

ENTERED
Office of Proceedings
September 8, 2022
Part of
Public Record

September 8, 2022

VIA E-FILING

Ms. Cynthia T. Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, S.W.
Washington, DC 20423-0001

Re: STB Finance Docket No. 36500, *Canadian Pacific Railway Limited, et al. – Control – Kansas City Southern et al.*

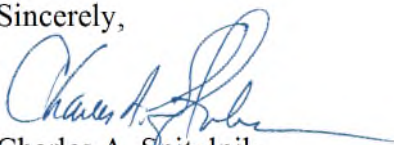
Dear Ms. Brown:

I am attaching for e-filing the Motion to Strike on behalf of the Commuter Rail Division of the Regional Transportation Authority d/b/a Metra, in the above-referenced proceeding.

Please note that this filing comprises a Public Version and a Highly Confidential Version. We are serving all parties of record with the Public version and will provide a copy of the Highly Confidential Version to any party that confirms that they have signed the Confidential undertaking that the Board approved as part of the Protective Order in this proceeding.

If you have any questions, please do not hesitate to contact me.

Sincerely,


Charles A. Spitulnik

Enclosure

cc: All Parties of Record

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB Finance Docket No. 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**

METRA MOTION TO STRIKE

Communications with respect to this pleading
should be addressed to:

Charles A. Spitulnik
Christian L. Alexander
Daniel C. Orlaskey
Kaplan Kirsch & Rockwell LLP
1634 I (Eye) Street, Suite 300
Washington, DC 20006
(202) 955-5600
cspitulnik@kaplankirsch.com
calexander@kaplankirsch.com
dorlaskey@kaplankirsch.com

Sue-Ann Rosen
Metra
547 W. Jackson Blvd
Chicago, IL 60661
srosen@METRARR.COM

*Counsel for the Commuter Rail Division of the
Regional Transportation Authority d/b/a Metra*

Dated: September 8, 2022

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB Finance Docket No. 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**

METRA MOTION TO STRIKE

The Commuter Rail Division of the Regional Transportation Authority d/b/a/ Metra (“Metra”) submits this Motion to Strike Applicants’¹ CP RTC Report attached as Exhibit 1 to the Reply Verified Statement of Raymond A. Elphick, submitted in Volume II of Applicants’ Reply to Comments and Requests for Conditions, Opposition to Responsive Applications, and Rebuttal in Support of the Application (“Rebuttal”) filed July 13, 2022, CP-53/KCS-39, in support of their proposal to merge (“Transaction”). Metra also moves to strike all statements contained in Mr. Elphick’s Reply Verified Statement and Applicants’ Rebuttal and all associated documents that contribute to, refer to, or rely on the CP RTC Report. It is now clear to Metra that Applicants have submitted a purportedly “corrected” RTC model that introduces inaccurate, unverifiable,

¹ Applicants are: Canadian Pacific Railway Limited (“Canadian Pacific”), Canadian Pacific Railway Company (“CPRC”), and their U.S. rail carrier subsidiaries Soo Line Railroad Company, Central Maine & Quebec Railway U.S. Inc., Dakota, Minnesota & Eastern Railroad Corporation, and Delaware and Hudson Railway Company, Inc. (collectively, “CP”); and Kansas City Southern and its U.S. rail carrier subsidiaries The Kansas City Southern Railway Company, Gateway Eastern Railway Company, and the Texas Mexican Railway Company (collectively, “KCS”). CP and KCS are collectively referred to as the “Applicants.”

and misleading information in support of the Application. Specifically, Metra's experts' review of the CP RTC Report reveals that:

- Applicants include new infrastructure improvements or changes in only their “corrected” future case modeling that are not identified as post-merger improvements in any of the documents Applicants have submitted in support of their Application.
- Many of Applicants' other changes to Metra's RTC modeling—including disregarding real-world historical train data representative of actual operations—are illogical and seem designed to reduce the reliability of the modeling.
- Applicants made other hidden changes to artificially improve the model's performance, without indicating that these changes had been made.
- Applicants misrepresent some of Metra's inputs such as siding lengths as “errors” that must be “corrected,” while Applicants did not change them in their own modeling.

In short, the CP RTC Report and associated assertions completely fail to meet the threshold of admissibility under the Board's regulations, *see* 49 C.F.R. § 1114.1, and therefore must be stricken.

BACKGROUND

This filing follows Metra's previous request to the Board to allow for time to review the “corrected” RTC modeling that Applicants filed the day after public commenting on the Application closed. METR-11, *responding to* CP-53/KCS-39. On July 21, 2022, Metra filed a motion to amend the procedural schedule, and for leave to file a reply, to respond to new evidence submitted by Applicants in their Rebuttal, including RTC modeling introduced for the first time in support of the Transaction. METR-11.² The Board has yet to issue a decision on

² The painstaking effort involved in reviewing, verifying, and understanding Applicants' purported RTC modeling changes, amounting to approximately 675 hours of labor by Metra's experts to date since the data became available

Metra's request.³ On August 1, 2022, Metra filed a Reply (METR-13) along with a Motion for Leave to file that Reply (METR-12) to correct a number of incorrect, incomplete, or misleading statements included in Applicants' Rebuttal, and notifying the Board that it would be seeking to submit its response to Applicants' alleged "corrected" RTC modeling at a later date after it was able to review that information.

APPLICABLE LAW

Board regulations permit as admissible "[a]ny evidence which is sufficiently reliable and probative to support a decision under the provisions of the Administrative Procedure Act, or which would be admissible under the general statutes of the United States, or under the rules of evidence governing proceedings in matters not involving trial by jury in the courts of the United States." 49 C.F.R. § 1114.1. The Administrative Procedure Act, 5 U.S.C. § 551, *et seq.* provides that a reviewing court shall "hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; . . . without observance of procedure required by law; [or] unsupported by substantial evidence in a case . . . reviewed on the record of an agency hearing provided by statute." 5 U.S.C. § 706(2)(A), (D), (E). Rule 403 of the Federal Rules of Evidence provides that a court "may exclude relevant evidence if its probative value is substantially outweighed by a danger of . . . unfair prejudice [or] confusing the issues." Rule 702 of the Federal Rules of Evidence

after July 13, has prevented Metra from filing this Motion earlier, as it did with its other corrections to Applicants' Rebuttal. *See* METR-13. Applicants' introduction of RTC data after the close of the public comment period is why Metra filed its motion for leave to extend the procedural schedule soon after Applicants' submission. *See* METR-11.
³ Metra also simultaneously filed a motion to grant leave to file this reply with the Board. *See* METR-12. The Board has not yet ruled on this motion.

requires that expert witness testimony be “the product of reliable principles and methods” and that “the expert has reliably applied the principles and methods to the facts of the case.”

Specifically concerning rebuttal evidence, Board precedent establishes that parties may not “eras[e] the distinction between a case-in-chief and rebuttal” by, for instance, submitting evidence that “contains factual information which could and should have been included in the . . . application itself.” *Union Pac. Corp.—Control—Chi. & N.W. Transp. Co.*, FD 32133, 1994 ICC LEXIS 168 *4, **39-40 (ICC served Sept. 12, 1994) (“UP”). *See also Duke Energy Corp. v. CSX Transp., Inc.*, FD 42070, slip op. at 4 (STB service Mar. 25, 2003) (“[r]ebuttal may not be used . . . as an opportunity to introduce new evidence that could and should have been submitted in the party’s case-in-chief.”). This applies to “reworked” studies that introduce new information that Applicants could have presented in their original application. *See UP* at *25. To permit otherwise “would allow [Applicants] to ‘sandbag’ [Metra] by withholding key arguments or evidence and submitting them later – when [Metra has] no opportunity to respond.” Letter from David L. Meyer to the Surface Transportation Board submitted in this proceeding FD 36500, *et al.*, dated July 20, 2022, at 2-3. Indeed, with respect to technical studies, “[f]airness dictates that [parties] would need an opportunity to address the feasibility and cost of a new [study] and how that change might alter other evidence in the record.” *Duke Energy*, slip op. at 4 (discussing changes to a stand-alone railroad design in the context of a rate-setting case).

DISCUSSION

Metra’s experts have now had time to review Applicants “corrected” RTC modeling in order to assess whether it supports the claims that Applicants make in their Rebuttal. The results of their review, attached as **Attachment A**, reveal that the CP RTC Report contains inaccurate, unverifiable, and misleading information. Furthermore, Applicants have, through the CP RTC

Report, introduced infrastructure improvements that were not identified in Applicants' initial Application. To allow the CP RTC Report, and the Applicants' statements that rely on it, into the record would constitute a clear contravention of Metra's rights and would expose the Board to the risk of a challenge under the Administrative Procedure Act.

A. Applicants include new infrastructure improvements and other previously undisclosed changes in its RTC modeling

Applicants' future case includes more infrastructure expansion than the "planned capital infrastructure improvements" identified in the Merger Application. CP-53/KCS-39, Vol. II, Elphick R.V.S. at ¶ 52. For the first time in these proceedings, Applicants have introduced through their Rebuttal to Metra's RTC modeling new infrastructure improvements at River Junction. The CP RTC Report and associated data reveals addition of new "River Jct. improvements" to its Future Case, despite Applicants having identified no improvements at River Junction in the Merger Application. R.V.S. Crowley and Mulholland at 31. These future case adjustments to the River Junction infrastructure appear to likely hide the severe deterioration in service caused by the merger. *Id.* at 31-32.

The River Junction future case infrastructure improvements "could and should have been included in the . . . application itself," *UP* *39-40, but were not. New infrastructure is not merely a tweak to Metra's modeling; it constitutes a critical aspect of the Application, which is why Applicants have highlighted various infrastructure improvements associated with the Transaction (and even some improvements supposedly not associated, as with the Bensenville Yard improvements). Only after the public comment period had closed did Applicants seek to rely on this evidence, not by stating so, but by including it in the highly technical RTC modeling that Applicants relied on to state that the Transaction would have no impact on Metra's service. This

denied Metra the opportunity to respond and undermined the integrity of the Board's evidence gathering process.

In addition to new future case infrastructure, Applicants' modeling includes changes to the historical operating data to reroute trains, remove daily stops, and omit foreign train interference without explanation, thereby artificially improving performance of the system.

R.V.S. Crowley and Mulholland at 25-27. For instance, among the changes that Applicants made to tip the scales in their favor was to reset sit restrictions, *i.e.*, length of time a train is allowed to remain parked on a crossing. The change applies to 102 sections of track and sidings that encompass public and private road crossings and loosens the restriction from 30 *minutes* to 30 *days*. *Id.* at 14. If Applicants intend to rely on the ability to hold up traffic on public and private crossings for ***up to 30 days*** in order to achieve the system performance required to permit the Transaction to operate without interfering with Metra's service, they should have stated so in their Application. They did not, and burying this information in the modeling attached to their Rebuttal deprived Metra and other parties of the opportunity to respond to it. Furthermore, this is a change that Applicants would never ask for or receive, making the model upon which it is based unreliable.

Similarly, Applicants have altered the dispatching priority settings to increase the spread between priority given to Metra trains and Amtrak trains, even though CP does not in fact provide that priority and the Application did not promise to do so. *Id.* at 16-17. This change served to expedite dispatching of Metra trains in the model when they would not (and do not) receive the same treatment in the real world as against Amtrak trains. If Applicants' Transaction will require special preferential treatment of Metra's trains as against Amtrak's trains in order to preserve Metra's existing performance, they should have stated so in their Application (and be

held to it by binding conditions imposed by the Board). They did not and have not indicated that Amtrak has agreed to this allocation of priority in dispatching. Including this information in the Rebuttal also deprived Metra of the opportunity to respond to it or test it by, for example, including it in Metra's modeling.

Unlike Metra, who used the actual train data for the modelled period, Applicants also altered the number of Metra trains in the model to artificially inflate the base case traffic, making the performance of the future case look better than it does when using the actual train data for the modelled period. *Id.* at 30. This sleight of hand allowed Applicants to assert that there could be a "slight but noticeable reduction in delays to Metra's trains compared to the Base Model." CP-53/KCS-39, Vol. II, Elphick R.V.S. at ¶ 52. In fact, this is not the case. Unless this and Applicants' modeling supporting it is stricken from the record, Metra will be unable to effectively respond to and rebut that assertion and supporting information, as the public commenting period closed before these were submitted into the record, and Metra's motion for an extension of the procedural schedule has not been granted.

Applicants had the opportunity to introduce the above evidence, through RTC modeling or otherwise, in their Application. Their failure to do so does not permit them to jam this new evidence into the record without providing Metra and other parties with a fair opportunity to respond. Either Applicants' new evidence should be stricken from the record, or Applicants should resubmit their Application with whatever assumptions they would like to make so that it may be reviewed and commented on by Metra and other parties, and fully evaluated by the Board, in the light of day.

B. Many of Applicants' other changes seem designed to reduce the accuracy of the modeling

Rather than *actual* representative departure times and delays, as Metra used, Applicants used scheduled departures, constant dwell times, and unrealistic “randomized” dispatching. CP-53/KCS-39, Vol. II, Elphick R.V.S. at ¶ 48, 52.b. These changes distort the results in CP’s favor, as demonstrated by the discrepancy between CP’s schedule and the *actual* CP train data that Metra used. R.V.S. Crowley and Mulholland at 8-14, 23-25.

For example, by relying on “randomized” dispatching settings, Applicants neglected the high proportion of CP trains that are *not* dispatched within CP’s chosen randomized windows, as detailed by Messrs. Crowley and Mulholland. *Id.* at 8-12. Applicants also ignored the implications of train movements beyond the boundaries of the modeled system, which they could have easily accounted for using actual historical train data. *Id.* at 8. Contrary to Applicants’ assertions, these changes do not improve the accuracy of the model. Instead, they reduce accuracy and obscure the impact of the merged operation.

CP’s own actual representative train data reflects real-world circumstances, providing the best basis for modeling CP’s operations. *Id.* at 24. The fact that Applicants disregarded their own actual train data is a glaring example of Applicants’ rigging the RTC modeling.

Applicants’ changes are not supportable and only serve to reduce the reliability, accuracy, and probative value of the RTC modeling already provided to the Board. Accordingly, the CP RTC Report, and all statements that rely on it, should be stricken.

C. Applicants made other unstated changes that artificially improve the model’s performance

Additional unstated changes further call into question the credibility of Applicants’ Rebuttal modeling. For example, Applicants never explained in its Rebuttal that its future case

simulation failed to dispatch 44% of the time; *i.e.*, that the model could not find a means of dispatching Applicants' proposed operating plan on the modeled lines almost as often as it could. *Id.* at 4-5. As Metra's experts note, the fact that 44% of attempts failed to dispatch, despite moderate RTC Dispatch Difficulty index numbers, indicates that there is a problematic choke point that repeatedly causes failure, specifically the Marquette Subdivision. *Id.* at 5-7. This reflects a genuine concern on the inability of CP's system to handle the new traffic, which, when tied to CP's poor dispatching history on Metra's lines, indicates Metra will expect additional delays and interference.

Applicants' results also showed a dramatic decrease in CP train performance post-merger, including an 86% increase in delay minutes per train for manifest trains on the Marquette Subdivision and a 77% increase in delay minutes per train for intermodal trains. *Id.* at 32-33. It is unlikely that Applicants will accept those substantial delays in actual practice and will continue CP's history of regularly prioritizing its own trains over Metra's, causing substantial additional delay to Metra as a result of the merger.

D. Applicants misrepresent Metra's inputs as "errors" that Applicants "corrected", but Applicants did not change them in their modeling

Applicants' charge that errors "riddled" Metra's RTC modeling, CP-53/KCS-39, Volume I, at 168, is contradicted by Applicants' decision to not adjust Metra's "errors" in their "corrected" modeling. R.V.S. Crowley and Mulholland at 20-25. For example, despite Applicants' criticism that Metra should have relied on timetables to determine siding lengths, and that Metra's reliance on track charts constituted an error, Applicants in their own analysis did not change the lengths of most sidings it claimed were erroneously modeled in Metra's simulation. *Id.* Rather, Applicants relied on the same infrastructure inputs that Metra used with

respect to sidings. *Id.* Even in some cases where changes were made, the changes were negligible and did not match CP's timetables. *Id.* at 20-22.

Applicants' statements regarding "corrected" modeling, therefore, do nothing but cause confusion and mislead the Board as to the veracity of Metra's RTC modeling in addition to the prejudice created by the attempt to introduce evidence in rebuttal that should have been provided in the original Application. Accordingly, the CP RTC Report and all statements that rely on it in the Rebuttal should be stricken.

E. Applicants' entire RTC model must be stricken because it is inextricably linked to the problematic "corrections" made by Applicants

The nature of RTC modeling is that it relates a multitude of factors to create a single picture, or model, of a rail system. The interconnected nature of this exercise means that any variable or input is inextricably linked to the rest of the simulation, and, therefore, the outputs of a simulation cannot be separated from the inputs. Given the issues surrounding the Applicant's RTC modeling, specifically new infrastructure and operational changes in support of the Application, hidden and unstated changes, and changes that are illogical and apparently designed to reduce the modeling's reliability or to unfairly support Applicants' assertions, the RTC simulations filed by Applicants must be stricken from the record.

F. Metra's RTC simulations remain the only reliable RTC model in the record

Metra has carefully reviewed and analyzed CP's assertions and "corrections" regarding Metra's RTC modeling. Our conclusion: Metra's RTC model, based on *actual* representative operational data, *actual* CP train routing, and *actual* CP infrastructure layout included in CP's track charts, all of which were provided by CP itself in discovery responses and applied correctly according to the RTC manual, remains the only reliable modeling in the record.

In contrast, in their last-minute modeling Applicants have gamed their RTC model to hide the true impact of the merger, including artificially inflating base case volumes to minimize the negative change in traffic, replacing actual freight train movements, departure times, and delays, with theoretical schedules, threshold metrics, and data, and using grade-crossing sit restrictions, route stops, priority settings in inaccurate and completely unrealistic ways. R.V.S. Crowley and Mulholland at 39-40.

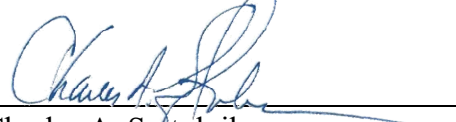
Even using these tactics, Applicants' modeling results suggest the same basic conclusions as Metra's results: that the Marquette Subdivision will be over-capacity and that service levels will significantly decline. For example, even Applicants' unadjusted RTC simulations show that randomization in train operations will cause unresolvable dispatch conflicts 44% of the time. *Id.* at 4, 39. When CP's model is corrected to account for true schedule deviation, CP's model fails to dispatch 67% of the time. *Id.* at 13. The precarious status of the system will inevitably put pressure on Applicants' dispatchers to adjust dispatching protocols to keep Applicants' trains from falling farther behind. These adjustments will result in Metra service levels declining further. *Id.* at 39-40.

The Board must use accurate and reliable data to understand the actual impact of the merger on Metra's essential commuter rail service and the greater Chicago area. Metra's RTC modeling is the only accurate and reliable information available to understand these impacts, which are severe. Allowing Applicants' modeling to remain in the record would undermine the Board's ability to accurately understand the impacts of the Transaction and prohibit Metra and other parties from having the opportunity to respond to this newly introduced evidence.

CONCLUSION

For the foregoing reasons, Metra requests that the Board grant Metra's Motion to Strike the CP RTC Report and statements contained within Applicants' Rebuttal that rely on it.⁴

Respectfully submitted,



Charles A. Spitulnik
Christian L. Alexander
Daniel C. Orlaskey
Kaplan Kirsch & Rockwell LLP
1634 I (Eye) Street, Suite 300
Washington, DC 20006
(202) 955-5600
cspitulnik@kaplankirsch.com
calexander@kaplankirsch.com
dorlaskey@kaplankirsch.com

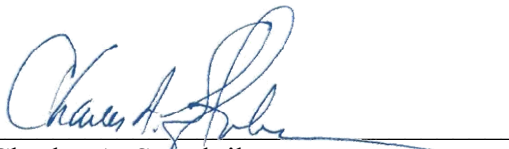
Sue-Ann Rosen
Metra
547 W. Jackson Blvd
Chicago, IL 60661
srosen@METRARR.COM

Dated: September 8, 2022

⁴ This includes, without limitation, statements relying on the CP RTC Report contained in the Rebuttal Verified Statement of Raymond A. Elphick at ¶¶ 24, 44-53 and all statements relying on these statements, including the Rebuttal, Volume I, page 168, 174-180, 183, 200.

CERTIFICATE OF SERVICE

I hereby certify that I have on the 8th day of September 2022, caused to be served a copy of the foregoing MOTION TO STRIKE, upon all parties of record in this proceeding.



Charles A. Spitulnik
Kaplan Kirsch & Rockwell LLP
1634 I (Eye) Street, NW
Suite 300
Washington, DC 20036
(202) 955-5600
cspitulnik@kaplankirsch.com

PUBLIC VERSION

ATTACHMENT A

**REBUTTAL VERIFIED STATEMENT OF
THOMAS D. CROWLEY and ROBERT D. MULHOLLAND**

PUBLIC VERSION

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. FD 36500

CANADIAN PACIFIC RAILWAY LIMITED; CANADIAN PACIFIC RAILWAY
COMPANY; SOO LINE RAILROAD COMPANY; CENTRAL MAINE & QUEBEC
RAILWAY US INC.; DAKOTA, MINNESOTA & EASTER RAILROAD CORPORATION;
AND DELAWARE & HUDSON RAIWAY COMPANY, INC. – CONTROL – KANSAS
CITY SOUTHERN, THE KANSAS CITY SOUTHERN RAILWAY COMPANY, GATEWAY
EASTERN RAILWAY COMPANY, AND THE TEXAS MEXICAN RAILWAY COMPANY

REBUTTAL VERIFIED STATEMENT

of

Thomas D. Crowley
President

and

Robert D. Mulholland
Senior Vice President

L. E. PEABODY & ASSOCIATES, INC.
ECONOMIC CONSULTANTS

On Behalf Of

**THE COMMUTER RAIL DIVISION OF THE
REGIONAL TRANSPORTATION AUTHORITY AND NORTHEAST
ILLINOIS REGIONAL COMMUTER RAILROAD CORPORATION
(METRA)**

Dated: September 6, 2022

	<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
	(1)	(2)
I.	Introduction.....	1
II.	Summary of Findings.....	2
III.	CP’s Narrative Description Misrepresents its RTC Simulation Workpapers	4
	A. CP’s RTC Simulation Assumptions Regarding Freight Schedule Adherence are Unrealistic	8
	B. CP’s RTC Simulations Include Undisclosed Assumptions Regarding Train Dwell on Public Road Crossings	14
	C. CP’s RTC Simulations Include Inappropriate and Unsupported Assumptions Regarding Train Dispatching Priority	16
IV.	Many of CP’s Changes to Metra’s Simulations are Unfounded and Produce Illogical Results.....	20
	A. CP’s RTC Simulations Include the Same Inputs CP Claimed were Erroneous in Metra’s Simulations	20
	B. CP’s RTC Simulations Inappropriately Modified Dwell Times.....	25
	C. CP’s RTC Simulations Include Undisclosed Changes to Train Routes and Local Work Assignments	27
	D. Problems with CP’s Base Case Modeling.....	29
	E. Problems with CP’s Future Case Modeling	31
	F. CP Fails to Discuss the Significance of the Reduction in CP Performance Predicted by its Own Modeling.....	32
	G. CP Mischaracterized Both Metra’s and its own RTC Simulation Results.....	33
V.	Many of CP’s Criticisms Regarding Metra’s Simulation Inputs are Inconsequential or Irrelevant.....	36
	A. Metra’s RTC Simulations Remain the Best Evidence in the Record.....	39

LIST OF EXHIBITS

Exhibit No. ¹	Exhibit Description
(1)	(2)
16	Summary of CP RTC Simulation Results
17	Page 35 of RTC Manual Section 3.2
18	Metra Opening vs CP Reply – Siding Length Examples
19	Metra Opening vs CP Reply – Deleted Road Crossing Examples

¹ Exhibit No. 1 through Exhibit No. 10 are included with our Verified Statement filed in this proceeding on March 15, 2022. Exhibit No. 11 through Exhibit No. 13 are included with our Supplemental Verified Statement filed in this proceeding on June 9, 2022. Exhibit No. 14 is included with our Reply Verified Statement filed in this proceeding on July 12, 2022. Exhibit No. 15 is included with our Sur-Reply Verified Statement filed in this proceeding on August 1, 2022.

I. INTRODUCTION

We, Thomas D. Crowley and Robert D. Mulholland, President and a Senior Vice President, respectively, of L. E. Peabody & Associates, Inc., are the same individuals who presented a Verified Statement (“VS”) in support of The Commuter Rail Division of the Regional Transportation Authority and Northeast Illinois Regional Commuter Railroad Corporation’s (“Metra”) March 15, 2022 Comments herein,² a Supplemental Verified Statement (“SVS”) in support of Metra’s June 9, 2022 Comments,³ a Reply Verified Statement (“RVS”) in support of Metra’s July 12, 2022 Comments, and a Sur-Reply VS (“SRVS”) in support of Metra’s August 1, 2022 Comments.

L. E. Peabody & Associates, Inc. is an Economic Consulting Firm that specializes in addressing economic, transportation, marketing, financial, accounting and fuel supply matters. We have spent most of our consulting careers of over 50 and 25 years, respectively, evaluating railroad operations, capacity, costs and profitability and pricing issues for shippers, producers, railroads and government agencies. Our credentials are included as Exhibit No. 1 and Exhibit No. 2 to our March 15, 2022 VS.

We were asked by Metra’s counsel to review workpapers supporting Canadian Pacific Railway (“CP”) and Kansas City Southern Railway Company’s (“KCS”) (jointly “CP/KCS” or “Railroads”) alternate Rail Traffic Controller (“RTC”) simulations, which CP/KCS claim demonstrate that: (1) there will be ample capacity on the combined system to accommodate the forecasted traffic volumes included in their operating plan; and (2) there will be no degradation in Metra’s service levels in the post-merger environment.

² As modified by an errata filed on June 9, 2022.

³ As modified by an errata filed on July 8, 2022.

II. SUMMARY OF FINDINGS

CP/KCS' critique of Metra's RTC simulations contains false statements and misleading claims. Moreover, CP's alternate RTC simulations provided by CP witness Raymond A. Elphick to justify the proposed merger include inputs and assumptions that: (1) do not reflect actual CP operations; (2) CP failed to disclose or deliberately misrepresented; and (3) are designed to obscure CP's simulation results that confirm Metra's conclusions and demonstrate that the Marquette Subdivision will be operating over capacity in the post-merger environment.⁴

In fact, CP's alternate RTC simulations underscore that capacity on the Marquette Subdivision following the proposed merger will be so diminished that slight deviations from CP's scheduled freight operations will undermine dispatch of the line. Inevitably, CP/KCS will have no other option but to divert additional CP freight trains over Metra's Milwaukee District ("MD") lines. However, Metra's MD lines will already be operating under strain caused by CP's daily operation of eight (8) additional long, time-sensitive, high-priority, intermodal and manifest trains over the MD lines.

CP/KCS is concealing these issues, and CP advocates that Metra's RTC simulations should be ignored entirely.⁵ Yet, CP objects to a review or assessment of its alternate RTC simulations submitted on July 12, 2022.⁶ Upon review of CP's workpapers, it is easy to see why CP does not want its analyses to be scrutinized – CP's claims are not supported by its RTC simulations. Moreover, although CP's presentation implies that Metra's RTC simulations were erroneous beyond repair and that CP was forced to create its own RTC simulations from scratch, CP's RTC simulations are modified versions of Metra's simulations, with select adjustments that are results-

⁴ Reply Verified Statement of Raymond A. Elphick dated July 12, 2022 in this proceeding ("Elphick RVS").

⁵ See, Elphick RVS at ¶39.

⁶ See, CP August 4, 2022 letter filing.

driven and often unsupported.⁷ Therefore, Metra's RTC simulations remain the only reliable evidence of record, and the conclusions drawn from them remain valid.

In the sections that follow, we demonstrate the following:

1. CP misrepresented its RTC simulation results, which actually show that RTC failed to dispatch the Future Case 12 out of 27 times (a 44 percent failure rate);
2. When CP's inputs are modified to reflect reality, its RTC Future Case simulation failure rate increases from 44 percent to 81 percent;
3. CP made additional RTC adjustments that it chose not to disclose;
4. CP misrepresented the changes it made to Metra's RTC simulation inputs upon which CP's own simulations are based;
5. Many of CP's changes to Metra's RTC simulations are unfounded and/or insignificant; and
6. Metra's RTC modeling is reliable, and its conclusions are confirmed by CP's RTC modeling

⁷ CP's RTC simulations include significant unrealistic edits to both track and trains that CP did not disclose anywhere in its nearly 6,000-page Reply filing. These edits artificially increase capacity on CP's lines in its RTC model.

**III. CP'S NARRATIVE DESCRIPTION MISREPRESENTS
ITS RTC SIMULATION WORKPAPERS**

CP's description of its RTC analysis is notable for what it omits. CP used an RTC function called "randomization" to generate dispatch times for CP freight trains within a specified window of the scheduled dispatch time (versus Metra's simulations that used actual times reported in CP's train event data). After setting these parameters, CP dispatched randomized RTC simulations until it achieved 15 successful simulations.

For CP's Base Case, RTC had to make 17 separate simulation attempts to achieve 15 successful runs. Thus, two (2) attempts at simulating the Base Case failed to run to completion using the randomized dispatch times generated by the RTC program within the parameters set by CP.

For CP's Future Case, RTC made 27 separate simulation attempts to achieve 15 successful runs. Stated differently, 12 attempts at simulating the Future Case failed to run to completion using the randomized dispatch times generated by the RTC program within the parameters set by CP.

CP disingenuously claims that the 15 successful dispatches prove that its operating plan is sound and there will be ample capacity to accommodate its projected post-merger train volumes.

The planned infrastructure improvements to the Marquette Subdivision will accommodate the increased traffic Applicants project from the Transaction. Indeed, without removing any trains from the train file, the updated Future Case successfully dispatched 15 randomized, 7-day runs.⁸

What CP's analysis shows is that nearly as often as not (12 out of 27 times, or 44 percent of its simulations), the variability in CP schedule adherence, i.e., randomness of train dispatch

⁸ See, Elphick RVS at ¶52.b.

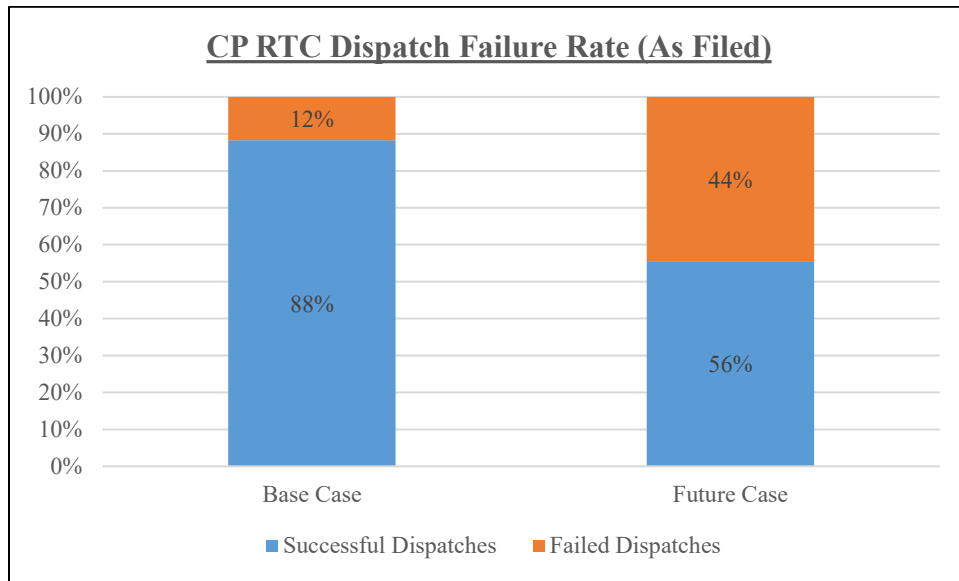
times, caused the system to fail. RTC was not able to successfully dispatch the full complement of trains in 12 runs, *which is the same thing Metra's RTC simulations showed.*

Table 1 below summarizes the full CP simulation results from CP's workpapers supporting its RTC Report included as Exhibit 1 to Mr. Elphick's RVS.

Table 1 <u>Impact of Merger Based on CP RTC Analysis</u>			
Item	Base Case	Future Case	Percent Change 1/
(1)	(2)	(3)	(4)
1. Successful Simulations Used to Generate Average Operating Statistics	15	15	0%
2. Attempts Required to Achieve 15 Successful Simulations	17	27	59%
3. Failed Simulations	2	12	500%
4. Simulation Failure Rate 2/	12%	44%	278%
5. RTC Dispatch Difficulty for Successful Simulations (Scale of 0 to 100)	20.00	29.67	48%
6. Average Train Speed for Successful Dispatches	28.22	27.18	-4%
7. Average Delay per 100 Train-Miles for Successful Dispatches (minutes)	20.50	28.85	41%
Source: Exhibit No. 16.			
1/ (Column (3) ÷ Column (2)) -1.0 x 100.			
2/ (Line 3 ÷ Line 2) -1.0 x 100.			

As shown in Table 1, Line 4, Column (2) above, capacity issues cause problems in the Base Case (a 12 percent dispatch failure rate). This is consistent with Metra's current real-world experience with CP's freight trains often interfering with Metra's passenger service. But, when the Future Case volumes are loaded into the system, even with CP/KCS' planned infrastructure additions and CP's other assumptions, the dispatch failure rate more than triples to 44 percent (Table 1, Line 4, Column (3)). Dispatch failure rate is shown graphically in Figure 1 below.

Figure 1



RTC fails when it is unable to determine a dispatch solution for all trains to perform all programmed stops from origin to destination. CP's proposed Future Case system is perilously close to failure, and any random event on any given day can cause cascading conflicts that lead to system failure. CP's analysis, including CP's unrealistic inputs, places the likelihood of failure in the Future Case at 44 percent.

RTC also generates a statistic called Dispatch Difficulty, which is made on a scale of 0 to 100. Dispatch Difficulty is a factor of how many attempts RTC makes to reschedule trains to achieve a successful dispatch. As shown above in Table 1, Line 5, Column (4), there was a 48 percent increase in dispatch difficulty for successful dispatches when moving from the Base Case to the Future Case. According to CP's own simulations, even for successful dispatches, there is a significant increase in difficulty related to increased conflicts in the Future Case compared to the Base Case.

The reported Dispatch Difficulty indexes reflect the entire modeled system. The fact that 44 percent of attempts failed to dispatch despite somewhat moderate index numbers for successful

attempts, indicates that the system capacity is generally adequate, but there is a problematic choke point(s) that repeatedly causes failure, i.e., Marquette Subdivision. Thus, Metra's concern about CPKC's need to reroute Marquette trains over Metra lines is warranted and is substantiated by CP's RTC simulation results.

CP's own results also show a 41 percent increase in Delay per 100 Train-Miles (minutes) when moving from the Base Case to the Future Case (Table 1, Line 7, Column (4)).⁹ CP's assertions that the merger will have no significant impact on operations is belied by CP's own results, as shown in Figure 2 below.

Figure 2

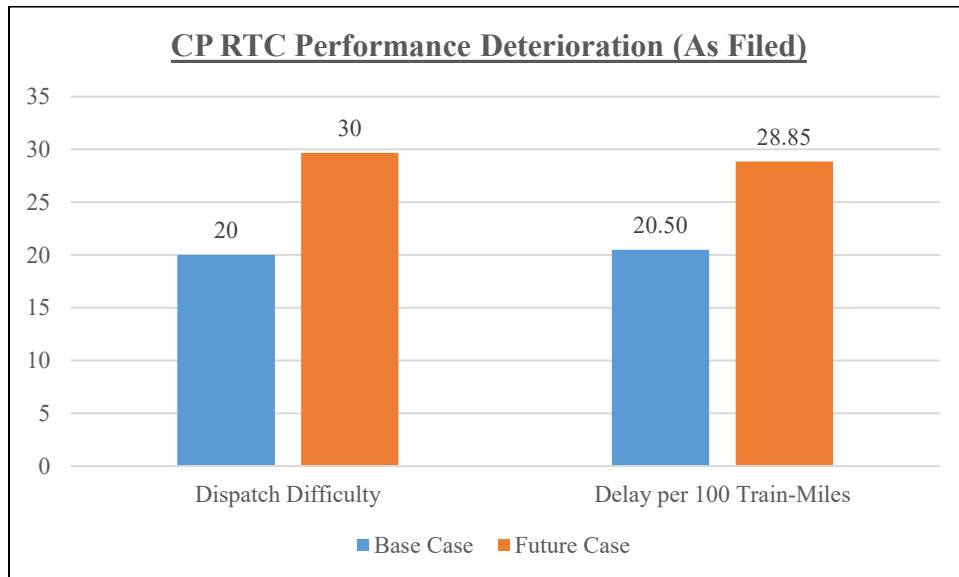


Exhibit No. 16 contains more detail regarding CP's successful and failed RTC simulations.

⁹ CP's results also show a four (4) percent decrease in train speeds (miles per hour) (Table 1, Line 6, Column (4)).

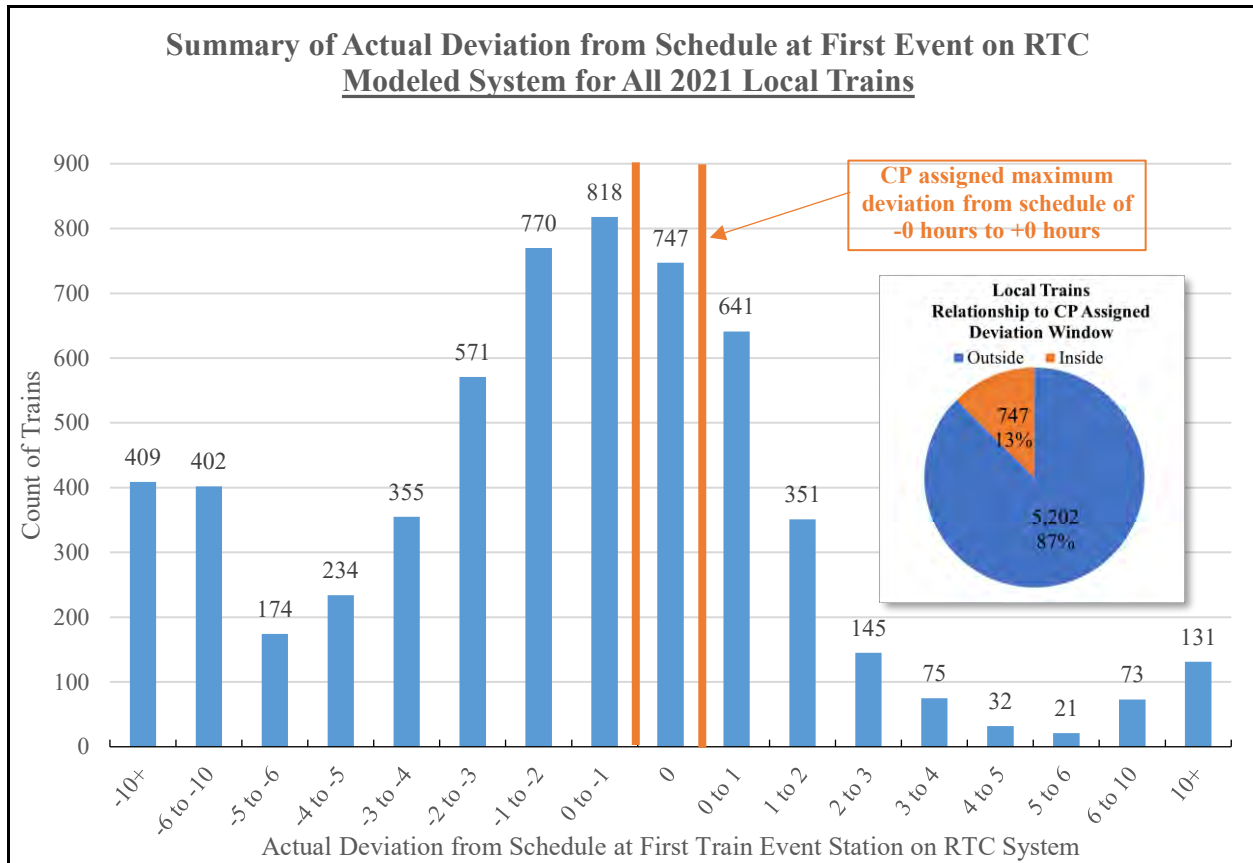
**A. CP'S RTC SIMULATION
ASSUMPTIONS REGARDING
FREIGHT SCHEDULE
ADHERENCE ARE UNREALISTIC**

CP misleadingly asks the Board to ignore real-world operations beyond the boundaries of the modeled system and accept CP's improbable schedule adherence. Many of the modeled CP freight trains originate hundreds of miles upstream from the portion of the CP/Metra system that we modeled. The CP train event data shows that these trains are habitually operating behind schedule when they arrive at the modeled segments. Rather than acknowledge the upstream interference that causes CP's freight trains to regularly run off schedule, CP's RTC simulations erroneously assume that every CP train will magically appear within a tight time window around the scheduled arrival time at Sabula and River Jct. on the south and north ends of the Marquette Subdivision, respectively. CP can only produce an RTC simulation that dispatches 56 percent of the time in the Future Case using these unrealistic assumptions.

Specifically, CP's simulations force much closer adherence to its freight schedules than is observed in the train event data CP provided in response to Metra's discovery requests. As shown in Figure 3 below, only 13 percent of the CP local trains that operated in the base year dispatched precisely on schedule.¹⁰

¹⁰ $[(5,202 + 747) \div 747] \times 100 = 13$ percent.

Figure 3



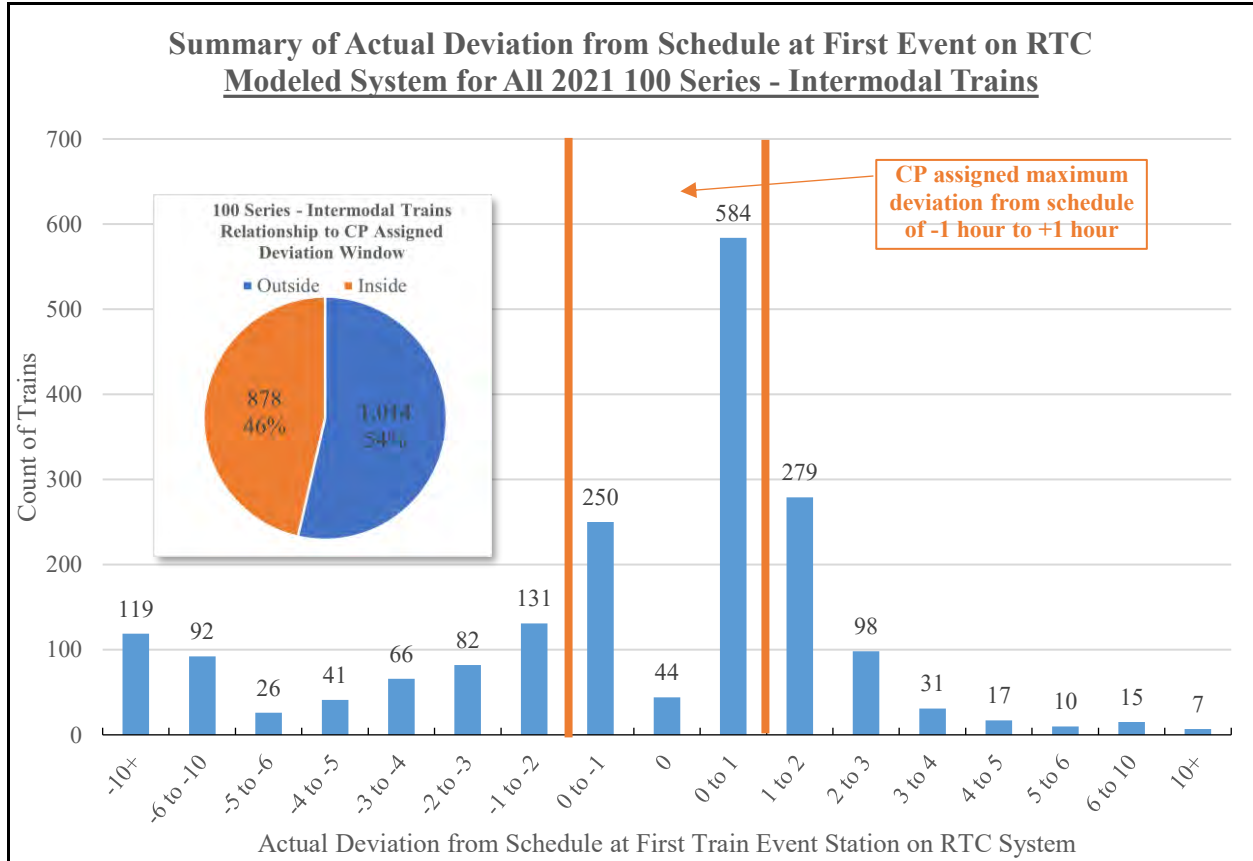
Notwithstanding the frequent schedule deviation reported in its train event data, CP forced 100 percent of the CP local trains to dispatch precisely on schedule in its RTC simulations. That is, CP did not include randomization around the scheduled departure time in its local train dispatching rules.¹¹ A randomization window for CP local trains of +/- three (3) hours would capture 68 percent of the actual local train operations, and extending the window to +/- five (5) hours would capture 80 percent of the actual train operations.

A similar issue arises with CP's treatment of intermodal trains. As shown in Figure 4 below, fewer than half of the 100-Series intermodal trains that operated in the base year were

¹¹ CP forced local trains to dispatch precisely according to schedule with zero deviation. In contrast, CP allowed for SOME schedule deviation for other train classes (as discussed below). Metra used actual times reported in the event data (regardless of the schedule) in its RTC simulations.

dispatched within the assumed +/- one (1) hour randomization window CP imposed on its RTC simulations.¹²

Figure 4



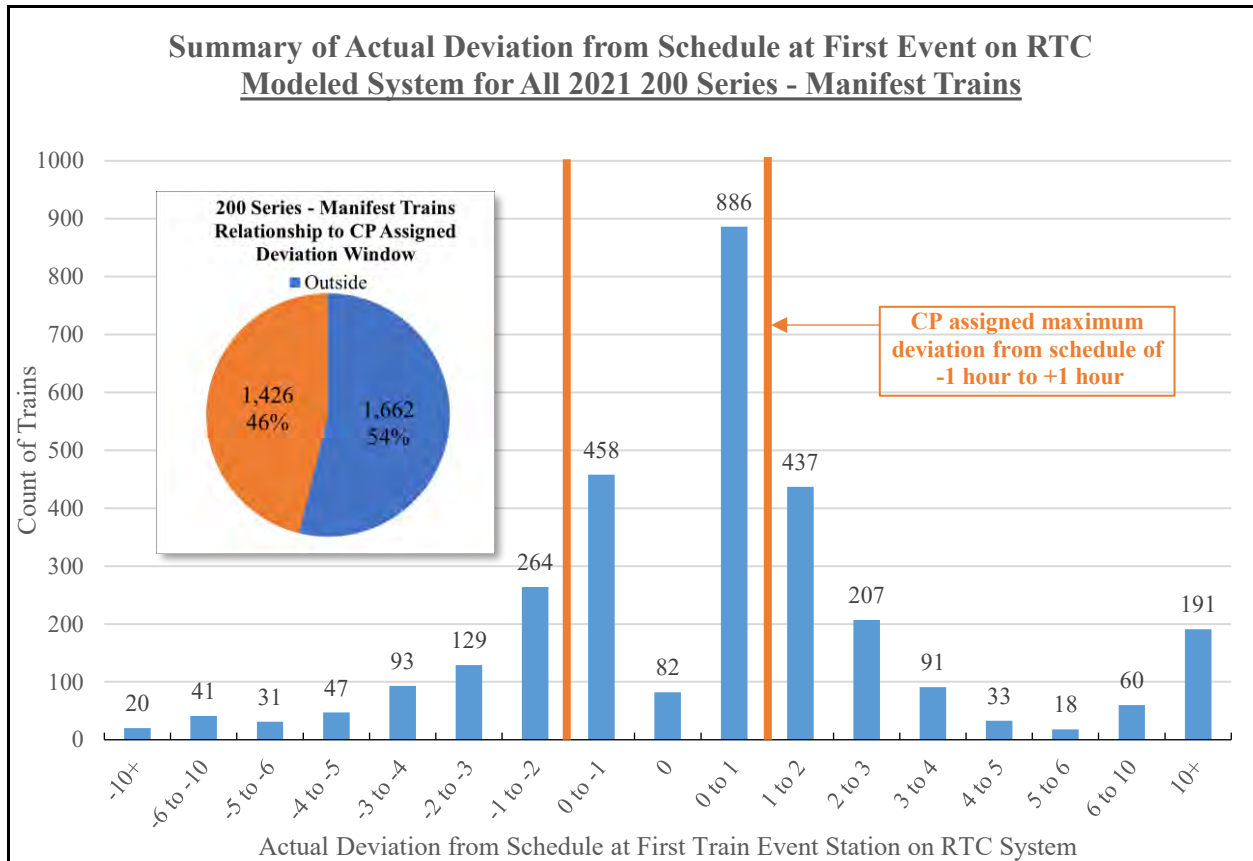
In its RTC simulations, CP forced 100 percent of the 100-Series Intermodal trains to dispatch within one hour of the scheduled times, when in reality, only 46 percent of CP's 100-Series Intermodal trains met that standard.¹³ Extending the randomization window for 100-Series Intermodal trains to +/- two (2) hours would capture 68 percent of the actual trains' operations, and extending the window to +/- three (3) hours would capture 78 percent of the actual train operations.

¹² $[(1,014 + 878) \div 878] \times 100 = 46$ percent.

¹³ See, workpaper "RTC Base and Future Case Randomization Review_08312022.xlsx."

Similarly, CP also forced 100 percent of the 200-Series Manifest trains to dispatch within one hour of the schedule in its RTC simulations, when again, only 46 percent of CP's 200-Series Manifest trains met that standard in the real world, as shown in Figure 5 below.¹⁴

Figure 5



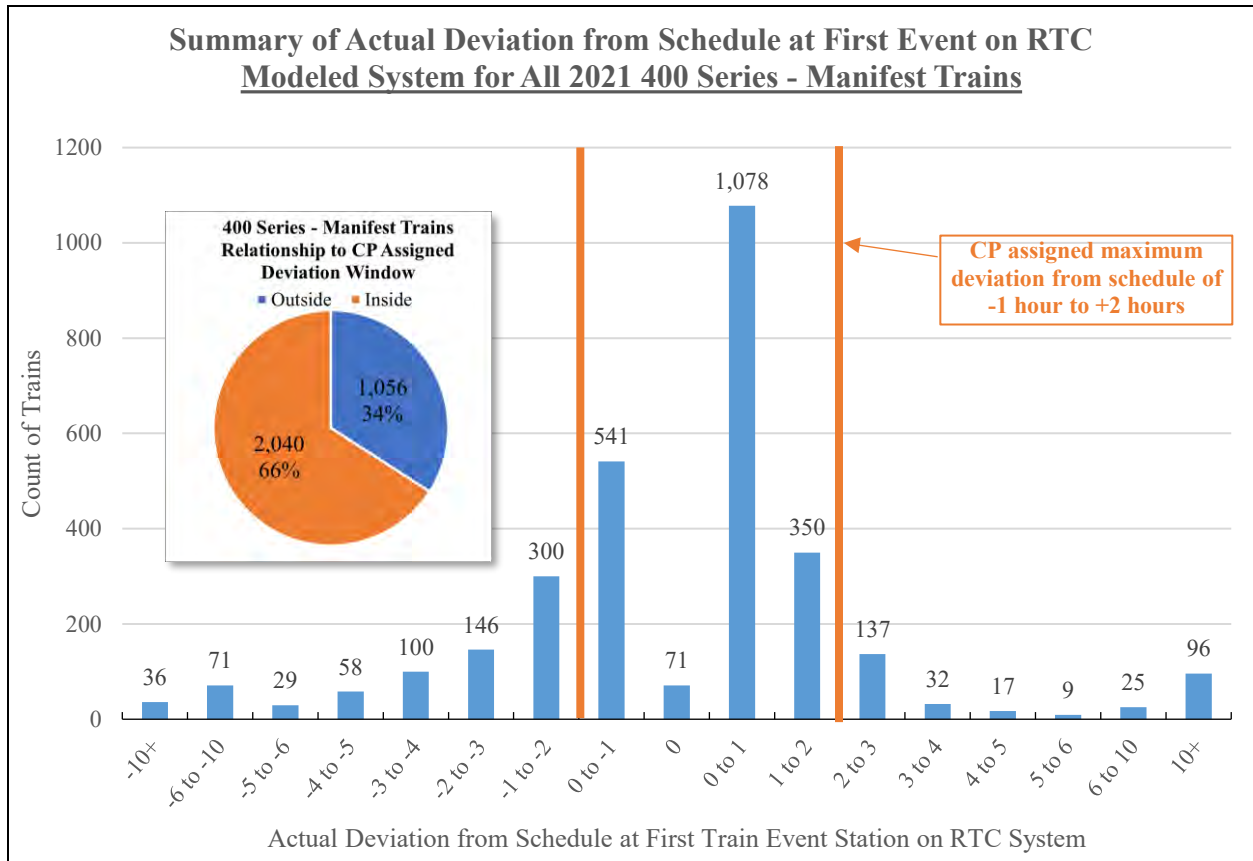
Extending the randomization window for 200-Series Manifest trains to +/- two (2) hours would capture 69 percent of the actual train operations and extending the window to +/- three (3) hours would capture 80 percent of the actual train operations.

CP also forced 100 percent of the 400-Series Manifest trains to dispatch between one hour ahead and two (2) hours behind the scheduled times in its RTC simulations, when in reality, only 66 percent of CP's 400-Series trains met that standard, as shown in Figure 6 below.¹⁵

¹⁴ $[(1,426 + 1,662) \div 1,426] \times 100 = 46$ percent.

¹⁵ $[(1,056 + 2,040) \div 2,040] \times 100 = 66$ percent.

Figure 6



Extending the randomization window for 400-Series Manifest trains to +/- two (2) hours on both ends would capture 76 percent of the actual train operations, and extending the window to +/- three (3) hours on both ends would capture 85 percent of the actual train operations.

We tested the impact of changing the randomization parameters in CP's model to closer reflect the actual divergence from schedule observed in CP's train event data.

These setting changes as shown in Table 2 below.

Table 2
Adjustments to CP/KCS Randomization Settings

Train Type	CP/KCS Randomization Settings			Corrected Randomization Settings		
	Dispatch Window		Percent of CP Trains Covered	Dispatch Window		Percent of CP Trains Covered
	Hours Early	Hours Late		Hours Early	Hours Late	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Local	0	0	13%	-5	5	80%
2. 100-Series Intermodal	-1	1	46%	-3	3	78%
3. 200-Series Manifest	-1	1	46%	-3	3	80%
4. 400-Series Manifest	-1	2	66%	-3	3	85%

Source: workpaper “Adjusted Randomization Settings Case Index_08312022.xlsx.”

Predictably, when this one simple change was implemented, the RTC simulation failure rate for CP’s Future Case increased from 44 percent to 67 percent. Specifically, only nine (9) of the 27 Future Case simulations submitted by CP in its workpapers ran to completion, while 18 of 27 failed to dispatch.

Table 3 below contains a summary of these results.

Table 3
Impact of Merger Based on CP RTC Analysis with Corrected Randomization Windows

Item	Base Case	Future Case	Percent Change 1/
(1)	(2)	(3)	(4)
1. Successful Simulations Used to Generate Average Operating Statistics	15	9	-40%
2. Total Simulations	17	27	59%
3. Failed Simulations	2	18	800%
4. Simulation Failure Rate 1/	12%	67%	458%
5. RTC Dispatch Difficulty for Successful Simulations (Scale of 0 to 100)	20.53	37.44	82%
6. Average Train Speed for Successful Dispatches	28.06	26.85	-4%
7. Average Delay per 100 Train-Miles for Successful Dispatches (minutes)	21.86	31.73	45%

Source: workpaper “Adjusted Randomization Settings Case Index_08312022.xlsx.”

1/ (Column (3) ÷ Column (2)) -1.0 x 100.

2/ (Line 3 ÷ Line 2) -1.0 x 100.

As shown in Table 3 above, adjusting CP's stated randomization windows to reflect actual freight train performance results in dispatch failure twice as often (18 simulations) as dispatch success (nine (9) simulations) in the Future Case, holding every other assumption and input constant in CP's simulations.¹⁶

**B. CP'S RTC SIMULATIONS
INCLUDE UNDISCLOSED
ASSUMPTIONS REGARDING
TRAIN DWELL ON PUBLIC ROAD
CROSSINGS**

CP changed the sit restrictions (length of time a train remains parked) for 102 sections of track and sidings that encompass both public and private road crossings from 30 minutes to 30 days.¹⁷ *Thus, CP assumed its trains could block roadway traffic indefinitely.* CP's adjustments effectively "deleted" 102 at-grade road crossings from its Reply RTC submissions. Notably, 86 percent of the road crossings CP deleted from its simulations are on the capacity-constrained Marquette Subdivision, and the other 14 percent are on the adjacent Chicago Subdivision, where trains may sit while they await an available window to traverse the Marquette subdivision.¹⁸

CP cannot unilaterally eliminate sit restrictions at road crossings from its model.¹⁹ CP made no mention of this change in its description of its RTC simulation parameters. We evaluated each change CP made to Metra's sit restriction settings and determined that 23 of the 102 locations where CP assumed it could hold trains indefinitely are on public road crossings.²⁰ Parking a train indefinitely at these locations is not possible. The remaining 79 at-grade road crossings that CP deleted are on private roads which presumably have lower traffic levels than the 23 crossings on

¹⁶ Compare Table 3, Column (3), Lines 1 and 3.

¹⁷ See, Exhibit No. 19.

¹⁸ See, workpaper "Base Case Track Comparison – Metra v CP.xlsx."

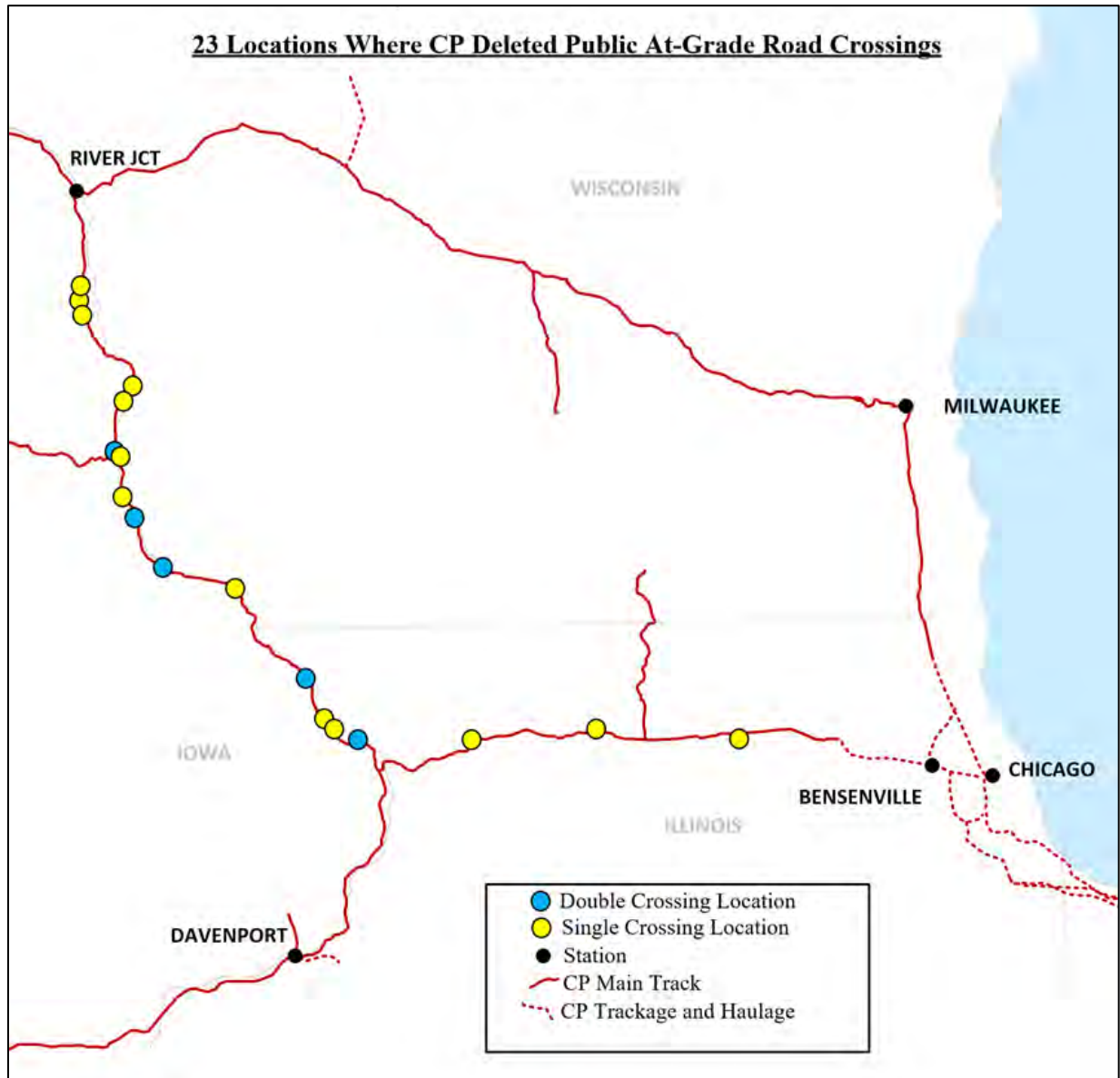
¹⁹ While most of the locations where CP made this change are located in Iowa, Iowa DOT code 327G.32 prohibits a railroad from blocking a crossing for longer than 10 minutes. See, <https://iowadot.gov/iowarail/highway-railroad-crossings/blocked-crossings>.

²⁰ See, the FRA Crossing Inventory Forms included in our workpapers.

public thoroughfares, but it is still improper to allow trains to sit indefinitely at these locations in the RTC simulation.

Figure 7 below shows the 23 locations where CP allowed trains in its RTC models to indefinitely block public at-grade road crossings (both the yellow and blue dots in Figure 7).

Figure 7



As shown in Figure 7 above, most (20 out of 23) of the locations where CP extended sit restrictions at public road crossings to 30 days are on the problematic Marquette Subdivision. CP

manipulated its RTC simulations to obscure the fact that its proposed operating plan will overload the Marquette Subdivision.

**C. CP’S RTC SIMULATIONS
INCLUDE INAPPROPRIATE AND
UNSUPPORTED ASSUMPTIONS
REGARDING TRAIN
DISPATCHING PRIORITY**

CP changed dispatching priority settings in the RTC model to increase the spread between priority given to Metra trains and the other trains CP included in its RTC models including, but not limited to, Amtrak, Manifest and Intermodal trains. This was done to ensure the model would not slow Metra trains under any circumstance. As a result, CP’s simulation is counter to CP’s real-world dispatching practices.

RTC handles dispatching priority by utilizing a series of delay “costs,” input by the user, to determine how it should prioritize the trains in each simulation. These delay costs are meant to represent the priority for each train, i.e., the higher the delay cost, the higher the priority. As a simulation progresses and a train incurs delays, its associated delay cost will increase from its “initial cost” setting until it reaches its “maximum cost” setting. As shown in Elphick’s Exhibit C-1 at page 4, CP lowered the initial delay cost for all of its non-Metra trains.²¹ As a result of this change, freight trains in CP’s RTC models are able to endure significantly more delays before the dispatching logic begins to consider them a high priority.

Even when CP’s freight trains have been delayed sufficiently to reach their maximum delay costs, the maximum delay cost for CP’s freight trains is lower than the initial delay cost for Metra trains. This disparity in priorities means it is nearly impossible in CP’s RTC simulations for Metra trains to incur a delay caused by a freight train. For example, CP’s highest priority “intermodal”

²¹ See, worksheet “Metra vs CP Train Priorities.xlsx.”

trains begin with an initial delay cost of 6500 and will gradually increase to a maximum delay cost of 8000 if they are significantly delayed. However, even the highest priority intermodal trains, when running well behind schedule, have a lower priority than the “initial” priority of Metra trains in CP’s simulations. CP’s RTC simulation, by design, never allows CP trains to delay a Metra train. These model settings do not reflect the real-world interference from CP freight trains that is experienced by Metra. CP’s simulation never allows a CP freight train to delay a Metra train, but this outcome depends on enforcement of a dispatching rule that is not always followed in the real world. Therefore, it cannot be accepted as proof that CP’s freight trains will not delay Metra’s passenger trains in the real world.

In addition, CP reduced the “initial cost” priority setting for select Amtrak trains by 14 percent.²² De-prioritizing Amtrak trains reduces the chances that these trains will interfere with Metra trains. CP produced a model that boosts Metra’s performance to the detriment of Amtrak’s, overstating the extent to which this occurs in the real world.

To test the impact of CP’s unrealistic assumptions, we ran another set of simulations using CP’s version of our RTC model. In this simulation, we adjusted the randomization windows as discussed in Section III.A. above and made three (3) additional adjustments. First, we reset the sit restrictions for the 23 busy public road crossings to the 30-minute limit used in Metra’s original simulations. We conservatively accepted CP’s change to the 79 private road crossings. Second, we reset CP’s train priority settings for Amtrak trains to utilize the priorities used in Metra’s original simulations. Finally, we removed an unrealistic link equation from the Dubuque siding.²³

²² See, workpaper “Metra vs CP Train Priorities.xlsx.”

²³ CP’s model included an equation on the Dubuque siding that artificially increased the length of one segment on the Dubuque siding, but did not properly reposition the switches or realign the siding, i.e., CP used a formula to make the segment longer than the distance between the two ends of that segment. This is like assuming you can drive for two (2) miles on a highway between two (2) exits that are one mile apart.

Table 4 below shows the results of this simulation.

Item (1)	Base Case (2)	Future Case (3)	Percent Change 1/ (4)
1. Successful Simulations Used to Generate Average Operating Statistics	7	5	-33%
2. Total Simulations	17	27	59%
3. Failed Simulations	10	22	109%
4. Simulation Failure Rate 1/ 5. RTC Dispatch Difficulty for Successful Simulations (Scale of 0 to 100)	59%	81%	31%
6. Average Train Speed for Successful Dispatches	21.00	37.40	117%
7. Average Delay per 100 Train-Miles for Successful Dispatches (minutes)	27.95	26.80	-4%
	22.72	32.13	41%
Source: workpaper "Adjusted Randomization Settings Case Index_08312022.xlsx."			
1/ (Column (3) ÷ Column (2)) -1.0 x 100.			
2/ (Line 3 ÷ Line 2) -1.0 x 100.			

As shown in Table 4, when these simple changes are implemented, CP's Future Case simulations fail to dispatch 22 out of 27 times (81 percent failure rate).²⁴ This does not demonstrate that CP's and Metra's service levels will be satisfactory following the proposed merger.

Figure 8 below compares the Future Case CP filed with CP's Future Case with the simple corrections discussed above.

²⁴ $[(22 \div 27) - 1] \times 100 = 81$ percent.

Figure 8

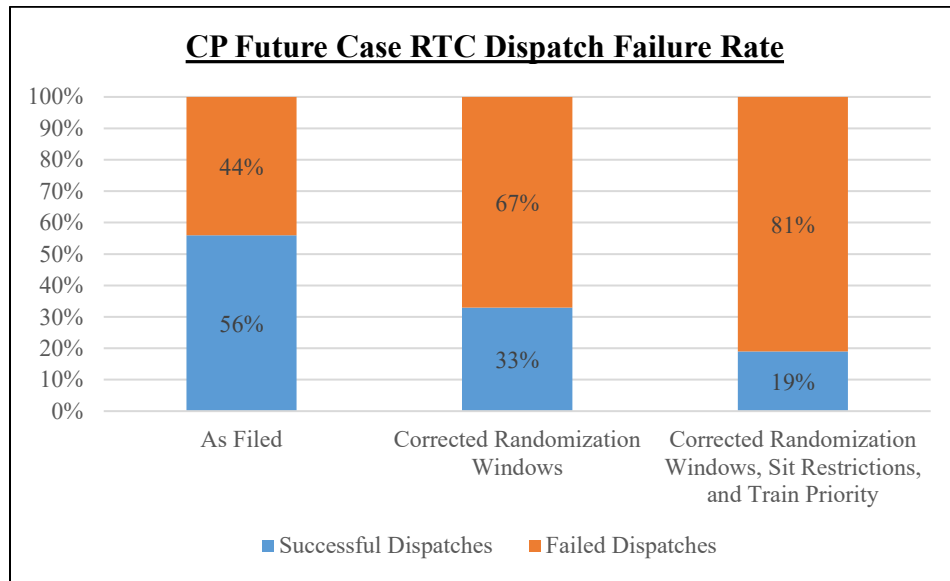


Figure 8 above shows CP’s RTC simulations, when corrected for obviously erroneous (and undisclosed) inputs, demonstrate that CP’s network will operate over capacity in the Future Case.

These results do not consider CP’s manipulation of the PERMIT file, which is a key input to the RTC simulations that includes track closures for things like maintenance and drawbridge openings. Specifically, CP eliminated 13 permits entirely,²⁵ changed the location of 48 permits, changed the speed restrictions for 143 permits, and changed the time and/or date for 103 permits.²⁶ Mr. Elphick notes three (3) general criticisms of the permits used in Metra’s opening but fails to describe or justify the changes CP made to 45 percent of the permits found in CP’s Reply simulations.²⁷ Notably, 70 percent of the permit file changes CP made were on Metra’s MD-W line (CP’s Elgin Subdivision), presumably in an effort to artificially increase capacity in its simulations.²⁸

²⁵ CP disabled 12 permits and deleted one.

²⁶ In many cases, more than one aspect of the permit was changed. For example, the location and time of the permit was altered by CP without explanation. In all, CP modified 206 out of 463 permits. See, workpaper “METRA vs CP_KCS .PERMIT Comparison.xlsx.”

²⁷ See, Elphick RVS, Exhibit A, Section D.

²⁸ $[(145 \div 206) - 1] \times 100 = 0.70$.

**IV. MANY OF CP'S CHANGES TO METRA'S SIMULATIONS ARE
UNFOUNDED AND PRODUCE ILLOGICAL RESULTS**

CP developed the following five (5) RTC cases: (1) Base Case; (2) Base Case with Extra receiving tracks added at Bensenville; (3) Future Case (including Bensenville infrastructure expansion); (4) Future Case with additional Amtrak service and related Infrastructure; and (5) Future Case Xover. CP's simulations include many unfounded assumptions that inaccurately impact the Base Case, the Future Case, or both. Each issue is discussed below under the following topical headings:

- A. CP's RTC Simulations Include the Same Inputs CP Claimed were Erroneous in Metra's Simulations
- B. CP's RTC Simulations Inappropriately Modified Dwell Times
- C. CP's RTC Simulations Include Undisclosed Changes to Train Routes and Local Work Assignments
- D. Problems with CP's Base Case Modeling
- E. Problems with CP's Future Case Modeling
- F. CP Fails to Discuss the Significance of the Reduction in CP Performance Predicted by its Own Modeling
- G. CP Mischaracterized Both Metra's and its own RTC Simulation Results

**A. CP'S RTC SIMULATIONS
INCLUDE THE SAME INPUTS CP
CLAIMED WERE ERRONEOUS IN
METRA'S SIMULATIONS**

CP repeatedly claims that Metra erred by not using the CP timetables to determine siding lengths in its development of RTC infrastructure inputs, despite CP's knowledge that timetables do not contain accurate siding length data. CP finally admitted as much in its August 4, 2022 response to Metra's August 1, 2022 filing:

The fact that the lengths are not expressed with precision is irrelevant to the reliability of this information. For example, dispatchers and operating personnel know that a 10,000' train will

fit in a siding that the timetable describes as 10,500' even if the precise physical dimension is 10,503'.²⁹

This is a 180 degree turn from the CP July 12, 2022 RTC report that claimed that Metra's modeled sidings were incorrect, erroneous, and unreliable because they did not align precisely with CP timetables, even when the lengths reported in the two (2) sources differed by just a few feet. For example, in Figure 11 of Mr. Elphick's RVS, he wrongly stated that Metra's modeling of an 8,712 foot siding at Davis Junction was an error because the timetable indicated that the siding was 8,738 feet long.³⁰

More critically, although CP complained of "errors" related to Metra's reliance on track charts,³¹ in most cases, CP did not adjust the alleged "error." To be clear, despite its lengthy criticism that Metra should have relied on timetables to determine siding lengths, and that Metra's reliance on track charts constituted an error, CP did not change the lengths of most of the very sidings it claimed were erroneously modeled in Metra's simulation. Rather, CP relied on the same infrastructure inputs that Metra used with respect to sidings, as shown in Table 5 below.

²⁹ See, August 4, 2022 Letter, Appendix A, pages A1-A2.

³⁰ See, Elphick RVS at Figure 11.

³¹ *Id.*

Table 5
Comparison of Siding Lengths Modeled in Metra and CP RTC Simulations to CP Timetable

Subdivision / Siding (1)	Siding Length			CP RTC Simulation	
	Metra RTC Simulation (2)	CP Claimed Actual 1/ (3)	CP RTC Simulation (4)	Difference from Metra (5)	Difference from Timetable (6)
A. <u>Marquette</u>					
1. Harpers Ferry	10,507	10,500	10,560	53	60
2. Eckards	8,870	8,615	8,606	(264)	(9)
3. Edmore	8,184	7,900	8,184	0	284
4. Dubuque 2/	7,708	9,036	7,708	0	(1,328)
5. Green Island	11,246	11,500	11,246	0	(254)
6. New Brownsville 3/	9,979	10,200	10,190	211	(10)
7. New Turkey River 3/	12,038	12,200	12,197	159	(3)
8. New Bellevue 3/	9,979	10,200	10,190	211	(10)
B. <u>Tomah</u>					
9. Kilbourn	9,768	10,024	9,768	0	(256)
C. <u>C&M</u>					
10. Lake	6,864	7,230	6,864	0	(366)
D. <u>Chicago</u>					
11. Kittredge	12,144	11,270	12,144	0	874
12. Adeline	10,507	7,949	10,507	0	2,558
13. Davis Jct	8,712	8,738	8,712	0	(26)
14. Genoa	9,504	9,246	9,504	0	258
15. New MP 75 Siding 2/	11,985	12,200	12,207	222	7

1/ Based on CP timetable.

2/ CP Included an artificial distance adjustment via an “Equation” that incorrectly increased the length of the Dubuque siding to 8,775 feet but did not change its connecting points in the model. In other words, CP does not dispute the turnout locations at either end of the siding (based on track chart milepost data), but assumes the siding is longer than the adjacent mainline between those two (2) turnouts.

3/ Future Case only.

Table 5 demonstrates that if Metra’s modelled sidings are erroneous, so are CP’s. In actuality, there was never a problem with the sidings Metra modeled, apart from the initial issues related to the Harpers Ferry and Eckards sidings that were caused by the erroneous track charts (dated 2019) that were provided by CP in Discovery and that were corrected in our June 9, 2022 and subsequent July 8, 2022 filings.

Figure 9 below shows all of the alleged “errors” in Metra’s RTC infrastructure compared to the same locations in CP’s “corrected” RTC simulations.

Figure 9

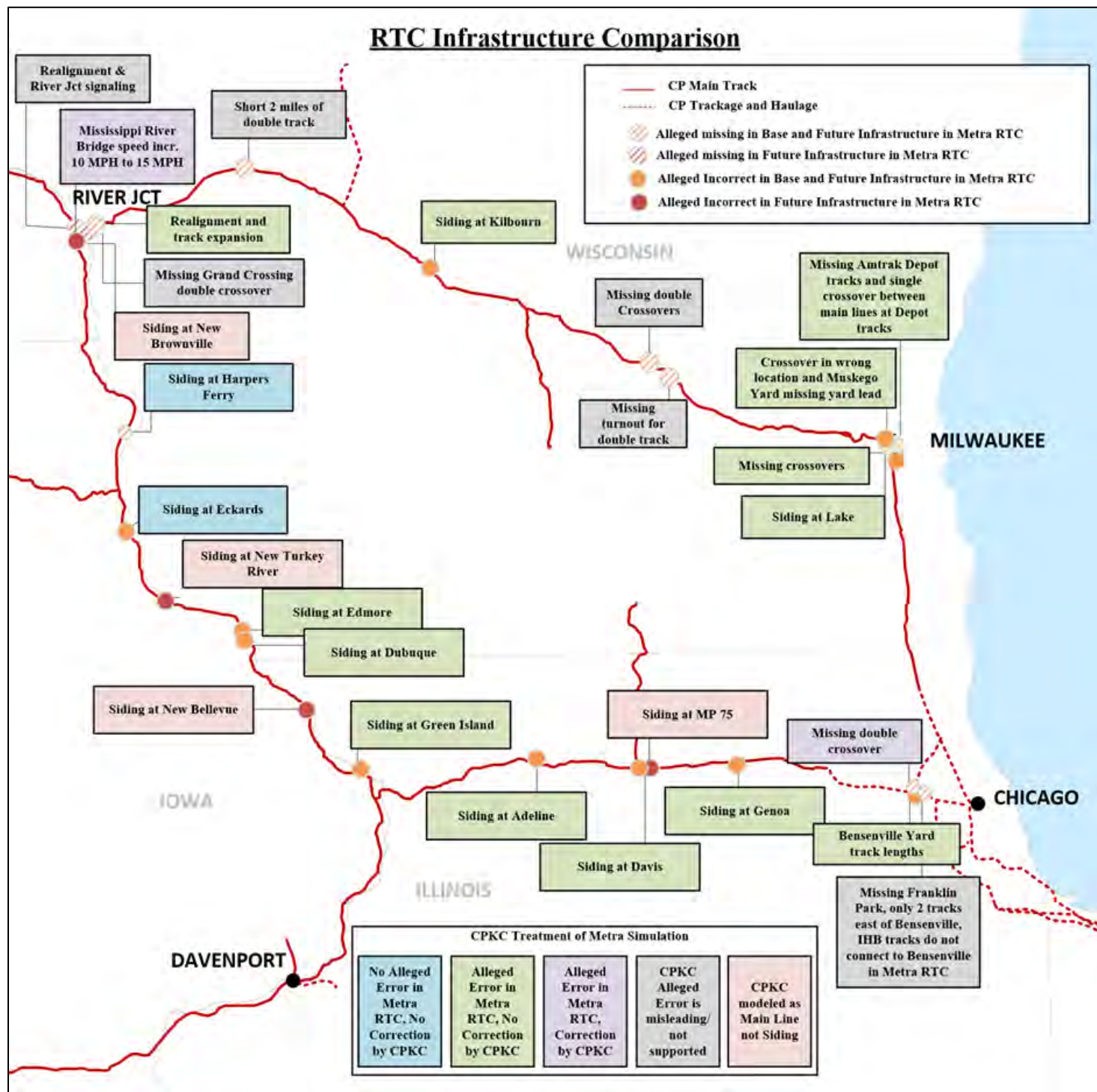


Figure 9 shows that most of the alleged “errors” in Metra’s RTC simulations remain unchanged in CP’s “corrected” version of the model, because CP understands that no change is needed, because no error exists.

CP’s repeated false claims that timetables are a commonly used source for developing siding lengths for purposes of RTC modeling is based on a misrepresentation of the RTC manual instructions. Specifically, in CP’s August 8, 2022, response to Metra’s 5th Interrogatories and 7th Data Requests regarding the propriety of using timetables as the source for siding lengths, CP repeatedly claims that the RTC manual states that, “RTC networks require data to be derived from a variety [of] sources ranging from track charts to operating timetables.”³²

However, the quote provided by CP is taken out of context, and the referenced manual is far more specific than CP indicated. Specifically, the relevant section states in full:

Network Data Sources

- RTC networks require data to be derived from a variety [of] sources ranging from track charts to operating timetables. The data must be entered accurately in order for trains to run properly.
- *Track charts provide graphical locations of track, switches, signals, etc.*
- Track profile data provide elevations, curves, speed limits.
- *Operating timetables provide exceptions, requirements, and restrictions.*³³

Thus, track charts are used to develop infrastructure inputs and timetables are used to develop operating inputs.

CP claims that all we had to do was to compare the track charts to the timetables to observe the discrepancies between the timetables and the track charts, which they claim should have provided “an opportunity to correct by adding sidings and siding extensions that were not reflected

³² See, August 8, 2022 Joint Responses to Request Nos. 3, 5-8, 10, at pages 10, 12-14, 16.

³³ RTC manual Section 3.2, page 35, included as Exhibit No. 17 to this Rebuttal Verified Statement, *emphasis added*.

on the track charts [Metra] used.”³⁴ Contrary to CP’s assertion, we did observe the multiple discrepancies between the timetables and track charts on siding lengths. This was not surprising, as the two (2) information sources frequently differ, which is why the RTC manual identifies track charts as the correct source for inputs related to geographical locations of track, switches, signals, etc. and why we chose to rely on track chart information when there was a discrepancy between the two (2) sources, as did CP.

**B. CP’S RTC SIMULATIONS
INAPPROPRIATELY MODIFIED
DWELL TIMES**

Mr. Elphick wrongly claims that it was incorrect for Metra to model actual train dwell time observed in train event data because it “increases congestion.”³⁵ Modeling actual dwell time reflects real-world operations. In contrast, modeling a fixed minimum dwell time without any variation, as CP (Mr. Elphick) did, artificially and dishonestly decreases congestion by maintaining a perfectly planned schedule. CP’s modeling of scheduled operations is demonstrably unrealistic, as proven by the reported actual dwell time (train event data), which regularly differs significantly from scheduled dwell time (train schedules), as shown in Table 6 below.

³⁴ See, August 4, 2022 Letter, Appendix A, page A7.

³⁵ See, Elphick RVS at ¶48.

Table 6
Difference in Actual vs Minimum Scheduled Dwell for Modeled Stops

<u>Actual Dwell Difference</u>	<u>Count of Modeled Peak Period Stops</u>	<u>Percent of Modeled Peak Period Stops</u>
(1)	(2)	(3)
1. 60+ minutes less than minimum scheduled dwell	4	0.4%
2. 30 to 60 minutes less than minimum scheduled dwell	58	6.2%
3. 0 to 30 minutes less than minimum scheduled dwell	329	35.1%
4. Equal to minimum scheduled dwell	108	11.5%
5. 0 to 30 minutes more than minimum scheduled dwell	322	34.4%
6. 30 to 60 minutes more than minimum scheduled dwell	77	8.2%
7. 60+ minutes more than minimum scheduled dwell	<u>38</u>	<u>4.1%</u>
8. Total stops with dwell	936	100.0%

Source: "RTC Base and Future Case Train Comparison_08312022.xlsx" at "CP Dwell Summary."

CP's use of constant dwell times rather than the shorter or longer times (as observed in the train event data and shown in Table 6 above) is inconsistent with CP's use of randomized train departure times. It also fails to reflect factors beyond the boundaries of the modeled network that affect train schedules and must be accounted for in some way. Variable dwell times reflect the fact that trains are held because of upstream or downstream congestion that occurs on segments beyond the simulation. For example, northbound CP trains are often held on the Marquette Subdivision due to downstream congestion between River Jct. and St. Paul, MN. If this downstream congestion was not an issue, actual dwell times on the Marquette Subdivision would be shorter. CP's RTC simulations assume away all capacity constraints on adjoining line segments.

CP's claims on dwell times reported in its train event data are not supported by evidence in the record. In its August 4, 2022 letter responding to Metra's August 1, 2022 filing, CP posits that Metra's experts "misunderstood CP's train data," and offers an example where there are two (2) AEI scanners in the vicinity of Portage, WI that are nine (9) miles apart at mileposts 183 and 174. CP/KCS further state that some dwell time reported in the train event data at Portage is related

to the train traversing the nine (9) miles between these two (2) mileposts, and that Metra's experts improperly failed to account for that operation.³⁶

The train event data provided by CP does not identify milepost data. Rather, it shows a departure from Milwaukee followed by an arrival at Portage, a departure from Portage, and a subsequent arrival at River Jct. The provided station segments data show only two (2) locations associated with Portage, at mileposts 180.4 and 178.2, *which are 2.2 miles apart, not nine (9) miles as CP claimed*. If there are AEI scanners at mileposts 183 and 174, they are not reflected in the data provided by CP, so CP's explanation of the operations in the vicinity of Portage is not supported.

**C. CP'S RTC SIMULATIONS
INCLUDE UNDISCLOSED
CHANGES TO TRAIN ROUTES
AND LOCAL WORK
ASSIGNMENTS**

CP incorrectly claims that it modeled the same CP freight trains Metra modeled in its simulations. While the roster of trains is the same, CP did not model the same historical operations that were reported in the train event and loading/unloading data CP provided to Metra in discovery. For example, the loading/unloading data show that two (2) cuts of 24 cars were handled by Marquette local train B50-20 on April 20, 2021. However, CP changed the route of this train from the route required to perform those set outs and pick-ups to the generic, shorter route according to the local operating plan, leaving those carloads stranded. CP's adjustments to local train operations do not reflect reality and serve to artificially reduce congestion on the Marquette Subdivision.

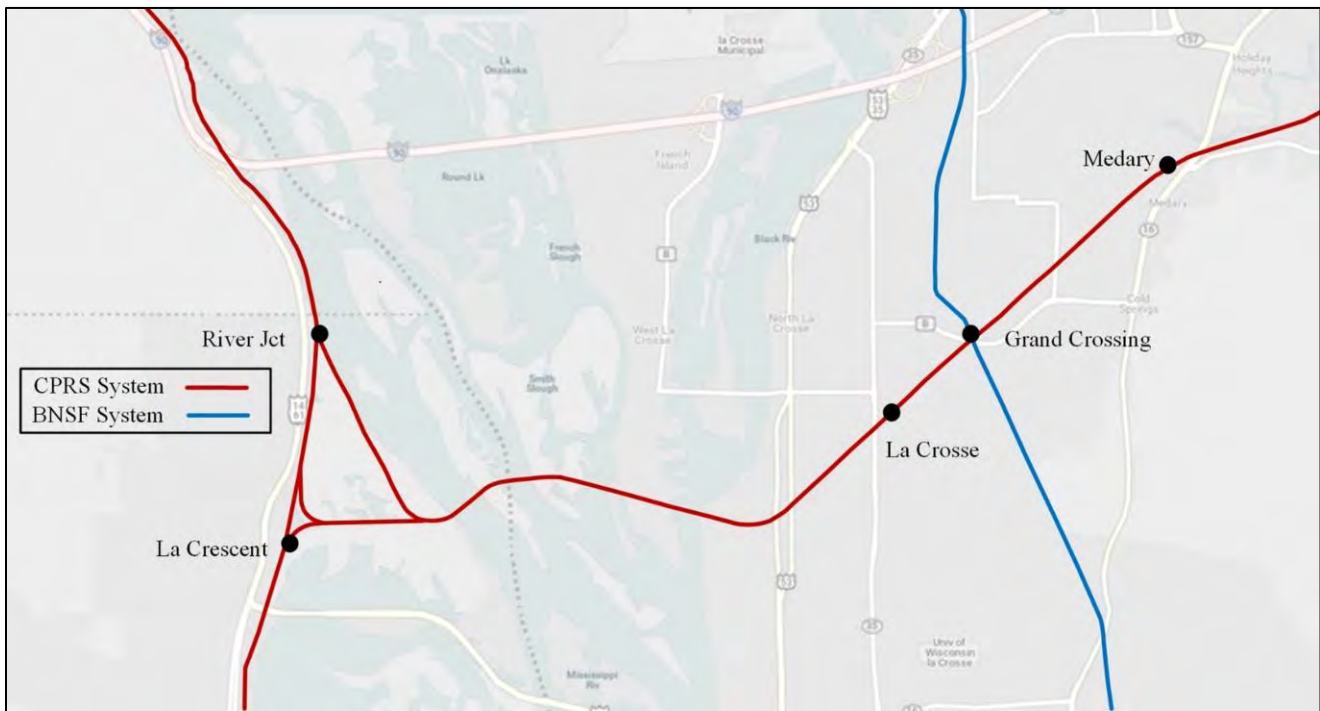
Similarly, CP removed a daily stop at La Crosse, WI, without explanation, for trains 198 and 199 that is reported in the train event data. Specifically, in the train event data, trains 198 and

³⁶ See, August 4, 2022 Letter, Appendix A, page A3.

199 report a five (5) to 15-minute window between departure and arrival at La Crosse, WI, daily. CP removed these stops because they are not included in the schedule, and offered no explanation on why events and dwell time reported for these trains in its train event data should be ignored.

As shown in Figure 10 below, BNSF crosses CP at Grand Crossing near La Crosse, WI, so CP trains clearly encounter foreign line interference at this location. Because the train event data provided by CP does not contain data for foreign train operations, removing the stops and dwell reported in the CP train event data at La Crosse for CP trains 198 and 199 from the RTC simulations effectively assumes away whatever interference is observed in the event data, whether it results from BNSF's operation of its line through Grand Crossing or some other cause.

Figure 10
BNSF Crossing over CP Line at Grand Crossing



If an RTC user inputs dwell time for a train that is meant to capture dwell associated with a conflict between two (2) trains that are included in the RTC simulation, a “double count” may occur. RTC will add dwell time due to the conflict encountered in the model and the user input

dwelling time for the same conflict. That does not occur in our RTC simulations. We did not model the BNSF line at Grand Crossing, nor did we model any trains traversing Grand Crossing that could duplicate these delays in the simulation. Therefore, the delays reported in the train event data must be input directly in the RTC model.

CP also altered the schedules for many Metra trains. Specifically, in the Base Case, CP modeled the 2019 Metra schedules for a period representing April 2021. This creates a disconnect between the freight and passenger operations in the base period.

D. PROBLEMS WITH CP'S BASE CASE MODELING

CP made significant, unrealistic changes to the infrastructure and to the trains in its restated version of Metra's RTC model. Despite these changes, CP's randomized simulations experienced two (2) dispatch failures before they were able to successfully dispatch 15 times.

The major changes CP made to Metra's Base Case were: (1) adjusting the dispatch times, dwell times, and some routes for CP freight traffic; and (2) adding significantly more Metra and Amtrak trains than currently operate over Metra's MD lines. Each issue is discussed below.

Divorcing CP freight train operating schedules and dwell times from historical performance results in simulation results that do not reflect reality and are inaccurate.

CP claims that Metra's simulations used erroneous routing, and "an expert modeler of freight railroads would know where events do and do not occur."³⁷ Indeed, we relied on the event data provided by CP. In August 2022, CP acknowledged the deficiencies in the data it provided:

There are multiple track routes a train can use between these locations, and thus the train data do not provide information on the actual route the trains took through Bensenville.³⁸

³⁷ See, August 4, 2022 Letter, Appendix A, page A7.

³⁸ See, August 4, 2022 Letter, Appendix A, page A7.

CP's changes to train routes are unsupported by the train event data it provided, and Metra used, to develop RTC inputs. CP failed to provide adequate routing data and now faults Metra for a lack of omniscience.

By adding more passenger trains to its Base Case than actually operated over Metra's lines during the base period, CP artificially decreased the *change* in Metra performance in the post-Merger environment compared to the pre-Merger environment. CP's Base Case is not representative of the pre-merger 2021 operating environment, for CP, Metra, or Amtrak trains.

Therefore, the following CP conclusion is incorrect:

Not only did the simulation results show that planned capital infrastructure improvements will prevent any additional delays to Metra's operations from the Transaction, certain simulation results showed that there may actually be a *slight but noticeable reduction in delays to Metra trains* compared to the Base Model.³⁹

CP moved the goalpost by overstating Base Case Metra train volumes. CP's simulations failed to measure actual change in Metra volume that will occur in the post-merger environment is a purposeful misrepresentation. CP's claim that Metra's inclusion of the reduced COVID schedules in the Base Case is a "major failure" that made it impossible for the "simulation to isolate the impact" of the merger. But it was CP, in its Application, that cited Metra's reduced COVID schedules to downplay the volume of traffic on Metra's lines and persuade the Board that ample capacity exists.⁴⁰ Specifically, CP relies on reduced COVID volumes to justify to the Board (and the public), but fault Metra for using the same standard in Metra's RTC simulations.

³⁹ See, Elphick RVS at ¶52.c (emphasis added).

⁴⁰ See, CP's proposed Operating Plan (Application Exhibit 13) at paragraphs 181-185.

CP posits that similar Metra train performance in the Base and Future Cases is proof that “planned capital infrastructure improvements will prevent any additional delays to Metra.”⁴¹ This is misleading. As we explained in detail above, the disparity between the priority settings CP imposed on its freight trains compared to Metra’s trains is so great that extreme circumstances are required for the RTC model to delay any Metra train in favor of a CP train. Given CP’s priority settings, when RTC encounters a conflict that would require substantial delay of Metra trains to accommodate CP trains, the model will fail to dispatch. CP’s efforts to assign Metra trains dispatch priority in its simulations that it does not honor in the real world contributes to the high failure rate of CP’s future cases.

CP also performed an alternate Base Case simulation in which it added significant infrastructure to the busy Bensenville Yard that is situated on Metra’s MD-West line, based on a design plan that has not yet been implemented. CP offered no timeline upon which this plan will be implemented. In this alternate Base Case scenario, CP divorced both its traffic group and its infrastructure from reality. Unsurprisingly, when CP assumed its capacity was greater than it actually is, its simulation results improved.

E. PROBLEMS WITH CP’S FUTURE CASE MODELING

CP’s Future Case includes the same infrastructure expansion at Bensenville as its alternate Base Case, along with the addition of the same sidings Metra added to its Future Case. CP also added “River Jct. improvements” to its Future Case, *despite the fact that CP/KCS identified no improvements at River Jct. in their Merger Application*. These adjustments to the River Jct. infrastructure in only the Future Case, and not the Base Case, conceal the severe deterioration in service that will occur consequent to a merger, similar to the artificial and untrue inflation of Metra

⁴¹ *Id.*

and Amtrak volumes in the Base Case.⁴² CP's modeled Future Case includes more infrastructure expansion than the "planned capital infrastructure improvements" identified in the Merger Application.

If CP made changes to River Jct. infrastructure in the Base and Future Cases (assuming the changes are warranted), the Base Case statistics would improve, which, when compared to the Future Case statistics, would show the same post-merger trend Metra's simulations show, i.e., impaired train performance.

CP's Future Case with additional Amtrak service and related infrastructure shows the incremental impact of adding Amtrak service along with some infrastructure to which Amtrak and CP agreed as part of the deal CP/KCS cut with Amtrak to secure Amtrak's support for the Merger.

**F. CP FAILS TO DISCUSS THE
SIGNIFICANCE OF THE
REDUCTION IN CP
PERFORMANCE PREDICTED BY
ITS OWN MODELING**

Due to: (1) CP's unwarranted addition of phantom Metra and Amtrak trains in the Base Case; (2) CP's selective addition in the Future Case of River Jct. infrastructure that is not part of the planned infrastructure expansion identified in its Application; and (3) CP's manipulation of train dispatch priority, CP's RTC simulation output shows artificially static Metra service levels in the pre- and post-Merger environments. CP makes much of these contrived results.

CP's RTC simulation results (as submitted, with no adjustment) also show a dramatic decrease in CP train performance following the merger. Specifically, Exhibit A to the CP RTC Report shows: (1) delay minutes per train for manifest trains on the Marquette Subdivision will

⁴² CP's modeling of future Metra traffic levels in its Base Case creates a disconnect with reality and misrepresents the change in available capacity in its Future Case. Specifically, because CP assumed that Metra was running a full schedule in its Base Case, CP's simulation presumes that all available capacity in the Future Case is available exclusively to CP.

increase 86 percent, from 56.13 minutes per train to 104.16 minutes per train from the Base Case to the Future Case;⁴³ and (2) delay minutes per train for intermodal trains on the modeled network will increase 77 percent, from 29.57 minutes per train to 52.45 minutes per train from the Base Case to the Future Case.⁴⁴

As discussed above, these results are predicated on the dispatching rules in the RTC simulations, but it is unlikely that CP would continue to give Metra trains priority while CP's performance dramatically worsens. According to CP's own RTC simulations, *CP would have to accept these severe reductions in its own performance levels in order to ensure that Metra's service levels are maintained.* Given that CP is currently responsible for dispatching Metra trains, it is more likely that CP will instruct its dispatchers to do everything possible to keep its own trains operating on time, which will require CP dispatchers to prioritize some CP trains over Metra trains, i.e., precisely the situation Metra justifiably fears.

G. CP MISCHARACTERIZED BOTH METRA'S AND ITS OWN RTC SIMULATION RESULTS

CP states that Metra's RTC simulations produced results that differed in level of service deterioration and falsely concluded there is a problem with our modeling. Specifically, Mr. Elphick states the results "swing greatly, indicating the unreliability of their simulation."⁴⁵

However, we were clear on the cause of this swing. Specifically, our March 15, 2022 results showed a 594 percent increase in delays to Metra trains. In our June 9, 2022 filing, we corrected for the erroneous siding lengths at Harpers Ferry and Eckards as reported in the track charts provided by CP in response to Metra's discovery requests. However, in the Future Case

⁴³ See, CP RTC Report Exhibit A, Section 1.0, page 1 $[(104.16 \div 56.13) - 1.0 \times 100]$.

⁴⁴ See, CP RTC Report Exhibit A, Section 4.0, page 5 $[(52.45 \div 29.57) - 1.0 \times 100]$.

⁴⁵ See, Elphick RVS at ¶ 47.

simulation, a single train was inadvertently blocking a Metra platform that caused several Metra trains to back up behind it on the last day of the simulation, which in turn caused a reported 1,200 percent increase in delays to Metra trains. When this issue was resolved in our July 8, 2022 filing, the results showed a 299 percent increase in delays to Metra trains. This reduction from the Base Case (i.e., from 594 percent to 294 percent) is logical and is exactly what one would expect when two (2) sidings are significantly extended.

In contrast, the Future Case RTC simulations filed by CP fail to dispatch 44 percent of the time, which is nearly as often as they succeed (56 percent). There is no clearer example of a “great swing” in RTC results than a model with parameters that result in a failure to dispatch essentially half of the time.

Yet, CP would have the Board believe that the simulations that failed to dispatch should be completely disregarded. However, it is these failed simulations that demonstrate the difficulty CP will face in forcing trains over a segment that has insufficient capacity to accept them in 44 percent of the simulation attempts.

When the full scope of CP’s RTC simulations is considered, including both the successfully dispatched cases and the cases that failed to dispatch, it is clear that the best Metra can hope for is that, on a good day, Metra will have no significant problems. On a bad day, CP’s network will be overwhelmed and CP’s dispatchers will be forced to take extraordinary measures to move its trains. This will undoubtedly entail rerouted trains and downstream delays.

Simply resetting CP’s randomization time windows to more accurately reflect CP’s actual on-time performance causes CP’s Future Case RTC simulations to fail to dispatch 67 percent of the time, which is twice as often as they succeed (33 percent of the time). Further, reversing CP’s assumptions that: (1) it can block busy roadway crossings for 30 days at a time; and (2) Amtrak

train priority can be selectively reduced relative to Metra train priority, causes CP's Future Case RTC simulations to fail to dispatch 81 percent of the time, which is more than four (4) times as often as they succeed (19 percent of the time).

**V. MANY OF CP'S CRITICISMS REGARDING METRA'S SIMULATION
INPUTS ARE INCONSEQUENTIAL OR IRRELEVANT**

CP lists a series of what it claims are deficiencies in Metra's RTC simulation inputs.⁴⁶ Exhibit No. 18 includes visual comparisons between CP's and Metra's latest RTC simulations to illustrate where CP has not made "corrections" to its model despite repeated criticisms of Metra.

Each "deficiency" is addressed separately below.

1. CP stated Metra siding lengths are shorter than "actual" reported in CP timetables:

Rather, siding lengths reported in the timetables do not reflect actual siding length, as confirmed by CP in its August 4, 2022 letter reply to Metra's August 1, 2022 filing. The RTC manual calls for use of track charts to develop infrastructure inputs. CP's RTC models contain the same alleged "errors" that CP claims are in Metra's models.

2. CP stated Metra's model excludes two miles of double track on the Tomah Subdivision at Raymore:

Based on track charts provided in discovery by CP, Metra modeled this section of track to include a small section with a break in the double track (roughly 0.1 miles) between two crossovers. Assuming that the track charts CP provided in discovery are inaccurate and this break in the track no longer exists, 1.9 miles of the 2-mile section in question are modeled appropriately as double track in Metra's models. CP grossly misrepresents this as an exclusion of two (2) miles of double track.

3. CP stated that Metra excluded three crossovers on the Watertown and Tomah Subdivisions:

Metra modeled the crossovers as they appear in the track charts provided in discovery.

4. CP stated Metra excluded double crossovers between B17 and Bryn Mawr (UP):

CP did not provide documents supporting the change to the configuration at this location.⁴⁷

5. CP stated that Metra improperly constructed "various other" infrastructure:

⁴⁶ See, Elphick RVS at ¶50.

⁴⁷ See, CP Reply Exhibit B-4, Metra RTC Revisions, p. 4.

Despite its claims, the track and structures implicated in this claim are consistent with the track charts provided by CP and are modeled the same way in both CP and Metra's RTC models.

6. CP stated that Metra used actual departure times for CP trains:

As discussed at length above, this was not an error. Actual departure times reflect real world CP freight operations. CP's position that CP freight trains will operate within a tight window around CP's schedule is unrealistic. When this assumption is corrected and the randomization windows are calibrated to reflect actual schedule deviation, CP's RTC simulations fail to dispatch all trains twice as often as they succeed, as discussed in Section III above.

7. CP stated that Metra incorrectly modeled some trains, including Metra trains:

Metra relied on the event data provided by CP. Specifically, "[t]here are multiple track routes a train can use between these locations, and thus the train data do not provide information on the actual route the trains took through Bensenville."⁴⁸

CP's changes to train routes are unsupported by train event data that CP provided. Moreover, CP eliminated stops that were reported in the train event data for select trains because those stops do not appear in the train schedules. This adjustment ignores real world operations and selectively rejects train event data CP provided to Metra, leading to stranded traffic in some cases.

For Metra trains, CP wrongly states that Metra excluded deadhead passenger trains from its simulations.⁴⁹ This is misleading; we labeled empty equipment moves as Metra trains (with no distinction from Metra trains carrying passengers).

8. CP stated that Metra incorrectly assigned dispatch priority to some trains:

Metra assigned CP intermodal trains the same priority as CP manifest and select bulk trains, whereas CP assigned manifest and bulk trains lower priority than intermodal trains. CP also selectively reduced Amtrak train priority relative to Metra train priority. Dispatch priority is a choice and reflects the objectives of the dispatcher. CP's objective was clearly to reduce the priority of select Amtrak trains relative to Metra to ensure Metra trains were dispatched as expeditiously as possible.

9. CP stated that Metra modeled no signaling systems:

⁴⁸ See, August 4, 2022 Letter, Appendix A, page A7.

⁴⁹ See, Elphick RVS at Exhibit 1, Section 5. "Metra train inputs have been corrected to reflect pre -COVID volumes, including subsequent non-revenue deadhead moves".

As noted in CP's RTC Report, "CP added fully functional signals to the model on the MD-W and MD-N lines at their current, actual locations in an effort to update Metra's simulation to accurately represent both existing and future operations."⁵⁰ CP does this based on a false premise that, "[w]ithout signals, RTC dispatches with fewer operating restrictions. This means that during dispatch, trains will operate closer together than current conditions may allow due to real-world signal spacing, potentially resulting in train bunching and subsequent ripple delays."⁵¹

CP's RTC signal additions were to Metra's MD lines. But Metra's lines are equipped with Positive Train Control ("PTC") systems. As explained in our prior statements, excluding a signaling system from the model is reflective of PTC system operations. In fact, based on discussions, we had with the designer and developer of the RTC simulation model, the dispatch logic of RTC most closely simulates the communications of a PTC system when there are no active signals within the model.

CP curiously did not add signaling to the Marquette Subdivision, despite that Marquette is not equipped with PTC. This is yet another example of CP slinging mud in to discredit, but making changes to the model that are not in line with its logic or claims.

10. CP stated Metra failed to model planned infrastructure changes at Bensenville:

As discussed above, CP provided no documentation that the planned infrastructure upgrades will actually be implemented as drafted, or more importantly, when they will be implemented. Moreover, CP also modeled expanded River Jct. infrastructure in its future case only, despite there being no planned expansion at River Jct. included in the merger Application.

11. CP stated that Metra did not incorporate randomization:

Metra modeled actual operations, which is reflective of CP's real-world performance. However, as discussed above, when CP's randomization windows are corrected to reflect actual schedule deviation, CP's RTC simulations fail to dispatch 67 percent of the time, and the results deteriorate even further when CP's other dubious assumptions regarding blocked roadway crossings and train dispatch priority are corrected (81 percent failure rate). The purpose of randomization is to develop a representation of the schedule deviation that may occur in the real world. This is not needed because we have actual observations of schedule deviation that did occur in the real world. Using randomization would be redundant.

⁵⁰ See, CP RTC Report at page 12.

⁵¹ See, CP RTC Report at pages 11-12.

**A. METRA'S RTC SIMULATIONS
REMAIN THE BEST EVIDENCE IN
THE RECORD**

Metra's RTC simulations reflect actual Base Case volumes and projected Future Case volumes. In contrast, CP's RTC simulations reflect inflated Base Case volumes for Metra and Amtrak traffic, which serves to artificially reduce the negative change in train performance that will manifest after the proposed merger.

Metra's RTC simulations reflect actual CP train performance relative to the CP freight schedules. In contrast, CP's RTC simulations reflect an unsupportable assumption that CP freight trains will operate on or very close to schedule, a standard CP does not meet in the real world. When CP's model is corrected to account for true schedule deviation, CP's model fails to dispatch 67 percent of the time.

Metra's RTC simulations reflect actual CP infrastructure layout, including siding length, included in the CP track charts, pursuant to the RTC manual. Despite its criticism of Metra for using the correct data source, CP's simulations also reflect the actual CP infrastructure layout included in its track charts.

Metra's RTC simulations reflect the actual CP train routing reflected in the train event and loading/unloading data provided by CP. In contrast, CP altered some routes to omit stops reported in its train event data and stranded some traffic that is handled by local trains in the real world.

Metra's results show that the Marquette Subdivision will be over capacity in the Future Case, and when calibrated correctly, CP's RTC simulations make the same demonstration. Even CP's unadjusted RTC simulations show that minimal randomization in train operations will cause unresolvable dispatch conflicts 44 percent of the time.

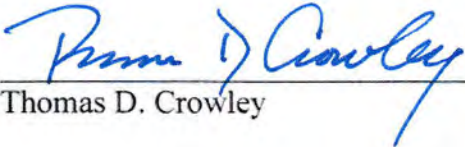
Metra's results show that Metra's service levels will decline. CP's results show that CP's service levels will significantly decline. This will likely put pressure on CP dispatchers to make

on-the-fly adjustments to dispatching protocols in order to keep CP trains from falling too far behind. These adjustments will result in Metra service levels declining further.

In short, both Metra's and CP's RTC simulation results, when fully understood, show the same thing. CP's operating plan is unrealistic and will lead to service degradation at the critical north-south junction between the two (2) merged systems, which will negatively impact Metra's operations.

VERIFICATIONS

I, Thomas D. Crowley, verify under penalty of perjury that I have read this Rebuttal Verified Statement on behalf of Metra, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Thomas D. Crowley

Executed on 9/6/22

* * *

I, Robert D. Mulholland, verify under penalty of perjury that I have read this Rebuttal Verified Statement on behalf of Metra, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Robert D. Mulholland

Executed on 9/6/22

LIST OF EXHIBITS

Exhibit No.	Exhibit Description
(1)	(2)
16	Summary of CP RTC Simulation Results
17	Page 35 of RTC Manual Section 3.2
18	Metra Opening vs CP Reply – Siding Length Examples
19	Metra Opening vs CP Reply – Deleted Road Crossing Examples

PUBLIC VERSION

EXHIBIT 16
CONTAINS HIGHLY CONFIDENTIAL INFORMATION

EXHIBIT 17

Page 35 of RTC Manual Section 3.2

3.2 Basic Network Elements

Basic Elements of a Network

Nodes (locations)

Nodes are one of the fundamental building blocks in RTC. They are used to describe point locations in the network. They can be switches, signals, track speed change points, clearance points, or any point that the user feels is relevant to train operations.

Associated with each node is an elevation, an RTC marker and a field marker (markers represent feet, miles, meters or kilometers).

Depending on what a node represents, it may have many attributes. For example, if node X happens to be the point of a switch, then it will also have normal and reverse nodes associated with it. In addition it will have switch type, e.g., manual with no lock, manual with padlock, manual with electric lock, spring, dual control, etc.

Links (track that connects nodes)

A link represents the track connecting two nodes.

Links have distance, grade, curvature, maximum authorized speeds and operating rules.

Operating rules take many forms, e.g. certain train types may be permitted to traverse the link, while others are not. Another example is whether trains may hold on a given link to resolve a conflict.

Link distances are computed automatically as the difference between RTC markers. In cases where the difference in RTC markers is not accurate, users must specify link equations. Equations are common where track has been realigned in such a way as to change the true distance of a link.

Network data sources

- RTC networks require data to be derived from a variety sources ranging from track charts to operating timetables. The data must be entered accurately in order for trains to run properly.
- Track charts provide graphical locations of track, switches, signals, etc.
- Track profile data provide elevations, curves, speed limits.
- Operating timetables provide exceptions, requirements and restrictions.

Building an RTC network

Before drawing a network in RTC, think about how much track is operationally significant and what level of detail you wish to model. RTC networks typically have much more detail than what is typically displayed on a dispatcher's screen.

Whenever possible, model arrival and departure tracks at yards and terminals. Avoid having trains appearing or disappearing on single mainline tracks; arrange the network such that they originate in yards or double track locations.

PUBLIC VERSION

EXHIBIT 18

CONTAINS HIGHLY CONFIDENTIAL INFORMATION

PUBLIC VERSION

EXHIBIT 19
CONTAINS HIGHLY CONFIDENTIAL INFORMATION