
VILLAGE OF
FRANKFORT
INC • 1879

September 30, 2008

Ms. Phillis Johnson-Ball
Surface Transportation Board
395 E Street, SW
Washington, D.C. 20243

Environmental Filing
STB Finance Docket No. 35087

SUBJECT: Comments on the Draft Environmental Impact Statement—Proposed Canadian National Railway Company Acquisition of the Elgin, Joliet and Eastern Railway Company, STB Finance Docket No. 35087 (including all subdockets)

Dear Ms. Johnson-Ball:

The Village of Frankfort, founded in 1855, is one of the fastest growing municipalities in Illinois. Frankfort's population was 16,432 in 2007 but is expected to reach 55,000 by 2030. Our unique community, which is known as the "Jewel of the South Suburbs," has a firm commitment to progressive growth management policies/strategies. These strategies include preservation of our historic downtown and a community design that encourages economic growth, protects open spaces, and maintains a high level of public safety.

In February 2008, Frankfort commented on the proposed scope of the environmental impact statement (EIS) in this proceeding. A copy of those comments is enclosed. We said that although we understood the economic interests of Canadian National Railway Company (CN), we believed it essential that the EIS fully evaluate and address all aspects of our quality of life.

Regrettably, the Draft EIS (DEIS) fails to accomplish that goal. The DEIS also fails to meet the legal standards set by the National Environmental Policy Act and the implementing regulations of the Council on Environmental Quality. For this reason, and as explained more fully in the enclosed report of the Louis Berger Group and letter from Winston & Strawn LLP, the DEIS must be revised substantially, so that the final EIS (1) addresses the local, site-specific effects of the proposed transaction in adequate detail and (2) addresses—fully—the options of a new rail line substantially farther from Chicago (and hence having fewer adverse environmental effects due to the lower population density) and the CREATE plan that has been supported by the Board.

Frankfort recognizes that the Board might elect to proceed without taking these steps. Mindful of that possibility, our village board has adopted the following list of mitigation actions that should be taken if the proposed transaction is to occur.

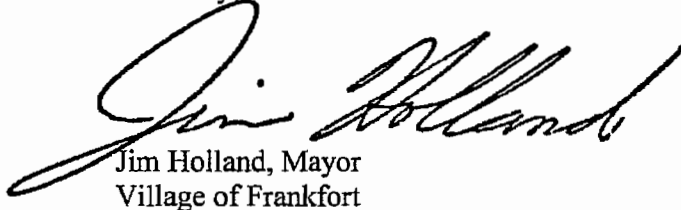
1. Require CN to pay for significantly improved safety devices at crossings. These will generally be active warning signals and quad gates and sidewalk/bike trail gated crossings that are adequate to justify quiet zones at least 15 years into the future, based upon FRA supplemental Safety Measure (SSM) Criteria (given current projections). Require CN to support Frankfort's application for a quiet zone designation along the Right of Way determined by the Village.
2. Improve track and roadbed. Construct and maintain to FRA Class 4 track to reduce the possibility of derailment and to reduce sound and vibration.
3. Require CN to install and maintain state of the art wayside rail-wheel lubrication systems for top of rail lubrication on tangent track and gauge face lubrication at all facing curve transitions greater than 1 degree.
4. Require CN to install Wheel Impact Load Detectors (WILD) at all rail connections to the EJ&E and at the lead and trailing end of East Joliet, Kirk and Markham Yards.
5. Install hot box wheel detectors at least two miles before the Village of Frankfort and at each of the 6 CN rail connections to the EJ&E as well as at end-to-end interchange locations with other Class 1 Railroads and the Indiana Harbor Belt.
6. Provide funds for police and fire department training and equipment for rail incidents. Ensure all local police and fire personnel receive adequate HAZMAT emergency derailment and spill response training at AAR provided training courses in Pueblo, Co. Coordinate response capability with Chemical Manufacturers Association (CMA) and CN forces.
7. CN shall install CCD Video cameras and/or motion sensors or other devices that will provide real time monitoring and recording of train movements at grade crossings for real time display at locations chosen by the Frankfort Fire District and Village Administration.
8. Require CN to pay for berms and plant materials on residential property and on railroad property as negotiated with the resident and CN. The cost will be financed by CN paying the Village of Frankfort \$20,000 for each residential lot that is within the 65 dBA line.
9. Eliminate the bottleneck in Frankfort. Do not allow double tracking to begin or end within two miles of Frankfort.
10. Restrict the number of trains that can operate from 6:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM to 25% the number that can operate the rest of the time.
11. Require CN to agree that Frankfort can impose civil penalties for excessive intersection blocking, defined as 10 minutes per idle train or greater. The penalties might be \$500 for a first offense of five minutes or more, \$1,000 for the second offense within three months and \$5,000 for each subsequent offense.

12. Have CN contribute 50% in future funding for State of Illinois Timber Bridge replacement at State Route 45 within three years from merger approval. New bridge will accommodate 39 ton axle loads with Coopers E-80 loading for trains and five lanes of traffic for motor vehicles. If state funds are not available within 3 years, CN pays for 100% of cost of bridge replacement.
13. Have CN pay for a grade separation at Harlem Avenue
14. Have CN pay for a grade separation at Wolf Road

Please include the aforementioned list as part of Frankfort's formal comments on the DEIS. Should the Board ultimately approve CN's application despite Frankfort's objections, the final decision should order CN to take these mitigation actions. (This request is, of course, not intended to waive Frankfort's right to ask the courts to review the Board's decision.)

Accordingly, we urge that the shortcomings of the DEIS be ameliorated in the final EIS. We recognize that to do so likely will require additional study but believe that more work is needed to do the job properly. The stakes for Frankfort—and the region—are too high to base the Board's decision on a less than complete analysis of the environmental consequences.

Sincerely,



Jim Holland, Mayor
Village of Frankfort

Enclosures: Winston & Strawn LLP comments on behalf of Frankfort
Louis Berger Group comments on behalf of Frankfort
Frankfort comments on proposed scope of EIS (Feb. 2008)

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Dear Ms. Johnson-Ball:

We represent the Village of Frankfort, Illinois (“Frankfort”), which is a participant in the above-captioned proceeding and would be affected profoundly by the proposed transaction. Frankfort’s principal comments on the draft environmental impact statement (“DEIS”) appear in the enclosed report from The Louis Berger Group, Inc. (“Berger Report”). This letter supplements the Berger Report and includes observations about the legal aspects of the environmental review process.

To summarize, despite its considerable bulk, the DEIS has at least four significant shortcomings:

- First, the DEIS does not meet the NEPA requirement of a “hard look” at the environmental consequences of the proposed transactions. Among other things, it fails even to identify some anticipated environmental effects of the proposed transaction on individual communities, including Frankfort, contains insufficient detail about others, and employs a number of improper methodologies. This should be corrected in the final environmental impact statement (“EIS”).
- Second, the DEIS dismisses cavalierly three reasonable options other than the proposed transaction, namely (1) the construction of a rail line considerably farther from Chicago than the fast-growing suburban communities through which

the EJ&E line passes, (2) the improvements that have been proposed by the CREATE initiative, and (3) the no-action option. This deficiency also needs to be corrected.

- Third, particularly given the explosive growth that is occurring in Frankfort and other affected communities, the time horizon employed in the DEIS for rail and vehicle traffic projections is far too limited. Further study and analysis is needed to correct this shortcoming of the DEIS.
- Fourth, the Board should not have permitted the petitioners (collectively, “Canadian National” or “CN”) to select the contractor preparing the DEIS for the Board. Presumably this problem cannot be cured without restarting the process using a different contractor.

Background Facts

Frankfort is a southern suburb of Chicago whose population was 10,000 in 2000 and is projected to reach 55,000 by 2030. The EJ&E main line passes through the village, which includes approximately six miles of main line. CN says that its proposed purchase of the EJ&E will lead to an increase in rail traffic from approximately six to approximately twenty-eight trains per day and a 560 percent increase in rail tonnage passing through Frankfort. The trains will be substantially longer than those currently using the EJ&E and the increase in hazardous materials passing through Frankfort will exceed 600 percent. Similar increases will be experienced, according to CN, along most of the 160-mile EJ&E main line.

Frankfort suspects strongly that the foregoing figures, which have been provided by CN, are conservative, for they assume no rail traffic growth beyond the transfer to the EJ&E of existing traffic that now passes through Chicago. Railroad mergers have borne out, over time, that carriers can expand track capacity by improving improve scheduling, operating plans, crew dispatch, and train control. Despite Frankfort’s protestations at the scoping stage of the EIS process, the likely increases in rail traffic resulting from greater efficiency of the CN operation and CN’s famously aggressive sales efforts have not been taken into consideration.¹ This issue is discussed at pages 9 through 11 of the Berger Report.

In addition to the anticipated growth in rail traffic if the transaction occurs, Frankfort is expecting an enormous increase in vehicle traffic over its six at-grade crossings of the EJ&E. Currently these crossings handle about 32,000 vehicles per day but the village’s Transportation Master Plan predicts that by 2021, this volume will reach 142,000 vehicles—more than

¹ By decision served February 22, 2008, the Board denied Frankfort’s motion to compel production by CN of information about projected increases in rail traffic.

quadruple its existing level.² At Wolf Road, the increase during this period will be from 7200 to 54,000 vehicles; at Harlem Avenue the increase will be from 10,000 to more than 48,000.³

The blockages of Frankfort's grade crossings will be considerable, even in the short term. The original scope proposal for the EIS would have looked only about three years into the future. Although the Board agreed to extend this horizon to the year 2015 following objections by Frankfort and other municipalities, the proper horizon is closer to 2030 than 2015.

Deficiencies of the DEIS

As discussed in more detail in the Berger Report, the DEIS in many respects fails to satisfy NEPA requirements. As a result, the DEIS fails to take a "hard look" at the proposed acquisition, as NEPA requires.

Initially, the DEIS fails to consider all reasonable alternatives. As discussed below, the DEIS pays scant attention to such obvious alternatives as constructing a line farther from Chicago to handle the traffic proposed for the EJ&E and the CREATE proposals that numerous railroads and government agencies (including the Board) have spent considerable time developing. The no-action alternative also receives unduly limited attention in the DEIS. The final EIS needs to correct these glaring shortcomings.

In addition, the DEIS fails to adequately identify, consider, or quantify many impacts. Further, the DEIS fails to provide sufficient detail on the alternatives "so that reviewers may evaluate their comparative merits."⁴ Indeed, the DEIS employs certain methodologies that are not explained, are not defined, are not replicable, and/or appear to have been arbitrarily assigned to this DEIS. In other instances, the assumptions, analyses, and conclusions are contradictory.

Further, proper identification and consideration of appropriate mitigation measures is sorely lacking. The DEIS must identify and consider all "*appropriate mitigation measures* not already included in the proposed action or alternatives,"⁵ and "[t]he means to *mitigate adverse environmental impacts*"⁶ The paucity of discussion on mitigation measures in the DEIS is exemplified by the utter lack of consideration given to appropriate mitigation measures in the Village of Frankfort. In fact, even where there is discussion of mitigation measures in other jurisdictions, those discussions are minimal and truncated. For example, the limited discussion of Quiet Zones in the DEIS serves, at best, as background information on the topic. In the absence of adequate information, analysis, and consideration of appropriate mitigation measures for the Village of Frankfort, the DEIS is fatally flawed.

² Village of Frankfort's Opposition to Application (FRKF-4), Holland V.S. at ¶ 8 & Exh. 3

³ *Id.*

⁴ 40 C.F.R. § 1502.14(a), (b).

⁵ 40 C.F.R. § 1502.14(f) (emphasis added)

⁶ 40 C.F.R. § 1502.16(g), (h) (emphasis added).

Examples of the many shortcomings in the DEIS are summarized below. A more detailed discussion and explanation of the shortcomings is provided in the attached Berger Report.

1) The DEIS fails to adequately consider near- and longer-range impacts on traffic, safety and rail operations

a) The DEIS relies upon implausible vehicle traffic counts and forecasts for at-grade crossings

The rail line capacity analysis does not examine the potential for bottlenecks, nor does it identify appropriate mitigation, even though the EJ&E segment including Frankfort (1) is identified as the fourth highest (out of 20 segments) for the probability of a bottleneck, and (2) is estimated to be at 79% occupancy (nearing capacity) once CN's planned improvements have been constructed. This scenario would likely lead to trains sitting on the tracks and blocking at-grade crossings while awaiting clearance, particularly near the highly constrained location at milepost 11.6 in Frankfort, where CN proposes to end its double track segment running east from Joliet. The DEIS should have examined this very likely scenario and the likely serious impacts in or around Frankfort. Because the DEIS fails to do so, the DEIS fails to satisfy NEPA's hard look requirement.⁷

Further, the DEIS allows for double-tracking of the right-of-way in and around Frankfort as a post-merger option instead of a condition of approval. Allowing for a single-track in the near-term will increase train queues and impact at-grade crossings. If the acquisition is approved, the double-tracking should be a condition of approval to mitigate delays in and around Frankfort.⁸

b) The DEIS fails to consider reasonably foreseeable post-merger additions to capacity

Estimates indicate that the EJ&E will be near capacity soon after the merger. It is therefore very likely that CN will seek to add capacity to the line. However, the DEIS fails to identify and evaluate the impact of improvements and other measures that may be taken post-merger to add capacity. These reasonably foreseeable improvements and other measures will likely have negative impacts, which must be seriously considered. Because the DEIS fails to do so, the DEIS fails to satisfy NEPA's hard look requirement.⁹ Further, appropriate mitigation measures must be required as a condition of approval of any merger.¹⁰

⁷ See Berger Report § III, pp. 4-11.

⁸ *Id.*

⁹ *Id.*

¹⁰ *Id.*

c) The DEIS is based upon numerous contradictions in assumptions, analyses, and conclusions

The rail operations analysis in the DEIS contradicts itself in the areas of rail capacity determination, impacts of new rail-to-rail connections and double-tracking, and potential for truck-to-rail shift in traffic flows.¹¹ These defects render the DEIS inadequate.

d) The DEIS does not adequately consider the effects of induced demand on regional rail lines

It is likely that additional demand will be induced as inner Chicago routes become increasingly bottlenecked with run time increases. However, the DEIS does not assess bottlenecks and time-space RTC modeling on inner Chicago routes (only the EJ&E was evaluated for such purposes). Consequently, the projections in the DEIS likely are too low and therefore deficient.¹² Without correction of these projections and adequate consideration thereof, the DEIS cannot be considered adequate.¹³

In addition, the EIS does not consider the impact of likely truck-to-rail diversions on EJ&E traffic.¹⁴ Failure to consider these reasonably foreseeable effects are material defects in the analysis and render the DEIS inadequate.

e) The DEIS fails to adequately analyze operational delays and other risks

As the Berger Report discusses, the only potentially realistic RTC cases will entail unacceptable operational delays. The DEIS does not adequately quantify and consider these delays or their negative impacts. For example, the DEIS does not consider the potential impacts of delays along the EJ&E based on limitations from the East Joliet Yard to the proposed single-track segment between Frankfort and Matteson. Nor is there serious consideration given to the fact that there does not appear to be any place to put trains that are waiting for opposite direction trains to clear. These delays will be unacceptable. Moreover, the delays will be even more acute as a result of the impact of longer trains.¹⁵ The DEIS's deficient data collection and analysis do not satisfy NEPA's hard look requirement.

Appropriate Mitigation — Notwithstanding the omissions, errors, and other deficiencies in the DEIS, the DEIS provides enough data and analysis, and raises enough issues, to conclude that the following mitigation measures are appropriate and necessary:

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

- Do not allow double tracking to begin or end within two miles of Frankfort.
- Restrict the number of trains that can operate from 6:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM to 25% of the number that can operate the rest of the time.
- Require CN to agree that Frankfort can impose civil penalties for excessive intersection blocking, defined as 10 minutes per idle train or greater. Suggested minimum penalties are \$500 for a first offense of five minutes or more, \$1,000 for the second offense within three months and \$5,000 for each subsequent offense. Require CN to install CCD Video cameras and/or motion sensors tied to the Frankfort Police Department, Fire Department, and Village Administration to monitor and record train movements at Grade Crossings. Require CN to pay Frankfort to install motion detectors.
- Require CN to contribute, within three years from merger approval, 50% of the future funding for State of Illinois Timber Bridge replacement at State Route 45. New bridge will need to at least accommodate 39-ton axle loads with Coopers E-80 loading for trains and five lanes of traffic for motor vehicles. If state funds are not available within 3 years, require CN to pay 100% of cost of bridge replacement.
- Require CN to pay for a grade separation at Harlem Avenue.
- Require CN to pay for a grade separation at Wolf Road.
- Require CN to install Wheel Impact Load Detectors (WILD) at all rail connections to the EJ&E and at the lead and trailing end of East Joliet, Kirk, and Markham Yards.

2) The DEIS fails to analyze noise impacts adequately

a) The DEIS improperly nets noise impacts over a large area and thereby masks severe local impacts

For noise, the analysis employed in the DEIS is fundamentally incorrect and violates the basic tenets of an adequate and complete environmental analysis. For example, there is no proposed or required mitigation of the adverse noise impacts to the almost 3,000 additional receptors (homes, businesses, etc.). The DEIS attempts to avoid consideration of these negative impacts on Frankfort and other communities, and thus the need for mitigation, by contending that benefits will occur at other, distant locations. There is no basis for this “net effect” analysis.¹⁶

¹⁶ The position that netting of impacts is appropriate over such a large area is similar to claiming that transplanting a large, coal-powered power plant from a remote and relatively uninhabited area to the middle of a densely populated city results in no negative impact, because there is no net increase in air pollutant emissions.

The analysis should be removed from the document, and all conclusions drawn from it also should be removed.¹⁷

b) The DEIS fails to adequately analyze peak hour noise as it relates to receptors (houses, businesses, schools, etc.)

The DEIS does not provide noise level information at peak rail traffic periods, which is a standard practice in noise analysis. As a result, the DEIS is incomplete, deficient, and fails to satisfy NEPA's hard look requirement.¹⁸

c) The DEIS inadequately analyzes thresholds for noise mitigation assessment

SEA established a two-part criterion of a 5 dB (decibel) increase on an Ldn (day-night level; or 24-hour analysis) basis and an overall Ldn of 70 dBA or greater for when it would be appropriate to recommend noise mitigation. However, there is no basis for that threshold in any Federal agency practice or STB regulation, and none is provided in the DEIS. A 3 dB increase and a threshold of 65 dBA are the accepted standards for mitigation and should be used here.¹⁹ Because they are not, the DEIS and the conclusions therein are arbitrary and without adequate basis.

d) The DEIS fails to adequately quantify impacts of noise or other nuisances on property values

Noise is a major consideration in the desirability, habitability, and market value of a residence, particularly in close proximity to a rail line. The DEIS fails to adequately quantify impacts of noise or other nuisances on property values. As a result, the DEIS does not satisfy NEPA's hard look requirement.²⁰

e) The DEIS fails to adequately identify and consider alternative crossover designs and impacts of noise or other nuisances on residences

There are six crossovers in Frankfort, four of which are standard crossovers. These must be examined to determine if they are close to residences and if alternative crossover designs would be effective at reducing noise and vibration levels at nearby residences. Without such an analysis, the DEIS is defective.²¹

¹⁷ See Berger Report § IV, pp. 12-16.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

f) The DEIS fails to adequately consider the prospects for Quiet Zones

The discussion of mitigation measures for noise tends to focus on noise barriers and does not adequately consider the prospects for Quiet Zones. Without such an analysis, the DEIS is incomplete and inadequate.²²

Appropriate Mitigation — Notwithstanding the omissions, errors, and other deficiencies in the DEIS, the DEIS provides enough data and analysis, and raises enough issues, to conclude that the following mitigation measures are appropriate and necessary:

- Require CN to pay for significantly improved safety devices at crossings, including active warning signals and quad gates and sidewalk/bike trail gated crossings that are adequate to justify quiet zones at least 15 years into the future based upon FRA Supplemental Safety Measure (SSM) Criteria (given current projections). Require CN to support Frankfort's application for a quiet zone designation along the Right of Way determined by the Village.
- Improve track and roadbed; construct and maintain to FRA Class 4 track to reduce the possibility of derailment and to reduce sound and vibration.
- Require CN to install and maintain state of the art wayside rail-wheel lubrication systems for top of rail lubrication on tangent track and gauge face lubrication at all facing curve transitions greater than 1 degree.
- Require CN to install Wheel Impact Load Detectors (WILD) at all rail connections to the EJ&E and at the lead and trailing end of East Joliet, Kirk, and Markham Yards.
- Restrict the number of trains that can operate from 6:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM to 25% of the number that can operate the rest of the time. This is necessary to address, in part, the comments regarding potential for increased rail traffic and its potential impacts on community.
- Require CN to install and maintain other technologies to reduce wheel squeal, in addition to the wayside curve lubricators and top of rail locomotive lubrications systems noted in the DEIS.

²² *Id.*

3) The DEIS fails to adequately analyze safety impacts

a) The DEIS understates the possibility of a hazmat release

The DEIS concludes that the possibility of a hazardous materials release would remain remote even as the analysis indicates a sevenfold increase in accident probability in and around Frankfort. So sharp an increase in probability should not be ignored in this manner.²³

b) The DEIS fails to consider grade crossing safety

The data related to the ranking and measurements of grade crossing safety are not disclosed or substantiated in the DEIS. Further, the DEIS concludes that data for some crossings are not available. Those data should have been collected, with safety and delay projections calculated and a “risk index” developed based on the existing grade crossing and train delay/queues. In the absence of such data and calculations, the DEIS is not based upon high quality, accurate data and analysis and, thus, is inadequate.²⁴

c) The DEIS fails to consider appropriate mitigation measures

The DEIS does not address potential mitigation measures such as restrictions on time-of-day freight train operations to avoid conflicts with heavy vehicular traffic (peak hours) or the needs of schoolchildren or school buses to cross the tracks. Further, while a proposed Quiet Zone will address some noise and safety issues, the DEIS does not address potential mitigation or safety enhancements related to Safe Routes to Schools, pedestrians or bicycle traffic. As a result, the DEIS fails to satisfy NEPA’s hard look requirement.²⁵

Appropriate Mitigation — Notwithstanding the omissions, errors, and other deficiencies in the DEIS, the DEIS provides enough data and analysis, and raises enough issues, to conclude that the following mitigation measures are appropriate and necessary:

- Require CN to pay for significantly improved safety devices at crossings. These will generally include active warning signals and quad gates and sidewalk/bike trail gated crossings that are adequate to justify quiet zones at least 15 years into the future based upon FRA Supplemental Safety Measure (SSM) Criteria (given current projections). Require CN to support Frankfort’s application for a quiet zone designation along the Right of Way determined by the Village.
- Improve track and roadbed to construct and maintain to FRA Class 4 track to reduce the possibility of derailment and to reduce sound and vibration.

²³ See Berger Report § V, pp. 17-20.

²⁴ *Id.*

²⁵ *Id.*

- Install hot box wheel detectors at least two miles before the Village of Frankfort and at each of the 6 CN rail connections to the EJ&E as well as at end-to-end interchange locations with other Class 1 Railroads and the Indiana Harbor Belt.
- Require CN to provide funds for police and fire department training and equipment for rail incidents, and to ensure all local police and fire personnel receive adequate HAZMAT emergency derailment and spill response training at AAR-provided training courses in Pueblo, CO. Coordinate response capability with American Chemistry Council (f/k/a Chemical Manufacturers Association) and CN forces.
- Require CN to pay for berms and plant materials on residential property and on railroad property as negotiated with the resident and CN, preferably to be financed by paying the Village of Frankfort \$20,000 for each residential lot that is within the 65 dBA line.
- Require CN to agree that Frankfort can impose civil penalties for excessive intersection blocking, defined as 10 minutes per idle train or greater. Suggested minimum penalties are \$500 for a first offense of five minutes or more, \$1,000 for the second offense within three months, and \$5,000 for each subsequent offense. Require CN to install CCD Video cameras and/or motion sensors tied to the Frankfort Police Department, Fire Department, and Village Administration to monitor and record train movements at Grade Crossings. Require CN to pay Frankfort to install motion detectors.
- Require CN to contribute, within three years from merger approval, 50% in future funding for State of Illinois Timber Bridge replacement at State Route 45. New bridge will accommodate 39-ton axle loads with Coopers E-80 loading for trains and five lanes of traffic for motor vehicles. If state funds are not available within 3 years, require CN to pay 100% of cost of bridge replacement.
- Require CN to install Wheel Impact Load Detectors (WILD) at all rail connections to the EJ&E and at the lead and trailing end of East Joliet, Kirk, and Markham Yards.

4) The DEIS fails to adequately analyze health and emergency services impacts

a) The DEIS des not adequately address emergency response planning

The DEIS lacks structured emergency response planning information that details how CN has considered or will respond to anticipated emergencies involving specific hazardous materials that will be transported through Frankfort and other affected communities. The DEIS also fails

to assess future emergency response scenarios at specific locations. Without that analysis, the DEIS fails to satisfy NEPA's hard look requirement.²⁶

b) The DEIS inadequately evaluates evacuation areas for emergency situations

The DEIS cites, but does not conform to, the 2008 Emergency Response Guide. For example, the DEIS indicates that only schools in a ½-mile buffer around the EJ&E right-of-way will be identified. In contrast, the 2008 Guide recommends an evacuation distance of one mile or more for chemicals such as anhydrous ammonia (a toxic, corrosive gas), which would be transported on the EJ&E line.²⁷ Any failure to comply with the 2008 Emergency Response Guide renders the DEIS and any decision based upon it as insufficient.

c) The DEIS does not comply with the NTSB standards for Hazardous Materials Emergency Response Plan coordination with local communities

The DEIS does not comply with the National Transportation Safety Board's (NTSB) standards for Class I railroads as it pertains to the Hazardous Materials Emergency Response Plan coordination with local communities.²⁸ As a result of this failure, the DEIS fails to satisfy NEPA's hard look requirement.

Appropriate Mitigation — Notwithstanding the omissions, errors, and other deficiencies in the DEIS, the DEIS provides enough data and analysis, and raises enough issues, to conclude that the following mitigation measures are appropriate and necessary:

- Require CN to install CCD Video cameras and/or motion sensors tied to the Frankfort Police Department, Fire Department, and Village Administration to monitor and record train movements at Grade Crossings. Require CN to pay Frankfort to install motion detectors.
- Improve track and roadbed; construct and maintain to FRA Class 4 track to reduce the possibility of derailment.
- Require CN to provide funds for police and fire department training and equipment for rail incidents, and to ensure all local police and fire personnel receive adequate HAZMAT emergency derailment and spill response training at AAR-provided training courses in Pueblo, CO. Coordinate response capability with American Chemistry Council (f/k/a Chemical Manufacturers Association) and CN forces.

²⁶ See Berger Report § VI, pp. 21-23.

²⁷ *Id.*

²⁸ *Id.*

- Require CN to install Wheel Impact Load Detectors (WILD) at all rail connections to the EJ&E and at the lead and trailing end of East Joliet, Kirk, and Markham Yards.
- Require compliance with the 2008 Emergency Response Guide.

5) The DEIS fails to adequately analyze several transportation impacts

a) Failure to adequately analyze vehicular delays and capacity

The DEIS fails to adequately analyze and consider vehicular delays and capacity issues. As a result, the DEIS fails to satisfy NEPA's hard look requirement.²⁹

b) Failure to adequately analyze vehicle traffic counts and forecasts for at-grade crossings

The DEIS fails to adequately analyze and consider vehicular traffic counts and forecasts for at-grade crossings. As a result, the DEIS fails to satisfy NEPA's hard look requirement.³⁰

Appropriate Mitigation — Notwithstanding the omissions, errors, and other deficiencies in the DEIS, the DEIS provides enough data and analysis, and raises enough issues, to conclude that the following mitigation measures are appropriate and necessary:

- Do not allow double tracking to begin or end within two miles of Frankfort.
- Restrict the number of trains that can operate from 6:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM to 25% of the number that can operate the rest of the time.
- Require CN to agree that Frankfort can impose civil penalties for excessive intersection blocking, defined as 10 minutes per idle train or greater. Suggested minimum penalties are \$500 for a first offense of five minutes or more, \$1,000 for the second offense within three months and \$5,000 for each subsequent offense. Require CN to install CCD Video cameras and/or motion sensors tied to the Frankfort Police Department, Fire Department, and Village Administration to monitor and record train movements at Grade Crossings. Require CN to pay Frankfort to install motion detectors.
- Require CN to contribute, within three years from merger approval, 50% of the future funding for State of Illinois Timber Bridge replacement at State Route 45. New bridge will need to at least accommodate 39-ton axle loads with Coopers E-

²⁹ See Berger Report § VII, pp. 24-26.

³⁰ *Id.*

80 loading for trains and five lanes of traffic for motor vehicles. If state funds are not available within 3 years, require CN to pay 100% of cost of bridge replacement.

- Require CN to pay for a grade separation at Harlem Avenue.
- Require CN to pay for a grade separation at Wolf Road.
- Require CN to install Wheel Impact Load Detectors (WILD) at all rail connections to the EJ&E and at the lead and trailing end of East Joliet, Kirk, and Markham Yards.

6) The DEIS improperly aggregates positive and negative impacts for the entire large study area

Rather than identifying and seriously addressing local negative impacts that affect individual regions and communities and/or individual properties, the DEIS improperly aggregates (nets) positive and negative impacts for the entire large study area. For example, in the bottleneck analyses, the DEIS looks at the greater Chicago area impacts – or cumulative effects of the merger – and states that there are net reductions of accidents or train delays for those inner belt lines where traffic is removed. However, the DEIS should conduct exhaustive analysis consistent with the DEIS work done along the EJ&E corridor. If this is not done, then “benefits” realized in reducing train traffic in Chicago are not being adequately measured against (under-reported) negative consequences in outlying areas.³¹ Another example of improper netting is the DEIS’ treatment of noise impacts, discussed above.³²

7) The DEIS fails to adequately quantify the indirect and cumulative impacts on humans, properties, property values, and natural resources

- a) The DEIS fails to utilize other, comparable cases or other means to determine either spatial or temporal boundaries for indirect and cumulative impacts.³³
- b) There is no description of how temporal or spatial boundaries for indirect and cumulative impacts were derived for purposes of conducting this analysis. As a result, the DEIS fails to describe the indirect and cumulative effects of the EJ&E rail line, or private actions that may exacerbate the effects of the proposed action for the communities and resources present in the vicinity of Frankfort.³⁴

³¹ See Berger Report § III, p. 7.

³² See Berger Report § IV, pp. 12-16.

³³ See also Berger Report § VIII, pp. 27-31.

³⁴ *Id.*

- c) The DEIS substantially fails to report on the overall community impact of noise on the community quality of life, or how the impacts vary spatially with a degree of specificity that would allow Frankfort to determine appropriate measures to mitigate the increased noise and vibration from the dramatic increase in rail volumes anticipated by the proposed action.³⁵
- d) The effects on land use are focused primarily on construction activities and substantially fail to address other land use considerations from indirect impacts due to noise and other factors that may influence property values and changes in market pressures to develop at a different intensity or type than is currently planned for by Frankfort.³⁶

8) The DEIS does not adequately quantify the indirect effects to land use beyond the immediate footprint of railroad facility construction

- a) Utilization of other, comparable cases or other means to determine either spatial or temporal boundaries for indirect and cumulative impacts.³⁷
- b) There is no description of how temporal or spatial boundaries for indirect and cumulative impacts were derived for purposes of conducting this analysis. As a result, the DEIS fails to describe the indirect and cumulative effects of the EJ&E rail line, or private actions that may exacerbate the effects of the proposed action for the communities and resources present in the vicinity of Frankfort.³⁸
- c) The DEIS substantially fails to report on the overall community impact of noise on the community quality of life, or how the impacts vary spatially with a level of specificity that would allow Frankfort to determine appropriate measures to mitigate the increased noise and vibration from the dramatic increase in rail volumes anticipated by the proposed action.³⁹
- d) The effects upon land use are focused primarily on construction activities and substantially fail to address other land use considerations from indirect impacts due to noise and other factors that may influence property values and changes in market pressures to develop at a different intensity or type than is currently planned for by Frankfort.⁴⁰

³⁵ *Id.*

³⁶ *Id.*

³⁷ See Berger Report § VIII, pp. 27-31.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*

9) The DEIS fails to properly consider socioeconomic impacts

- a) The aggregation of impacts over the entire study area is unacceptable and deserves more attention, particularly as the analysis is so non-specific that it does not allow for a determination of the Proposed Actions impacts on Frankfort.⁴¹
- b) The DEIS does not reference local land use plans even as the rail traffic, and the associated traffic impacts at rail crossings, represent large changes to communities along the EJ&E corridor, such as Frankfort.⁴²
- c) Travel patterns, accessibility and travel times, and hence topics such as community cohesion, emergency response and public services, are all predicated on rail traffic projections that appear quite conservative given the possibility of CN to construct capacity improvements that would not be subject to action within the DEIS post-merger.⁴³

10) Lack of consideration of disproportionately high and adverse human impacts or environmental effects on low income and minority populations

- a) The method by which affected low income and minority populations were identified arbitrarily applied an additional 10% to the thresholds previously used in other SEA-related railroad mergers. This is not a common practice in an Environmental Justice assessment and essentially eliminates any possibility that communities along the EJ&E would result in a finding of adverse impacts on low income and minority populations.⁴⁴
- b) The aggregation of impacts over the entire study area is unacceptable and deserves more attention, particularly as the analysis is so general that it does not allow for a determination of the Proposed Actions impacts on Frankfort.⁴⁵
- c) The DEIS does not reference local land use plans despite the fact that the rail traffic, and the associated traffic impacts at rail crossings, represent large changes to communities along the EJ&E corridor, such as Frankfort.⁴⁶
- d) Travel patterns, accessibility and travel times, and hence topics such as community cohesion, emergency response and public services, are all predicated on rail traffic projections that appear overly conservative given the possibility that after the acquisition

⁴¹ See Berger Report § IX, pp. 32-35.

⁴² *Id.*

⁴³ *Id.*

⁴⁴ See Berger Report § X, pp. 36-38.

⁴⁵ *Id.*

⁴⁶ *Id.*

of control, CN will construct capacity improvements that would not be subject to STB or EIS review.⁴⁷

11) The DEIS fails to properly consider impacts to natural resources and the natural environment

- a) The DEIS fails to identify, delineate, and consider wetlands, jurisdictional waters of the United States, farmland soils, and soils of statewide significance.⁴⁸
- b) The DEIS fails to adequately analyze the impacts on energy use or the resulting impacts that an increase in energy use might have in terms of climate change.⁴⁹
- c) The methodology used for calculating impacts on climate changes essentially dismisses the impacts as inconsequential on a global scale. However, this is not an acceptable reason to ignore or dismiss such impacts.⁵⁰

12) The DEIS fails to evaluate air quality impacts

- a) The estimation of fuel uses and operational emissions for other carriers and related emissions reductions is flawed. As a result, the DEIS fails to take a hard look as required by NEPA.⁵¹
- b) The analysis of energy use and greenhouse gas emissions was done on a global scale to the exclusion of a regional or local analysis. As a result, the DEIS fails to take a hard look as required by NEPA.⁵²
- c) The DEIS fails to evaluate air emissions budgets for the project area in both Illinois and Indiana non-attainment areas. As a result, the DEIS fails to take a hard look as required by NEPA.⁵³
- d) A description of the analysis methodology of how the fuel uses and operational emissions were estimated for other carriers freight trains was not identified in the DEIS. In the

⁴⁷ *Id.*

⁴⁸ *See* Berger Report § XI, pp. 39-42.

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *See* Berger Report § XII, pp. 43-44.

⁵² *Id.*

⁵³ *Id.*

absence of such data, the DEIS is incomplete and fails to take a hard look as required by NEPA.⁵⁴

13) Selection of EIS contractor

CN's application notes that—

CN has obtained the approval of the Board's Section of Environmental Analysis ("SEA") for the retention of HDR Engineering, Inc. ("HDR") as a third-party environmental consultant to prepare any environmental documentation (EA or EIS) that may be required. As provided in the Board's rules, 49 C.F.R. § 1105.10(d), the scope of the third-party consultant's work will be approved by SEA, and the consultant will work under SEA's direction to collect the needed environmental information and will compile it into a draft EA or draft EIS. SEA will then review the draft EA or draft EIS for review and verification, and for publication with such revisions as SEA may choose to make.⁵⁵

In effect, the contractor was selected by CN, even though the Board thereafter concurred in CN's choice. This is improper.

Discussion

General principles

Under NEPA, federal agencies must include an EIS in every recommendation for "major Federal actions significantly affecting the quality of the human environment."⁵⁶ The agency must take a "hard look" at the environmental impacts of the proposed action and compare those impacts with the impacts of alternative courses of action. The Council on Environmental Quality (CEQ) has promulgated regulations to establish uniform procedures for determining whether, when, and how to prepare an EIS.⁵⁷ Those regulations require, *inter alia*, that all federal agencies' "NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken."⁵⁸

⁵⁴ *Id.*

⁵⁵ Application (CN-2), at 33.

⁵⁶ 42 U.S.C. § 4332(2)(C); *Indiana Forest Alliance, Inc. v. United States Forest Service*, 325 F.3d 851, 856 (7th Cir. 2003) (citing *City of Evanston v. Regional Transp. Authority*, 825 F.2d 1121, 1124 (7th Cir. 1987)).

⁵⁷ See 40 C.F.R. pts. 1500-1508. The STB's NEPA procedures implement and comport with the CEQ requirements. See 49 C.F.R. pt. 1105.

⁵⁸ 40 C.F.R. § 1500.1(b).

The EIS must consider and evaluate not only direct impacts but also indirect impacts of the alternatives. The CEQ regulations provide:

Effects include: (a) Direct effects ... [and] (b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.⁵⁹

The CEQ regulations also require consideration of cumulative effects or impacts, including impacts from other projects (such as similar projects being proposed in an area). The regulations define “cumulative impact” as: “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”⁶⁰

Proper identification and consideration of appropriate mitigation measures are critical. The EIS must “[i]nclude *appropriate mitigation measures* not already included in the proposed action or alternatives,”⁶¹ and discuss “[u]rban quality, historic and cultural resources, and the design of the built environment,” and the “[m]eans to *mitigate adverse environmental impacts*”⁶² Accordingly, in looking at reasonable alternatives,⁶³ an agency must consider *more environmentally protective alternatives and mitigation measures*.⁶⁴

Failure to include all reasonable alternatives

Where, as here, an EIS is required, the EIS must “provide a full and fair discussion of significant environmental impacts” and “inform decision-makers and the public of the reasonable alternatives which would *avoid or minimize adverse impacts* or *enhance the quality of the human environment*.”⁶⁵ To that end, the EIS must “[r]igorously explore and objectively evaluate *all* reasonable alternatives,”⁶⁶ regardless of whether the alternative is within the jurisdiction of the

⁵⁹ 40 C.F.R. § 1508.8.

⁶⁰ 40 C.F.R. § 1508.7.

⁶¹ 40 C.F.R. § 1502.14(f) (emphasis added).

⁶² 40 C.F.R. § 1502.16(g), (h) (emphasis added).

⁶³ *Nw. Env'tl. Defense Center v. Bonneville Power Admin.*, 117 F.3d 1520, 1538 (9th Cir. 1997).

⁶⁴ *See, e.g., Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1122-23 (9th Cir. 2002) (and cases cited therein).

⁶⁵ 40 C.F.R. § 1502.1 (emphasis added).

⁶⁶ *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14(a)) (emphasis added).

lead agency,⁶⁷ and must include, for example, the no-action alternative.⁶⁸ This means that “[a]n agency must look at *every reasonable alternative*, with the range dictated by the nature and scope of the proposed action.”⁶⁹ This requirement extends to considering *more environmentally protective alternatives and mitigation measures*.⁷⁰ As CEQ has stated in response to questions on this issue:

Q. If an EIS is prepared in connection with an application for a permit or other federal approval, must the EIS rigorously analyze and discuss alternatives that are outside the capability of the applicant or can it be limited to reasonable alternatives that can be carried out by the applicant?

A. Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of the alternatives to be considered, the emphasis is on what is “reasonable” rather than on *whether the proponent or applicant likes or is itself capable of carrying out a particular alternative* [emphasis added].

Reasonable alternatives include those that are *practical or feasible* from the technical and economic standpoint and using common sense, rather than simply *desirable* from the standpoint of the applicant [emphasis in original].⁷¹

NEPA requires that a “range” of alternatives be considered, so as to “preclude agencies from defining the objectives of their actions in terms so unreasonably narrow that they can be accomplished by only one alternative (i.e. the applicant’s proposed project).”⁷² This requirement helps to prevent the EIS from becoming a preordained formality.⁷³ And, proper attention must be paid to each alternative. In the evaluation, the EIS must “[d]evote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.”⁷⁴

⁶⁷ 40 C.F.R. § 1502.14(c).

⁶⁸ 40 C.F.R. § 1502.14(d).

⁶⁹ *Nw. Envtl. Defense Center*, 117 F.3d at 1538 (emphasis added) (quoting *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1520 (9th Cir. 1992)).

⁷⁰ See, e.g., *Kootenai Tribe of Idaho*, 313 F.3d at 1122–23 (and cases cited therein).

⁷¹ Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, 46 Fed. Reg. 18026, 18027 (Mar. 23, 1981).

⁷² *Col. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1174 (10th Cir. 1999) (citing *Simmons v. U.S. Corps of Engineers*, 120 F.3d 664, 669 (7th Cir. 1997)).

⁷³ See *City of New York v. United States Dep’t of Transp.*, 715 F.2d 732, 743 (2nd Cir. 1983); see also *Davis v. Mineta*, 302 F.3d 1104, 1119–20 (10th Cir. 2002).

⁷⁴ 40 C.F.R. § 1502.14(b).

Importantly for this proceeding, “the evaluation of ‘alternatives’ mandated by NEPA is to be an evaluation of alternative means to accomplish the *general* goal of an action; it is not an evaluation of the alternative means by which a particular applicant can reach his goals.”⁷⁵ Thus, for example, the DEIS’ rejection of possibly constructing a bypass rail line farther out from the City of Chicago because *CN* might lack full ownership or *CN* might have to spend additional funds⁷⁶ is an unduly narrow reading of the NEPA requirement.

As noted above, the DEIS pays scant attention to such obvious alternatives as constructing a line farther from Chicago to handle the traffic proposed for the EJ&E and the CREATE proposals that numerous railroads and government agencies (including the Board) have spent considerable time developing. The no-action alternative, whose consideration is required by the CEQ regulations,⁷⁷ also receives unduly limited attention in the DEIS. The final EIS needs to correct these glaring shortcomings.

Insufficient detail and improper methodologies

Importantly, sufficient detail is required. To insure the “professional ... [and] scientific integrity” of its EIS, the agency must identify the “methodologies used” and provide “explicit reference[s].”⁷⁸ Thus, the EIS must fairly analyze potential impacts of the proposed action at a level of detail sufficient to permit meaningful analysis.⁷⁹

And, NEPA’s “hard look” at environmental consequences must be based on “accurate scientific” information of “high quality.”⁸⁰ Indeed, “[a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.”⁸¹ High quality, accurate data and analysis are also required for the agency to “carefully consider detailed information concerning significant environmental impacts.”⁸² And, it is essential that the EIS not be based on misleading or incorrect assumptions. For example, an EIS’ reliance on an inflated estimate of a project’s benefits violates NEPA because it impairs fair consideration of the project’s adverse environmental effects.⁸³

⁷⁵ *Van Abbema v. Fornell*, 807 F.2d 633, 638, 642-43 (7th Cir. 1986).

⁷⁶ DEIS, Exec. Summary, at ES-9.

⁷⁷ 40 C.F.R. § 1502.14(d).

⁷⁸ 40 C.F.R. § 1502.24.

⁷⁹ 40 C.F.R. § 1502.9(a).

⁸⁰ 40 C.F.R. § 1500.1(b).

⁸¹ *Id.* (emphasis added).

⁸² *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

⁸³ *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 446 (4th Cir. 1996).

Unduly brief time horizon

CN initially proposed only a three-year time horizon for considering the effects of the proposed transaction. Frankfort and others, taking note of the fact that the southern suburbs are among the fastest growing in the nation, asked that the scope of the EIS extend to 2030, or at least 2021. The Board's scope decision chose 2015 as the horizon.

NEPA requires consideration of the future effects of a covered action.⁸⁴ Although the statute does not specify a time horizon, a reasonable look forward is necessary. Given (1) the solid projections available for Frankfort's traffic (to 2021) and population (to 2030) growth and (2) the explosive growth that is expected in these figures, the EIS should extend beyond 2015 and the DEIS is insufficient for its failure to do so.

Applicant's selection of Board's EIS contractor

As noted above, CN selected HDR as the EIS contractor and then "obtained the approval" of SEA.⁸⁵ Frankfort objected to this procedure in its comments on the EIS scope and continues to object now. "Once the [STB] decided not to prepare the environmental impact statement itself, it was obliged to pick a contractor itself, and not to delegate the responsibility."⁸⁶ Moreover, the Board's concurrence in the choice of HDR does not fulfill the Board's duty under the CEQ regulations. "We need not page through the dictionary at length to decide that concurring in someone else's choice of consultant is not the same as choosing a consultant of one's own."⁸⁷

When considered cumulatively with the other shortcomings of the DEIS outlined above, the improper selection of HDR requires that the EIS be redone by a contractor selected by the Board and not by CN.

Mitigation

As the Board has pointed out in this proceeding, it has authority to prescribe mitigation requirements as a condition of approving a transaction subject to its jurisdiction.⁸⁸ On September 22, 2008, the Frankfort Village Board adopted a list of mitigation options, a copy of which is included in this package of Frankfort's comments on the DEIS. Frankfort believes that the DEIS is inadequate and, more broadly, that the proposed transactions should not be

⁸⁴ *Cape Henry Bird Club v. Laird*, 359 F. Supp. 404, 418 (W.D. Va. 1973), *aff'd*, 484 F.2d 453 (4th Cir. 1973); *see also Atchison, T. & S.F. Ry. v. Callaway*, 382 F. Supp. 610, 621 (D.D.C. 1974) (requiring that future elements of covered project be taken into account).

⁸⁵ Application (CN-2), at 33.

⁸⁶ *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 202 (D.C. Cir. 1991) (Clarence Thomas, J.) (citing 40 C.F.R. § 1506.5(c)); *accord Sierra Club v. Sigler*, 695 F.2d 957, 962 n.3 (5th Cir. 1983).

⁸⁷ *Citizens Against Burlington*, 938 F.2d at 202.

⁸⁸ Decision No. 2, at 15 (served Nov. 26, 2007).

approved. Should the Board nevertheless approve the CN application, the Board should, as part of its final order, require CN to fund the mitigation actions set out in Frankfort's proposal.⁸⁹

Sincerely,

A handwritten signature in black ink, appearing to read "Eric L. Hirschhorn", written in a cursive style.

Eric L. Hirschhorn

Counsel, Village of Frankfort, Illinois

⁸⁹ The presentation of mitigation options is not intended to waive Frankfort's right to seek judicial review of the Board's final decision or of any decision underlying that decision.

**Village of Frankfort, Illinois:
Review of Draft Environmental Impact Statement
for the Proposed CN / EJ&E Acquisition**

September 25, 2008

Prepared by:



The Louis Berger Group, Inc.

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I. Executive Summary

On behalf of the Village of Frankfort, Illinois, The Louis Berger Group, Inc. has reviewed the Surface Transportation Board's (STB) *Draft Environmental Impact Statement (DEIS) for the Proposed Canadian National Railway Company Acquisition of the Elgin, Joliet & Eastern Railway Company*. This draft report is a culmination of Berger's review of the report and is intended to be a document by which the Village of Frankfort can issue its comments to the STB and continue its involvement with Canadian National Railroad and other applicable parties in the proposed acquisition.

Based on this review, the DEIS does not satisfy the requirements established by NEPA and subsequent case law to take a "hard look" at the proposed acquisition. Further, the DEIS employs methodologies in some subject areas that are not explained, are not defined, are not replicable, or appear to have been arbitrarily assigned to this DEIS by the STB.

The proposed acquisition of the Elgin, Joliet & Eastern Railroad (EJ&E) by the Canadian National Railroad (CN) has been cited by both its opponents and supporters as an action that would impact local communities, the Chicago Region and the nation's transportation network. The President and CEO of CN continually emphasizes the far-reaching implications of the proposed acquisition, stating "this transaction is in the broader regional and national interest."¹

Despite this universal acknowledgement, the DEIS does not hold the proposed acquisition to the same standards required by the federal government in other regional and national transportation projects and does not comport with federally-mandated, as well as legally-mandated, practices associated with the National Environmental Policy Act (NEPA), precedent-setting case law, and related statutes.

For the Village of Frankfort and the region as a whole, the Draft EIS fails to adequately address, and in some cases fails identify, impacts to the community in critical areas such as rail operations, noise, hazardous materials, traffic delay, and safety risks, as well as impacts to emergency service providers, school districts and property values. The prospects of rail traffic growing from six trains per day to more than 28 per day with 100- to 135-car trains almost immediately after the acquisition is an action that requires a much more in-depth look at these factors, as well as some level of examination of what will occur 10 to 20 years following the proposed acquisition and detailed mitigation commitments.

The DEIS does not constitute a "hard look" at the proposed acquisition in numerous areas, which are explained in detail in this report. These areas of concern are applicable not only to the Village of Frankfort, but for the entire study area. The following are specific areas where the DEIS does not meet established standards and practices for a "hard look":

- Long-range impacts on traffic, safety and rail operations;
- Effects of induced demand on regional rail lines;
- Operational risk analysis;
- Vehicular delay and capacity analysis;

¹ CN News Releases. "CN will seek legal relief to conclude its proposed EJ&E acquisition." August 6, 2008. http://www.cn.ca/about/media/news_releases/2008/3rd_quarter/en_News20080806.shtml. Accessed 9/8/08.

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- Net effect and peak hour analysis for noise as it relates to receptors (houses, businesses, schools, etc.);
- Aggregation of pluses and minuses for an entire study area rather than addressing local impacts that affect individual communities or individual properties;
- Specifically addressing comprehensive emergency planning issues;
- Quantify cumulative impacts on properties, property values and natural resources; and
- Quantify indirect effects to land use beyond the immediate footprint of railroad facility construction.

Further, there are numerous instances in which the DEIS is not specific, as the study's approaches are not explained, not quantified, not replicable or appear to have methods that were arbitrarily assigned. These include:

- Thresholds for noise mitigation assessment;
- Vehicle traffic counts and forecasts for at-grade crossings;
- Quantification of specific impacts of noise or other nuisances on property values;
- Lack of consideration of disproportionately high and adverse human impacts or environmental effects on low income and minority populations;
- Methods and data to assess hazardous materials transport;
- Utilization of other, comparable cases or other means to determine either spatial or temporal boundaries for indirect and cumulative impacts;
- Estimation of fuel uses and operational emissions for other carriers and related emissions reductions;
- Formal delineation of streams and wetlands; and
- Analysis of energy use and greenhouse gas emissions on a global scale rather than regionally or locally.

The topic of Quiet Zone (QZ) establishment is summarized in two subject areas of this report: Safety and Noise & Vibration. There is limited discussion of Quiet Zones in the DEIS and no Frankfort-specific references. Therefore, the review related to this subject is based on background knowledge of the topic and what other aspects of the DEIS indicate for the potential of a QZ in Frankfort.

II. Methodology

The information contained in this report is the culmination of an independent review of whether or not the DEIS meets the requirements of a “hard look” as required by NEPA. While the term “hard look” does not specifically appear in the NEPA statute, the Courts have interpreted that the purpose of an EIS under NEPA is “action forcing” in that it assures that the agency take a “hard look” at environmental consequences.² The term “hard look” is used consistently in NEPA analysis and case law, with the earliest reference dating from *Natural Resources Defense Council v. Morton* 148 U.S. App. D.C. 5 (1972), “So long as the officials and agencies have taken the ‘hard look’ at environmental consequences mandated by Congress, the court does not seek to impose unreasonable extremes or to interject itself within the area of discretion of the executive as to the choice of the action to be taken.” Analysis must also be conducted on the indirect and cumulative effects of the proposed action, and the lack of certainty of future, forecasted conditions does not release the applicant from their responsibility to assess reasonably foreseeable consequences of their actions, as well as substantiating future impact areas and past and future time horizons for these categories of impacts.

For purposes of conducting the review of the DEIS, Berger employed its staff of professionals who have worked on NEPA-related efforts and conducted numerous research projects on the topic. The firm of Harris Miller Miller & Hanson, Inc. was contracted by Berger to conduct the rail-specific noise and vibration analysis, as they are recognized as industry experts on noise analysis and have authored numerous works for the Federal Railroad Administration (FRA), Transportation Research Board (TRB) and the Federal Transit Administration (FTA).

Specifically, the DEIS was reviewed by professionals and is organized by the following subject areas:

- Rail Operations;
- Noise & Vibration;
- Safety & Hazardous Materials;
- Public Health & Emergency Services;
- Transportation Systems;
- Indirect Effects & Cumulative Impacts;
- Socioeconomics;
- Environmental Justice;
- Natural Environment (Climate, Biological/Water Resources, Energy);
- Air Quality; and
- Cultural Resources.

This review was conducted to summarize and investigate study methodologies, identify concerns related to those methodologies, identify overall concerns and determine Frankfort-specific issues. The following sections contain summaries of this review and are organized by subject area. The “Summary” sections contain key conclusions of Berger’s examination, followed by “Technical Review” sections, which provide more in-depth perspective. *Note that some comments are applicable to more than one subject area and may be addressed in more than one section.*

The subject matter of this report is highly technical. Topics such as noise and rail operations tend to have a language all their own that requires technical terminology and measurements that may not be easily explained to non-transportation/environmental professionals.

² *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n. 21, 96 S.Ct. 2718, 2730 n. 21, 49 L.Ed.2d 576 (1976)

III. Rail Operations

Summary Comments

- The rail line capacity analysis does not examine the potential for bottlenecks and identify mitigation, even though the EJ&E segment containing Frankfort is identified as the fourth highest of 20 segments for the probability of a bottleneck and is estimated to be at 79% occupancy (nearing capacity) once CN's planned improvements are constructed. This scenario would likely lead to trains sitting on the tracks and blocking at-grade crossings.
- Despite estimates that the EJ&E will be near capacity soon after the merger, the DEIS fails to identify other measures CN will likely pursue post-merger to add capacity to the line. If the merger is approved, communities will have no input into post-merger capacity improvements.
- The rail operations analysis contained within the DEIS contradicts itself in the areas of rail capacity determination; impacts of new rail-to-rail connections and double-tracking; and potential for truck-to-rail shift in traffic flows.
- The DEIS allows for double-tracking of the right-of-way in and around Frankfort as a post-merger option instead of a condition of approval. Allowing for a single-track in the near-term will increase train queues and impact at-grade crossings. If the acquisition is approved, the double-tracking should be a condition of approval to mitigate delays in and around Frankfort.

Technical Review

The Rail Operations review contains many components that have impacts on the methodologies that drive other aspects of the DEIS, which are contained later in this document. The following technical review was conducted from a strictly rail operations standpoint and does not attempt to determine the effects of a chain reaction on other subject areas.

Review of Methodology

EJ&E Capacity: Bottlenecks, Line Occupancy Index (LoI) and Delay. The SEA has determined, through independent modeling, that the LoI for mainline track Segment P, containing Frankfort, is the fourth most occupied track territory on the EJ&E and would receive an LoI (a volume to capacity measure) of 79 percent. SEA states that with any LoI greater than 70 percent it is very difficult to operate trains reliably and consistently without delay.

SEA further makes its case by stating that "CN is unlikely to be able to accept the total number of trains proposed by CN in its Operating Plan [sic: 28.3 trains per day], even with a significant increase in horsepower per ton [e.g. faster train]."

These statements beg the question: Should Frankfort be relieved that CN is not likely to be able to run 28 trains a day and that it will coordinate operations with potential passenger train services?

The answer to that question is: No. The history of railroad acquisitions and mergers has shown that delays and bottlenecks post-merger do occur for a variety of reasons including unforeseen events, such as difficulty in upgrading a "territory" (part of a railroad operating division or line

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segment) for improved train control and dispatch. This case was evidenced during the Union Pacific - Southern Pacific Merger where post-merger congestion, differences in operating philosophies, underinvestment to improve capacity in yards and terminals, and track control dispatch led to significant bottlenecks across a wide swath of the system. Ultimately, STB was called in to moderate and order relief. The CN/EJ&E case has the potential to significantly delay train movements in and around Chicago and we want to ensure protections are in place to avoid that. These occurrences have profound impacts on a community, as trains tend to dwell, block at-grade intersections, and create a safety risk for surrounding homes, businesses, school age children and emergency response vehicles at crossings.

The DEIS, in reference to the train simulation modeling done using the Rail Traffic Controller (RTC) model, states that the EJ&E rail line would be operated at or very near capacity and that there is little, if any, room for growth in the anticipated daily train volumes. This contradicts the previous statement in the traffic forecasting section (Page 4, 1-17): "For this analysis, SEA assumed that the train capacity of the E J&E line was not a limiting factor."

Train capacity is a function of a variety of variables with the number of train slots available affected by track capacity, as well as train dispatch and control technology, and dispatch priority. Most of the capacity availability in the system, however, ties back to physical infrastructure. Additional train capacity is possible by double-tracking the line in east Frankfort to Matteson as well as by installing Computerized Train Control (CTC) where Traffic Warrant Control (TWC) is now used; both of which CN does not include in their capital plans post-merger, but they will likely include sooner or later depending on capital availability and actual post-merger train delay.

The scheduling or distribution of trains operating in allotted time and space, or "slots" can have profound impacts on capacity. The DEIS assumes that trains are evenly spaced through a 24-hour period. This is simply an incorrect operative assumption. Passenger trains during peak periods are scheduled and are likely to cause the most delay before and after the peak period.

Delays are likely to increase as Union Pacific Metra trains are added to the west and STAR line service is introduced circumferentially on the EJ&E. Accordingly, SEA acknowledges these train services are likely to hinder track availability when added to the network. As these services are added and likely, along with the post-merger 28 trains per day forecast, the window for freight trains relative to that for passenger trains diminishes, hence the probability for train delay goes up as the prospects of train bunching increases. As trains wait to gain clearance on the eastbound move before the interlocking/switch to single track territory near a given roadway, grade crossing blockage potential goes up, given:

1. Limited track availability to hold trains at East Joliet Yard run through tracks; and
2. Loss of siding capacity (that currently exists) In Frankfort to hold trains.

The DEIS then contradicts itself (4.1-40): "Unlike passenger train schedules, which are fixed and vary little, freight train schedules vary widely depending on a number of factors..." Given that SEA acknowledges in this section that freight is not steady state, then the capacity analysis discussed in 4.1-32 – done by RTC modeling - should be reconstructed so the time-space stringline diagram shows actual operating experience lately and overlays actual projected train slots and demand in the double-tracked, connected, future scenario.

The document contradicts itself again in stating that "activity in and around East Joliet and Kirk Yards would not interfere with the movement of through trains at the East Joliet Yard." The SEA has already acknowledged that run around tracks that avoid entering or leaving the yard and allow trains to bypass slower and erratic switching operations at East Joliet Yard are capacity constrained. As such, the ability for higher traffic density with several trains a day over 6,387 feet long will increase the probability of East Joliet Yard-related delays to run-through trains.

Options that can be taken to mitigate the strong likelihood of bottlenecks in and around Frankfort include:

1. The line segment between Frankfort to Matteson should be required to be double-tracked as condition of approval of the acquisition;
2. Computerized train control (CTC) should be installed system wide (28-44 trains per day are above where TWC territory should operate);
3. CN should curtail its operations during the AM/PM peak periods to alleviate grade crossing blockage. RTC cases 4 and 5, with Case 4 most likely (see analysis later in this section), show frequent "train meets" (e.g. based on simulation of when an eastbound train is likely to meet a westbound train) during peak periods.
4. The assumption in the DEIS that capacity is a constant seems highly unlikely given the 100-year history of railroads to increase capacity with capital intensive productivity enhancement through:
 - Double-tracking;
 - Improved train control and dispatch;
 - Elimination of spring switches;
 - Higher locomotive horsepower ratings and exclusive use of AC Traction locomotives (CN retains use of an older SD-40 in its likely locomotive lash up);
 - Passing siding locations (CN will remove these by double-tracking and real estate should be looked at to enable trains to be "held"); and
 - No other railroad in North America has pressed the envelope for better scheduling than CN.
5. Provisions should be made with shippers who regularly set out and pick up trains off the mainline to place their trains or carload traffic on a siding or storage track away from the mainline. In the Midwest Energy situation, where unit coal trains cycle through their two plants along the EJ&E right of way at Will County and the Joliet power plants, the taking of a siding track to create double-track mainline reduces the shipper's logistics options and places them at risk.³ Similarly, double-tracking and taking away siding capacity in and around Frankfort could have significant impacts to railroad operations where trains are held just before and after the single track territory in East Frankfort.

³ Midwest Energy is currently in negotiations with CN to ensure that their operations are not interrupted for daily unit trains in and out of their plants. Unit train productivity, like many scheduled train consists, is a function of a high number of "turns" per period where turns are a complete round trip including mainline travel in each direction plus terminal time for loading and unloading at both ends of the trip (Power River Basin and the Plants). These negotiations include good tight pick-ups and set-out of trains from the mainline to the plants and vice versa. A 135-car coal train consist has the potential to delay operations significantly if scheduling is not optimized given that siding "set out" capacity will be lost as a result of the proposed double-tracking by CN post-merger.

- CN should investigate locations where double-track mainline in each direction can be complemented with passing sidings where land is either available or can be acquired without major wetland impacts.
6. The single track territory between Frankfort and Matteson (segment P) is the 4th densest track segment on the corridor when looking at bottleneck and delay potential at Lol 79 percent. This area should be double-tracked with passing sidings to complement capacity. *(Note: Berger is developing a graphic to articulate what is occurring along segment P and will have this graphic available for the September 15 presentation).*

Bottleneck Analyses. SEA conducted an 11-mile bottleneck analysis in a corridor west of Frankfort from the Metra/CSX crossing at Rock Island Junction to Walker, Illinois. While this was clearly a source of great delays associated with passenger train slot requirements, lift bridges and yard operations, SEA failed to conduct a bottleneck analysis in Segments P and O where Frankfort lays as well as in all other track segments A through T, as identified in Figure 4.1.7. This was a surprising omission given that Segment P has the fourth worst performing Lol on the line at 79 percent occupancy. SEA should conduct a bottleneck analysis along these two segments to determine how capacity can be added and validate the source of delays while at the same time identifying likely grade crossing delay in and through Frankfort. Though the data strongly suggests significant operating delays in this segment, no mitigation suggestions are made and no special analysis is performed to address the problem.

Further, if SEA feels it appropriate to look at the greater Chicago area impacts – or cumulative effects of the merger – and states that there are net reductions of accidents or train delays for those inner belt lines where traffic is removed, then it should conduct exhaustive analysis consistent with the DEIS work done along the E J&E corridor. If this is not done, then “benefits” realized in reducing train traffic in Chicago are not being adequately measured against (under-reported) negative consequences in outlying areas.

Operational Delay. The DEIS does not adequately consider the potential impacts of delays along the EJ&E based on limitations from the East Joliet Yard to the proposed single-track segment between Frankfort and Matteson. For the Frankfort area, it is proposed that CN will complete a double-tracking project between I-80 near Joliet and South Owens Road (116th Street). The DEIS states:

“This added capacity afforded by the double-tracking would accommodate CN’s proposed traffic volume increase of approximately 22 trains per day [sic: plus the 6.3 existing trains per day for a total of 28.3 trains per day post merger projected]. However, near the east end of the double-track segment, there are only two locations where trains over 5,100 feet in length could be held between East Joliet and Frankfort without blocking one or more grade crossings. A train could be held near the east end of East Joliet to Frankfort double-tracking segment....If a train longer than 5,100 feet is moved west towards Joliet from the Frankfort area, it would be necessary to keep this train moving without stopping, due to the fact that there is no location outside the East Joliet Yard that can hold a train without temporarily blocking an at-grade crossing.”

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This plan poses a number of operational risks. If East Joliet Yard is at or near capacity, then the ability to hold more than one or two trains moving eastbound through Frankfort will be constrained and trains may be held westbound. Trains can never be held westbound, except while waiting for westbound moves to clear the switch in east Frankfort between Sauk Trail and Center Rd. Delays and bottlenecks are at the switch in Frankfort leading to single track mainline from double-track territory. The East Joliet Yard is also constrained by lack of run around track capacity as described previously. If trains are held to clear the interlocking for an eastbound opposing move, grade crossings in Frankfort risk being blocked.

Further, if the eastbound track before the switch serves as a holding track waiting for westbound movements to clear, grade crossings are likely to be blocked. Putting 28 trains – evenly split between east and westbound – on the single track at the east end of Joliet is likely very close to the theoretical capacity of CTC based single track operations. Further, as can be seen from the RTC stringline diagrams for Case 4 (most likely scenario in Berger's opinion), trains running eastbound during afternoon peak periods far outnumber westbound moves. This means that trains will be held further away on the next double-track section going eastbound into Matteson. As the DEIS notes, the further away a train is held from a meet, the higher the chances of delay because by the time the train is given clearance to proceed and the train accelerates, the situation at the actual meet location may have changed and another action may be necessary. Further, as noted also in the DEIS, once a train "slot" is lost, it is lost forever and the effects of delays can and often do cascade at the line and system level.

A 135-car unit train operation will occupy about 1.7 miles of "moving slot" distance to run through (135*60 + 200 feet locomotives + 400 foot quiet/safe stopping distance from Grade Crossing or switch). Any grade crossing east or west of the switch, within 1.7 miles, may be blocked while east or westbound moves clear the switch. The STB says no grade crossing shall be blocked greater than 10 minutes per event or mitigation is required, which will likely be the case in Frankfort.

For speed considerations, if the switch is an AREMA Number 12 speeds are generally restricted to twice the frog number on a facing or trailing diverting route move, in this case 24 MPH on the diverting westbound move. A train that re-starts from full stop to revenue speeds going eastbound at the switch could easily take greater than ten to fifteen minutes to clear the switch and grade crossings just to the east of that switch.

Post-Merger Operational Cases. The RTC stringline diagrams shown in Attachment B4, pages 25-29 were reviewed and the factors and assumptions to construct them considered. These are technical diagrams that model when train meets are likely to occur based on the operations analysis provided by CN and conducted as part of the DEIS. Various "cases" were analyzed to determine which would be most likely to occur.

Based on Berger's review of these factors, we believe Cases 4 and Case 5 are the most likely immediate post-merger outcomes. CN Base Case 1 is unlikely because the UP mainline is likely to increase the number of METRA trains it carries. Case 1 ignores this likely increase in passenger train track occupancy time.

RTC Case 4. Case 4 shows most train meets to occur early in the morning from 4am to 6am and a higher number of meets from noon to 4:15pm. In two cases, the westbound train is held from about 12:15pm to about 4pm in Frankfort before the switch to allow five westbound trains

to pass. This assumes that this is double-track territory, which it is not. Where would trains be held? Does this mean that the westbound moves would be held at Kirk Yard, or that they would be held in the double-track territory east of Matteson? In either case this would represent close to a four-hour delay for the westbound move starting where it is being held at 11 am and originating from Kirk Yard.

In general, Case 4 would present potentially unacceptable delays in Frankfort as mostly eastbound trains approach the switch from double- to single-track territory. If trains are held to allow a westbound move to proceed and those trains are longer than the distance between grade crossings then the crossing will be blocked for as long as it takes for:

- The opposing move to pass – if it too was held – which could take 20 minutes;
- Dispatcher in TWC territory to clear the signal aspect and authorize movement;
- Throwing the switch – this switch is shown as a *spring switch* which would require the train crew to throw the switch manually - adding 10-20 minutes of delay to return the switch to original position from facing move diverting path move; or
- The train to proceed from full stop to 40 mph.

Berger's review indicates Case 4 would result in 58% delays, even without longer trains.

RTC Case 5. Under Case 5, between three and four train meets are shown within an hour from 7pm to 8pm. This is a period of potentially high delay and could unacceptably hinder the time it takes for traffic and emergency vehicles to traverse at-grade crossings both before and after the transition from single- to double-track in east Frankfort.

Because of the capacity issues laid out on the east end of the bottleneck territory closely modeled by SEA extending to the east side of the East Joliet Yard, there does not appear to be any place to put trains when waiting for opposite direction trains to clear. CN has not opted to put crossovers along any segment of the right of way between East Joliet and Frankfort, hence operating flexibility is highly constrained.

RTC Case 1. This scenario is the baseline case which CN claims it would/could operate. This scenario does not appear to be realistic because additional METRA passenger train services are both likely and imminent on inner Chicago routes and the circumferential STAR service (see Figure 3.1-10, Proposed Metra New Routes). Without these trainsets affecting track occupancy slots (like the STAR service) and with passenger trains bisecting the EJ&E to Chicago, Case 1 does not appear to be realistic and should not be the base case for analysis.

Economic Forecast of Rail Traffic Growth. The DEIS fails to identify the potential for capacity improvements along the EJ&E post-merger that will then allow CN to increase its operations – and ultimately marketability in Chicago and across the US and Canada – along the rail line. Despite estimates that the EJ&E will be near capacity soon after the merger, the DEIS fails to identify other potential measures CN will likely undertake post-merger to add capacity and attract additional business to the EJ&E and its existing lines.

CN has stated that their current trackage rights agreement with the EJ&E would not prohibit a growth in traffic without the merger. This is correct, as is the ability of CN to offer trackage rights to other Class I railroads post-merger. If the merger is approved, communities will have no input

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into post-merger capacity improvements or trackage rights, so these should be addressed to some degree in the DEIS as to the potential impacts of such actions.

The DEIS states that "for year 5 after completion of construction, there is, on average, a 50 percent chance that actual train volume exceeds the Applicant's projections" and this "would only exceed the Applicants' projections by a *small* amount." What is a small amount? Is a small amount a reasonable statement in a federal DEIS? Should this number not be viewed either in a relative sense, or as a percent?

Even so, a five-year window after construction of CN's proposed improvements is unrealistic, as the window should be ten to fifteen years and comport with the transportation plans adopted by local, state, and federal governments. This point is echoed by the Chicago Metropolitan Planning Commission testimony to Illinois' Congressional delegation.⁴ Short and long term traffic flows will be influenced by many factors when considering trains to be routed through Chicago. Questions that should be addressed in the DEIS related to this include:

- Can trains be re-routed from the two inner belt roads to the EJ&E passing east-west through Chicago onto the EJ &E beyond 28 daily trains?;
- Will Union Pacific (UP), Norfolk Southern (NS) or CSX add fast train service bi-directionally east-west and become capacity constrained? If so, then the regional network traffic flows need to be evaluated and UP, NS, CSX or Burlington Northern Santa Fe (BNSF) traffic should be quantified and put through the bottleneck and Lol analysis as well as a rail simulation;
- What will happen to capacity if NS/CSX in and around Chicago's eastern gateways shift traffic to the Belt Railway of Chicago and the Indiana Harbor Belt? Will this in turn divert trips to the EJ&E? Train speeds and origin-destination run times and cycle times are dynamic based on volume-to-capacity ratios that change depending on macro-economic demand (see page 4.1-17, point 2, east-west container traffic will grow...);
- If traffic will be diverted to the EJ&E, at what point is practical capacity reached on the double-track mainline through Frankfort?
- When will CN build out the second track to enable improved connectivity through Frankfort to reach the CN radial mainline crossing. If practical capacity is constrained by train delays in East Joliet and Kirk Yards and dispatch bottlenecks, will shippers opt to continue to use other routes?

Another factor in future traffic growth is market forces that will likely lead to a major shift from truck to rail for commodities shipping. The DEIS is contradictory in its statements regarding the potential for this truck-to-rail shift. As fuel prices rise, rail has an inherent advantage on per mile costs for long distance hauls. As highway capacity is constrained, there is likely to be a mode shift for 500- to 1,000-mile medium-distance hauls that can be combined with fast unit trains.

This analysis fails to include consideration of medium haul truck-to-rail mode shift as a function of a) improved connectivity and reduced run times on post merger rail routes, and b) train miles generated are not proportional. That is there is a slight reduction in train miles for each of two

⁴ Blankenhorn, Randy. "Informal Congressional Hearing : CN's Proposed Acquisition of the Elgin, Joliet & Eastern rail line. Talking Points" August 5, 2008. <http://www.cmap.illinois.gov/WorkArea/showcontent.aspx?id=9792>

radial arc routes (Lake Shore Route and Belt Railway of Chicago routes) but more induced trains per day on the EJ&E.

While the SEA concluded that the traffic projections provided by CN present a reasonable basis for purposes of the DEIS, it is very likely that these projections are too low because additional demand will be induced as:

- Use of inner Chicago routes becomes increasingly bottlenecked with run time increases. SEA did not assess bottlenecks and time-space RTC modeling on inner Chicago routes, just the EJ&E.;
- Traffic on the inner Chicago routes will go down in the near term but increase post-merger, potentially taking up to a decade; and
- No truck to rail diversions are built into the EJ&E traffic.

As noted SEA falsely treats the EJ&E as a line unable to carry more than immediate post-merger capacity (with connections and double-tracking complete). Further, the DEIS did not contain a shipper audit to determine: 1) Under what circumstances shippers would divert moves to the EJ&E?; and 2) Which Origin-Destination pairs that travel through Chicago for long and medium hauls could be diverted on routes completely bypassing the region?.

The DEIS does not deal with these questions, and should aim to satisfy the requirements for a "hard look". Given that SEA uses a Gross Domestic Product rail multiplier of 10 to 10.2 or .06, then it should also apply a ratio or multiplier or Origin-Destination mode choice survey of those moves that could divert to the EJ&E if service quality were good for those railroad lines that could run over the EJ&E. Diverting trips because of a shorter faster route over the EJ&E are not included in CN's estimate of 28 trains per day post-merger. (see B3.2.1 GDP Blended Forecast, Appendix B3 page 2 of 12). The DEIS should conduct sensitivity testing to determine the possible impacts of a "50% chance" that there will be more train operations than currently described in the document, using reasonably foreseeable increases in rail traffic as inputs, rather than attempt to base a judgment of adequacy on a single, inadequately substantiated, future condition.

The question that should be raised through a shipper survey is: "Under what circumstances would you ship traffic over the EJ&E and what service quality affects your decision?" Factors such as reliability, reduction in run time that contributes to cycle time reductions (especially with private car fleets), rates, and delays would likely contribute to this shift. Additionally, carload time versus value sensitivity will influence mode and rail route choice. Typically, the shipper does not have a route choice, but an improvement in travel time will influence the decision over whether to ship via one railroad versus another – when a choice is available.

IV. Noise & Vibration

Summary Comments

- For noise, the analysis employed in the DEIS is fundamentally incorrect and violates the basic tenets of an environmental analysis. There is no mitigation of the adverse noise impacts to the almost 3,000 additional receptors (homes, businesses, etc.), as the DEIS attempts to offset the need for mitigation by stating that benefits will occur at other locations. There is no basis for this "net effect" analysis, and it should be removed from the document, and all conclusions drawn from it should also be removed. (*See Appendix for references to federal regulations and court cases that address net effects.*)
- SEA established a two-part criterion of a 5 dB (decibel) increase on a Ldn (day-night level; or 24-hour analysis) basis and an overall Ldn of 70 dBA or greater for when it would be appropriate to recommend noise mitigation. However, there is absolutely no basis for this threshold in any Federal agency practices or STB regulations, as a 3 dB increase and a threshold of 65 dBA is the accepted standard for mitigation.
- The Draft EIS does not provide noise level information at peak rail traffic periods, which is a standard practice in noise analysis.
- Other technologies to reduce wheel squeal should be required of CN in addition to the wayside curve lubricators and top of rail locomotive lubrications systems noted in the DEIS.
- There are six crossovers in Frankfort, four of which are standard crossovers. These should have been examined to see if they are close to residences and if alternative crossover designs would be effective at reducing noise and vibration levels at nearby residences.
- Mitigation measures for noise tends to focus on noise barriers and does not fully consider the prospects of Quiet Zones.

Technical Review

For this review, it is assumed that the DEIS correctly monitored noise and vibration levels, used the correct operational inputs for the analysis, and correctly applied the models for noise and vibration from freight operations. There is no basis to assume otherwise and insufficient information contained in the DEIS and its appendices to fully evaluate the results of the analysis. However, based on the review and a few cursory applications of the models, these portions of the work seem to be correct.

While the monitoring and analysis of the noise for the project is not in question, there are several fundamental concerns with the methodology, impacts and mitigation discussion that must be addressed. As discussed below, these include two fundamentally incorrect assumptions in the noise methodology and a weak commitment to noise mitigation that is based on the methodological assumptions.

There are no major concerns with the vibration assessment for the Proposed Action. There would be no increase in vibration levels due to the project, and the Applicant has applied the strictest vibration criteria for this type of project. In addition, the STB regulations do not have any criteria for vibration, so the use of FRA/FTA vibration criteria is appropriate for the Proposed Action. Furthermore, due to the nature of freight train vibration, mitigation measures are limited.

Review of Methodology

The STB noise regulations, as stated in 49CFR 1105.7, are correctly implemented by SEA in identifying noise impacts that would be caused by the Proposed Action. However, there are two fundamental issues with the noise impact assessment methodology that are critical to the analysis:

1. Net Effect Analysis. The DEIS states there are 2,996 noise sensitive receptors on the EJ&E line segments 1-14 which would experience an increase in Ldn (day-night level, or 24-hour analysis) to 65 dBA (decibels) or greater and 2,738 noise sensitive receptors with reductions in noise level below 65 dBA Ldn on other CN segments, for a “net effect” of only 258 receptors with an increase in Ldn of 65 dBA or greater. The DEIS states on page 4.10-7 that: “This increase equates to roughly one additional affected receptor per mile of rail line associated with the Proposed Action. In this context, the DEIS does not consider the overall increase in the number of receptors affected by noise associated with the Proposed Action to constitute an adverse environmental impact.”

While it is appropriate to mention benefits due to the project, they cannot be used to offset impacts at other locations in a noise analysis. This differs from a resource area such as wetlands, where it may be appropriate to mitigate taking of wetlands by creating them elsewhere, resulting in a “net effect” of no reduction in wetlands. Even in the example of wetlands, on-site mitigation is vastly preferred to off-site restoration.

For noise, this type of analysis is fundamentally incorrect and violates the basic tenets of an environmental analysis. There is no mitigation of the adverse noise impacts to the almost 3,000 additional receptors, despite the benefits that occur at other locations. There is no basis for this “net effect” analysis, and it should be removed from the document, and all conclusions drawn from it should also be removed.

The purpose of a DEIS is to identify and document impacts, and propose mitigation for project induced impacts, not to attempt to dismiss almost 3,000 impacts as not significant through an accounting trick. There is no benefit to the almost 3,000 receptors with impacts that results from decreases in noise elsewhere. If SEA does not consider 3,000 impacts to be a high enough number to constitute an adverse environmental effect, then they need to set a criterion that does.

2. Additional Threshold for Mitigation Assessment. The DEIS states that the noise regulations for the Proposed Action “do not include criteria for when to impose noise mitigation measures.” Therefore, SEA, based on previous projects which are not referenced in this document, has somewhat arbitrarily decided that mitigation should be assessed based on the following, stated on page 4.10-14: “On previous projects, including both railroad acquisition cases like the Proposed Action and cases involving the construction of new rail lines, SEA evaluated noise mitigation criteria enacted by other Federal agencies. The purpose of this review was to determine what criteria SEA would use to identify the noise sensitive receptors predicted to experience the greatest noise effects. SEA reasoned that, with this information, the DEIS could evaluate this subset of predicted noise-sensitive receptors to assess potential opportunities to reduce noise effects. Based on its evaluation in prior cases, SEA established a two-part criterion of a 5 dB increase on an Ldn basis and an overall Ldn of 70 dBA or greater for when it would be appropriate to recommend noise mitigation.”

However, there is absolutely no basis for this threshold in any Federal agency that we are aware of. In discussions with HMMH staff, who have worked with every Federal agency that has noise criteria, not one person could point to either a 5 dB increase or 70 dBA Ldn as a threshold for impact or mitigation. Almost uniformly, all Federal agencies, including FAA, FHWA, HUD and STB itself, cite the 65 dBA Ldn as a threshold for adverse impacts and therefore a need for mitigation. Even the applicant, on page 4.10-2 states: "Noise levels in areas where the Ldn is less than 65 decibels are generally not considered adverse to human health and welfare..." The implication here is that levels above this threshold are adverse.

Therefore, it is unclear where this additional threshold came from, and why it should be applied to the Proposed Action. STB already has noise impact criteria, and no other source that we are aware of uses 70 dBA Ldn as a threshold, which is already well above the generally accepted threshold for adverse effects. This seems like an unnecessary addition, with no basis in STB regulations, Federal agency policy, or scientific literature, with the sole purpose of reducing the amount of mitigation to be assessed. SEA should use the noise criteria of a 3 dB increase and a Ldn of 65 dBA to determine when mitigation is warranted.

Overall Concerns. In addition to, and directly related to the methodology concerns above, the primary concern for the project is the discussion and implementation of noise mitigation. The purpose of the DEIS is to identify impacts related to the Proposed Action and discuss mitigation of those impacts. However, because of the flawed methodology, mitigation is given only a cursory discussion. The concerns regarding mitigation include:

- *Magnitude of Impact* – Because of the "net effect" impact analysis, the DEIS has concluded on page 4.10-29: "that the magnitude of the net increase in noise-sensitive receptors that would be exposed to an Ldn of 65 dBA or greater due to the Proposed Action does not constitute an adverse environmental impact." However, there is a fundamental flaw in this conclusion that dismisses the almost 3,000 additional receptors affected by the project. If the SEA were to correctly recognize the significant number of noise impacts associated with this project, there should be an adverse environmental impact and mitigation measures would need to be addressed much more seriously.
- *Mitigation Threshold* – There appears to be no basis for the 70 dBA Ldn threshold for considering mitigation. The DEIS has identified almost 3,000 receptors where the Ldn is increasing to 65 dBA or greater, along with almost 2,000 with an existing Ldn of 65 dBA or higher. Because an Ldn of 65 dBA is almost uniformly considered the threshold for adverse impacts by the scientific community and Federal agencies, this should be the threshold for a discussion of mitigation, and not some arbitrary threshold established by SEA.
- *Mitigation Commitments* – The language in Chapter 4.10 related to noise mitigation is not very strong or specific. SEA should require a greater commitment from the Applicants for noise mitigation due to the 3,000 additional impacts related to this project, and there should be stronger language requiring the Applicant to explore mitigation options. In addition, SEA recommends that applicants use the feasibility and reasonability criteria as defined by the Illinois Department of Transportation (IDOT). These criteria require a reduction in noise levels of 8 dB at a cost of no more than \$24,000 per receptor. Given the limitations SEA has placed on the definition of locations for mitigation (70 dBA Ldn or higher), it may be impossible to meet these IDOT criteria for noise barriers, based on the

cost threshold and limited number of affected receptors defined by SEA. By including locations with an Ldn of 65 dBA or greater, it is much more likely that barriers would meet these criteria. SEA should conduct an analysis to determine potential locations where noise barriers would meet these criteria to determine if any noise barriers could be constructed and to demonstrate a serious commitment to mitigation.

- *Peak analysis* - The Draft EIS does not provide noise level information at peak rail traffic periods, which is a standard practice in noise analysis. There is no indication in the Draft EIS of current or predicted peak period noise readings. Peak noise readings were not considered in each community impacted by the proposed acquisition.
- *Wheel Noise* - Other technologies to reduce wheel squeal should be required of CN in addition to the wayside curve lubricators and top of rail locomotive lubrications systems noted in the Draft EIS. CN should be required to initiate an ongoing preventive rail grinding program on the EJ&E mainline through Frankfort and in other communities to promote single point wheel-rail contact, and reduce stress-based rail defect initiation and wheel squeal. Additionally, the Draft EIS concludes that wheel impact load detectors (WILD) should only be placed near the Fermi lab; however, this practice should extend to all interchanges and rail yards along the EJ&E. This will minimize out-of-round concentric wheels and/or wheel flats and wheel tread parabolic wear along the entire line.

Another alternative mitigation measure that should be explored is relocation of crossovers or use of alternative types of turnout hardware near residential areas. This could reduce both noise and vibration levels in the immediate vicinity of the crossovers.

Frankfort-Specific Concerns. The Frankfort-specific concerns of the project mirror those of the project as a whole. These include:

- The magnitude of the noise impacts in Frankfort are not considered adverse, due to the "net effect" impact analysis.
- The additional threshold (70 dBA Ldn) for assessing mitigation will result in fewer locations in Frankfort where the Applicant will consider mitigation.
- The IDOT reasonability and feasibility criteria may result in no barriers being constructed for noise mitigation.
- There are six crossovers in Frankfort, four of which are standard crossovers. These should be examined to see if they are close to residences and if alternative crossover designs would be effective at reducing noise and vibration levels at nearby residences.

Quiet Zone. The discussion of mitigation in Chapter 4.10 is focused solely on noise barriers and provides for no alternative mitigation options. While the mitigation requirements in Section 6.2.6 suggest that Quiet Zones are a possible mitigation method, this should be discussed in Chapter 4.10. The village of Frankfort has five at-grade grade crossings with no current Quiet Zones, all of which are located near residential areas. The implementation of a Quiet Zone in Frankfort would provide a significant benefit to the residents of the town.

The highest noise levels from train operations come from horns, and given that there are almost 160 at-grade grade crossings (public, private and pedestrian) along the 140-mile corridor, and that horns are blown for approximately ¼-mile on each side of a grade crossing, a substantial portion of the corridor is exposed to horn noise from train operations.

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September 25, 2008

There are only four current Quiet Zones on the corridor, representing less than a fifth of the length of the EJ&E line. There is substantial opportunity to provide a significant benefit to the communities along the corridor by implementing Quiet Zones near grade crossings. As such, there should be a commitment to exploring the creation of Quiet Zones to reduce noise levels from the Proposed Action.



V. Safety & Hazardous Materials

Summary Comments

- The DEIS concludes that the possibility of a hazardous materials release would remain remote even as the analysis indicates a seven fold increase in accident probably in and around Frankfort – a wholly unacceptable assertion.
- The data related to the ranking and measurements of grade crossing safety are not disclosed or substantiated. Further, the Draft EIS concludes that data for some crossings is not available. That data should have been collected, with safety and delay projections calculated and a “risk index” developed based on the existing grade crossing and train delay / queues.
- The Draft EIS did not address potential mitigation measures such as restrictions on time of day freight train operations to avoid conflicts with heavy vehicular traffic (peak hours) or the needs of schoolchildren or school buses to cross the tracks.
- While a proposed Quiet Zone will address some noise and safety issues, the Draft EIS does not address potential mitigation or safety enhancements related to Safe Routes to Schools, pedestrians or bicycle traffic.

Technical Review

The safety information contained in this section consists mainly of a review of the stated accident risks identified in the DEIS. These are addressed in a review of accident potential, the hazardous materials determination, grade separations and the limited Quiet Zone component of the DEIS.

For purposes of this review there is little attention given to rail safety comparisons within rail yards along the EJ&E as there are none in Frankfort. While the East Joliet Yard is considered in the operation analysis contained earlier in this report, a hazmat spill of major proportion at this location is not likely to affect Frankfort. Similarly, rail to rail at grade crossings are omitted from this review because there are no direct crossings in Frankfort. The two closest crossings of CSX/Metra and CN trains are not far beyond the limits of Frankfort, at the Rock Island Junction to the west and Matteson to the east.

Review of Methodology

The term *Study Area* is used in the first sentence of 4.2.1 Methodology. No where in the document, by our read, was the Study Area defined, or limits described clearly. How the Study Area is defined should dictate across the board analytics used for both Rail Operations and Rail Safety throughout the document. The Study Area also has major impacts on how accident rates are derived and calculated, who benefits from this Merger and who loses.

The DEIS did not address potential mitigation measures such as restrictions on time of day freight train operations to avoid conflicts with heavy vehicular traffic (peak hours) or the needs of schoolchildren or school buses to cross the tracks. The analysis contradicts itself by first stating that “there would no substantial impacts in the area of rail operations...and SEA [Section of Environmental Analysis] does not propose mitigation at this time” then states under Modify Train Operations that “SEA is considering a mitigation condition that would requires the Applicant to develop and submit to SEA a train operation proposal that would mitigate vehicle

delay...including train operating curfews." Options for reduced frequencies in rail traffic and elimination of traffic during school bus crossing periods were not included in mitigation sections.

Review of Accident Potential. The DEIS should either substantially justify the use of the lower accident rates on the EJ&E line, or recalculate accident analyses based on the more applicable EJ&E accident rates for this line. The Applicants made the following statements:

The Applicants are working with FRA to finalize their Safety Integration Plan (SIP), addressing how the two railroads would integrate their operations under the Board's rules at 49 CFR Part 1106. The Applicants' current SIP, along with SEA's comments on the SIP, is included in Appendix D. SEA will recommend that, in any decision approving the Proposed Action, the Board require compliance with the final SIP. Therefore, because the SIP will provide for safe integration of EJ&E into the CN rail system, and because FRA is working with the Applicants on the SIP, SEA believes that by using CN's existing (pre-transaction) accident rate its analysis presents a reasonable estimate of the likelihood of train accidents from the Proposed Action.

Under the Applicants' Safety Integration Plan, CN will own, operate and maintain the acquired EJ&E rail line as part of CN's United States system, therefore, the historic accident rates for CN are more representative of what would be expected to occur on the EJ&E rail line segments than the historic EJ&E rates. Different railroad companies often experience significantly different safety results during the same time period. Management practices, strategies, and philosophies about safety have historically had a larger influence on a particular railroad's results than geographic or rail traffic conditions. (Page 4.2-4)

In both cases, the Applicants defend the use of the 1.5/million train miles accident rate, which is the lowest of any of the companies indicated. Evidence indicating that the second statement – that geographic and rail conditions have less to do with accident rates than “management practices, strategies, and philosophies” – should be clearly substantiated, or the DEIS should investigate a range of accident potentials reported that uses the C&N rate and the EJ&E rate. The use of the higher (3.1 accidents/million train miles) EJ&E accident rate on the existing EJ&E line would substantially alter the conclusions presented on page 4.2-5 and elsewhere in the DEIS.

Review of Hazardous Materials Transport Methodology. The merger would create more than a seven fold increase in hazardous materials traffic over the no-action alternative (17,885 carloads versus 131,692). This is non-linear with regard to the four plus fold increase in trains per day. If train length is held fairly constant, it means that actual origin-destination cargo flows are both calculated and projected based on carload waybill data (STCC) or some other means.

Increased risk of hazmat traffic should be seen as unacceptable to Frankfort, especially as potentially leaking or failed cars sit on the westbound track before the switch at the east end of Frankfort where double-track merges to single track territory and is now a long passing siding in Frankfort (see analysis under rail operations related to potential train delays or dwellings).

Further, of all the route segments analyzed by SEA, the EJ&E-7 segment, between Rock Island Junction and Matteson is the fewer number of years forecasted for a hazmat under the merger

scenario, which could be as significant at 71 years. Under the no action scenario, a release is forecast every 899 years, which when compared to 71 years is a huge and unacceptable increase in risk. It should also be noted that cars which are not moving or frequently delayed tend to skew these numbers and make a reportable release even shorter, as is the case in Frankfort between single and double-track train meets (see Operation analysis related to time-space diagrams).

The DEIS states SEA concluded that there would be a potential increase in the possibility of a release because of increased train miles resulting from the longer route, and more carloads of hazardous materials, on the EJ&E line. But, even on the EJ&E line, the possibility of a hazmat release would remain remote because of the regulatory and other safeguards already in place.

Effects to the surrounding community resulting from the seven-fold non-linear increase in hazmat traffic and a nearly thirteen-fold increase in accident probability (from 899 years to 71 years) should be addressed as part of the DEIS.

It is not clear, even after contacting SEA (telephone call on 9.9.2008), how the 10,000 annual carloads of waste were determined as the only threshold for further analysis of transporting hazardous materials. The citation shown in the Association of American Railroads (AAR) Circular OT-55-B has since been updated to OT-55-I⁵ and is therefore out of date. The AAR Circular OT-55-I defines key routes as well as key trains, with the former including 4,000 carloads annually of certain chemicals in certain "hazard zones" as well as the 10,000 carload/annually definition. Appendix C and the resulting analysis, mitigation, and conclusions should reference the latest AAR Circular, and include appropriate definitions for key routes and key trains passing through Frankfort. Also, it is unclear as to how this is a useful threshold under NEPA; the translation of this threshold is that a maximum of 27 carloads of hazardous material each day can pass through Frankfort without any additional consideration of the welfare of its citizens and visitors.

Therefore, the threshold of 27 carloads per day of hazardous waste being transported through the community (10,000/year) should be reexamined in light of (AAR) Circular OT-55-I, including identification of key trains as well as key routes, and substantially justify these as acceptable and normal thresholds under NEPA.

Grade Separations. In the DEIS, STB states that the criteria for grade separation between road and rail is 300 million gross tons per year or 150 more trains per day. This is not consistent with past precedent (which has withstood legal challenges), where the STB Order for Mitigation for Rochester, Minnesota for the merger of Dakota, Minnesota & Eastern (DM&E) with Canadian Pacific is a much lower threshold:

"DM&E pays the cost of **two grade separations** to address emergency service concerns. Select the two from Broadway, West Silver Lake Drive and East Circle Drive. The grade crossings are to be installed one prior to 20 million annual tons (11 trains per day) and one prior to 50 million annual tons (20 trains per day).

The Eighth Circuit Court stated "DM&E bears the burden of non-performance it has the incentive to secure the funding or fund the crossing itself. ...Rochester is not required to pay."

⁵ Association of American Railroads, "Circular No. OT-55-I: Recommended Railroad Operating Practices For Transportation of Hazardous Materials." July 17, 2006.

Quiet Zone (Page 4-2-27). Frankfort is not addressed in the DEIS explicitly for Quiet Zone treatment. Because train frequency will increase substantially in Frankfort, and average daily traffic will stay constant with or without the merger, the bar for Quiet Zone approval will rise substantially as the probability goes up as a function of risk index times train frequency.

While not specific to Quiet Zones, references contained in the document for “one-time” payments by CN for mitigation are not acceptable due to the lack of certainty contained in the analysis for future traffic volumes, freight characteristics and build-out of rail infrastructure.

If Frankfort wishes, the Louis Berger Group can support them in a Quiet Zone application to the Federal Railroad Administration, though mitigating grade crossing risk and applying CN resources for a Quiet Zone directly through barrier gate improvement, and potentially grade separations, is likely a better use of funding.

While a proposed Quiet Zone will address some noise and safety issues, the Draft EIS does not address potential mitigation or safety enhancements related to Safe Routes to Schools, pedestrians or bicycle traffic, for which the establishment of the Quiet Zone could have detrimental effects.

Other Comments

- In American Association of Railroads (AAR) sponsored research done for the Class I companies, railroad diamond crossing safety is directly a derivative of the maintenance window available for track maintenance to conduct regular profile grinding on the points of each diamond crossing casting, or frog. Since Line occupancy Index (LoI) on Segment P of the Franklin-Matteson corridor rates at 79 percent, we question whether sufficient work gang availability would exist with this level of occupancy. STB should correlate work window availability (inversely proportional to traffic density) with its own exposure index and safety risk analysis.
- The data related to the ranking and measurements of grade crossing safety are not disclosed or substantiated. Further, the Draft EIS concludes that data for some crossings is not available. That data should have been collected, with safety and delay projections calculated and a “risk index” developed based on the existing grade crossing and train delay / queues.

VI. Public Health & Emergency Services

Summary Comments

- The Draft EIS lacks structured emergency response planning information that details how CN has considered or will respond to anticipated emergencies involving specific hazardous materials that will be transported through Frankfort and other communities impacted by proposed acquisition. The Draft EIS does not assess future emergency response scenarios at specific locations.
- The Draft EIS does not conform to the 2008 Emergency Response Guide cited in the document as it cites that they will only identify schools in a ½-mile buffer around the EJ&E right-of-way. The 2008 Guide recommends an evacuation distance of one mile or more for chemicals such as anhydrous ammonia (a toxic, corrosive gas).
- The Draft EIS does not comply with the National Transportation Safety Board's (NTSB) standards for Class I railroads as it pertains to the Hazardous Materials Emergency Response Plan coordination with local communities.

Technical Review

Safety was also reviewed from the perspective of emergency services and their response to hazardous material spills and other railroad-based incidents that would result in increased response times.

In general, the DEIS fails to provide data to justify the Applicant's assumption that any release of hazardous materials would be very low given that there would be an increase risk of main track train accidents and yard accidents on the EJ&E rail due to the increase in rail traffic and miles traveled and a substantial increase in the volume of hazardous materials that would be transported on the EJ & E rail line. The Applicant must give adequate consideration to the risk of a low-probability / high-consequence accident involving a significant release of hazardous materials at a segment level.

Further, the DEIS does not clearly establish the consequences of potential accidents and/or hazardous material exposure associated with the Proposed Action at a community level. The document points out that the Proposed Action has the potential to eliminate some existing risks on the CN line segment and transversely is anticipated to increase the security and hazardous chemical exposure risks along the EJ&E line, but does not go far enough in identifying community resources located in close proximity to the EJ&E rail segments that would be most sensitive to short-term (24-hour period) impacts associated with a hazardous material spill.

The DEIS states that "the applicant voluntarily agrees to distribute to each local emergency response organization or coordinating body in communities along the key routes a copy of the Applicants' current Hazardous Materials Emergency Response Plan". The Applicants' current Hazardous Materials Emergency Response Plan is an internal document that would be provided to community representative and responders within 60 days of the effective date of the Board's final decision on the Proposed Action. These mitigation measures does not go far enough to ensure a coordinated emergency response from the Applicant and local emergency response agencies.

The National Transportation Safety Board's recommends that all Class I railroad and railroad systems "develop, implement and keep current, **in coordination with communities adjacent to your railroad yards and along your hazardous material**

routes, written emergency response plans and procedures for handling release of hazardous materials. The procedure should address, at a minimum, key railroad personnel and means of contact, procedures to identify the hazardous materials being transported, identification of resources for technical assistance that may be needed during the response effort, procedures for coordination of activities between railroad and emergency response personnel, and the conduct of disaster drills or other appropriate methods to test emergency response plans". [R-91-15]

The DEIS identifies potential emergency service providers, but does not go far enough to ensure the adequacy of emergency response efforts by indicating probable emergency response times to the various communities within the Potential Action study area.

Other than stating that the Applicant shall comply with the Pipeline and Hazardous Material Safety Administration (PHMSA), Federal Railroad Administration (FRA) and Transportation Safety Administration (TSA) requirements the DEIS does not describe the Applicant's consideration of measures or countermeasures to minimize general non-specific security threats of possible terrorism activities involving railroad personnel and facilities.

Review of Methodology

The Draft EIS provides general emergency management planning information with applicable government regulations and guidance, but does not specifically address comprehensive emergency planning issues that are relevant to communities, including the Village of Frankfort. It is also lacking information regarding structured emergency response planning that details how the applicant has considered or will respond to anticipated emergencies involving specific hazardous materials or Toxic Inhalation Hazards (TIH) that are likely to be transported through communities.

The Rail Safety Analysis in Appendix C of the DEIS provided an explanation of analytical methods used to assess the hazardous materials being transported on the EJ&E line, but does not provide the data that were the results of these calculations (see sections C.3.5.2-C.3.5.13). The DEIS uses the undisclosed data to estimate potential release intervals for the Proposed Action. Without this data stakeholders are unable to identify the specific components that were utilized when determining the predictive approach of incident/release probability.

Overall Concerns. The DEIS is lacking structured emergency response planning information that details how the Applicant has considered or will respond to anticipated emergencies involving specific hazardous materials or Toxic Inhalation Hazards (TIH) that are likely to be transported through communities.

Voluntary mitigation efforts aimed at identifying entities at risk of exposure to hazardous materials within 0.5 miles of the EJ&E right-of way limits appears to be shortsighted in the consideration of all hazardous materials that are anticipated to be transported through the Proposed Action study area and regulatory guidelines on evacuation procedures.

Mitigation measures do not seem to go far enough to ensure a coordinated emergency response between the Applicant and local emergency response agencies. Emergency Response Planning does not appear to incorporate the National Transportation Safety Board's recommendations for Class I railroad and railroad systems.

Additionally, the DEIS does not clearly establish the increased risk of potential accidents and hazardous material exposure associated with the Proposed Action at the community level and does not describe the Applicants consideration of measures or countermeasures to minimize general non-specific threats of possible terrorism activities involving railroad personnel and facilities.

Frankfort-Specific Concerns. The DEIS does not include the locations of permanent and/or temporary response units in the Village of Frankfort. It also fails to state whether Frankfort's emergency responders would be able to respond to an emergency without having to cross the EJ&E. Would emergency responders be able to get to sensitive areas during evacuations should a railroad crossing be damaged or obstructed? The inability to do so may interfere with emergency response efforts.

The Village of Frankfort is located adjacent to a portion of the EJ&E line that the Draft EIS identifies as a "major key route" due to the amount of hazardous materials that are anticipated to be transported on this rail. What is Frankfort's actual level of risk for exposure to a hazardous chemical associated with the Proposed Action? What level of risk is acceptable considering sensitive areas and community characteristics within the Village of Frankfort?

Finally, the DEIS does not discuss the expected number of people to be impacted on a segment level in the case of a hazardous material release. This type of information is critical when developing an appropriate perception of risk for those residing and working in the Village of Frankfort.

VII. Transportation Systems

Summary Comments

- Flawed transportation and traffic analysis resulting from a lack of in-depth consideration of growth rates, employment figures, vehicle delay and best available planning data cause the DEIS to grossly underestimate the degree of impacts on Frankfort's at-grade crossings.
- A horizon year of 2015 is wholly inadequate to determine the long-term effects of the merger on the transportation system in Frankfort and the Chicago region.
- Despite dismissal by CN of the ability to provide forecasts beyond 2015, case law indicates CN's reasoning for not providing this information may not be adequate to avoid such an analysis in the DEIS.

Technical Review

A number of issues with the assumptions made in the vehicle delay analysis and methodology should be resolved in order to provide Frankfort and other communities with a reasonable depiction of what can be expected by the Proposed Action. If these issues are resolved, then the degree of impacts in Frankfort, IL will be greater than that predicted in the DEIS.

The growth rate of 3% per year (page 3.3-4) for traffic in Will County is low based on growth figures that show that between 1990 and 2000, the population of Will County grew by 4.06% and increased to 5.5% between 2000 and July 2006. Will County is the fastest-growing county in the State, and has grown by a third since the 2000 Census, putting it into the top 10 counties in the nation for new population growth.⁶

The DEIS then fails to consider the additional influence of the rate of employment growth in the traffic analysis, and the impact that out-of-town and out-of-county commutation patterns may have on levels of service and vehicular delay at at-grade crossings beyond that indicated by population increases alone. Will County is adding businesses faster than any other county in the State, and is the 36th fastest-growing job center in the Country.⁷

Review of Methodology

Traffic analysis methods for both delay at intersections / at-grade crossing and overall traffic projections for roadways within Frankfort and the study area do not comply with established traffic engineering and transportation planning principles.

Grade crossings should be treated as intersections, which means delays are calculated based on the worst 15 minutes of the day or a peak hour instead of a daily level-of-service concept as described in Attachment C-2. A daily LOS does not adequately describe the amount of delay that is incurred in urbanized areas during peak periods of travel (for example, 6am to 8am). The impact of the peak period delay caused by additional train traffic from the proposed action – increases by factors of eight to ten times in some cases in Frankfort as shown in the *daily* delay calculations in the DEIS – during peak periods will have a disproportionate effect on many business operations, for example, that are not described in the DEIS and are masked by the

⁶ Will County, Illinois. Website: www.willcountyillinois.com/FactsFigures/tabid/245/Default.aspx (accessed 9.9.2008).

⁷ Ibid.

use of a daily level-of-service assessment. We would anticipate vehicle queuing lengths and delays to be much greater during the peak periods than are currently described in the DEIS.

The 2015 horizon year for traffic growth is not adequately justified in the DEIS and the methods used to project traffic along the railroad or crossings of the EJ&E does not conform with federally-established transportation planning policies that require a 20-year planning horizon for transportation projects. The Draft EIS contains projections for 2015, failing to use information already available in the 2030 Regional Transportation Plan for Northeastern Illinois, related efforts, or even the most up-to-date information available, such as the Frankfort Transportation Master Plan.

The best available information for Frankfort extends at least until 2021, as identified in the Transportation Master Plan. Furthermore, the differences between the ADTs indicated for several roadways in Attachment C-2 for the year 2015 and the Frankfort Transportation Master Plan for the year 2021 are frequently very large, and larger than the six-year difference between the two forecast years can explain (Table 1.).

Table 1. Comparison of Transportation Plan and DEIS Forecasted Traffic Volumes

Roadway Name (Near EJ&E Line)	(Near Frankfort Transportation Master Plan (2021))	DEIS (2015)	Difference
Harlem Avenue	48,184	12,336	291%
Pfeiffer Road	20,471	7,752	164%
Wolf Road	53,848	9,966	440%
Sauk Trail	9,361	3,461	170%
Center Road	5,198	7,752	-33%

The Chicago Metropolitan Agency for Planning director Randy Blankenhorn stated to Congressional leaders: "It is impossible to properly analyze the impacts of this acquisition if we are only looking three to five years beyond the date of the STB [Surface Transportation Board] approval. ...The EIS analysis is not nearly robust enough for us to accept as credible its assertions about EJ&E traffic."⁸

CN acknowledged that there are forecast techniques available that could provide some level of long-term analysis, but dismissed such practices as "flawed approaches" and inaccurate. It appears that the SEA accepted these assertions by CN despite the fact that local governments, MPOs, and travel demand models are the standard use for federal long range transportation plans and air quality conformity analyses; methods do exist to perform such a forecast; and the applicant provided the SEA with hypothetical growth projections for traffic on the EJ&E.⁹

In correspondence between the SEA and CN, the railroad stated that a long-term forecast would require "a very extensive special study" and "would not have sufficient accuracy to warrant the

⁸ Blankenhorn, Randy. "Informal Congressional Hearing : CN's Proposed Acquisition of the Elgin, Joliet & Eastern rail line. Talking Points" August 5, 2008. <http://www.cmap.illinois.gov/WorkArea/showcontent.aspx?id=9792>

⁹ April 21, 2008 Applicant Response Letter Exhibits – Attachments 4 & 5. *Canadian National Railway Company and Grand Trunk Corporation – Control – EJ&E West Company (STB Finance Docket No. 35087)*. Attachments 4 & 5. <http://www.stbfinancedocket35087.com/html/inforequest/request3/08apr21response/08apr21exhibits.zip>

expense...much less provide a sound basis" for predicting flows on the EJ&E. CN states it would not be reasonable to perform an analysis on the maximum number of trains that could use the EJ&E. And they are not aware of any way to assess this. CN wrote, "Fortunately, there is no need for the SEA to adopt any of these flawed approaches."¹⁰

Case law related to Indirect and Cumulative Effects analysis, however, indicates that this is not an acceptable line of reasoning for not conducting such an evaluation. In the case of *Conservation Law Foundation v. FHWA* (2007), the Court stated that "forecasts are always marked by a degree of uncertainty, yet NEPA often requires agencies to forecast uncertain events...an agency may not treat a foreseeable effect as nonexistent simply because the magnitude of the effect is difficult to quantify."¹¹ This decision also addressed the issue of how transportation system changes can affect population growth and induced impacts of that population growth. While this case was dealing with a highway project, it is logical to assume that a major change in traffic along a railroad, such as the CN proposed increases along the EJ&E, would also have the potential for such induced effects.

Overall Concerns. The vehicle delay analysis is deficient in several areas, and must be revised to include a forecast year that meets: a) the lifespan of the project; and b) the best available data which, for Frankfort, is the Transportation Master Plan 2021 traffic forecasts. The DEIS should also:

- Revise the traffic impacts on roads in Will County not included in the Frankfort Transportation Master Plan forecasts to reflect a 5.5% annual population growth factor;
- Address impacts from new job growth and the resulting external commute trips for every intersection and at-grade crossing in the DEIS; and
- Specifically address peak period traffic congestion, level-of-service, and queuing impacts to surface street intersections and business driveway locations.

¹⁰ April 21, 2008 Applicant Response Letter. *Canadian National Railway Company and Grand Trunk Corporation – Control – EJ&E West Company* (STB Finance Docket No. 35087).
http://www.stbfinancedocket35087.com/html/inforequest/request3/08apr21response/08apr21Response_Letter.pdf

¹¹ *Guidance on Legal Sufficiency Criteria for Adequate Indirect Effects and Cumulative Impacts Analysis* NCHRP Project 25-25 Task 43. National Cooperative Highway Research Program. Washington, DC. July 2008.

VIII. Indirect & Cumulative Effects

Summary Comments

- There is no description of how temporal or spatial boundaries for indirect and cumulative impacts were derived for purposes of conducting this analysis. As a result, the DEIS fails to describe the indirect and cumulative effects of the EJ&E rail line, or private actions that may exacerbate the effects of the proposed action for the communities and resources present in the vicinity of Frankfort.
- The DEIS substantially fails to report on the overall community impact of noise on the community quality of life, or how the impacts vary spatially with any specificity that would allow Frankfort to determine appropriate measures to mitigate the increased noise and vibration from the dramatic increase in rail volumes anticipated by the proposed action.
- The impacts to land use are focused primarily on construction activities and substantially fail to address other land use considerations from indirect impacts due to noise and other factors that may influence property values and changes in market pressures to develop at a different intensity or type than is currently planned for by Frankfort.

Technical Review

The most prominent issues regarding indirect effects and cumulative impacts as they relate to the DEIS are those of property valuation and land use. Impacts to energy and climate change are also a factor and are discussed under a separate section of this report .

Indirect effects are “caused by the action and occur later in time or farther removed in distance, but are still reasonably foreseeable” and “may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.”¹² Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.”¹³

Generally, there is no description of how temporal or spatial boundaries for indirect and cumulative impacts were derived for purposes of conducting this analysis. As a result, the DEIS fails to describe the indirect and cumulative effects of the EJ&E rail line, or private actions that may exacerbate the effects of the proposed action for the communities and resources present in the vicinity of Frankfort.

In many instances, the DEIS fails to describe clear mitigation measures, the potential effect of mitigating impacts, or the process by which these measures will be negotiated, monitored, maintained, or enforced. Without an adequate description of these measures and their effectiveness, it is not possible to conduct a thorough assessment of the proposed action.

The Appendix of this report contains relevant court cases on the topic of indirect effects and cumulative impacts that may be of assistance to Frankfort in its comments to the STB.

¹² 40 CFR 1508.8

¹³ 40 CFR 1508.7

Review of Methodology

Indirect Effects on the Village of Frankfort. The DEIS does not indicate that the Applicant has negotiated with any of the 50 communities along the EJ&E rail line as to the placement and type of noise attenuation or other voluntary mitigation measures required to maintain property values, this in spite of the explicit findings of the DEIS to do so (Section 4.10.3). Since there is no requirement on the Applicant to create noise mitigation or offsets after completion of the EIS process, the DEIS substantially fails to report on noise attenuation mitigation or effectiveness on the affected receptors.

Additionally, the DEIS substantially fails to report on the overall community impact of noise on the community quality of life, or how the impacts vary spatially with any specificity that would allow Frankfort to determine appropriate measures that would need to be introduced in structural codes, for example, to mitigate the increased noise and vibration from the dramatic increase in rail volumes anticipated by the proposed action.

The DEIS fails to address land use impacts from indirect impacts due to noise and other factors that may influence property values and changes in market pressures to develop at a different intensity or type than is proposed by local governments. These different development patterns could prove to have detrimental effects on property values of parcels located in proximity to the EJ&E and CN rail corridors for non-industrial and industrial land uses, respectively.

The most obvious factor that might induce a decline in property values or dictate a change in land use with respect to freight rail operations is that of noise. The majority of sounds detected by human hearing are within the range of 0 to 140 decibels (dB). The effects of transportation noise are routinely measured using an A-weighted decibel scale (designated dBA), which is useful for measuring the noise impact of a single occurrence but not the impact of continuous noise.

A frequently used measurement for continuous noise is the equivalent sound level (Leq), known also as the energy mean sound level. Leq includes both the intensity and length of all sounds occurring during a given period; it indicates "the average acoustic intensity over time and is the equivalent noise energy level of a steady, unvarying tone." The U.S. Environmental Protection Agency has developed a measurement for a community's exposure to noise (the average energy sound level) for a 24-hour period from midnight to midnight. The measure of this day-night sound level, designated DNL or Ldn, is commonly used to evaluate noise impacts, with tolerance thresholds set for various types of land uses.

Previous studies have indicated a reduction in property values (0.4% to 0.5%) for each additional decibel increment above a tolerable threshold of noise.^{14,15,16} Actual noise impacts can vary greatly depending on the type of equipment, grade inclines, noise barriers, noise-resistant structural elements such as double-paned windows, and operational factors such as number of starts and stops. Most studies of project-level noise impacts are hedonic models, with an estimate made of before-and-after property values, the latter based primarily on comparable

¹⁴ TranSafety, Inc., "Factors that Determine the Reduction in Property Values Caused by Traffic Noise." Road Engineering Journal, October 1, 1997.

¹⁵ Hailing, D. and Cohen, H., "Residential Noise Damage Costs Caused by Motor Vehicles." Transportation Research Record 1559, pp. 84-93.1996.

¹⁶ From Pearce and Markandya, "Environmental Policy Benefits: Monetary Valuation." OECD. 1989.

values where available. This approach has been criticized on the grounds that noise impacts the value of the pedestrian experience and business operations, not just residential receptors. The effects of this underestimation are such that only 1/6 to 1/8 of the true impacts of noise on a community are typically reported.^{17,18}

The study conducted by Bellinger for the case of Wormleysburg, PA also indicates that train noise is responsible for a decline in resident's quality of life, specifically dealing with train horn soundings. Property values were found to decrease by 4.1% per 10 dBA of added noise exposure (very similar to the other studies cited herein), or by about \$4,800. Additionally, the Wormleysburg residents noted that their willingness to pay to silence the noise from the train horns (for those living nearby the train route) was about \$13 per household per month (\$156/year).¹⁹ The DEIS notes a 70 dBA threshold for its noise analyses; this does not appear to agree with §1105.7 of 49 CFR Ch. X (e)(5 – 6) which cites a 65db threshold for identification of impacted receptors.

Cumulative Impacts on the Village of Frankfort. The DEIS section on Indirect and Cumulative Effects (Chapter 5) does not address the following key points that are reasonably foreseeable based on past, similar actions or otherwise fail to meet the basic guidance from the Environmental Protection Agency and the Council on Environmental Quality:

1. The cumulative effects on properties, property values, and natural resources in the vicinity of Frankfort;
2. The cumulative effects of other, public and private actions that would exacerbate the noise, vehicular traffic, and other categories of impacts presented by the proposed action on properties and resources in the vicinity of Frankfort;
3. Utilization of other, comparable cases or other means to determine either the spatial or temporal extent of effects based on the resources that are potentially affected by the proposed action; and
4. In numerous instances, the proposed mitigation is not specific; the analysis methods are unclear and undocumented; does not have any presentation of its potential effect in remediating the impact that is supposed to offset; or a distinct timeline for implementation of the mitigation measure.

Furthermore, there is no explicit description of the analysis methodologies, how they were applied, or why they are adequate for this project. The failure to explain the temporal horizon for cumulative effects specifically has produced a future horizon that is patently inconsiderate of future traffic and other impacts presented by the proposed project or could explain the success of mitigation measures that may take longer than five years to develop.

These positions are based on the Council on Environmental Quality's (CEQ) issuance of detailed, specific guidance on the limits, procedures, and elements for inclusion in a cumulative impact analysis.²⁰ Specifically,

"The effects of past actions may warrant consideration in the analysis of the cumulative effects of a proposal for agency action. CEQ interprets NEPA and CEQ's NEPA

¹⁷ Erik Verhoef, "External Effects and Social Costs of Road Transport," *Trans. Research*, Vol. 28A. 1994. p. 286.

¹⁸ Peter Bein, "Barnet Hastings Benefit Cost Analysis." BC Ministry of Transport and Highways. 1994.

¹⁹ Bellinger, William K., "The economic valuation of train horn noise: A US case study." *Transportation Research Record Part D (Elsevier Ltd.)* 2006 pages 310-314.

²⁰ Connaughton, James L., "Guidance on the Consideration of Past Actions in Cumulative Effects Analysis." Memorandum dated June 24, 2005.

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regulations on cumulative effects as requiring analysis and a concise description of the identifiable present effects of past actions to the extent that they are relevant and useful in analyzing whether the reasonably foreseeable effects of the agency proposal for action and its alternatives may have a continuing, additive and significant relationship to those effects. In determining what information is necessary for a cumulative effects analysis, agencies should use scoping to focus on the extent to which information is 'relevant to reasonably foreseeable significant adverse impacts,' is 'essential to a reasoned choice among alternatives,' and can be obtained without exorbitant cost." (40 CFR 1502.22.)

The CEQ has also stated that:

"...the cumulative impacts of an action can be viewed as the total effects on a resource, ecosystem, or human community of that action and all other activities affecting that resource no matter what entity (federal, non-federal, or private) is taking the actions."²¹

Further, the USEPA states that:

"Geographic boundaries and time periods used in cumulative impact analysis should be based on all resources of concern and all of the actions that may contribute, along with the project effects, to cumulative impacts..." and "The selection of geographic boundaries and time period should be, whenever possible, based on the natural boundaries of resources of concern and the period of time that the proposed action's impacts will persist, even beyond the project life. EPA reviewers should determine whether the NEPA analysis has used geographic and time boundaries large enough to include all potentially significant effects on the resources of concern. The NEPA document should delineate appropriate geographic areas including natural ecological boundaries, whenever possible, and should evaluate the time period of the project's effects."²²

Finally, the SEA has issued in other cases specific and similar guidance that closely emulates that of USEPA and CEQ guidance. The inclusion of "Federal and non-Federal" actions and "...the potential additive effects of the Proposed Action and Alternatives to the effects on applicable resources of relevant past, present, and reasonably foreseeable projects or actions in the area of the proposed action. SEA will determine appropriate time and geographic boundaries for applicable resource-specific analyses in order to focus the cumulative impacts analysis on truly meaningful effects."²³

Indirect Economic Effects on Existing CN Lines. Note that while the effects of freight traffic on proximate, non-industrial uses are detrimental to property values and quality-of-life measures, there has been the opposite finding for passenger rail services near station locations (the specific effects of which are explained by Debrezion, et al).²⁴ This evidence points to a secondary source of concern outside of Frankfort; namely, the impact to industries and secondary support providers that currently depend on the current volumes of train traffic and

²¹ U.S. Environmental Protection Agency, "Consideration of Cumulative Impacts in EPA Review of NEPA Documents." USEPA 315-R-99-002. May, 1999.

²² U.S. Environmental Protection Agency, "Consideration of Cumulative Impacts in the EPA Review of NEPA Documents." 1999.

²³ Quinlan, Anne K., "Alaska Railroad Corporation – Petition for Exemption – To Construct and Operate a Rail Line Between North Pole, Alaska, and Delta Junction, Alaska." Surface Transportation Board, February 12, 2008 and April 3, 2008.

²⁴ Debrezion, et al. "The Effects of Railway Investments in a Polycentric City." (Tinbergen Institute) 2004.

loading/unloading operations for the CN rail lines that would decrease under the proposed action. The DEIS does not deal with these potential, secondary effects clearly; although there is a statement about the loss of 280 jobs, it is not clear as to how this figure was derived or what jobs are being lost.

Other Comments

- The Applicant notes (Section 6.5 Monitoring and Enforcement) that they will submit status reports on the progress of mitigation measures for a period of three years. The period of compliance should extend to five years to match the analysis period offered by the Applicant. This comment in no way should be misconstrued as an acceptance of a five-year analysis period as being adequate to assess the cumulative and indirect effects of the proposed action.
- The noise analysis in general does not agree with § 1105.7 of 49 CFR Ch. X parts (e)(5) and (e)(6), which uses a 65db threshold for noise impacts. Refer also to the Noise Analysis Section.

IX. Socioeconomics

Summary Comments

- The aggregation of impacts over the entire study area is unacceptable and deserves more attention, particularly as the analysis is so non-specific that it does not allow for a determination of the Proposed Actions impacts on Frankfort. (*See Appendix for references to federal regulations and court cases that address net effects.*)
- The DEIS does not reference local land use plans even as the rail traffic, and the associated traffic impacts at rail crossings, represent large changes to communities along the EJ&E corridor, such as Frankfort.
- Travel patterns, accessibility and travel times, and hence topics such as community cohesion, emergency response and public services, are all predicated on rail traffic projections that appear quite conservative given the possibility of CN to construct capacity improvements that would not be subject to action within the DEIS post-merger.

Technical Review

The Socioeconomics section of the DEIS (Chapter 4.6) covers different issues concerning the social and economic change related to the Proposed Action: the impact of rail operation and construction upon population, employment, fiscal impact, property values, housing, community cohesion, travel patterns, accessibility, travel times, community facilities and public services. Some of these issues relate to other components of this report.

The overall methodology raises questions and concerns, especially with respect to communities and community cohesion and to changes in property values, as noted under the indirect and cumulative effects section. One of the greatest concerns is the tendency to present aggregate, metropolitan-wide results, with limited attention to individual communities.

Review of Methodology

The DEIS employs different methodologies for different aspects of socioeconomic impacts of the Proposed Action, with the results revolving around an input-output analysis of rail operations and construction. Some considerations require more specific innovative approaches while other topics involve the straightforward identification of specific sites and facilities impacted. Input-output analysis employing the IMPLAN model is the basis for estimating changes in employment, output, value-added, personal incomes, and fiscal impacts. This is a standard approach, but the presentation in the DEIS raises several concerns.

The discussion of property values relies upon reviews of some of the rare literature available on the subject of freight rail impacts, but this is problematic. More important, there is no quantification of the specific impacts of noise or other nuisances on property values. This is addressed in more detail under the Indirect & Cumulative Effects section of this report.

The topic of communities and community cohesion is addressed in the DEIS by first noting that the same rail right-of-way has existed for over a century while communities have continued to grow. The DEIS maintains that the considerable (8- to 9 times greater in the case of Frankfort and the other EJ&E corridor communities) increases in minutes of traffic delays each day will not affect accessibility or social life, as the existing system of at-grade rail crossings and grade

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separations work well today. It states that the Proposed Action will not close any existing roads or eliminate any at-grade crossings, ensuring accessibility, and states that the new operations are unlikely to break the cohesion of communities.

The DEIS highlights the changes in travel patterns, accessibility and travel times, referring to the increased crossing delays affecting all types of traffic (including emergency response), the details of which were developed in chapter 4.3. (The exact degradation of level of service, delays approaching at-grade crossings, and other related topics are addressed in a separate section of this Review of the DEIS.) Sixteen crossings will reach level of service thresholds requiring mitigation. The Socioeconomics section admits there will be traffic delays at several intersections, and that emergency vehicles may not be able to reach local medical facilities on time. Section 4.6 requires a better, quantitative explanation of these impacts on accessibility, emergency response, what that means for community cohesion, and mitigation, and should highlight the changing conditions in each community.

Overall Concerns . At a higher level, the overall approach to the assessment of socioeconomic impacts displays a habit observed elsewhere in the DEIS of vaguely aggregating negative and positive impacts over the entire study area, rather than addressing local impacts that effect individuals and specific communities. This aggregation of impacts over the entire study area is unacceptable and deserves more attention, particularly as the analysis is so non-specific that it does not allow for a determination of the Proposed Actions impacts on Frankfort. The suggestion that the merger is practically a zero sum game because some communities will benefit while other will not is a flawed approach. An analogy to this would be if a proposed action (directly or indirectly) removed flood risks from one community or study but shifted that risk to another community, few would consider it satisfactory that the net change over the study area is zero.

First of all, the DEIS neither identifies the specific properties affected, nor quantifies the negative and positive impacts. Its statements that the net impacts of the proposed action will not affect overall property values within the Chicago metropolitan region is merely a bold assumption without any substantiation. The same applies to pronouncements concerning traffic delays and community cohesion. It is unscientific, and little more than hand-waiving.

The DEIS also clearly states there will be adverse noise effects on individual property owners adjacent to or near the EJ&E rail line; and residents would notice increased delays at highway/ rail at-grade crossings over EJ&E rail tracks. No one denies these are impacts. Section 4.6 "Socioeconomics" of the DEIS merely makes the unsubstantiated claim that negative and positive impacts somehow balance across the Region. The DEIS does not address the criteria for mitigation for these noise, traffic delay or community cohesion impacts, in ways that are specific to individuals and communities along the EJ&E rail line.

The Socioeconomics section does not reference local land use plans even as the rail traffic, and the associated traffic impacts at rail crossings, represent large changes to communities along the EJ&E corridor, such as Frankfort. The DEIS fails to acknowledge that even though the railroad has existed in Frankfort for more than 100 years, the historical function and characteristics of the EJ&E have produced adjacent development patterns predicated on a relatively low volume of rail traffic and hazardous materials transport. Persons who have made residential location decision choices and important investments based upon a preferred quality of life will not have their concerns satisfied by learning that other communities in the Chicago

metropolitan area obtain some relief from the proposed action. This DEIS approach of aggregating impacts over the entire study area deserves a little more attention.

The DEIS only passively acknowledges that the Proposed Action could have an impact on nearby downtown redevelopment efforts by some of the communities. We believe the land use impacts in terms of desirability, marketability and financing possibilities could be impacted to the degree that Frankfort and other communities will have to revisit their established land use and related plans to respond to such a drastic change in the characteristics of rail traffic on the EJ&E.

One question is whether or not the DEIS provides mitigation for these impacts. "Mitigation" according to NEPA²⁵ can take several forms:

- Avoiding the impact altogether by not taking a certain action or parts of an action;
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
- Compensating for the impact by replacing or providing substitute resources or environments.

Chapter 6 does make reference to mitigation measures such as working with communities to construct noise control devices, installing vegetation and berms to mitigate noise impacts to as low as 70dBA (which remains "normally unacceptable"²⁶ and has been cited elsewhere in this report as a threshold that has no basis in accepted, past NEPA practice for noise analyses); and also discusses lubricating curves, inspecting wheels and so on, but provides no specific information about Frankfort or any other communities.

In addition, it is worth stating that travel patterns, accessibility and travel times, and hence topics such as community cohesion, emergency response and public services, are all predicated on rail traffic projections that appear quite conservative without testing other scenarios that are reasonably foreseeable and would include higher levels of rail traffic. Similarly, changes in housing values depend upon analysis of noise and vibration, which depend upon rail traffic volumes. Forecasts of rail traffic that consider national growth in demand for freight and intermodal services, capacity constraints and pent-up demand are arguably more realistic. Changing these basic assumptions will of course change the entire analysis, not just that of socioeconomic impacts.

Frankfort Specific Concerns. The change in rail traffic, noise, road traffic, community cohesion, quality of life, and the associated impact on housing values, as well as industrial plant, the Proposed Action represents is a great concern amongst many members of Frankfort's population. Train traffic in segment 7 will increase more than four times under the Proposed Action. Queue lengths at Frankfort at-grade crossings will be approximately 40 percent greater in 2015 under the proposed action than under the no action. Minutes spent waiting to cross will be eight to nine times greater. The congestion and air pollution surrounding at-grade crossings could reduce the values of properties. Accidents, emergency response, and community

²⁵ 40 CFR (Code of Federal Regulations Section), section 1508.20, "Mitigation."

²⁶ See Department of Housing and Urban Development's HUDnoise.com web site (<http://www.hudnoise.com/>)

cohesion could all conceivably deteriorate the quality of life in Frankfort, and thus reduce property values.

Noise remains the most accessible measure of property values. The four-fold increase in freight rail traffic under the Proposed Action will raise the number of noise-sensitive receptors inside EJ&E's Sector 7, 65-dBA, Ldn noise contour more than 150 percent. A quick look in the Frankfort aerial photos with noise contour lines reveals approximately 140 houses will fall within the 65 dB contour. The 70 dB Proposed Action noise contour encompasses more than 65 homes. While the methodology may not be readily available to determine the magnitude of the damage to property values, the Proposed Action certainly would seem to lead to declines in property values in those parts of Frankfort within approximately 500 feet of the rail lines. This scenario has not been adequately quantified in Section 4.6 "Socioeconomics." There has been no specific treatment of Frankfort in this respect.

Other Comments

The organization of the tables appearing in Attachment H-1, and their incorporation in section 4.6, is unclear. The G3, G4 and net results, which take into account the decrease in truck transportation, are inputs only to the analysis of fiscal impact (p 4.6-5). Meanwhile, the sections discussing output, value added, employment, and labor income draw only on table G1. The description provided there is unclear.

Other minor issues deserving attention include the following:

- On page 4.6-6, the total (direct, indirect, induced) tax impact related to employee compensation is incorrectly characterized as the direct tax impact.
- Presentation of direct annual labor income on page 4.6.5 is confusing. It should be made clear that the \$10.9 million is the estimate of the labor income of the 114 rail employees. (It appears high.)

X. Environmental Justice

Summary Comments

- The method by which impacted low income and minority populations were identified arbitrarily applied an additional 10% to the thresholds previously used in other SEA-related railroad mergers. This is not a common practice in an Environmental Justice assessment and essentially eliminates any possibility that communities along the EJ&E would result in a finding of adverse impacts on low income and minority populations.

Technical Review

The Environmental Justice analysis prepared for the DEIS correctly considers potential project impacts in the determination of the study area. Other methodologies employed to conduct the analysis do not provide enough information for a third party to replicate the analysis. The DEIS indicates that the methodology used to establish minority and poverty thresholds for each county in the project area is based on guidance from the EPA and methodologies previously employed by SEA for other rail studies. The application of this methodology assumes that adverse project impacts would only be considered if a Census block group reports having a minority or low-income population that is 20.0 percent higher than the county in which it is located. As discussed below, this is not a typical assessment method for considering disproportionately high and adverse human impacts or environmental effects on low-income and minority populations.

Review of Methodology

The study area for the Environmental Justice assessment was established based on the distance at which project related effects would be experienced. The determination of the study area correctly considers impacts that could materialize by changes in air pollutants, noise, the disturbance and movement of hazardous materials, and other effects.²⁷ A 1,500-foot radius around train lines that would experience an increase of eight or more trains per day and serve as primary thoroughfares for the movement of hazardous materials was identified for the study area to examine project induced effects on nearby communities. A second study area having a radius of 400 feet was established for those areas where there would be a decrease of at least eight trains per day and vehicular corridors would not serve as designated haul routes for hazardous materials. The establishment of two study areas – one where project-related impacts would increase and one where project-related impacts would decrease – helps in the identification of benefits and burdens of the proposed action on nearby communities, including those having high concentrations of low-income and/or minority populations.

The identification of low-income and minority populations in accordance with NEPA guidance is discussed below:

- **Low-Income Population** – Low-income populations in the study area should be identified with the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty.²⁸

²⁷ Environmental Justice Guidance Under the National Environmental Policy Act. Council on Environmental Quality, 1997.

²⁸ U.S. Census Bureau, 2000, SF1 and SF3 Datasets.

- **Minority Population** – Minority populations are comprised of all those residents who identify themselves as being of a race other than Non-Hispanic White. Minority populations should be considered when the minority presence in the affected area exceeds 50.0 percent or the minority presence is meaningfully greater than the minority population percentage in the geographic area of comparison.

For the DEIS, the methodology states that the establishment of county low-income and minority thresholds for which Census block groups would be evaluated is similar to the methodology previously established by SEA for the NEPA documentation for the CN/Illinois Central, Conrail, and Bayport Loop transactions. The methodology identifies two criteria that were established to identify the presence of minority and low-income populations:

- The minority or low-income population in a particular Census block group must account for at least half of the Census block group population; and
- The Census block group's minority or low-income population percentage must be at least 10.0 percentage points above the percentage for the entire county where the particular Census block group is located.

In order to perform the Environmental Justice assessment, minority and low-income thresholds were established for each county in the project area. The percentage of those living below the Federal-poverty threshold and those identifying themselves as some race other than Non-Hispanic White at the time of the 2000 Census were collected. For the DEIS, SEA then added 10.0 percent to this number to establish low-income and minority thresholds for each county in the project area. If the sum of the county average and the additional 10.0 percent was greater than 50.0 percent, the threshold was set at 50.0 percent (see page 3.7-2 of the DEIS). The addition of a set percentage or the establishment of a threshold ceiling is not a common practice in an Environmental Justice assessment.

The addition of 10.0 percentage points to county averages paired with the above-mentioned criteria stating that a Census block group must be at least 10.0 percentage points greater than the county average means that a Census block group must exceed the actual county average by 20.0 percent for the assessment to consider the Census block group to have a meaningfully greater low-income or minority population. This methodology would help offset any identified adverse project impacts that may be borne by nearby populations, including those having high concentrations of low-income or minority populations. Further, not only should the federal poverty threshold not be lowered to create a definition of low-income, but the threshold should be raised to 150% of the federal poverty line. The Illinois Low Income Energy Assistance Program (LIHEAP), for example, uses the 150% mark to determine assistance eligibility; Medicaid eligibility is 133% for children aged 1 – 19 in Illinois (200% for infants). The purpose of establishing such a threshold is to determine which communities have the ability to avoid or mitigate negative circumstances from the proposed action, and a well-substantiated threshold should be established accordingly.

The consideration of disproportionately high and adverse human health impacts and environmental effects on low-income or minority populations should be given if the percent of

low-income and/or minority populations in a Census block group is greater than the county average. The geographic areas of comparison can vary by project and assessment.

Using reported data sources mentioned in the DEIS, Berger sought to replicate Table 3.7-1 found in the DEIS. The presence of low-income and minority populations by county as reported by the U.S. Census Bureau do not match those presented in Table 3.7-1. This is also true if one considers the addition of 10.0 percent as stated in the above methodology. Furthermore, these percentages are thought to be inaccurate based on the minority population presented in Table I.2-4 of Appendix I where the number of minority residents in a Census block group often times exceeds the Census block group total population.

The noise impact analysis – while showing no adverse impacts that would fall disproportionately or greater in magnitude on low-income and minority populations – has some inconsistencies. Section I.2.3 indicates that any Census block group with a train and horn noise impact score of four or higher is considered a high and adverse impact. However, the noise impact rating system employed in the assessment associates dBA levels with a numerical rating of 0, 3 and 5; the methodology does not associate dBA levels with a numerical ranking of 4 or 6. Furthermore, Tables I.2-2 and I.2-3 indicate that high to very high noise impacts result when a Census block group has a score of between 4 and 6. The methodology states that dBA levels greater than or equal to 70 dBA will receive a rating of 5. While it appears as though there is some inconsistency in the scoring system, Tables I.2-2 and I.2-3 appropriately demonstrate the number of Census block groups – both with and without populations of concern – that would be adversely affected by an increase in dBA levels.

Other Comments

The methodology discussed in Section 4.7 indicates that SEA does not consider temporary effects to be high and adverse. Depending on the duration of construction activities, temporary impacts (e.g., changes in accessibility, noise, air emissions, vibration, etc.) should be included in the Environmental Justice assessment. Typically, construction activities having a duration of more than two or three years would be included in a socioeconomic assessment including Environmental Justice.

XI. Natural Environment

Summary Comments

- The DEIS does not adequately address the Proposed Action's potential cumulative impacts on energy use or the resulting impacts that an increase in energy use might have in terms of climate change.
- The methodology used for calculating impacts on climate changes essentially writes off the impacts as inconsequential on a global scale, which is not an acceptable determination in light of case law related to such evaluations.
- Wetlands, jurisdictional waterways, and farmland soils and soils of statewide significance are not identified in the DEIS.

Technical Review

The subject areas of energy, climate change, biological resources and water resources were combined into this Environmental section. The review related to energy and climate change was conducted from the standpoint of indirect and cumulative effects. Biological and water resources were examined based on established practices for environmental impact studies.

The DEIS cumulative impacts analysis on energy and climate change is inadequate in two ways.

1. The methods by which cumulative impacts are determined for energy use resulting from the Proposed Action along with other regional projects is not sufficient.
2. Addressing how this increased energy use, resulting in increased emissions, would have a cumulative impact on the environment in terms of climate change.

The issue of climate change is recognized by the Courts to be a valid concern that must be considered in a cumulative impacts analysis. The DEIS analysis of cumulative impacts on climate change is limited to one sentence and does not constitute the required "hard look" at impacts to the environment required by NEPA.

For biological and water resources, the DEIS does not adequately delineate wetlands in the study area, determine which waterways or wetlands are jurisdictional (e.g. subject to the regulations of Environmental Protection Agency, US Army Corps of Engineers, and/or the State of Illinois) or identify farmland soils or soils of statewide importance.

Review of Methodology

Cumulative Impacts on Energy Use. The following statements contained within the DEIS conclude that energy use will increase:

- "SEA found that implementation of the Proposed Action would result in a net increase in energy (diesel fuel) use caused by the longer EJ&E route that would be taken by CN trains." (p. 5-24).
- "It [SEA] concluded that vehicles would use more energy under the Proposed Action because of greater idling time at crossings blocked by longer trains" (p. 5-24).

It is reasonably foreseeable that increased energy use may have a significant adverse effect on the human environment. The Proposed Action will increase the use of diesel fuel, which is a limited resource. The cumulative impact of this action along with other regional projects, such as the Metra STAR line expansion which includes 52 one-way trips each weekday, may result in a significant increase in the use of diesel fuel. There is no information presented in the cumulative impacts analysis in this regard. A "detailed calculation" may not be necessary, but some discussion or even assumptions should be made to demonstrate that a "hard look" has been taken and that cumulative impacts have been considered as required by NEPA.

However, "SEA concluded that there was no need to assess cumulative effects on energy use". As a result, detailed calculations of energy use for the regional related projects were not analyzed for the DEIS "because the available planning documents for those projects did not analyze energy use". Additionally, calculations were not done because "proposed train numbers, configurations, schedules and equipment were either tentative or not available". The DEIS goes on to state that "based on a review of the available information on the related projects, however, it appears to SEA that each project is intended to increase overall energy efficiency". (p. 5-24)

Cumulative Impacts on Climate Change. Section 4.9.4.2 of the DEIS addresses Global Climate Change and states that "the Proposed Action's main potential contribution to global climate change would be through the emissions of greenhouse gases (GHG's), primarily carbon dioxide (CO₂).". (p. 4.9-30) The analysis goes on to state that "the Proposed Action would contribute between 0.00009 percent and 0.00002 percent (Original and Revised estimates, respectively) to the global CO₂ emissions in 2015, assuming no increases in total world GHG emissions between 2005 and 2015". What is the scientific reasoning for this assumption? If this assumption is incorrect, then the estimated contribution of CO₂ that would result from the Proposed Action may be incorrect.

SEA's current analysis of the cumulative impacts of the Proposed Action on climate change are limited to one sentence on page 5-26 of the DEIS using the above, possibly flawed estimate; "SEA's analysis of the direct effects on climate change from the Proposed Action concluded that it would contribute between 0.00009 and 0.00002 percent to the global CO₂ emissions in 2015, or approximately the CO₂ emissions output of 1,000 passenger vehicles". One additional sentence in the conclusion states "the net effect on global climate change would be minimal". (p. 5-26). More importantly, the contribution of almost any change not directly related to a national shift in energy production is likely to be "minimal;" an assessment that considers the incremental impact and mitigation options in this area is more applicable to the proposed action.

Reasonably Foreseeable Incremental Impacts from Greenhouse Gas Emissions. Over the past few years, the Courts have "recognized greenhouse gas emissions as a more standard resource requiring detailed consideration under NEPA"²⁹ in cases such as *Mid States Coalition for Progress v. STB*³⁰. Additionally, recent cases show that the courts have been looking very closely at whether the incremental impacts from actions have been evaluated thoroughly in NEPA documents. A discussion of the incremental impacts that would occur as a result of the reasonably foreseeable actions is required by NEPA.

²⁹ van Aelsyn, Nicholas; Global Warming NEPA Challenges Likely to Increase. Public Land and Resources Committee Newsletter, April 2007.

³⁰ *Mid States Coalition for Progress v. STB*, 345 F.3d 520 (8th Cir. 2003)

In late 2007, the Ninth Circuit Court of Appeals ruled that an Environmental Assessment prepared by the National Highway Traffic Safety Administration was inadequate in that it did not include a discussion of the cumulative impacts of greenhouse gas emissions on climate change and the environment. The Court explained that “while the EA quantifies the expected amount of CO₂ emitted...it does not evaluate the “incremental impact” that these emissions will have on climate change or on the environment more generally in light of other past, present, and reasonably foreseeable actions.... The EA does not discuss the actual environmental effects resulting from those emissions...”. The court went on to conclude that “the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.”³¹

As the Court explained in *Sierra Club v. Marsh*³² an environmental effect is “reasonably foreseeable” if it is “sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision”. It is reasonably foreseeable that the cumulative effect of the EJ&E project along with the effects of other projects, such as the expansion of the Metra STAR line, may result in effects on climate change through increased energy usage. The Ninth Circuit Court of Appeals emphasizes this point in a 2004 ruling; “Cumulative impacts of multiple projects can be significant in different ways....Sometimes the total impact from a set of actions may be greater than the sum of the parts.”³³

Additionally, the absence of complete information is not an excuse for failing to analyze the effects of other regional projects. As the Court in *Mid States* explains “when the *nature* of the effect is reasonably foreseeable but its *extent* is not, we think that the agency may not simply ignore the effect”. [549] The *Mid States* court goes on to explain “the CEQ has devised a specific procedure for ‘evaluating reasonably foreseeable significant adverse effects on the human environment’ when ‘there is incomplete or unavailable information’”³⁴ [550]. SEA’s DEIS states that the methodology for the assessment of indirect effects and cumulative impacts is based on CEQ’s regulations, yet these steps were not followed in the absence of complete information. The DEIS clearly states that the analysis was not performed because the information was not available, not for the reason that they did not feel it was necessary.

Review of Biological & Water Resources. Much of the DEIS is prepared on an assumption of impacts to resources such as wetlands and streams instead of actual delineations of those resources that are part of standards practices for conducting such environmental analysis. Since wetlands have not been formally delineated, it should be mentioned when during the EIS process a formal wetland and stream delineation will be performed. After delineations have been performed, the EIS should list all the jurisdictional wetlands and streams identified in the Study Area. When discussing wetlands and streams in the DEIS, it should be stated that a formal delineation has not been conducted and impact calculations may change.

Further, the DEIS does not perform its due diligence to specifically define or analyze the following biological and water-related resources:

³¹ *Center for Biological Diversity v. National Highway Traffic Safety Administration* 508 F.3d 508, 549-550 (9th Cir. 2007)

³² *Sierra Club v. Marsh* 976 F.2d 763 (1st Cir. 1992)

³³ *Klamath-Siskiyou Wildlands Center* 387 F.3d 968, 994 (9th Cir. 2004)

³⁴ 40 C.F.R. § 1502.22

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- When listing vegetation or wildlife species, it needs to be clear whether or not the species were observed or assumed to be in the Study Area;
- Wildlife crossings along the rail lines should be considered as a form of mitigation for wildlife mortality (3.11.5.3);
- The effects of vibration on wells should be analyzed. If no effects are anticipated, that should be stated (3.12.2);
- The analysis on train/animal interaction stated that collisions “would increase, but remain low.” It is unclear how this determination was made as there are no records of animal strikes/kills stated in 3.11.5.3;
- Farmlands should be discussed, including a soils map detailing prime farmland soils and soils of statewide importance;
- The Farmland Protection Policy Act should be discussed and the appropriate Natural Resource Conservation Service should be consulted. If no farmlands are within the Study Area, that should be stated as well;
- Wetland function and values should also be assessed so that correct compensatory mitigation is achieved;
- Stream mitigation should be addressed, with streams categorized into perennial and intermittent streams. Mitigation requirements may be different for perennial vs. intermittent streams; and
- All coordination letters with agencies regarding resource impacts should be included in an appendix to fully display the results of the analysis and positions of the regulatory agencies.

XII. Air Quality

Summary Comments

- The DEIS fails to evaluate air emissions budgets for the project area in both Illinois and Indiana non-attainment areas.
- A description of the analysis methodology of how the fuel uses and operational emissions were estimated for other carriers freight trains was not identified in the DEIS.

Technical Review

Generally, the DEIS air quality analysis does not provide sufficient information regarding Illinois State Implementation Plan emission budgets for the Chicago metropolitan nonattainment areas. Additionally, there is insufficient explanation for fuel use / emission reductions by other (foreign) carriers under the Proposed Action scenario per *revised* estimates as well as an insufficient discussion of air monitoring requirements for the project study area. The following sections contain the detailed technical approach used in making these determinations.

Review of Methodology

The DEIS did not provide a description of the analysis methodology of how to estimate the fuel uses and operational emissions for other carriers freight trains under Project Action scenario, especially for *revised estimates*. This description should be crucial because the entire conformity determination was based on this emission reduction, especially for NO_x (mono-nitrogen oxides).

Specially, on page 4.9-12 of Chapter 4, Table 4.9-12; and page 23 of Appendix K, Attachment K1, *Air Quality Operations Revised Data*; both NO_x emissions and fuel use by other foreign carriers were predicted by DEIS to be decreased by a 68% margin, as a result the Proposed Action. The DEIS predicted fuel use by other foreign carriers under 2015 No Action as 1,345,781 gal / year and under Project Action 434,420 gal / year. Likewise, the predicted 2015 annual NO_x emissions for other foreign carriers were 202.8 and 65.5 tons / year, respectively under No-Action and Action scenarios, which would result in a 137.4 tons / year NO_x reduction. Since this reduction is a major component to offset the operational emission increases 287.1 tons / year by CN operational trains to demonstrate the total emission increases would still be within the *de minimis* threshold 100 tons / year in the future and to determine the Project's conformity; the detailed descriptions and assumptions of how these 68% reductions in fuel use and air emission can be achieved by other foreign carriers should be provided by DEIS/FEIS. Furthermore, a plan of enforcing other carriers to meet the requirements to ensure their emission reductions will be in place need to be assessed in the DEIS.

Overall Concerns. The DEIS failed to evaluate the air emission budgets defined by the State Implementation Plans for the project study areas, including Chicago-Gary-Lake region, or Illinois-Indiana nonattainment areas. Although the DEIS Chapter 3, page 3.9-5, Table 3.9-2 listed the motor vehicle emission budget for Lake and Porter Counties in Indiana for ozone precursors – VOC (volatile organic compounds) and NO_x; the data for rest of all other major study areas – Chicago metropolitan region were missing in the DEIS.

As such, the DEIS should discuss the emission budgets defined by the SIPs for the entire study area for at least PM_{2.5} (fine particulate matter) and ozone (or its precursors VOC and NO_x), as

Village of Frankfort, Illinois

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in nonattainment area; and evaluate the future status of the emission budgets which are relevant to the Proposed Project, while an overall increase in regional emission is expected.

Also, the greenhouse gas emissions relevant to the Proposed Project should be evaluated in the DEIS. The States' or region's goals and requirements for controlling greenhouse gas emission or global climate and how the project can help achieve these goals or requirements need to be demonstrated in the DEIS.

Frankfort-Specific Concerns. The DEIS did not provide a description of the State's air monitoring program, or indicate whether there are existing monitoring sites within the project areas. As such, a discussion of monitored levels within or near Frankfort was not assessed. If there is no State-operated monitoring stations in the Frankfort area, then a request for establishing a special purpose monitor (SP M) by the Project or IEPA needs to be discussed.



XIII. Cultural Resources

Summary Comments

- SEA appears to have proceeded thus far in accordance with the requirements of Section 106 of the National Historic Preservation Act and its regulations with regard to cultural resources.
- SEA needs to ensure that the Section 106 process is concluded in accordance with the regulations at 36CFR800 and that the results of this consultation process are fully described in the Final EIS and Record of Decision.

Technical Review

From the record, SEA appears to have proceeded thus far in accordance with the requirements of Section 106 of the National Historic Preservation Act and its regulations with regard to cultural resources. It would be expected that the Final EIS will document the results of SEA's consultations with the State Historic Preservation Offices (SHPO) and Native American organizations regarding identification of historic properties, assessment of effects, and resolution of any adverse effects.

SEA's cultural resources investigations did not identify any historic properties within the project APE in Frankfort. Pending results of SEA's continuing consultations under Section 106, it appears that the proposed undertaking would affect no historic properties in the Village of Frankfort.

Review of Methodology

In addition to NEPA, federal agencies must comply with Section 106 of the National Historic Preservation Act (NHPA). Section 106 requires agencies to consider the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation opportunity to comment. To this end, SEA has followed the regulations (36 CFR 800) that implement Section 106 of NHPA.

Identify consulting parties and initiate consultation. SEA notified the Illinois and Indiana SHPOs and eight Native American organizations by letter about the proposed acquisition and invited the Native American organizations to participate in the Section 106 process as consulting parties.

Identify historic properties. In consultation with the SHPOs, SEA identified the Area of Potential Effect (APE) for the proposed acquisition as consisting of those areas where construction or other ground-disturbing activity would take place, encompassing areas coterminous with the proposed rail connections, siding extensions and double track. SEA then conducted archaeological and historical resource surveys as specified by the respective SHPOs to identify cultural resources listed in or eligible for listing in the National Register of Historic Places (National Register). Through literature/site file reviews and field investigations, the following historic properties were identified within or immediately adjacent to the APE in Illinois:

- Bridge 099-3149, 16th Street Bridge over Deep Run Creek and Railroad, built 1907
- Bridge 099-0224, EJ&E Bridge over IL Route 171, built 1918
- Illinois and Michigan Canal, built 1836-1848

All three properties are located in that portion of the APE involving the Joliet Rail Connection.

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The following historic properties were identified immediately adjacent to the APE in Indiana:

- Griffith Grand Trunk Depot, South Broad Street (no date given)
- EJ&E Interlocking Tower, South Broad Street (no date given)

Both of these properties are adjacent to the APE involving the Griffith Rail Connection.

At the request of the respective SHPOs, SEA's cultural resources surveys also included photographs and map locations of previously unrecorded buildings and structures standing in proximity to the APE, but provided no other information about or analysis of these resources.

Assess Effects. In NHPA, an effect is defined as alteration of characteristics that qualify a historic property for inclusion in the National Register. SEA determined that construction of new rail connections and double track would not affect any historic properties, since none of the known historic properties are located within areas of proposed ground disturbance or demolition. SEA also determined that although operation of rail lines under CN's proposal would result in increases in noise and vibration, these increases would not be of sufficient magnitude to adversely affect any of the identified historic properties.

In the DEIS, SEA noted that its compliance with Section 106 was still in process. The regulations require SEA to inform all consulting parties (e.g. the SHPOs and concerned Native American organizations) about the results of historic property identification and effects determinations, and to seek concurrence from these parties with the findings. In the event that one or more consulting parties disagree with SEA's findings, SEA must consult with those parties to resolve the disagreement, or request the Advisory Council on Historic Preservation to review the findings. The regulations set forth the additional steps necessary to resolve disagreement and to address any adverse effects to historic properties.

It should be noted that although the Section 106 process for this project has not yet been concluded, SEA has proposed several measures to ensure that historic properties are not inadvertently affected by construction and operation of the project. SEA would require the applicants to consult with the appropriate SHPO and relevant consulting parties in the event that an adverse effect to an historic property is found, and to implement all mitigation measures that may be developed as a result of the Section 106 process. During construction, SEA would require the applicants to immediately cease ground-disturbing activities in the event that archaeological resources are encountered during construction, notify the appropriate SHPO and consulting parties, and consult with those parties regarding appropriate measures to address the newly-identified archaeological resource.

Frankfort-Specific Concerns. SEA's cultural resources investigations did not identify any historic properties within the project APE in Frankfort. Pending results of SEA's continuing consultations under Section 106, it appears that the proposed undertaking would affect no historic properties in the Village of Frankfort.

Overall Concerns. SEA needs to ensure that the Section 106 process is concluded in accordance with the regulations at 36CFR800 and that the results of this consultation process are fully described in the Final EIS and Record of Decision.

XIV. Appendix

Precedent Setting Court Cases on Indirect Effects & Cumulative Impacts

The following excerpts are the results of previous work conducted by the Louis Berger Group to identify case law relevant to Indirect Effects and Cumulative Impacts.³⁵ They are intended to be a reference for future use by the Village of Frankfort and are not meant to be a final legal opinion on the subject of Indirect Effects (IE) and Cumulative Impacts (CI) or the DEIS.

As NEPA does not provide for an independent cause of action, Federal agencies are subject to the Administrative Procedure Act (APA) when their actions are challenged in court. Under the APA, the action of agencies must be final (ripe) before a decision can be challenged in a court. A final agency action is the issuance of a Record of Decision (ROD) on an EIS or Finding of No Significant Impact (FONSI) on an Environmental Assessment (EA).

Most NEPA challenges are brought under Section 102 of the Act, which concerns procedure rather than substance. Procedural challenges are afforded a broad standard of review under the APA known as the arbitrary and capricious standard of review. Under this standard, the agency's final action (ROD/FONSI) will be set aside if the plaintiff can prove that the agency acted in a way that was "arbitrary, capricious, an abuse of discretion or otherwise not in accordance with the law" 5 U.S.C. §706(2)(A) by issuing the ROD or FONSI.

Substantive challenges under NEPA call into question the adequacy of an EIS under Section 101 and are afforded a much narrower standard of review than procedural challenges. Circuit Courts of Appeals commonly employ the "reasonableness" test to determine the adequacy of the discussion of environmental consequences in a substantive challenge, which consists of ensuring that the agency takes a "hard look" at the consequences of the proposed project.

This standard for judicial review under NEPA comes from the decision in *Calvert Cliffs' Coordinating Committee v. Atomic Energy Commission* 449 F.2d 1109 (1971) where the Court explained that based on the language used in NEPA, the intent of Congress was to give more flexibility to an agency's discretion when it comes to substantive aspects of NEPA under Section 101. However, the Court felt that Congress was more specific with procedural requirements under Section 102 since they were to be followed "to the fullest extent possible". Therefore, the Courts will generally get more involved in procedural challenges than substantive challenges.

The following cases are examples of precedent-setting cases involving the analysis of indirect effects and cumulative impacts. These cases set the foundation for the way courts look at NEPA challenging regarding IE and CI, and are still cited today in the most recent cases. They are not intended to be a comprehensive review of all cases that have involved indirect effects or cumulative impacts.

City of Davis v. Coleman, 521 F.2d 661 (1975). This case involved a proposal to build an interstate highway interchange to stimulate and service future development in a rural area. Neither an environmental assessment nor an EIS was prepared. Instead, a three-page

³⁵ Guidance on Legal Sufficiency Criteria for Adequate Indirect Effects and Cumulative Impacts Analysis NCHRP Project 25-25 Task 43. National Cooperative Highway Research Program. Washington, DC. July 2008.

"Negative Declaration of Environmental Impact" was issued. This declaration neither identified nor discussed the commercial and industrial development that would likely spring up around the interchange, located in a "sparsely populated agricultural area," instead assessing only the direct impacts related to the construction of the interchange. The court held that the failure to identify and analyze the project's indirect effects violated NEPA, and noted the significance of the growth-inducing effects of the proposed development, which were essential to the project objectives. Although uncertain, these effects were reasonably foreseeable, and indeed probable. Not being able to predict the exact type of development that would occur could not be used as an excuse for failing to prepare an EIS evaluating the indirect effects of the project. Reasonable forecasting of project-induced development must be conducted in an EIS.

Kleppe v. Sierra Club (1976). This case is one of the earliest, continually referenced cases that deals with the extent to which [indirect and cumulative] impacts must be analyzed. The Supreme Court determined it was not necessary for the Department of Interior to complete a comprehensive environmental impact statement, considering *all* of the possible impacts that might result from the result of one mining project in the region (*emphasis added*) [*id* at 413-415]. This case established that there are limits to what can be expected from an agency when considering the impacts of a major federal action under NEPA. However, although agencies are not required to consider *all* of the impacts, they are required to consider the ones that are reasonably foreseeable and the Courts expect an adequate discussion of these impacts as seen in later cases.

Coalition for Canyon Preservation v. Bowers, 632 F.2d 774 (1980). This case involved a proposal to widen a 10.8 mile section of a narrow, two-lane federal highway that connected four small, rural towns in northern Montana and served as the primary access road into Glacier National Park. The widening would create an 88-ft-wide, four-lane highway, including 10-ft parking lanes with new curbing and other improvements in the sections passing through the towns, resulting in the relocation of several businesses. The EIS admitted that the wider four-lane highway could result in project-induced development, but did not assess the indirect impacts of such growth. The court held that the EIS's failure to assess this foreseeable development violated NEPA, as it did not analyze secondary effects.

Sierra Club v. Marsh (1985). In *Sierra Club v. Marsh*, the Court set forth a three-part test, using the 1978 CEQ regulations as a guide, to determine if a particular set of impacts is definite enough to take into account, or too speculative to warrant consideration:

1. With what confidence can one say that the impacts are likely to occur?
2. Can one describe them now with sufficient specificity to make their consideration useful?
3. If the decision maker does not take them into account now, will the decision maker be able to take account of them before the agency is so firmly committed to the project that further environmental knowledge, as a practical matter, will prove irrelevant to the government's decision?

Sierra Club v. Marsh involved the Court's review of an EA that was prepared for a proposal to build a port and causeway on rural Sears Island in Maine. It was inevitable that development would occur as a result of the construction on the island, as the Court concluded after a review of the administrative record which included a municipal response plan and another EA that projected further industrial development after construction of the cargo port. The Court further assessed whether there was sufficient information available at the time to make their

consideration useful. It was concluded that a marketing study in addition to the municipal response plan provided enough information to be included in an EIS, satisfying the specificity question. Third, once the causeway and port were built, the pressure to develop the rest of the island could prove irresistible. Therefore, delaying the preparation of an EIS until a later time would result in environmental knowledge that would not offer the decision maker a meaningful choice about whether to proceed. This satisfied the third part of the test. As a result, the Maine DOT was required to prepare an EIS.

Robertson v. Methow Valley Citizens Council 490 U.S. 332 (1989). This case involved the Forest Service's issuance of a special use permit for the construction and operation of a ski area on federal lands. The issuance of this permit is a major federal action subject to NEPA and therefore resulted in the preparation of an EIS by the Forest Service. Subsequent Court of Appeals decisions stated that the Forest Service did not include an adequate mitigation plan in the EIS, and that they failed to do a "worst case analysis" in the absence of complete information. The Supreme Court however, reversed and remanded the lower Court's judgment explaining that under the 1986 CEQ Amended Regulations, a worst case scenario is no longer required to be prepared when information is lacking. What is required is an acknowledgement of the missing information and for the agency to "prepare a summary of existing relevant and credible scientific evidence and an evaluation of adverse impacts based on generally accepted scientific approaches or research methods" [354-356]. Additionally, the Supreme Court stressed that although mitigation must be sufficiently discussed in order to allow for a fair evaluation of environmental consequences, a complete mitigation plan is not required.

Sierra Club v. Marsh (Sierra Club IV) (1992). This case involved a challenge to the adequacy of the indirect effects evaluation in the EIS prepared for the development on Sears Island. The EIS in this matter restricted its indirect effects analysis to four light-dry industries. Plaintiffs complained that the evaluation was inadequate because it did not evaluate heavy industries. Heavy industries would involve upgrades to water and sewer on the island that were previously determined not to be feasible and were therefore left out of the evaluation. Although the Sierra Club challenged this decision by the agency, the Court held that "the likelihood of these industries developing on Sears Island is too speculative to be reasonably foreseeable" [*id* at 778]. The Court upheld the EIS as a reasoned decision based on the agencies' evaluation.

City of Carmel-by-the-Sea v. USDOT (1997). The Court was a little more specific about what it would like to see in an indirect and cumulative impacts analysis in *City of Carmel-by-the-Sea v. USDOT*, explaining that the federal and state highway department and officials failed to adequately explore the indirect and cumulative impacts of a proposed highway project in California. The Court noted generalities in describing past projects resulting in insufficient review of their cumulative impacts and a lack of discussion of the impacts that would result from several other future proposed projects as well as the project at issue. [*id* at 1160] Specifically, noting "threats" resulting from other "development pressures" was not a sufficient analysis in this Court's opinion.

Cuddy Mountain v. U.S. Forest Service (1998). One year later in *Cuddy Mountain v U.S. Forest Service*, the Forest Service prepared an EIS for the Grade/Dukes timber sale on the Payette National Forest in Idaho. The Court ruled that the cumulative impacts analysis was inadequate because it failed to properly take into account other proposed timber sales in the vicinity of the project.

To “consider” cumulative effects, some quantified or detailed information is required. Without such information, neither the courts nor the public, in reviewing the Forest Service’s decisions, can be assured that the Forest Service provided the hard look that it is required to provide...General statements about “possible” effects and “some risk” do not constitute a “hard look” absent a justification regarding why more definitive information could not be provided. [1379]

Specifically, the Forest Service failed to describe the effects that the other timber sales would have on the area, which in turn did not allow for a comparison of those effects on the Grade/Dukes timber sale, thereby making it impossible to really determine the cumulative effect of the proposed sale. The Forest Service did not discuss the impacts on old growth and the pileated woodpecker that would occur as a result of the other timber sales, and they did not provide a reason for not doing so. As a result, future logging in the area was enjoined until the Forest Service’s analyses complied with NEPA.

Center for Biological Diversity v. National Highway Traffic Safety Administration 508 F.3d 508 (2007). More recently, a very important decision was made by the Ninth Circuit Court of Appeals, which is likely to affect the way cumulative impacts are analyzed when it comes to emissions. In *Center for Biological Diversity v. National Highway Traffic Safety Administration 508 F.3d 508 (2007)*, four environmental groups, 11 states, the District of Columbia and the City of New York challenged a rulemaking by National Highway Traffic Safety Administration (NHTSA) setting new corporate average fuel economy (CAFE) standards for light trucks (model years 2008-2011), based on violations of the Energy Policy and Conservation Act of 1975 (EPCA) and NEPA. Plaintiffs were successful on both the EPCA and NEPA challenges, the new CAFE standards were remanded to NHTSA to be revised in accordance with EPCA, and the agency was required to prepare a full EIS (NHTSA had prepared an EA and FONSI).

The NEPA issues in the case involved the adequacy of the cumulative impact analysis in the EA, the range of alternatives considered in the EA, and the decision not to prepare an environmental impact statement. A summary of the cumulative impact analysis issue is provided below.

Cumulative impacts of greenhouse gas emissions on climate change and the environment

- NHTSA’s EA identified the amount of CO₂ that would be emitted by the trucks regulated by the rule. The court found this to be an inadequate cumulative impacts analysis because the EA did not evaluate the “incremental impact” that these emissions will have on climate change or on the environment in light of other past, present and reasonably foreseeable actions. The court emphasized that the cumulative impact analysis must describe actual environmental effects—not just the change in emissions. The court cited a U.S. Forest Service NEPA case to support this point (calculation of the numbers of acres harvested in a cumulative impact analysis is not sufficient description of the actual environmental effects of logging those acres).
- “The fact that climate change is largely a global phenomenon that includes actions that are outside of the agency’s control does not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming.” The court also cites the NEPA CEQ regulatory

definition of cumulative impacts—impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions.

- Greenhouse gas emissions from any one action might have an individually minor impact on the environment, but over time may be “collectivity significant actions taking place over a period of time”.

Court Cases & Federal Regulations Regarding Net Effects

The following excerpts are the results of a review conducted by Berger for court cases and federal regulations related to net effects within NEPA-related studies. They are not intended to be a full summary of such cases or regulations.

Audubon Soc. of Cent. Arkansas v. Dailey, 977 F.2d 428 (1992). (Audubon challenged the EA FONSI, injunction granted by district court, ruling affirmed by 8th circuit court of appeals)

*“Of course, the result of the mitigating measures must be to render the **net effect** of the modified project on the quality of the environment less than ‘significant’.” [HN4]*

*“An agency may base its decision of no significant impact on the environment on mitigating measures to be undertaken by a third party. In such a case, the mitigating measures need not be a condition of the permit or even a contractual obligation. However, the mitigating measures must be more than mere vague statements of good intentions. The result of the mitigating measures must be to render the **net effect** of the modified project on the quality of the environment less than significant.” [436]*

Surfrider Found. v. Dalton, 989 F. Supp. 1309 (1998). Surfrider challenged the adequacy of the EA. The injunction was denied.

*“Despite the minimal size and arguable quality of the affected on-site wetlands, the USMC devoted substantial effort to evaluating and minimizing the **net environmental effects** on area vernal pool habitats. On these bases, the USMC’s determination that the effects on the on-site wetlands were not significant was not an arbitrary or capricious decision.” [1322]*

Foundation for Global Sustainability Incorporated’s Forest Protection and Biodiversity Project v. McConnell, 829 F. Supp. 147 (1993). Foundation challenged decision not to prepare an EIS or EA, injunction denied. The USFS has an existing FONSI in place for certain harvesting operations.

*“The U.S. Forest Service proposed to harvest the damaged timber, and disseminated a scoping notice which invited comment from various environmental groups and the public at large. In addition, the Forest Service conducted several analyses to determine the **net environmental effect** of the proposed action.” [149]*

*“In addition, the Forest Service considered **the effects of the operation as a whole**, as evidenced by its decision to mitigate the effects. The DM mandates the protection of riparian areas by specifically allowing only certain road-building activities and forbidding*

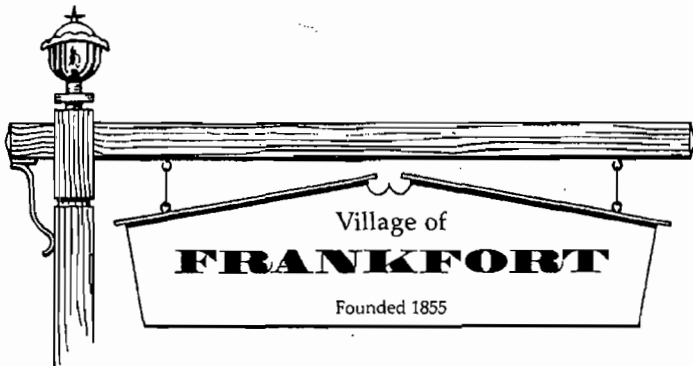
the building of roads within the thirty (30) foot riparian zone near streams. Thus, the Court finds that the agency thoroughly considered the effects of the proposed road building and timber harvest." [152]

Council on Environmental Quality & NEPA regulations. The CEQ NEPA regulations (link below) indicate that effects are both beneficial and adverse.

40 CFR 1502.16(h) notes that the EIS should identify mitigation measures for adverse effects. Netting out impacts is not expressly prohibited, but the regulations seem pretty clear in noting that if there are adverse effects, they have to be mitigated.

40 CFR 1508.27(b)(1) "A significant effect may exist even if the Federal agency believes that on balance the effect would be beneficial ."

http://ceq.hss.doe.gov/nepa/regs/ceq/toc_ceq.htm



Village President
Jim Holland

Village Clerk
Kate Romani

Village Administrator
Jerald P. Ducay

February 13, 2008

Surface Transportation Board
395 E Street, SW
Washington, D.C. 20243

Attention: Phillis Johnson-Ball
Environmental Filing
STB Finance Docket No. 35087

SUBJECT: Comments on the Scope of Study for the Draft Environmental Impact Statement for the Proposed Canadian National Railway Company Acquisition of the Elgin, Joliet and Eastern Railway Company, STB Finance Docket No. 35087

Dear Ms. Johnson-Ball:

The Village of Frankfort is one of the fastest growing municipalities in Illinois, with a projected population of 55,000 by 2030. Our unique community was recognized in 2003 by Southland's Reader's Choice for "Best Community," and subsequently has become known as the "Jewel of the South Suburbs." To preserve our excellent quality of life, we have a firm commitment to progressive growth management policies/strategies that honor our rich heritage dating back to 1855. These strategies include preservation of our historic downtown and a community design that encourages economic growth and protection of open spaces while maintaining high levels of public safety.

While we understand the economic aspirations of Canadian National Railway Company (CN) to acquire the Elgin, Joliet and Eastern Railway Company (EJ&E), we respectfully request that the Surface Transportation Board (STB) ensure that all aspects of our quality of life be fully evaluated and addressed as part of this proceeding. The heart of our concerns lies with the rail traffic projections that form the evaluation and analysis of all environmental impacts. We believe the Application may significantly understate future rail traffic volumes. Unless accurate figures are obtained and used in the Board's review, the EIS process will result, in turn, in significant understatement of environmental impacts and requisite mitigation.

The Application does not appear to address rail traffic increases other than diversions of existing CN and EJ&E traffic. The acquisition of the EJ&E, as articulated by CN's President, E. Hunter Harrison, will allow CN to "expand our operational flexibility, and move through the

Chicago gateway more effectively, efficiently, and reliably.”¹ Mr. Harrison further states, “Unfortunately, there is no way to achieve these benefits in the dense urban core of Chicago without introducing new traffic in less populated areas.”² Frankfort will be affected directly and profoundly by this aspect of the proposed transaction.

This transaction is about CN’s using the EJ&E seamlessly as an integral part of a 20,000 mile dominant Class I railroad whose routes connect both coasts of Canada through a spine terminating in the Gulf of Mexico with its locus of connectivity in Chicago. CN will be able to offer more competitive rail and truck routes when this deal is consummated and connections completed. Competing railroads and truckers will most likely lose a portion of their traffic base to CN where current interline movements on existing routes in and around Chicago cannot compete on time or rates with the new CN/EJ&E routings.

In order for our Village—and the SEA—to understand fully the impacts from this proposed acquisition, an accurate projection of train traffic is essential. This traffic not only drives the impact assessment but informs mitigation strategies. The decisions made by the STB concerning this acquisition have irreversible and potentially devastating consequences to our citizens’ lives. To assist with understanding Frankfort’s unique context, we offer the following specific comments to the draft scope of the EIS presented in the Federal Register notice of December 21, 2007. In the event that all impacts from this transaction cannot be avoided, we ask that thorough consideration be given to a full range of mitigation strategies to alleviate negative consequences to our quality of life.

Moreover, and as required by the National Environmental Policy Act (NEPA) and the Council on Environmental Quality’s implementing regulations, the time horizon of the EIS process must be sufficiently distant to take into account the reasonably foreseeable cumulative effects of (1) the proposed rail transaction *and* (2) the explosive growth of Will County in general and Frankfort in particular. The Northeastern Illinois Planning Commission estimates that Frankfort’s population will grow from its 2000 level of 10,000 to 55,000 by 2030. By 2021, the daily motor vehicle traffic count for Frankfort’s six at-grade crossings of the EJ&E will increase from 32,000 to 142,000. Although the Application is less than clear on the point, it appears to look only about three years ahead—to the end of 2010. This is far too short a period. The environmental process should consider rail and motor vehicle traffic projections for at least ten years after all post-acquisition construction has been completed.

Finally, although Frankfort understands that the third-party contractor assisting the Section on Environmental Analysis (SEA) in preparing the DEIS and FEIS is working under the SEA’s direction, Frankfort objects to CN’s having been permitted to select the contractor. We understand that the Board believes the arrangements outlined in its 2001 policy statement on the subject are adequate to ensure the contractor’s neutrality, but we respectfully disagree.

¹ Application at 51.

² Application at 53.

1. SAFETY

Many issues related to safety must be considered as part of the Draft and Final EIS. First and foremost, we have nine residential subdivisions adjacent to the EJ&E and over 1800 parcels within 1500 feet of the EJ&E line. In addition, we have one of the fastest growing school districts in Will County and we are expected to expand from 2400 students to 4000 by 2014. Four of our schools are in close proximity to the EJ&E. We have a church and one of the most beautiful retreat and conference centers in the Chicago area (65-acre farm and nature preserve) adjacent to the EJ&E. The Village of Frankfort contains approximately six miles of track between 116th Street and Harlem Avenue with seven crossings of the EJ&E (see Table 1). All these crossings are at-grade except one. Five of the six at-grade crossings have only two gates and the sixth is ungated.³ The CN application notes an almost 500 percent increase in rail traffic—from 6.4 to 28.3 trains per day. As previously stated, we believe these numbers are substantially underestimated (see additional discussion under Section 2: Transportation Systems). When considering the dramatic increase in train traffic coupled with projected vehicle, pedestrian and bicycle traffic projections (2021), we have the following concerns, particularly with the at-grade crossings:

- Absent appropriate additional safety measures, children (and others) will cross in an unfettered way without adequate train warning and protection.
- The high school is located north of the tracks, and students living to the south of the tracks will have to cross to go to school.
- As trains increasingly block the tracks at grade crossings, delay time will go up, as will the propensity to avoid warnings and “beat the train,” unless appropriate safety protections are in place.
- The Town will be effectively bisected into two communities affecting not only safety but also economic, social, and cultural aspects of Frankfort.

³ Ungated crossings have automatically activated flashing lights mounted on classic crossbuck railroad warnings.

Table 1: Frankfort Railroad Crossing Characteristics⁴

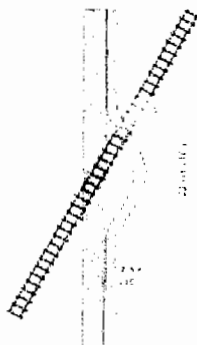
Crossing	# of Lanes	Func. Class	Crossing Type	Truck Route	Existing Volume		Proj. Volume (2021)
					All	Truck	
Owens Rd/116 th	2	Maj Coll	At-grade		2,500		5,000
Wolf Rd	2	Commty Art	At-grade		7,200		53,800
LaGrange Rd	2	Reg Art	Overpass	Y	10,400	1450	45,800
Center Rd	2	Maj Coll	At-grade		4,200		5,200
Sauk Trail	2	Maj Coll	At-grade		2,500		9,400
Pfeiffer Rd	2	Maj Coll	At-grade		5,600		20,500
Harlem Ave	2	Reg Art	At-grade	Y	10,000	1000	48,200

We request that the scope of the draft EIS include the use of the projected (2021) traffic volumes for probability analysis, as well as crossing geometry and associated vehicular site distances set forth in the American Association of State Highway and Transportation Officials (AASHTO) requirements, and crossing controls including the types of signals and signing.

Non-Rail Exposure

Not only vehicular but also pedestrian and bicycle crash rates should be included in this analysis. The number of pedestrian accidents at railroad crossings has amplified nationally due to increased exposure from more frequent train/pedestrian interactions. Crossings can be made considerably safer and reduce liability for the railroad company, while providing an excellent opportunity to mitigate impacts upon the community by offering improved crossing treatments and alternative paths for cyclists and pedestrians.

Consequently, we request that the scope for the EIS include an examination of each at-grade crossing to assess hazards to cyclists and pedestrians at every point of interaction – in this case, “crossing” refers to both on-road, parallel, and off-road bicycle and pedestrian facilities. The assessment will determine the skew or angle of approach as well as the smoothness of the



crossing to assess the threat of trapped/diverted wheels, and the concomitant need for adjusting crossings of bicycle lanes, trails, or off-road facilities to address skew (see figure to the left). The following should also be addressed throughout the corridor: the need for additional, advance warning signage at each crossing based on sight distance, crossing design specifics, and exposure; the need for additional parallel fencing to separate adjacent bicycle/pedestrian traffic from the

Bicycle Path Crossing RR at Acute Angle (>45°) - Plan View.

Source: The Louis Berger Group, Inc. from AASHTO Guide for the Development of Bicycle Facilities (Figure 27)

railroad right-of-way; modifications to pavement markings on all crossing approaches, particularly for facilities with bicycle lanes or near off-road crossings; and the need for additional gates, flashing signals, audible warnings, or other warning devices at every crossing.

Additionally, the growth of Frankfort will result in substantially increased volumes of pedestrian and bicycle traffic that should be taken into account in all traffic forecasts, including accident exposure indices at each crossing. Off-road trails, designated bicycle trails, and popular destinations for bicyclists and pedestrians within ½-mile (pedestrians) and one mile (bicyclists) of the corridor, including but not limited to schools, parks, event centers and venues, major employers, playgrounds, libraries, recreation centers, large (greater than 100 units) housing developments, shopping/retail centers, and office complexes should be noted in this assessment as well as probable paths between these destinations. We request that opportunities to mitigate and minimize damage to the pedestrian and cycling system consider the physical separation of pedestrians and cyclists from the right-of-way (e.g., pedestrian gates and mazes) .

Emergency Management Services

The impact to public safety due to potential delays in delivery of emergency medical services (EMS) is of great concern to the Village. With the large increase in train traffic and the lack of grade separations, delays in EMS are inevitable. These consequences to public safety should be considered as part of the draft EIS.

Derailment Potential

A walking inspection of the track structure in Frankfort was conducted by our environmental consultants in winter when much of the right of way was not visible due to snow. They noted that much of the track has deteriorated ties, 132-pound butt welded rail with a roll date of 1979, implying it has been in track for about 25 years. They also noted some track geometry alignment deviations, as well as settling of the grade crossings, particularly in and around the ballasted track to asphalt transition zones and the rubberized grade crossing surface. While we assume CN will entirely rehabilitate the track structure with new ties, undercutting, fasteners, plates and rail grinding, the EIS should consider the specifics of CN's Capital Improvement Plan for the next five years, including the switch between Sauk Trail and Center Road. Substandard rail conditions can increase the potential for derailments; therefore, the SEA and we will need to know when the track work will be done. In addition, track conditions, especially at the turnout, are important when combined with increased traffic and load composition for predicting derailment severity. In order to better evaluate derailment and consequence scenarios, the Village requests that the DEIS address:

- Traffic mix including current and post merger locomotives, train length, STCC commodity flows.
- Origin-Destination flows projected post merger.
- When, where and how often train meets will occur at the only turnout in Frankfort.

- Time of day where unit trains, chemical trains, and coal trains will idle waiting for block clearance.
- Percentage of trains forecast by train length by time of day (night, off peak, peak, Saturday and Sunday).
- CN's plans to upgrade the track.
- CN's plans to integrate train dispatch and control into its own system. The Application addresses consolidations at Kirk Yard and train crew consolidation at Homewood, but does not provide sufficient additional detail to allow a full assessment of the impacts on safety of scheduling and labor consolidations.

Operational Safety

The Safety Integration Plan (SIP) is critical to bringing EJ&E into the CN culture of safety, as employees coming from EJ&E will need retraining to be integrated successfully. Full acknowledgement of the information in the SIP as part of the Draft EIS is important given the significant traffic impacts of the merger. In accordance with past STB rail mergers, CN will use merger-related Safety Integration Plan Guidelines developed by FRA specifically for this purpose. The Applicants must address all of the safety concerns identified by FRA. As noted, subsequent to the initial filing of the SIPs, a SIP review team (made up of FRA experts and representatives from each Applicant) must work to prepare for the implementation of the SIPs by the Applicants under the supervision of FRA, in the event that the STB approves the proposed transaction.

The Village is considering a quiet zone along with other measures to mitigate environmental impact categories. FRA has a policy and procedures associated with quiet zone establishment. Quiet zone creation requires changes in FRA grade crossing safety to either:

- Supplemental Safety Measure (SSM) – a measure intended to improve grade crossing safety when train horns are not sounded that is defined as effective in the FRA rule.
- Alternative Safety Measure (ASM) – a measure intended to improve grade crossing safety when train horns are not sounded that does not fall under the definition of an SSM is defined as effective in the FRA rule. ASM's are subject to FRA review and analysis to determine their effectiveness.

In either case, there is ample evidence and long precedent establishing that STB's role in ordering appropriate mitigation for affected communities is strong in scope and enforcement power. Based upon past precedent, for example in cases involving the DM&E (Mayo Clinic in Rochester, MN) as well as Conrail's Cleveland case with NS, appropriate grade crossing safety and community partnership monies were allocated as part of a long negotiation. Railroads are typically responsible for between ten and one hundred percent of the cost of grade separation or quad gate protection, and we believe that the anticipated level of traffic warrants maximum, railroad-paid protection through Frankfort.

While no comprehensive grade crossing assessment has been made in Frankfort, one option is the establishment of a quiet zone for the entire EJ&E run through Frankfort. The cost of such a zone should be paid by CN. Most of Frankfort's at-grade crossings have only two gates; one has only flashing lights. With both rail and motor vehicle traffic growing significantly, introduction of a combination of quad and grade separated crossings likely is in order. It also may be appropriate to rebuild and widen the Howe Truss bridge and its timber piers at Route 45 (La Grange Road). In 2006, FRA reported that 94% of rail related fatalities were grade crossing users and trespassers.⁵ The massive growth of rail, motor vehicle, and bicycle/pedestrian traffic at the existing crossings demands close attention to ensuring maximum safety for all concerned.

Further, track condition in Frankfort appears somewhat deteriorated. During their January 2008 field inspection, our consultants they noted that visible tie conditions were deteriorated with many condemnable at FRA Class 2 limits. We would anticipate that before the merger was effective, Class 4 track would be reconstructed to handle the significant increases in traffic and hazardous material. Frankfort trusts that CN will do this work before full operations commence so the risk of catastrophic incidents and derailments is reduced. It is not possible from the Application to ascertain CN's precise track capital plans during the merger and transition period and we request they be submitted for consideration in the preparation of the DEIS. Included in this package should be:

- Five Year Capital Plans
- Track Class Planned post merger.
- Track geometry run history (at least four recent consecutive runs).
- Drainage and ditching history and plans, including undercutting and tie replacement.

We also request that a risk/exposure index calculation be utilized to assist with evaluating the merits of providing grade separations. The FRA maintains a risk rating of all grade crossings nationally. We request that the crossings in Frankfort be considered for mitigation within the parameters of known risk together with future traffic to be loaded on the network as a function of this merger.

Hazardous Materials Safety

Based on information from the CN application, hazardous materials cars per day are expected to increase by 636%. This is a dramatic increase and poses numerous risks to the many citizens living, working, playing, socializing, worshipping, and exercising in locations adjacent to the EJ&E. It is critical that the Draft EIS analyze the specific safety risks associated with the unique characteristics of the Village of Frankfort. We request the following information be examined in preparing the Draft EIS:

⁵ <http://safetydata.fra.dot.gov/Objects/2006-PRELIM-BOOK-OCT.pdf>

- How is CN managing safety risks, especially in terms of the most frequent, highest risk causes of accidents including human operating error and track deficiencies? Federal Railroad Administration (FRA) inspection findings for CN, including those provided in the National Hazardous Materials Audit (February 5, 2007), indicated a 22.3 percent defect ratio (second highest of companies inspected) in terms of trains inspected and found to be noncompliant with FRA's requirements for train placement of hazardous materials shipments and accurate hazardous communications information on train consists in the train crews possession.⁶
- How does CN classify a hazardous material and what procedures are in place to help minimize the possibility of a hazardous material spill?
- How will CN coordinate with the Village of Frankfort representatives regarding the transport of hazardous materials through populated areas?
- What are the employee training protocols for operators involved with all aspects of hazardous material transport.
- Security measures – how will CN protect against terrorism threats?
- Inclusion of information indicating how CN complies with all applicable hazardous material safety statutes and regulations.
- Discussion of appropriate mitigation strategies including:
 - Training and coordination with local emergency responders for improved preparedness in the case of an accident or spill.
 - Development of a community based emergency evacuation plan.
 - Public involvement programs aimed at educating the general public on the community based emergency evacuation planning and ways to minimize their risk of exposure to hazardous materials that will be transported via CN through their community.

2. TRANSPORTATION SYSTEMS

Frankfort is concerned with the effect of increased train traffic generated through the merger of EJ&E with CN. CN and the Illinois Central Railroad (IC) (which later was purchased by CN) first instituted running highly scheduled rail freight operations. We note CN's statement about CN President Harrison:

During his career with Illinois Central, he [Harrison] initiated the concept of scheduled service for freight shipments, maintaining a sharp focus on operational efficiency and asset utilization. By 1996, he had succeeded in driving down the railroad's operating

⁶ Federal Railroad Administration, Office of Safety, National Hazardous Materials Audit 14-15 (Feb. 5, 2007).

ratio by some 30 points to the low 60s – the best in the entire North American railroad industry.⁷

Since privatization and the acquisitions of the IC and Wisconsin Central, CN has experienced:

- Consistently high operating ratios (revenue divided by cost) each year.
- Strong train scheduling enabling faster and longer trains -- particularly in premium intermodal and unit-train service.
- Use of Berkley Systems' Train Performance Calculator (TPC) for train simulation and network optimization. The TPC enables a service planner to minimize train conflicts.

Given the nature of the proposed transaction and CN's unwillingness to provide the rail traffic projections that Frankfort has sought in discovery, Frankfort is concerned that there may be a significant discrepancy between CN's rail traffic projection of 28 trains per day and the actual volume that Frankfort soon will experience. CN states that it is buying EJ&E to better connect its gateways around Chicago while alleviating congestion and decreasing through train travel time around the inner City and out to the EJ&E ring.

It is difficult to avoid the conclusion that CN's \$400 million dollar investment in upgrading corridor connectivity (\$300 million in railroad acquisition plus \$100 million in planned immediate capital improvements) will have, at the very least, the following effects:

1. Attract traffic from other Chicago area Class I railroads (e.g., UP, CSX, NS, BNSF and CPR) to the EJ&E corridor by offering a competitive advantage for interline⁸ movements.
2. Induce truck to rail traffic with improved intermodal service.
3. Reduce travel time for existing rail to rail traffic.⁹

Frankfort respectfully requests that STB obtain and consider in the EIS process a detailed plan for CN's capital and operating plans and programs over at least the ten years following completion of the post-acquisition construction proposed in the Application. The level of traffic shortly following the acquisition (or at least the completion of post-acquisition construction) could be substantially greater than the traffic level CN has included in its filing. That does not account for a five to ten year forecast and may accurately represent only the immediate post-merger future (within one to three years).

CN asserts that there will be "[n]o *quantifiable* traffic gains from trucks or rail traffic not presently handled in part by CN, EJ&E or both carriers."¹⁰ In refusing to provide rail traffic

⁷ Application at 58.

⁸ Interline traffic is rail traffic that a) neither originates or terminates in the Chicago area, b) is not captive to EJ&E; and c) does not currently use CN routes. Rate and travel time improvements lead to a change in route choice, skimming traffic from one railroad to another and improving shipper Level of Service.

⁹ Reduced travel time is one of the primary rationales for this merger. Application at 50 (Harrison V.S.).

¹⁰ Application at 209 (emphasis added).

projections sought by Frankfort in discovery, CN said that it had “not made *definitive* projections or estimates for time periods after those addressed [on page 247 of the Application].”¹¹ The use of qualifiers such as “definitive” and “quantifiable” suggest that CN at least has expectations of additional traffic. These expectations should be factored into the environmental review process.

Given the nature of the transaction and the nature of CN’s business, the mix of trains running on the EJ&E is likely to change from low-value bulk commodity mixed freights (*e.g.*, coal, petrochemicals, and steel) to higher value fast unit-trains and double stack trains. The Village currently sees trains in the range of 100 to 120 cars long operated with two to three second-generation 2000 HP locomotives. That too will change, and we anticipate that CN will move to 4000 HP AC traction locomotives coupled with longer trains. We understand EJ&E has a policy of 8000-foot trains maximum (they actually run shorter) using existing locomotives.

As train length increases, so does the probability of blocking at-grade crossings. The potential exists with at-grade crossings to bisect Frankfort. If train length increases from 100 to 150 cars per train and these are intermodal stack trains of eighty-six foot cars (instead of the sixty-foot average car length assumed now) train length increases from 6000 to 12,900 feet, or more than double. Order of magnitude traffic increases in STB cases typically and necessarily involve more mitigation.

We are concerned with significantly higher grade crossing delay and safety risk and accordingly request that the following be included in the Draft EIS:

- Models and horsepower of CN’s planned road locomotive and switchers to be assigned to the EJ&E corridor.
- TPC inputs and outputs for the base case and post-merger traffic assumptions and projections.
- Times when train meets at the switch between Sauk Trail and Center Street are likely to occur.
- Post-merger train length and car mix.
- Capital and operating plans for train control and dispatch.

The Application’s time frame of 2010 is unacceptable because a five to ten year growth forecast (*i.e.*, following the completion of all capital improvements designed to increase traffic capacity and connectivity) is required to present an accurate picture of the impact this merger will have on the Village. By 2010, CN may not have completed track connections and yard improvements on the EJ&E described in CN’s filing (three capital phase improvements totaling \$100 million in expenditure).

The Application does not disclose plans for double-tracking east of Sauk Trail/Center Road where the double-to-single track switch in Frankfort is located. CN should advise the SEA

¹¹ Exh. 3 to Motion to Compel Discovery from Applications (FRKF-3) (filed Jan. 25, 2008).

(and Frankfort) whether CN has any plans during the five years following the proposed acquisition to double-track to the east of the existing switch. Railroading is all about efficient train movements and the benefit to CN of double tracking throughout the EJ&E seems obvious. Double tracking will significantly increase capacity and therefore increase train traffic. Further, if double-tracking occurs, the grade crossings in the area to be double-tracked should be candidates for the same level of grade crossing protection as those to the west of the current switch.

Another aspect of train traffic projection as well as truck traffic changes involves *short haul moves* versus *long haul moves*. The Application states that truck movements below 750 miles will not be loaded onto CN's rail network in and around Chicago.¹² In industry parlance, these are called *short haul moves* and this thesis is changing as fuel price increases, crew costs and travel time improvements have made rail more competitive with truck. That is, depending upon the corridor, moves less than 750 miles are more likely than ever to go on rail. Frankfort believes that the assumption that additional trucks will not be loaded to the new CN network as a result of this acquisition is inaccurate. As rail to truck competitiveness increases, we expect that short haul truck movements will be skimmed from roads as highway congestion rises and as the new CN/EJ&E corridor becomes more competitive coupled with rail's fundamental rule and crew cost advantage. These advantages will only increase with time. Moreover, CN has a set of strong intermodal loading facilities in and around Chicago that will increase the efficiency of loading containerized cargo. All these considerations affect rail traffic projections as well as effects upon road crossings.

Once accurate rail traffic projections have been obtained, we request that the analysis of traffic delay at each crossing include an estimate of the delay (average vehicle delay, average person delay, total vehicle hours of delay, a queue analysis, and a level of service determination). Analysis of traffic operations should include an AM, PM, and off-peak period analysis. As part of the traffic operations analysis, a determination should be made as to how long the queues will be and whether they interfere with nearby intersections. The analysis should also include a traffic analysis of any special events that may involve traffic generation from the Village of Frankfort. Delay impacts on school buses and emergency vehicles (fire, police, and ambulances) should be also be considered. Alternative routing should be identified if crossings are blocked due to a potential long term crossing delay.

We strongly recommend that all delay and operational analysis be conducted using VISSIM microsimulation software. VISSIM, one of the leading microsimulation software packages, will provide a complete analysis of intersections and railroad crossings. The software is capable of determining the operational impact on vehicular traffic due to railroad traffic. It is critical for VISSIM to be calibrated based on demonstration of its capability to replicate existing conditions. An important product of the microsimulation analysis will be a visualization of future operations at the railroad crossings. This visualization will assist in fully understanding the impacts at crossings.

¹² Application at 195 (Stuebner V.S.).

3. LAND USE AND SOCIOECONOMICS

The future of the EJ&E in many ways represents the future of Frankfort. The EJ&E bisects our community, requires busing of school children across grade crossings, presents a barrier to connectivity between our residents and our employment base and plays a vital role in our economic vitality. Any variation in service along the EJ&E represents a significant impact on our growing Village.

While we have planned for the EJ&E as a part of our community, we have not planned for the context and intensity of service increases associated with the proposed acquisition. The increase in transport of hazardous materials, along with construction of the Matteson connection and the siding extension from Frankfort to Joliet, were not factors in the development of the Village of Frankfort Comprehensive Plan (2004), the Transportation Master Plan (2007) and the Historic District Master Plan (2007). Instead, growth patterns and associated land uses were predicated on the EJ&E's maintaining freight traffic at or near existing levels.

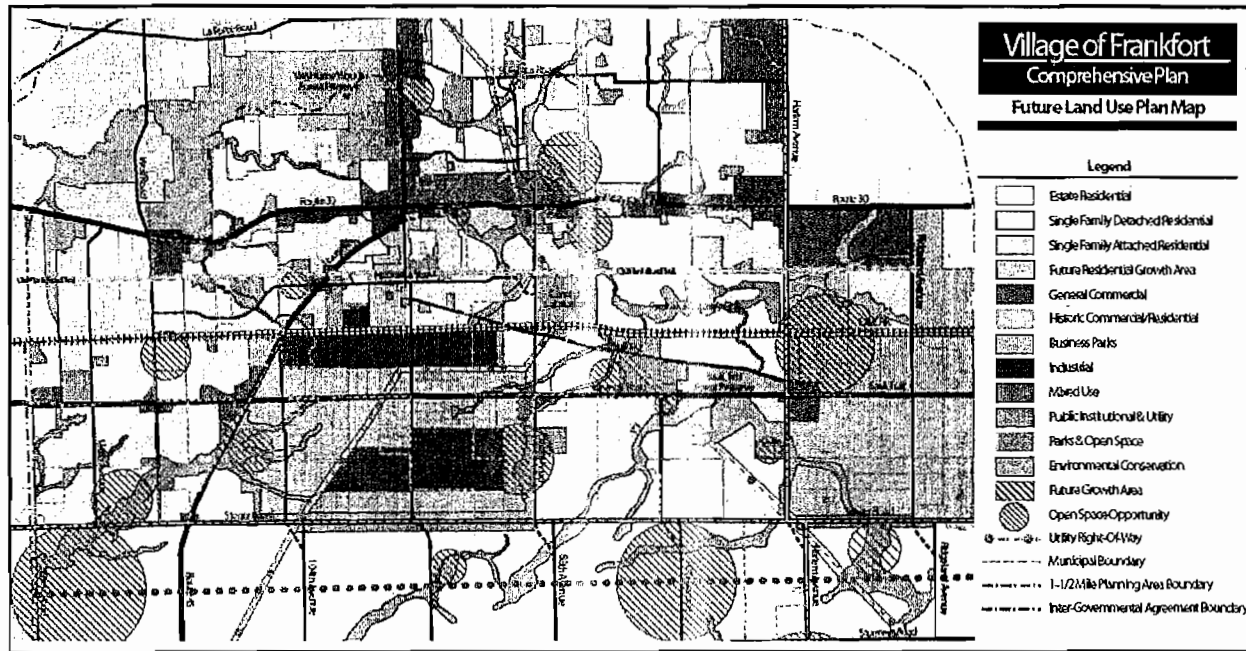
Without careful consideration to the impact of the increased rail traffic on land uses, open space and schools, and identification of appropriate mitigation measures to ensure Frankfort's future sustainability, Frankfort will not be able to grow in accordance with the adopted local and regional plans created by our citizens and elected leaders.

Based on these factors, as well as those noted in Sections 1 and 2 above, we request that:

- Section 3 address the impacts of the proposed acquisition on the land uses depicted in the Frankfort Comprehensive Plan so we can safely and effectively accommodate growth from a population of 15,000 today to 55,000 by 2030.
- Section 3 be modified to require more community-specific land use and socio-economic analysis, particularly regarding impacts on businesses, schools and residences (existing and planned) near the railroad. The effects should be specifically quantified in order to determine the impacts on the downtown historic district, local businesses, schools, neighborhoods and Frankfort's overall tax base.
- Section 3E be revised to address funding and implementation roles for mitigation measures in Frankfort and updates to existing adopted plans.

Figure 1 depicts Frankfort's planned land uses and shows the Village's proximity to the EJ&E. A majority of Frankfort's historical residential and commercial structures are just north of the EJ&E tracks, with most business parks and industrial land uses located south of the railroad. The ability to connect these residences to future jobs is a critical facet of Frankfort's future, and the combination of roadway and railroad traffic growth poses many challenges in that regard. Frankfort must be able to connect all of its jobs and people to one another, now and in the future, and Frankfort should not be solely responsible for funding the improvements to sustain acceptable levels of service and safety.

Figure 1: Village of Frankfort Future Land Use Map (2004)



4. ENERGY

Energy consumption is a major issue for our Village residents. Traffic delays incurred as a result of waiting for trains can affect family budgets as well as business and government operations. We request that changes in energy consumption resulting from increases in the delays of motor vehicles at all at-grade crossings be addressed in the Draft EIS.

5. AIR QUALITY

We believe that for air quality, the draft scope does not meet the intent of the National Environmental Policy Act (NEPA), General Conformity Rules¹³ or the requirements of the STB's environmental rules,¹⁴ as described below.

▪ Mobile Source Vehicular Emission and Impact need to be analyzed

The CEQ regulations require that all direct and indirect environmental effects and their significance be discussed.¹⁵ Therefore, in addition to the scope proposed, analysis of local impacts caused by changes in diesel particulate emissions resulting from rail train and rail yard operations, the air quality impacts resulting from increased mobile source emissions

¹³ 40 C.F.R. pts. 51 and 93.

¹⁴ 49 C.F.R. 1105.7(e)(5).

¹⁵ 40 C.F.R. 1502.16

from vehicles on local roadways due to increased rail operations and delays at railroad crossings, and additional vehicles queuing or idling conditions should also be analyzed in the Draft EIS. These emission increases will affect numerous sensitive receptors including homes, parks, schools, and other facilities. Sensitive receptors need to be identified along the EJ&E route as well as at all road crossings (see Table 1). This may require a mobile sources vehicular impact analysis.

▪ **A conformity determination to the State Implementation Plan (SIP) needs to be demonstrated**

As required by the General Conformity Rules,¹⁶ the proposed EJ&E acquisition must conform to the Illinois SIP. The SIP emission inventories include State projected railroad locomotive emissions of various pollutants for Will County, as well as for Chicago Non-Attainment Area. As such, the Draft EIS should conduct an emission analysis and demonstrate the SIP emission budget SIP conformity of the EJ&E acquisition and present it to the Illinois Environmental Protection Agency.

▪ **Construction Schedule, Emission and Impact need to be evaluated**

Based on the Conformity Rules, if the construction period will last five years or longer, analyses of construction emissions and impacts are required. As such, the construction schedules and phases of EJ&E acquisition need to be reviewed to determine whether an air quality impact analysis will be included in the DEIS.

▪ **Data that should be utilized for air quality analysis includes:**

- On-Road Mobile Traffic Data
- Changes in locomotive type used pre and post merger as well as changes in train length and car mix.
- Rail Yard and Stationary Sources Operational Data.

▪ **Analytical methods utilized for the air quality analysis should include:**

- Microscale Analysis for Mobile Sources (MOBILE6.2, CAL3QHC/R Modeling)
- AP-42 Fugitive Emissions, Locomotive Engines Pollutants, Stationary Sources Modeling
- Construction impact AERMOD modeling.

▪ **Possible mitigation strategies that should be evaluated as part of the Draft EIS include**

- Adjustment of Train Operation Schedule
- Engine Upgrades Design or Retrofit to Reduce Air Emissions.
- Placement of the eastern terminus of the second track to the west of Frankfort rather than in Frankfort.

¹⁶ 40 C.F.R. pts. 51 and 93.

6. NOISE AND VIBRATION

Noise and vibration concerns are paramount to the citizens living adjacent to the EJ&E. Consequently, we suggest the following changes to the scope of study for the Draft EIS:

- We request you revise Section 6B to read: "Identify all locations where the proposed increase in rail traffic will cause an increase to a noise level of 65 decibels L_{dn} or greater. Identify all existing and permitted sensitive receptors (e.g. schools, libraries, parks, and residences) and identify mitigation measures to abate the increase down to existing levels or below 65 L_{dn} impact limit whichever is lower. Affected receptors will not be limited to those adjacent to the right of way, but be based on line of sight and current measured ambient noise levels."
- We request you revise Section 6C to read: "Identify all sensitive receptors that will experience an increase in noise level of 3 decibels L_{dn} including but not limited to all sensitive receptors adjacent to or with line of sight views of the tracks."
- Due to the significant increase in train traffic, we request you revise Section 6D to read: "Assess potential vibration effects based on Federal Transit Administration (FTA) vibration methodology for Detailed Analysis in areas where it appears there may be vibration sensitive receptors within or immediately adjacent to the railroad right of way."

The following neighborhoods have residences with outdoor use areas approximately fifty feet from the EJ&E tracks: Newbrook, Sandlewood Estates, and Heritage Knoll, as well as several individual and future residential areas abutting the EJ&E right of way. The Prestwick neighborhood has outdoor use areas approximately 100 feet from the right of way. In addition, the Cardinal Lake, Founders Place, and Old Towne neighborhoods have outdoor use areas approximately 200 feet from the EJ&E right of way. All these neighborhoods are adjacent to the right of way and are the most likely to be affected by noise. Further, a noise screening estimate based on literature review of existing and future freight operations and the FTA Noise Spreadsheet Model indicate future L_{dn} noise levels could potentially increase by 8 to 9 dBA over existing L_{dn} noise levels (well above STB's 3 dBA incremental impact criteria) making it crucial to start assessing mitigation alternatives as soon as possible. Desired mitigation from affected neighborhoods includes quiet zones and receptor side sound walls.

Moreover, there is an earthen dam located just south of Prestwick that could be affected adversely by the increased rail traffic and the resulting increase in noise and vibration. The environmental review should require an examination of the dam and the Board should, if necessary, require reinforcement of the dam to ensure its integrity.

7. BIOLOGICAL RESOURCES

We request that the Draft EIS include an investigation of the existing terrestrial ecosystem (natural plant communities and aquatic communities), not just federally or state protected wildlife areas (Table 2). We have particular concerns about the ecological character and functions that comprise the Manitoqua Camp grounds and Prestwick neighborhood,

including large stands of old-growth oak trees. The preservation of these tree stands are important to the surrounding communities.

In addition, the scope should include:

- Discussion that impacts to natural resources will be avoided to the extent possible, minimized to the extent possible, and mitigated if impacts are not avoidable.
- A statement that impacts to jurisdictional wetlands/streams will be mitigated in conformity with federal and state requirements.
- Double tracking east of the existing double-to-single track switch should be considered now, as part of the environmental investigation. The project study area should be large enough to encompass the potential area for double tracking.

Table 2: Will County List of Threatened and Endangered Species¹⁷

Indiana bat	<i>Myotis sodalist</i>	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)
Eastern prairie fringed orchid	<i>Platanthera leucophaea</i>	Threatened	Mesic to wet prairies
Prairie bush clover	<i>Lespedeza leptostachya</i>	Threatened	Dry to mesic prairies with gravelly soil
Mead's milkweed	<i>Asclepias meadii</i>	Threatened	Virgin prairies
Lakeside daisy	<i>Hymenoxys herbacea</i>	Threatened	Dry rocky prairies
Leafy-prairie clover	<i>Dalea foliosa</i>	Endangered	Prairie remnants on thin soil over limestone
Hine's emerald dragonfly	<i>Somatochlora hineana</i>	Endangered	Spring fed wetlands, wet meadows and marshes
Eastern massasauga	<i>Sistrurus c. catenatus</i>	Candidate	
Sheepnose mussel	<i>Plethobasus cyphus</i>	Candidate	Rivers
Spectaclecase mussel	<i>Cumberlandia monodonta</i>	Candidate	Rivers

¹⁷ <http://www.fws.gov/midwest/endangered/lists/illinois-cty.html>.

8. WATER RESOURCES

Frankfort has numerous water bodies, including associated floodways, located in or near the EJ&E right of way. The DEIS and FEIS should:

- inventory and assess the existing condition of such waters;
- assess how storm water runoff from the EJ&E affects water quality in these waters;
- assess how activities associated with the action (e.g. pollutant loadings associated with lubricants and wheel/track wear from increased traffic) will affect water quality in the future condition; and
- describe steps to be taken by CN to comply with requirements of the Clean Water Act and associated federal and state regulations and requirements.

Due to the large increases projected for hazardous loads on the EJ&E, the draft EIS should include an accurate reading of the seasonal high water table and soil characteristics in order to evaluate how long it would take spilled hazardous materials to leach into the groundwater table. This information then should be utilized to develop safety protocols for managing infusion risk to potable water supplies.

The Village has identified numerous drainage, debris, and sediment issues in proximity to the EJ&E that result from runoff, which the Village will provide in due course. We request that these types of considerations be included in the Draft EIS in order to identify areas in which CN may need to adjust construction/maintenance plans to correct these problem areas.

9. ENVIRONMENTAL JUSTICE

No Comments

10. CULTURAL RESOURCES

The impacts of the EJ&E acquisition will play an important role in Frankfort's abilities to continue to preserve and grow the downtown Historic District. Section 10 notes that the EIS will "address potential impacts ... on cultural and historic resources that are on, or immediately adjacent to, a railroad right-of-way." We request Section 10 be required to examine impacts on the historic commercial and residential areas of Frankfort, as well as the downtown historic district up to one-mile north of the railroad along Center Road.

This is especially important from a mitigation standpoint, as the delays created on other railroad crossings within the Village will likely cause traffic to divert to less-traveled roadways. The historic commercial and residential areas spread approximately one-mile to the north of the railroad along Center Road, which is roughly parallel to US 45/LaGrange Road and Pfeiffer Road, both of which are projected to experience multifold traffic increases in the next 15 years (see traffic volumes in Table 1 above).

11. SECONDARY AND CUMULATIVE EFFECTS

The EIS should address impacts beyond those immediately adjacent to the railroad and proposed improvements. To the railroads this may appear as a railroad acquisition project but to Frankfort, it has a community-wide impact, not only in the immediate vicinity and during the time of implementation, but also further removed in time and distance from the EJ&E corridor.

Forecasting project-influenced effects, not only adjacent to the railroad, are paramount as secondary and cumulative effects have great potential to affect Frankfort. As noted in our Section 3 comments, the context and intensity of the proposed increased railroad operations were not foreseen in the development of adopted plans.

For Section 11, we request that the following items be included:

- Guidance: Secondary and cumulative effects be closely examined in accordance with the Council on Environmental Quality (CEQ) requirements,¹⁸ NCHRP REPORTS 403/466,¹⁹ and the ILLINOIS DEPARTMENT OF TRANSPORTATION COMMUNITY IMPACT ASSESSMENT MANUAL.²⁰
- Study Area and Temporal Boundaries: An evaluation of secondary and cumulative effects should include a study area encompassing up to a one-mile buffer around the railroad and up to one-mile north and south along grade crossings, although the area of influence may increase along high-volume roadways that cross the corridor. Potential conflicts of the proposed action with adopted land use, transportation, corridor, subarea, and environmental plans; sensitive natural and human environmental features; jurisdictional boundaries; watershed/sub-watershed areas; and ordinances and regulations adopted by Frankfort should be utilized to assist in the delineation of the secondary and cumulative boundary. Sub-areas of particular influence in the immediate vicinity of loading/unloading points; switching areas; major roadway crossings; and other areas of heightened influence should also be assessed at a greater level of detail. The analysis horizon should extend to the same time frame as that of the long-range planning documents currently adopted by Frankfort and regional/state governmental agencies. The specific time scale and area of influence of secondary and cumulative effects should be discussed and agreed-upon with the Village of Frankfort and its representatives prior to engaging in further analysis of indirect and cumulative effects.
- Items to Include: Secondary and Cumulative Effects should be considered in the following contexts, at a minimum, as well as reviewing the areas of impact from induced growth and encroachment-alteration effects described in detail in NCHRP Reports 403/466 and the CEQ's CONSIDERING CUMULATIVE EFFECTS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA).²¹ All outcomes that are reasonably foreseeable should be considered in the

¹⁸ 40 C.F.R. pts. 1500-1508.

¹⁹ http://gulliver.trb.org/publications/nchrp/nchrp_rpt_466.pdf

²⁰ <http://www.dot.state.il.us/desenv/CIAManual.pdf>

²¹ <http://www.fhwa.dot.gov/environment/guidebook/vol2/doc6a.pdf>

analysis of secondary and cumulative effects. Again, agreement with local officials should be obtained to catalogue accurately the natural and human elements to be considered in the assessment, but the following general items should be anticipated:

- Effects on natural habitat, wildlife fragmentation, threatened/endangered species, and water quality, due to induced development or changes in the density or pace of development activities already anticipated in the study area;
- Effects on property valuation, human health, and quality of life issues due to induced development on community facilities, services, and activities; and
- Cumulative impacts from new developments with similar impact profiles as that of the proposed project, such as increased traffic, noise/vibration, and odors.

We expect the Draft EIS to generally adhere to the framework for estimating secondary and cumulative effects as outlined in NCHRP REPORTS 403/466. These include:

- Scoping
- Identifying the study area's direction and goals
- Inventorying the study area's notable features
- Identifying impact-causing activities of proposed action and alternatives
- Identifying potentially significant indirect effects for analysis
- Analyzing indirect effects
- Evaluating analysis results; and
- Assessing consequences and develop mitigation
- Analysis of impact methods should include comparative case studies that assess the degree to which each case is similar/dissimilar to that of the proposed action as well as the relevant outcomes; convening local and national expert panels to refine potential impact scenarios from the project; and overlay analyses that graphically portray those geographic areas that are most sensitive to change compared with those areas that are most likely to change based on the direct, indirect, and cumulative effects associated with the proposed action.

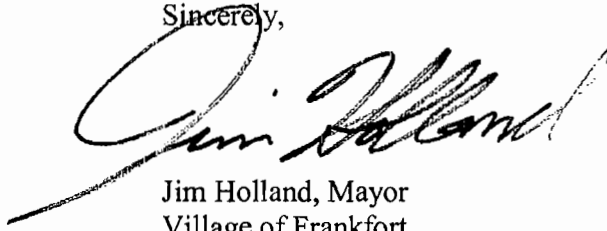
Mitigation Strategies

Although the scope of the Draft EIS only mentions mitigation in Section 3 (Land Use and Socioeconomics), an STB EIS must describe any actions that are proposed to mitigate adverse environmental impacts, including an indication of why the proposed mitigation is appropriate.²² We request that mitigation for impacts identified in each of the above sections be clearly addressed, including all impacts for which no mitigation is being proposed.

²² 49 C.F.R. 1105.7(e)(10).

We appreciate the opportunity to provide input on the scope of study for the Draft EIS. We respectfully ask that STB consider all of our issues, concerns, and requests before making a final decision on the EJ&E rail acquisition. We look forward to additional opportunities for public input during this Environmental Review Process and offer our full cooperation to the STB and CN during the development of the Draft and Final EIS.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Holland", is written over the typed name. The signature is fluid and cursive, with a long horizontal stroke extending to the left.

Jim Holland, Mayor
Village of Frankfort