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Via E-Filing

Ms. Allison Davis
Director, Office of Proceedings
Surface Transportation Board
395 E Street SW
Washington, DC 20423

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Office of Proceedings
February 7, 2022
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Public Record

Re: Finance Docket No. 36496, *Application of the National Railroad Passenger Corp.*

Under 49 U.S.C. § 24308(e) – CSX Transportation, Inc. and Norfolk Southern

Gulf Coast Passenger Service between New Orleans, LA and Mobile, AL

Dear Ms. Davis:

Please accept this notice as a request to comment during the February 15, 2022 public hearing on this case. A short presentation on the questions noted below with references to the appendix would require 15 minutes in the schedule.

I would like to address the need for the Surface Transportation Board (STB) to consider several questions related to the minimum fixed infrastructure needed to efficiently support domestic industry under Common Carrier railroad freight service obligations. Should the Board consider this minimum freight service quality question first, it might clarify what baseline fixed infrastructure should be expected from railroads for “transportation or service on reasonable request” before calculating the incremental costs to host passenger trains or provide modified freight service for the public good. It appears that the recent data submissions have diverged from a publically discernable test, yielding questions for policy makers and ultimately citizens who may be prevented from providing informed opinions to elected representatives without publically available answers to questions on the macro-level performance of the railroad mainline operations, namely:

1. Absent a determination of a minimum freight service metric, similar to Minimum Level of Service (MLOS) and jamb density metrics for highways, railroad mainline engineering capacity models may never converge on objective cost divisions as the existing majority use freight operations were reported earlier in the record to require infrastructure additions for the No Build models to even numerically function¹ yet no further publicly discernable numerical results have been provided. Can the STB state that the submitted carrier models converge in the No- Build scenario with reality?

¹See generally - CSX TRANSPORTATION, INC. AND NORFOLK SOUTHERN RAILWAY COMPANY’S MOTION TO DISMISS, April 5, 2021, wherein is included the CSX Gulf Coast Passenger Rail report, dated August 11, 2016, hereafter known as the “HDR Report”, which states on page 108, “*To achieve a dispatchable (Ed. One thus even capable of junction priority?) No-Build case model, a limited amount of infrastructure was added to the No-Build case, compared to the Base Case, consisting of: 38 track-miles of second*

2. As one of the parties to this case is a terminal railroad, which would seem to have an interest in using mainline capacity for assembling terminating or originating traffic instead of through interstate movements, a metric may be needed to balance interests. Such a metric might be a MLOS of less than 60 Daily Averaged Freight Train Minutes of Delay per 100 Train-Miles² on railroads found to be Revenue Adequate when operating a mainline transporting more than 15 Million Gross Ton-Miles (MGT). This metric could apply to the entirety of the mainline run of through freight trains between off-mainline terminals, measuring daily averaged delay relative to a free-running speed while allowing for fungible tradeoffs between mainline free running time and terminal yard capacity. Another analytical method would be a Capacity (Public) Utility Curve as illustrated in **Figure 3**. Would either such a metric balance competing interests between States?
3. Will the STB also set a discernable test if additional passenger trains “impair *unreasonably* freight transportation” such as say a net increase in daily averaged minutes of freight train travel greater than 15% from added passenger trains?
4. While newer analytical capacity allows for the use of the Rail Traffic Controller (RTC) program for detailed analysis, do not earlier parametric CTC Capacity Curves³ provide a framework to visualize tradeoffs, demonstrating less freight train delay⁴ in No Build conditions should such trains simply be shorter than most existing sidings and sufficient terminal and staging tracks be provided. It appears that the train delay starting point was set rather high in the Capacity Models, near the inflection point in the curve slope in **Figure 1**. It is important to note that this research appears to have been produced with carrier provided Macro-level train data befitting a public good investment. Why has the STB not required the release of similar Macro-level train data for public analysis seeing that such was done to produce these

main track, new sidings, siding extensions, and yard bypasses...” yet infrastructure costs to make a No Build model functional appear to have been included in the HDR Report costs to host passenger trains though excluded from a HNTB calculation.

² Conceptually an all-day average delay on fixed infrastructure even capable of junction priority of 60 Daily Averaged Freight Train Minutes of Delay per 100 Train-Miles is the difference between a free running average speed of 35 MPH and a delayed average due to meets and passes of 26 MPH typically seen in STB documentation; $[(100 \text{ Miles} / 35 \text{ MPH}) - (100 \text{ Miles} / 26 \text{ MPH}) = 60 \text{ Minutes}]$. 60 Minutes of delay also appears to be the inflection point observed in the parametric capacity curves reproduced in the appendix.

³ USDOT, Federal Railroad Administration, "Parametric Analysis of Railway Line Capacity," Figure 1: Train Volume – Average Delay Relationships for Alternate Configurations of 100-Mile Rail Line (Reproduced in Appendix), 1975, <https://railroads.dot.gov/sites/fra.dot.gov/files/fra_net/15031/FRA-OPPD-75-1%20Parametric%20Analysis%20of%20Railway%20Line%20Capacity.pdf>.

⁴ For year 2020, 12 through freight trains are noted in the HDR Report, a normalized capacity of 130 merchandise cars x (12) trains or 1560 carloads per day for 7000 foot trains that fit most sidings or alternately (9) 10,000 foot trains of 174 merchandise cars that clear less than half the sidings. In this simple example the effective siding spacing went from 10 miles to 20 miles (in actuality much longer) and the capacity decreased, based on CTC Capacity Curves from 23 to 12 trains per day per Figure 1 in the Appendix. So for shorter trains $(12)/23 = 52\%$ of mainline through capacity is used whereas with longer trains in this simplified example $(9)/12 = 75\%$ of mainline through capacity is used, likely resulting in greater net delay as the true siding spacing is greater.

curves while a recent article states data of this type is collected by third parties by Automatic Equipment Identification (AEI) scanners on public property?

5. Might the STB simply use in this case the Net Present Value (NPV) of the cost to the railroad to operate shorter freight trains that fit most existing sidings, with some additional crews on an average day as a “discernible test⁵” for the upper limit of public capital funding for “incremental cost” as this approach would likely increase available line capacity and likely reduce net Freight Train Minutes of Delay across the entire General Railway System?
6. Is it improbable to understand that when Congress reduced the passenger service common carrier duty of railroads in 1970 to services for compensation and hosting trains on their infrastructure it meant to combine the two concepts of “incremental cost” atop a fixed cost, shared use infrastructure so configured so as to even be reasonably capable of providing “junction priority”, outside the unstable train length and siding length region shown in **Figure 2**, for which no incremental payment would be due?
7. What is to throttle railroad operations such that the public is not simply paying for infrastructure to account for less disciplined operations, such as up to an hour to re-crew trains⁶ on the mainline as was included in the capacity models, absent a MLOS metric as a capacity modeling and future performance baseline?
8. Given the current period of rising freight rates and railroad Revenue Adequacy might the suggested MLOS guide the Board in judging if service quality for freight transportation is being reduced, yielding reduced cost without reduced price in an unbalanced manner only possible outside competitive remedies? At some point, should not the Board consider as well the net loss of efficiency to industry shippers from reduced speed and capacity mainline operations when such shippers are willing to pay rates reasonably above variable costs?
9. Are not other partially regulated pipeline and power transmission carriers required to keep a certain peak infrastructure capacity available to meet seasonal and cyclical surges in demand or even to design their infrastructure for public welfare resiliency exceeding physical limits? Would such indicate that the Board could require a 30% reserve capacity

⁵ See STB Decision FD 46869, APPLICATION OF THE NATIONAL RAILROAD PASSENGER CORPORATION UNDER 49 U.S.C. § 24308(a)—CANADIAN NATIONAL RAILWAY COMPANY, August 9, 2019, Note [40] “While Amtrak argues for a temporal limit to incremental costs, it does not lay out a discernable test that the Board or the parties could use to determine whether a cost category could be included as an incremental cost under the “short-run avoidable” standard it proposes. Furthermore, as CN notes, Amtrak appears to concede that certain freight delay costs could be incremental costs, even under the method Amtrak proposes. (CN Reply Br. 75, Mar. 5, 2018 (citing Amtrak Rebuttal, V.S. Crowley & Mulholland 24, Sept. 14, 2017).) In other words, even under Amtrak’s own analysis, regardless of whether incremental costs were defined as short-run avoidable costs only, certain freight delay costs could be considered incremental costs.”

⁶ HDR Report, page 75, “Train dwells for crew changes were randomized up to an additional 1.0 hours, and train dwells for work events were randomized up to an additional 1.5 hours.”

relative to theoretical freight capacity modeling from Revenue Adequate railroad operating mainlines handling more than 15 MGT? Does not the record indicate that such reserve was a common industry practice for mainline operations at the time that the relevant “incremental cost” and “junction priority” legislation for passenger train access was passed?

10. Should the absolute preference granted to railroads at grade-level road crossings be understood to mean that Congress, and the STB as empowered, may reasonably regulate priority and capacity upon railroad lines to provide for public welfare by ensuring stable operational parameters?

Discussion:

While the questions to the Board above point to a need for public scrutiny and public openness in the modeling of railroad operational changes as they relate to the functioning of a fixed infrastructure suitable for a certain Common Carrier freight and passenger service it is also true that public investment is warranted to ensure that railroad infrastructure Long-run Average Cost is adequately funded so the service may grow with the national economy. This public investment is ultimately necessary in the long-term for shareholder owned railroad infrastructure as their primary competitor, truckload freight, use Interstate Highways, which have a very high publically funded financial gap⁷ between incremental fuel excise tax and fee revenue and the financial costs of construction, maintenance, and accidents upon such highways.

This Interstate Highway financial gap has in the past been filled by taxing the unrelated daily use of locally financed roads through the gas tax and then leveraging these funds to highways. It would be like taxing food purchases at all cafes, coffee houses, convenience stores, groceries, and restaurants to build a new restaurant, offering an inexpensive buffet, while just painting the walls elsewhere with the funds. Such a scheme could obliquely be called a “food user fee” for “food infrastructure yet it obviously tilts the market. However, of late funding is shifting further still to direct Federal General Fund transfers.

The general misunderstanding of this leveraged highway cost gap and the political messaging of “user fees” paying for all is why toll highway facilities seem rather overpriced relative to public expectations when proposed such as for the I-10 Mobile Bay toll bridge project. Perhaps some of the opposition is rooted in a misunderstanding of this question though certainly the railroads should be provided with a reasonable amount of capital found using the proposed MLOS.

⁷ See generally - Payne, Virgil, “Reforming Surface Transportation for Long-Term Sustainability”, Competitive Enterprise Institute, Issue Analysis 2020 No. 10, November 2020. <https://cei.org/news_releases/report-urges-reforming-surface-transportation-for-long-term-sustainability/>

What has been missing from many discussions is any admission that the primary problem was a lower real freight market rate due to the effects of competing for 200 mile to 1000 mile traffic against trucks using Interstate Highways with their leveraged financial gap noted earlier.

Ultimately, the Federal government created many of the problems through prior uneven interventions in the transportation marketplace. Even today 49 U.S. Code § 10101 - Rail transportation policy, only speaks of “effective competition among rail carriers and with other modes, to meet the needs of the public and the national defense” but no practical way is provided for private shareholder owned railroads to provide this competition as existing infrastructure capacity is expended and public financing of infrastructure is only by intermittent grant programs for only very specific bottlenecks.

In past recession and expansion cycles railroads have provided a resilient surge capacity that has allowed industry expansion with less risk but have been denied consideration to invest in general resilient infrastructure. Perhaps answering the questions presented in this comment is the most logical way to support the development of domestic industry, renewal of stable communities, conservation of fuel, and promotion of safer intercity traffic.

However, in this case before the Board the public agencies appear to be offering to fund in the future shared use railroad infrastructure capacity improvements at a rate near the level of recently proposed Tax Credits⁸ for railroad freight operations. Other national interests such as freight fuel conservation and industry production cost efficiency would be served if the segment was operated at a certain MLOS to support the intermodal transportation of truck trailers/containers by railroad so as to alleviate the worsening congestion conditions on I-10 in the region in a more efficient manner.

The public interests in providing efficiency to smaller industry shippers, timely passenger train operations, and increased interstate intermodal freight are all actually aligned to a common goal of making the railroad line fluid instead of being at odds as proposed by some. Ultimately, if the publicly funded level of investment noted by the Federal Railroad Administration essentially offsets the publically funded Interstate Highway cost gap would not that also serve the Board as another measure of an upper limit of the required infrastructure investment so as to promote competition between modes?

Should the Board elect to require further study using capacity models, the inputs and numerical methods should be open to the public and a full range of operational modifications and initial MLOS cases be presented that account for the true No Build operating conditions without adjustments and with full consideration of delays attributable to terminal congestion.

⁸ See generally - Payne, Virgil, "Renewed Consumer Relevance of the General Railway System," Railway Age 1 June 2021, <<https://www.railwayage.com/news/renewed-consumer-relevance-of-the-general-railway-system/>>

These cases should include as well as an alternate analysis that explores the relative cost to simply operate shorter freight trains on the segment perhaps resulting in less mainline congestion, lower fuel burn, and more terminal throughput capacity.

However, it would seem reasonable for the Board to immediately approve access for passenger trains under the National Railroad Passenger Corporation's (NRPC) proposed terms with the knowledge that a subsequent \$95 some-million level of public infrastructure investment on the Mobile to New Orleans mainline is pledged for a later construction, similar to that suggested by the Federal Railroad Administration analysis in the Gulf Coast Working Group (GCWG) Report to Congress⁹.

Yet the Board might characterize the infrastructure investment as primarily related to enabling the timely interstate transport of freight traffic made necessary by the existing elevated levels of train delay, unfortunately caused by a failure in public policy that results in a long-term railroad cost reduction strategy so as to compete in the transportation marketplace against the publicly funded financial revenue to cost gap seen for Interstate Highways.

Thus, is it not true that in this instance, while awaiting a broader national policy that could provide amicable public investments in shareholder owned interstate railroad lines to incentivize fluid operations for the good of domestic industry, the proposed investment in the Gulf Coast Working Group Report to Congress is warranted as a matter of national policy for true resource efficiency and reasonable in cost for the services requested?

To our Mutual Prosperity,

/s/ Virgil G. Payne, PE

Madison, MS

This comment is my personal opinion, not an engineered work, meant to suggest an amicable solution to the Board. I am a professional engineer supporting high volume manufacturing - where fixed and incremental cost functions must be understood - that is reliant on both highway and railway freight logistics. Previously I supported MDOT coordinating mostly highway projects, such as I-269 from planning, design, and construction to FHWA acceptance. This work followed a period of designing buildings, sites, and utilities and a brief stint in railroad operations, yielding a perspective from both sides of the fence on customer needs and transportation infrastructure centered on true financial and resource efficiency.

⁹ See generally – “Gulf Coast Working Group Report to Congress,” July 2017, at ES-1.

Appendix

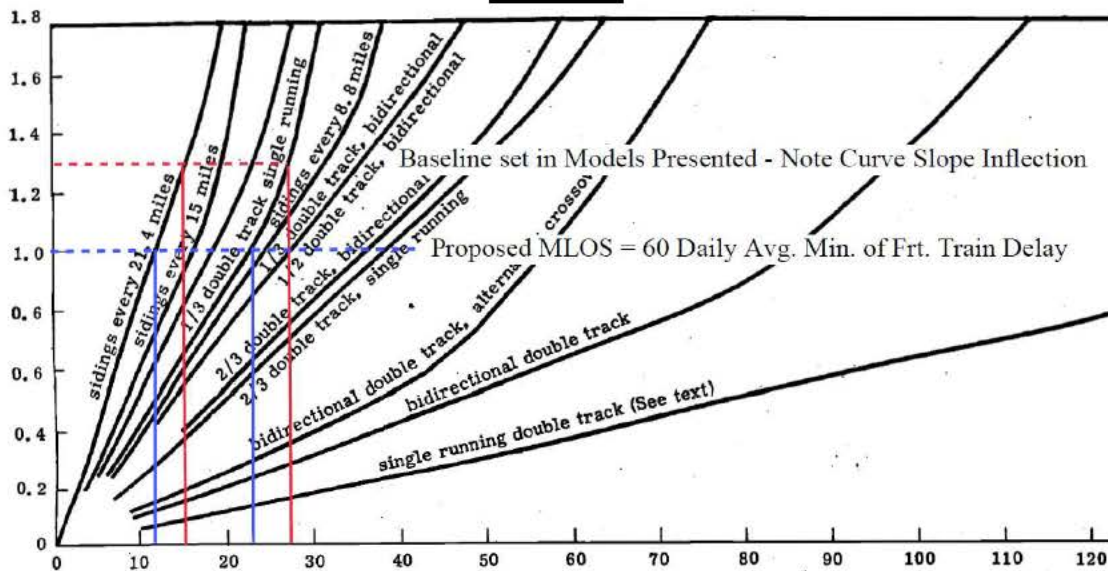


Figure 1: Train Volume – Average Delay Relationships for Alternative Configurations of 100-Mile Rail Line¹⁰

Note: Parametrical capacity at the proposed MLOS metric (Blue Line) of 60 Daily Average Freight Train Minutes of Delay per 100 Train-Miles is approximately shown as 12 Trains per Day (TPD) at 21.4 mile siding spacing (8% Double Track) vs 23 TPD at around 10 mile siding spacing (16% Double Track). The 10 mile siding spacing approximately exists on the New Orleans, LA to Mobile, AL segment should shorter (7000 foot) trains be operated that fit most sidings whereas with longer (10,000 foot) trains the spacing is actually greater than 30 miles in the existing baseline so capacity would be less than indicated. From the delay curve geometry, at higher minimum allowed delay metrics or longer siding spacing the slope of the delay curve slope increases indicating near network lockup from freight traffic alone.

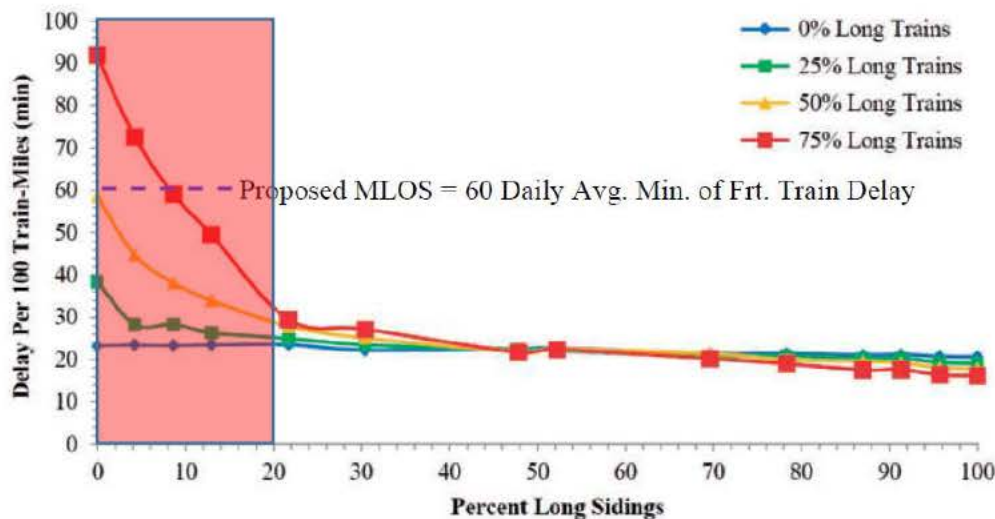


Figure 2: Average train delay for combinations of percent long trains and percent long sidings with 3:2 length ratio¹¹

Note: The current infrastructure has almost no long sidings and is operating around 50% of trains of a 3:2 length ration (10,000 foot / 7000 foot) which intersects at the proposed MLOS metric of 60 Daily Average Freight Train Minutes of Delay per 100 Train-Miles. An alternate visualization would be various Train Volume vs Train Density per Mile curves, each run with differing percentages of trains longer than half the sidings, so as to illustrate the delayed average speed relative Capacity.

¹⁰ USDOT, Federal Railroad Administration, "Parametric Analysis of Railway Line Capacity," Figure 1: Train Volume – Average Delay Relationships for Alternate Configurations of 100-Mile Rail Line, 1975

¹¹ Dick, et al, Relative train length and the infrastructure required to mitigate delays from operating combinations of normal and over-length freight trains on single-track railway lines in North America, Figure 1, Proc IMechE Part F: J Rail and Rapid Transit 0(0) 1–12, 2018, <<https://railtec.illinois.edu/wp/wp-content/uploads/Dick-et-al-2018-JRRT-0954409718809204.pdf>>

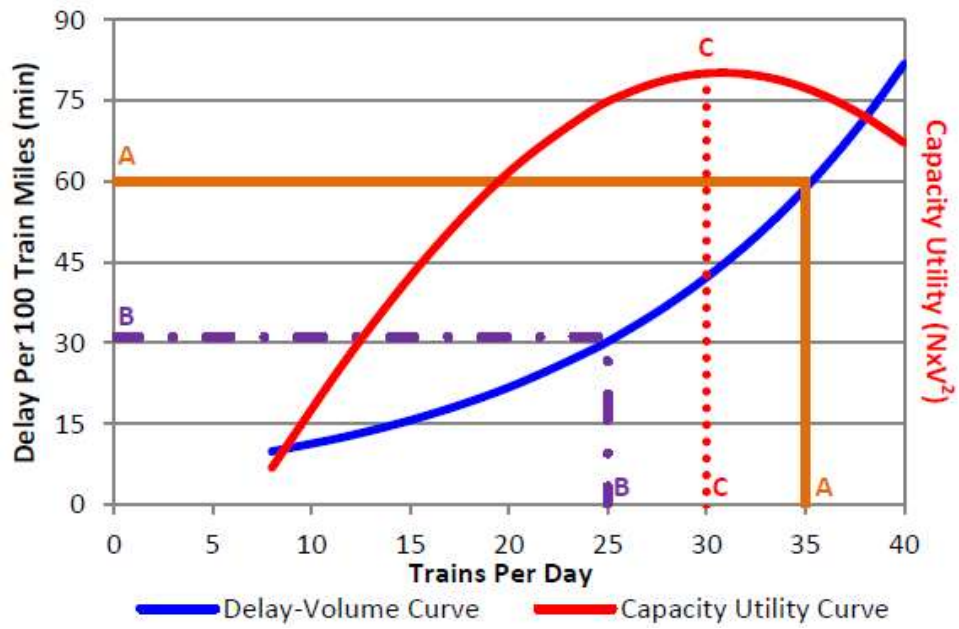


Figure 3: Capacity (Public) Utility Curve relative to Delay-Volume Curve - Conceptual Example¹²

¹² Sogin et al. "Measuring the Impact of Additional Rail Traffic Using Highway and Railroad Metrics." Proceedings of the 2012 Joint Rail Conference. Philadelphia, PA, 2012. <<http://railtec.illinois.edu/wp/wp-content/uploads/pdf-archive/Sogin-et-al-2012.pdf>>.