt's model to generate a new set of estimates, the results would not be reliable since the underlying model is broken.[60] Changing the relative prices and durations would not result in any substantive change to the estimated diversions, counter to basic fundamentals of modal choice. It is unclear how Hunt can cite an Oliver Wyman expert opinion on price and transit time mattering as the basis for his approach and then generate a model whose results are inconsistent with that premise.

[59] Based on "Segmentation" tab (columns K, L, AB) from Hunt WP "HC-Intermodal Diversions Model vFinal.xlsx."

[60] For example, one could revise the drayage times and costs on major lanes that include cities such as Los Angeles, and this would push those lanes into a bucket where their archetype might be T+72 with price within 10% of trucking. In this case, Hunt's estimated share is identical to the lower-priced, faster archetype.

E. The Estimated Savings from Diversion Are Unrealistic and Overstated

99. Hunt's "public benefits" estimates are not only overstated due to unrealistically high levels of diversions attributable to the merger, but also due to the "savings" that shippers currently using trucking would experience. Some of these issues are common for carload and IM diversions. First, Hunt prices trucking services as the average of spot and contract price from DAT for truckload services. This is not an accurate estimate for private carriers, who are not purchasing truckload services from the marketplace. And, as stated before, there is an underlying assumption in both the quantity of diversions and amount of savings that private carriers will seamlessly switch to a transportation provider, disregarding their sunk transportation investments and operations. This underestimates their switching costs and overestimates potential "savings."

100. Second, any shippers who divert from truck to rail will experience costs from switching modes. This includes potentially working with new transportation providers, altering loading/unloading processes, adjusting inventory and customer management based on transit time, and related factors. Failure to incorporate these costs leads to overstated benefits.

101. The "shipper savings" estimates were not included in the original Application. Per Mr. Hunt's deposition, {{REDACTED

}}.[61]

102. For carload diversions, Hunt appears to assume that shippers have direct access to rail. This is not evident in the data – Transearch does not contain shipper-level information or even granular location information that would allow modeling rail access. Access is assumed in the model if there is UP/NS rail access within the same county. Absent direct access, shippers

[61] Hunt deposition transcript, Vol. II, pp. 701-704.

would either need to build out access or build in time and cost for transloading. This is not incorporated into the model. This not only biases diversions upward, but it also underestimates shipper costs, and overestimates shipper savings.

103. Hunt's estimated IM price is calculated as linehaul IM rail rate plus drayage, with an assumed mark-up of 36% based on Hunts's analysis of J.B. Hunt financial data.[62] He assumes this covers IM equipment, overhead, and profit margin. J.B. Hunt is an asset-based carrier, and its pricing structure is likely different than a non-asset-based IMC. Using a single year of J.B. Hunt aggregated financials and applying this to all movements is unrealistic and should have incorporated sensitivity analysis or some method for accounting for non-asset-based IMCs.

104. As previously discussed, the drayage component of the IM linehaul cost is mileage from the "FIPS centroid with the intermodal terminal to the door FIPS." In some cases, there is a ramp in a FIPS and Hunt assumes all shippers are close enough to the ramp that the mileage at origin or destination is zero. And the attendant drayage cost is assumed to be constant and, in many cases, $200. This underestimates drayage cost and total rail cost.[63]

105. Moving from truckload service to IM service also has implications for costs related to equipment usage and accessorials. The rules for use and return of IM equipment are different from a domestic trailer and the higher fees associated with the former will drive up the shipper's cost of IM service.

106. Finally, it appears that Hunt assumes a 1:1 trade-off between a 53-foot trailer and a 53-foot IM container. Because IM containers and chassis weigh more than a 53-foot trailer, shippers of heavy cargo may not experience a 1:1 trade-off as they hit the effective weight limit

[62] Pp. 140-141.
[63] There are multiple vendors of drayage data that can provide historic data on dray costs, including fees, for major metropolitan areas. Examples include Draydex.com and drayrates.ai.

for the road portion of the IM move, even though they may still have room in the container to add more freight. This will require more containers or the risk of fines related to moving overweight containers in the drays at origin or destination. This is particularly relevant for certain commodity groups that Hunt estimates represent a large share of potential diversions, including STCC 32 (clay/concrete/glass/stone) and STCC 37 (transportation equipment).

107. The overestimate of savings for truck-to-rail diversions is evident in Hunt's aggregate numbers. On average, he assumes price differentials between trucking and rail of roughly 50 percent.[64] This is substantially higher than industry analysis of the price differences. Historical cost differentials for shippers switching from truckload to rail IM is on the order of 10-15%.[65] With the 2026 truck capacity crunch and resulting shift to IM, contract rates between truck and rail IM spread to as high as 30% based on SONAR estimates.[66] So, despite a current market situation that has resulted in unusually high trucking prices relative to rail, the spread is not close to the Hunt 50% figure.

108. The initial paragraph of Hunt's VS Section 8.2 describes the purported truck-to-rail savings as, "a significant, quantifiable affordability benefit for US customers."[67] In the following four paragraphs he alternately uses the terms, "total transportation expenses", "out-of-pocket transportation costs", and "savings that would otherwise be spent on more expensive truck transportation." In his deposition, Hunt conceded that {{REDACTED }} and stated that {{ REDACTED }}.[68] But that assertion does not align with his VS, which more broadly refers to transportation costs

[64] Hunt assumes that shipper spending on trucking would decrease $7.2 billion and spending on rail would increase by $3.4 billion (Hunt Second Errata VS, p. 96).
[65] https://gosonar.com/wp-content/uploads/SONAR-WP_Intermodal_7-1-24.pdf; https://www.inteklogistics.com/blog/intermodal-vs-truckload-true-apples-to-apples-cost-comparison.
[66] https://www.freightwaves.com/news/j-b-hunt-experiences-growing-pains-in-q3.
[67] Hunt Second Errata VS, p. 95.
[68] Hunt deposition transcript, Vol. II, pp. 589-591.

multiple times. Applicants have further expanded the meaning of the $3.5 billion in "shipper savings," stating on their website that, "Shifting freight from higher-cost trucks to lowercost [sic] rail will save shippers an estimated $3.5 billion annually – savings expected to flow through to consumer prices."[69]

109. Holding extra inventories, equipment costs, transloading/network access, additional cargo handling, accessorials, and related expenses are transportation costs shippers would incur with a switch from truck to rail. Shippers and transportation experts know this; comparing two modes of transportation in terms of base costs does not permit proper comparison between modes. By extension, it certainly is not an appropriate basis to calculate "shipper savings" when multiple cost components are excluded.

F. Hunt Did Not Perform Sensitivity Testing or Otherwise Check the Robustness of His Results

110. Nowhere in the multiple iterations of Hunt's VS and WPs is any sensitivity analysis performed. Point estimates are presented, as if there is no underlying variability to account for. And despite multiple instances of workpapers being omitted and containing multiple errors, there apparently was no coordinated effort to carefully review the final versions of supporting documents for completeness and accuracy.[70]

111. Lack of confidence intervals does not equate to precision of estimates. Throughout, assumptions are made regarding cost, pricing, speeds, time, and dwell without any presentation of how altering these underlying assumptions would affect the estimates. In the Major Rail Consolidation Procedures Decision, the Board emphasized the need for accurate and

[69] https://www.up-nstranscontinental.com/news-details/union-pacific-norfolk-southern-transcontinental-merger-fast-facts/.
[70] {{REDACTED}}.

detailed data.[71] Relying on point estimates when there is underlying uncertainty in the data, model, and results implies accuracy where none exists. Perhaps if Mr. Hunt had performed sensitivity analysis on his models, he would have seen the unusual performance of the IM diversion model, where diversion rates are largely independent of price.

112. Additionally, Hunt did not provide any theoretic underpinnings for his model. There is no alternative approach to modeling presented in the VS, though in deposition {{REDACTED

}}. [72]

113. Given the numerous problems documented with both the levels of diversions and associated shipper savings, the quantitative estimates of truck-to-rail diversion and supposed shipper savings provided by Applicants are invalid and should be disregarded in their entirety.

III. OPERATING COST AND CAPITAL EXPENDITURE BENEFITS

114. Applicants' Final Summary of Benefits Table presents their estimates of "normal year" Operating Cost Benefits and Capital Expenditure benefits as below:[73]

OPERATING COST BENEFITS	
G&A/Technology	$198
Operating (Rail Operations)	111
Operating (Rolling Stock & Engineering)	88
Operating (Op Practices and Op Tech Applications)	77
Operating (Procurement)	100
Personnel (Non-Agreement)	260
Personnel (Agreement)	131
Net Operating Cost Benefits	$965
CAPITAL EXPENDITURE BENEFITS	
Infrastructure Replacement	$90
Locomotive & Equipment	3
Technology & Other	40
Net Capital Expenditure Benefits	$133

[71] P. 58.
[72] {{REDACTED}}.
[73] App. (Second Errata), Vol.1, p. 120 and Janke VS, Table 4.

115. In discovery documents, UP describes initial cost synergies estimates from a potential merger as being calculated through {{REDACTED.[74]}} The actual approach presented in the Application is neither entirely {{REDACTED}}.[75]

116. The claimed cost "benefits" are derived from multiple sources, with substantially different levels of detail and supporting information:

(1) Substantial personnel cuts described in the VS of Perkes and Parkerson.

(2) Purported savings in procurement described in Janke VS and accompanying workpapers.

(3) The Boyles-Mathur estimates of cost savings from the optimized network, described in detail in their VS.

117. After carefully reviewing these supporting materials, there appears to be an inverse relationship between cost savings and documentation; the most thorough and carefully documented cost savings are relatively low in magnitude; the bigger ticket items have less documentation and support. Finally, there is little evidence that the bulk of these estimated cost savings are public benefits, as opposed to private benefits.

A. Personnel Savings Estimates Lack Justification and Are Substantially Higher Than Other Class I Mergers

118. Roughly 40% ($391M of $965M) of the Operating Cost Benefits are based on reductions in personnel. Of this, $260M is attributed to reduction of non-agreement positions. These positions are also referred to in the Perkes VS, as "management" positions, though that is

[74] {{REDACTED}}.
[75] {{REDACTED}}

likely inaccurate since, based on titles and estimated pay of some of these positions, many appear to be front-line supervisors, responsible for operational activities as well as supervision. For this reason, I use "non-agreement" to describe these positions, to reflect that they are not covered by a collective bargaining agreement. Given that such a large share of the cost savings are attributed to these positions, it is surprising that the supporting material for this is limited to an eight-page VS and two supplemental WPs in the form of Excel spreadsheets that list positions.[76]

119. Perkes states that UP and NS teams "worked collaboratively to evaluate the estimated impact of the proposed transaction" on non-agreement positions and portrays this as a "commitment to a thoughtful, measured approach that maintains stability."[77] It is not clear how eliminating 20% of the NS non-agreement workforce reflects a thoughtful, measured approach, when the lion's share of these positions are from a level below director and happen in the first year. Indeed, one might be concerned that first year reductions in finance ({{REDACTED}}), sales ({{REDACTED}}), network planning and ops ({{REDACTED}}), premium strategy ({{REDACTED}}), safety ({{REDACTED}}), and technology ({{REDACTED}}) from the lower-level non-agreement NS workforce in year 1 may adversely affect the integrity of the NS network.[78]

120. And while there is a stated commitment to customer service, in addition to cutting {{REDACTED}} NS lower-level customer care positions, an additional {{REDACTED}} are slated to be eliminated at UP, along with relocation of {{REDACTED}} of the NS positions in year 2. This does not appear to align with the statement that "there will be no significant impacts on customer-facing positions in the customer support function."[79]

[76] "Management Attrition Rate.xlsx" and "Management_Workpapers_Employee_Impact.xlsx".
[77] Perkes VS at para. 5.
[78] Numbers are from "Management_Workpapers_Employee_Impact.xlsx", tab "Workpaper_Impact by Level."
[79] Perkes VS at para. 13.

121. Given the sheer magnitude of the non-agreement personnel cuts, one might expect some narrative or other evidence from Applicants explaining how an overall 12.5% decrease in combined UP/NS non-agreement positions within three years aligns with the stated goal of preserving network fluidity and the customer experience. These numbers are substantially higher than the 5% cut in non-agreement personnel in the CPKC merger application, which involved few cuts in customer service and transportation categories, as opposed to UP/NS who propose cutting over 100 lower-level transportation positions.

122. The agreement personnel position cuts are at a lower rate (2.8%)[80] and lower cost savings ($131M) and are primarily concentrated in crew reductions, with little supporting documentation provided. And while the Janke VS and supporting workpapers suggest that jobs will grow post-merger, this job growth would lead to net gains roughly equivalent to the cuts and rely on substantially inflated diversion estimates. If the diverted traffic does not appear, the combined network will have lower agreement employment than the status quo.

B. Procurement and IT Spend Savings Likewise Lack Support

123. General and Administrative Services savings include $198M in cost savings, of which the vast majority ($161) are attributed to technology savings.[81] The process used to determine these savings is described in the workpaper as {{REDACTED

[80] Parkerson VS at para. 9.
[81] Janke Amended VS, Table 1, p. 9; Workpaper "Synergies G&A Admin.xlsx", tab "Tech."

}}[82] There is little additional context provided in the Janke VS, which likewise relies on a general explanation that they can "rationalize managed service provider and contractor software development expenses."[83] There is no specific information provided regarding how this can be attained quickly and the scope of these changes. Some savings are attributed to {REDACTED }, but, again, lack detail and concrete evidence.[84]

124. Similarly, Janke cites $100M in procurement savings without specifics of how this will be attained.[85] These savings are based on applying UP procurement approaches to NS spending data. {{REDACTED

}} There is no evidence provided that NS currently has an inefficient procurement process, nor any evidence provided of volume discounts or some other mechanism that would allow returns of this size. From the workpapers provided, the savings for this category do not appear to be derived from procuring fewer items, but simply through an assumed superior UP procurement process.[86]

125. Simply adding the tech savings of $161M and procurement savings of $100M results in over a quarter billion dollars of annual savings that essentially have no evidence behind them, just vague assertions that UP could do them better. They therefore fail the Board's requirement for well-documented benefits.

[82] Janke Amended VS, Table 1, p. 9; Workpaper "Synergies G&A Admin.xlsx", tab "Tech."
[83] Janke Amended VS at p. 24.
[84] In his deposition, Janke {{REDACTED}} (Janke deposition transcript, pp. 148-149).
[85] Janke Amended VS, p. 16; Janke WP "Mech_Eng Synergies.xlsx", tab "WAVE OE Summary".
[86] In his deposition, Janke acknowledges that {{REDACTED}} (Janke deposition transcript, pp. 149-150).

C. The More Concrete Cost Savings Estimates Have Substantially More Supporting Evidence but Involve Smaller Cost Savings

126. The cost savings generated by changing the structure of rolling stock and engineering are explained in detail in Gehringer and Orr VS.[87] These total $88M in savings that is disaggregated in detail in Janke WP "Mech_Eng_Synergies.xlsx." And while one might question some of the included costs and approach to evaluating overhead, these are minor issues. Likewise, Boyles and Mathur in their VS and supporting workpapers present their optimized network cost savings estimates in extensive detail. These amount to $77.5M.[88]

127. In sum, a very small portion (15%) of the projected cost savings is fully documented.

D. There Is Asymmetry in Cost Estimation Approaches in the Optimized and Growth Models

128. Incremental costs are calculated moving from the merger to an "optimized" UP/NS network in a very different manner than the costs associated with growth are calculated. In estimating costs savings from an optimized network, Boyles and Mathur exclude depreciation, rents, leases, general overhead, and return on investment. They include crew costs associated with operating cost savings from reductions in train miles. This includes engine crew and train crew. They also include switching crews in their switch costs.[89] Because of the nature of URCS, it is clear why certain long-run cost-related factors (such as those itemized by Gehringer and Orr) were removed from the cost estimates. It is less clear why other items were excluded and shifted to other categories presented by Janke. It is notable, however, that the Janke general and

[87] VS section 10.2.3.
[88] Boyles and Mather Amended VS, Figure 1, p. 6.
[89] Boyles and Mathur Amended VS, pp. 13, 14, 24.

administrative cost savings are both substantially higher than the operating savings estimated by Boyles and Mathur, and lack supporting evidence.

129. Contrary to the cost-savings estimation approach, to estimate the costs of the growth model, Boyles and Mathur run the full URCS model, without any carve outs. It is not documented anywhere in the Application or related workpapers why costs were calculated one way to estimate the "cost savings" from the merger and a completely different way to estimate the increased costs associated with diversions.

E. Cost Savings Are Not Necessarily Public Benefits

130. Inflated cost savings aside, cost savings are not necessarily benefits that should be included in a public interest decision.

131. In the Union Pacific/Southern Pacific transaction decision (FD 32760), the Board noted:

> "Cost savings in rail consolidations can come from a variety of sources, including elimination of interchanges, internal reroutes, more efficient movements between the two merging parties, reduced overhead, and elimination of redundant facilities. These benefits, in varying degrees depending on competitive conditions, are passed on to most shippers as reduced rates and/or improved services. When cost reductions from the merger are passed on to shippers, public benefits are extended and shipper benefits are increased. Benefits to the combining carriers that are the result of increased market power, such as the ability to increase rates at the same or reduced service levels, are exclusively private benefits that detract from any public benefits associated with a control transaction."[90]

132. Based on this, the projected cost savings should be considered private savings unless they are shared with customers in the form of lower rates or improved service. There is no evidence in the Application of the extent to which these cost savings will be shared with shippers in the form of lower rates, and a small portion of the cost estimates are associated with network

[90] P. 99.

optimization resulting in improved service. There is evidence, however, in discovery documents that {{

REDACTED

}}.[91] Further, Janke, the UP expert tasked with generating the cost synergy estimates and drafting the associated VS, {{REDACTED

}}.[92]

133. In summary, the savings associated with substantial cuts to agreement and non-agreement labor exceed the share from the most recent Class I merger and there is little evidence provided by Applicants that their combined network would achieve high levels of customer service and support effective operations by a reduction in personnel of the size they are proposing. The procurement and IT savings are based on assumptions that UP can do this work better than NS could, without concrete proof that NS's work in these areas was suboptimal. Only 15% of the asserted cost savings are backed with operational detail that allows one to track how they can be achieved within three years by the combined railroad.

IV. APPLICANTS FAIL TO ADDRESS 1180.1(C) – BENEFITS ACHIEVABLE WITHOUT MERGER

134. In its Major Rail Consolidation Procedures Decision, the Board provided clear guidance regarding the need for applicants to submit information on whether benefits were attainable short of merger. The requirements throughout the Major Rail Consolidation

[91] {{REDACTED}}.
[92] {{REDACTED}}.

Procedures emphasize more rigorous evidentiary standards for applicants, which the Board makes clear on page 12, stating, "we do plan to take a more skeptical, 'show me' attitude toward claims of merger benefits."

135. Pragmatically, the Board recognized that mergers can achieve benefits in terms of efficiency, investment incentives, and new operations that could not be achieved short of the merger; however, these must be differentiated from benefits that could be achieved in other ways.

> "In addition, we recognize that consolidations may permit applicants to gain substantial benefits that are not otherwise achievable, and that the finality of a consolidation can result in long-term investments that would not otherwise be made. But this does not mean all of the claimed benefits require a merger for their accomplishment, nor does it address shipper concerns that a carrier might seek to gain enhanced market power through a merger, while claiming that this harm would be offset by efficiencies that could actually be achieved by means short of merger. We need to have a full awareness of which of the claimed benefits are obtainable only through a merger so that we can fairly weigh them against potential harms. Accordingly, we believe that it is appropriate for us to require applicants to address the question of whether the particular merger benefits upon which they are relying can be achieved by means short of merger."[93]

136. The background from the Major Rail Consolidation Procedures, along with a straightforward reading of the regulations at Part 1180 indicate that applicants need to specify the **incremental** benefits from merger. In the volumes of information provided by Applicants in their original filing, amended filing, and responses to supplemental Board questions, they do not address this requirement in any substance. The responses throughout the Application and accompanying VS simply reject altogether the premise that benefits can be achieved absent merger. This places the burden on the Board and commenters to provide the analysis of incremental benefits, counter to the intent of the Major Rail Consolidation Procedures.

[93] Major Merger Rules, p. 12.

137. The Amended Application (Volume 1, page 40) states that benefits are not available without merger, citing to George (VS at para 56-9), Rocker/Elkins (VS at para. 144-148), and Israel (VS at para. 95-99). The Amended Application does not cite to Bailey on this topic; however, she also addresses this concept in her VS.

138. George states that full integration is required to "deliver the scale, coordination, and customer responsiveness necessary to compete with trucking and modern logistics providers."[94] Further, George states that a merged company can better respond to customer needs.[95] Similarly, Rocker and Elkins provide short descriptions of the limitations of partnerships, including differing objectives, scheduling challenges, changing priorities, coordinating investments, misaligned technology, as well as the short-term nature of alliances.[96] They further state that a merged entity can better meet the goals of customers since a single railroad "can turn on a dime."[97] None of these assertions are untrue; however, they fail to distinguish what can and cannot be achieved absent merger.

139. While, as George notes, a merged railroad can more quickly deliver a new unit train opportunity[98], there is no quantification of **how much** faster that can be accomplished. Railroads and shippers value unit train service; it is efficient to provide this service and can be a stable source of railroad revenue. It is not clear, however, that a unit train service can be more quickly developed by an integrated carrier versus via an arrangement between two railroads. Certainly, they both have the financial incentive to attract this traffic and, in George's example, where a new unit train needs to go into service immediately, the investment obstacle would be

[94] George Amended VS at para. 57.
[95] George Amended VS at para. 59.
[96] Rocker and Elkins Amended VS at para. 144.
[97] Rocker and Elkins Amended VS at para. 145.
[98] George Amended VS at para. 59.

immaterial – either the merged or separate railroads have the capacity for such a new service or they do not. The other limited examples cited by Applicants include auto service and IM.[99] IM is a key example of services that have long been provided in sustained partnerships between Class Is without merger and {{REDACTED

}}.[100]

140. Thus, the limited examples that Applicants' Executives and Operational Experts provide in support of their assertions that benefits are not attainable absent merger are those that align with partnerships and collaboration today. These experts do not provide any substantive evidence of the **incremental** benefits the merger would bring.

A. The Economic Experts Fail to Align Economic Theory with Operational Realities

141. While engaging in more detail with the concept that specific benefits can only be achieved with merger, the economic experts (Bailey and Israel) do not provide any quantitative analysis of the incremental benefits from merger versus other forms of collaboration. They both provide limited operational examples to support their assertions, but do not provide an analysis of each component of the public benefits that either quantitatively or qualitatively assesses which are/are not possible absent merger. This is a major shortcoming, particularly given the extent of quantitative and qualitative workpapers provided in support of the inflated public benefits estimates.[101]

142. Both Bailey and Israel rely on classic economics literature that finds vertical integration is required to align incentives. The literature is well-established; however, the focus

[99] Gehringer and Orr VS at para. 203-4 and 207.
[100] {{REDACTED}}.
[101] Applicants note in Amended App Vol 1, p. 18, that over 500 G of supporting workpapers were provided. None provides a detailed analysis of the **incremental** merger benefits.

is not on what can be achieved absent a merger or approaches for systematically evaluating the incremental benefits from mergers. Neither Israel nor Bailey engage with the academic literature describing collaboration among railroads.[102] Academic literature aside, collaboration among firms is prevalent in freight transportation. In addition to the collaboration on interline partnerships described above, railroads have collaborated in the development of data standards, safety standards, and infrastructure at key gateways.

1) Class I Railroads Have an Extensive History of Collaboration

143. Railroads share information with customers and each other based on the structured backbone of electronic data interchange (EDI). The EDI standards for railroads were developed long ago through collaboration among the railroads.[103] The railroads have a binding system of Railway Accounting Rules[104] and collaborate in billing through the use of RailInc's Railroad Clearinghouse, which hosts the interline settlement system (ISS), car hire data exchange, switching settlement data exchange, and multi-level pool billing. Additionally, the railroads collaborated on the standards for positive train control (PTC).

144. Key joint investments of the railroads include Conrail (NS and CSX), the Alameda Corridor (UP and BNSF), the Belt Railway Company of Chicago (all Class Is), Indiana Harbor Belt Railroad (NS, CSX, CPKC), as well as TRRA and KCT, which have received considerable attention as part of this proceeding. Additionally, through the CREATE program,

[102] Examples include Natarajan, Balu, Chandler Duncan, and David Simpson, "Strategic Innovations in North American Railroad Management," *Transportation Research Record: Journal of the Transportation Research Board* 1924 (2005), 146-152 and Pittman, Russell, "Railway Mergers and Railway Alliances: Competition Issues and Lessons for other Network Industries," Competition and Regulation in Network Industries, 10 (2009), 259-278.
[103] https://www.up.com/suppliers/existing/order-inv/edi/standards-guidelines.
[104] https://public.railinc.com/sites/default/files/documents/RAR.pdf.

the Class Is support fluid operations throughout the Chicago area and collaborate in real time through the Chicago Integrated Rail Operations Center (CIROC).[105]

145. Collaboration and/or coordination is required for many services, including IM services, as well as trackage rights/haulage rights, and operating rights. And many of these arrangements are not temporary; the BN-CSX IM partnership has existed for over 20 years. Finally, collaboration among competitors in freight transportation is evident in IM services, where large truckload carriers are both customers of Class I railroads and competitors.

146. This evidence is overlooked by Bailey and Israel in their arguments regarding whether public benefits are achievable absent merger.

2) Bailey's and Israel's Claims of Improved Operations for A Merged Railroad Disregard Possible Operational Collaboration Absent Merger

147. Bailey addresses the improved incentives for a merged railroad in her VS at Sections 3.1.1-3.1.4; however, she does not present any analysis of **why** these improvements are unattainable absent merger, merely contending that the ability to fully realize the potential gains are only available through merger, which is not the point of Part 1180.1(c). Again, in the Major Rail Consolidation Procedures, the Board already concedes the point that mergers can achieve benefits – the issue is to differentiate these from those possible absent a merger.

148. Bailey presents her justification for merger being required to align incentives to ensure reliable service in her VS at Section 3.1.1. This justification lacks underlying evidence and analysis, essentially citing Rocker and Elkins VS at para. 51. Long-term successful deployment of IM, and other services that cross railroad networks, demonstrates that both carriers have an incentive to provide reliable service. The inability to provide reliable service, per

[105] https://www.createprogram.org/projects/.

the railroads, is often due to unexpected issues, including IT, communications, weather, and congestion on other parts of the network. Merger itself does not overcome these delays. Most confounding, Bailey states:

> "If the changes associated with the Optimized Plan could be easily implemented outside of the proposed merger, one would expect UP and NS to already have done so."[106]

149. The premise that if a UP/NS service could exist without merger, it would already exist is preposterous on its face. NS and UP separately partner with other railroads today. Some of the services being "unlocked" by merger are simply services that are currently handled through interchanges with other railroads; thus, they already exist without merger, but the merger seeks to take credit for an incrementally improved service, with a change in service providers. Indeed, UP and NS announced a joint service alongside its merger application, demonstrating that merger is not needed for new services to be developed.[107]

150. Bailey cites to broad economic literature on obstacles to coordination and contracting between firms to conclude that these options will not be as efficient as they might through a merger. The conclusion is that "vertical integration is often the best solution."[108] But, the best solution does not mean the next best solution is substantially worse, and could, in fact, be better from a public interest perspective, as the Board's requirements reflect. This is not examined by Applicants, or Bailey.

151. Bailey cites to the George VS regarding alliances being "fragile and prone to inefficiency".[109] In the same paragraph she describes arrangements breaking down as

[106] Bailey Amended VS at para. 68.
[107] https://www.up.com/news/growth/louisville-intermodal-service-it-250915.
[108] Bailey Amended VS at para. 69.
[109] Bailey Amended VS at para. 71. George Amended VS at para. 7 and 59. George at para. 7 cites that contractual partnerships have limited benefits with no evidence and further states that "We must move beyond the outdated belief that fragments railroad alliances can effectively compete with trucking's unified networks. It is one of the main reasons rail has lost share to the highway." There is no proof provided to support this statement. Similarly at

"circumstances change" and asserts that the "transaction costs associated with sustaining an efficient partnership are simply too high."[110] This is fallacious reasoning. Partnerships and alliances may change over time because economic circumstances change. That does not necessarily mean that the transaction cost was too high. And this is a feature, not a bug. As networks and types of traffic change, alliances and partnerships would be expected to evolve as well.

152. Bailey describes improved operations, with a focus on reduced car handling.[111] This overlooks the operational reality that eliminating a single car handling at an interchange can be accomplished through a coordinated IM service, as currently exists among some Class I services, or via run-through unit trains. Eliminating a single handling at interchange for merchandise traffic can improve time but may not appreciably improve the service time due to the handling-intensive nature of merchandise traffic, given there is other work that also needs to happen at certain points on the network. It is important to properly understand the extent to which improved blocking and efficient handling can be achieved **only** through merger, and this is not addressed.

153. This disconnect between economic argumentation and operational reality arises again at paragraph 70, which describes the interline activities that can only be removed through single-line services resulting from a merger, without recognizing that not all interline services require activities to occur precisely at the point where the individual carrier networks meet and, in some cases (unit trains), they need not occur at all. Bailey justifies the need for merger to

para 59 he states that a unified network can be more responsive to changes in shipper needs, but again provides no evidence, just an assertion.

[110] Bailey Amended VS at para. 71.

[111] Bailey Amended VS, Section 3.1.1.

coordinate operational activities by citing to Gehringer and Orr's VS, which, in turn, describes improved handling of auto traffic in Chicago.[112] {{REDACTED

}}[113]

154. Bailey states that incentives to offer improved service terms rely on a merger, including, for example, lowering the time period required to provide customer quotes.[114] There is little reason that coordination between railroads needs to involve a long timeline to provide a quote to a shipper, whether this coordination is the result of a strategic partnership, merger, or condition from a past merger. In fact, there are multiple examples of existing collaborations in which interline partners provide customers with timely rate quotes today. Applicants themselves have cited the I-5 Prop Rate, the foundation of their Committed Gateway Program, as one example of such a streamlined quoting mechanism. The I-5 Prop Rate allows UP to quote a customer a single rate for moving freight that either originates or terminates on the BNSF network in the relevant area.[115] Likewise, the CGP proposed by Applicants would streamline quotes by allowing BNSF or CSX to generate a quote on an interline service for a subset of traffic.

155. Bailey further states that a merger is required to increase railroads' incentive to offer better terms to shippers. This assertion rests on her underlying conclusion that rate savings will be passed along to shippers due to cost savings post-merger. But as discussed above it is not necessarily the case that will happen, and this is unlikely to be experienced among all shippers. The combined UP/NS need only offer a rate slightly lower than their competitors. And, given

[112] Bailey Amended VS at para. 58.
[113] {{REDACTED}}.
[114] Paragraphs 59 and 60.
[115] www.up.com/shipping/metals-minerals-forest/i-5.

that the combined UP/NS will now have fairly complete information across the full network, they can potentially engage in more sophisticated price discrimination.

156. Like Bailey, Israel cites to economic literature about the potential gains from merger, particularly aligning incentives, without engaging with the Board's requirement to assess to what extent this might occur without merger. Israel states that it is impossible for other alternatives to "come close to addressing every possible situation that arises in the daily operations of two independent railroads" and to generate benefits equivalent to that available through merger.[116] But nowhere is there an attempt to quantify the incremental benefits.

157. Given that Israel contends there is no vertical harm from merger it is unsurprising that he concludes that a merger is needed to optimize operations; however, given the complexity of the entire U.S. rail network, one might use the same argument to suggest that it would be operationally optimal for a single firm to coordinate the entire network. There appears to be an underlying assumption in both Bailey and Israel that if a Class I railroad has a service problem, it only considers its own network in prioritizing how to address the issue. But neither analyzes whether this leads to suboptimal results. Under the status quo, if NS has a service problem (as recently happened), it must determine how to address this in a way that restores fluidity to the network.[117] Clearly this cannot be done in a way that gives equal weight to prioritizing all of their existing customers, let alone the customers of other railroads. Yet, these service problems will be addressed, as failure to do so would reduce their current and future revenues, and draw scrutiny from the Board. It is not clear from Israel how, for example, NS's incentives to ensure adequate service levels would lead to different levels of public benefits based on whether they are prioritizing the customers located on their own network, the customers on their interchange

[116] Israel Amended VS at para. 11.
[117] https://www.trains.com/pro/freight/class-i/norfolk-southern-begins-to-reverse-network-slowdown/.

partners' networks (UP, BNSF, CPKC), or a future state where they prioritize UP and NS customers above all others.

3) Israel's Claims that Merger Is Required for Optimal Investment Is Contradicted by the Parties' Own Claims

158. Israel contends that independent railroads make sub-optimal investment decisions.[118] This is not universally true in practice. As discussed above, there are a number of investments that railroads make collectively to ensure capacity and fluidity. There are also investments that railroads make in their own networks that benefit their interchange partners. And it is not clear what the incremental investment would be from better coordination through merger and how that would impact public benefits. Israel contends that if UP is investing today, it fails to consider how NS will be impacted. This statement is not backed up by evidence. One could easily make the case that if UP is investing today in the western part of its network it must consider how this affects all its interchange partners. UP has made considerable investments in its IM network to support cross-network moves, not just moves on its own network. For simplicity, let's say when UP does this, it must consider how it affects both NS **and** CSX. How do public benefits improve if, in the future, it weighs the impact on customers located on the current NS network far in excess of those located on the CSX network?

159. Applicants themselves state that they have invested greatly in their networks over time.[119] Israel describes the investment projects that purportedly support his hypothesis that investment would not be optimal absent the new traffic stemming from merger at paragraphs 125-127. These projects include UP's expansion to the Sunset and Golden State lines and facilities at Houston, Laredo, and Inland Empire (UP projects), and Sharonville and Toledo (NS

[118] Israel Amended VS at para. 122.
[119] Rocker and Elkins Amended VS at para. 29 and 30.

projects). These references exemplify the disconnect between the economic argument that merger is required to achieve this investment and the reality of how railroads undertake investment decisions today. These projects were largely underway before any talk of a merger began between UP and NS.

160. Turner's description of the UP Sunset investment attributes nearly all of the capacity to pre-merger activities; only one segment (Mohawk to Stoval, consisting of 3.9 miles of track) is associated with the merger.[120] The Golden State line likewise has nearly all of the capacity needed to handle post-merger growth; the string of projects cited are focused on incrementally extending the capacity for very long trains and lengthening sidings.[121] The types of UP line investments attributed to the merger would likely be slated absent merger, to support the volumes moving in and out of California and activities at the Inland Empire Intermodal Terminal (IEIT).

161. The IEIT itself has been planned for many years, with construction starting in 2023.[122] The IEIT pre-merger project generates capacity of 345,000 lifts. The projected growth is 398,000 lifts per year. The project attributed to merger would expand capacity far in excess of this growth projection to 500,000 lifts per year.[123] Likewise Houston (Settegast) had pre-merger expansion planned. Both Settegast and Port Laredo have capacity in excess of the optimized plan, at approximately 70% of the growth plan.[124] On the NS network, terminals at Sharonville and Toledo have current capacity at over 94% of growth projections, absent merger.[125]

[120] Turner Amended VS at para. 86.
[121] Turner Amended VS at para. 87.
[122] The Board's final rule in EP 724, Sub 4 requires Class I railroads to report on large infrastructure projects semi-annually. These reports are available at: https://www.stb.gov/reports-data/rail-infrastructure-projects/.
[123] Turner Amended VS at para. 97, Turner Workpaper "UP Intermodal Terminal Expansion Projects.pdf."
[124] Turner Amended VS at para. 98-99. Turner Workpaper, "UP Intermodal Terminal Expansion Projects.pdf."
[125] Turner Amended VS at para. 101 and 104. Tuner Workpaper "NS IM Auto Manifest Expansion Projects.pdf."

Sharonville recently completed an expansion, roughly doubling its capacity, indicating investment for planned growth absent merger.

162. Thus, Israel's conclusion that "absent the ability to attract additional intermodal volumes from trucks – and the increased investment incentives described above – as a result of the merger, these investments would not occur," does not hold up. There is little incremental investment attributable to the merger, absent unrealistically high levels of predicted diversions. Much of the growth projections can be handled by the current investment projects that pre-date UP/NS merger discussions, suggesting that the lack of investment coordination between UP and NS has not led to substantial gaps in investment that require a merger to overcome.

163. Applicants reiterate Israel's assertion that a merger is required for appropriate investment in their supplemental response to the Board, stating that "economically valuable" investments will go unfunded without coordinated effort.[126] However, in the same document, Applicants assert that the joint network already has virtually all of the investment required to support the growth they project post-merger. Applicants state that their network can accommodate 96% of manifest growth, 91% of intermodal growth, and 92% of auto growth immediately after merging.[127] They further state that new investment is only needed in a "small portion" of the combined network.[128] If individual incentives to invest led to substantially suboptimal investment levels, it is highly unlikely that the network would already have the bulk of the capacity required to support a very aggressive growth forecast.

[126] Supplement, p. 116.
[127] Supplement, p. 86.
[128] Supplement, p. 87.

B. Applicants Fail to Address Investments That Are Truly Unlikely Absent Merger

164. A realistic operational case where a merger may, in fact, be required to ensure investment aligns in a way that benefits shippers is unaddressed in the Application. In paragraph 77, Bailey mentions the "hold-up" problem and describes it as such:

> It arises when firms must make investments that are specific to a relationship but cannot fully specify in advance how the returns from those investments will be realized or shared… To solve the hold-up problem and achieve efficient levels of investment, the economics literature identifies vertical integration as likely the best solution.

165. The economists appear to believe the hold-up problem best applies to IM services, given that Hunt, Bailey, and Israel all mention the need to achieve diversions through the merger and the fact that most of the diversions are attributed to IM. But IM appears, in practice, to have limited hold-up problems. Partners can determine appropriate allocations on main IM lanes and have done so for decades. And all Class I railroads have engaged in considerable intermodal investment. As a result, over the past 20 years, IM freight has grown, as carloads have declined.[129]

166. One possible application of hold-up theory to justify mergers is investments that support pairs of shippers and receivers located on different rail networks who use/might use carload service. As an example, suppose a major grain elevator located on the western railroad wants to develop options to connect to a customer on the eastern railroad. Absent merger, it may be difficult for the western carrier to induce the eastern railroad to support access to the customer, as the eastern carrier may have prioritized customer investments where the shipper and receiver are both located on its network. Under a merger, however, the potential joint revenue

[129] https://fred.stlouisfed.org/graph/?graph_id=1629628.

from these volumes may result in a better business case for incentivizing building out access to the eastern customer.

167. But no such case is highlighted by expert witnesses or in the Application materials, though Applicants clearly understand that investment in customer access is critical for carload and merchandise freight.[130] Applicants may fail to mention this issue because they have not built support for any industrial access projects into their investment strategy. And this is not due to an underlying assumption that customers will pay for access. In PB-5, the Board asked about the timeline to complete investments, specifically naming shipper facilities. There was no direct response from Applicants regarding shipper facilities and merely a reference that shipper investment would not be required for IM service.[131] There was no response from Applicants addressing investment for access to carload service.

168. Thus, the argument from Applicants and their experts that only merger will suffice to ensure investments are aligned is undermined by their own analysis that they currently have sufficient capacity across the network. The case to be made for integrated support for investment would better focus on shipper access, but there is no budget to support shipper access in the Application, despite the role of carload diversions in achieving a portion of the estimated public benefits.

V. APPLICANTS FAIL TO PRESENT JUSTIFICATION FOR THEIR TIMING

169. Recall from the 2001 decision the statement that "we will take particular care to scrutinize future claims of merger benefits and associated timeframes to determine whether the applicants' projections are well-documented and reasonable." There is little in the Application or

[130] For example, see George Amended VS at para. 25, noting the role of industrial access in supporting customers.
[131] Supplement, p. 101.

supporting material that permits careful assessment of the likelihood of achieving these timelines, both in terms of potential diversions and investment.

170. While both Hunt and Turner assume a three-year phase-in of 40-70-100, there is no evidence provided as the basis for this phase-in assumption. Turner's investment and other timelines roughly equate to this ratio.[132] Hunt imposes this phase-in timeline to his diversion estimates without explaining the source and further assumes these phase-ins are consistent across service type, commodity type, and lane.

171. There is a circular logic built into the diversion assumptions and service plans that undermines the assumed timing. Turner notes that UP and NS have "change management" processes in place and plan to continue to engage in change management protocols after merger. He states, "For this reason, among others, Applicants' Operating Plan and the service improvements identified in the Service Assurance Plan necessarily represent projections rather than finalized plans."[133] Further, Turner states that any new schedules will respond to "market conditions."[134] Thus, the management change process is not merely intended to ensure the schedules are realistic and in line with infrastructure, labor, and other capacity-related concerns – the schedules also depend on market conditions. If diversions do not occur, then there is no market for the service. If there is no market for the service, the service will not have the attributes (routing and scheduling) identified in the Application that are used to support the diversions.

[132] Though not the focus of this VS, there is ample evidence that large railroad investment projects are often delayed. Under Part 1250.4 the STB collects and publishes carrier updates on significant rail infrastructure projects. This information is available at: https://www.stb.gov/reports-data/rail-infrastructure-projects/.
[133] Turner VS, para 19.
[134] Turner VS, para 40.

172. Absent adequate volumes of initial diversions, the new services on the growth plan will likely not materialize and, in turn, the time savings that Applicants use as evidence of benefits from improved service will also not be achieved, decreasing the likelihood of further diversions. The dynamic interrelationship between diversions, systems investment, and new service offerings is not incorporated into Hunt's model, which is a static model based on unrealistic assumptions.

VI. APPLICANTS DO NOT ADDRESS MARKET DYNAMICS

173. In response to the Board's questions on market reactions to diversions (PB-1 and PB-2), Applicants assert that some market adjustment has been incorporated by Hunt. This is based solely on Hunt stating that his lookalike models are based on comparable markets that are presumably in equilibrium and therefore the model accounts for this. This is overselling what a lookalike can possibly do, even if it were implemented properly. It does not control for market factors that vary by geography, commodity, and shipper type. While is it challenging to fully control for this, there are a smaller subset of lanes that Hunt has identified as key sources of diversions that could be modeled more completely.[135]

174. Nor does Hunt consider the continued evolution of trucking, particularly long-haul trucking, where there are multiple efforts to streamline truck flows through major freight corridors. Examples include routes in the Southwest that are testing self-driving trucks. These projects will considerably alter truck service times and attributes, and these routes fully overlap key lanes that Hunt has identified as divertible.

[135] See, for example, Hunt Second Errata VS, pp. 176-177 (Top 10 states originating and terminating truck-to-rail merchandise diversions) and p. 86 "Key intermodal lanes…"

175. Autonomous truck corridors are scaling up in the Southwest U.S. past the pilot phase and include routes within TX and extending to AZ and OK.[136] These routes overlap with projected diversion lanes. And while these trucking lanes will not likely see substantial volumes during the 3-year estimated diversion window, they will in the mid-term future, which further erodes sustainability of diversions on certain routes. Autonomous deployment is most useful on routes that are longer and have a high component of freeway driving, which aligns nearly perfectly with rail. Autonomous trucking also increases the speed advantage of trucks, by removing the hours-of-service constraints.

VII. SUMMARY

176. The Application falls short of the requirements for justifying a major merger in multiple areas:

(1) The diversion estimates are vastly overstated. Hunt's flawed, atheoretical model, insufficient data analysis, and lack of accounting for shipper choices results in diversion estimates that are unrealistic and are merely flawed projections of potentially divertible freight. Nowhere in the Application is there an explanation of the mechanisms by which shippers who currently use trucking are going to be converted to rail, including carload service, within three years. The model assumes "frictionless" mode switching, wherein inventory costs, existing shipper investment, rail access, equipment usage/cost, capacity, and service availability are omitted, ignoring major obstacles in converting truck to rail.

Applicants assume tens of millions of tons of freight currently moving via truck will divert simply due to the removal of an interchange. And if Hunt were measuring potential changes at the intensive margin (e.g., moving from 35% rail share on a lane to 40%) then some of these changes might be likely. However, particularly on the carload lanes, he assumes changes at the extensive margin, moving from nearly no rail today to rail dominant lanes within three years without any supporting evidence.

[136] https://www.freightwaves.com/news/aurora-mclane-autonomous-hauls-texas-volvo-oklahoma-city; https://theaiinsider.tech/2026/09/28/kodiak-ai-names-dallas-houston-corridor-as-first-long-haul-driverless-launch-lane/; https://www.trucknews.com/technology/waabi-autonomous-freight-volumes-grow-80-on-dallas-houston-corridor/1003221752/; https://www.truckinginfo.com/news/aurora-adds-1000-mile-driverless-run-from-fort-worth-to-phoenix.

(2) The bulk of Applicants' cost savings lack detailed supporting evidence.

(3) Applicants' "public benefits" largely rest on private benefits and unsubstantiated claims.

a. The cost reductions are not public benefits unless the cost savings are passed on to shippers. There is no indication in the Application materials that these cost savings would be passed on in terms of lower rates and {{REDACTED}}

b. The increased revenue, likewise, is a private benefit and should not be included.

c. The shipper "benefits" rest on levels of diversions that are implausible and "cost savings" that are likewise exaggerated, by failing to accurately project actual rail prices for shippers. Further, there is no foundation provided by Applicants for including such benefits in the Amended Application.

(4) Applicants fail to address the Board's regulations at 1180.1(c) to identify the **incremental** benefits from merger. Applicants' executives and economic experts state that the public benefits cannot be fully experienced without a merger, but that does not address the requirement to evaluate **what is possible** absent merger. The history of the rail industry provides many examples of ways that carriers collaborate to generate public benefits. The Application itself contains contradictory evidence – joint service is only possible with merger, but the expanded BNSF-CSX services are used as examples of pro-competitive aspects of merger. Similarly, Applicants and their experts indicate that investment can only be optimized through merger, while also asserting that the separate UP and NS networks have nearly all the capacity needed to accommodate the high estimates of post-merger growth.

177. The Amended Application relies heavily on benefits based on estimating very high numbers of diversions and associated shipper costs. Given that those numbers do not hold up to scrutiny, there is little alternative evidence in the Application for assessing the **qualitative** benefits from the merger in terms of either lower rates for existing shippers or diversions from truck to rail that lead to benefits for new and existing shippers.

178. Applicants state that the merger will "transform the nation's supply chain" and "begin to reclaim market share from trucking."[137] Aside from the flawed diversion estimates from Hunt, there is no qualitative evidence of the actions Applicants will take to generate the public benefits. While Hunt's VS identifies "addressable markets"[138] to carve out potential diversions, he does not account for **how** the merged railroad will actually convert customers from truck to trail. There is no marketing plan provided elsewhere in the Application that fills this gap.

179. Applicants provide no evidence that in carload service the interchange itself is so costly or time-consuming (relative to other operational activities in this service) that its removal will suddenly flip lanes with nearly no rail carload freight to the dominant mode.[139]

180. While Hunt's model assumes that Applicants can unlock permanent diversions from trucking through simply changing some gateways, removing an interchange, and changing where certain work activities happen, this does not overcome the trucking advantage, nor is there any support in the Application for how they will attract and retain freight from trucking.

181. Due to the lack of supported quantitative or qualitative public benefits from a merger, the transaction fails to meet the requirements of the Board under Part 1180 and should be rejected.

[137] Application, Second Errata, p. 15.
[138] Hunt Second Errata VS, p. 57, 148.
[139] This is not entirely dissimilar to CN and IANR claiming that their pre-merger interchange created substantial obstacles for shippers. The Board noted in its decision that "There is no evidence in the record that CN and IANR's current interchange is so burdensome or costly that it forecloses markets to IANR customers" (FD 36744, Board Decision, p. 12). It is also notable that Gehringer and Orr (VS, Appendix A) do not provide time estimates for new manifest services.

Appendix A: Effects on Estimated Diversions from Basic Filters

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REDACTED

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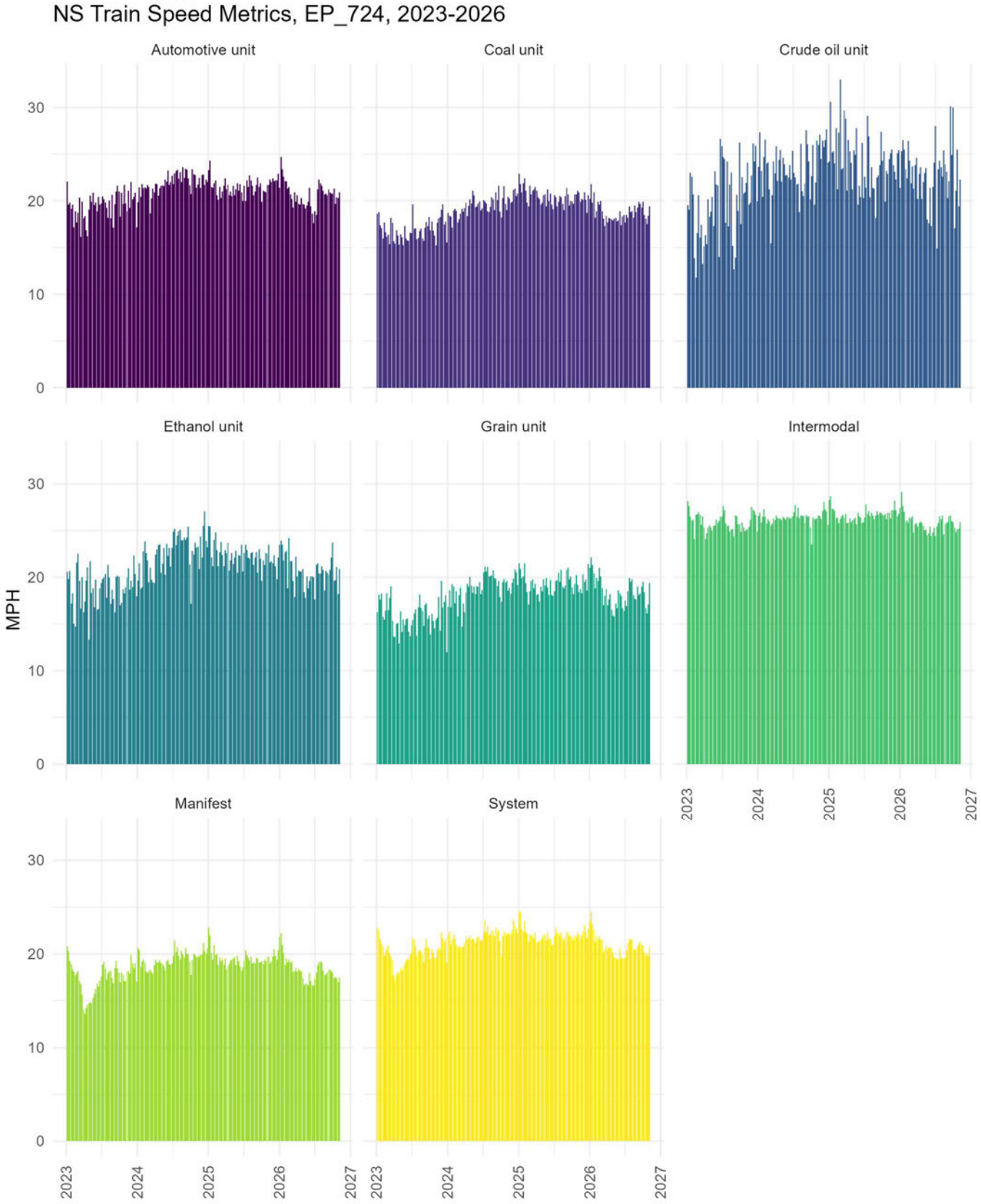
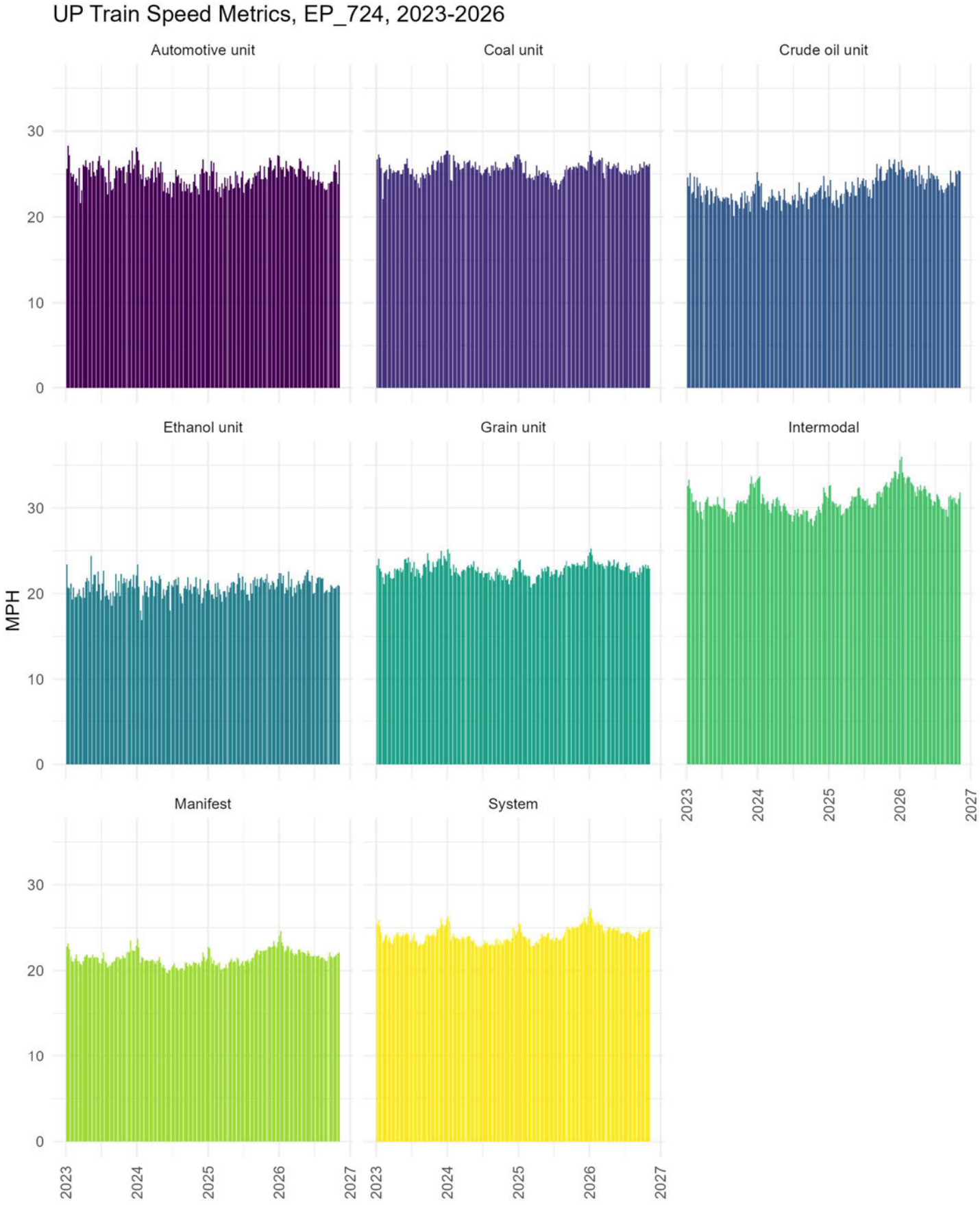
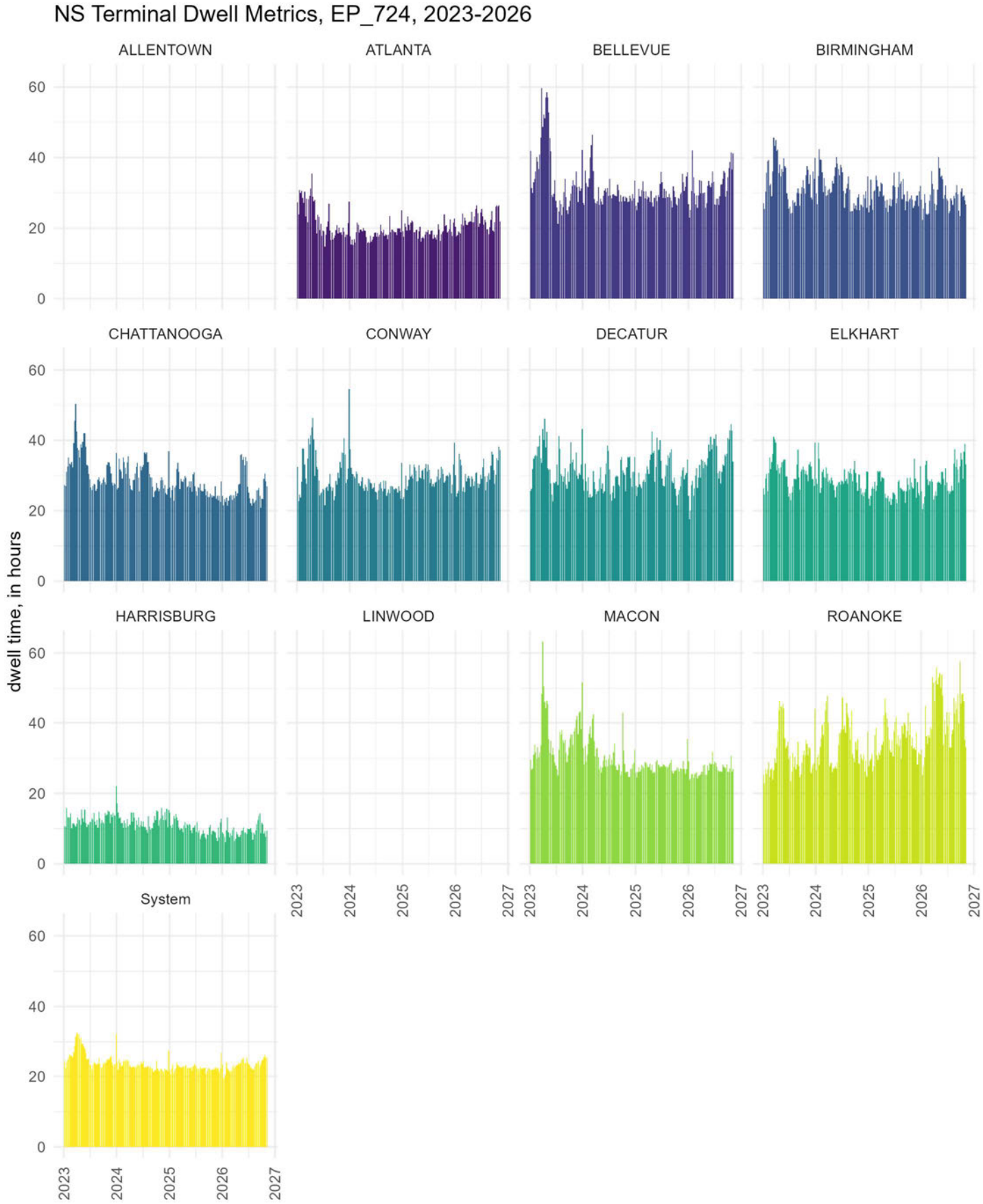
Appendix B: Train Speed and Terminal Dwell Time for UP and NS




UP Train Speed Metrics, EP_724, 2023-2026
Automotive unit
Coal unit
Crude oil unit
Ethanol unit
Grain unit
Intermodal
Manifest
System
MPH
0
10
20
30
2023
2024
2025
2026
2027


NS Terminal Dwell Metrics, EP_724, 2023-2026
ALLENTOWN
ATLANTA
BELLEVUE
BIRMINGHAM
CHATTANOOGA
CONWAY
DECATUR
ELKHART
HARRISBURG
LINWOOD
MACON
ROANOKE
System
dwell time, in hours
0
20
40
60
2023
2024
2025
2026
2027


UP Terminal Dwell Metrics, EP_724, 2023-2026
Chicago (Proviso), IL
Fort Worth, TX
Houston (Englewood), TX
Livonia, LA
North Little Rock, AR
North Platte East, NE
North Platte West, NE
Pine Bluff, AR
Roseville, CA
Santa Teresa
System
West Colton, CA
dwell time, in hours
0
10
20
30
40
2023
2024
2025
2026
2027

Appendix C: Curriculum Vitae

Kristen Monaco
562-533-7620
kristenmonaco@gmail.com

Positions Held

Instructor of Practice, Marquette University, Department of Economics, August 2025-present

Principal, Monaco Economic Consulting, August 2025-present

Director, Office of Economics and Chief Data Officer, Surface Transportation Board, February 2024-July 2025 (Senior Executive Service)

- Led office of 26 staff responsible for economic, financial, engineering, and operational analysis of cases before the Board. Scope included analysis of costs, rates, and competition. Also responsible for collection, review, and dissemination of railroad economic and financial data.
    - Reorganized office to focus on data modernization and effective case management, including renewed focus on competition issues.
- As Chief Data Officer, supported initiatives to modernize data infrastructure and analytics, including deployment of data lake and modernization of web-based data extraction tools to improve stakeholder experience.

Chief Economist and Director of Trade Analysis, Federal Maritime Commission, March 2021-February 2024 (Senior Executive Service)

- Led office of 25 staff responsible for compliance with multiple regulations related to ocean common carriage and marine terminal operations, evaluating the competitive effects of collaboration among competitors in ocean transportation, researching the economics of trade and transportation related to ocean-borne commerce.
    - Reorganized office to refocus on regulatory compliance, overhauled information reporting requirements for regulated entities, and led multiple Commission initiatives.
    - Developed new data unit, staffed with data scientists and data architect, to modernize agency approach to collecting, transforming, and analyzing data.
- Served as Chief Economist
    - Generated economic reports for Commissioners, including monthly analysis of key economic indicators.
    - Provided subject matter expertise to support Commission initiatives, including rulemakings.
    - Provided technical assistance on requests from Congress.

    - Provided briefings on FMC activities to external groups, including EOP, National Economic Council, Port Envoy, and Congressional staff.
- Led multiple requirements of Ocean Shipping Reform Act 2022
    - Initiated and served as agency point of contact for National Academies of Science committee study on best practices for chassis pool.
    - Drafted request for information, oversaw analysis of responses, and drafted recommendation to Commission regarding invoking temporary emergency collection for data collection due to maritime congestion. Continued to monitor maritime congestion in support of this requirement.
- Coordinated with international competition authorities.
    - Discussed on-going programs to assess competition among international ocean common carriers.
    - Discussed potential outlook and challenges to antitrust immunity for carriers who have filed agreements with the FMC and the block exemption review in the EU, which conveys similar advantages to ocean carriers.
    - Shared information regarding on-going analysis of horizontal and vertical cooperation and merger in ocean transportation industry.
- Chaired executive resources board for the agency

Associate Commissioner, Office of Compensation and Working Conditions, Bureau of Labor Statistics, April 2016-March 2021 (Senior Executive Service)

- Led the offices that produce National Compensation Survey, Occupational Requirements Survey, and Occupational Safety and Health Statistics, employed a staff of over 100 (and funded an additional 270 staff in data collection and IT), and managed an annual budget in excess of $120 million.
    - Led programs responsible for sampling, collection, estimation, validation, and dissemination of 12 federal statistical products.
    - Ensured successful contracting on federal-state cooperative data programs.
    - Produced several data outputs under interagency agreements with federal agency partners.
    - Oversaw testing and production of new data product, Occupational Requirement Survey, intended to support Social Security Administration efforts to modernize the Social Security Disability Insurance program adjudications.
    - Oversaw expansion of machine learning and other data science techniques to improve operational efficiency, including automated coding of text.
    - Initiated major expansion for occupational safety and health statistics to collect and produce detailed data on injuries and illnesses leading to job transfer and restriction.
- Served on BLS executive oversight board, providing strategic leadership for the Bureau.

- Served as BLS and Department of Labor representative on multiple workgroups, including those centered on automation's impact on the labor force as well as interagency groups on data sharing.
- Led BLS efforts to increase data use and utility through expanding modes of restricted microdata access, including BLS participation in Federal Statistical Research Data Centers and creation of BLS virtual data enclave.
- Conducted outreach to the public on BLS data, worked on ensuring business cooperation with voluntary survey participation, published research on technical aspects of statistical programs.

Supervisory Research Economist, Office of Compensation and Working Conditions, Bureau of Labor Statistics, February 2014-April 2016 (Senior Level)

- Served on management teams for both National Compensation Survey and Occupational Safety and Health Statistics.
- Managed a team of 6 research economists whose mission is to lead program development efforts to improve economic statistics of compensation, workplace safety and work requirements.
- Led research and development programs to validate new data output, the Occupational Requirement Survey.
- Co-chaired team tasked with increasing BLS involvement in the federal statistical research data center network.

Labor Economist, Office of Federal Contract Compliance Programs, Department of Labor, January 2013-February 2014 (GS-14)

- Provided technical assistance on the measurement of employment or compensation discrimination for managers and compliance officers. Consulted on over 300 cases during period of employment.
- Provided training and tools to compliance officers to assist in understanding economic analysis of discrimination and case valuation.
- Served as resource to national office staff on other issues related to labor economics.
- Received multiple Secretary of Labor awards for work on compliance tools and case resolution for major settlements.

Professor of Economics, California State University Long Beach, August 2004 to December 2013

- Taught courses at both undergraduate and graduate level. Courses include: principles of economics (macro and micro), microeconomic theory, economic statistics, managerial economics, industrial organization, econometrics, transportation economics, research methods, and applied microeconometrics.
- Served as Economics Department undergraduate advisor from 2003-2006
    - Responsible for advising economics majors/minors.

    - Chaired department curriculum committee, which revised existing majors and minors in light of increased student demands for courses
- Served as Economics Department graduate advisor from 2011-2012
    - Responsible for graduate student admissions and advising.
    - Chaired graduate committee, which revised existing admissions requirements and altered curriculum to refocus graduate program on the skills needed in applied economics.
    - Hired and supervised performance of department graduate assistants and tutors (approximately 8-10 per semester).
- Generated approximately $600,000 in external grants as principal investigator

Enrollment Manager, College of Liberal Arts, California State University Long Beach, May 2011-December 2012

- Worked with Provost's office and Dean to set enrollment target and goals for College of Liberal Arts, consisting of 27 departments and programs, 9,000 majors, 900 graduate students, and instructional budget of over $20 million per year.
- Coordinated with department chairs within the college to develop strategy to reach enrollment target.

Director, Master of Arts in Global Logistics, California State University Long Beach, August 2009 to December 2012 (Associate Director, MAGL, August 2005-2009)

- Ran self-support graduate program offered through College of Continuing and Professional Education.
- Responsible for hiring faculty, marketing program, recruiting students, curriculum development, and program budget

Co-Director, Office of Economic Research, CSULB, 2011 to 2012

- Responsible for Annual Long Beach Economic Outlook analysis and executive summary
- Presented information about the local and regional economy in Southern California to local groups and media

Associate Professor, California State University Long Beach, August 2001 to August 2004

Assistant Professor, University of Wisconsin – Eau Claire, June 1998 to May 2001

Education

- Ph.D., Economics, University of Wisconsin-Milwaukee, May 1998
- M.A., Economics, University of Wisconsin-Milwaukee, August 1994
- B.A., Political Economy, James Madison College, Michigan State University, August 1992

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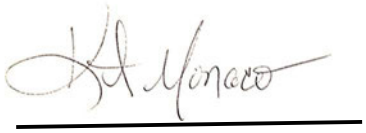
VERIFICATION

I, Kristen Monaco, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed this 18th day of November, 2026.



REDACTED VERSION – TO BE PLACED ON PUBLIC RECORD

BEFORE THE

SURFACE TRANSPORTATION BOARD

DOCKET NO. FD 36873

UNION PACIFIC CORPORATION, ET AL. – CONTROL – NORFOLK SOUTHERN CORPORATION, ET AL.

CSXT TRANSPORTATION, INC.'S COMMENTS AND REQUEST FOR CONDITIONS

VERIFIED STATEMENT OF

SCOTT R.R. DANIELS

NOVEMBER 18, 2026

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I. QUALIFICATIONS

My name is Scott R.R. Daniels. I am a Partner at Kearney, a global management consulting firm, where I lead the firm's Strategy and Growth Practice in the Americas. In this role, I routinely advise senior executives and boards on corporate and competitive strategy, operations, innovation, and digital transformation. I have more than 30 years of experience in consulting and industry, with particular expertise in transportation and logistics, rail operations, energy, chemicals, and other industrial sectors.

Prior to joining Kearney, I served as Senior Vice President of Strategy and Innovation at Canadian National Railway. As a member of CN's senior leadership team, I was responsible for corporate strategy, mergers and acquisitions, and the development of enterprise-wide innovation and digital transformation capabilities, including advanced analytics and operational transformation. Prior to CN, I was a Senior Partner at Deloitte, where I served as National Leader of the Process and Industrial Products Sector and a leader in the Monitor Deloitte Strategy and Operations Practice. My consulting experience includes advising freight railroads and other transportation and logistics companies on competitive strategy, organizational and operating model design, operations, and top-line growth. I hold a master's degree in economics from Queen's University and an Honors Bachelor of Arts degree in Economics from McGill University.

II. INTRODUCTION

1. In 2001, following a period of consolidation in the 1980s and 1990s that substantially increased industry concentration and triggered severe service disruptions, the Surface Transportation Board (STB) adopted stricter standards for evaluating future Class I railroad mergers. Under the new framework, the STB must find that a proposed transaction is consistent with the public interest.[1] It will evaluate whether substantial and demonstrable public benefits, such as improved service or enhanced competition, outweigh potential competitive harms, service disruptions, and other adverse effects. Importantly, the new rules place greater emphasis on enhancing competition, expecting applicants to propose measures that go beyond merely preserving existing competitive options.[2]

2. The proposed UP-NS merger does not satisfy this standard. Applicants substantially overstate the benefits and understate the competitive harm that the transaction would create. The proposed merger may generate legitimate operational efficiencies for UP-NS, but Applicants have neither demonstrated nor committed that those private gains would translate into commensurate benefits for shippers or the public. The proposed merger is unlikely to deliver the broad service improvements Applicants claim or generate truck-to-rail diversion and shipper savings on the scale they project. At the same time, it would allow UP to expand its dominance in economically important and competitively critical rail markets and divert traffic and associated contribution from competing railroads, potentially eroding the competitive strength of the rival networks on which effective rail competition depends.

[1] 49 U.S.C. § 11324(b)–(c); 49 CFR § 1180.1(a)–(c); Major Rail Consolidation Procedures, 5 S.T.B. 539, 553–54, 558–59 (2001).
[2] 49 CFR §§ 1180.1(c), 1180.6(b)(10); Major Rail Consolidation Procedures, 5 S.T.B. 539, 547–48, 610–11, 616–17 (2001).

III. APPLICANTS SUBSTANTIALLY OVERSTATE BENEFITS OF THE PROPOSED MERGER

3. UP and NS identify improved service as a central benefit of the proposed merger and the foundation for many of the other public benefits they claim, including truck-to-rail diversion and shipper savings. By bringing the two railroads under common ownership, the transaction would eliminate the need for interchange, expanding the availability of single-line service. They contend that shippers would benefit from faster transit times, improved routings that avoid congested gateways, and a more seamless customer experience.

4. Applicants argue that this improved service would make UP-NS more competitive with trucking. They project that approximately 2.1 million long-haul truckloads would divert to rail annually, saving shippers approximately $3.5 billion in transportation costs.[3]

5. They further assert that these diversions would reduce highway congestion, improve safety, lower emissions, and support economic growth and employment.[4] The projected environmental, safety, and employment benefits depend, in substantial part, on realizing the forecast volume of truck-to-rail diversions.

6. Combining the two railroads could produce legitimate operational efficiencies and some benefits for shippers and the public. However, Applicants have not adequately established the magnitude and achievability of the claimed benefits, the infrastructure investment required to realize them, or their value to shippers and the public. They substantially overstate the volume of achievable truck-to-rail diversion, and their operating plan shows only modest systemwide changes, raising questions about the breadth of any resulting service improvements. Applicants also have not committed to pass through their projected cost savings to shippers in the form of

[3] Am. App., Vol. 2, Hunt VS § 8.2, p. 482.
[4] Am. App., Vol. 1, p. 20.

lower rates, and the proposed Committed Gateway Pricing program contains no such commitment. Absent a firm commitment, there is little reason to expect those savings to be retained by anyone other than the merged railroad.

A. Estimates of truck diversion and corresponding savings are overstated

1) Single-line service is only one factor affecting modal choice

7. The creation of new single-line routes could make rail transportation more attractive to certain shippers currently using trucks. For a shipment that otherwise must interchange, eliminating the switch could reduce transit time and the possibility of delay. A single carrier also may offer more consistent tracking, simpler customer service, and clearer accountability when service problems arise. Rail also historically offers a lower cost per ton-mile than truck, although this advantage is reduced for smaller shipment quantities and shorter lengths of haul. Together, these attributes can support diversion where the customer has practical and economical rail access, sufficient volume, a rail-feasible commodity, and favorable end-to-end economics.

8. In practice, the choice between rail and truck depends on far more than the number of railroads in the line-haul movement. Trucks provide direct access to nearly any facility, predictable service windows, and flexibility to accommodate variability in shipment size and timing, all while requiring relatively limited up-front investment. Rail service generally requires fixed track access, rail-compatible facilities and equipment, adequately frequent and reliable local switching service, and sufficient volume across which to allocate fixed costs. A reduction in interchange friction would improve only a part of the rail service offering relative to truck without addressing any of these more fundamental constraints. The Application nevertheless treats a broad pool of freight as realistically divertible even where there is insufficient evidence that these prerequisites are satisfied and no explanation of how they would

be addressed. In certain instances, the Application also treats traffic as divertible even though rail already appears to be the more economical option for it today. That these shippers have not converted despite an existing rate advantage indicates that the obstacles to rail conversion lie elsewhere, and the proposed merger does not address them.

2) Assumptions about rail access overstate addressable market for truck-to-carload diversion

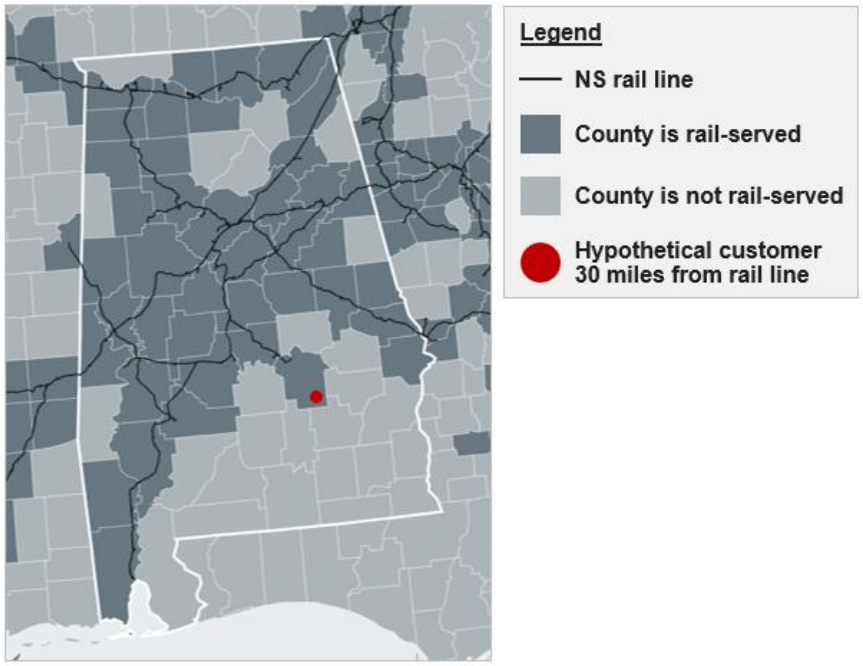
9. A central weakness of Applicants' thesis is the treatment of physical rail access in the estimation of truck-to-carload diversion. Of the 2.1 million truckloads predicted to divert to rail, approximately 862,000 (41%) are expected to convert to carload rail service.[5] The balance of diversions would convert to intermodal, which faces a different set of access constraints and for which a different set of assumptions was used.

10. Applicants identified rail-serviceable truck freight using Transearch, which projects commodity flows at the county level. Transearch is a purchased database provided by S&P Global; see Monaco Verified Statement at pp. 10-14 for detailed discussion of its limitations for modal analysis. Because Transearch projects truck flows only at the county level, Applicants likewise make assumptions about rail access at the county level. Under their approach, the presence of a UP or NS station within a county indicates that truck traffic originating or terminating in that county could be served by rail.[6]

11. Exhibit 1 illustrates this county-level approach. If a county contains even one rail station, Applicants treat every potential customer in that county as rail-serviceable, regardless of the distance from the rail line or any other practical constraints. A hypothetical customer 30 or more miles from the line is treated the same as a customer on the line with existing rail access.

[5] Am. App., Vol. 2, Hunt VS, § 4.1, Exhibit 4-1, p. 422.
[6] Am. App., Vol. 2, Hunt VS, Appendix B.5.2.B, pp. 539–541.

Exhibit 1: County-Level Eligible Diversion Screen



12. This is a convenient, but overly generous, assumption. It does nothing to establish or distinguish whether the actual shippers in the county have a physical connection to the rail network or practical access to a transload operation. Counties can encompass widely dispersed industrial facilities, and a station located within the same county may be many miles from the facilities generating the truck traffic. For these shippers, this assumed single-line option would not be available in practice without either substantial investment in new track connections or added transloading costs, neither of which Applicants account for.

13. {{REDACTED }} is one example that illustrates the problem this assumption creates. Applicants project diverting approximately {{REDACTED }} originating in the county.[7] Although the available traffic data does not identify individual shippers, we compared the rail map to publicly available data and identified no rail connections to potential shippers of these commodities in the

[7] See "Truck Diversions Analysis.xlsx," Tab "County Example."

county. Of the {{REDACTED}} potential shippers in the county we did identify, none has direct rail access and most are several miles from the rail line. As Exhibit 2 shows, the presence of a rail station in the county says little about whether the volume originating in the county can actually reach the rail network.

{{REDACTED

}}

14. Applicants nonetheless treat all truck traffic from this county as serviceable in the diversion model. The county-level assumption may provide a general indication of freight that UP-NS could hypothetically serve, but the diversion projections are not presented as a rough estimate of long-run potential. Instead, Applicants' model projects that over {{ }} of this truck traffic will shift to rail within three years.[9] For the projected {{REDACTED }} diversions to occur, each carload would require either new rail access infrastructure or an economically viable

[8] See "Truck Diversions Analysis.xlsx," Tab "County Business Index."
[9] See "Truck Diversions Analysis.xlsx," Tab "County Example," Cell G16.

transload operation that the Application neither identifies nor includes the funding to construct. Establishing direct rail access would require substantial investment and still depend on engineering feasibility, property rights, permitting, and construction, all within the three-year forecast period. Transloading is also not a guaranteed alternative. It requires a suitably located facility with commodity-specific equipment, available capacity, and sufficient compatible volume to make the utilization of the required infrastructure viable, and it adds trucking and handling costs that may erode rail's economic advantage.

15. The presence of a station somewhere in the county establishes none of these conditions. Because Applicants apply the same assumption across the diversion pool, the model materially overstates the traffic that could realistically become rail-serviceable within the forecast period.

3) Diversions consist disproportionately of low-density, unpenetrated lanes

16. Applicants advertise that the proposed merger will create single-line service opportunities for 88,000 origin county-destination county lanes.[10] It must be noted, however, how very little traffic interline rail moves on those lanes today, meaning that their forecast depends on converting traffic that has shown little inclination to move by rail at all. According to Applicants, the current market share for rail across all projected truck-to-carload diversion lanes is only {{ }}. Within three years, they project that it will grow to {{ }}, a twelvefold increase.[11]

17. The {{ }} of freight that does move by rail today moves over only a tiny fraction of the diversion lanes. {{ }} of projected truck-to-carload diversion lanes had no rail

[10] Am. App., Vol. 1, p. 38.
[11] See "Truck Diversions Analysis.xlsx," Tab "Lane Density Statistics," Cells D7 and F7.

traffic in the diverted commodity group (STCC2) in the base period, accounting for {{ }} of diverted tons.[12]

18. This absence of traffic does not, by itself, prove that service could not be introduced. It does, however, indicate that something about these movements makes rail unattractive to shippers today, whether an interchange would be involved or not, and that the projected diversions more often would necessitate the introduction of new rail service rather than the expansion of existing service. The share gain model assumes that rail can rapidly capture meaningful volumes with customers that either lack rail access entirely or have not been using rail on the diversion lane, and where viable handling arrangements, competitive transit times, and advantaged economics may not exist. Although Applicants discuss network-wide operating improvements and capacity expansions, they do not demonstrate how the local service arrangements necessary to capture the projected diversions could feasibly be established.

19. The economics of offering service to divert that traffic from truck would depend primarily on volume density. Rail service becomes more efficient when enough cars can be aggregated to justify regular local switching, as well as the classification and line haul operations required. Rail service cannot economically be added in small increments where it does not already exist. Before the first car moves, a railroad must commit crews and locomotives to a local switching assignment, and the expected traffic must justify those fixed costs. If sufficient volume cannot be aggregated at either the origin or destination, initiating rail service may not be economically viable.

20. Much of Applicants' projected diversion is concentrated on low-density lanes. Some are extremely small: {{ }} of diverted tons occur on origin county-destination county-

[12] See "Truck Diversions Analysis.xlsx," Tab "Lane Density Statistics," Cells F16 and D16.

STCC2 lanes with less than one carload per year of projected rail traffic.[13] A much larger share lacks the volume needed to make rail service economical for shippers or the railroad. {{ }} of diverted tons are on lanes with less than one carload per week; {{ }} are on lanes with less than one carload per month.[14] To put this into perspective, lanes with less than one carload per month represented {{ }} of UP's 2023 total carload volume.[15] This small share suggests that such density makes rail service unattractive to both railroads and shippers, a fundamental economic constraint that the proposed merger would not change. Yet Applicants project that {{REDACTED }} of their truck-to-carload diversions will occur on precisely these types of lanes.

{{REDACTED

}}

21. Applicants acknowledge that volume density affects the likelihood of diversion, and they apply a volume screen to account for it.[17] However, they apply the screen only at the origin county and STCC2 level, which makes it largely ineffective. It does not test volume at the destination, by individual shipper, or by commodity below the two-digit STCC. As a result, a county's aggregate volume can qualify many small, dispersed movements for diversion, even though many of them may lack the individual volume to support rail service on their own.

[13] See "Truck Diversions Analysis.xlsx," Tab "Lane Density Statistics," Cell F26.
[14] See "Truck Diversions Analysis.xlsx," Tab "Lane Density Statistics," Cells F26 and F27.
[15] See "UP Waybill Analysis.xlsx," Tab "Section 3.A.3."
[16] See "Truck Diversions Analysis.xlsx," Tab "Lane Density Statistics," Cells B26-F30.
[17] Am. App., Vol. 2, Hunt VS, Appendix B.5.2, p. 543.

22. The {{REDACTED }} example discussed above illustrates this problem well. In aggregate, the county's originated volume clears Applicants' origin county threshold of 104 carloads per year in the diverted commodity. But because Applicants do not screen individual origin-destination pairs for density, that volume is spread thinly across many destinations. Applicants treat every destination that would receive improved service as eligible for diversion, regardless of how much traffic would move there. To one destination county, {{REDACTED }}, UP-NS projects diverting {{ }} carloads per year. This phenomenon is present throughout the projections; of all the diversion lanes originating in {{REDACTED }}, {{ }} of them or {{ }} are diversions of less than one carload per year. A lane generating less than one carload a year cannot justify rail service on its own. Unsurprisingly, rail had {{REDACTED }} in the base period. [18]

23. {{REDACTED }} is obviously not an isolated case; low-density lanes are pervasive throughout the diversion forecast. One drastic example is {{REDACTED }}. {{REDACTED }} moves by rail on this lane today, total market volume is the equivalent of {{REDACTED }}, yet Applicants project diverting {{REDACTED }}.[19]

24. Further, the origin county volume threshold considered by Applicants does not adequately account for how, in reality, county-level volumes would often be distributed among multiple shippers. For example, one county with a single industrial facility generating the equivalent of 100 railcars annually presents a different conversion opportunity from a county with five unrelated facilities generating 20 railcars each. The latter would require separate

[18] See "Truck Diversions Analysis.xlsx," Tab "County Example."
[19] See "Truck Diversions Analysis.xlsx," Tab "Lane Aggregation," Row 32012.

facility investments, equipment, commercial negotiations, and local service commitments for each shipper. Treating those cases alike because their county-level volumes are equal understates the difficulty and cost of inducing many smaller facilities to adopt rail service. {{REDACTED }} fits this pattern: its modeled volume may originate from up to {{REDACTED}} shippers of varying size, none with direct rail access.

4) Share gain projections are aggressive and discount factors that will influence probability and rate of conversion

25. Many of the shippers in Applicants' diversion projections are not using rail today, but not necessarily because the option was unavailable. Even for shippers off the rail line, an interline option was theoretically available, either by building in to the rail network or through a transload. Applicants nonetheless assume that single-line service and its associated benefits will, within three years, increase rail share on these lanes from {{ }} to {{ }}. That assumption assigns disproportionate weight to the absence of single-line service as the reason these shippers choose truck, when it is only one of many factors, and likely one of the smaller constraints. For any shipper, the decision to move freight from truck to rail is a business decision that depends on many factors beyond the line-haul rate and transit time. A shipper must consider how rail would fit within its existing modal mix, including whether committing a portion of its freight to rail would reduce flexibility to meet its own customer delivery requirements. It must weigh its tolerance for shipment timing and variability. Rail service typically offers less frequent pickups and longer and less predictable transit times, which can require the shipper or its customers to hold more inventory, tying up additional working capital. A shipper with no rail experience has no prior history on which to judge those risks. It must also ensure it has the personnel to manage rail shipments, including staff to coordinate with the railroad, manage demurrage and other accessorial charges, and safely load and unload rail equipment. Where that expertise does not

already exist, the shipper must hire or train staff to provide it. Applicants' model does not account for these frictions, or for the broader cost and difficulty of changing the supply chains that shippers and their customers have built around truck service. By treating diversion as a function of only a few variables, the Application understates the complexity of converting these volumes to rail. The merger would remove none of the structural factors that prevent much of this traffic from moving on rail today.

26. Nor does the investment program described in the Application make it any more likely that UP-NS will be able to motivate this traffic to shift. That program includes investments in network capacity (e.g., yards, sidings, track, and signaling), but nothing to help connect the diverted truck traffic to the rail network. The Application includes no plan for, or even acknowledgement of, the funding required to build the access infrastructure needed to enable the projected diversions. In the absence of commitments by Applicants, it must be assumed that these costs would fall to shippers. For the predominantly low-volume shippers contemplated in Applicants' diversion projections, that investment is unlikely ever to pay for itself. A rail spur, siding, or loading facility is a fixed cost that must be justified by the volume moving over it. Depending on the distance to the rail line and requirements at the facility, such projects can cost several million dollars or more, a sum that the low-volume diversions in Applicants' projections are unlikely to justify.

27. Applicants' assumption that all of the diversions will be achieved within three years casts further doubt on the claimed public benefits. To serve 100% of the projected traffic in the third year, UP-NS would need to convert many shippers that do not use rail today within roughly two years of the proposed merger's closing. Even where an access investment is ultimately found to be economical, that conversion is a multi-step process. UP-NS would need to

first secure a commercial commitment from that shipper and design a service plan for the new lane, then complete land acquisition, site design, permitting, and construction of access facilities, if needed, then demonstrate that the service performs reliably enough for the shipper to shift meaningful volume. Completing this process at the scale the Applicants' projections require would be difficult under any circumstances, and it is especially unlikely here, where much of the necessary access infrastructure likely does not yet exist and while UP-NS would simultaneously be carrying out other network expansion needed to handle the additional volume. Moreover, the projections imply that these new lanes would quickly reach rail market shares comparable to those on lanes where rail service is already well established and proven, an outcome that typically requires years of demonstrated performance. Applicants do not explain how any of these steps would be completed before the forecast traffic is projected to materialize.

5) Applicants overstate estimates of shipper cost savings

28. Just as Applicants overstate how much traffic is likely to divert, they also overstate how much each diversion would save shippers because their estimate compares transportation rates rather than the total cost of moving freight by truck or rail. The approximately $3.5 billion estimate Applicants claim only represents the difference between estimated truck and rail line-haul charges for the projected diverted traffic, plus an allowance for intermodal drayage costs.[20] Shippers, however, compare transportation options on total delivered cost, and switching from truck to rail carries many costs that the estimate omits: the cost of building, maintaining, and operating rail-served facilities; private ownership or leasing of railcars; for shippers without direct rail access, transloading and the associated truck movements; and the working capital tied up in the larger inventories that less frequent rail service requires.

[20] Am. App., Vol. 2, Hunt VS § 8.2, pp. 481–483.

29. The rail rates used to calculate these savings raise a further concern. As noted above, most projected diversions involve low-volume shippers that do not use rail today, and such shippers are unlikely to obtain contract rates. More likely, their traffic would move under tariff rates, which are generally higher than contract rates.[21] Applicants, however, estimated rail costs using the Confidential Carload Waybill Sample, which reflects a blend of contract and tariff rates, and then adjusted those rates downward using the STB's Freight Commodity Statistics to correct for an overstatement of revenues.[22] Applying blended, downward-adjusted rates to traffic that would likely move at tariff rates significantly understates the rail costs these shippers would most likely face in reality and, correspondingly, overstates their savings and thus the level of demand for rail service at tariff rates, all else equal.

30. If taken into consideration, these omitted or insufficiently reflected costs would materially change the outcome of any modal shift analysis. A nominally lower rail line-haul rate can fail to produce a lower delivered cost if freight must be handled at both ends, if a shipper must finance substantial fixed infrastructure, and/or if less frequent service forces the shipper to hold more inventory. Total logistics economics do not merely affect the value of each diversion after the fact; they determine whether a shipper converts at all. Overstating net savings therefore has the potential to overstate both the economic benefit from conversion and the number of conversions that are likely to occur. These shippers already have the option to move their freight by rail and capture the rail-truck rate differential today. That they have not done so suggests they place greater value on truck service, or face conversion costs and/or other barriers that Applicants' diversion and savings estimates do not reflect.

[21] "Freight Rail Pricing," United States Government Accountability Office, December 2016.
[22] Am. App., Vol. 2, Hunt VS, §§ 8.1–8.2, pp. 481–483.

6) Summary findings on truck-to-rail diversion benefits

31. For these reasons, the projected truck-to-rail diversions are best understood as an abstract, hypothetical exercise rather than a realistic and substantiated forecast of achievable diversions. While some increase in rail share is plausible and even likely, truck-to-carload conversion is highly dependent on shipper-specific access, volume density, investment required, and differences in total landed logistics costs, which are constraints the Application does not address or sufficiently account for. The proposed merger eliminates an interchange on certain routes, an improvement to one part of the rail offering that may not translate into lower rates or materially improved service for many, if not most, shippers. As a result, Applicants materially overstate the carload traffic likely to convert. Because Applicants' claimed employment, environmental, and safety benefits depend on those diversions, they are overstated to the same degree: if the diversions do not materialize, neither do those benefits.

B. The proposed merger is unlikely to produce broad improvements in manifest service

1) Eliminating interchange may not produce material end-to-end service improvements

32. Applicants contend that combining UP and NS will improve rail service by eliminating interline switches and enabling more efficient train planning and coordination across the two networks. This proposition has some merit. Interline service carries operational complexities that can contribute to delays and reduce service reliability. It requires coordination between independent railroads on train schedules, blocking arrangements, and the transfer of traffic at interchange gateways, creating opportunities for additional handling, dwell time, and missed connections. Under common ownership, the combined railroad may be able to avoid some of this complexity by planning train schedules and blocking arrangements more coherently, coordinating equipment over a larger network, and eliminating certain duplicative activities.

33. These operating efficiencies may create value for the merging railroads by reducing the cost of transporting freight, but they do not, by themselves, constitute benefits to shippers. For customers to benefit, those efficiencies must translate into lower rates or meaningful improvements to service, such as shorter and/or more reliable transit times. Applicants have not committed to passing operating savings through in the form of lower rates, and the extent to which the proposed merger would produce meaningful and broad-reaching improvements in service remains uncertain. Some shippers may see improved service while others may not, and there may even be certain shippers that see deteriorated service if UP-NS decides that sacrifice in service quality is necessary for improvement in other parts of the network. Indeed, at one point, Applicants suggest that around 14% of manifest routes could see longer transit times post-merger, measured by an increase in average handlings.[23] It is also important to note that for many manifest shippers, consistency, not speed, is the most valuable element of service quality. It is unclear whether the proposed merger would meaningfully impact consistency, especially on longer-haul movements where the elimination of one interchange is a small factor in the chain of events that cause delivery timing variability.

34. Rail transportation takes three principal forms: unit-train, intermodal service, and manifest. Unit trains transport large volumes of a single commodity, such as coal or grain, between an origin and destination, generally without intermediate classification of individual railcars. Intermodal trains transport containers and trailers between major terminals on relatively direct, scheduled routes, with first- and last-mile connections served by truck. Manifest trains, in contrast, carry single and multicar shipments of different commodities for multiple customers and destinations. These cars must be organized into blocks and assembled into trains according

[23] Am. App., Vol. 2, Turner VS, ¶ 44, p. 871.

to their destinations and optimal routing. Unlike unit-train service, single-line manifest service does not generally provide direct origin-to-destination transportation without intermediate handling. Dr. Israel describes the proposed merger as creating "direct, single-line service" and likens the elimination of an interchange to "the difference between connecting air travel service and a nonstop option."[24] That analogy is not an accurate characterization of manifest rail service. Even when a shipment moves entirely over one railroad, its cars are often switched several times throughout the movement, in addition to the local origin and destination switches.

35. In a typical manifest movement, a car or set of cars is first picked up at the shipper by a local switching assignment, a task which is frequently performed by a shortline. Where a shortline is involved, the handoff to the Class I adds another layer of coordination and another opportunity for delay. After being switched to a Class I, it is grouped with other cars at one or more classification yards. If required, it might be switched to another railroad at an interchange. Closer to its final destination, it is sorted for delivery at another classification yard and is eventually switched to the receiving customer. Along the way, the train stops frequently to perform non-switching activities such as crew changes, inspections, maintenance, and refueling. Unit and intermodal trains avoid some of the switching work, but these non-switching activities are largely unavoidable for any form of service. Manifest service is subject to all of these frictions whether or not an interline switch is required.

36. One of Applicants' proposed new trains (Exhibit 4) illustrates how much of this work remains even on a single-line movement. Although the train would eliminate the existing interchange in Chicago and reduce certain intermediate handlings, the proposed operating plan continues to include work events at multiple intermediate locations, including swapping blocks

[24] Am. App., Vol. 2, Israel VS, ¶ 105, p. 230.

in the Chicago area.[25] It would stop several other times only to change crews. This example omits the numerous other train stops and work events that would occur before the cars are added to the train at North Platte or after the cars are switched off at Conway. The proposed operation may be more efficient, but it would hardly be free from the inherent complexity of manifest service.

Exhibit 4: New MNPCW Train with Operating Stops[26]



37. Each required stop introduces opportunities for delay and variability in transit time. Longer-haul manifest shipments are particularly exposed to these risks as they encounter numerous switching, classification, and other operating events between origin and destination. Eliminating a single interchange may remove one potential source of delay, but it does not necessarily improve the reliability of the movement as a whole. Consequently, even where the proposed merger reduces average transit time, it may have a much smaller effect on the

[25] Am. App., Vol. 2, Operating Plan, ¶ 190, pp. 698–699; Appendix A, MNPCW train schedule, p. 830.
[26] *Id.*

consistency and predictability of delivery, which shippers often value more than speed. This is especially relevant in the context of an end-to-end transcontinental merger where many of the affected movements would exceed 1,000 miles, including 63% of Applicants' projected truck-to-carload diversion.[27]

2) Taking out an interchange does not necessarily eliminate work

38. Classification is a fundamental component of manifest service, whether the movement is single-line or interline. Importantly, eliminating an interchange does not always remove the need to perform underlying classification and switching work. Some interchanges involve transferring an intact train or block of cars between railroads with little or no classification, while others require the switching of individual cars or blocks of cars. Interchange gateways can serve as major classification points, where railcars arriving from different origins are sorted and assembled into blocks for onward movement to their respective destinations. This is the case at facilities such as the Belt Railway Company of Chicago's (BRC) Clearing Yard. Eliminating interchange at such facilities does not automatically eliminate the need to handle those cars; instead, that work may be performed at upstream or downstream yards. For example, cars previously sorted at BRC's Clearing Yard could instead be organized into destination blocks at an upstream UP yard or classified farther downstream on NS. Consequently, eliminating interchange handlings does not necessarily translate into an equivalent reduction in physical work across the combined network or equivalent improvements in service for customers.

[27] Am. App., Vol. 2, Hunt VS, Exhibit 4-12, p. 434

3) Applicants' operating plan shows only modest reduction to operational metrics

39. The limited extent to which the proposed merger changes the underlying operating work is reflected in Applicants' own projections. Under the Base Plan, UP and NS together account for approximately 70.5 million annual unit handlings.[28] Under the Optimized Plan, Applicants project a net reduction of approximately 0.9 million handlings, equivalent to only 1.3% of the baseline total.[29] Thus, even after implementing the proposed operating changes, approximately 98.7% of existing unit handlings would remain. These projections are consistent with the continued need for extensive switching and classification activities throughout the combined network. They also reflect the net effects of eliminating certain handlings, revising train and blocking arrangements, and potentially introducing handling activities elsewhere. Selected routes may see meaningful efficiencies, but systemwide the reduction is marginal: nearly all of the switching activity across the two networks would remain.

40. Moreover, Applicants' unit-handling counts are not a direct measure of the physical switching work eliminated or the resulting improvement in service. For example, Applicants count {{REDACTED

}}.[30] Intermodal handlings present a similar issue: Applicants count {{REDACTED

}}.[31] Eliminating these counted handlings can produce a substantial

[28] Am. App., Vol. 2, Gehringer and Orr VS, Table 2, p. 625; 193,727 total daily handlings multiplied by 364 days (Applicants use 364 days for the annual conversion factor in their workpapers) equals 70.5 million yearly handlings.
[29] Am. App., Vol. 2, Gehringer and Orr VS, Table 2, p. 625.
[30] See Turner WP "C-Operating Plan Metrics vFinal.xlsx," Tab "ReadMe", Cell D30.
[31] See Turner WP "C-Operating Plan Metrics vFinal.xlsx," Tab "ReadMe", Cell D28.

numerical reduction without a proportional reduction in switching events, train stops, or crew hours.

41. Other operating metrics reinforce the need for measured interpretation. Applicants' Optimized Plan indicates only small reductions in car miles (0.2%), train miles (1.0%), and {{REDACTED }}.[32] These results do not preclude meaningful improvements on individual routes, but they demonstrate why the number of eliminated handlings alone cannot establish the extent of the underlying operating work that would be eliminated or the service benefits that shippers would experience.

42. Ultimately, the relevant measure of shipper benefits is not simply the number of interchange handlings eliminated, but whether those efficiencies translate into lower rates or meaningful improvements in service. Applicants identify potentially significant time savings for certain new intermodal trains, and eliminating a handling may provide benefits where it avoids lengthy dwell or missed connections. Those selected examples, however, do not demonstrate comparable transit time reductions, improved on-time performance, or reliability gains across manifest traffic generally. Nor do Applicants' suggested savings of 20 to 24 hours per eliminated handling establish that every shipment converted to single-line service would realize such a reduction.[33] The proposed merger may improve coordination and eliminate certain duplicative activities, but it leaves the overwhelming majority of systemwide handlings, and the underlying complexity of manifest transportation, in place. The Application does not establish the magnitude or breadth of the service improvements that eliminating interchange would provide to manifest shippers.

[32] Am. App., Vol. 2, Gehringer and Orr, Table 2, p. 623; for crew assignment figures, see Turner WP "C-Operating Plan Metrics vFinal.xlsx" Tab "Growth Plan."
[33] Am. App., Vol. 2, Service Assurance Plan ¶ 30, p. 864.

C. Single-line service is unlikely to translate into rate savings for shippers

43. Certain operational efficiencies from eliminating coordination, interchange activities, and duplicative functions may reduce the combined railroad's costs. Applicants assert that expanding single-line service will translate those efficiencies into customer benefits, either through lower rates or through higher-quality service without corresponding rate increases.[34] But lower operating costs do not automatically produce lower rates or prevent future rate hikes. Whether savings are passed through would depend on market conditions, available competitive alternatives, and the value of the service provided, not solely on the railroad's cost of providing that service. The claim that customers will realize rate benefits from the proposed merger is not supported by basic economic principles governing pricing, UP's historic rate data, or UP's own statements concerning its pricing strategy.

44. Applicants' case for lower rates relies on the proposition that interline service carries a substantial rate premium relative to single-line service. Israel estimates in his Verified Statement that interline rates carry a premium of approximately 27–29% over single-line rates.[35] Given a premium of that magnitude, one might expect Applicants to commit to at least modest rate reductions on routes converted from interline to single-line service to establish the public benefits, yet they make no such commitment.

45. Basic pricing economics explains why that may be the case. Railroads do not generally set rates by applying a fixed margin to the cost of providing service. Rates instead reflect factors such as demand, capacity, the value of the service, infrastructure and other assets required to facilitate competitive service, and the price and availability of the shipper's next-best alternative. Where no viable interline alternative exists, a reduction in UP-NS's costs would

[34] Am. App., Vol. 2, Israel VS ¶¶ 105–111, pp. 230–233.
[35] Am. App., Vol. 2, Israel VS, pp. 234–235, Figure 10.

create no competitive pressure to reduce rates, allowing the railroad to retain the savings as additional margin. Where a competitive alternative does exist, UP-NS would have an incentive to price its single-line service relative to that alternative, but no incentive to price materially below it or to sustain those lower prices over time if doing so was only to motivate switching. Indeed, because they contend that single-line service is superior to interline service, UP-NS may be able to charge as much as, or more than, the interline alternative while still attracting traffic. In either case, lower costs do not automatically translate into lower rates for shippers.

46. The claim that single-line rates are significantly cheaper than interline rates is also not borne out by UP's traffic data. {{REDACTED

}}.[36]

47. For other merchandise traffic, {{REDACTED

[36] See workpaper, "UP Waybill Analysis," Tab "Section 3.C," Cells J6, G5, F5, S5:S6, D12:D13.

REDACTED

}}. It is not necessary to resolve the precise size of any average rate difference. What matters is that single-line service has not, by itself, produced lower rates for UP shippers, and there is no basis to assume that converting interline traffic to single-line service would do so in the future.

{{REDACTED

}}

48. UP's own descriptions of its pricing strategy reinforce this conclusion: the railroad seeks to maximize price based on demand and the value of its service, rather than automatically passing cost savings through to customers.

- January 2026: "[W]e're going to gather the demand that's out there, maximize the price based on the service that we have, and we'll see where that lands us."[38]
- January 2025: UP's "strong core pricing gains [are] a result of our deliberate focus on maximizing price."[39]

[37] See workpaper "UP Waybill Analysis.xlsx," Tab "Exhibit 5."
[38] UP Earnings Call Transcript (Jan. 27, 2026).
[39] UP Earnings Call Transcript (Jan. 23, 2025).

- September 2024: "The team has a hustle mentality, and we are very ferocious about business development. We will maximize price."[40]

49. Accordingly, Applicants' projected cost savings cannot be treated as benefits to shippers or the public. The Application estimates approximately $965 million in annual operating efficiencies and cost savings and approximately $133 million in capital savings.[41] Applicants may choose to use a portion of the operating savings to improve service quality or support lower rates in markets where competition makes such a response commercially attractive. However, Applicants do not establish that the projected cost savings will be systematically passed through to shippers or that the service improvements will be sufficiently large and widespread to provide an equivalent economic benefit. Nor does evidence of lower costs to the railroad establish that a comparable benefit will accrue to the broader public. The distribution of the proposed merger's value is an economic and strategic business issue that must be evaluated separately from the amount of expense reduction identified in Applicants' financial projections.

50. Taken together, the evidence supports a narrower and more qualified conclusion than the Application advances. The proposed merger might very well create legitimate opportunities for truck-to-rail diversion and more coordinated railroad operations, but Applicants have not shown that anything close to the full projected diversion volume is feasible, that the ascribed savings to shippers reflect shippers' total logistics economics, that interchange elimination materially transforms network-wide service level and quality, or that lower railroad costs will result in meaningfully lower rates. By contrast, Applicants have identified substantial potential operating efficiencies that could directly benefit the merged enterprise. Consequently,

[40] Transcript of Union Pacific Live Investor Roadshaw (Sept. 19, 2024).
[41] Am. App., Vol. 1, Janke VS ¶ 60, Table 4, pp. 515–516.

UP–NS stands to capture substantial private economic value without necessarily delivering commensurate benefits to shippers and the public.

IV. THE PROPOSED MERGER CREATES COMPETITIVE HARMS THAT THE APPLICATION DOES NOT ADDRESS

A. Effective competition depends on healthy rival networks

1) Competition benefits shippers, and railroads compete on network strength

51. Competition benefits shippers by placing market discipline on both prices and service. When sellers must compete to attract and retain customers, they face pressure to offer more favorable rates and commercial terms. They also have stronger incentives to maintain and improve the quality of the services they provide.

52. In the railroad industry, service quality is, in great part, a function of network quality. It is not determined solely by whether a railroad can physically access a customer at a particular origin or destination. The service provided to that customer depends on the performance of the broader network over which the shipment moves, including the availability and condition of track, the capacity and location of yards and terminals, the efficiency of switching and classification operations, the frequency of train service, and the railroad's connections to relevant markets. These network characteristics determine important aspects of the transportation product available to shippers, including transit time, reliability, frequency, flexibility, and the ability to accommodate growth or recover from disruptions. A railroad seeking to improve its competitive position must therefore do more than establish access to individual customers. It must invest in the infrastructure and capabilities needed to improve the quality of its network as a whole.

53. The benefits of those investments are not confined to the particular traffic that motivated them. Network infrastructure generally supports multiple customers, commodities, and

markets. Investment undertaken to attract or retain traffic in one market can therefore improve service elsewhere on the railroad's network. Competition benefits shippers not only by controlling rates for directly contested movements, but also by motivating investments that strengthen the broader rail network.

2) Differential pricing enables substantial network investment

54. Maintaining and improving railroad network quality requires substantial and sustained investment. To compete effectively, a railroad must earn sufficient contribution across its traffic base to maintain existing infrastructure and fund capacity and service improvements.

55. The condition of the industry before and after the Staggers Rail Act illustrates this relationship. Before 1980, burdensome economic regulation restricted railroads' abilities to adjust rates to market conditions and earn sufficient returns, contributing to financial distress, deferred investment, and deteriorating service. Staggers established a more market-based framework that gave railroads greater pricing flexibility, strengthened incentives to compete for traffic, and allowed carriers to generate the capital needed to upgrade their networks.

56. The pricing flexibility provided by Staggers reflects the recognition that a railroad's common network costs cannot be allocated equally across all traffic and that some traffic, shippers, or commodities require unique service products to support their business and be competitive in the marketplace. Under differential pricing, commodities and customers with greater demand for rail service and fewer economical transportation alternatives may contribute more toward network costs and investment, while more price-sensitive traffic with stronger alternatives may be carried at a lower contribution. This variation is an accepted and intentional feature of the post-Staggers framework: it allows railroads to recover the shared costs of their networks while retaining traffic that could not economically bear an equal allocation of those costs. The market-based pricing mechanism also enables investment in shipper- or commodity-

specific offerings. As a result, certain commodities and customers contribute a larger share of the resources used to maintain and improve infrastructure serving the railroad's broader traffic base.

57. The period of consolidation that followed Staggers helped create the scale in operations necessary to support continental service and the investment capacity to sustain it. The industry has since achieved a relatively stable equilibrium, with established networks sustaining meaningful competition in their respective regions. It is therefore not consolidation itself that presents a concern; it is that the proposed merger would disrupt this equilibrium.

3) The proposed merger could weaken competition by depriving competing networks of investment capital

58. The competitive significance of differential pricing extends beyond how an individual railroad recovers its network costs. Not all traffic is equally important to the health of competing networks. A transaction that redirects traffic making a substantial contribution to network investment transfers more than the associated movements. The railroad receiving the traffic gains additional contribution to invest in its network, while the railroad losing the traffic has fewer resources to maintain and improve its own network. These effects can compound over time. A railroad with declining traffic and contribution may find it increasingly difficult to justify additional train service, terminal capacity, customer connections, or other improvements. A resulting decline in service quality can cause additional traffic to shift to the stronger network, further reducing the resources and incentives available for investment.

59. This type of competitive harm does not require a shipper to lose access to a carrier. Since railroads compete through the quality of their networks, competition may weaken when the redirection of key traffic impairs a rival network even though the same carriers and routes remain available. This risk is concentrated in markets that provide a larger share of the

contribution supporting network investment. The proposed merger's effects on those markets, as well as the resulting effects on the broader networks, must therefore be evaluated.

B. Competition for Gulf Coast chemicals supports the health of the national rail network

1) North American chemicals production is concentrated in the Gulf Coast

60. The important carload volumes that form the core of the Staggers differential pricing model are not evenly distributed geographically across the US supply chain: they tend to be heavily clustered in regions of resource extraction or production. The Gulf Coast chemicals market is a uniquely important example of these dynamics. The Gulf Coast, which encompasses the major petrochemical production centers extending from the South Texas coast through to the Houston area, Beaumont, Lake Charles, and the Baton Rouge-New Orleans corridor, accounts for approximately {{ }} of all chemicals rail volume originated in the U.S. and {{ }} of all plastics.[42] Chemicals production is concentrated here because of the region's proximity to major oil and natural gas production in and around the Gulf. Oil and natural gas produced in the region supply the raw materials used to manufacture chemical products, largely plastic resins, for downstream industries across North America. The region's relevance is expected to expand through the 21st century, with growth in Gulf Coast plastics and rubber originations projected to outpace the rest of the U.S. through 2045 (133% vs. 125%).[43]

[42] See workpaper "US Chemicals Traffic.xlsx," Tab "Section 4.B.1," Cells D6 and C21.
[43] See workpaper "Plastic Volume Growth.xlsx," Tab "Section 4.B.1," Cells F6 and F15.

{{REDACTED

}}

2) Chemicals contribute a large portion of railroads' investible capital

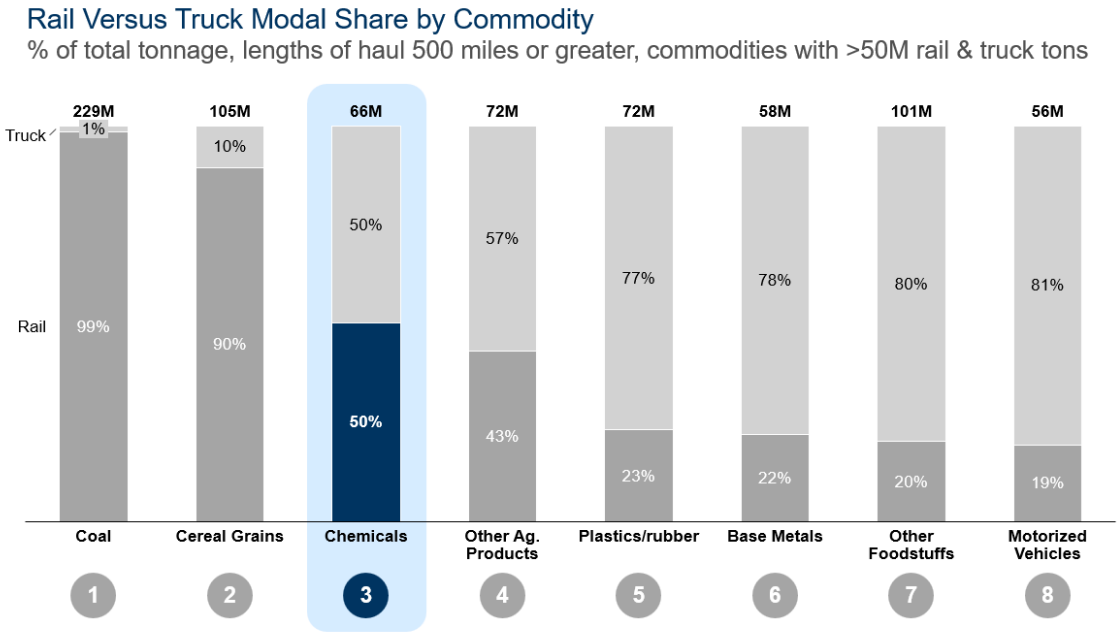
61. Chemicals are among the highest volume and most economically important commodities transported by U.S. railroads, accounting for approximately {{ }} of Class I carloads annually. This traffic is highly important to the railroads that compete to serve it. In 2023, in aggregate, it accounted for {{ }} of total Class I carriers' U.S. carload revenue.[45]

62. Chemical shippers are high-volume users of rail specifically, with approximately 50% of long-haul chemicals tonnage moving by rail. This heavy utilization of rail reflects the economic and operating requirements of chemical production. Large volumes must move economically to geographically dispersed customers, while chemical plants often rely on specialized loading equipment, storage facilities, and rail infrastructure. For continuously

[44] See workpaper "US Chemicals Traffic.xlsx," Tab "Exhibit 6."
[45] See workpaper "US Chemicals Traffic.xlsx," Tab "Section 4.B.2," Cells D5 and I19.

operating plants, the reliable and continuous takeaway of finished products is essential to maintaining operating conditions, optimizing storage, and ensuring healthy distribution economics for shippers' production. Switching transportation modes or carriers can therefore require substantial investment and may cause operational disruption, leaving many chemical shippers who have already invested in rail with reduced practical alternatives.[46]

Exhibit 7: Rail vs. Truck Modal Share[47]



63. Prior investment in rail, unique attributes of the rail service product or the chemical products themselves, and rail's relative economic attractiveness versus truck influence chemical shippers' willingness to pay for rail service. Correspondingly, chemicals represent some of the most economically important traffic for railroads and a key source of railroad investment capital.

[46] See workpaper "Modal Share.xlsx," Tab "Exhibit 7," Cells F6:F13.
[47] FAF classification of "Plastics/rubber" includes finished products alongside resins, distorting modal share comparisons for that category.

C. The proposed merger would disrupt competition for Gulf Coast chemicals

1) The merger would entrench UP's Gulf Coast dominance and weaken Eastern competition

64. UP currently controls {{REDACTED }} of Gulf Coast chemicals traffic, originating {{ }} of all carloads in 2023. This advantage is not confined to or the product of dominance in one corner of the region. UP controls most of the originating traffic from the largest market {{REDACTED }} but also carries a significant advantage {{REDACTED }}. UP controls {{REDACTED }} of chemicals traffic terminated in the Gulf, {{ }} of which it also originates.[48]

{{REDACTED

}}

65. Interline service is important to the delivery of Gulf chemicals into Eastern end markets. Approximately {{ }} of Gulf-originated chemicals traffic moves interline today, and UP originates more than {{ }} of this traffic. Eastbound interline traffic is split

[48] See workpaper "Gulf Coast Market Share.xlsx," Tab "Section 4.C.1, Exhibit 8," Cells D5, C41, C47, C42, and C39.
[49] See workpaper "Gulf Coast Market Share.xslx," Tab "Section 4.C.1, Exhibit 8," Cells D5:D8, C9, D15:D18, and C19

{{REDACTED }} between NS and CSX, with {{REDACTED }} terminated by Canadian carriers. [50]

{{REDACTED

}}

66. The proposed merger would reinforce UP's already dominant position and disrupt competition in the East. By combining UP's origination franchise with NS's Eastern network, UP-NS could offer single-line service to NS-served destinations on movements that BNSF and other Western carriers currently originate and interchange with NS, consolidating its control of the origination market. The merger would also disrupt the existing competitive balance among Eastern railroads. For traffic originating at UP-served facilities and terminating at destinations served by both NS and CSX, UP currently can interchange with either Eastern carrier. After the merger, UP-NS would have a strong incentive to retain that traffic on its combined network.

67. If UP-NS did take share on these routes, competing railroads would face diminishing economic incentives and resources to maintain competitive service. Declining volumes would make it increasingly difficult to justify regular train operations and associated

[50] See workpaper "Gulf Coast Market Share.xlsx," Tab "Section 4.C.1, Exhibit 9," Cells D16 and D5.
[51] See workpaper "Gulf Coast Market Share.xslx," Tab "Section 4.C.1, Exhibit 9," Cells D15:D16 and D23:D28.

infrastructure, potentially leading competitors to reduce service or withdraw from certain routes. Over time, UP-NS could become the only commercially viable alternative on some routes, even where competing carriers retain physical access. With fewer meaningful competitive alternatives, shippers would lose all competitive leverage over rates and service terms, allowing UP-NS to retain more of the proposed merger's operating efficiencies and potentially raise prices.

2) Competitors face major hurdles to improving the competitive situation

68. UP's advantage in Gulf chemicals is firmly entrenched, and competing carriers (primarily BNSF and CPKC) face substantial obstacles to meaningfully improving the competitive balance. This advantage is heavily linked to infrastructure – often built, but frequently acquired, largely between 1982 and 1996. Although measures were adopted to preserve competitive access to that infrastructure, UP remains the dominant carrier in the region and continues to control many of the key assets necessary to serve the market.

69. UP's current infrastructure advantage reflects decades of consolidation. The acquisition of Missouri Pacific in 1982 gave UP a broad Texas and Gulf Coast franchise. Adding the Missouri-Kansas-Texas Railway, or Katy, in 1988 strengthened UP's connections between Texas and northern markets. The 1996 merger with Southern Pacific (SP) combined two major regional systems and substantially completed the network in existence today.

70. UP derives substantial advantages over rivals in the Gulf from its owned infrastructure. These advantages encompass trackage, switching capacity, storage, routes to end markets and interchange gateways, and direct customer access. Their combined effect is that UP can usually offer a superior product with greater speed, flexibility, and reliability than its Gulf Coast competitors.

71. **Track.** A railroad's track is its physical footprint connecting customers to the network; a larger footprint expands customer access, improves network flow, and creates routing

alternatives. UP owns 52% of all track on the Gulf Coast, while BNSF, CN, and CPKC each own less than 20%. UP owns nearly 70% of all track in the Houston area.[52]

Exhibit 10: Gulf Coast Track Ownership Maps[53]



72. Other railroads rely heavily on trackage rights to replicate some of the advantages of physical footprint, but rights do not convey the same control and corresponding benefits as ownership. For example, BNSF owns approximately 16% of Gulf Coast track, but holds operating rights over another 18%. It depends on UP for dispatching and other operating arrangements where it uses UP-owned track.[54]

[52] See workpaper "Track Rights and Ownership.xslx," Tab "Section 4.C.2, Exhibit 10," Cells R7:R12 and R20.
[53] Maps created using data from U.S. Department of Transportation's North American Rail Network Lines file.
[54] See workpaper "Track Rights and Ownership.xslx," Tab "Section 4.C.2," Cells R11 and S11.

Exhibit 11: Share of Ownership and Rights to Gulf Coast Track

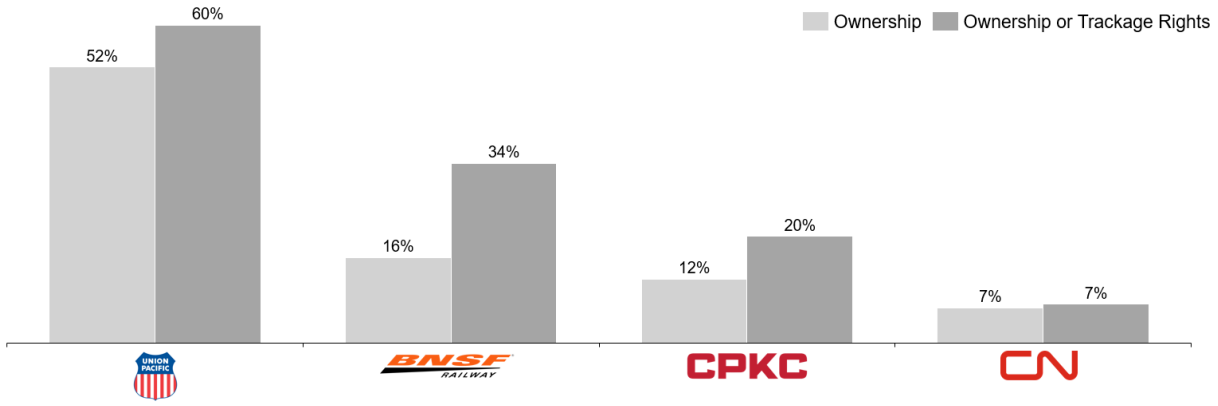
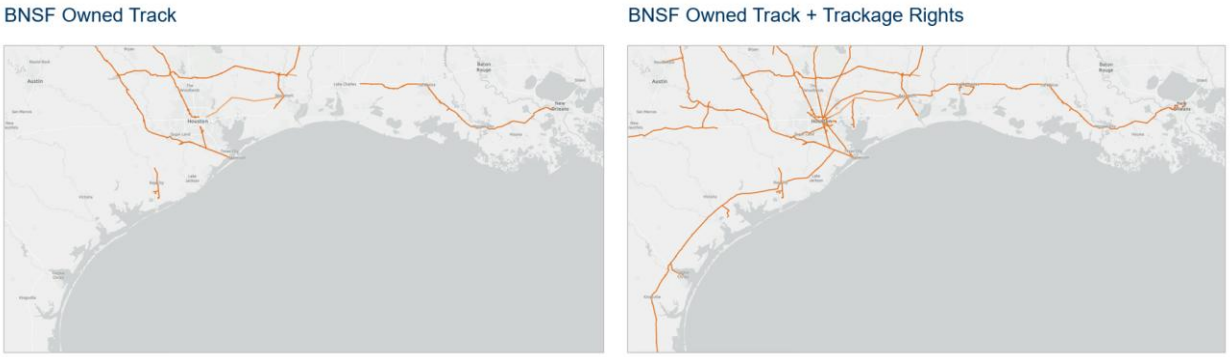


Exhibit 12: BNSF Gulf Trackage Rights[55]



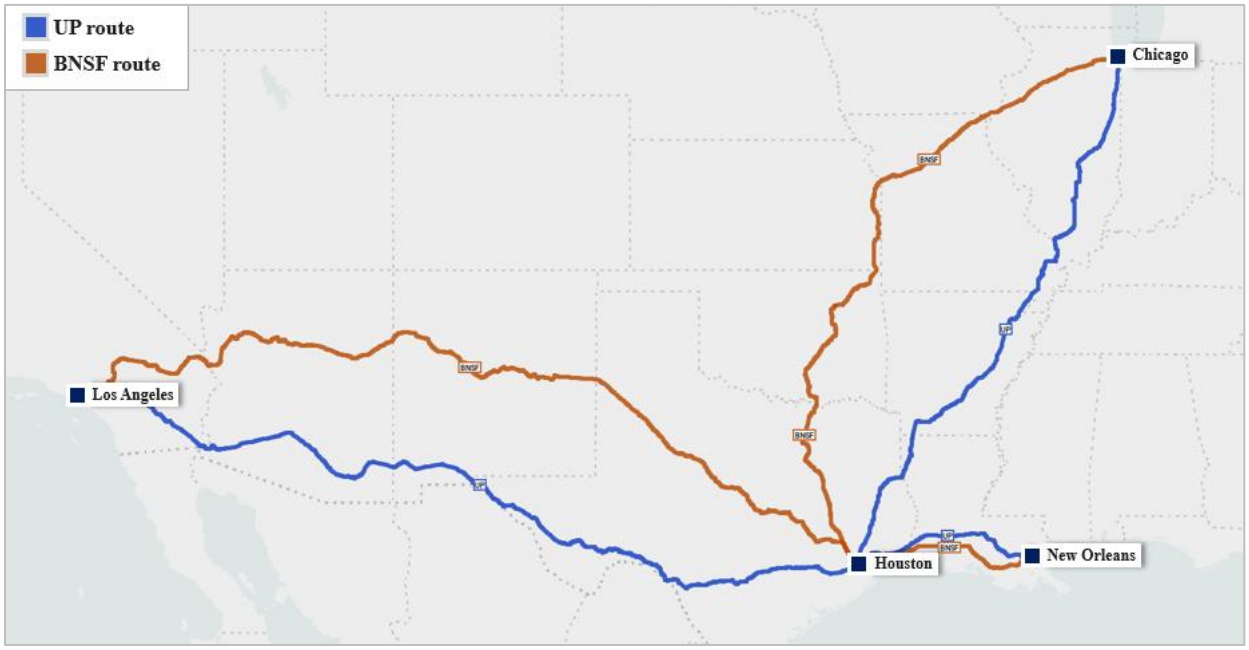
73. **Yards.** Rail yards support functions such as receiving, staging, sorting, assembling, and storing railcars; a larger yard network improves throughput, reliability, and operating flexibility. According to data from the Bureau of Transportation Statistics, UP owns significantly more yards in the region than competing carriers, with 55 yards across the Gulf versus BNSF's 11 and CPKC's 12. In the Houston area, UP owns 32 yards to BNSF's 3.[56] A notable example is UP's Englewood yard in Houston, which can process nearly 3,000 cars a day and ranks among the largest classification yards in the U.S.

[55] Maps created using data from U.S. Department of Transportation's North American Rail Network Lines file.
[56] See workpaper "Yard Ownership.xslx," Tab "Section 4.C.2," Cells C5, G5, H5, C10, and G10.

74. **Railcar storage.** Storage-in-transit (SIT) allows loaded railcars to serve as inventory between production and final delivery. It is particularly valuable where plants produce continuously but customer demand is uneven, which is the case for many chemicals shippers. UP also owns a larger SIT footprint, including Lloyd Yard in Houston. BNSF has rights to certain UP SIT facilities like Dayton for some eligible traffic, but it lacks independent control of these alternatives. Many third-party railcar storage facilities in the Gulf are accessible to multiple carriers, but often over trackage rights on UP.

75. **End-market routing.** On top of its assets in the Gulf, UP can offer customers direct routings to end markets and interchange gateways that other carriers cannot. In the West, UP can send traffic over the Sunset Route, saving approximately 135 miles versus BNSF's route via Albuquerque to Los Angeles. For Eastbound interchange traffic, UP is at least as direct to New Orleans and 175 miles shorter to Chicago, with a direct route to Memphis available to both via trackage rights over UP.

Exhibit 13: End-Market Routes



3) UP's advantage persists despite competitive access rights agreements

76. Direct access to customer facilities is one of UP's most important competitive advantages on the Gulf Coast. At the time of the 1996 UP-SP merger, the STB considered whether the transaction would reduce competitive rail options for shippers that would lose access to SP as an independent carrier. To address this concern, UP and BNSF reached a settlement that provided BNSF extensive competitive access rights, including trackage rights, line sales, reciprocal switching, access to qualifying new and existing facilities, build-in and build-out rights, and supporting yard and storage access.

77. Despite these arrangements, UP still controls a dominant share of the market. The persistence of UP's advantage reflects the limitations of contractual access. Where UP performs local switching or haulage, BNSF depends on its competitor to execute a portion of its service. Even where BNSF operates its own trains over UP-owned track, UP retains control over dispatching and important operating arrangements. UP's ownership and/or control of the infrastructure therefore gives it influence over the level of service its competitors can provide.

78. The history of legal disputes stemming from the UP-SP agreement illustrates how access rights can fall short of commercially effective service, particularly when competitors must rely on UP for essential operating arrangements.

- **BNSF:** In 2013, BNSF sought terminal trackage rights to serve Lake Charles customers directly. UP and KCS opposed the request, arguing that the merger remedies did not provide the requested rights. The STB granted BNSF terminal trackage rights in 2016, but disputes over operating conditions, infrastructure requirements, and compensation continued through 2026.[57]

[57] *BNSF Railway Co.—Terminal Trackage Rights—Kansas City Southern Railway Co. and Union Pacific Railroad Co.*, Finance Docket No. 32760 (Sub-No. 46), Decision No. 16 (STB served July 21, 2026).

- **Shell:** Shell complained that UP's directional operating arrangements and switching service impaired BNSF's ability to compete. It stated that UP "abused its monopoly power" by making BNSF and Tex Mex wait for up to 24 hours to move their trains against the newly unidirectional flow of UP. Additionally, Shell cited several circumstances in which UP switching negatively impacted Tex Mex, including the loss or misrouting of cars, failure to deliver loaded cars, and the preferential delivery of empty cars to its customers rather than to Tex Mex's customers. As a result, Shell requested neutral switching supervision.[58]
- **DuPont:** DuPont argued that dependence on UP switching left BNSF unable to provide effective competition. It argued that "neutral switching is a necessity for efficient and effective competition" and that it was, in effect, single-served by UP due to "the inadequacy of UP's switching."[59]
- **Dow and Formosa:** Both companies sought additional BNSF access rights to their facilities. Dow argued that the UP-SP merger had concentrated too much Houston infrastructure under UP and that restrictions on BNSF's access discouraged investment. Formosa attributed deteriorating service to UP's increased market power.[60]

[58] *Verified Statement of David L. Hall, at 5–8, attached to Joint Comments of Shell Oil Company and Shell Chemical Company, FD 32760 (Sub-No. 26) (filed Sept. 18, 1998); Union Pacific Corp.—Control & Merger—Southern Pacific Rail Corp. (Houston/Gulf Coast Oversight), Finance Docket No. 32760 (Sub-No. 26), Decision No. 10, at 28 (STB served Dec. 21, 1998).*
[59] *Union Pacific Corp.—Control & Merger—Southern Pacific Rail Corp. (Houston/Gulf Coast Oversight)*, Finance Docket No. 32760 (Sub-No. 26), Decision No. 10, at 33–35 (STB served Dec. 21, 1998).
[60] *Union Pacific Corp.—Control & Merger—Southern Pacific Rail Corp. (Houston/Gulf Coast Oversight)*, Finance Docket No. 32760 (Sub-No. 26), Decision No. 10, at 31–34 (STB served Dec. 21, 1998).

4) UP's advantages in the Gulf are exceptionally difficult for competitors to recreate

79. UP's substantial infrastructure advantages in the Gulf, and the corresponding operational control that they confer, mean that any carrier looking to meaningfully challenge UP's position – particularly if the merger were approved – would have to make enormous investments in track, yards, storage facilities, and customer connections. The scale of the investment alone presents a formidable obstacle.

80. The physical and regulatory environments create arguably higher barriers. Much of UP's infrastructure was constructed when Gulf Coast industrial areas were less developed and land was more readily available. Today, competing carriers face substantial challenges in acquiring rights-of-way and obtaining the approvals needed to construct new infrastructure near established chemical facilities.

81. The proposed San Jacinto Rail project illustrates these challenges. In 2001, BNSF and several chemicals shippers proposed a new 13-mile, $81 million line to bring competitive rail service to the Bayport Loop. The project required finding a route through a developed area that included airport property, wetlands, and residential neighborhoods. Five possible routes were proposed, all of which were opposed by the City of Houston. After an extensive review, the STB approved the project in 2003, subject to 80 environmental mitigation measures. Despite receiving federal approval, the project faced further delay when the City of Houston refused to sell a necessary easement across its property and then successfully defeated a challenge from BNSF in court. The case was finally overturned in 2005, but by that point, BNSF had negotiated a separate rights agreement with UP to serve certain Bayport facilities.[61]

[61] *San Jacinto Rail Ltd.—Construction Exemption & Burlington N. & Santa Fe Ry. Co.—Operation Exemption—Build-Out to the Bayport Loop*, 6 S.T.B. 821, 821–823, 832, 835–837 (2003).

82. The cost and complexity involved in successfully completing numerous such projects make it highly unlikely that competing railroads could make significant inroads against UP within a commercially meaningful timeframe. UP's existing position is therefore likely to persist, and further consolidation would strengthen its advantages.

83. The competitive consequences of these barriers extend beyond the Gulf Coast chemical routes on which UP-NS could capture additional traffic. Chemicals provide substantial contribution toward shared railroad infrastructure costs. When a competing railroad loses a chemicals movement or a portion of its line haul, it avoids some variable costs but continues to bear much of the cost of maintaining its network. Lost contribution reduces the resources available for investment, while lower expected traffic volumes diminish the return on future projects.

84. Competing railroads may therefore have less incentive to expand capacity or improve services used to compete with UP-NS. As their service offerings weaken, additional traffic may shift to the merged network, further increasing UP-NS's advantage. The resulting loss of competition need not involve abandoning routes or eliminating contractual access rights. Competing services may remain available but become less attractive and less capable of constraining UP-NS's rates post-merger.

85. These effects would not be confined to Gulf Coast chemicals shippers. The same railroad infrastructure carries other commodities, including lower-margin intermodal traffic that depends on investment supported by higher-contribution business. A loss of chemicals traffic could therefore weaken competing carriers' service and investment incentives across the national network.

V. COMPETITIVE HARMS OUTWEIGH PUBLIC BENEFITS AND THE APPLICATION SHOULD BE REJECTED

86. The competitive implications of this dynamic are not contemplated in the Application but warrant close scrutiny. Applicants' competitive assessment rests principally on the assertion that the proposed merger would not eliminate existing competitive alternatives because UP and NS operate complementary networks and do not generally compete to serve the same customers. But the absence of a direct loss of carrier access does not mean that competition would remain unaffected. As the Gulf Coast example illustrates, the merger could potentially redirect important traffic to UP-NS and weaken the rival networks on which effective competition depends, even where the same carriers remain physically available.

87. To address competitive concerns, Applicants commit to preserving access for 2-to-1 shippers, keeping existing gateways open on commercially reasonable terms, maintaining build-in and build-out rights, and avoiding new regulatory bottlenecks that could restrict access to rate relief. Their proposed Committed Gateway Pricing program would leave the structural sources of UP's existing Gulf Coast advantage largely intact, and the proposed merger would give UP-NS further leverage in diverting traffic from other railroads to its network. These remedies would not significantly mitigate the disadvantages to competitors.

88. The overlooked competitive effects must be weighed against public benefits that Applicants have substantially overstated. Single-line service could create operating efficiencies for UP–NS and potentially improve service for certain shippers where eliminating an interchange meaningfully reduces transit time or improves reliability. However, operating efficiencies do not constitute shipper benefits unless they translate into lower transportation costs or meaningful improvements in the service customers experience. Applicants have not established that their projected efficiencies would produce widespread improvements in manifest service, particularly

in the consistency and predictability of deliveries, or committed that their own cost savings would be passed through to shippers.

89. They also project substantially more truck-to-rail diversion and associated shipper savings than the evidence supports. Their projections adopt an unrealistically broad view of the divertible market by treating traffic as accessible to rail even where rail connections and practical service may not be available. A substantial share of the projected diversions consists of low-volume lanes that do not generate enough traffic to justify the fixed costs and operating commitments required for rail service. The claimed benefits of truck diversion are further inflated by savings estimates that do not fully reflect the total costs shippers would incur to convert to and use rail.

90. Applicants have not demonstrated that the merger's public benefits are sufficient to outweigh the competitive harm, and the Application should be rejected.

VERIFICATION

I, Scott R.R. Daniels, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed this 18th day of November, 2026.



EXHIBIT 1

BEFORE THE

SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential

Pursuant to the Protective Order

CONFIDENTIAL PORTIONS INCLUDED

VIDEOTAPED DEPOSITION

The deposition of ELIZABETH BAILEY was convened on Thursday, October 29, 2026, commencing at 8:07 a.m., at the offices of Covington & Burling, One CityCentre, 850 Tenth Street, N.W., Washington, D.C., before Karen Brynteson, Registered Merit Reporter, Certified Realtime Reporter, Fellow, and Notary Public.

answered.

THE WITNESS: I mean, the -- I just -- because particularly the open gateway access and the pricing are just not the focus of my analysis, I really want to stay in the lane of the work that I did, and the work that I did was related to horizontal competition.

And so my understanding of those access commitments was to address a potential horizontal concern related to access at facilities, but that's -- that's really where my focus has been, has been on the horizontal competition.

BY MR. ENSON:

Q. You did not do an economic analysis of whether these commitments actually offset any competitive harm from the proposed merger, correct?

MR. LUDWIN: Object to form.

THE WITNESS: I mean, beyond what's in my report, I haven't done anything additional beyond what's in my report.

BY MR. ENSON:

Q. Okay. Not my question. You did not do an economic analysis of whether these commitments actually offset any competitive harm from the proposed merger, correct?

MR. LUDWIN: Object to form.

THE WITNESS: I mean, my understanding -- and I'll point you to my paragraph 114 -- is that my understanding that to preserve horizontal competition -- and just to be clear, this is back in April -- for the five customer facilities facing a potential reduction in access from 2-to-1, the applicants have committed to entering into agreements that would allow for another existing Class-I railroad to serve those facilities.

And then as I write one sentence later, is if these commitments are effective in preserving horizontal competition for these customers, the affected customers will not be harmed by the proposed merger. That's how I'm treating these access commitments.

BY MR. ENSON:

Q. Is that an economic analysis, in your view?

MR. LUDWIN: Object to form.

BY MR. ENSON:

Q. Why don't I ask the question again, Dr. Bailey.

You did not do an economic analysis of whether these commitments actually offset any

competitive harm from the proposed merger, correct?

MR. LUDWIN: Object to form.

THE WITNESS: Well, as an economist, if they are effective, as an economist, I would say that that preserves the horizontal competition, but -- but as an economist, I'm cognizant that at the time of writing this, it wasn't -- it wasn't known who would be -- who would be offered the access commitment.

And that would be part of doing an evaluation to be thinking about are they effective. And so I have the information that I -- that I have, and I've written it in a way that explains my opinion. And that is -- that is if they are effective in preserving horizontal competition, then the affected customers will not be harmed.

But, in concept, that's -- that would be a resolution to -- to resolve a potential reduction in access from 2-to-1, is to provide access, so that instead of being 2-to-1, it remains 2-to-2.

BY MR. ENSON:

Q. Dr. Bailey, you did not study whether these commitments are effective in preserving horizontal competition, correct?

MR. LUDWIN: Object to form, asked and

answered.

THE WITNESS: I don't know how to answer that a different -- a different way. The analysis that I did is here and the way that I explained it is here in paragraph 114, at least as of April.

And the STB asked that I do this work in a slightly different way that would be limited just to Class-I railroads, and I did that in my July report.

And I followed a similar methodology and provide the same kind of information for the same kind of reasoning in that report.

BY MR. ENSON:

Q. Dr. Bailey, you're not answering my question. It's a pretty straightforward question. You've testified all day that you want to stay in your lane and be an economist and not overreach and go beyond what you did in your reports.

I'm just asking whether you did the work or not, and I think it's a pretty simple answer.

So, for example, you did not do an economic analysis of whether the open gateway commitment will result in any particular shipper receiving rates or service post-merger that are commensurate with their rates or service today,

correct?

MR. LUDWIN: Object to form.

THE WITNESS: That was not part of my assignment.

BY MR. ENSON:

Q. You did not do an economic analysis of whether the CGP will result in any particular shipper receiving rates or service post-merger that are commensurate with their rates or service today, correct?

MR. LUDWIN: Object to form.

THE WITNESS: That was not part of my assignment.

BY MR. ENSON:

Q. You did not do an economic analysis of whether the access commitments will result in any particular shipper receiving rates or service post-merger that are commensurate with their rates or service today, correct?

MR. LUDWIN: Object to form, asked and answered.

THE WITNESS: I mean, beyond what we've already talked about in the work and the identification of those access commitments, in Exhibit 11 of my April report and Exhibits 1 and 2

of my July supplemental report, I haven't done anything additional for the reasons we talked about.

BY MR. ENSON:

Q. Well, show me -- show me in either of those reports where you did an economic analysis of whether a particular shipper will receive rates or services post-merger that are commensurate with their rates or service today, due to access commitments?

MR. LUDWIN: Object to form.

THE WITNESS: So I think we talked about this. In paragraph 114, what I wrote is: If these commitments are effective in preserving horizontal competition for these customers, that's -- what I've done is I've identified the access -- the facility, the customer facilities that have a potential reduction in access from 2-to-1, and I did that inclusive of Class-II and Class-III railroads in my April report, the STB asked that I do that for just Class-I railroads, and I did that in my July report, for potential reduction in access from 2-to-1 and 3-to-2.

And I identified the customers that the applicants had committed to an access commitment. And that's what I've done. But I've been also very

clear that I -- that I don't have all the information I would need to identify if the commitments are effective in preserving horizontal competition. And that's what I wrote in -- in paragraph 114.

BY MR. ENSON:

Q. Correct. You do not know if these commitments are effective at preserving horizontal competition, correct?

MR. LUDWIN: Object to form.

THE WITNESS: I wrote if these commitments are effective at preserving horizontal competition for these customers, then the affected customers will not be harmed by the proposed merger. That's what I wrote.

BY MR. ENSON:

Q. What was my question, Dr. Bailey?

MR. LUDWIN: Object to form.

THE WITNESS: You're going to have to say it again.

BY MR. ENSON:

Q. Sure. I am happy to. I am happy to. I'm happy to.

You do not know if these commitments are effective at preserving horizontal competition,

correct?

MR. LUDWIN: Object to form, asked and answered.

THE WITNESS: I don't know how to say it any differently. I mean, what I wrote is if these commitments are effective at preserving horizontal competition for these customers. That's -- that's what I wrote.

BY MR. ENSON:

Q. Are you going to answer my question, Dr. Bailey? It's a very simple question. It's obvious from the face of your report. I'm just asking you to confirm it for me.

You do not know if these commitments are effective at preserving horizontal competition, correct?

MR. LUDWIN: Object to form, asked and answered.

THE WITNESS: What I wrote is if these commitments are effective at preserving horizontal competition for these customers. I did not write these commitments are effective at preserving horizontal competition for these customers.

I wrote: If these commitments are effective at preserving horizontal competition for

these customers.
BY MR. ENSON:
Q. And you did not write: These commitments are effective at preserving horizontal competition because you don't know whether they are or not, correct? You didn't study that, correct?
MR. LUDWIN: Object to form, asked and answered.
THE WITNESS: That's why I wrote if these commitments are effective at preserving horizontal competition, that's why I wrote that.
BY MR. ENSON:
Q. Would you look at paragraph 11, please, of your supplemental, which is 602.
MR. LUDWIN: Did you say 11?
MR. ENSON: I'm sorry, paragraph 11, yes.
BY MR. ENSON:
Q. I want to look at the last sentence of paragraph 11. You say there: "I understand that applicants' proposed commitments would preserve rail competition for 18 of 27 3-to-2 customer facilities." Do you see that?
A. I see that.
Q. What did you mean by "would preserve rail competition"?

A. It is written slightly differently than paragraph 114, but my -- but I mean the same thing. I mean "would" in the way that if these commitments are effective. That's -- that's what I mean.

Q. Okay. And that's why my original question could have cut all of this off. You didn't study whether or not any of these commitments will be effective in preserving horizontal competition; yes or no, Dr. Bailey?

MR. LUDWIN: Object to form, asked and answered multiple times.

THE WITNESS: I did the work that I did. I don't know how to answer it any differently. I wrote -- I wrote if these commitments are effective. And it's -- and it's based on what I know.

And what I know is not enough to write the sentence: These commitments are effective. So what I wrote is: If these commitments are effective.

BY MR. ENSON:

Q. Let's look at Exhibit 4 in your supplemental report. It's on page 18.

And here in Exhibit 4 you identify traffic that is eligible for applicants' proposed commitments, correct?

DISTRICT OF COLUMBIA, to wit:

I, Karen K. Brynteson, the officer before whom the foregoing deposition was taken, do hereby certify that the within-named witness personally appeared before me at the time and place herein set out, and after having been duly sworn by me, according to law, was examined by counsel.

I further certify that the examination was recorded stenographically by me and this transcript is a true record of the proceedings.

I further certify that I am not of counsel to any of the parties, nor an employee of counsel, nor related to any of the parties, nor in any way interested in the outcome of this action.

As witness my hand and notarial seal this 2nd day of November, 2026.

Karen Brynteson

KAREN K. BRYNTESON

Notary Public

MY COMMISSION EXPIRES: 11-30-2027

EXHIBIT 2

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILWAY COMPANY

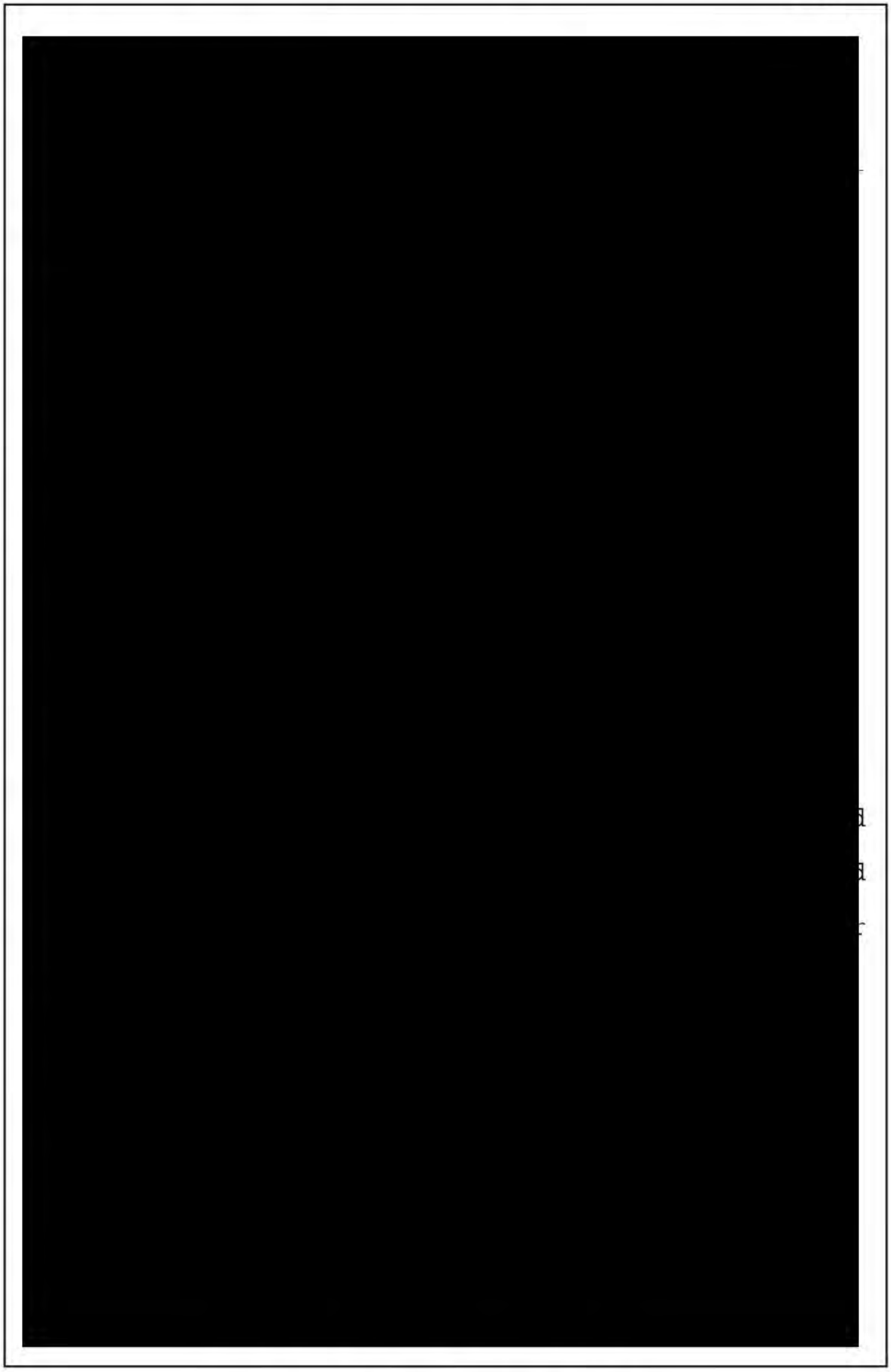
--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

VIDEOTAPED DEPOSITION

The DEPOSITION OF CLAUDE E. ELKINS, taken on behalf of the BURLINGTON NORTHERN SANTA FE RAILROAD, at the Law Offices of Sidley Austin LLP, 1501 K Street, NW, on the 9th day of September, 2026, at 8:05 a.m. EST



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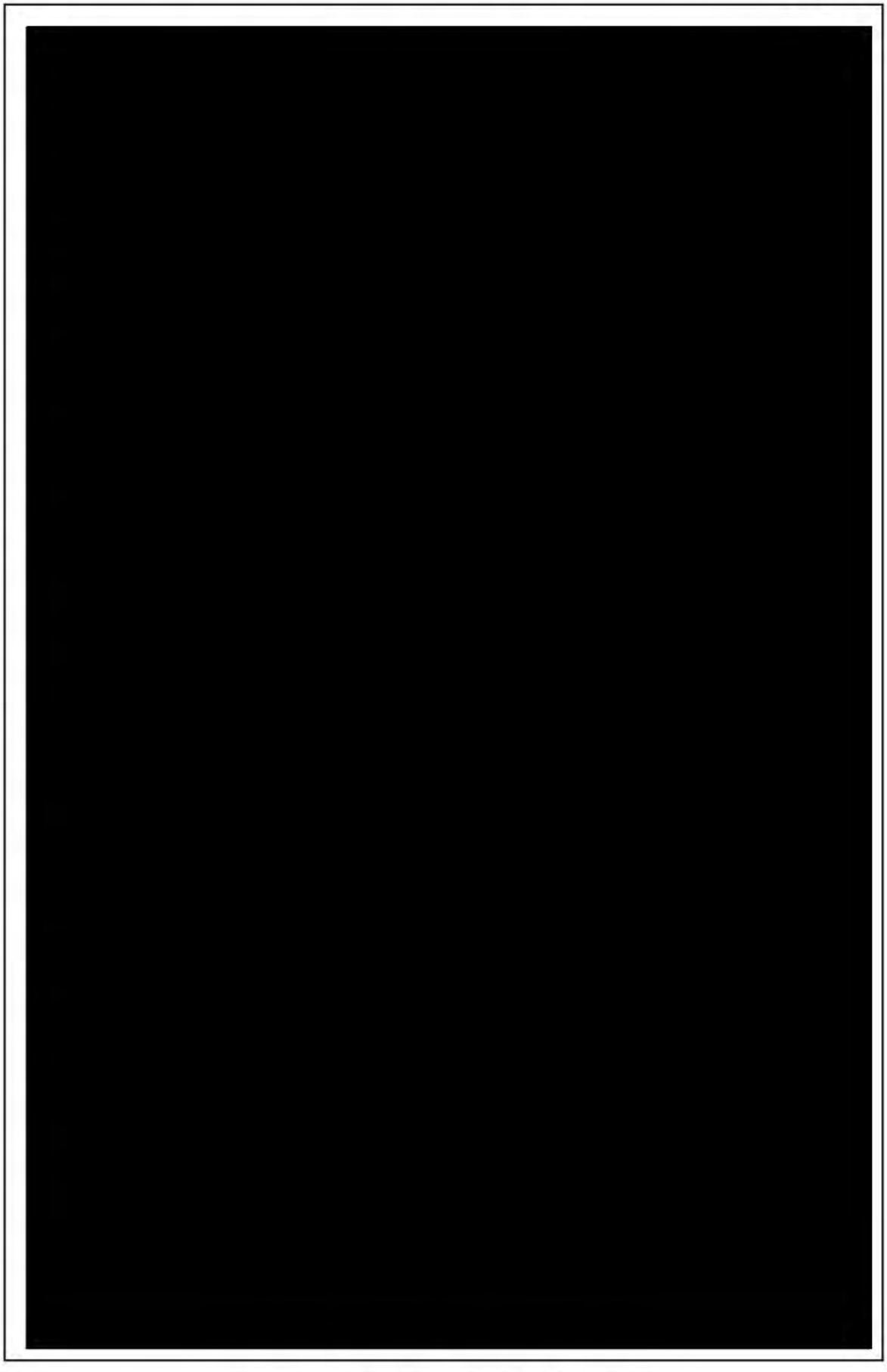


[redacted]

Q. And the COO at the time explained that 2023 was a historically challenging year.

Would you agree with that?

A. I can't remember if he said that or not but --

Q. Yeah. Let me ask it separately.

Would you agree for Norfolk Southern --

A. Yes.

Q. -- in your many years there that 2023 was a historically challenging year?

A. Yes.

Q. Starting off with the East Palestine derailment, correct?

A. Yes.

Q. And Norfolk Southern has not had that kind of major derailment in 2024 or 2025 or year to date 2026, correct?

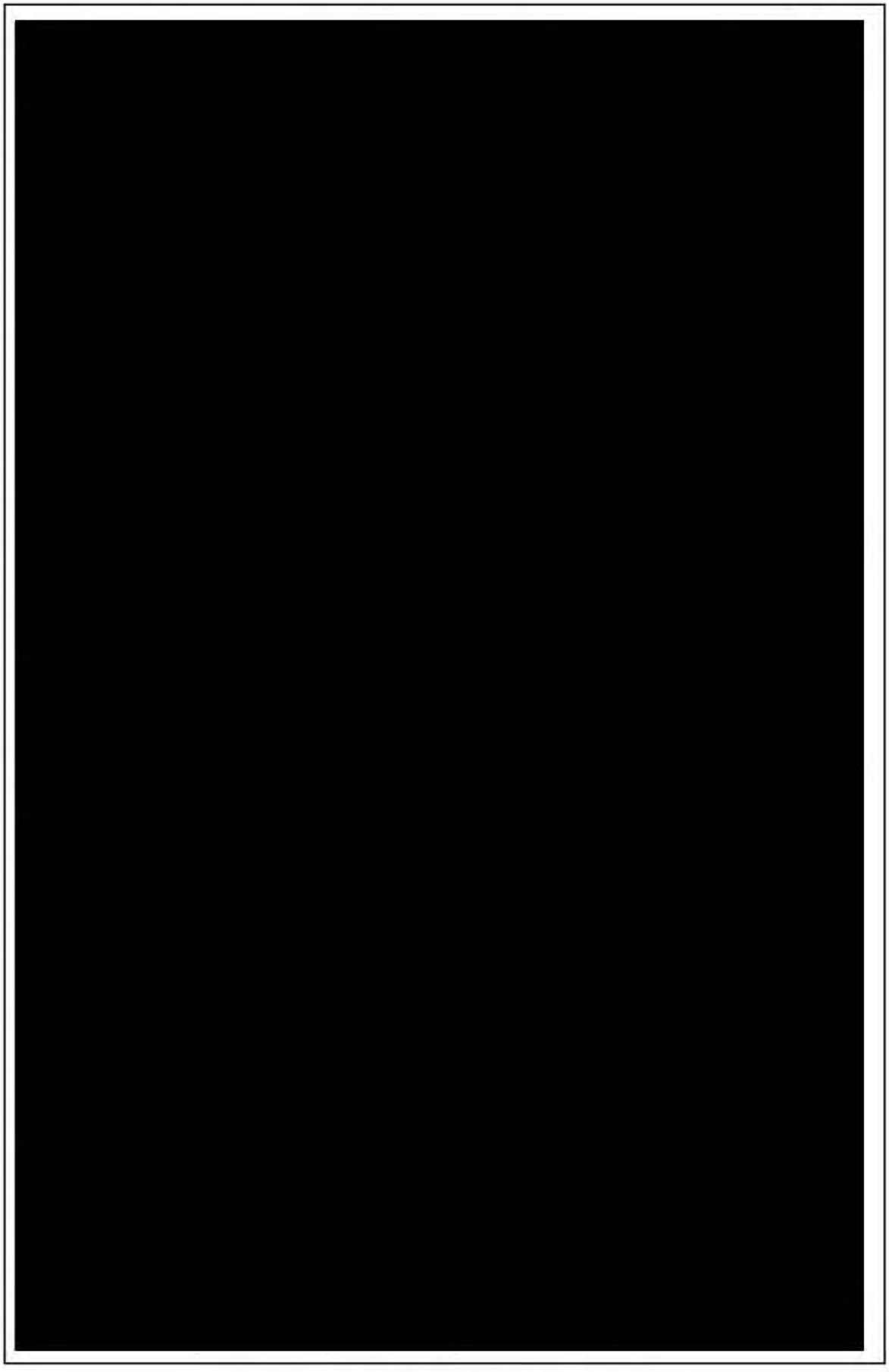
A. That is correct.

Q. Okay. 2023; Norfolk Southern also faced serious network disruptions, correct?

A. Yes.

Q. And Norfolk Southern hasn't had those same kind of network disruptions in 2024, '25, or year to date '26, correct?

A. That is correct.
Q. And 2023 was a stubbornly weak freight market, correct?
A. Yes.
MS. MAHAN: Object to the form.
A. Yes. It was a middle of the freight recession.
Q. (By Mr. Donovan) There was weak demand for goods in 2023, correct?
A. Yes.
Q. There were lower levels of manufacturing activity in 2023, correct?
A. I believe that's correct.
Q. And there was generally less freight coming in from overseas, correct?
A. I don't recall, but I believe that's correct.
Q. Since you've been chief marketing officer, you participate in quarterly analyst calls, correct?
A. Yes.
Q. Along with the COO and the CFO, correct?
A. Yes.



Q. (By Mr. Donovan) I'm sorry. You're right. I should be --

In current times, Norfolk Southern is not losing freight to trucks, correct?

A. I believe that is correct.

Q. In fact, Norfolk Southern is gaining share from trucks in the intermodal space, correct?

A. I believe that is correct, yes.

Q. Can you turn to your verified statement? If you'll turn to paragraph 45 on page 18.

Do you see that, sir?

A. Yes, sir.

Q. Okay. And paragraph 45 was written: Railroad continues to lose freight to trucks, and that gap keeps getting wider.

Do you see that?

A. Yes.

Q. And that was not written by you, correct?

A. That's correct.

Q. And this statement, as you look at it today in September 2026, would not be true, correct?

MS. MAHAN: Object to the form.

A. I think at this point in time, we are not losing share like we were.

Q. (By Mr. Donovan) Correct. So as of this time, railroads, as we talked about, are winning freight versus truck, due to the reasons you said, correct?

A. I believe --

MS. MAHAN: Object to the form.

A. I believe so, yes.

Q. (By Mr. Donovan) And based on your market outlook, you expect railroads, Norfolk Southern especially, to continue to win freight from trucks in the intermodal space, at least in the foreseeable future?

MS. MAHAN: Object to the form; asked and answered.

A. In the near-term, yes.

Q. (By Mr. Donovan) And how do you define the near-term?

A. We -- we -- typically, I'm looking a year out.

Q. Can you turn to page 19 of your verified statement.

Do you see Figure 6 that says: Railroads

are losing market share to trucks?

A. Yes.

Q. Okay. And this graphic ends in 2023, correct?

A. That is correct.

Q. And if we brought that current to 2026, you would agree that it would say railroads are gaining share from trucks, correct?

A. I don't know. I don't know -- I haven't looked at the data for all railroads versus all trucks.

Q. I see. Okay. Fair enough.

If this related only to Norfolk Southern, you would agree with, me based on the data we looked at, that it would say Norfolk Southern is gaining market share compared to trucks?

A. I believe it would say that we're gaining relative market share, which might mean that trucks are still growing but growing at a slower rate in terms of gap versus us.

Q. Fair enough. Fair enough.

The gap, I guess on this chart, is closing?

A. It could be.

Q. 3-8. 38.
A. Okay.
Q. There's Table 2, Average Effective Trailing Equipment Usage.
Do you see that?
A. Yes.
Q. Do you know who created that chart?
A. I don't know the individual that created the chart.
Q. And this is the 2025 Q4 average. And, one, they provide J.B. Hunt having a capacity of 14 percent, correct?
A. Yes.
Q. Do you understand what J.B. Hunt has reported as its capacity after its second quarter 2026 with the uptick in intermodal?
A. I do not.
Q. Based on your experience in the industry, do you believe they would have less capacity today, in September of 2026, than they had in Q4 of 2025?
A. I would assume so, yes.
Q. In the intermodal space -- well, withdrawn.

Yeah. You're still on that chart, sir.

A. Yes, sir.

Q. I asked about J.B. Hunt, but based on the uptick in the intermodal business, is NS's capacity also lower than the 8.6 listed here?

A. Yes.

Q. And if you know, is the UP-owned capacity less than the 13 percent reported there?

A. I believe so.

Q. I want to turn to the intermodal business, and I believe we talked about this, but the truck and rail compete for that business, correct?

A. Yes.

Q. Okay. And when you offer a new service or pricing, I believe in your statement you talked about truck reacts to that, or they have competitive responses, correct?

A. Yes.

Q. As you use that term, what is a competitive response by the trucking?

A. Well, typically it's the -- the trucking writ large attempts to enhance the value of



Q. Are you familiar with the program called UMAX?

A. Yes.

Q. And what is UMAX?

A. A similar program jointly owned by Union Pacific and CSX, primarily.

Q. Are there meaningful differences that you're aware between those two programs, obviously other than one is with NS and one is with CSX?

A. None that really come to mind. It has similar market characteristics.

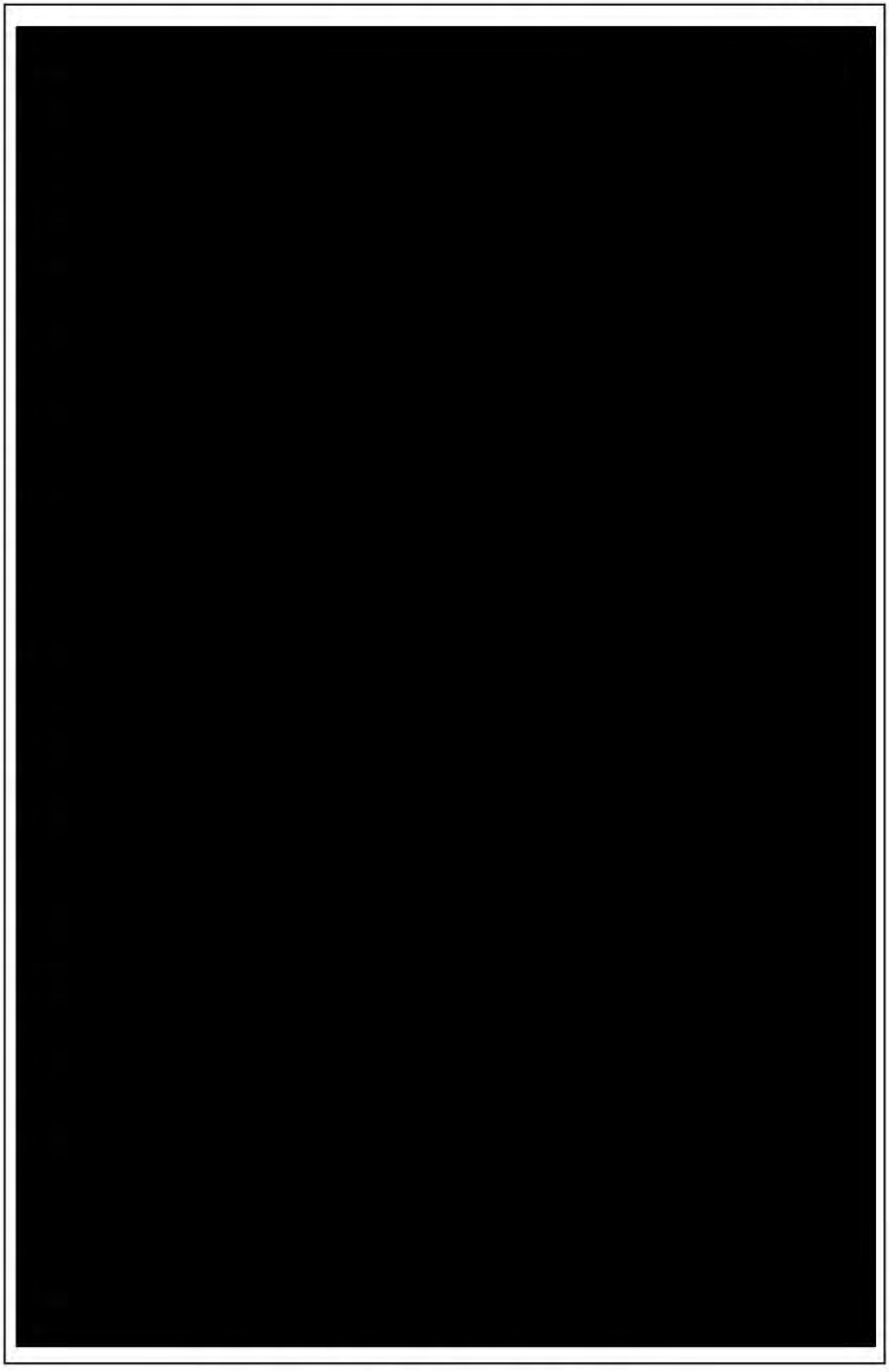
Q. Okay. And the -- the EM program -- the EMP program, that is something that Union Pacific and Norfolk Southern have been able to offer successfully to customers for the last 25 years --

A. Decades.

Q. -- 35 years without a merger?

A. Yes.

[redacted]



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Q. Are you familiar with -- let me withdraw that.

I'm sure you are familiar with something called Rule 11 --

A. Yes.

Q. -- pricing? What is Rule 11 pricing?

A. It's essentially where you -- you as a customer solicit rates from two or more carriers as you attempt to assemble a rate to go from point A to point B using more than one railroad.

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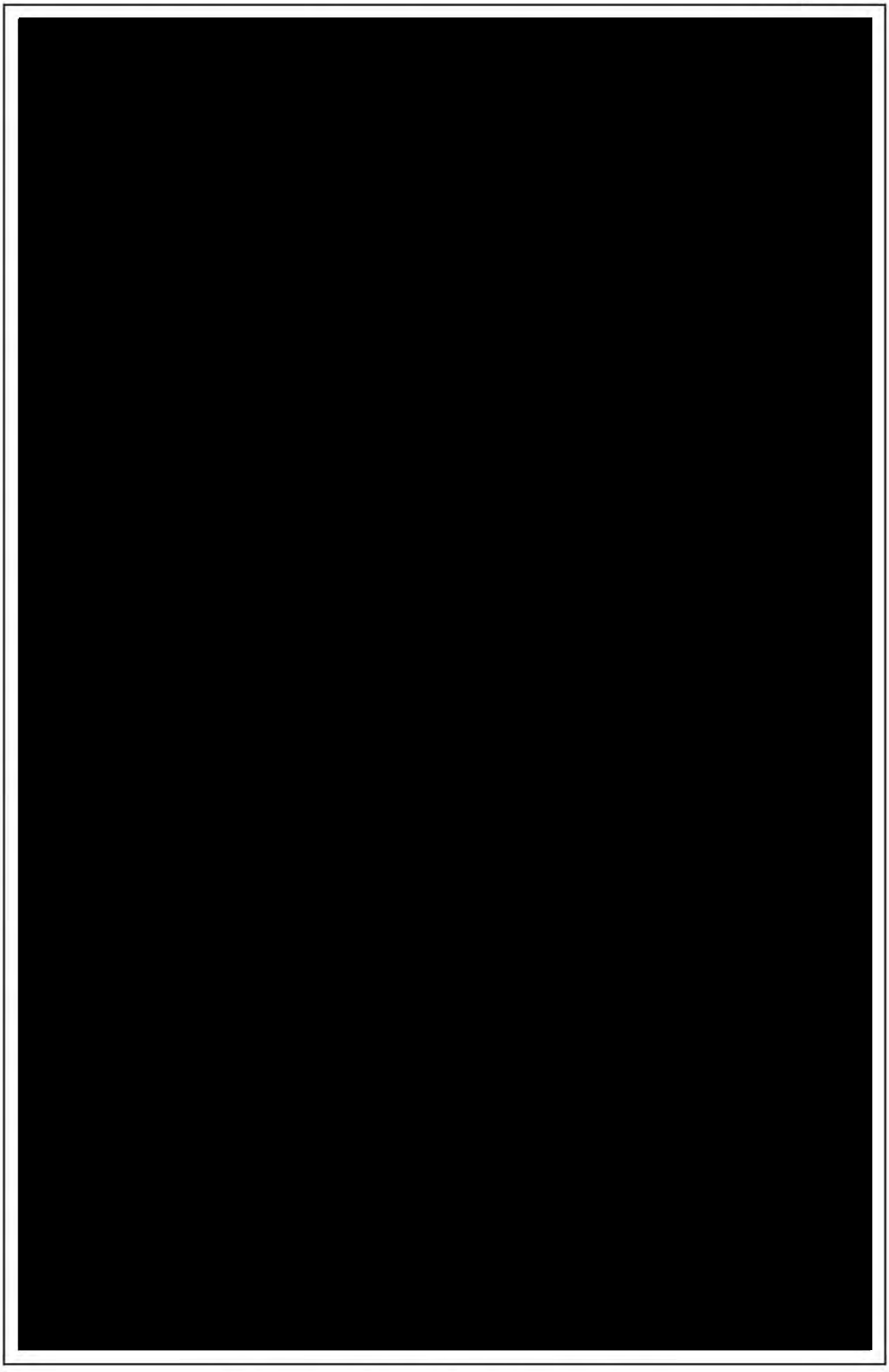

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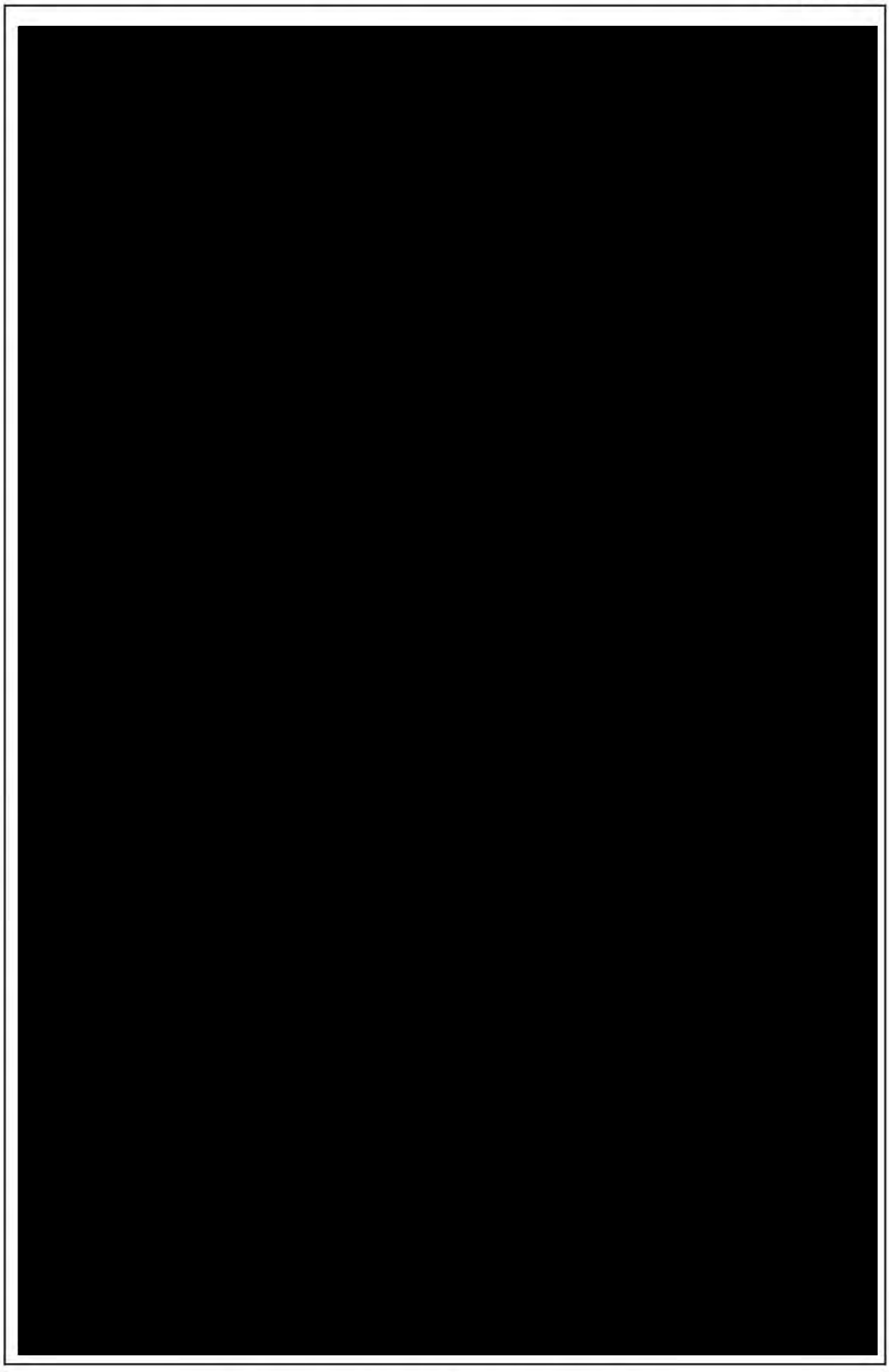

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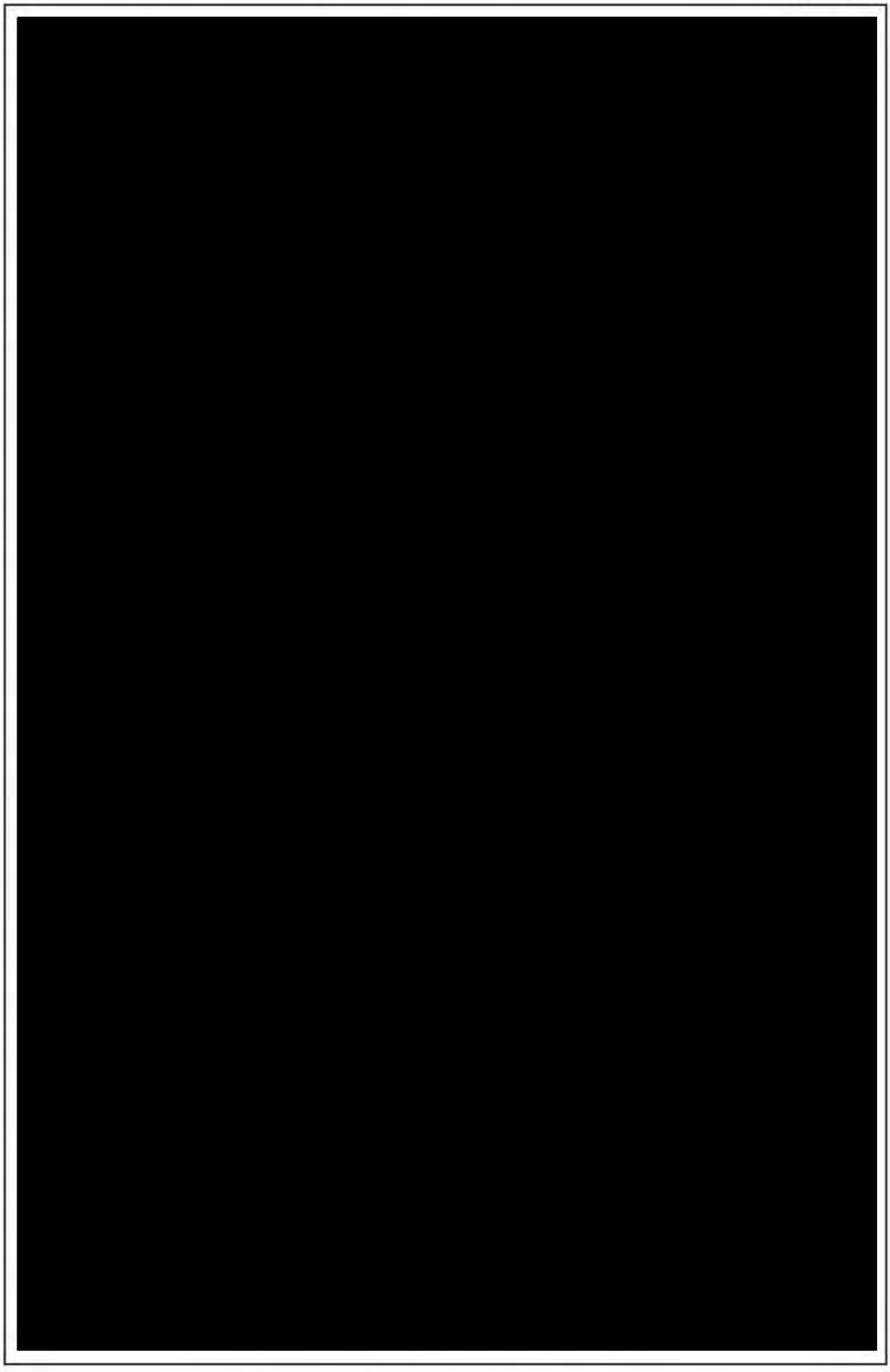
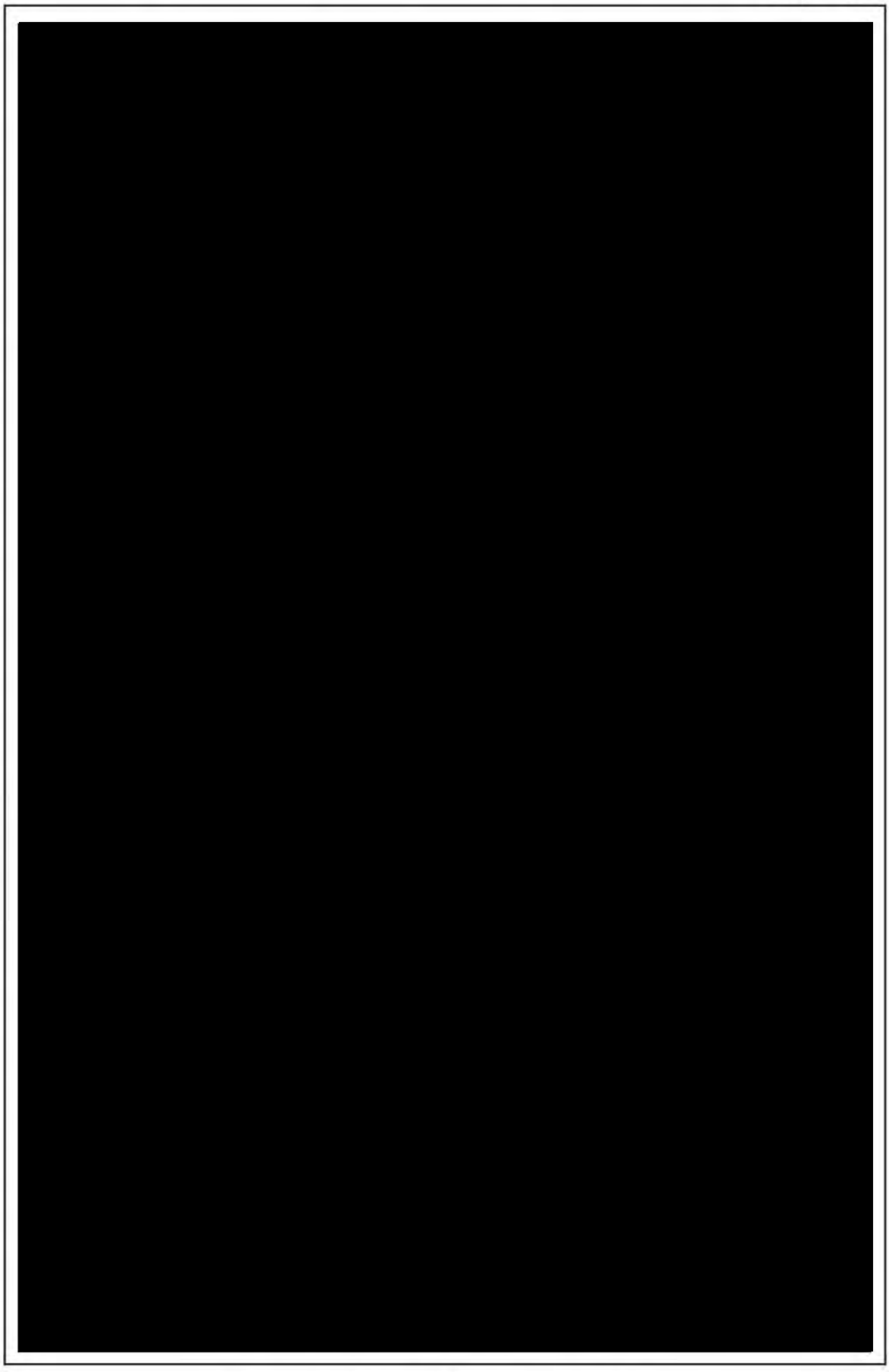
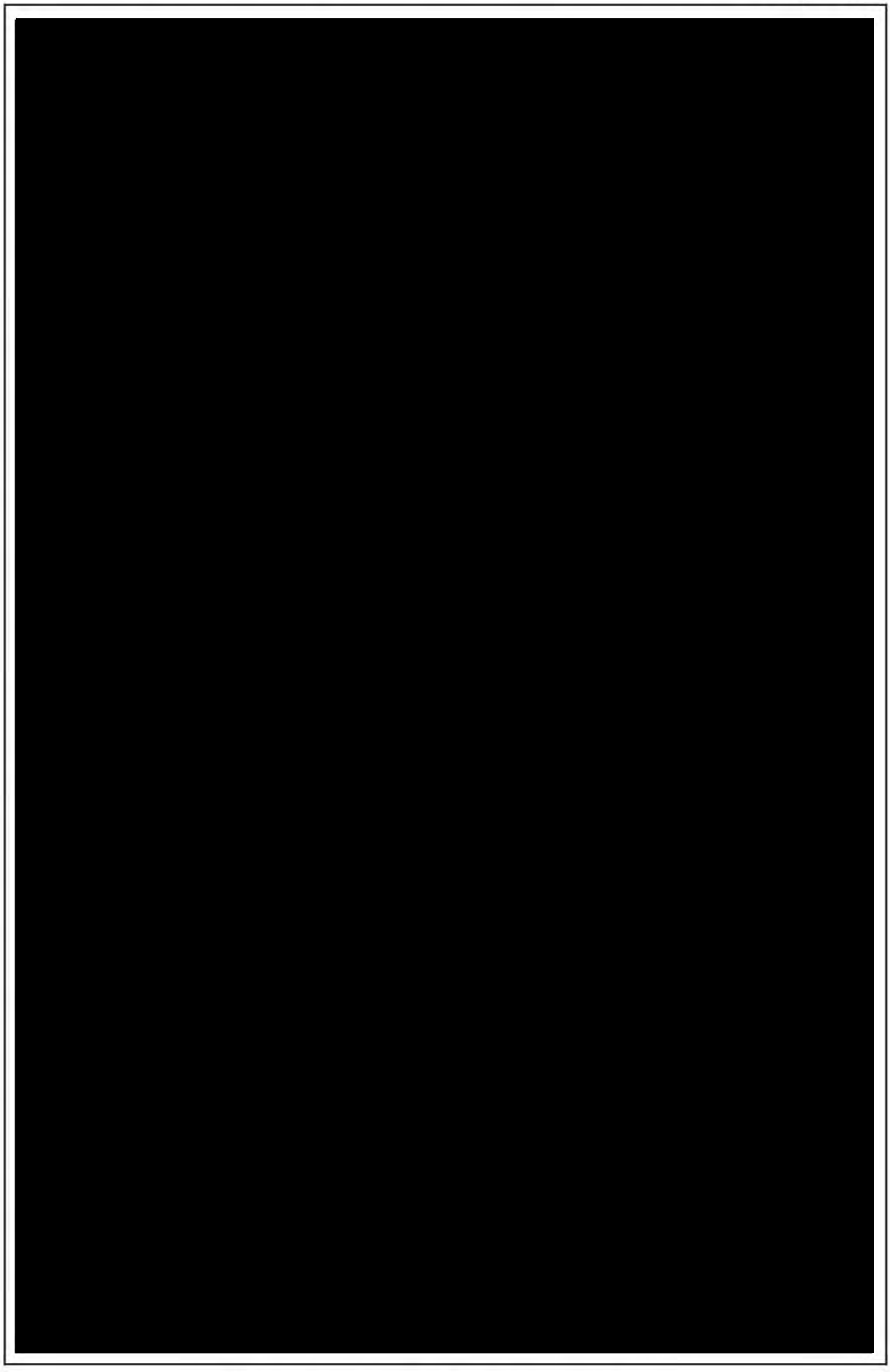






[redacted]

[redacted]

REPORTER CERTIFICATE

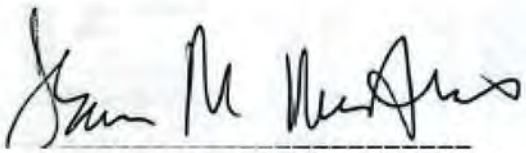
I, TRACI M. MERTENS, RDR, CRR, do hereby certify that there came before me

CLAUDE E. ELKINS

who was by me first duly sworn to testify to the truth and nothing but the truth of all knowledge touching and concerning the matters in controversy in this cause; that the witness was thereupon carefully examined under oath and said examination was reduced to writing by me; and that this deposition is a true and correct record of the testimony given by the witness and that signature by the witness is reserved.

I further certify that I am neither attorney nor counsel for nor related nor employed by any of the parties to the action in which this deposition is taken; further, that I am not a relative or employee of any attorney or counsel employed by the parties hereto or financially interested in this action.

Dated September 14, 2026.



TRACI M. MERTENS, RDR, CRR

EXHIBIT 3

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

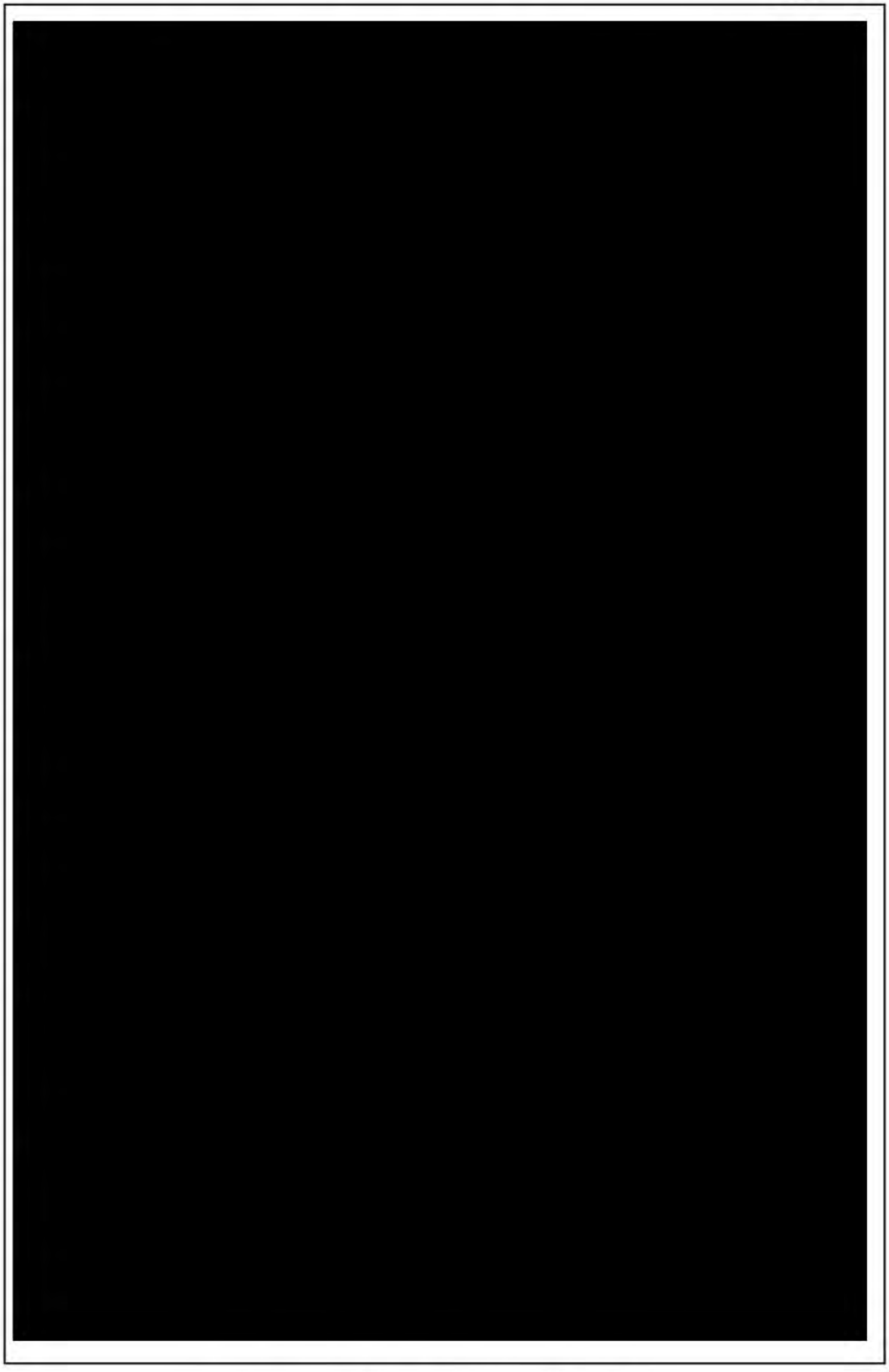
Highly Confidential
Pursuant to the Protective Order

VIDEOTAPED DEPOSITION

The DEPOSITION OF ERIC GEHRINGER, taken on behalf of the BURLINGTON NORTHERN, at Baird & Holm, 1700 Farnam Street, Nebraska, on the 13th day of October, 2026, at 8:01 a.m., CT.

[redacted]

[redacted]



[redacted]

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STATE OF ILLINOIS)
) SS.
COUNTY OF DUPAGE)

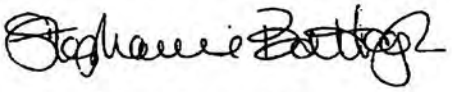
I, STEPHANIE A. BATTAGLIA, CSR and Notary Public in and for the County of DuPage and State of Illinois, do hereby certify that on October 13, 2026, at 8:01 a.m., at Baird Holm, ,1700 Farnam Street, Suite 1500, Omaha, Nebraska, the deponent ERIC GEHRINGER personally appeared before me.

I further certify that the said ERIC GEHRINGER was by me first duly sworn to testify and that the foregoing is a true record of the testimony given by the witness.

I further certify that the deposition was terminated at 4:44 p.m.

I further certify that I am not counsel for nor related to any of the parties herein, nor am I interested in the outcome hereof.

In witness whereof, I have hereunto set my hand and seal of office this 16th of October, 2026.



Notary Public

CSR No. 084-003337 - Expiration Date: May 31, 2027

EXHIBIT 4

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILWAY COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

VIDEOTAPED DEPOSITION

The DEPOSITION OF MARK R. GEORGE, taken on behalf of Burlington Northern Santa Fe Railway Company, at the Law Offices of Sidley Austin LLP, 1501 K Street, NW, Washington, DC 20005, on the 17th day of September, 2026, at 8:59 a.m. EST.

A. I don't know.

Q. Let's turn to the next page, page 436, entitled: UP NS Interline Petrochemicals Gulf Coast Growth.

Do you see that?

A. I do.

Q. Okay. What does this slide represent?

A. I need a moment to study it.

Q. Please. Take your time.

A. So this looks to be a slide that talks about our opportunities for growing petrochemicals together.

Q. Okay. And --

A. A better ask for Ed Elkins.

Q. Okay. The lower left, it says: 90 percent plus petrochemical shipments move via rail in the US.

Do you see that?

A. I do.

Q. Okay. So fair to say at least with respect to the petrochemicals, this is not a rail-versus-truck issue. It's a rail-versus-rail issue. True?

MS. MAHAN: Object to the form.

A. It is predominantly moved by rail, so yes, it's rail -- rail versus rail.

Q. (By Mr. Donovan) Okay. And here, it provides that UP has a 76 percent market share in petrochemicals on the Gulf Coast versus BNSF.

Do you see that?

A. I do see that.

Q. And the discussion in the lower right of UP NS engagement strategy for everyone there was an engagement strategy to grow the business, the petrochemical Gulf business, between UP and NS without the merger at that time, correct?

A. Correct.

Q. If you turn to the next page, it says: UP NS interline refrigerated products growth.

Do you see that?

A. I do.

Q. And what does that represent?

A. This would be the growth of interline refrigerated intermodal boxes.

Q. And on the right, it says: NS UP has robust pipeline for customer growth, regular meetings set up to capture growth.

Do you see that?

[redacted]

REPORTER CERTIFICATE

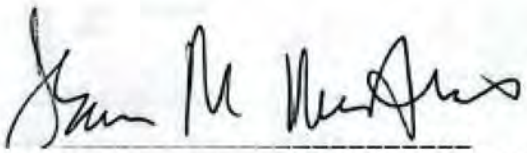
I, TRACI M. MERTENS, RDR, CRR, do hereby certify that there came before me

MARK R. GEORGE

who was by me first duly sworn to testify to the truth and nothing but the truth of all knowledge touching and concerning the matters in controversy in this cause; that the witness was thereupon carefully examined under oath and said examination was reduced to writing by me; and that this deposition is a true and correct record of the testimony given by the witness and that signature by the witness is reserved.

I further certify that I am neither attorney nor counsel for nor related nor employed by any of the parties to the action in which this deposition is taken; further, that I am not a relative or employee of any attorney or counsel employed by the parties hereto or financially interested in this action.

Dated September 22, 2026.



TRACI M. MERTENS, RDR, CRR

EXHIBIT 5

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

(CONFIDENTIAL PORTION INCLUDED)

VIDEOTAPED DEPOSITION

The DEPOSITION OF JENNIFER HAMANN, taken on behalf of the BURLINGTON NORTHERN, at Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, on the 15th day of October, 2026, at 8:01 a.m., CT.

[redacted]

STATE OF ILLINOIS)
) SS.
COUNTY OF DUPAGE)

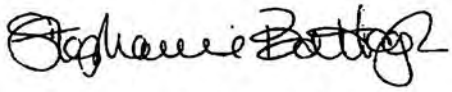
I, STEPHANIE A. BATTAGLIA, CSR and Notary Public in and for the County of DuPage and State of Illinois, do hereby certify that on October 15, 2026, at 8:01 a.m., at Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, the deponent JENNIFER HAMANN personally appeared before me.

I further certify that the said JENNIFER HAMANN was by me first duly sworn to testify and that the foregoing is a true record of the testimony given by the witness.

I further certify that the deposition was terminated at 4:18 p.m.

I further certify that I am not counsel for nor related to any of the parties herein, nor am I interested in the outcome hereof.

In witness whereof, I have hereunto set my hand and seal of office this 20th of October, 2026.



Notary Public

CSR No. 084-003337 - Expiration Date: May 31, 2027

EXHIBIT 6

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

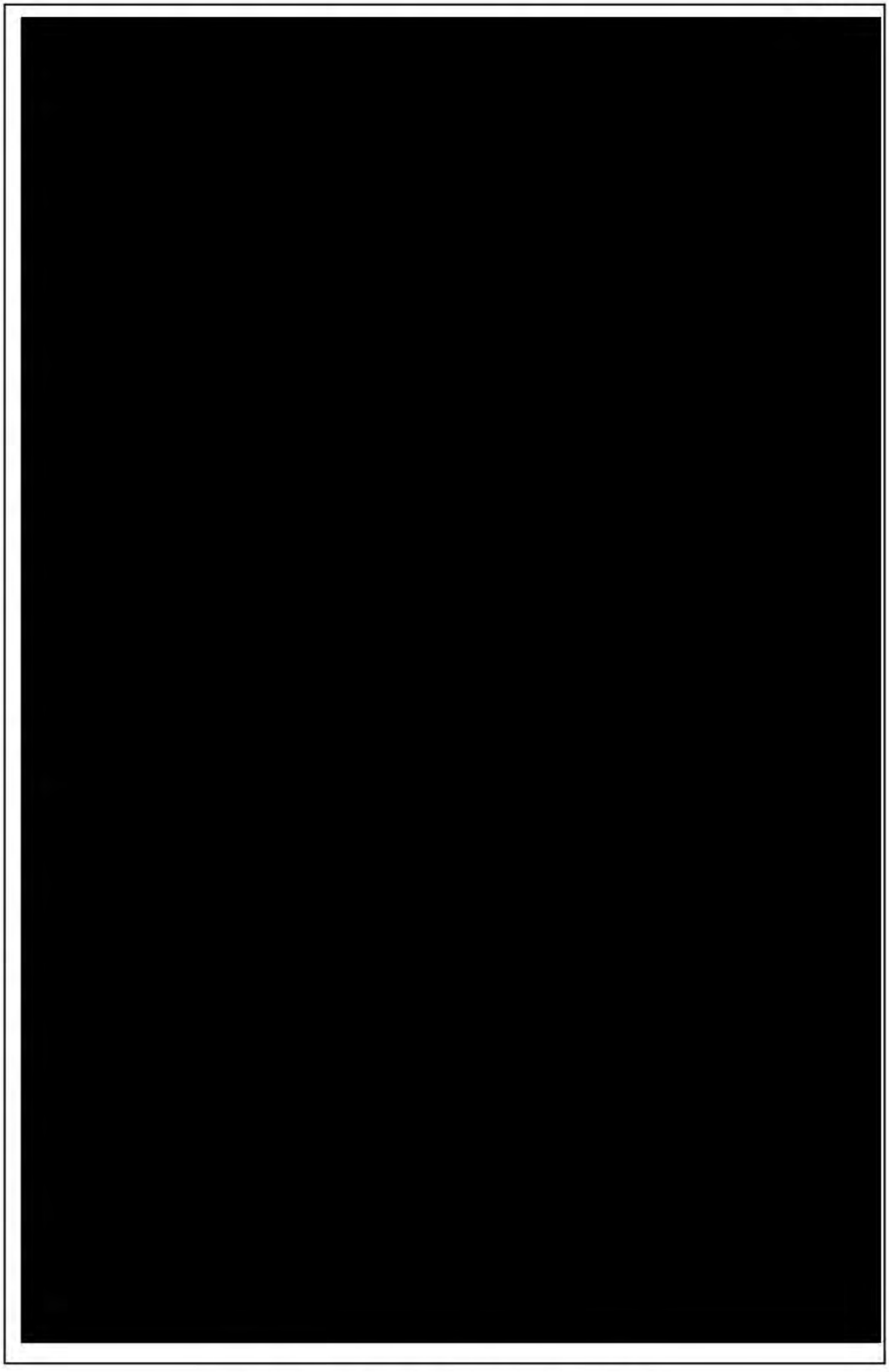
Highly Confidential
Pursuant to the Protective Order

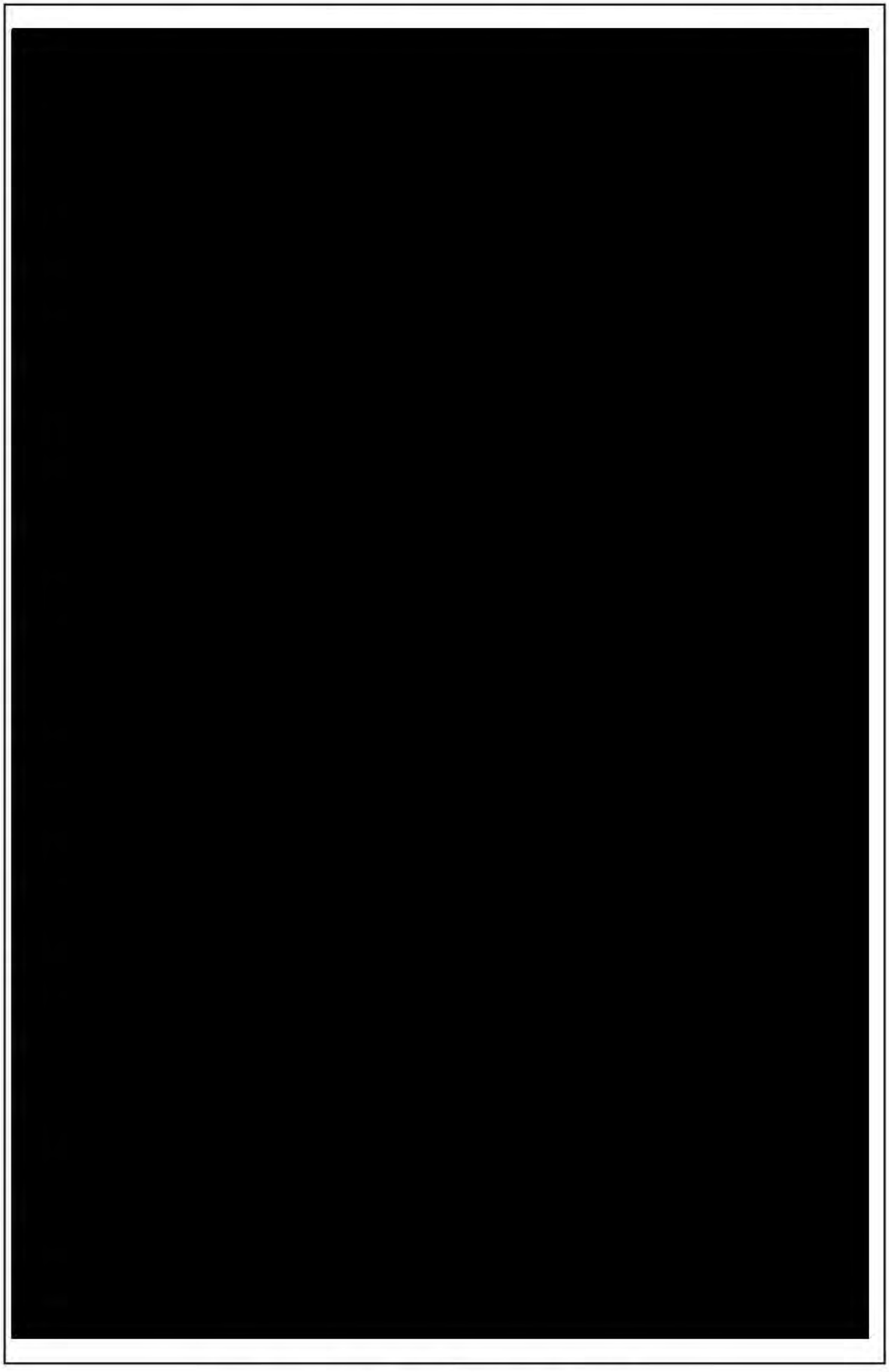
V-I-D-E-O-T-A-P-E

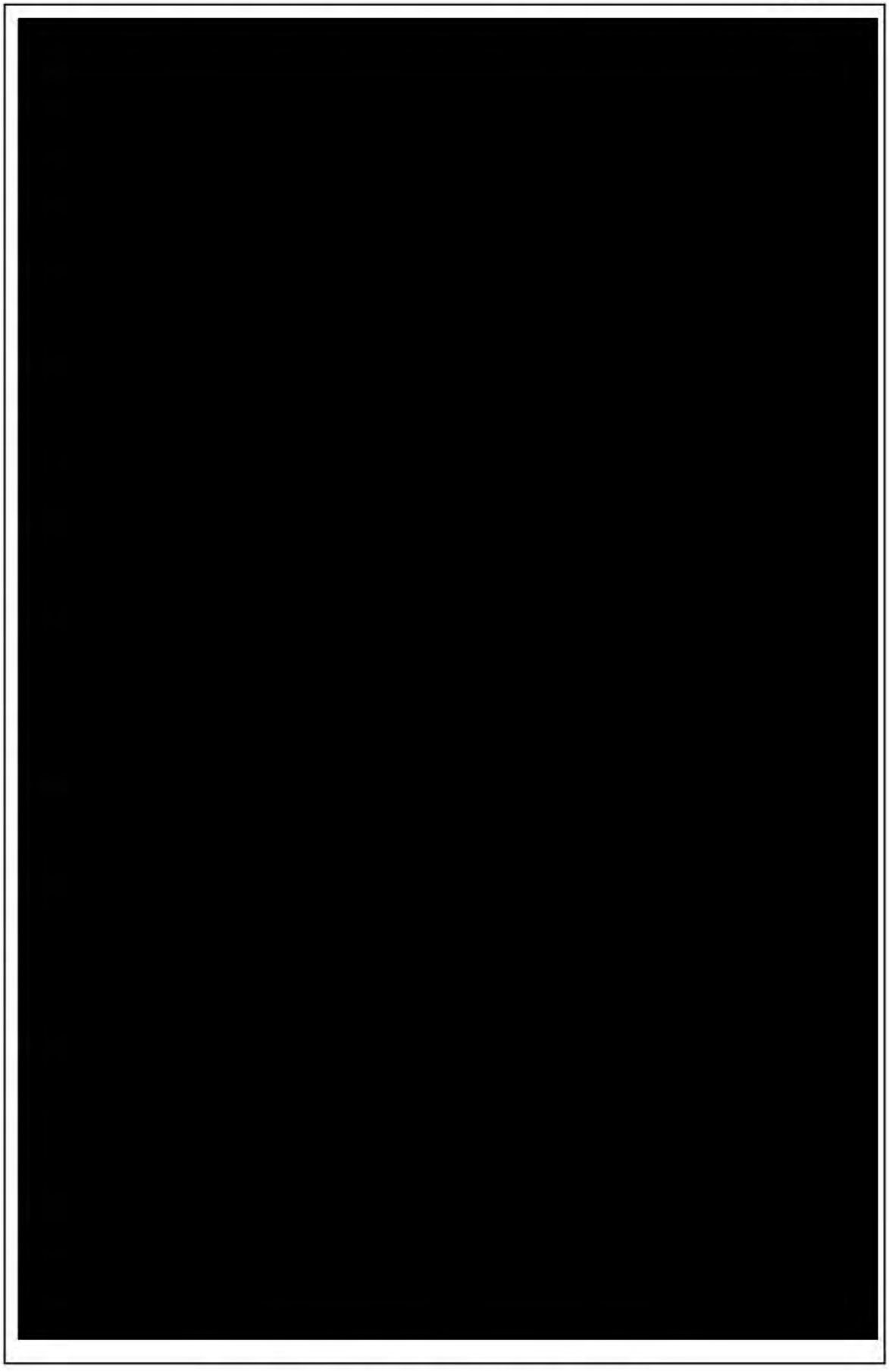
D E P O S I T I O N

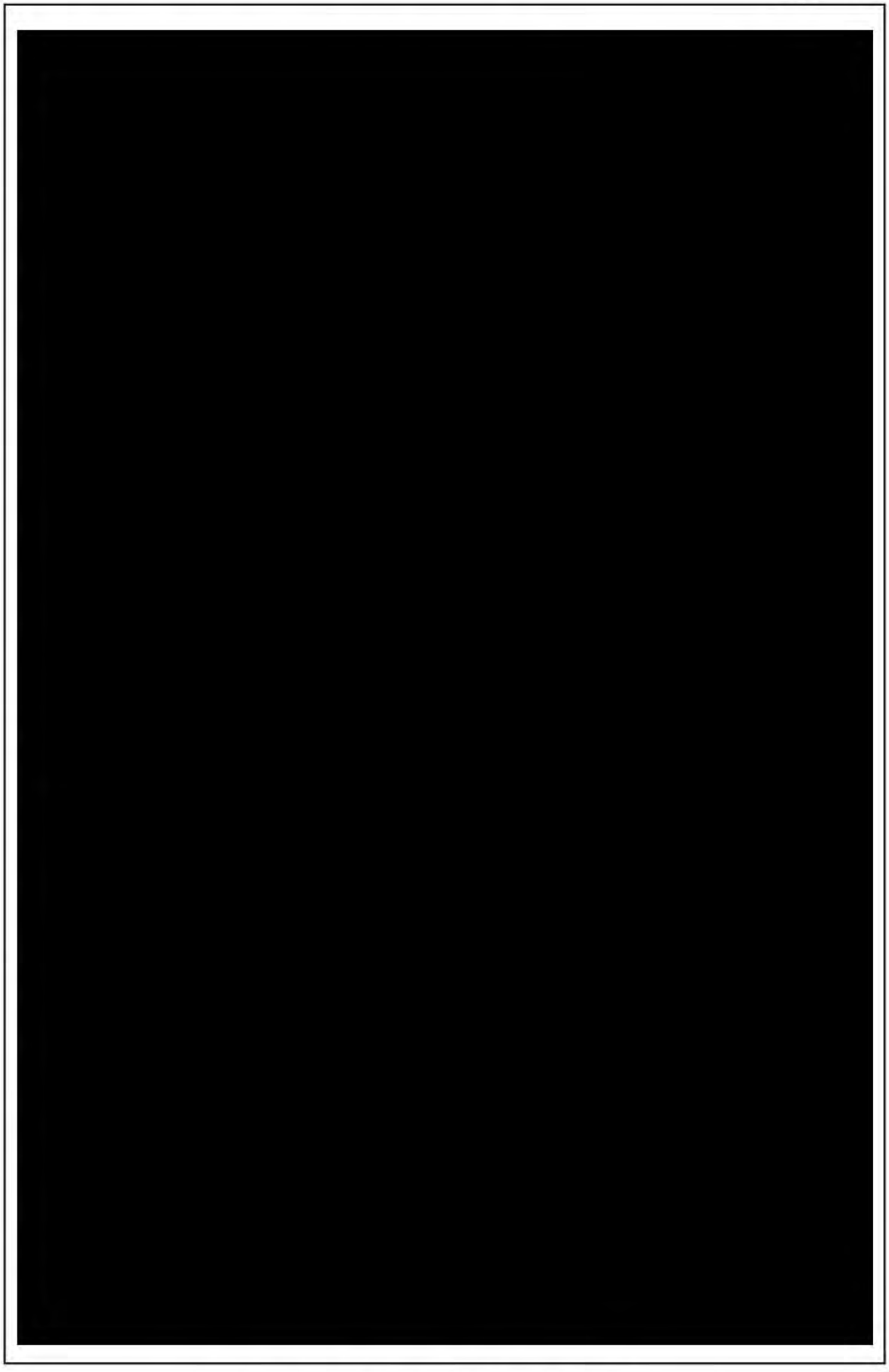
The DEPOSITION OF MR. MICHAEL HOUSTON, taken on behalf of the BURLINGTON NORTHERN ;

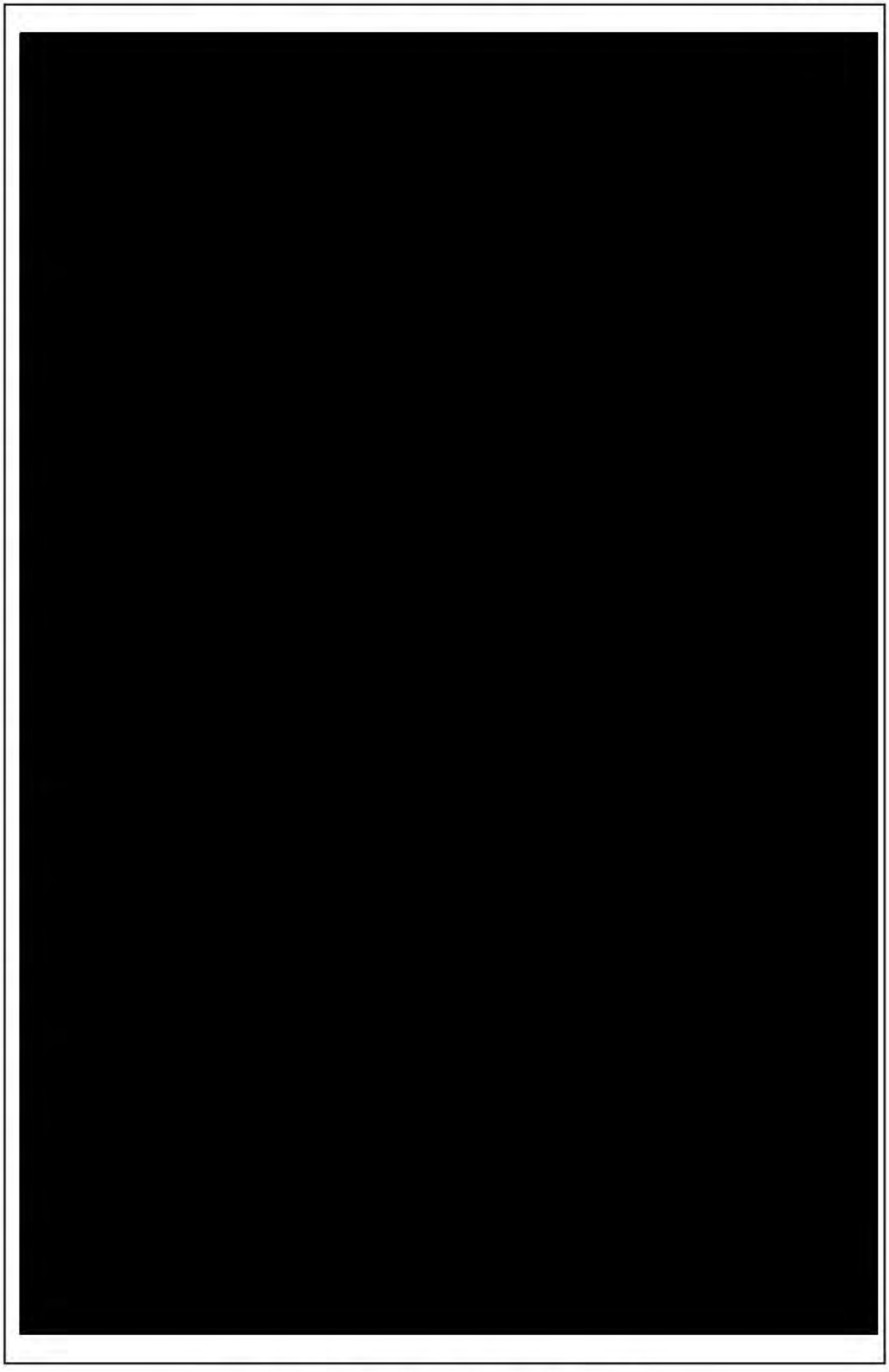
at THE LAW OFFICE OF KUTAK ROCK, OMAHA, NEBRASKA; on the 30TH day of JULY, 2026 at 8:00 a.m., CT.











[redacted]

Q. Were you involved in the preparation of documents like this?

MS. WU: Objection, vague.

A. I've assisted in providing documents for these before. So at a very general -- general level.

BY MR. MATELIS:

Q. So can we turn to the PowerPoint page numbered 5.

A. Yes. The green and red box?

Q. Correct.

A. Yes.

[redacted]

[redacted]

C E R T I F I C A T E

I, DANA LEA BURKDOLL a Certified Court Reporter (#1364), Registered Professional Reporter (#830156) and Certified Shorthand Reporter (#1955), do hereby certify that the within-named witness was by me first duly sworn to testify the truth.

That the testimony given in response to the questions propounded, as herein set forth, was first taken in machine shorthand and reduced to writing with computer-aided transcription, and is a true and correct record of the testimony given by the witness.

I certify that review of the testimony was requested by the witness or the parties. If any changes are made by the deponent during the time period allowed, they will be appended to the transcript.

I further certify that I am not a relative or employee or attorney or counsel of any of the parties, or a relative or employee of such attorney or counsel, or financially interested in the action.

WITNESS my hand and official seal on this 30TH day of JULY, 2026.

Dana Lea Burkdoll

DANA LEA BURKDOLL CSR, RPR, CCR
Certified Court Reporter #0136
Registered Professional Reporter
Certified Shorthand Reporter#1955

EXHIBIT 7

BEFORE THE SURFACE TRANSPORTATION BOARD

\- - -

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY,	:	FINANCE DOCKET NO.
-- CONTROL --	:	36873
NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY.	:	VOLUME I

HIGHLY CONFIDENTIAL
PURSUANT TO PROTECTIVE ORDER

\- - -

October 7, 2026

\- - -

Videotaped hybrid deposition of DAVID T. HUNT, taken pursuant to notice, was held at the law offices of Covington & Burling, 850 10th Street, NW, Washington, D.C., beginning at 8:04 a.m., on the above date, before Michelle L. Ridgway, a Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, Certified Court Reporter, and Notary Public.

\- - -

the applicant submitted a diversion statement that used a lookalike model?

BY MR. McCARRICK:

Q. Well, we can break it down that way. Let's try to do it in two steps.

Before this merger, are you aware of any merger in which the applicants have submitted a lookalike model to estimate traffic diversions?

A. I would argue that the CPKC work by FTI used a -- they didn't call it a lookalike model, but they used a form of a lookalike model.

I mean, there was a tape on there that shows, based on the characteristics of the lanes, that they would divert 25 percent, 50 percent, or 75 percent, and so that was based on how the lanes looked.

Q. Okay. Other than the FTI model in CPKC, can you think of any other merger in which the applicants

have put forward a lookalike model to estimate truck-to-rail diversions?

A. I'm not aware of any.

Q. Okay. You criticized the FTI lookalike model in CPKC, correct?

A. I did.

Q. You did not think that lookalike model accurately depicted truck-to-rail diversions, correct?

A. The FTI model was rail-to-rail.

Q. Okay. So let me just ask my question again.

Are you aware of any merger proceeding in which a lookalike model has been used to estimate truck-to-rail diversions by the applicants?

A. Outside of this one, I am not.

Q. And you had criticized the FTI rail-to-rail model, correct?

A. I did, yes.

Q. Okay. And you thought it vastly overstated diversions, correct?

A. I felt that the -- they had -- CPKC had three different statements with diversion numbers in it, and I collectively looked at those and felt that they were overstated.

Q. Okay. And one of the -- one of the things I think that you opined on, that there were different diversion estimates from different sponsoring witnesses, correct?

MS. FLAHIVE WU: Objection to form.

THE WITNESS: I discussed the different diversion estimates of the different witnesses.

BY MR. McCARRICK:

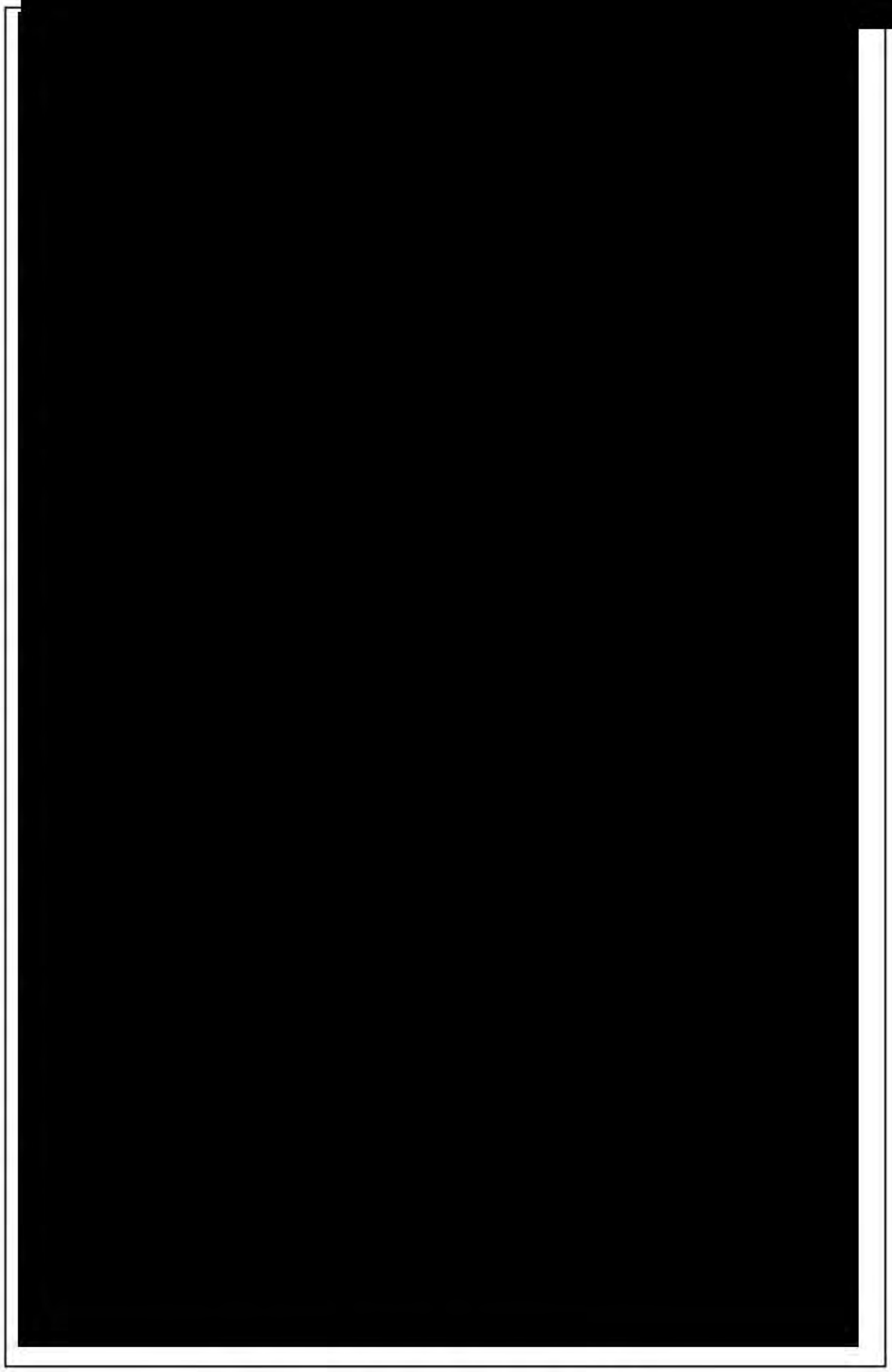
Q. Yeah. In your mind, did those diversion estimates match?

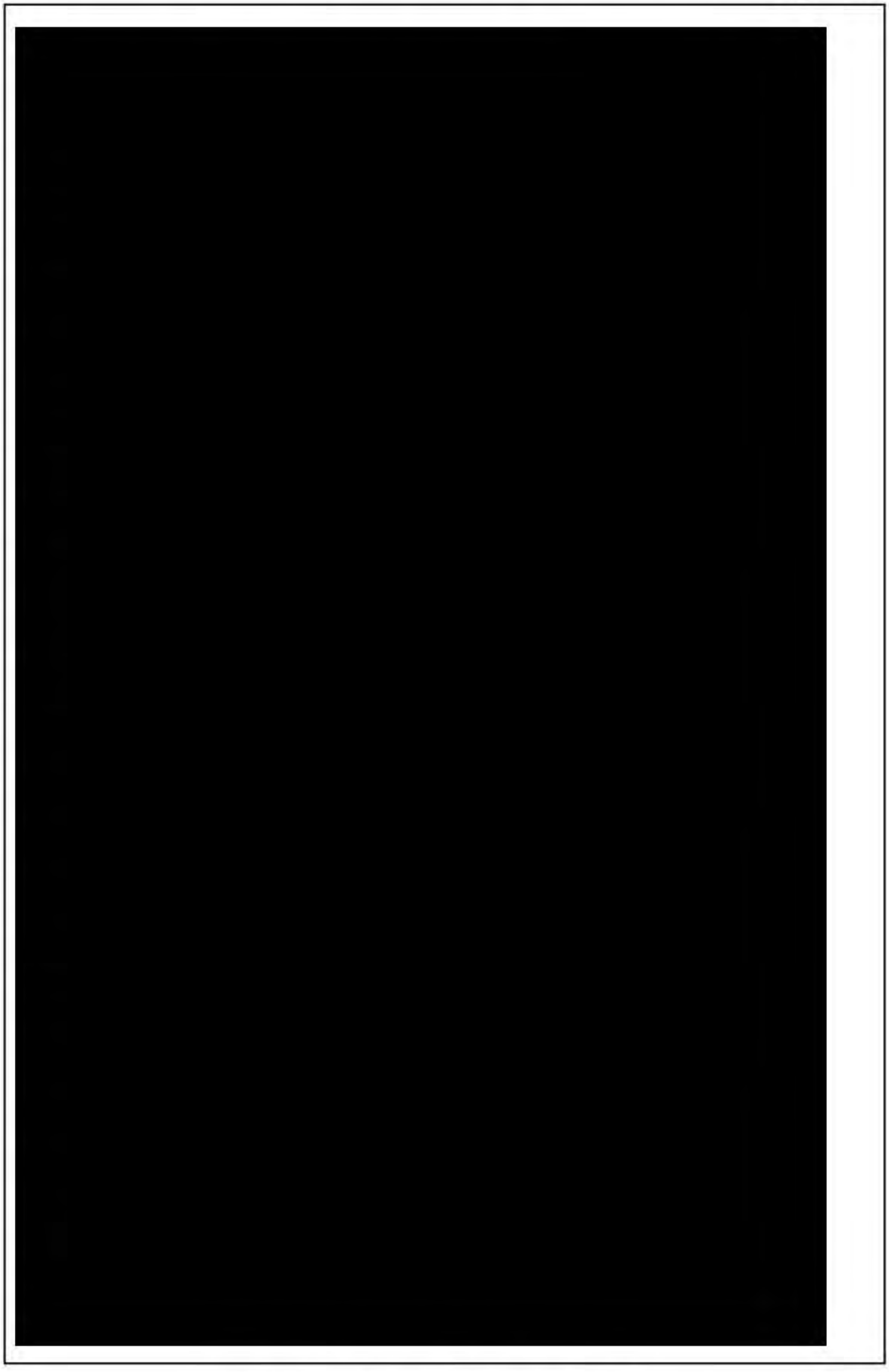
MS. FLAHIVE WU: Objection to form.

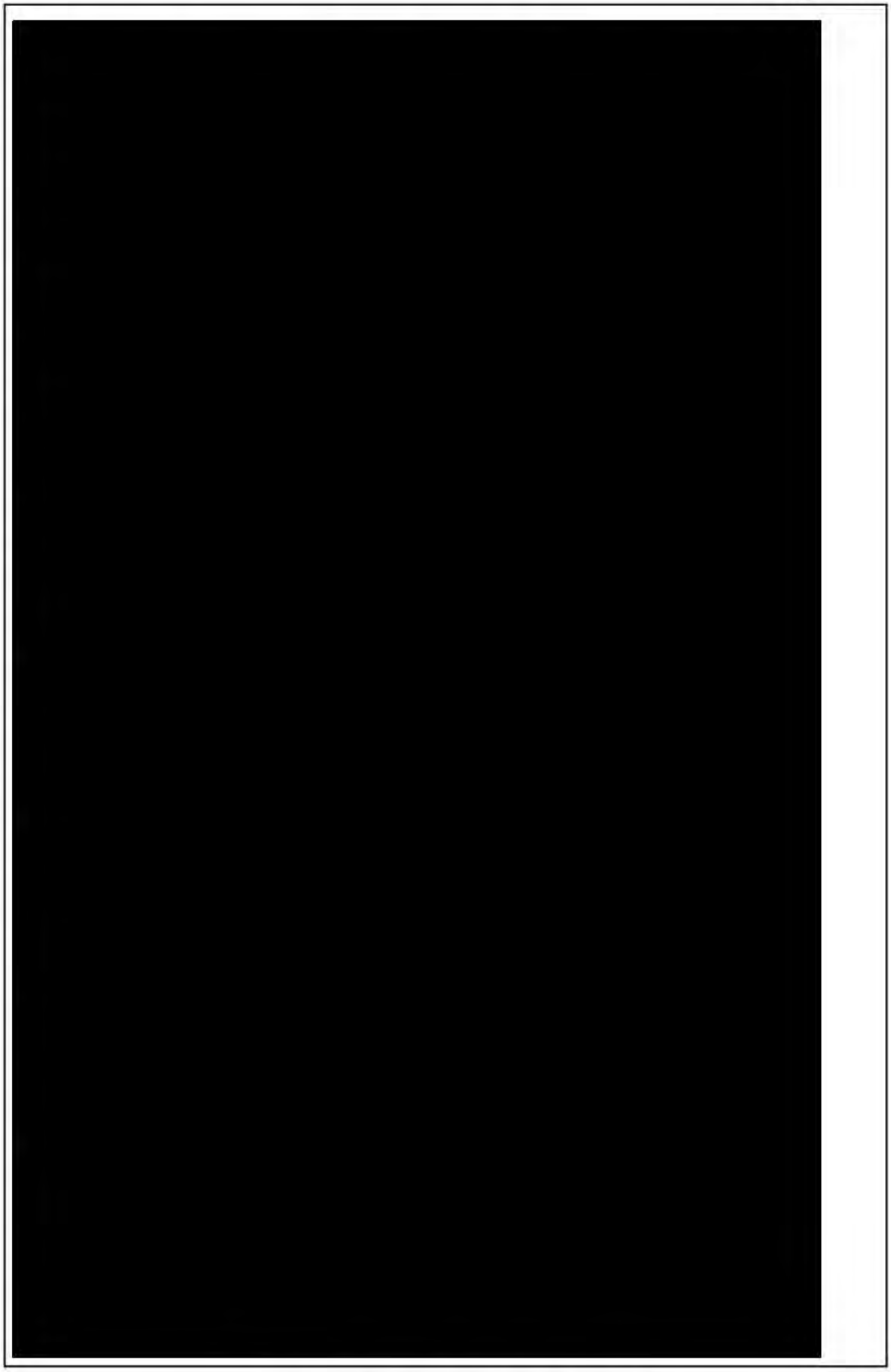
THE WITNESS: Did they -- I don't know what you mean. Match what?

[redacted]

[redacted]







[redacted]

[redacted]

CERTIFICATE

I HEREBY CERTIFY that the witness was duly sworn by me and that the deposition is a true record of the testimony given by the witness.

It was requested before completion of the deposition that the witness, DAVID T. HUNT, have the opportunity to read and sign the deposition transcript.

Michelle Ridgway

MICHELLE L. RIDGWAY,
A Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, Certified Court Reporter, and Notary Public
Dated: October 12, 2026

(The foregoing certification of this transcript does not apply to any reproduction of the same by any means, unless under the direct control and/or supervision of the certifying reporter.)

BEFORE THE SURFACE TRANSPORTATION BOARD

- - -

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY,	:	FINANCE DOCKET NO.
-- CONTROL --	:	36873
NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY.	:	VOLUME II

HIGHLY CONFIDENTIAL
PURSUANT TO PROTECTIVE ORDER

- - -

October 8, 2026

- - -

Continued videotaped hybrid deposition of DAVID T. HUNT, taken pursuant to notice, was held at the law offices of Covington & Burling, 850 10th Street, NW, Washington, D.C., beginning at 8:34 a.m., on the above date, before Michelle L. Ridgway, a Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, Certified Court Reporter, and Notary Public.

- - -

THE WITNESS: That is not something we included in this study.

BY MR. ENSON:

Q. Is there a reason why?

MS. FLAHIVE WU: Objection to form.

THE WITNESS: As I stated previously, TRANSEARCH does not tell us the shipper. I do not know --

BY MR. ENSON:

Q. Isn't it a logical question? If you're projecting all these diversions from truck to rail, isn't it logical to think, yeah, it would be great if -- if all these shippers convert, but there's got to be some costs associated with that conversion, and we should factor that into our analysis.

You never thought that?

MS. FLAHIVE WU: Objection to form.

THE WITNESS: What I'm looking at here are the potential annual savings to shippers.

I did not -- again, we did not know individual shippers. We did not know the details of what facilities they may or may not have. We did not try to factor in a one-time cost for a switch.

BY MR. ENSON:

Q. And the savings that you project do not reflect costs that shippers may incur to achieve those savings, correct?

A. As we clearly --

MS. FLAHIVE WU: Objection to form.

THE WITNESS: As we clearly state, it is an annual line haul savings.

BY MR. ENSON:

Q. A fundamental question I

way to competitiveness with truck?

A. It relates to -- it relates to factors that we use in our models for estimating the market share.

Q. Okay. For the best route to be a viable alternative, does the shipper need to be located at the station, so 1, 2, 3, 4, 5 UP in your example here in B24?

A. What we're really doing here is we're establishing what the best rail route -- or we have defined best as the lowest impedence rail route in a market so that we can then see if the UP-NS merger will create a new best rail route.

If it does not, then our model will not consider any diversions in that county-to-county pair. That's what the purpose of this is.

Q. Does your model -- does this analysis consider where the shippers are actually located within that county?

A. We put the -- because TRANSEARCH is provided at a county level, what we did is we took the latitude/longitude of the freight stations and used that to define a freight centroid in the county. And we put that as the most likely place for the generation of freight traffic.

Q. What do you mean by "the most likely place for the generation of freight traffic"?

A. We had to select a location in a county-to-county centroid, and so we base that off of where we saw the most freight activity. And the best source we had for that was the location, the -- sort of the geographic centroid of the rail freight stations in that county.

Q. So does the -- does the analysis of where the most freight activity within the county is, does that reflect in any way where shippers are actually physically located?

A. I would assume the most freight activity is where the shippers are.

Q. That's my question, then.

Is that -- is that what you're assuming, that the freight activity reflects where shippers are actually located?

A. The centroid of the freight activity was our best estimate as to where shippers are located within the county.

MR. ENSON: Those are my questions. Thank you for your time.

We can go off the record.

THE WITNESS: You're welcome.

THE VIDEOGRAPHER: Going off the record. The time is 10:11.

(Short break.)

THE VIDEOGRAPHER: We are on the record. The time is

CERTIFICATE

I HEREBY CERTIFY that the witness was duly sworn by me and that the deposition is a true record of the testimony given by the witness.

It was requested before completion of the deposition that the witness, DAVID T. HUNT, have the opportunity to read and sign the deposition transcript.



MICHELLE L. RIDGWAY,
A Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, Certified Court Reporter, and Notary Public
Dated: October 12, 2026

(The foregoing certification of this transcript does not apply to any reproduction of the same by any means, unless under the direct control and/or supervision of the certifying reporter.)

EXHIBIT 8

BEFORE THE SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to Protective Order

CONFIDENTIAL PORTIONS INCLUDED

VIDEOTAPED DEPOSITION

The DEPOSITION OF MARK A. ISRAEL, Ph.D., taken on behalf of the BURLINGTON NORTHERN, at the Law Office of Covington Burling LLP, 850 Tenth Street, N.W. Washington, D.C., on October 15th, 2026, at 9:08 a.m. Eastern Daylight Time.

REPORTED BY: GREG S. WEILAND, CSR, RDR, CRR

JOB NO.: 23895

would think.

The way I usually think of these things, as an economist is it's a commitment in a regulated industry to be commercially reasonable about how you deal with the other party, which, to me, in a regulated industry with STB oversight, would say if practices change dramatically or if rates go up a lot or, really, if practices look a lot different than they did historically, I would think the STB would be -- you're committing to the STB that they would have the ability to react to that.

BY MR. CUNNINGHAM:

Q. Would a 5 percent price increase in excess of inflation be commercially reasonable?

MR. LUDWIN: Object to form.

THE WITNESS: I think it depends what's going on around it. A reason that I think the open gateway commitments here have a lot of teeth is that, you know, again, my -- there's a lot of cost savings and double marginalization savings and things that I'm predicting.

And so single-line service is coming into place. That's going to have benefits. To the

extent there are complaints about harm that interline service isn't going to be treated as well, the STB has comparators to look at, and if the interline service is being treated substantially worse or worse than the single-line service, that -- that, you know, I think a 5 percent difference could easily be seen as not reasonable.

BY MR. CUNNINGHAM:

Q. Is there any threshold that you'd feel comfortable for a price increase beyond inflation that would, in every case, be commercially unreasonable, a ceiling, if you will?

MR. LUDWIN: Object to form.

THE WITNESS: I wouldn't impose a once-and-for-all ceiling. I mean, there can be cost factors and so on.

But as I said, I think a reasonable way to think about it in this case is that there's going to be service that the merged carrier is providing that provides a lot of data on comparable rates, and I would want to look at that.

So that wouldn't give me a ceiling, but it

would give me a good thing to compare it to.
BY MR. CUNNINGHAM:
Q. Okay. So there's no price increase number that, as we sit here today, you feel comfortable saying, "Geez, that would not be commercially reasonable"?
MR. LUDWIN: Object to form, mischaracterizes prior testimony.
THE WITNESS: I can't give a number sitting here today because I don't know what's happening to costs on the route. So that means I can't give a number without circumstances.
But, as I said, something that's significantly out of line with what's happening on comparable routes and it doesn't have a clear cost justification would cause me to question that.
BY MR. CUNNINGHAM:
Q. Okay. You mentioned, in the second bullet on Paragraph 91, that part of an open gateway commitment is "offering connecting carriers commercially reasonable rate divisions and negotiating in good faith regarding disagreements."
Do you see that?

let me revise that.

It's the shipper -- if the shipper and the railroad are splitting the surplus, then the surplus is actually both the railroad's profit and whatever benefit the shipper gets from the movement.

So if the shipper is a business, then probably it's profit for them, too, so it would be the sum of their profits from having that movement go.

Q. Okay. I understand. Starting with the sole-serving railroad, so that's the second step in the large paragraph in the middle --

A. Yep.

Q. -- you model that the shipper and the sole-serving railroad -- well, you model them reaching the Nash Bargaining Solution, conditional on the rate set by the dual-serving railroad; is that correct?

A. In the sense that they split the surplus equally. Nothing in my -- yeah, nothing in my conclusions about the efficient contracting depends on it being an even split, but that's what I do in this example.

Q. Does the low-cost dual-serving railroad

also bargain with the shipper and achieve the Nash Bargaining Solution?

A. This example -- again, none of these conclusions -- all this conclusion is based on, if you have nonlinear contracts, you're going to maximize surplus. But none of it depends on this.

But in this example, no. In this example, there's a first step where the shipper bargains with the two non- -- the two downstream, the two dual-served railroads, and ends up buying from the more efficient one. And, basically, what he -- he plays them off against each other until he gets the best deal that he can.

And that -- in this case, that best deal is, basically, he drives the more efficient railroad down to the other railroad's cost, but then the other railroad won't bargain anymore, and that's the best he can do.

Q. So as you explained there, the quantity demanded by the shipper for the competitive dual-served leg is not determined by the cost of the low-cost railroad but the high-cost railroad, correct?

A. In this case, yes. That is how -- well,

dual-serving side?

BY MR. van HOUWELINGEN:

Q. I'll go into the paragraph.

I think this is laid out in the middle there that the shipper ends up paying NS a term that's CSX's higher cost times quantity, correct?

A. Yeah. Just to cut through this, I mean, it's fair that in this example, the -- what's happening is that there's a separate negotiation happening first with the dual-served shipper. And to your point, the dual-served shipper is being paid a linear price at marginal cost.

And so if that negotiation is happening separately first, then the dual-served shipper is getting paid this linear price, and you have the situation you just described where it could end up being a very high linear price.

You could modify it and bring the dual-served shipper into the negotiation, and that would all go away. You would just -- you would charge the lowest cost. And none of my conclusions would change. It would just be a bigger negotiation.

Q. Okay. I think I'm going to come back

there, but bear with me because I have to get there.

So in your model, why -- why does the dual-serving railroad charge a linear price rather than a nonlinear price, like the sole-served railroad?

A. I mean, that was just the nature of the analysis that I did here was, suppose that what happens is the shipper plays the dual-served guys off against each other to get the best term he can, and then he brings that term with him to a negotiation with the upstream railroad.

Q. So nothing prevents the low-cost dual-serving railroad from negotiating over nonlinear prices with the shipper, correct?

A. No.

Q. And wouldn't -- wouldn't the low-cost dual-serving railroad and the shipper have an incentive to continue bargaining to increase their joint surplus?

A. I think that's right. I mean, that's where I was going a minute ago. You could imagine a bigger negotiation where the lower-cost railroad would win at that lower cost, and that would be the cost that would come into the bargain.

Q. And if they did that, if they negotiated over a nonlinear price, would they choose the quantity that maximizes and divides the joint surplus?

A. Say that again.

Q. If they did that, if they negotiated over a nonlinear price, would they choose the quantity that maximizes and divides the joint surplus?

A. Yes. I mean, they would -- the nonlinear price, also what's called a two-part tariff, so the shipper would pay a per-unit price of the lower marginal cost. That would cause him to consume a quantity that maximizes the joint surplus. And the low-cost downstream railroad, the upstream railroad, and the shipper would divide that up.

Q. Okay. And that would reach the efficient level of output?

A. Yes.

Q. In that case, there wouldn't be any Ricardian rent?

A. Correct.

Q. And so there's -- there would be no inefficiency resulting from a price in the East above unit cost?

MR. LUDWIN: Object to form.

THE WITNESS: Correct. In that case, for that particular transaction, the merger would cause no harm or have no benefit. The premerger world would have gotten to the efficient outcome for that particular transaction.

BY MR. van HOUWELINGEN:

Q. Can you turn to -- well, let me -- have you analyzed how often in the real world that situation occurs?

A. No. I mean, it's similar to the earlier question. I mean, it's profit maximizing. It's what we think sophisticated buyers will do if they have nonlinear contracts in front of them.

So I expect it to happen sometimes, certainly not all the time, because there's these things that cause inefficiencies in contracts, which is why I analyzed the other cases. But I can't tell you how often each one happens, which is why I analyzed all of them.

Q. So we've touched on it.

Appendix B contains your rebuttal or your extension of the Moresi model?

MR. LUDWIN: Object to form.

THE WITNESS: I don't know how frequently it is to win one contract, but I think it's fair to say that there are cases in which railroads make shipper-specific investments.

BY MR. van HOUWELINGEN:

Q. Do shippers ever attempt to renegotiate contracts during the term of those contracts?

MR. LUDWIN: Object to form, foundation.

THE WITNESS: I don't think I've studied how frequently that happens, so I don't know. I'm -- I don't know.

I mean, I would imagine, based on the complexity of contracts here and the length of them and what I've seen as an economist, that the answer to that is almost certainly yes, but I have not studied it.

BY MR. van HOUWELINGEN:

Q. So we just talked about -- you've stated that shippers are free to solicit Rule 11 or through rates in a particular circumstance, correct?

A. Yes.

Q. Is it your understanding that, all else equal, shippers will choose the pricing arrangement

that results in the lowest rate available to them?

A. Literally, all else equal, then I would think shippers would choose the lowest rate.

Q. Do you agree that if shippers can choose whether to solicit Rule 11 or through rates, then, all else equal, the rates they receive through both pricing arrangements should not be materially different?

MR. LUDWIN: Object to form.

THE WITNESS: Can I get that one again?

BY MR. van HOUWELINGEN:

Q. Sure. Do you agree that if shippers can choose whether to solicit Rule 11 or through rates for a particular movement, then, all else equal, the rates they receive through both pricing arrangements should not be materially different?

A. I suppose if, literally, all else was equal, so they could move freely, then economics would predict the prices would equalize.

That's a little different than your other question because, in your other question, I could imagine -- you're saying for a given shipper, all else equal, what will they choose? Here, you're saying, if all else was equal, will the prices

equalize? Then, yes, but you might see different prices because all else is not, in fact, equal.

So I'm not sure we can predict that the prices will be the same because, in reality, not everything else might be equal. I'd have to study that.

But if all else is equal, then the prices should be close.

Q. Well, if all else equal, systematically, Rule 11, one or the other of Rule 11 or through rates was systematically lower, the shipper would always choose the arrangement that resulted in the lower rate, fair?

MR. LUDWIN: Object to form.

THE WITNESS: I mean, in this hypothetical, if one of those rates was systematically lower, and in the hypothetical, if all else was truly equal for the shipper, then I agree, the shipper would choose the lower rate.

BY MR. van HOUWELINGEN:

Q. Okay. And so over time, shippers are always choosing one rate arrangement because it's lower, how would you expect railroads to respond to

that?

MR. LUDWIN: Object to form.

THE WITNESS: I don't think in the earlier answer I agreed they would always do it because all else is not necessarily equal.

I don't know how railroads would respond. It would depend if railroads have any preference for the two. But -- so I'm not sure I have enough facts in your hypothetical.

BY MR. van HOUWELINGEN:

Q. If they had no preference between the two?

A. If railroads have no preference between the two, and this hypothetical is just hypothetically speaking, if railroads have no preference between the two and shippers have no preference between the two, you would expect to see the prices equalize.

But, again, that's holding all else equal, including everything else we're talking about in this case, about market forces and contractual forms and competition and everything else in the world.

Q. Okay. Given that shippers can choose to solicit rates from either the sole-serving railroad or the dual-serving railroad, then, all else equal,

the rates they receive from one end or the other should, likewise, not be materially different, correct?

MR. LUDWIN: Object to form.

THE WITNESS: Sorry. Can I have that again?

BY MR. van HOUWELINGEN:

Q. Yeah. Let me -- I think I have to clean that up.

Given that shippers can choose to solicit rates from either the sole-serving railroad or dual-serving railroads, then the rates they receive from either end, all else equal, should, likewise, not be materially different, correct?

A. Again, all else equal is an awful lot of stuff. But if literally everything else in the world was equal, then I think I agree with that.

Q. Over time, they'd, likewise, reach an equilibrium, where the rates received on either end are not meaningfully different from each other?

MR. LUDWIN: Object to form.

THE WITNESS: I mean, if all else is equal, I think I agree, the ability of the shipper to move between these different rate

institutions means those rates are going to tend to equalize.

I mean, in this industry, it's an important option that the shippers have. So if all else is equal, it's going to tend to have that effect.

BY MR. van HOUWELINGEN:

Q. And that's consistent with the results you show on Figures 7 through 9, correct?

A. Sure. I mean, I think Figures 7 through 9 are consistent with the importance of the shipper's ability to choose, equalizing those rates. I think that's fair.

Q. It's also consistent with those rates, with a situation where rates have reached an equilibrium --

MR. LUDWIN: Object to form.

BY MR. van HOUWELINGEN:

Q. -- where the rates received on either end are not meaningfully different from another?

MR. LUDWIN: Object to form.

THE WITNESS: I mean, I think that's almost true by definition.

You're hypothesizing a very simple

hypothetical, in which everything else is equal, and so the shipper just moves back and forth. I agree that if literally everything else is equal, the shipper would do that, and the rates would equalize. That's a very simple case.

Your question now is, are they consistent with an equilibrium in which the rates have equalized? I mean, yes, the market presumably is in an equilibrium, and the rates had equalized.

BY MR. van HOUWELINGEN:

Q. Okay. I think we're -- I don't know if you still have 17. No, you've turned a few pages.

I'm still at 17. Can you turn back there?

A. Sure.

MR. LUDWIN: Paragraph 17?

MR. van HOUWELINGEN: Paragraph 17.

BY MR. van HOUWELINGEN:

Q. You give these convenient -- convenient paragraph numbers. We might as well use them.

As discussed, the one situation where you could not rule out standard theories of foreclosure based on theory alone was a situation where the

shipper receives a through rate on the competitive side, correct, in the context of linear pricing?

MR. LUDWIN: Object to form.

THE WITNESS: Can you say that once more? Sorry.

BY MR. van HOUWELINGEN:

Q. Yeah. I'm sorry.

So as we spoke about, the one situation where you could not rule out standard theories of foreclosure based on theory alone was the situation involving non-negotiated linear pricing, where the shipper receives a through rate on the competitive side, correct?

A. Correct, where the shipper approaches the -- gets his rate from the competitive side, yes.

Q. And because you couldn't rule that out in that situation, that's why you conducted the empirical tests in your verified statement that we've just been talking about, correct?

A. Correct.

Q. You believe you can rule out standard theories of foreclosure in all other rate-setting circumstances based on theory alone, correct?

A. Rule -- I would say "rule out," or I talk

about edge cases. Either rule out entirely or it's exceedingly unlikely.

Q. And that's what you did, correct? You ruled out foreclosure in those settings based on theory alone, correct?

A. In other settings, is it based on theory alone?

Q. You didn't conduct any empirical tests --

MR. LUDWIN: Sorry. Sorry. I think the witness was still answering your last question.

THE WITNESS: I'm thinking. If there -- I think "in the other settings" meaning Rule 11 or prices from the sole-served side --

BY MR. van HOUWELINGEN:

Q. Or the bargaining.

A. -- or bargaining, I think it is fair to say that, as a matter of economics, foreclosure is exceedingly unlikely.

Q. And you didn't conduct any empirical tests to confirm that foreclosure doesn't apply or is exceedingly unlikely in those settings, correct?

A. That's -- that's not the basis of any opinions that I've presented in my verified statement. They're not based on empirical tests for

those settings.

Those conclusions about those settings are based on what the economic literature has to say about those settings. Others have conducted empirical tests about those settings, but I did not.

So I wouldn't say it's theory alone. I would say it's what the economic literature has to say about those settings, some of which is empirical.

Q. Okay. I think I understand.

You haven't conducted any empirical tests in your work on this case using the data available in this case to confirm that foreclosure doesn't apply or is exceedingly unlikely in those settings, correct?

A. That's correct.

MR. van HOUWELINGEN: We've been going an hour. I don't know if you want to take a break? Keep going?

MR. LUDWIN: If you've got another few minutes, why don't you go ahead. I'm pausing. I'm looking at the court reporter and the videographer, if that's okay.

MR. van HOUWELINGEN: Okay.

from the eastern side" -- sorry -- "from the dual-served side."

A. Correct. Sole-served carrier, presuming it's sole-served, faces no competition downstream.

Q. You did not conduct empirical tests to confirm that when shippers receive non-negotiated through rates directly from the sole-serving carrier that the sole-serving carrier is already earning all profits possible, correct?

A. I mean, it would be all profits possible, conditional on the prices it has to pay the duopolists.

But, no, I don't know how I would do that test as I sit here because I don't know how to define "all profits possible."

But this is based on the economics of the fact that if it's a sole-served carrier, it's setting the price that a carrier without competition sets. I didn't do empirical work beyond that.

Q. You're assuming that the longstanding response to such concerns in this situation folks have referred to as the "one-lump theory" holds in those situations?

MR. LUDWIN: Object to form,

mischaracterizes prior testimony.

THE WITNESS: This result has nothing to do with the one-lump theory.

The one-lump theory says that there is no possibility of a price below the integrated price if there's a sole-served carrier anywhere. I'm not assuming that. I'm testing that.

The one-lump theory applies everywhere. It says it can't happen. I just talked about how I tested that.

This result that a sole-served carrier sets the monopoly price is the result of, in all of economics, that says monopolists set monopoly prices.

BY MR. van HOUWELINGEN:

Q. Okay. But you did empirical testing on the other side?

MR. LUDWIN: Object to form.

BY MR. van HOUWELINGEN:

Q. Right? You didn't do empirical testing on this side?

MR. LUDWIN: Object to form.

THE WITNESS: Right, because the one-lump

theory, as we've been calling it, is no longer accepted as a theory because people have found that there are ways in which the price could be below the integrated price. I agree.

You have to test for whether those ways hold. I've done that.

But one of those ways that economists have found that can be true is not that the sole-served carrier wouldn't set the monopoly price.

The economics -- the breakdowns of the one-lump theory that economists have found, and they've found -- and they have found them and I've tested them, one of those breakdowns is not rejecting sort of second page of Econ 1 result that monopolists set monopoly prices. That's not a way in which the theory has broken down.

BY MR. van HOUWELINGEN:

Q. Well, there's various things that can be going on in the marketplace that constrain the sole-serving carrier from charging the monopoly price.

A. If it's a monopolist, it's -- if it's a

other constraints, and that's -- that's -- I don't think I'm assuming that. I'm applying economics.

But that test that you seem to have in mind I don't think has anything to do with the one-lump theory. It's just an application of economics to say that there's no direct rail competition, and that will be true pre- and post-merger.

Q. Okay. And I want to be clear. The test that I have in mind is an empirical test.

Again, you haven't done that?

MR. LUDWIN: Object to form.

THE WITNESS: I have not done an empirical test to test whether the sole-served carrier sets the price that you would set in the absence of direct rail competition.

BY MR. van HOUWELINGEN:

Q. You referred to some tests that you have done. I think you're just referring to looking at economic theory.

Do I understand that correctly?

MR. LUDWIN: Object to form, mischaracterizes prior testimony.

THE WITNESS: No. I'm saying I have

A. I'm -- in all of my analysis, I'm defining the full monopoly price as the price that a railroad without direct rail competition charges.

Q. And so you haven't -- you haven't conducted any empirical study and the extent to which indirect competition from another railroad could stop Union Pacific from charging -- strike that.

You haven't conducted any empirical study of the extent to which indirect competition from another railroad constrains Union Pacific's prices at sole-served locations, correct?

A. Not --

MR. LUDWIN: Object to form, asked and answered.

THE WITNESS: That's correct. Not in this case, I have not done such analysis.

BY MR. van HOUWELINGEN:

Q. You're generally familiar with the STB's authority to regulate the reasonableness of noncontract rates and shippers' ability to bring rate cases before the STB challenging the reasonableness of noncontract rates?

A. Right. Noncontract -- yes, they can

BY MR. van HOUWELINGEN:

Q. And if you look at Paragraph 25, and this is in your analysis of negotiated nonlinear contracts --

MR. LUDWIN: Hold on. We're not quite there yet.

THE WITNESS: I went to Page 25.

BY MR. van HOUWELINGEN:

Q. Oh, I'm sorry. Did I not say it? Yeah.

A. Okay.

Q. So this is in your discussion of this rate setting, correct?

A. Yes.

Q. And here, you're considering the situation where a route is sole-served by UP in the west and dual-served by CSX and NS in the east?

A. Yes.

Q. You have not conducted any empirical analysis to show that, in such situations, price will fall to the costs of the higher cost eastern railroad, then the lower cost railroad will price just under that cost and win the business, correct?

A. That's correct. Again, these ones, I can't identify the universe that fits exactly these

characteristics. I'm just saying, there likely are some, and they would follow this pattern.

So I have not isolated them and done that empirical test.

Q. Okay. You've conducted no empirical analysis to confirm that sole-serving railroads and shippers in this setting achieve the efficient level of output under contracts and other nontariff arrangements?

MR. LUDWIN: Object to form.

THE WITNESS: I mean, that's correct. In general, efficient level of output is not something we could define or compare it to, so I wouldn't know how to, but I have not.

BY MR. van HOUWELINGEN:

Q. Conducted no empirical analysis to confirm that for the same movement rates set by sole-serving railroads contain nonlinear pricing terms but rates set by dual-serving railroads reflect linear pricing terms?

A. That's not something I'm saying holds in general. That's just one specific example here.

Q. Okay. And you've conducted no empirical analysis about the extent to which that situation

holds?

A. I don't have any prediction. It doesn't enter any of my analysis, so I have not conducted an analysis of that.

Q. Okay. You've conducted no empirical analysis to confirm that sole-serving railroads and shippers have equal bargaining power on every movement such that they split the surplus 50/50?

A. Same answer as last time. It wouldn't affect any of my conclusions, and I have not done such an analysis.

Q. You've conducted no empirical analysis to establish that the bargaining leverage of the parties would be unimpacted by the transaction?

A. I mean, that's -- again, that's correct. That's fundamental in economics. I haven't seen something different done in a merger, but I have not done an empirical analysis.

Q. It's your expert economic opinion that the merger cannot affect the bargaining leverage of the parties in this rate setting?

MR. LUDWIN: Object to form.

THE WITNESS: Given the way that bargaining leverage in these models is

affect the bargaining leverage of any of the parties to interline rate negotiations?

MR. LUDWIN: Object to form.

THE WITNESS: It is a technical term in these models, so I need to know what you mean by "bargaining leverage."

BY MR. van HOUWELINGEN:

Q. Well, the negotiating leverage.

MR. LUDWIN: Object to form.

THE WITNESS: I still need to know what you mean, just because it's a very technical term in these bargaining models.

BY MR. van HOUWELINGEN:

Q. Can the merger of Union Pacific and Northern Southern [sic], could it affect the outside options available to shippers negotiating for moves from the west to the east and vice versa?

MR. LUDWIN: Object to form.

THE WITNESS: Affect the outside options?

I think it -- it could, technically, affect the outside options in a bargaining game. That's -- I don't think there's an economically coherent theory in which that causes harm, given the evidence in this case,

but it could affect the outside options.

BY MR. van HOUWELINGEN:

Q. Have you conducted any empirical analysis in this case of that possibility?

A. I have conducted the empirical analysis of whether -- what I've done in this case is relevant to whether such a theory could -- could be a theory of harm in this case, and it shows that it could not.

Q. And you're referring, again, to Figures 3 through 9?

A. Yeah, that's the empirical analysis that would speak to that.

I also think just that the nature of the way bargaining plays out in this industry would explain why that would not be a theory of harm.

If someone were to advance that theory of harm and I had to respond to it, I could explain all that. But I don't -- based on my empirical evidence and the nature of bargaining in this industry, I don't see how there could be an economically coherent theory of harm based on that. But I do think it's possible that the merger changes the outside option.

Q. You've conducted no empirical analysis to demonstrate the existence and magnitude of Ricardian rents on interline movements in the rail industry?

MR. LUDWIN: Object to form.

THE WITNESS: Not Ricardian rents, per se. Ricardian rents in that example was the thing that generated double marginalization, and I've done empirical studies that speak to the size of double marginalization, but not Ricardian rents as a specific source of them, of double marginalization.

BY MR. van HOUWELINGEN:

Q. You've conducted no empirical analysis to estimate profit margins relative to each other and, you know, their extent on interline moves in the situation where a route is sole-served by Union Pacific in the west and dual-served by CSX and NS in the east, correct?

MR. LUDWIN: Object to form.

THE WITNESS: Sorry. I didn't follow all the pieces of that question.

BY MR. van HOUWELINGEN:

Q. So we're talking about this situation, a route is sole-served by Union Pacific in the west,

Figure 7 and Figure 8, is the addition of contracts in Figure 7. But I do not show a regression that is just contracts.

Q. Okay. You conducted no empirical analysis in your testing of the Moresi model or to confirm your extension of that model in Appendix B, correct?

MR. LUDWIN: Object to form.

THE WITNESS: That's fair. The model was a piece of applied theory, so that's -- what I did was not an empirical analysis.

Thinking about my extension, the extension is demand slopes downward. I'm comfortable, you know, offering my opinion that that's correct, but I have not done a separate empirical analysis of that.

BY MR. van HOUWELINGEN:

Q. Okay. You did not -- you did not attempt to quantify what share of traffic your extension of the Moresi model in Appendix B would apply to, correct?

A. I don't really know what that means.

Q. Well, I'm asking, you didn't attempt to quantify what share of traffic reflects the, you know, conditions to which you -- to which the Moresi

model would apply, so that's -- sorry. One second.

There's private information on the downstream side?

MR. LUDWIN: Object to form.

THE WITNESS: But that's the Moresi model.

BY MR. van HOUWELINGEN:

Q. Okay.

A. I don't --

Q. But your extension is the same conceptual traffic but allowing demand -- adding a downward-sloping demand slope?

MR. LUDWIN: Object to form.

THE WITNESS: I have not done an empirical analysis of where all that model applies. I don't think it's a particularly good model of the railroad industry.

I'm not claiming that Moresi model applies very often. I do think downward-sloping demand applies probably most places. That's what we generally expect in economics.

BY MR. van HOUWELINGEN:

Q. So hitting a couple other topics briefly before I finish, Dr. Israel.

Do you believe that shippers who do not

Q. Have you conducted any empirical analysis to determine that exit from a corridor is not a relevant competitive consideration in the rail industry?

MR. LUDWIN: Object to form.

THE WITNESS: No. My discussion of that whole topic is in this paper, where my fundamental conclusion in this paper is both by the way railroads work and certainly by the open gateway commitments, pure bundling is not possible here. So I didn't dig more deeply into the theories.

BY MR. van HOUWELINGEN:

Q. So the answer is no?

A. Yeah, I didn't --

MR. LUDWIN: Object to form.

THE WITNESS: The answer is no, I didn't dig more deeply into these theories, including by an empirical test because they're not possible.

BY MR. van HOUWELINGEN:

Q. So in paragraph -- in the same paragraph, you note the other theory of harm addressed in this paper would require that the BNSF and CSX legs are

systematically less compatible with each other, correct?

A. Yes.

Q. It is true that BNSF and CSX legs may be less compatible for some shippers?

A. I'm not sure I'd say they're less compatible. It might be true that one of BNSF or CSX is less appealing to some shippers.

"Less compatible," to me, would suggest that they can't connect with each other. I doubt that's true. But it might be true that a shipper has a preference for one or the other or both of them.

Q. Well, some routes, it's possible that one of those railroad's routes to or from the gateway to the shipper could be meaningfully more circuitous?

A. Right. So that's what I meant. I mean, it wouldn't be that BNSF and CSX aren't compatible, but it might be that CSX and/or BNSF is less attractive.

Q. That would make them less compatible with each other from the shipper's perspective, no?

MR. LUDWIN: Object to form, asked and answered.

THE WITNESS: That's not how I would describe that. I would just say that they're still compatible. Just one or the other of them is less appealing as a partner.

BY MR. van HOUWELINGEN:

Q. Have you conducted any empirical analysis of whether BNSF and CSX legs are less compatible for at least some commodities and shippers?

A. No, for the same reason as in my last answer.

MR. van HOUWELINGEN: Why don't we go off the record.

THE VIDEOGRAPHER: Going off the record. The time is 3:24.

(Whereupon, a recess was taken from 3:24 p.m. to 3:27 p.m.)

THE VIDEOGRAPHER: We are on the record. The time is 3:27.

EXAMINATION

BY MS. HYNES:

Q. Good afternoon, Dr. Israel.

A. Good afternoon.

Q. My name is Samantha Hynes. I represent CPKC.

means short of a merger?

MR. LUDWIN: Object to form.

THE WITNESS: I mean, I think that's been happening in the railroad industry for a long time. They try to achieve what they can by interline and alliances, and that leaves, you know, an absence of single-line movements and an absence of integrated networks, and so there's a lot left to be gained.

So I think what's incremental to what they've already tried to accomplish is mostly still on the table.

BY MS. HYNES:

Q. Did you do any sort of analysis of whether or not there's still additional interlining that could be done between UP and NS to achieve some of the merger benefits that they would set out?

MR. LUDWIN: Object to form.

THE WITNESS: No, not specifically interlining, no.

BY MS. HYNES:

Q. So what's your basis for saying that none of the benefits could be achieved by a means short of a merger?

A. I mean, much of the benefit is -- that I talk about and contribute is single-lining and elimination of double marginalization, which I think are inherent to a single railroad.

Beyond that, I guess I'm not saying there's absolutely nothing that someone could do better as alliances. It's just economics saying they have been a long time trying to maximize profits as separate railroads.

And so, again, I wouldn't say my opinion is there's nothing they could possibly do better, but there's a fundamental failure when you maximize separate profit pools that can only be overcome as a matter of the merger. That's an opinion based on economics.

Q. Okay. When you talk about the single-lining benefits, those are operational, right?

MR. LUDWIN: Object to form.

THE WITNESS: If you mean the changing of the network part, yes.

BY MS. HYNES:

Q. And you didn't do any analysis of whether or not there are ways for the parties to make

operational improvements short of a merger?

MR. LUDWIN: Object to -- sorry. Object to form.

THE WITNESS: Yeah, I didn't study operational improvements. I mean, I think single-lining in railroads would require you to be one railroad.

But, again, what I'm -- other people have studied the operational synergies they're going to make. I think what I can offer here most is, I think, is sort of Nobel Prize-winning economics about why that all can't be done without a merger. But, again, I'm just offering the economics behind what other people have done about the operations.

BY MS. HYNES:

Q. But behind your statement that single-lines are preferable, we were talking earlier, for example, about interchanges.

You haven't done any analysis to determine whether or not the parties could work operationally to decrease the amount of time they're spending at an interchange, for example?

A. I haven't --

MR. LUDWIN: Objection.

THE WITNESS: -- studied the railroad operations of that.

BY MS. HYNES:

Q. There's various places in your opinion you suggest that, for example, BNSF-CSX can put competitive pressure on the merged UP-NS; is that right?

A. Yes.

Q. How are you -- how am I to square that with your opinion that there's such great benefits to single-line that it's difficult to coordinate a strong competitive option?

MR. LUDWIN: Object to form.

THE WITNESS: I mean, one railroad gets better and becomes higher quality and lower cost, probably lowers its prices, the most obvious thing the other railroad could do would be to cut its prices.

It could also invest more, so each railroad could improve itself by spending more money on investments. It's still going to -- they are going to have this problem that they're somewhat constrained by being separate

So I would say it's a combination of economics, plus what I talk to and what I see on the low end of the differential prices we were talking about before.

Q. Is this based on -- is your conclusion based on any discussion with Union Pacific or Norfolk Southern?

A. I mean, not the conclusion that comes out of this section. This is just analyzing one particular case that could happen.

Q. I'd like to direct your attention now to Paragraph 91 of your April verified statement. It's on Page 45.

Actually, let's start with Paragraph 90 at the bottom of Page 44.

You say, at the end of Paragraph 90, "To the extent there remains any concern that some of these edge cases may slip through and apply the isolated atypical transactions, those are the situations that the open gateway commitments are designed to address."

Do you see that sentence?

A. I do.

Q. Okay. On Page 45, Paragraph 91, you have

good comparables to use because, again, the situations we're talking about, as I understand it, are, like bottlenecks, like one -- you know, a sole-served on one side, two on the other, which means the merged carrier is itself providing service.

And so it seems to me the most likely situation where somebody would complain would be the merged railroad's own rate is not going up or is even going down, but the interline rate is going up.

And I think that creates a simpler situation for a shipper to say this is hard to justify because this rate is going in the opposite direction of these obvious comps.

Q. Are you aware of concerns that shippers have expressed about the cost complexity and length of rate cases?

A. I am.

Q. Are you familiar with STB efforts to reform its rate review process to make it more accessible to shippers?

MR. LUDWIN: Object to form.

THE WITNESS: At a general level, I know that has occurred. I don't know the ins and

C E R T I F I C A T E

The within and foregoing deposition of the witness, MARK A. ISRAEL, Ph.D., was taken before GREG S. WEILAND, CSR, RDR, CRR, at 850 Tenth Street, N.W., Washington, D.C., commencing at 9:08 o'clock a.m., on the 15th day of October, 2026.

The said witness was first duly sworn and was then examined upon oral interrogatories; the questions and answers were taken down in shorthand by the undersigned, acting as stenographer; and the within and foregoing is a true, accurate and complete record of all the questions asked of and answers made by the aforementioned witness at the time and place hereinabove referred to.

The signature of the witness was not waived and the deposition was submitted to the deponent as per copy of the attached letter.

The undersigned is not interested in the within case, nor of kin or counsel to any of the parties.

Witness my signature on this 20th day of October, 2026.



GREG S. WEILAND, CSR, RDR, CRR
License No. 084-003472

EXHIBIT 9

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

VIDEOTAPED DEPOSITION

The DEPOSITION OF GRANT JANKE, taken on behalf of the BURLINGTON NORTHERN, at the Law Office of Kutak Rock, 1650 Farnam Street Omaha, Nebraska on the 1st day of September, 2026 at 8:05 a.m. CT

personnel do not have labor union representation.

Q. And if I look at Table 3, so if you flip over to Page 19, you are projecting by year 3, 260 million in management personnel savings; is that right?

A. That is correct.

Q. And 131 million in agreement personnel savings; is that right?

A. That is correct.

Q. And we -- "personnel savings" means reduced employee head count, correct?

MR. KELLY: Object to form.

THE WITNESS: That is -- yes, it does.

BY MR. CONGDON:

Q. Right. It says in Paragraph 57, the first sentence: Savings from reductions in personnel consist of avoided salaries and benefits, right?

A. Yes.

Q. These are personnel that are no longer working for UP or NS as a result of the merger, correct?

A. There is a reduction in the number of people working relative to where we are at today, yes.

Q. And then in Paragraph 57 there, you say:

THE WITNESS: I believe that we should price our product at a level that a customer deems that we are providing the value for what service we are providing.

BY MR. THOMPSON:

Q. Have you heard -- are you aware of any internal plans for Union Pacific to lower its rates on customers if the merger is approved?

MR. KELLY: Objection, form, vague.

THE WITNESS: I am not part of any of those discussions.

BY MR. THOMPSON:

Q. Well, are you -- well, I don't think that was an answer to my question. I understand you might not be a part of those discussions, but my question is, are you aware of any internal plans for Union Pacific to lower its rates on customers if the merger is approved?

MR. KELLY: Objection, form, argumentative, vague.

THE WITNESS: I am not aware.

BY MR. THOMPSON:

Q. Will UP raise rates on customers post merger?

MR. KELLY: Objection, foundation, calls for speculation.

THE WITNESS: I do not know that. It is not something that I am responsible for.

BY MR. THOMPSON:

Q. By how much will UP raise rates on customers post merger?

MR. KELLY: Objection, foundation, assumes facts.

THE WITNESS: I don't know. I am not -- that's not something I am responsible for.

BY MR. THOMPSON:

[redacted]

STATE OF ILLINOIS)
) SS.
COUNTY OF DUPAGE)

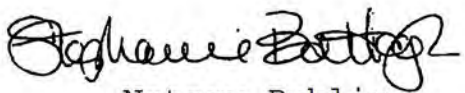
I, STEPHANIE A. BATTAGLIA, CSR and Notary Public in and for the County of DuPage and State of Illinois, do hereby certify that on September 1, 2026, at 8:05 a.m., at Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, the deponent GRANT JANKE personally appeared before me.

I further certify that the said GRANT JANKE was by me first duly sworn to testify and that the foregoing is a true record of the testimony given by the witness.

I further certify that the deposition was terminated at 4:56 p.m.

I further certify that I am not counsel for nor related to any of the parties herein, nor am I interested in the outcome hereof.

In witness whereof, I have hereunto set my hand and seal of office this 4th of September, 2026.



Notary Public

CSR No. 084-003337 - Expiration Date: May 31, 2027

EXHIBIT 10

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILWAY COMPANY

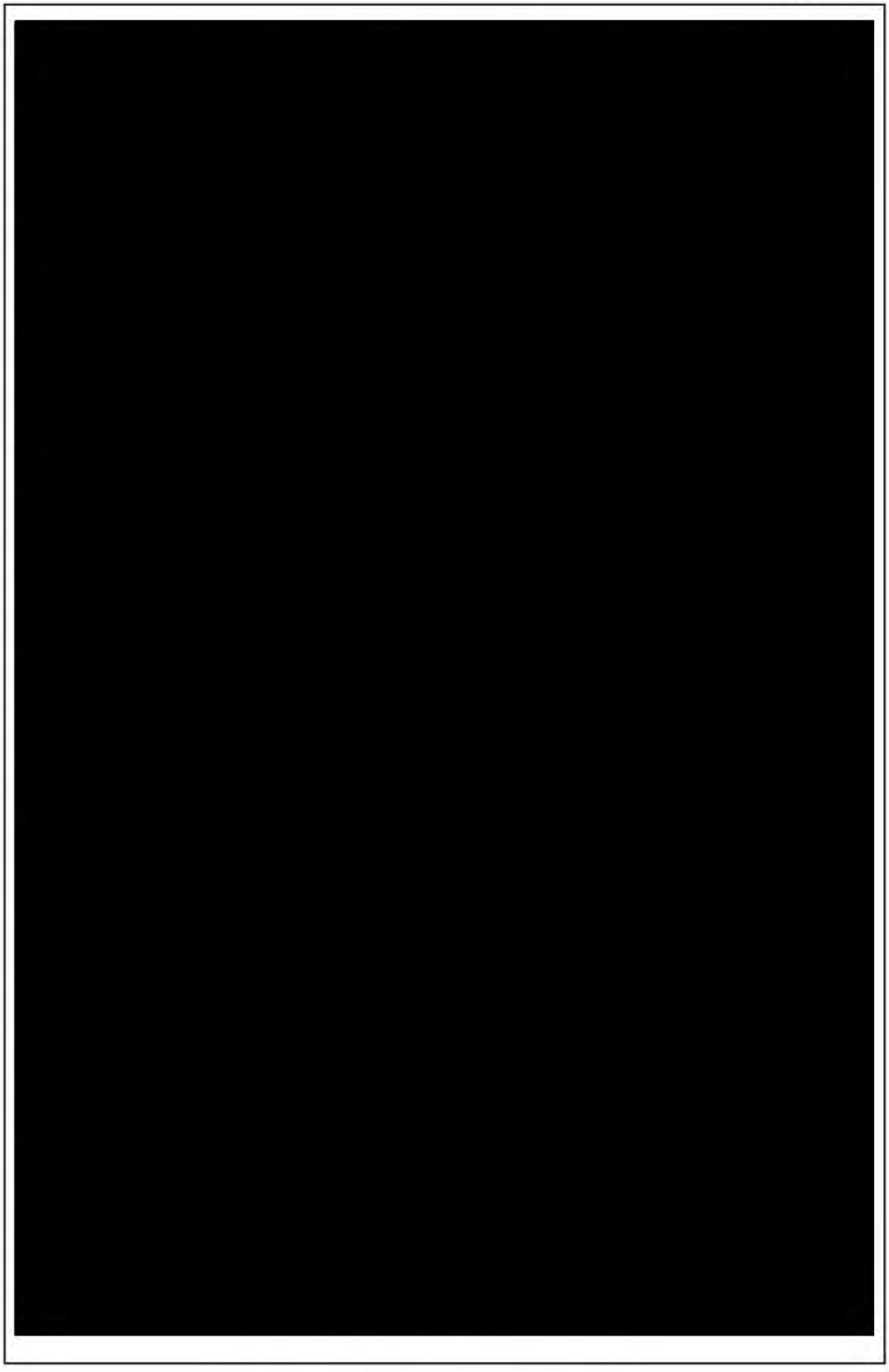
--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

VIDEOTAPED DEPOSITION

The DEPOSITION OF DAVID LEHLBACH, taken on behalf of the Burlington Northern Santa Fe Railway, at the Law Offices of Sidley Austin LLP, 1501 K Street, NW, Washington, DC, 20005, on the 10th day of September, 2026, at 8:32 a.m. EST.



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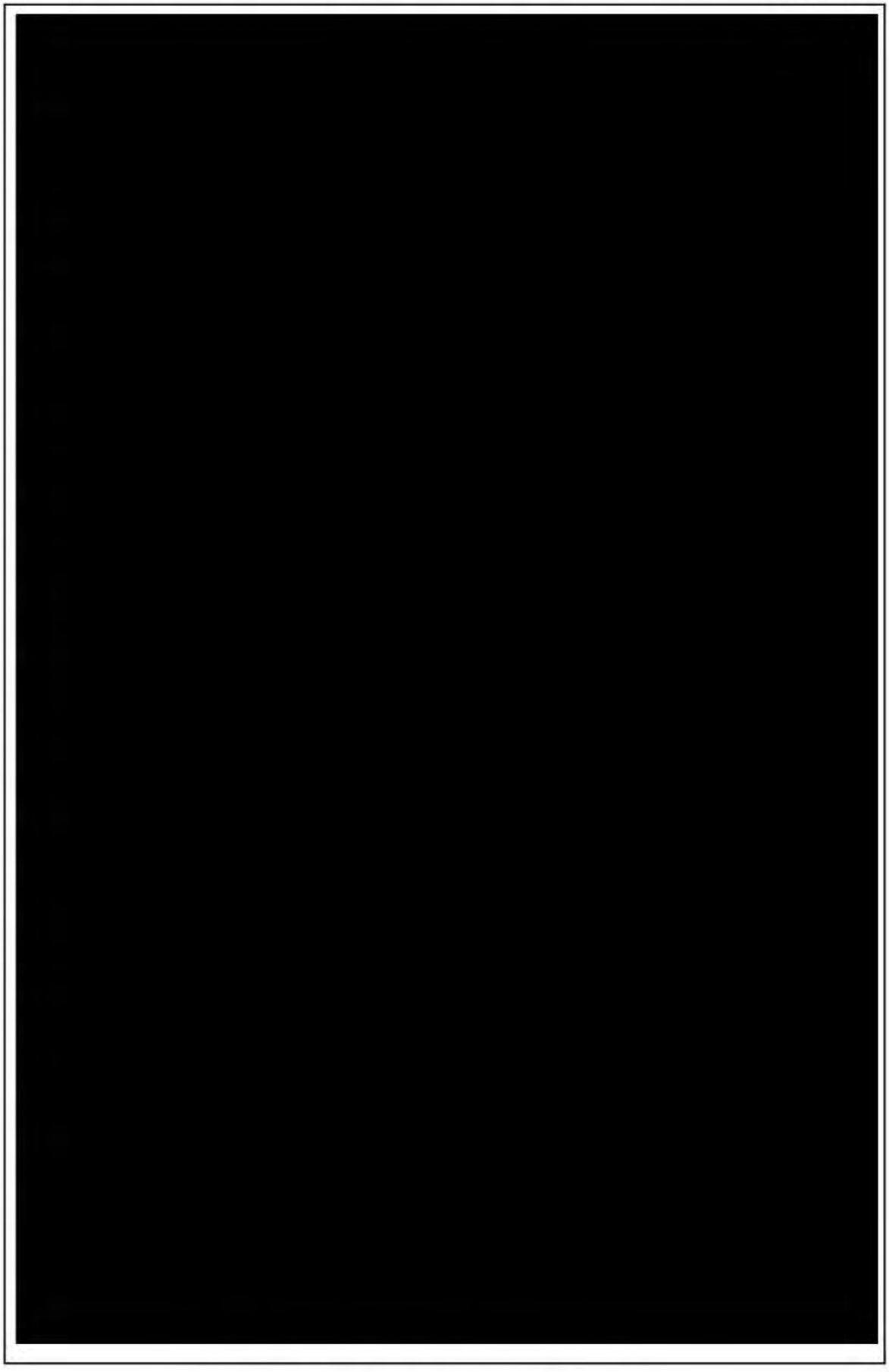
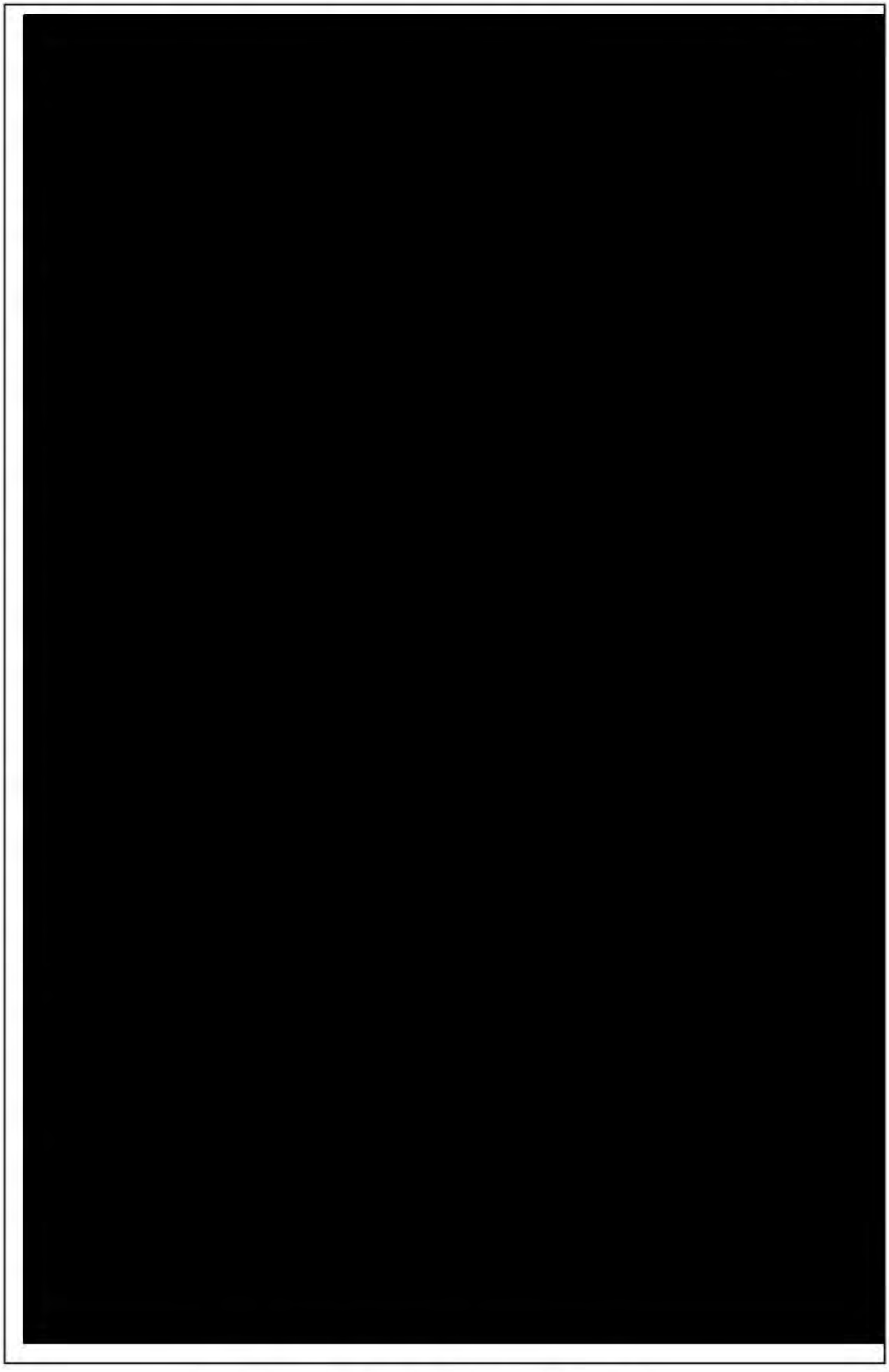




REPORTER CERTIFICATE

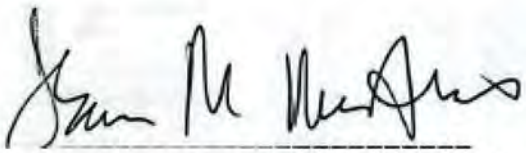
I, TRACI M. MERTENS, RDR, CRR, do hereby certify that there came before me

DAVID LEHLBACH

who was by me first duly sworn to testify to the truth and nothing but the truth of all knowledge touching and concerning the matters in controversy in this cause; that the witness was thereupon carefully examined under oath and said examination was reduced to writing by me; and that this deposition is a true and correct record of the testimony given by the witness and that signature by the witness is reserved.

I further certify that I am neither attorney nor counsel for nor related nor employed by any of the parties to the action in which this deposition is taken; further, that I am not a relative or employee of any attorney or counsel employed by the parties hereto or financially interested in this action.

Dated September 14, 2026.



TRACI M. MERTENS, RDR, CRR

EXHIBIT 11

BEFORE THE SURFACE TRANSPORTATION BOARD

- - -

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY,	:	FINANCE DOCKET NO.
-- CONTROL --	:	36873
NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY.	:	

HIGHLY CONFIDENTIAL
PURSUANT TO PROTECTIVE ORDER

- - -

October 9, 2026

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Videotaped hybrid deposition of MICHAEL R. McCLELLAN, taken pursuant to notice, was held at the law offices of Sidley Austin LLP, 1501 K Street NW, Washington, D.C., beginning at 8:04 a.m., on the above date, before Michelle L. Ridgway, a Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, Certified Court Reporter, and Notary Public.

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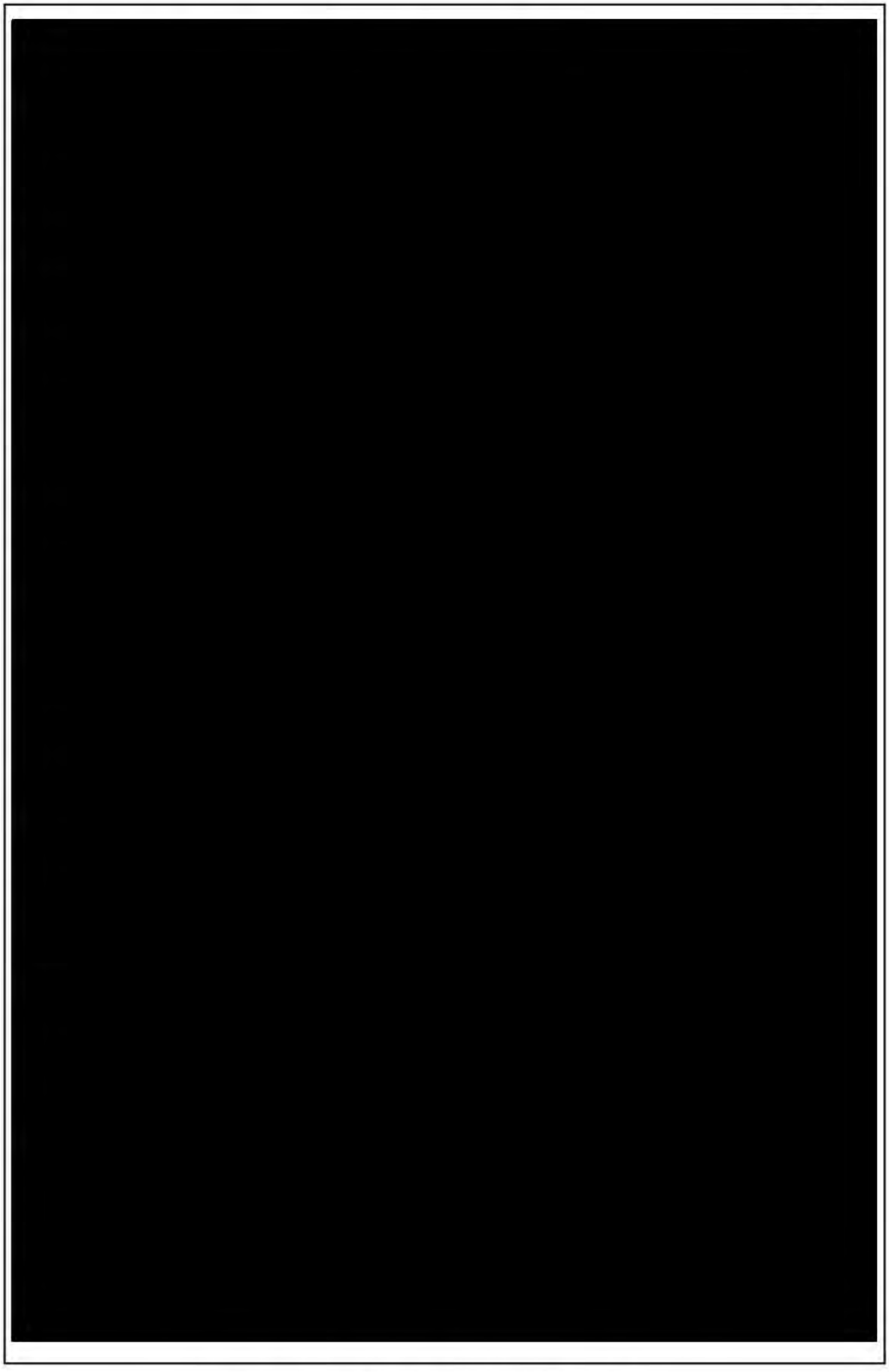

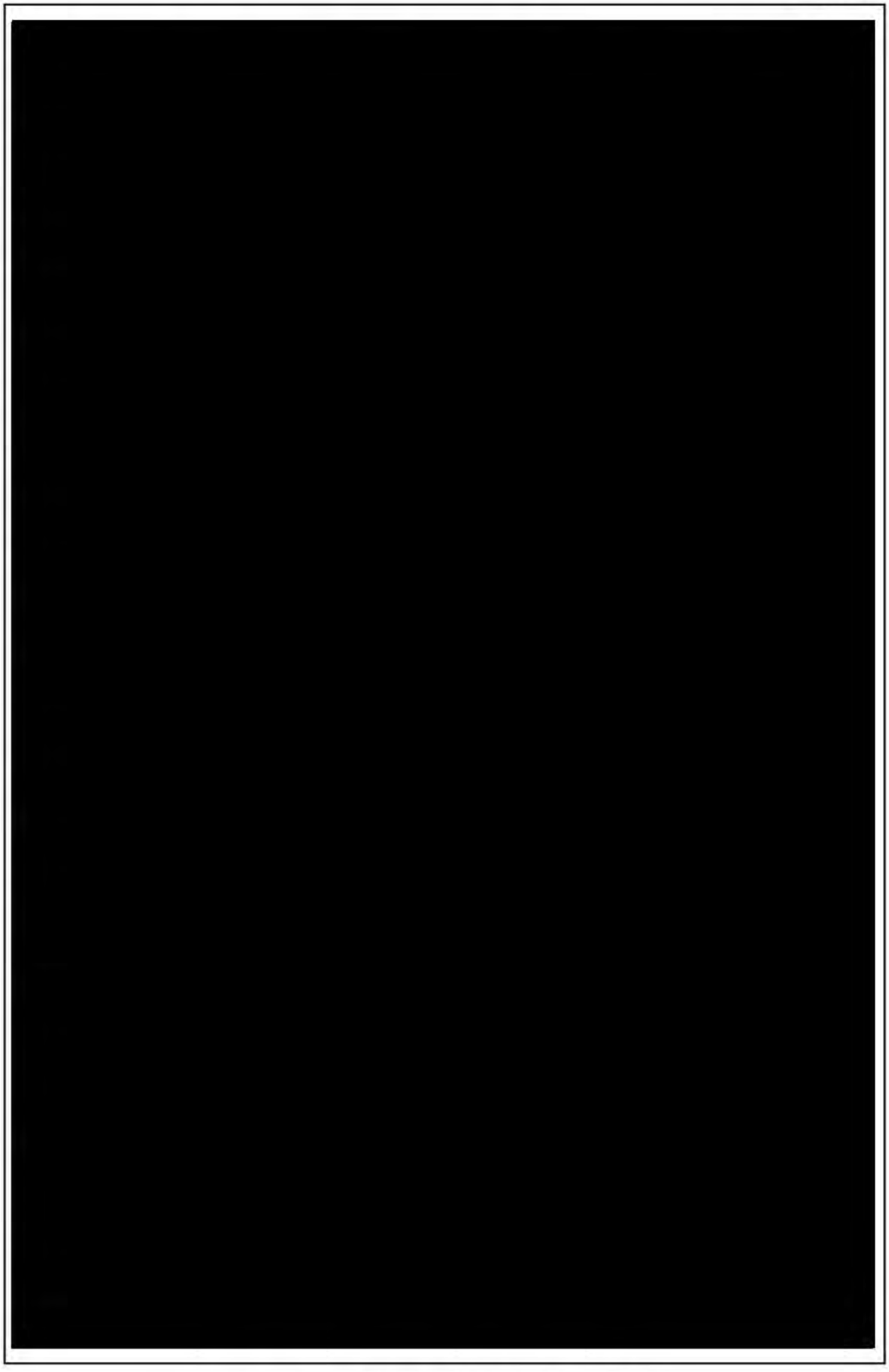

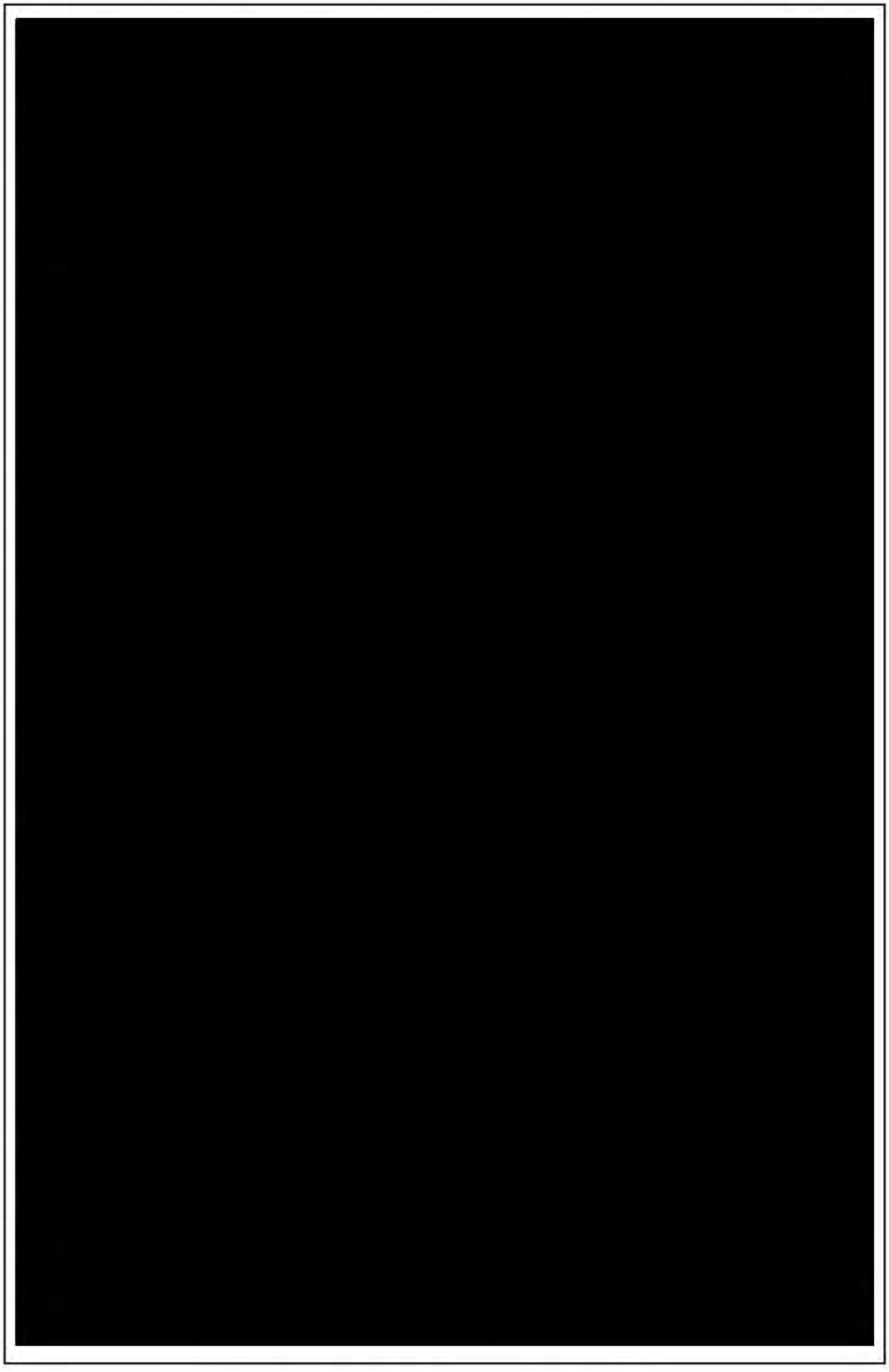

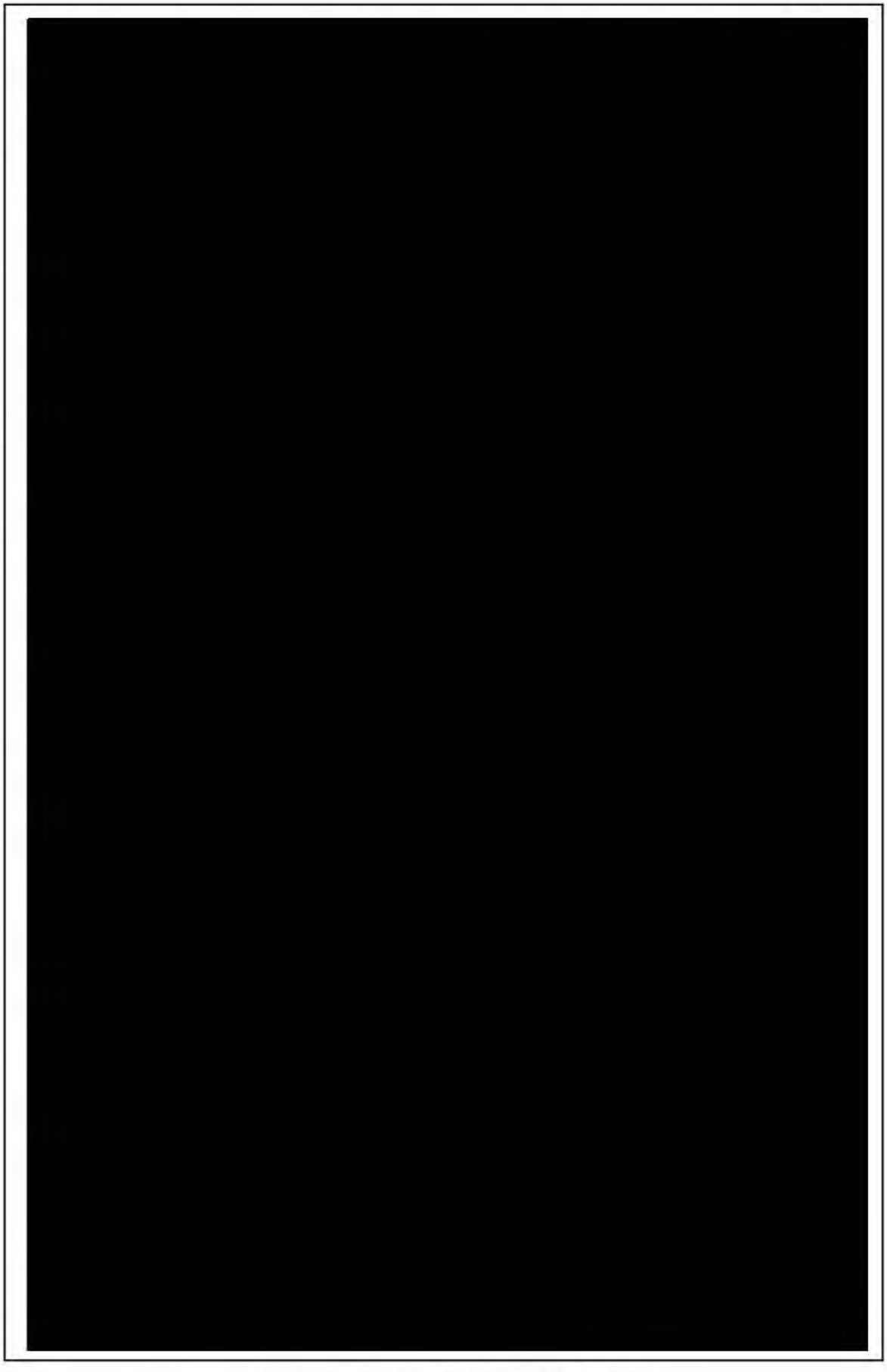

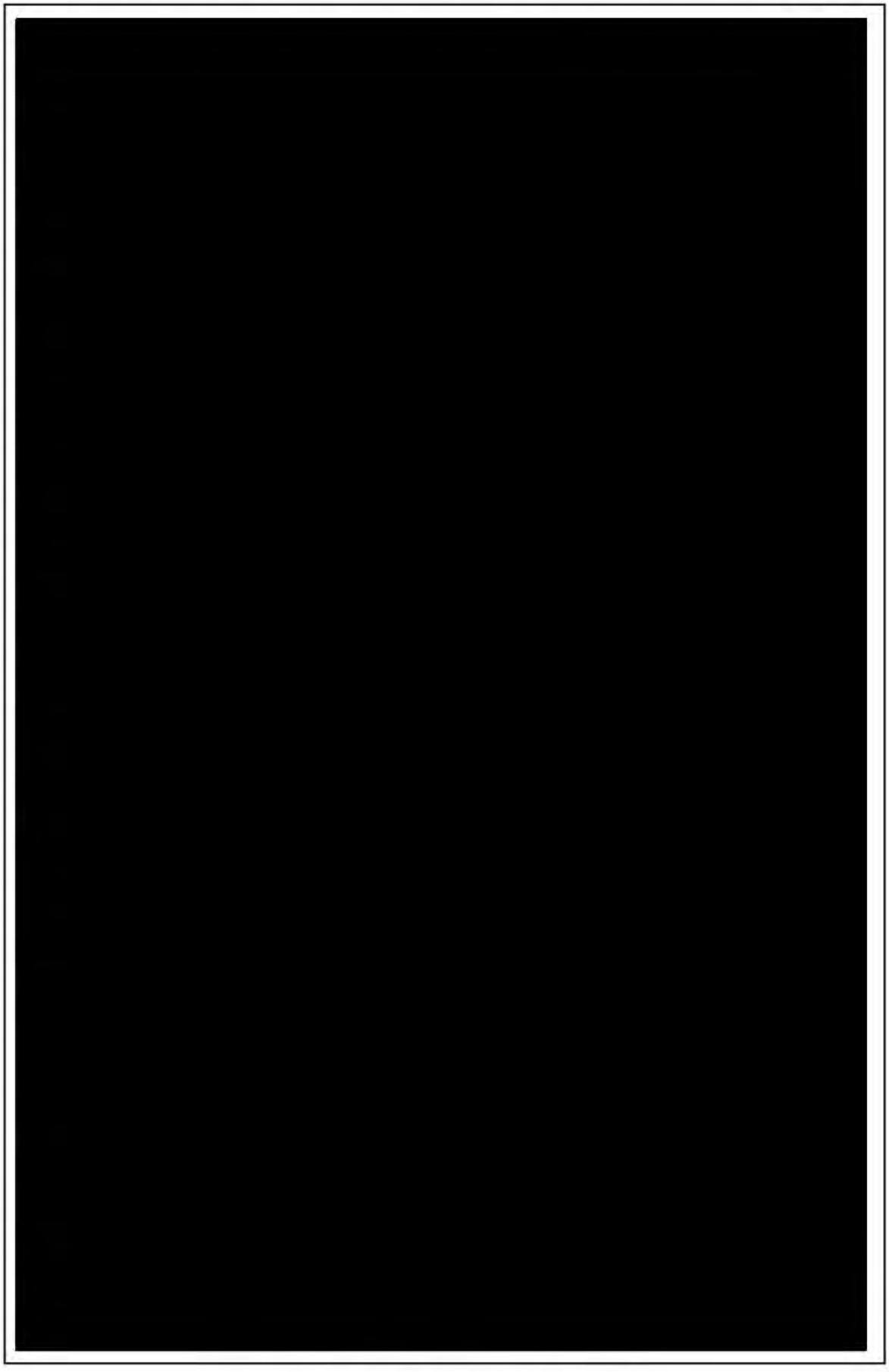

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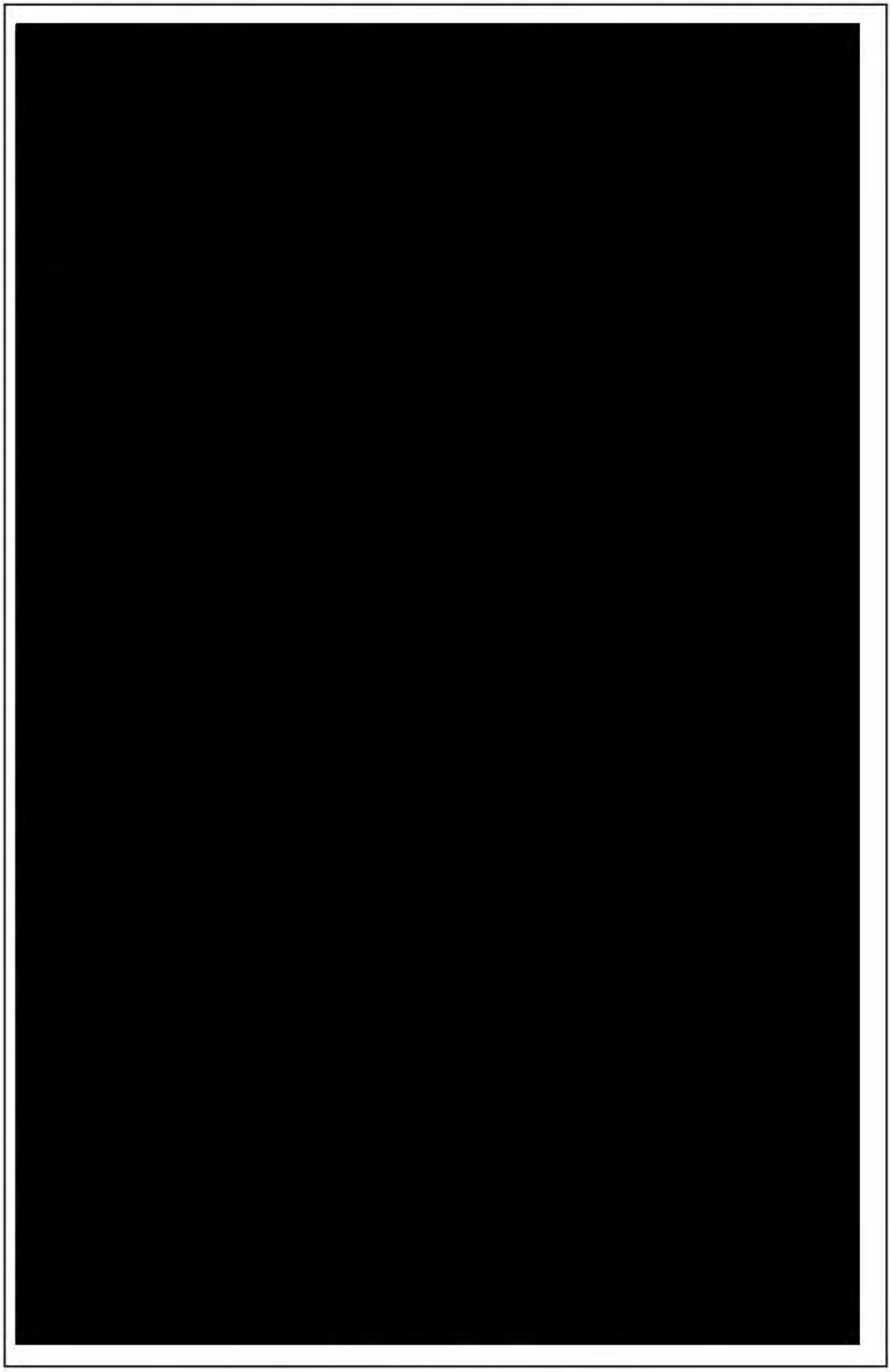

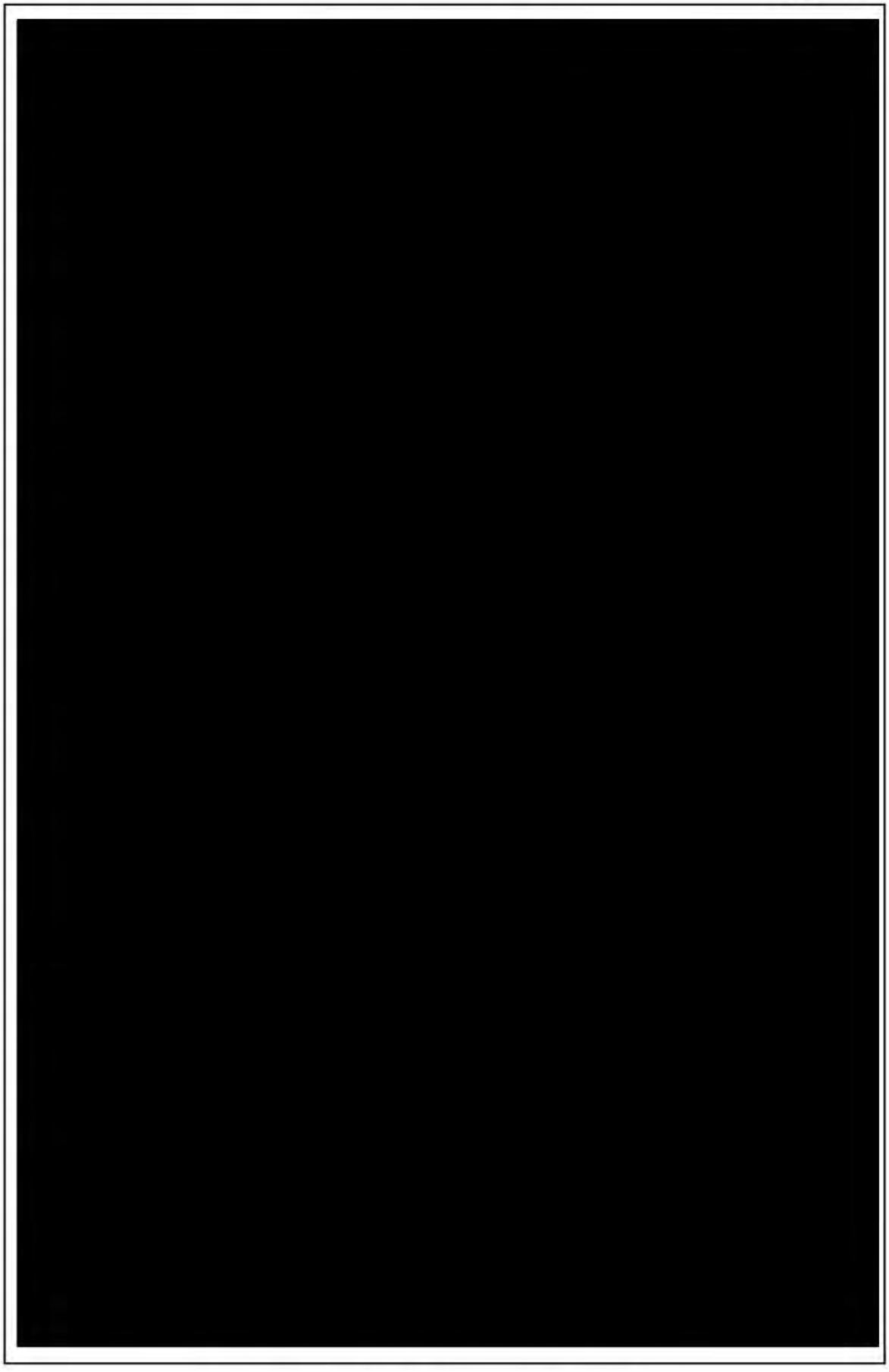

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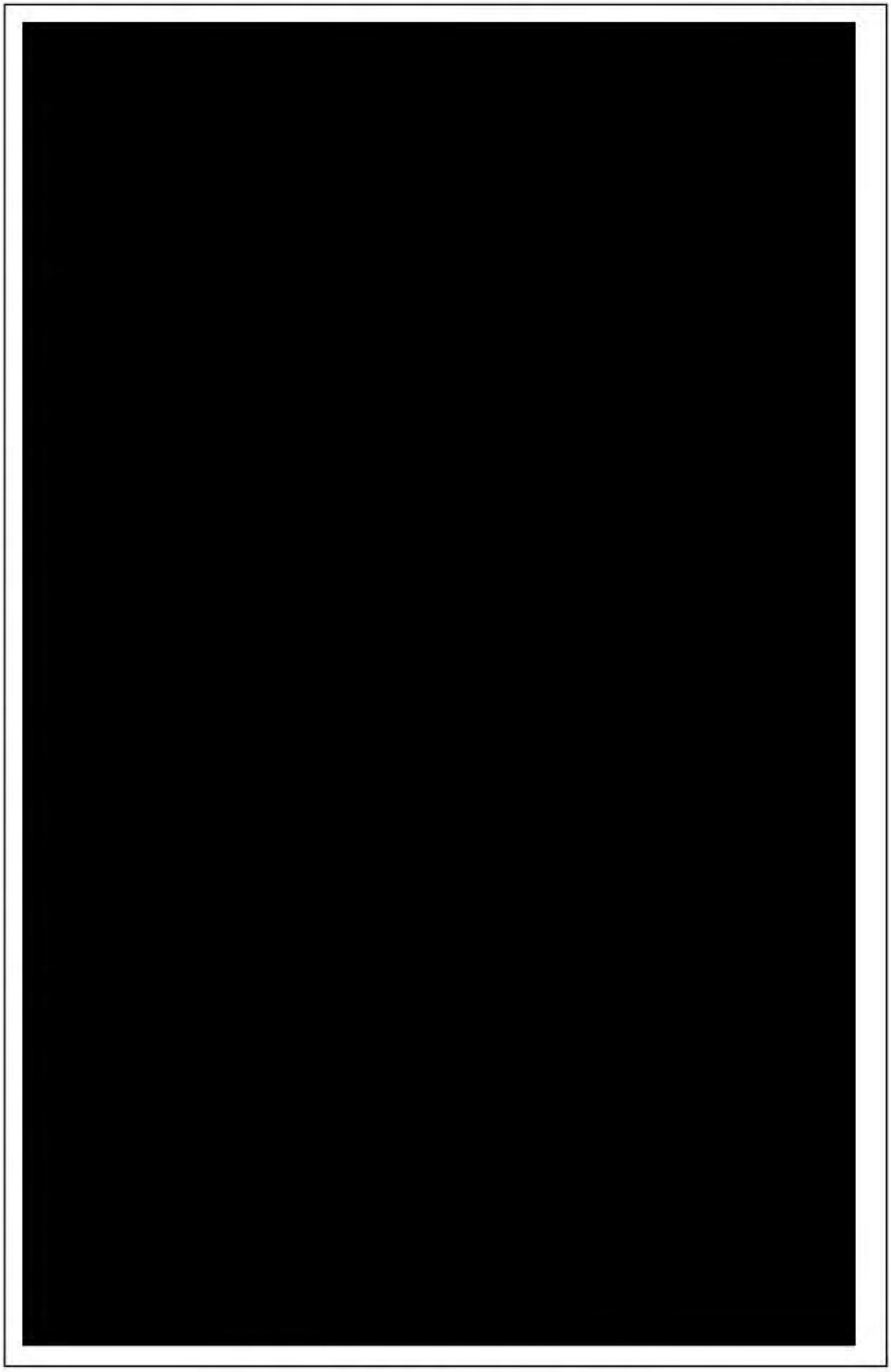

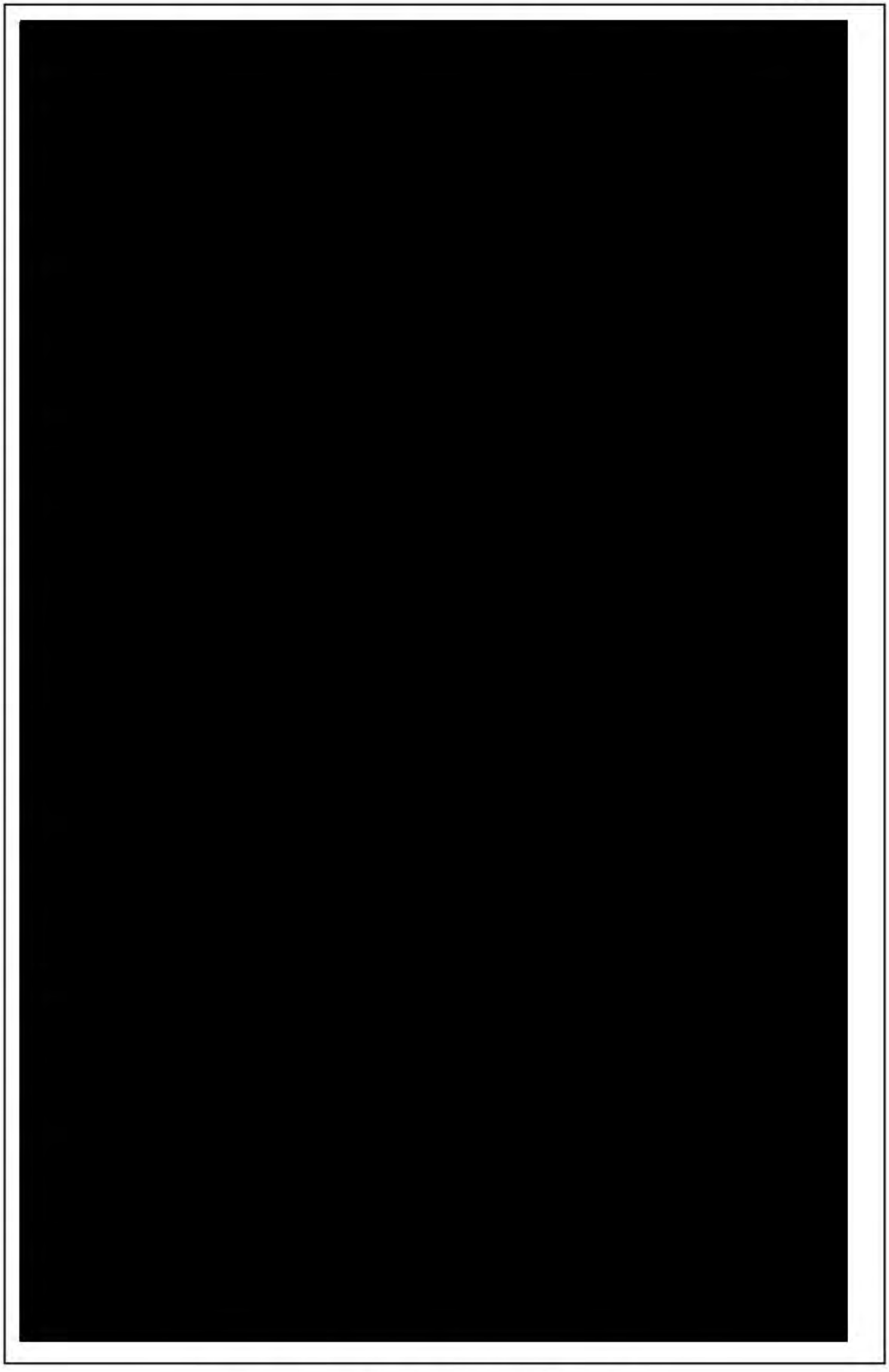

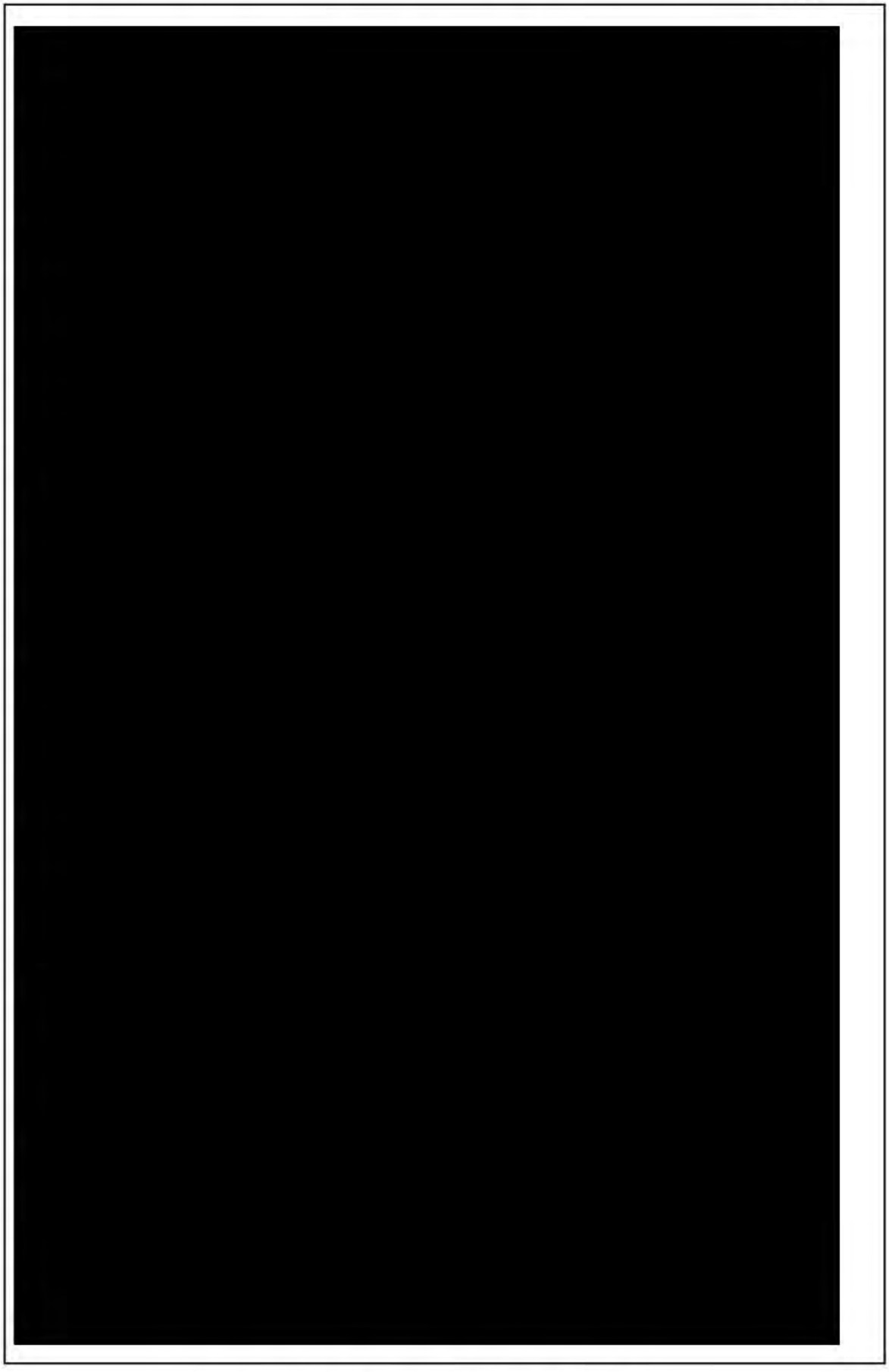

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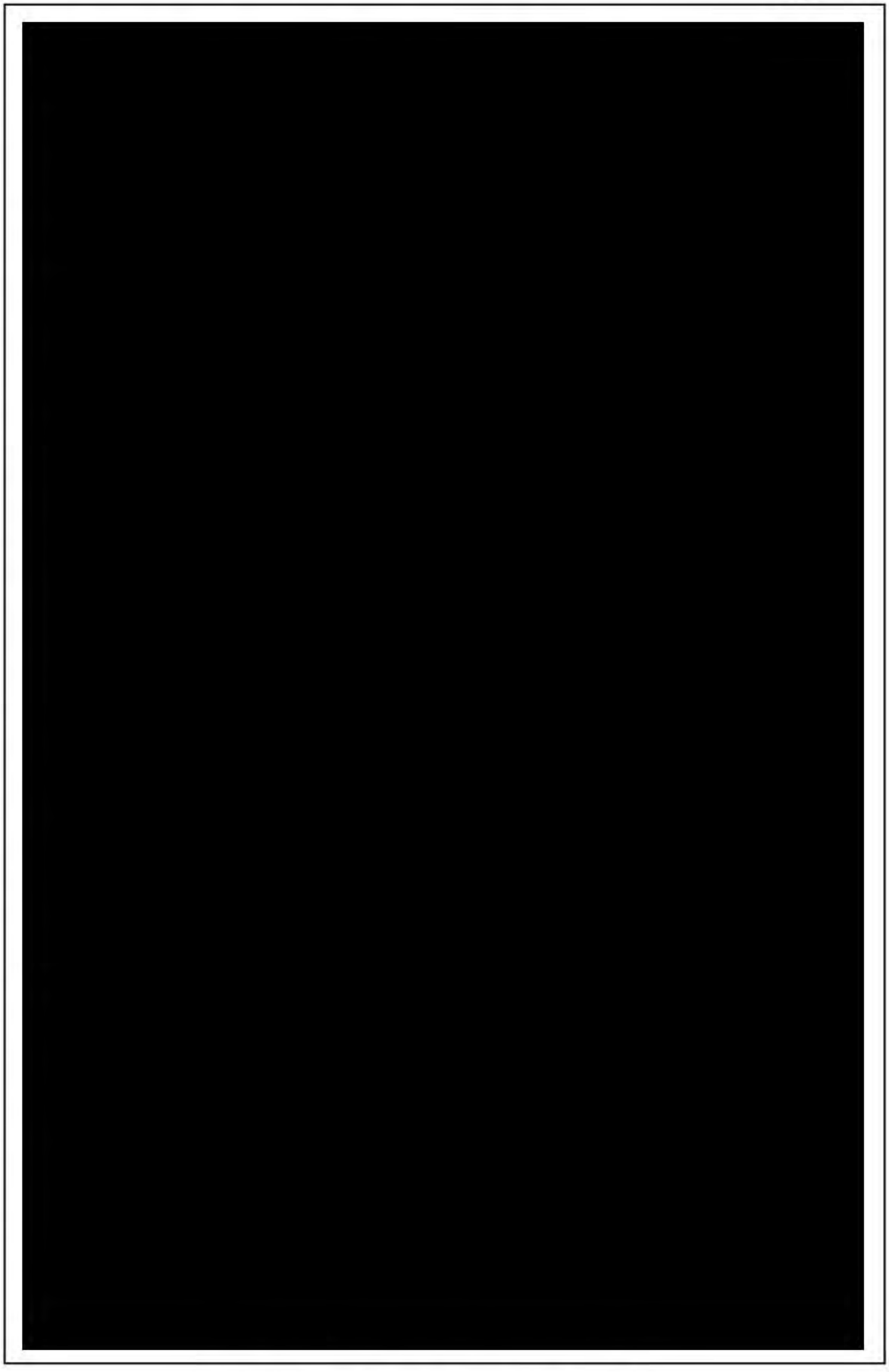

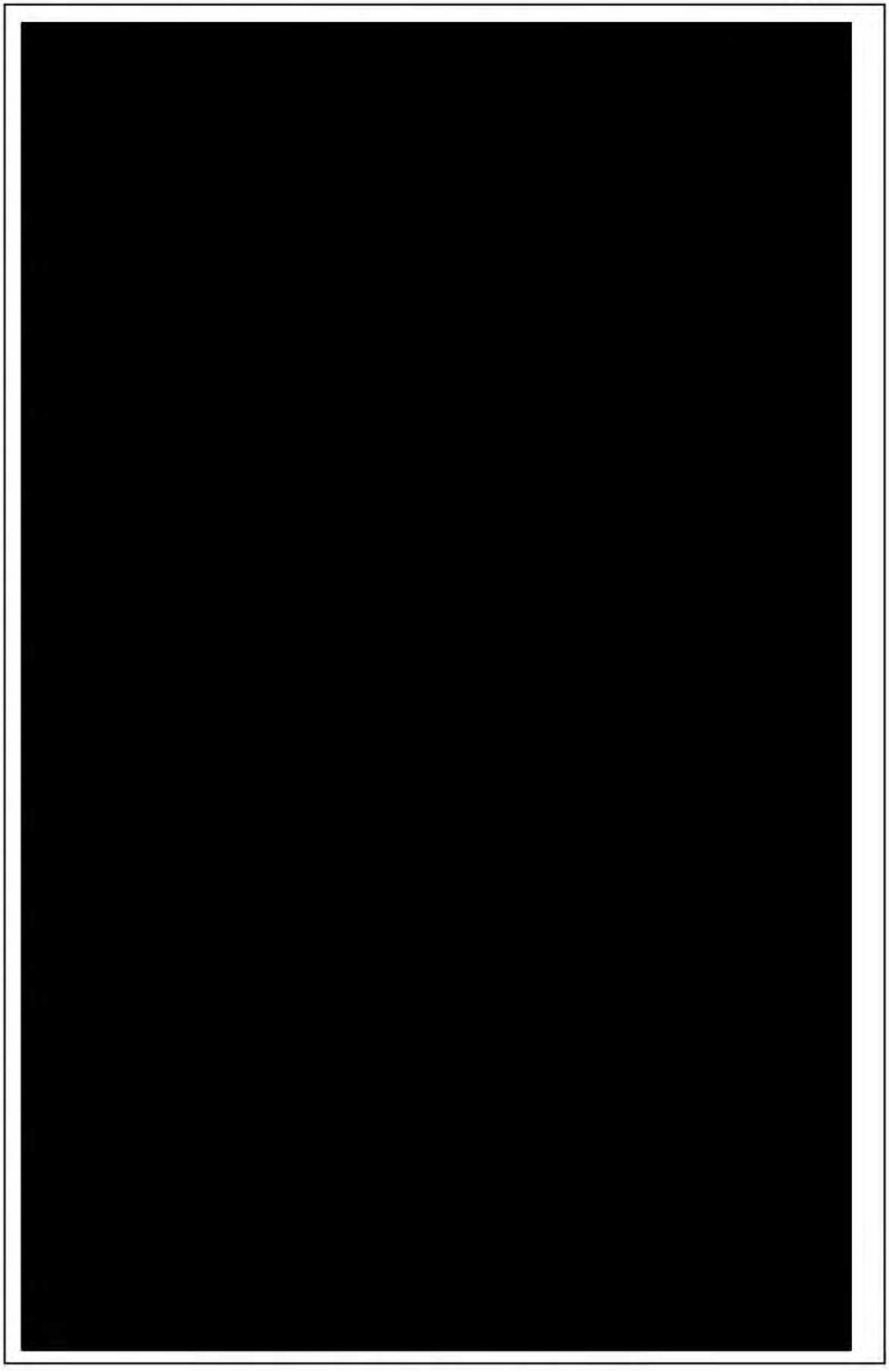

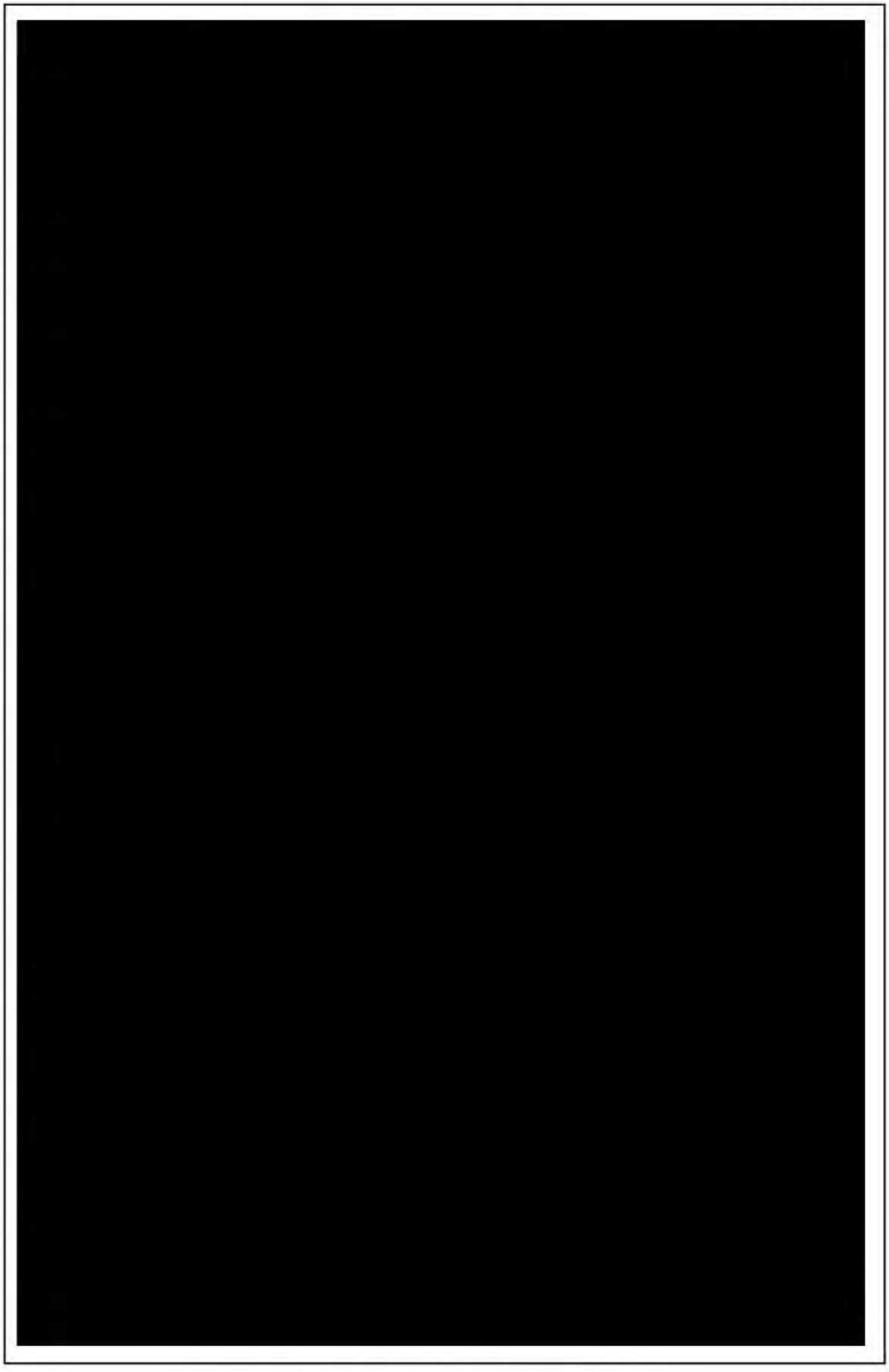

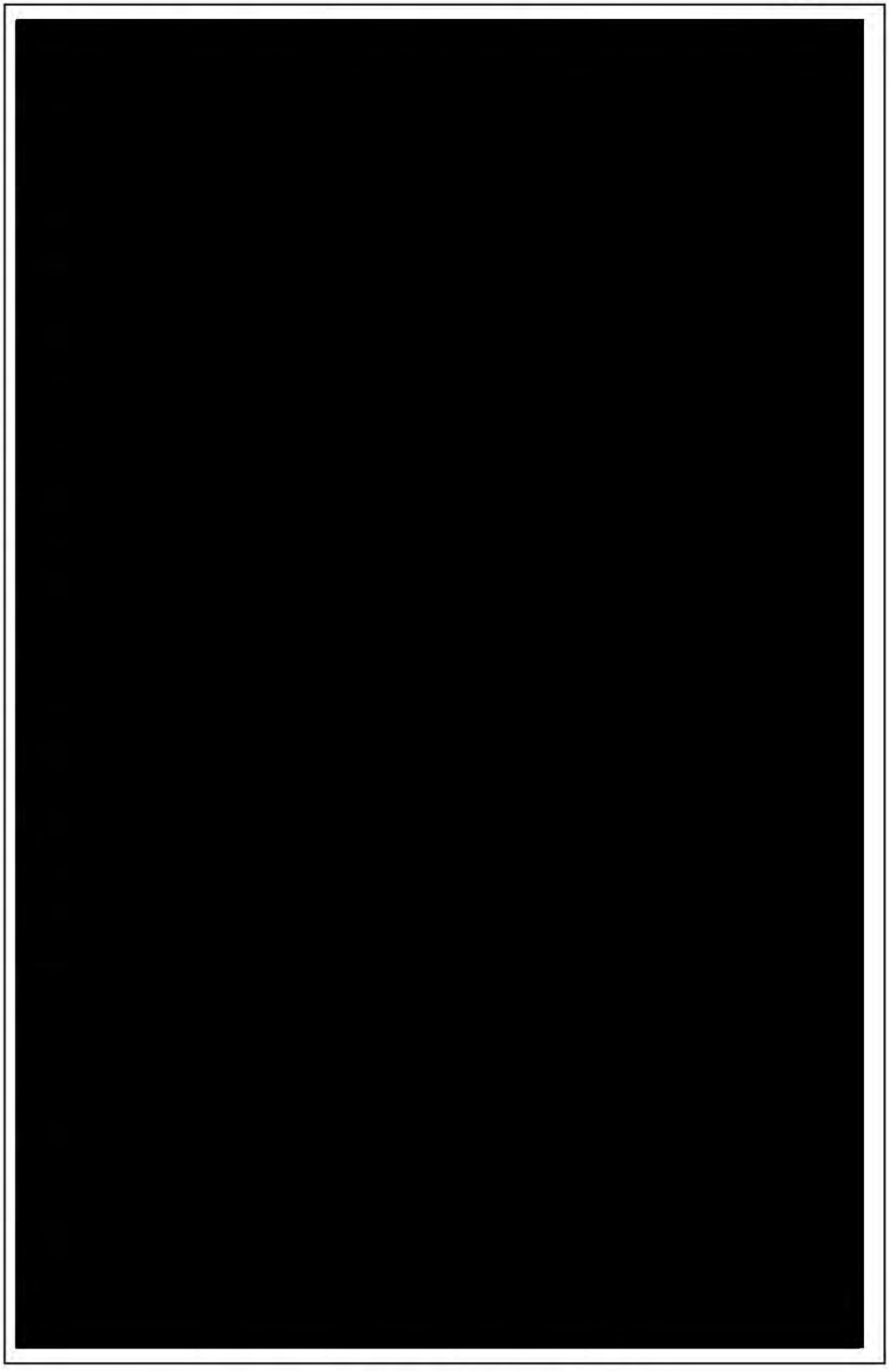

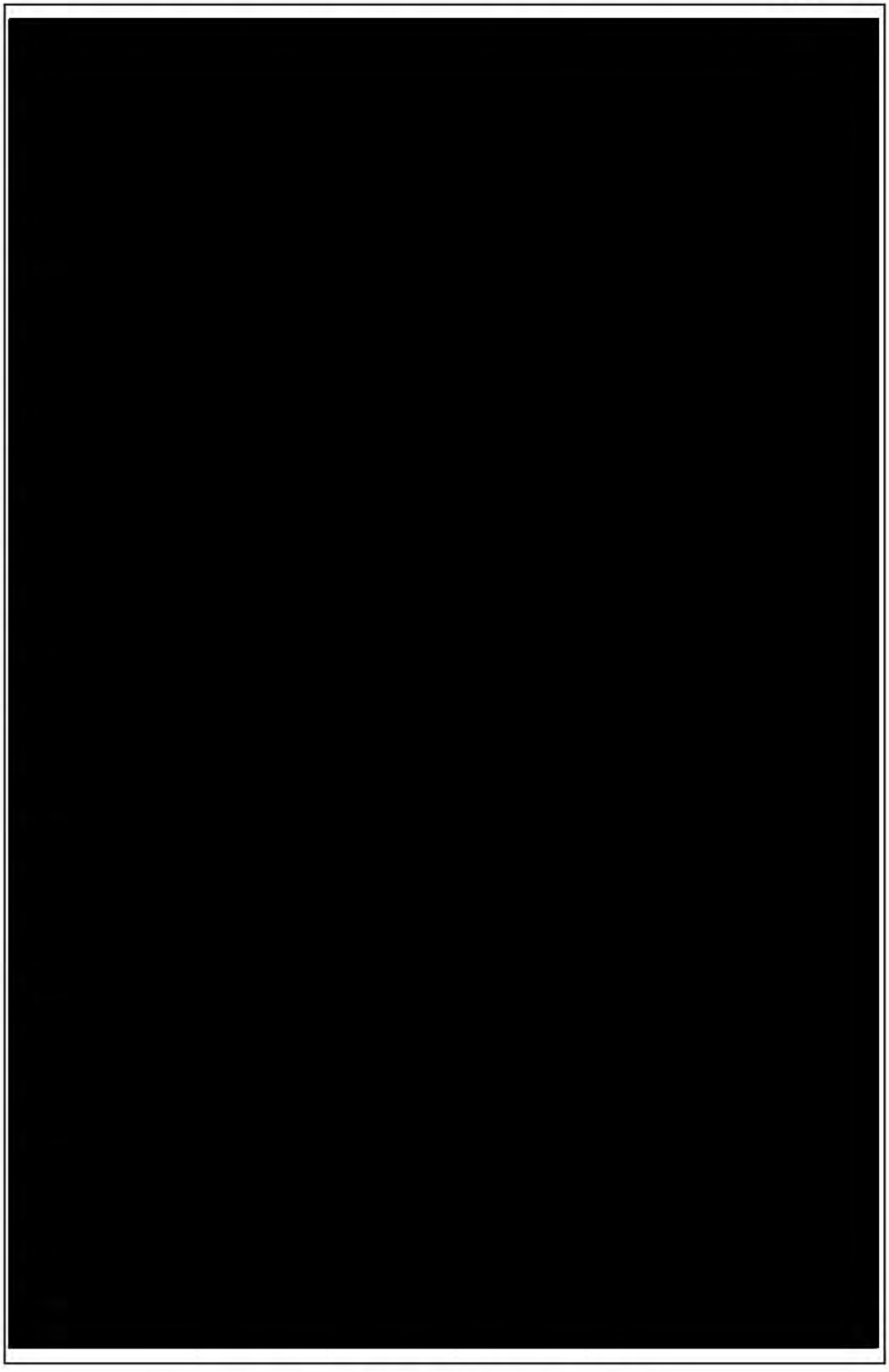

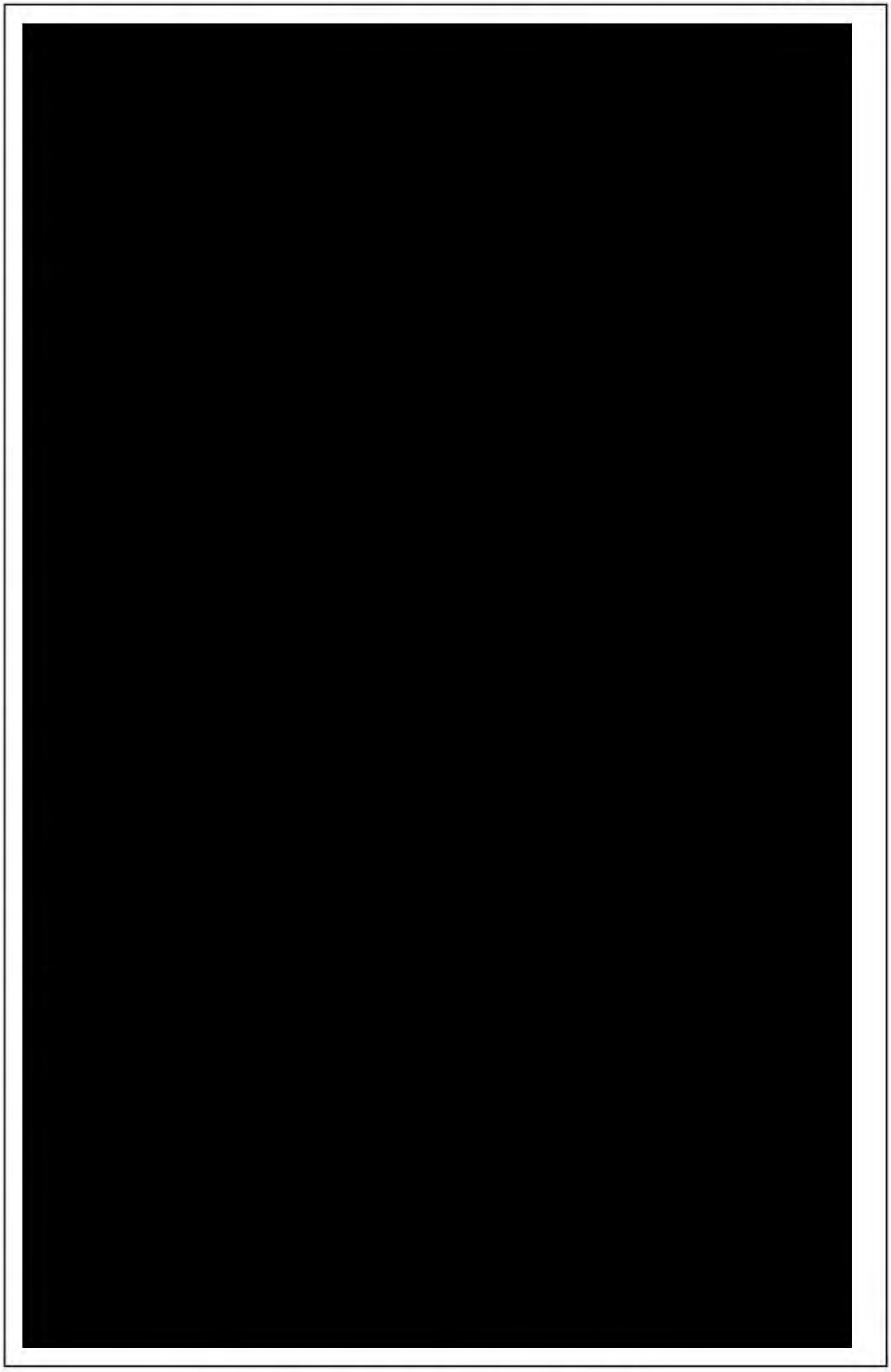

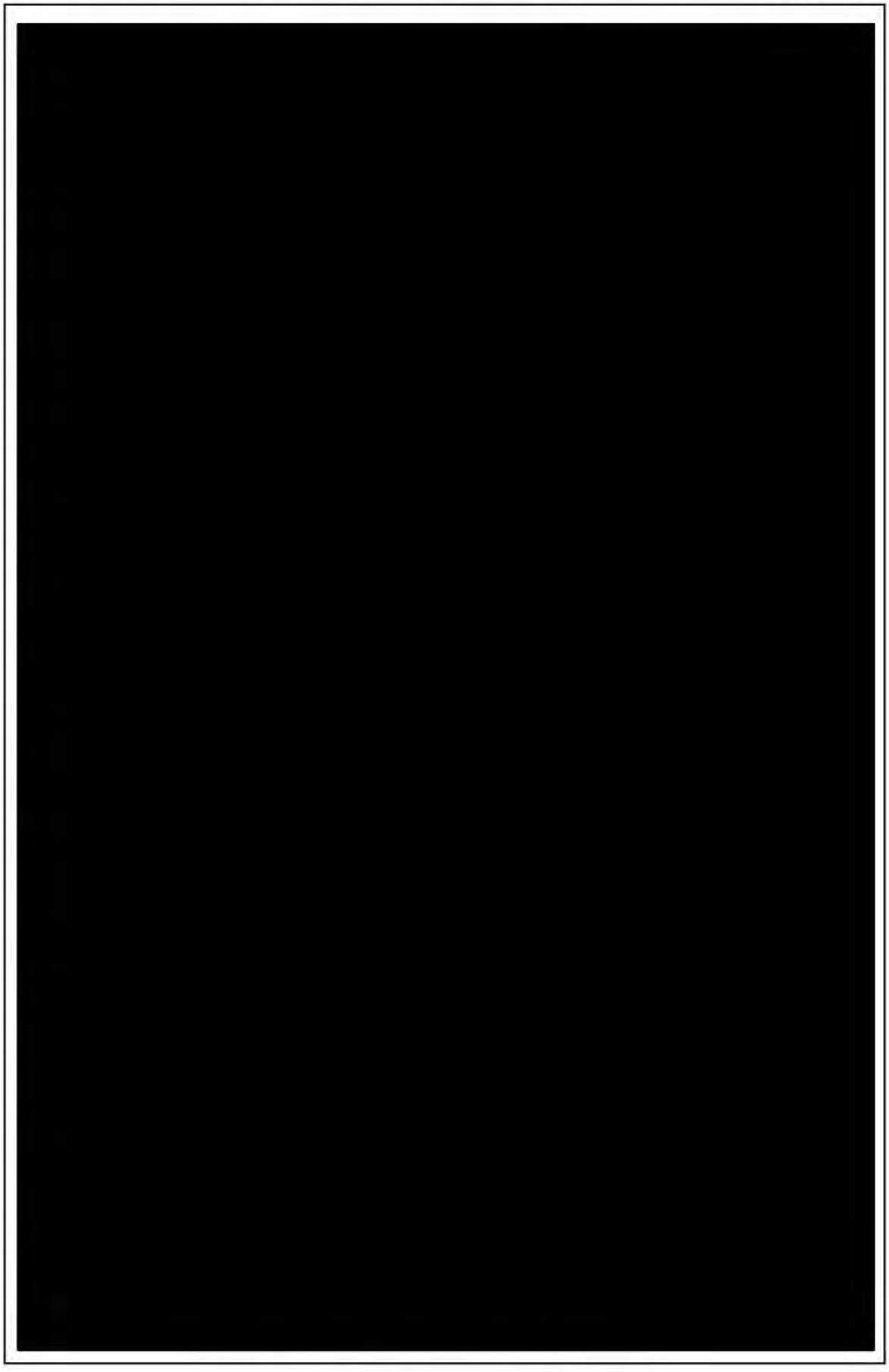

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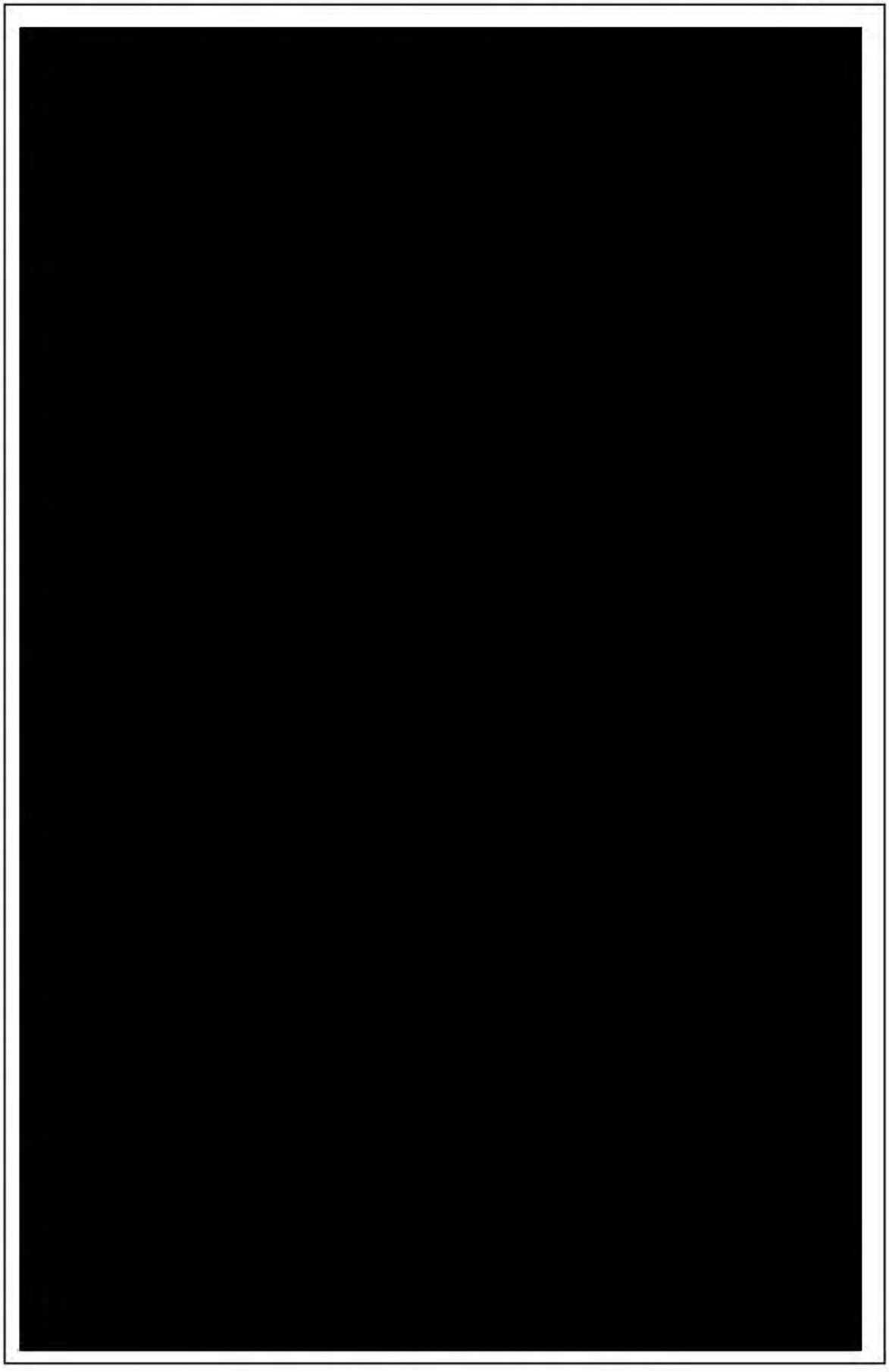

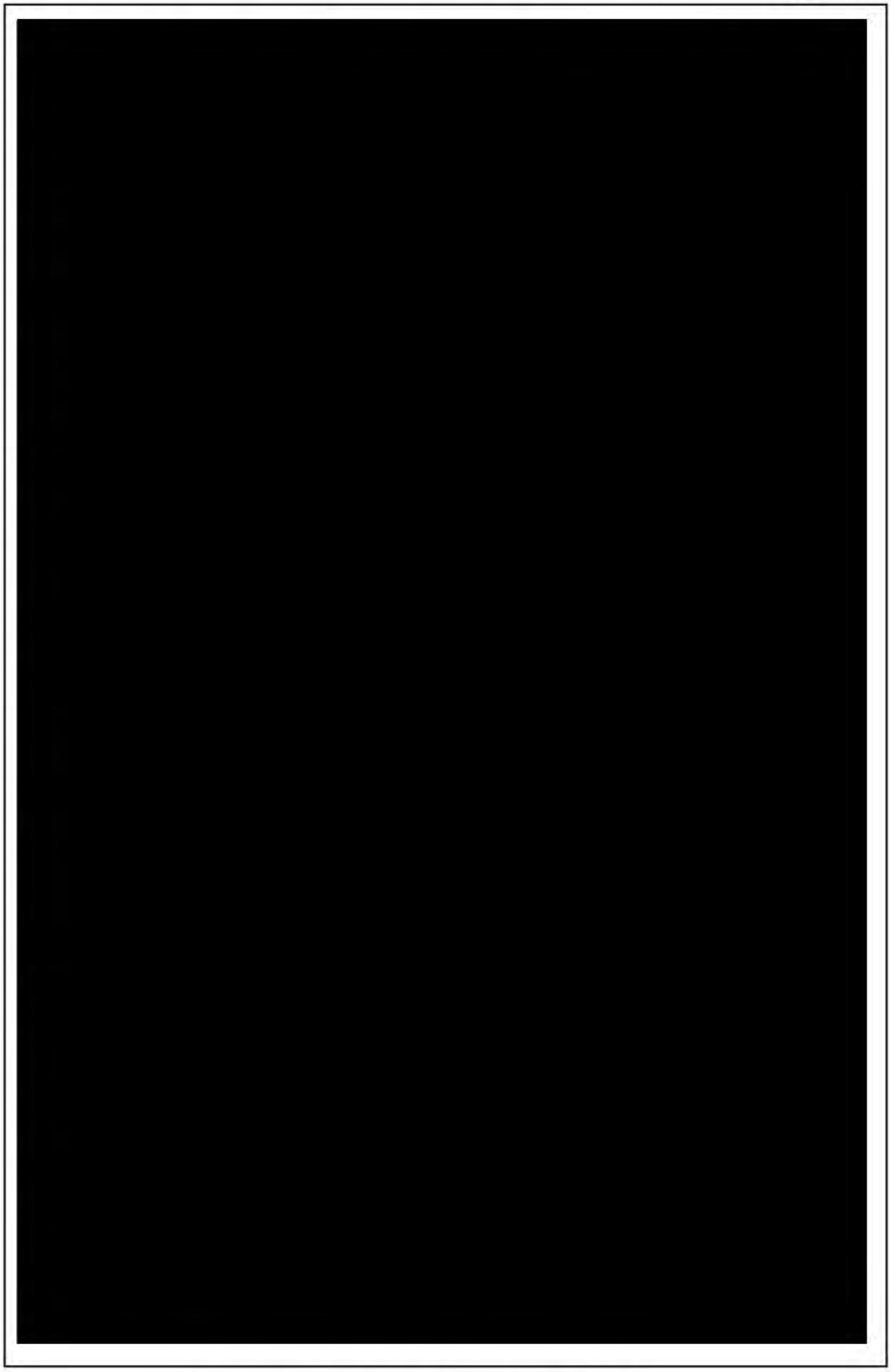

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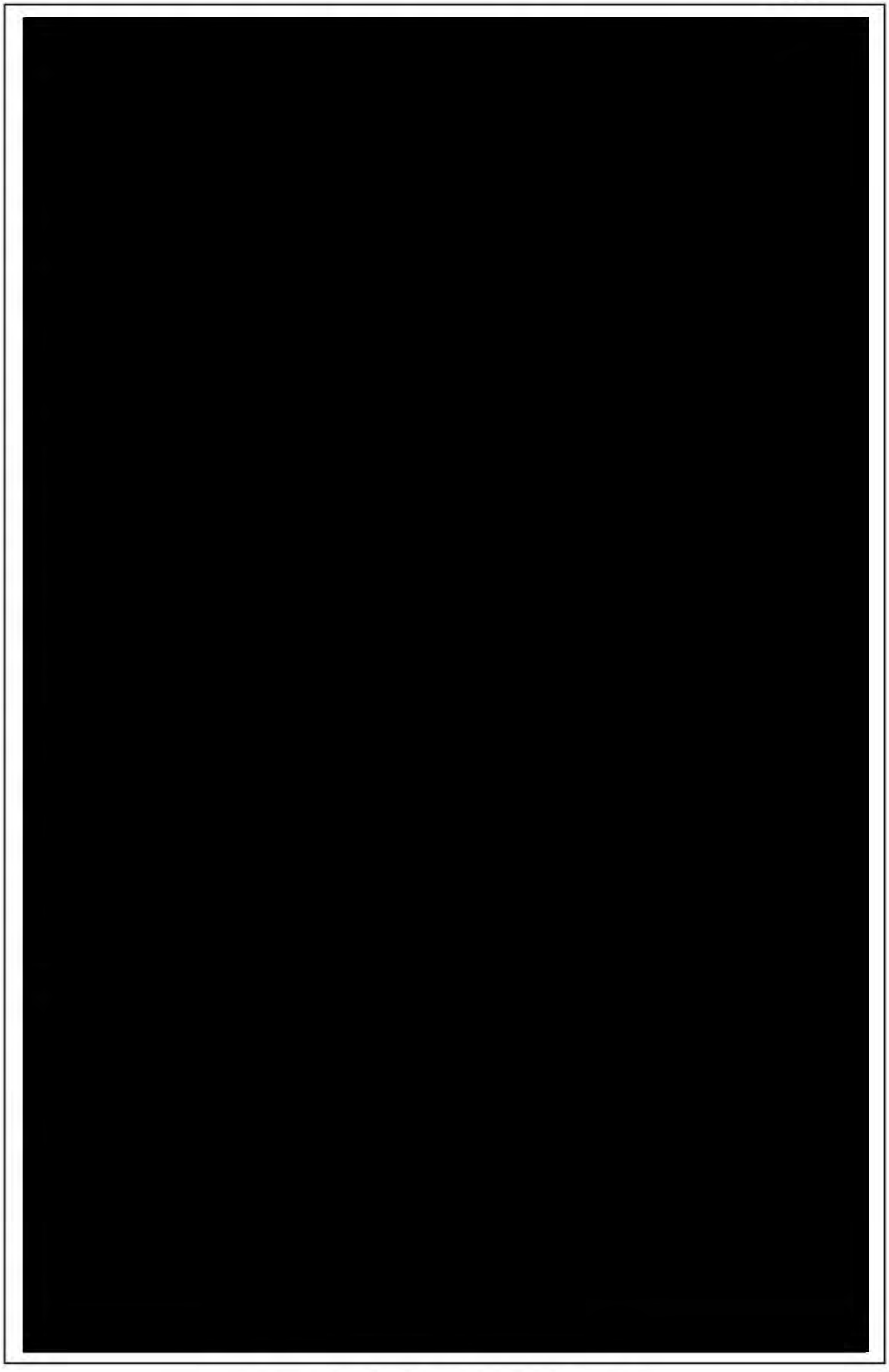

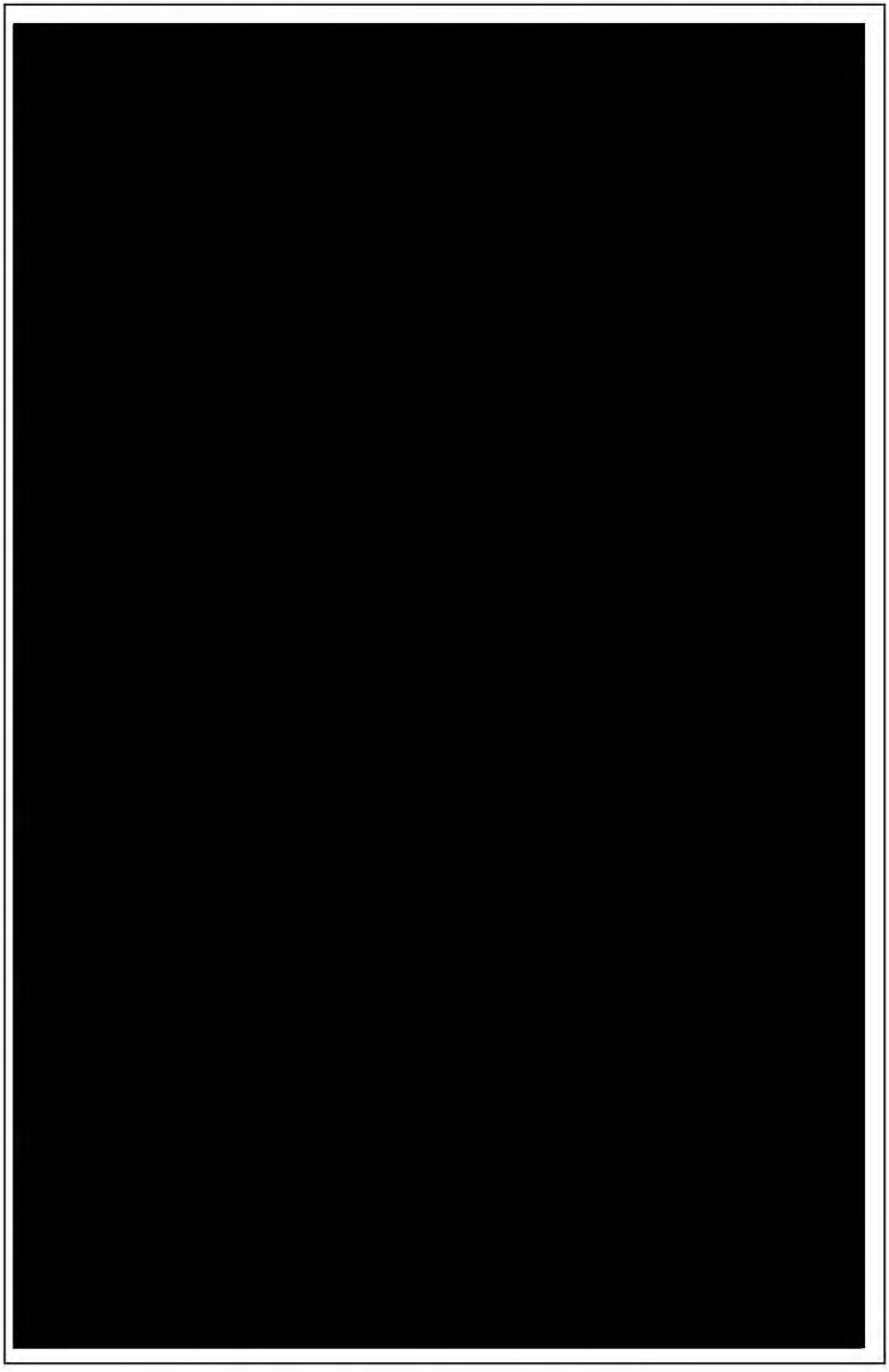

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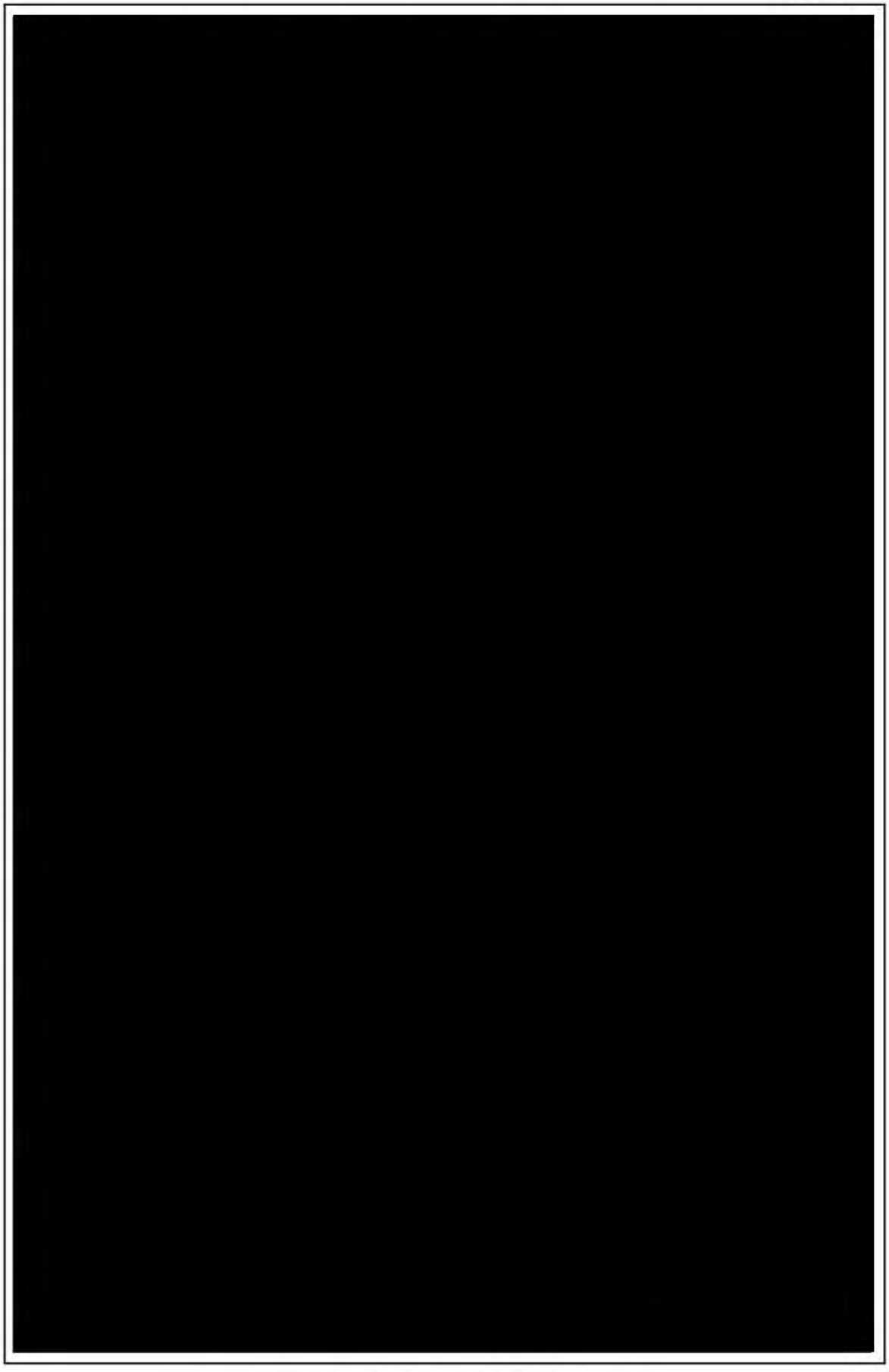

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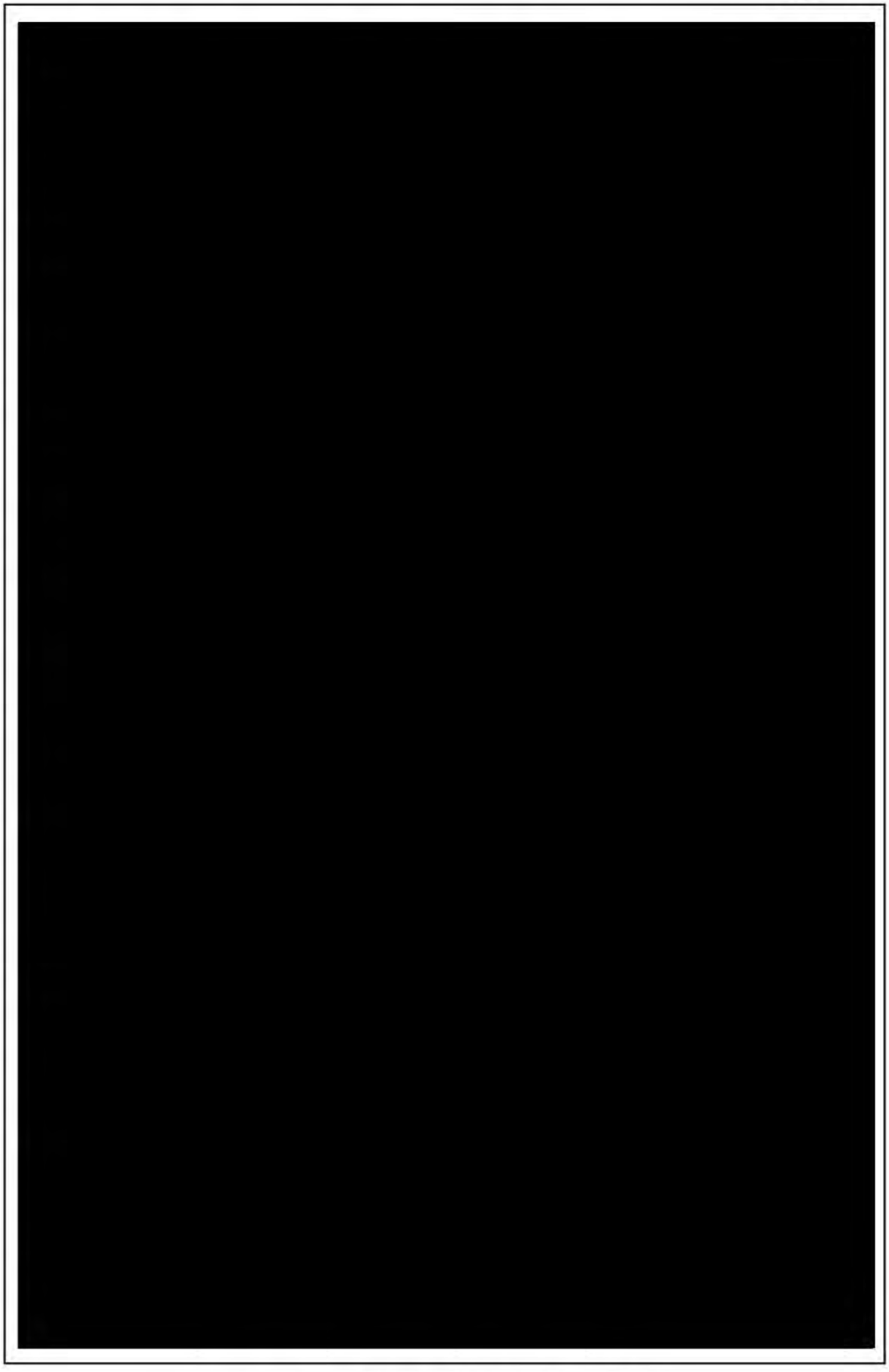

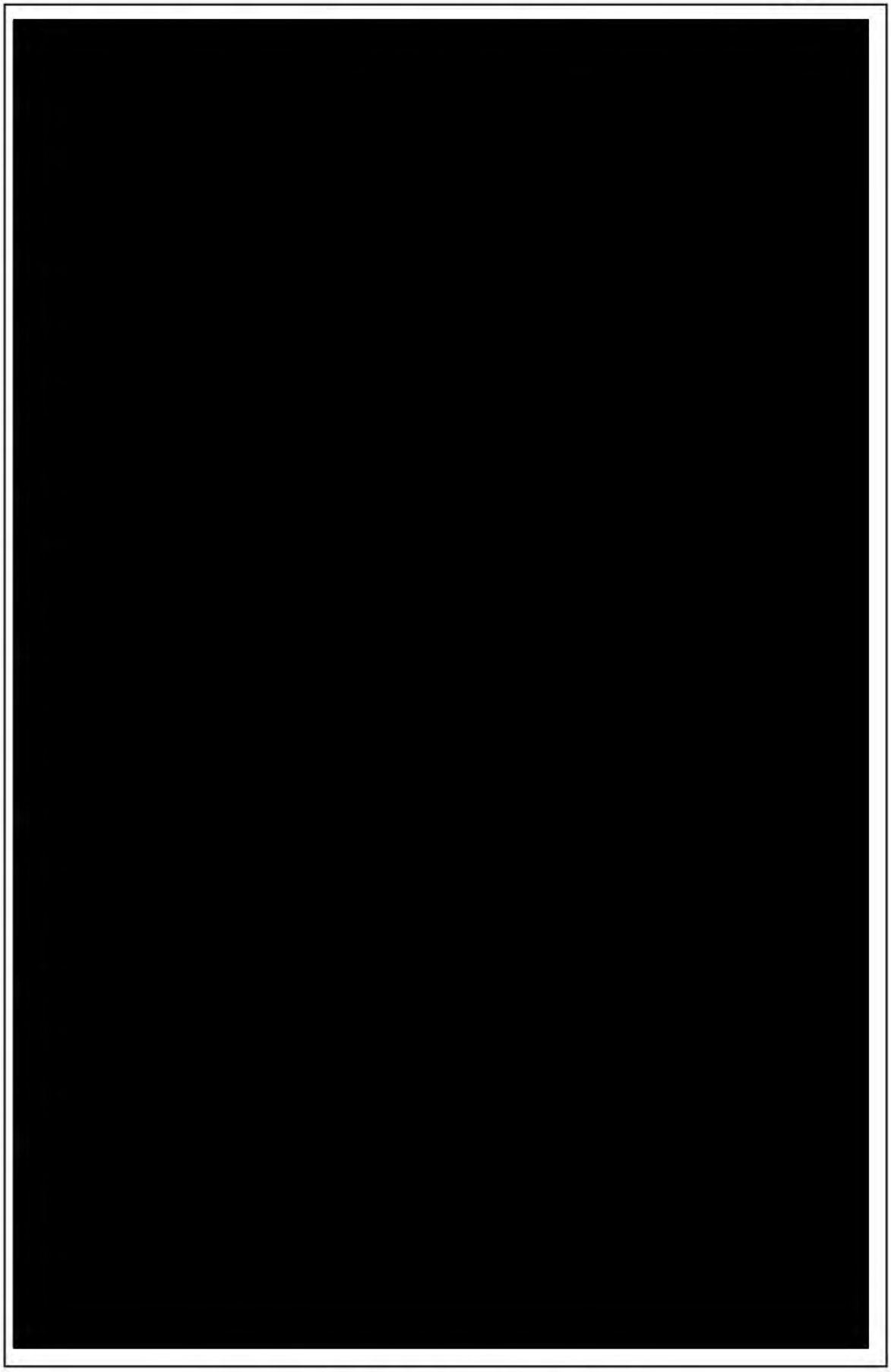

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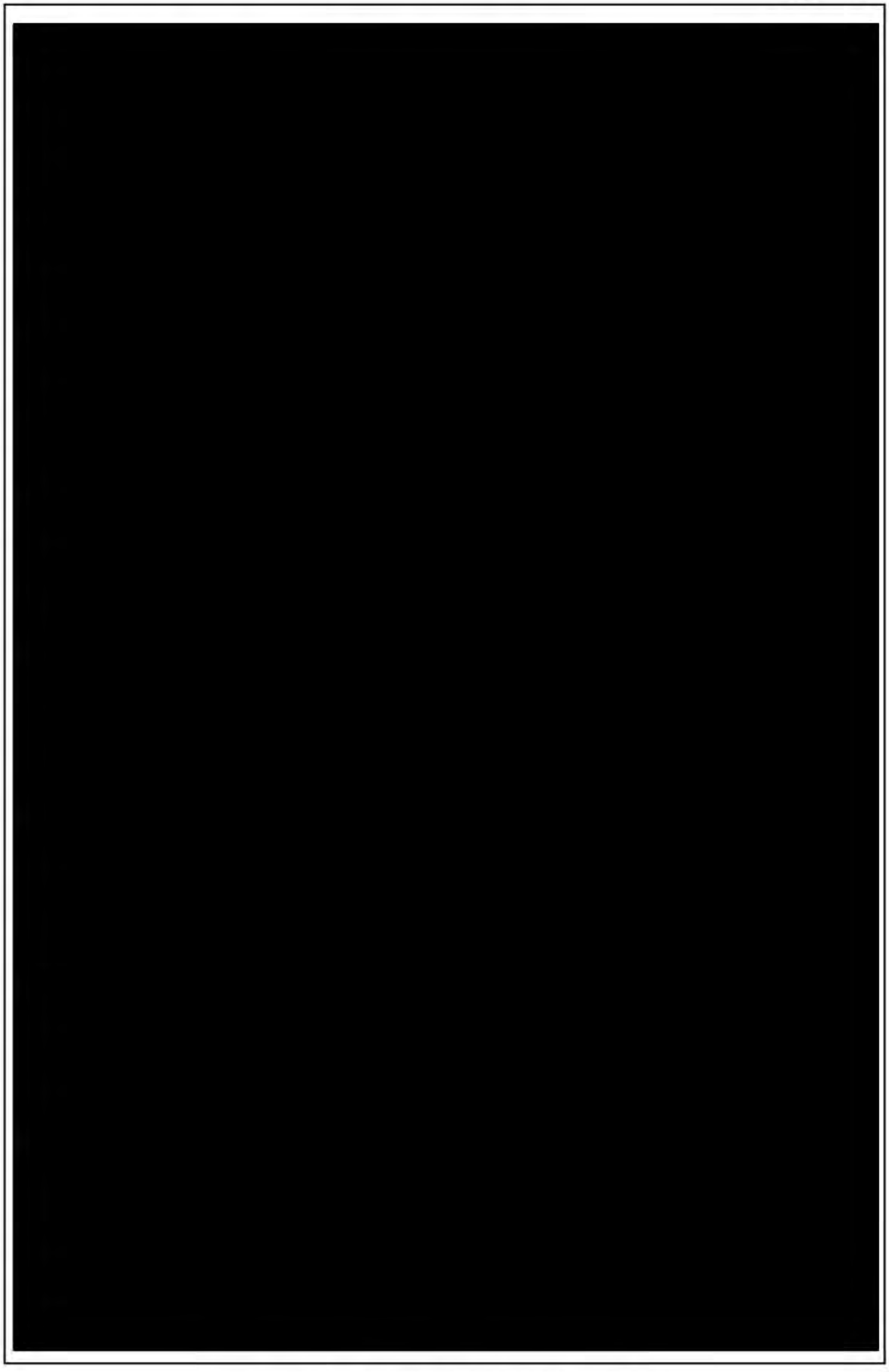

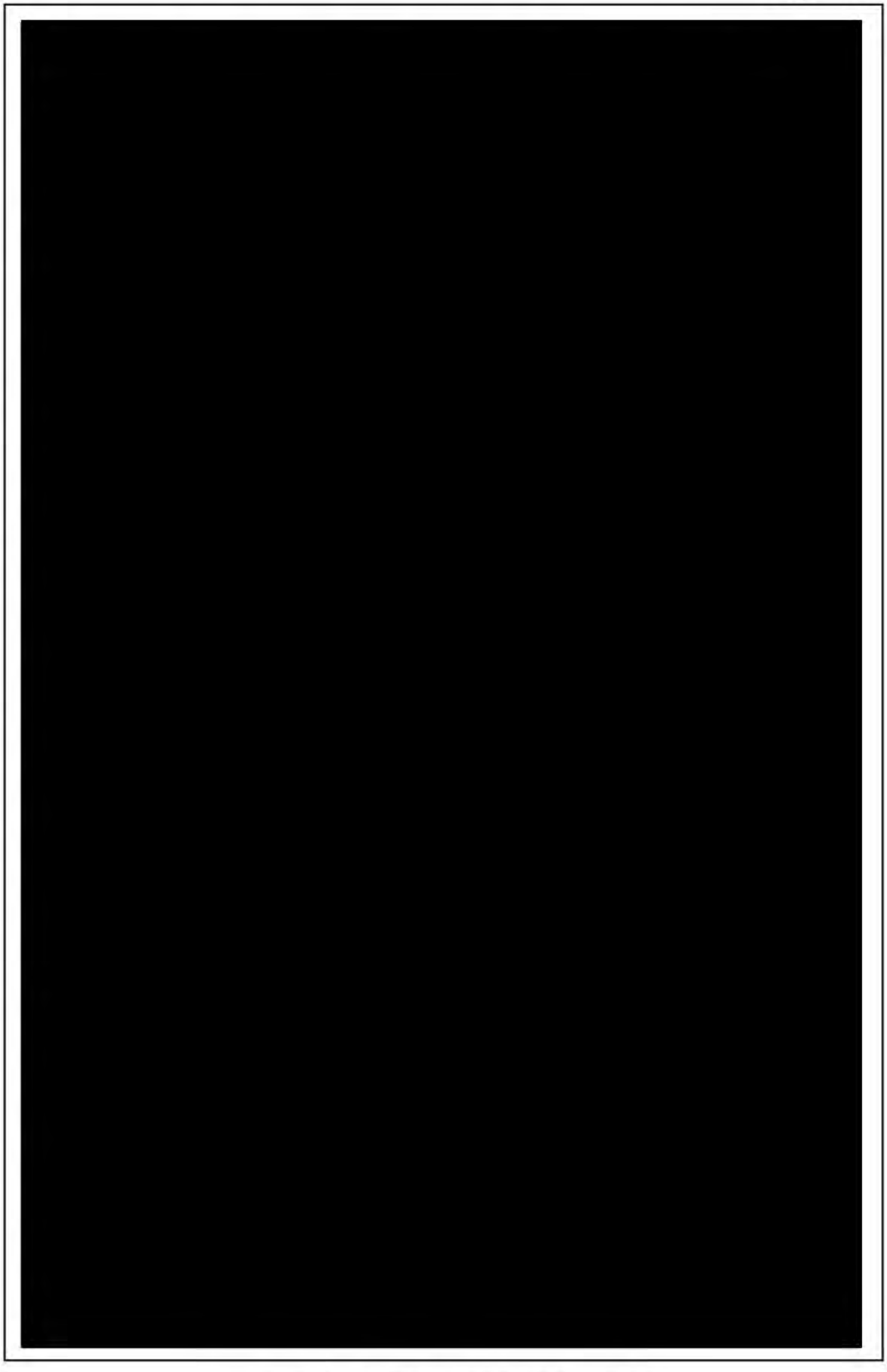

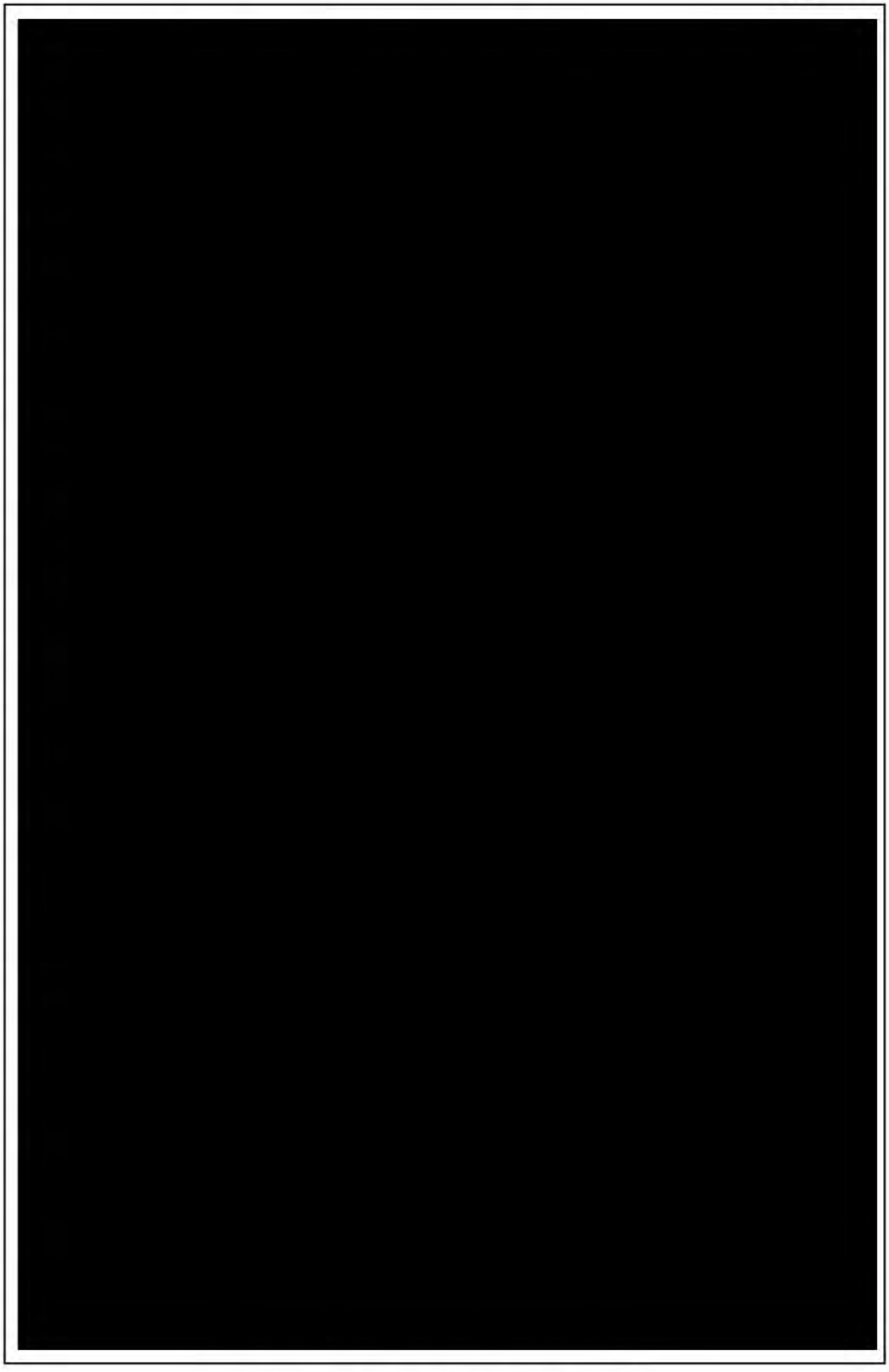

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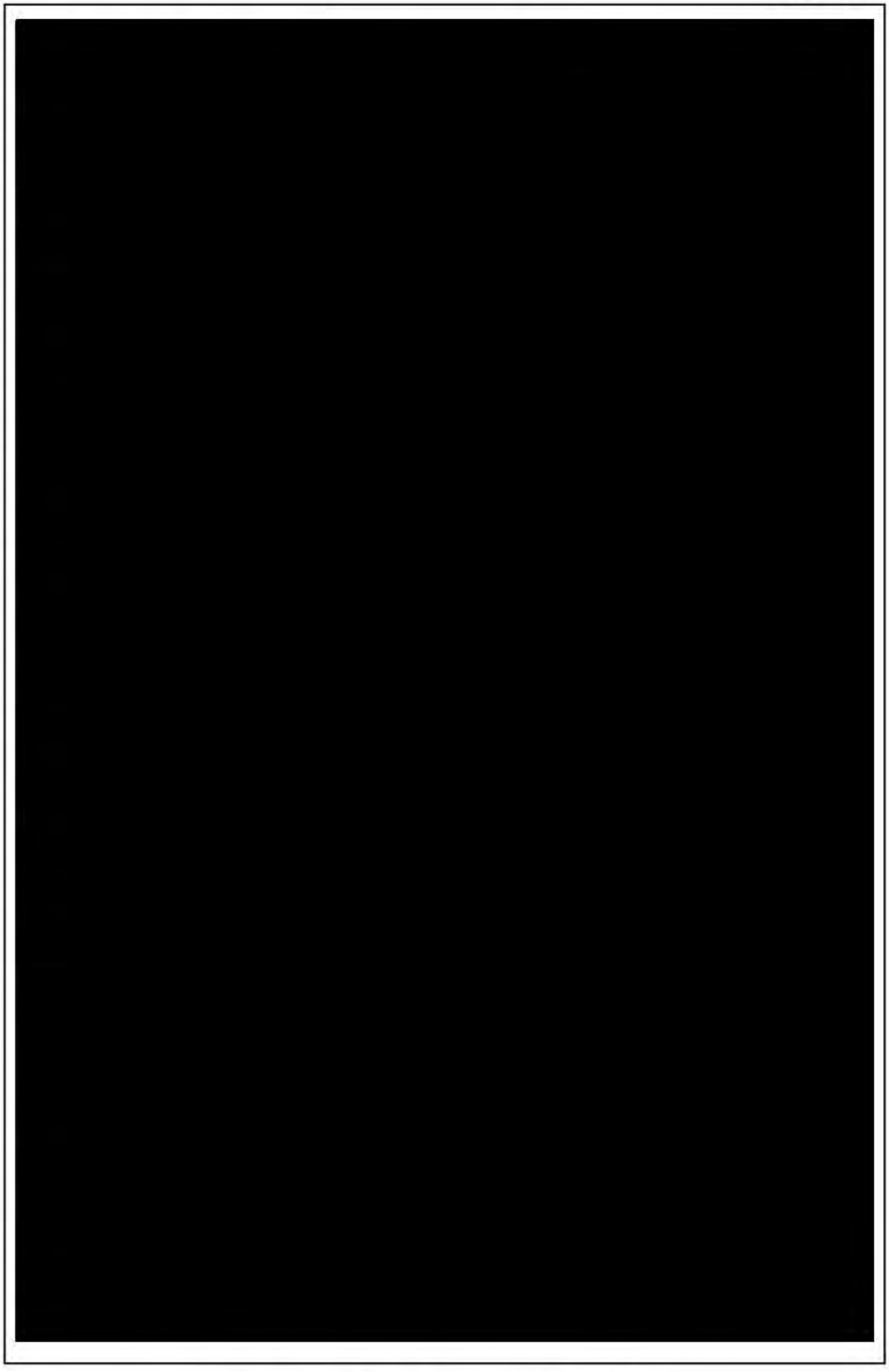

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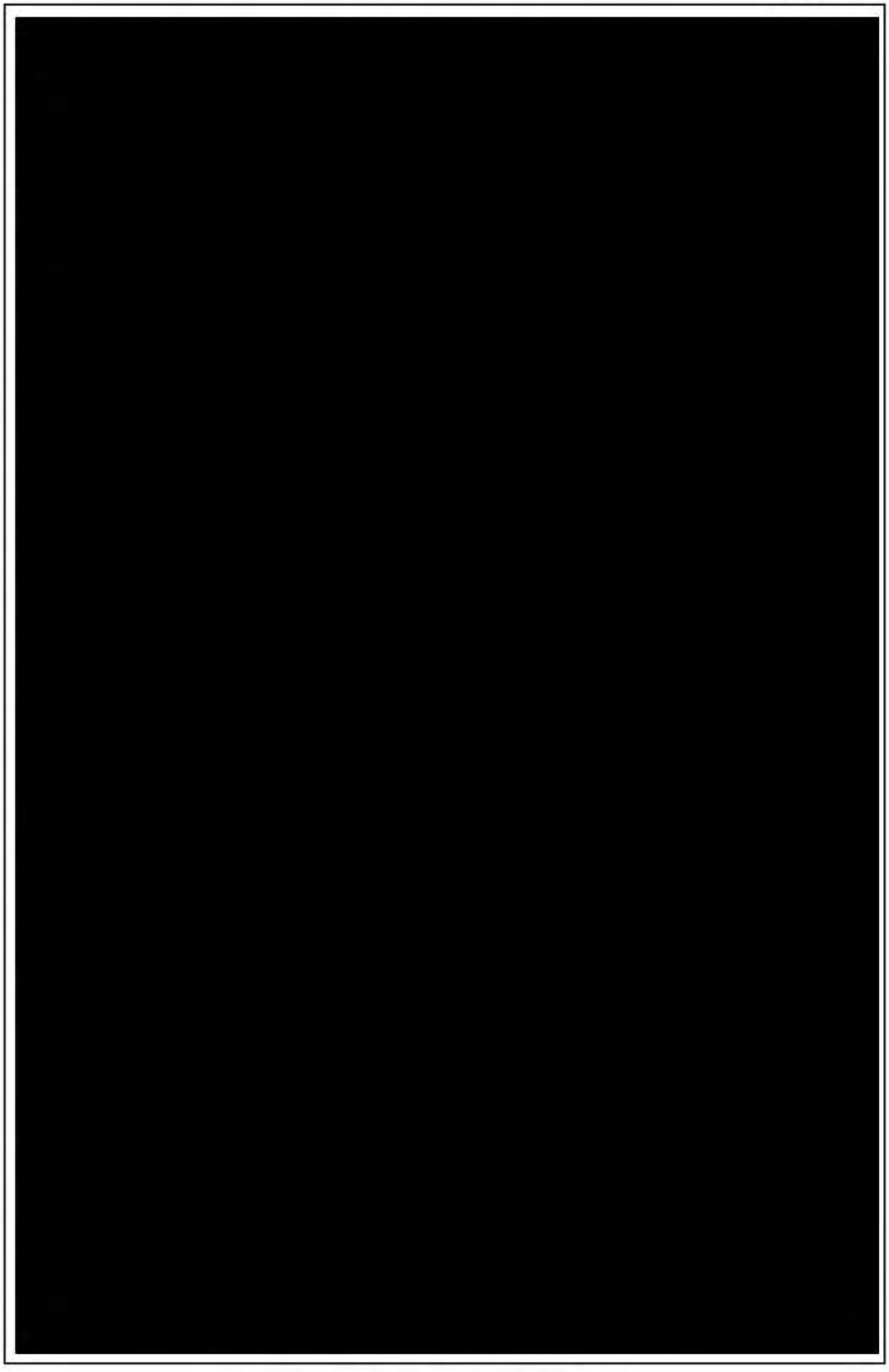

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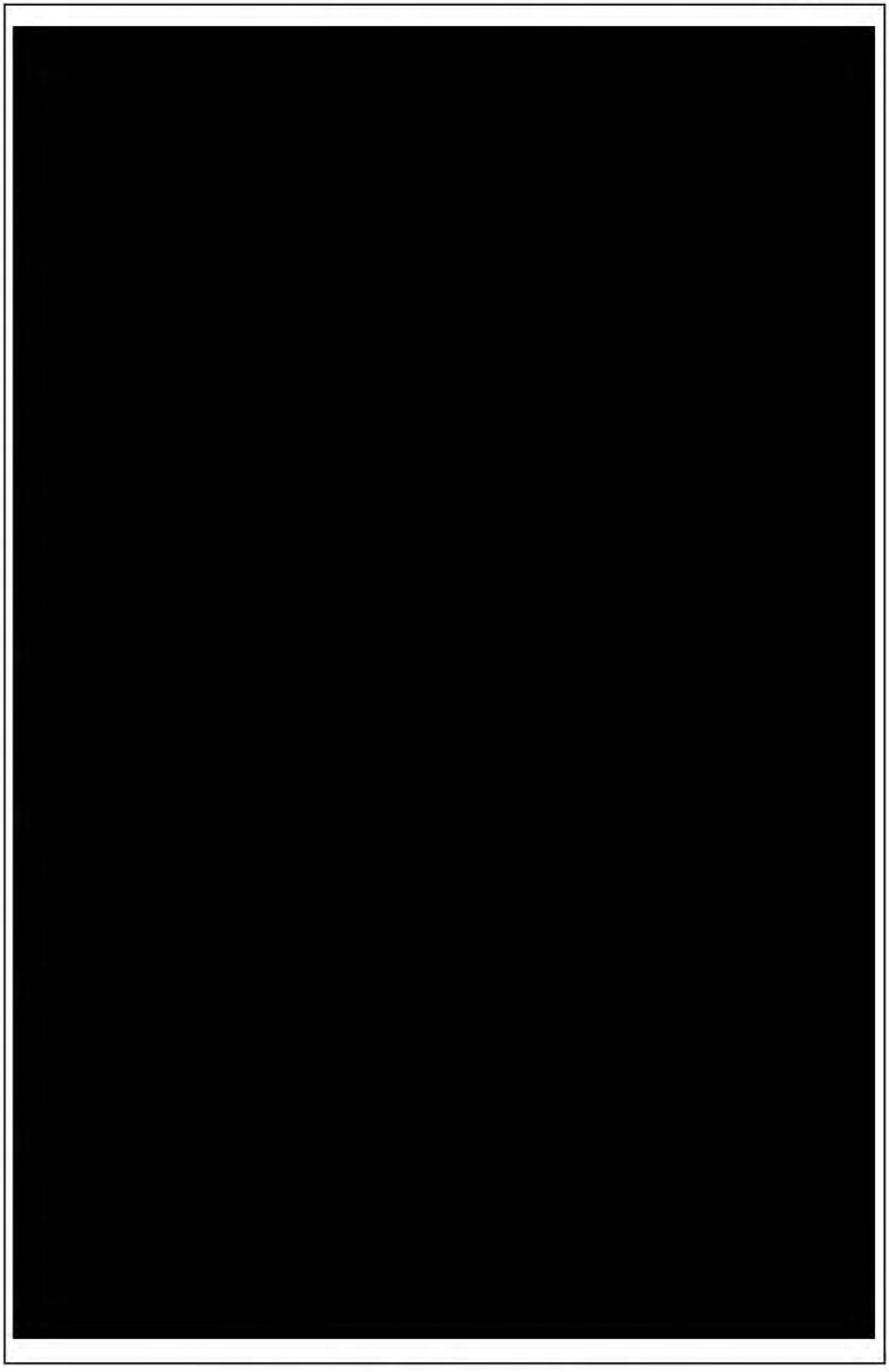

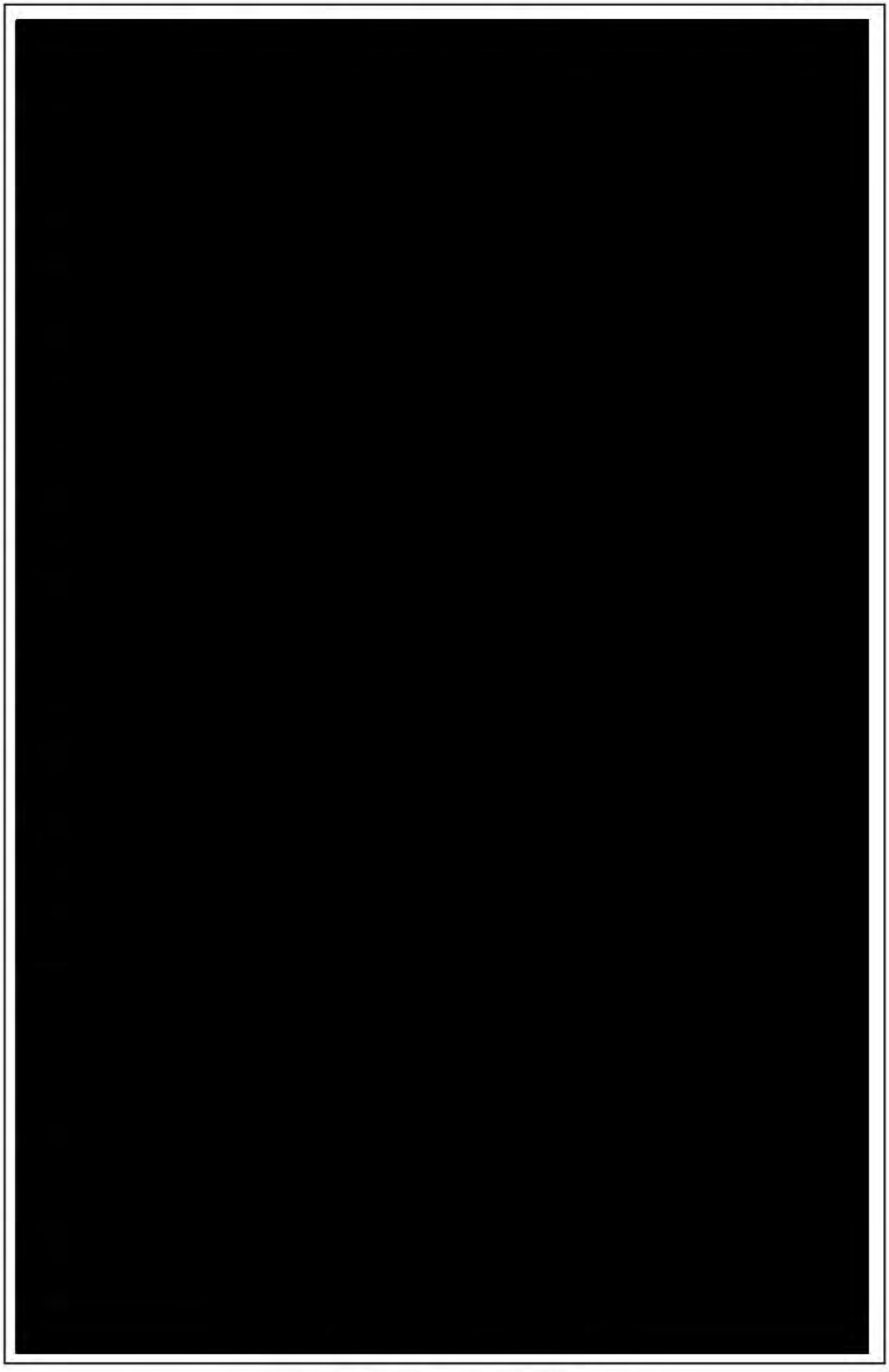

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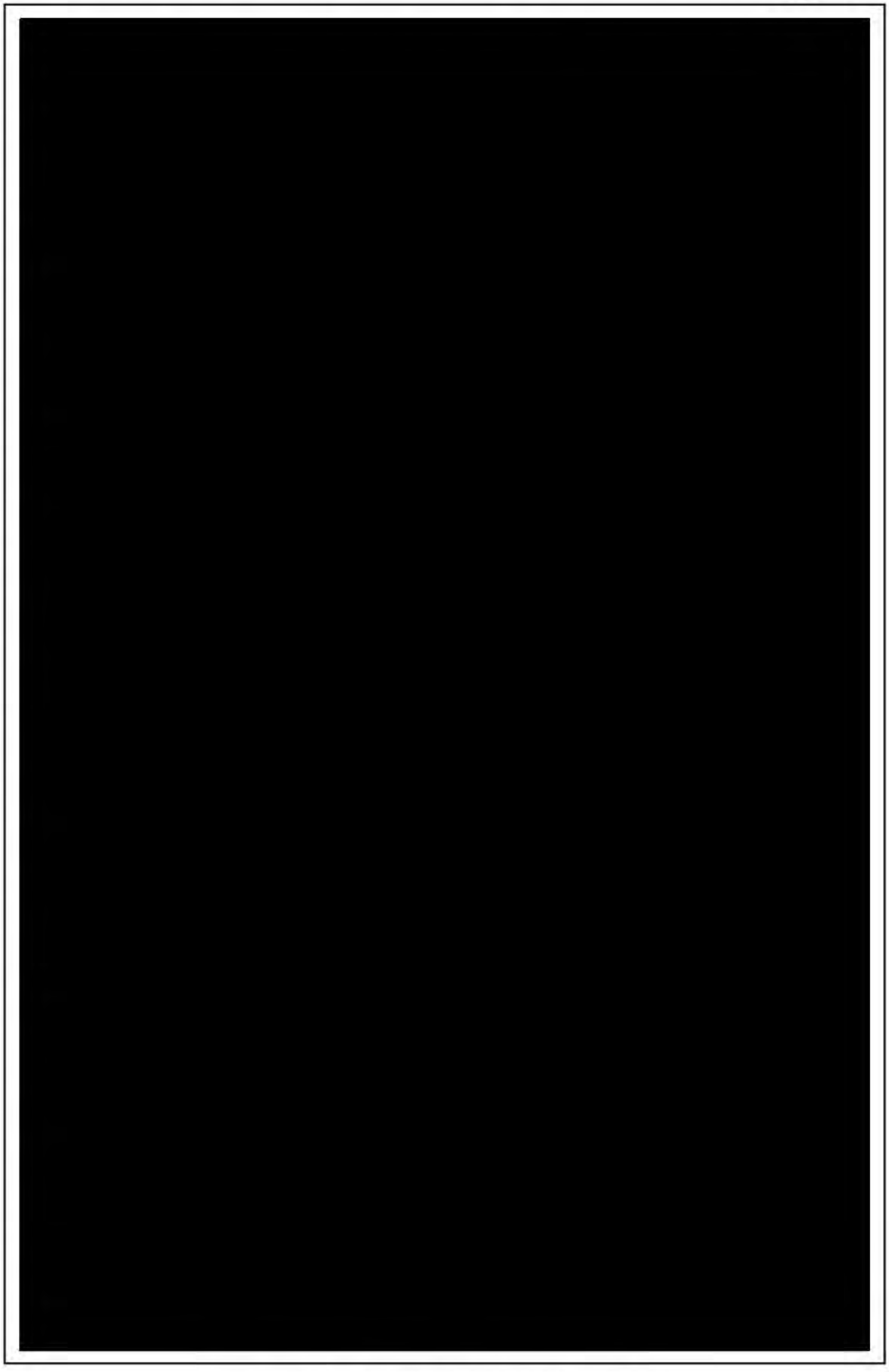

[redacted]

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CERTIFICATE

I HEREBY CERTIFY that the witness was duly sworn by me and that the deposition is a true record of the testimony given by the witness.

It was requested before completion of the deposition that the witness, MICHAEL R. McCLELLAN, have the opportunity to read and sign the deposition transcript.

Michelle Ridgway

MICHELLE L. RIDGWAY,
A Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, Certified Court Reporter, and Notary Public
Dated: October 14, 2026

(The foregoing certification of this transcript does not apply to any reproduction of the same by any means, unless under the direct control and/or supervision of the certifying reporter.)

EXHIBIT 12

BEFORE THE SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to Protective Order

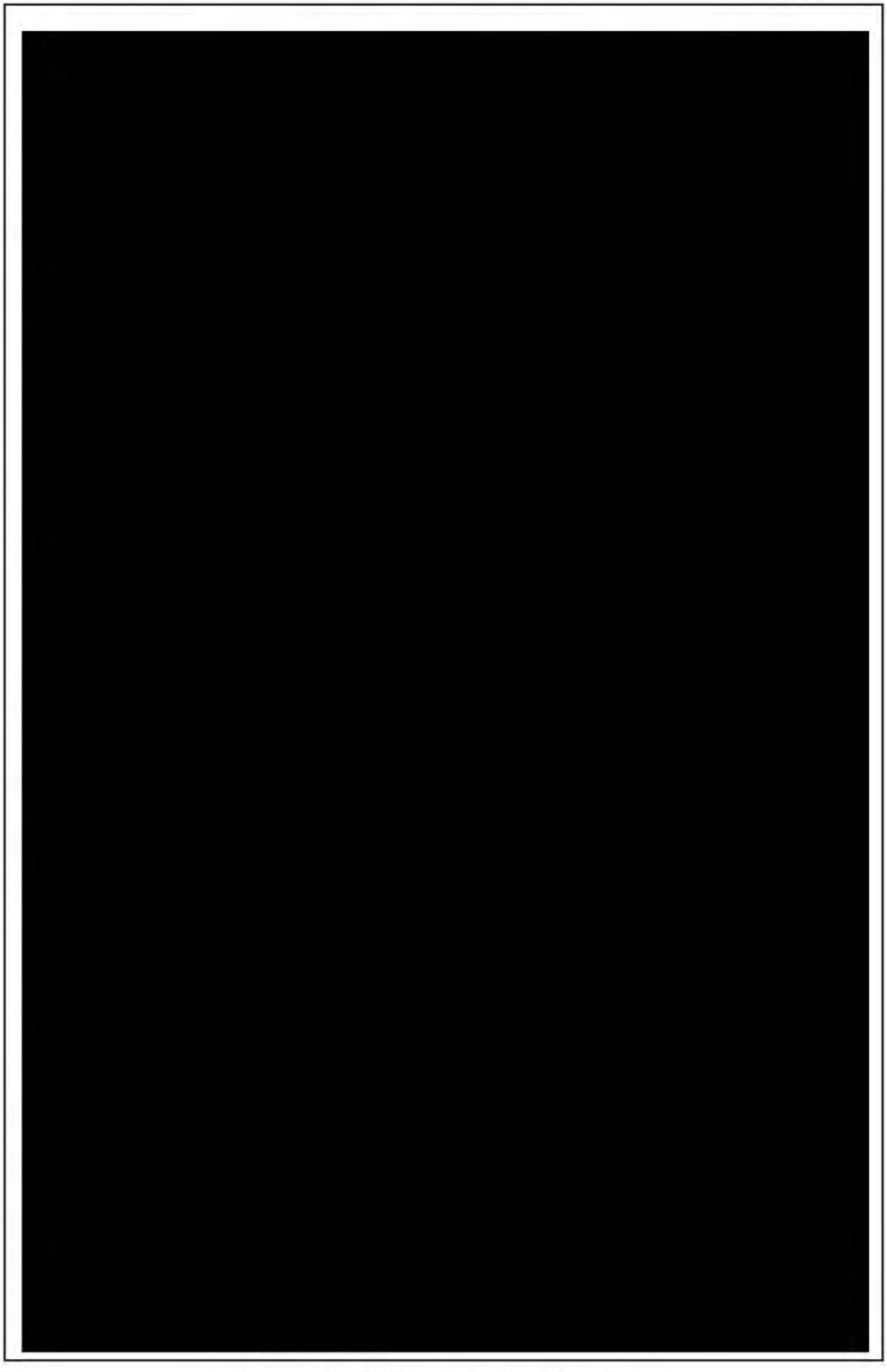
CONFIDENTIAL PORTIONS INCLUDED

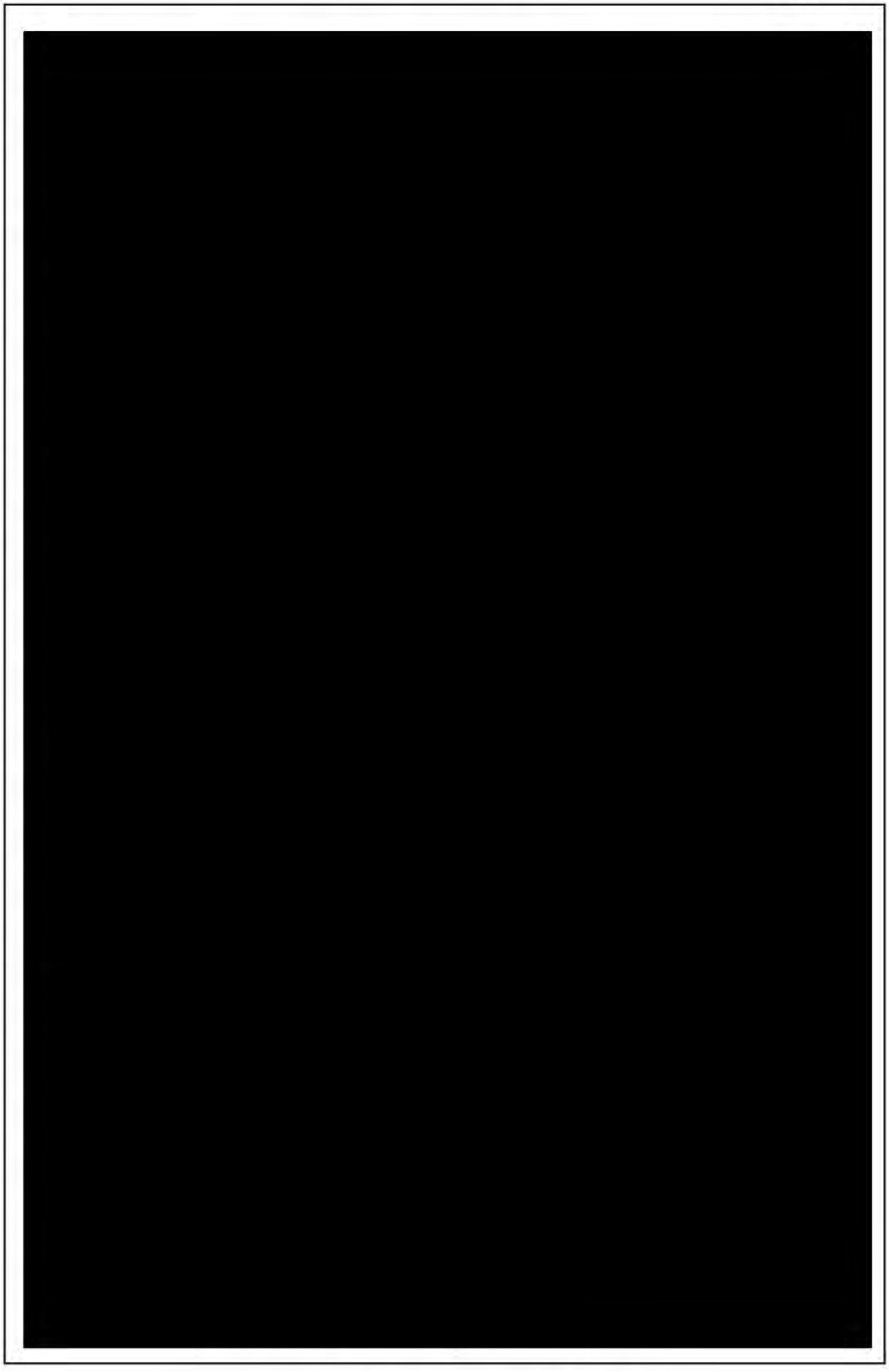
VIDEOTAPED DEPOSITION

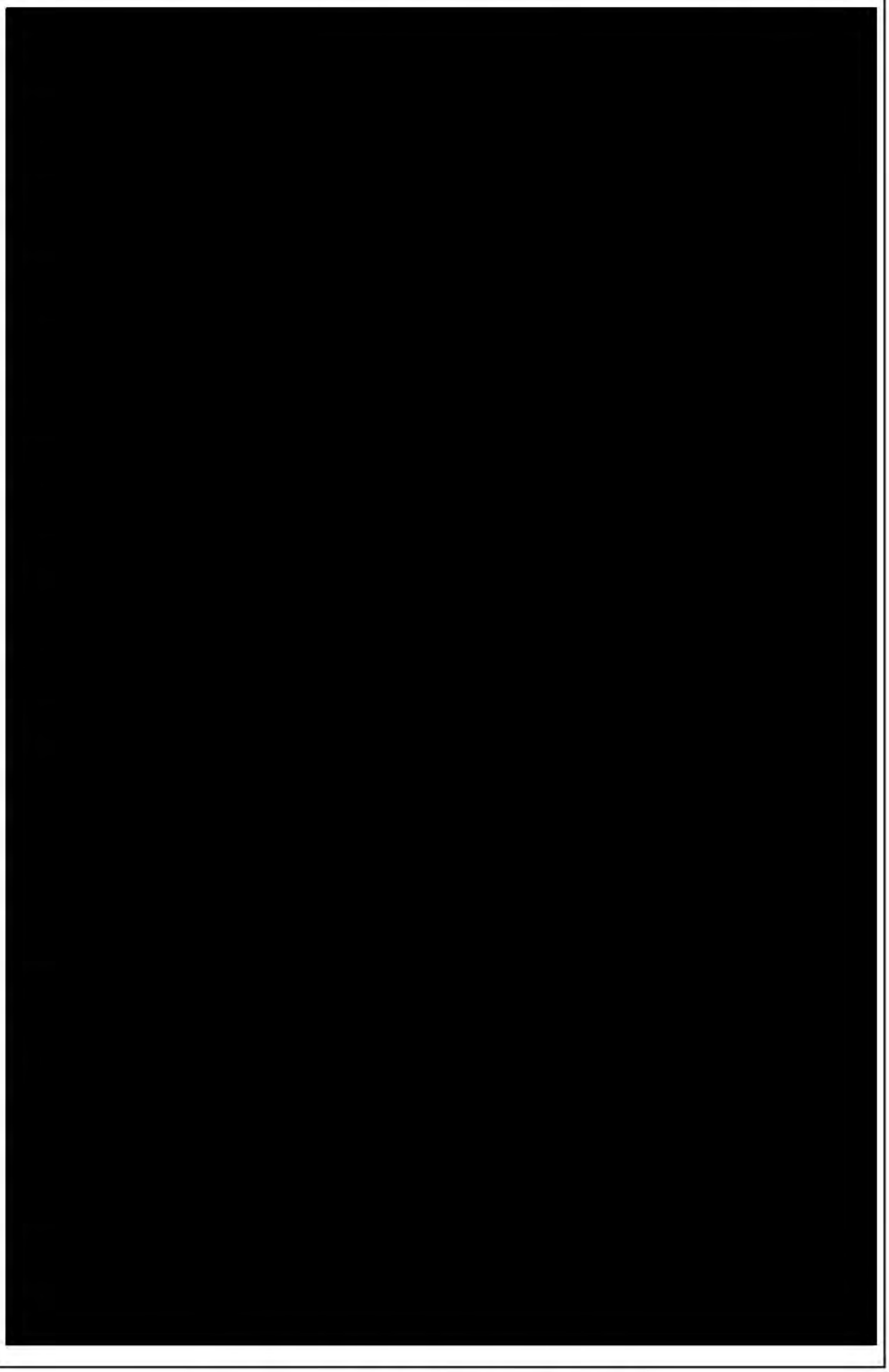
The DEPOSITION OF DAN McLAUGHLIN, taken on behalf of the BURLINGTON NORTHERN, at the Law Office of Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, on September 30th, 2026, at 7:59 a.m. Central Daylight Time.

REPORTED BY: GREG S. WEILAND, CSR, RDR, CRR

JOB NO.: 23824







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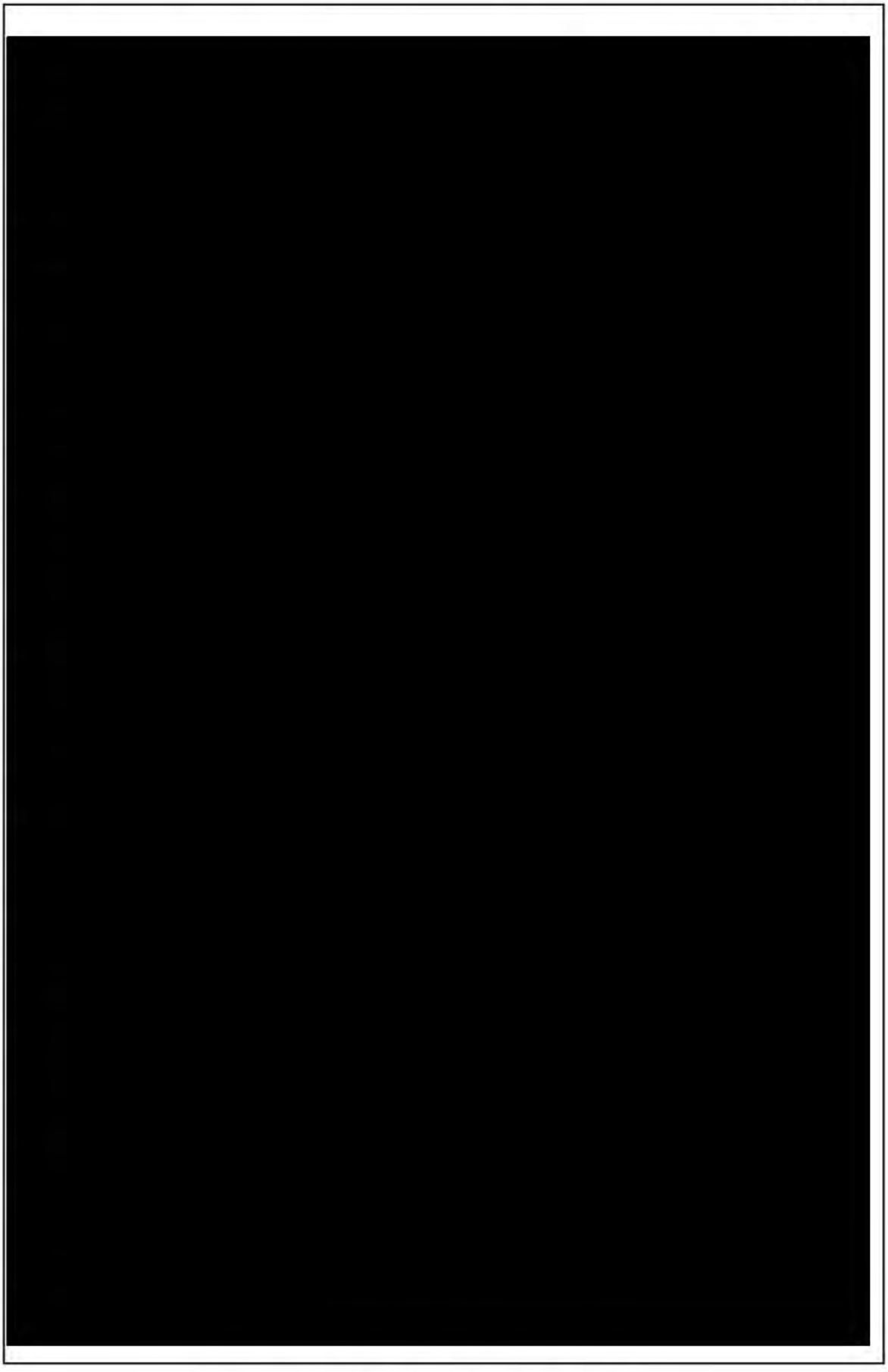

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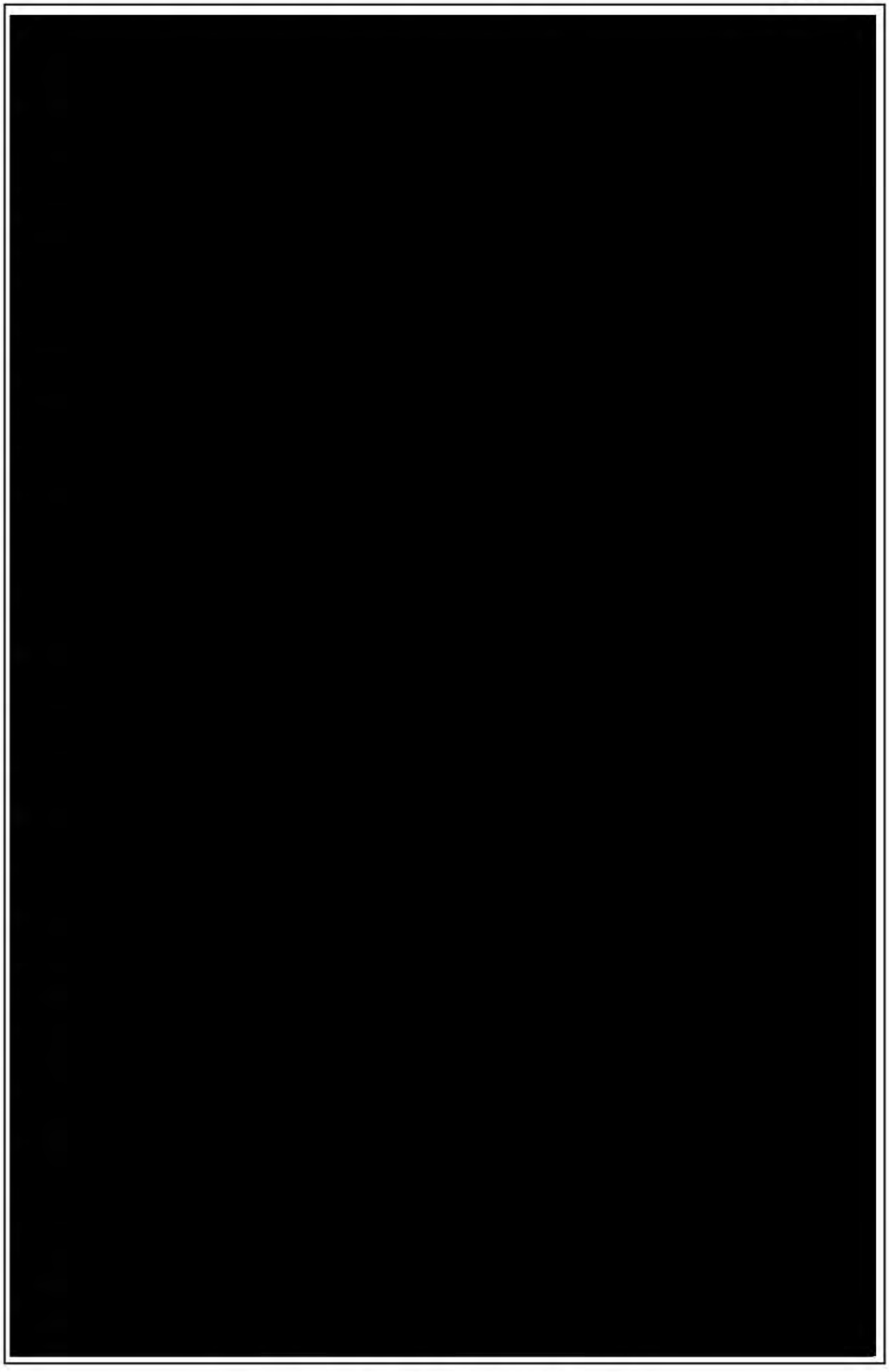
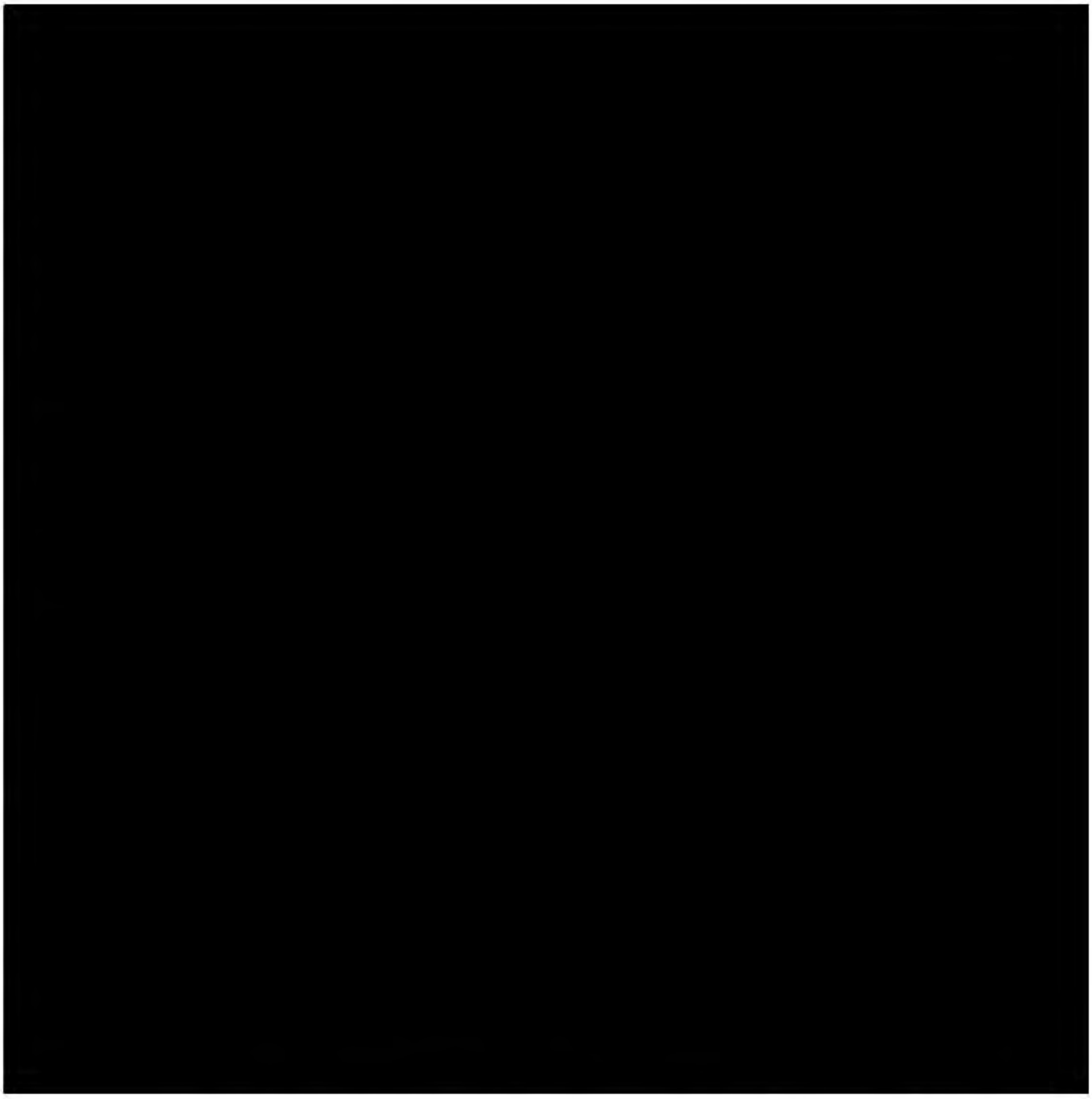




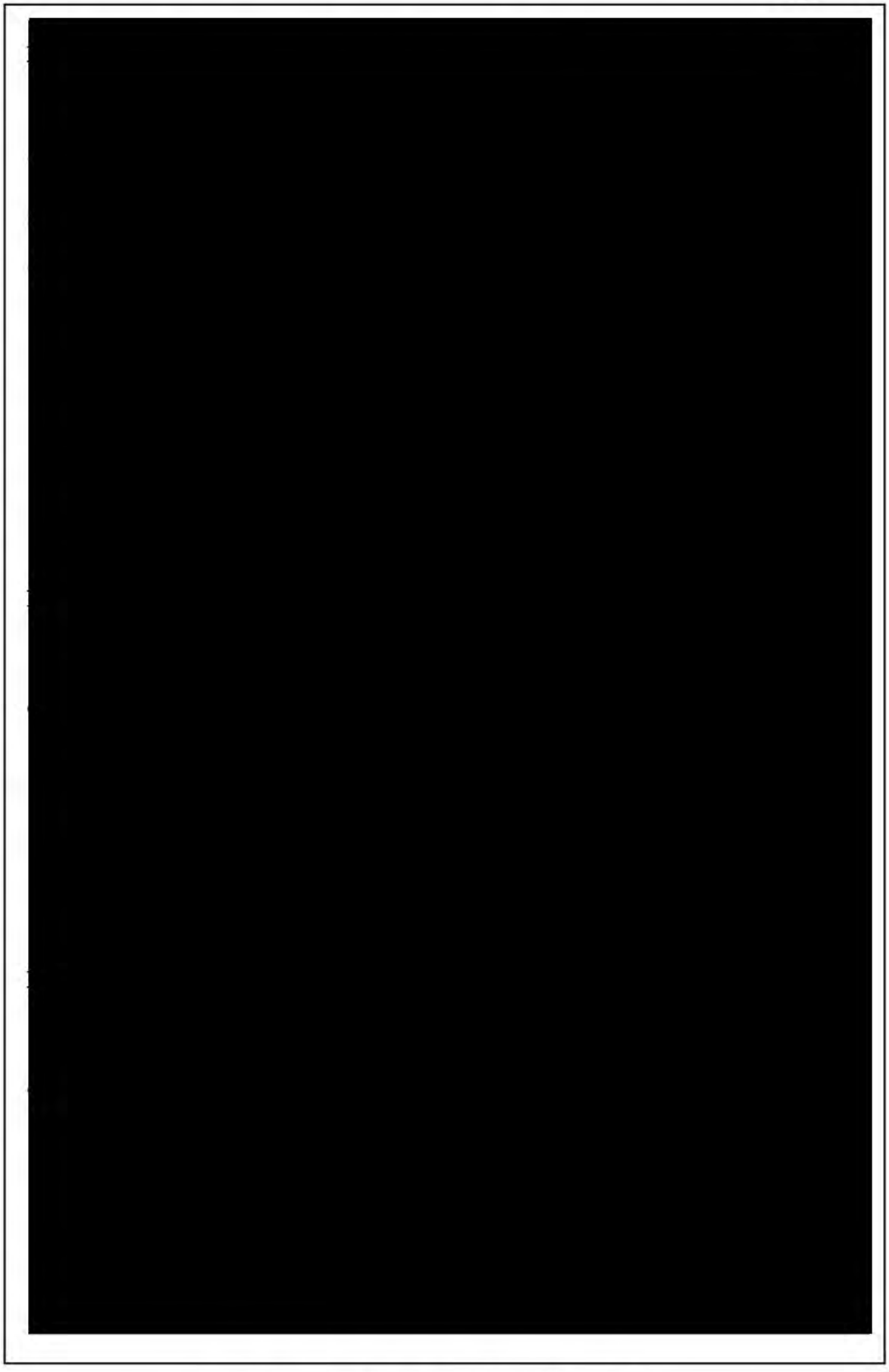
MR. FANCHIANG: Okay. I believe that's all the questions I have for you, Mr. McLaughlin. I believe we have to go off the record.

THE VIDEOGRAPHER: The time is 2:42 p.m. We are off the record.

(Whereupon, a recess was taken from 2:42 p.m. to 2:49 p.m.)

[redacted]

[redacted]





MS. HYNES: Okay. You can put that aside. I'll quickly do one more document.

So the next one will be Exhibit 322. It will be a document ending in -- it's going to be UP_2753147.

(Exhibit 322 was marked for identification.)

MS. HYNES: I think it should appear.

THE WITNESS: It's downloading.

BY MS. HYNES:

Q. When it comes through, you can feel free to review the document, but my questions will focus on the pages ending in 148.

If you'd turn to the page ending in 148.

A. Sure. Just give me -- I'm reading

C E R T I F I C A T E

The within and foregoing deposition of the witness, DAN MCLAUGHLIN, was taken before GREG S. WEILAND, CSR, RDR, CRR, at the Law Office of Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, commencing at 7:59 o'clock a.m., on the 30th day of September, 2026.

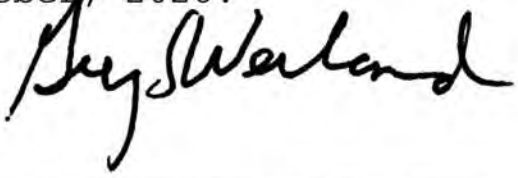
The said witness was first duly sworn and was then examined upon oral interrogatories; the questions and answers were taken down in shorthand by the undersigned, acting as stenographer; and the within and foregoing is a true, accurate and complete record of all the questions asked of and answers made by the aforementioned witness at the time and place hereinabove referred to.

The signature of the witness was not waived and the deposition was submitted to the deponent as per copy of the attached letter.

The undersigned is not interested in the within case, nor of kin or counsel to any of the

parties.

Witness my signature on this 5th day of October, 2026.



GREG S. WEILAND, CSR, RDR, CRR
License No. 084-003472

EXHIBIT 13

BEFORE THE SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to Protective Order

CONFIDENTIAL PORTIONS INCLUDED

VIDEOTAPED DEPOSITION

The DEPOSITION OF KATHERINE N. NOVAK, taken on behalf of the BURLINGTON NORTHERN, at the Law Office of Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, on September 24th, 2026, at 8:03 a.m. Central Daylight Time.

REPORTED BY: GREG S. WEILAND, CSR, RDR, CRR

JOB NO.: 23793

[redacted]

[redacted]

C E R T I F I C A T E

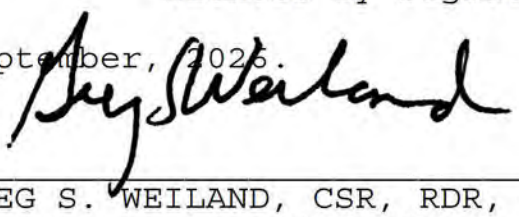
The within and foregoing deposition of the witness, KATHERINE N. NOVAK, was taken before GREG S. WEILAND, CSR, RDR, CRR, at 1650 Farnam Street, Omaha, Nebraska, commencing at 8:09 o'clock a.m., on the 24th day of September, 2026.

The said witness was first duly sworn and was then examined upon oral interrogatories; the questions and answers were taken down in shorthand by the undersigned, acting as stenographer; and the within and foregoing is a true, accurate and complete record of all the questions asked of and answers made by the aforementioned witness at the time and place hereinabove referred to.

The signature of the witness was not waived and the deposition was submitted to the deponent as per copy of the attached letter.

The undersigned is not interested in the within case, nor of kin or counsel to any of the parties.

Witness my signature on this 28th day of September, 2026.



GREG S. WEILAND, CSR, RDR, CRR
License No. 084-003472

EXHIBIT 14

BEFORE THE SURFACE TRANSPORTATION BOARD

\- - -

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY,	:	FINANCE DOCKET NO. 36873
-- CONTROL --	:	
NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY.	:	

HIGHLY CONFIDENTIAL
PURSUANT TO PROTECTIVE ORDER

\- - -

September 30, 2026

\- - -

Videotaped hybrid deposition of MAQUILING B. PARKERSON, taken pursuant to notice, was held at the law offices of Covington & Burling, 850 10th Street, NW, Washington, D.C., beginning at 8:07 a.m., on the above date, before Michelle L. Ridgway, a Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, Certified Court Reporter, and Notary Public.

\- - -

know, the regulations require us to use a certain traffic base to develop the models. And based on that analysis, the result was that we would have added 1,171 jobs.

Ultimately, after the combination, the traffic -- we'll have to understand what the traffic does.

BY MR. EDELMAN:

Q. So what happens if there are not -- is not a net increase of 1,171 jobs? Is that merely an aspiration?

MS. FLAHIVE WU:

Objection. Lacks foundation. Calls for speculation.

THE WITNESS: I don't think it's an aspiration. It's a result of the modeling exercise.

BY MR. EDELMAN:

Q. Okay. I'd like you to look

Q. And then there are totals of those categories, right?

A. Yes.

Q. Okay. What does positions transferred mean in this document?

A. So, again, based on the modeling that was performed, my understanding is that, based on where the work will ultimately be, as predicted by those models, this is the impact on workforce that would be required to handle those work events, where they are.

Again, the operating leadership ultimately has a responsibility to determine if they feel that this is -- that those are the decisions they need to make.

Q. Okay. So I understand what positions abolished means because that's a common term in the industry. And I understand positions created.

What does positions transferred mean?

and reposted in another location.

BY MR. EDELMAN:

Q. Well, on Union Pacific, if you're eliminating jobs, you issue abolishment notices, correct?

MS. FLAHIVE WU:

Objection. Vague.

THE WITNESS: Generally, yes.

BY MR. EDELMAN:

Q. And the current employees at Norfolk Southern who were in the clerical craft, they do not, at present, have the ability to bid on jobs with Union Pacific in Omaha?

MS. FLAHIVE WU:

Objection. Lacks foundation.

THE WITNESS: Not under their current CBA, no.

BY MR. EDELMAN:

Q. Will the employees whose jobs are abolished in Atlanta be treated as dismissed employees under the New

York Dock conditions?

MS. FLAHIVE WU:

Objection. Lacks foundation.

THE WITNESS: We will -- my understanding is that the intent is to offer positions in Omaha for those positions that are transferred from Atlanta to Omaha.

BY MR. EDELMAN:

Q. I understand. But will they be treated as dismissed employees?

MS. FLAHIVE WU:

Objection. Lacks foundation. Asked and answered.

THE WITNESS: They have -- they will have jobs in Omaha.

BY MR. EDELMAN:

Q. Will Union Pacific take the position that clerical employees holding Norfolk Southern positions in Atlanta, who decline to relocate and transfer, will be ineligible for New York Dock dismissal benefits?

MS. FLAHIVE WU:

Objection. Lacks foundation.

THE WITNESS: We will comply with our obligations under New York Dock.

BY MR. EDELMAN:

Q. Well, I'm asking whether you're going to take the position that an employee in Atlanta that declines to go to Omaha will be treated as a dismissed employee under New York Dock.

MS. FLAHIVE WU:

Objection. Lacks foundation. Asked and answered.

THE WITNESS: I don't know how to answer that question. There may be an implementing agreement that describes how that process works.

Rich, I don't -- I can't answer that question.

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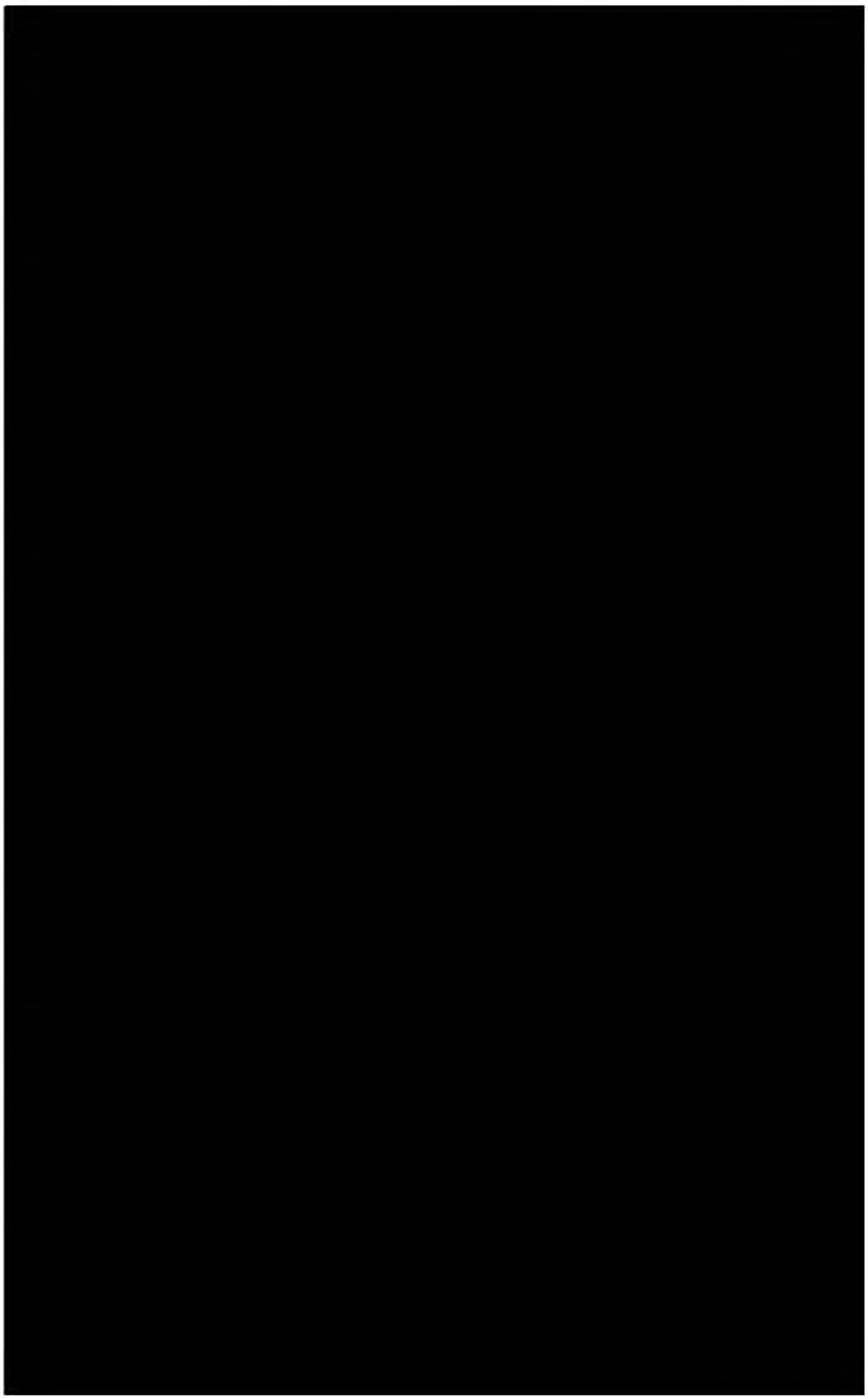

[redacted]

BY MR. EDELMAN:

Q. Did applicants make any projections or assumptions or estimates of how many employees from Atlanta will transfer to Omaha?

MS. FLAHIVE WU: Objection to form. Compound.

THE WITNESS: I'm sorry. The question again?

Did we make assumptions?

BY MR. EDELMAN:

total positions will be abolished, correct?

MS. FLAHIVE WU:

Objection.

The document -- document does not state what is in the question.

BY MR. LANGE:

Q. Well, according to this document, will 81 total positions in the locomotive mechanical craft be abolished?

A. So, I mean, will they be? I don't know. Could they be? That's what the model says. Yes.

Q. Is the model modeling what could happen or is it a model that the applicants plan to use?

MS. FLAHIVE WU:

Objection. Vague and compound.

THE WITNESS: I think the model tells us what the resulting traffic flows could be, using that -- whatever the

relevant traffic base that was used for the model.

You know, we still have CBAs and our jobs-for-life commitment. And so operating decisions are going to have to be made in light of those commitments which are going to exist.

BY MR. LANGE:

Q. So in the -- let's switch to the "Transfer" column.

A. Okay.

Q. Do these estimates assume that all workers who are transferred will accept the transfer?

A. I don't know.

Q. In your experience at NS, I believe, then KCS, right?

A. Yep.

Q. And then UP?

A. Yep.

Q. How often do mechanical craft employees accept transfers?

earlier, that -- has this model been applied to make any decisions that will -- strike that.

Has this model been brought into the real world and applied to what actual positions may be eliminated, maintained, transferred in the combined entity?

MS. FLAHIVE WU:

Objection. Vague and compound.

THE WITNESS: I'm not sure that it can be. I mean, the exercise, by its nature, is projecting results.

BY MS. LESSER:

Q. That's helpful.

Does the projections of the exercise, will those be used to inform decisions that are ultimately made about craft employees?

MS. FLAHIVE WU:

Objection. Lacks foundation.

THE WITNESS: To the extent that traffic patterns

emerge that are consistent with the model, I suppose it could be one of the inputs that -- that our operating departments consider. Ultimately, it will depend on the traffic flows.

BY MS. LESSER:

Q. And that's the actual traffic flow?

A. The actual traffic, yes.

Q. Okay. Do you mind turning to Paragraph 9 of your verified statement?

A. Sure.

Q. Which I think we've already looked at.

A. Yep.

Q. In the last sentence here, you write, "In planning for continuing increased operations, applicants have taken into account their combined annual attrition rate for craft employees, which is approximately 8 percent."

Do you see that?

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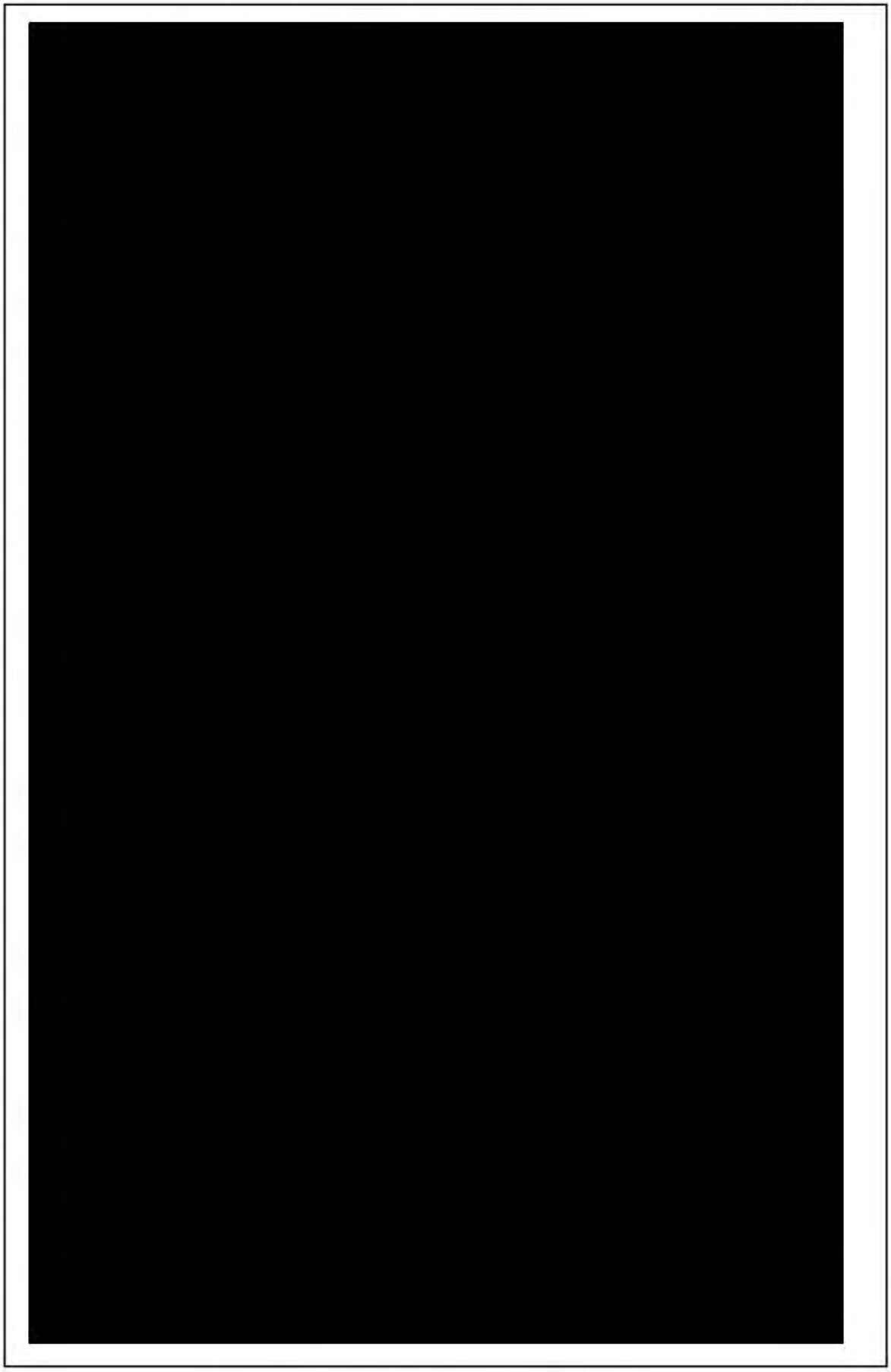
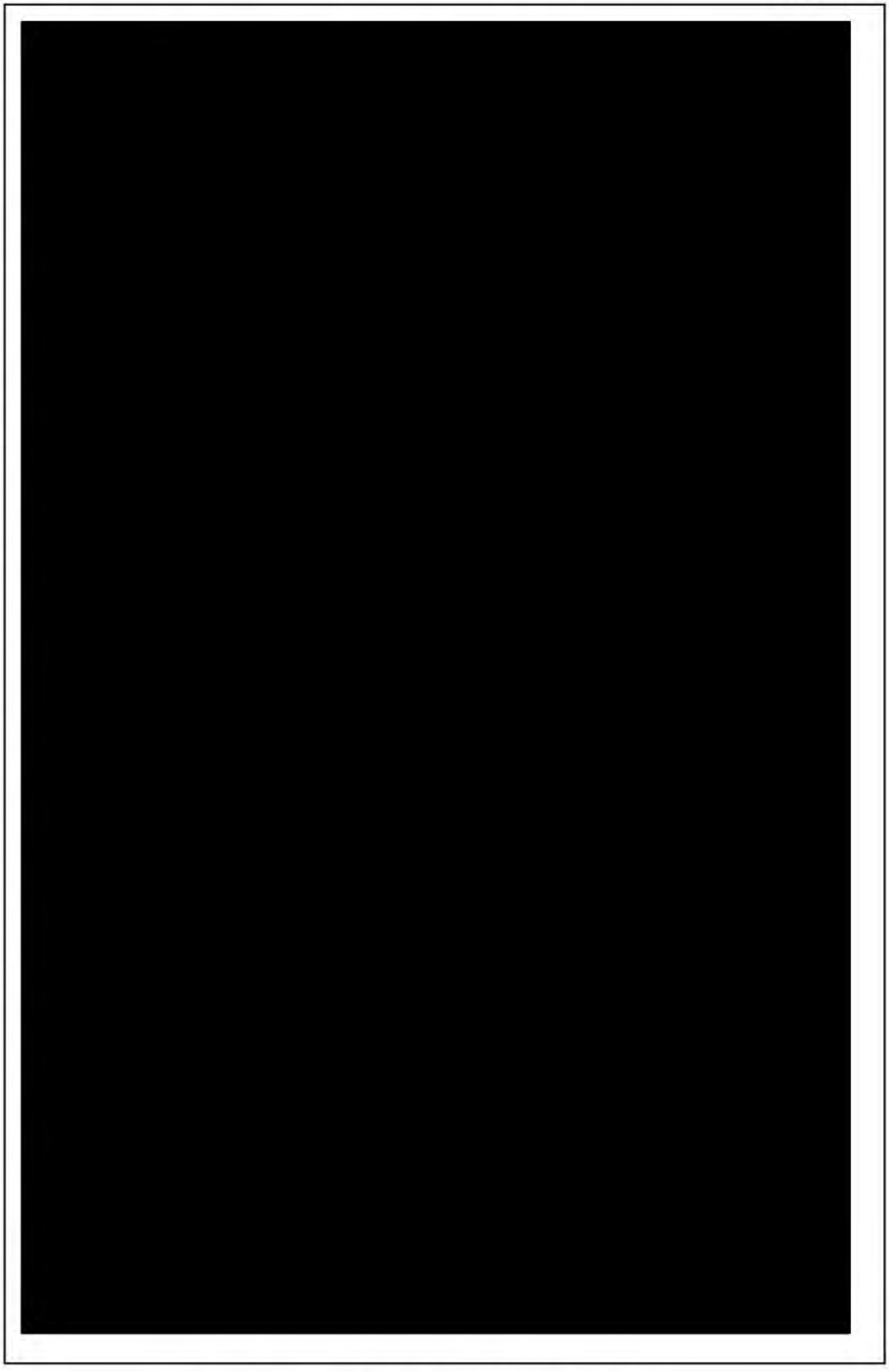




CERTIFICATE

I HEREBY CERTIFY that the witness was duly sworn by me and that the deposition is a true record of the testimony given by the witness.

It was requested before completion of the deposition that the witness, MAQUILING B. PARKERSON, have the opportunity to read and sign the deposition transcript.

Michelle Ridgway

MICHELLE L. RIDGWAY,
A Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, Certified Court Reporter and Notary Public
Dated: October 6, 2026

(The foregoing certification of this transcript does not apply to any reproduction of the same by any means, unless under the direct control and/or supervision of the certifying reporter.)

EXHIBIT 15

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

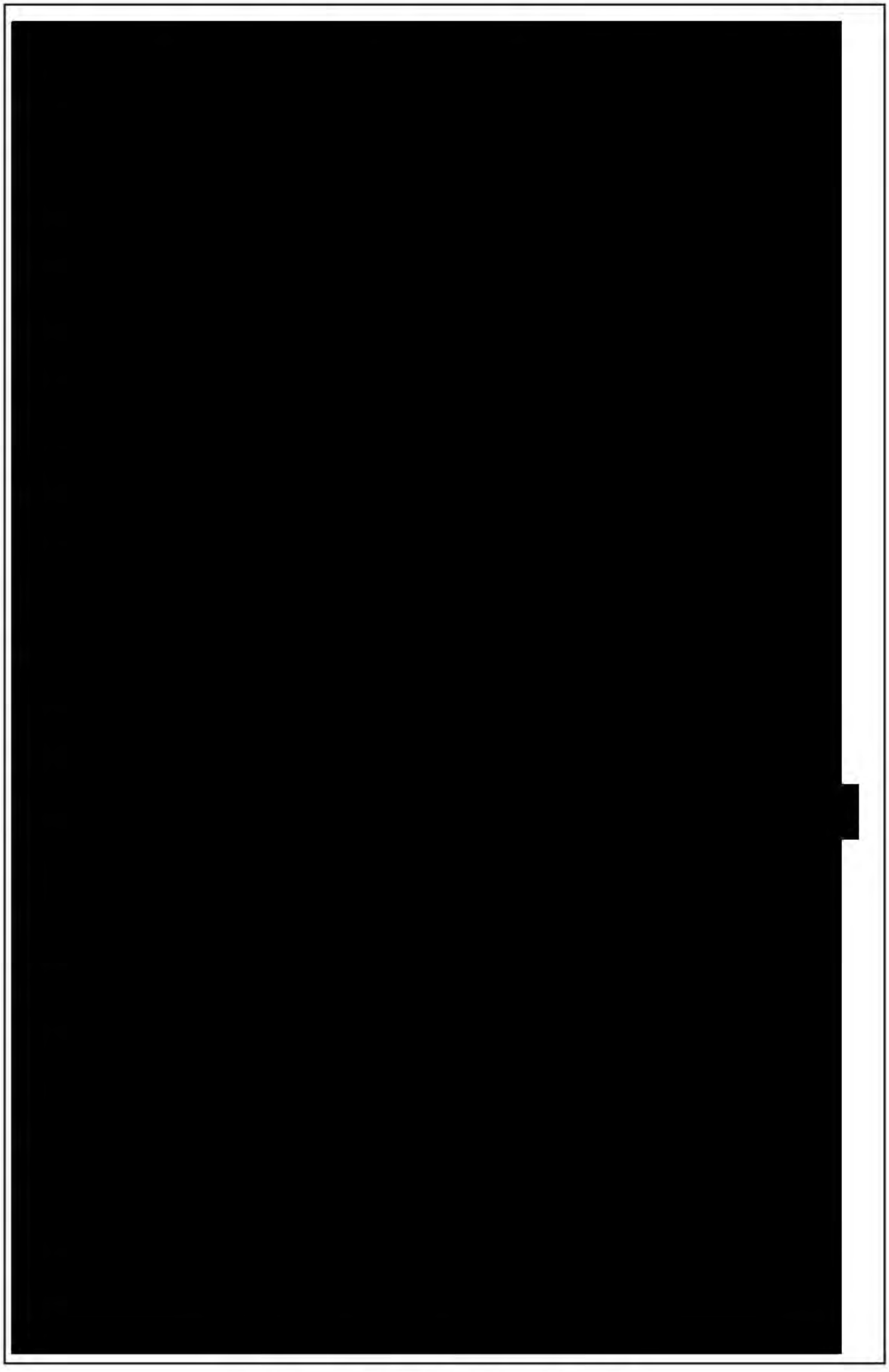
--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

VIDEOTAPED DEPOSITION

The DEPOSITION OF AARON PFEIFER, taken on behalf of the BURLINGTON NORTHERN, at the Law Office OF Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, on the 20th day of August, 2026, at 8:07 a.m., CT



just spoke?

MR. BEAUREGARD: That's Charles Beauregard of Sidley Austin on behalf of Norfolk Southern.

MS. REPORTER: Thank you.

BY MR. THOMPSON:

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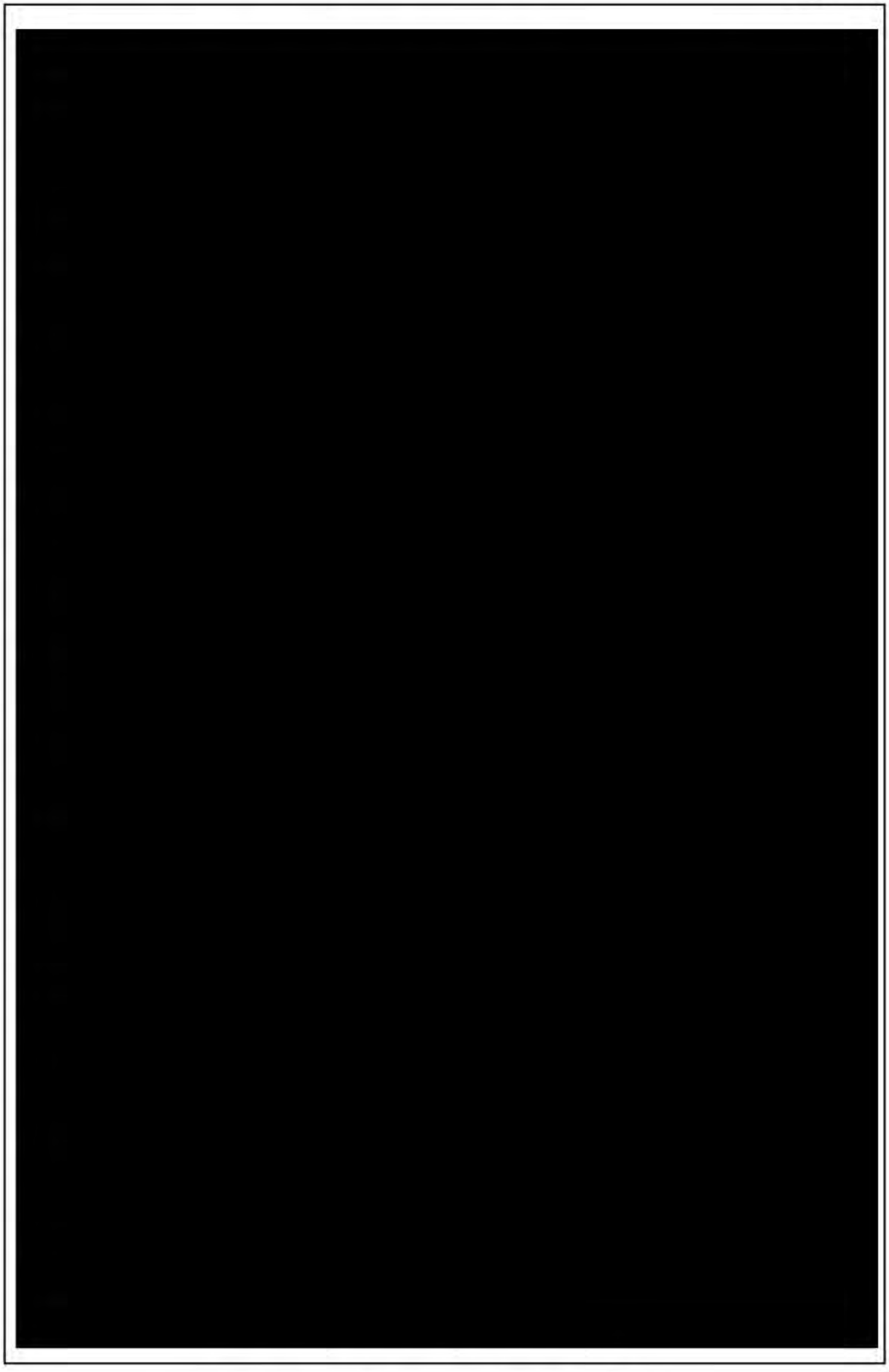


[redacted]

MS. WU: Objection, asked and answered.

THE WITNESS: Yes.

BY MR. THOMPSON:

Q. How does volume outpace -- what does it mean for volume to outpace the market?

MS. WU: Objection, vague.

THE WITNESS: That's referring to our volume growth growing faster than the marketplace.

BY MR. THOMPSON:

Q. What does that mean?

MS. WU: Objection, asked and answered.

THE WITNESS: If the market is growing 1 percent, we would grow 1.1 percent. That would be growing above the market.

BY MR. THOMPSON:

Q. And then the second part is that: We expect the revenue to outpace the volume.

Correct?

A. Correct.

Q. What does that mean?

MS. WU: Objection, lacks foundation.

THE WITNESS: That says that our revenue -- in this case, the revenue would be growing faster than the volume.

BY MR. THOMPSON:

Q. For revenue to grow faster than the volume, you need pricing increases, correct?

MS. WU: Objection, lacks foundation, calls for speculation.

THE WITNESS: That is one way revenue could grow faster in volume.

BY MR. THOMPSON:

Q. Is the primary way that -- increasing price is the primary way that revenue outpaces volume, correct?

MS. WU: Objection, lacks foundation, calls for speculation.

THE WITNESS: I mean, I actually think mix could happen --

MS. REPORTER: I am sorry, mix --

THE WITNESS: Mix could result in revenue outpacing volume growth.

BY MR. THOMPSON:

Q. So we have got increasing price. We have got changes in the mix of the business, right?

What other ways?

MS. WU: Objection, vague.

THE WITNESS: I believe those are the

primary ways.

BY MR. THOMPSON:

Q. So the primary ways that revenue would outpace volume would either be increasing price or changes in the mix of the product that you are moving, correct?

MS. WU: Objection, misstates prior testimony.

THE WITNESS: The two primary ways that I believe revenue could grow faster than volume are through changes in mix or changes in rates.

BY MR. THOMPSON:

[redacted]

[redacted]

BY MR. THOMPSON:

Q. You can set that aside.

MR. THOMPSON: Mark Exhibit 31. It is an Investor Day -- Investor Road Show from September 19,

MS. WU: Objection, vague.

THE WITNESS: We all want to achieve our goals, and we set ambitious goals.

BY MR. THOMPSON:

Q. Okay.

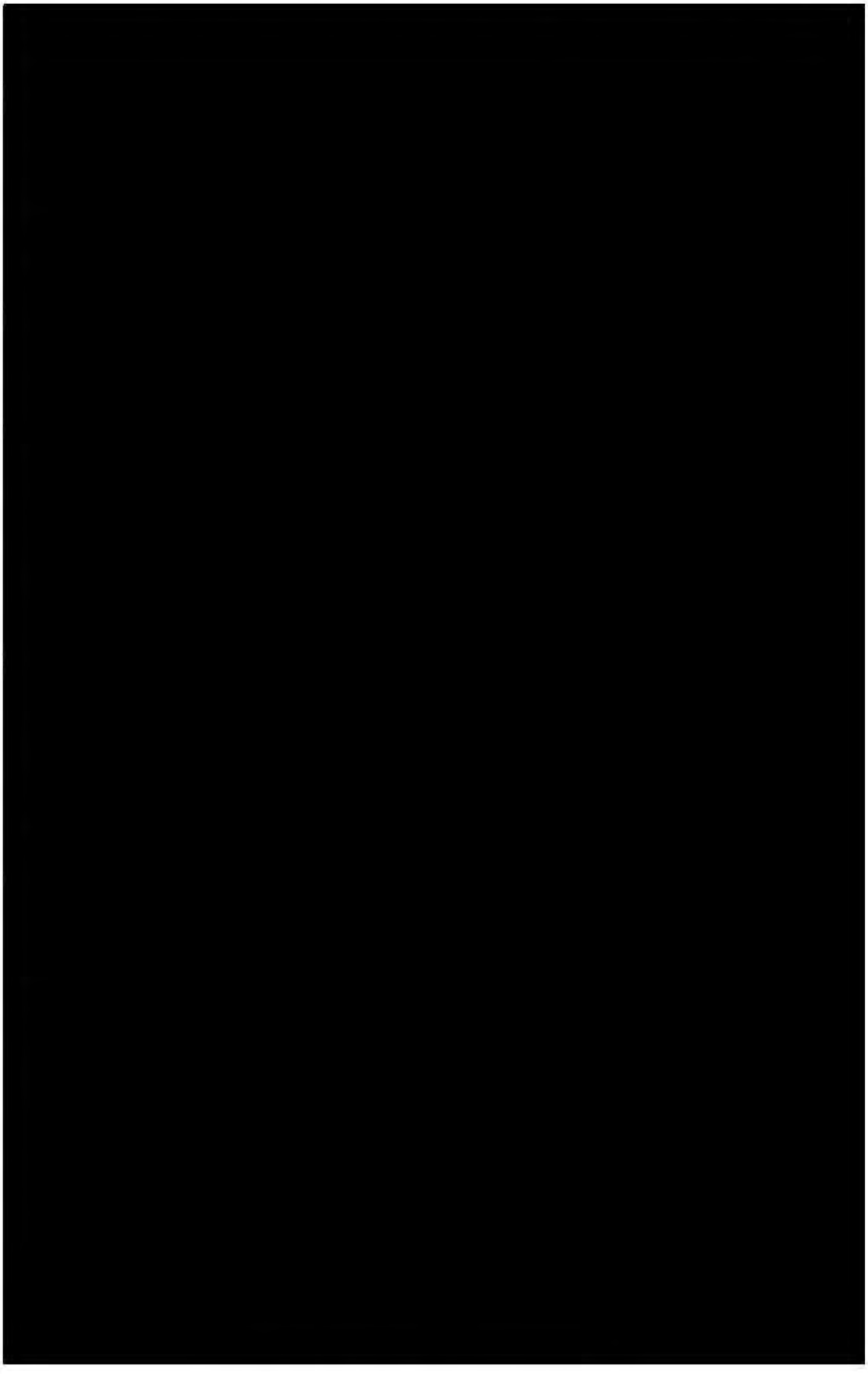
And one of the ways to incentivize the commercial team to set ambitious goals and then work to exceed them is through compensation, correct?

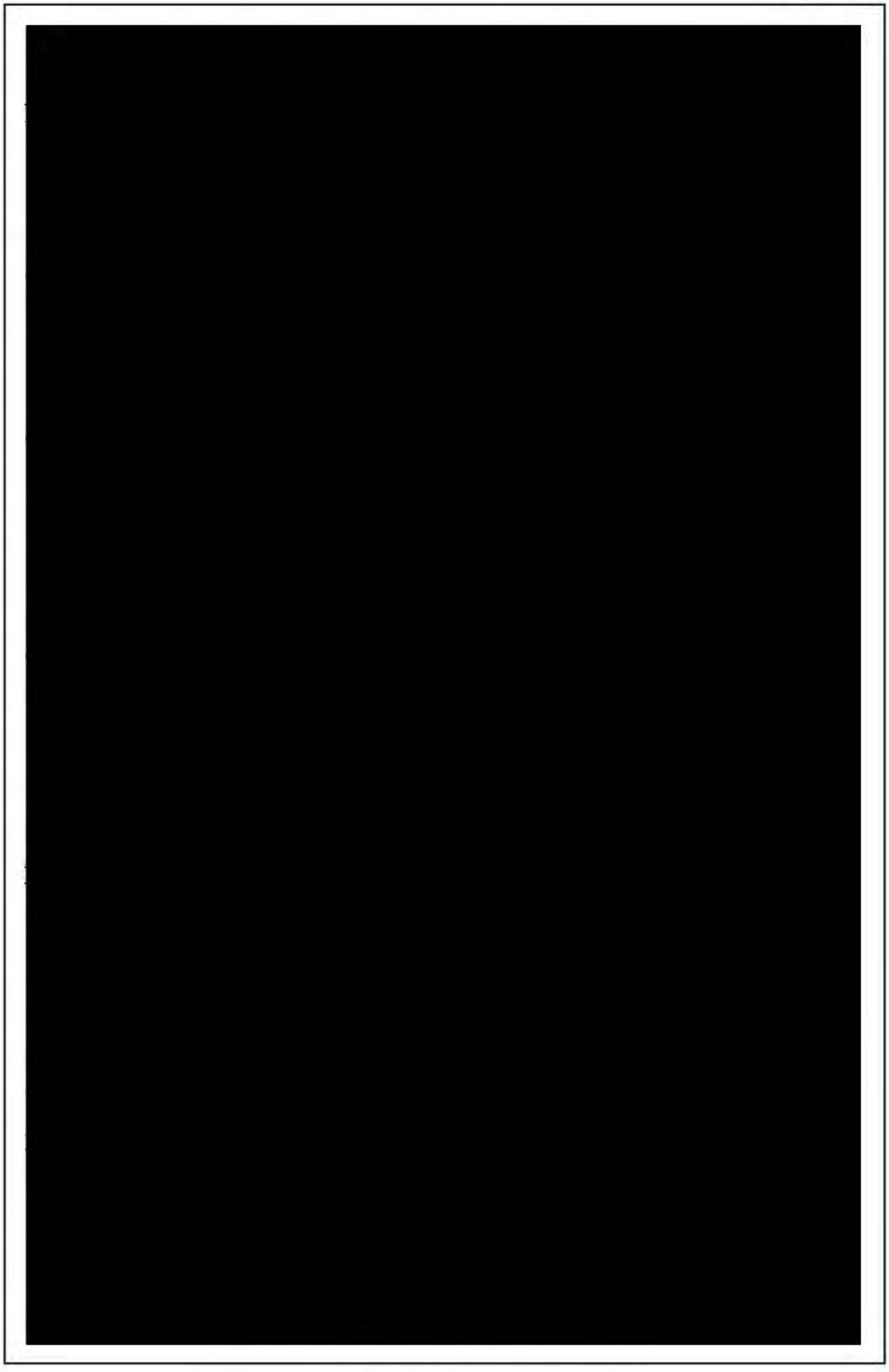
MS. WU: Objection, lacks foundation.

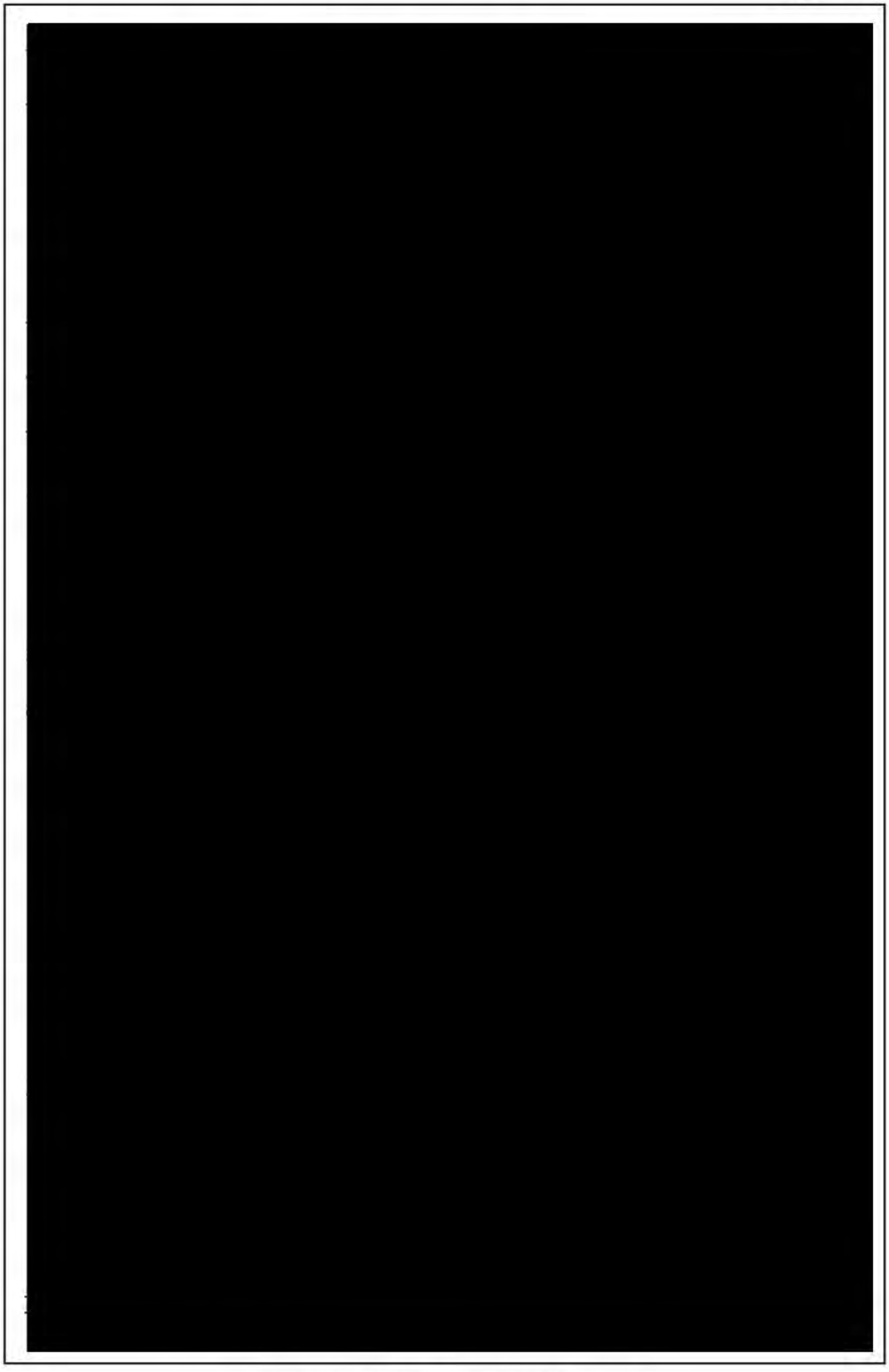
THE WITNESS: I work for compensation, yes.

BY MR. THOMPSON:

[redacted]







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BY MR. THOMPSON:

Q. Can you go to Page 33? This is still Mr. Rocker.

Do you see where it says: Truck Conversion Opportunities, winning and poised for

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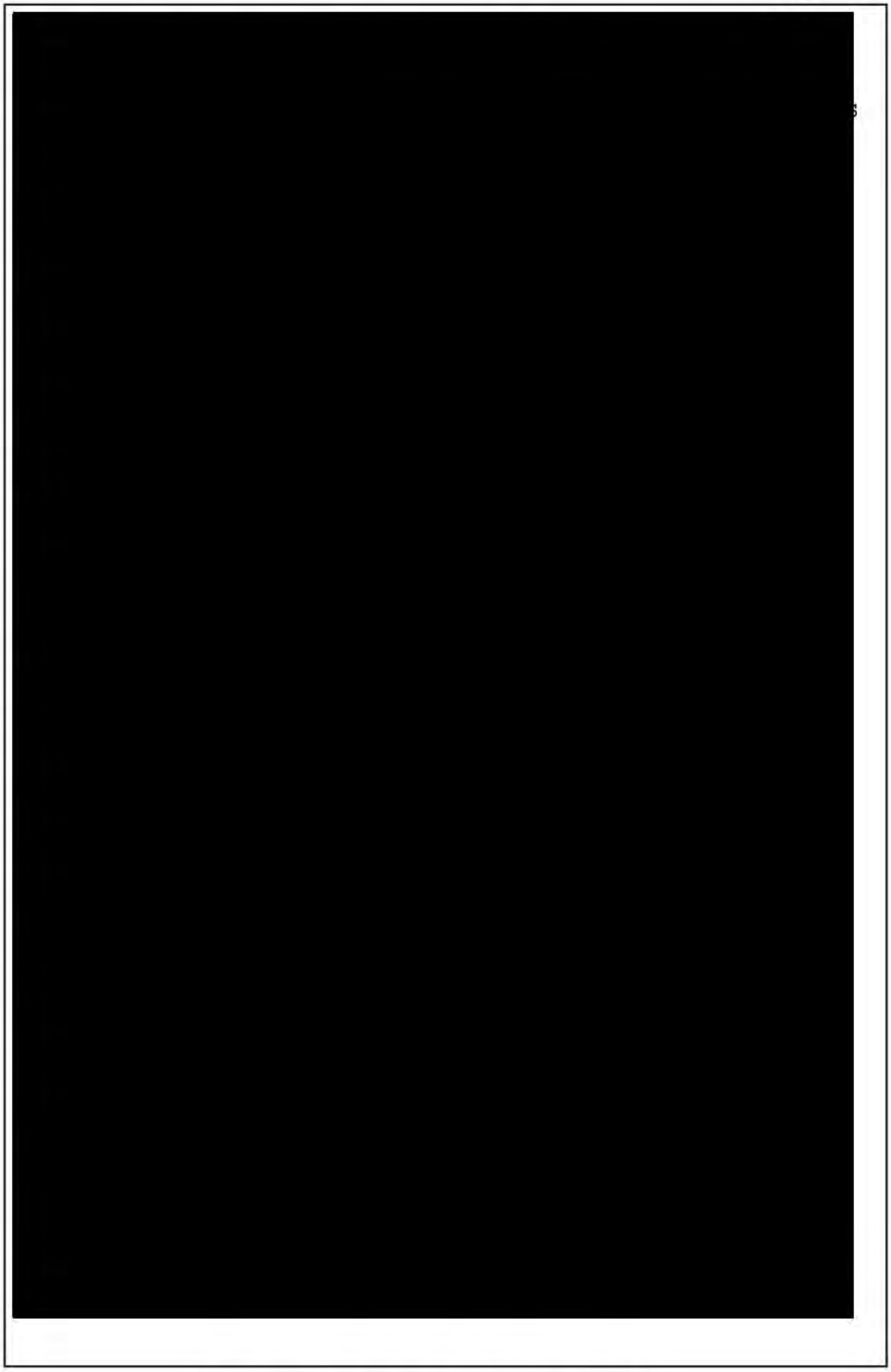

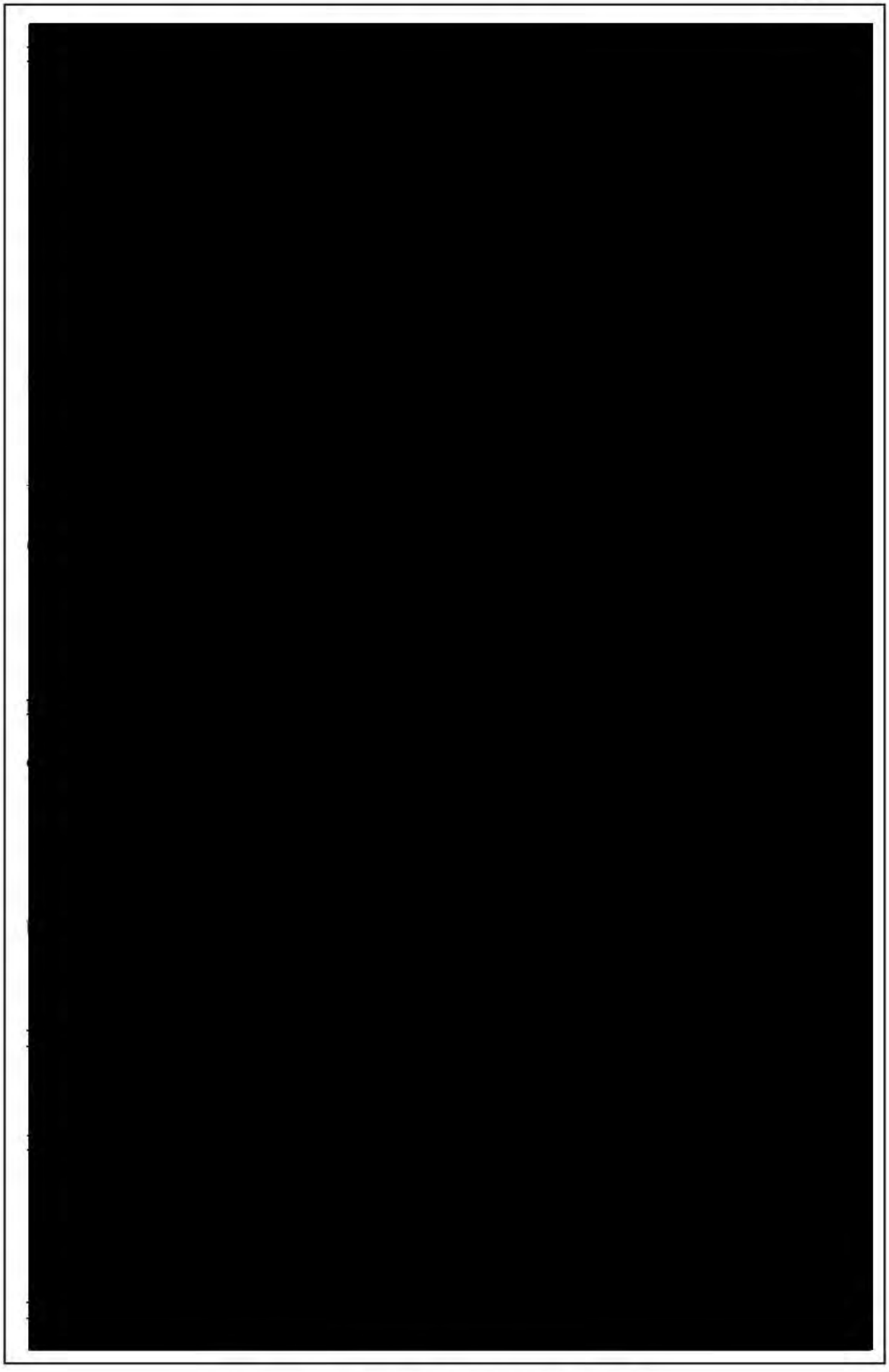

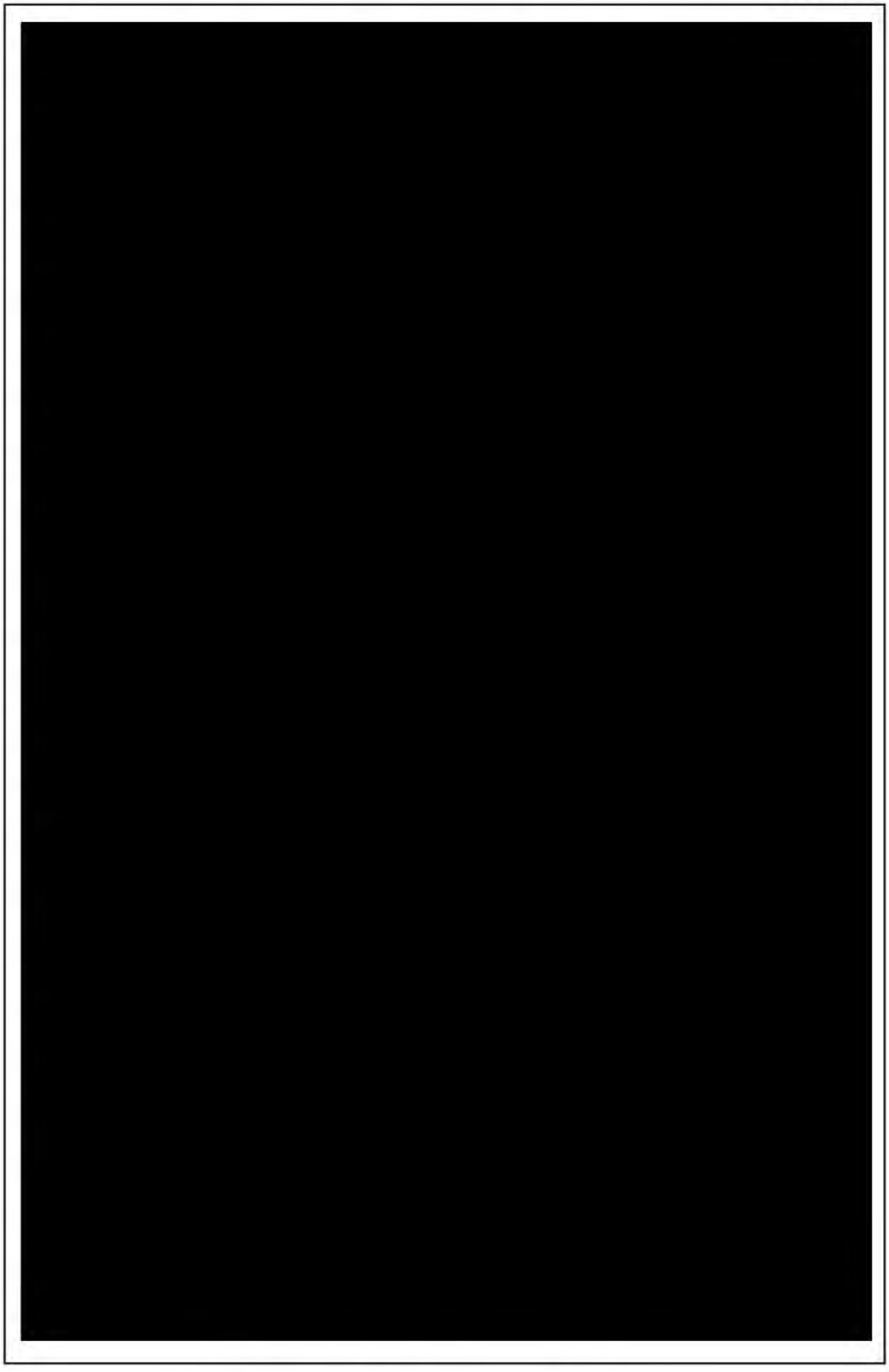

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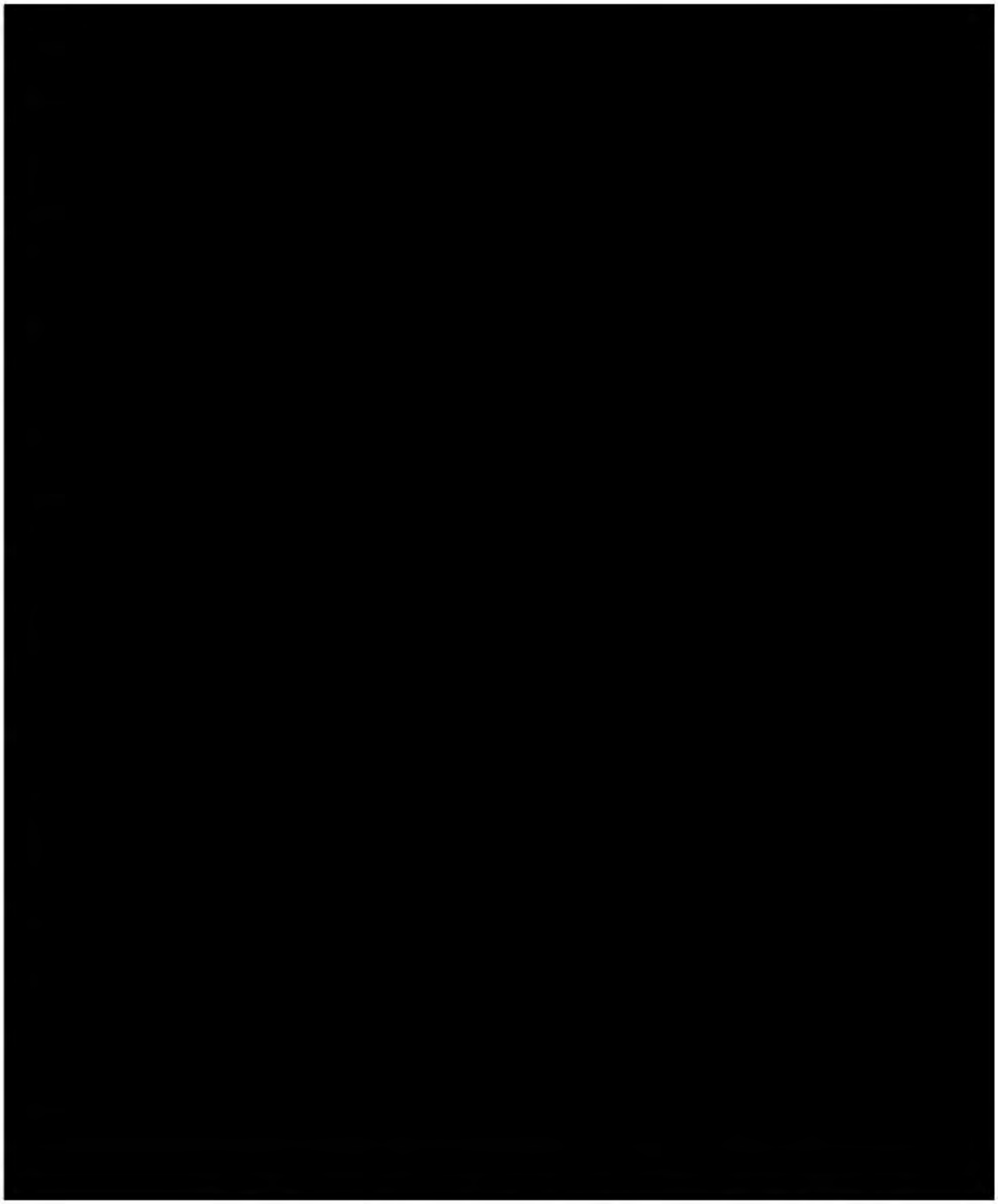


MR. FANCHIANG: Thank you, Mr. Pfeifer.

I would like to go off the record. I am likely done here. I believe we may have another counsel who wants to ask you some questions.

THE VIDEOGRAPHER: Off the record at

STATE OF ILLINOIS)
) SS.
COUNTY OF DUPAGE)

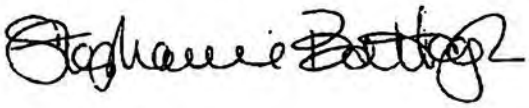
I, STEPHANIE A. BATTAGLIA, CSR and Notary Public in and for the County of DuPage and State of Illinois, do hereby certify that on August 20, 2026, at 8:07 a.m., at Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, the deponent AARON PFEIFER personally appeared before me.

I further certify that the said AARON PFEIFER was by me first duly sworn to testify and that the foregoing is a true record of the testimony given by the witness.

I further certify that the deposition was terminated at 4:46 p.m.

I further certify that I am not counsel for nor related to any of the parties herein, nor am I interested in the outcome hereof.

In witness whereof, I have hereunto set my hand and seal of office this 25th of August, 2026.



Notary Public

CSR No. 084-003337 - Expiration Date: May 31, 2027

EXHIBIT 16

BEFORE THE SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to Protective Order

CONFIDENTIAL PORTIONS INCLUDED

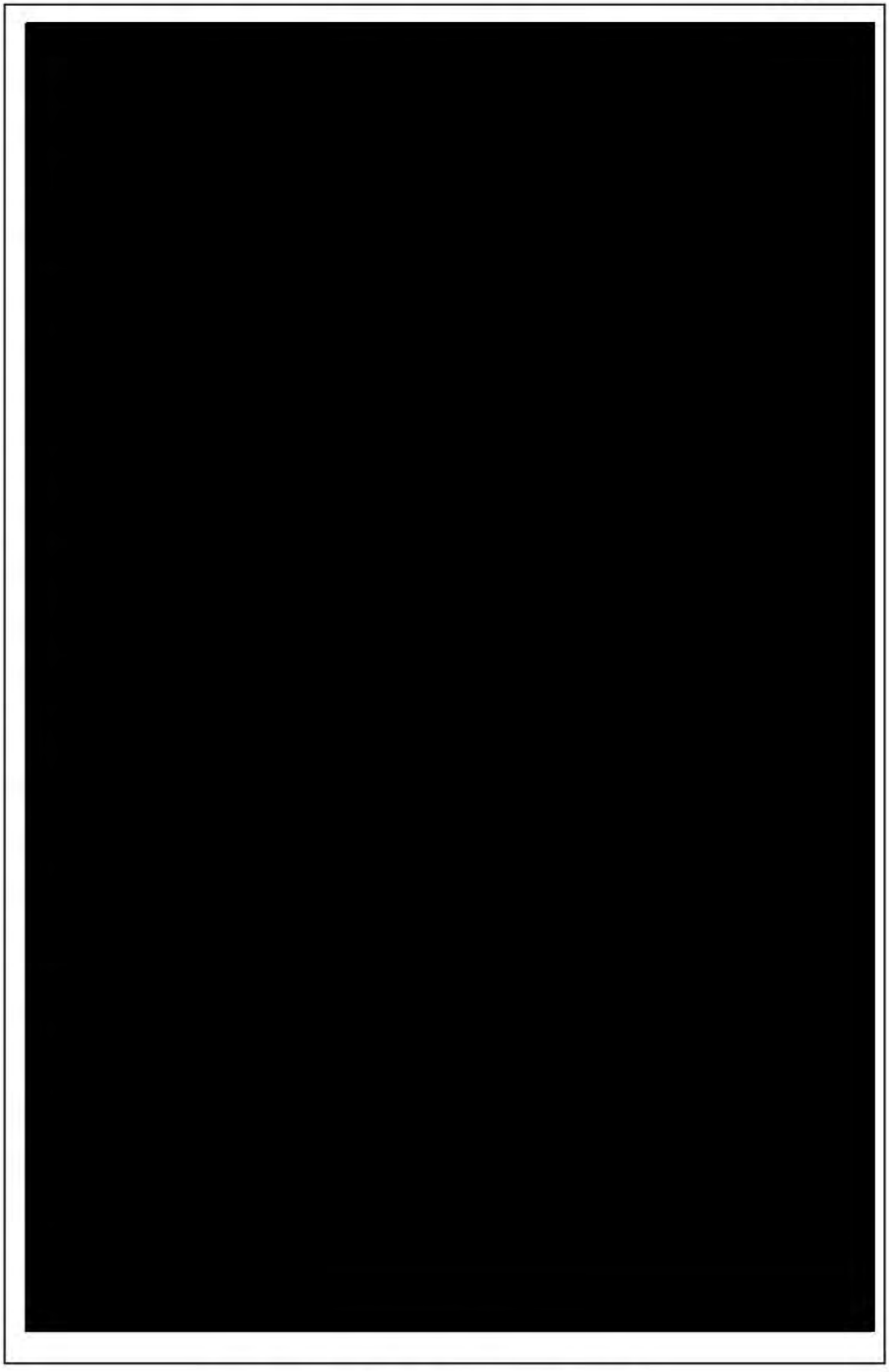
VIDEOTAPED DEPOSITION

The DEPOSITION OF JEFFREY PINCOCK, taken on behalf of the BURLINGTON NORTHERN, at the Law Office of Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, on October 8th, 2026, at 8:12 a.m. Central Daylight Time.

REPORTED BY: GREG S. WEILAND, CSR, RDR, CRR

JOB NO.: 23896

[redacted]



STATE OF ILLINOIS)
) SS.
COUNTY OF DUPAGE)

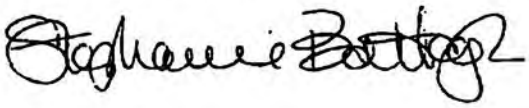
I, STEPHANIE A. BATTAGLIA, CSR and Notary Public in and for the County of DuPage and State of Illinois, do hereby certify that on August 20, 2026, at 8:07 a.m., at Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, the deponent AARON PFEIFER personally appeared before me.

I further certify that the said AARON PFEIFER was by me first duly sworn to testify and that the foregoing is a true record of the testimony given by the witness.

I further certify that the deposition was terminated at 4:46 p.m.

I further certify that I am not counsel for nor related to any of the parties herein, nor am I interested in the outcome hereof.

In witness whereof, I have hereunto set my hand and seal of office this 25th of August, 2026.



Notary Public

CSR No. 084-003337 - Expiration Date: May 31, 2027

EXHIBIT 17

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

VIDEOTAPED DEPOSITION

The VIDEOTAPED DEPOSITION OF KENNY ROCKER, taken on behalf of the BURLINGTON NORTHERN, at Baird Holm, LLP, 1700 Farnam Street, Suite 1500, Omaha, Nebraska, on the 29th day of October, 2026, at 7:57 a.m., CT.

[redacted]

[redacted]

Q. Can you go to -- let me ask you one or two things about what Ms. Hamann said after you in Dallas in September 19, 2024. Can you go to Page 45?

On Page 45, there is a header that says: Connecting the Strategy to Profit Drivers.

Do you see that? It's in bold.

A. I see it.

Q. And Ms. Hamann says: If you look at our industry, we essentially have three ways to drive profitability: productivity, price, and volume.

Do you see that?

A. Can I get a minute to --

Q. Sure. Just read that paragraph.

A. Okay.

Q. Do you see where Ms. Hamann says: Three ways to drive profitability in the rail industry:

[redacted]

BY MR. Van HOUWELINGEN:

Q. I am asking about this proceeding.

If -- if your promise to keep those gateways open -- strike that.

Your promise -- you -- you -- you have made a commitment to keep gateways open, and that -- those commitments have certain aspects to it. But if the rate you set for the portion of an interline movement is too high for interline service to be competitively viable under those commitments, those commitments would -- would be meaningless?

MS. FLAHIVE WU: Objection to form, lacks foundation.

THE WITNESS: As the executive vice president of the revenue here, there is no part of our goal or vision to set rates that are not competitive, thus we lose business. We want to be market competitive. So it would not be meaningless, no. We want to be competitive.

BY MR. Van HOUWELINGEN:

Q. I understand that. But you -- you have made commitments that -- I think your -- your testimony is those will be -- we will get there, but you called them robust and unenforceable.

I am just asking, the point of making the commitments is that they should be meaningful, right?

MS. FLAHIVE WU: Objection to form.

THE WITNESS: Are you referring to the commitment of being commercially reasonable?

BY MR. Van HOUWELINGEN:

Q. Yes.

A. Yes.

Q. And if that commitment is unable -- if that commitment -- through setting commercially reasonable rates, if that -- if that commitment to use that -- to keep gateways open is unable to prevent UP-NS from setting its portion of an interline movement too high for interline service to be competitively viable, that commitment would be meaningless. The whole point of making a commitment would be so it allows for rates that make the interline service competitively viable, fair?

MS. FLAHIVE WU: Objection to form, lacks foundation.

THE WITNESS: As I have stated --

BY MR. Van HOUWELINGEN:

Q. But you are -- you didn't answer my question. I am asking --

MS. FLAHIVE WU: Counsel, could you allow the witness to answer, please?

THE WITNESS: Respectfully, you talked about a lot. Maybe if you could just streamline the question. I -- I thought I have answered it.

BY MR. Van HOUWELINGEN:

Q. Well, let me -- let me -- let me ask about some aspects of this.

If you take a look at the paragraph on Page 19 that starts, "We understand the problem," I am going to ask about that, that paragraph.

Is it still true that you are not aware of any mechanical definition of what it means for a rate to be commercially reasonable?

A. Is it true that I am still not aware?

Q. Correct.

A. It's -- it's not true. I know if a rate is commercially reasonable or not.

Q. Okay. Are you now aware of a mechanical definition of what it means for a rate to be commercially reasonable?

A. I base it on the results, and that's why I keep going back to what happened post merger with CPKC.

I know if the rate is reasonable -- you use the words -- I use the word "mechanical" -- mechanical definition, is you win or you lose business. I know that if the rate is -- is not competitive or the service product is not competitive, I will make the adjustment or CPKC will make the adjustments on their service end.

Q. Is commercially reasonable a concept that UP uses today in pricing its traffic?

A. That word choice is not something we use all the time. We use -- you know, you want to be competitive, market competitive.

Q. So you would use concepts like competitive and market competitive, not commercially reasonable, correct?

MS. FLAHIVE WU: Objection to form.

THE WITNESS: "Commercially reasonable" is one of them, one term you could use. If it's in here, it's in here. It is one word -- one -- it's one -- it's one phrase you can use. It's not a "only." There is not an "only" to it.

BY MR. Van HOUWELINGEN:

Q. You -- you are aware that Union Pacific has produced a large volume of documents in this

proceeding, correct?

A. Yes.

Q. Do you --

A. Yes, I am aware.

Q. Do you think if I were to go into all of those documents and -- and look for Union Pacific describing its pricing in a negotiation with a shipper, it would be using the phrase "commercially reasonable" anywhere in there?

MS. FLAHIVE WU: Objection to form.

THE WITNESS: As you state it, it's a lot of documents. I don't know if we put that word in there.

BY MR. Van HOUWELINGEN:

Q. Well, is it still true that Union Pacific's contracts do not call simply for rates that are commercially reasonable?

MS. FLAHIVE WU: Objection to form.

THE WITNESS: Ask that question a different way. I can't tell if you are asking a literal question or what.

BY MR. Van HOUWELINGEN:

Q. Well, let me flip it around.

Are you aware of any Union Pacific

contracts that call for rates described as commercially reasonable?

A. The contracts themselves, the wording in the contract?

Q. Correct.

A. I am not aware of a contract that has that wording in it.

Q. Do you still agree that railroads and customers operating in good faith -- as you said in your sworn testimony in 2022, you still agree that railroads and customers operating in good faith may disagree about whether a particular rate is appropriate in light of market circumstances?

A. I agree with that statement regardless of the testimony. There is always dialogue that has to take place with customers and Union Pacific.

Q. Now, in 2022, in your testimony here, you write on -- two paragraphs down on Page 19: Applicants there at CPKC, plainly recognize their promise to charge commercially reasonable rates is illusory and unenforceable.

Correct?

A. That's in writing.

Q. And that's what you believed in 2022 in

your sworn testimony to the STB?

A. Just to clarify something -- and I have said this before -- at that time in 2022, I believed that. Since then I have seen what has actually taken place. So I need to make sure I am on the record saying that.

Q. Okay.

A. But, yeah, when I wrote this, I thought that. But -- but since then, like I mentioned, our service product has improved, and we increased our train performance, which has benefited the customer, and then cases we have had to compete and lower our rates, which has also benefited the customer. And I would expect the merger to do the same -- same thing.

[redacted]

[redacted]

[redacted]



Q. Is -- is it your understanding that -- okay. You have called the commitments that Union Pacific has made in this transaction, the open gateway conditions, robust and readily enforceable, correct?

A. Yes.

Q. Is it your understanding that the open gateway conditions that Union Pacific has committed to --

MR. Van HOUWELINGEN: Why don't we go off the record.

THE VIDEOGRAPHER: The time is 1:58 p.m. We are off the record.

(Recess taken.)

THE VIDEOGRAPHER: The time is 2:08 p.m. We are back on the record.

BY MR. Van HOUWELINGEN:

Q. Hello, again, Mr. Rocker. Before that fire drill, we were talking about your testimony on CPKC where you referred to the open gateway commitments that CPKC had committed to as illusory and unenforceable, and in this proceeding, you have referred to the open gateway commitments that UP has made as robust and readily enforceable.

And my question is: Do you understand there to be some difference between those commitments, the ones you were describing in your verified statement in CPKC and the ones you are now endorsing in this proceeding to have -- it is a long question, sorry.

Do you understand those commitments -- there to be some difference between those commitments?

A. I understand that. That's why I went through also a pretty lengthy discussion around what I thought in 2022 versus what's actually happened. And it changes how I look at the proceeding now.

Q. Fair enough. But I am just trying to get

clarity. I was asking, I think, a different question.

A. Okay. How is it different?

Q. Yes. My question is -- my question is whether you understand there to be some difference in the commitments that were made that contributes to your -- or informs your different descriptions, different views about the enforceability and robustness, because there is a difference between the commitments or -- because I understood you to be testifying your experience since has caused you to come to a different view.

MS. FLAHIVE WU: Objection to form.

BY MR. Van HOUWELINGEN:

Q. And so -- and this is a long preamble so I can get to a clearer question.

I am asking -- because you testified about that experience in the years since. I am asking if you understand there to be a difference in the actual commitments that are being described that causes you to view them differently?

MS. FLAHIVE WU: Objection to form, and object to the characterization or mischaracterization of the witness's prior testimony.

THE WITNESS: There are a few things.

One is that the STB made sure that they had oversight and made sure that the rates were commercially reasonable.

And what I am saying is -- and "experienced" is probably not the right word. "Results" is the better word. And the results is that if you look at it over the last three years, and I do look at it, you know, our ability to grow New Mexico has been protected, sustained. We have been able to grow. So that's the difference.

BY MR. Van HOUWELINGEN:

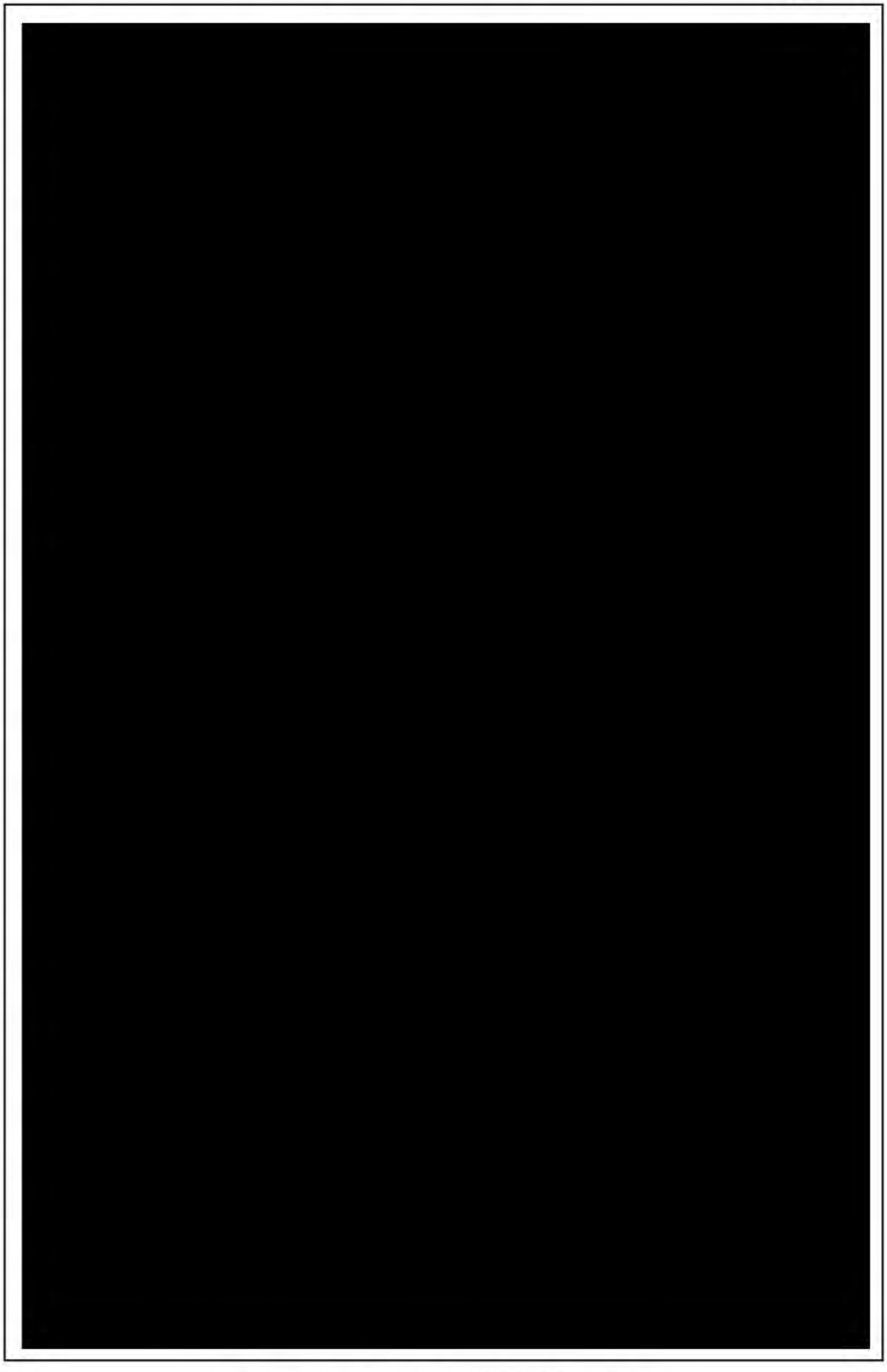
Q. So setting aside the results, you mentioned that the STB made sure that they had oversight and made sure the rates were commercially reasonable.

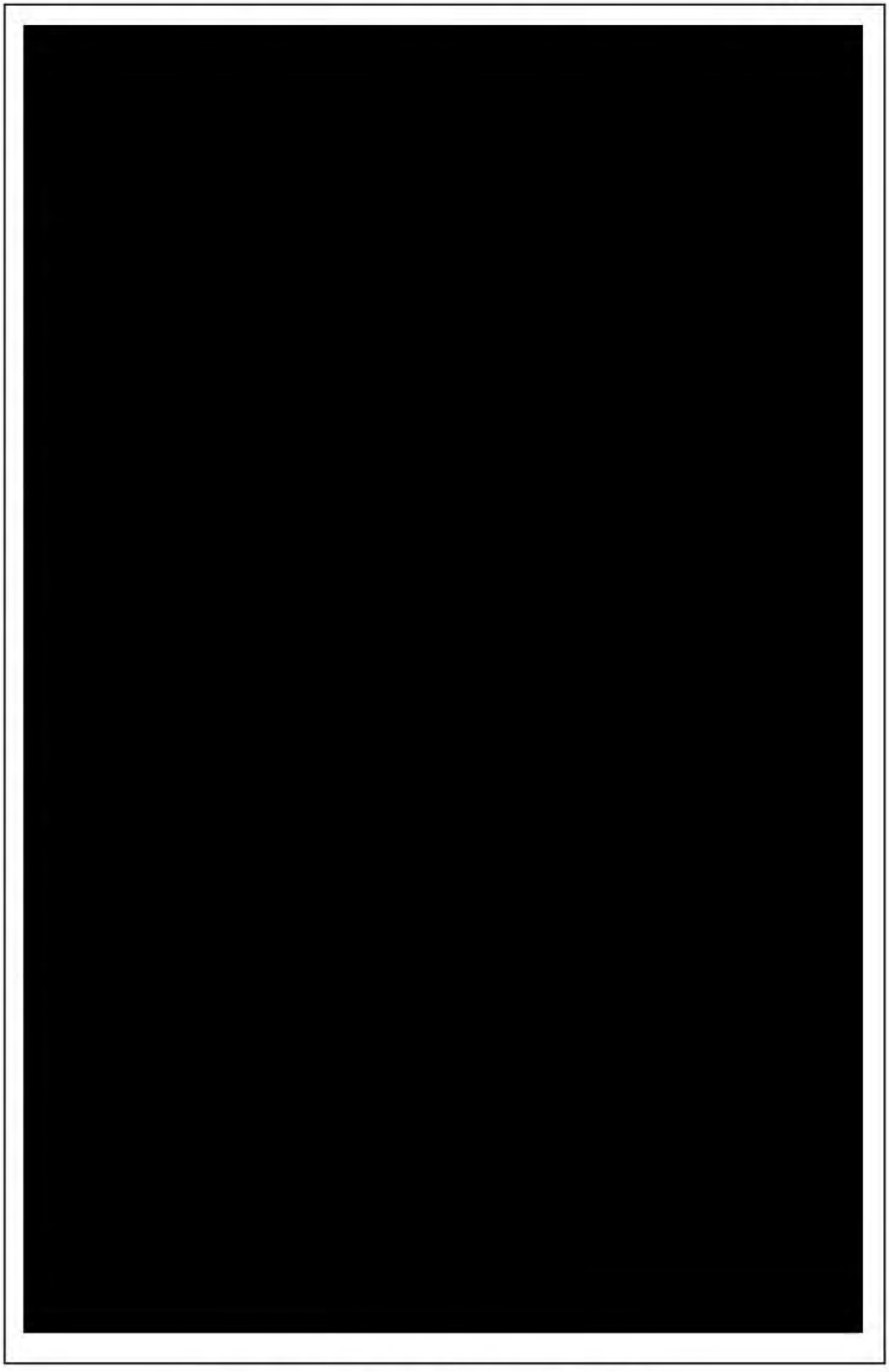
Did I get that correct?

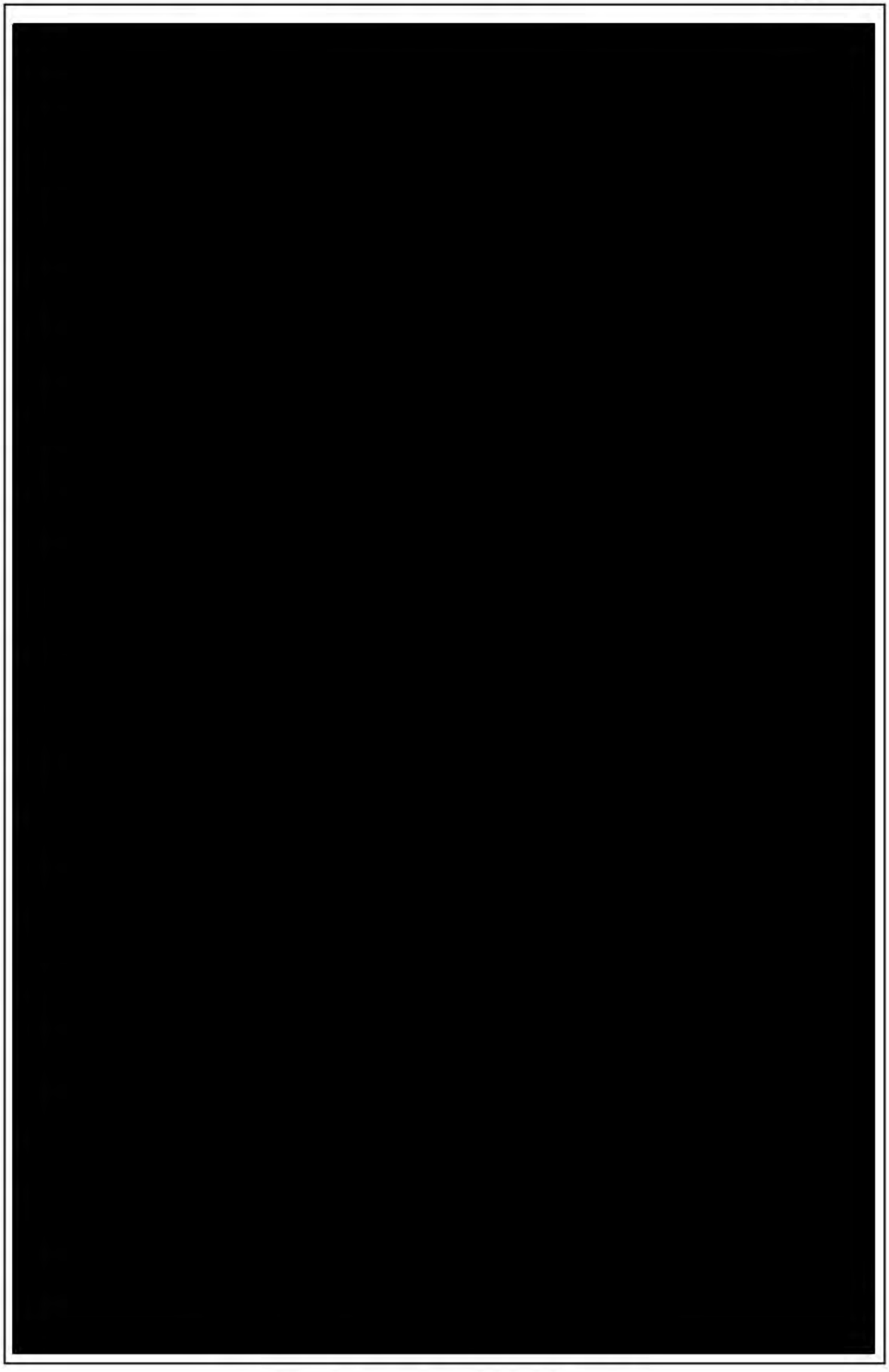
A. I believe that.

Q. There is -- are you aware of there being any difference in the definition -- the definition of the rates that UP is committing to as commercially reasonable?

MS. FLAHIVE WU: Objection to form. Are you referencing the STB oversight the witness had just testified about?







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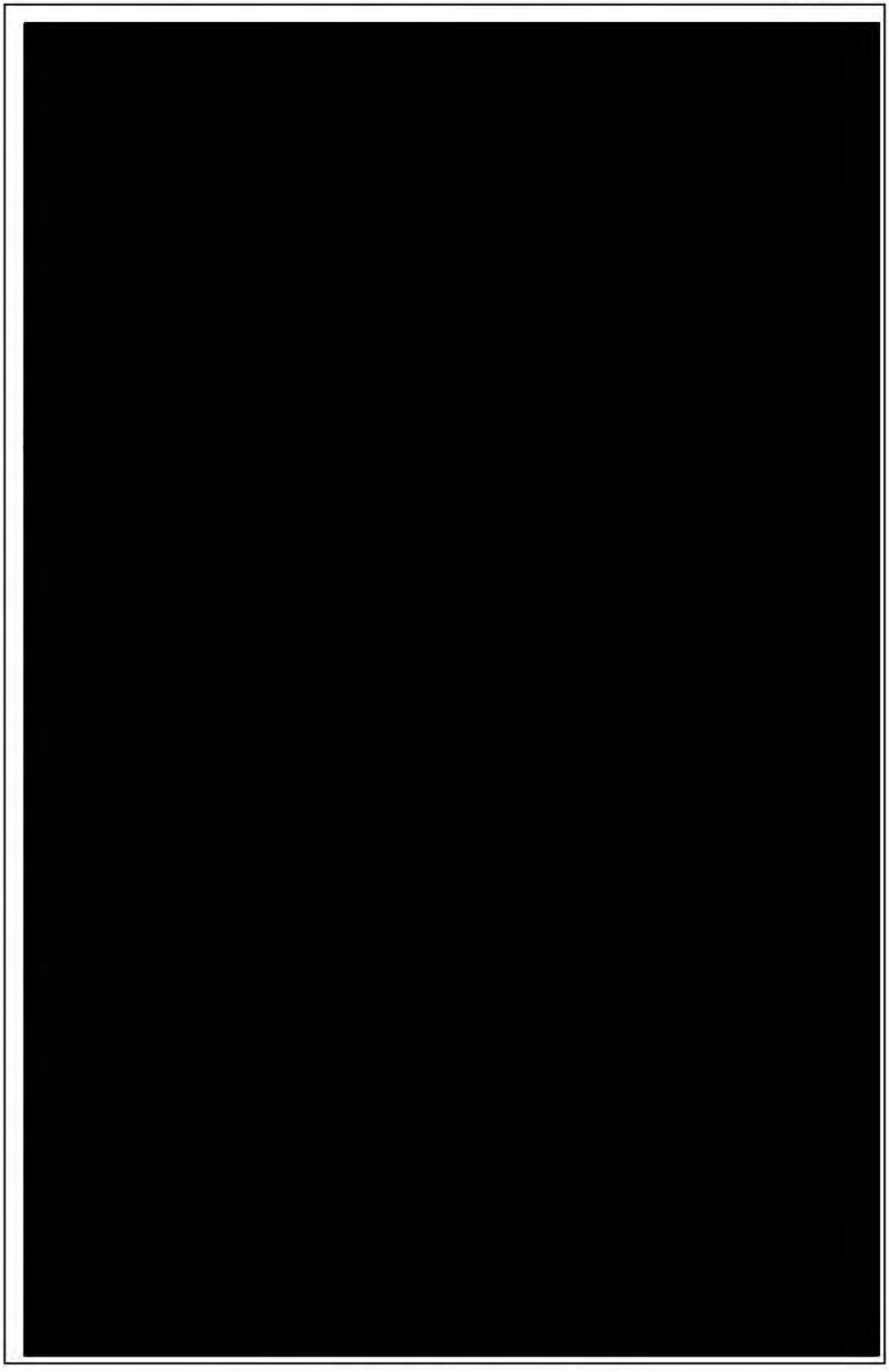

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[redacted]

MR. Van HOUWELINGEN: Why don't we take a break.

THE VIDEOGRAPHER: The time is 3:05 p.m. We are off the record.

(Recess taken.)

THE VIDEOGRAPHER: The time is 3:18 p.m. We are back on the record.

MR. Van HOUWELINGEN: Thank you, Mr. Rocker. I am done with my questions. I am going to pass the witness.

MS. FLAHIVE WU: Counsel, we spoke off

[redacted]

[redacted]

STATE OF ILLINOIS)
) SS.
COUNTY OF DUPAGE)

I, STEPHANIE A. BATTAGLIA, CSR and Notary Public in and for the County of DuPage and State of Illinois, do hereby certify that on October 29, 2026, at 7:57 a.m., at Baird Holm, LLP, 1700 Farnam Street, Suite 1500, Omaha, Nebraska, the deponent KENNY ROCKER personally appeared before me.

I further certify that the said KENNY ROCKER was by me first duly sworn to testify and that the foregoing is a true record of the testimony given by the witness.

I further certify that the deposition was terminated at 4:23 p.m.

I further certify that I am not counsel for nor related to any of the parties herein, nor am I interested in the outcome hereof.

In witness whereof, I have hereunto set my hand and seal of office this 2nd of November, 2026.



Notary Public

CSR No. 084-003337 - Expiration Date: May 31, 2027

EXHIBIT 18

BEFORE THE SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to Protective Order

CONFIDENTIAL PORTIONS INCLUDED

VIDEOTAPED DEPOSITION

The DEPOSITION OF TODD M. RYNASKI, taken on behalf of the BURLINGTON NORTHERN, at the Law Office of Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, on September 9th, 2026, at 8:03 a.m. Central Daylight Time.

REPORTED BY: GREG S. WEILAND, CSR, RDR, CRR

JOB NO.: 23769

[redacted]

MR. BROWN: 126.

(Exhibit 126 was marked for identification.)

THE VIDEOGRAPHER: There has been a message dropped in the chat. Remote participants asked, "Please read the Bates number of the document that has been produced in discovery."

MR. BROWN: Got it. Thank you.

[redacted]

[redacted]

[redacted]

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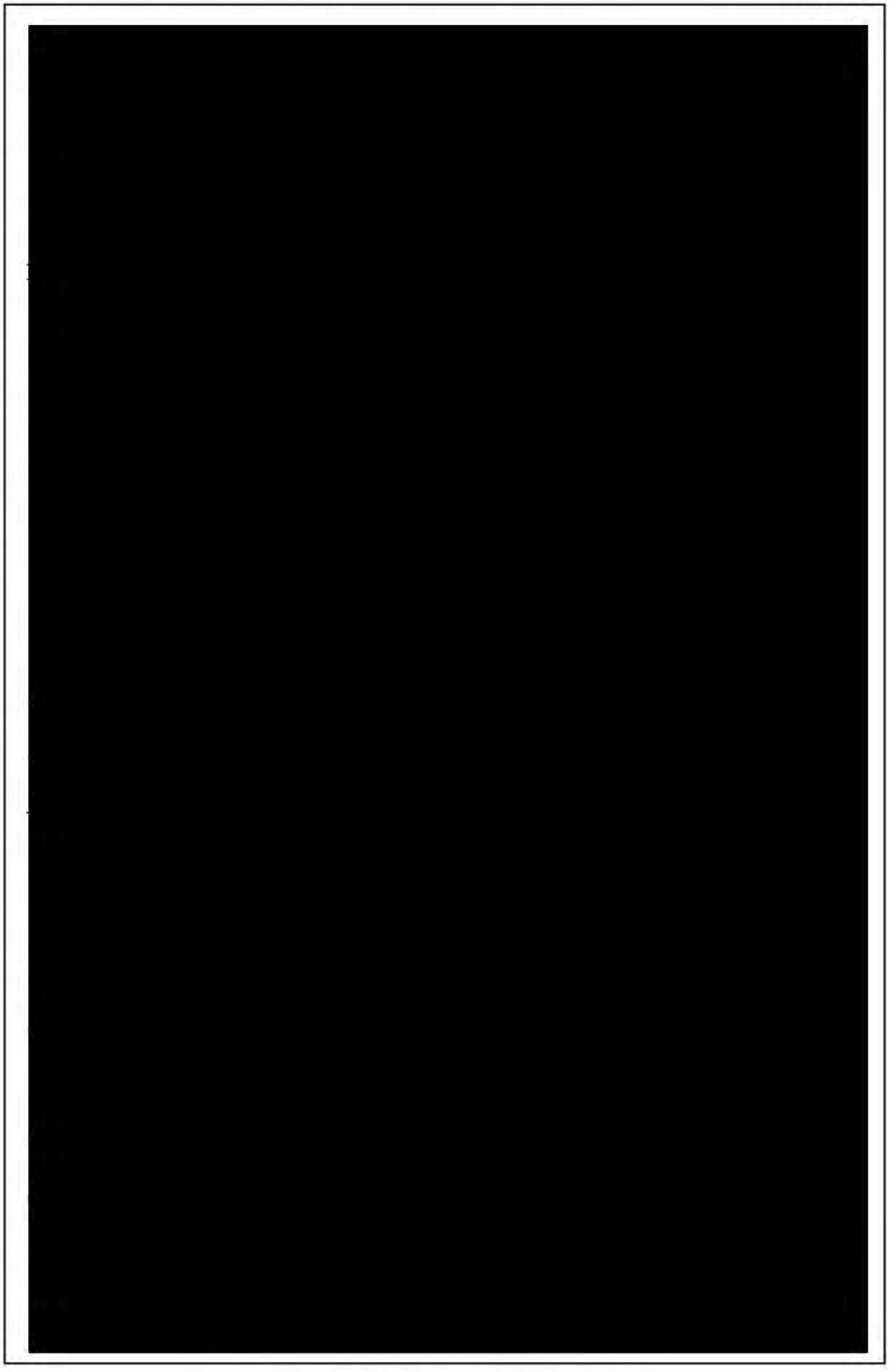
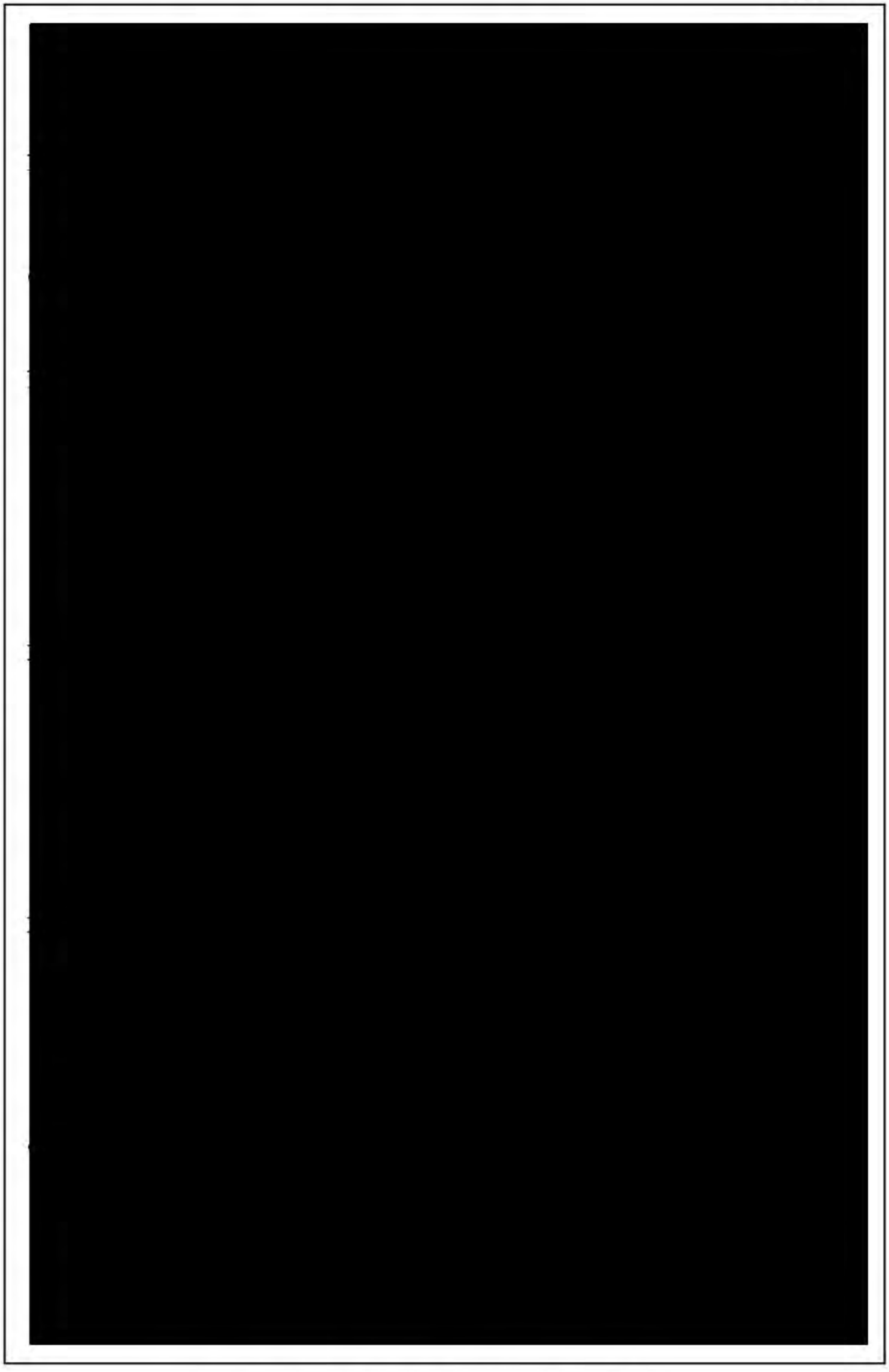
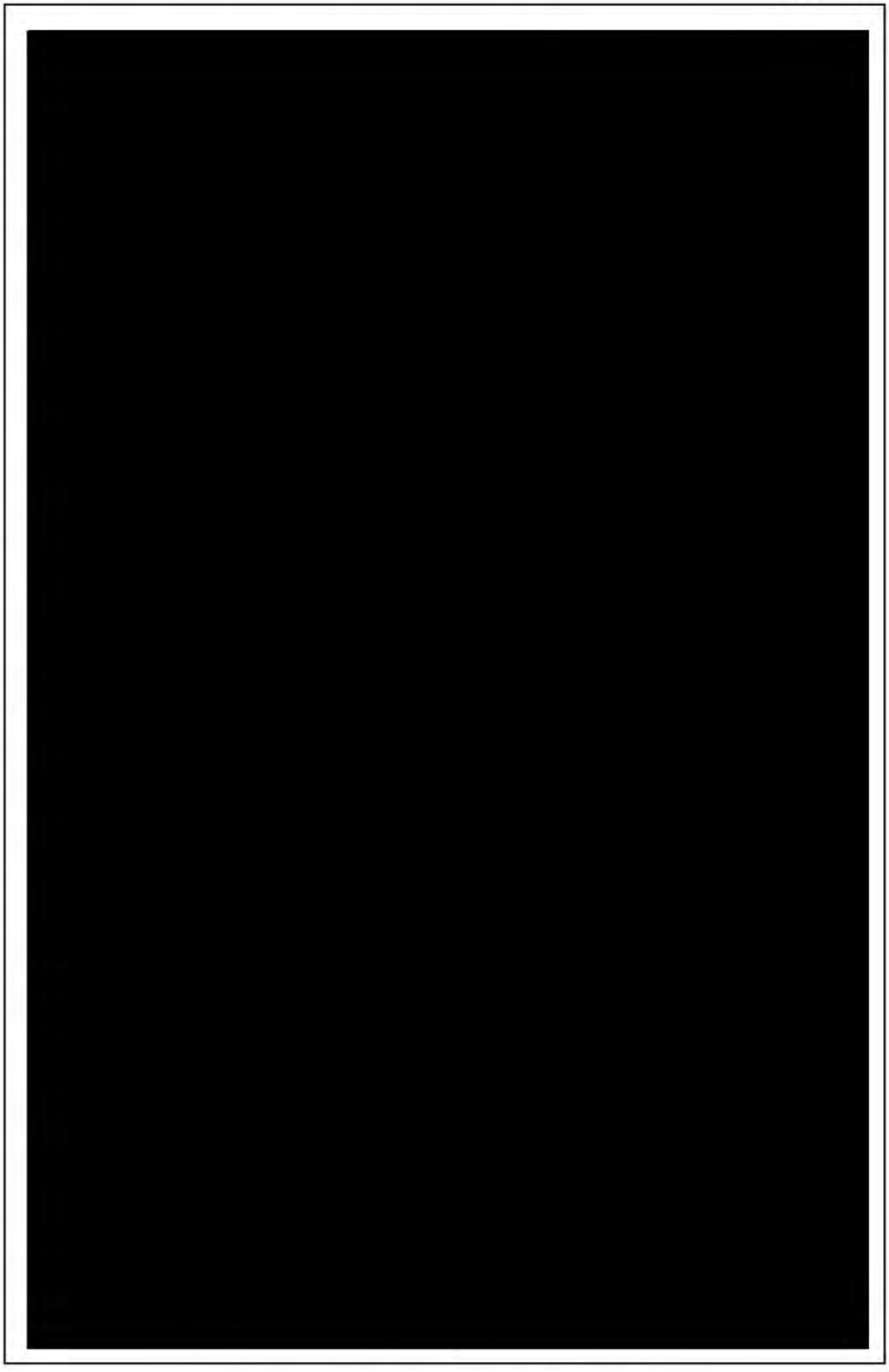






Q. And I believe earlier that you confirmed that the merger application estimates that shippers will save about $3.5 billion a year by switching from truck to rail as a result of the merger, right?

A. Correct.

Q. That's a figure that Oliver Wyman calculated?

A. It is.

Q. And that $3.5 billion figure, that does not take into account costs that shippers might incur in switching from truck to rail, correct?

A. It does not.

Q. And there are, at least, some shippers that will incur some costs in switching from truck to rail, correct?

A. Our assessment, when you talk about truck-to-rail conversion, that targets truck to intermodal. And an intermodal box provided by an intermodal marketing company can pull up on a truck's ramp just as well as a long-haul truck can.

Q. My question was, there are, at least, some shippers that will incur some costs in switching from truck to rail, correct?

A. Perhaps.

[redacted]

MR. ENSON: Those are my questions. Let's go off the record.

THE VIDEOGRAPHER: The time is 4:36 p.m. We are off the record.

C E R T I F I C A T E

The within and foregoing deposition of the witness, TODD M. RYNASKI, was taken before GREG S. WEILAND, CSR, RDR, CRR, at 1650 Farnam Street, Omaha, Nebraska, commencing at 8:03 o'clock a.m., on the 9th day of September, 2026.

The said witness was first duly sworn and was then examined upon oral interrogatories; the questions and answers were taken down in shorthand by the undersigned, acting as stenographer; and the within and foregoing is a true, accurate and complete record of all the questions asked of and answers made by the aforementioned witness at the time and place hereinabove referred to.

The signature of the witness was not waived and the deposition was submitted to the deponent as per copy of the attached letter.

The undersigned is not interested in the within case, nor of kin or counsel to any of the parties.

Witness my signature on this 14th day of September, 2026.



GREG S. WEILAND, CSR, RDR, CRR
License No. 084-003472

EXHIBIT 19

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

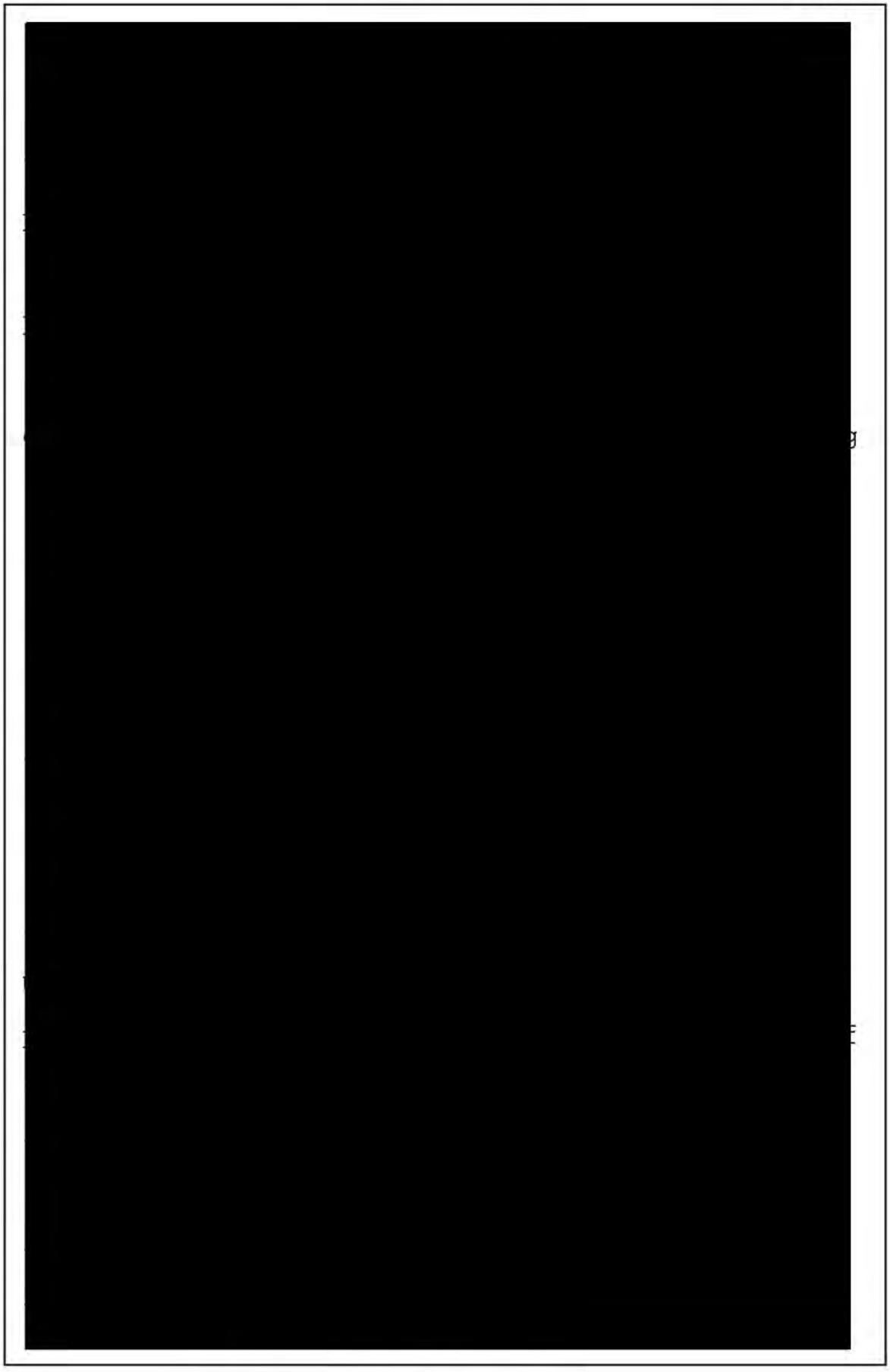
NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

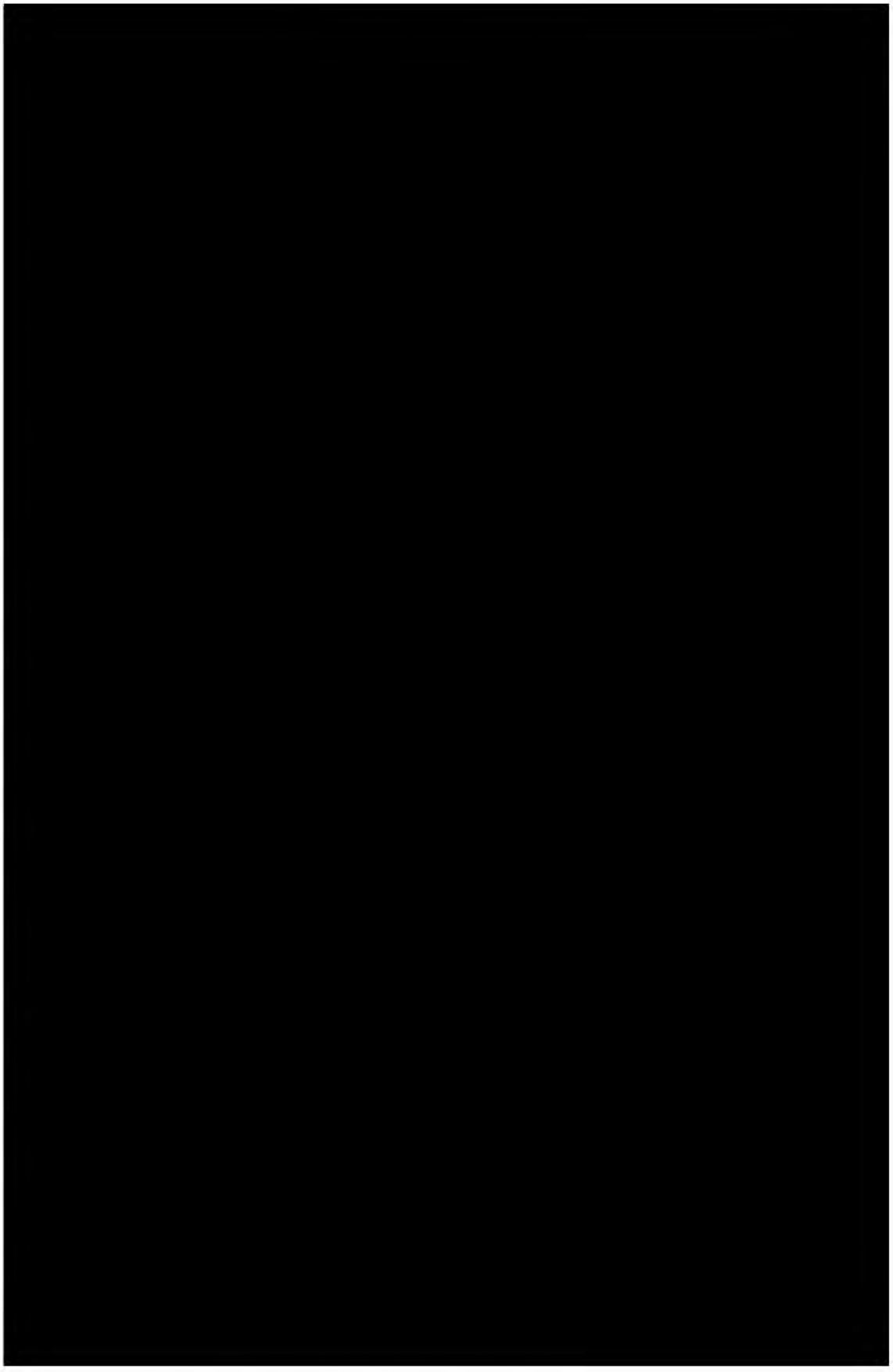
Highly Confidential
Pursuant to the Protective Order

CONFIDENTIAL PORTIONS INCLUDED

VIDEOTAPED DEPOSITION

The DEPOSITION OF JACOB THOMAS, taken on behalf of the BURLINGTON NORTHERN, at the Law Office OF Kutak Rock, 1650 Farnam Street, Omaha, Nebraska, on the 21st day of August, 2026, at 7:54 a.m., CT





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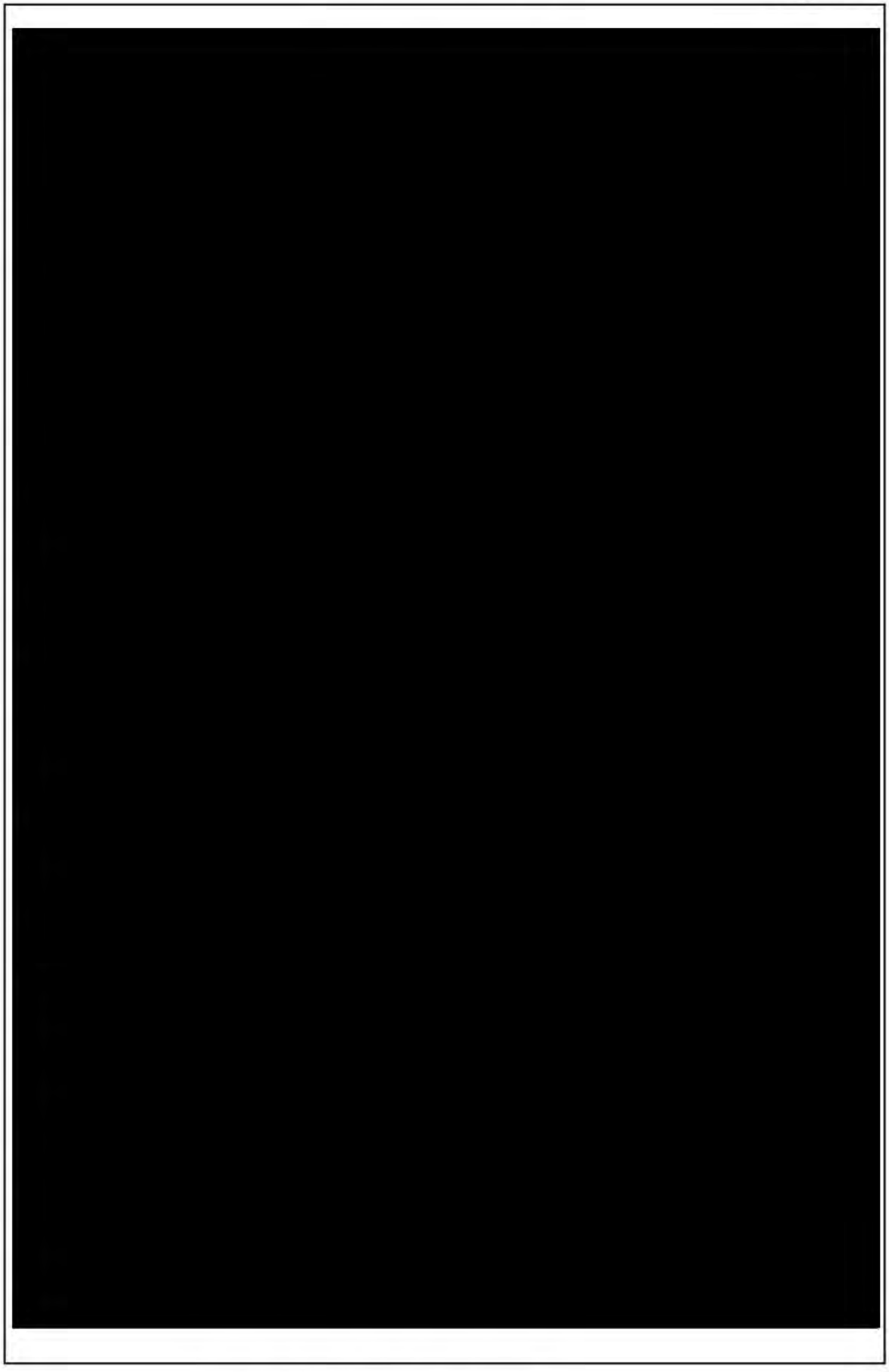
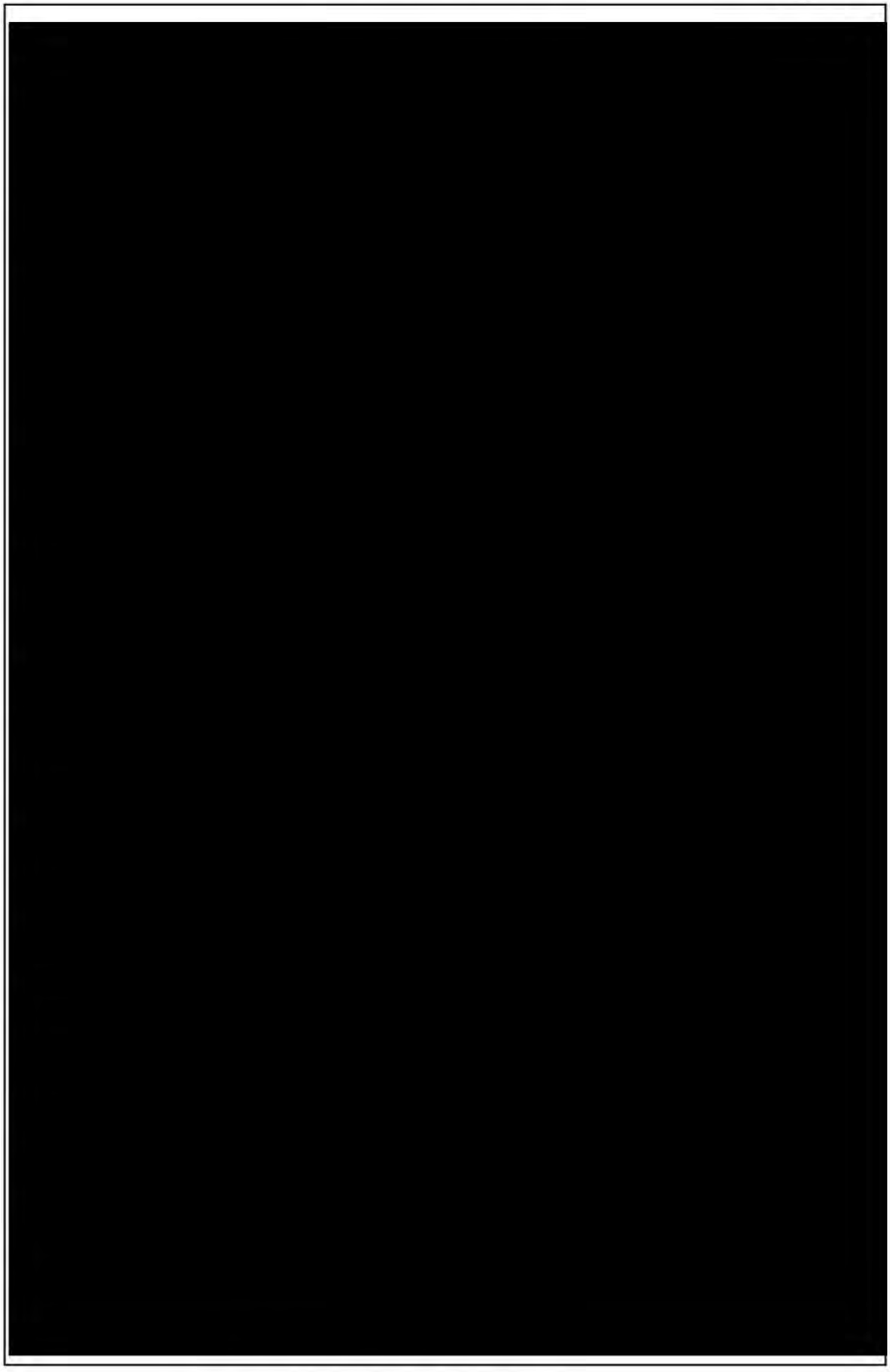




would be part of that program.

BY MR. THOMPSON:

Q. I suspect you are not going to know what he means by "obliterate the goal."

Now, do you, do you know what he means by "obliterate the goal"?

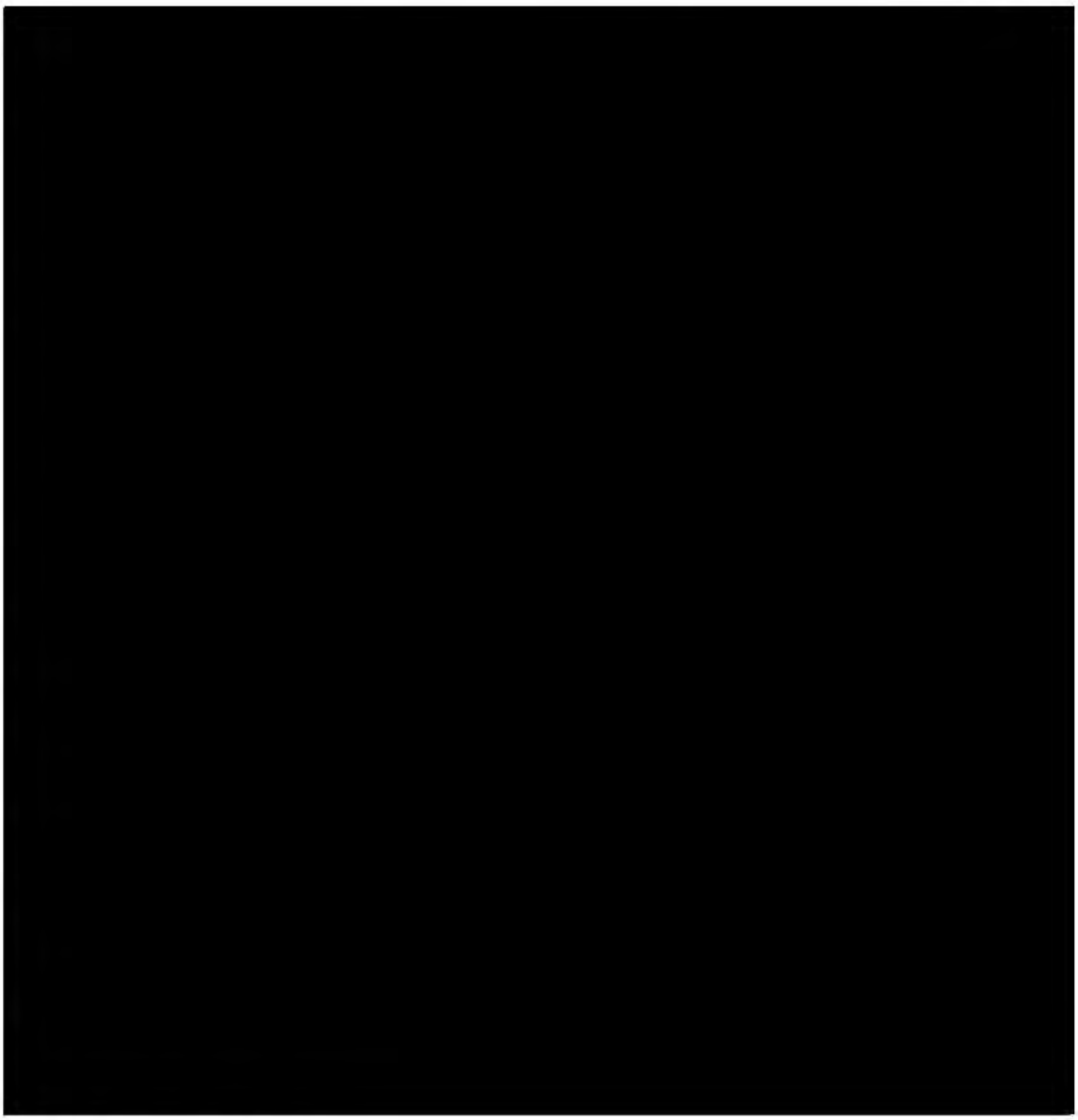
A. I am not sure what he -- what exactly that would mean.

Q. I will save us all the time. We will ask him.

They added a price component to the commercial incentive plan, right?

A. That's what this states, yes.

[redacted]



BY MR. THOMPSON:

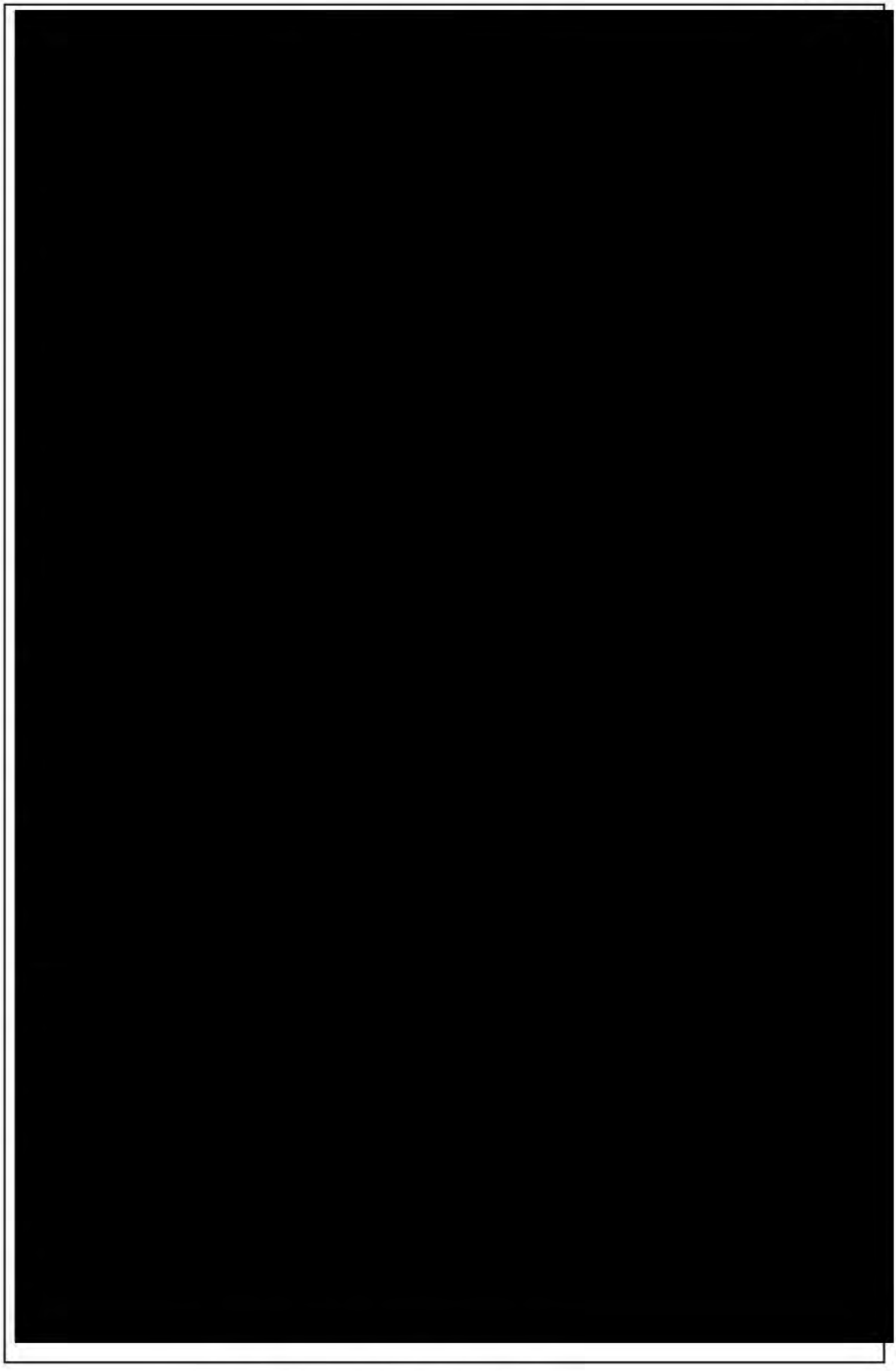
Q. Well, that's why it's called the commercial incentive plan, you were trying to incent behavior, right?

MS. WU: Objection, lacks foundation.

THE WITNESS: I don't know.

MS. WU: The witness testified he doesn't know.

[redacted]





Q. You can close out of that.

Sir, could you open -- there is an Excel with the date beginning with 202 -- it's March 14 of 2025. And the title is Customer Alignment, Top 25 Contracts, 2024 Detail.

A. I'm sorry, what was the date?

Q. March 14, 2025 --

A. Oh, I see it.

Q. -- so 2025.03.14, and the Bates is UP_0077567.

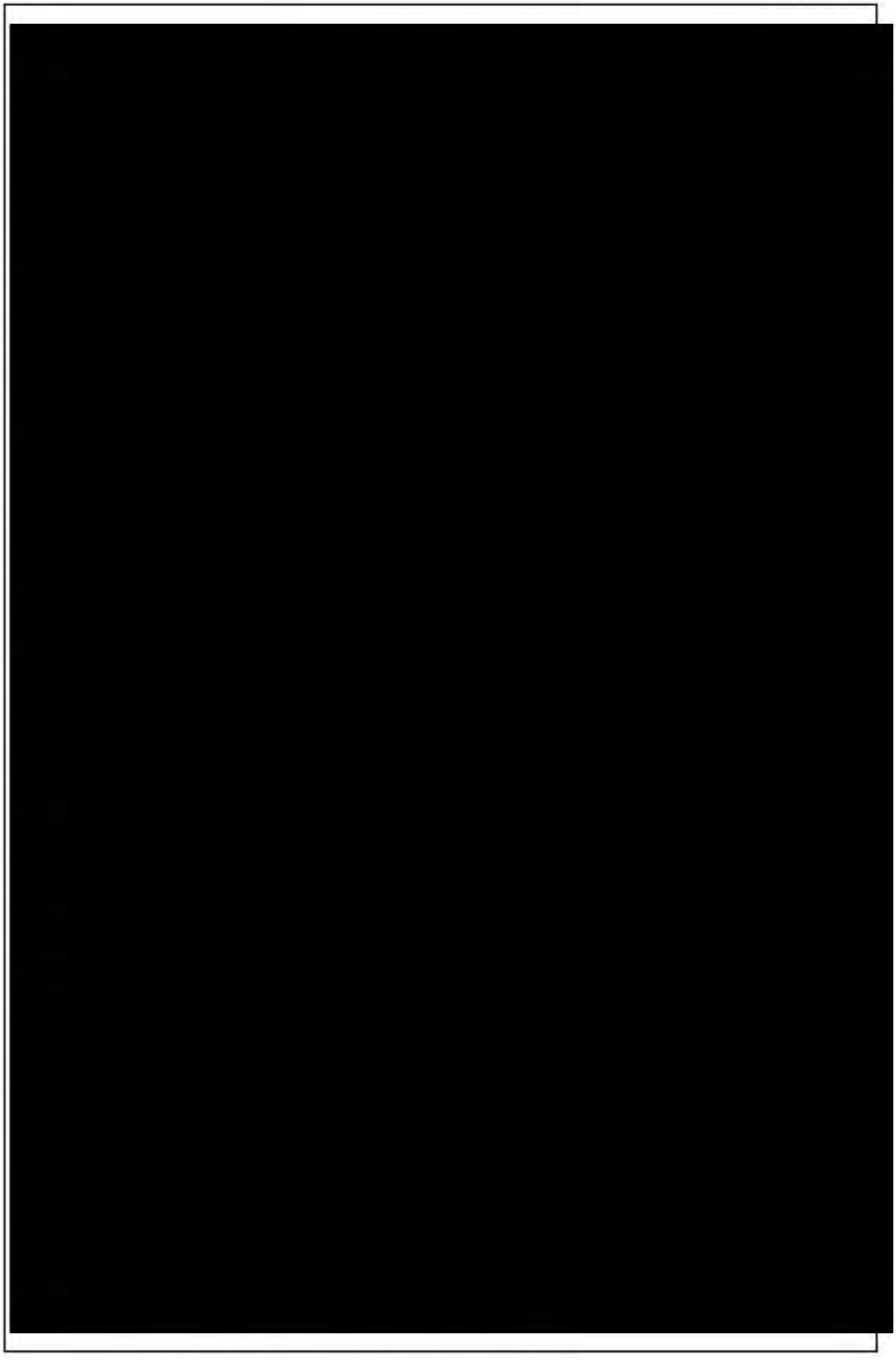
Do you see that?

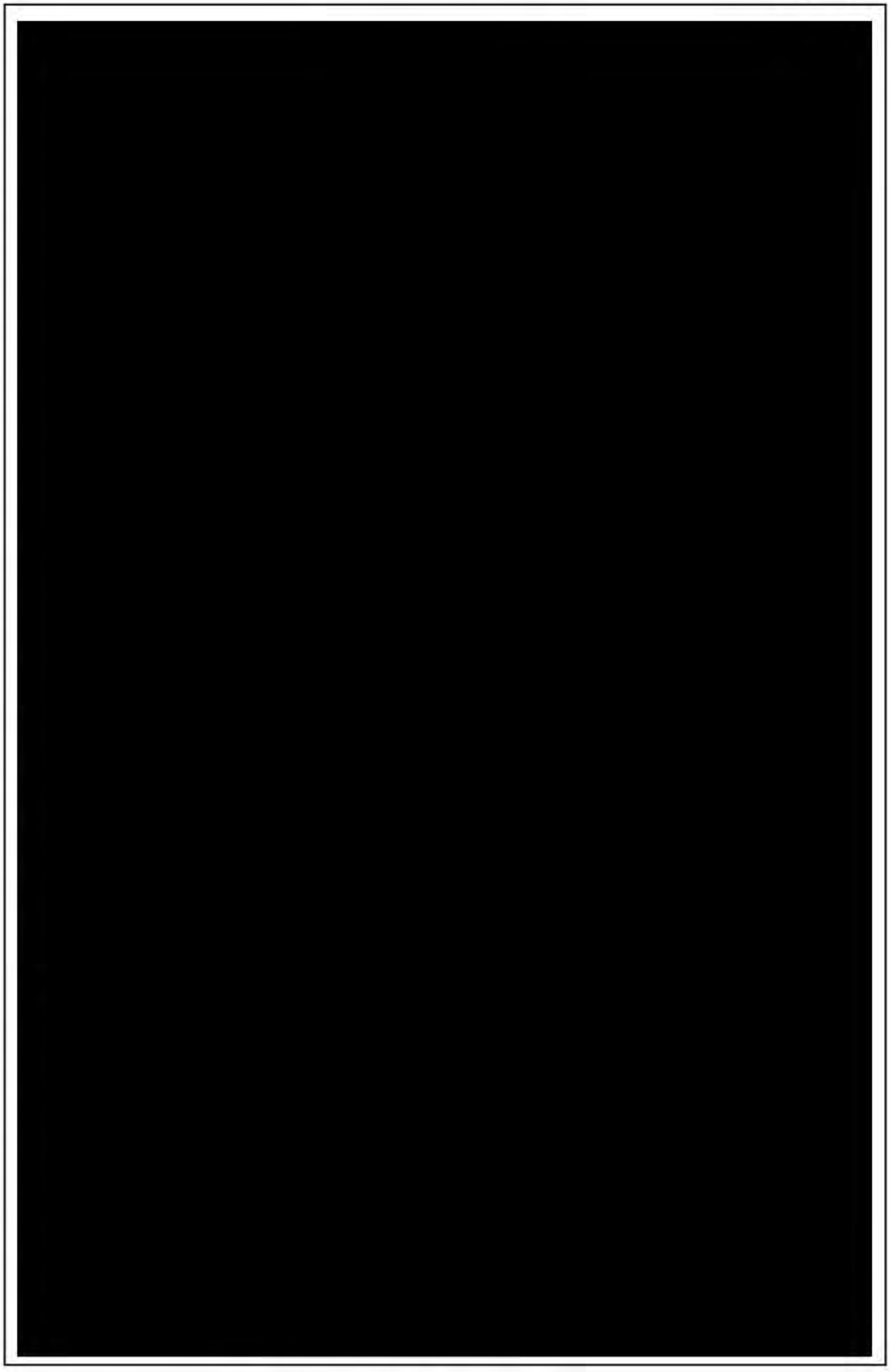
A. Yes.

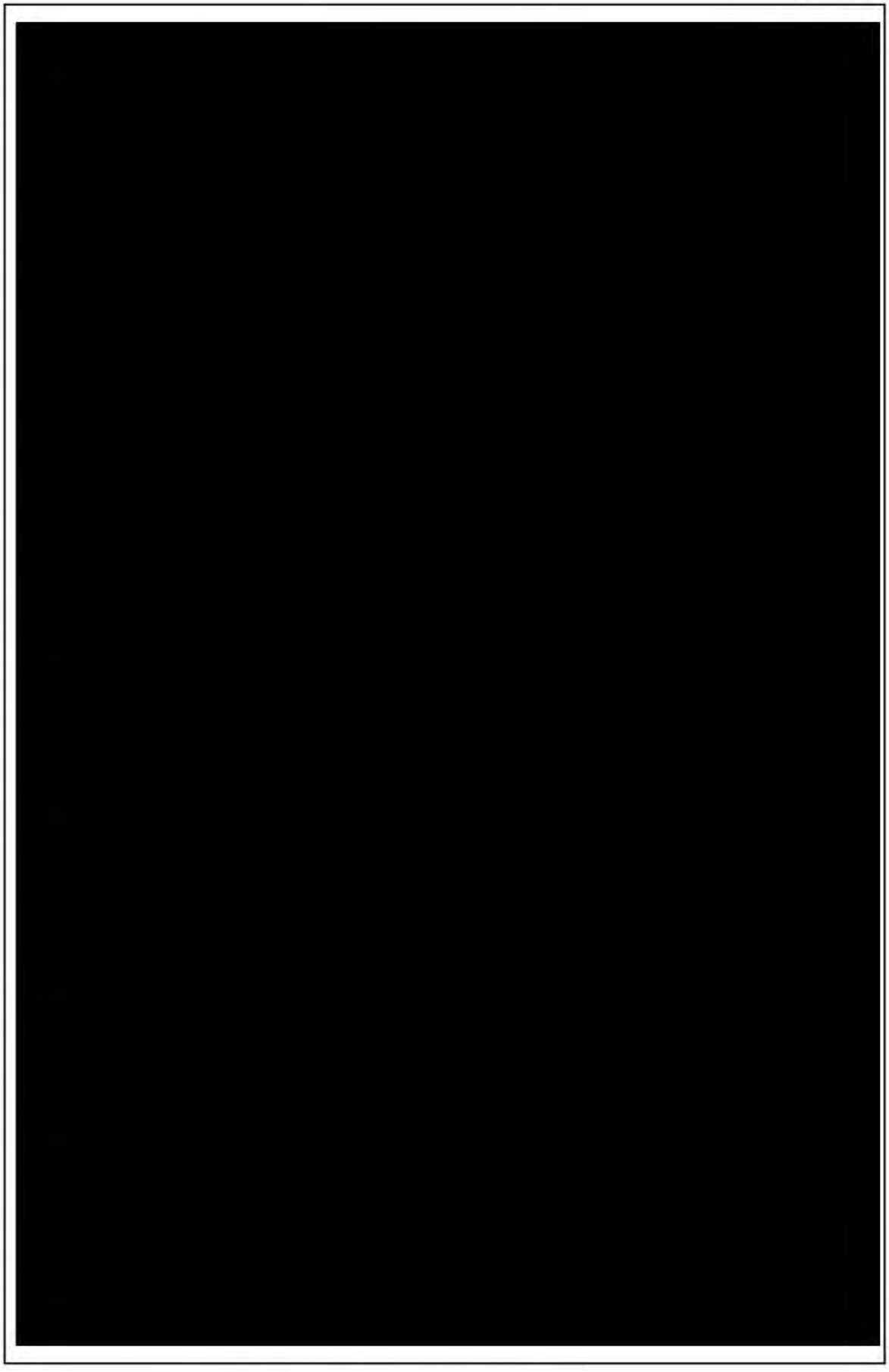
Q. Do you have it open?

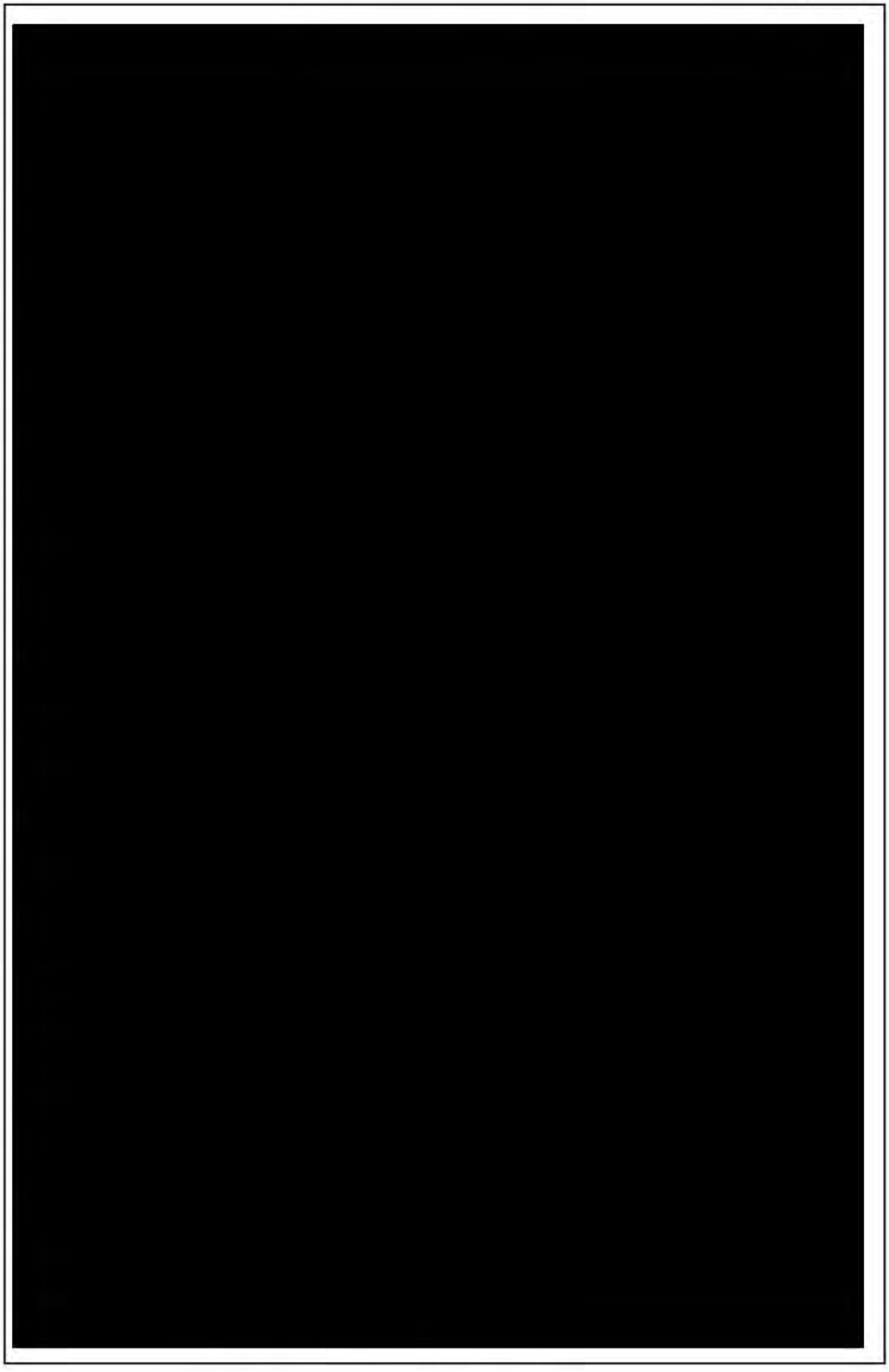
A. Yes.

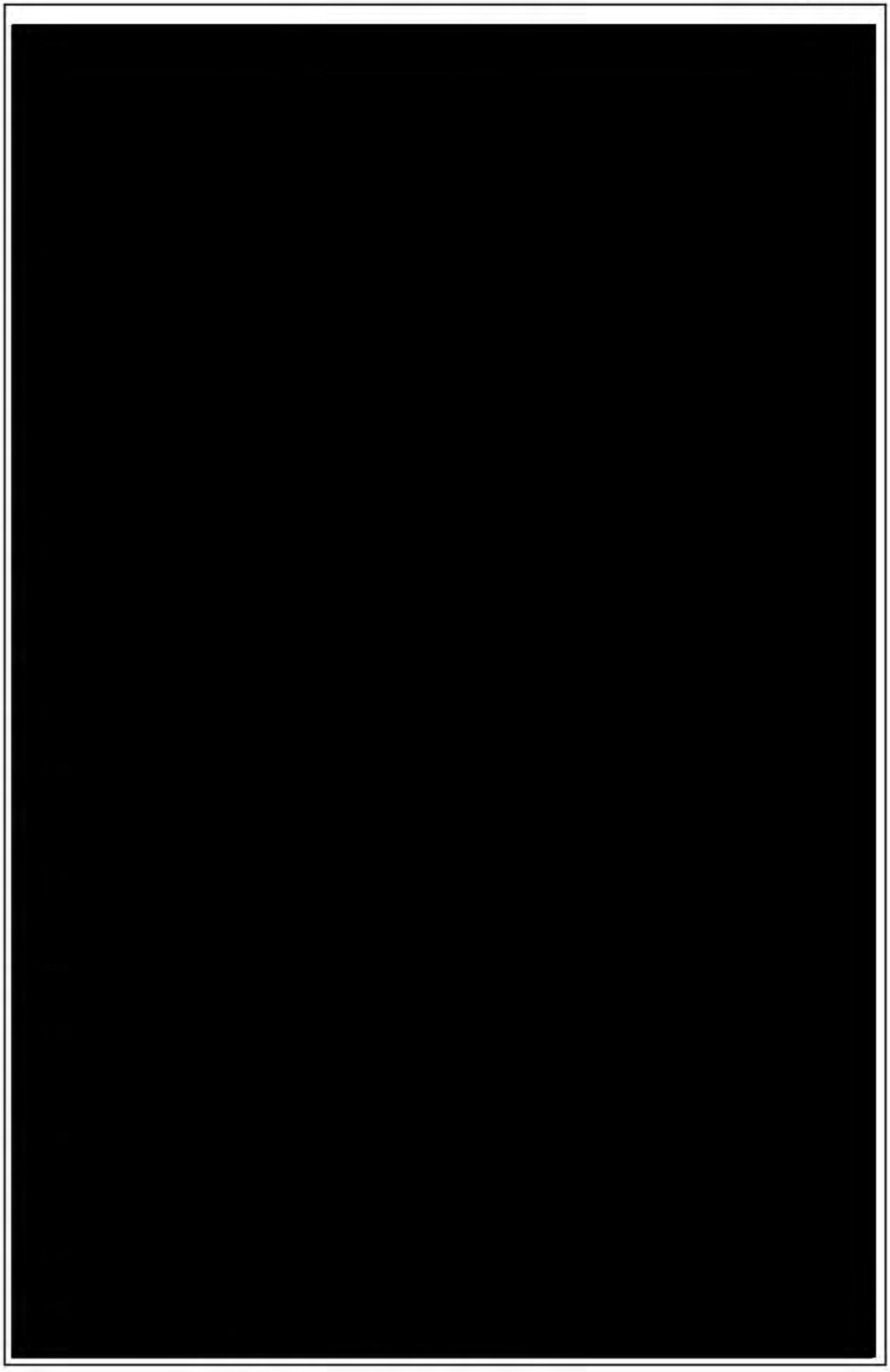


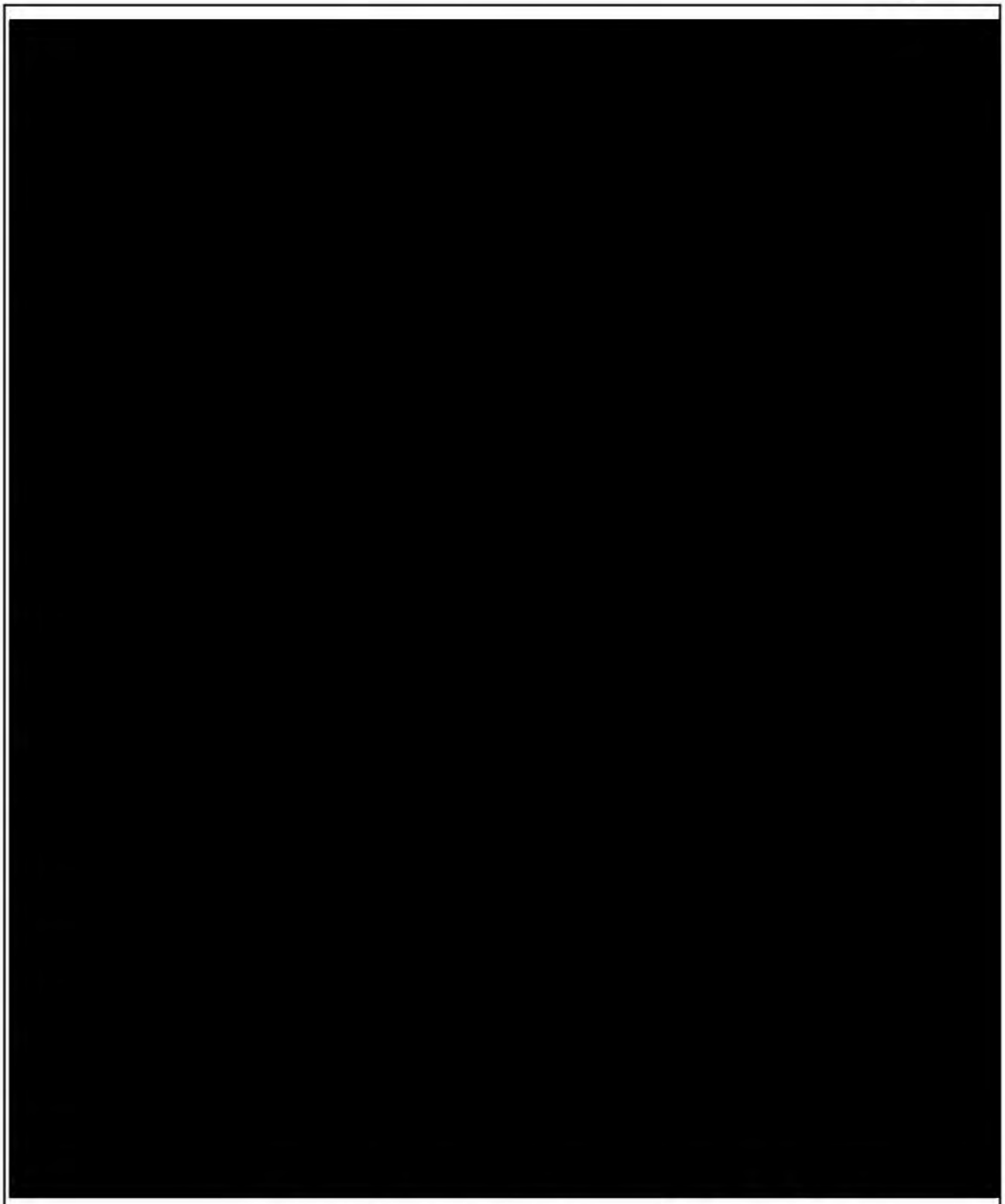












MR. FANCHIANG: Okay. That's all the questions I have for you today, Mr. Thomas.

And I will pass the witness to Mr. Congdon.

MR. CONGDON: Can you hear me okay?

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

CONFIDENTIAL PORTIONS INCLUDED

I, JACOB THOMAS, being first duly sworn, on oath say that I am the deponent in the aforesaid deposition taken on August 21, 2026; that I have read the foregoing transcript of my deposition, consisting of pages No. 1 through No. 327, inclusive, and affix my signature to same.

JACOB THOMAS

Subscribed and sworn to
before me this day of
, 2026

Notary Public

EXHIBIT 20

BEFORE THE SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to Protective Order

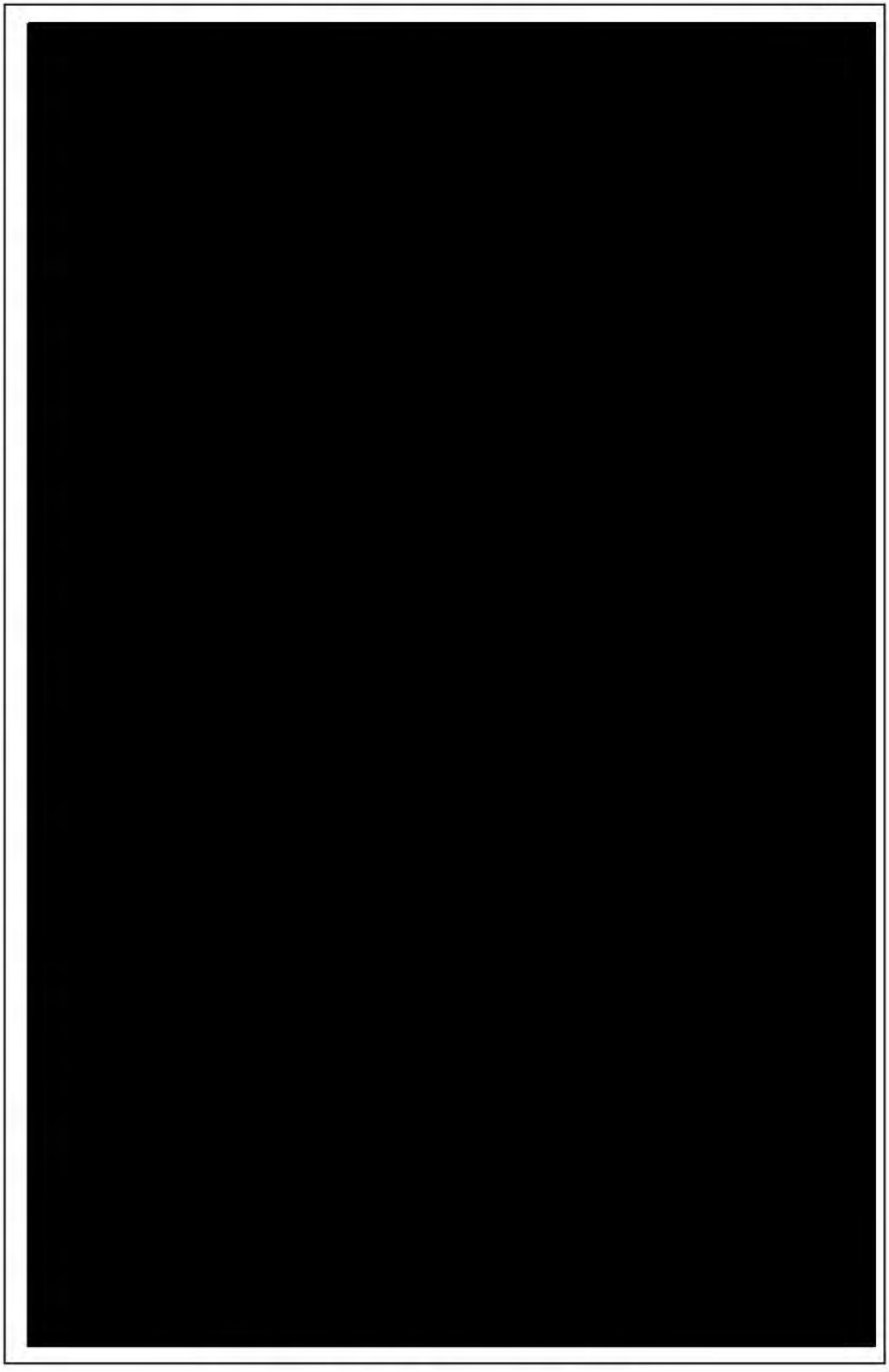
CONFIDENTIAL PORTIONS INCLUDED

VIDEOTAPED DEPOSITION

The DEPOSITION OF YANNIK THOMAS, taken on behalf of the BURLINGTON NORTHERN, at the Law Office of Sidley Austin LLP, 1501 K Street, N.W., Washington, D.C., on October 13th, 2026, at 8:03 a.m. Eastern Daylight Time.

REPORTED BY: GREG S. WEILAND, CSR, RDR, CRR

JOB NO.: 23833



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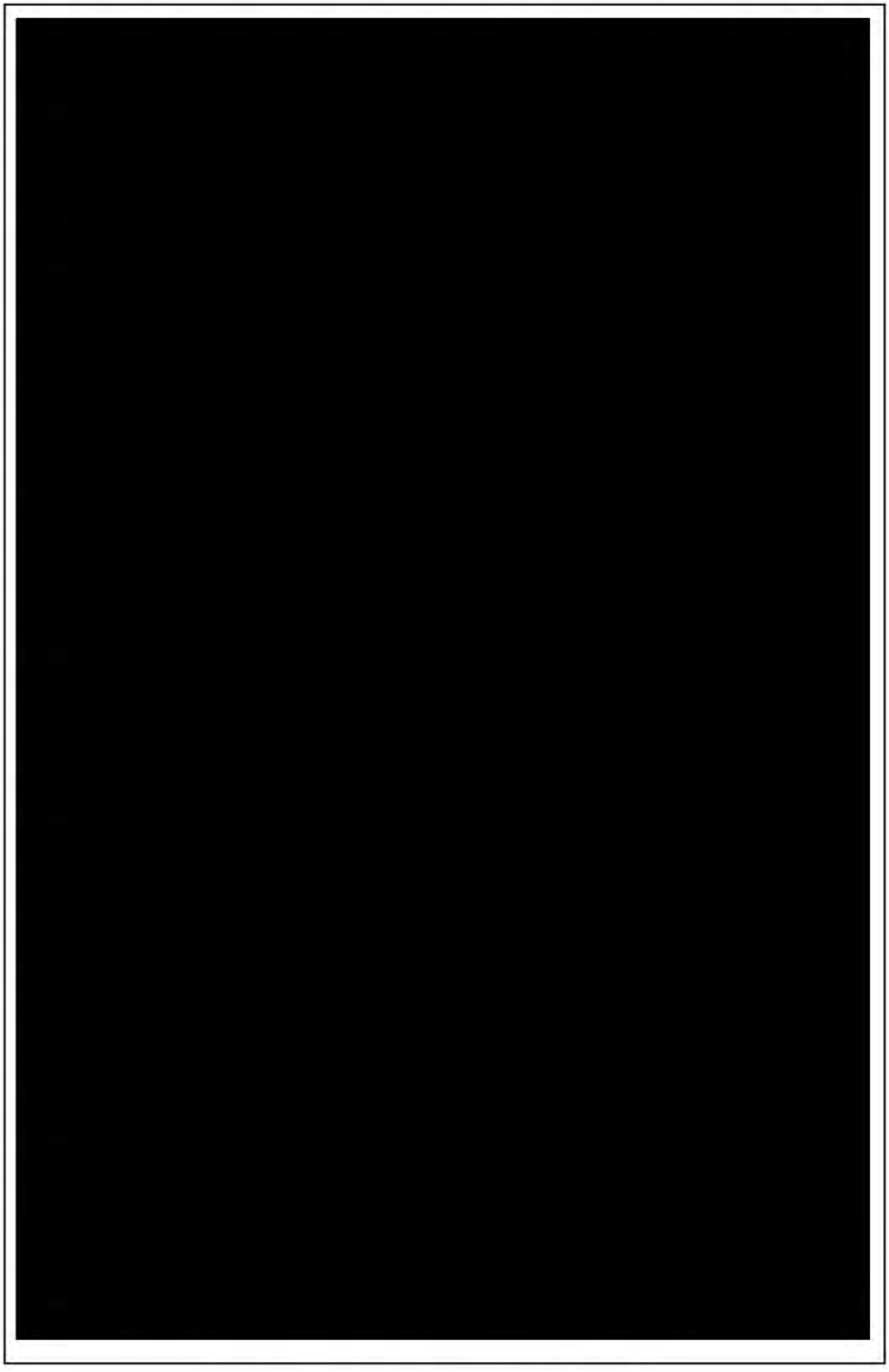

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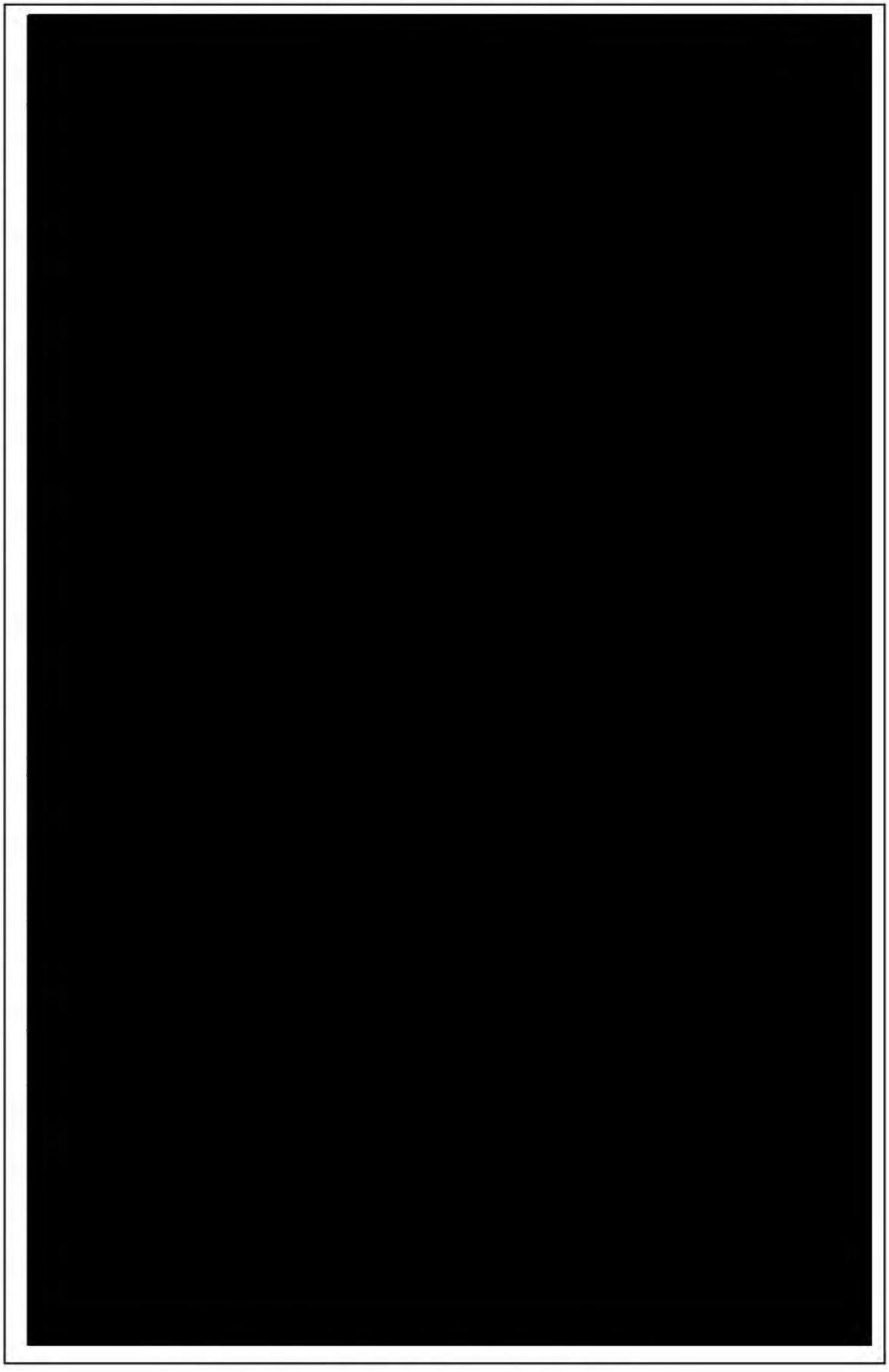

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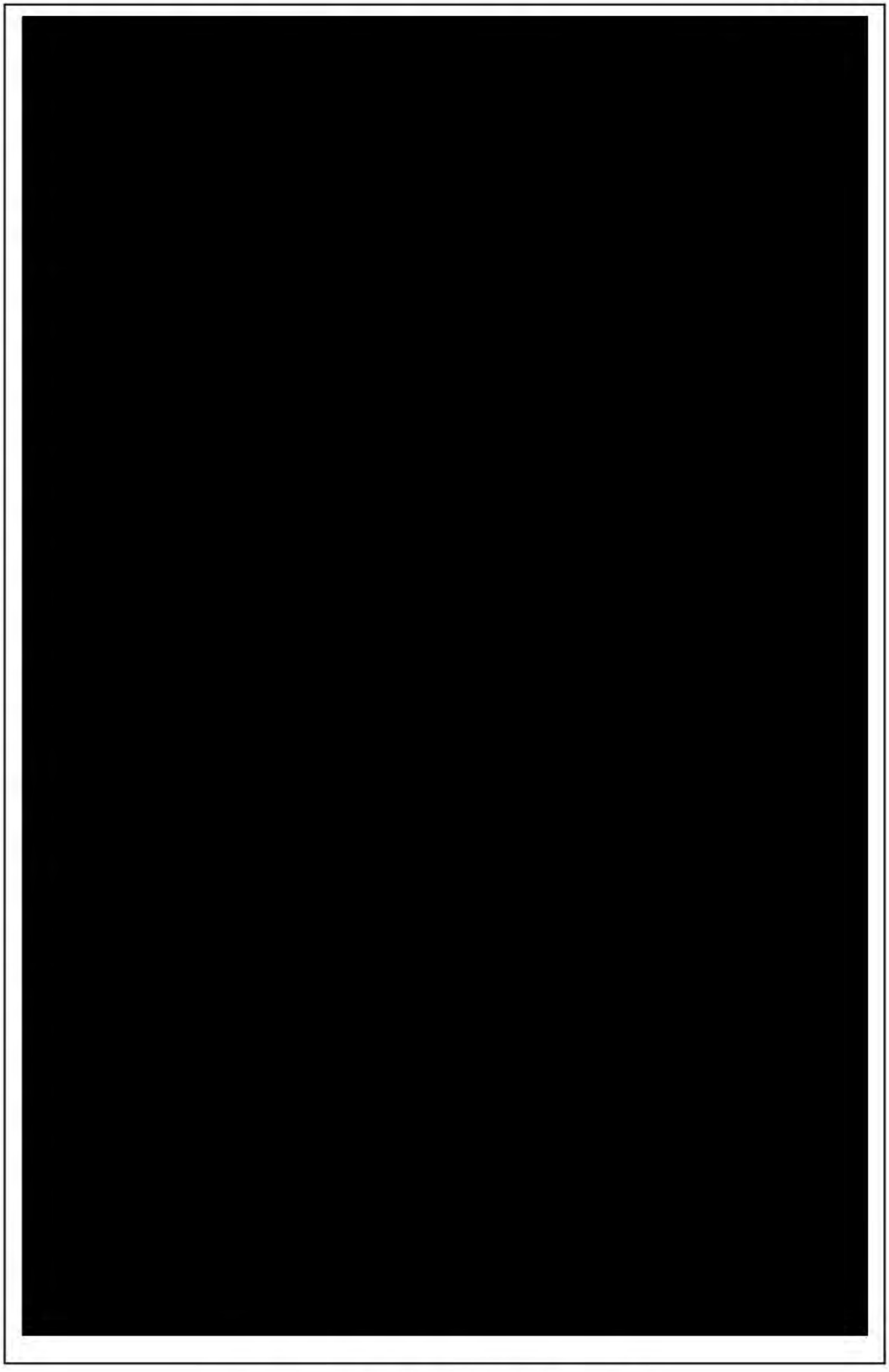

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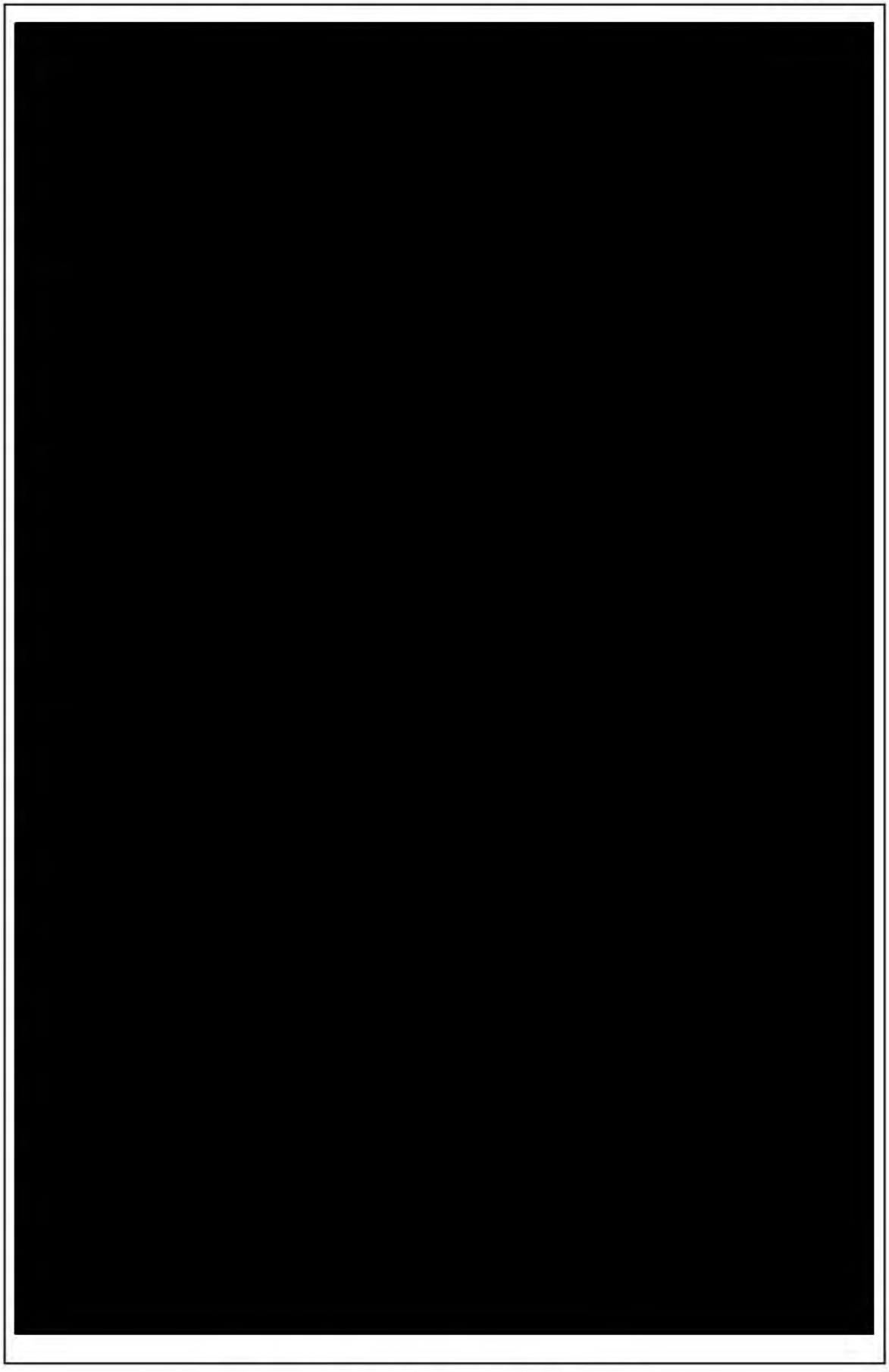

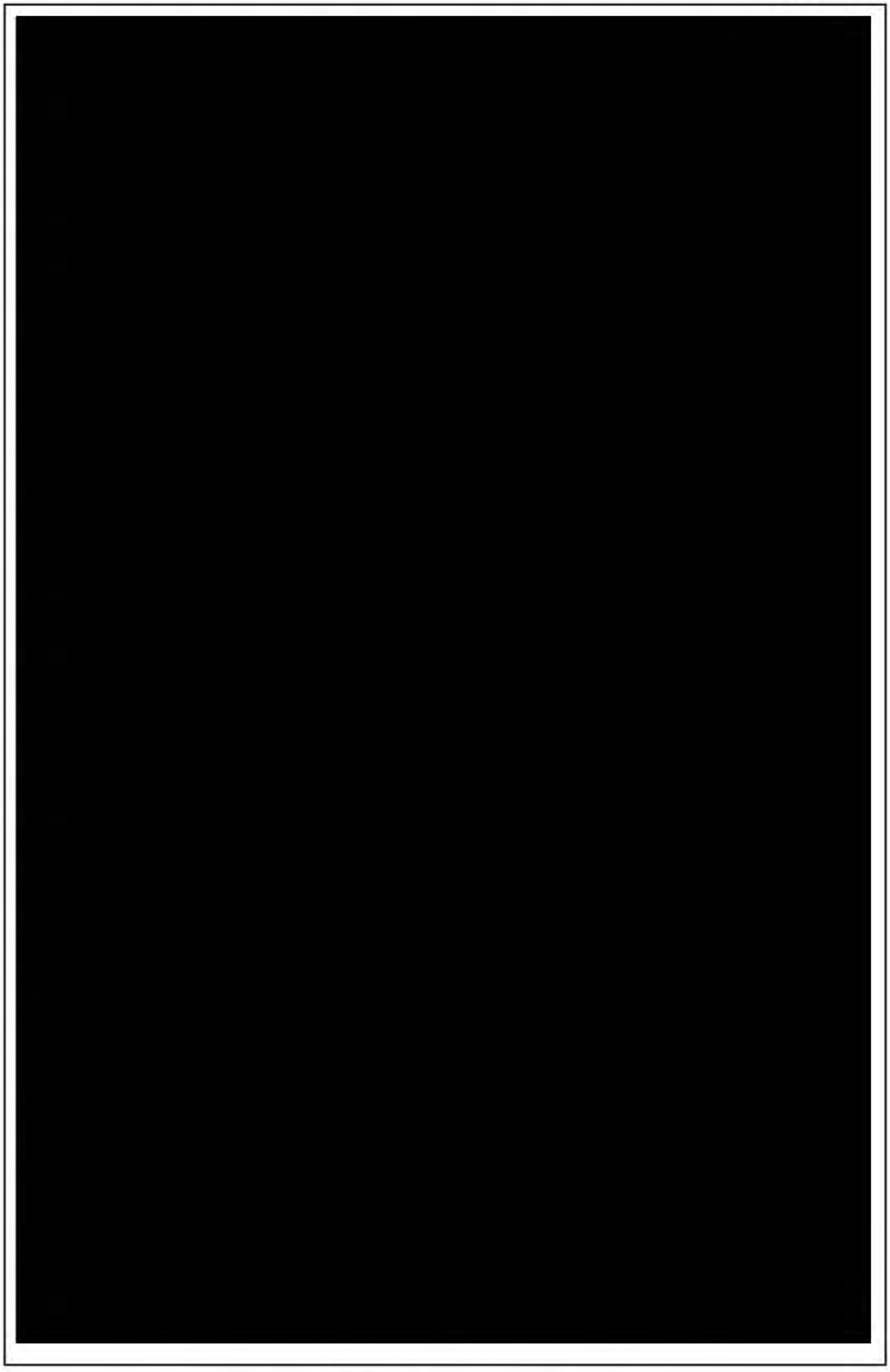

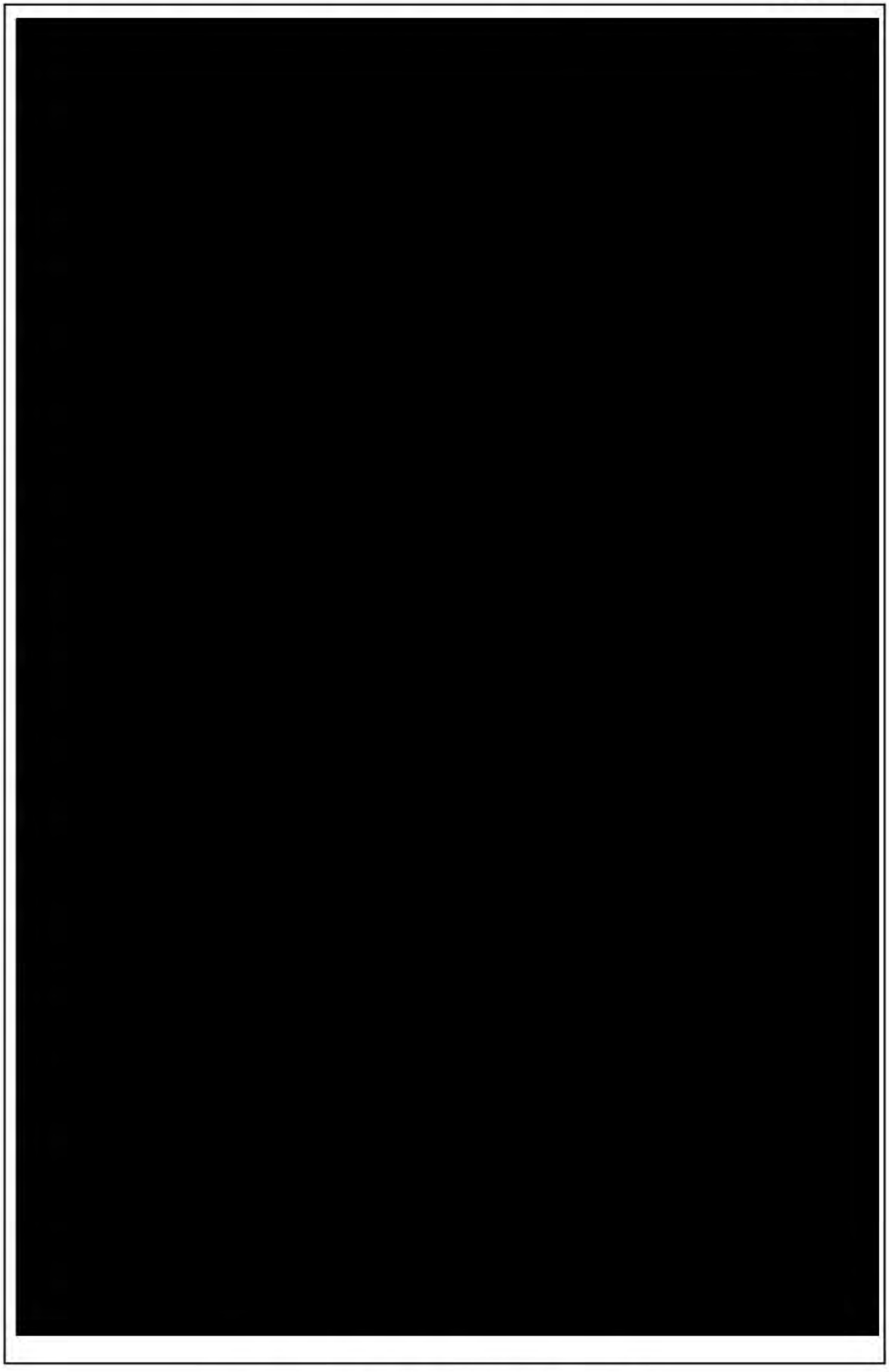

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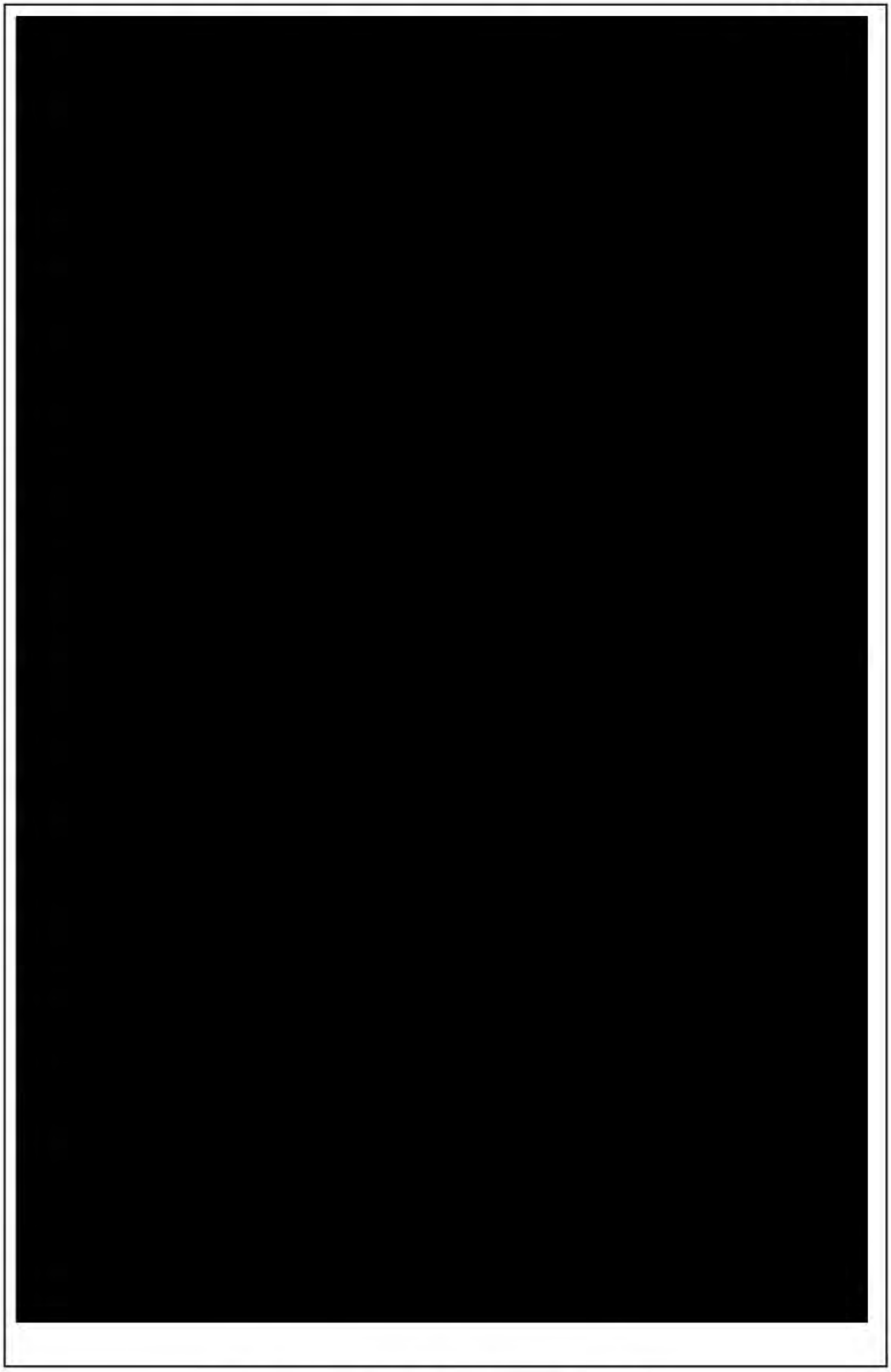

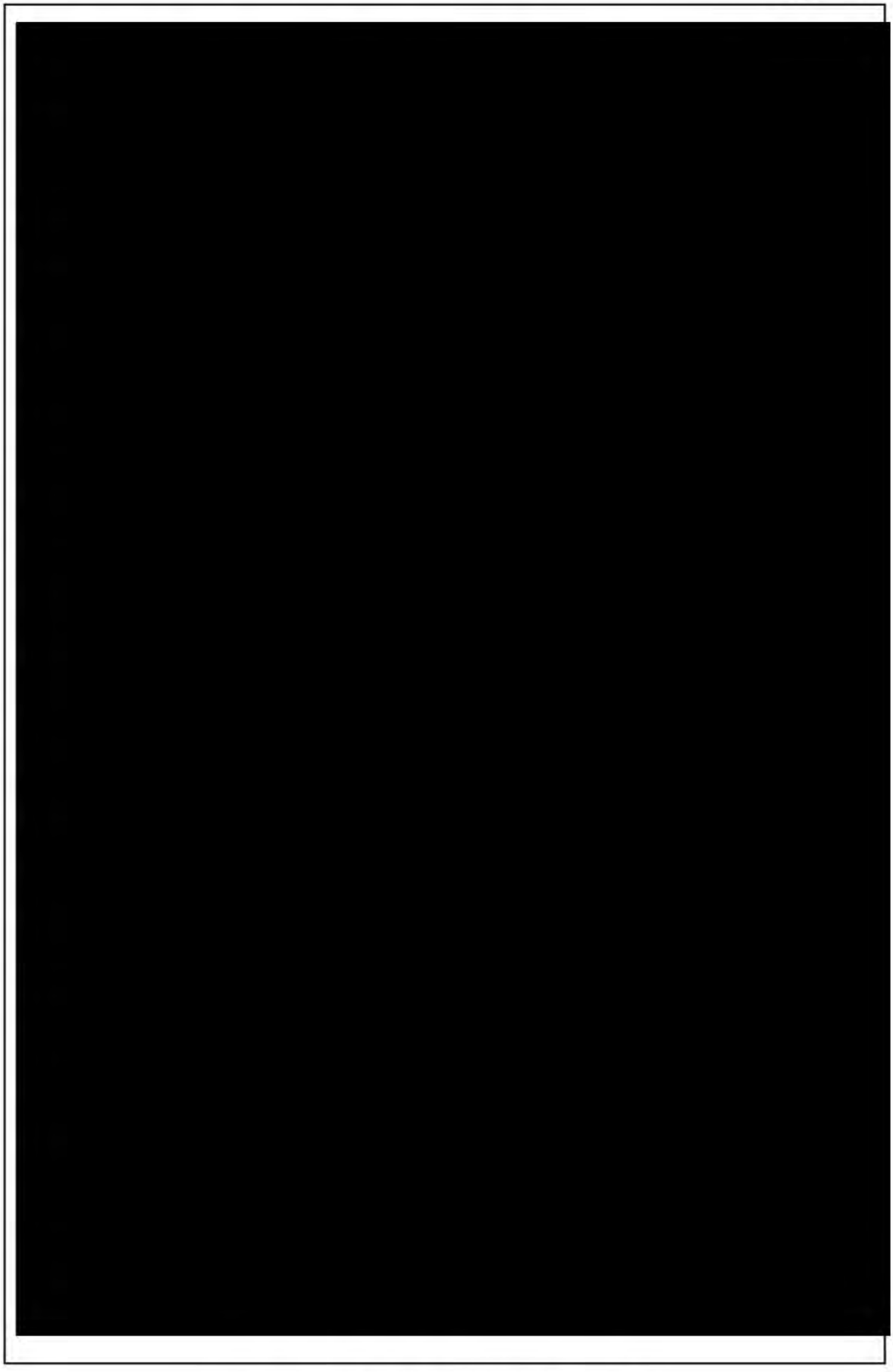

C E R T I F I C A T E

The within and foregoing deposition of the witness, YANNIK THOMAS, was taken before GREG S. WEILAND, CSR, RDR, CRR, at Suite 600, 1501 K Street, N.W., Washington, D.C., commencing at 8:03 o'clock a.m., on the 13th day of October, 2026.

The said witness was first duly sworn and was then examined upon oral interrogatories; the questions and answers were taken down in shorthand by the undersigned, acting as stenographer; and the within and foregoing is a true, accurate and complete record of all the questions asked of and answers made by the aforementioned witness at the time and place hereinabove referred to.

The signature of the witness was not waived and the deposition was submitted to the deponent as per copy of the attached letter.

The undersigned is not interested in the within case, nor of kin or counsel to any of the parties.

Witness my signature on this 16th day of October, 2026.



GREG S. WEILAND, CSR, RDR, CRR
License No. 084-003472

EXHIBIT 21

BEFORE THE SURFACE TRANSPORTATION BOARD

\- - -

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY,	:	FINANCE DOCKET NO. 36873
-- CONTROL --	:	
NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY.	:	

HIGHLY CONFIDENTIAL
PURSUANT TO PROTECTIVE ORDER

\- - -

October 20, 2026

\- - -

Videotaped hybrid deposition of SHAWN TUREMAN taken pursuant to notice, was held at the law offices of Sidley Austin LLP, 1501 K Street NW, Washington, D.C., beginning at 8:03 a.m., on the above date, before Michelle L. Ridgway, a Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, Certified Court Reporter, and Notary Public.

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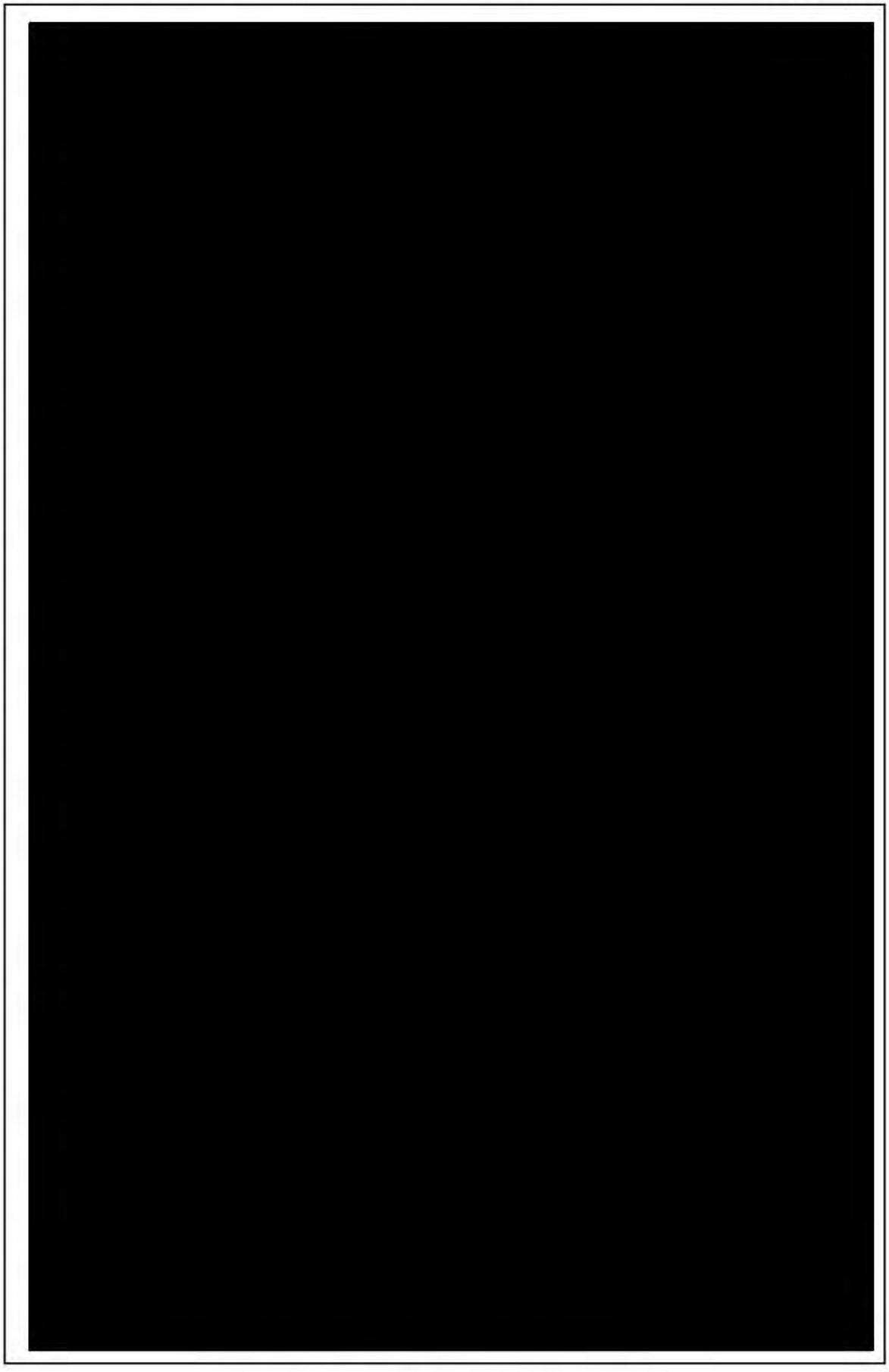

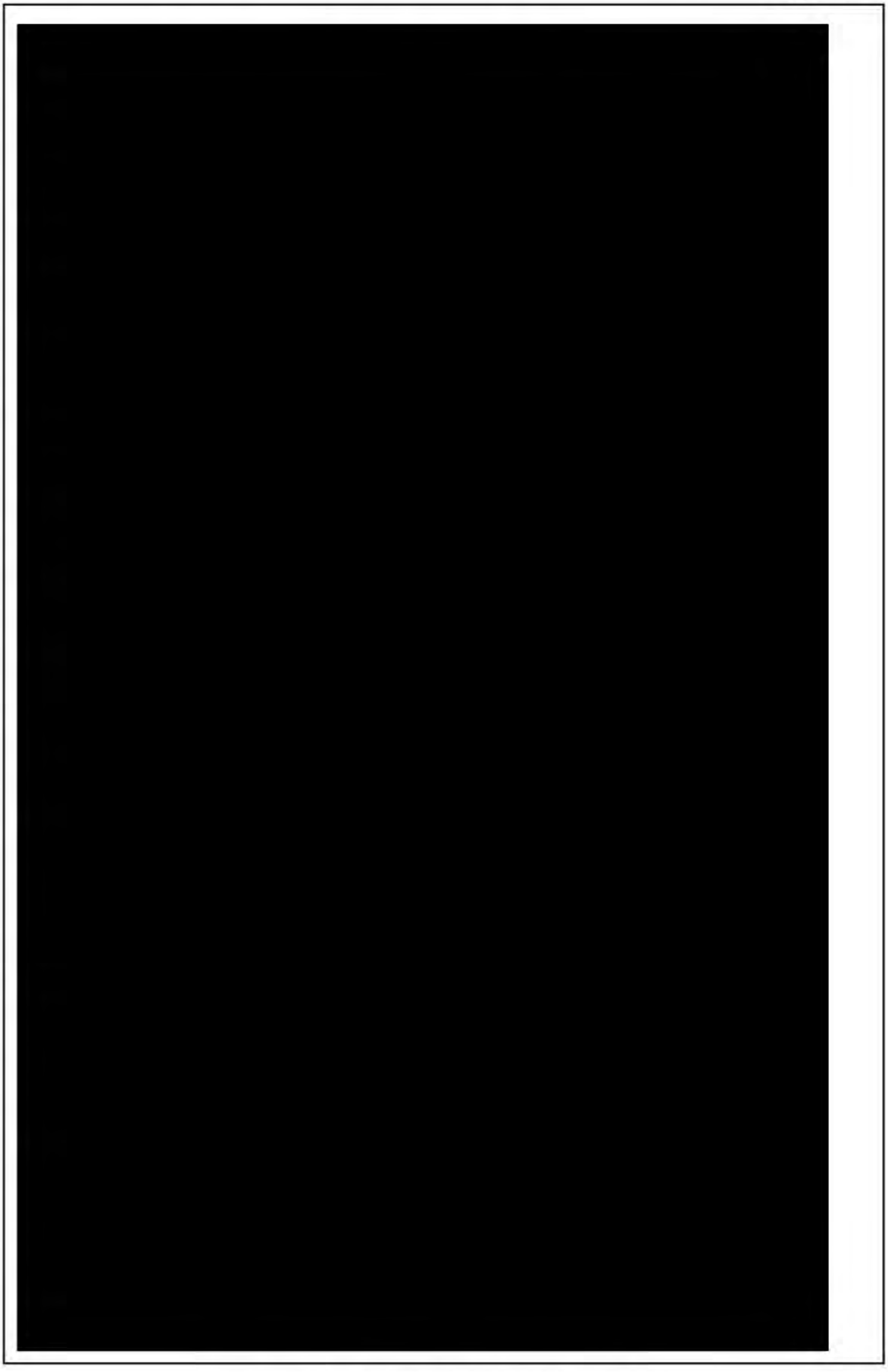

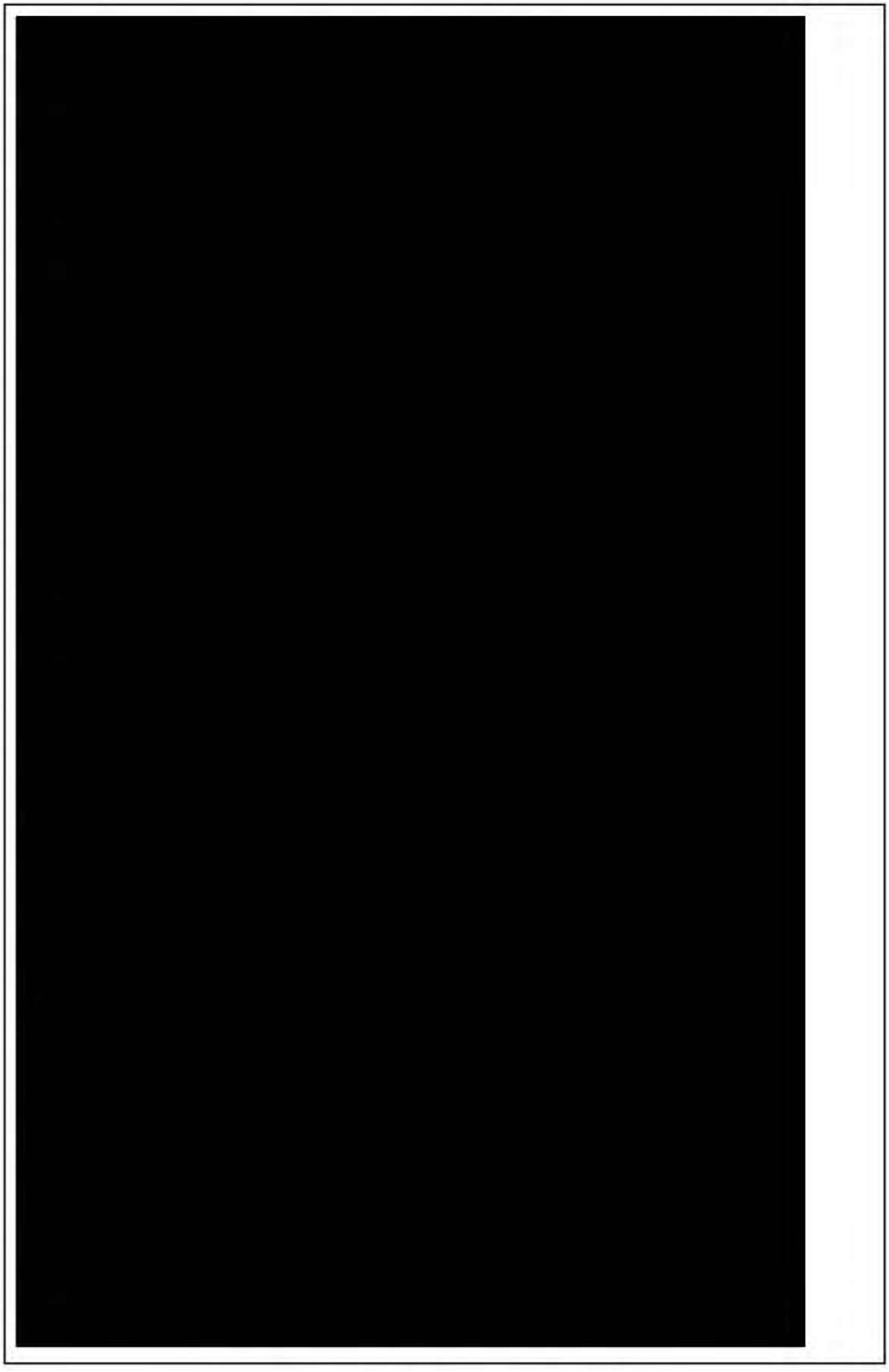

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CERTIFICATE

I HEREBY CERTIFY that the witness was duly sworn by me and that the deposition is a true record of the testimony given by the witness.

It was requested before completion of the deposition that the witness, SHAWN TUREMAN, have the opportunity to read and sign the deposition transcript.

Michelle Ridgway

MICHELLE L. RIDGWAY,
A Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, Certified Court Reporter, and Notary Public
Dated: October 23, 2026

(The foregoing certification of this transcript does not apply to any reproduction of the same by any means, unless under the direct control and/or supervision of the certifying reporter.)

EXHIBIT 22

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

VIDEOTAPED DEPOSITION

The DEPOSITION OF JOHN TURNER, taken on behalf of the BURLINGTON NORTHERN, at Baird & Holm, 1700 Farnam Street, Nebraska, on the 2nd day of September, 2026, at 8:03 a.m., CT.

rate-based strategies will provide the most direct" --

A. Hold on a second. Where are you at again?

Q. On Page 14, in the middle there.

A. Under --

Q. Anticompetitive service-based strategies.

A. Okay, that first paragraph?

Q. Yes.

A. Okay.

Q. You wrote: Although rate-based strategies will provide the most direct opportunity for KC to force traffic diversions, KP-controlled KCS will also provide opportunities to divert traffic by making UP KCSM transportation offerings more costly or less attractive in other ways.

After UP-NS merge, if the merger is approved, will UP-NS have opportunities to divert traffic by making interline transportation offerings more costly or less attractive?

MR. ROSENTHAL: Objection, lacks foundation, calls for speculation.

THE WITNESS: I don't know.

BY MR. FANCHIANG:

Q. Why not?

MR. ROSENTHAL: Objection.

THE WITNESS: Because I don't.

BY MR. FANCHIANG:

Q. Let's go to the next paragraph.

It says: CPKC's potential strategies for making KCSM UP service less attractive would be as broad and as simple as reducing the high level of cooperation that exists today.

After -- if the UP-NS merger is approved, could UP and NS make interline service less attractive by reducing the high level of cooperation that it has today with interline partners?

MR. ROSENTHAL: Objection, vague, lacks foundation, calls for speculation.

THE WITNESS: We wouldn't do that.

BY MR. FANCHIANG:

Q. Why not?

A. Because we don't do that.

Q. Have you made any specific commitments not to do that?

MR. ROSENTHAL: Objection, vague.

THE WITNESS: Have I?

BY MR. FANCHIANG:

Q. Has the company?

MR. ROSENTHAL: Objection, vague.

THE WITNESS: I don't know.

BY MR. FANCHIANG:

Q. Have you?

MR. ROSENTHAL: Objection, vague.

THE WITNESS: No.

BY MR. FANCHIANG:

Q. Why not?

MR. ROSENTHAL: Objection, vague.

THE WITNESS: Because I haven't.

BY MR. FANCHIANG:

Q. Let's go to Page 15. The first full paragraph, it says: CPKC could also reduce competition by giving preferential treatment to its own traffic moving over the international bridge at Laredo.

We discussed this international bridge at Laredo is an interchange point, correct?

A. Yes.

Q. Does Union Pacific currently have interchange points?

MR. ROSENTHAL: Objection, vague.

THE WITNESS: Yes.
BY MR. FANCHIANG:
Q. And it controls those -- it has interchange points it controls, correct?
MR. ROSENTHAL: Objection, vague.
THE WITNESS: What do you mean by "controls"?
BY MR. FANCHIANG:
Q. That it either owns or operates.
MR. ROSENTHAL: Objection, vague.
THE WITNESS: Yes, every railroad does.
BY MR. FANCHIANG:
Q. Post merger could the -- could UP-NS reduce competition by giving preferential treatment to its own traffic moving over its interchange points that it controls?
MR. ROSENTHAL: Objection, vague. Lacks foundation, calls for speculation.
THE WITNESS: We wouldn't do that.
BY MR. FANCHIANG:
Q. Why not?
MR. ROSENTHAL: Objection, vague.
THE WITNESS: Because we wouldn't.

BY MR. FANCHIANG:

Q. Have you made -- has Union Pacific made any specific commitments not to do that?

A. I don't know.

Q. Have you made any commitments not to do that?

MR. ROSENTHAL: Objection, vague.

THE WITNESS: No.

BY MR. FANCHIANG:

Q. Are you aware of any specific commitments not to do that?

MR. ROSENTHAL: Objection, vague.

THE WITNESS: I am not aware, no.

BY MR. FANCHIANG:

Q. Let's go to Page 17 here. At the bottom, that last paragraph, it says -- the second sentence: However, applicants' proposed solutions are not sufficient to protecting against potential harms - as they themselves appear to acknowledge. Applicants commit to keeping the Laredo Gateway and other gateways open both physically and commercially, but key elements of those commitments are vague, ephemeral, and essentially unenforceable.

Did you think that CPKC should have made

Q. How was your lunch?
A. It was good. How was yours?
Q. It was good.
A. Good.
Q. Came from the same place.
You understand you are still under oath?
A. I do.
Q. Mr. Turner, has Union Pacific committed to reducing rates post merger?
MR. ROSENTHAL: Objection, lacks foundation.
THE WITNESS: I don't know.
BY MR. CONGDON:
Q. To the best of your knowledge, has Union Pacific committed to reducing rates post merger?
A. I don't know.
Q. So the answer is you don't know that they have?
A. I don't know.
Q. To the best of your knowledge, has Union Pacific committed to not raising rates post merger?
A. I don't know.
Q. So the answer is to the best of your knowledge, they have not committed to doing so?

A. I don't know.

Q. You were asked earlier this morning about planned transit times and whether they could change post merger by the time the plan goes into service, and you replied: I haven't given it any thought.

Do you recall that?

A. Could you repeat that?

Q. Sure.

You were asked about planned transit times and whether they could change by the time you put the actual operating plan into service post merger. And you replied: I haven't given it any thought.

For the record, on the realtime it was at 11:47 this morning on Pages 164 to 165.

A. It sounds familiar.

Q. So am I to understand that you have given zero thought as to how the planned transit times in your verified statement might differ from what's actually implemented in practice?

MR. ROSENTHAL: Objection, lacks foundation.

THE WITNESS: Not today.

STATE OF ILLINOIS)
) SS.
COUNTY OF DUPAGE)

I, STEPHANIE A. BATTAGLIA, CSR and Notary Public in and for the County of DuPage and State of Illinois, do hereby certify that on September 2, 2026, at 8:03 a.m., at Baird & Holm, 1700 Farnam Street, Suite 1500, Omaha, Nebraska, the deponent JOHN TURNER personally appeared before me.

I further certify that the said JOHN TURNER was by me first duly sworn to testify and that the foregoing is a true record of the testimony given by the witness.

I further certify that the deposition was terminated at 4:50 p.m.

I further certify that I am not counsel for nor related to any of the parties herein, nor am I interested in the outcome hereof.

In witness whereof, I have hereunto set my hand and seal of office this 8th of September, 2026.

Stephanie Battaglia
Notary Public

CSR No. 084-003337 - Expiration Date: May 31, 2027

EXHIBIT 23

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

VIDEOTAPED DEPOSITION

The DEPOSITION OF VINCENZO JAMES VENA, taken on behalf of the BURLINGTON NORTHERN, at Union Pacific Center, 1400 Douglas Street, Omaha, Nebraska, on the 20th day of October, 2026, at 8:01 a.m., CT.

best supply chain, best cost, delivering against what they want. And a single railroad gives them a better product.

You have to remember, I worked for -- and as two people on the far end that are representing Canadian Pacific, Kansas City, and Canadian National, I worked for 40 years at Canadian National, and we were a single line. And customers loved that. To be able to go from Toronto to Vancouver, to go from Prince Rupert to Chicago and take business away from American railroads by being able to open up ports in Canada to be able to go, we smiled all the way to the bank. We gave customers better service, better price, better mobility.

So absolutely customers love when you can do that. And for them, it's the total end cost that they look at and the service level that drives that benefit.

BY MR. DONOVAN:

Q. What was my question?

A. Pardon me?

Q. What was my question?

A. You asked me whether customers like one railroad more than the other, and I gave you the

[redacted]

[redacted]

STATE OF ILLINOIS)
) SS.
COUNTY OF DUPAGE)

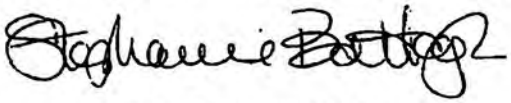
I, STEPHANIE A. BATTAGLIA, CSR and Notary Public in and for the County of DuPage and State of Illinois, do hereby certify that on October 20, 2026, at 8:01 a.m., at Union Pacific Center, 1400 Douglas Street, Omaha, Nebraska, the deponent VINCENZO JAMES VENA personally appeared before me.

I further certify that the said VINCENZO JAMES VENA was by me first duly sworn to testify and that the foregoing is a true record of the testimony given by the witness.

I further certify that the deposition was terminated at 4:08 p.m.

I further certify that I am not counsel for nor related to any of the parties herein, nor am I interested in the outcome hereof.

In witness whereof, I have hereunto set my hand and seal of office this 23rd of October, 2026.



Notary Public

CSR No. 084-003337 - Expiration Date: May 31, 2027

EXHIBIT 24

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36873

UNION PACIFIC CORPORATION AND UNION PACIFIC RAILROAD COMPANY

--CONTROL--

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

Highly Confidential
Pursuant to the Protective Order

V-I-D-E-O-T-A-P-E

D E P O S I T I O N

The DEPOSITION OF MR. DAVID WELCH, taken on behalf of the BURLINGTON NORTHERN;

at THE LAW OFFICE OF KUTAK ROCK, OMAHA, NEBRASKA; on the 29TH day of JULY, 2026 at 8:00 a.m., CT.

[redacted]

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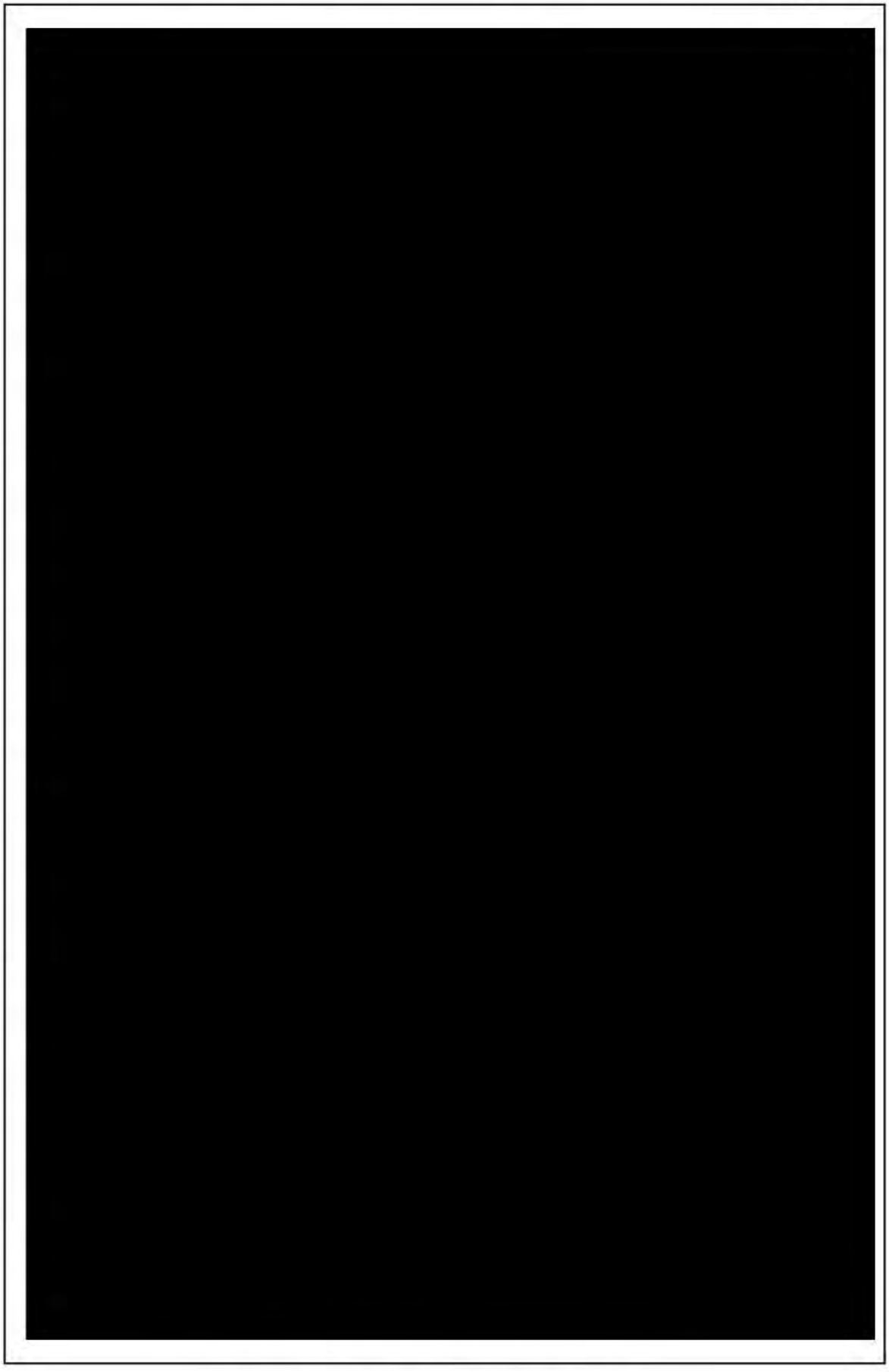

[redacted]

MR. THOMPSON: Let's mark tab -- excuse me -- mark Exhibit 9.

(Exhibit No. 9 was marked for the record.)

BY MR. THOMPSON:

Q. It is a leadership conference deck, Bates 24575, called "Growing our Business."

I'm going to ask you about -- it's page 3, ending in Bates 580?

MS. WU: Mr. Welch, of course, you can review any aspect of Exhibit 9 that you feel you need to understand the deck identified by counsel.

BY MR. THOMPSON:

Q. And I said -- I said page 3 of -- I apologize. I meant -- the one I'm going to ask you about ends in 582. Are you at Bates ending in 582?

A. Yes.

[redacted]

C E R T I F I C A T E

I, DANA LEA BURKDOLL a Certified Court Reporter (#1364), Registered Professional Reporter (#830156) and Certified Shorthand Reporter (#1955), do hereby certify that the within-named witness was by me first duly sworn to testify the truth.

That the testimony given in response to the questions propounded, as herein set forth, was first taken in machine shorthand and reduced to writing with computer-aided transcription, and is a true and correct record of the testimony given by the witness.

I certify that review of the testimony was requested by the witness or the parties. If any changes are made by the deponent during the time period allowed, they will be appended to the transcript.

I further certify that I am not a relative or employee or attorney or counsel of any of the parties, or a relative or employee of such attorney or counsel, or financially interested in the action.

WITNESS my hand and official seal on this 29TH day of JULY, 2026.

Dana Lea Burkdoll

DANA LEA BURKDOLL CSR, RPR, CCR
Certified Court Reporter #0136
Registered Professional Reporter
Certified Shorthand Reporter#1955

EXHIBIT 25

IDX™

Union Pacific
Live Investor Roadshow

Thursday, 19th September 2024

Welcome & Safety Briefing

Brad Stock

Assistant Vice President, Investor Relations, Union Pacific

Introduction

Good morning, everybody. Thanks for coming.

Anyone standing in the back, we do have some seating, it looks like, available up front here, so please find an empty seat if you would.

My name is Brad Stock. I am the Assistant Vice President of Investor Relations. I think I know a good portion of you, but those that I have not would love to meet with you after the event.



We welcome those that have joined us here in Dallas as well as those online. So before we start today, I have got the task of going through a few housekeeping items to make sure that we are set for the day.

Safety Briefing

First, a quick safety briefing. As shown on the slide, you are currently in the Century Ballroom. Restrooms are out, these back doors and to the right.

If you would please make sure all cell phones have been silenced. And if you get up at any point today, please tuck in your chair and also watch. We got a lot of cords, so just want to make sure we do not have any tripping.

Should we experience any inclement weather, likely not to happen with the sun outside. However, if we do, hotel staff will direct us as well as UP folks to the basement. If there is an incident where we need to evacuate the hotel, we will go across the street towards the AT&T Discovery Centre.

And if there is a medical emergency, we have folks assigned to call 911, fetch the AD, and we have a number of CPR-qualified folks. If you have any special medical conditions, please write those on a piece of paper and stick those in your right shoe or jacket pocket. And finally, if we have an active shooter situation, we will assess the situation of all run, hide or fight.

Next, all the slides from today's presentation have been posted out to our website and a replay of this event will be posted soon after the conclusion. So if anyone missed it or if you need to leave early. Finally, I need to keep my good friend John Menicucci and the law team happy, so I have to read the safe harbour statement here.

Cautionary Information

Today's Investor Day presentations contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 as amended, Section 21E of the Securities Exchange Act of 1934 as amended, and the Private Securities Litigation Reform Act of 1995.

In addition, management may make forward-looking statements orally or in other writing during and among today's management presentations and question-and-answer sessions. These statements contain a number of risks and uncertainties. Actual results could materially differ from those anticipated by such forward-looking statements as a result of a number of factors or combination of factors affecting the operation of the business, and other risks identified in today's presentation in Union Pacific's annual report on Form 10-K in the year ended 31 December 2023, and in other reports filed by Union Pacific within the Securities and Exchange Commission.'

Forward-looking statements reflect the information only as of the date on which they are made. Union Pacific does not undertake any obligation to update any forward-looking statements to reflect future events, developments or other information.

Okay, so with those housekeeping items covered, we will now kick off today's festivities. We will start with a video, and when the video is over, our CEO, Mr Jim Vena, will be on stage. Thank you.

[VIDEO]

When a bold team rises on machines of steel and gold, buffed and buffered with passion and pride, we become the fleet. We rise to defy all obstacles and to beat all odds, knowing winning is the pursuit of what is possible.

Building bridges and scaling mountains, we weather frost and fire, connecting at the intersection of imagination and innovation. We are Union Pacific. Our strategy, safety, service and operational excellence is our key to growth.

To be the best at safety, we look out for each other. We carry goods with courage and care for customers counting on us. Safeguarding communities depending on us, ensuring everyone makes it home.

To deliver the service, we sold our customers, we bring food and fuel to nourish the land, grow economies, heat homes and hearths. We energise industries, moving construction cargo, chemicals, petroleum and plastics.

We transport, transportation, hauling finished vehicles and their parts for all major manufacturers. We move the world, serving all six major gateways, leading service to and from Mexico, sustainably connecting our continent with commerce from across the globe. We do this with operational excellence, powered by predictable precision, speed, reliability and resilience.

We are thoughtful about asset utilisation, empowering those closest to the work to make the best decisions. We exercise cost control, spending resources wisely with a buffer for the unexpected. We know people make everything possible and engage our teams and stakeholders, listening to their needs and investing in their success.

We are legend and legacy, steam and dreams made of the engines that shaped our nation. We are one fleet borne from steel and powered by will. We carry the weight of the freight that fuels our world.

We are Union Pacific.

Pursuit of What is Possible

Jim Vena

Chief Executive Officer, Union Pacific

Introduction

Well, good morning, everyone. I am having my first cup of coffee, so I am going to keep it close. Okay, I am a little bit of a coffee snob, so guess what? It is not the best coffee in the world, but it will do. It's got caffeine.

So welcome to Dallas. I hope you enjoyed the video. It was put together and all those words were done by Clarissa, who is our Chief Communication Officer. I think she did a wonderful job of showing who we are and what we do every day. So I think it is a fantastic video. And you can see the employees this morning as we are sitting here.

We have 7,000 employees on trains handling the business. We have multiple thousands of people inspecting track, inspecting cars. They are the people that actually do the final delivery that moves everything.

Yes, none of that is on the slide. I do not like following the exact words they give me to say. So yesterday we moved 2.35 billion GTMs of product. Think about that number. So it is not a small enterprise and we have a responsibility to do that. Did we move it well? I look at things a little deeper inside than we give out to everybody on a daily basis. However, our car velocity was good. Could be better. Never happy with car velocity, but our business in some segments is up, especially the international, much more.

However, overall, if I look at how we are handling the trains through terminals, the cars, how we are switching them, we switched, had to handle over 100,000 cars yesterday. And that means you touched them. Not on a through train. We have spotted over 130,000 rail cars at customers ready to load. And that number is higher than what we would normally do. And some of that is because of the international.

So I am just giving you a feel of what I look at, when I get up at 06.00 in the morning.

Railroad is pretty good. Now, thanks for coming to Dallas, and hopefully yesterday you had a little bit of fun. I spent the entire time out in the sun, and I know a few of you did also. There was a few wimps on the management side, and I will remember them, like I think Kenny Rocker spent most of his time sitting inside one of those business cars. So, Kenny, if you thought I missed it, you are wrong, okay? And there were a few others.

However, at the end of the day, what we wanted to show you yesterday was a little bit of our history. And I think that big boy steam engine is really representative of where railroads were and where Union Pacific was. However, if you look at it, where we are, what is real important to me, yesterday was fun. Last evening was fun. Today it is business. I have got my tie on; I am dressed for business. And we are going to be serious and take you through what we are going to be like and what we think we can do as a company in the next three years.

We always are pragmatic about how we put targets out. We do not get too far ahead of ourselves. However, in this event, and why we are having this event, is so that we talk about what we see and what, we think, is possible for us in the next three years. And we are always pragmatic when we put stuff out. So the numbers are out for anybody to see, I think at 07.30 this morning, our guidance. However, hopefully, you all stay with us for the rest of the morning and listen to us as we take you through.

You are going to meet a number of great employees. And this was one of the reasons of having investor conference was for you to meet some of the talent that works with me every day at Union Pacific. And you are going to have them on the stage. You are going to have a chance to ask them questions. And I think it is a great way to get to know the team and see the kind of talent that we have.

Dallas, TX Metroplex Key to UP Franchise

Also, why in Dallas? And I joked around about it last night at supper, but seriously, Dallas is important to us. It is in the top ten fastest growing metro areas in the US. We also serve four of the other ten. Whether it is Phoenix, and we see the growth, and we are investing. So I could go through them, Denver, all the communities in the west and the big cities that we serve. And for us, that is real important.

What do we do in Dallas? We have two intermodal facilities. You saw one of them yesterday. Mesquite is another one. And it is placed because of the size. Normally, you would never have

two, but it is placed there because of the size of the Dallas Fort Worth metroplex. And we have a great classification yard.

This morning the dwell was 18.5 hours. That is a pretty good number. I know you will never hear me say fantastic number because there is more to give. However, it is a pretty good way to say that every car that went through there, and they humped close to 1800 cars yesterday.

You also notice that we want to use, and you will get more detail as you go with the team, we are talking about what are we going to do with some of the land that we own and how can we bolt-on businesses to give us to bring more products to the railroad, but also leverage that for ourselves if we think it helps us grow the business. And it is not just intermodal. We spent a lot of money, and you will hear that from some of our senior VPs, and I will leave it for them to explain. However, welcome to Dallas, thought it was great.

Redefining What's Possible for Union Pacific

So who are we? What kind of culture do we want to have in the company? And these three events in history tell you a little bit about who we want to be. Okay, so I already talked about I want you to meet the team and I think our strategy is clear. It is safety, service, operational excellence, and I will take you through that a little bit.

So let me take you back in time. By the time May of 1953 happened, there were 15 expeditions to try to get up to the top of Mount Everest, and they all failed.

The first one being in the 1920s with Mallory in 1924 disappearing until his body was found on the side of Mount Everest. However, if you think about it, those people, there was a lot of divergent point of view on whether it was a smart thing to do and whether you could survive at a mountain that is high enough that the jet stream hits it at the top at 29,000-plus feet. However, they were sure, and mankind pushes.

Now, are we trying to climb Mount Everest? No. However, on the 29 May, a sherpa and a New Zealander climbed to the top and opened up a different view of how the world could be, and mankind always pushes the envelope to see where they can get. And for us, we no longer look, I do not listen to people when they tell me, well, coal could be a problem. So what? What do we do to make sure we make that up? We do have a great railroad, and we should be able to use our railroad and our network to grow.

So it is all about what is possible. What is even crazier is there was an Italian from Northern Italy, Reinhold Messner. If anybody follows, it is a great book to read of his. And he talks about he wanted to go up to the top of Everest 29,000ft with no supplemental oxygen and everybody thought he was crazy. You can see one of my passions in life. That is why I have been to Mount Everest base camp three times. And I went up a little bit, and it is not a big deal.

That is not what we are here to talk about. However, at the end of the day is this guy decided he is going to go up to the top with no oxygen. And did he make it? Yes. Everybody, doctors that studied it said your brain is going to implode, you are going to have permanent brain damage, you are going to have a real problem. And Reinhold Messner is still alive in Northern Italy. And that is what we want to do.

We want to push the envelope, and that is who we are. It is what is possible.

Laying Foundation For Success

Year-over-year improvements for trailing 12 months ended 30 June 2024

So if you want success, you need to make sure that you lay the foundation, and you can see this on what we have been able to do in the last 12 months, 30 June. And we could have updated the slide. Nothing has changed and said it would as of yesterday. However, sometimes, you know, it is good to just hammer down a time frame and do it. It basically aligns with the time frame.

However, our injury rate is down 22%. Our freight car velocity is up. Our terminal dwell is better. Intermodal service performance exited up 11 points. So we are delivering better service. That is the foundation. Now below that is about another 100 numbers that I look at every morning on a quick summary, and that is important is that we are all aligned in the company.

Those numbers are available to everybody that operates the company. There is no secret. So when I tell somebody like Hunt Kari, who some of you were on the bus with yesterday, I do not like how fast your car velocity is on intermodal. I am sure he is looked at it before me. So we do not have a lot of discussion.

A Unique Opportunity to Lead Premier Rail Franchise

So what are we selling? What is our advantage? You heard me talking about coal and the way we should look at it is leverage. If you look at this map, what this map tells you is that looking at the 23 states, we have a cross-section of a business that is used in the industrial production and the consumer across the entire 23 states. And of course, we partner with Canadian National and Canadian Pacific, Kansas City to go into Canada. We partner with short lines, we partner with CSX and NS to go East. However, for us, our origination franchise is real important. And let me just take a minute to go around.

I think we have got a franchise that is the best when it comes to that crescent from New Orleans and the petrochemical industry from New Orleans all the way to Brownsville, and it continues to expand. And you will hear some of that, that people are putting in more products in there. You can see the grain business that we have in the American plains. We have plastics in places, we have coal that still operates a number of trains every day. The West Coast we have got. If you go to Los Angeles, not only are we handling a lot of consumer products, we have the big international ports of LA and Long Beach, plus our own domestic business in there. And I could keep on going. Lumber, steel, tin, so industrial products of all sorts.

And we put that 70 miles an hour up there on purpose. We actually do build our railroad, unless the curvature is too severe to be able to operate our freight trains at up to 70 miles an hour. And listen, they do not all operate at 70 miles an hour.

However, if anybody thinks that it is not the coolest site in the world to see a regular length 15,000-foot train flying through Tucson, Arizona. East of Tucson. And going 70 miles an hour as the interstate is running right next to it, and I am in my vehicle in the interstate. That is pretty cool. And we sell that. It gives us in some quarters truck-like speed.

Not everybody needs that speed, but the ones that do, we can go from LA to Dallas in around two days, and it is just under 2,000 miles. So that is what we are selling. And it is a great, diversified business. We are serving the fastest-growing centres. And our access into Mexico,

I cannot leave, that gives us multiple entryways into Mexico in all of them that go across, and you can see them listed on the slide.

Safety, Service & Operational Excellence Leads to Growth

So what is our strategy? Let us get back to it. You have heard me say it. You will probably hear me say it so often that you are sick of it.

It is safety, service, operational excellence. And why start with safety? Listen, I have been railroading for a long time. I think my first job was actually in 1975, but first time permanent was in 1977.

In 1986, on 8 February, there was a head-on collision at the railroad I used to work on where a passenger train ran in and a freight train collided. 23 people from my hometown of Jasper, Alberta. A lot of them were on that train and died. The head and crew, I still remember their names. We never sacrifice safety for what we have to do. We spend for training, we spend on technology, and we make sure that we have all the tools to be the best. I can name you the people on the train. There was Amo Miller. I will stop there.

So safety is the foundation of everything that we do. Now, are we safe as a railroad? Yes. You could take a train of ours and run it around the equator 49 times before you would have an incident, a main line or an incident in the siding. So we are safe. We are the safest ground transportation method of moving cars anywhere.

What is service? Service is what we sold the customer. Some of them want high speed, some of them want timeliness, some of them want consistency. Some of them want Monday to Friday service only. Some of them want two times a day service. So service for us is what we sold the customer. And that is important that we do not lose sight of it. Now, for the public, we have to tell everybody, and we do. We provide an index that says, how are we doing? However, at the end of the day, we look at that as a guide. More important to us is, what have we done to the individual customer? And if you want to grow the business, you need to be able to handle that piece and deliver at a high level.

The parcel we won with UPS last year, the carrier that had the best peak, and we did not win that by accident. We worked hard to do that. And we have the railroad to do that, and we want to win it again this year. And that during peak, UPS expects us to be just about at 100%. So we have that capability. However, listen, a customer that is shipping fertiliser to a storage facility in Portland that has 150,000 tonnes of capacity looks at timing a little differently than somebody like a UPS or FedEx or one of those. And that is what service is.

Asset utilisation, listen, every locomotive costs us a lot of money and every piece of equipment costs us a lot of money. So for us, we sweat the assets every day, but we keep a buffer. And if anybody was wondering, what is Vena talking about when he talks about what a buffer is? I think there was not a lot of people that expected the bump up in Western international intermodal that happened here in the last 90 days. And I think we have been able to show people how we have been able to use that buffer in our railroad infrastructure, our people, and our assets to be able to do that.

Cost control, I have a mantra that I tell everybody. Think about it as if you are spending your own money. And listen, I got to have a little bit of fun, okay? I am in work mode. I am serious. However, got to have a little bit of fun. So I forgot my ties, and I was going to wear

a tie for supper last night. So I unload my suitcase and I go, son of a gun, Vena, you idiot. Because I am a process guy. When I pack, I pack from my feet up, right? That way you do not make a mistake. However, something must have got to me, and I stopped at some point. And son of a gun, I open it up, I go, I do not have a tie.

Well, last night I was okay, but this morning I wanted a tie. So I asked some of the people that are here to help me. I said, would you guys mind going out to get a tie? So, I do not know, they are crazy. They went to Neiman Marcus. Now, it is a nice tie, but I do not usually spend that kind of money on a tie.

It comes back to my mantra about spend the money as if it was your own. They thought, I am sure Vena spends money and buys $350 ties. Son of a gun. Anybody want to buy it off of me after? I am willing to give it to you.

And on people, it is the development of people. And the reason I started with telling you how many people were out there working today is we are in an office environment. They are out there working. Some people did not like the heat yesterday. We have people out there operating at 100-plus degrees and at 20 below the weather. It is an outdoor sport. And we do everything we can to retain people, which our retention is real high across the board. We do not lose a lot of people once we hire them.

They are great jobs. The benefits we provided are top-notch, as good or better than anybody. So we need to continue to develop. And I look at the people not as unionised and management. There is a group that are covered by the union, but at the end of the day, they are employees of Union Pacific. So we want to pay them all well. We want to give them a good work environment. We want them to succeed. We want them to be shareholders at Union Pacific. And we have a programme out there that everybody can buy-in, and we match with 40%, up to $15,000. And I am proud to say that now we have over 40% of our people that work at this company that are owners of Union Pacific shares. And for me, that is really important because I want them to be part of the business. I want them to be successful, just as the company is.

So that is our vision and strategy.

Balancing Expectations & Results

I wanted to talk, this slide, and I purposely put this one here. I gave it a lot of thought, and I wanted this in. It is the balancing that we have to do every day at Union Pacific. The customer expectations are we live to what we have agreed, we deliver on that. And we have to do that.

And at times, that customer expectation and what we have promised that we are going to do is going to impact our operational performance a little bit, and our financial success. We want to price, but we want to price right. We want to do things that set ourselves into the right place of where we are. We think we have the capability to price, but you cannot do that across the whole board easily. And you have to be smart about what the market gives us.

On the operational performance, you do not want to be so lean that you cannot handle the normal variations of what happens in our business. Listen, our business drops. The amount of cars released on every weekend is normal to see a drop 15-25%. So think of the capacity we really have if everybody released on a flatline basis over seven days a week. However, that is customers. They are paying the bill. It is pretty hard for us to move them all to do that.

However, at the end of the day, that is the pressure you have, and expectation, and operational performance, and that drives the way. And we understand what our financial success is.

What is our financial success? You have seen the metrics we put out this morning, and the numbers that we think we can deliver. We are very prudent, but I am very comfortable that even with all the balancing of everything that we do on a daily basis as a company, as individuals, I am very comfortable that we are going to be able to deliver that.

Agenda

So what is the agenda today? So what are you going to see today? Eric Gehringer is going to come up, and I have known Eric since I joined the company last time in 2019, and before I went on sabbatical for a couple of years. And I think he is doing a heck of a job. He is a smart individual, understands the business. He is a little bit of an aerospace engineer kind of guy once in a while, so we have to get him back in line. However, overall, I think you will be impressed of his talent and what he has been able to deliver and what he can help with Union Pacific.

Rahul is going to come up here and talk about technology. However, listen, he is not going to talk about technology in the sense of there is technology out there. We look at it as what can it do for the railroad? How do we speed up the trucks going into our intermodal facilities? How do we handle it quicker? How do we make the UP experience for a customer better? And how do we have tools built, and he will take you through a piece so that we can make decisions quicker and better in the railroad and how we operate our terminals, our operating plan and what we are doing?

Kenny Rocker, I was joking around about him and it was the truth. He did not spend any time out in the sun. But at the end of the day, Kenny is a heck of a sales and marketing guy. He is a leader. Do not kid yourself with that giggle and that smile that he has every so often. He is got this killer instinct to go win, and that is what you want. So he is good with relationships, and you will see him take through in some of his team.

Beth, who is our President and pretty cool. She is the first female President of Union Pacific, and she comes up and is going to give you through a number of products. And Beth has had a great career across the company, from labour relations, to the finance side, to the customer side, to the human resource side. And listen, I think she has got a great presentation to show you what we are doing with some of the properties and everything else that we are doing, looking forward.

And then Jennifer. Listen, I would not trade Jennifer for anybody. She keeps me grounded. She makes sure that we are prudent about what we are doing, and the facts are the facts, and that is the way we are. And she does a fantastic job.

So I am looking forward to today. You will not see me again until the question-and-answer panel at the end. Because this day really is for you all to get a greater picture of the talent we have at Union Pacific, what our vision is of what we are going to go.

So with that, thank you very much. We are going to have a little video and then Eric is going to come up. Thank you very much.

[VIDEO]

At the heart of every journey lies a promise. At Union Pacific, we are stewards of that promise. Driven by the dedication of our people and backed by cutting-edge technology. Every day, we rise to the challenge of operating North America's largest railroad. We never lose sight of what matters most. Safety.

More than 7,000 wayside detectors monitor freight cars and locomotives in real-time, generating 16 million data points daily to proactively identify and mitigate risks. Our engineering team visually inspects 4.5 million miles of track every year. We inspect another 500,000 miles, enough to cover our network more than 15 times, using innovative equipment like our autonomous geometry fleet.

This technology and the data it provides puts investments and resources in the right place. Over the last ten years, we have reduced track-cause derailments by 28%, as we invest nearly $10 million a day to protect and enhance our infrastructure. Autonomous unloading and loading systems eliminate the need to physically handle track materials while driving efficiency.

What used to take a ten days to unload 33,000 ties will now take five to seven hours. Now we are exploring how we can design and build equipment that leverages similar technology to more efficiently unload rail. We are building safer trains with Physics Train Builder, enabling us to safely increase train length and deliver our customers' goods even faster.

And as those trains traverse our network, energy management systems automatically adjusts locomotive throttle and dynamic braking to improve train handling and optimise fuel consumption. Our entire fleet will be equipped with this intelligent cruise control by 2026.

Delivering superior service grounded in operational excellence is our promise to the customers and Americans who rely on us for the goods they use every day. We are harnessing technology to drive efficiency within our terminals and across our mainline track throughout 23 states. UP vision is our eye in the sky. This all-in-one network surveillance tool displays the real-time status of every train on the system, providing information to effectively manage the overall health of our network.

Railcars are moving faster through 19 key terminals with automation tools like SwitchPro NX. This technology integrates field equipment, back office systems, handheld devices, and digital displays, enabling a single operator to safely and efficiently switch cars. Before SwitchPro NX, employees physically threw switches to route rail cars into the correct tracks to be assembled into trains, a daily task involving hundreds of switches and walking up to 6 miles. We continue to explore opportunities to expand SwitchPro NX to locations that will most benefit our customers and employees.

Remote control locomotives used in and around rail terminals boost safety and productivity by putting one person in control of a train's movement. By integrating that technology into our hump process control systems, we have increased the throughput capability of our hump operations by over 20% without adding resources.

At our major intermodal terminals, Precision Gating Technology (PGT) automates check-ins, so truck drivers can quickly get in and out. In most cases, eliminating wait times. And outside Chicago, five wide-span cranes integrate AI to semi-autonomously load and unload intermodal containers on trucks. While we have come a long way since diesel locomotives replaced steam, innovation continues to unlock unlimited possibilities.

We are testing a first of its kind hybrid battery-electric locomotive designed to cut fuel consumption by up to 80%. And we are the first Class 1 railroad to modernise the big three core operating platforms: positive train control, computer-aided dispatch and most recently, NetControl, our new transportation management system. NetControl opens the doors to leveraging real-time data and the power of AI to build new decision support tools like Terminal Command Center, which provides real-time insight into terminal performance to drive smarter decision-making, and our network planning platform and optimization tools which enable us to quickly integrate transportation plan changes while removing car stops from our manifest network.

When we are safe, we lay the foundation to deliver our customers a consistent and reliable service that sets the stage for us to compete and opens the door to strong growth potential. We are on a journey to be the best, powered by the right plan, innovative technology and the best people in the industry.

Pursuit of Safety, Service & Operational Excellence

Eric Gehringer

Executive Vice President, Operations, Union Pacific

Safety, Service & Operational Excellence Leads to Growth

Well, good morning. It is an exceptional video. It really captures on the technology side when we say we are pursuing what is possible. That actually captures many examples of us doing that today.

Now, as I think about Union Pacific, I focus on the fact that we are a truly exceptional company. It is actually what attracted me to UP 19 years ago. And as I think back over those 19 years, whether it was the ten years I spent in field operations as our Chief Engineer, as our Chief Mechanical Officer, leading our transportation to team, or the role I have now, the same two things have always driven me.

The first one is our mission. We fundamentally build America. I believe at my very core the prosperity of our country is tied Union Pacific. And it is the greatest calling professionally that we can answer. The other thing that drives me on a very consistent basis, day in and day out, is I always believe there is a better way to do things, even things we are doing well today. If you talk to some of the people in the room that I work with on a daily basis, they will talk to you about the fact that I always ask them, okay, even when we are doing good, what does great look like, and really reinforcing to our team, that is the culture we want to have. It is almost a perpetual dissatisfaction with our results because it pushes us to always accept the fact that we can do better.

World-Class Safety

So let us start on how we think about safety. Already this year we are making tremendous progress in our safety results.

We are clearly on the path to become the safest railroad. We are doing it with the strategy that you see here on this slide. It has four specific pillars. On the left hand-side, it starts with our work to prevent serious injuries. This is a programme in which we target a specific set of our rules. Rules that we know that any form of non-compliance can result in a serious injury.

We spend more time in the classroom, more time in the field with our employees, helping to ensure they understand how to execute against those rules. You just saw at least half a dozen examples of the leveraging technology pillar of the strategy.

On the commit side, we talk about this as it is a hearts and minds programme. It is us being in the field. To Jim's point, no titles, just people out with those that have done the work before and those that are doing the work now. We do that for two reasons.

We want to provide education, coaching and training while we are out in the field actually doing the activities that run this railroad. However, at the same time, we want our craft professionals, who are those closest to the work, to have an avenue to talk to managers about how did they think we should do the work, and then using that feedback to continue to evolve how we think about safety.

And then finally peer-to-peer. Peer-to-peer is about a family culture. We are a family at Union Pacific, but also like a family, you have to be able to care for yourself when it comes to safety and those around you. And that manifests itself in having the courage, no matter how few years you have on the railroad, how many years, what title you have, you are willing to take on the conversations where if you see something unsafe, you talk about it, you mitigate that risk.

The proof that we have already that this is working is serious injuries year-to-date down 25% versus same time last year. Our derailments are down 15%, and our personal injuries are down 22%.

We are not the safest yet, but we are going to be there.

Managing Variables to Deliver Strong Service Product

So let us talk about the railroad itself. And really, no matter what type of audience I am talking to, this slide always usually shows up because I believe one of the responsibilities of my job is to deepen the understanding of any person I come into contact with on how do we fundamentally execute operational excellence.

Because for us, what that really means is how do you operate our complex, 32,000 miles outdoor factory, and what you see on the screen are all the building blocks to accomplish that. And my hope here is that I am going to deepen your understanding of how we do that on a daily basis because it feeds everything else you are going to see.

So we start in our blues. This is the literal foundation of the Union Pacific because it is our infrastructure. We talk about 32,000 miles, but did you know that we have 110 million ties that we have to maintain and renew across our railroad. That is enough ties to go from here to the moon.

We also have 89,000 miles of rail. We could wrap that around the equator of the earth three and a half times. And of course, we have 16,000 bridges, enough that if you actually stack them end to end, you can walk from Omaha, Nebraska, and never touch the ground until you get to Colorado.

We then, of course, have 273 terminals. Those collectively form the foundation of our service product. However, when you think about our service product, you then have to get into the purples because this is really where the volume comes from and where the volume goes to.

If we think about our ports as an example, PNW, LA and Houston, on average, 1.6 million carloads come from those ports every year. If you then expand a little bit beyond that, and you look at the interchange points that Jim mentioned, two in Canada, six in Mexico, hands down the best interchange franchise of any railroad. And as a result of that, we get about a million carloads every year that come across those eight interchange points. And we do not only interchange with Canada and Mexico. Inside our 32,000 miles, 600 different locations where we interchange traffic on a daily basis. And we do that with 260 different entities that range from short lines to other Class 1 railroads.

And then, finally, we have approximately 10,000 customer facilities that we serve. It starts to give you a better feel for when we talk about operational excellence, what do you actually have to do to accomplish that?

Then you move to the reds. And the reds are some of the most important because they are fundamentally how we move freight. You start with our locomotive fleet. We have talked to you before, we have about 3500 locomotives in our mainline fleet. Each one of those locomotives has about 200,000 parts. Each one of those locomotives, on average, will go 81,000 miles in a year. As a result of that, we perform 3 million inspections per year on our locomotive fleet. That generates 6.3 million specific maintenance tasks that have to be done to ensure that they are reliable to deliver our service product.

On the car side, a fleet of 343,000 cars in our inventory, 2000 parts per car, 81,000 to 84,000 miles travelled every single year, 13 million inspections are performed and 1.6 million repairs performed every year, just so we can ensure that we have the cars our customers need, and they are reliable.

Then you move to the oranges. And this is what ties it all together, specifically, our transportation plan and our locomotive plan. Up to this point, we have talked about asset classes, tracks, signals, bridges, terminals, locomotives and cars. The "T plan" and the "L plan", which is what we call them, that is what actually connects everything. That is what dictates, on a daily basis, the trains we run, how long are they, how many locomotives they have, where are the locomotives in the train? How many mechanical repairs do we have to do?

And then, of course, you have the yellow, crews and dispatching. On an daily basis, we are dispatching 2500-plus trains across our system. And of course, we wrap our safety systems around all of that. So when you hear us talking about building America with operational excellence, this is how we do it. And these are the results of that work.

Service – What We Sold Our Customers

When we think about service, it is what we sold our customers. Operational excellence is how we deliver that service. And king among the way we do that is terminal dwelling car velocity. You can see the results over the last eight quarters in the top two charts. You can see the trend of continuous improvement through all eight quarters. That is critical to our service product. The faster we can move cars into a terminal and back out of a terminal, first, we generate capacity. Second, we generate car velocity.

Car velocity drives fluidity. Fluidity is what drives our service product. When we get bogged down in parts of our railroad, that is a massive headwind for our service product. It is not what our customers paid us to do. So our job every single day is to look for opportunities.

And you can see the results on the service side. Again, same trend. As our terminal dwells come down, car velocity has gone up. To Jim's point, it is never good enough. I am not happy with the 214 we had this morning on the seven day, it should be more like 220. However, you can see the results on the service side. And we hear that feedback from our customers that they are satisfied with our service across the system.

Productivity = Resource & Fuel Efficiency

So now, when you think about inside of that, how do we think about productivity? And I always talk about the fact that I think some people, not all people, they have a misunderstanding about productivity.

When they hear the word productivity, they think just dollars and cents. That is actually not why we focus on productivity at UP. Productivity is about growth. We know from all of our history and current state right now that the more productive we are, the better we put Kenny and the team in positions to compete, not only for the markets of today, but for the markets of the future as well. And you can see we are doing that.

On train length, a continuous improvement. Second quarter of this year, best quarter in the history of Union Pacific. That included the best month in the history of Union Pacific, which was June.

However, the thousands of people that are out on the railroad today, they said that was not good enough. So in July, they beat the best ever, and then in August, they beat that. Train length will continue to be a very important productivity initiative for us from a capacity perspective, a dollars and cents perspective and a service perspective.

Top-right, locomotive productivity. Lots of things go into locomotive productivity, but two are far bigger than everything else. One is our fleet size.

All the work that we have done over the years to ensure that we keep that fleet as lean as possible while still maintaining a buffer. That we will talk about in a minute. The other big item is locomotive dwell in our terminals. And it is a simple measure. We do not complicate things for our teams. It is the time between when the locomotive arrives in the terminal and when it leaves the terminal. If you go back and look four-ish years ago compared to now, we are down about 35% in our locomotive dwell. Six of those 35 points have been delivered in just this year alone. That is a testament to all of you that we still see opportunities on a daily basis today, even in something that we have improved 35% on.

Workforce productivity, large increase in 2024. However, most people think about workforce productivity for transportation. And while clearly there is transportation productivity in there, do not forget the mechanical team. Best record ever year-to-date on their headcount per asset, asset being either a locomotive or a car.

The engineering team, you just saw examples of their continued work to automate operations, which dramatically reduce the number of people that we need while improving the safety of how we do the work.

And then fuel consumption. Good trend. You see it levelling out a little bit here over the last 18 months. There are people in this room specifically that have the best list of our portfolio of initiatives for reducing our fuel consumption. In fact, it is the best that I think we have ever

delivered. It focuses on things that start with fleet size, but then it focuses on EMS, which we have talked to this group about before.

EMS is one of those systems like PTC. You can keep bolting on improvements, even going all the way down to the anti-idling technology that we are working to be able to get on our locomotives. So we have got opportunities in all four of these, and that is one of the most important messages I would ask you to take away.

Capacity to Grow

So now, do we have the actual capacity to grow? Definitively, yes. Because you need these five things to do it. And we have them.

On our mainline capacity, we have invested, over the last five years more than $900 million. Those investments are usually in three things. It is either the construction of a new siding, the extension of an existing siding, or the adding of double track. And we will talk in a minute about where we are doing that over the next three years.

Terminal capacity, I want to be really clear here. Terminal capacity starts with process improvement. It is the work of thousands of people every single day to once again look at how do we do it today? Where do we see the opportunities? Get them on the railroad, and let us keep moving that metric in the right direction. In addition to that, we have invested nearly $600 million over the last five years. And most of our manifest terminals and some of it are intermodal terminals.

I say most from the perspective of when you think about a project like Englewood, at nearly $125 million that we have spent in a phased approach, those are big investments for us, and they have big returns because the commercial team continues to drive growth out of the Gulf Coast region.

Locomotives, we still maintain a fleet of about 500 that are buffers staged across the system in certain locations, and you can see us actually using them. When we had the hurricane that most recently hit down in the Gulf Coast area, we pulled some locomotives out of that fleet so that we could pick that car velocity back up. With the international intermodal that Jim mentioned, we are using some of those. That is why they are there. They are there to deal with variability. They are there to deal with seasonality and our volume. And most exciting of all, they are there to deal with the business development wins that Kenny and the team are bringing to the railroad.

From a people perspective, it is the same thing. We have got extra crews surgically and thoughtfully placed around the system that we can call upon for growth. And then, of course, for freight cars. Not only do we have cars stored across the system, we are still investing hundreds of millions of dollars in our fleet. Some of that investment is to replace cars that have aged out. Some of that, once again, is the business development wins that Kenny and the team are bringing to the railroad. And there is no better reason to buy cars than that.

Investing for Future Growth

2025 – 2027

So let us talk about those investments on our main line and our terminals over the next three years. And I am going to underline that this is over the next three years.

Some of these projects have actually already started to be constructed. We start with our dots that show us green. These are those mainline projects, siding extension, siding construction, double track.

Some of them that have my highest attention are the green dots that you see up in the Pacific Northwest. Siding extensions and siding construction that will allow us to continue to drive growth into the PNW. What I am equally excited about is on the sunset, you can see some green dots on that.

In 2025, we are going to recommence with doing additional double track on our Sunset Route. We have got about 127 miles of still signal main track down there. That is a direct result of the growth that Kenny and the team have in our long-range plan.

The yellow dots are our manifest terminals. You are going to see us continue to invest even more in our manifest terminals, and that is a direct result of ensuring that we have the capacity to handle the growth over the next three years. Those investments take two forms.

At the most basic, fundamental level, it is going into a yard, extending tracks, adding new tracks, or as we will talk about in a minute, implementing new technology, some of which you saw in the video, all with an eye towards generating capacity. The other form that it takes is where we actually put what we would call as a bypass track. So if you have a single main running through a terminal, it is adding another track next to it, say, for about three to five miles, so that you can circumnavigate that terminal and promote fluidity in the terminal.

And then finally the intermodal. Kari and Kenny are going to talk about this at length. However, in addition to the million lifts that we have added of capacity over the last four to five years, we still have investments that we are making, and they are investments that are all tied to growth that is on the railroad and coming to the railroad.

Speed to Market Captures Growth

And then finally, as you think about that growth, it is one thing to say we are building things, but we do not want to just be that company. We want to be the company that takes great pride in the manner in which we build things and the service product offerings that we put on the Union Pacific. These are four examples of many examples where we are demonstrating better than we ever have before, agility and speed. Up on the top-left, the La Basin, the Inland Empire, an area in which it is just inundated with warehousing. We have created an approach in which we have repurposed part of a yard, which is our West Colton Yard, and through a phased, which means judicious investment strategy, we build some, Kari and the team fill it up. We build more, Kari and the team filled it up. And that is exactly what they have done there. We started at 25,000 loads per year, and now we have got 140,000 loads, and we are building to nearly a quarter million loads.

Same thing with Phoenix from the perspective of speed. Old UP, four or five years ago, if we had said we want to have a new intermodal terminal in Phoenix, it might have taken us two years to do that. As Kari will talk about later today, it was a fraction of that time.

On the right-hand side, you see our service products that are new to the railroad once again, not spending weeks, months, and quarters developing these. Rather it is Kenny and the team saying there is demand there. What service product do our customers need? And coming to us, helping us understand that, and getting it on the railroad. The one that is LA to Chicago,

that was about actually bypassing G4 to go to G2, which gets you closer to the heart of Chicago. That train is out there and it is running. Falcon and Eagle Premium, this is all about the service that we have established coming out of Mexico, going into Chicago and then eventually Canada, some of the best performance intermodal-wise that we have on the entire system.

So the bottom line for the Operating department is, as we think about operational excellence, we are demonstrating that on a daily basis. However, that mentality, that perpetual dissatisfaction with our results, that is our culture. Because it is in that perpetual dissatisfaction, we continue to challenge ourselves from going from good to great. Thank you.

The next person up is going to be our CIO, Rahul Jalali.

Pursuit of Smarter Operations Through Innovation

Rahul Jalali

Executive Vice President & Chief Information Officer, Union Pacific

Technology Results Advanced By Strong Foundation

Good morning. I am excited to talk with all of you today.

I have been at the railroad for nearly four years, and prior to that spent 24 years at Walmart. And these experiences really defined my world view, which is focused on being customer-centric, be operationally efficient and running safe, secure tech.

At Union Pacific, we always start with safety. And in my world that includes cybersecurity. We are excited about setting industry standards and regularly collaborate with best-in-class partners as well as the government to keep us secure. We have built a strong foundation of platforms across our business, starting with the Salesforce CRM for marketing and sales to the industry-leading platforms for operating. And we are in the process of implementing SAP for our back office systems refresh.

What excites me is that we are beginning to thread these platforms with free-flowing, rich, real-time data that enables the development for features driving operating efficiency and customer-centricity.

As you saw in the video, we take pride in being the first railroad to deliver the next generation of core operating systems, with the completion of our NetControl transportation management system. It is built with an advanced microservices architecture that is generating 6 billion API calls a day. This volume rivals what you may see from some of the most admired companies in Silicon Valley. Yes, that is coming from Union Pacific.

Combining Real-Time Data With AI Drives Productivity

Productivity of $100+ million over next three years

Combined with AI and machine learning, we see an opportunity for the next generation of productivity.

Eric and I have set an aggressive goal to deliver $100 million in productivity over the next three years from these efforts. You saw an example of this in the video, but let me tell you about a few more. First, let us start with the agile transportation plan. Again, you saw that in the video.

It is an initiative where we are focused on developing a better-quality transportation plan, and enabling the capability to re-plant on demand as things change. In our large outdoor factory, things evolve rapidly, and our transportation plan should also evolve to optimise the millions of car connections we execute each year.

In turn, that optimization improves network fluidity. You heard Eric talk about five critical resources required to grow, and we are leveraging our rich data layer to optimise those resources for maximum efficiency. An example of this is using our data to expand the footprint of remote control operations performed across our network.

We also see this opportunity to help our frontline employees, and one way is through decision support tools. Terminal Command Center, which you saw in the video, provides a real-time view of terminal performance, advancing our ability to drive productivity. In future, we will enhance Terminal Command Center to equip those frontline employees with turn-by-turn direction for consistent execution. That consistent execution will drive improved service.

Finally, we have several initiatives around automation in play to help drive productivity as well as capacity. One example is the semi-autonomous crew repositioning in our yards. In this pilot, a vehicle capable of driving itself will position to pick up a crew, and then the crew then drives themselves back or simply vice versa. We are piloting the tech at a location right here in Texas this year, with an opportunity to expand thereafter. If you think about the scale of van rides we use annually, which is more than 100,000 in our yards, you can begin to see what this innovation will mean for efficiency and cost.

I again want to emphasise that we are beginning to use AI pervasively in all these efforts and continuously train our AI models on the real-time data. And our technologists are now deeply embedded, partnering with the operating expertise of Eric and his team to redefine operations.

Simplifying the Customer Experience Empowers Growth

Now, equally as important is the customer experience, and I heard a lot about that at the dinner last night. So let us talk about that, how our platforms will enable growth with our customers.

Customers have told us loud and clear that they would like to see an accelerated shopping journey, whether they are new customers or existing ones, with new business opportunities. Using this real-time data integration, we have reduced the time to onboard for the new customers already by 20-25%. Now, my friend Kenny and I never are happy with that number. We want to get that onboarding process even better. So we will go back to Jim's challenge of what possible. We are continually evolving to reduce the friction across the entire customer journey.

We are also getting very sophisticated in connecting directly with customer supply chain systems, which in turn reduces calls into our customer care and support teams. And one thing that excites me about these interactions, that we are now developing bidirectional pathways with our key customers. In addition to the information that they request, we are also pushing the data to the customers that will help them make more agile supply chain decisions.

Finally, customers have told us when it comes to visibility again, I heard that a lot at the dinner table last night, they would like to see three things. Where is my stuff? Can you be exceptional

in exception management? And when an exception happens, notify us in real-time. And we agree wholeheartedly with that.

In response, we are actually developing a new product that will arrive later this year called Customer Vision. And we are not doing that in a vacuum. We have a pilot group of more than 100 customers who have started to provide feedback from the very first line of code that we are writing. That is customer-centricity to me. Ladies and gentlemen, we have a very talented tech team at Union Pacific, and I am excited by the tech-powered era of railroading that is getting unleashed at UP.

Thank you. Next, we have a panel with Brad.

Operating & Technology Panel Discussion

Eric Gehringer

Executive Vice President, Operations, Union Pacific

Rahul Jalali

Executive Vice President & Chief Information Officer, Union Pacific

John Turner

Senior Vice President, Northern Region, Union Pacific

Steven Bybee

Senior Vice President, Southern Region, Union Pacific

Carl Garrison

Vice President, Network Planning & Operations

Brad Stock: Yes, here I am. Okay, so, as some new faces get situated here with Eric and Rahul, before we take questions from the audience, I do want to allow these new speakers to get involved in the conversation. And so before they answer a question, I am going to ask of each of them to introduce themselves and give you a little bit about their background.

So, starting here first with John and Steven, we have heard from both Eric and Rahul and saw in the video how technology is evolving to drive productivity. So, can you help us understand how on a day-to-day, in your world, how you see that playing out, and how you see productivity being driven? Well, let us start with John.

John Turner: Good morning. A little bit about myself. I began my railroad career 27 years ago on the ground. What that means is I switched cars and classification yards, and I moved trains from terminal to terminal to begin my career. One of the things you have heard Rahul talk about it, you saw it in Eric's video, I was one of the first few people on the Union Pacific to ever have an RCL licence to operate in a classification yard.

Running remote control operations is something I am very familiar with. Throughout my career, I have had various field operating roles, leading teams that operated terminals and line-of-road facilities across our network, becoming a general manager of two of our service units. I have had a number of what I would call network roles as the head of our service design team, who is responsible for building the transportation plans for our customers, as well as been the head of a group that was responsible for the strategic plan of our five critical resources.

And then my most previous role was as the head of the Harriman Dispatch Center, our network operations centre, who is responsible for dispatching and distributing locomotives and crews across their network. All of those experiences inform and build my decision-making on a day-to-day basis in my current role. However, to answer Brad's question, there are two really notable things that stand out.

For those who had the opportunity yesterday to go to Dallas Intermodal Terminal, you saw our autonomous tie loading machine. And for those that are maybe less familiar, distributing ties across our network is a critical step into actually doing the tie replacement work that needs to be done every year.

If you think about it in terms of yesterday, today and tomorrow, tomorrow is the machine. However, yesterday that work was done by hand, by people literally in a car, lifting 200 pound ties and throwing them out along the right of way. A very laborious, very hard work. If you can imagine doing that yesterday in the Texas heat, all day long, for hours upon hours. Today, we use a backhoe that is attached to a gondola car, and we pick those cars out, and we do it.

While it is a major step forward, it is certainly a very laborious and time-intensive operation. So today, to do that same work with that backhoe, it takes multiple days worth of track time to do that. Call it, sometimes those projects are around ten days just to get the ties distributed out there. Tomorrow, at the push of a button, you will be able to do that in just a handful of hours.

What does that mean? That generates latent capacity on the railroad that we can use to grow into the future without the need for added capital. In addition to that, obviously there is workforce productivity associated with that. So, something we are very excited about.

In addition to that, the second thing that comes to mind is a new tool. Working with Rahul's team and the network planning team is an integrated transportation planning tool. And that tool really takes the planning of our transportation plan, minimises it to maybe just a few hours. So you can use that both in a tactical sense and in a strategic sense.

In the tactical sense, when we have majority service interruptions, being able to come up with a plan that will minimise the impact to our customers is paramount. If you are going to have a multiple day outage to try to serve our customers well, we can use that tool to speed up that process and reduce the iterations that it takes to get the plan right for those circumstances.

On a strategic level, you hear Jim and others talk about reducing touches in our yard, or reducing car connections in our yard. So Jim started off the day talking about the number of cars that we handle. If we can reduce those touches across our network, we can speed up the cars, improve the reliability, and compete for business that we might not have been able to compete for in the past.

Brad Stock: Thanks, John. I will turn it over to Steven.

Steven Bybee: Thank you, John.

So I started my career about a little over 19 years ago, kind of a similar path that John had. I started out on the ground and worked various switchman, brakeman, conductor, as well, was an RCL operator as well, and then moved into my management career and had the opportunity to work various field positions.

I too had two general manager positions in the field with our South Texas service unit in our mid-America. From there, I moved into a few different AVP roles, two of them being network-level type positions. The first one was over our network design, designing the transportation plan for the network. And the other one was over asset distribution, which was managing and distributing the entire fleet that we have on the railroad on top of our crew management services. And I also had a third AVP role, which was our operations for the Northern region. So to present now, I am the Senior Vice President of the South.

And so, to get to the question, when I really think about technology, I am thinking about productivity in our terminals, and productivity specifically around how many cars that we are processing per minute. So there is two applications that I will cover as well, one of them being the Mobile NX. And Mobile NX has already, as you saw in the video, produced over 20% of productivity in those terminals that we cut it over so far. And if you recall, there was a gentleman standing next to a large monitor processing cars. That is Mobile NX. That is what I will be referring to.

So when you think about it, think about it in a sense of an assembly line. So Mobile NX in the essence of an assembly line, there is ten people on an assembly line producing X amount of widgets in a shift. Now re-look at that assembly line and think about now four to five people doing it versus the ten, but producing more widgets in their shift. So that is Mobile NX inside of a railroad, inside of our rail yard. So what used to take us two to three people to process now takes one to two altogether, processing more cars per minute.

So the next application I would like to cover is the hump computer systems that you saw in the video as well. Specifically, though, the application of variable speed.

So if you think about how we used to process cars historically inside of a hump yard, it was a stagnant speed. Call it 1.6 miles an hour. So with variable speed based on a lot of different inputs, based on the cut that we are processing, that now will fluctuate anywhere from, call it 1.6 to 3-plus miles an hour, again allowing us to process more cars per minute.

So when you think of it in terms of productivity, there are a lot of benefits there from the growth standpoint, but you have also got to think of it from a drives consistent, reliable service through the ability to be better on our connection performance, but also recoverability. And recoverability becomes really important when we deal with variability, kind of like what we have had in the south just last week with Hurricane Francine. So having that recoverability and be able to process more cars per minute speeds up the service that our customers expect from us on the recovery side.

So really excited about the technology and what it is doing for our terminals, and we are really just getting started with these cutovers. So looking forward to the future and the additional productivity gains that we are going to get from that.

Brad Stock: Cool, thank you. Thanks, Steven. Carl, your team is responsible for the company's operating metrics. Where do you see the most opportunity across the network to drive better freight car velocity and improve SPI?

Carl Garrison: Thanks, Brad. First, I will say I started with Union Pacific about 18 years ago, a little over 18 years ago as a management trainee in Denver, Colorado. I spent the majority of my career in field transportation roles at different terminals, working in ten different locations,

some of those multiple times, including three General Manager positions before I moved to a Chief Mechanical Officer role at our Headquarters for a few years.

And now I have transitioned into the Head of Network Planning and Operations, where we design the transportation plan, we do capital and resource planning, and we run our measurement systems as well as our joint facilities in terms of how we work with our interchange partners.

To answer your question, Brad, I will start by saying delivering the service that we sold our customers is really all about executing on our fundamentals and leveraging technology to help us do so.

In our manifest network, car velocity opportunity is all about making car connections at our terminals. We have to execute on our switching plan, our train build plan, and we have to effectively manage our assets to make those connections. We are using technology like NetControl and Terminal Command Center to improve our decision-making and to be more predictive in planning. And at the same time, we are giving real-time information. We are putting it directly into the hands of the employees doing the work through the use of those software tools and our mobile devices.

Now, in our intermodal network car velocity opportunity comes down to two words, and that is train speed. To improve on our train speed, we have to execute effectively in our dispatching, we have to execute effectively at every train stop along a route. You can think of every train stop, whether it is planned or unplanned, like a pit stop in a Formula One race. Every employee involved has a role to play, whether it is the engineer, the conductor, the train dispatcher or the terminal manager. If they understand their role, if they work as a team, if they execute at a high level, the train stop time is minimised. We stay ahead of schedule, and we have a chance to win the race.

At the same time, we are using tools like John mentioned to reduce the number of times that trains need to stop along the route, doing intelligent blocking at our terminals and with our customers to make sure that cars can move as far into the network as possible, with as few stops at terminals along the way as possible. This minimises the transit time, it minimises variability.

It is really the combination of execution and technological improvements that will improve our car velocity and ultimately drive our service performance index.

Brad Stock: Thanks, Carl.

So we will now open up if anyone from the audience would like to ask a question. We will start here with Tom. If you can, please limit to one question, you got to get that in there, as well as introduce yourself. Just give your name, if you would, before you ask your question.

Thomas Wadewitz (UBS): Sure. Great. Thanks. So, Tom Wadewitz with UBS. Wanted to get your thoughts on the opportunity to speed up certain services on the network and how that creates more volume with customers.

I think one example, I think you sped up your LA to Chicago service, took out some days. So which parts of the network or customer segments would be responsive to speeding up the

network, and where in the network can you do that, where you just run the trains faster and generate more volume? Thank you.

Eric Gehringer: It is an outstanding question. In fact, we were talking about that last night at our table. I think I am going to have John answer that question.

John Turner: The way I would think about it is twofold. One is there has to be a need for it from the customer's perspective. You have heard us talk about, we do what we say, we sold the customer. So to the extent that that is real, I think there are opportunities really across the board.

We have two levels of service on the intermodal side. One of them is what we would call our premium service, which is our 'Z' trains. And those are very challenging schedules to meet with the things that we do every day. Jim mentioned that. However, at the same time, if there was a need commercially from Kenny and Kari's team to come to us to speed those up, we have the second-level product, and if it was commercially viable, we could speed up those trains as well, largely broadly across the network.

Eric Gehringer: You saw an example when I went through the example for the Falcon and the Eagle. Those were both 'I' trains before we converted one to a 'Z' train. And we are running that performance better than we ever have before. So to John's point, if it is there, we want to bring it to the railroad if it drives growth.

Brad Stock: Thanks, Eric. I think Chris Wetherbee, then we will go ahead.

Chris Wetherbee (Wells Fargo): Thanks. Chris Wetherbee from Wells Fargo. I guess I want to think about capacity that you might have on the network today, and how you sort of stay ahead of what the potential volume growth opportunity might be. In particular, thinking about the two regions, so Northern and Southern, I think the growth profile might be different, as we look out over the next couple of years. How do you think about the capacity you have now? Is there a way to measure that?

Eric Gehringer: Oh, Bybee is ready to answer that question because it is a very consistent conversation we have because of the Gulf Coast and so much growth that we have coming to the Gulf Coast.

Steven Bybee: Okay. So when I think through generating capacity, I will tell you when it comes to investments of steel in the ground, that is one of the last things I will look at. So I will break it down in three different portions.

One of them is, I think you have heard someone earlier today talk about execution, right? So if you think about what a terminal is capable of, are we actually meeting those deliverables inside of a terminal? And if not, what are we doing to close that gap? And then we do not stop there because we are never satisfied. Just because if we are setting new records inside of a terminal, where do we find additional minutes to reduce our tag times to be able to process more cars? And the more effective we are at that processing, we are improving our connection performance, and we are organically creating capacity inside the terminals. So that is where we spend a lot of time with our work on a day-to-day basis.

The second aspect, and John mentioned it earlier about eliminating touches, that is the work that we have been knee-deep in here all year in the south, looking for opportunities to run a

more efficient transportation plan and eliminate the touches in the cycle of a car. So instead of staying with the status quo of having an average of, let us just say, five touches per trip, how do we eliminate that and reduce one of the connections, which can ultimately almost save a day in the transit as well? That is how I think about from an efficient transportation plan, generating capacity in the terminals. The last thing that we will go to is actually on the investment side because there are productivity gains that we have been able to realise inside these terminals, and we have the capacity to grow now.

Eric Gehringer: And I would remind people that one of the strategies we have had in place now for the last four years is even when we do get to the point of that last resort and making the investments, it is almost always a phased investment. Ensure that we get the volume. Once we start to receive the volume, we make the next investment.

Brad Stock: Thank you. Ravi?

Ravi Shanker (Morgan Stanley): Thank you, Ravi Shanker from Morgan Stanley. Rahul, a question for you.

You spoke about customer visibility tools. What is the timeline for rolling that out? And second, does that help get customers on the same page as you guys in sharing the improvement in service that you are having? Because I think there has been some friction in the past about the railroad saying we are improving service, but customers saying we do not see it. Thank you.

Rahul Jalali: Yes, the first phase, Ravi, on that is coming later this year, and then will continually evolve. So I said, we have actually formed a group of over 100 customers from across our network that has given us feedback. So we want to make it what they would desire it to be, in conjunction with visibility. Where is my stuff? Any exceptions? And we are going to start with the first and inform our development process based on the feedback that we get. However, the first phase is coming in December.

Ultimately, when customers have, as the service improves, they are having to get to, when they deal with railroads, to a disparate set of places within our systems to get to the information. This is one single pane of glass where they will start, and they can drill down, they can reach out, they can actually create tickets from the same place. So, first phase coming in December with a very robust plan to kind of keep scaling it up over the course of next year.

Tony Hatch: Hi, it is Tony Hatch. Rahul, where does RailPulse fit into your customer visibility lens for the future?

Rahul Jalali: Yes, so we are early into the RailPulse coalition out there. So we are very supportive as a company around RailPulse, but it is just not RailPulse. We. Let me take a broader view, Tony, around our ability to develop IoT.

So for our container fleet, we have over 80% of our own container fleet now equipped with IoT. And on the RailPulse side, as an industry, there is 5,000 cars that have been equipped with the IoT devices. Now, on the railcar side, the number is pretty enormous. At the UPSIDE, we have about 500. It is just a very small fraction. However, what we are developing is use cases both on the container as well as the RailPulse on the railcar side on what is it that the customers want? Where is my car? Can we give turn-by-turn directions or any other data that can be

acquired from those IoT devices? We are in the process of developing those use cases a little bit more advanced on the container side, but applicable very much on the other side.

So the speed of implementation will depend on how fast, really, the shippers get IoT devices put on these railcars.

David Vernon (Bernstein Research): Thank you. David Vernon, from Bernstein. So Eric and team, you are running a model now with 9,600-foot trains, getting closer to that 10,0000-foot level. Several years ago, was shorter. All the infrastructure is built for some of those shorter trains. I am just wondering if there are still points in the system where you are maybe not running at the right level of productivity, or you are having to do workarounds to accommodate some of the infrastructure that has not been adjusted for the longer train lengths? And as you think about that investment programme for the next couple years, how should we be thinking about those bottlenecks coming away and opening up some further opportunities for productivity or efficiency? Thanks.

Eric Gehringer: Sure. So, Carl's group is actually the tip of the spear of our train length initiative. So, Carl, you want to respond to that initially?

Carl Garrison: Yes. So when we think about train length, we really think about it in terms of an opportunity to generate mainline capacity and give us a platform for growth.

So we do not think about it in terms of just how do we make the number higher. We think about it in terms of what do our customers need, what service have we sold them? Are we utilising any latent capacity on a given train symbol, whether it be tonnage capacity, with the number of locomotives that are on the train, maximising that, or leveraging the routes that you mentioned, that have previous investments into double track or siding extensions?

So the way we look at the network today, there is latent capacity in a number of places. We have terminal capacity, we have mainline capacity, and we are continuing to leverage the latent capacity on the individual trains.

We will continue to do that. You saw on Eric's slide the number of run-through projects and mainline project that are still yet to come in places like the PNW, and then more of a terminal focus on places like the Southeast and around the soda ash patch area in Wyoming.

So you will see us continue to implement the strategy we have been working on. The proof is in the results where we have set record train length over the last few months, and we have had a 30-plus percent gain over the last five or six years. That will continue as we move forward.

Customer-Driven Pursuit of Growth

Kenny Rocker

Executive Vice President, Marketing & Sales, Union Pacific

Introduction

[VIDEO]

Kenny Rocker: We are committed to safety, service and operational excellence as we stretch to achieve what is possible across our railroad. The commercial team is being bold. We are

hyper focused on engaging customers proactively, and we are driven to be the first to act on new opportunities, invest to grow and find innovative solutions to help our customers win.

Jason Hess: The emerging renewable biofuels market is providing the Bulk team a vast array of opportunities, not only for the outbound finished product, but also for the inbound feedstock. We are proactively collaborating with our existing customers and new market entrants, working to develop and enhance an entire supply chain. Union Pacific has the premier franchise for feedstock origination, with access to nearly all the soy processing facilities in the Western US.

This includes the new crush facilities opening this fall, Norfolk Crush in Norfolk, Nebraska and Bartlett Grain in Cherryvale, Kansas. They will each have the capability to crush over 38 million bushels of soybeans annually. These are just two of the 12 new customer facilities or expansions that have come online in the last couple of years to support the biofuels market. We are actively working with several other facilities that are either under construction or plan to be completed in the next few years.

Over the past several years, we have seen the grain market landscape change. Beyond the increase in domestic processing of soybeans, we are also seeing geographical shifts in domestic feed markets.

To continue maximising our participation in our growing market share, it is critical we expand both origin and destination capabilities. Origin facilities give us capacity to extend our reach for bushels of grain, while destination facilities assure our participation in expanding markets. For example, Viterra recently announced they are building a new grain facility in Dalhart, Texas that will be served by Union Pacific. Anticipated to be completed in mid-2025, this facility will increase Union Pacific's access to animal feed markets, expected to grow by 18,000 railcar equivalents by 2026.

Union Pacific also has seen strength in grain moving into Mexico. We have a strong network, with our North-South line providing access to all six border gateways into and out of Mexico. Our network is well-aligned to serve their growing demand for animal feed and penetration opportunities for incremental wheat used in flour production. These are just a couple of examples of how we are growing our grain portfolio.

Over the last two years, Union Pacific has secured new business from over 20 facilities that are either new to the Union Pacific network or have recently expanded, giving us access to over 190 million bushels of additional origination and destination capacity.

New assets like these are long-term growth engines for Union Pacific and will generate revenue for more than 50 years. The Bulk team remains focused on growth and our future is bright.

Jacque Bendon: Our Industrial team is intensely focused on delivering highly profitable car load growth for Union Pacific.

One area where we are achieving that growth, both now and in the future, is with our petrochemicals business. The feedstock and infrastructure advantage in the US Gulf Coast has attracted a hotbed of investment, and we recognised early on that our customers would need supply chain solutions to get their products to the global markets. That foresight has helped us win. Since 2017, when the first plastic expansion came online, we have grown our plastics business, adding over 100,000 annual units.

And here is how we did it. First, we leveraged our unrivalled Gulf Coast franchise with our efficient service products to our interline partners in the East, and our industry-best access to nearby Mexico markets. Second, we built products to deliver export optionality with customers like KTN at Prime Pointe in Dallas.

And third, we created the largest storage and transit network in the industry, with more capacity than both of our competitors combined. It has been exciting to work with our petrochemical customers to help get their products to the market, and the future continues to look bright. The US Gulf Coast plastics production continues to expand. Over the next two years, five more expansions are coming online and that could generate more than 25,000 annual carloads for UP.

We continue to be well-positioned to win by investing in our modernised and highly efficient Houston Englewood yard and adding capacity as needed throughout our Gulf Coast region to provide a safe, reliable service product to our Petrochem customers. Beyond petrochemicals, we are focused on outperforming the market by locating rock, forest products and metals customers on our railroad.

Since 2021, we have worked with industrial customers on over 100 track construction projects with production capacity greater than 85,000 annual carloads. These projects will generate long-term car load growth. For example, we have seen our steel volumes grow nearly 15% since 2021, and that is a direct result of locating new mills on Union Pacific.

We have a proven track record of working with customers to build sites, and we are ready to win.

Another industrial US commodity expanding to supply the global market is soda ash. We are seeing exciting developments in that market, similar to plastics. The largest natural deposit of soda ash is in Green River, Wyoming, and it is served by Union Pacific Railroad. Using natural soda ash has enabled US producers to lower their cost with new technology and have a much smaller carbon footprint than synthetic production, which is energy-intensive.

As global demand for soda ash continues growing, it puts US producers in a great position to supply the demand. Soda ash producers in Green River have announced 6.6 million tonnes of expansion that are slated to come online over the next five years. That is over 60,000 carloads per year.

The key to winning is having an efficient export product to get all this additional tonnage to the global market. For us, that means working closely with customers to improve both loading and export capabilities, investing in sidings that enable longer trains and reduce bottlenecks. Our efficient soda export product is already delivering results. By running longer trains, we are handling record tonnage with the fewest trains in our history.

In industrial, this is how we win, by working collaboratively with our customers, imagining what is possible and developing winning products and solutions.

Kari Kirchhoefer: We are committed to providing premium customers with fast, reliable service to key markets and investing in infrastructure that benefits both international and domestic markets, taking trucks off the road. Our Inland Empire Intermodal Terminal (IEIT) has been a tremendous success since we launched it as a pop-up ramp in June of 2021. We

have done multiple expansions since then, including the most recent one in April that doubled the facility's capacity to 140,000 lifts.

We plan to continue expanding this ramp as the market is still untapped, with 85-90% moving over the road. We also introduced a new market out of Inland Empire, offering three-day service between Southern California and the heart of Chicago, competing directly with truck.

Technology has been a key enabler for growth across our intermodal network. In 2021, we rolled out Precision Gating Technology, or PGT, that allows truck drivers to bypass the check-in kiosks when entering our intermodal terminals. We are nearing completion of PGT installations at our high-volume terminals, which we call Fast Gate. It is used in tandem with another new technology called UPGo, our mobile app device designed to expedite the intermodal terminal experience. In addition, we have now taken visibility to the street with GPS-equipped containers. This offers customers real-time visibility, event-based alerts and much more.

In Phoenix, we opened a brand-new pop-up intermodal terminal this year, competing with truck freight moving between the Southern California ports and Phoenix. Our initial focus is on imports and exports, converting short-haul truck to rail.

Closer to Omaha, I am excited to announce we are developing a new and larger Kansas City Intermodal Terminal that once completed, we will have 250,000 lifts to address this ever-growing market. Port Houston has seen explosive growth and Union Pacific is ideally situated to connect imports and exports from on-dock to door. We have launched our new on-dock service, providing a direct connection from container ships to rail, linking Port Houston to 11 major US markets.

With nearshoring on the rise, Union Pacific's Falcon and Eagle premium services offers the fastest service from border to border, to every major market in the US and Canada, bypassing the congested border crossings with a seven-day-a-week market delivery. We are just scratching the surface with our new product and expect significant growth as nearshoring expands.

And finally, linking Mexico's auto industry with the US and Canada, Union Pacific's automotive network is number one in the transportation of finished vehicles and automotive parts. We offer extensive coverage, cross-border efficiency and a commitment to safety, security and sustainability. Union Pacific's premium business team is dedicated to delivering reliable, innovative solutions that will enable market growth now and well into the future.

Kenny Rocker: The team is energised and so am I. We have a passion for growth. We are delivering innovative product offerings, creating new services for our customers, extending our reach to serve new markets, and leveraging technology to make it easier to do business with us. The table is set to meet the needs of our customers.

Kenny Rocker: All right, good morning. So, before we start, I have got to clear up some things, this whole thing about me on a train, drinking tea and stuff on the air conditioner. So, yes, normally I like to go on offence when Jim comes after me, but I got to tell you, I had a lot of fun in that steam engine. There were a few people with me. I took a few videos, I took several pictures, I was in there for about 15 minutes and yes, I was hot. So I went to the train to have some good conversations. So I do resemble that Jim, but I am telling you, I am going to come after you if I can, next time.

So again, my name is Kenny Rocker. I am the Executive Vice President of Marketing and Sales. I grew up in the company in the late 1990s. By the mid-2000s, as we were going through the pricing renaissance, I really learned the importance of maximising price and the impact that it has on margins. Ten years later, after a few more increased responsibilities, I got an opportunity to lead a large team and really got to understand the importance of culture and setting high expectations and being very responsive to our customers.

2018, 2019, I got promoted into this role. It was around this time that I also met Jim and got to understand the importance of a lower cost structure and what productivity meant, which really puts us to today and putting it all together with safety, service and operational excellence for growth.

And I will tell you, on a personal level, I have a passion for growth. Our commercial team has a passion for growth. And as a company, you do not want to get on the wrong side if we are trying to grow.

Driving Revenue Growth – Rethinking What's Possible

So I want to talk to you about how we plan on growing today. And I want to keep this simple. There is three ways you can grow your revenue.

The first is business development. And you can do that a few ways. And I will talk to you about the few ways we are going to do that. The other part of it is product development. And I look at product development hand-in-hand to business development because you get to product development by listening to your customers. And the other piece, and the last piece that I talked a little bit earlier about is maximising price.

And as I mentioned, we have always been very price disciplined. Meaning, you know, the last to lower, the first to increase here. Recently, we have just taken a lot more risks as Eric and the team have really given us a good value product to put in front of our customers. And I know Jennifer also has a slide she will be sharing on price a little bit later.

Empowering the Commercial Team

Unleashing what is possible through our hustle

So let us jump into things. First of all, it starts with culture to me.

What kind of culture do you have, you know, selling the product out there and delivering to customers what you sold to them. And so from a culture perspective, we look at it, and we say we want to be very nimble, and we want to be very responsive. As you can imagine, if you have got a whole bunch of hunters on your team, the last thing they want to do is go to some committee meeting or a second committee meeting, or have to go talk to ten people about a deal.

So delayering, cutting out the layers has made us very responsive. That is the way we win with our customers because we can respond first with products and solutions.

The second part of that is also making sure that we touch more customers in the supply chain. Let me just simplify that. We do not just call on the folks that pay the freight or the large shippers. We get into the weeds, and we go to the plants of the receivers, we talk to the receivers, we are there looking at both sides of the supply chain. So we are talking to more customers now than any other time in our career.

Rahul talked about it a little bit earlier. We are leveraging technology. Let me just tell you what that means on a real pragmatic level as a commercial leader. Our commercial sales teams do not want to do a lot of administrative things. They do not want to worry about managing through contracts. And you would not want them to, either. We want them doing less administrative things and learning more about the markets. Technology has allowed us to do that.

We can respond very quickly, same day, real-time, through a phone or through an iPad on a rate. We can get a contract out much quicker. We can see real-time where the cars are as we are working with our customers to really talk through the service product.

The other part of it is our commercial incentive plan. And that is just compensation. I am motivated by compensation. I do not deny that. I want to get paid, and our commercial team leaders want to too. And we want them to. We want them to obliterate the goal. And part of that comp plan, just in case somebody is concerned, and I am also saying this for Jim and Jennifer while they are here, is a price component to it. So it is not just the volume growth, it is also maximising the price to achieve that comp plan.

So again, that comp plan helps us go on offence, build up campaigns to learn more about the business. However, culturally, I want you to know that we are fired up and very responsive and very hard charging here.

Adding Business to UP

Attracting customers to rail-served facilities

The other part of business development, and you saw a little bit of it with Chick-fil-A and McKinley and being here at Prime Pointe, is literally just landing customers onto our network.

How do you get customers onto the network? And you can see over the last couple years, over 180 different construction or expansion. How do we do that quickly? Someone asked me over dinner to quantify. Well, you got it now. You can see the $700 million that is there, that is added in terms of revenue.

We are proactively going out there, working with customers. And let me talk about that a little bit because we talked about Prime Pointe. There are three different ways we approach the landing with customers.

One is a deep understanding of what our customers are trying to do. So there is not a day that goes by, our team has a saying, where are your major hubs? Where are your major distribution centres? Where do you see a gap? We want to fill it in. The second thing we do is, as you would expect, we talk to a lot of the large commercial developers.

So we talk to CBRE to say, we have got a facility in Phoenix, we have got a facility in Kansas City, we have got two facilities in Utah. Because a lot of times the way everything goes down, the customer will go to one of these commercial developers. It will come to us as Project Jennifer. We will never know who it is. It will be anonymous. However, if we are proactive in our engagement strategy there, we are able to make sure that Union Pacific is front and centre.

And then the last piece is the Chamber of Commerce, the economic development centres. We are also engaging them. We have got a great relationship with the city of Houston, with the city of Dallas, with the city of LA, with the city of Phoenix and so forth and so on.

These are very attractive pieces of business for us. Higher ROI, great margin for us. And we are very ferocious about attacking that part of our business. You can see the pipeline that we have there. It is a very robust pipeline, and I am excited about it, I am proud of it, and bullish about the future based on that pipeline.

Delivering What Customers Need

New products and innovation

The other part of it is product development.

So we are listening to our customers. If we have got a deep understanding of the markets, then we can put products up against them. And products can be broad. And so I just want to talk about them in a very pragmatic way in how we look at the products.

Eric talked about it, and kudos to the Operating folks about some of the products that they have set up in a very short time. Minneapolis, Southern California, Inland Empire and I will talk about that a little bit later. Phoenix is one. However, also what discreetly was talked about when Kari was on the video, are other products. We have had 11 different new services coming out of the Port of Houston.

We have added on nine different new services on our intermodal network outside of the Port of Houston. On the carload side, and Jackie and Jason will be up here a little bit later. We purchased transloads. In our Phoenix site, since we purchased that facility, we have had 40 new customers that are at that Phoenix site that were not there. Since we purchased the West Colton site, it has doubled in terms of the volume. So we feel very good about going to our customers and providing optionality for them.

On that customer experience side, I heard a question about visibility and what it gets you. What I like about visibility is it takes away any data wars – customer has their data, and they want to tell you where the car is. We have got our data. GPS is undisputed and very clear, and we have been sharing that. The other part of that value on the GPS side is that for those containers, the containers, that 80% Rahul mentioned that has GPS, the productivity is better, the dwell is less. That makes sense.

Same thing on RailPulse. I heard a question about it. We get to find out, where are those cars? When are they unloaded? And let us get them back to us. Rahul talked about the 6 million API hits. Well, guess what, 3 million of those API hits are from customers. We have got 65 different unique products out there. We have got close to 300 customers that are on APIs. And humbly, we lead the league on the API creation.

So adding all that value to make it sticky and also go on offence.

Key Growth Markets

So how? A lot of folks are, well, how are you going to grow? How are you going to win? Which of the markets? We have got a whole bunch of markets that we could lay out how we are going to grow and where they are going to win. However, for the sake of time, I am going to walk you through four of them.

One is just over the road, and you can see the data. That is the largest long-term pie that is out there, with the annual truckloads. Second is Mexico. And you can see the investments that are going on there in Mexico, and some of that has already been iron in the ground, and

we are talking to those customers. However, tremendous opportunity for us coming out of Mexico. The Petrochem markets, and I will talk a little bit about it a little bit later. And then finally, the renewable fuels and grain and grain products, and I will get into the weeds on that.

Grain & Grain Products Opportunities

UP's network supports the growing agricultural landscape

First, let us just go into grain and grain products and let us just talk about a few things. Now, I am going to say 30% three times. It is not a verbal typo, I am not mumbling or something, but I am going to say it 30 times because there is three different unique parts of this.

Back when Jason did the Investor Day a few years ago, we gave a number for where we thought renewable fuels would go. Since that time, that amount has jumped up by 30%. The announced expansions, the announced production has jumped up 30%.

During that same time, we have grown over 30% as a company with that product. And then the last 30% is that over the next ten years it has being forecasted that it will grow by 30%. To have this many, 18-plus facilities on our line or coming on our line announced is just a tremendous feat, and it gives us physical capacity to ship that product.

Here is where I think this product is really underappreciated. Now, Jason and I went to Europe over the spring to talk to traders about the soybean mill. So when you create the oils that go into these renewable fuels, it creates a by-product. You all probably know it. If I am bringing it up and boring you, just do not go to sleep while I am here. Go to sleep a little bit later.

However, it gives you a by-product. And that by-product, the way you should think about the by-product, is anywhere from three and a half to four more rail cars. So you make one carload of oil, you get the soybean mill. It is got to go somewhere. That is why we were in Europe because it is got to go somewhere. It is got to be exported because it is not enough US consumption. We do not talk about that enough.

The other thing we do not talk about enough is pitching and catching. Now, I am more of a football fan, but I will use a baseball analogy. And the pitching and catching means those oils, we move it to the processors, they process it, and in some cases, we get to move that finished product, the fuels, into an end market. So we may send the oils into Nevada or somewhere like that, and then we will capture those fuels going into the West Coast, in the California.

Switching gears on the grain, a lot of folks tend to think about grain as a mature market. We do not do that at all. We do not think of it as mature at all. And you can see, based on the data we have down there, that we are growing it out. We are building it out not just in the States, but also in places like Mexico. So I am foreshadowing some things.

20 plus facilities. I think we called out Dalhart, Texas, but it is really all over our network that we are growing, and we see that growth that is coming online.

Petrochemical Market Wins

Unmatched Gulf Coast franchise

The petrochemical markets, and you can see the stats. We have had some really solid growth, Jackie, over the last five years that we lay up there. And humbly speaking, we are the market leader when it comes to the Petrochem market.

Petrochem is not just plastics. There is just a lot of other feedstocks that go into it that we move. It is caustic, it is VCM. Those are all things that we move on our network. And Eric and the team have just done a great job of making sure that we are investing to be able to support that product.

We have got the fastest, most reliable service product to the East over our competitors. We use that when we are talking to our customers. Because we have storage in transit, sitting at work more than twice, closer to two and a half than two. We got two up there. We talk to our customers about that, and they like that optionality. For us, remember, it is two moves. You move from the plant and the sit, waits there. That is value proposition for us, and then we move it out. Customers appreciate that. That is a competitive advantage for us. Again, a lot more investing that will take place. And we have got more expansions coming on. Five more expansions over the next couple years. Again, a good margin product that we like.

Mexico Advantage

Mexico, here is where I think I want to make sure we are not being underappreciated on Mexico. Yes, I have got to hit it hard. We have got the shortest route. We have got the fastest service. We are shorter by 300 miles. In the video, you heard Kari. We got it daily. We move out of Mexico daily. You can catch a ride with us daily. That is a big difference than everybody else.

However, here is where we are underappreciated in Mexico. We can go throughout the US. We can go to the West Coast. We have got an EV OEM. We are moving parts going to the West Coast. That is optionality that we have. We talked about the grain network. Those six gateways give us optionality, and we build upon that.

Truck Conversion Opportunities

Winning and poised for growth

Truck conversions and over the road conversions is something that we talked about. And again, if you can look over the last few years, you can see what we have done. And it is like you hear people say, follow the money. You can see where some of the money has been and some of the investment, and it has allowed us to win new business.

The Swift business that we won, the Schneider business, we won. And what makes me so mad about winning Swift and Schneider is that the market has been so crappy, you cannot even tell it was a great win. However, that is going to change.

The market will come back. It is going to be two parts of that. One is going to be the volume, and the other part is that as the truck rates go up, that is also going to be more value that we will be able to provide the corporation from a price perspective once the truck markets go up.

Again, along the way, we have strategically filled in where we thought there were opportunities, where we thought that there were gaps. And we have done it in a very productive manner. And it has been great to see Eric and the team, and Jim and our management team be very deliberate in that. After it is all said and done, you know, call it around a million lifts, that is going to be there.

Win = Revenue Growth

Okay. So just to land the plane here, as a management team, as a leadership team, we are very cohesive, and we talk a lot about safety, service and operational excellence. And we also

talk about what is possible. We do not mash our hands, no mashing of teeth, wringing our hands. We go out there and put those products together.

The team has a hustle mentality, and we are very ferocious about business development. We will maximise price. And I am very bullish about where we are now. I am very bullish. So with that, I think I will turn it over to Beth Whited, who is our president. Beth?

Pursuit of Tomorrow, Today

Beth Whited

President, Union Pacific

Introduction

All right, good morning. I also am wearing a suit, no tie, scarf. I am serious. I am going to start off with some fun because I do not know who Kenny thinks he is, international man of mystery with this whole, I came up in the late 1990s. What does that even mean? Yes, he is just trying to fudge his age. I will not tell you what it is. I will be honest, though, and say I started at the Union Pacific in 1987.

So, yes, if you do the maths, that is 37 years. I have had the really great good fortune to have a fantastic career. Spent about 15 years in finance, about a dozen in marketing and sales. Have had strategy, HR, labour relations, customer service centre, you name it. I think they made me President because they could not figure out what to do. Like she is done everything else, maybe we will let her have a shot at that. However, anyway, it is my honour to be the President of Union Pacific, and it is wonderful to be here with all of you today.

One of the last jobs that I had, or part of my responsibilities was human resources and labour relations. I am guessing that some of you might have noticed that some of the other railroads have started to enter into labour agreements with their unions. We, like them, agree that our employees are our most important resource and that they deserve very competitive pay and benefits.

And as a matter of fact, we think our employees are among some of the highest compensated in the industry. However, we are so focused on our strategy of safety, service and operational efficiency, we think it behoves us to spend some time with our unions in this negotiating cycle, to talk about ways that we can work together as part of our agreements to improve availability and modernise work rules. So that as we emerge from this negotiating cycle, we are able to really ramp up our ability to provide that consistent and reliable service that our customers want and need from us.

So that is the focus that we have at UP. There is a lot of time left even before we serve notice, another six weeks or so. And so we will be engaging in that bargaining with our unions, as we have done over the past many years. So you may have more questions about that later, but I just wanted to address that.

Pursuing New Ways to Drive Long-Term Growth

So part of my job is strategic planning, and that is really what I am going to talk about now, what we do in strategic planning and corporate development to support the growth initiatives at Union Pacific. What you see here are kind the five areas where we play.

I am going to talk about the three on this slide, and then I am going to dive a little deeper into emerging growth markets and leveraging the real estate assets. However, first off, expanding our network through acquisitions and partnerships. We really want to look at opportunities out there to help us either close gaps in our service territory, reach new markets that way, find ways that we can improve our operational efficiency or reach and grow.

So that could be partnerships with transloads, it could be purchase of transload. You have seen us do some of that. It could be different kinds of collaborations with short lines and other rail providers. We have a number of things in the hopper that we are doing there, and we are excited about the opportunities.

You have heard a lot about culture today. I will talk to you about one thing that we are doing to really try to drive strategic understanding through the entire employee base.

We developed a training called "How We Win Together", and it really is explaining safety, service and operational excellence in an interactive manner all the way down to the very frontline person, working at Union Pacific. We have put, I think, nearly 25,000 of our employees through the training this year with overwhelmingly positive feedback because it is the first time in our history that we have ever said understanding the strategy and the "why" of the decisions that we make is so important that everybody needs to be a part of it. And we want them all in that conversation because we are relying on all of them to bring their opinions, their best ideas and thoughts to us. And if they do not understand what we are doing across the network, they will not be as good at it as we want them to be.

Because of its wild popularity and the results that we have seen from it, we are actually doing a 2.0 that will dive a little deeper in 2025, and it will be combined with our safety training as we roll out through the year. We are pretty excited about that.

And then delivering sustainable advantage versus trucks. We already have a sustainable advantage. You saw some of the things we are doing to become more sustainable. We believe that for some customers, that is a decision point, and we are going to sell it.

Carbon by Rail Unlocks Supply Chain Opportunities

Moving on to talking about emerging markets.

We work really closely with Kenny's team on this, but their job is in the here and now. Of course, they are always helping customers land new facilities and things like this. However, our team is trying to look out over the horizon and say what market are coming that could really represent potential for the rail industry.

And I have got two here that really talk a bit towards sustainability and net-zero aspirations for customers. So as people try to drive more of their greenhouse gas production emissions out of their environment, carbon by rail or the sequestration of carbon is emerging as an opportunity area. And for us, this green circle represents the core ethanol production.

They are a really big focus area for us because as you produce ethanol, every car load of ethanol produces about another car load of CO2. So that capture for those, and it is relatively easy for them to capture in their manufacturing process. Some of it is served by pipeline, a lot of it is not.

Pipeline approvals are difficult. So we are offering rail opportunities to those customers. And you can see, by the God's grace of the Union Pacific franchise in blue, those areas are prime sequestration points. And we are working closely with a site under development with a company called Frontier Carbon Solutions in Wyoming, where they are permitted, and we are actively sourcing with them and partnership customers to use this facility that we hope to see go under construction very soon.

New Growth on Horizon – Sustainable Aviation Fuel (SAF)

Another one, and this really builds on the biodiesel and bio and the renewable story you heard in the video from Jason as well as from Kenny, sustainable aviation fuel is really starting to emerge as a next country, if you will, in the bio renewable space.

Today, airlines are using less than 1% sustainable aviation fuel, but they have made commitments to be at about 10% by 2030 and up to 35 billion gallons by 2050. Again, there will be a huge opportunity for us to move that by biodiesel, I mean that biofuel for the aviation industry by rail. And we are working with both the producers as they either convert old facilities to be for sustainable aviation fuel, or they build new. And as well as the destination markets where the airlines want to use it. So it is an exciting opportunity for us.

Developing Land for Growth

Current projects have alignment with top metro areas

I will not spend a lot of time on this because Kenny did hit it a bit. In strategic planning, we take a slightly different take on the developing of land for growth, though, so I will spend just a second on it. We own roughly 1 million acres of land in the United States, the vast majority of majority of which, of course, is used for rail operations. However, there are, call it 10% or something like that of those acres that are available for us to do other things.

And the best thing that we can do with that land, if it is close or adjacent to our network, is to develop it so that we can land customers on it who will then ship by rail. And in the past, we were a little bit, I am going to use the word lazy, and we would say, we have this land, and it would be great if you wanted to build something on it. And what we have discovered through relationships with real estate developers, who we are now partnering with, is we have to be further along than that.

We have to know about how much power we can get there, we have to know more about the environmental impact, we have to know more about water resources, etc. And so we have identified a number of locations along our network, about 60, where we are actively saying, what can we do to develop this, like what we have done at Prime Pointe, and how can we accelerate that process? And we are pretty far along with about 11 of them. And I think we decided that we were kind of grandiose, and we called Omaha, the Omaha metro, as opposed to Los Angeles and Chicago, which certainly are not metros, right? However, anyway, we did that because it said council bluffs, and we were worried you would not know where that was. And then we made Omaha sound like it was super fancy and called it a metro area.

However, anyway, these are the locations where we are pretty advanced with our process, with those developers, and we are excited about the opportunity that that going to bring us in terms of growth. So all of those things that we are doing are trying to really leverage up all the things that you have heard from everybody else about improving the service, making ourselves

efficient, holding ourselves accountable for how we spend the money and being able to grow on top of that. With that, I think we are going to bring up a panel so that you all can ask questions.

Growth & Strategy Panel Discussion

Beth Whited

President, Union Pacific

Kenny Rocker

Executive Vice President, Marketing & Sales, Union Pacific

Jacqueline Bendon

Senior Vice President, Industrial, Union Pacific

Jason Hess

Senior Vice President, Bulk, Union Pacific

Kari Kirchhoefer

Senior Vice President, Premium, Union Pacific

Brad Stock: Okay. As folks get situated, like the last panel, I have got a question for each of the new, the new faces up here. And so that we can kind of get them in the conversation. I will also ask them to kind of introduce themselves before they answer my question. So we are going to start with Jackie.

So Jackie, your Industrial business team covers a wide range of products. And in the video you highlighted several areas that you could see significant growth over the next three years that included areas like rock, forest products and metals. Can you go into a little bit more in depth on some of these opportunities?

Jacqueline Bendon: Sure. So hi everybody, I am Jackie Bendon. I started in Union Pacific in our Corporate Audit department. And then after a couple years in finance, I wanted to go work with our customers. So I went to our subsidiary company, and then in 2009, came back to the railroad to work with our plastics customers.

And at that time, plastics was a very mature market. It was going to be, I thought, a boring job. We were talking about maybe importing plastics into this country. And of course fracking took off in the rest of this history, as you saw in the video. And so it is with that lens, I want my team to be really focused on knowing the markets, understanding where there is opportunity and growing revenue and carload for UP.

So on the video I talked about rock, metals, forest. So, a little bit about rock. Rock is a market that you cannot be complacent in. And that is what I love about it. It is project-based, projects start and they end. And we have to constantly be working with our customers to understand the projects that they are trying to supply rock to.

And I am really excited and pleased with the ability that our team has done to grow our rock franchise. We have the largest rock franchise in Texas. We moved last year, over 1,000 cartloads of rock a day for construction projects. It was a record year. We are not going to have a record year in rock this year because of the weather challenges, but the order books

are strong. So looking forward, I am really excited about the opportunities to move as much rock as possible.

Metals, metals what we are seeing in the metals market is a shift from the integrated steel producers to EAF. EAF is more regional. And what I love about that is it takes scrap inbound, and then we get to move the outbound bar and rod and coils. So it is a great use of our assets. So we want to locate those new mills that SDI, CMC, new car or is investing in on UP.

And then lastly, forest. So look, the forest housing market is not very strong right now, but fundamentally in this country, we need more housing. Housing market will eventually improve. And when you see the capacity that has been taken out this year, it has been in Canada, in the Southeast. So that puts our producers in a great spot to provide the fastest-growing markets in the US that we serve, California, Texas, Denver, Utah, that puts us in a great position. So when I look at my market, while it is a challenging economy right now, I think we are just poised for growth.

Brad Stock: Thanks, Jackie. So, Jason, you highlighted pretty heavily in the video, and Kenny talked about it with renewable and then the grain markets. Highlight some other areas within your team, within the Bulk team, that you are excited about.

Jason Hess: Yes. Thank you. I am Jason Hess. I started my career right out of college. Apparently, the cool thing to say is I grew up in the 1990s as well. So I have had various roles, leadership roles in all of our business teams, Industrial as well as Premium. I was the Vice President of our Customer Care and Support, Vice President of AG Products, Vice President of Premium, and now currently on my role.

Yes, renewable diesel is getting a ton of attention, and rightly so. As Kenny mentioned, 30% growth, and you have 30% growth coming in the future. The really cool thing about that, and I am really proud of our team, is this business did not just show up. You are kind of hearing about an emerging market. However, my team had to go out, spend a lot of time with customers, learn their business, understand what they needed, and help bring them to the railroad. And that was a great model. And I think that is why we have had some success. We are going to have success in the future.

Now, that same model we can take and use for other emerging markets or other businesses. One you do not hear as much about is diesel exhaust fluid. Diesel exhaust fluid is an additive that it goes into diesel engines that helps with emissions and global emission reduction. That is in a market prior to 2016, we did not handle a single carload of it. And in the last three years, we have seen about 60% growth in this market.

And going forward, when you look at it, there is about 60-80% more growth projected by 2030. So we can take that same model of making sure we are out in front of the customers, helping them locate facilities or blending facilities for the DEF that eventually ends up in truck stops that can blend into the trucks, but take that same model to make sure that customers are locating on Union Pacific.

In other areas, our strong service product and our efficient service product has allowed us to take business away from trucks.

A couple of areas we have done that. One is in fertiliser. Fertiliser, traditionally, there was some business that was fairly short hauls, fertiliser being produced, like in Kansas and

Oklahoma, and it needed to get to co-ops in Iowa and Nebraska. You would not even think that that would even be a rail opportunity, right? It could be trucked. It is way less than 500 miles. We have been able to work with those retail fertiliser folks, and we have got 20 new opportunities just here in the last couple years of actual locating and putting in rail facilities in some cases, or expanding or even rejuvenating old rail facilities to move fertiliser a fairly short haul. And that is because we are more efficient, and we can compete on some of those shorter hauls.

The last one I will bring up is we hear a lot about our import beer business, but we have a large domestic beer producer who has traditionally shipped all their outbound beer via truck. And some of that is because of regional focus. However, this particular shipper is seeing the value of rail, so being cost-effective, being efficient. They also see it as part of just their goals in terms of sustainability. And that particular large beer producer is now even going out and acquiring new rail cars and assets and working with their distributors to convert to rail. And a lot of that is the same thing, being more efficient, having a good service product, and showing the value for that customer so they can switch to rail.

So lots of great opportunities. I know we mentioned grain a little bit. Kenny did a great job of mentioning that. We do not want to think of grain as just a stagnant market that is not growing. There are shifts happening, and we are getting out in front of those, too. So just lots of great opportunities for us to grow in the bulk area.

Brad Stock: Awesome. Thanks. Kari, intermodal within your group gets a lot of attention. We do not want to forget about autos. So, can you remind investors about our strong autos franchise?

Kari Kirchhoefer: Sure. Good morning, everybody. I am Kari Kirchhoffer. Next month, I will have 32 years at Union Pacific. I have worked in all of our commercial areas, and I have had the opportunity to lead our Industrial team, our Customer Care and Support, our subsidiary loop. And now my most recent position is leading the Premium team.

Turning to the question, our automotive business represents 21% of the Premium team portfolio. We are the largest finished vehicle carrier west of the Mississippi. We own, we operate or access 40 vehicle distribution centres, and we serve six vehicle assembly plants. In addition to the movement of finished vehicles, we also provide the expedited handling of automotive parts to Mexico, the US and Canada.

As mentioned at some of our previous earnings calls, we have talked about some of our significant business development wins with General Motors and Volkswagen that will fuel growth for years to come. General Motors is also a great example of us taking advantage of nearshoring opportunities. In addition, Union Pacific is also the largest railroad moving electric vehicles in all of North America today, and we are ready for growth moving forward as that market continues to expand.

Let us talk a little bit more about some short-term opportunities. This year, we worked closely with our OEMs to develop land bridge opportunities. For those of you in the room, historically, this would be business that would land on the US East Coast port and then truck locally into their markets. And because of capacity issues on the vessels, they came to us and said, can you find us space on your West Coast ports, and could you move this business long-haul East

via rail? We have been very successful in doing that for them this year, and it is brought on nice incremental growth.

Overall, for us, it is all about a strong service product, which we have for both finished vehicles and parts. So we are poised and ready for growth, both now and well into the future.

Brad Stock: Awesome. Thanks, Kari. Okay, we will open it up to some questions. We are going to start with Brandon Oglenski, and then we will go to Brian Osenbeck and I will make a note on the next.

Brandon Oglenski (Barclays Capital): Good morning. Brandon Oglenski from Barclays.

Kenny, can you talk more about this delayering process and how that is helping unlock potential in your organisation in going to market with your customers? Because if we go back in prior UNP Investor Days, there has always been a pretty positive volume outlook. However, I think in hindsight, you know, we never really saw that achieved in the past. So what has changed now?

Kenny Rocker: Why don't I start and some you all jump in.

Jim has the vision of pushing the work down to the lower level, to the frontline users. That is not just on the Commercial team, that is across the company. How it works here on the Commercial team, look, if you are a Commercial leader, and you have got a deal that you want to work on, and you are trying to get approval for it, if you have less layers, that is less approvals. That is just one part of it.

The other part of it is just from a culture standpoint. One of the great things that I like about Jim being so involved in the Commercial team is that he knows the business and I can go to him and say, there is a need in Phoenix for Kari and I that we want to have a ramp there. That is just a discussion with Eric and I and a few other folks on the management team, and it happens. That is a cultural change, that is a responsiveness change. We talked about it from the time we made a decision to put Phoenix up to several weeks later. We stood up a ramp. That is a huge difference. And that is what we mean by how delayering has helped us.

Anybody?

Jason Hess: Maybe I would add to that. When we are building, I mentioned all these new facilities, and we are trying to get them on our railroad. You know, we have processes. Obviously, you want to make sure you locate them in the right spot. However, sometimes that process you drag on. The customer has to submit a 10% drawing. Then more time goes by, and you will do a 30% drawing, which eventually some of those, we have streamlined that. Fewer layers, fewer approvals, as Kenny mentioned.

However, now we go to the customer with fewer layers, fewer approval. I will call up my counterparts, John Turner in the North, if it is in the Northern region, get this going really quick. He understands, his team understands it, and we can get that approval much faster than we have in the past. And that is what customers need. They need to make decisions because they may be looking at different options.

Brian Ossenbeck (JP Morgan): All right, thanks. Brian Ossenbeck with JP Morgan.

Beth, a question for you on labour and why have we seen the other railroads go ahead early and individually with these negotiations? What is UNP looking to accomplish here? Work rest

rules have changed across the industry. You are working with something on the engineers right now, maybe. Is that fully implemented? And what are you looking to negotiate in this next round of bargaining? Thanks.

Beth Whited: I cannot really speak for why others decided to go early. Maybe they did not see as much opportunity in their labour agreements to modernise and find efficiencies and availability opportunities with their workforce. So I do not know why they chose that.

We look at it, when we step back, and we look at our agreements and some of the things that are pain points in terms of being able to use crews more fluidly in certain terminal operations, we think it has value, and we think it improves service, and we want to address it and talk about it at the same time as we are talking about the whole package.

I think you asked about the work rest rules. We are partially implemented with the BLET. I am sorry, off the top of my head, I cannot remember the number of locations, but we are partway through that process. We are still negotiating in some locations over different makeup of what the crew pools would look like.

We would hope to have that behind us and move forward with the rest of that implementation, and then we still have that work rest process to do with the SMART-TD conductors.

Jeff Kaufman (Vertical Research Partners): Thank you very much. Jeff Kaufman from Vertical Research Partners.

Kenny, I have a question for you. So over the course of the last decade, there is a lot of traffic that should be on rail that is not. And some of it used to go on rail, but service and consistency force people to make a different decision. You got every reason to believe it should be on rail. It is cheaper, it is more sustainable, etc., etc.

Outside of the growth objectives that you highlighted today, can you address how big this market could be, how much opportunity it theoretically could be, and what is required, in your opinion, to bring some of these customers that had to move away from rail, or would like to use rail but are hesitant to do so, what would it take to bring them over the transom?

Kenny Rocker: So let me start off with the last part of the question on what it requires, and that is part of our customer engagement strategy of just sitting down with the customers, spending time with them face to face, going over data that shows where our service product is. That is the first thing.

As we do that, as we are able to do that, we can also ask them some very important questions. How much is going via truck versus how much is going via rail? What customers do is if we are not as consistent and reliable, they will hedge truck versus rail, meaning they are going to have an insurance policy. If rail is at 60%, they will say, well, we are not sure we are going to have truck at a certain percentage as an insurance policy. As we are more consistent, we are able to ask for more business. We are able to build that confidence so that they can move more.

That is on the carload side, on the, I will call it bulk or unit train side, as we are able to have a more consistent, reliable network like we have today, you are going to naturally get a little bit more tonnage out. You are going to pull ahead more trains of soda ash, you are going to pull ahead more trains of rock. The rock network that Jackie talked about, it is a very truck-

competitive market. As we are able to pull more of that ahead, we are going to get more tonnage.

For Kari's product, the same thing. We have some customers that we, candidly, that maybe in the parcel place, we charge them for it. We are able to have a more reliable product. On the other hand, some of the customers that maybe are just using our baseline domestic product, as that service is reliable, yes, we are going to ask for more business.

When I look at that and how I size that, I look at that in terms of just outperforming the markets. You are not going to hear me say it is going to be X percent more, or 1% more or 10% more. I look at it as good growth and just trying to outperform the market.

Bascome Majors (Susquehanna): Yes, Bascome Majors, Susquehanna.

Kenny and maybe Beth, if I look at the second quarter, your business was just under a third of revenues from Bulk, just under a third from Premium and a bit over a third from Industrial. If we walk your views on the markets out three to five years, do you see that mix changing markedly? Where are the biggest opportunities and why in the midterm here?

Kenny Rocker: Yes, I will start off. Look, nobody is going to get me to go out and forecast this. That is a mix. That is a pretty dangerous thing to do.

What you will hear me say is you heard us size up the markets and how large they were and the opportunities in front of us, we would expect them to grow out. However, to get in the forecast in the mix, that is probably not something you will hear me do. However, you see the size of the market, you know where the service is today, and you see what we are trying to accomplish.

Jordan Alliger (Goldman Sachs): Yes. Hi, Jordan Alliger of Goldman. You talked about Mexico as being one of the growth areas, $140 billion of announced investments. Is a way to maybe translate how that could relate to the revenue opportunity, volume opportunity for UNP and others, you had mentioned $1.6 billion of revenue potentials out there. Is there a way to get a sense or size up that opportunity specifically? Thank you.

Kenny Rocker: Yes. You know, the way we look at the business, we put it into different categories, and it starts us off as a conceptual and then as we get into the negotiation phase, and we feel a little bit better about it, we have good visibility to it. Right now, all of that expansion that has been announced has not been put in the ground. And so as that gets put into the ground, we will feel a little bit better about having a size on those pieces of business.

I think the encouraging thing about the $140 billion is it is across the board, and it touches all of our commodities. It touches Jason's commodities, it touches Jackie's and for sure it touches a lot of Kari's products. So cannot size what that will show up like. We need to see a little bit more of those investments put into the ground, but our strong service product has us prepared.

Ken Hoexter (Bank of America Securities): So Ken Hoexter from BofA. Kenny, I think I might need to change the title into Kenny, multiple pages instead of one, two pages. However, that font size was small. Okay. And it was single space. I heard the margins were big.

So I guess bring near-term for a second, intermodal or Kari, I guess maybe, intermodal is really on fire kind of out of the West Coast now seeing these volumes. We heard early it was pre-shipping out of tariffs or what was going on in Canada or East Coast port strikes. Can you just

give us a minute, maybe a little more near-term in terms of what is going on? Is demand starting to rebuild? Is that ahead of the rate cut we saw? Is it inventories are going up? Can you provide some perspective? I know a little bit near term.

And then, Kenny, just because we have heard so much going on in Mexico with the grains, I do not know if so, Jason, you want to address that, just what is going on in terms of the grain crop just as we start this process, is that going to be an issue moving forward? Thanks.

Kenny Rocker: So first of all, and Kari will get into the details, remember, we came into the year with a contract loss on the international intermodal side. So we were really expecting not to have a great year on the international intermodal side. And this really talks to the agility and the cultural change that we talked about with Eric and the team, quickly jumping in and handling all of that business, having a buffer. And you can see where we are quarter-to-date, the double-digit growth. So that just shows how the network can flex to capture all of that tonnage.

Kari Kirchhoefer: Yes, I think that is a great question about international, and many of you in the room have been asked me that over the course of the last day. I will say this, the key to us keeping the growth that has shifted to the US West Coast is making sure that we have a strong service product. And I can tell you this, in the month of August, we moved a record amount of tonnage off the US West Coast.

We are going to beat that this month, thanks to our operating team and Jim and their focus on that, and working closely with the port of Long Beach and the Port of LA, has us set up to not expect a large transition to move back. So we are anticipating that the shift that has occurred from the East to the West, a large portion of that will stay. In the PNW, I think it is a little bit more up in the air. They have already, the Canadian labour negotiations are done, as you know. We have been notified by one customer that they are reopening the Vancouver port of call. However, the really good news is the customer customers have been so pleased with the UP service coming out of Tacoma that they are going to continue a port of call there as well.

So while I think a portion of that will shift back, we also expect to be able to keep a portion of that coming out of the PNW as well. So long term, for at least the next quarter, we are looking at strong volumes continuing to hit the West Coast.

Kenny Rocker: So Ken, you heard my answer in DC, so you do not need to hear it again. Jason, do you want to?

Jason Hess: Just to follow up the grain quickly. It has been a strong year on grain going to Mexico. Part of that is driven by crops, conditions, but a lot of it is also driven by being efficient, productive trains. We get to six different gateways to get into Mexico, not just one. So we are able to leverage those gateways to actually do more business and have more flexibility.

We have had a lot of business development efforts, too, to capture more of the Mexico business going forward. Those things are paying off, and if we keep offering a good product, we get the border fluid again. I still see Mexico as a great growth product for us going forward.

Brad Stock: Thank you. Good discussion. As we exit, our CFO Jennifer Hammond will take the stage.

Pursuit of Industry Leadership

Jennifer Hamann

Executive Vice President & Chief Financial Officer, Union Pacific

Introduction

All right. Well, good morning, everyone. I am Jennifer Hamann. I am the CFO of Union Pacific. I was going to say I grew up here, but that seems to be a common theme around folks. So maybe I just need to say I was a child prodigy maybe, I started when I was 12. No, like many others, I started at UP right out of college. I have been here almost 33 years. I have worked through a number of different roles, started on our corporate audit staff, worked a number of roles in finance. Where I know many of you from is my time in Investor Relations when I had Brad's job. I also spent a little bit of time in Marketing and Sales and Workforce Resources.

It is great to have you all here today, both in-person and those that are joining us online. And I know what you are all here for is to see what is new and hear what is new at Union Pacific. Now, many of the things that we have talked about today are familiar themes, but I do believe that the approach, the conviction and this pursuit of what is possible within our company is really quite different. The team has walked you through our strategy that we want to be the safest railroad, one that meets our customer commitments by delivering the service product that we sold them and doing so in a very operationally efficient manner.

Track Record of Strong Returns

Now, before I connect that strategic imperatives to our financial performance, let us first look back at what Union Pacific has been able to deliver to our shareholders over the last five years.

We have returned over $38 billion to our shareholders in the form of dividends and share repurchases. That equates to nearly 40% of our market capitalization returned to our owners, which is near industry-leading levels. And we did that during a period that featured a global pandemic, severe supply chain challenges, as well as a freight recession. So, a pretty challenging business environment.

Another measure of our long-term performance is return on invested capital, or ROIC. Last year we led the industry at 15.5%, and our expectation in 2024 and going forward is that we will continue to maintain that position of industry leadership through effective capital deployment.

Goal: Industry Leading Operating Ratio

Another area where we expect to be an industry leader is through our rail operating efficiency. And the best way to measure that and compare us against our peers is operating ratio.

If you look back on the line chart, in the second quarter of 2023, we reported a 61.9% operating ratio. That was basically middle of the pack, and we had unfortunately been trending the wrong direction. In the second quarter of this year, we reported a 60% operating ratio. It was our third sequential quarter of improvement and placed us now in the position of leadership in terms of both the first quarter, second quarter and year-to-date with our operating ratio.

Now, you are not hearing me stand here and declare victory over that number. We know, and you have heard from the teams today, there are additional opportunities for us to improve.

However, I very much believe that this early progress is proof statement that our strategy is the right one and that it is working.

And I also want to point out that we at Union Pacific do not do any, what I will call, fancy maths around our operating ratio. It is straight up, it does not include any real estate, and it does not have any other adjustments. I also want to make sure that everybody understands that operating ratio is an outcome. Having an industry-leading operations ratio is the outcome of our ability to successfully execute on our strategy.

Connecting the Strategy to Profit Drivers

So let us get into that. If you look at our industry, we essentially have three ways to drive profitability. It is productivity, its price and its volume. When you hear the team talk about industry-best safety, operational excellence, those are absolutely the right things for us to do as a company, for our employees, for our customers, for the communities that we operate in. It is also productivity.

Now, Eric and the team and Rahul gave you a number of different examples of how we are driving better productivity, which will ultimately lower our operating costs. I am going to give you one more example, and this one is with our Strategic Sourcing team. That team has worked cross-functionally and come up with a process that they are calling a "first call strategy".

So through a competitive bid process, they are identifying, across a number of different spend categories, vendors that can be the best performer at the best total cost of ownership. That vendor then earns what we call the first call distinction. We then give that information to our frontline managers, the people who are empowered to make the decision about who they engage with to do work for Union Pacific. It is a tool in their toolkit to help them be operationally excellent. And it is driving savings for us today to the tune of about $10 million annually.

Now, I share this story because I now have responsibility for the supply chain team. As Jim likes to tell me, I am no longer just the scorekeeper. I am also in charge of driving operational savings.

Now, you heard Eric, Kenny and Rahul all talk about the things that we are doing to make our service product better and to distinguish it from others. And that is critical to our ability to attract and win new business. It is also critical to our ability to support core price. And I am going to come back to price in a minute.

However, we deliver tremendous value to our customers. When you think about our labour efficiency, our fuel efficiency and our greenhouse gas efficiency, as well as the billions that we invest in our network annually to support that service product, but achieving long-term growth really is what I am going to call the holy grail for the rail industry. It is something that we have all been pursuing, but not consistently attaining.

Now, you could blame coal or other commodities, but at the end of it we have to have a different approach to pursuing long-term growth. And I believe what the team has articulated for you today is that different approach. And you have also heard one of the great proof statements today about why we believe that approach is winning. It is in that international intermodal space. That business volume that has come to us was unexpected. And not only have we handled it well, at the same time we have improved our operating performance. That is critical

to be able to flex like that with our customers and to give them the confidence that they can award more business to us, and we will successfully handle it for them.

Pricing Opportunities to Recapture Inflation

Now let us go back to price. So, as many of you know, I have been in the investor space a while and price has always been a hot topic. In fact, I have been around long enough to remember the conversations around legacy price. So it is in the spirit of legacy price that I want to talk to you about UP's repricing opportunities against the higher inflationary costs that we have seen.

So let us start with inflation. Inflation really started to move above historic levels in 2021, and then it really accelerated the last few years, primarily driven by a hot labour market. However, within the rail space in particular, we settled some expensive labour contracts, plus had the added cost of the work rest agreements and paid sick leave.

We are committed, though, to be able to offset inflation through our pricing activities. And even though that inflation picked up for us over the last few years, we were still able to yield price dollars that exceeded the inflation dollars these last several years. Unfortunately, just not quite to the level that it was actually accretive to our operating ratio. And when you look at 2025 and beyond, we do expect inflation will stay somewhat elevated, but probably a little bit lower in the 3.5% range.

So how do we attack that? Well, if you look at the pie charts, you see that annually we are able to reprice about 50% of our book of business. The other 50% is covered by long-term contracts. Between 2022 and 2024, we have repriced about 75% of that long-term book of business, which means we still have 25% that we have not yet priced yet. So there is upside there.

I would also say we have upside in a couple other areas. Kenny mentioned one already, and that is the domestic intermodal side. Since we instituted the dynamic contracts, we have not experienced pricing upside. As that market comes back, so will our price. And I think it is absolutely fair to say that for that part of our business that we repriced in 2022, and even in early 2023, there is still price upside there. Because at that time, we really did not fully appreciate the stickiness of the current inflationary environment.

Achieving Volume Growth

You heard Kenny and Beth both talk about our different approach to the growth. You heard the team talk about it. It was listed on the video. So there is a lot of activity, obviously, all coalescing around one theme. We do think that this strategy supports the growth story here at Union Pacific. And again, I think this gives you a bit of an early proof statement that we think it is working.

In the second quarter, against a 23% decline in our coal volumes, we actually improved and saw a slight growth in our volumes overall. Third quarter-to-date, our volumes are up about 5% against an 18% decline in coal. So again, an early proof statement. However, we are going to take that win.

Now as we look long term, or at least over the next three years, we think what we are doing to go after our customers' business through our investments, through our differentiated service product and business development efforts, that is going to enable us to grow volumes that

exceed the markets that we serve and that our revenue will exceed the volumes. And that is supported obviously by that differentiated service that we are going to price into the marketplace.

Now, with that long-term view about revenue exceeding volume, I do need to make one small caveat, and it is actually quite relevant to today's environment. Again, going back to international intermodal, which you have heard a lot talked about today, it is great business for us. It is a big driver of our third quarter volume growth. In fact, if you look at our international intermodal volumes, it is up over 30% here in the third quarter. That business comes with an average revenue per car that is 40% to 45% of our company average. So the related revenue that comes with that volume growth is maybe less than what you might otherwise think or expect it to be.

Efficient Capital Deployment Supporting Growth & Returns

Now, when I started out today, I talked to you about and gave you a proof statement about the success of our strategy when it comes to capital deployment. As we look out over the next three years, we intend to follow that same formula for success, but with a couple of important changes.

First of all, unchanged is the fact that we are going to continue to invest in our franchise. UP's best returning asset is the UP franchise. So we will continue to invest for growth and for productivity. Over the next three years, we expect that to total between $3.5-3.7 billion. That will be below our historic benchmark of roughly 15% of revenue.

So what has changed there? Well, you heard Eric and his team talk about the fact that they have created capacity through their efforts at operational excellence and they have capacity to grow across their critical assets. And in addition, as you all know, we have also continued to invest for growth post-pandemic, even though volumes in many cases have not got back to those pre-COVID levels.

Now, when you think about capital too, and you heard Beth mention this in her section, we are also looking at other areas where we can deploy capital. Not included in that $3.5-3.7 billion dollars range is if we see a discrete opportunity to invest in something that will drive productivity, a one-off acquisition, or anything that could support further car load growth to our network. You should know that we are going to make those investments, but only if they are going to drive shareholder value.

Another part of our capital allocation strategy that is unchanged is with our dividend. Union Pacific is very committed to its dividend. We have paid it for 125 consecutive years. We also are committed to the fact that we have a 45% dividend payout ratio. That is industry leading. You saw actually in the third quarter, though, that even though we are trending a little bit above that 45% dividend payout ratio, that we did in fact increase our dividend by 3%. That marks the 18th consecutive year of dividend increases. This also marks a slight change in our capital allocation strategy relative to dividends. We understand that shareholders value consistency.

So within that construct, as well as the fact that we want the 45% dividend payout ratio, we are committed to annual increases. Now, some years those annual increases may be more nominal, like in 2024, but in other years where we have greater earnings growth, we would expect to see greater growth in our dividend as well.

We also are remaining very committed to our share buyback programme. Since we instituted share repurchases as a company back in 2007, we have generated an internal rate of return of almost 15%, while at the same time avoiding $17 billion worth of dividends. In 2024, we expect to buy back about $1.5 billion worth of shares, and over the next three years we expect to buy back between $4-5 billion worth of our shares on an annual basis. We will fund much of that through the cash flows that we generate as a company. However, we will also use our balance sheet capacity.

Strong Balance Sheet & Capital Access

And let us talk about the balance sheet because our balance sheet is also a priority for Union Pacific.

You heard Jim mention both last night and this morning that it is the job of this management team to build on the legacy of those who came before us. One way we do that is through the management and optimization of our balance sheet. Union Pacific has a strong investment-grade credit rating. We have excellent access to the credit markets and good demand for our paper. We also have the best combination in the industry between our weighted average debt maturity at 20 years and the low cost of debt below 4%.

We also have been very prudent or pragmatic in how we have managed the annual debt towers. And in no year do we have more than $2 billion that comes due in any given year, which gives us great ability to pay that off with cash if we ever decide to do that. And we actually did do that here in 2024.

So when you think about our approach to the business as a management team, what you have heard us talk about today, maybe not using these exact words, but it has all been about controlling the controllables. Whether it is the management of our balance sheet or whether it is the execution of our strategy.

Economic Indicators – Growth Prospects Improving

The one thing we cannot control is the economy.

The economy is really, call that market for us. You have heard us reference market before, and that essentially sets the floor to which we then are tasked with outperforming that. So what I am showing you here is S&P Global's latest outlook of the economy over the next three years.

And it is showing growth over that period. Although I would call that growth somewhat muted and you know, somewhat back half loaded as well. Now the one thing that I think is important to note here is that when you think about that economic outlook, that with those muted prospects, it is also assuming that you have or excuse me, it is not assuming, but it is in the face of the fact that you have a truckload market that has just kind of bounced along the bottom for the last couple of years. And of course we all know the Fed after four years just made its first rate cut. So I do think there is the potential for upside here, but that is just something that we are going to have to watch.

Industry-Leading Financials – Driving Shareholder Returns

Now as I have walked you through this strategy, I have already laid out the majority of UP's targets over the next three years.

So let me just give you a pretty quick summarisation of where we are at. So we will start on the top-line. And again, that is rooted in market or S&P Global's outlook. However, within that, we expect our volumes to grow faster than the market and the revenues to grow faster than the volumes. When we make that statement, we are not including any impact up or down from fluctuating fuel prices or from what happens with coal demand. So we are setting that aside.

We are also committing to the fact that our pricing will become accretive starting in 2025. So pricing will begin to help our operating ratio. And over the three-year period, we will continue to maintain an industry-leading operating ratio. And the combination of revenue, accretive pricing and productivity will enable us to produce over the three-year period, an earnings CAGR that ranges from high-single-digit to low-double-digit. When you think about that range, at the low end of that range is the economy forecast that S&P Global has. At the high end of that range is more robust growth.

Again, over the three year-period, we will invest in our franchise for growth and productivity. We will maintain a strong investment-grade credit rating. We will deliver value to our shareholders through dividends and share repurchases, and we will maintain an industry-leading return on invested capital.

To say that our team is excited and motivated to deliver on this service performance, this financial performance over the next three years, I think is an understatement. We are very confident in our ability to execute on the fundamentals of railroading. We have the strategy that is going to set us up for success and the UP team is ready to deliver.

So with that, I am going to bring the panel on.

Executive Team Q&A

Scott Group (Wolfe Research): Thanks. It is Scott Group from Wolfe.

So I want to try and unpack some of the pieces here. You have talked about 3.5% cost inflation going forward. Is there any way to think about, maybe Jennifer or Eric, how much of that we can offset with productivity? And then on the pricing side, Jennifer, your comment about price becoming accretive to the OR. Is that simply a view of inflation slowing, osr do you actually see an opportunity for the price to improve given some of this legacy pricing contract opportunity, if that is the term you want to use?

Jennifer Hamann: Yes. So maybe hit the last part of your question first. Absolutely, we believe that we have further pricing upside from where we are at today. And that comes across a number of different things. It is a better service product. It is continuing to touch parts of our business that have not been touched. It is market recovery on the truckload side. And then it is just also getting back and retouching some of that business that we maybe while we priced and we got increasing price from it, it maybe was not quite the level that we needed relative to what is happened with inflation. So it is kind of D, all of the above, is really what it is there, Scott.

On the inflation side, we do see it coming down a little bit. Anyway, the inflation side, that really is something that we always task the team, is to offset some of that with productivity. So that is not a new thing. However, that is where we see the inflation coming in, is at around 3.5%.

Eric Gehringer: I think you covered exactly it with the closing comment. That is what you heard from the team today and me today. When you think about that portfolio of initiatives, especially that particular quad chart that talked about workforce productivity, locomotive productivity, that is at the forefront of those opportunities. And Scott, to your point, with volume growth as we plan, that is important for us to be able to capture even more productivity in all four of those fronts.

Jonathan Chappell (Evercore ISI): John Chappell, Evercore ISI. Jim, maybe Eric as well, there has been a lot of talk about labour. We have talked about you going on your own, and we have like, the work rest, and we have the paid sick leave, etc. However, in some side conversations, you have talked about other things that you are looking for in the negotiation. So there is so much focus on this. 3.5%. It may end up being a ceiling, it may end up being a floor, whatever the case may be. Can you just go into a little bit more detail on what you are looking for in these negotiations, the optionality you get, the flexibility you could potentially win despite the number, and what that means for you with capacity, with growth, and with margin?

Jim Vena: Okay, listen, it is pretty simple. It could be a 20-minute answer if you wanted to get into all the detail of what we are looking at, but if we want to frame it, is we congratulate the other railroads that have signed contracts and they feel comfortable with what they have, and they are going through the ratification process, and hopefully it all works out for them. For us at Union Pacific, we understand where the increase is going to be in wages. Some of that has already been agreed to by others. However, at the end of the day, we are very, very set that we need to improve our service product. And you only do that with some changes in the collective agreements with all of them, not just the locomotive engineers and conductors.

So the SMART-TD, the BLET, but the rest of them. And we think it is best for us to negotiate with the entire package to be able to sit down and do that. And we are very, very focused on how do we do that in a cost-effective manner moving ahead, so that the wage increases are reflective of what is happening to the inflation in the economy and how we move ahead?

And remember, we are not late in this game. As Beth explained, notice goes out for the start of the negotiations in weeks, so not in days. And the last increase that we just put in at 4.5% last July is in place until 30 June of next year. So that is the way we think about it. And always everything that we do, we look at how we make Union Pacific better. And better is better service that drives increase in business and capability to price better. And making sure that our employees, who are the highest paid employees in the industry, so they get more money already that are properly compensated. So we draw in the right people and we are able to recruit, which we have not had a problem with.

So that is the answer, John. Sorry for the long answer.

Jairam Nathan (Daiwa Capital Markets): Hi, Jairam, I am from Daiwa. So Jennifer, you talked about a 15% IRR on buybacks. At the same time, Kenny, it looks like the payback periods on the investments that you made to get new business is pretty good as well. So just trying to understand, and it looks also that there is a lot of opportunities in terms of soda ash. You talked about renewable diesel. So how do we kind of balance these two as far as capital allocation goes? Would you need more investments going forward, and especially given that you kind of kept the CAPEX pretty much flat?

Jennifer Hamann: Yes. I mean, within the growth prospects that we see in the long term, that was all included in that capital range that we gave you of the $3.5-3.7 billion. And the reason maybe that feels a little low for some people is that you are maybe not fully grasping the additional capacity that we have on the network that we have created today.

So, no, I mean, we have created capacity, and obviously $3.5 billion, call it 25-30% of that is growth capacity that we are going to be putting in. So I feel very comfortable with the combination of being able to support the growth projects with the capital allocation strategy that we laid out and the buybacks.

However, as I also said, if there is a discrete opportunity that we have to take that is going to drive more business to the bottom line, UP is our best-returning asset, and we will invest in it.

Fadi Chamoun (BMO Capital Markets): Okay, thank you. Fadi Chamoun from BMO.

A couple of quick ones. One, on the revenue guidance side, you laid out a lot of interesting and details about the self-help opportunities on the commercial side. However, then when we look at the revenue kind of growth of the overall guidance, if we are assuming inflation is 3.5%, so pricing at or above that, and with the economic data that you put out, that revenue growth could be in the mid-single-digit easily, just based on those two metrics with high-single-digit.

What I am trying to understand is really what is the self-help contribution in here? Where is the growth in volume that is above the market being assumed? Because it feels like guidance is really driven more by the economy. And maybe the other piece of it, what is the incremental margin contribution you are assuming? I think in the past you talked about something in the 65%. I am not sure if anything changes here as far as mix goes, or as far as kind of inflation goes, if that ratio still is the right assumption moving forward.

Jennifer Hamann: So a couple of things there. So on the incremental margins, we have not put an exact number on at this go round, but we do think have the ability to grow with very strong incrementals. That is, that is part of the whole strategy that the team has in terms of growing train length, reducing our train starts and just being overall more efficient with how we move the business.

In terms of maybe if you are feeling like there is a disconnect there, I think there is maybe a couple things to consider.

Our guidance about revenue greater than volumes, I set aside any impact from fuel, and I also set aside coal. So if you are then trying to get to a gross revenue number, you do need to take into account that coal is a declining business for us, and that is likely not going to change over the next three years.

The other thing is mix. Kenny declined to answer the mix question earlier, but I will. We do see some of our strongest growth opportunities in the intermodal side of the world. And I just gave you some very specific information relative to international intermodal and the average revenue per car difference it has with the company average. Domestic intermodal is better than that, but it is still towards the lower end of the range. So I would say those are maybe a couple things that we need to factor in.

Chris Wetherbee (Wells Fargo): Thanks. Chris Wetherbee from Wells Fargo.

I guess maybe coming back to the self-help question there for a second, so I guess when you think about the potential macro implications, if we end up seeing below the range, I know you talked about $100 million of productivity. I think that was on a slide earlier in the presentation. What are the other levers that maybe you can pull to sort of improve that or maybe add to that?

And I guess maybe a separate question would just be back on the pricing piece, I guess. If you think about the pricing opportunity ex-truck, can you give us a sense, outside of the intermodal business, sort of what the types of improvements you are getting now, and if you can potentially get that acceleration in price, even if the truck market does not recover, say, in 2025?

Kenny Rocker: Yes, I will take the price. You know, as it stands today, and I said this explicitly, we are taking more risks, and the team feels more than comfortable with the amount of price that we are able to capture today, especially with the service product that Eric and the team have put out in front of us, especially with the investments that we were making. And you have heard me say this before on the earnings calls. Our customers also, they are experiencing the same inflationary pressures that are there, too.

So there is nothing that, you know, concerns me about our ability, our fortitude to go out there, setting aside the domestic truck market, to go out there and get the price over the next few years.

Jennifer Hamann: So then going back to your self-help question, I think I should clarify that $100 million plus, that was on the slide was just around technology. So that does not encompass all the process things that we are doing or other things that we are working on to drive productivity. So I think there is a lot of self-help opportunities that we are looking to explore across the board. And Eric, I know you laid out several, but maybe you might want to highlight a couple more.

Eric Gehringer: Yes, let us build on a couple more of them. So when you start thinking about cost per car handled in our terminal, that is one of our greatest productivities that our teams look at locally. When you hear us talking about things like level loading or moving touches, that is where you start to able to eke out that cost out of the system.

When you also look at it, and I mentioned it today, but I have got to mention it again because it is so important. I am not satisfied at 15.5 hours on our locomotive dwell. There are still opportunities on that front. Yes, opportunities in some areas may be bigger than others. That is still an opportunity for us as we continue. And then we push our teams, whether it is in the mechanical team, the engineering team, we want them to continue to get more and more efficient in how they repair our infrastructure, our locomotives, our cars. That is going to continue to be an opportunity for us with or without technology.

Walter Spracklin (RBC Capital Markets): Yes, thanks very much. Good afternoon or good morning. It is Walter Spracklin, RBC Capital Markets. My question is on your labour force growth over the three year period that you have outlined, is with your productivity improvements that you are achieving, do you expect to get labour growth to come in below the volume growth that you are expecting? And perhaps give us some indication around that, that cadence of growth in your labour force over the next few years.

Jim Vena: Our position, Walter, is pretty straightforward and you have seen it with our results over the last year. I think we are doing a good job of right-sizing with where the business is, and we will continue to do that.

We do not see ourselves growing anywhere near the amount of business that comes on the railroad and have a one-for-one increase in the number of people that we need. In fact, we see a substantial decrease as we move ahead. And that is our focus.

And I think we have shown that we can deliver that already with us now being under 29,000 employees. We need the right number of employees to operate the railroad. This is not about chasing a number. This is about doing those thousand things that we look at. Can we use different processes in the management team? How do we look at billing? How do we look at customer contact? How do we look at real estate? How do we look at operating our trains every day, our yards every day? How do our locomotives turn? Can we do them faster and still get the same quality? Can we use other rail cars? I could keep on going here for 15 minutes. So we look at that every day to see how we can be more productive. And that is why I am very comfortable with what we have done, and we will continue to do that as we move ahead.

Thanks, Walter. I love that question. I was ready for it, Walter.

Ravi Shanker (Morgan Stanley): Thank you, Ravi Shanker, Morgan Stanley. Jennifer, if I may follow up on the pricing question.

You said that you have not, or customers have not given you enough pricing to offset the inflation you have seen so far, but is there a risk that as inflation starts to come down, you may get some pushback from customers saying, inflation is coming down, so why should we give you that pricing back?

And maybe, Jim, very quickly to you as well. If macro in the next three years is weaker than you think, how do you think about balancing your commitment to industry-leading OR versus growth? Thank you.

Kenny Rocker: Let me jump in on this price first. So, Ravi, we do not lead with cost when we are talking price with our customers. We have never done that. We will not do that in the future. Yes, we can talk about inflationary pressures, but we do not lead with that.

The fact that we have got a solid, consistent, reliable service product out there, the fact that we can point to them and show them the investments we are making and to be reinvestable, we have those conversations with our customers. So, no, I do not see as the inflationary pressures change or move a little bit, that is stopping us from going out there and achieving what we need to do to maximise price.

Jim Vena: The only thing I would add, Ravi, on price is, I think, the value we provide our customers in a lot of segments, when we look at how they are doing themselves in those segments, allows us to be very bullish that we can price because of the value of the product that we are moving and the service that we are providing. That is why if we are not providing the service, it makes it way harder for us to talk. So I am very comfortable with that.

And the question about the economy, it would be easy if you could set the world and say, the economy is going to grow at 2.9%, inflation is running at 2.01%, and the world is flat. Well,

we operate the railroad. It is not flat. We have some big grades. We need locomotives, and it is in the world, we do not know.

However, the way Jennifer laid it out was very important in that we want to structure the company financially, so we can go through the ups and downs. And our peaks, we want higher and our lows, we want not as low. And that is the way we look at it. And I think we have the company and the talent. The reason I did not spend 2 hours up here, which I could have, people have heard me go in the company and they go, you going to get off the stage? So this because I wanted you to meet the talent of the people that are supporting that work with me every day to do that.

And OR, yes, OR is important to us. Yes, we want to be the leaders, but it truly is a result of what you do. If you focus too much on driving to a specific number, like if you came out and said UP is going to be a 55 or a 56 OR, you can make bad decisions inside the company trying to drive towards that number instead of looking about what we are.

This is what we want to do. We want to deliver to our shareholders like we have in the last year. The last year, our shareholders have been able to get a return of 16% if they invested to us one year ago today. I just looked it up before I came up on stage. And that is what you want.

You want a good return for our shareholders. You want to be sustainable. You want to be able to pay that dividend, and you want people to say they can go up and down and deliver us a good value. And I am very comfortable with where we are.

Now let us not fool around on OR, Ravi. We are going to be the best. Like, I am not playing this game to sit in the dugout. I want to get up on the 9th inning, bases are loaded, we are down three, and I want to hit the home run. Other people want to do whatever. That is not my world. And this team is the same. Otherwise they would not be up here with me. Thanks for the question. I like that.

Thomas Wadewitz (UBS): Yes, great. Thanks. Tom Wadewitz from UBS. So you gave us the guidance, and what is the right underlying assumption we should have on volume? Is it like 1-2%? Or are you thinking a bit better than that?

And then I guess the second question, Jim, for you. You started off with talking about redefining possibilities, and you talked about Mount Everest. What is the Mount Everest for UNP? Is it we are going to just defy the industry's low-volume growth and grow volume better? What would you say is something that would be new possibilities that you try to achieve at UNP that is the Mount Everest? Thank you.

Jennifer Hamann: So on your volume question, Tom, I specifically did not give a number to that, just like we did not give a number coming into 2024 because our crystal ball is not quite that refined. Because I could have given you a number and I would have been dead wrong. I mean, the best example is international intermodal.

We thought our international intermodal volumes were going to be down maybe double-digit this year, and they are up double-digit. So we just have to be flexible and nimble to handle whatever comes our way. You see the base case assumptions, but, you know, put a point or so on top of that, whatever you want to do, but we are going to handle it, and we are going to turn it into profitable growth.

Jim Vena: You want me to answer that last piece? All right. Oh, yes, sorry. I love it. He does not want me to answer. I am going to the next question. This it is like a political forum, you can talk about something completely different.

Why did I have that slide up? Is, yes, I talked and I spent a little too much time in the very first opening. And I do, even though it went to zero, I want to try to get us on time. And we are stopping at 11.30. Because some of you have to go. So we are going to finish the questions, and I want to tie up for a couple of minutes.

What we look at when I put that up is what is possible. And if you think about the history, it is not Roger Bannister was up there when he ran the sub-four-minute mile. And humans, for the longest time, thought it was physically impossible to do things. So the win for me at Union Pacific is when I walk out the door and I came in with one box of things, I am going to maybe walk out with two boxes. I am not one of these guys that wants a bunch of trinkets on the walls. Okay, so I am going to walk out with my two boxes. And if we have a team that optimises what is given to the railroad, that is a win.

That is what we want. A team that can handle the adversity that happens in this business. Things happen like, who the heck thought we would have a hurricane hit us in July? It is a little early. So at the end of the day, the resiliency and how fast we recover and we can show our customers and the country that we are doing our part to grow and be part of the US economy. That is a win. And having the right-sized company with the right amount of people talented that we can win.

I am going to go on my sunset and I will drive around the UP mainline there when I am going to hike up in the park outside of Tucson, not that far from my house. And I will watch those trains. And do not worry about it. I will count the number of cars, I will count the locomotives, and I will time it to see how fast it is going, or I am going to the next Board meeting. That is a win for me, Tom. Okay. Thank you.

Ken Hoexter (Bank of America Securities): It is Ken Hoexter from BofA, again. Thanks for the presentation. And Kenny, I will take it. Thanks for the AC.

The greatest growth on your lower or average-yielding product, as you were highlighting international and modal, but yet you still see revenues outpacing volumes. So I guess we are talking about the legacy contracts catching up. You are talking about improving productivity, the best OR in the industry.

So maybe, I do not know, Jen, can you talk about thoughts on incremental margin targets? Is that something you are comfortable addressing here? And then near term, I just want to understand your messaging. Just given the international intermodal growth, is that bad for margins near term? Is that the signal you were trying to talk to?

Jennifer Hamann: For the international intermodal piece, it is a couple things. It is the revenue and it is the margins. And where I specifically made my comment was the fact that the view that we have that long term, we should be able to grow our revenues in excess of our volumes. When you have international intermodal up 30% in the quarter and being the main driver of your growth, it is hard to achieve that target. So that is where I made that comment and that is what I was getting at with that.

In terms of incrementals, we are not going to give you a specific number, but I think what you should be able to see us do is return to maybe more historical incrementals, maybe a little bit better than that, as we are driving growth efficiently across the network. That is the expectation that we have for ourselves.

Closing Remarks

Jim Vena

Chief Executive Officer, Union Pacific

Introduction

So, listen, I said I was going to get you all out on time, and we will do that 11.30.

First of all, thank you for coming. Second is there was a lot of people that put together, you think about getting that steam engine down in place. That crew worked until very late in the evening and after midnight to make sure that thing, that big steam engine looked positive. I cannot believe so many of you, when I went around last night, talked about what was the best part of the day, and you said, the steam engine. For me, if something is sitting, I do not love it. So the only time I like it is when it is moving. However, that is fine. And it was a lot of hard work, and you could see the quality of the team we have that put this event together.

I think the team did a great job of trying to show you who we are, because that is very important. And I am going to get some feedback, talking to some people that I know, and one is my wife, and she will give me feedback on whether we are doing the good job for investors, because that is the way she looks at it. She is looking purely at the result.

Key Investor Takeaways

If we look at what we did and what we laid out today, we laid out a very reasonable plan that we want to lead the industry in returns. We laid out some detail which we do not normally do on an annual basis. And we talked about the $4-5 billion in share buyback.

We talked about industry-leading OR. We talked about earnings per share, high-single digits, the low-double digits. I am very comfortable that we can spend right and make sure that on the cost side we will improve. And I am very comfortable with how the service levels are running and what is possible for this company. We can beat in the marketplace anybody else that is playing against us. That is the challenge.

However, do not kid yourself. I understand we have to look at the regulatory environment. We have to look at the governmental environment. We look at how we deal with communities that we operate through, and we handle those things on a daily basis because it is very important to do the right thing.

And we also understand that we are owned by shareholders, so I think we have covered every one of those. We have a company that is going to deliver good, strong value for our shareholders. We are going to be very prudent in how we do things as far as the length of trains and how we operate, so that we lessen the impact about what is happening in the communities.

And we have to manage what is happening and make sure that the goals are very similar. The FRA goal is very similar. We want to be the best. The STB goal, we want to provide service at

a reasonable price, and I think we do that. So if we do all that, success in the next three years. And I am looking forward to doing this again in another three or four years. I do not think we will do them every year. Maybe we will do it before the guidance comes up.

However, I really appreciate you all coming in here. Thanks for all the questions. The questions were great. Hopefully, you have met the team. This is quite the team. I am very proud to work with all of them.

Thank you very much. Have a good, safe trip home. Thank you.

[END OF TRANSCRIPT]

EXHIBIT 26

S&P Global
Market Intelligence

Union Pacific Corporation NYSE:UNP
FQ4 2024 Earnings Call Transcripts
Thursday, January 23, 2025 1:45 PM GMT
S&P Global Market Intelligence Estimates

	-FQ4 2024-			-FQ1 2025-	-FY 2024-			-FY 2025-
	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS
EPS Normalized	2.79	2.98	▲6.81	2.78	10.96	11.16	▲1.82	12.10
Revenue (mm)	6148.75	6121.00	▼(0.45 %)	6109.46	24284.46	24250.00	▼(0.14 %)	25162.71

Currency: USD
Consensus as of Jan-23-2025 1:40 PM GMT



	- EPS NORMALIZED -		
	CONSENSUS	ACTUAL	SURPRISE
FQ1 2024	2.52	2.69	▲1 6.75 %
FQ2 2024	2.71	2.74	▲2 1.11 %
FQ3 2024	2.78	2.75	▼3 (1.08 %)
FQ4 2024	2.79	2.98	▲4 6.81 %

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Call Participants

EXECUTIVES

Eric J. Gehringer
Executive Vice President of Operations

Jennifer L. Hamann
Executive VP & CFO

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

Vincenzo James Vena
CEO & Director

ANALYSTS

Ariel Luis Rosa
Citigroup Inc., Research Division

Bascome Majors
Susquehanna Financial Group, LLLP, Research Division

Brandon Robert Oglenski
Barclays Bank PLC, Research Division

Brian Patrick Ossenbeck
JPMorgan Chase & Co, Research Division

Christian F. Wetherbee
Wells Fargo Securities, LLC, Research Division

Christyne McGarvey
Morgan Stanley, Research Division

Daniel Robert Imbro
Stephens Inc., Research Division

David Scott Vernon
Sanford C. Bernstein & Co., LLC., Research Division

Jason H. Seidl
TD Cowen, Research Division

Jeffrey Asher Kauffman
Vertical Research Partners, LLC

Jonathan B. Chappell
Evercore ISI Institutional Equities, Research Division

Jordan Robert Alliger
Goldman Sachs Group, Inc., Research Division

Joseph Lawrence Hafling
Jefferies LLC, Research Division

Kenneth Scott Hoexter
BofA Securities, Research Division

Oliver Holmes
Redburn (Europe) Limited, Research Division

Scott H. Group
Wolfe Research, LLC

Thomas Richard Wadewitz
UBS Investment Bank, Research Division

Walter Noel Spracklin
RBC Capital Markets, Research Division

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Presentation

Operator

Greetings. Welcome to Union Pacific's Fourth Quarter 2024 Earnings Conference Call. [Operator Instructions] As a reminder, this conference is being recorded, and the slides for today's presentation are available on Union Pacific's website.

At this time, it's my pleasure to introduce your host, Mr. Jim Vena, Chief Executive Officer for Union Pacific. Thank you, Mr. Vena, you may now begin.

Vincenzo James Vena
CEO & Director

Thank you very much, Rob, and good morning, everyone. Pleased to have you with us this morning. A little bit of winter in some parts of our company, even lots of snow in the southeast part, but I love the way the operating team has worked through it, and we are in way better shape already. So great recovery by everybody, but lots of hard work by the men and women of Union Pacific. But why don't we get started?

So I'm joined here this morning in Omaha by Chief Financial Officer, Jennifer Hamann; our Executive Vice President of Marketing and Sales, Kenny Rocker; and our Executive Vice President of Operations, Eric Gehringer.

Let's dig into 2024. It was a very successful year for the Union Pacific team, and we really finished the year on a high note in the fourth quarter to put up an adjusted 58% operating ratio, removing the impact of a new regional brakeperson agreement is really excellent work. It shows that the team is executing our strategy to lead the industry in safety, service and operational excellence.

Now why don't we move over to discuss the fourth quarter results, starting on Slide 3. This morning, Union Pacific reported 2024 fourth quarter net income of $1.8 billion and earnings per share of $2.91, both 7% improvements. Fourth quarter revenue, excluding the impact of fuel surcharge, grew 4%. Our ability to generate strong volume growth and core pricing gains more than offset an unfavorable business mix. Reported expenses year-over-year improved 4%, while lower fuel prices led the way, the team demonstrated strong productivity, utilizing 3% fewer employees to move 5% more volume. This led to operating income growth of 5% and the operating ratio outcome that I mentioned earlier. This is the result of the team's commitment to build a safer, more durable and more efficient network. Just a fantastic way to end 2024.

Throughout the year, we built momentum behind our strategy, and you see that in the financial results we delivered. While internally, we've already turned the page to work on further improvements in 2025, we need to pause and celebrate the team's success in 2024. We set a goal to achieve industry-leading results. And when the dust settles, I'm confident that's where we'll be.

So with that, I'll let the team walk you through the quarter and the year in more detail and then come back for a wrap-up before we go to Q&A. We'll start with the fourth quarter and full year financials. Jennifer, it's all yours.

Jennifer L. Hamann
Executive VP & CFO

All right. Thank you, Jim, and good morning, everyone. Let's begin with our fourth quarter income statement on Slide 5.

Operating revenue of $6.1 billion decreased 1% versus 2023 against strong volume growth, while our fourth quarter freight revenue finished flat at $5.8 billion. Breaking down the drivers of freight revenue, increased volume in the quarter added 525 basis points. Fuel surcharge revenue of $588 million declined $207 million as lower year-over-year fuel prices reduced freight revenue 450 basis points. Similar to our

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third quarter results, strong core pricing gains were more than offset by business mix, reducing freight revenue 100 basis points with our 16% intermodal growth driving that mix dynamic. Of significance, our price dollars met the long-term commitment of exceeding inflation dollars while also being accretive to fourth quarter operating ratio.

Wrapping up the top line, other revenue decreased 7% as a result of lower accessorial revenue from the second quarter intermodal equipment sale and reduced revenue from the ongoing transfer of Metro operations. As a reminder, we see offsets against this revenue decline in operating expense.

Switching to expenses, our appendix slides provide more detail. But let me share some highlights of our strong cost control as total operating expense declined 4% to $3.6 billion against a 5% increase in quarterly volume. Looking closer at the expense line, compensation and benefits expense increased 8% compared to fourth quarter 2023, driven by the $40 million brakeperson buyout agreement, which Jim mentioned and wage inflation. This is the second brakeperson agreement that we have reached in the last couple of years both of which have enabled more efficient car handling.

Quarterly workforce levels decreased 3%. Our train service employee workforce was flat against the 5% volume growth as we effectively handle the additional volume. All other workforce areas decreased 4%. These efforts resulted in record workforce productivity, demonstrating our strategic focus on delivering operational excellence. For 2025, we expect our all-in cost per employee to be around 4% as we continue to find ways to be more productive with our workforce through process improvements, technology and investment.

Fuel expense decreased 23% on a 24% year-over-year falloff in fuel prices from $3.16 to $2.41 per gallon. Our fuel consumption rate improved 1% in the quarter as we more than offset the impact of moving a less fuel-efficient business mix. Equipment and other rents expense increased 8% due to inflation and volume-related growth in our intermodal business. Finally, other expense declined 22%.

As you'll recall, in the fourth quarter of 2023, we highlighted elevated casualty costs due to the catch-up of case backlogs. In the fourth quarter of 2024, we benefited from lower casualty expenses as well as a reduction in bad debt expense. Operating income improved 5% to $2.5 billion and was a fourth quarter record. Below the line, other income decreased $40 million on lower real estate gains, while interest expense declined 6% or $19 million as a result of lower average debt levels. Altogether, these results total a record fourth quarter net income of $1.8 billion and earnings per share of $2.91, both up 7% versus 2023.

Our fourth quarter operating ratio of 58.7% improved 220 basis points year-over-year. And as Jim noted, when you adjust for the brakeperson agreement, our quarterly OR came in at 58%, and a great outcome, reflecting very strong quarterly performance by the UP team as we work to safely and efficiently serve our customers.

Moving to Slide 6. Let me quickly recap full year 2024. Operating revenue of $24.3 billion grew 1% on a 3% volume increase, core pricing gains, partially offset by lower fuel surcharge revenue and business mix. Excluding fuel surcharge, our freight revenue grew 4% versus 2023. Operating income totaled $9.7 billion, a 7% increase and our full year operating ratio of 59.9%, improved 240 basis points, both great indicators of how good railroading produces solid operating leverage and cost control. Earnings per share of $11.09 increased 6% versus 2023, while our return on invested capital improved 30 basis points to 15.8%.

Let's turn then to shareholder returns on the balance sheet on Slide 7. Full year 2024 cash from operations totaled $9.3 billion, up almost $1 billion from 2023. Our cash flow conversion rate improved to 87% and free cash flow increased from $1.5 billion to $2.8 billion. These year-over-year improvements reflect the change in year-over-year labor agreement payments as well as the growth in our operating income.

We rewarded our shareholders, returning $4.7 billion in 2024 through dividends and share repurchases. Our adjusted debt-to-EBITDA ratio finished the year at 2.7x as we maintain a strong balance sheet and continue to be A rated by our three credit agencies. 2024 proves that our strategy of safety, service and operational excellence, leading to growth also generate strong cash returns for our shareholders.

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With that, let me turn it over to Kenny.

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

Thank you, Jennifer, and good morning. As Jennifer mentioned, we had a strong fourth quarter. Freight revenues totaled $5.8 billion for the quarter, which was up 4% excluding fuel surcharges due to increased volume. This also reflected strong core pricing gains as a result of our deliberate focus on maximizing price. Let's jump right in and talk about the key drivers for each of our business groups.

Starting with our bulk segment, revenue for the quarter was down 4% compared to last year, on a 4% decrease in volume, while average revenue per car remained flat even with decreased fuel surcharges. Coal continued to experience the same challenges seen throughout the year as demand remains soft due to high inventory levels and the competition from low natural gas prices. Grain volumes increased for the quarter as there was strength in export grain to Mexico, coupled with UP service during -- strong UP Service during the harvest. Lastly, grain products grew in the fourth quarter as our work to locate renewable diesel plants on our railroad, it's paying dividends in the form of increased demand for feedstocks, and we expect that growth to continue with the startup of two new facilities, one in Nebraska and one in Kansas that came online in the fourth quarter, bringing the current count of UP assessable plants to 15, with more expected this year.

Turning to industrial. Revenue was up 1% for the quarter as volume remained flat. Strong core pricing gains were mostly offset by lower fuel surcharges and a negative mix in volume. Business development in our petrochemical and petroleum commodity segments drove growth. Demand improved for plastics -- for our plastics business in both export and domestic markets. However, these gains were offset by softer demand for metals, sand and rock.

Premium revenue for the quarter was up 3% on a 13% increase in volume and a 9% decrease in average revenue per car, reflecting increased intermodal shipments and lower fuel surcharges. Intermodal volumes remained strong due to international West Coast import demand and positive domestic growth driven by business development efforts. International volumes were up 26% in the quarter, outpacing the growth rate of the West Coast imports by utilizing our buffer resources, which includes people, locomotives and railcars, our operating team efficiently move the traffic and maintain fluidity in the supply chain. Automotive volumes were flat due to unplanned downtime, partially offset by business development wins with Volkswagen and General Motors.

Now let's focus on 2025. Here are some of the key macroeconomic indicators that we're watching this year on Slide 10. These are S&P Global's forecast from their January report. And you'll notice that it shows a mixed picture for 2025, which is not materially different than what we shared back in September at our Investor Day in Dallas. The forecast for industrial production shows a slight increase, while GDP growth slows from 2024. Housing starts are expected to remain challenged, but with December sharp uptick, we are closely watching the situation.

Now turning to Slide 11. Here is Union Pacific's 2025 outlook as we see it today for the key markets we serve. Starting with bulk, we anticipate coal to continue to decline, though not to the levels we've seen in 2024. We expect coal demand will be met from existing high inventory levels. However, a new contract win with Lower Colorado River Authority, also known as LCRA, will help offset losses from 2025 co-retirements.

While it's premature to predict grain export demand, domestic grain demand is expected to remain steady through the first half of 2025, driven by strong grain yields from a good harvest in 2024 as well as our efforts to serve both new and expanding facilities. Lastly, we expect continued strength in grain products, driven by intense business development and the expanding markets for renewable fuels and the associated feedstocks. We will continue to monitor potential changes in renewable diesel incentives and tax credits.

Moving on to Industrial. While the forecast for industrial production in 2025 remains muted, our diverse business mix, strong service and robust franchise will help us grow in some markets. The metals market is expected to remain soft. However, our industrial chemicals and plastics markets will remain

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favorable based on plant expansions with multiple strategic customers and our strong focus on business development. This strong focus is all about unleashing what's possible by empowering the commercial team. They are leveraging our Gulf Coast franchise and strong service to win.

And wrapping up with premium on the intermodal side, we expect growth in domestic intermodal with over-the-road conversions. Strong international intermodal volume experienced in 2024 creates tough year-over-year comparison for us. And the mix issue continues as international volumes remain strong at the start of the year. Additionally, we are keeping a watchful eye on potential tariff changes that could further impact volumes.

Even though we are early in the year, we are seeing automotive OEM curtail production to better manage high inventory. However, consistent with S&P Global's outlook and our conversations with customers, we expect a positive trend with output increasing as the year progresses. Overall, we anticipate a soft economic environment and face difficult comps in 2025, but I'm excited about onboarding LCRA, the new coal customer mentioned earlier, and I'm encouraged by the incremental volume we will gain from new and expanding facilities across multiple business segments.

In fact, we currently have over 200 track construction projects in progress with a potential revenue of $1.5 billion, and our business development pipeline is just as strong as it was this time last year. We continue to invest in intermodal, which Eric will touch on. You heard me discuss new unit train facilities added to our network, and we are bullish on industrial development projects in the Gulf Coast, with a mix of large and small customers. I'm proud of the commercial team. They continue to hustle and we will maintain our strong pricing posture in 2025.

And with that, I'll turn it over to Eric to review our operational performance.

Eric J. Gehringer
Executive Vice President of Operations

Thank you, Kenny, and good morning.

Moving to Slide 13. Before diving into our results, I want to express my appreciation to the team for their hard work. Historically, vast surges in volumes, such as those we witnessed in 2024, significantly disrupt rail operations. However, the team bucked that trend and was able to improve our service product, while also driving growth and network efficiency. It's proof our relentless focus on operational excellence is working, and I'm excited we are carrying that momentum into 2025.

Safety also improved in 2024 and continues to be at the forefront of everything we do. For the year, both our derailment and personal injury rates improved significantly, a strong step towards becoming the safest railroad. We remain committed as well to enhancing safety as we strive to send every employee home safe each day.

Moving to our results this quarter. Freight car velocity improved 1% versus last year, a favorable business mix, coupled with continued improvements in terminal dwell drove the performance. Notably, 2024 marked an all-time record for terminal dwell, a meaningful improvement in our service, which reduces customers' fleet costs through improved cycle types. Exceptional work by the team is they continue our focus on the fundamentals to drive terminal fluidity and capacity for future growth.

On the service front. Our intermodal service performance index declined 7 points year-over-year, while manifest improved 5 points. Intermodal SPI specifically improved month-by-month through the quarter as December ended with our second highest level of the year at 97%. The team continued to deploy buffer resources and adjust trip plans to minimize the impact of the quarter's 26% surge in international intermodal shipments.

Now let's review our key efficiency metrics on Slide 14. Our full year locomotive productivity metric improved 5% versus 2023, while the deployment of buffer resources to handle higher volume levels drove a 3% decline in our fourth quarter results. Workforce productivity, which includes all employees, improved 6% in both the fourth quarter and full year versus 2023. Further, 2024 marked a fourth quarter and full

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year record for workforce productivity. We continue to remove unneeded work and automate operations while improving the safety of how we work.

Train length improved 1% versus 2023, marking our sixth consecutive quarter year-over-year improvement. All in, 2024 set an all-time record for train length. We have made great strides in this area. However, there are still opportunities to adjust the transportation plan and leverage targeted investments as we push to generate mainline capacity in the pursuit of growth.

To wrap up, let's review our capital outlook for 2025 on Slide 15. In 2024, we invested approximately $3.4 billion across the railroad as we continue to reduce capital intensity while still delivering value to our shareholders. In 2025, we are targeting capital spending of roughly $3.4 billion, flat versus last year. As always, our first capital dollars will support safe and productive operations as we invest in our infrastructure, and renew older assets. This includes modernizing our locomotive fleet and acquiring freight cars to support replacement and growth opportunities.

Also, we will continue to invest in capacity projects that support our growth initiatives while enhancing productivity. This includes siding construction and extension projects such as those in the Pacific Northwest and the Southwest along our Sunset Route. Furthermore, terminal investments supporting our manifest network, such as those in and around our Houston Gulf Coast region, aimed to improve fluidity and increase capacity. On the intermodal side, we will continue to invest for growth in areas like Kansas City, Inland Empire and Lathrop to name a few. At the end of the day, it's about ensuring we have the right resources in the right place to support growth and drive efficiencies.

Wrapping up. I'm encouraged by the progress we made in 2024, but our work is not yet done. Continuing to focus on the fundamentals of railroading and leveraging new innovative technologies, we will further improve our service product and build a more resilient, efficient network in 2025 and beyond.

So with that, I'll turn it back over to Jennifer to lay out our initial financial thoughts for 2025.

Jennifer L. Hamann
Executive VP & CFO

Thanks, Eric. If you turn to Slide 17, I do want to start by pointing out that in the appendix, we have a modeling slide that contains several 2025 assumptions that should be helpful in framing our current expectations. And as we talk about the year, all of our guidance is within the context of the 3-year targets we provided at our Investor Day in September. Our team understands those commitments, we are focused on achieving them and our 2025 performance is the first step.

As you heard from Kenny, economic indicators for this year are a bit muted and mixed, some growth, some contraction. Add to that outlook, questions around possible tariffs, interest rates, regulatory changes, et cetera, and our ability to forecast only gets more challenging. As we see the year ahead, there are positives on the volume front.

First, we're starting the year with a bang. Volume is growing and the network is running well. Mother Nature has certainly taken a couple of early shots and will likely fire a couple more, but our resiliency is strong as we focus on meeting our customer commitments. And you heard Kenny talk about how that service product has helped us secure new business for 2025, as well as the continuing pipeline of opportunities that span our entire portfolio.

We also acknowledge there are some tough spots namely from reduced coal demand and the year-over-year international intermodal comparison we'll face in the second half of 2025 as today's mix impact turns into a volume challenge. So while there are puts and takes on the volume side, we are confident that we will continue to drive operational and financial improvement in 2025. We will achieve that goal by continuing to control the controllables, by generating pricing dollars that are accretive to our operating ratio, gaining further technology, productivity through technology and by empowering every UP employee to drive asset efficiency. We expect the combination of our activities to drive volume, price and productivity will deliver earnings per share growth for the full year that is consistent with attaining our 3-year Investor Day CAGR of high single to low double-digit growth.

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Finally, with the capital allocation. As you heard from Eric, this year, we plan to invest $3.4 billion back into the railroad. We remain committed to our industry-leading dividend payout ratio of around 45% of earnings, and we plan to return excess cash to shareholders through share repurchases of $4 billion to $4.5 billion during the year. The team has done an excellent job to position ourselves for whatever environment we face this year. We are on target to achieve our long-term goals while maintaining our industry-leading position. We are excited for this new year, and we're ready to deliver.

With that, I'll turn it back to Jim.

Vincenzo James Vena
CEO & Director

Thanks, Jennifer. Before we get to your questions, and I'm looking forward to the questions, I'd like to summarize what you've heard.

First, you heard from Jennifer in the fourth quarter, we leveraged the network to handle volume growth and drive strong quarterly results. Similar to the third quarter, our business mix profile presented a margin headwind. So it was imperative that we generated strong productivity and pricing to offset that impact, and that's exactly what we did.

Kenny gave an overview of fourth quarter volumes and laid out initial thoughts for 2025. Look, there are a lot of unknowns, but in my 48 years of railroading, I've never entered a year without some economic question mark. It is what it is. As you heard from Kenny, our team will focus on outperforming our markets and generating strong pricing for the value we provide. Importantly, I believe our 2024 performance demonstrates that our strategy to operate with a buffer and connect more closely to our customers is paying dividends, both in terms of meeting our customer commitments, and as a direct result, winning new business.

Eric provided an update on our progress to improve safety, service and operational excellence. From a safety perspective, we made great strides, but we still have work to do. On the service front, we're showing our customers what's possible while at the same time, driving productivity. What's exciting for me is that I know we're not done. There are more opportunities ahead, and we have a clear line of sight of how we drive further improvements in 2025.

Lastly, you heard from Jennifer, our expectations for the upcoming year. Key for me is that we're on target to achieve the long-term guidance that we laid out at the Investor Day in September. We operate the largest, most complex rail network in North America and with it comes challenges and opportunities. The team understands our goal is to deliver what's possible from this franchise. We intend to do that as an industry leader that keeps raising the bar as we drive value for our shareholders.
Let me finish with one of my favorite quotes from a mentor, it's the fundamental stupid, do what you say and commit to it and deliver, and that's who we are at Union Pacific. And with that, I'll turn it over back to you, Rob, and let's start the questions.

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Question and Answer

Operator

[Operator Instructions] And our first question today is from Scott Group with Wolfe Research.

Scott H. Group
Wolfe Research, LLC

I just want to start on the guidance. The comment consistent with attaining the long-term CAGR. That seems carefully chosen language. Just so we're all on the same page, like does that just mean you expect to be in that high single-digit to low double-digit range on earnings this year? And then I just want to understand also, Jennifer, the pricing starting to become accretive to margin, is that -- does that start right away in Q1? I don't know if there's any sort of Q1 color you want to give us?

Vincenzo James Vena
CEO & Director

So let me start, Scott, with the question of where we are. We were clear that we had a 3-year -- and when we commit, just like I said, from my favorite quote from a mentor early, we committed. And you never know exactly what's going to happen this year. What are tariffs going to do? What are the regulatory changes that the administration is going to put in? But our goal is, just as we showed in 2024 with the 7% increase, that we think that, that's where we're going to be. We are going to be high single digit, low double digit. Now if there's things outside of our control, then we're going to have to work harder. But this is not a change from what we said before, and I would expect that every year we deliver high single digit to low double digits, that's the win for us. So that's what we committed to, and that's what we look forward to delivering.

Jennifer, on the accretive piece?

Jennifer L. Hamann
Executive VP & CFO

Yes, Scott. So just going back for a second. So fourth quarter, we were accretive. So we actually, I would say, outperformed ourselves a little bit there because we did not think we would achieve that here in 2024, but we did in the fourth quarter. And so I'm not going to parse out the quarters in 2025, but I don't see us taking a step back, and we're going to be accretive throughout 2025.

Operator

Our next question is from the line of Jon Chappell with Evercore ISI.

Jonathan B. Chappell
Evercore ISI Institutional Equities, Research Division

Eric, in Jennifer's comments at the start, she noted the record workforce productivity, also said all-in cost per employee of 4% in '25 as you continue to find ways to be more productive. You've done a lot of volume with a lot less resources. Is it still a labor productivity? Or what are some of the other initiatives you're looking at a '25 to kind of maintain or manage that cost inflation?

Eric J. Gehringer
Executive Vice President of Operations

Yes. Thank you for the question, Jon. Let me be clear, there is more opportunity, and we're working to capitalize on that. Let's go back to our Investor Day and kind of level set from that perspective. First thing I'd said at Investor Day was that we focus on productivity because it puts Kenny and the team in the best position to grow in the markets, and that's still and will always be true. The second thing that we focused on was our culture, our mindset here at Union Pacific, which is to be perpetually dissatisfied with ourselves when it comes to productivity, to keep pushing to find additional opportunities.

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So specifically to your question about what are those opportunities, it's going to be some of the same things you've heard in the past and a lot of new things that I'm excited about. The fundamentals, they always stay true. Those are the things in the past that we continue to focus on. The improvements we made in the fourth quarter regarding our re-crew rate. Even moving that just a single point has a significant productivity driver for us. The work that we did to reduce our people starts in our yards and locos, approximately 2% and 4%, respectively, in the fourth quarter. That's about the technology we're putting in the yards and being able to be even more productive with it.

On the technology front, the work that we do, and have continued to do, and will continue to do, on the automation of our terminals and pushing to reduce dwell. Then when you get outside of the terminals and the transportation side, you mentioned a couple of them, and the engineering team as they work to continue to automate inspections, maintenance tasks, distribution of materials. And then, of course, you have the whole bucket of purchased services, and I see great opportunities in that. And we capitalized on those in 2024, but there's more. When you start to think about the technology we have to automate some of our vans across the system and when you're using hundreds of thousands of van starts per year, a 10% improvement in that is really meaningful for us.

So here's the bottom line. There's more than 75 initiatives up against how we think about driving productivity across this company. And I really do mean across the company. It's not just operating. I'm very confident about our plan in '25, and I'm encouraged that we'll be telling you about those results as we go through '25.

Operator

Our next question is from the line of Stephanie Moore with Jefferies.

Joseph Lawrence Hafling
Jefferies LLC, Research Division

This is Joe Hafling on for Stephanie Moore. Congrats on the good results. I wanted to talk about, one of the things you've mentioned over the last couple of months has been maybe a reduction in regulatory burden. And maybe consistent with what you talked about on the second question here, what are some sort of specific areas maybe that you've seen additional red tape or what areas do you think you guys could particularly benefit if there's reduced regulatory burden on you guys in particular? I know you guys had mentioned a lot of things on the Investor Day, so any specific examples, that would be very helpful.

Vincenzo James Vena
CEO & Director

Well, I think the largest thing is that we've applied for a lot of waivers that would help with the technology that we've implemented to make the railroad more efficient, provide better service to our customers. Those are the things that are out there that we hope with the turning of the page and how regulations are being talked about at the federal level that we get those improvements will allow us to be able to provide better service and, of course, be more productive. So those are just to name a few. And there's a lot of waivers that we've applied for that are being outstanding for years now that we're looking forward to it.

So I could go on here for about 45 minutes on things, the regulation-wise, I think would help the industry make us safer provide better service and be more productive. But that's a good way to look at it is those waivers that we've applied for over the last number of years.

Operator

The next question is from the line of Brian Ossenbeck with JPMorgan.

Brian Patrick Ossenbeck
JPMorgan Chase & Co, Research Division

I wanted to come back to the -- I guess, there's a second brakeperson role. So I wanted to hear a little bit more about that because you mentioned there was one earlier. So thanks for pointing that out.

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And then also, Jennifer on the comp per employee for the full year, you're still rolling out -- last we heard, you're still rolling out some of the predictable work schedules for the engineers. As I understand that there's still some negotiation going on with the conductors for something similar. So maybe you can just give us a little context in terms of the other brakeperson agreement, how it's different to the first one? And then how do you see this other two factors or agreements, I guess, for the engineers and conductors rolling out for the rest of this year and what you expect in the numbers there?

Jennifer L. Hamann
Executive VP & CFO

I'll let Eric talk about the brakeperson agreement and what that really does. But just as a reminder, we did one in the second quarter of 2023 and now this one here in the fourth quarter, and we actually have one more region that we're working on there.

In terms of the rollout of work/rest, we continue to roll out on the engineer side, and we continue to work with our conductor SMART-TD in terms of coming to an agreement. And that's all really part of the mix as we think about the statement that I made about the all-in 4% comp per employee in 2025.

Eric J. Gehringer
Executive Vice President of Operations

Yes. And Brian, I'll just add to that. If you think about the -- on the engineer side, there's 28 hubs across Union Pacific and 20 of the 28 are already cut over. So we're nearly 75% cut over.

Now thinking about the brakeperson, the way to really think about it is you're kind of going to go back in time a little bit. So go back in the days when you had 5 people on every single train. And that's the context you got to think about this brakeperson deal. As the technology has improved over the last 40 years, including the technology that we're still implementing to this day, you just have less demand for some of those 5 people, and we've demonstrated that, right? Most the crew today has 3. That third person is the brakeperson, and we have that in some parts of our railroad.

In Jennifer's prepared comments, she referred to it as a regional brakeperson agreement, that's because not every single area of the Union Pacific has it. So this is very similar to the first agreement that we reached in almost every single regard. And the goal is still the exact same, right? It's to utilize who was in those brakeperson positions as conductors and our normal crew base to be able to provide the service that we sold to our customers.

Vincenzo James Vena
CEO & Director

The only thing I'd like to add is the whole discussion about where we are on implementing with SMART and with the BLET. And Eric just said that 20 out of the 28 hubs, we've implemented. What you always -- Brian, when you do those things is you make sure that you still end up with the same number of starts per week per employee, and that's really important. And I sat down very first few weeks I was here, came back to work, what, 16, 17 months ago. And with the union leaders, and they committed that it made sense that, that goal had to be there. And what we wanted to do was provide that time off and that scheduling, but they also understand because they want us to succeed also is that we have a workforce that works, what we expected them to work on a weekly basis.

And what we found results so far is we have to work hard to find ways to make sure that the schedules are set up, and we've had a little degradation, but nowhere near as much as some people write about. I'm always surprised when people write about those things without the detail. But at the end of the day, I'm very comfortable that we have figured out a way to move ahead and do this right so that we don't add incremental cost to the company when we provide and the unions have agreed that it is going to be cost neutral for us or start neutral, wages still went up 4.5%. So the wages are the wages that we've agreed to. But that's the way to look at it is that we're very comfortable.

And with SMART, we'll get to the right place that's good for our employees. We want our employees to have regular shifts. I'm one of the guys who is a CEO in this industry that's actually worked on the ground

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as a locomotive engineer and conductor, and to have schedules that help you plan your life so that you can balance the demands of working and also everything else, your family and everything else is really important to me. So we'll come to the right place, but we're also being smart about how we get to it. You can't have a deal that's all one-sided.

So I'm looking forward to working with SMART to finalize the deal. And working with the BLET to implement the last 8 terminals that we have. But I think it's a real positive for both of us and it will become -- it will help us to become even more efficient in the long run. Because people with schedules will not take as much time off as they did before once they get used to what their work schedule is.

So sorry for the long answer, but I just needed to sort of clarify because I know there's some noise out there about what the effect is for us, okay?

Operator

Our next question is from the line of Jason Seidl with TD Cowen.

Jason H. Seidl
TD Cowen, Research Division

Nice job with the quarter. You briefly touched about some of the unknowns that are out there. There's obviously been a lot of talk about potential tariffs with two of our largest trading partners Canada and Mexico. Clearly, you guys have a big position in Mexico with your access to the Mexican interchanges as well as a partial ownership of Ferromex. I guess if we do get that tariff on February 1, sort of what are the expectations on volume? And then, I guess, what potentially could have an impact if cross-border business with you guys would decline because of that?

Vincenzo James Vena
CEO & Director

Listen, let me start and then I'm going to pass it over to Kenny, who knows our markets and what the different business mix would be. If something happened south of the border, does it give us more business out of origination in the U.S. I'll leave that to Kenny. But let me talk in general the way I think about this is, I have never -- for all the years I've been railroading, and I just probably hate to say that number because I think it's -- I've been railroading longer than most people on this call have been alive. But at the end of the day, I have -- there's always something, and this is the way I see it.

We have the capability of Union Pacific to react to anything that's thrown at us. Good strong balance sheet, real good focused marketing team, operations that's looking to be more efficient. And I look at the entire package. If we get tariffs, but we also get the regulatory changes and we get the tax changes that were talked about by the President, with how depreciation is going to work on capital and how our corporate tax rate works, that could be a lot of positive.

Now I don't expect any of that. That's not what we plan. We plan for the worst. If something really bad happens, make sure that we are in a good position to handle that. So I think that with the puts and takes of where our business is, we'll deal with it, and we're waiting to see what actually happened.

I'm hoping that it's a negotiating position by the President, and because I don't think anybody, the consumers in the U.S. would love to have increase in prices because of dispute unless there's some strategic reason that the President needs to do that for security of the country. But overall, I'm very comfortable that we're going to be in a good position as we move forward, and we'll just react on how we see things happening. Kenny?

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

Jim, I'll tell you, you covered a lot. So all I'll say is -- and we've seen this before, it's really about being prepared. And what generally happens is maybe the origin location shifts from Asia to Mexico or Canada, and that commodity is priced in, and that tariff is priced in. But being prepared is the critical thing.

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Eric and his team have demonstrated that, especially in the second half of this year when we saw that happen on the West Coast. Same is true with exports. We saw that on the grain side where it may shift from PNW or go to the Gulf or go to Mexico. Regardless, it's all about preparedness. And I'm telling you, as we're humming along here from an operating and service perspective, I feel good about our posture going in regardless of what happens.

Operator

Our next question is from the line of Chris Wetherbee with Wells Fargo.

Christian F. Wetherbee
Wells Fargo Securities, LLC, Research Division

I guess I wanted to maybe pick up on the West Coast and get some perspective about how you think about sort of the shifts. I know international intermodal has got some pretty challenging comps, particularly as you move into the second half of the year. But Kenny, any sort of perspective you can give what you're seeing from your customers? Maybe how real time any of those shifts may occur? I know we kind of have a tentative agreement on the East Coast. So potentially, there could be some business moving around a little bit.

And then just maybe in terms of the pricing piece. I know we're getting back into sort of accretive pricing. How do we sort of think about the opportunity in pricing as we move forward over the course of the next year, or maybe longer, in terms of the service recovery in the network ultimately, the inflation that we've seen across the sort of the broader market outside of transportation and maybe what your opportunity is to try to tap into that? Just want to get a sense of maybe how that plays out.

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

Yes. Chris, on the international intermodal side, we are seeing some pull ahead taking place and whether it's the hangover from some of the strikes on the East Coast or whether it's just the idea of the tariff, you can see our numbers and they're pretty strong here as we are walking into January. We'll see how that plays out for the rest of the quarter before I can really tell you what will happen. We've got the tough comps and I've talked about that. Those are in the second half. But sitting here on January 23, I think it's premature to go out and make a strong forecast about what will happen there.

Now on this whole thing around pricing. I just want to reiterate what Jennifer said, and we were price accretive in 2024, and we expect to be price accretive in 2025. Eric and the team have really done a great job of providing a strong service product, our commercial team sells it, and we're providing the service that we've sold to our customers. I want to hit that hard. We're sharing the investment that we're laying out to support the growth. Our commercial team is crystal clear on what's acceptable going in from a pricing standpoint based on the service that we've sold. With that, we're going to take some risk, but it's all about aligning the service we've sold with maximizing price.

Operator

Our next question is from the line of Ravi Shanker with Morgan Stanley.

Christyne McGarvey
Morgan Stanley, Research Division

This is Christyne McGarvey on for Ravi. Just wanted to circle back to some of the service comments. It sounds like you guys have a pretty good confidence going into 2025, but I wanted to touch on kind of what's underpinning that? And maybe particularly in the context of perhaps a better environment than you guys are currently thinking about if the volumes do snap back a little bit more aggressively, how you guys feel the kind of capacity is there to meet that without much service disruptions for customers?

Vincenzo James Vena
CEO & Director

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Well, I love the question that says what happens if we have more business. I think I like that question. That would be a great outcome for all of us. If the U.S. consumer stays strong and grows the demand for us. We operate a railroad that -- and we keep on talking about buffer, and I think we showed it with the large increase in international. And that's the way we look at it. We want to have our assets in place, operating them efficiently, but we carry a buffer, especially the assets that we can't inbound into the company if we need them in a quick manner. So locomotives, railcars, we do that.

Capacity on the railroad, we operate our railroad with the capacity because we need to recover from events like we just had in the southeast part of our network, we need to have a buffer. So we run with a 20% to 25% buffer on our capacity -- rail capacity, because our business goes up and down, customers don't release cars 7 days a week. There's a big drop in the weekends. So we have that buffer. That's the way we look at it.

Listen, the best thing that could happen is a 10% increase in volume across the board. I think we're set up to handle that, and we'd onboard the people to be able to handle that in a very quick manner. So that would be the best problem I would have in 2025. Thank you very much for the question.

Operator

Our next question is from the line of Ari Rosa with Citigroup.

Ariel Luis Rosa
Citigroup Inc., Research Division

Congrats on the nice results here in the fourth quarter. So I wanted to ask about the operating ratio. You mentioned this expectation of industry-leading operating ratio. Just wanted to understand a little bit more. What gives you confidence in that target? And if you could talk about kind of how you perceive the structural advantage of the UP relative to some of your competitors, especially given the context of BN maybe having some challenges in the fourth quarter that maybe held up some of their intermodal partners. So if you could just give a little more color on that outlook, both kind of short term and longer term, how we should think about that, the OR evolution?

Vincenzo James Vena
CEO & Director

Ari, I don't -- I'm not going to comment about any other railroad. We have a position that -- it's a complicated network that we have. It truly is. It's not linear. It's complicated. But I think we've fundamentally figured out a way to operate it and be as efficient as possible.

We want to be the leaders when it comes to operating ratio. And that's what we're delivering. And I'm not sure what the other railroads are going to because we're first up. I'm assuming that we will have the best operating ratio. That's an outcome of everything we do. That's the important piece is, Ari, what do we do with -- do we provide good service so we can maximize price, so our customers can win and grow in the marketplace. That's really important for us, that triangle. Is that operationally, do we look at our assets, how we operate the number of people? And do we use technology? And like we're excited about net control and how we're going to be able to quickly change our operating plan faster than we've ever been able to do before to operate the railroad more efficiently.

So with all those things, I personally -- and I said this publicly, and I'll say it again, all the railroads should be very close when it comes to operating ratio. There's no reason for the Class 1s not to be, and I know some -- I'll probably get some notes from some of the other CEOs and I'd appreciate the call or the text. But at the end of the day, we want to be in the best position. And you can see what happens when we have a little bit of volume, we price smart, we operate the railroad efficiently. We end up with a 58.0%. Are we always going to be at 58.0%? No, we might go up a little bit, depending on what the market conditions are. But we're going to drive that to be the best.

And stay tuned, okay? I don't think anybody thought we were going to be able to deliver a 58%, and hang on and watch us go. That's the win for us. Anybody else wanted to comment anything further? Nobody else wants to say anything after that. Thanks for the question.

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Operator

Our next question is from the line of Bascome Majors with Susquehanna.

Bascome Majors
Susquehanna Financial Group, LLLP, Research Division

In one of the earlier questions, you talked about some opportunity with the FRA waiver backlog potentially beginning to clear and opening up some efficiency. But this week, we also had Patrick Fuchs take over as STB Chairman. Can you talk about that side of the regulatory fence? What have you learned from working with him as a Board member over the last 6 years? And over the next several years, what opportunities is UP or the industry have that might not have been on the table under Primus or Oberman's leadership?

Vincenzo James Vena
CEO & Director

Yes. Listen, there's always changes in who leads and I've had a number of meetings with Mr. Fuchs, okay? Very smart individual. And the rest of the Board is very strong. So at the end of the day, the way I look at it is we have the same goal. We want to provide good service to our customers. And if we can provide good service to our customers, they win in the marketplace and we both win and the STB deals with those things.

Now at the end of the day, there's a lot of other things that the STB does. They look at mergers, they look at acquisitions. And I'm absolutely sure that everybody, the STB and the railroads would like quick decisions, quicker movement on what's happening. And I'm hoping that, that's how we move ahead. But I'm very comfortable that the relationship will be strong and we'll continue to have a strong relationship with all the regulators.

There is a position to have regulators there. There is a need, and I'm very comfortable that we'll work with them and be very transparent about what we're doing at Union Pacific. Anybody else have any comments on that any further? Because you've all met with the STB, Kenny?

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

No. I mean, we're looking forward to it as the commercial leader, we want quicker outcomes so that we can service the marketplace. So it's encouraging.

Vincenzo James Vena
CEO & Director

Eric, anything from -- you deal with them lots?

Eric J. Gehringer
Executive Vice President of Operations

I think that's the exact same comment. I mean even in the engagements that we've had with them on even service things, right, continuing to move faster. I know Patrick in the past has had a really good perspective on how he think about service. So looking forward to working with them.

Vincenzo James Vena
CEO & Director

I know, Jennifer, you don't meet with them as often, but maybe we should get you there more often because you've got a better personality for it than me, maybe, but anything to add?

Jennifer L. Hamann
Executive VP & CFO

No. I think your point about our goals being aligned is the important one. They want a strong rail franchise. It's the best thing for the nation, our national security, our economy, and we want to grow with our customers. And I think working together to fulfill that purpose is what everybody wants.

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Vincenzo James Vena
CEO & Director

Perfect. Great question. Thank you very much.

Operator

Our next question is from the line of Ken Hoexter with Bank of America.

Kenneth Scott Hoexter
BofA Securities, Research Division

Congrats on the solid OR and results, but maybe digging in a little bit on that, Jen, you guided in the appendix, the other expense to $325 million, $350 million. Maybe can you delve into what happened in the fourth quarter? I think you mentioned the bad debt expense. Can you talk about a scale of the one-timer, or the scale of casualty expense that we should see bounce back? And I guess maybe I'm just ultimately getting at trying to think about the cadence to first quarter. Can you talk about seasonality in what we should -- I know you don't delve into quarterly specific, but maybe just normal historical seasonality, how we should think about the move given the improved performance here in the fourth quarter?

Jennifer L. Hamann
Executive VP & CFO

Yes. I mean when we look at other expense for the fourth quarter, I mean, casualty was really the driver there. I did call out the bad debt expense, but the bigger piece was the casualty, both in terms of looking at it year-over-year because we did have a pretty big step-up in fourth quarter of 2023, as well as the fact that we're starting to see some better performance here in 2024. That's a little slower to come through on the expense side, but you heard Eric and Jim both talked about the fact that we're continuing to drive better safety performance. So that's really where I'd focus in, in terms of the driver for fourth quarter.

In terms of looking out into 2025 within that category, it's probably one of the least seasonal categories we have, quite frankly. State and taxes, state and local taxes is the biggest component of that. And then you do have some of the other things like the casualty, like bad debt, travel, all those fun things. So I wouldn't think about that in terms of a lot of seasonality on that expense line.

Kenneth Scott Hoexter
BofA Securities, Research Division

I didn't mean, just on the expense line, I meant the cadence into first quarter of kind of the OR. Jen, do you normally see 150-basis-point deterioration? Is that -- would you see that given all the backdrop that you're talking about in a big picture way?

Jennifer L. Hamann
Executive VP & CFO

Yes. I mean, obviously, I'm not going to give you a guide, Ken, for the quarter. But I think in terms of seasonality, you understand it, there is a difference. When you start out the year, you have some beginning of year costs, if you think about some of the payroll taxes that kick back in for us, our business is a railroad. You generally see some of the lowest volumes of the year in the first quarter.

And then you tend to have some more weather expenses. I mean, I'm not used to paying for snow removal in New Orleans, but I think I'm going to this year a little bit. So you have some of those things happening. So pleased to see the way the railroad started in terms of the volume demand and the fluidity. But from a seasonality perspective, I wouldn't look for anything unusual there.

Operator

Our next question is from the line of David Vernon with Bernstein.

David Scott Vernon

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Sanford C. Bernstein & Co., LLC., Research Division

So Kenny, I got a couple of questions for you. First is, in the intermodal business, can you give us a sense for where utilization is and the box pool fleet for you guys right now? Obviously, there's a lot of channel inventory that's been built up by the intermodal marketing companies through the pandemic, taking too many boxes. I'm just wondering where your utilization is kind of running right now on railroad-owned equipment?

And then the second question would be whether this recent uptick in natural gas prices that we're seeing may have some benefit for you on the pricing side with some of your utility coal contracts?

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

Yes. So the first question, I think, we certainly did deploy our rail fleet in the second half. We saw it grow and really do really well in our portfolio fleet. And when I say portfolio, I'm talking about the private asset folks, the IMC. So we saw shrink there. It wasn't fully deployed. So there's upside there. And so we'll see what happens as we move throughout the year.

Switching to natural gas, I'd tell you, it's one of the most volatile things to do, and I've been in this role now 7 years, and I've gotten out of that game of trying to forecast what's going to happen with natural gas. But bottom line, you asked a direct question. We should see some benefit if natural gas prices increase, absolutely.

David Scott Vernon
Sanford C. Bernstein & Co., LLC., Research Division

Right. And is there any way to quantify how many more boxes kind of are stacked today versus maybe you would have had normally pre-COVID?

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

No, I would just say that if you look at the overall market, again, I mean, the overall market is still not where it should be. There's still upside. And so we still feel good about deploying those boxes as the market comes back.

Operator

The next question is from the line of Jordan Alliger with Goldman Sachs.

Jordan Robert Alliger
Goldman Sachs Group, Inc., Research Division

Just coming back to intermodal. If the trends hold up that international facing those tough comps, maybe volumes be tough to grow in the back half of the year. Does the domestic intermodal offset can that provide -- even if volumes are perhaps down, can that provide a favorable net positive in terms of mix, margin, EBIT dollars, et cetera?

Jennifer L. Hamann
Executive VP & CFO

Yes. I mean, everything depends on magnitude, right, Jordan. So I think it's unfair to really kind of focus in on one commodity line like international intermodal. You're right, the comps are going to be extremely tough in the back half. But there's a lot of other businesses that we move, and that's really what's going to ultimately play into what our financial results will be. So maybe domestic intermodal offset some of that, but we've got a lot of other business lines that we're going to move, and we're going to try to maximize those. So I don't know that we want to get into the game of trying to make a prediction about how the back half actually looks. There's a lot to happen between now and then.

Kenyatta G. Rocker

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Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

But the bottom line is we feel confident and we're bullish on the domestic intermodal market going into 2025. That's the key.

Jennifer L. Hamann
Executive VP & CFO

We've had some great franchise wins there that we still haven't seen the full benefit from.

Operator

Our next question is from the line of Daniel Imbro with Stephens.

Daniel Robert Imbro
Stephens Inc., Research Division

Maybe to follow up on the volume outlook. If we look on the outlook on Slide 11, on a headline, there's more pluses than minuses. But how should we think about the mix impact on revenue per carload? You just talked about intermodal in the previous question. But I guess, any visibility into changes of mix within mix within these categories that we should be aware of when we think about the market share wins?

And Jennifer, I understand that you don't want to guide each quarter, but how should we think about volume growth through the year given the more difficult back half comparisons? Can we grow volume each quarter? Would that be kind of a base case expectation? Just any color there would be helpful.

Jennifer L. Hamann
Executive VP & CFO

Yes, Daniel, thanks for the question. So I mean, we specifically aren't giving volume guidance either for full year or on a quarterly basis. I think you've laid out, as we laid out, kind of what some of the puts and takes are through the year. I think the important thing is, is that we're very well positioned. The service product is good. Kenny and his team are out there winning new business. And so we're going to do all we can to push that curve upward. But there's also market forces out there that we're going to be playing against, and we'll just see how that all plays out.

From a mix perspective, and I did say this in my comments, when I look to the back half of the year with what we expect to happen from international intermodal, that will alleviate that mix pressure that we had in the back half of 2024. How that ultimately shapes out, kind of similar to my answer to Jordan, will depend on what the rest of the business is doing at that point in time.

But I think you're thinking about the different components correctly. It's just a matter of what else layers in along with those as we go ahead. Certainly, mix will continue to be a challenge here, at least in the first part of the year as international intermodal stays strong.

I don't know, Kenny, if you want to add anything else?

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

You've hit it all. Again, the credo here for the management team is we're going to have volume outpaced the market, and we expect the revenue to outpace volume.

Vincenzo James Vena
CEO & Director

I guess the only thing I would say is this, our business mix actually is, is we've got a broad range of customers in a broad range of markets that we play in. So of course, we want to maximize all of them in a smart way that fits our network, makes our customers win and it's service that we can provide at a high level.

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So puts and takes. International, we don't see it being able to stay at that. Nobody -- if I go back to the early part of 2024, nobody thought the international intermodal for the Western railroads was going to grow in for Union Pacific as much as it did, but it did. But we also have products across. Whether it's industrial products, whether it's sand for fracking, you name it, and that's the nice part about our franchise is the different types of customers that we handle. We move every day products that America needs for finished products, consumer goods and inputs to the economy.

So I'm very happy. It's great to have this franchise that was built by a lot of people before I came to Union Pacific. So that's the way we look at it. And of course, Kenny's job is to maximize it. Otherwise, why do you have a marketing department, right? So I'm looking forward to another great year, Kenny. Thank you very much for the question.

Operator

Our next question is from the line of Walter Spracklin with RBC Capital Markets.

Vincenzo James Vena
CEO & Director

Walter, how is it in Canada?

Walter Noel Spracklin
RBC Capital Markets, Research Division

It's pretty cold, but my backyard rink is in good shape, Jim. That mentor quote, it sounds like it was a quote from Hunter, am I right?

Vincenzo James Vena
CEO & Director

Well, it was a little earlier, but I think Hunter would have -- might have said it in a different way. He might have not called stupid -- but at the end of the day, yes, he would have said something very similar. It's -- don't worry about all these things that you can't control. It's the fundamentals. If you operate a strong railroad. If you look at your costs, you make sure you're very efficient. Don't lose sight of what's important, you end up on the winning side of the game. You end up on the winning side of the hockey game, Walter, good strong defense, right, in hockey, always wins the Stanley Cup. Not that five persons in the front, it's that strong four core defenseman that make a difference and a strong goalie. So that's what we're all about.

Walter Noel Spracklin
RBC Capital Markets, Research Division

Well, my son will be happy to hear that comment for sure. Speaking of those fundamentals, Jim, you talked a bit about guidance, and it's predicated on a mixed economic outlook. And I know you like that kind of scenario analysis where we look at the upside, and I know a few of your trucking peers have spoken pretty constructively here today about that potential for an improvement in the economy.

So if we do see that, where do you see the most opportunity for leverage if we get a better macro? And more importantly, is this type of operating leverage that you're engineering here, Jim? Is this setting you up for potentially coming in above the high end of that low double-digit band? Or is the low double-digit capture if the economy gets better than we will do low double digits? Just curious to hear how that sensitivity works out for you.

Vincenzo James Vena
CEO & Director

Well, Walter, if I didn't have a few hundred people on the call, maybe I would say something different. But bottom line is you know what we talk about. But you know what, you always hear from me, but I've got a strong team with me. And Eric does a fantastic job about how we operate every day and Kenny does a fantastic job. I rib them every so often about why do we need a marketing department. So why don't I let

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them talk about what they see and what we have operating leverage and what we see customer leverage as we move ahead and what that would mean. So Kenny or Eric?

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

I'll kick off, Eric, and then you take over. I mean, look, we laid out the slide, but I'm very bullish on what we're seeing in our grain products area with renewable diesel. And I'm bullish from a number of reasons. One is structural. We've talked about these facilities that are on our line. Eric's service product has given us flexibility on the grain side to move anywhere in the world, whether it's going out of the Gulf, whether it's going to Mexico, whether it's going to the PNW. And we'll see where coal ends up. I got a coal question a little bit early. It started off pretty solid here, and we've got a win that's coming on.

On the industrial side, our petrochem business has been strong. We've had some wins. We've been investing in that area to help us grow, we'll see that in terms of expansions coming on this year. And then we got to look at some of these other macro indicators, what's going to happen with housing starts. That has a really, I'll call it, a step function impact on us from a lot of different commodities.

And then on the premium side, we should see automotive market improve as we move throughout the year. Domestic intermodal, I mentioned, high on and should be positive. And on the international side, I'd be remiss if I didn't say we've gone out and tried to minimize those comps by winning some business last year and trying to retain portions of it, not all of it, obviously. So we'll see how that plays out.

Eric J. Gehringer
Executive Vice President of Operations

And then, Walter, if you pick it up from there, then the question becomes are there proof statements in Union Pacific's recent history that demonstrate that we can do exactly what Kenny just said that we can support them as he's out there in the market. And there are a number of them. We talked about international intermodal, and I think we've talked about that one enough, a massive accomplishment for the team. But think about if we were sitting here a year ago, nobody would have expected the shift on the grain side away from the Pacific Northwest as much into Mexico. But you didn't hear any noise about that. Instead, you saw us pivot, use some of those buffer resources we have, leverage our strong relationship with FXE to be able to grow that market share.

You also see it in the example that I mentioned in my prepared comments about the Houston Gulf Coast project. Sometimes when people think about capital investments and we say projects, they think it's one location, and we must be building just a siding. That project collectively is a massive undertaking, and it's a very strategic undertaking to say where do we have to make just small adjustments, small investments in many different terminals to make sure that we can support exactly what Kenny said.

And then finally, one of the most exciting ones for me and certainly for all of us. I tell you, every single expansion we do in Inland Empire, Kenny's team just keeps filling it up. And so we have many proof statements that say we can support exactly what Kenny is setting out to do in 2025.

Vincenzo James Vena
CEO & Director

Walter, thank you very much. And listen, it's time for one of the Canadian teams to win the Stanley Cup, okay? It's been a long time.

Walter Noel Spracklin
RBC Capital Markets, Research Division

Agreed. Agreed.

Vincenzo James Vena
CEO & Director

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And I think the Edmonton Oilers are going to do it. I've been following them for a long time, and I've been suffering for many years, Walter. Not as bad as you in Toronto, but that's okay. Don't worry about it.

Operator

Our next question is from the line of Jeff Kauffman with Vertical Research Partners.

Jeffrey Asher Kauffman
Vertical Research Partners, LLC

Congratulations on just a terrific execution quarter. Kenny, I want to come back to you, if I can. I like your answer to Jason Seidl's question, be prepared in terms of dealing with these known unknowns. But I want to dive a little bit deeper. When I think about what could be at risk on the tariff side, I'm not talking about the tax change or regulatory benefit. You would think, obviously, export grain south. You would think beer imports north. You would think auto parts. What elements of your traffic mix either have maybe a Canadian end to it that we might not see as obviously, or a Mexican import/export and that might not be as obvious to us on the outside?

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

Well, first of all, I just want to say it's all fluid, and I'm not aware when I look across our commodity groups where -- maybe there is one specific commodity I can think about, but most of these commodities have different entry points and different origin points, different destinations. That's why I talk about preparedness because we have just a great franchise to be able to capture that.

So whether it's finished vehicles that have to come in through the Gulf. Whether it's finished vehicles that have to come in through Mexico. Whether it's finished vehicles that we move out of the PNW. We have different entry points and destination points to move in and out. That's why I harp so much on preparedness. The end consumer is going to consume these products. It may be a few pennies more. They're going to consume the product. It's just how it's going to get there. And our commercial team is all over this to make sure it moves Union Pacific.

Jeffrey Asher Kauffman
Vertical Research Partners, LLC

So maybe to your point, I guess, maybe the thing we should be thinking about is, maybe the way it gets to where it's going changes, but your feeling is that the team will find a solution if that has to be?

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

So I hit that point, I thought I hit it hard earlier. That's exactly what I'm saying. Our job, our commercial team needs -- and we are, and we're dialed in on where these changes will be and then coming up with solutions with Eric's team to make sure we can deliver them.

Vincenzo James Vena
CEO & Director

Yes, [indiscernible] I have to say that, and thanks for the question. I think, you hit it, you summarized it well.

Operator

Next question is from the line of Tom Wadewitz with UBS.

Thomas Richard Wadewitz
UBS Investment Bank, Research Division

I wanted to -- I think you had some pretty positive and convicted views on pricing and focus on price, which is great. How do you think about the trucking, and your assumptions on truckload market? And do you just think, well, we'll get a little help from some modest contract increases in trucking that helps

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us. Or how do you think about that? And also just on intermodal revenue per unit, is that something that's been a pretty meaningful drag for a while. I know some of that can be fuel surcharge and mix and everything, but it's been a pretty big drag. How do you think about revenue per unit in intermodal in 2025 as well?

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

So the last couple of years, we -- I have resisted from going out and forecasting as seeing back half, back half, back half. We want to look at the data points and the market data points, we'll tell you whether you're looking at DAC, whether you're looking at FTR, that it should improve as we move throughout the year. Customer sentiment is the same as we're talking to a number of our IMCs and private asset folks will let that market play out, the timing of it. We'll see where that goes. The extent of it, we'll see where that goes. And yes, if that improves, we should see some uptick there based on how we position things in terms of that revenue per box.

Jennifer L. Hamann
Executive VP & CFO

Yes. And Tom, I think you really nailed it in terms of what you see as the drivers there. I mean, it's one of those categories where we have mix within mix. We talked at our Analyst Day about how our international intermodal has our lowest revenue per unit of any commodity that we haul. And so when that's growing strong within that group, you see that impact. And of course, fuel coming down is another thing. So both of those are really what you see happening there, as well as the tougher competitive environment.

Vincenzo James Vena
CEO & Director

The only thing I can add, Tom, is just on the productivity side of the way we've been able to change the way we operate our lowest revenue movements. And no ifs, ands, or buts, there's a big difference between some products that we move because we don't price the same for every commodity. But at the end of the day, we've done a lot of work on terminal dwell, car speed, car velocity, how many boxes we can put on a train to be able to make it more efficient for us so that we handle the difference in the revenue that we make.

And that's -- and the Eric's team works every day, every minute on that commodity to see how do we optimize the railroad and the cost structure that we have against the revenue that we make on it. So it's a challenge. But at the end of the day, I think we've done a pretty good job of it, and we still love that business. It's good for us, and it moves through our whole network. And the more efficient we can get, the better we are on being able to handle more of it in an efficient manner and maybe put a little less pressure on Kenny -- well, I guess not to price it up. So thanks for the question, Tom.

Operator

The next question is from the line of Oliver Holmes with Redburn Atlantic.

Oliver Holmes
Redburn (Europe) Limited, Research Division

Just a question on CapEx, if I may. It looks like your locomotive and equipment CapEx is forecasted to decline from $0.6 billion to $0.5 billion. I was just wondering if that's a reflection of the withdrawals...

Vincenzo James Vena
CEO & Director

Oliver? Oliver? You're breaking up. I can't understand it. I don't know if anybody else from the table can?

Jennifer L. Hamann
Executive VP & CFO

No. All I heard is something about CapEx.

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Vincenzo James Vena
CEO & Director

Yes. Can you maybe just get into a little better spot or something and see if you can get through to us, please?

Oliver Holmes
Redburn (Europe) Limited, Research Division

Can you hear me any better now?

Vincenzo James Vena
CEO & Director

No, still breaking up, Oliver. Can we go to the next question and then see if we can get Oliver in a different spot because I know we're down to the last couple, operator?

Operator

The next question is from Brandon Oglenski with Barclays.

Brandon Robert Oglenski
Barclays Bank PLC, Research Division

I know it's been a long call, and I was off for the front part of it, so apologies if I'm replicating something here.

But I guess, Jim or Kenny, we've heard about better service. And I think what investors are looking for at Union Pacific and other railroads is to finally see real volume growth. So on the back of those service gains that you guys have made in the network, Kenny, within the context of your comments about volume outpacing the market this year? I mean, is this incremental wins? Is it business development efforts that are driving this? And finally, leveraging that service product?

Kenyatta G. Rocker
Executive Vice President of Marketing & Sales - Union Pacific Railroad Company

Yes, absolutely. I mean if you look at our network minus the business development wins, especially in markets like the automotive that I highlighted, in markets that are challenged, where we have structural decline like coal and markets that are emerging, and we're ahead of it in renewable diesel in a market that we expect to grow from an export perspective on the petrochem side and industrial chemical side, absolutely. The business development wins matter, and it does help us outpace the market. So no other way to really say that than to just hit that one head on.

Vincenzo James Vena
CEO & Director

Brandon, thank you very much. Operator, do we get the Oliver back on or not?

Operator

No, we did not. Mr. Vena. I'll turn it over to you for closing comments.

Vincenzo James Vena
CEO & Director

Okay. Well, listen, Oliver call in. Brad, and the team are always willing to answer the question, so I apologize that it didn't work out.

But listen, I'm very proud of the team. I'm very proud of the focus. I'm proud of every -- today, right now, we have 15,000 people out there moving, touching and working to move the products that we sell. And the rest of us are in a nice warm office, and they're out there working. I can't be more appreciative. Great

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quarter for all of them, great quarter for us and looking forward to speaking to all of you, if not at some conference or at some other time at the end of the first quarter.

So thank you very much. Have a great day, and let's enjoy the day as we go forward. Thank you.

Operator
Thank you, Mr. Vena, and thank you to everyone for joining us today. You may now disconnect your lines at this time. We thank you for your participation, and have a wonderful day.

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EXHIBIT 27

Corrected Transcript

22-Oct-2026

Union Pacific Corp. (UNP)

Q3 2026 Earnings Call



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CORPORATE PARTICIPANTS

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

Jennifer L. Hamann
Chief Financial Officer & Executive Vice President, Union Pacific Corp.

Kenyatta G. Rocker
Executive Vice President-Marketing & Sales, Union Pacific Corp.

Eric J. Gehringer
Executive Vice President-Operations, Union Pacific Corp.

OTHER PARTICIPANTS

Chris Wetherbee
Analyst, Wells Fargo Securities LLC

Ken Hoexter
Analyst, BofA Securities, Inc.

Scott H. Group
Analyst, Wolfe Research LLC

Jason H. Seidl
Analyst, TD Cowen

Walter Spracklin
Analyst, RBC Capital Markets

David Vernon
Analyst, Bernstein Institutional Services LLC

Stephanie Moore
Analyst, Jefferies LLC

Jordan Alliger
Analyst, Goldman Sachs & Co. LLC

Ariel Rosa
Analyst, Citigroup Global Markets, Inc.

Brian P. Ossenbeck
Analyst, JPMorgan Securities LLC

Thomas Wadewitz
Analyst, UBS Securities LLC

Jonathan Chappell
Analyst, Evercore ISI

Richa Harnain
Analyst, Deutsche Bank Securities, Inc.

Brandon R. Oglenski
Analyst, Barclays Capital, Inc.

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MANAGEMENT DISCUSSION SECTION

Operator: Greetings and welcome to Union Pacific's Third Quarter 2026 Earnings Call. At this time, all participants are in listen-only mode. A brief question-and-answer session will follow the formal presentation. [Operator Instructions] As a reminder, this conference is being recorded, and the slides for today's presentation are available on Union Pacific's website.

It is now my pleasure to introduce your host, Mr. Jim Vena, Chief Executive Officer for Union Pacific. Thank you, Mr. Vena. You may begin.

V. James Vena

Chief Executive Officer & Director, Union Pacific Corp.

Thanks, Rob. Sorry, I'm rather fast this morning. I'm ready to go. I overstepped you, so hopefully I don't do that to everybody today.

Operator: No.

V. James Vena

Chief Executive Officer & Director, Union Pacific Corp.

I hope I am. We're ready to go here. So why don't we take a step back and think about where we are as a company and what we're doing?

So this morning, my wife, for whatever reason, got me up a little early, okay? So I had a little more time to look at the railroad real close. And the first thing I look at is, what's happening to the railroad weather-wise. And bottom line is, this is my favorite time of the year to railroad.

And Eric will tell you the same thing. You know, engineering programs are in a different place. The railroad is well setup. You don't have the extremes. Too much of an extreme of weather. And it is a beautiful morning here in Omaha. Absolutely gorgeous. I'll tell you, it's a great place to live and a wonderful spot. But so the railroad is good.

Now, the range of temperature we have is from the low-30s to the high-80s. But that's who we are. And we have thousands of employees out there right now, okay? Yesterday, we had 2.31 billion GTMs of product that we moved in this railroad. And all the people out there. And I got to congratulate them on the quarter that we had. So very excited to share with all of you, who we are, what we're doing?

And one thing we're not changing is the key pillars that we have. Safety for us is the foundation. And Eric will take you through some of the detail. But where we are this year on an injury rate improvement from last year, where we are in the derailment rate? Significant improvement from last year. That continues. All the work we've done is very exciting as a foundation of everything that we do.

And listen, safety for us is more than just a number. It's about people going home exactly the same way as they showed up when they came to work. And it's the movement of the goods that we have for America. We are moving products across the western states, and pretty soon, across the entire country. That just helps the economy and helps businesses move ahead.

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So I love where we are, safety. And I know Eric's got some more detail on that as we move ahead. And service, absolutely, I love where our service is, we're delivering what we sold the customer and what we agreed to. And operational excellence, I see numbers in detail that I had a chance this morning to spend probably a half an hour. Usually, it's five minutes on that show me that the number of cars that missed their plan, that we call 32-hour cars is like 15% lower with business up, the number of locomotives we have out there running and operating. Don't match the amount of business increase, meaning we have way less locomotives operating.

So much more efficient with them. The way the cars are turning, the car velocity is exactly the same as it was last year at this time, with increase in business to show the resiliency of our buffer and how we handle traffic. So I guess, if I don't stop there, I might as well just tell everybody to keep quiet and we'll just go to question and answers. But let me real quick tell you who's here with me.

Our Chief Financial Officer, of course, Jennifer's with me all – with me every quarter. Love having her here. She's next to me. Kenny Rocker, our Executive VP of Marketing and Sales, always in the right spot, right there to my right. And across the table, Eric Gehringer, our Executive Vice President of Operations. And I can't be prouder of what the team has done.

If we can turn to slide 4 and quickly review. So this morning, Union Pacific reported record financial results as net income totaled $2.1 billion and our adjusted earnings per share grew 15% to $3.53. Union Pacific's third quarter results demonstrate our ability to safely deliver the service we sold our customers, while efficiently handling 6% volume growth. Higher fuel prices were a big cost driver. But when we take out the impact of fuel price and merger costs, our core operating ratio improved 110 basis points from last year.

Now I'll let the team walk you through the results in more detail, and then I'll come back to talk about the Q&A, and maybe a quick wrap-up before we get into the – before we finish the call.

And Jennifer, all yours with some of the details on the financials, please.

Jennifer L. Hamann

Chief Financial Officer & Executive Vice President, Union Pacific Corp.

All right. Thank you, Jim, and good morning, everyone. I'll begin with our third quarter income statement on slide 6, where operating revenue of $7.2 billion increased 15% versus last year. Digging into the components of our growth further, freight revenue totaled $6.8 billion, up 15% on 6% volume growth. In addition, higher year-over-year fuel prices and the related fuel surcharge added 900 basis points to freight revenue.

Although our quarterly pricing gains continue to exceed our inflation dollars, that contribution from price was masked by business mix as nearly 75% of our quarterly volume growth was from domestic and international intermodal traffic. Wrapping up the top line, other revenue increased 21% to $384 million as higher intermodal volume contributed to increases in both accessorial and subsidiary revenue.

Turning to expense, our appendix slides will provide more detail as our total operating expense increased 15% to $4.3 billion, primarily from the higher diesel fuel prices. Compensation and benefits expense increased 4%, as cost per employee was up 5%, driven by higher wages, incentive compensation and training costs. Offsetting some of that cost pressure was a 1% decrease in head count, against that 6% volume growth, enabling us to generate our ninth consecutive quarter of record workforce productivity.

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Fuel expense grew 69% on a 64% increase in average fuel price and 4% higher gross ton miles. Year-over-year, our price per gallon increased from $2.56 to $4.21, and added 140 basis points to our operating ratio. Purchased services and material expense increased 9% as a result of inflation. Intermodal-related costs for our Loup subsidiary and the railroad, as well as costs to add surge locomotives to the active fleet. These increases were partially offset by lower year-over-year merger costs. Equipment and other rents declined 3% versus 2025, as we more than offset the impact of volume growth with lower car hire and operating lease expense.

Putting it all together, we had a record quarter with reported earnings per share of $3.49. Adjusted for merger costs, earnings per share totaled $3.53, and our operating ratio was 58.8%.

Turning to cash returns in the balance sheet on slide 7, our record financial results translated into 18% growth in cash from operations to $8.3 billion. Free cash flow totaled $2.4 billion after we reinvested in our network and increased our third quarter dividend 3%, the 20th consecutive year providing our shareholders with an annual dividend raise. We finished the quarter holding $3.1 billion between cash and short-term investments, and with an adjusted debt-to-EBITDA ratio of 2.4 times. We will continue growing our cash reserves in anticipation of closing the Norfolk Southern merger in the second half of 2027.

Looking out to the remainder of 2026 on slide 8, we are affirming our outlook of reported EPS growth in the high-single digit range versus 2025's reported EPS of $11.98. And as a quick reminder, that $11.98 included $0.30 from a fourth quarter land sale. We are also affirming our ability to continue improving our core operating ratio in 2026 and leading the industry.

Our 2026 reported operating ratio remains challenged by higher fuel prices, as we are currently expecting prices to average around $4.85 per gallon in the fourth quarter. We're also updating our capital spend to $3.5 billion for 2026, as we invest for growth and pull ahead some of the capital work planned for 2027. Overall, we're delivering strong financial results in 2026, as we consistently execute on the three key levers for our railroad success: volume, pricing and productivity.

I'll now turn it over to Kenny to provide an update on the markets.

Kenyatta G. Rocker

Executive Vice President-Marketing & Sales, Union Pacific Corp.

All right. Thank you, Jennifer, and good morning. We delivered a record revenue quarter with freight revenue increasing 15% to $6.8 billion. Excluding fuel surcharge, freight revenue grew 6% to a record $5.6 billion. That's a result of our team at Union Pacific winning in the marketplace, pricing to the value of our service product and executing for our customers every single day.

Moving to slide 10, let's talk about the key drivers for each of our business groups. Starting with our Bulk segment, revenue was up 10% compared to last year on flat volume. Grain and grain products was driven by strong export grain demand and continued growth in renewable fuels, ethanol and feedstocks. These gains were partially offset by lower wheat shipments resulting from a softer harvest. Coal and renewables volume declined 3%, as lower natural gas prices and elevated inventories weighed on demand.

Moving to Industrial. Revenue was up 14% on 6% higher volume. Our strong service product and business development efforts led to record industrial carloads and freight revenue, excluding fuel. We saw growth in all of our major commodity segments.

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Metals and minerals growth was driven by our construction project wins located in Louisiana and Texas. We also benefited from sustained strength in our domestic steel production. Energy and specialized markets growth was driven by business development wins across petroleum, non-metallic minerals, government and waste markets.

Petroleum products benefited from refinery utilization [ph] that remained (00:11:21) at near record level. Premium revenue for the quarter increased 21% on a 9% increase in volume and set a record for freight revenue and freight revenue, excluding fuel. Domestic intermodal delivered its fifth consecutive record quarter in both volume and revenue.

Our foundation of service, combined with strong business development and a deployment of buffer resources, enabled 13% volume growth. International intermodal volumes improved 8% versus last year, driven by strong West Coast import volumes and business wins.

In automotive, business wins offset continued market softness. We saw strength in auto parts driven by growth with our current OEMs, as well as over-the-road conversions with parts suppliers.

Looking ahead to slide 11. Grain and grain products is positioned for further growth driven by strong export grain demand and our ongoing business development efforts. We're also seeing a positive impact from new facilities, including Bunge and 5V, both in Dalhart, Texas.

Our industrial development pipeline in this market remained strong. In fact, I recently took part in the groundbreaking of a CHS's new crush facility in Evansville, Wisconsin, which we will serve. We also see continued upside from renewable fuels and feedstocks, supported by further policy certainty.

In coal, lower natural gas prices and elevated inventories will continue to be a challenge. Our pricing discipline and business wins are helping to offset some of the market driven declines.

Moving to Industrial. We are focused on winning new business and outperforming industrial production. In metals, we expect continued strength from our construction projects and domestic steel production.

In petrochemicals, we are excited to see the Golden Triangle Polymers plant in Texas, continue their commissioning and start up activities towards full operation. Concurrently, export demand for plastics is strong as customers respond to disruptions in global supply. Overall, we expect continued momentum supported by our strong service product and the investments we've made in the Gulf.

And wrapping up with Premium. Domestic intermodal is on track to deliver its third consecutive record volume year supported by over-the-road conversions and our service product. International intermodal has fully lapped last year's tariff volatility, and we expect volume to grow double-digits in the fourth quarter.

And for automotive, we expect business wins to continue to offset market weakness. While we delivered a record third quarter, our focus is to build upon that success. We remain committed to pricing to the value of our service product and capturing new opportunities across the network.

And with that, I'll turn it over to Eric.

Eric J. Gehringer

Executive Vice President-Operations, Union Pacific Corp.

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Thank you, Kenny, and good morning. The team operated at a consistently high level, safely supporting 6% volume growth, while providing strong service for our customers. By remaining agile and strategically deploying resources, we overcame weather-related and seasonal network challenges and improved network fluidity.

Importantly, we continue to be disciplined and committed to personal injury and derailment prevention efforts, as our employee safety and derailment rates both improved against our three-year rolling average.

Moving to slide 13. The majority of our key operating metrics improved in the quarter of 2026, even as carload volume increased 6%, reinforcing the importance of maintaining surge resources and highlighting the resiliency of our network. Freight car velocity increased 1% to 228 miles per day, driven by a 2% improvement in terminal dwell. This marks our fourth straight quarter of terminal dwell below 20 hours, demonstrating our ability to run an efficient network while handling higher demand.

We delivered the service we sold to our customers. Intermodal Service Performance Index finished at 92%, as intermodal volume grew 11%. We responded quickly to capitalize on the improving freight market by unstacking containers and utilizing our buffer of resources.

Manifest Service Performance Index finished at 93%, against best ever industrial carloads. While these results reflect solid execution, we continue to see opportunities to perform even better. We know what is possible, which is why our Service Performance Index is set to continually challenge the team by setting the threshold at our best monthly performance.

Moving to slide 14. Operating discipline and consistent execution of the fundamentals drove another quarter of record workforce productivity, record train length and record fuel consumption. Locomotive productivity of a 140 gross ton miles per horsepower day was even with last year's record third quarter. The active locomotive fleet increased 2% to handle 4% higher gross ton miles, demonstrating strong asset efficiency.

Additionally, we continue to benefit from our ongoing locomotive modernization investments and fuel conservation initiatives, as our fuel consumption rate decreased 2% and set a new quarterly record. Workforce productivity improved 5%, as our active train engine and yard workforce increased 1%, against 6% higher carloads. We remain diligent in our hiring approach, aligning resources with demand while delivering for our customers. And finally, we continue to safely increase train length, which improved 2% to nearly 10,000 ft.

This remarkable progress is supported by technology improvements and mainline capacity infrastructure investments that enhance network efficiency. These results are a testament of our unwavering focus on safety, service and operational excellence. The team is well-positioned to serve our customers and empowered to raise the bar in what's possible.

With that, I'll turn it back over to Jim.

V. James Vena

Chief Executive Officer & Director, Union Pacific Corp.

Thank you, Eric. Thanks, everybody. Great presentation on who we are and what we're doing. So listen, before I tidy this up and get to the questions, which is the part I'm looking forward to is the real smart questions we're going to get this morning. I'd like to talk about Jennifer or my favorite CFO and the person that's been by my side since I came back as CEO.

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I've known Jennifer and I met her first in 2019, and then when she took over as CFO in 2020. And she is grounded, tough, sweet – tough, delivers, listens and tough. So I find that to be a perfect mix. And she has delivered for this company for many years. And I have to thank her for extending her stay a year longer than when I came back to work. She was going to stay for a couple of years and then depart. And she's been with me for three years, and we'll finish off early next year. So I can't be more pleased that she's going to go enjoy herself and do things with her and [ph] Kippy (00:18:51) and enjoy life a little bit. I know she's going to miss me and she's going to miss this railroad. And who knows? You know, it's just October. So we'll leave it at that. But Jennifer, thank you very much for everything you've done.

Jennifer L. Hamann

Chief Financial Officer & Executive Vice President, Union Pacific Corp.

Thank you, Jim, for the very kind words.

V. James Vena

Chief Executive Officer & Director, Union Pacific Corp.

No, no, I speak truth. If you were awful, I would have just said thank you very much. Where you go? Go enjoy yourself and don't come, watch the door as it hits you in the back.

Jennifer L. Hamann

Chief Financial Officer & Executive Vice President, Union Pacific Corp.

I'd be gone by now is what I'm saying you know.

V. James Vena

Chief Executive Officer & Director, Union Pacific Corp.

So listen, Jennifer, in all seriousness, you've done a spectacular job for this company. Seeing all the things that it's been through, and you've been very helpful on the merger and everything else we've done, so congratulations to you.

But I wouldn't mind real quick, just, before I get to questions, summarize what you've heard and make sure that everybody's clear on and provide a quick update on the merger with Norfolk Southern.

Our third quarter results reflect the strength of our franchise and our ability to execute at a consistently high level. 6% volume growth and 110 basis points of core operating ratio improvement don't just happen. It's the result of a long-term execution of our strategy, and that is enabled record financials and reinforcing our position as industry leader.

Year-to-date in 2026, we delivered reported earnings per share growth of 9%, exactly in line with our outlook of reported high-single digit growth. We are focused on what's possible, delivered at the highest level and winning even more business.

As to the status of our merger with Norfolk Southern, the Surface Transportation Board published a procedural schedule. Based on the schedule, we should be reporting our first earnings as a merged company a year from now. We also have requested for the second time, ex parte communications. That's the lawyer talk.

Jim Vena talk is, we are more than willing to have open discussion with the STB for any information they need, or if anybody at the STB or others want us to take through all the detail in those 8,000 pages, because there is a lot

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of benefits for the country, for our customers, for our employees, and for the movement of goods seamlessly at a faster rate that's in that 8,000-page detail that we've given.

So we're hoping that they accept the ex parte and we're able to stop any of this that we're trying to hold back any information. This is the second time we've done that. And it's real important to think that we have always been open and willing to talk about. And we can hardly wait to see the November 18th openness from anybody that wants to put comments in about who we are and what we've been doing with the merger.

Now, we're very confident, the merger application and the information we provided are the most extensive and transparent merger record ever submitted, and it demonstrates through fact and analysis that the best way to enhance the US freight supply chain is through the UP-NS combination.

Our merger, as I said before, but I love to repeat myself on this, will deliver substantial, measurable benefits by strengthening the supply chain. It will lower transportation costs and provide faster, more seamless rail service options that enable our customers to compete and help keep goods affordable for American customers – consumers.

And you can see it every day, even with the latest announcements from some of our competitors, they know they have to up their game and be better to be able to compete against this railroad when we get the merger approved.

And with that, Rob, let's go to question and answers. Thank you very much.

QUESTION AND ANSWER SECTION

Operator: Thank you, Mr. Vena, and best wishes, Jennifer. Thank you. We'll now be conducting our question-and-answer session. [Operator Instructions] Thank you. And our first question is from the line of Chris Wetherbee with Wells Fargo. Please proceed with your question.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Good morning, Chris.

Chris Wetherbee
Analyst, Wells Fargo Securities LLC

Q

Good morning, Jim, and congrats, Jennifer. I don't want to imply we're getting old, but I think you and I have been talking for a very long time. So well deserved in your retirement. So wish you all the best.

I think, I wanted to start maybe big picture on the M&A side, Jim, just where you kind of left off, I guess. You know, how do you think about sort of the receptivity. I know in mid-November, we'll get some commentary from all the folks who want to sort of weigh in on the merger. And it'll probably be incremental to some of the stuff we've heard already from some of the other railroads. You obviously were very successful getting an agreement with CN. How do you think about potentially sort of staving off some of the other potential asks by further agreements? I don't know if there's any receptivity that you're sort of seeing out there from competitors or other folks in the industry. Want to get a sense of how you're thinking about sort of discussions that may be going on in the background with other folks in the industry?

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V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Yeah. Chris, listen, I appreciate the question, and I can't believe you and Jennifer think you might be old, okay? I don't know, I woke up this morning. I was ready to run over anybody that was in my way coming into the office. And I'm a lot older than all of you guys, but that's okay.

But let's get to the whole M&A. So I think sometimes we have to make sure that we understand what it is that we're doing. This is an end-to-end attachment between the two companies that give the extent of a possibility of how people want to move. This is not a big overlap. We knew we had to fix some of the areas, a very small piece, the St. Louis, Kansas City and with Canadian National.

Listen, we have a deal that should be announced, finalized completely right away with all the t's crossed and the i's dotted, and the Tracy Robinson and her team have done a spectacular job of protecting Canadian National. And we've done a good job of protecting Union Pacific, and that deal is just about done. So I love it. But given that, really, there isn't a lot of opportunity to say, what do we trade? Are we willing to trade benefits for the industry? Sure. But there is not a lot of competitive benefit that we can – that we need to fix within the merger. And what we're going to deliver.

And listen, I've seen what people have asked for the very first one without the detail. And hopefully, there's nobody has their kids on this. I hate to tell people there is no Santa Claus, okay? So it's not a freebie. That you get to go in front of Santa Claus and wish for something that's going to happen, on December 25, okay, in the morning. And you get it delivered down the chute, okay? The fireplace – most places don't have real fireplaces anymore. So, it's fake. So what they're putting in, if they – if their dream is off, it needs to be fact based on what the impact is.

And it's pretty hard for anybody, anybody in this industry other than being selfish for themselves or trying to get something for free. And this is going to be a long answer. Even some of the unions that are against us, that are part of the coalition. I would ask the unions that are in the coalition if they've asked their partners, the railroads to guarantee a job for life for every employee like we have, okay?

So the benefits of what we're doing is across the board for consumers, for the nation, for our employees. And I don't think we're going to have a lot that we have to move. The STB was pretty clear when they approved the Canadian Pacific and Kansas City merger. They handed out no concessions to other railroads because there was no big overlap and movement. The pattern is set, and that's why I'm looking forward to go through this process. Chris, sorry for the long answer. Hopefully, I answered it.

Chris Wetherbee
Analyst, Wells Fargo Securities LLC

Q

Always appreciate the perspective, and best wishes, Jennifer. Take care.

Jennifer L. Hamann
Chief Financial Officer & Executive Vice President, Union Pacific Corp.

A

Thanks, Chris.

Operator: Our next question is from the line of Jonathan Chappell with Evercore ISI. Please proceed with your question.

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V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Good morning, Jonathan.

Operator: Jonathan, perhaps your line is on mute. Okay. Mr. Vena, appears he may have lost his line. I'll move on. Our next question will be from Ken Hoexter with Bank of America.

Ken Hoexter
Analyst, BofA Securities, Inc.

Q

Hey, great. Good morning. Jen, congrats. It's definitely been a long time since we met back in 2002. So, thanks for all your help along the way. And best of luck in your next phase. You know, I guess, if I jump into – I guess looking forward, right, volumes are trending at double-digits quarter-to-date. So it looks like you've accelerated a bit, kind of a good job there, but maybe, Jen, dig into the outlook a bit for upper-single digit growth. You're raising your CapEx $200 million. You noted you used your surge resources. So, if that growth sustains, maybe thoughts on investments or capital going forward, ability to beat the targets and sustain, given your need to increase the investment and keep pace. And if you're using surge resources, do you have some left on the side, if you continue to get this strong growth?

Jennifer L. Hamann
Chief Financial Officer & Executive Vice President, Union Pacific Corp.

A

Yeah, Ken, thanks for the question and thanks for the well wishes. Yeah, we feel very confident that we have sufficient resources that we can deploy and continue to handle the growth seamlessly and continue to put up the great numbers, the record results that we have done so far. But we're wanting to make sure we maintain that surge buffer. And so that's what I was referencing in the comments around purchase services is we've put more locomotives into service to handle the growth, still hitting record locomotive productivity. But we want to maintain that buffer because if we get another leg up on the growth, we want to be ready for it.

Same with hiring. I think we've got, call it, 300-plus folks in training right now because we want to make sure we have those crew resources available. But we are getting to your point, great volume leverage. And that's what gives us confidence that we're going to be able to finish the year in a very strong manner, putting up high-single digit earnings per share growth. It's just been a great year. The thing that's been the variable that we weren't anticipating coming into the year is the high fuel prices. And certainly, that has an impact on our results, weighs on our margins.

But the team is doing a great job in working with that. When you think about our fuel conservation efforts and really the fact that rails are so much more fuel efficient than truck, that's actually enabling us to win even more business and bring it on to the railroad.

In terms of the capital, we look at capital over a multi-year period and some projects you can accelerate, some projects stall a little bit depending on permitting and all the variables that go into it. We had an opportunity, and I'll let Eric weigh in here to pull some things forward. And certainly, we had the cash resources to do it. And it just made sense to do that this year.

Eric J. Gehringer
Executive Vice President-Operations, Union Pacific Corp.

A

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Yeah. When you think about Ken, where we made those adjustments, Jennifer mentioned the locomotives. That's an important one. You know that we've been in multi-year contracts in our modernization overhaul of locomotives. And we saw some opportunity because of how well the railroad continues to operate to pull some of that forward.

And that's a down payment in the future growth that Kenny is bringing to the railroad. And then the others were some infrastructure related opportunities that, again, because the railroad is running so well, we saw the opportunity to pull some of those projects ahead. So – and I'm just going to reiterate Jennifer's point. When we said used, we didn't say used up. We utilized some of our buffer of resources of which we have many buffer resources still left across the board.

V. James Vena A
Chief Executive Officer & Director, Union Pacific Corp.

Yeah, I think you had 589 locomotives accessed this morning.

Eric J. Gehringer A
Executive Vice President-Operations, Union Pacific Corp.

That is correct.

V. James Vena A
Chief Executive Officer & Director, Union Pacific Corp.

289 stores sitting there wondering what the heck you're going to do with them. And the other one's ready to go, if we had bulk go up or AGRs or we had an issue. So Ken, I like where we are. It gets pretty exciting right now. Good question though, I love it.

Ken Hoexter Q
Analyst, BofA Securities, Inc.

Appreciate it. Thank you.

V. James Vena A
Chief Executive Officer & Director, Union Pacific Corp.

Thank you.

Operator: The next question is from the line of Scott Group with Wolfe Research. Please proceed with your question.

V. James Vena A
Chief Executive Officer & Director, Union Pacific Corp.

Morning, Scott. How are you?

Scott H. Group Q
Analyst, Wolfe Research LLC

Hey, thanks. Good morning. I echo those comments to Jennifer. Jim, do the comments from coaster change your view at all of deal approval? What do you need to do to get deal approval? And then just separately, Kenny, just the yield ex-fuel were flat and I know there's mix, but I think there's an expectation that with better volume, rising trucking rates, the rail pricing is going to accelerate. Is that a reasonable expectation? When do you think we start to see that? Thank you.

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V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Yeah. Listen, I think you were asking me about the one of the four STB members that put out the separate note after they accepted the application and moved it forward. Is that right? Is that what you were asking, Scott? Sorry.

Scott H. Group
Analyst, Wolfe Research LLC

Q

Correct. Yes.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Okay. Bottom line is, if you take a look at what's in the application, there is benefits across the board and far of how we enhance competition, how we enhance the product for our customers, how we're going to be able to make it less expensive. If we're faster, if we remove touch points, every customer that uses our railroad that used to have to hand it off to somebody else is going to have a reduction in supply chain costs.

It is like automatic, it's basic business. We see that every day. And we see that every day, even today when we go hand off to a short line or hand off to somebody else versus the mileage and what we charge to be able to handle it on our own railroad. So that's a given. So listen, I always take people's position and I read it and I said to myself, I wonder if he used AI to summarize the 8,000 pages and all the detail or what. But he's a smart guy. So he has the position and we're clear, and we'd love to have the ex parte discussion with the board to take them through what the benefits are. It's up to them if they want to have that or not. But we're clear on what our case is, Scott. It is a benefit for this country.

And I don't know how many times I have to say it, and I'm not trying to say it to make sure people hear me, other than to say it's fact. Canada has two railroads that go across the entire nation. There's a reason for that, and they're not split up, even though some of them don't like it. One of them doesn't like us to have the same thing here. And at the end of the day, it's a benefit. And we are able to provide a better product to our customers. And that's what it's all about. And that's why this is going to be approved. I'm 99.999 sure that it's going to be approved.

Kenny, do you want to take the second half? You ready to go?

Kenyatta G. Rocker
Executive Vice President-Marketing & Sales, Union Pacific Corp.

A

Yeah. So, first of all, I mean, we don't want to lose sight of the fact that we had a record revenue year ex-fuel for Union Pacific. And we've done that in not just one area and a couple places that you heard in my comments. You know, it's a dynamic market when we're going out there to price, every day, we're competing against barge. We're competing against sourcing options. We're competing against truck.

There's a lot of competition out there that we have to compete against. And Eric and the team have provided us an excellent service product. And that's what we stand on. And so we're going to price to what the market can support. We want our customers to win. We want to win too, but we want our customers to go out there and win with the excellent service product that we have. So as the service product supports it, we're going to keep pricing to what the market can support.

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V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Thank you very much, Scott.

Operator: Thank you. Our next question is from the line of Jason Seidl with TD Cowen. Please proceed with your question.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Good morning, Jason.

Jason H. Seidl
Analyst, TD Cowen

Q

Hey. Thank you. Hey, good morning, Jim, and, I'll jump on the train for saying congratulations to Jennifer and thanks for putting up with guys like me for the past almost 25 years. I wanted to talk a little bit, sort of, about now that we're in the merits phase and we're coming up along the comments period.

Jim, can you talk to maybe some of the ongoing discussions to get more people on the side of supporting the mergers, whether they be customers or some of the unions that may not be supporting right now? Is this something that's ongoing? And could we expect some more, sort of, letters of support, or is this something that we're just going to have to wait for the comments and we're going to look forward from there?

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Well, I think it's important that we wait for the comments and see what everybody puts forward. And let's talk about the Union piece, because you raised it. Bottom line is no one has given a guaranteed job for life for any employee, unionized employee in the railroad industry, ever. Every employee. And it's amazing. So, what are we supposed to give? What else is there to give? We're going to grow the business. So, there's more employees that work because we're going to have a much more efficient railroad.

So – and the rail unions that understand that benefit signed up real quick. And I don't need them to sign up, because for me, it's more important on our employees. And sometimes I wonder whether the Union at the highest level is worried about their employees or worried about the employees. They're our employees that are unionized or they're worried about their union. You know, the teamsters. Listen, trucking is real important to them. And it's truly amazing that we have them part of the against coalition with railroads that have not guaranteed jobs. And in fact, some of them have been cutting people left and right over the last few months. And they still think that's a better model than being.

So I don't know how you make a deal there. And the merits will show that we have a great plan for our employees. We care about our employees, and we want them to win. So that's where I'm at with it. So I don't see us making a deal with anybody. Now, if it gets reasonable, if people want to talk, I'm good. On the customer side, we have over 500 customers that have written letters of support across the spectrum of. And we don't have very many, if any, just a little number of people that have actually gone into the STB and said, we're against it.

We have a lot of customers that we've met that say we want to go through and understand through the process, and I'm good with that. That's a smart move for some of them. But we also just had, in the last two weeks,

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customers that are in the chemical industry that put a letter of support for us, and they're actually single origination with us in Texas because they see the benefit of that handoff of not happening when we closed the deal with Norfolk Southern.

So sorry for the long answer, but I think from the customer side, big support. From the union side, our employees understand it. We just finished a survey of our employees and the feedback is about as good as it's ever been because they understand what providing. Think about it. We hire an 18-year-old because that's who we like to hire to be one of our people on repairing locomotives on the track, operating locomotives, tech people, everything else. And we say to them, you're unionized. You've been with us for one day. You have a job for life. And the average pay at Union Pacific all in with benefits is $160,000. I'm not sure about anybody else, but the – unless it's a rich cats, that might be all on this call. Okay. There's a lot of benefit for that, for everybody that works for Union Pacific. I'm not ready to hurt that.

Kenny, you got your hand up before you go, you get. Kenny's excited. He wants to correct something I said or what, Kenny?

Kenyatta G. Rocker
Executive Vice President-Marketing & Sales, Union Pacific Corp.

A

Hey, look, we had about 30 of our customers that are excited about the merger. They're going to be helping us with the integration process and the feedback is that they're looking forward to this happening.

Jennifer L. Hamann
Chief Financial Officer & Executive Vice President, Union Pacific Corp.

A

Yeah, I forgot that, Kenny. That's why I got Kenny and Eric and okay, Jennifer with me. I go on and I forget, so I'll try to shorten the answers because otherwise we're going to be here till lunchtime, okay? The way we go.

Jason H. Seidl
Analyst, TD Cowen

Q

I appreciate it, Jen. Thank you.

Operator: The next question is from the line of Walter Spracklin with RBC Capital Markets. Please proceed with your question.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Walter, [indiscernible] (00:40:16).

Walter Spracklin
Analyst, RBC Capital Markets

Q

Yeah, thanks very much. Good morning, everyone. Yeah. Jennifer, echo as well. Congrats on the retirement. Wish you all the best. Perhaps, this is for Kenny. When we look at your intermodal volumes, they've been very good. We're focused a little bit here on some of the items that both you and Jennifer have mentioned on truck to rail conversion opportunity.

Can you, well, maybe trifurcate here between how that volume growth is coming in, whether you're seeing it mostly in economic – general economic, coming out of the freight recession type of driver, is it business wins or is

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it that truck to rail conversion? Just if you could size it for us, you know, an order of magnitude in those three buckets or if there's other buckets, I'm not mentioning here, but I appreciate if you give that kind of color.

Kenyatta G. Rocker
Executive Vice President-Marketing & Sales, Union Pacific Corp.
A

Well, this is great. I appreciate that question. I'm getting excited that I get to trifurcate the volume growth. Just take a step back. Remember, this volume growth has happened before. We saw the inflection and the acceleration of these diesel prices. So – and I said it in my comments, it's our fifth quarter of record growth. Over the last couple quarters, we've seen some things happen with the fuel. So yes, that has helped us go out and win some business. But before, like I mentioned, the service product is what has helped us go out and win that business five quarters ago.

And then lastly, you look at some of the investments that we made over the last couple three few years. They are paying off, as we thought, twin cities, Phoenix, modernizing Kansas City, Inland Empire. Having that capacity to grow the product with a strong service product has helped. We talked a little bit about resources. And Jim and I debate this all the time, what's the right buffer for our UP rail fleet? We have it. We're 100% on our mutual commitment program for customers on our rail box. But then on the boxcar side, Eric, you know, we're 100% – near 100% on car orders. So you put it all together, it's all of it. But it starts with the foundation of a strong service product. The investments we've made in the network.

Walter Spracklin
Analyst, RBC Capital Markets
Q

Appreciate that.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.
A

[ph] Well, you keep that up, why don't you (00:42:44) just tell everybody what our strategy is completely, Kenny, okay? Just like. Thanks, Walter.

Walter Spracklin
Analyst, RBC Capital Markets
Q

You bet.

Operator: Next question is from the line of David Vernon with Bernstein. Please proceed with your question.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.
A

Morning, David.

David Vernon
Analyst, Bernstein Institutional Services LLC
Q

Hey. Good morning, guys. Thanks for taking the question. And, Jennifer, congratulations and best of luck on the next chapter here. Kenny, I wonder if you could help us understand what's going on around – going on with the intermodal business in terms of profitability? It looks like the RPUs came in maybe a little bit lighter than we would have expected, just given where – what's happening in the truck market. I'm not sure if that's mix on an underlying basis. And also looks like accessorials are elevated and purchased services is a little bit up.

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So if you could kind of give us a sense for, you know, how the business is performing from a profitability standpoint and how you expect it to perform into 2027 as you get around to, maybe the contracts resetting some of the index-based pricing, starting to respond to what we're seeing in the truck market, catch up on fuel, that kind of thing? Thank you.

Kenyatta G. Rocker
Executive Vice President-Marketing & Sales, Union Pacific Corp.

A

Yeah. So remember, David, we saw a transition in what's going on with the truck rates and truck capacity, really over, call it, spring to summer, when much of the bid season was pretty much baked. Now we're going to have an opportunity as we move forward here end of the year for several months of 2027 to have a better opportunity with our service products that we have to support the inflection that occurred in the summer. So, looking forward, you would expect a better position, a better environment for stronger pricing.

Jennifer L. Hamann
Chief Financial Officer & Executive Vice President, Union Pacific Corp.

A

Yeah. And then, David, just on your questionnaire tying in the purchased services, I did reference intermodal volumes. So we've got our Loup subsidiary. So as intermodal volumes grow with them, we tend to see an increase in some of the drayage costs. That was part of it. You – certainly when you think about our intermodal ramps, they're primarily operated by third-party contractors.

As we're putting more volume through those ramps, you see some elevation there. But I think it's also important to point out that on the other revenue line, you saw a 21% increase growth year-over-year there. That really is intermodal driven as well, because that's the revenue that you're seeing come through on that subsidiary side, as well as some of the accessorials associated with our containers.

And one thing to recall for everybody is that what I think is a big differentiator for UP is not only do we have strong relationships with asset-based IMCs, we also work with the non-asset-based guys because we have our own intermodal box fleet. And that's what Kenny was referring to when he said, we've got all the players on the field, but that's been a big plus for us this year.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Yeah, listen, thank you very much. Good question.

Operator: The next question is from the line of Stephanie Moore with Jefferies. Please proceed with your question.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Morning, Stephanie.

Stephanie Moore
Analyst, Jefferies LLC

Q

Good morning. Thank you. Appreciate it. Maybe taking this into a different conversation. And first, Jennifer, thank you very much for all the help and working with you over the years. So, I guess maybe starting out, investors, I

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think are obviously slicing and dicing a lot of the freight data right now. And I think they're trying to form a broader view on the economy. You've obviously called out some pretty broad-based strengths across industrials. And I think, maybe beyond data centers, what are you hearing from customers about demand through the rest of the year.

And then on the other side of this, given what we've seen this as of late in the food and beverage side, maybe being a little bit softer, do you think that's idiosyncratic or do you think that, maybe you're seeing something early on in terms of just the broader consumer? So any color on the volume environment would be great. Thank you.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Stephanie, so let me start and then pass it off to all three of you that want to comment. Bottom line is, it's nice that we see strength in the industrial market. And industrial for us goes across products that Americans use to build things, to move things, to tidy things up, whether it's steel, you name it, is there, including our Premium business and our Bulk business is pretty good, right, so the movement of all that.

So all that, it goes across the section and we have not seen or any indicator of the consumer slowing down that the consumer spends. Is there parts of the economy that are probably facing the higher inflationary pressure? Absolutely, there is, but there's a big piece still that are spending money and going out and buying. And, that's what we see. And Kenny, do you want to or any of the rest of you get more detail?

Kenyatta G. Rocker
Executive Vice President-Marketing & Sales, Union Pacific Corp.

A

I just want to really more or less talk mindset and the results. I mean, we don't come in and say, hey, the economy is tracking that one way and, oh, well, as we want to outperform the macroeconomic indicators. Industrial production up 1%, industrial team up 6%; automotive down 1%. You've seen the finished vehicles and parts up in the positive. Same thing with the housing starts. They haven't been where they want, where we like them to be, but we're going to outperform the macroeconomic indicators. So yeah, we want to pay attention to it, but our goal is to outperform it.

Stephanie Moore
Analyst, Jefferies LLC

Q

Great question. Thank you very much.

Operator: The next question is from the line of Jordan Alliger with Goldman Sachs. Please proceed with your question.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Good morning, Jordan.

Jordan Alliger
Analyst, Goldman Sachs & Co. LLC

Q

Yeah, good morning. Hi. I just wanted to come back to fuel in light of the energy volatility. Maybe talk a little bit more about what you can do around fuel efficiency, ability to improve on that. And then in light of the volatility, any

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impact on the third quarter drag, can you maybe talk to how you're thinking about the fourth quarter and the fuel impact? Thanks.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Let me make one point and then Eric and Jennifer or Kenny, but especially the two of you get through this. Bottom line is, this is the way we are. Railroads are much more efficient. It costs us way less per ton to move product across the US. So when fuel prices go up, it's naturally an advantage. What we need to do is show all those customers that are trying us now or deciding they're going to do this that our service level is high enough that they should stay with us and not all of them will as they drop.

But bottom line is, we see a time for us to show what a high level of service is, what consistency is in movement and the cost structure can be better for them, and it's better at the end of the day for the final consumer. So I like where we are, and we'll deal with fuel – with the fuel surcharge. We've got long-term programs that we go in and out with. And I think it's good and it's clear and our customers understand where it is. Eric?

Eric J. Gehringer
Executive Vice President-Operations, Union Pacific Corp.

A

[indiscernible] (00:49:42). Building on Jim's foundation, so then you start thinking about the specific initiatives we have. Now we're a little bit different than other railroads where other railroads start by talking about initiatives, we start by talking about the fundamentals, because when you're trying to conserve fuel or generate productivity or generate capacity, it's not about initiatives first. It's about the fundamentals.

So when you see us increased the fleet by 2%, but we're handling 4% higher GTMs in the quarter, that's us executing on the fundamentals. When you see us grow train length 2% to nearly 10,000 feet, that's us executing on the fundamentals, that also saves us fuel. Then on top of that, we've got our technology portfolio from our energy management system to our precision train builder that dictates the use of locomotives and route to even when we think about how we manage the locomotives inside the terminals at 14-hour dwell, which was also a 2% improvement in the quarter versus previous quarter – same quarter previous year. We're doing all the things you would expect us to, Jordan.

And then we wrap around that as one last layer, our perpetual dissatisfaction with our performance, always challenging ourselves to look for what's the next thing, whether the next thing is new or doing more of the thing that's already making us successful. And in the quarter, it netted out a 2% improvement in our fuel conservation, but we're not done.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

So you're actually doing something out there. I appreciate that, okay? Listen, great results, and I love the detail on what we're doing specifically to – if you stay the same, you burn fuel at a certain level, even if your locomotive is more efficient with the money we're spending on them. But if you can operate the same amount of business with the same amount of locomotives and a larger train size, we end up winning less cost, more efficiency. Love the story. Well done, Eric.

Jennifer L. Hamann
Chief Financial Officer & Executive Vice President, Union Pacific Corp.

A

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Yeah. Just the last point of your question there, Jordan, in terms of how do we see that impacting the fourth quarter. So, you heard me say that we're looking at pricing right now in terms of fuel prices for the fourth quarter to be around $4.85 a gallon. That compares to $4.21 that we averaged in the third quarter. So, at this point, I would say we're probably going to see a little bit greater impact to fourth quarter.

And we said it had about 140 basis point drag to us in the third quarter. So, that's how I would look at it sitting here today. Obviously, if we see a change in fuel prices, we'll update folks, but that's the current lay of that land.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Yeah. Listen, thank you very much for the question. Great question. Thank you.

Operator: The next question is from the line of Ari Rosa with Citi. Please proceed with your question.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Ari, how are you this morning?

Ariel Rosa
Analyst, Citigroup Global Markets, Inc.

Q

Hey, how are you, Jim? Good morning. And congrats to Jennifer. Echo everyone else in appreciating her contributions.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Ari, can I stop you there? This congratulations for somebody retiring, I don't understand, okay? Like, it's much more fun to work than to be retired. I thought if anybody should be, congratulation Kenny, Eric, and Jim that we're still going to work. Like this idea of congratulations to retirement, I have no idea. But go ahead, ask the question. I'm good. Retirement, thank you.

Ariel Rosa
Analyst, Citigroup Global Markets, Inc.

Q

Fair enough. Well, Jim, I know you're signed up for many more years ahead. So, it's good to hear. I'm sure a lot of folks will be encouraged by that. Jim, just going back to the merger, I'm curious what you say to customers who say, look, I understand the benefits – the efficiency benefits that come from – from not having to switch between railroads, but are concerned about the downstream merger effects and what happens with kind of that wave of further consolidation that could follow? If that's the big concern that customers have, what do you say in response to that?

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

I'll tell you. When – and I've sat down with a lot of customers, okay? Top 50 customers, I've written them a letter, specifically to their CEOs, ask me any question you want and I won't get into the detail with everything. I have met, Kenny, I could probably pretty fairly say between you and me, hundreds of customers. And we talked through.

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And actually, once we go through the detail, they go, son of a gun, okay? This sounds pretty good. They understand that every commodity that we move for them is competitive against another shipper. And it's driven by what the market is or even they understand that it's competitive against the world, whether it's soybeans going to Mexico, whether it's corn being exported, whether it's steel products. So, when they see the efficiency that we can give, they understand it and they see it.

Now let's talk about the next step. It's pretty straightforward. You can see what we're going through with the STB. It doesn't matter what people think. First of all, the Berkshire who actually is the company that owns the subsidiary, Burlington Northern, has been pretty black and white that they don't want that merger.

I don't know how they change, okay? They've been spending a lot of money. I just got a seven-hour deposition with their lawyers, okay, talking about every freaking question in the world. And they say they're against it. So I don't – in my lifetime, if they're against it, it sure won't be with BNSF, it's going to be with somebody else.

But let's say, they get religion. They still have to go through the process and prove that they're not – they're going to improve. I'll be honest, I have no problem with them if they merged. If CSX and BNSF merged, I think the customers and the US would get a better product and they – you would win against the world.

So, that's where I'm at with it, Ari. And I tell you, when I go through that and I'm not nervous and we give them the facts of what we're in that application and what we're doing. I hate to tell you, most of them go – well, we'll still go through it, but we see the benefits of what – Kenny, maybe you can add something that I'm missing there.

Kenyatta G. Rocker
Executive Vice President-Marketing & Sales, Union Pacific Corp.
A

Yeah. I mean, I believe we do a good job of personalizing the discussion with the customers. You got some customers, that, boy, they've got 10,000 railcars, and then you have that conversation about the fleet savings and that matters to them. You have some customers that have to pay dray costs at the interchange, and you have a conversation with them and they understand the benefits. You have other customers that want to compete, as you mentioned, globally and have optionality, whether it's PNW, the Gulf, competing with barge. So, I know the customers see the value that's there.

Ariel Rosa
Analyst, Citigroup Global Markets, Inc.
Q

Yeah. You bet.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.
A

Good question, Ari. Appreciate it.

Operator: The next question is from the line of Brian Ossenbeck with JPMorgan. Please proceed with your question.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.
A

Brian, how are you?

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Brian P. Ossenbeck
Analyst, JPMorgan Securities LLC

Q

Hey. Good morning, Jim. Good morning, Jennifer. Jennifer, I'll give you also congrats, but also, I know you like talking about the quarterly. Well, wait for a second here, Jim. I know you like talking about the quarterly OR cadence. So, I know you're going to miss that. So maybe you can walk us through that for the fourth quarter, some of the puts and takes and give us a little bit on fuel.

And then Jim, for all the other stakeholders that we've talked about here, one thing we haven't heard too much about it, I don't really know your level of interaction, but would just be like the DOJ and maybe the DOT, but they're on a little bit of a different track obviously, different entities. It's a lot of history there. So, we'd love to hear any context you can provide with your interactions with them, because their comments are due, I think, sometime in early December. So, thank you.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Yeah. Listen, Brian, you're a smart guy. You work for one of the biggest bank in the world, if not for sure pretty close. So, you guys have a lot of history of how the regulatory environment works. Pretty simple. The STB is the regulatory agency that will review and decide how we move ahead. The DOJ has the right to put comments.

In one sense, I would have liked the DOJ process, because it would have been done already, okay? But we go through the STB process. So, their comments are going to come forward. Have we had meetings with them? Yeah, they want to learn about the railroad industry and what we're doing. And when they put their comments on, which we have sat down with them, and we'll continue to answer questions of anybody, Department of Transportation or DOJ so that people can get facts, because there's a lot of miss facts out there, or people just don't understand what the true facts are. So, at the end of it, that's what we've done. The rest, Jennifer?

Jennifer L. Hamann
Chief Financial Officer & Executive Vice President, Union Pacific Corp.

A

Yeah. Brian, in terms of fourth quarter OR, so you heard my comments relative to fuel. Obviously, when you think about seasonality, you do tend to have some seasonal changes going with second and third quarter where you tend to have your highest volumes of the year. That's where you tend to have your greatest ORs. We'll likely see, well, very strong growth here continuing on in the fourth quarter.

Just on an absolute basis, probably a little bit of a seasonal step back when you consider the holidays and everything that happens in the fourth quarter. So, you obviously need to take that into consideration. But I think the important point is on a core operating basis, you have seen us make year-over-year improvements to our core OR, and that's going to continue. We have a great line of sight to being able to continue to very efficiently move this volume growth, and that will enable us to continue to improve.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

You bet. Thank you very much, Brian.

Brian P. Ossenbeck
Analyst, JPMorgan Securities LLC

Q

All right. Thanks, Jim. Thanks, Jennifer.

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Operator: Next question is from the line of Tom Wadewitz with UBS. Please proceed with your question.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Good morning, Tom.

Thomas Wadewitz
Analyst, UBS Securities LLC

Q

Yes. Good morning. And Jennifer, I'd just say thank you and wish you well. Pleasure interacting with you and benefiting from your insights over the years. Jim, I just got to say I'm a little more optimistic on Santa Claus than you are. But anyways, a little more of a fan. But maybe...

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Yeah, but you know who Santa Claus is, right? It's not real.

Thomas Wadewitz
Analyst, UBS Securities LLC

Q

Yes, yes, I guess so. All right. So let's see. I understand.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Sorry about that, ask the question, I apologize.

Thomas Wadewitz
Analyst, UBS Securities LLC

Q

No, no, no. I'm trying to add a little here. I think your position is pretty clear. Your single-line service is a strong benefit. That's a compelling driver for the merger, and you got some other elements in there. But let's say that there are potential elements of consideration for the constituencies, kind of labor shippers, railroads. How do you think short lining is a component of what you would want to do in the future? Is that important to say, hey, there's some branch lines inefficient and we'd like to have flexibility? Or is that something that's not really important? I'm just thinking that's a point of potential negotiation.

And then with respect to the CN deal, does that preclude you from giving access to another railroad on that St. Louis to Kansas City? Or is it like if you wanted to do that, you really could?

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Well, we can do anything that we can control, Tom. But at the end of the day, the Canadian National deal fixes that issue of a little concentration and overlap on that piece. And listen, Canadian National is a very good railroad goes across Canada, goes all the way to the Gulf and it's going to give a lot of opportunity for customers in there when they serve them to compete against us, and we're looking forward to that.

So we're pretty comfortable with where we are, but we always are willing to listen. And you said something about short lines, and it sort of sounded like you thought maybe we would short line more. No, we are not going to sell

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off pieces of our railroad, large pieces to anybody, okay? I've always found that – in fact, I found that short lines are really good at some things. But listen, if you take a look at the way short lines work and what they do, we should be able to do that ourselves, and we do that every day on our railroad. So we're pretty good at dealing with customers.

We're pretty good at growing the business and a lot of the business that's being given, and we see the short lines that we have attached to the Union Pacific and Norfolk Southern will grow because of the business that we're going to grow on the railroad. But listen, it's a bigger picture. If you step back, short lines in the United States of America do receive a lot of funding from the federal government per mile and tax breaks that put them in a different place in how they operate. But that's not enough for me to think – and if you think about it, they get $3,400 a mile for every railroad. And some of them are not small mom-and-pop railroads anymore.

I think Genesee & Wyoming bought – was bought out by a couple of foreign investment funds for $8.5 billion. So even though they own over a 100 short lines, they're the – okay, that's really not a short line. It's a big railroad, a big piece of business. So I'm not into selling to somebody else our railroad unless it allows us to grow more business and to be able to deliver a better product for our customers. And I think Union Pacific, with where we are operational efficiency, where we are with assets, where we've invested in our railroad, most of the time we want to keep everything internal and grow and be able to manage it ourselves, Tom. So hopefully, I answered the question.

Thomas Wadewitz
Analyst, UBS Securities LLC

Q

Yeah, maybe just another component. Any thoughts on like, are there active discussions with the parties? Is there a phase when you might expect them to become more active with, you know, what you might offer, whether it's shippers labor, other railroads?

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Listen, I'm willing to talk to anybody, but at the end of the day, it has to be a good reason. It can't be just because I want it, okay? So let's go back to the Santa Claus piece. Right now, they've put a piece of paper out that says what they want from Santa Claus. Santa Claus is not real. So, we're going to look at it. But I have to wait to see what factually they can put in on the November 18th deadline to see if there's an issue there that we've missed. I don't think we've missed anything, but if there is, more than willing to talk.

And I'll be honest, you know, even though I've known some of the CEOs at the other railroads and some of the people below them for a long time, for some reason they don't talk to me very often anymore, right now. I don't know, I'm still a nice guy, right, Jennifer. But, you know, they've got this coalition against making America better. They have a coalition that won't give the employees a guaranteed job for life. It's truly interesting, Tom. Truly interesting. I love where we are.

Thomas Wadewitz
Analyst, UBS Securities LLC

Q

Okay, great. Thanks for the time, Jim.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Thank you.

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Operator: Our next question is from the line of Jonathan Chappell with Evercore ISI. Please proceed with your question.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Good morning, Jonathan.

Jonathan Chappell
Analyst, Evercore ISI

Q

Good morning. Can you hear me? [indiscernible] (01:05:00), Jim.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Hear you. Perfect.

Jonathan Chappell
Analyst, Evercore ISI

Q

All right. Great. Sorry. I don't know what happened before, but I was doing some damage control with my two young kids explaining to them about, Mr. Vena, just lying about that Santa.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

[indiscernible] (01:05:09), I apologize. Are you serious? I apologize.

Jonathan Chappell
Analyst, Evercore ISI

Q

No, I'm not serious. They're at school. They do believe, but they're at school. And that was all [indiscernible] (01:05:18).

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Yeah, good. So don't let them hear me, okay? I'm worried about my grandkids. If my wife was listening, I'm going – after I said that. I said, holy cow, I could get myself big trouble at home. That's not the place I want to be in trouble, okay? Go ahead.

Jonathan Chappell
Analyst, Evercore ISI

Q

No, I'm not going to let – I'm not going to let my nine-year-old read the transcript tonight, like, he typically does. But anyway, I don't know who wants to take this, maybe Eric, but nine consecutive quarters of workforce productivity. You're investing more now with your capital envelope. Kenny talked about intermodal, basically going from strength to strength. It seems like the West Coast ports are setup really well. At a certain point, do you reach a hurdle where ringing out more workforce productivity becomes more difficult as you shift more top line volume growth? Or is this just kind of an evergreen opportunity that may ebb and flow, depending on where we are in the cycle?

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Eric J. Gehringer
Executive Vice President-Operations, Union Pacific Corp.

A

Yeah, thank you for that question, Jonathan. You know, I don't think it's either one of those, because when you think about the way that we think about productivity, you know, the driver behind why we focus on it is to ensure that we're putting Kenny in the team and the best possible position to compete in the market. And no matter what the markets are giving us, no matter what the railroads like, that's always going to be with us. There's always going to be a drive and a strong commitment to put Kenny and the team in the best possible position.

Now, if you think then within that and you say, okay, now what do we think about workforce productivity as we look out? I still see opportunities. Hell, before I came to this call, I had two phone calls this morning. We were talking about things that are related to workforce productivity. So even on a daily basis, we see opportunities. And then what you've seen us do and you'll continue to see us do is, as I mentioned with Jordan's question, focusing on the fundamentals, that's perpetual, we will never stop doing that and then the technology side.

Jonathan Chappell
Analyst, Evercore ISI

Q

Keep on going.

Eric J. Gehringer
Executive Vice President-Operations, Union Pacific Corp.

A

Yeah, the technology part, you know, we don't – we talk a lot about it. We don't necessarily always talk a lot in detail. But when you think about the technology side, right, it's first designed to improve the decision making of our frontline leaders. And we've talked about a lot of results here today.

All right, well, all the four of us are part of it. The reality is the 29,000 people out in the field that are switching boxcars, fixing track, fixing cars, they're the ones that actually made the results happen. And so if you can give them, which we have and you can continue to empower them to make even better decisions, you're going to drive workforce productivity that way.

And then when you think of some of our work around semi-autonomous operations and our terminals and our engineering gangs inside our locomotive facilities, you're just adding layer of layer and layer of success that we've delivered on. And I don't see an end to it.

Jonathan Chappell
Analyst, Evercore ISI

Q

Yeah, right on, Eric.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Listen, great question. Thank you very much. What time is NS supposed to start? 9:00? What, eight minutes? Okay. Lightning round, let's go. Okay. We'll be fast.

Operator: Next question is from the line of Richa Harnain with Deutsche Bank.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

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Morning. How are you?

Richa Harnain
Analyst, Deutsche Bank Securities, Inc.

Q

Hey. Good morning. Jim, you can chuckle, but I have to tell Jennifer how, we've been really impressed by the quality and consistency of Union Pacific's execution over the past few years. And Jennifer, obviously, you played a major role in that success. So, congratulations. And I'm sure you're proud of what you've helped build.

So for my question, it's for Eric and maybe just following up on that last question, actually. From a technology standpoint, are there capabilities, tools or operating systems at NS that you don't have today or vice versa that make you particularly excited about the merger opportunity?

And on a related note, and maybe more broadly for the team, for Kenny or Jim, what do you make of autonomous trucking as sort of a competitive offering to railroads, as that technology matures? Do you see it as a meaningful competitive threat, or do you think investors are sort of overestimating its impact to rail? I would love to hear, what structural advantages rail retains that it can't replicate. I'm sure fuel efficiency is top of the list, but I'd love to hear that from you. Thanks.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Let me answer that last one real quick. I want to try to get the off. I don't want to overlap with NS. Bottom line is, you always have to look at how you move forward, not backwards. So autonomous is going to happen. We need to be ready for it to be the most efficient railroad in North America, which we are today. And we will continue to find ways to be better. We will use technology every way to be able to move it ahead.

So that's the challenge. And it's exciting. It would be boring to get up in the morning and say, well, guess what? We're railroading, I love it. We have a lot of plans on how we move this railroad forward to make it. And part of it is this merger that will help us be able to give much more seamless operation. Eric, real quick on the tech.

Eric J. Gehringer
Executive Vice President-Operations, Union Pacific Corp.

A

I love the way you framed that question because oftentimes the question we get asked is, what can you bring to the NS? But you're right, there are things on the NS that we will look forward to bringing to the Union Pacific, and we're talking about those because we can talk about integration. So like, one example, just briefly, there, wayside technology for the inspection of rolling stock, whether that's locomotives or railcars, is really impressive, so yes.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

And the technology behind it, the software, right?

Eric J. Gehringer
Executive Vice President-Operations, Union Pacific Corp.

A

Absolutely, identifies defects, even better than our system. So yeah, we're looking forward to taking the best of Union Pacific to NS and the best of NS to bring it to Union Pacific.

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V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Thank you very much. Okay. Next question.

Operator: Our next question is from the line of – final question from Brandon Oglenski with Barclays.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Good morning, Brandon.

Brandon R. Oglenski
Analyst, Barclays Capital, Inc.

Q

Thanks for getting me in here. Yes. Good morning, Jim. And Jennifer, condolences that you had to go drink margaritas now.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Now, Brandon, you could take – ask any question you want. Take your time.

Brandon R. Oglenski
Analyst, Barclays Capital, Inc.

Q

Well, Jim, maybe you. We'll be a little critical here. I know you have a majority of the unions, but obviously, the BLET here is against the merger, so maybe if you can speak to that. And then in the response of requests from a number of your competitors, they've called out this vertical competition issue that the STB could be incrementally concerned about with this merger. And obviously, given the closer comments as well, I guess, is there like a medium ground on some of these responsive requests where you could see potentially more deals happening to get this across what could be really arbitrary issues approving competitive enhancement in the future? Thank you.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

A

Yeah. Listen, I would be remiss not to say, and I get it, I'm aggressive against the side that says, like what are we going to give? But there's always deals to be made, okay? But let's listen, let's wait, because time is real important. If you're playing poker, you don't put everything down before you see the last card or the third card coming out. So bottom line is, I'm waiting to see what they put in on November 18th that has to be factual, has to show what their concerns are and how we move ahead. So – and then at that point, we'll re-examine. I think we've done a good job so far. I said it before, I was surprised at the comments that we got from one of the STB members, especially when we were the ones that said we'd be open for discussion.

So it is what it is. That's part of the process, and that's why we applied again. With the unions, the BLET, let's get serious. People don't understand this. Again, there's a deal to be made. But every locomotive engineer that's covered under the BLET, the Brotherhood of Locomotive Engineers and Trainmen actually gather and increase their seniority with Smart-TD, who's a proponent for this, who's accepted it and sees the benefit. If somebody from the BLET gets cut back and they can't hold as an engineer, they become a conductor and guess what? So they're all protected already. I have no idea what – I've already got a deal that covers every one of our locomotive engineers at both railroads.

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So I have no idea what the BLET is doing. They want to get something like job protection for life. I'm not into that. I'm not setting this company. So I'm not going to do things that are going to hurt this company. And I know I'm going longer than I should. At the end of the day, if anybody thinks we're going to make a bad deal for Union Pacific, we're not. We will walk away from this. We're pretty strong as we've just shown this quarter, and we will move ahead. But it's so good and compelling for the country that it's crazy for us not to push this to the final piece. Anybody else want to comment? But good question. Thank you very much.

Brandon R. Oglenski
Analyst, Barclays Capital, Inc.

Q

Thank you.

V. James Vena
Chief Executive Officer & Director, Union Pacific Corp.

We have time for one more. I think that's it, right? Thank you very much. Okay. Appreciate it. Listen, all I have to say is this is, I'm real proud of the team. I really am. And everybody, the management team, the unionized employees, everybody at Union Pacific, heck of a quarter. And it's about who we are, what we want to do and how we win and move ahead. And I love our competitors getting better. I love our competitors getting more efficient because we make up such a small amount, these railroads of the total products that are moved in the US that we could all grow and win. And we work together so many places together to win. And I think this merger has driven people to get – merger discussion has driven people to get better, and I love it. A little more competition, movement of products more by rail than by truck, decongesting highway systems, decongesting city roads. I'm telling you it's a win-win, and I love it, and we'll talk to you all next quarter.

And Jennifer, in all seriousness, congratulations, okay? Even though I don't understand retirement, but congratulations, enjoy yourself and all the best, and thanks for everything you've done. Thank you very much, everyone.

Jennifer L. Hamann
Chief Financial Officer & Executive Vice President, Union Pacific Corp.

Thank you, Jim.

Operator: Thank you. Ladies and gentlemen, thank you for your participation. This does conclude today's teleconference. You may disconnect your lines at this time, and have a wonderful day.

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EXHIBIT 28

SEPTEMBER 2026

Rail Industry Overview

Record intermodal and broad-based carload gains point to continued economic momentum.

In August 2026, U.S. railroads averaged nearly 297,000 intermodal containers and trailers per week, up 4.4% over last year and a new monthly record (breaking the previous record set in June 2026). August was the seventh straight year-over-year gain for intermodal.

Meanwhile, total U.S. rail carloads (not including intermodal) averaged more than 235,000 per week in August, the most since October 2019 and their eighth straight year-over-year gain. Combined U.S. carload and intermodal volume in August was the most in nearly eight years.

Key Takeaways

- **Intermodal keeps setting records.** August volume reached a new monthly record, while year-to-date volume through August was also the highest ever.
- **Carload gains are unusually broad.** Fifteen of 20 major carload categories saw year-over-year gains in August, helping push total monthly carloads to their highest level in nearly seven years.
- **Manufacturing is providing another tailwind.** Broad-based factory expansion is supporting gains in chemicals, metals, construction materials, and other rail-served commodities.
- **The near-term signal remains positive.** Risks remain, but rail traffic and other economic indicators currently point more toward continued growth than a meaningful slowdown.

Subscribe to receive the Rail Industry Overview directly in your inbox.

The significance goes beyond rail. The combination of record intermodal traffic and broad-based carload growth points to resilient consumer demand, improving manufacturing activity, and a rail value proposition that is increasingly compelling for shippers.

Intermodal is benefiting from several powerful tailwinds.

Given recent intermodal monthly records, it's no surprise that year-to-date intermodal volume through August was a record too. Strong rail service offerings and higher trucking costs (higher fuel prices, higher insurance and maintenance costs, fewer available drivers) are enticing more shippers to use rail.

Resilient consumer spending means the amount of freight needing to be transported remains robust. And seasonal factors, including back-to-school demand and preparation for the upcoming holiday season, mean August is typically one of the highest volume months of the year for intermodal.

Taken together, these forces provide a strong near-term backdrop for intermodal. Conditions can change quickly, but there is little in the current data to suggest momentum is fading.

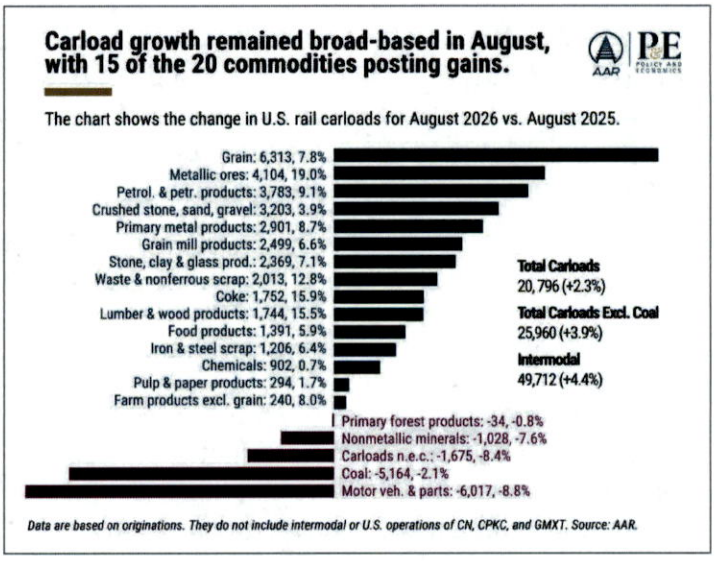
EXHIBIT 408
WIT: McClellan
DATE: 10-9-26
MLR, CSR, RPR, CRR, CCR

Carload growth is unusually broad.

On the carload side, rail gains in August were again broad-based, with 15 of the 20 carload categories posting year-over-year increases. Excluding coal and grain (whose volumes tend to rise or fall for reasons mostly unrelated to the state of the economy), the carload categories combined that posted gains in August accounted for an unusually high 84% of total carloads.

Put another way, August carload growth was widespread across economically sensitive freight categories, and the breadth of those gains was unusually strong compared with a typical month. Breadth measures such as this help distinguish between isolated pockets of strength and pervasive improvements that are more likely to be sustained.

In August, year-over-year carloads of chemicals rose for the seventh time in the past eight months, thanks to low natural gas prices and improving manufacturing health. Chemical carloads are on pace to set a new annual record this year.



Steel-related products have enjoyed solid year-over-year carload gains in recent months, including in August. In August, for the first time in nearly five years, carloads of metal products averaged more than 9,000 per week. Carloads of crushed stone and sand, used heavily in construction and extractive industries, were the highest in August in nearly three years.

Grain carloads were up in August for the tenth straight month, and they again had the biggest absolute year-over-year gain among carload categories. Through the first eight months of 2026, grain carloads were up 12%, thanks mainly to strong grain exports.

When chemicals, metals, construction materials, agricultural products, and other commodities all post rail freight gains at the same time, it suggests economic growth is being driven by a wide range of industries, not just a few isolated sectors.

On the downside, U.S. carloads of motor vehicles and parts were down sharply in August, but that's more a function of unusually high carloads last August than low carloads this August. Year-over-year carloads of coal fell in August 2026 for the sixth straight month. Including coal, total U.S. carloads rose 2.3% in August; without coal, they rose 3.9%.

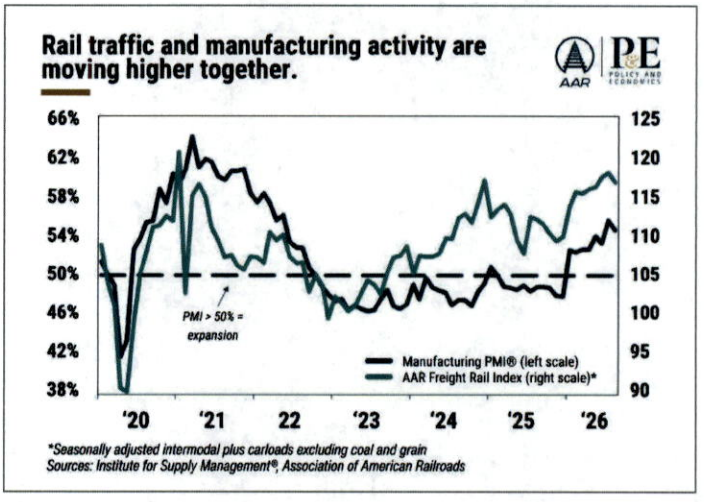
The AAR's Freight Rail Index (FRI) strips out coal and grain and seasonally adjusts the remaining traffic to provide a clear view of underlying freight demand. In August, the index fell slightly from July but remains at one of its highest levels ever, signaling that underlying goods movement remains strong.

Another sign of stronger rail demand is appearing in the equipment fleet. The number of freight cars in storage fell by another 6,700 in August, bringing the number taken out of storage since January at more than 59,000. Cars in storage as a share of total cars in service fell from 21.7% in January 2026 to 18.1% in August 2026. A decline in stored cars suggests railroads and other freight car owners are putting more equipment back into service, reflecting stronger traffic volumes and stronger demand for rail transportation.

The manufacturing rebound is showing up in rail traffic.

The Manufacturing PMI® in August saw its eighth straight month above 50%, signaling manufacturing expansion. Like rail traffic, this expansion is broad-based: of the 18 industries tracked by the ISM®, 15 had growth in both July and August.

Meanwhile, manufacturing output as measured by the Federal Reserve was higher in July than in any month since mid-2022. This manufacturing improvement is clearly positively impacting rail volumes.



The broader economy presents a mixed picture.

Economic expansions are rarely uniform. Strength in one corner of the economy often coincides with weakness in another. The latest data continue to tell that story.

U.S. GDP grew 1.5% in Q2 2026 over Q1 2026. However, final sales to private domestic purchasers (a broad measure that excludes inventories, government spending, and trade) rose 4.2%, reflecting stronger underlying private-sector demand than suggested by total GDP. Manufacturing expansion is well underway; the ISM's services index was in expansion territory in August for the 26th straight month; August net new job growth was strong; unemployment stayed low; and consumer spending growth continues to outpace GDP growth.

On the other hand, inflation has exceeded the Fed's 2% target for more than five years; housing remains weak amid high mortgage rates; and consumer confidence is near historic lows. Uncertainty regarding global geopolitics and global and domestic economic policies persists.

The freight economy is still signaling growth.

No single indicator can settle the debate over the economy's direction, but when viewed alongside the broader economic evidence, recent rail traffic suggests growth in the goods economy remains intact. The current expansion may be uneven and subject to ongoing risks, but freight data continue to align more closely with continued growth than with an economy that is losing momentum.

EXHIBIT 29

EXHIBIT
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S&P Global
Market Intelligence

Union Pacific Corporation NYSE:UNP
FQ2 2026 Earnings Call Transcripts
Thursday, July 23, 2026 12:45 PM GMT
S&P Global Market Intelligence Estimates

	-FQ2 2026-			-FQ3 2026-	-FY 2026-	-FY 2027-
	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS	CONSENSUS	CONSENSUS
EPS Normalized	3.23	3.41	▲5.57	3.37	12.75	13.88
Revenue (mm)	6712.80	6864.00	▲2.25	6750.55	26246.12	27415.99

Currency: USD
Consensus as of Jul-23-2026 8:14 AM GMT

Stock Price [USD] vs. Volume [mm] with earnings surprise annotations



- EPS NORMALIZED -

	CONSENSUS	ACTUAL	SURPRISE
FQ3 2025	3.00	3.08	▲2.67 %
FQ4 2025	2.87	2.86	▼(0.35 %)
FQ1 2026	2.86	2.93	▲2.45 %
FQ2 2026	3.23	3.41	▲5.57 %

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Call Participants

EXECUTIVES

Eric J. Gehringer
Executive Vice President of Operations

Jennifer L. Hamann
Executive VP & CFO

Kenny G. Rocker
Executive Vice President of Marketing & Sales

Unknown Executive

Vincenzo James Vena
CEO & Director

ANALYSTS

Ariel Luis Rosa
Citigroup Inc., Research Division

Bascome Majors
Stephens Inc., Research Division

Brandon Robert Oglenski
Barclays Bank PLC, Research Division

Brian Patrick Ossenbeck
JPMorgan Chase & Co, Research Division

Christian F. Wetherbee
Wells Fargo Securities, LLC, Research Division

David Scott Vernon
Bernstein Institutional Services LLC, Research Division

Harrison Ty Bauer
Susquehanna Financial Group, LLLP, Research Division

Jason H. Seidl
TD Cowen, Research Division

Jeffrey Asher Kauffman
Citizens Bank

Jonathan B. Chappell
Evercore ISI Institutional Equities, Research Division

Jordan Robert Alliger
Goldman Sachs Group, Inc., Research Division

Kenneth Scott Hoexter
BofA Securities, Research Division

Madison Jade Pasterchick
Morgan Stanley, Research Division

Richa Harnain
Deutsche Bank AG, Research Division

Stephanie Lynn Benjamin Moore
Jefferies LLC, Research Division

Thomas Richard Wadewitz
UBS Investment Bank, Research Division

Walter Noel Spracklin
RBC Capital Markets, Research Division

ATTENDEES

Unknown Attendee

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Presentation

Unknown Attendee

Thank you for accessing Union Pacific Corporation's 2026 Second Quarter Earnings Conference Call held at 8:45 a.m. Eastern Time on July 23, 2026, in Omaha, Nebraska.

This presentation and the accompanying materials include statements that contain estimates, projections or expectations regarding the company's financial results and operations and future economic conditions.

These statements are forward-looking statements as defined by the federal securities laws. Forward-looking statements are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in the statements. The materials accompanying this presentation include more detailed information regarding forward-looking information and these risks and uncertainties. In addition, please refer to the company's website and SEC filings for additional information about our risk factors.

Operator

Greetings, and welcome to the Union Pacific Second Quarter 2026 Earnings Call.

[Operator Instructions]

As a reminder, this conference is being recorded, and the slides for today's presentation are available on Union Pacific's website. It is now my pleasure to introduce your host, Mr. Jim Vena, Chief Executive Officer for Union Pacific. Thank you, Mr. Vena, you may begin.

Vincenzo James Vena
CEO & Director

Thank you, Rob. Really appreciate it. Listen, a pretty special day here today. Great day to be putting our results out for the second quarter. And it's my wife's birthday. So it's a double win. And she would have complained big time if this quarter wasn't good. So let me just highlight how it is moving forward. She might have been mean to me today. So why don't we get started? Here with me today in Omaha is our Chief Financial Officer, Jennifer Hamann; our Executive Vice President of Marketing and Sales, Kenny Rocker; and our Executive Vice President of Operations, Eric Gehringer. Good day railroad out there. Weather is good, little storm coming in, but nothing we can't handle, right, Eric?

Eric J. Gehringer
Executive Vice President of Operations

Yes.

Vincenzo James Vena
CEO & Director

Perfect. Now let's review the highlights on Slide 4. This morning, we reported record financial results driven by strong execution and 2% volume growth. Net income totaled $2 billion, and earnings per share after we adjust for merger costs grew to $3.41. There was a lot of ins and outs as we compare our performance against last year. Fuel was a big driver of both surcharge revenue and expense this year, and we had some one-timers we called out last year. But what's really important is when we remove all of that, we see solid core improvement in our results with growth in revenue and operating income, and we were about 10 basis points better on our operating ratio. Now the team will walk you through the quarter in more detail, and then I'll come back and wrap it up before we go to Q&A.

I'm very excited this morning on the Q&A, looking for some great smart questions from our smart analysts and owners. We'll start with Jennifer and the second quarter financials. Jennifer?

Jennifer L. Hamann

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Executive VP & CFO

All right. Thanks, Jim, and good morning, everyone. Let's begin with our second quarter income statement on Slide 6, where operating revenue of $6.9 billion increased 12% versus last year, and freight revenue also grew 12% to $6.5 billion. Breaking down the drivers of freight revenue, volume growth added 225 basis points. Fuel surcharge revenue added 750 basis points and increased roughly $460 million, reflecting the impact of higher year-over-year fuel prices and volume.

Solid core pricing, combined with business mix to drive 175 basis points of freight revenue improvement. Importantly, our quarterly pricing dollars continue to exceed inflation dollars as we compete and win business at levels that reflect the value of our rail service. I also want to call out that second quarter business mix was a slight headwind in the quarter as growth in domestic intermodal outpaced expectations and offset the mix benefit of less international intermodal traffic.

Wrapping up the top line, other revenue increased 11% to $346 million as higher volume drove increases in both subsidiary and accessorial revenue. Turning to expense. Our appendix slides provide more detail as total operating expenses increased 13% to $4.1 billion, primarily from higher diesel fuel prices. Compensation and benefits expense improved 1% against last year's reported results, which included the final brakeperson buyout agreement of $55 million. Excluding that agreement, second quarter cost per employee increased 7%, driven by higher wage and benefit costs.

A key driver to offsetting wage inflation is workforce productivity, and we have delivered 8 consecutive quarters of record results. Although we're confident we'll continue that productivity trend, we now expect full year compensation per employee to increase around 6%. Fuel expense grew 63% on a 60% increase in average fuel price and 2% higher gross ton miles.

Year-over-year, our price per gallon grew from $2.42 to $3.86 and added 120 basis points to our operating ratio. Purchased services and material expense increased 10% due to merger-related costs as well as higher intermodal and subsidiary expenses. Despite increased volume, fewer operating equipment leases and record second quarter cycle times drove a 7% reduction in equipment and other rents and other expense grew 13% on higher casualty costs.

Income tax expense increased 29%, reflecting last year's onetime $115 million deferred state tax benefit and higher pretax income this year, partially offset by some good news in 2026 from state taxes.

Put it all together, we had a record quarter with reported earnings per share of $3.36. Adjusted for merger costs, our earnings per share totaled $3.41 and operating ratio was 59.2%. Turning to cash and returns and the balance sheet on Slide 7. Our strong financial results carried forward into cash from operations of $5.5 billion, up 21% versus last year. Free cash flow totaled $1.8 billion after we reinvested in our network and returned an industry-leading dividend to our shareholders. We also paid down $1.5 billion of long-term debt in the first half of the year, resulting in an adjusted debt-to-EBITDA ratio of 2.5x.

Turning to our outlook on Slide 8. We have delivered a very strong first half 2026 as we execute on our strategy and deliver improvement in safety, service and operational excellence, leading to carload growth. From that focused approach, we have generated reported earnings per share growth of 6% year-to-date, in line with our January outlook. Looking to the remainder of the year, we are raising our 2026 outlook to reported EPS growth in the high single-digit range as we continue to efficiently move increased volume on our network. We also expect to continue delivering operating ratio improvement and maintain our position of industry leadership even against ongoing margin pressure from fuel. Fuel prices remain volatile, and our recent purchases have been over $4 a gallon.

Overall, a strong first half of 2026, coupled with an improved outlook, highlight our ability to grow volumes, deliver for customers and manage costs, a strategy that delivers value for all of our stakeholders.

With that, I'll turn it over to Kenny.

Kenny G. Rocker
Executive Vice President of Marketing & Sales

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Thank you, Jennifer, and good morning. We had a very strong second quarter as freight revenue grew 12% to $6.5 billion. And if you exclude fuel surcharge, grew 4% to $5.5 billion, both were best ever records. Let's walk through the key drivers on Slide 10. Starting with our Bulk segment, revenue was up 7% compared to last year on a 1% decline in volume. Grain & Grain products had double-digit volume growth in the second quarter, driven by strong export demand, facility expansions and growth in renewable fuels and associated feedstocks. That resulted in record second quarter volume and revenue. Meanwhile, coal volume was challenged by weaker natural gas prices, mild weather across our served locations and customer downtime. These factors adversely impacted overall demand.

Shifting to Industrial. Revenue was up 8% on a 3% increase in volume. When you exclude fuel surcharge, strong core pricing gains delivered record freight revenue and average revenue per car. Petrochemicals growth was driven by improved demand and new business. In Metals & Minerals, volumes rose to -- on higher domestic steel production and business development wins, more than offsetting the ongoing weakness in the export soda ash market. Premium revenue for the quarter increased 21% on a 4% increase in volume and a 16% increase in average revenue per car, reflecting higher fuel surcharge, core pricing and improved business mix.

Domestic Intermodal delivered its fourth consecutive record quarter in both volume and revenue. It's evident our outstanding service set the foundation to grow the business, and that's exactly what we're doing. In the second quarter, private asset, rail asset and parcel volumes were all up double digits, benefiting from constrained truck capacity and share gains. Our buffer resources allowed us to respond quickly to increased customer demand. International Intermodal volume was down 14% versus last year. However, we saw improvement as we close out the quarter, driven by stronger West Coast import volumes.

In automotive, results were positive despite market softness due to strong business development results. Looking ahead on Slide 11. Grain & Grain products is positioned for further second half growth driven by strong export demand, ongoing business development and new facility openings. I'm excited about AGP's new export facility that opens next week in Grays Harbor, Washington. We also see continued upside from growing renewable fuels and feedstock markets supported by greater policy certainty.

In Coal, elevated inventories and lower natural gas prices will make for a challenging second half. We will continue to watch this market closely, but Eric and his team have proven they can quickly flex to handle shifts in volume. Business wins are also helping to offset some of the market-driven declines.

Moving to industrial. We still see a soft housing market, but we remain firmly focused on winning new business and outperforming industrial production. We expect continued strength in metals, growth from industrial development efforts and increased petrochemicals from customer wins like the start-up of CPChem that I mentioned last quarter. And wrapping up with premium, we expect domestic intermodal to continue to perform very well, supported by over-the-road conversions and our service product. International Intermodal will fully lap last year's tariff volatility in August, and we expect volume to be positive in the second half. And for automotive, we expect new business to offset market weakness. So while we're proud of the record second quarter, the team is focused on capturing the opportunities ahead.

Our approach does not change, price for the service we provide, invest for growth and keep winning new business. And with that, I'll turn it over to Eric.

Eric J. Gehringer
Executive Vice President of Operations

Thank you, Kenny, and good morning. We delivered record second quarter operating performance, ran a fluid network and improved safety, all while handling 2% more volume. It all starts with safety, and both employee and derailment rates improved versus their respective 3-year rolling averages, highlighting the team's dedication to critical safety rule compliance and human factor prevention initiatives.

Moving to Slide 13. We provided exceptional service as freight car velocity increased 5% to 231 miles per day and set a second quarter record. Train speed increased 3% and terminal dwell improved 7% as we tied our first quarter record of 19.7 hours, our third straight quarter below 20 hours. Both the intermodal

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and manifest service performance indices finished at 95%, demonstrating our ability to execute on the fundamentals and effectively utilize our buffer of resources.

This enabled the team to support double-digit Domestic Intermodal growth at very high service levels. And remember, this bar only gets harder for us as it resets based on monthly best, which we achieved in 2025. Opportunities remain to improve, and we are committed to providing consistent reliable service while growing with our customers.

Moving to Slide 14. Our key efficiency metrics reflect our commitment to operational excellence as we delivered record workforce productivity, record train length and record fuel consumption. The team is relentlessly focused on identifying opportunities to further enhance service, productivity and efficiency across the network by first, executing on the fundamentals, then implementing new technologies and finally, investing prudently back into the railroad.

Locomotive productivity of 142, improved 1% as the average active fleet decreased 1% against 2% higher gross ton miles. We successfully onboarded incremental volume by leveraging existing train starts, demonstrating strong asset utilization and efficiency. Our fuel consumption rate improved 1% as we continue to benefit from fuel conservation initiatives and locomotive technology and modernization investments. Workforce productivity increased 5% on 2% higher volume. Our active train engine and yard workforce decreased 2%, demonstrating our discipline and remaining more than volume variable.

Finally, train length grew 2% versus last year, driven by continued optimization of the transportation plan and reduced train starts. Closing the quarter, we delivered on the fundamentals while growing volumes and effectively serving our customers. We have the capacity to grow while continuing to improve safety and service. As Kenny's outlook has improved, we've been agile and reexamined our base resources and buffer, aligning both to support growth. We are also continuing to make strategic capacity investments, including the Houston Complex, Pacific Northwest siding extensions and Sunset double-track projects. The operating team is demonstrating daily that we are ready to grow with our customers while delivering the service we sold them.

With that, I'll turn it back over to Jim.

Vincenzo James Vena
CEO & Director

Thank you, Eric, Kenny, Jennifer. Why don't we turn to Slide 16. Before we get to your questions, I'd like to quickly summarize what you've heard and provide an update on our merger with Norfolk Southern. As the team walked through, we had a very strong second quarter as volumes, pricing and operational efficiency drove record financial results. The network continues to be very fluid and our buffer of resources is supporting broad-based growth. Looking ahead, we are prepared to meet increased customer demand with best-in-class safety, service and operational excellence. For our 2026 outlook, we are raising to full year reported EPS growth in the high single-digit range.

As to the status of our merger with Norfolk Southern, first, we met a very important milestone when the Surface Transportation Board accepted our application is complete on May 28. And on Monday, we will meet another important milestone when we complete the supplemental information asked from the Board. As you see when you read it, we've carefully answered each of the Board's questions. We also -- we've also taken the opportunity to further improve the competitive nature of our merger through an expansion of committed gateway pricing among several other voluntary commitments.

This is in addition to the merger benefits of seamless single-line service, better reliability, lower costs and greater competition against trucks and other railroads. Also yesterday, we announced that we reached a merger settlement agreement with the railroad I used to work for Canadian National.

I said from day 1 that our merger will create a stronger railroad industry that delivers better service for customers. Our agreement with CN, Canadian National, reinforces those commitments. Our merger is unprecedented and deserves a careful review. We've done our homework. Now versus almost 1 year ago when we first announced our plans to merge, we have even more conviction that our transaction is in the public interest and will deliver benefits for our stakeholders, especially our customers.

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The case for our transcontinental railroad is clear, and we're ready to go. With that, Rob, we're ready to take questions.

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Question and Answer

Operator

[Operator Instructions]

And the first question is from the line of Ken Hoexter with Bank of America.

Kenneth Scott Hoexter
BofA Securities, Research Division

I guess a 2-parter. One, a little confusion on the $0.14 fuel gain. Is that just all upside from fuel and the pricing? Maybe if, Jen, you could just delve into that a little bit. And then if you can expand on the commercial agreement with CN, the access to the EJ&E, maybe talk about what that gives you and what you're giving up on the network down south.

Vincenzo James Vena
CEO & Director

Jennifer, why don't you?

Jennifer L. Hamann
Executive VP & CFO

Yes, Ken, on the fuel piece, we're just calling out the fact that it did have the 120 basis point headwind to our operating ratio mathematically. But then when you look at the difference between expense and surcharge, the benefit there was the $0.14.

Vincenzo James Vena
CEO & Director

Okay. And on the Canadian National announcement yesterday, it was in 2 parts. The one part was something that we knew that we wanted to make sure, and we said it right from the start and when we looked at with the merger that we needed to do something. And we've told the Surface Transportation Board twice that we never wanted to take control and get over 50%.

In fact, we called meetings at the TRRA and the other railroads didn't show up. But at the end of the day, the nice part about the deal is that clears that up as far as ownership of the Kansas City Terminal and TRRA. It also allows Canadian National to come over between St. Louis, just east of St. Louis to Kansas City and give optionality to the customers in those area because we would have ended up with the 2 rail lines that we use in directional, and we would have had another one.

So we thought it was prudent for us not to be too concentrated. Again, that was the only part of the company where we have a significant overlap, and that was a pretty small area when you take a look at the entire railroad. So with Canadian National, we've got an MoU that takes care of that. And then we also talked about -- and it goes with our commitment to keep every gateway open.

And Canadian National says, listen, can we figure out a way to get into Mexico to be able to move traffic and use -- we could still use Chicago if we wanted to, but we want to be clear that we could use a priority location that they find better to be able to have access into Mexico, and we worked out a deal.

And for that, we said, listen, we want better access through Chicago, east-west. And sometimes people look at things in the short term instead of long term and they don't understand. Listen, I've worked in Chicago and I worked at Canadian National, where it took us longer to get a train from the north side of Chicago to the south side of Chicago, where our terminal was than it did to run it from Prince Rupert to the northern part of Chicago.

So any time a railroad can figure out a way to be able to run much more seamless east-west to make interchange connections or run through trains, that's what we've done. It's a win-win. It's a win for Union

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Pacific, and it's also a great position for Canadian National. I think it's a deal that is going to help both of us be able to increase traffic from both of us because of what we're able to take off the roads and move more of it on the rail. So Ken, maybe you didn't want that much detail, but I just gave it to you, okay?

Operator

Our next question is from the line of Chris Wetherbee with Wells Fargo.

Christian F. Wetherbee
Wells Fargo Securities, LLC, Research Division

So maybe sticking on that topic, I guess I just wanted to kind of see if you could expand a little bit on how you think this plays out both from like a revenue synergy perspective. I think there's initially an initial thought in the initial merger agreement, there was some concessions baked in several hundred million dollars of potential concession. So maybe thinking about this agreement that you've constructed and how it may influence some of the revenue synergies and concession numbers?

And then maybe bigger picture, is this the first of what could be multiple of these types of arrangements? I guess how do you feel about the receptivity of the rest of the rail industry? This is a big move coming from potential opposition to agreement to get on board with the deal? Just want to get a sense of how you see the landscape right now.

Vincenzo James Vena
CEO & Director

Yes. Listen, Chris, I won't get into too much detail, some other discussions we've had. But I'll tell you that if people are reasonable, we are more than willing to come. And this one is a reasonable expansion for Canadian National, and it's great for Union Pacific.

As far as the impact, listen, we knew we were going to have to do that. We see this as for both of us, a growth story, not a limiting factor on business. So this will not impact what we're doing. Remember, we're still going to have to have them operate on our railroad to get to Mexico. So it's not like -- and what it does is it makes them much more competitive against the Canadian Pacific, Kansas City.

So they're able to originate out of Canada and compete head on and sell a direct link. And we see that as them being able to grow more business and not be less and then we should be able to get more revenue on trackage or whatever else that we do in how we finalize the deal. So it's a real positive, Chris.

Jennifer L. Hamann
Executive VP & CFO

Yes. And I would just say a big part of it, which is addressing the 3-to-2, 2-to-1 as well as access into Kansas City was all part of what we knew we were probably going to have to do something to address that. So all part of our thinking.

Operator

The next question is from the line of Walter Spracklin with RBC.

Walter Noel Spracklin
RBC Capital Markets, Research Division

And I know, Jim, as you mentioned, you worked a lot on the EJ&E certainly when we first met and some of the looparounds and efficiencies you get and as you translate into the transcon solution is quite compelling. Curious whether -- when you were talking to CN, does this open the avenue now for more cooperation with CN? Or is this something, okay, we've addressed this now with CN, let's move on to any of the other railroads.

Just curious whether you're seeing this as, okay, that's one player we've addressed and now we move on? Or is there avenue for further opportunities with CN that might have come up in the conversations?

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Vincenzo James Vena
CEO & Director

So listen, let's start with fundamentally, we would have never been able to get to this kind of deal with Canadian National if it wasn't because of going through the merger, okay? So that's the problem with people, anybody thinking that it's easy to make a deal with another railroad or another company is, Walter, pretty tough, okay? So it was the merger that drove this, and it was something that helped us and helped Canadian National. It truly is a win-win.

I'm not sure what the next step is, okay? I really don't. What I'd like to make -- and the problem we have is because we do not have a whole bunch of overlap. We've basically dealt with 2-to-1 and 3-to-2 customers even. There isn't a lot else that we need to give up. Like what is it that you give? You give access to somebody around Nashville. Well, we'd like access to a different part to Florida, further south in Jacksonville.

So at the end of the day, it's going to be difficult, but we're always open to have discussions. We really are. And if something happens, and I love our relationship with Canadian National, but I'll tell you, they don't give me any deference because I know their railroad. I'll be honest. They're tough negotiators. Son of a gun, okay? I was hoping I didn't have to give them that much access into Mexico.

But at the end of the day, they're tough negotiators, they're smart, but I like that. That's what you want, Walter, is to be able to move the deal forward together. And if there's other things that we can figure out how to do, we'll do that. We really will. But I don't see a whole bunch of things that are sitting on the platter.

And Walter, because I think you've met my wife, you know I would never take her out for a burger, okay? Sometimes I like having a joke, like the chance of me having a marriage for 43 years like I have or 44 years and take her out for a burger for a birthday, that would not work out good, okay?

Walter Noel Spracklin
RBC Capital Markets, Research Division

Because McDonald's is not on the menu. I got it.

Vincenzo James Vena
CEO & Director

We're in Omaha. It should be like a nice steak from Omaha. I'm telling you nice way I go from a farm out in Iowa or Nebraska, I'm looking forward to it tonight.

Operator

The next question is from the line of Jonathan Chappell with Evercore ISI.

Jonathan B. Chappell
Evercore ISI Institutional Equities, Research Division

Jennifer, shifting gears away from the merger for a second. You raised the EPS guide versus 3 months ago while also raising the outlook for your most important cost line item with the cost per employee. So can you help us kind of solve then for where the majority of the upside is coming from? Is that volumes running better than expected? Is it surcharge tailwind benefiting you more than you thought in 2H, more productivity and other line items? How do we kind of rectify those 2 changes?

Jennifer L. Hamann
Executive VP & CFO

Yes. I mean I think you kind of answered your own question there a little bit, Jonathan. It really is a number of different things. Certainly, when you hear Kenny talk and look at his outlook in terms of how the business is performing and what we see the opportunity for the second half of the year, it's stronger than what we thought it was coming into the year, which is great news, and we feel very bullish about that.

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And then you see how Eric and his team are handling that increased volume, doing it very efficiently, in a very cost-efficient manner and giving a great service product to support our customers as they're growing their business. So it's all of those things, and we feel great about it. It's a great setup for the first half and looking forward to a strong second half.

Operator

The next question is from the line of David Vernon with Bernstein.

David Scott Vernon
Bernstein Institutional Services LLC, Research Division

So I'm going to try to squeeze 2 into here because you guys are quick on the next question. The first question is really around the outlook for the second half. Kenny, you sound pretty positive about everything except coal, which sounds like a throwback to last decade.

I wanted to ask if you're seeing any sort of broadening of industrial demand outside of anything related to sort of data center construction, anything that you're seeing in the economic tea leaves that would tell you that we are starting to see some broader industrial recovery kind of building up?

And then the second question would be around the Falcon service, right? How does this agreement sort of change that? Or is CN going to be running some of its own trains? Like how does -- or is that totally separate from what you guys announced today?

Kenny G. Rocker
Executive Vice President of Marketing & Sales

Yes. So the first question, we look at car orders, and we're at 100% fulfilling those. And those are up slightly. And so yes, if you look at it broadly, if you look at the car orders, and I'm talking across the board, there is some slight uptick that's there.

You're also seeing that in the momentum that we talked about on the industrial side, that's largely a lot of our carload business where we've had record average revenue per car and candidly, record revenue that's there. So that's encouraging to us as we move and turn into the second half. And then there are some things that we're doing to make our lot -- life a lot better. So you look at Grain & Grain products, we've got a few more facilities that are coming online, some that are exports, some that are domestic.

Automotive is -- it's not a great overall macro area, but we won new business to go out and compete in that area. So a little bit of a macro bump on the industrial side, but also we're balancing that and supplementing that by winning new business. I think the second question was around the Falcon.

Our Falcon product with CN is going well. The service product is strong. Eric, you've really helped us on the CN there. So as we look at Mexico, again, and you can see the numbers in Mexico, we've done well in Mexico, and we see that occurring as we go through.

Vincenzo James Vena
CEO & Director

Kenny, sorry for interrupting or Eric, you guys should talk about -- we've talked about open gateways and the Falcon was through Chicago, but we have no problem with making sure that the other railroads come to our network and move the way the customers want it to move.

Eric J. Gehringer
Executive Vice President of Operations

So when we think about the Falcon, it is independent of this. And to Jim's point, our commitment as part of the merger, which has remained unchanged and will remain unchanged, is full access to all the active interchange points. And when some people think about that, they underestimate when I say interchange points, they think of places like Chicago and New Orleans, which are obviously incredibly important to us and all the other railroads.

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But just remember that every single day, there's 260 interchange points across the Union Pacific network as we sit here today. So we're really committing to that. 260 open interchanges just like they were yesterday, just like they were a month ago, and that's going to remain that because to Jim's point, our partnerships with all of the railroads are incredibly important when you consider 40% of our volume every day is interchanged to another railroad or received by us from another railroad.

Operator

Our next question is from the line of Stephanie Moore with Jefferies.

Stephanie Lynn Benjamin Moore
Jefferies LLC, Research Division

I guess I wanted to maybe ask a bigger picture question here for whoever on the team would like it. But I wanted to ask a little bit about just maybe the reindustrialization theme that we're seeing across the U.S. and maybe that means a bit more domestic manufacturing and maybe less imports coming on to the West Coast. So can you maybe frame how you think the network is positioned to handle what could be a pretty big medium-term theme here over the next 5, 10 years?

Vincenzo James Vena
CEO & Director

So Kenny, why don't you talk about what you see with all the construction, different products, hot markets, cooler markets real quick. And then Eric talk about the railroad and how it is.

Kenny G. Rocker
Executive Vice President of Marketing & Sales

Yes. Stephanie, you're really asking about what we call our industrial development area where we're either expanding at a plant or locating a new customer on our network, and that pipeline has remained strong. And we've seen a lot of new customers come on to our network. I talked about AGP, which is a grain customer. But then we've also seen it with Hyundai Steel that's bringing on new production here in the U.S. into the Gulf.

That pipeline is strong, and we see it show up in other areas. Someone talked a little bit earlier about the data centers, but we're seeing really good strength, really good pipeline. We're converting that at a great rate. We're seeing a robust number of RFIs, meaning our opportunity to compete in that area.

And so we're bullish and we're excited about that. We've been able to convert on that.

Eric J. Gehringer
Executive Vice President of Operations

And then, Stephanie, as far as the railroad's ability to handle it, we are and we remain poised to be able to handle that growth. You saw that a couple of examples here recently. You go back to last year with a 33% increase in International Intermodal, and we handled it. We handled it well.

Then you look at what's happened in the Domestic Intermodal market, which credit to Kenny and his team, they've done a great job bringing that growth to our railroad. And you've seen us handle that exceptionally well, especially when you see 5% increases on car velocity in a period of the year where historically, no matter how many years you go back, we actually would degrade by about 15 to 20 miles per day.

But 50 days into the summer, we haven't had any degradation, and we don't plan to have any degradation. Now that really tells you that the fundamentals of the railroad are strong. Every single metric I gave this quarter, last quarter, the quarter before that indicate that we're not only strong, but we continue to make more progress.

Now on the capacity side, to be able to handle that, and you used examples like the West Coast and Mexico, think about what we've been doing, and this is not a new thing. We've always invested in our capital, invested that into the railroad prudently. So whether you're thinking about the more than $125

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million we've invested in our Houston Complex, whether you think about our continued work to finish double tracking the Sunset Route from Yuma all the way to Tucson so that we're actually double track all the way to El Paso.

And even on the bulk side and the manifest side, when you think about our siding construction projects and siding extension projects up in the Pacific Northwest and across Iowa, we are poised. We'll continue to be poised and we'll continue to maintain a buffer so that when unexpected growth comes because of all of Kenny's team's hard work, we can bring it on to the railroad with an immediate yes to our customer.

Jennifer L. Hamann
Executive VP & CFO

Yes. And just one last thing to add there, Stephanie. So you've heard us talk about our pipeline of industrial projects where you're -- and Kenny mentioned the RFIs. We've got about 200 of those in the pipeline today. It's a very strong pipeline. So we feel very bullish about our opportunity to continue to grow there.

Operator

The next question is from the line of Tom Wadewitz with UBS.

Thomas Richard Wadewitz
UBS Investment Bank, Research Division

Congratulations on this deal with CN. That seems like a really nice step forward for you in terms of making the case with STB. I wanted to ask you just for a little more kind of understanding on how you would view that deal. So -- can you give us any kind of framing of say, 3-to-2, 2-to-1 customers when you consider the customers on St. Louis to Kansas City or in St. Louis area that CN is getting access to.

How large is that group? Is that like 5 customer facilities? Is that like 50? Is there any way to kind of frame that? And then I guess the other component would just be their access to your line on Memphis to Eagle Pass. Would you expect CN to compete with you on business to and from Mexico? Or is that like, hey, this is going to really enable them to compete with CP on business that's more like, call it, Eastern Canada to Mexico. Just want to see if you could give us a little bit more perspective on kind of the -- how meaningful that is and how you think it affects the competition?

Vincenzo James Vena
CEO & Director

Okay. The new deal is Canada to Mexico. So it's not competitive with us. It's good for both of us. It allows them to sell it. Second is as far as the number of 3-to-2, and 2-to-1, it's in the application, Tom. It's absolutely a small number. Less than -- out of the thousands of customers we have, we're talking about a couple of handfuls if that. Jennifer, what's the exact number? I don't want to put the wrong number.

Jennifer L. Hamann
Executive VP & CFO

I think the...

Vincenzo James Vena
CEO & Director

Because it's been fricking moving...

Jennifer L. Hamann
Executive VP & CFO

Yes, the 2-to-1 is 3 or 4 and 3-to-2, I think, is low 30s.

Vincenzo James Vena
CEO & Director

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Right. So that's it. So out of all our customers. And we said that we would fix the 2-to-1s, and we have a remedy even for the 3-to-2s, which truly is -- let's get serious. If somebody has 2 plus [indiscernible] they should be competitive. But we want to make sure that there's no question about leaving every optionality that people have.

Tom, I'll take exception to one thing on yours. It's pretty straightforward. This merger doesn't need a lot of help, okay? And I've been pretty adamant about this. And what people are missing is when you give customers a seamless single-point railroad that can move things a larger -- a longer distance, that is automatically makes the thing less expensive for the customer and more competitive against any other product that's out there.

So people want to make noise about whether we need to help this. I think the CN deal, the Canadian National deal, is great for both of us with EJ&E and Mexico and then within the piece, but we're talking a small number of customers.

This is a growth deal. We see taking trucks off the road to go across the U.S. faster and take things that are right now going through cities and less fuel efficient, more greenhouse gas impacting roads that, of course, everybody knows trucks do not pay their full share of the construction and capital costs on the interstate system while we pay for all ours, but we want to put them on our railroad.

So this is truly more compelling today than we looked at it than ever before. And you can see because it only touches -- think about that, less than 10 customers go 2-to-1. This is truly an end-to-end that wins. We think we have a strong case. People -- they can write stories that aren't factual, can say whatever they want. The facts are pretty clear. So you got me going a little bit this morning.

Thomas Richard Wadewitz
UBS Investment Bank, Research Division

Jim, do you think you'll get a shipper agreement as well? Are you optimistic on that?

Vincenzo James Vena
CEO & Director

Sorry, you broke up on one piece. What did he say?

Thomas Richard Wadewitz
UBS Investment Bank, Research Division

No, I'm just -- I'm saying like -- yes, you got this agreement with CN. Do you think it'll announce some kind of big shipper agreements as well or maybe not after a while?

Vincenzo James Vena
CEO & Director

Listen, we talk to our customers all day, and we have set a number of customers that -- and how do we move ahead? How do we make sure that they understand how it is and how they can win in the marketplace. So yes, we're not going to announce them because they're private deals. But at the end of the day, absolutely, we've been talking to a lot of customers.

I sent the letter to our top 50 customers saying, if you have any questions about the business that we're doing together, and I sent it to their CEOs, here's my phone number, give me a call, text me, and we'll get the teams together to go through detail so you understand what the benefits are.

I had a meeting on Monday with one of the big shippers here in the Midwest, and they're not going to come out and he told me black and white. He says, "Listen, I'm not going to come out to support it because other people have not worry about what they might say and do if I do."

But at the end of the day, he says, I see the advantage. If we're moving pulse products from the Southeast U.S. to the West, which they are, they would -- they see the seamless. So customers, absolutely. And thanks for the question. It got me to fill in all the gaps of what I haven't been able to say yet this morning. So I appreciate it.

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Operator

Next question is from the line of Brian Ossenbeck with JPMorgan.

Brian Patrick Ossenbeck
JPMorgan Chase & Co, Research Division

Maybe just one real quick for Jennifer and then a couple for Jim. Jennifer, the comp per head up 6%. I mean, typically, you have good visibility on that to start the year. It continues to move up a bit. Just wanted to see what the driver was for that.

And then, Jim, you mentioned or hinted that there'll be some, I guess, improvements expanding of the CGP and a couple of other, I guess, voluntary enhancements, if you want to call them that, that we'll see on Monday. I wanted to see if you could get a little bit more granular on that, give us a little bit of a preview of what to expect.

And then, of course, the STB had a couple of decisions out yesterday. One that was interesting, just the trackage rights, the reciprocal switching with UP going back to Lake Charles. Is that anything that you think sets the precedent as you start to work towards the merits -- the review of the transaction on the merits?

Vincenzo James Vena
CEO & Director

So real quick on the STB. Listen, I think they were very prudent when they came out with the decisions. And basically, they just said that there are certain things that were in place that just makes sense. And you can't just automatically ask for access for nothing on somebody else's property. It would be like somebody setting up a coffee shop and go into Starbucks and saying, I want to set up a coffee shop in Starbucks because I drove by the fricking place. That doesn't make a particle of sense, and that's what the STB said. So we're very happy. Now are we happy with every decision? No. They want us to put out detailed information on employees. And you think about, we're going -- we've given it to every law firm that covers every person that might want to comment on this deal.

So at the end of the day, are we happy with that one? I'm not because it impacts people's lives. And I always worry about that and how it impacts our employees. But overall, I think it's a clear win for Union Pacific that our position was correct in how things were done with the 3 cases. So on that, that's where I am with it. Jennifer?

Jennifer L. Hamann
Executive VP & CFO

Yes. On the comp per employee piece, Brian, it really is wage inflation and benefits. So really, the part that's been a little bit hotter than we were expecting coming into the year is on the health and welfare side. You're right, the wage inflation is known. Just as a reminder, we had the 4% for the first half of the year and effective July 1, we now have 3.75% increase in terms of the unionized wages. So good healthy increases there, and that's where we're just running a little bit hot.

Brian Patrick Ossenbeck
JPMorgan Chase & Co, Research Division

So per employee, we're up, but how is the productivity -- remind everybody?

Eric J. Gehringer
Executive Vice President of Operations

Yes, absolutely. So when you think about some of the numbers that I reported in my prepared comments, they start to give you some perspective, but I have the benefit to be able to peel that back and see at the ground level exactly what's happening. And so to Jennifer's point, while we are running hot on that, we've seen continued progress on the productivity side. You don't grow train length to almost 9,900 feet by chance. If you think about it, not that long ago, we were at 7,500 feet.

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So our 2% gain is on a very large gain over the last 5 years, and we don't see a stop to that. I often get asked, can you make it to 10,000 feet? We got the team here at Union Pacific that takes challenges like that very seriously and looks for safe opportunities for us to be able to do that.

Now when you look down even deeper into our terminals and you look at line of road with our wage increases, right, our challenge that we take on every year, we focus on every quarter, every week is to offset as much wage inflation as possible. And you can see how we've done that. You can see that when you're increasing car velocity and you're running at 231 miles per day, you're dropping your recrew rate to 4.5%. We did that in the quarter. That's 2 whole points better than it was last year.

And I can go on and on, terminal dwell being down 7%, run through dwell down being -- down 8%. It's all those things that our team and the operating department with the support of the rest of the company do every single day, and I could not be more proud of them, mostly because they're perpetually dissatisfied, always looking for more opportunities. And we're going to offset as much inflation as we possibly can, and our track record demonstrates we do that quite well.

Vincenzo James Vena
CEO & Director

You know what, you had a third question in there -- sorry, a subpart. What was the third subpart?

Brian Patrick Ossenbeck
JPMorgan Chase & Co, Research Division

Yes, I think just to give us all a preview of what to expect on the supplementals because it sounds like there might be a couple of additional things you went above and beyond the initial list.

Vincenzo James Vena
CEO & Director

I was hoping you forgot that piece, okay, when I asked you. But bottom line is, listen, there's a whole bunch of detail in there. What the expansion does is we actually -- we went out and talked to our customers and the feedback we received was, would you guys examine and we went in detail with a lot of them to say, listen, it will help us being able to -- just because -- and I've always talked about distances is your enemy if you try to route things the wrong way. So the bottom line is when we went through that, we see it in the application, we've expanded it because of what our customers gave us a feedback.

Again, we don't see that as a negative because the more you can open up some of those things to make sure the optionality is there, we get more business out of it. And it's about growth -- so Eric, I thought Eric was going to give you a real quick, yes, our productivity was again great, but he decided to show you the whole fricking railroad. I love it. He's starting to sound more like me, okay? Pretty soon, Eric, I don't even have to come on these calls. It'll between you and Kenny and Jennifer, you guys have got it. But -- so that's where we are. You'll have to wait until Monday, okay? I can't let the whole cat out of the bag.

Operator

The next question is from the line of Jason Seidl with TD Cowen.

Jason H. Seidl
TD Cowen, Research Division

Congrats on a good quarter here. I wanted to focus on 2 different things. One, I guess I'm going to talk to Eric a little bit about operations. Guys doing a great job out there. How much ability do you have to take on additional freight without sort of adding much in the way of headcount or other expenses, particularly on the intermodal side for both the near term and also sort of the longer term as you look at some of your forecasts that are out there for the deal? And then I guess, for Kenny, how should we think about pricing on intermodal as it flows through your network for the remainder of the year in '27?

Eric J. Gehringer
Executive Vice President of Operations

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All right. So let me start. So you asked the question in the context of the merger. When we put in our application, we said that there would be an incremental increase in our Union employees to be able to handle the revenue synergies that Kenny and the team have identified with the help of Norfolk Southern.

But don't be surprised by the fact that when we look at that, we didn't start in that place. You start from the place of we know our transportation plan and we know our network and Norfolk Southern knows their transportation plan and their network. And you look first for where do you have latent capacity within your existing train starts.

Now you've seen our history over the last 4 to 5 years, we've done an exceptional job of being able to utilize latent capacity. So you always want to look there first. From there, we then overlay the new volume that's coming on to the railroad, and we have to add some train starts. Now we've been clear with that, and it's in the application that those train starts involve trains that are going to go from L.A., generally speaking, from L.A. to Chicago, I'm afraid...

Unknown Executive

I'm not, but I want to make sure...

Vincenzo James Vena
CEO & Director

We will sort of give them a high level -- I don't want the other railroads to listen to him though.

Eric J. Gehringer
Executive Vice President of Operations

Yes, I know. I know. Jason, he's afraid I'm giving away the secret recipe. But the secret is here. That sauce is our people. And we will make sure that we have the appropriate number of people to make sure we run the railroad, but also do it in a volume variable way.

Jennifer L. Hamann
Executive VP & CFO

And that last part is important is you're not going to see people grow at the same level...

Eric J. Gehringer
Executive Vice President of Operations

Exactly.

Vincenzo James Vena
CEO & Director

Listen, Eric, I love it. But son of a gun, I thought you were -- pretty soon you were going to say how we start people and what our terminal type is and how we got that down...

Eric J. Gehringer
Executive Vice President of Operations

I'm not giving that statement.

Jason H. Seidl
TD Cowen, Research Division

Eric, you can just e-mail that all to me, that's fine.

Kenny G. Rocker
Executive Vice President of Marketing & Sales

So I'd tell you, Jason, we're coming from a position of strong momentum. You heard me talk about the fourth consecutive quarter of record volume. So we already have that momentum. And Eric just talked about it, he's given us a strong service product that we sell.

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And because we're moving boxes faster, we're talking to customers about price when you're doing that. And BCOs want to align with us because of that. So as we're able to quote these new rates, as the private asset folks are able to quote new rates, the IMCs. We are getting a little bit more price uplift as we move throughout the year. Obviously, the biggest opportunity for us will be as we enter into the next bid season, but we're pulling more containers out of the storage. Our private asset folks are doing the same thing. And on these spot moves, it's a small percentage of our business, but we are getting some of that price uplift now. But the big apple is once we get into the next bid season.

Vincenzo James Vena
CEO & Director

Thank you very much. Good question. If maybe the rest of the people are on, I want to answer everybody's question, but we're going to try to be real fast because I do not want to overlap with Norfolk Southern, who's coming on here at the top of the hour. So if we could ask a question, you might not get as long an answer. Ask me any and the team any, yes or no, we'll be quick where we go.

Operator

The next question is from the line of Ari Rosa with Citigroup.

Ariel Luis Rosa
Citigroup Inc., Research Division

I'll give you a yes or no question. Just was there any discussion with the STB prior to reaching the agreement with CN? And to the extent you can give any color around kind of how it came together, whether it was you approaching CN or the other way around, it would be appreciated.

Vincenzo James Vena
CEO & Director

The answer is no with the STB. And I don't know who made the first call, probably it was me.

Operator

The next question is from the line of Brandon Oglenski with Barclays.

Brandon Robert Oglenski
Barclays Bank PLC, Research Division

Sorry, I haven't been on the full call here. So maybe I'm being redundant with my question, too, so you can just tell me to shut up. But in the world where truck availability and spot rates are so volatile, up like 50% in the last 6 or 9 months, I mean, doesn't this just embolden the case for transcontinental rail mergers? And I mean, congratulations on the deal with CN. Do you need to do more like that as well just to win over more hearts and minds here? And maybe that's where it is. Like is this going to close, Jim?

Vincenzo James Vena
CEO & Director

This is going to -- the merger is going to close. It's just too compelling for the country. It would be a mistake for this deal not to close. We would be harming. Canada goes across the entire country, and there's a reason why they haven't applied to the Canadian equivalent to the STB to split their railroad up there, both of them because it doesn't make a particle of a sense that hurts customers, hurts the country.

So this deal will close, and it will close with limited impact just because it's an end-to-end. So -- and yes, as far as I'm concerned, it's -- if there's something else with other people, we'll move ahead. Anything else I missed?

Operator

Our next question is from the line of Jordan Alliger with Goldman Sachs.

Jordan Robert Alliger

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Goldman Sachs Group, Inc., Research Division

I know there's a lot of moving parts on the yield front between fuel and mix and core price. But is there a way you could maybe give some thoughts at least on how you're thinking about revenue per carload, whether it be the third quarter or the second half, taking into context core price mix and the fuel impact volatile as it may be?

Vincenzo James Vena
CEO & Director

So let me start and then Kenny, real quick, talk about ex fuel, the way we look at it, too, and just give an idea because we don't always split everything up particularly. Put it this way, if you remove all the noise, we actually had a 58% operating ratio, okay? So that tells you fundamentally who we are and what we're doing.

We don't -- we like to -- we absolutely report the way we're supposed to report. But if you remove the noise from those things that are -- because fuel was an impact of 120 basis points. So you take that away from our reported, we're at 58%. So the railroad is good. Kenny, second piece?

Kenny G. Rocker
Executive Vice President of Marketing & Sales

Yes. We do look at revenue ex fuel. And let me just leave with the fact that on the service end, Eric, on our carload business is the SPI is oscillated between 95 and 100 depending on where it is, and we price according to that.

Most times, it shows up in average revenue per car. I talked a little bit about that depending on the mix. But we're going to -- with the service that we're providing, the investments that we're making with the market where it is and the truck prices where they are, we're going to make sure that we're pricing to that value proposition.

Jennifer L. Hamann
Executive VP & CFO

Yes. Just one quick comment on mix, though, Jordan. So as you heard me say, it was a little bit of a headwind for us in the second quarter. That surprised us a little bit just because of how strong domestic intermodal came on in the back half of the quarter. As we look then to the second half, with domestic intermodal likely staying very strong and maybe some upside on the international side, we'll probably see a little bit more pressure on that mix side, but it's a great business. We're handling it well, and we look forward to the contribution that provides us.

Vincenzo James Vena
CEO & Director

Listen, thank you very much, and we love the way July is running so far, and you guys can all see the carloads.

Operator

The next question is from the line of Bascome Majors with Stephens.

Bascome Majors
Stephens Inc., Research Division

As you look forward and get to the point on Monday where you release the next set of things the STB has asked for, where do you think we land on in the procedural schedule where we get to the point where you see the more formalized list of demands for some of the competitors that oppose the merger and ultimately, those -- the hearings where we discuss that live with the regulator. And just does the agreement that you've reached with the CN change the tone of that in any way that you think is meaningful or impactful for those of us watching?

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Vincenzo James Vena
CEO & Director

Well, I think the deal with CN clears up some of those things that we said that we needed to clear up. So that's real helpful. And it expands competitiveness coming out of Canada to Mexico, and then it expands our capability to go through Chicago faster. So I love it, not a problem there at all. As far as -- what was the other part of the question?

Eric J. Gehringer
Executive Vice President of Operations

Timing on hearings.

Vincenzo James Vena
CEO & Director

The timing. My Chief Legal Officer and everybody that we've hired, some of the best law firms say the statute is pretty black and white when you accept the application, they have a year.

So I just follow the law, right? Like if I get caught speeding out there, when I get pulled over, the police officer says to me, you know why I pulled you over, I go, yes, I was going 70 in a 55 zone. And he goes, son of a gun, you're telling me the truth. Yes, usually gets me off of the ticket. So I like to be honest and upfront. The statute is pretty black and white. It's clear. So we would expect the clock to have started when they accepted the application. The next step is people get the comment.

So we're looking forward to that. Looking forward to finally people putting their facts in and telling us factually what it is, not some high level, whether Union Pacific has the capability to operate the system across the country and worried about this and that. So I'm looking forward to it to tell you the truth, and let's hurry up and get this thing done. We're not going to get it done for my birthday on August 17, but I love it. Let's move ahead. Good question. Thank you very much.

Operator

The next question is from the line of Ravi Shanker with Morgan Stanley.

Madison Jade Pasterchick
Morgan Stanley, Research Division

This is Madison on for Ravi.

Vincenzo James Vena
CEO & Director

Madison, I like having you on, Okay? I can't remember the last time I talked to Ravi, I knew you were going to be on.

Madison Jade Pasterchick
Morgan Stanley, Research Division

I like talking to you guys, too. I think we're just wondering how does fuel impact seasonality on numbers in third quarter and fourth quarter and how we should be thinking about kind of like the opportunity on OR?

Jennifer L. Hamann
Executive VP & CFO

Yes. So in terms of fuel, I mean, it likely will continue to pressure OR. As I mentioned, we're paying a little bit north of $4 a gallon right now. Even with that, though, we're still very confident that we're going to make margin improvement. We feel like when we look at what we see ahead for ourselves in terms of volume opportunity, in terms of our continued gains from productivity and efficiency, we should be able to overcome the headwinds from the fuel.

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Who knows exactly how it's going to play out. So that's why we just need to be nimble, need to try to become more fuel efficient to the extent that we can. Obviously, we're already more fuel efficient than truck, and that's a benefit to us, more fuel efficient, more emissions friendly. But we'll wait and see how that plays out overall.

Vincenzo James Vena
CEO & Director

We always worry about is what happens with our customers.

Jennifer L. Hamann
Executive VP & CFO

Yes, no, true. That's a good point, Jim. I should mention that. The issue with fuel can be what that does to overall price inflation and the consumer. And if that stays high enough long enough that it starts to reduce demand overall.

Vincenzo James Vena
CEO & Director

No, we haven't seen it so far.

Jennifer L. Hamann
Executive VP & CFO

No, we have not.

Vincenzo James Vena
CEO & Director

But that's always a worry, and that's why I'd rather have fuel prices come down and not gather that extra revenue from fuel because we're better off having the consumer strong. So Kenny, they've been pretty strong right now?

Kenny G. Rocker
Executive Vice President of Marketing & Sales

They have.

Vincenzo James Vena
CEO & Director

That's a yes or no.

Kenny G. Rocker
Executive Vice President of Marketing & Sales

That's strong yes.

Vincenzo James Vena
CEO & Director

I love it. Good question, thank you very much.

Operator

Our next question is from the line of Jeff Kauffman with Citizens Bank.

Jeffrey Asher Kauffman
Citizens Bank

Congratulations. Just terrific news. I have a question for Kenny. Kenny, the volume environment feels pretty good. Some of this, as you mentioned, is customers can't find truck capacity because of the

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driver shortage. I think some of this is customers may be diverting because of the pricing and the fuel surcharge situation. One of these is a little stickier with longer-term potential. One of these is a little more temporary. Can you talk about what you feel is just shorter-term customers scrambling to the rails? And then beyond intermodal, which is kind of the obvious conversion, what other rail commodities do you think are seeing a benefit from whatever is going on in the trucking industry that's creating the shortage of capacity?

Kenny G. Rocker
Executive Vice President of Marketing & Sales

Yes. So one part that you did not mention is the fact that we are winning business, and we are winning over-the-road business, and that's not necessarily tied to one or the other. That's just the strong service product that we have. But yes, as you look at the overall domestic intermodal network, what's helping us out is the fact that we have different levers and optionality for our customers. We've got our rail box, which we've deployed for a couple of years now, I've been talking about the number of private asset folks that we have that give our BCOs optionality.

So with that strong service product, that's how we're going out and winning the business and setting aside where fuel is. And yes, to your point, there are other markets that are very strong for us. You look at what's happening in our petrochemicals market, that's been a strong uptick for us. We talked about some wins there, but that market is also strong, and we're moving a lot export. And we've invested in the Gulf for storage and transit network to support that.

Same thing with our grain network. We've invested and put in new facilities on the grain network. And Eric and his team has shown us that we can flex to different markets. Last year, it was Mexico. This year, it's been the Gulf, whether it's the PNW, the Gulf of Mexico, we're able to flex in those markets, wins in automotive. So as you look at the overall landscape, coal is still the wildcard, and I got out of the business of trying to figure out how to forecast coal a while ago. But I'm very bullish on where we sit from a demand and our ability to win new business.

Operator

The next question is from the line of Harrison Bauer with Susquehanna.

Harrison Ty Bauer
Susquehanna Financial Group, LLLP, Research Division

Jumping off Kenny's point on some of the rail assets that you're deploying. Can you walk through maybe the thought process decision and the opportunity that you have in some of your assets? Are private assets constrained right now? And then maybe how does this allow you to accrue more economics, whether through peak season surcharges or into next bid season?

Vincenzo James Vena
CEO & Director

I love the way you asked that. I think you always need to price on what the market provides that you could still move the product and win. So that's the way we look at it. If we can price higher because of it, which we have, then we're going to do that. As far as the assets, sure, we went from having a whole bunch of our container stored to just about all of them out. But what we're doing is we're trying to drive more productivity by being able to get the turns on them quicker so we can get more turns on there, and we see some of that.

So that's what it's all about. And we've always liked to have a buffer. Now we chewed up a big piece of the buffer, and we're sitting in a place where I think there's still more growth, and we're not going to limit it. But of course, we're going to price and be smart about how we price so we can continue to move. Kenny, anything you want to add or?

Kenny G. Rocker
Executive Vice President of Marketing & Sales

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No. And I said this a little bit earlier. The private asset folks, they have ample capacity [indiscernible] new business. That's a positive for us. And you've seen some of the surcharges that we put in place for a small amount of customers, we'll do that if we have to.

Vincenzo James Vena
CEO & Director

Yes, people on our railroad have capacity, right? They have extra assets. Good question. Thank you very much. Last one. We're going to do it and get it done.

Operator

And last one is from Richa Harnain with Deutsche Bank.

Richa Harnain
Deutsche Bank AG, Research Division

Honored to be the last question. So I just wanted to clarify, maybe piggybacking off that last point and maybe like drilling down more into the intermodal commercial strategy. I'm curious how you're partnering with other IMCs.

And I know you just said your private assets have capacity, but are other IMCs you work with private assets struggling with drayage drivers where that's a concern that's been popping up over the last couple of months? And how the strategy has changed and is influencing your ability to address the strong demand. We've also been hearing transcon intermodal trends are pretty competitive. It sounds like you're doing a good job, getting price. Just curious if you can square all of that.

Vincenzo James Vena
CEO & Director

Okay. So listen, I think it's a 2-parter. One thing about this team here is operations and marketing work close every day to figure out exactly the question that you're asking. How do we do this and how do we make things more efficient so we can get the asset turns quicker so that we can use less assets and use that 20-plus percent capacity buffer we have on our railroad to be able to run it faster.

And don't kid yourself, Jennifer is in there like a dirty shirt, pushing these guys around to make sure that they're spending money the right way and the capital. So I'm going to let the team talk about this. It's the last question, but you guys don't go on for 10 fricking minutes because we need to let NS on, okay? So where you go whatever you want...

Kenny G. Rocker
Executive Vice President of Marketing & Sales

Let me make this clear because that's a great question. We're very judicious about how we supplement our capital and our containers out to the IMCs. We're crystal clear on the ones that have higher dwell versus the ones that have lower dwell, and we're not afraid to have difficult conversations with them about it. So if you're sitting on our box a long time, that's a problem, and we're going to address it with you.

Vincenzo James Vena
CEO & Director

You don't want to say anything, Eric?

Eric J. Gehringer
Executive Vice President of Operations

I think Kenny did a great job explaining that how we think about it...

Vincenzo James Vena
CEO & Director

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Bottom line is who we are, and this is culturally, and it's not just Eric and I, okay? Eric is a real smart guy, okay? He's well educated, but I'm telling you he's a railroader. Probably 5 or 6 years ago, I would have said he was an engineer or an engineering department. Now he's a railroader. And what we do and what he's led the team and the people, the culture that we've developed from the frontline people, they're not afraid to make a mistake. We want them to push.

We want them to look at what's possible, and we want to make sure we move ahead. That's who we are. And when we do that, because you can't operate a railroad that's spread out across the entire country and think you're going to make every decision from Omaha, you have to make it locally. So I love where we are. We're clear on what we have to do. If we need to speed up something, we react quick. We decide how we're going to do that. We measure the heck out of it and we move ahead. So listen, that's where we are. Jennifer, anything before we tie it up?

Jennifer L. Hamann
Executive VP & CFO

Yes. The only thing I'll say is I think you slipped something in there at the end of your question about transcontinental pricing, transcontinental margins. Again, we have surcharges out earlier than normal on our private -- on our assets. We see very strong demand, and we're providing a great service product. So we are competing in a market that is strengthening, and we're not putting discounts into that marketplace.

Vincenzo James Vena
CEO & Director

Well, listen, that was the last question. So why don't we just tie it up real quick. We're going to look forward to having another discussion here in a few months. And we don't look backwards, okay? It's done. So we're delivering for this next quarter and seeing what we can do to get this merger approved quicker than slower because we think it's a benefit.

We want to move ahead and return for our shareholders a high return like we talked about where the EPS is going to be high single digit. So I'm excited about what -- where we are, what we're doing and blessed to have a team that makes my life easy. I get up in the morning and sometimes I wonder what I'm going to do. Everyone, have a great day. Thank you very much.

Operator
Thank you. This concludes today's conference. You may disconnect your lines at this time. Thank you for your participation. Have a wonderful day.

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EXHIBIT 61

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