

Appendix A

Technical Information

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A.1 Matteson Connection Environmental Analysis

A.2 Leithton Connection Environmental Analysis

A.3
Commuter Rail Service

Proposed Metra STAR Line Service along the EJ&E Rail Line

A.3 Metra STAR Line Background

As described in Section 4.1.7.3 of the Draft EIS, SEA considered the potential effects of the Proposed Action on Metra's ability to implement their proposed STAR Line service on a portion of the EJ&E rail line. Under Metra's plans (1999, 2003, 2007), STAR Line service on the Outer Circumferential Segment (OCS) is proposed to operate on the EJ&E rail line segment between Hoffman Estates near EJ&E MP 42.3, south of the Northwest Tollway/Interstate 90 overpass and Joliet near EJ&E MP 7.2, just south of Renwick Road near Interstate 55. In the Draft EIS, SEA concluded that the Proposed Action would not preclude the implementation of the STAR line service, and that the Proposed Action would not adversely affect potential implementation of the Metra STAR Line Service on the EJ&E rail line.

Based on various comments to the Draft EIS, SEA has conducted a more in-depth analysis of the potential effects that the Proposed Action would have on STAR Line implementation. In order to handle the increased freight train traffic that would result from the Proposed Action, CN has proposed to upgrade and connect existing siding tracks and construct a second main line track to create a 10.1 mile segment of double track (see Figure A.3-1) between the north end of East Siding (MP 21.1) and the south end of Walker Siding (MP 10.9). This increase in track capacity by CN is intended to accommodate solely the additional CN as well as existing EJ&E freight traffic. According to several commenters including Metra, these additional freight trains, along with CN's intention to add this second main line in the EJ&E right-of-way, would be expected to increase the difficulty, costs, and timeline to construct the capacity improvements that would be needed to allow Metra to initiate STAR Line service on the EJ&E segment.

Metra, in their comment letter dated September 29, 2008, stated that these increased costs could adversely affect the STAR Line's cost-benefit standards and potentially jeopardize FTA funding for the STAR Line. Additionally, Metra points out that CN's predecessor railroads were involved with Metra for implementing the North Central Service (Wisconsin Central) and Heritage Corridor Service (Illinois Central) and that CN has been involved with Metra only for ongoing operations on these two routes. Since Metra and CN have never negotiated the initiation of a new Metra service on a CN line, Metra has expressed concern that CN's freight interests could undermine Metra's ability to successfully negotiate the details for STAR Line implementation on the EJ&E. Although Metra had discussions with EJ&E regarding initiation of this service prior to the Application, Metra has not entered into any formal agreements with EJ&E or CN for operating proposed STAR Line trains on the EJ&E.

Metra is preparing an Alternatives Analysis under the Federal Transit Administration (FTA) process. Metra, in a letter dated January 14, 2008, provided SEA with preliminary draft portions of the Metra STAR Line Alternatives Analysis; "Feasible Alternatives: Detailed Descriptions" dated November 13, 2007. Metra also provided SEA with a preliminary weekday passenger train schedule that includes 52 total passenger trains on the EJ&E segment. These trains are proposed to operate on 30 minute peak hour and 60 minute non-peak hour headways. Metra previously completed the Outer Circumferential Commuter Rail

Feasibility Study (T.Y. Lin International 1999) and the STAR Line (Suburban Transit Access Route) Feasibility Study for a Metra Commuter Rail Service System (Metra 2003). Key points provided in these documents have formed the basic framework for SEA's additional analysis.

The Metra Studies identified the capital improvements that would be necessary in order to implement the STAR Line service on the EJ&E under existing conditions. SEA defined these improvements as the Scenario No. 1, or the No Action alternative. To date, none of the Metra Studies include a detailed capacity study (a computer-based dispatch study which models the existing rail corridor with expected freight trains and proposed passenger trains). This capacity study would identify the locations of potential freight and passenger train conflicts and help to confirm the extent of capital improvements that would be needed to safely, efficiently and reliably handle both freight and passenger trains. Typically, a capacity study would be performed by the sponsoring agency (Metra) with the aid of the host railroad at a later stage in the feasibility studies. The results of a capacity study are usually described in terms of average operating speed or delay ratios and, once acceptable levels of these results are agreed upon, form the basis of an agreement between the freight owner and passenger train operator. Should the Board approve the Proposed Action and Metra proceed with the STAR Line development then Metra and CN would ultimately have to agree on a number of operating issues, including a program of capital improvements.

The 2003 Metra Study identified the following improvements that would be required to be implemented to begin STAR Line service as it was envisioned at that time:

- Construct a second mainline track between Crest Hill near Joliet (MP 6.1) and Eola (MP 20.9), including upgrading and incorporating the existing sidings at Walker, Normantown, East Siding and Eola as the second mainline track, with associated crossovers
- Construct a second mainline track between Eola (MP 20.9) to a point just south of West Chicago (MP 28.0)
- Construct a new siding between MP 37.6 and MP 39.1 at Spaulding
- Upgrade the existing mainline track to allow higher speeds
- Upgrade and install a Centralized Traffic Control signaling system with bi-directional signaling
- Upgrade existing at-grade rail/highway crossing surfaces and crossing protection devices
- Construct eight (8) passenger stations with low-level platforms
- Construct a maintenance facility at Hoffman Estates

In this 2003 Study, Metra states that “the ultimate scope and costs of improvements required will be subject to detailed operating analyses and negotiations.” The improvements listed in the Study were determined using a “preliminary” schedule to determine the effects of operating EJ&E freight and STAR Line trains on the EJ&E. This preliminary schedule used 30 minute peak service and 60 minute non-peak service headways. These improvements for the initial service were envisioned to allow the joint use of the existing and proposed tracks by both EJ&E freight and Metra commuter passenger trains.

Table 11 of the 2003 Metra Study lists a Summary Opinion of Probable Construction Costs. This summary included capital costs for both the Outer Circumferential Segment on the EJ&E and for the Northwest Corridor Segment (NWCS) along I-90. This summary also included costs for rolling stock, but it did not include costs for right-of-way acquisition, environmental mitigation, or closing/separating any rail highway at-grade crossings. Table A3.1-1 below summarizes the Metra cost information.

TABLE A3.1-1. SUMMARY OPINION OF PROBABLE CONSTRUCTION COSTS FROM METRA 2003 STUDY (2003 DOLLARS)		
Item	Opinion of Probable Costs 2003 Dollars	Opinion of Probable Costs Without NWCS and Rolling Stock
Outer Circumferential Segment/EJ&E (OCS) (Joliet to Hoffman Estates on EJ&E: 36 miles, 8 Stations)	\$225,000,000	\$225,000,000
Connection of EJ&E to NWCS (In Hoffman Estates: 1 Mile, 1 Station)	\$38,000,000	Not Included
Northwest Corridor Segment (NWCS) (Hoffman Estates to O'Hare: 18 miles, 8 Stations)	\$329,000,000	\$38,000,000
Maintenance Facility and Yards	\$36,000,000	\$36,000,000
SUBTOTAL	\$628,000,000	\$299,000,000
Contingency: 25 percent of Subtotal	\$157,000,000	\$75,000,000
Engineering Design/Construction Management: 16 percent of Sum of Subtotal and Contingency	\$126,000,000	\$60,000,000
Rolling Stock	\$192,000,000	Not Included
GRAND TOTAL	\$1,103,000,000	\$434,000,000

Source: Metra's 2003 STAR Line Report

When these figures are adjusted for inflation at a rate of 5 percent per year for five years, these figures increase to \$1,407,000,000 when all items are included and \$483,000,000 in terms of 2008 dollars when focused on the elements specified to be implemented along the EJ&E but not considering NWCS-corridor improvements and rolling stock. This \$483,000,000 figure includes some project elements that are not included in SEA's analysis. SEA's analysis includes an assumed cost for each of the eight stations and does not include a cost for a Hoffman Estates station on the NWCS.

A.3.1 SEA's Additional Analysis for the Metra STAR Line

As discussed in Section 4.1.5.3 of the Draft EIS, SEA performed three separate and distinct analyses to assess whether CN had sufficient capacity along the EJ&E rail line to handle the expected rail volume. The first analysis was labeled the Bottleneck Analysis which considered all the factors that limit the ability of CN to handle their projected volumes. The second study used a technique known as Line Occupancy Index (LOI) that determined the amount of time each day a particular segment of track is occupied in terms of available minutes. A third test was also conducted by using the Rail Traffic Controller (RTC) model which is an industry-standard dispatching software tool that is used to determine train running times, meeting and passing locations and to help identify infrastructure requirements for a segment of rail line using various different operating scenarios. SEA performed RTC modeling of portions of the CN-EJ&E rail system as part of the Draft EIS analysis.

Following the issuance of the Draft EIS, SEA received numerous comments expressing concern about the EJ&E corridor being able to handle both the traffic levels anticipated by CN as well as the proposed Metra STAR Line service. In response to these comments, additional analysis was conducted to determine whether the EJ&E corridor could accommodate both CN and Metra rail traffic levels.

The additional analysis described below was completed by modifying the rail network that had already been created for the Draft EIS analysis to consider the implementation of Metra STAR Line trains with and without the inclusion of CN's expected traffic volumes. The RTC assumptions listed in the Draft EIS were also applied for this additional analysis.

SEA used the RTC model to examine the operational feasibility of freight trains and Metra passenger trains for various operating scenarios and combinations of infrastructure improvements for the entire STAR Line route on the EJ&E for a 35 mile segment between Hoffman Estates and Joliet. The objective of the additional analysis was to utilize the RTC model to confirm that the Proposed Action would not preclude Metra from initiating the STAR Line service on the EJ&E. The RTC modeling developed workable operating scenarios with associated delay ratios using combinations of infrastructure improvements. With this data, SEA then developed approximate baseline Metra costs for implementing STAR Line service on the existing EJ&E and then considered the incremental Metra implementation costs for additional alternatives that considered the Proposed Action. SEA defined these improvements as the Scenario No. 1, or the No Action alternative. For each scenario, SEA's analysis identified opinions of probable construction cost that would be needed to sustain acceptable levels of freight and passenger train operations.

Using information provided in the Metra documents referenced above, SEA identified four possible capital improvement and operating scenarios under which Metra could implement STAR Line Service. SEA developed Scenarios No. 1, 2, and 3 assuming that freight and passenger trains would or could use the same trackage. The only exception to this assumption is the proposed flyover at West Chicago over the Union Pacific/Metra Line. Metra has indicated that the flyover may be required and would be considered as project planning progresses. SEA assumed that the flyover would be designed with steep gradients to minimize costs, and therefore would be a passenger-train only structure. SEA developed Scenario No. 4 as a "stand-alone" commuter network to be constructed within EJ&E ROW. To date, none of the Metra Studies include a detailed capacity study (a computer-based dispatch study which models the existing rail corridor with expected freight trains and proposed passenger trains). Using the RTC Dispatch Model that SEA developed as part of the verification of the Applicants' operation plan (see Appendix B of the Draft EIS), SEA evaluated the operations of each of the scenarios to determine if the scenario would provide an acceptable level of passenger rail and freight rail service. SEA evaluated the following scenarios for the operation of the STAR Line service. See Figures A3-1 through A3-6.

- Scenario No. 1 – STAR Line base line infrastructure with a second main track between Eola and Walker was evaluated with two different train operating schedules: Scenario No. 1A with STAR Line trains and existing EJ&E trains (no action) and Scenario No. 1B with STAR Line trains and Proposed Action freight trains
- Scenario No. 2 – Infrastructure adds a third main track between Eola and Walker (near Plainfield) to the base line

- Scenario No. 3 – Infrastructure includes a third main track between Walker and Renwick Road to the base line
- Scenario No. 4 – Stand-alone commuter rail was created to analyze a stand-alone option that avoids, to the extent possible, the interference between freight and passenger trains between Hoffman Estates and Renwick Road, and to determine if this stand-alone option could potentially reduce the infrastructure costs

A.3.1.1 RTC Modeling Results

Table A3-2 displays the results of the four Scenarios described above and compares these outputs with the results compiled in the DRAFT EIS (Alternative 4.5), which was rerun to honor the curfew requirement. The Delay Ratio indicates the difference in hours between an unimpeded run as compared to a model run that includes meets and passes, waiting at rail/rail interlockings and trains held to avoid blocking at-grade highway/rail crossings. This difference is expressed in terms of percentage. Another applicable indicator is the average speed derived by the RTC simulation. Freight trains have a maximum operating speed of 45 MPH and passenger trains would be allowed to operate at 79 MPH. The speeds displayed in Table A3-2 include all meets and passes, dwell times at stations, accelerations and deceleration time, permanent slow orders, and slower speeds if a train uses a diverging route. The RTC simulation assumes that yard tracks “absorb” each train upon its arrival, a condition that seldom occurs in real life. The average speed for Metra trains under Scenario 4 indicates that commuter trains would average 44.9 MPH, a relatively high rate of speed with the numerous stations stops enroute.

Scenario	Delay Ratio (%)		Average Speed (MPH)	
	CN+EJE	STAR Line	CN+EJE	STAR Line
Proposed Action*	69.7	n/a	23.1	NA**
Scenario 1A	13.0	12.6	20.8	36.2
Scenario 1B	Unacceptable	Unacceptable	Unacceptable	Unacceptable
Scenario 2	40.5	10.5	18.0	35.2
Scenario. 3	38.5	8.0	18.2	25.9
Scenario. 4	NA#	2.6	NA	44.9

* The Draft EIS, Table B4-4 shows this value as 58 percent, SEA recalculated the delay ratio to include the commitment made by the Applicants in voluntary mitigation measure VM 41 related to the operating restrictions imposed by the curfews.

** No STAR Line trains were operated under Proposed Action

Under Scenario 4, CN traffic would be entirely separated from Metra’s STAR Line operations.

Scenario No. 2 produced performance results for STAR Line trains roughly comparable to Scenario No. 1A and freight train performance results were better than the Proposed Action. This indicates that Scenarios No. 2 and No. 3 would provide for an acceptable level of service for both passenger and freight trains. Performance results for Alternative No. 3 indicate a slightly better average speed and lowered delay ratio as compared to Alternative No. 2. However, the additional costs do not warrant the very slight benefits provided by Alt. No. 3. Therefore, SEA does not recommend that Alt. No. 3 be pursued. The stand-alone

option, Scenario No. 4 performs without freight train interference and shows the best results for the STAR Line trains.

A.3.1.2 Scenario No. 1: STAR Line with Double Main between Hoffman Estates and Joliet per Metra's 2007 Draft Alternatives Analysis

Scenario No.1 considered the infrastructure improvements identified in Metra's 2007 Draft Alternatives Analysis with the preliminary STAR Line weekday passenger train schedule that includes 52 total passenger trains (see Figures A.3-1 and A.3-3). Two RTC scenarios were modeled with the 52 STAR Line trains sharing trackage with EJ&E trains. Scenario 1A considered STAR Line trains sharing trackage with only current EJ&E freight trains (existing conditions). Scenario 1B considered the full complement of STAR Line trains sharing trackage with CN and EJ&E freight trains that would result from the Proposed Action. Both Scenarios No. 1A and 1B include the following improvements that were identified in the Metra 2007 Draft Alternatives Analysis. These improvements have been based on the fact that, as stated in Metra's 2007 Report, increases in the EJ&E freight train numbers have occurred since the 2003 Metra Study was completed. Due to these increases, Metra has proposed to extend the second mainline for the entire length of the EJ&E STAR Line route as noted above. For purposes of the Scenario No.1 analysis, it was assumed that CN would allow the additional track to be built within EJ&E right-of-way on 15 foot track centers without a transfer of ownership to Metra.

- Construct a second mainline track between a location near Crest Hill at I-55 (Turner - MP 5.5)¹ and Hoffman Estates (MP 42.3), including upgrading and incorporating the existing sidings at Walker, Normantown, East Siding, Eola, and Spaulding as the second mainline track, with associated crossovers
- Upgrade the existing mainline track to allow higher speeds (79 MPH up from 45 MPH)
- Upgrade and install a Centralized Traffic Control signaling system with bi-directional signaling
- Upgrade existing at-grade rail/highway crossing surfaces and crossing protection devices
- Construct eight (8) passenger stations with low-level platforms
- Construct a maintenance facility at a new location in Spaulding (instead of Hoffman Estates as was the case in the 2003 Report)

SEA's Scenario No.1 analysis also included additional features that were not identified in the Metra 2003 Study or the Metra 2007 Draft Alternatives Analysis but were identified to be desirable to consider for the proposed Metra train operations. The Maintenance Facility is slated to be located at a site north of the Metra Milwaukee District West Line at Spaulding and east of the EJ&E Main Track, and north of the proposed Elgin-Bartlett/Spaulding Station

¹ The RTC analysis for Scenario No. 1 is based on double tracking from Turner (MP 5.5) to Renwick Rd. (MP 7.5) to avoid congestion as freight traffic entered the STAR Line corridor and to avoid potential resultant freight delay into the corridor, which would skew the model results. Costs and exhibits reflect double tracking only to Renwick Road, which was identified in previous Metra studies of the Star Line, because this is the portion of costs which would fall onto Metra. The additional two miles of double track from Renwick Road to Turner could potentially be required in the future, based on operational conditions that emerge after STAR Line implementation. As stated previously, the precise capital requirements of STAR Line implementation would be worked out after additional in-depth analysis and negotiation between Metra and CN.

commuter station at MP 38.7. In order to facilitate equipment moves to and from the Maintenance Facility, SEA's analysis included a two track connection at MP 42.3 at Shoe Factory Road just south of the Northwest Tollway/Interstate 90 overpass, plus a dedicated Metra mainline track between MP 42.3 and the Elgin-Bartlett/Spaulding station with a connecting track leading to the Maintenance Facility.

The Metra 2007 Draft Alternatives Analysis states that a grade-separated crossing at West Chicago may be required but would be determined later in the project analysis. Due to the heavy UP freight and Metra West Line passenger traffic at West Chicago, SEA's analysis also included a grade separated crossing that will take a single passenger-only track for Metra STAR Line trains over the UP/Metra West Line tracks at West Chicago. Due to a track gradient of up to 4 percent, this track over UP/Metra was assumed to be used only by Metra STAR Line trains for this analysis.

Station locations for Scenario No. 1 included the eight (8) station locations listed in the 2007 Metra Draft Alternatives Analysis: Elgin-Bartlett/Spaulding Road, West Chicago/North Avenue, West Chicago/Washington Street, Aurora-Warrenville/Butterfield Road, Northwest Naperville, Naperville/95th Street, Plainfield/Van Dyke Road, and Joliet/Renwick Road. The Renwick Road station includes a layover facility with three (3) stub ended tracks. For station locations where there are two main line tracks, SEA assumed that platforms would be located on the outside of each track; center- or island platforms were not considered. For estimating purposes, SEA assumed a lump sum cost of \$5,000,000 for each station/park & ride location.

Due to the Federal Transit Administration's level-boarding mandate that nominally requires platform construction within the dynamic clearance envelope of a freight train, SEA's analysis used a gauntlet track at each station platform. A gauntlet track includes two mainline turnouts and an additional pair of rails on longer cross ties that allow the passenger train to switch to the rails that are located closer to the station platform which is outside the clearance envelope of the mainline track. Scenario No.1 includes the use of gauntlet tracks at all stations except West Chicago/Washington Street since this station will be located on a track that would only be used by STAR Line trains near the grade separation at West Chicago. For estimating purposes, SEA assumed a cost of \$500,000 for each gauntlet track location.

As part of the Proposed Action, CN has indicated that they will construct a second mainline track between East Siding (MP 21.1) and Walker Siding (MP 10.9), including upgrading and incorporating the existing sidings at Walker, Normantown, and East Siding as the second mainline track. SEA's Scenario No. 1 analysis includes the cost to build this segment of second main line. It is assumed that the cost for the second track as described by CN in their Application would be covered by CN and the cost to install all other trackage and STAR Line stations would be borne by Metra.

SEA performed an operational analysis using RTC for Scenario No.1. The Scenario No. 1 results were inconclusive because the RTC model could not produce a satisfactory result based on the number of conflicts caused by adding both the CN+EJ&E freight trains and the STAR Line service. In other words, SEA determined that Scenario No. 1 would not function adequately with only the infrastructure improvements identified above when considering

Metra STAR Line trains and the CN+EJ&E freight trains that would result from the Proposed Action.

SEA's preliminary opinion of probable construction costs for the infrastructure improvements listed above for both Scenario No. 1 scenarios was determined to be approximately \$419 million (2008 dollars) which includes a 25 percent contingency and 16 percent for engineering design and construction management. Table 4.1.2-B contains a summary listing of these costs. This summary includes the costs identified in the Metra 2003 Study for the Maintenance Facility/Yards which has been adjusted up to \$46,000,000 in 2008 dollars. This summary does not include costs for the NWCS segment, rolling stock, environmental mitigation, utility relocation, access fees, or operating costs.

SEA considered this figure of \$419 million to be the baseline STAR Line cost that was then compared to the costs for the subsequent scenarios that were considered.

A.3.1.3 *Scenario No. 2: STAR Line with Double Main between Hoffman Estates and Joliet plus Third Main between East Siding and Walker*

Scenario No. 1B was shown to not be feasible operationally when considering CN+EJ&E freight trains and Metra STAR Line trains with the infrastructure identified in the Metra 2007 Draft Alternatives Analysis (see Figure A.3-4). Scenario No. 2 considered additional mainline track construction to provide additional capacity. Scenario No. 2 includes the same CN+EJ&E freight trains and Metra STAR Line trains with essentially the same improvements considered for Scenario No. 1, with the addition of a third mainline track between East Siding at MP 21.0 and Walker at MP 10.3. Again these improvements for the initial service would allow the joint use of the existing and proposed tracks by both freight and passenger trains. For purposes of the Scenario No. 2 analysis, it was again assumed that CN would allow the additional track to be built within EJ&E right-of-way without a transfer of ownership to Metra.

Similar to the analysis for Scenario No. 1, SEA's Scenario No. 2 analysis also included additional features that were not identified in Metra's 2003 Study or the Metra 2007 Draft Alternatives Analysis but were determined to be desirable to consider for the proposed Metra train operations. SEA's Scenario No. 2 analysis included a two track connection at MP 42.3 just south of the Northwest Tollway/Interstate 90 overpass, plus a dedicated Metra mainline track between MP 42.3 and the Maintenance Facility at Spaulding and the Elgin-Bartlett/Spaulding Station. The north limit of the new double track was modified to tie into the south end of the existing Sutton siding at MP 42.2. Due to the heavy UP freight and Metra UP West Line passenger traffic at West Chicago, SEA's Scenario No. 2 analysis also included the same grade-separated crossing for the Metra STAR Line at West Chicago that was included in Scenario No. 1. For estimating purposes, Scenario No. 2 again assumed a lump sum cost of \$5,000,000 for each station/parking lot location and \$500,000 for each gauntlet track location.

SEA performed an operational analysis using RTC for Scenario No. 2. Based on the results of this analysis, SEA determined that Scenario No. 2 would function adequately with the infrastructure improvements identified above when considering Metra STAR Line trains and the CN+EJ&E trains resulting from the Proposed Action. Delay Ratios of approximately 10 percent for Metra STAR Line trains were also identified. This equates to approximately 2.3

minutes of delay per Metra train. The CN freight delay ratio was calculated to be 44.2 percent, or 61.4 minutes of delay per freight train. This is a relatively high delay ratio, but as identified in the Draft EIS, the initial modeling results of Base Case 4.5 of the original CN Operating Plan without Metra STAR Line trains calculated a freight delay ratio of 47.2 percent, or 64.6 minutes of delay per freight train. Hence Scenario No. 2 has fairly low STAR Line commuter train delays and lower freight delay ratios as compared with the RTC results listed in the Draft EIS analysis. The modeling results indicate that the Proposed Action would not adversely effect the operations of the STAR Line, and conversely that the added infrastructure would not adversely affect the operation of CN's proposed and EJ&E's existing freight traffic.

SEA's preliminary opinion of probable construction costs for the infrastructure improvements listed above for Scenario No. 2 was determined to be approximately \$472 million (2008 dollars) which includes a 25 percent contingency and 16 percent for engineering design and construction management. Table 4.1.2-B contains a summary listing of these costs. This summary includes the costs identified in the Metra 2003 Study for the Maintenance Facility/Yards which has been adjusted up to \$46 million in 2008 dollars. It should be noted that this summary does include costs for the items described above plus additional right-of-way that is estimated to be required. This summary does not include costs for the NWCS segment, rolling stock, environmental mitigation, utility relocation, access fees, or operating costs.

SEA's preliminary opinion of probable construction cost of \$472 million for Scenario No. 2 represents approximately a 2.3 percent increase above the baseline Scenario No. 1 cost of \$419 million. As part of the Proposed Action, CN has proposed to construct a second mainline track between East Siding (MP 21.1) and Walker Siding (MP 11.0), including upgrading and incorporating the existing sidings at Walker, Normantown, and East Siding as the second mainline track. The incremental cost between Scenarios No. 1 and No. 2 is essentially the cost to build this segment of additional main line track. It could be argued that, since CN has proposed to build this segment of additional main line track at their cost even without the STAR Line, there should be no incremental cost increase to Metra to implement Scenario No. 2 rather than Scenario No. 1.

A.3.1.4 *Scenario No. 3: STAR Line with Double Main between Hoffman Estates and East Siding plus Third Main between East Siding and Joliet*

Scenario No. 3 considered adding mainline trackage to provide additional capacity (see Figure A.3-5). Scenario No. 3 includes the same CN+EJ&E freight trains and Metra STAR Line trains with essentially the same improvements included for Scenario No. 2, with a third mainline track extended from Walker at MP 10.3 south to just north of Renwick Road at MP 7.7. These capacity improvements would allow the joint use of the existing and proposed tracks by both freight and passenger trains. For purposes of the Scenario No. 2 analysis, it was again assumed that CN would allow the additional track to be built within EJ&E right-of-way without a transfer of ownership to Metra.

Similar to the analyses for Scenarios No. 1 and No. 2, SEA's Scenario No. 3 analysis also included additional features that were not identified in Metra's 2003 Study or the Metra 2007

Draft Alternatives Analysis but were determined to be desirable for inclusion for the proposed Metra train operations. SEA's Scenario No. 3 analysis included a two track connection at MP 42.3 just south of the Northwest Tollway/Interstate 90 overpass, plus a dedicated Metra mainline track between MP 42.3 and the Maintenance Facility and Elgin-Bartlett/Spaulding station. The north limit of the new double track was modified to tie into the south end of the existing Sutton siding at MP 42.2. Due to the heavy UP freight and Metra West Line passenger traffic at West Chicago, SEA's Scenario No. 3 analysis also included the same grade-separated crossing for the Metra STAR Line at West Chicago that was included in Scenarios No. 1 and No. 2. For estimating purposes, Scenario No. 3 again assumed a cost of \$5,000,000 for each station/park & ride location and \$500,000 for each gauntlet track location.

SEA performed an operational analysis using RTC for Scenario No. 3. Scenario No. 3 differed from Scenario No. 2 by the addition of a segment of double track between Walker through Plainfield, the Lake Renwick area to the end of the STAR Line service near Renwick Road. While a slight improvement in overall average speed (18.2 MPH up from 18.0 MPH) and a reduction in delay ratio (38.5% down from 40.5%) were noted, these results do not likely justify the increase in cost of approximately \$27.9 million.

SEA's preliminary opinion of probable construction costs for the infrastructure improvements listed above for Scenario No. 3 was determined to be approximately \$500 million (2008 dollars) which includes a 25 percent contingency and 16 percent for engineering design and construction management. Table 4.1.2-B contains a summary listing of these costs. This summary includes the costs identified in the Metra 2003 Study for the Maintenance Facility/Yards which has been adjusted up to \$46,000,000 in 2008 dollars. It should be noted that this summary does include costs for the items described above plus additional right-of-way that is estimated to be required. This summary does not include costs for the NWCS segment, rolling stock, environmental mitigation, utility relocation, access fees, or operating costs.

SEA's preliminary opinion of probable construction cost of \$500 million for Scenario No. 3 represents approximately an 8.9 percent increase above the baseline Scenario No. 1 cost of \$419 million.

A.3.1.5 *Scenario No. 4: Stand-Alone Option - STAR Line with CN Double Main between East Siding and Walker plus Exclusive Metra Main between Hoffman Estates and Joliet*

Metra has envisioned the STAR Line to operate in mixed use with freight traffic similar to how Metra operates on all other diesel-operated service corridors in the Chicago area (see Figure A.3-6). As an alternative to a mixed freight-passenger corridor on the EJ&E, SEA considered the 52 daily STAR Line trains using a dedicated passenger-only Metra main line track located on the east side of the EJ&E corridor between Joliet (MP 7.5) and Hoffman Estates (MP 42.5). A dedicated main track for the STAR Line would allow Metra trains to operate independent of the CN+EJ&E trains. Under Scenario No. 4, Metra would purchase a 20 foot-wide swath on the east side at the outer edge of the EJ&E right-of-way between MP 42.5 and MP 7.5 and would then install a single track commuter network within this swath. At some locations where the right-of-way is limited by topographic features and

locations where passing tracks and stations would be required for Metra trains to meet opposing Metra trains and for passenger stations and park & rides, additional property would need to be acquired as needed outside the EJ&E right-of-way. The cost for this property acquisition has not been estimated. Due to the heavy UP freight and Metra UP West Line passenger traffic at West Chicago, SEA's Scenario No. 4 analysis also included the same grade-separated crossing for the Metra STAR Line at West Chicago that was included in the previous Scenarios. Because Metra would enter the EJ&E on the east side of the right-of-way at MP 42.5 and exit the EJ&E right-of-way on the west side at MP 7.5, a grade-separated flyover has been assumed just north of the Joliet/Renwick Road station.

The advantages to operating a stand-alone commuter network within the EJ&E ROW include:

- Metra could control their own operation which includes the ability to add, subtract or modify commuter service on an as-needed basis.
- Metra could also realize lower liability insurance premiums for independent rather than co-mingled or shared service.
- Track Access Fees would be eliminated.
- Metra could avoid the installation of gauntlet tracks at station locations.
- If desired, Metra could operate non-compliant vehicles.
- Signal spacing could be tailored for optimal commuter train operation. Developing a wayside signal system that provides for the safe operation of two-mile long freight trains operating at 40-45 MPH combined with 500 foot long commuter trains operating at 79 MPH can be difficult and expensive.

Since this Metra track would be independent of the CN+EJ&E trackage, Scenario 4 does not include upgrading the CN+EJ&E trackage and signal system. A new Centralized Traffic Control signaling system with bi-directional signaling would be installed for the Metra track and would include locations where CN+EJ&E trains would need to cross the Metra main line to service industries located on the east side of the right-of-way. CN could serve these industries at night to minimize interference with STAR line commuter trains.

Since only Metra STAR Line trains would operate on this dedicated main line track, mid or high level platforms could be used to accomplish level boarding. For estimating purposes, Scenario No. 4 again assumed a cost of \$5,000,000 for each of the eight station/park & ride locations, but the cost of gauntlet tracks was not included.

In order for the dedicated Metra track to not be considered an adjacent track for maintenance purposes, the centerline of the Metra track would need to be located a minimum of 25 feet from the centerline of the closest CN track. This separation allows either railroad to perform maintenance tasks independent of and without contacting the other railroad. Since this 25-foot separation is greater than the usual 15-foot track centers, additional right-of-way would need to be acquired because the grading footprint for the new Metra track would likely be off the existing right-of-way at more locations for Scenario No. 4 than for Scenarios No. 1 through No. 3.

SEA's preliminary opinion of probable construction costs for the infrastructure improvements listed above for Scenario No. 4 was determined to be approximately \$499.7

million (2008 dollars) which includes a 25 percent contingency and 16 percent for engineering design and construction management. Table A3-3 contains a summary listing of these costs. This summary includes the costs identified in the Metra 2003 Study for the Maintenance Facility/Yards which has been adjusted up to \$46,000,000 in 2008 dollars. It should be noted that this summary does include costs for the items described above plus additional right-of-way that is estimated to be required. Because the stand-alone alternative will be free and clear of CN's track infrastructure, the improvements that CN is planning to improve capacity along the EJ&E will not provide a benefit to Scenario No.4. This summary does not include costs for the NWCS segment, rolling stock, environmental mitigation, utility relocation, access fees, or operating costs.

SEA's preliminary opinion of probable construction cost of \$499.7 million for Scenario No. 4 represents approximately a 19.3 percent increase above the baseline Scenario No. 1 cost of \$419 million.

Item	Scenario No. 1	Scenario No. 2	Scenario No. 3	Scenario No. 4
Track (Ballast, Ties, Rail & OTM)	\$40,627,900	\$53,333,500	\$57,157,900	\$57,194,000
Track Rehabilitation	\$20,282,760	\$20,282,760	\$20,282,760	\$0
Remove Track	\$948,250	\$918,200	\$931,250	\$186,300
Remove Turnout (s)	\$440,000	\$440,000	\$460,000	\$0
Add Track @ Diamond Crossing	\$450,000	\$600,000	\$600,000	\$1,650,000
Turnouts:				
New #10 (Hand Throw)	\$2,100,000	\$2,100,000	\$2,300,000	\$600,000
New #15 (Power Operated)	\$300,000	\$300,000	\$300,000	\$0
New #20 (Power Operated)	\$9,800,000	\$11,800,000	\$12,800,000	\$2,000,000
Gauntlet Tracks	\$3,500,000	\$3,500,000	\$3,500,000	\$0
Drainage & Erosion Control	\$15,500,000	\$20,000,000	\$21,500,000	\$21,500,000
Railroad Bridges/Underpasses	\$16,695,000	\$18,300,000	\$23,580,000	\$17,400,000
Railroad Flyovers:				
West Chicago	\$15,225,000	\$15,225,000	\$15,225,000	\$16,425,000
Renwick Rd.	\$0	\$0	\$0	\$9,900,000
Modifications to Existing Highway Overpasses	\$1,682,500	\$1,682,500	\$1,682,500	\$7,003,750
New Grade Crossing (Surfaces and Track)	\$1,387,200	\$1,789,600	\$2,032,800	\$1,215,200
Embankment (Assumed 68 SF/TF)	\$12,029,396	\$15,819,596	\$16,925,850	\$42,029,307
Mechanically Stabilized Earth (MSE Wall) for Flyovers	\$0	\$0	\$3,625,000	\$7,125,000
Right-of-Way	\$16,500,000	\$24,900,000	\$26,400,000	\$34,800,000
Train Control Signals	\$45,500,000	\$48,800,000	\$49,700,000	\$39,600,000
Stations	\$40,000,000	\$40,000,000	\$40,000,000	\$40,000,000
Maintenance Facilities and Yards	\$46,000,000	\$46,000,000	\$46,000,000	\$46,000,000
SUBTOTAL	\$288,968,006	\$325,791,156	\$345,003,060	\$344,628,557
Contingency	\$72,242,002	\$81,447,789	\$86,250,765	\$86,157,139
Design / Construction Management	\$57,793,601	\$65,158,231	\$69,000,612	\$68,925,711

TOTAL PROJECT COST	\$419,003,609	\$472,397,176	\$500,254,437	\$499,711,407
Less Work Completed By CN		\$43,871,645	\$43,871,645	
Net Project Costs (to Metra)		\$428,525,530	\$456,382,792	\$499,711,407
INCREMENTAL COST Above Scenario No. 1 (\$)		\$9,521,921	\$37,379,182	\$80,707,798
INCREMENTAL COST Above Scenario No. 1 (percent)		2%	9%	20%

A.3.2 Summary of SEA's Additional Analysis for the Metra STAR Line

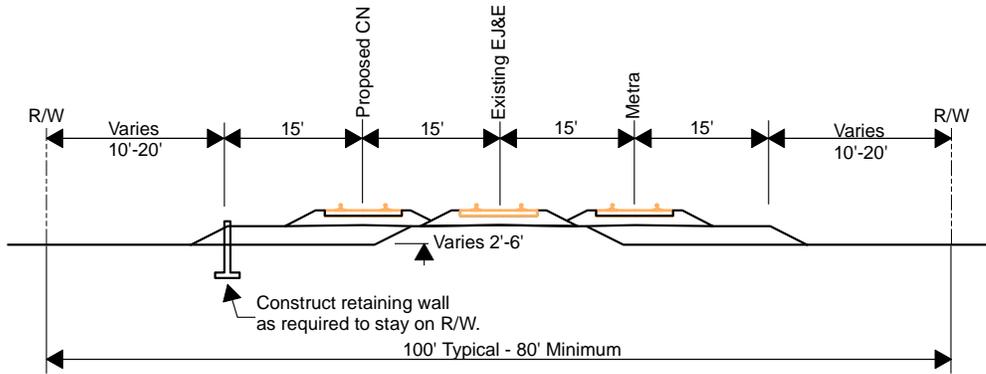
Table A3-4 contains a summary listing of the capital costs for Scenarios No. 1 through No. 4 including the incremental capital costs to implement each of Scenarios No. 2 through No. 4 over and above the cost of Scenario No. 1 for the EJ&E segment. SEA's analysis shows that the cost to Metra to implement the STAR Line will be greater if the Proposed Action is approved. The percent ranges of the incremental increases are within reasonable ranges given the project complexities and factors that can only be more accurately identified through further detailed analysis. Since SEA did not include costs for the NWCS or for rolling stock, these percentages would be even lower if considered as a percentage of the overall cost to implement the entire STAR line project. CN has indicated that they will construct approximately ten miles of double track. If this double track construction occurs, Metra's cost for Scenarios 2 and 3's could be reduced accordingly. SEA has estimated that the probable construction costs for the double track segment between East Siding and Walker that includes connecting the existing sidings at East Siding, Normantown and Walker would be approximately \$43.9 million. This cost may be higher than ultimately estimated by CN as SEA's estimate includes several universal interlockings between East Siding and Walker than were not included in CN's original estimate.

TABLE A3-4. SUMMARY COMPARISON OF OPINION OF PROBABLE CONSTRUCTION COSTS FOR SCENARIOS NO. 1 THROUGH NO. 4 (2008 DOLLARS)				
	Scenario No. 1	Scenario No. 2	Scenario No. 3	Scenario No. 4
Total Project Cost	\$419,003,609	\$472,397,176	\$500,254,437	\$499,711,407
Incremental Cost Above Scenario No. 1 (\$)		\$53,393,567	\$81,250,828	\$80,707,798
Incremental Cost Above Scenario No. 1 (percent)		13 percent	20 percent	19 percent
LESS WORK COMPLETED BY CN		\$43,871,645	\$43,871,645	
NET PROJECT COSTS (TO METRA)		\$428,525,530	\$456,382,792	
INCREMENTAL COST Above Scenario No. 1 (\$)		\$9,521,921	\$37,379,182	
INCREMENTAL COST Above Scenario No. 1 (percent)		2 %	9 %	

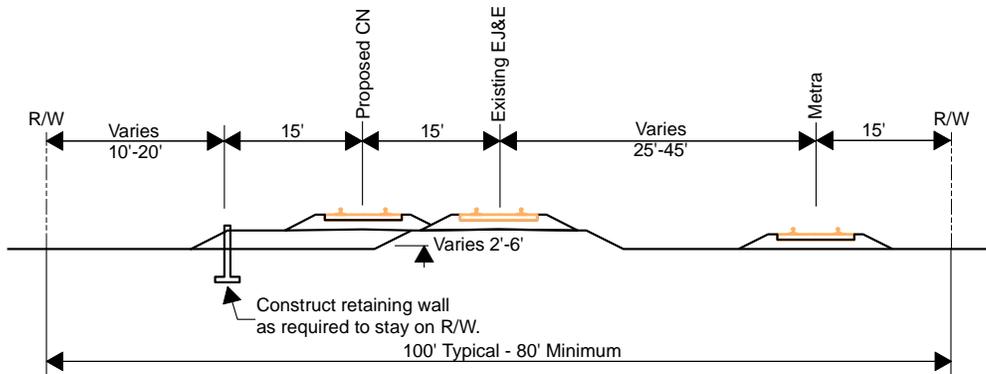
A major consideration when discussing STAR Line implementation is the speculative nature of determining costs for additional right-of-way. SEA's analysis identified costs per acre that were used uniformly but these costs in reality could vary widely per location. Scenario No. 4 has relatively low capital costs but would likely require the most right-of-way to implement. SEA also did not consider potential utility relocation for the additional analysis due to the

limited information available, but these costs would also become factors in determining overall implementation costs.

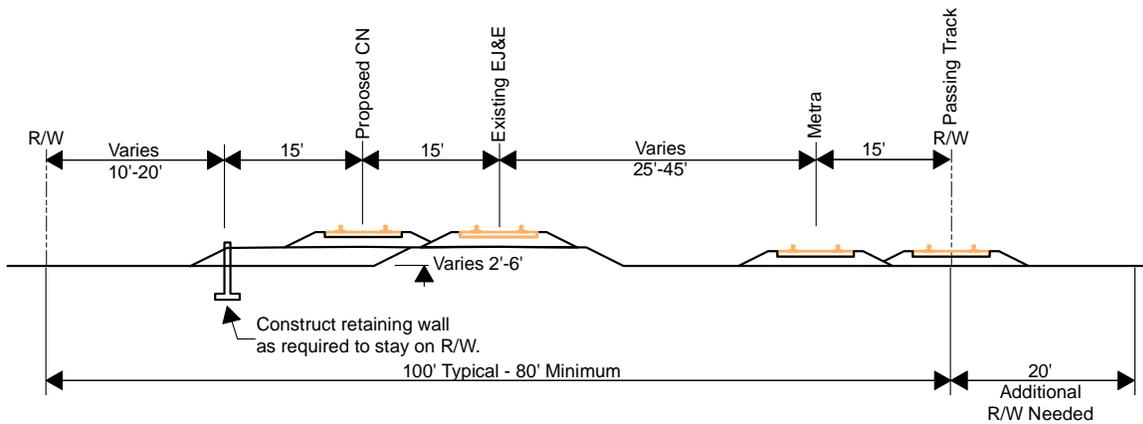
In conclusion, SEA determined that implementation of the STAR Line would still be physically possible and operationally feasible if the Proposed Action is approved. SEA acknowledges that the Proposed Action would increase the cost and difficulty to implement the STAR Line but would not preclude it.



Co-Mingled 3 Track Main



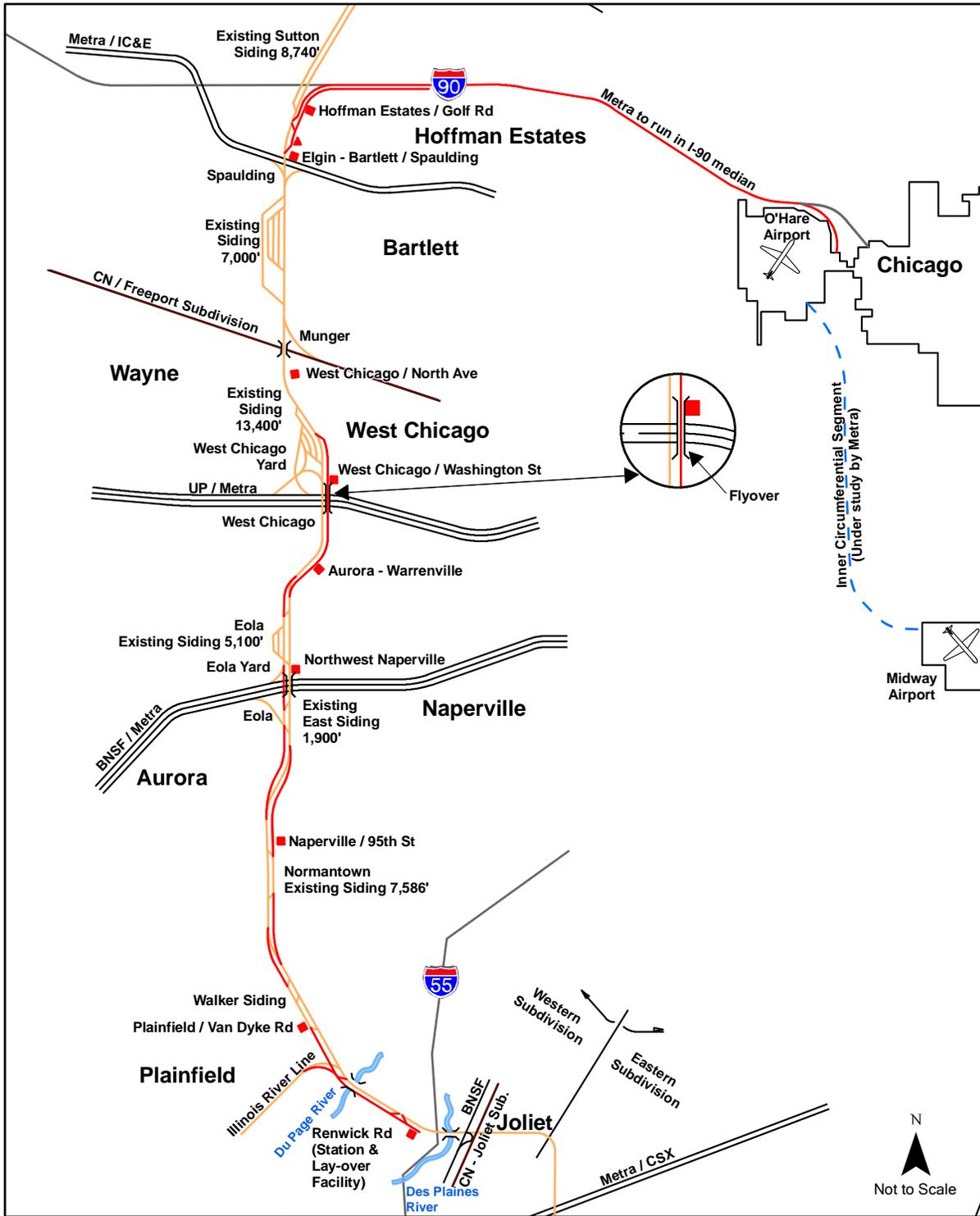
Stand-Alone



Stand-Alone With Passing Track

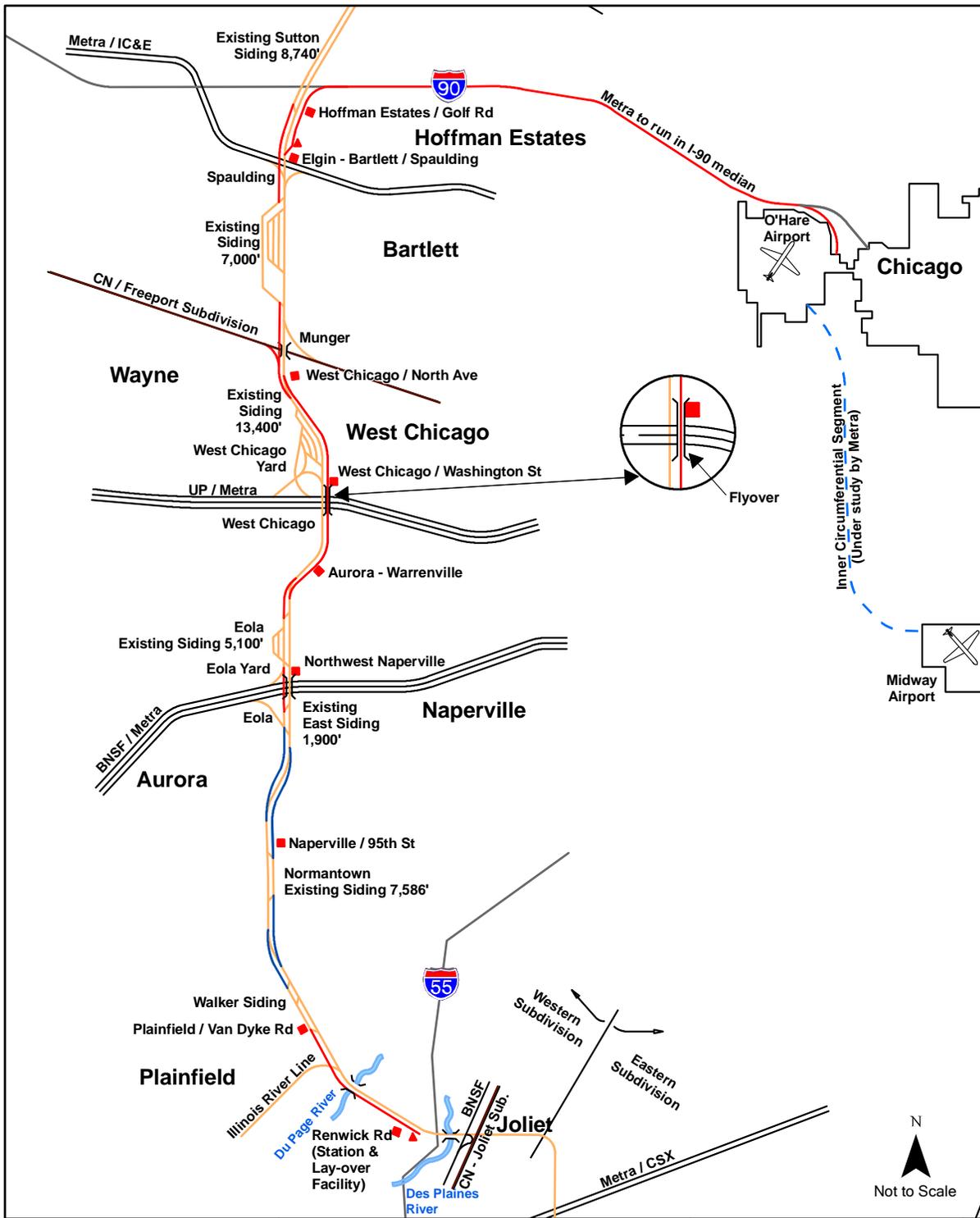


Figure A.3-1
Star Line
Commuter Rail
Typical Sections



- EJ&E Rail Line
- CN Rail Line
- Other Rail Line
- CN Proposed Track Improvements per Application
- Proposed Track
- Proposed Metra Station on EJ&E
- ▲ Proposed Metra Maintenance Facility on EJ&E

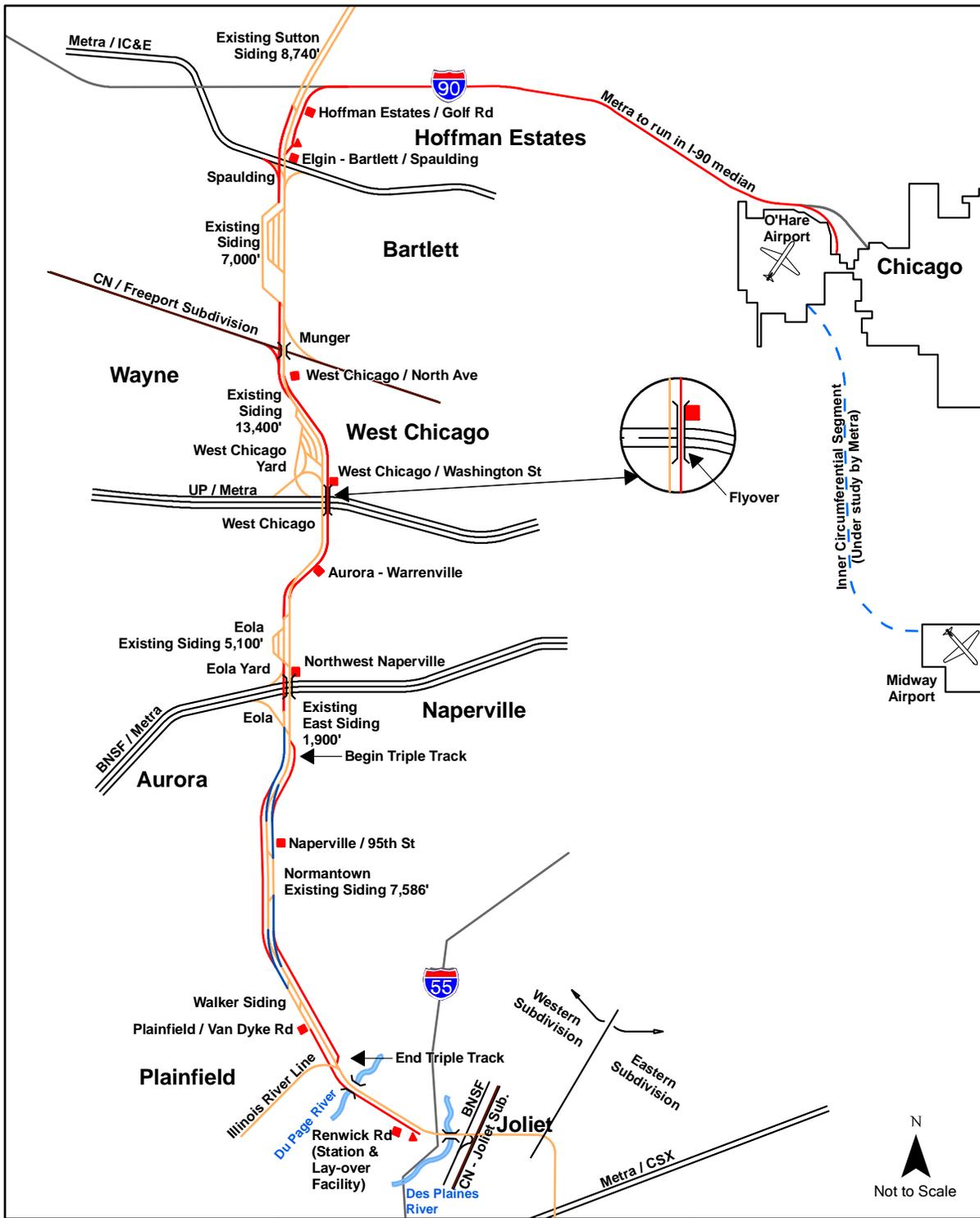
Figure A.3-2
Star Line
Commuter Rail
Alternative 0.0



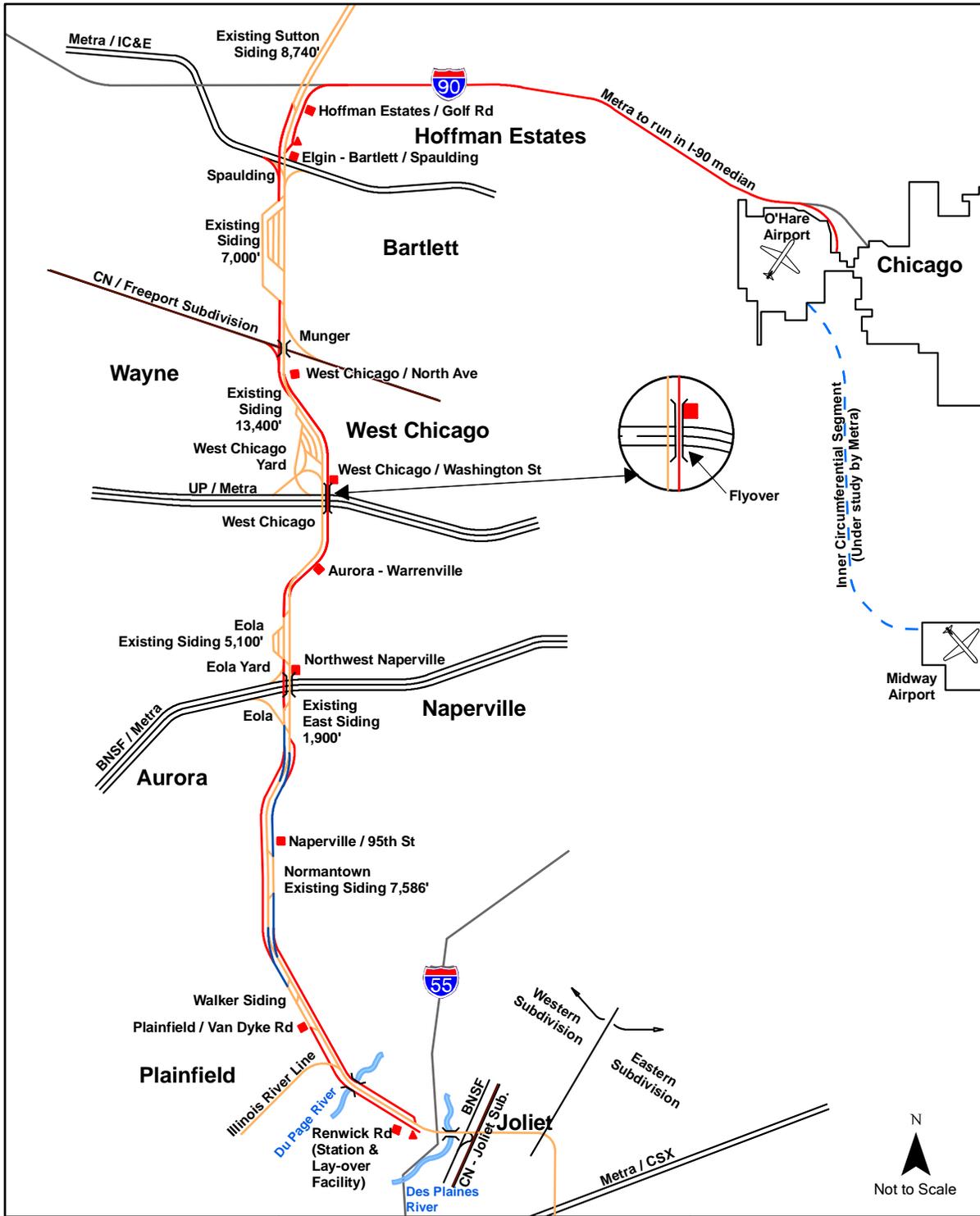
CN | EJ&E
Environmental Impact Statement

- EJ&E Rail Line
- CN Rail Line
- Other Rail Line
- CN Proposed Track Improvements per Application
- Proposed Track
- Proposed Metra Station on EJ&E
- ▲ Proposed Metra Maintenance Facility on EJ&E

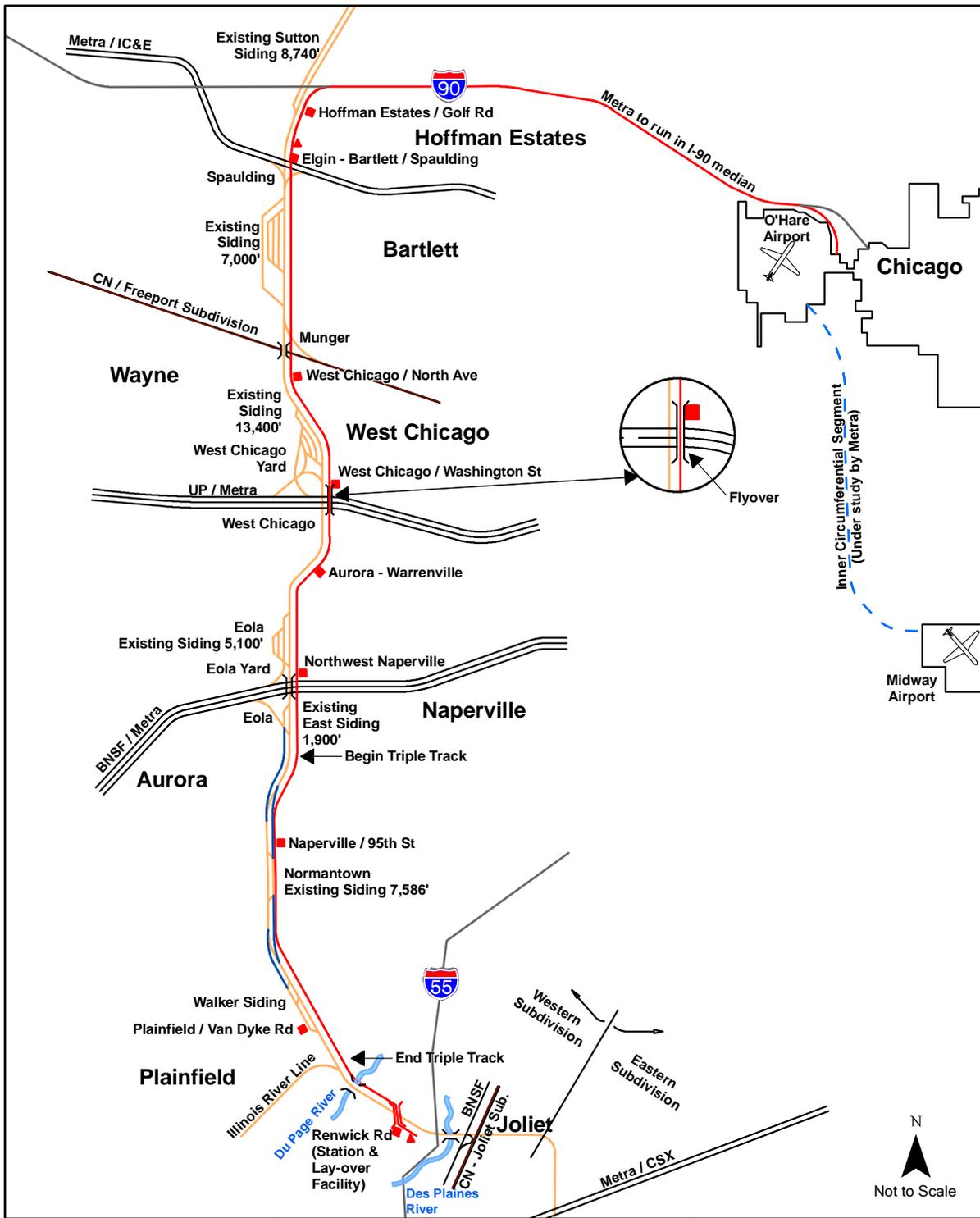
Figure A.3-3
Star Line
Commuter Rail
Alternative 1.0



<p>Environmental Impact Statement</p>	<ul style="list-style-type: none"> — EJ&E Rail Line — CN Rail Line — Other Rail Line — CN Proposed Track Improvements per Application — Proposed Track ■ Proposed Metra Station on EJ&E ▲ Proposed Metra Maintenance Facility on EJ&E 	<p>Figure A.3-4 Star Line Commuter Rail Alternative 2.0</p>
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<p>Environmental Impact Statement</p>	<ul style="list-style-type: none"> — EJ&E Rail Line — CN Rail Line — Other Rail Line — CN Proposed Track Improvements per Application — Proposed Track ■ Proposed Metra Station on EJ&E ▲ Proposed Metra Maintenance Facility on EJ&E 	<p>Figure A.3-5 Star Line Commuter Rail Alternative 3.0</p>
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- EJ&E Rail Line
- CN Rail Line
- Other Rail Line
- CN Proposed Track Improvements per Application
- Proposed Track
- Proposed Metra Station on EJ&E
- ▲ Proposed Metra Maintenance Facility on EJ&E

Figure A.3-6
Star Line
Commuter Rail
Alternative 4.0

A.4 Safety
Federal Railroad Administration Letter
CN Safety Record in Canada

13680



U.S. Department
of Transportation

**Federal Railroad
Administration**

Administrator

1200 New Jersey Avenue, SE
Washington, DC 20590

SEP 12 2008

Ms. Victoria J. Rutson
Chief, Section of Environmental Analysis
Surface Transportation Board
1925 K Street NW
Washington, DC 20423

Re: Canadian National Railway Safety Integration Plan, Finance Docket No. 35087

Dear Ms. Rutson:

Pursuant to applicable regulations, the Federal Railroad Administration (FRA) hereby submits its findings and conclusions on the Safety Integration Plan (SIP) prepared for the proposed Canadian National Railway Company and Grand Trunk Corporation (CN) acquisition of the Elgin, Joliet and Eastern West Company (EJ&EW) (as per Title 49 Code of Federal Regulations (CFR) Section 244.17).

On December 28, 2007, CN filed its initial SIP with FRA and the Surface Transportation Board (STB) detailing the process and timetable for the merger of its operations with those of the EJ&EW. Subsequent discussions between FRA and CN resulted in CN submitting a revised SIP by letter dated June 27, 2008.

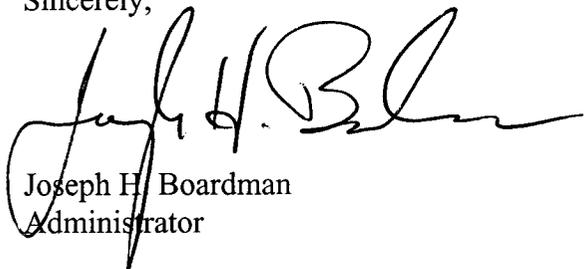
After careful review of the revised SIP, FRA finds that CN has adequately addressed the concerns FRA raised regarding the original SIP, and FRA finds that CN has now satisfactorily addressed each of the SIP elements required as per 49 CFR § 244.13.

Assuming that CN's acquisition of EJ&EW is approved, FRA will monitor CN's implementation of the SIP during the operations integration period. In accordance with regulatory requirements, FRA will also consult with the STB at all appropriate stages of implementation and will advise the STB of CN's status implementing the SIP, as appropriate. (See 49 CFR § 244.17(g).)

Finally, FRA supports adoption of the standard relevant conditions in rail merger cases, i.e., requiring the merging carriers to comply with the final SIP and to continue to

coordinate with FRA during the implementation of the transaction. (See, for example, Draft Environmental Impact Statement at ES-35).

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph H. Boardman". The signature is fluid and cursive, with a large initial "J" and a long, sweeping underline.

Joseph H. Boardman
Administrator

A.4 Canadian National Safety Record

CN's Safety Record in Canada

Several commenters on the Draft EIS expressed concerns about CN's safety record in Canada. This section provides an overview of Canada's rail safety regulations and CN's safety performance.

Transport Canada (TC), a department of the Canadian federal government, has jurisdiction over federally certified railways in Canada. TC reports to the Minister of Transport. A number of short lines operating solely within individual provinces fall within provincial jurisdiction; steps have been taken to harmonize federal and provincial regulation of railways under their respective jurisdictions.

A number of pieces of legislation cover the operation of federal railways in Canada, including;

- Canada Transportation Act
- Railway Safety Act
- Transportation of Dangerous Goods Act
- Canadian Transportation Accident Investigation and Safety Board Act
- Railway Relocation and Crossing Act

Two separate branches within Transport Canada have responsibility for implementing, monitoring and administering rail safety: the Rail Safety Directorate, and the Transport of Dangerous Goods Directorate (the latter has responsibility for handling and transportation of dangerous commodities by all modes).

The independent Transportation Safety Board of Canada (TSBC) conducts independent accident investigations for all transportation modes under federal jurisdiction, makes findings as to cause and contributing factors, identifies safety deficiencies, makes recommendations and reports publicly. TSBC regulations require accidents and incidents be reported to it, and establishes standards for reporting. The TSBC reports directly to the Privy Council.

The Canadian Transportation Agency (CTA) is an independent, quasi-judicial tribunal reporting to Parliament through the Minister of Transport. The CTA deals mainly with issues of economic regulation, market-entry and dispute resolution for all transport modes under federal jurisdiction. Although the CTA is responsible for issuing the Certificate of Fitness required for the operation of a railway company, it otherwise has a limited role in rail safety related mainly to level crossing issues, right of access to owners of adjoining land, and noise.

Comparison with the United States

The role of Transport Canada with respect to rail, particularly the role of the Rail Safety Directorate, is largely vested with the Federal Railroad Administration (FRA) in the US. The Transportation Safety Board of Canada acts similarly to the National Transportation Safety Board in the US. The Canadian Transportation Agency's role is largely filled by Surface Transportation Board in the US.

A.3.3 Rulemaking under the Railway Safety Act

Rulemaking in Canada under the *Railway Safety Act* (RSA) is largely a voluntary and consultative, rather than a prescriptive and directory, process. TC envisions the regulatory process as being performance-based. The Minister, however, has preemptory and definitive power under the RSA to order a railway company to formulate or revise its rules on any matter involving rail safety, and may impose rules directly.

FRA regulations are more prescriptive with little room for flexibility. While there has been discussion within the industry in the US about risk and performance based regulations, there has been little progress to date.

A.3.4 Background on Current Concerns about Rail Safety in Canada

The RSA was implemented in 1989 during a period of significant change in rail transportation in Canada – government deregulation, industry privatization and restructuring. The two Class I Railroads in Canada, the CN and CPR, closed many unprofitable lines and transferred others to newly created short lines. CN was privatized in 1995 and CPR completely reorganized and moved its headquarters from Montreal to Calgary in 1996.

The RSA reflected a move from a fully prescriptive regulatory approach to a co-operative relationship where Transport Canada retained overall responsibility for safety. After a mandated review in 1994, the RSA was amended in 1999, whereby each railway was required to develop and implement a safety management system (SMS). The SMS approach is neither deregulation nor industry self-regulation, but partnering between the industry and the regulator to better manage risks and continuously improve safety performance. The SMS approach remains in effect today.

From the mid-1990's through 2002, railway accidents in Canada declined. The trend reversed from 2003 through 2005, during which time there were a number of high-profile accidents. Although the number of accidents fell off again in 2006, the Minister of Transport, Infrastructure and Communities, under pressure from the media, the public, federal opposition parties, provincial governments and rail unions, initiated the *Railway Safety Act* Review in December, 2006. A Review Advisory Panel was appointed by the Minister in February 2007. The Minister tabled the Panel's report entitled *Stronger Ties: A Shared Commitment to Railway Safety – Report of the Railway Safety Act Advisory Panel* in the House of Commons on March 7, 2008.

The House of Commons' Standing Committee on Transport, Infrastructure and Communities commenced its own review of rail safety in October 2006 (2 months before the Minister announced his review) and issued a report on May 29, 2008 which largely endorsed the finding of the Advisory Review Panel while adding a few recommendations of its own.

A.3.5 CN's Safety Record in Canada

CN and CPR have both suffered a number of high – profile accidents over the last few years. In its Introduction, the Advisory Panel makes specific reference to accidents at Cheakamus Canyon BC, Lillooet BC and Montmagny, Quebec, all involving CN. And in the body of its Report, the Panel compares accidents at Cheakamus and Wabamun, Alberta, other locations on CN.

The specifics of the accidents at the four CN locations are as follows:

Wabamun: On August 3, 2005, a CN freight train, proceeding westward from Edmonton, Alberta to Vancouver B.C., derailed 43 cars, including 1 loaded car of pole treating oil, 1 car of toluene, and 25 cars of Bunker C (heavy fuel oil) at Mile 49.4 of the Edson Subdivision near Wabamun, Alberta. Approximately 700,000 litres of Bunker C and 88,000 litres of pole treating oil were spilled causing extensive property, environmental, and biological damage in and adjacent to Lake Wabamun. About 20 people were evacuated from the immediate area. There were no injuries.

Cheakamus: On August 5, 2005, a CN freight train, proceeding northward from Squamish to Lillooet, B.C., derailed nine cars including one of sodium hydroxide (caustic soda) and eight empties at Mile 56.6 of the Squamish Subdivision near Garibaldi, B.C.

Approximately 40,000 litres of caustic soda spilled into the Cheakamus River, causing extensive environmental damage. There were no injuries.

Montmagny: The Transportation Safety Board investigated four accidents, which took place on CN's Montmagny Subdivision in 2002, 2003 and 2004. These were:

On July 22, 2002, 52 cars, 51 of which were empty tank cars which had recently held fuel oil and gasoline, derailed and rolled over while being switched in Joffre Yard at Levis, Quebec, Mile 115.2 of the Montmagny Subdivision. Two switches and 3600 feet of track were damaged. There were no injuries.

On January 20, 2003, an eastbound CN freight train collided with a Hi-rail vehicle at Mile 97.60 of the Montmagny Subdivision, near St. Charles, Quebec. The Hi-rail vehicle was destroyed and the lead locomotive slightly damaged. There were no injuries.

On February 7, 2004, a westbound CN freight train derailed 27 freight cars, including a pressure tank car loaded with chlorine at Mile 77.8 of the Montmagny Subdivision in the city of Montmagny, Quebec. Approximately 1500 feet of track and two public crossings were damaged. Three spans of the railway bridge over the Du Sud River were destroyed, and the remaining six spans were damaged. There was no release of dangerous goods and no-one was injured.

On November 12, 2004, 10 multi – platform container cars of an eastbound CN freight train derailed at Mile 114.8 of the Montmagny Subdivision, near Levis, Quebec. The cars sustained minor damage, and two switches and 500 metres of track were damaged. No dangerous goods were spilled and there were no injuries.

On June 29, 2006, a CN locomotive and lumber car derailed approximately 40 kilometres north of Lillooet B.C. Two CN employees were killed and a third injured. The locomotive and car were destroyed.

While rulemaking in Canada under the *Railway Safety Act* is a consultative and cooperative rather than a prescriptive and directory process, the Minister has preemptory and definitive power under the RSA to order a railway company to formulate or revise its rules on any matter involving rail safety, and may impose rules directly. Transport Canada, acting on behalf of the Minister, has used this authority on several occasions to issue orders affecting

CN operations, particularly on the former BC Rail property acquired by CN in 2004. Transport Canada also carried out a detailed audit of CN's safety management system.

A.3.5.1 Canadian Rail Safety Statistics

- The Panel analyzed accidents reported to the Transportation Safety Board of Canada (TSBC) since the RSA was implemented in 1989 through 2006 and found two periods during which accidents increased, 1992-1996 and 2002-2005.
- The first increase was attributed to a change in reporting requirements, which started in 1992 and not fully implemented until 1994. The turmoil associated with the privatization of CN in 1995 and CPR's reorganization and move of headquarters to Calgary likely also contributed, as did the severe winter weather in the middle of the decade.
- The Panel noted that the sale of lightly used (and therefore less well-maintained) federal lines to provincial railways may have contributed to the reduction of accidents between 1997 and 2002. Similarly, CN's 2004 acquisition of previously provincially – regulated BC Rail increased the size of the federally regulated network for which accident statistics were reported. Also, the mountainous nature of BC Rail likely contributes to higher preponderance of accidents. Many of the accidents CN experienced between 2004 and 2006 occurred on BC Rail.

The Panel found:

- Main track accidents accounted for only 12.2 percent of all accidents in 2006, and 66 percent of these involved 5 cars or less. The Panel focused heavily on main track accidents, however, as these have the greatest potential for catastrophic impact. Also, while infrequent, total main track accidents increased between 2002 and 2005, then fell in 2006.
- Non main track accidents accounted for 52.8 percent of all accidents in 2006. These also increased from 2002 to 2005.
- Crossing accidents accounted for 23.6 percent of the total in 2006, and have fallen substantially since 1989. Trespasser accidents accounted for 2.8 percent of the total in 2006 and have remained fairly constant over the period. Crossing and trespasser accidents are the cause of most railway fatalities and serious injuries, responsible for 87 percent (142 people) of the total in 2006.
- While transportation of dangerous goods on CN and CPR increased by approximately 60 percent between 1997 and 2006, reportable accidents and incidents fell dramatically.

A.3.5.2 Comparison of Canadian and U.S. Reporting Criteria

What constitute railway reportable “accidents” and “incidents” in Canada are very different from those in the U.S.; further the word “accident” has a very different meaning in Canada than in the U.S. Therefore what are counted as accidents in the two countries are not the same and cannot be compared.

What constitutes an “accident” in Canada is far more encompassing. To emphasize this point, data provided by the TSBC for the years 2005 and 2006, showing TSB reportable accidents compared to accidents which would have been reported had the FRA methodology been used, is shown in the following table:

Numbers of TSB Reportable Accidents and Accidents Indicated as FRA Reportable				
	2005		2006	
	CTSB Reportable Accidents	Accidents Indicated as FRA Reportable	Accident Type	Accidents Indicated as FRA Reportable
Main track Collisions & Derailments	200	71	137	33
All other	1,047	55	1,006	34
Total	1,247	126	1,143	67

Source: Joseph F. Schulman, CPCS Transcom Limited, *The State of Rail Safety in Canada* (August 2007), p. 29, Figure 7.1 (see Appendix C)

A.3.5.3 Comparison of Canada/U.S. Rail Safety Records

Using conversion data like that above provided by both CPR and CN, a comparison can be made of the Canadian railways with their Class I counterparts in the U.S. and draw the following conclusions:

- CN's performance since 1996, its first year following privatization, has been consistently better.
- CN's and CPR's accident rates per million train miles for their combined Canadian and U.S. operations averaged over the entire period 1996 – 2006 are 2.2 and 2.4 respectively. This compares favorably with the averages of the four largest U.S. railways, which range between 2.8 and 4.4, and the overall U.S. Class 1 (does not include Canadian operations of CN and CPR) average of 3.9 per million train miles for the same period
- CN's average for its U.S. operations alone is 5.4, higher than the U.S. Class 1 average. CPR's
- CN's and CPR's safety records in Canada are better than those achieved in the U.S.

A.3.5.4 Panel's Conclusions and Recommendations

The Panel concluded “the safety record of Canada’s major railways (CN and CPR) is among the best in North America”. It also found that “the RSA and its principals are fundamentally sound” and indicated it “supported the SMS approach to managing railway safety.” It stressed, however, the upward trend of main track accidents must be addressed, and improvements made to reduce accidents in yards and on railway spurs.

The Panel went on to make 56 recommendations. Only five of these dealt with operational issues. The bulk of the recommendations relate to governance, regulatory framework, the nature of safety management systems, information collection, analysis and dissemination,

proximity issues, environmental protection and response, scientific and technological innovation, resources, and relationships.

A.3.5.5 Harmonization of Rail Operations and Safety between Canada and the US

CN's activities in the US are governed by US and not Canadian laws and regulations. Even so there may be some concern that CN, as a company headquartered in Canada, is somehow different from the US based Class 1 roads. The following information is intended to allay concerns.

- Rail Safety Directorate senior officers hold confidential meetings with their FRA counterparts each spring and fall. Representatives of both organizations feel cross - border harmonization on rail safety is very good.
- The Railroad Safety Advisory Committee comprised of all North American railways and their unions as well as both Canadian and American regulators meet quarterly.
- Harmonization is expected to be furthered by railway associations and regulators working out problems one by one, rather than by formal structure. A number of factors contribute to this belief:
 - Harmonization is necessary for unimpeded flow of trade
 - The Rail industry has a 140-year history of close integration.
 - Canadian and U.S. railways operate in each other's countries.
 - Canadian railways see themselves as North American carriers with a mindset that operationally, the border does not exist.
 - Industry has always interchanged traffic, necessitating harmonization.
 - Industry is highly organized with associations, supplier groups and other bodies that have created standards and procedures that permeate day-to-day life.
 - Industry draws on common pool of equipment suppliers.

A.5 Transportation Systems

Current and Regional Mobility

Village of Barrington Traffic Operations Analysis

Table A.5-1 Total Vehicle Traffic and Percent Increase

A.5 Current and Regional Mobility

Appendix A Transportation Current and 2015 Regional Mobility

Current Regional Mobility

Section 3.3 of the Draft EIS discussed the existing local and regional highway systems, emergency vehicle services, navigation, and airports. To update current regional mobility conditions, SEA used updated ADTs to conduct additional analyses of crossing LOS and queue lengths. The results of SEA's additional analyses assessing current regional mobility factors are described below.

EJ&E Rail Line

SEA used updated ADT's and train operation data, including increased train speeds at some locations, to reassess potential effects of the Proposed Action on mobility within affected communities and the region. SEA's additional analyses resulted in several changes in Levels of Service (LOS) for roadways that cross the EJ&E rail line. The LOS refers to the efficiency at which a roadway, intersection, or highway/rail at-grade crossing operates and is a reflection of vehicle delay and congestion. LOS is one of the measurements planning agencies use to assess regional mobility. Based on SEA's additional analyses, the LOS for some affected roadways that cross the EJ&E declined but most improved. Table 2.5-2, below, (published in the Draft EIS with SEA's original results as Table 3.3-3) summarizes the changes in LOS that SEA identified.

LOS	Total	Lake (Illinois)	Cook (Illinois)	DuPage (Illinois)	Will (Illinois)	Lake (Indiana)
LOS A - B	54	10	12	5	21	6
LOS C - D	41	9	6	4	17	5
LOS E - F	17	7	2	3	1	4

SEA's new analyses of the current roadway conditions in each affected community resulted in many changes to queue lengths that were included in Section 3.3 of the Draft EIS. Those changes are described below.

Lake County, Illinois

Mundelein, Illinois

- IL 60/83 queue length changed from 950 feet to 930 feet, which continues to block Diamond Lake Road, a major cross street east of the crossing.

Kane County, Illinois

Aurora, Illinois

- Liberty Street LOS changed from LOS E-F to D or better.

Will County, Illinois

Plainfield, Illinois

- Wolf's Crossing Road changed from LOS E-F to LOS D or better.
- 127th Street changed from LOS D or better to LOS E-F.
- Main Street changed from LOS E-F to LOS D or better.

- Peak period queue lengths.
 - 127th Street queue length changed from 250 feet to 545 feet, and would still block Lincoln Highway/US 30, a major cross street west of the crossing.

Frankfort, Illinois

- 88th Avenue/Pfeiffer Road queue length changed from 275 feet to 285 feet, and would still to block one major roadway, Sauk Trail. Lake County, Indiana

Dyer, Indiana

- Hart Street now has a queue length that blocks a major roadway. Queue lengths at Hart Street are approximately 680 feet at the crossing, which blocks Matteson Street, a major roadway, north of the crossing.

Griffith, Indiana

- Broad Street now has a queue length that blocks a major roadway. Queue lengths at Broad Street are approximately 1,035 feet at the crossing, which blocks one major roadway, Main Street, north of the crossing.

CN Subdivisions

The new analysis resulted in several changes in LOS for the CN subdivisions. Table 2.5-3, below is a summary of those changes for the 2007 roadway LOS analysis.

Table A3-2. 2007 LOS Summary of Roadways Crossing CN Subdivisions						
LOS	Total	Waukesha (Illinois)	Freeport (Illinois)	Joliet (Illinois)	Chicago (Illinois)	Elsdon (Illinois/Indiana)
LOS A - B	74	20	17	9	1	27
LOS C - D	49	17	13	2	0	17
LOS E - F	29	10	6	3	1	9

River Grove, Illinois

- 1st Avenue queue length changes from 925 feet to 1,100 feet, which continues blocks North Avenue/IL 64, which is a major cross street north of the crossing.

Des Plaines, Illinois

- Prospect Avenue queue length changes from 150 feet to 325 feet, which continues to block US 12, which is a major cross street west of the crossing.
- Golf Road/IL 58 queue length changes from 1,175 feet to 1,125 feet, which continues to block Rand Road/US 12, a major cross street east of the crossing.
- Rand Road/US 12 queue length changes from 950 feet to 925 feet, which continues to block Golf Road (IL 58), a major cross street south of the crossing.

North Riverside, Illinois

- Harlem Avenue LOS changes from LOS D to LOS E-F.

- Peak period queue lengths.
 - Harlem Avenue/IL 43 queue length changes from 1,325 feet to 1,500 feet, which continues to block 26th Street, a major cross street north of the crossing.
 - 1st Avenue/IL 171 queue length changes from 1,600 feet to 1,425 feet, which continues to block Cermak Road, a major cross street south of the crossing.

Bloomington, Illinois

- Gary Avenue queue length changes from 825 feet to 850 feet, which continues to block Army Trail Road, a major cross street north of the crossing.

Lemont, Illinois

- Lemont Street LOS changes from LOS E-F to D or better.
- Stephen Street LOS changes from LOS D to LOS E-F.
- Peak period queue lengths.
 - Lemont Street changes from 70 feet to 75 feet, which continues to block one major roadway, Main Street

Lockport, Illinois

- 9th Street/IL 7 queue length changes from 1,200 feet to 1,275 feet, which continues to block State Street/IL 171, a major cross street east of the crossing.

Joliet, Illinois

- Jackson Street queue length changes from 1,165 feet to 1,175 feet, which continues to block Scott Street/IL 53 and Ottawa Street, major cross streets west of the crossing.
- Ohio Street queue length changes from 290 feet to 825 feet, and this updated queue length blocks Scott Street/IL 53 and Chicago Street/IL 53, major cross streets to the west, along with two railroad crossings to the east.

Chicago Subdivision

Richton Park and University Park, Illinois

- The Draft EIS discussed two roadways in University Park, Illinois. These two roadways should have been separately analyzed as being in University Park and Richton Park. University Parkway/Stuenkel Road is in Richton Park, Illinois, and W. Dralle Road is in University Park, Illinois.

Elsdon Subdivision

City of Chicago, Illinois

- 51st Street is a four-lane collector, but was shown as a two-lane connector in the Draft EIS.

Harvey, Illinois

The Draft EIS stated that all roadways in Harvey, Illinois currently operate at LOS D or better with no queue length issues. SEA's updated analyses identified the following regional mobility changes in Harvey, Illinois.

- Ashland Avenue is a two-lane collector that runs north-south, crossing the Elsdon subdivision. Ashland Avenue LOS changed from D to E-F.
- Wood Street is a four-lane collector that runs north-south and operates at LOS D or better. Wood Street parallels Ashland Avenue within 0.25 mile, and is an alternate route to the congested Ashland Avenue.
- Peak period queue lengths:
 - Ashland Avenue's revised queue length is approximately 850 feet, which blocks 147th Street/Sibley Boulevard (IL 83), a major cross street to the north.

Phoenix, Illinois

The Draft EIS did not address potential mobility effects in Phoenix, Illinois. SEA reviewed the roadways in Phoenix and identified one that crosses CN's Elsdon Subdivision at-grade at 155th Street.

- 155th Street operates at LOS D or better.
- Community is urban-residential and industrial in the vicinity of the crossing.

SEA concluded that mobility in Phoenix would not be substantially affected and would remain acceptable levels because the at-grade crossing operates at LOS D or better.]

A.5 Village of Barrington Traffic Operations Analysis

CHAPTER 1 – INTRODUCTION

This report documents the study methodology and evaluation of existing and future traffic operations in the Village of Barrington, Illinois. As part of the proposed purchase of the Elgin, Joliet, and Eastern Railway Company (EJ&E), Canadian National Railway (CN) is proposing to increase the number of freight trains using the EJ&E line. Increases in train traffic proposed by CN will have an effect on automobile traffic operations in Barrington, especially at the EJ&E at-grade crossings. Three corridors have been identified to be analyzed to assess area mobility: Northwest Highway, Main Street/Lake Cook Road, and Hough Street. These three corridors serve a majority of traffic in the Barrington area and have at-grade crossings with the EJ&E line.

Public meeting commentors and local government officials have expressed concerns about the interaction of the new EJ&E rail traffic with existing UP freight rail traffic, METRA commuter rail traffic, Barrington High School traffic and existing roadway congestion. A closer review of these conditions was deemed necessary recognizing that vehicular mobility and safety in the Barrington area is a complex issue requiring additional study. Therefore, this more detailed analysis of the interaction of train movements and motorist travel was conducted.

Chapter 1 describes the study methodology. Chapter 2 describes the VISSIM model coding methodology. Chapters 3 and 4 identify existing traffic conditions and analysis results. Chapter 5 identifies 2015 future traffic conditions and provides a comparative analysis of two future scenarios.

1.1 STUDY PURPOSE

This study will address:

- 1) Commenter and local agency concerns regarding worsening of the Barrington community congestion and mobility resulting from the Proposed Action;
- 2) Concerns regarding the inter-related effects of the Proposed Action on Barrington's transportation network due to the close proximity of major roadway intersections and railway crossings;
- 3) Analysis of reasonable and feasible alternatives for mitigation of the serious transportation system effects of the queuing predicted for the Hough Street and EJ&E rail line at-grade crossing.

These objectives will be addressed using a high-level, microscopic simulation model to simulate existing and future traffic conditions on Northwest Highway, Main Street/Lake Cook Road, and Hough Street corridors. PTV's VISSIM software program was employed for this purpose. Two rail lines, the EJ&E and the Union Pacific/Northwest Line, cross these three study corridors. Vehicles in these corridors currently experience delays due to train movements at these crossings. The current proposal by CN would result in an increase in the number of freight trains traveling through Barrington on the EJ&E line by the year 2015.

Three simulation models have been developed to assess effects of the Proposed Action on automobile traffic in the study area:

- 2008 Existing Conditions (simulation calibration)
- 2015 Future Conditions - No Action (No Action for EJ&E)
- 2015 Future Conditions - Proposed Action (EJ&E traffic increases)

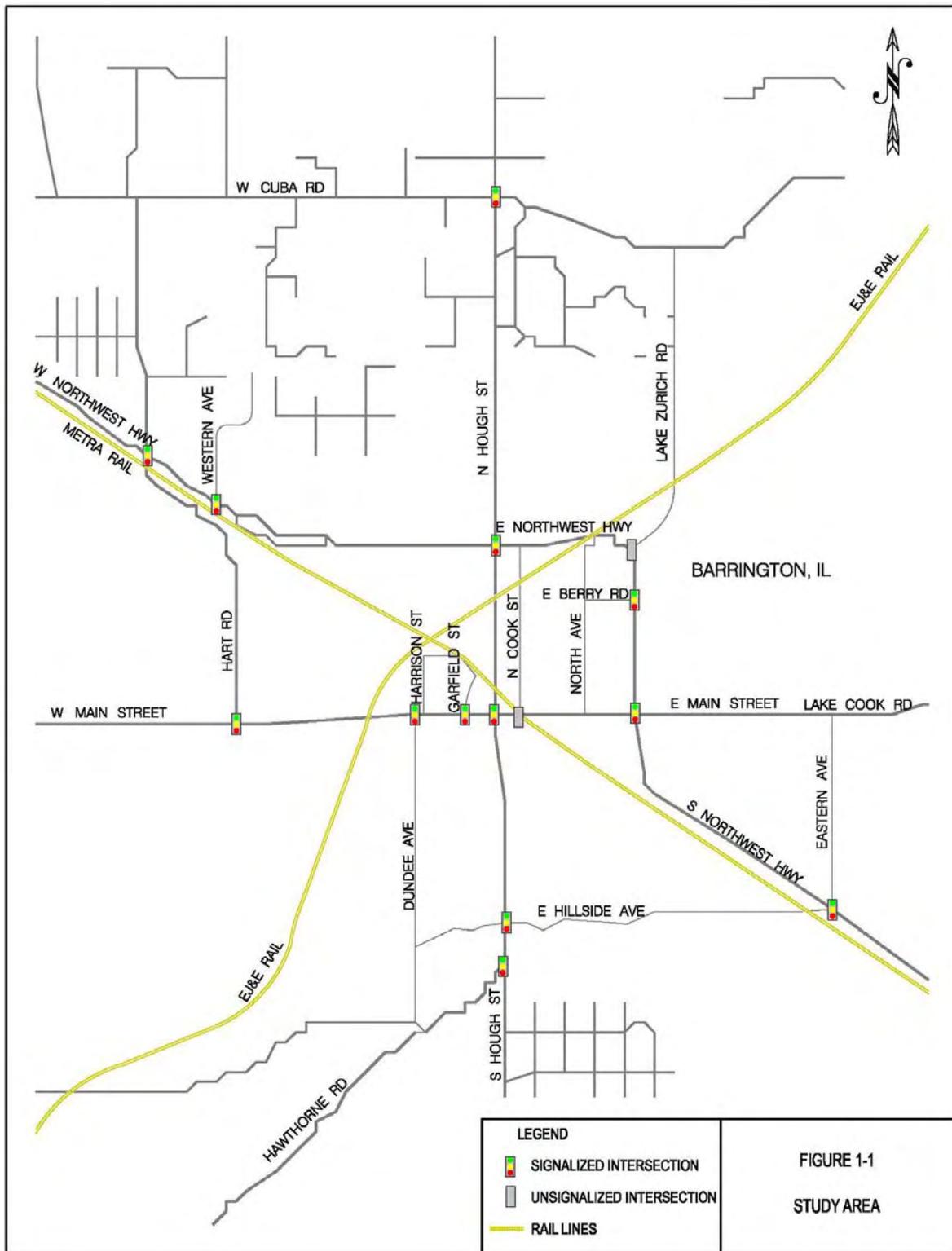
These models evaluate intersection operations under the above scenarios and provide several measures to document traffic operations in the corridors, as presented in this report.

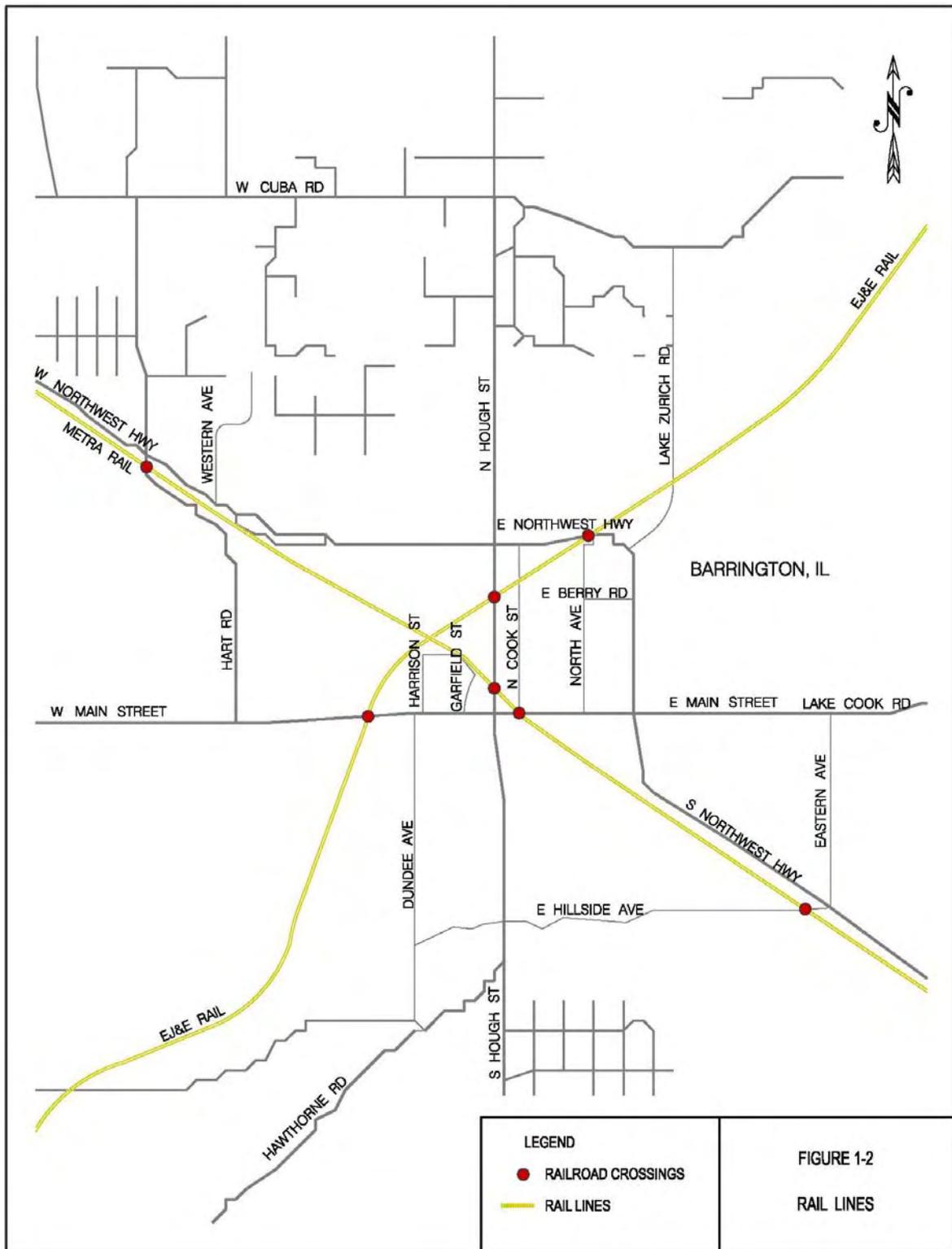
1.2 STUDY AREA

The study area was designated to include regional roadways/highways and railroads that effect Barrington mobility. The three regional roadway corridors and two railroads listed earlier have been specifically included in the study area. The area consists of approximately 2.5 miles of Northwest Highway, between Hart Road and Eastern Avenue, 1.2 miles of Main Street/Lake Cook Road, between Hart Road and Northwest Highway, and 2.1 miles of Hough Street, between Cuba Road and Hawthorne Road, as shown in Figure 1-1. There are thirteen (13) signalized intersections and two (2) unsignalized intersections in the study area.

As mentioned in the previous section, two rail lines, the EJ&E and Union Pacific/Northwest Line, cross the study corridors as shown in Figure 1-2. These two rail lines cross these major corridors five (5) times in the study area.

According to CN, a total of five (5) trains currently run on the EJ&E railway line per day through the study area. For the purposes of this study, it was assumed that currently, no EJ&E trains travel through Barrington during the AM and PM peak hours. A total of ten (10) trains and seven (7) Metra commuter trains run on the Union Pacific/Northwest Line during the AM and PM peak periods, respectively, through the study area at this time.





CHAPTER 2 – VISSIM MODEL CODING METHODOLOGY

2.1 OVERVIEW

The three corridors in the study area were simulated using the microscopic simulation model VISSIM Version 5.00. VISSIM (a German acronym, which translated means “traffic in towns – simulation”) has main two components: a traffic simulator and a signal state generator. The traffic simulator is a microscopic traffic flow simulation model which includes car following and a lane change logic model. The signal state generator is signal control software that uses detector information from the traffic simulator and updates the status of the traffic signals on a discrete time step basis (as small as one-tenth of a second). VISSIM is classified as a microscopic simulation model because it models vehicles and other components as individual units and updates them every second. After defining the street geometry, traffic control and vehicular volumes, VISSIM outputs many measures of effectiveness (MOEs) such as average delay, queue length, speed etc. that can then be used as a basis for comparison of alternatives. VISSIM also has the capability of modeling various modes of transit such as buses, trains, and rail. VISSIM has a user friendly 3D animation tool which can be used to show the existing and future transportation network in 3D animation form.

This chapter discusses the methodology for modifying VISSIM model parameters to account for roadway network changes in the study area.

2.2 ANALYSIS METHODOLOGY

The three corridors in the study area were simulated using VISSIM Version 5.00. It was used to evaluate AM and PM peak hour traffic operations on weekdays.

2.3 COMPUTER SIMULATION

One of the most important analytical tools of traffic engineering is microscopic simulation software. A transportation system simulation by means of a simulation model allows the prediction of the effects of modified lane configurations, traffic control and any changes made in the transportation system on the system’s operational performance. Operational performance is measured in terms of MOEs, which include average vehicle speed, vehicle stops, delays, vehicle hours of travel, vehicle miles of travel, fuel consumption, and several other measures. The MOEs provide useful input in the selection of future alternative improvements to handle issues related to traffic such as traffic congestion, delay, queues, etc.

VISSIM is capable of simulating individual vehicle behavior in a roadway network and is capable of simulating the operation of signalized intersections. VISSIM applies interval-based simulation to describe traffic operations. Each vehicle is a distinct object whose characteristics are updated every second. Each variable control device (such as traffic signals) and each event are registered and updated every second. In addition, each vehicle is identified by category (auto, carpool, truck, or bus) and by type. Additionally, specific driver behavioral characteristics are assigned to specific vehicles. The major features of the VISSIM model are identified as follows:

- ❑ Link types and connectors
- ❑ Fleet components (bus, truck, car)
- ❑ Load factor (number of passengers/vehicle)
- ❑ Automobile routing and turning movement
- ❑ Bus operations (headways, dwell times, stations, and routes)
- ❑ Priority rules (right of way designations)
- ❑ Stop and yield signs

- Pretimed/actuated signal control

2.4 Model Parameters

The traffic flow model used by VISSIM is a discreet, stochastic, time step based microscopic model, with driver-vehicle-units as single entities. The model contains a psycho-physical car following model for longitudinal vehicle movement and a rule-based algorithm for lateral movements (lane changing). The model is based on the continuous work of Wiedemann.

Vehicles follow each other in an oscillating process. As a faster vehicle approaches a slower vehicle on a single lane, it has to decelerate. The action point of conscious reaction depends on the speed difference, distance, and driver-dependant behavior. On multi-lane links, moved up vehicles check whether they can improve their position by changing lanes. If so, they check the possibility of finding acceptable gaps on neighboring lanes. Car following and lane-changing together form the traffic flow model, comprising the basis of VISSIM.

More detailed information regarding VISSIM modeling parameters can be found in the VISSIM user's manual.

2.5 Model Development

The HDR|WHM team developed the network for the study area. Field observations and aerial photographs were used to obtain accurate geometrics. Year 2008 traffic volume counts collected in September 2008 were used to develop the existing condition model.

The major component inputs for the study area VISSIM model included the following:

Roadway Geometrics – The first step in defining a network is describing the network geometry. VISSIM uses the concept of links and connectors to define the roadway network. Links are one-directional segments of streets or freeways, and connectors are usually the intersection of two or more links. In the case of a two-way street, each roadway block would consist of two one-directional links as shown in Figure 2-1.

Volume Data – Year 2008 traffic volume counts collected in the field were used for developing the existing condition model update.

Entry and exit volumes at the periphery of the network were obtained from tube counts and intersection turning movement counts (TMCs), since entry volumes are coded as input when building the model, and exit volumes are used to calibrate the model to ensure appropriate distribution of traffic through the simulated network.

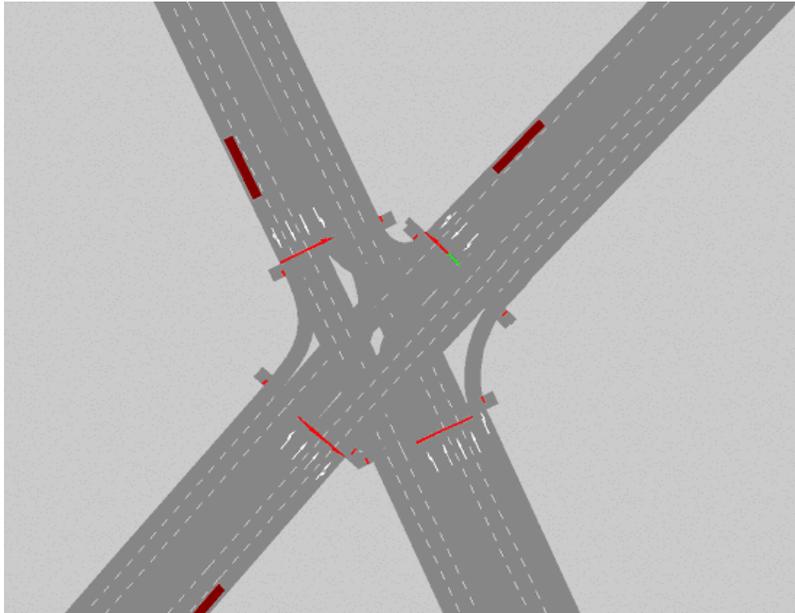
When coding the model, turning movement input describes how traffic is distributed to departure links. TMCs were used to determine existing routing decisions for each approach at an intersection. When a simulation is run, traffic volumes enter the network through entry links and are distributed through the network according to routing decisions assigned to each intersection approach.

Traffic Control – Existing conditions analysis involved coding of traffic signal phasing, timing, and coordination in Synchro, a microcomputer traffic signal coordination software program developed by Trafficware. This traffic signal information was then imported into the VISSIM model to simulate the operation of existing signalized intersections.

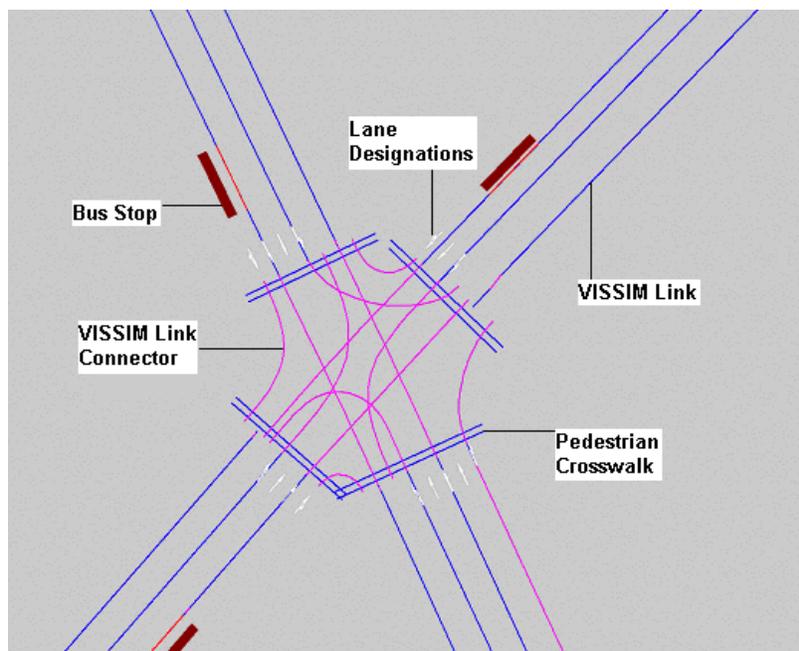
Rail Operations – Information on rail line and at-grade crossings for the EJ&E and Metra rail lines were obtained from Canadian National Railway Company and Regional Transportation Authority, respectively, and

were included in the development of the VISSIM network. Two (2) rail lines that traverse the study area were coded in the model.

FIGURE 2-1
INTERSECTION LINK TO CONNECTOR DIAGRAM
VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
BARRINGTON, ILLINOIS



(A) Typical VISSIM Intersection



(B) Typical Intersection Converted to VISSIM Link-Connector Diagram

2.6 Model Calibration

The models were calibrated using field-counted traffic volume data. Turning movement counts at intersections in the study area were used to verify that volumes shown on the corresponding links in the model were distributing in a manner consistent with real-world conditions. In addition, field observations were conducted and the models were calibrated based on field observations of queue lengths, traffic operations, and rail operations.

In order to account for inherent variability in traffic flow and operations, ten (10) replicate runs were performed for each model scenario, and the average results were reported.

2.7 MEASURES OF EFFECTIVENESS

Operational performance is expressed in terms of measures of effectiveness (MOEs), which include average vehicle speed, delay, vehicle miles of travel, travel time, fuel consumption, emissions and several other measures. While the VISSIM model provides a wide variety of MOEs, only a few MOEs that focus on the scope of this project were used to establish a baseline evaluation of existing traffic operations.

Network Delay – Delay is a measure of lost travel time and is influenced by a number of factors including cycle length, signal coordination and degree of saturation or volume-capacity ratio. The *Highway Capacity Manual (HCM)* defines total delay as the total time elapsed from when a vehicle stops at the end of a queue until the vehicle departs from the stop line. It is measured in vehicle-hours and was measured for autos and buses.

Network Vehicles – Network Vehicles are measured in vehicles per hour and identifies the vehicles that have left the network or reached their destination. It was measured for autos and buses.

Network Travel Time – Travel time is measured in hours. Travel time identifies the total amount of time, including moving time, delay time, and stop time, that it takes for all vehicles to travel through the study area network. Travel time was calculated for vehicles and buses.

Average Speed – Average speed is measured in miles per hour and identifies the average speed of a vehicle in the network. It is calculated by taking the average of all link speeds. Average speed is a useful measure of effectiveness to assess the impact of network changes for alternative models and was measured for autos and buses.

Intersection Level of Service – Level of service (LOS) is a qualitative measure of operating conditions at a location and is directly related to vehicle delay at intersections, as shown in Table 2-1. LOS is given a letter designation ranging from A to F (free flow to heavily congested). For example, LOS can be related to the grading scale of a report card: A = excellent, B = good, C = average, D = below average, E = needs improvement, and F = failing. Utilizing procedures in the *HCM* and the MOEs reported by VISSIM, LOS was determined for intersections within the study area network.

Maximum Queue Length – Maximum queue length is the distance from the stop bar at a given intersection approach to the end of the furthest upstream vehicle in the queue at that approach.

TABLE 2-1
LEVEL-OF-SERVICE DEFINITIONS FOR INTERSECTIONS
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Level of Service	Control Delay (sec/veh)		Description
	Signalized Intersections	Unsignalized Intersections	
A	≤ 10.0	≤ 10.0	Very low vehicle delays, free traffic flow, signal progression extremely favorable, most vehicles arrive during given signal phase.
B	10.1 to 20.0	10.1 to 15.0	Good signal progression, more vehicles stop and experience higher delays than for LOS A.
C	20.1 to 35.0	15.1 to 25.0	Stable traffic flow, fair signal progression, significant number of vehicles stop at signals.
D	35.1 to 55.0	25.1 to 35.0	Noticeable traffic congestion, longer delays and unfavorable signal progression, many vehicles stop at signals.
E	55.1 to 80.0	35.1 to 50.0	Limit of acceptable vehicle delay, unstable traffic flow, poor signal progression, traffic near roadway capacity, frequent cycle failures.
F	> 80.0	> 50.0	Unacceptable delay, extremely unstable flow, heavy congestion, traffic exceeds roadway capacity, stop-and-go conditions.

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

CHAPTER 3 – EXISTING CONDITIONS

The analysis of existing conditions forms the basis for VISSIM traffic simulation development and for evaluation of future scenarios. The major elements of the existing conditions scenario are year 2008 vehicular volumes collected as part of the study, existing signal timing data, as well as geometrics of the existing roadway network. Field studies were conducted to collect supplemental data, such as queue lengths, needed for the evaluation of traffic operations. Traffic data collected in the field included AM and PM peak period intersection TMCs. Illinois Department of Transportation (IDOT) provided signal timing information for signalized intersections. Further, freight and commuter train timetables were obtained from EJ&E, CN, and Regional Transportation Authority of Northeast Illinois (RTA). This chapter describes how this information was used to develop the VISSIM model for the subsequent analyses.

3.1 COMPUTER SIMULATION

The three corridors in the study area were simulated using VISSIM Version 5.00. VISSIM is classified as a microscopic simulation model because it models vehicles and other modes as individual units, updating their properties (such as location) every second. After defining the street geometry, traffic control and vehicular volumes, VISSIM outputs several MOEs that can be used as a basis for comparison. A more detailed description of the model parameters, model development and model calibration can be found in Chapter 2.

3.2 INTERSECTION SIGNAL TIMING

There are currently thirteen (13) signalized intersections in the study area. All the intersections are maintained and operated by IDOT. The HDR|WHM team coordinated with IDOT to obtain existing intersection signal timing data. The existing signal timing data were coded into VISSIM to ensure the model results reflect actual operations in the field.

3.3 EXISTING TRAFFIC DATA

Extensive data collection was performed to obtain information on existing conditions along the Northwest Highway, Main Street/Lake Cook Road, and Hough Street corridors.

AM peak hour (7:00 to 9:00 AM) and PM peak hour (4:00 to 6:00 PM) turning movements were collected in September 2008 as part of this study. AM and PM peak hour TMCs were collected at the signalized and unsignalized intersections along the corridors in the study area. The peak hour TMCs are summarized in the following section. A summary of the peak hour traffic volumes along the corridors are identified in Table 3-1. Twenty-four-hour TMCs were collected at twelve (12) locations in the study area and were focused on the outskirts of the limits of the study area to capture the number of vehicles entering and exiting the study area. Table 3-2 shows the hourly distribution of traffic volumes along the three major study area corridors.

AM and PM peak hour travel time runs were also performed along Northwest Highway, Hough Street, and Main Street/Lake Cook Road. The travel time runs assisted in gauging the average traveling speeds and levels of congestion on each roadway and also to calibrate the existing models.

In addition to the traffic data collected, field observations were performed to identify queue lengths at study intersections.

TABLE 3-1
EXISTING PEAK HOUR TRAFFIC VOLUMES
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Locations	Direction	AM Peak (vph)	PM Peak (vph)
Northwest Highway, east of Hart Road	Eastbound	1,800	1,000
	Westbound	850	2,000
Northwest Highway, east of Hough Street	Eastbound	1,850	1,000
	Westbound	750	1,850
Northwest Highway, north of Main Street	Northbound	800	1,950
	Southbound	1,950	1,000
Northwest Highway, south of Eastern Avenue	Northbound	750	1,700
	Southbound	1,850	800
Main Street/Lake Cook Road, east of Hart Road	Eastbound	1,100	700
	Westbound	550	950
Main Street/Lake Cook Road, west of Hough Street	Eastbound	1,050	700
	Westbound	350	650
Main Street/Lake Cook Road, west of Northwest Highway	Eastbound	1,000	600
	Westbound	500	600
Hough Street, north of Northwest Highway	Northbound	550	950
	Southbound	850	600
Hough Street, south of Main Street/Lake Cook Road	Northbound	700	900
	Southbound	900	800

TABLE 3-2
HOURLY TRAFFIC VOLUME DISTRIBUTIONS
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Time Period	Roadway		
	Northwest Highway	Hough Street	Main Street/ Lake Cook Road
12:00 a.m. – 1:00 a.m.	0.4%	0.4%	0.2%
1:00 a.m. – 2:00 a.m.	0.2%	0.2%	0.2%
2:00 a.m. – 3:00 a.m.	0.3%	0.2%	0.1%
3:00 a.m. – 4:00 a.m.	0.2%	0.2%	0.2%
4:00 a.m. – 5:00 a.m.	0.6%	0.6%	0.3%
5:00 a.m. – 6:00 a.m.	2.3%	2.3%	2.1%
6:00 a.m. – 7:00 a.m.	6.2%	4.9%	6.4%
7:00 a.m. – 8:00 a.m.	8.3%	6.1%	8.1%
8:00 a.m. – 9:00 a.m.	7.4%	6.5%	7.3%
9:00 a.m. – 10:00 a.m.	6.1%	6.3%	6.0%
10:00 a.m. – 11:00 a.m.	4.8%	6.2%	4.5%
11:00 a.m. – 12:00 p.m.	4.4%	6.0%	4.8%
12:00 p.m. – 1:00 p.m.	5.0%	6.0%	5.3%
1:00 p.m. – 2:00 p.m.	5.0%	6.3%	5.6%
2:00 p.m. – 3:00 p.m.	5.6%	6.0%	6.4%
3:00 p.m. – 4:00 p.m.	6.8%	6.9%	7.2%
4:00 p.m. – 5:00 p.m.	8.2%	7.5%	8.2%
5:00 p.m. – 6:00 p.m.	9.0%	7.5%	8.6%
6:00 p.m. – 7:00 p.m.	7.2%	6.2%	6.9%
7:00 p.m. – 8:00 p.m.	4.3%	4.9%	4.5%
8:00 p.m. – 9:00 p.m.	3.1%	3.8%	3.4%
9:00 p.m. – 10:00 p.m.	2.3%	2.6%	2.0%
10:00 p.m. – 11:00 p.m.	1.4%	1.6%	1.2%
11:00 p.m. – 12:00 a.m.	0.7%	0.8%	0.6%

3.5 EXISTING RAIL SYSTEM

As mentioned in previous sections, two rail lines, the EJ&E and Metra, cross the study corridors.

EJ&E is a Class II railroad which provides rail service to approximately 100 customers, including steel mills, coal utilities, plastics and chemical producers, steel processors, distribution centers, and scrap processors. In addition to operating local trains in the Chicago and Northwest Indiana region, EJ&E connects customers to Class I rail lines. A total of five (5) trains run on the EJ&E railway line per day through the study area. For the purposes of this study, it was assumed that no EJ&E trains travel through Barrington during the AM and PM peak hours.

The EJ&E at-grade crossings in the study area are as follows:

- Northwest Highway, east of Hough Street
- Lake Zurich Road, east of Hough Street
- Hough Street, south of Northwest Highway
- Lake Cook Road/Main Street, west of Hough Street

Village of Barrington Traffic Operational Analysis

Metra, the commuter rail division of RTA, provides commuter service on its own rail lines and also has trackage rights on freight railroads. Metra operates 720 trains per day and provided service to eighty-two (82) million passengers in 2007. Metra's rail lines are intertwined with Class I freight rail lines through a series of parallel tracks, trackage rights granted to Metra on freight rail lines, and dozens of rail/rail at-grade crossings. A total of ten (10) trains and seven (7) trains run on the Metra railway line during the AM and PM peak periods, respectively, through the study area.

The Metra at-grade crossings in the study area are as follows:

- Lake Cook Road/Main Street, east of Hough Street
- Hough Street, north of Lake Cook Road/Main Street
- Hart Road, South of Northwest Highway
- Eastern Avenue, southwest of Northwest Highway

CHAPTER 4 – ANALYSIS OF EXISTING CONDITIONS

The Existing Conditions model (Year 2008) reflected the current conditions and operational problems associated with the three corridors. This chapter describes the results of analyses for existing conditions.

4.1 MEASURES OF EFFECTIVENESS

Operational performance is expressed in terms of measures of effectiveness (MOEs), which include average vehicle speed, delay, vehicle miles of travel, travel time, fuel consumption, emissions and several other measures. While the VISSIM model provides a wide variety of MOEs, only a few MOEs that focus on the scope of this project were used to establish existing traffic operations.

The MOEs that were evaluated for the existing conditions analysis include travel time, network delay, network vehicles, average speed and intersection level of service. Detailed descriptions of these MOEs can be found in Chapter 2.

4.2 NETWORK TRAFFIC OPERATIONS

Area-wide statistics are critical to the evaluation of the overall efficiency of the transportation network. Results for network travel time, network delay, network vehicles, and average speed for autos is summarized in Table 4-1 and shown graphically in Figures 4-1 and 4-2. Existing intersection level of service results for the AM and PM peaks are summarized in Table 4-2 and Figures 4-3 and 4-4.

TABLE 4-1
NETWORK-WIDE AVERAGE STATISTICS
VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
BARRINGTON, ILLINOIS

MOE	AM Peak	PM Peak
Network Vehicles (no. of vehicles)	9,996	11,022
Total Travel Time (veh-hr)	986	1,007
Total Delay Time (veh-hr)	493	501
Average Speed (mph)	16	17

FIGURE 4-1
EXISTING TRAVEL TIME AND NETWORK DELAY FOR AUTOS
VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
BARRINGTON, ILLINOIS

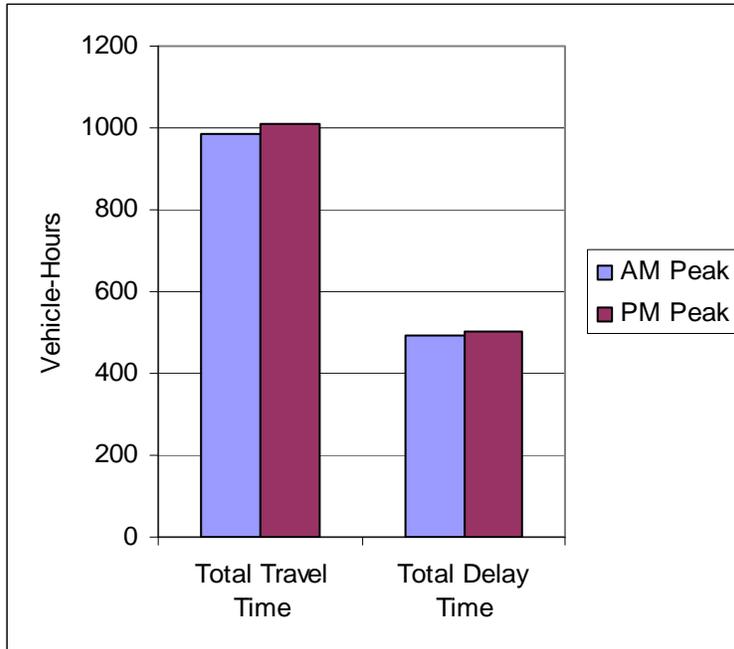
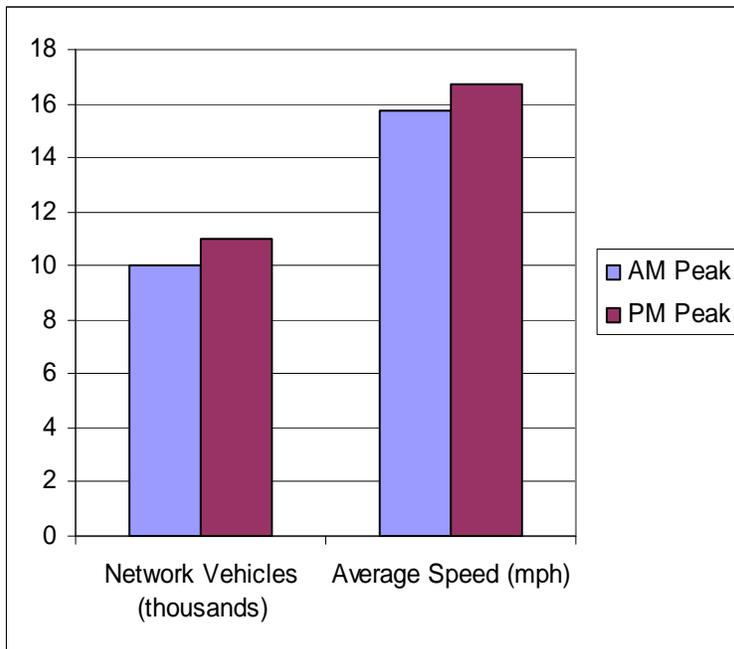


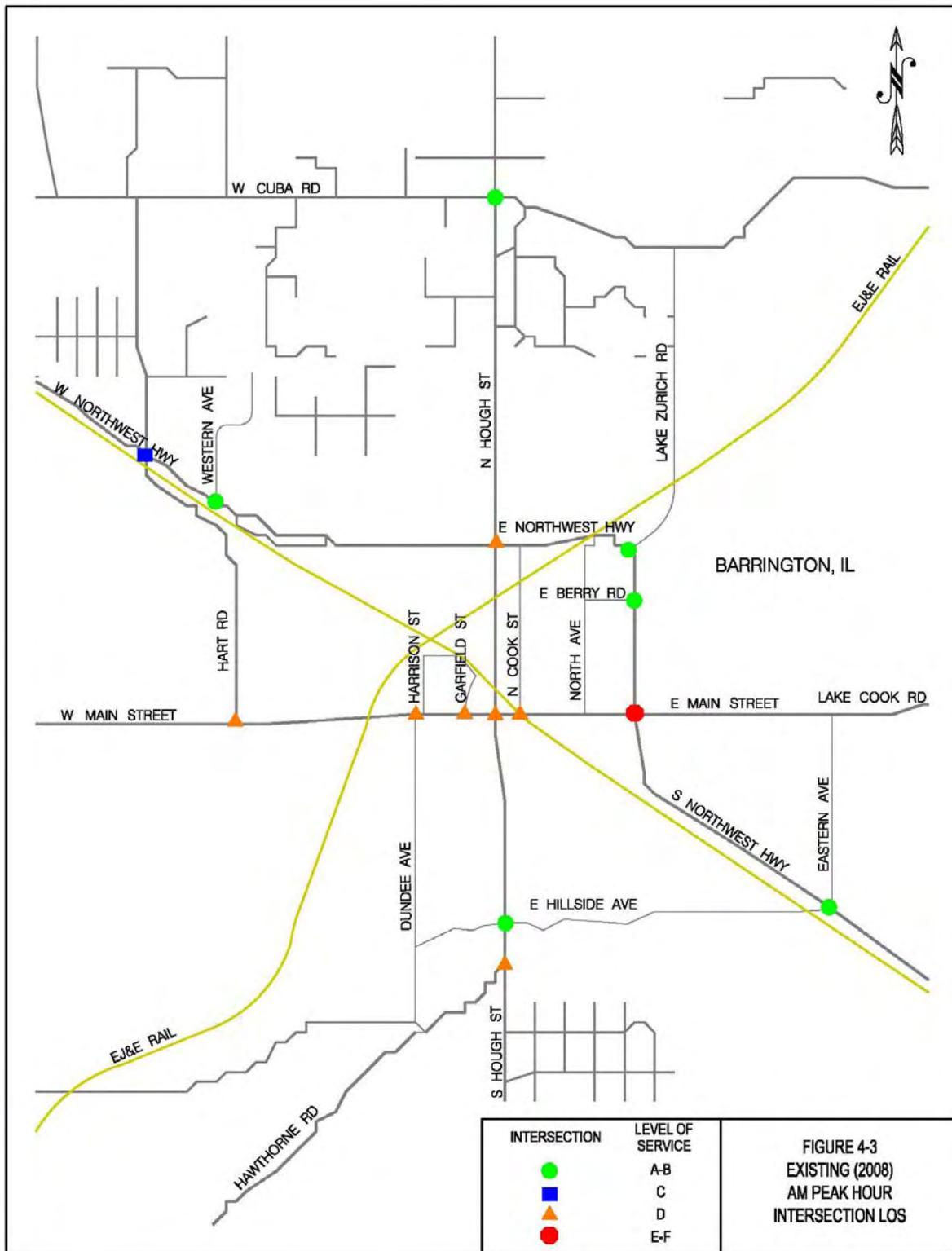
FIGURE 4-2
EXISTING NETWORK VEHICLES AND NETWORK SPEED
VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
BARRINGTON, ILLINOIS

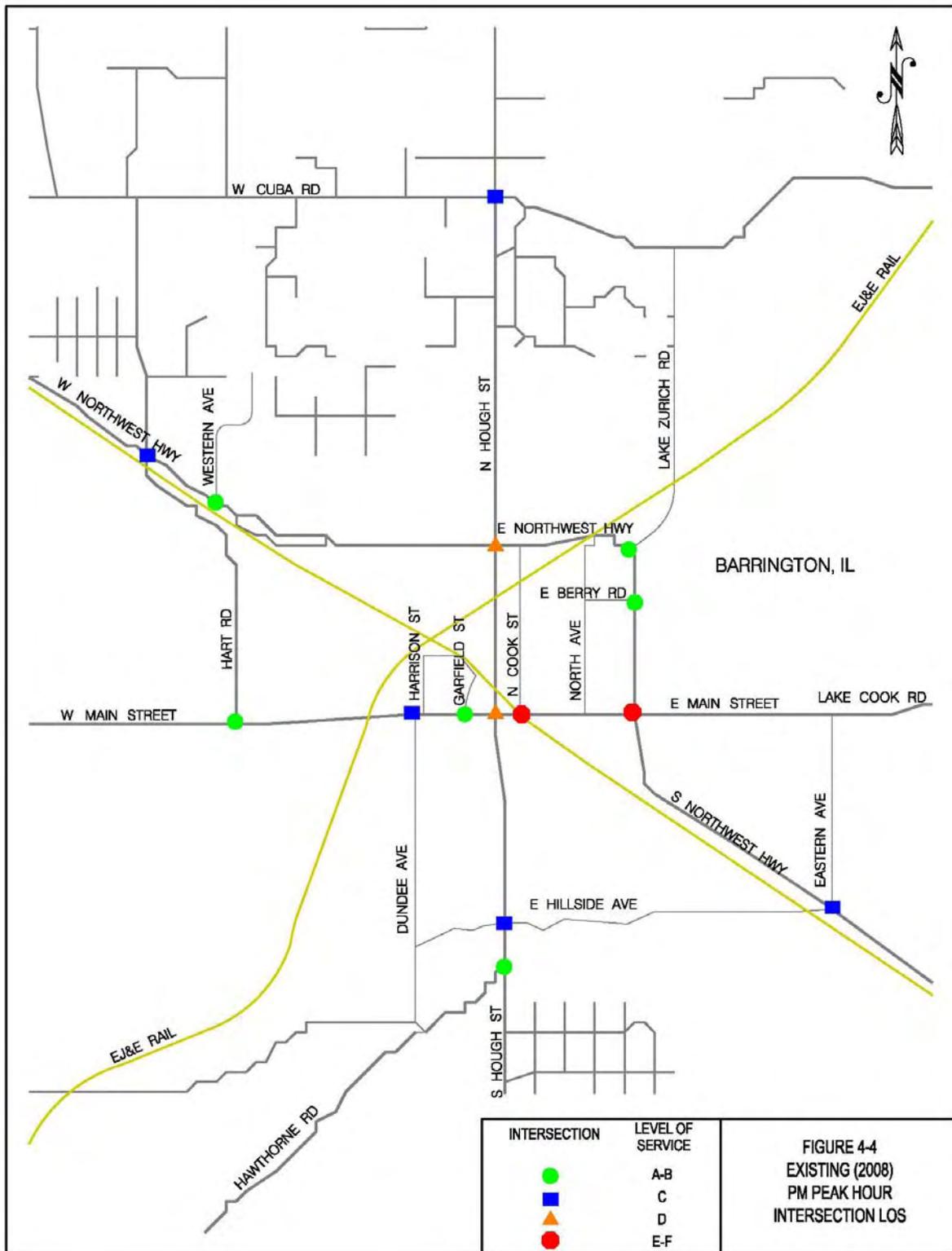


Existing intersection LOS is an important MOE for evaluating the existing conditions along the study corridor. Table 4-2 shows the existing levels of service for the intersections in the network during the AM and PM peak periods. The intersection LOSs are shown graphically in Figure 4-3 and Figure 4-4.

TABLE 4-2
INTERSECTION LEVEL-OF-SERVICE
VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
BARRINGTON, ILLINOIS

Intersection LOS	AM Peak	PM Peak
A	1	3
B	5	3
C	1	5
D	7	2
E	0	0
F	1	2





CHAPTER 5 – 2015 TRAFFIC FORECASTS

The year 2015 was designated as the horizon year for full implementation of the Proposed Action. This study evaluates regional travel and intersection operations for the following two (2) future scenarios:

- 2015 Future Conditions - No Action (no change in the number of EJ&E trains)
- 2015 Future Conditions - Proposed Action (increase in the number of EJ&E trains)

5.1 2015 NO ACTION SCENARIO

The No Action scenario assumed no modifications to the train patterns on the EJ&E rail line. Future traffic conditions under this scenario assumed an increase in automobile traffic and Metra commuter rail traffic, with no increase in freight rail traffic on the EJ&E rail line.

Travel demand forecasts for 2015 are not available from local planning agencies normally responsible for developing those values. Therefore, available traffic counts were factored to simulate a 2015 travel forecast. Initially, the new traffic counts taken in September of 2008 were factored at 3% per year in the manner similar to the factoring performed for the Draft EIS analysis. However, with all movement counts factored in this manner, traffic demands became so great that the simulation was not able to process the traffic meaningfully. With traffic factored in this manner the area becomes grid-locked.

Therefore, traffic volumes along the corridors in the study area were factored to reflect 2015 traffic conditions by applying an annual growth rate of two (2) percent and three (3) percent in the AM and PM peak periods, respectively, to the existing 2008 traffic volumes. The growth rates still reflect increased estimates by Lake County engineering officials and iterative estimates of future congestion levels. These rates of increase were applied only to the through traffic volumes on the Northwest Highway and Hough Street. No growth rate was applied to the traffic volumes on Main Street/Lake Cook Road or to turning movements to/from local streets in the Village of Barrington. Assumptions of no growth in certain vehicle movement on these roadways was justified for this analyses since these areas are well built out and may not experience future increases. In addition, traffic congestion already exists in the Barrington region encouraging regional travelers to take routes that do not use these congested roadways.

Future year increases in Metra train operations were also input to the simulation. The number of trains on the Metra rail line was assumed to increase by one (1) train in both the AM and PM peak periods resulting in a total of eleven (11) trains and eight (8) trains during the AM and PM peak periods, respectively, through the study area.

Signal timing is an important input to the traffic simulation and future year timing schemes will be important to efficient regional travel. Signal timing optimization is an effective way to adjust to increasing traffic volumes and ever changing traffic patterns. It was assumed that IDOT would monitor signals in the study area and make modifications to signal timing when necessary. Minor modifications to the signal timing were assumed for some of the intersections in the study area. Additionally, a traffic signal was assumed at the intersection of Northwest Highway and Lake Zurich Road because it operated at an unacceptable LOS under the 2008 existing traffic conditions. It was anticipated that this intersection would meet traffic signal warrants by 2015, and hence, a signal was assumed at this intersection under this scenario.

5.2 2015 PROPOSED ACTION SCENARIO

The Proposed Action scenario assumed modifications to the train patterns on the EJ&E rail line. As per the proposal by Canadian National Railway, the number of trains on the EJ&E rail line will increase from five (5) to twenty (20) trains per day through the study area. For analysis purposes, it was assumed that one (1) train of average length would travel on the EJ&E rail line during both the AM and PM peak hours through the study area under this scenario. This assumption is conservative because CN has agreed to adhere to the existing freight train curfews, which could limit the number of trains on the EJ&E rail line during the AM and PM peak periods. The actual number and

Village of Barrington Traffic Operational Analysis

length of trains traveling the EJ&E during morning or evening peak periods, however, were not confirmed by CN. The same growth trends and signal timings were used as in the No Action scenario.

A summary of the estimated 2015 peak hour traffic volumes along the corridors is provided in Table 5-1.

TABLE 5-1
2008 EXISTING AND 2015 FORECASTED PEAK HOUR TRAFFIC VOLUMES
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Locations	Direction	2008 Existing		2015 Forecasted	
		AM Peak (vph)	PM Peak (vph)	AM Peak (vph)	PM Peak (vph)
Northwest Highway, east of Hart Road	Eastbound	1,800	1,000	2,050	1,200
	Westbound	850	2,000	950	2,450
Northwest Highway, east of Hough Street	Eastbound	1,850	1,000	2,100	1,200
	Westbound	750	1,850	850	2,300
Northwest Highway, north of Main Street	Northbound	800	1,950	900	2,400
	Southbound	1,950	1,000	2,200	1,250
Northwest Highway, south of Eastern Avenue	Northbound	750	1,700	850	2,100
	Southbound	1,850	800	2,050	1,000
Main Street/Lake Cook Road, east of Hart Road	Eastbound	1,100	700	1,100	750
	Westbound	550	950	550	950
Main Street/Lake Cook Road, west of Hough Street	Eastbound	1,050	700	1,050	750
	Westbound	350	650	350	700
Main Street/Lake Cook Road, west of Northwest Highway	Eastbound	1,000	600	1,000	600
	Westbound	500	600	500	650
Hough Street, north of Northwest Highway	Northbound	550	950	650	1,150
	Southbound	850	600	1,000	800
Hough Street, south of Main Street/Lake Cook Road	Northbound	700	900	800	1,100
	Southbound	900	800	1,000	950

5.3 COMPARISON OF NETWORK TRAFFIC OPERATIONS

Area-wide statistics are critical to the evaluation of the overall efficiency of the transportation network. A comparison of the network travel time, network delay, network vehicles, and average speed for autos between 2015 No Action and 2015 Proposed Action traffic conditions is summarized in Table 5-2 and shown graphically in Figure 5-1 and Figure 5-2. The addition of an EJ&E freight train traveling through the study network was the only programmed difference between the No Action and Proposed Action scenarios. Because VISSIM is a stochastic simulation model, however, network traffic volumes differed slightly—but not substantially—between the two scenarios.

As shown in Table 5-2, based on the existing traffic model MOEs, the PM peak period was the critical peak period in that it had the highest traffic volumes, which resulted in the greatest travel time and delay within the network with vehicles traveling at low speeds.

TABLE 5-2
2015 NO ACTION AND 2015 PROPOSED ACTION NETWORK-WIDE AVERAGE STATISTICS
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

MOE	AM Peak			PM Peak		
	No Action	Proposed Action	Change	No Action	Proposed Action	Change
Network Vehicles (no. of vehicles)	10,178	10,199	Not Substantial	11,853	11,828	Not Substantial
Total Travel Time (veh-hr)	1,037	1,053	+1.5%	1,223	1,240	+1.4%
Total Delay Time (veh-hr)	550	565	+2.7%	639	660	+3.3%
Average Speed (mph)	16.1	15.9	-1.2%	15.9	15.6	-1.9%

FIGURE 5-1
2015 NO ACTION AND 2015 PROPOSED ACTION AM TRAVEL TIME AND NETWORK DELAY FOR AUTOS
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

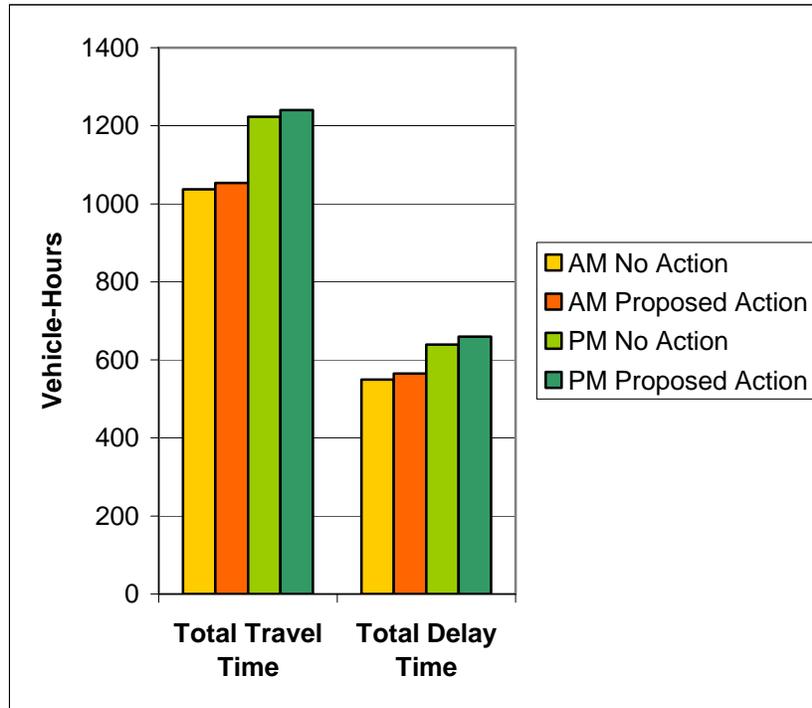
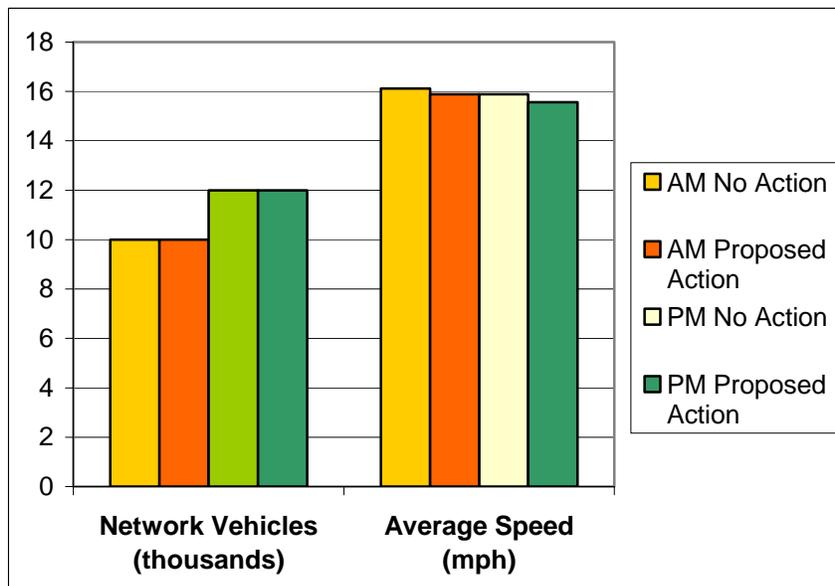


FIGURE 5-2
2015 NO ACTION AND 2015 PROPOSED ACTION AM NETWORK VEHICLES AND NETWORK SPEED
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

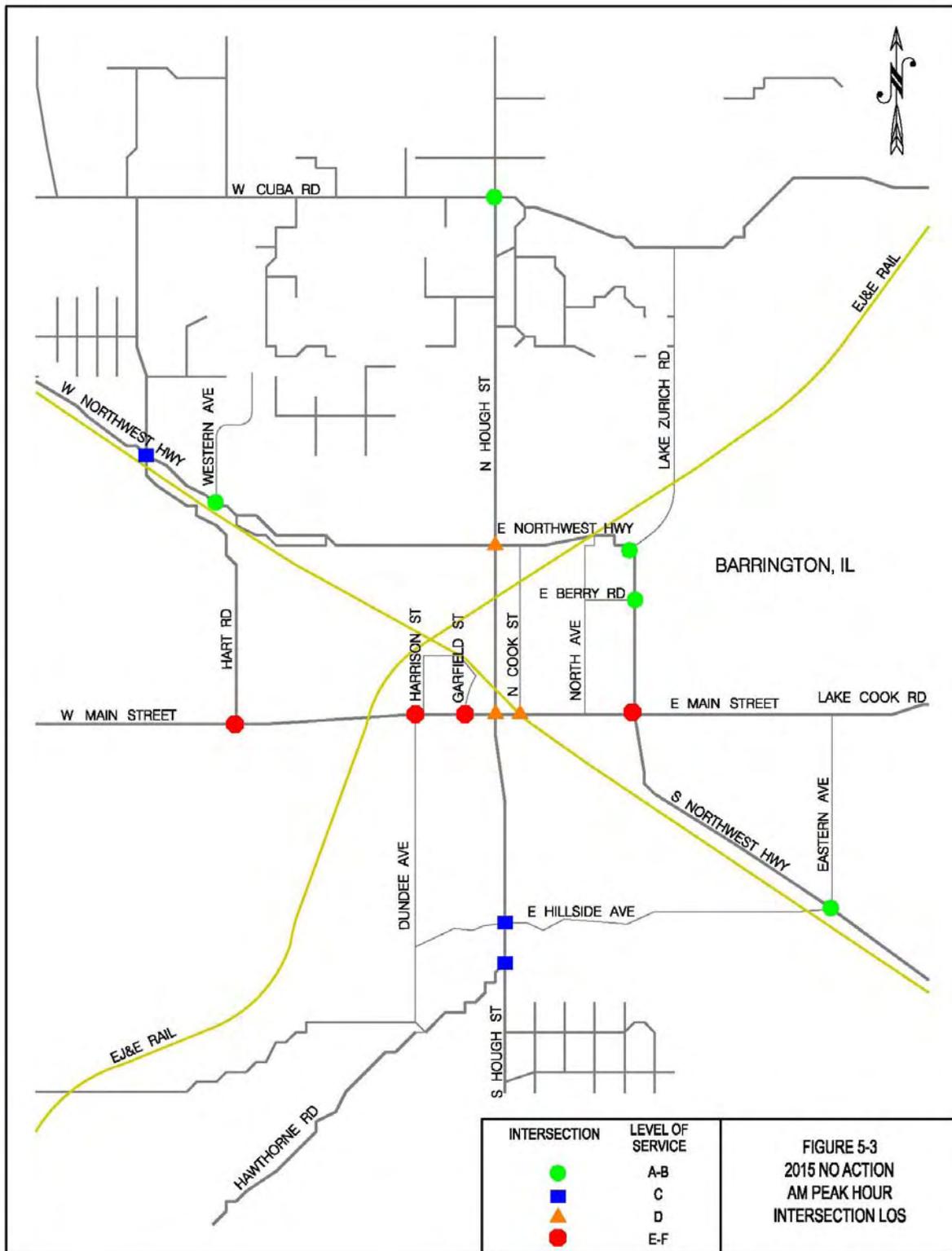


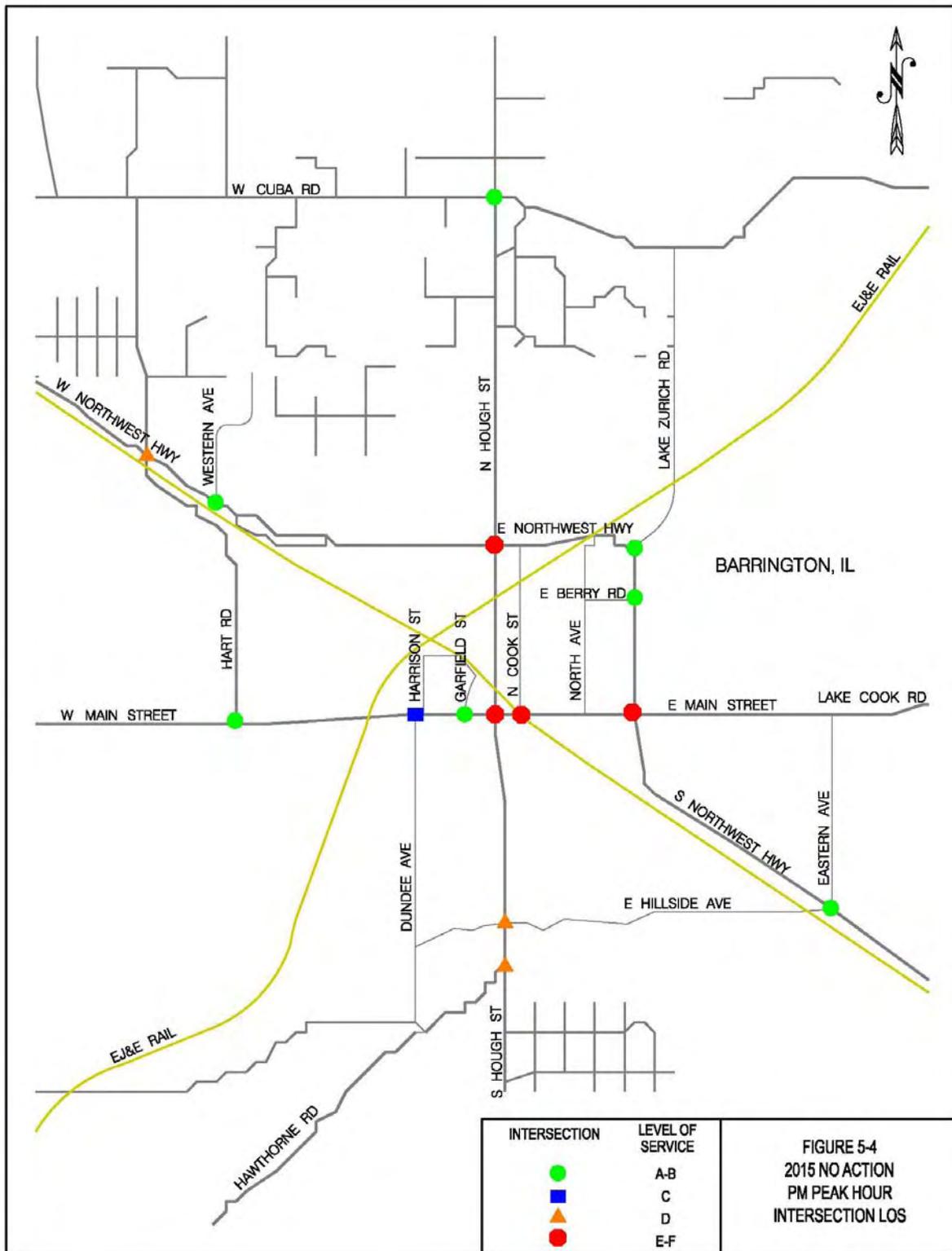
Village of Barrington Traffic Operational Analysis

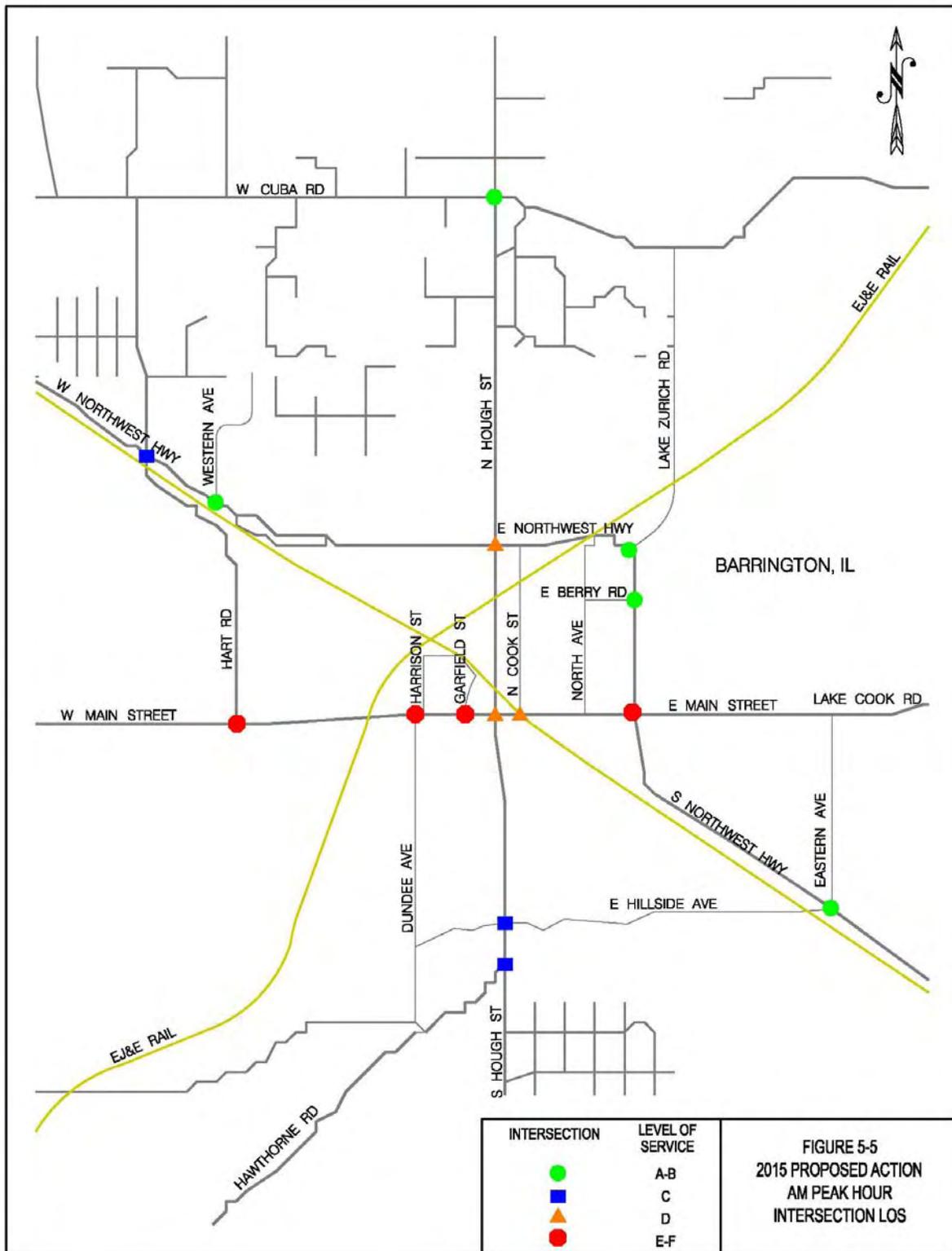
As mentioned in previous sections, LOS is an important MOE for evaluating the existing conditions along the study corridor. Table 5-3 and Figures 5-3 through 5-6 show the LOS at the intersections in the study area for the 2015 AM and PM No Action scenarios. Of the fifteen intersections in the study network, eleven (11) intersections operated at an acceptable LOS during both the AM and PM peak periods, while four (4) intersections operated at an unacceptable LOS during both the AM and PM peak periods.

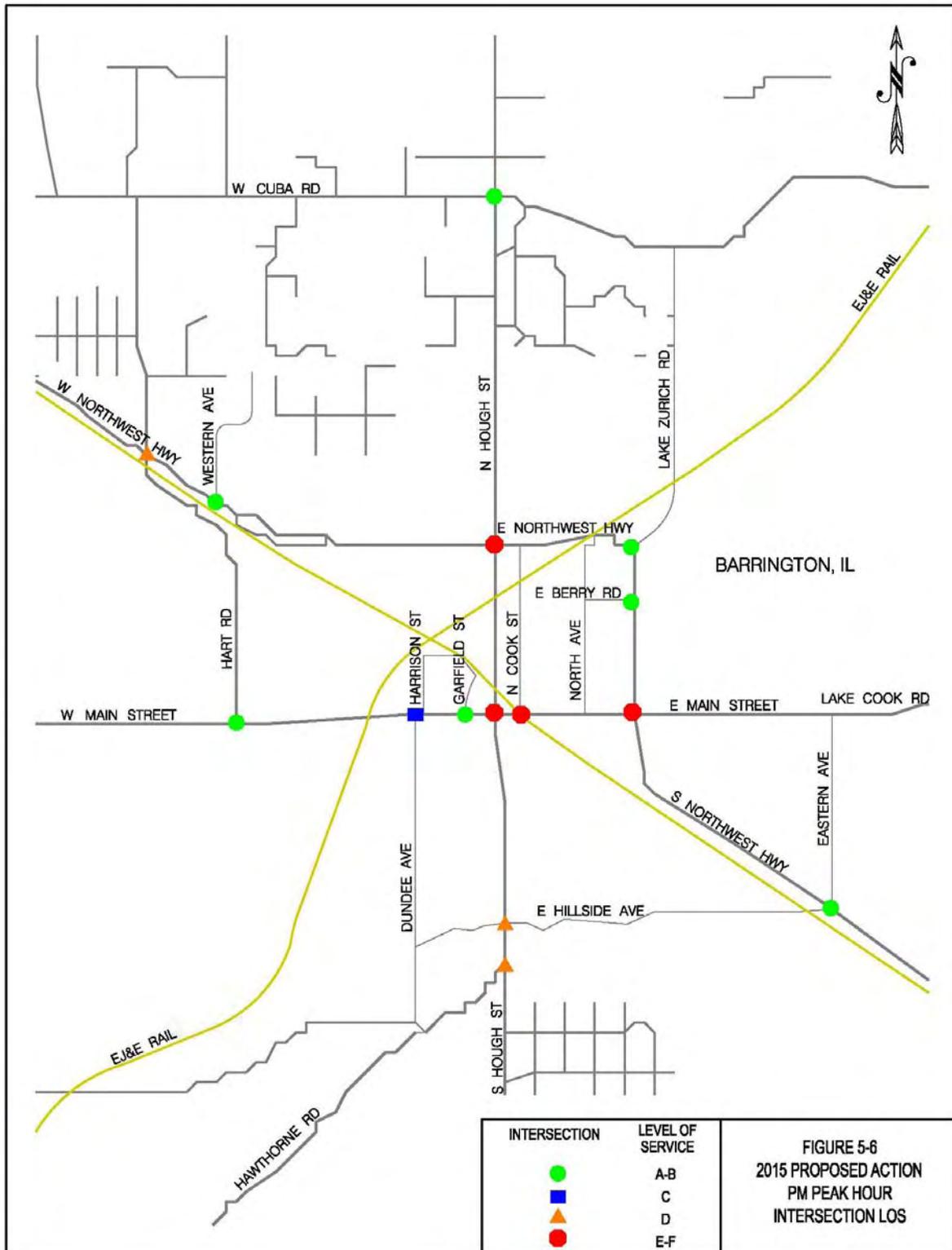
TABLE 5-3
2015 NO ACTION AND 2015 PROPOSED ACTION INTERSECTION LEVELS OF SERVICE
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Intersection LOS	AM Peak		PM Peak	
	No Action	Proposed Action	No Action	Proposed Action
A	2	3	0	0
B	3	2	7	7
C	3	3	1	1
D	3	3	3	3
E	2	1	2	1
F	2	3	2	3









5.4 COMPARISON OF AT-GRADE CROSSING MEASURES OF EFFECTIVENESS

In addition to the intersection analyses, MOEs were obtained at the EJ&E at-grade crossings in the study area at Northwest Highway, Hough Street, and Main Street/Lake Cook Road. These included the maximum queue lengths and average vehicle delay at these locations. All crossing MOEs were obtained at sixty-second increments to isolate the effects of the increased EJ&E train traffic.

The methodologies used to calculate vehicle delay and queue lengths used in this study and the Draft EIS and the Final EIS are different. This study uses hourly vehicle counts, observed queue lengths and travel times taken on roadways in the Barrington area. The simulation model has been calibrated with this information to replicate actual traffic conditions on Barrington area roadways. Delay and queue length calculations used in the Draft and Final EIS documents relied on 24-hour traffic count data at the railroad grade crossings. The methodology used an approach that used available data and traffic operations assumptions. Results of these different methods will be different due to these variations in data and calculation techniques.

Northwest Highway Crossing

No Action Conditions

During the AM peak period under the No Action scenario, the Northwest Highway rail/highway at-grade crossing experienced a 550-foot queue resulting from spillback due to insufficient capacity at the intersection with Main Street/Lake Cook Road. In the westbound direction, however, no vehicle queuing was observed. During the PM peak period, the eastbound direction exhibited no vehicle queuing while the maximum vehicle queue in the westbound direction extended south from the intersection with Hough Street to just south of Berry Road due to insufficient capacity at the intersection of Northwest Highway and Hough Street. This results in a 1,600-foot maximum vehicle queue at the existing Northwest Highway crossing under the No Action scenario. Table 5-4 summarizes the travel times along Northwest Highway in each direction of travel between Hart Road and Eastern Avenue under the No Action and Action scenarios.

Proposed Action Conditions

During the AM and PM peak periods, the addition of a freight train on the EJ&E line resulted in minimal increases in travel time along Northwest Highway over the peak period as shown on Table 5-4. Travel time increased during and immediately following the freight train but soon returned to No Action conditions.

Table 5-5 provides a comparison of the maximum queue lengths at the Northwest Highway at-grade crossing under the No Action and Proposed Action scenarios. Figure 5-9 and Figure 5-10 show the effects of the EJ&E train on maximum queue lengths and average delay at the Northwest Highway at-grade crossing during the AM peak period. Queues caused by the blocked crossing dissipated after approximately fourteen (14) minutes and five (5) minutes in the eastbound and westbound directions of travel, respectively.

Under the Proposed Action scenario, the maximum eastbound vehicle queue length at the railway/highway at-grade crossing increased zero to 700-feet or an increase of 700 feet over the No Action scenario. Figure 5-11 and Figure 5-12 show the effects of the EJ&E train at Northwest Highway during the PM peak period. In the eastbound direction, queues caused by the blocked crossing dissipated after approximately six (6) minutes; however, queuing in the westbound direction remained for over twenty (20) minutes due to the high volumes traveling in this direction during the PM peak period and existing capacity constraints at the intersection of Northwest Highway and Hough Street. Under the Proposed Action scenario, the average westbound vehicle queue length increased by from 1,600 feet to 3,700 feet for an increase of 2,100 over the No Action scenario.

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Table 5-4 shows that travel times along the Northwest Highway Corridor would increase over the peak hour study period.

TABLE 5-4
NORTHWEST HIGHWAY - TRAVEL TIMES AND AVERAGE SPEED
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Direction of Travel	AM Peak				PM Peak			
	No Action		Proposed Action		No Action		Proposed Action	
	Speed	Travel Time	Speed	Travel Time	Speed	Travel Time	Speed	Travel Time
Eastbound	21.2 mph	7.1 min.	21.2 mph	7.1 min.	29.6 mph	5.1 min.	29.6 mph	5.1 min.
Westbound	29.5 mph	5.1 min.	28.4 mph	5.3 min.	18.2 mph	8.3 min.	18.2 mph	8.3 min.

TABLE 5-5
NORTHWEST HIGHWAY MAXIMUM QUEUE LENGTHS
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Direction of Travel	AM Peak		PM Peak	
	No Action	Proposed Action	No Action	Proposed Action
Eastbound	550 ft.	2,300 ft.	0	700 ft.
Westbound	0	500 ft.	1,600 ft.	3,700 ft.

FIGURE 5-9
 NORTHWEST HIGHWAY EASTBOUND PERFORMANCE – AM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

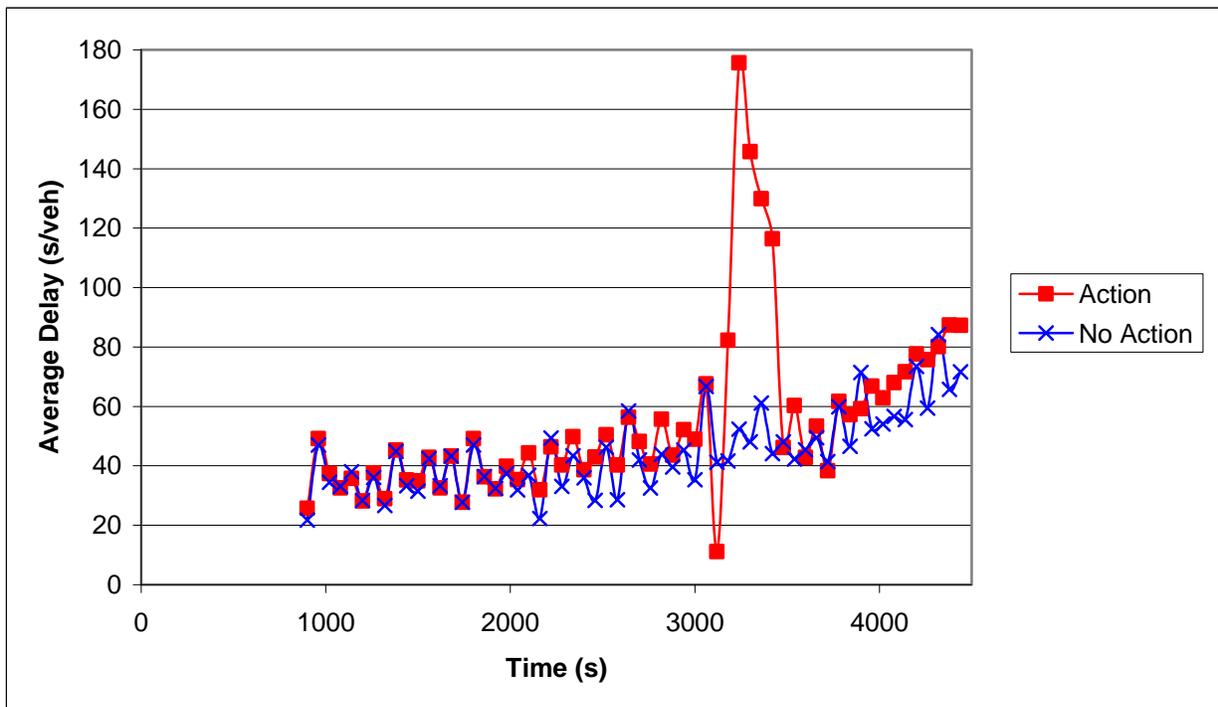
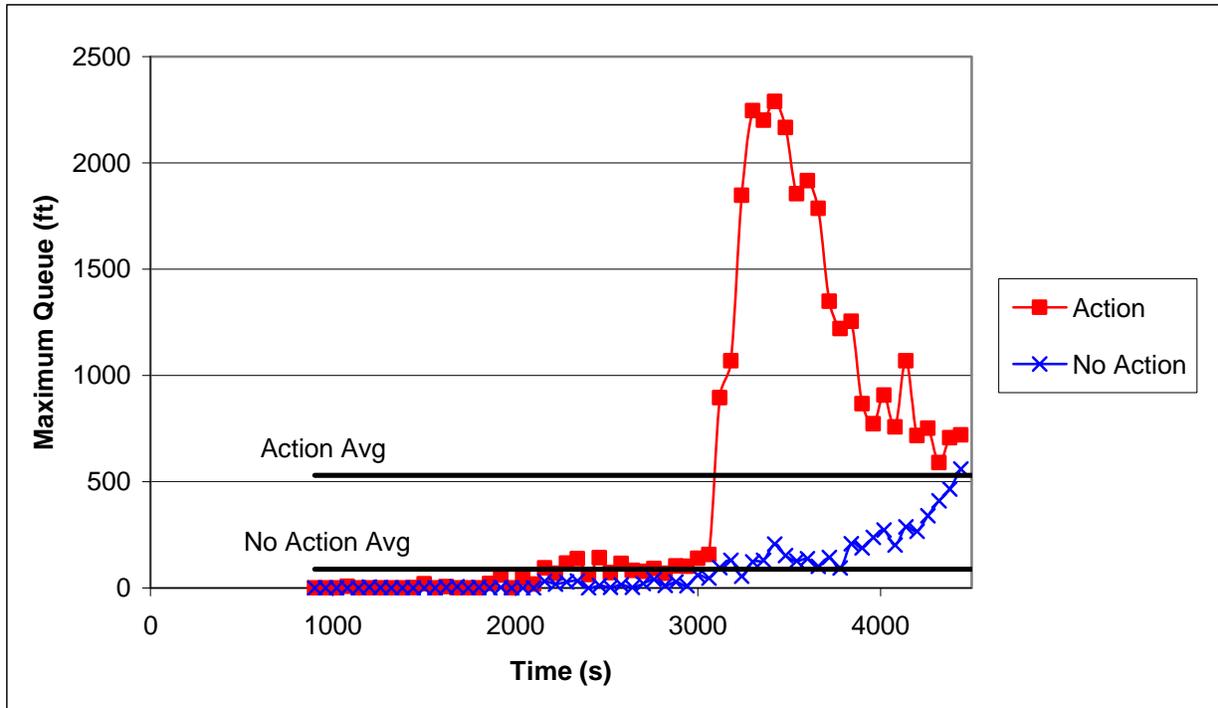


FIGURE 5-10
 NORTHWEST HIGHWAY WESTBOUND PERFORMANCE – AM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

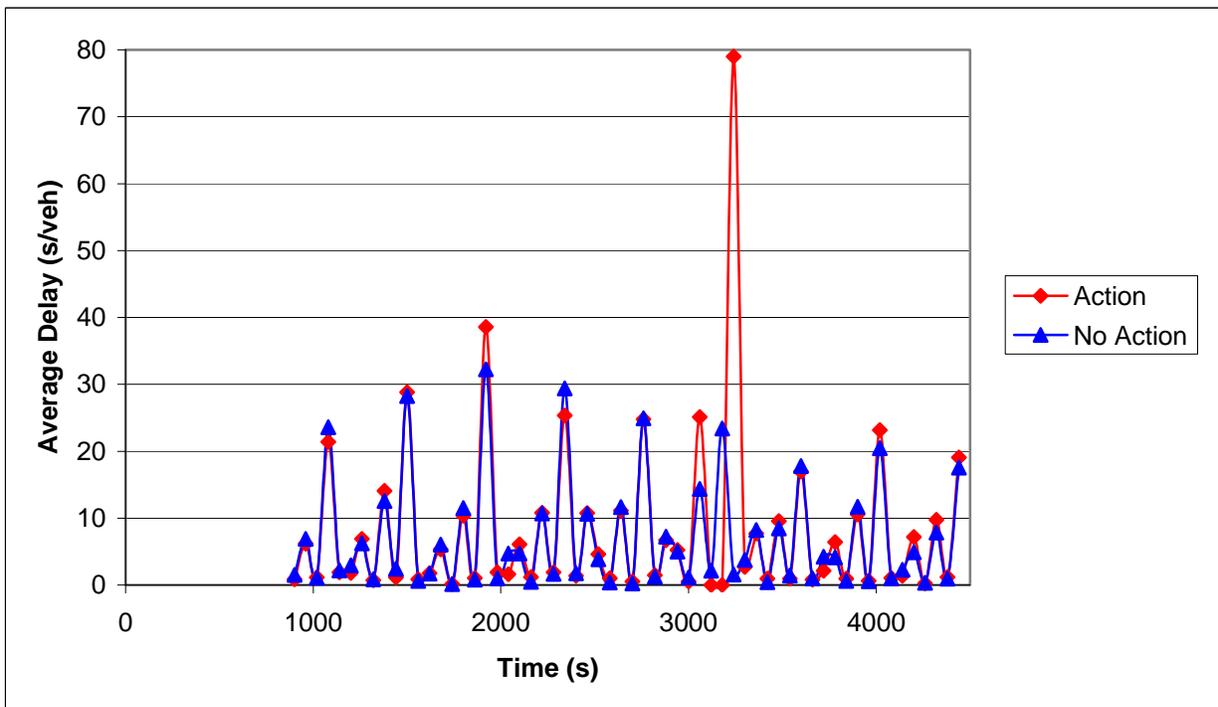
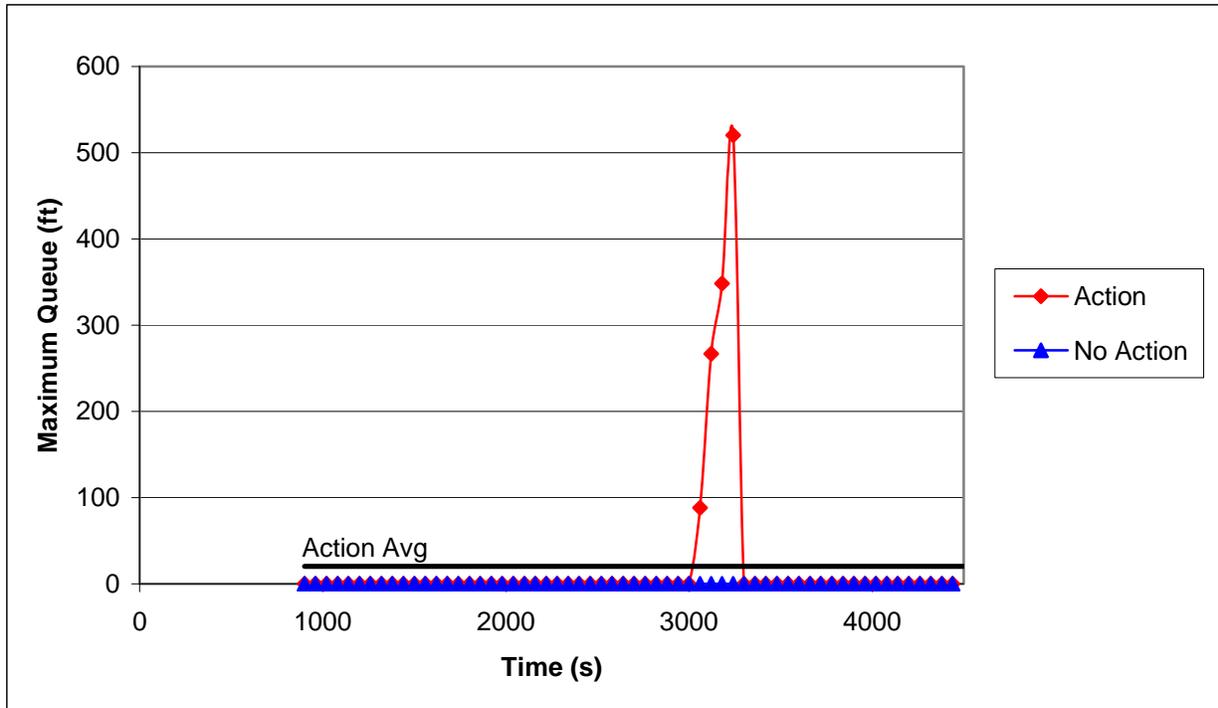


FIGURE 5-11
 NORTHWEST HIGHWAY EASTBOUND PERFORMANCE – PM PEAK
 VILLAGE OF BARRINGTON MODELING STUDY
 BARRINGTON, ILLINOIS

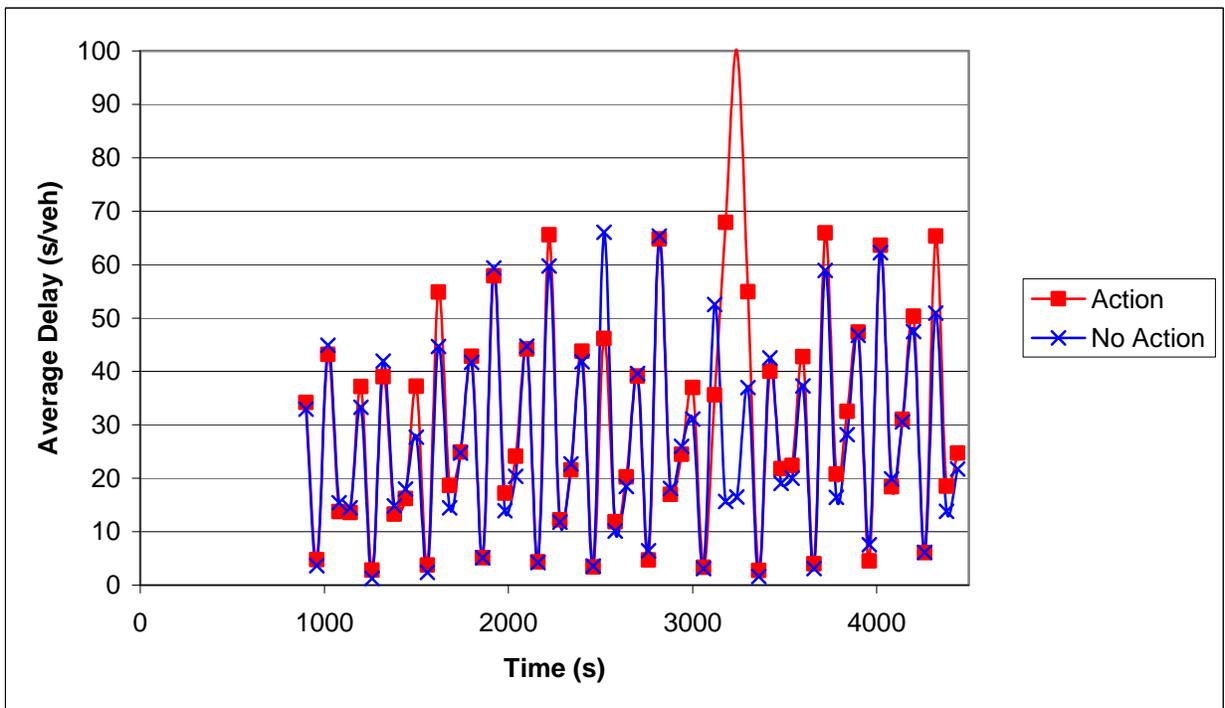
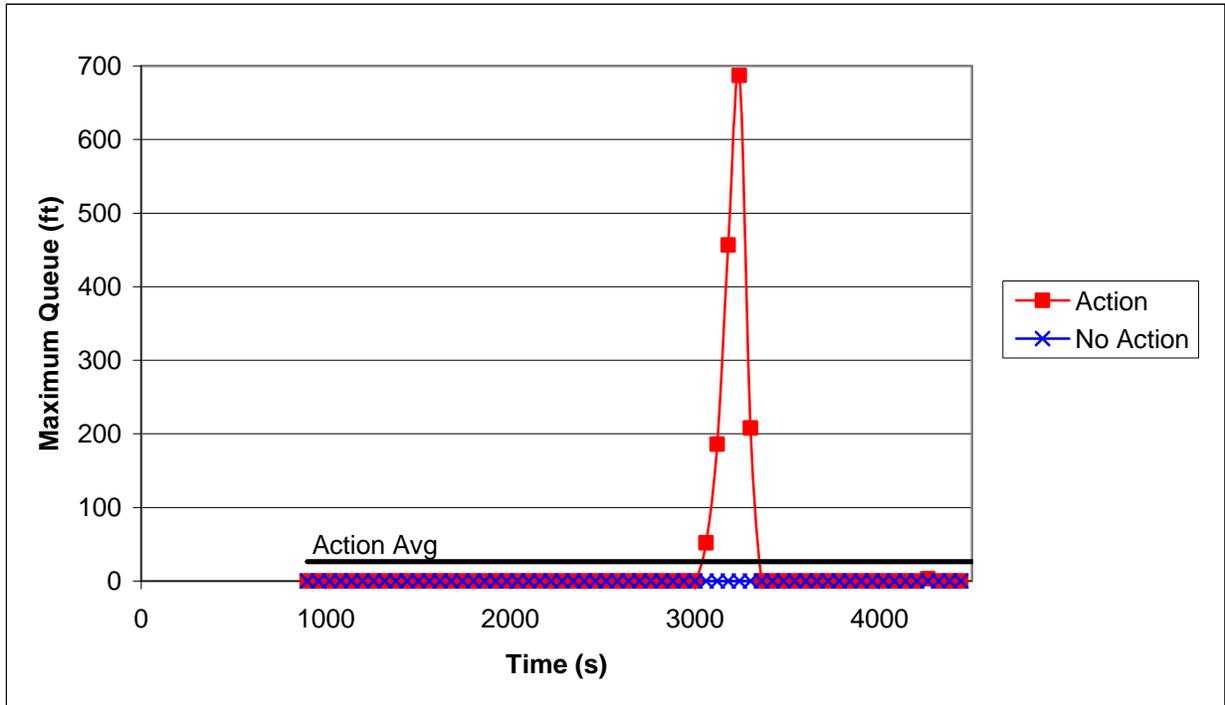
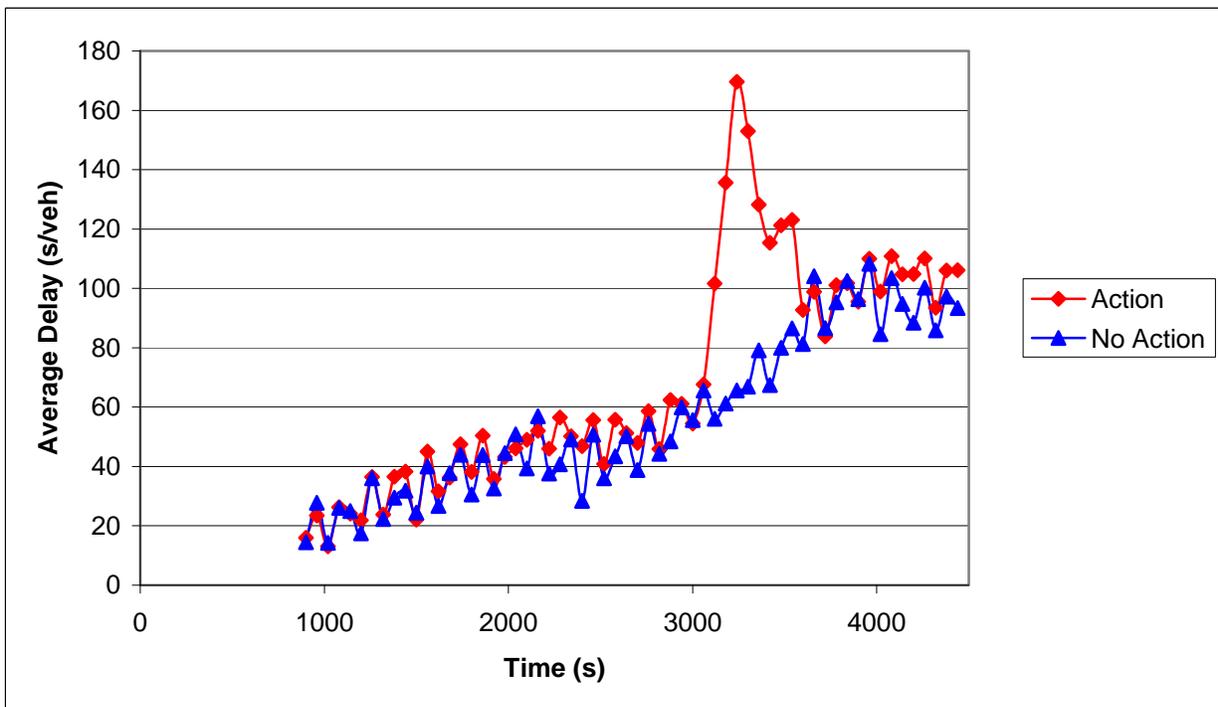
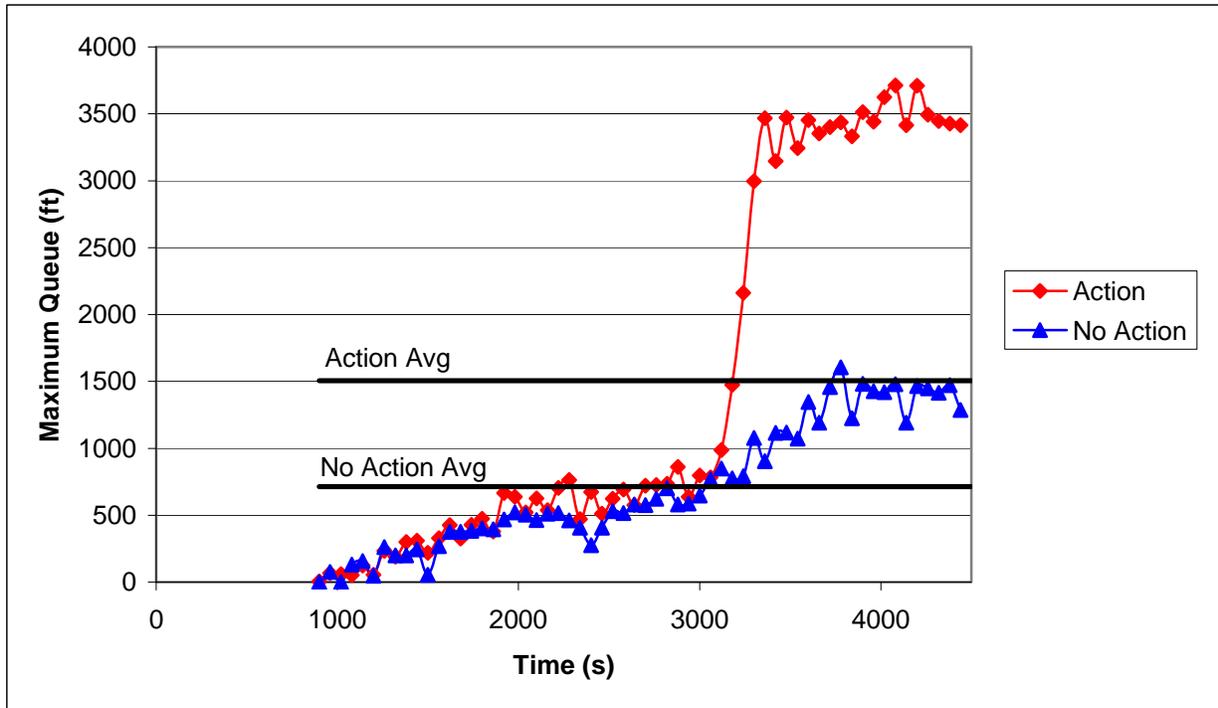


FIGURE 5-12
 NORTHWEST HIGHWAY WESTBOUND PERFORMANCE – PM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS



Hough Street Crossing

No Action Conditions

During the AM peak period under the No Action scenario, the Hough Street at-grade crossing experienced occasional vehicle queuing in the northbound direction while vehicle queues in the southbound direction extended north past Northwest Highway because of queue spillback due to insufficient capacity at the intersection of Hough Street and Main Street, resulting in a maximum vehicle queue of 1,150 feet at the Hough Street crossing under No Action conditions. Figure 5-13 (a) shows a screen capture of vehicle queuing under the No Action scenario. During the PM peak period, the northbound direction exhibited occasional vehicle queuing due to congestion at the intersection of Hough Street and Northwest Highway while no vehicle queuing existed in the southbound direction. Table 5-6 summarizes the travel times along Hough Street in each direction of travel between Cuba Road and Hawthorne Road under the No Action and Proposed Action scenarios.

Proposed Action Conditions

During the AM and PM peak periods, the addition of a freight train on the EJ&E line resulted in minimal increases in travel time along Hough Street over the peak period. Travel time increased during and immediately following the freight train but soon returned to No Action conditions.

Table 5-7 provides a comparison of the maximum queue lengths at the Hough Street at-grade crossing under the No Action and Proposed Action scenarios. Figure 5-14 and Figure 5-15 show the effects of the EJ&E train on maximum queue lengths and average delay at the Hough Street at-grade crossing during the AM peak period. Queues caused by the blocked crossing dissipated after approximately five (5) minutes and eight (8) minutes in the northbound and southbound directions of travel, respectively. Figure 5-13 (b) shows a screen capture of vehicle queuing under the Proposed Action scenario. Figure 5-16 and Figure 5-17 show the effects of the EJ&E train on the same MOEs at Hough Street during the PM peak period. In the southbound direction, queues caused by the blocked crossing dissipated to acceptable levels after approximately five (5) minutes. In the northbound direction, the queues remained for more than twenty (20) minutes due to high volumes in the northbound direction during the PM peak period and existing capacity constraints along Hough Street. Under the Proposed Action scenario, the maximum northbound vehicle queue length increases from 450-feet to 2,000-feet an increase of approximately 1,500 feet over the No Action scenario.

Table 5-6 shows that travel times along the Hough Corridor did not change substantially over the peak hour study period.

FIGURE 5-13
HOUGH STREET - PM PEAK
VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
BARRINGTON, ILLINOIS

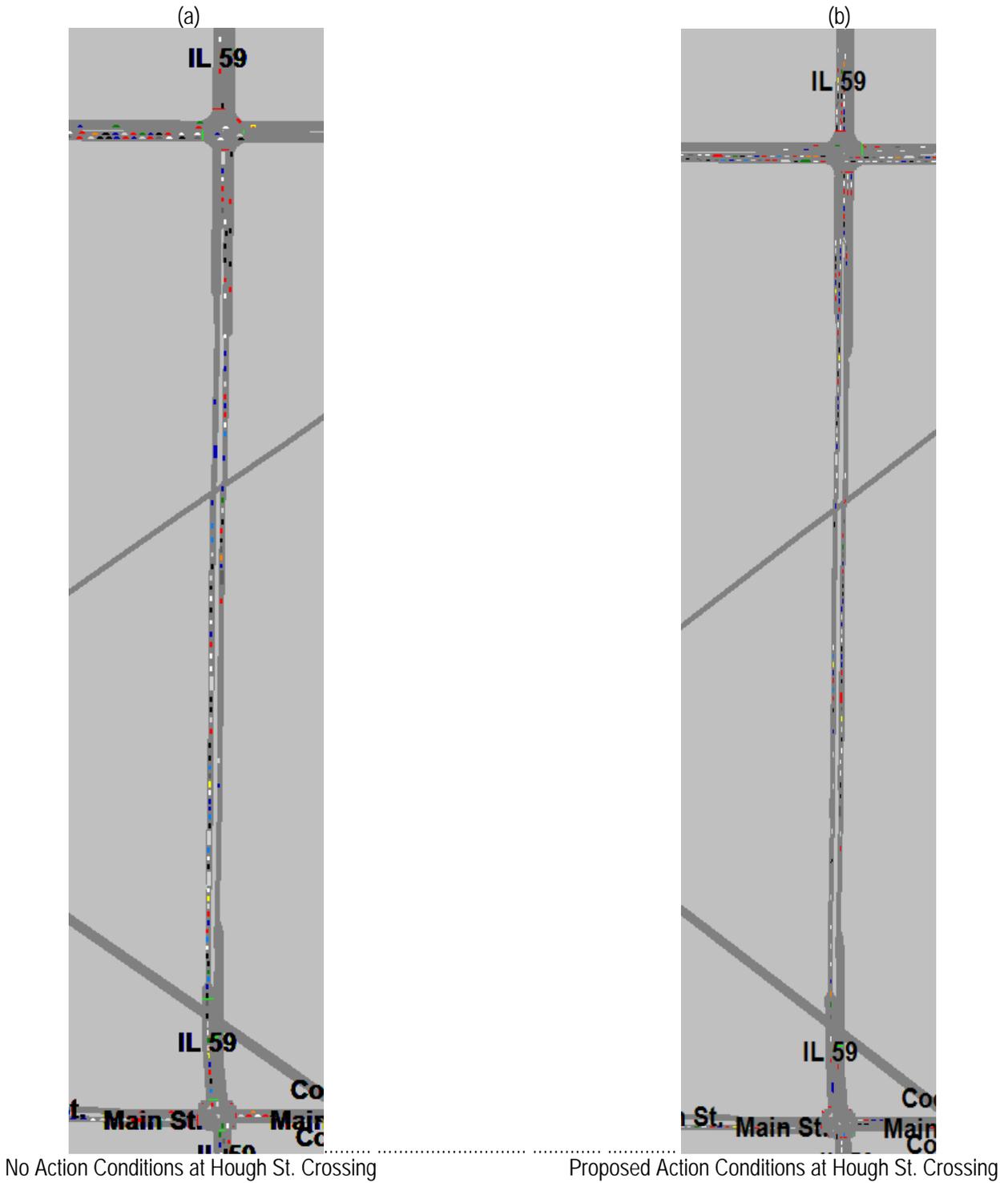


TABLE 5-6
HOUGH STREET TRAVEL TIMES
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Direction of Travel	AM Peak				PM Peak			
	No Action		Proposed Action		No Action		Proposed Action	
	Speed	Travel Time	Speed	Travel Time	Speed	Travel Time	Speed	Travel Time
Northbound	20.5 mph	6.2 min	20.2 mph	6.3 min.	14.6 mph	8.7 min.	14.0 mph	9.1 min.
Southbound	14.2 mph	9.1 min	13.8 mph	9.4 min.	18.3 mph	7.1 min.	17.5 mph	7.4 min.

TABLE 5-7
HOUGH STREET MAXIMUM QUEUE LENGTHS
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Direction of Travel	AM Peak		PM Peak	
	No Action	Proposed Action	No Action	Proposed Action
Northbound	100 ft.	1,000 ft.	450 ft.	2,000 ft.
Southbound	1,150 ft.	1,350 ft.	0	900 ft.

FIGURE 5-14
 HOUGH STREET NORTHBOUND PERFORMANCE - AM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

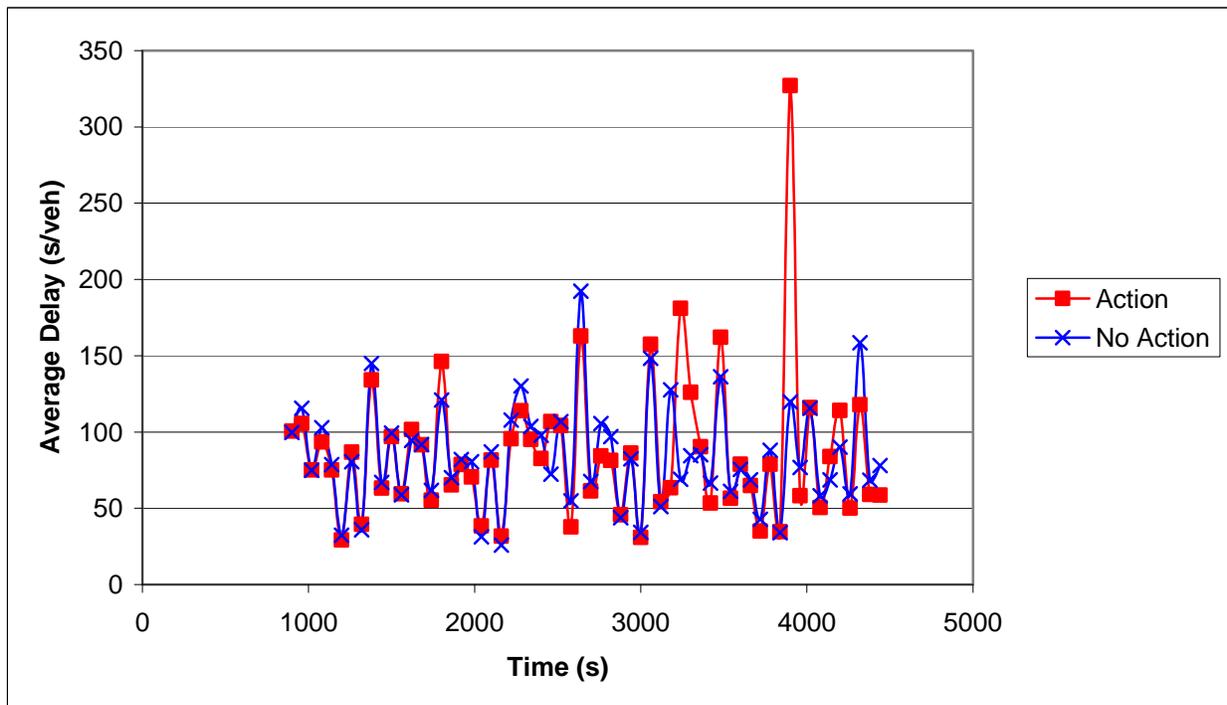
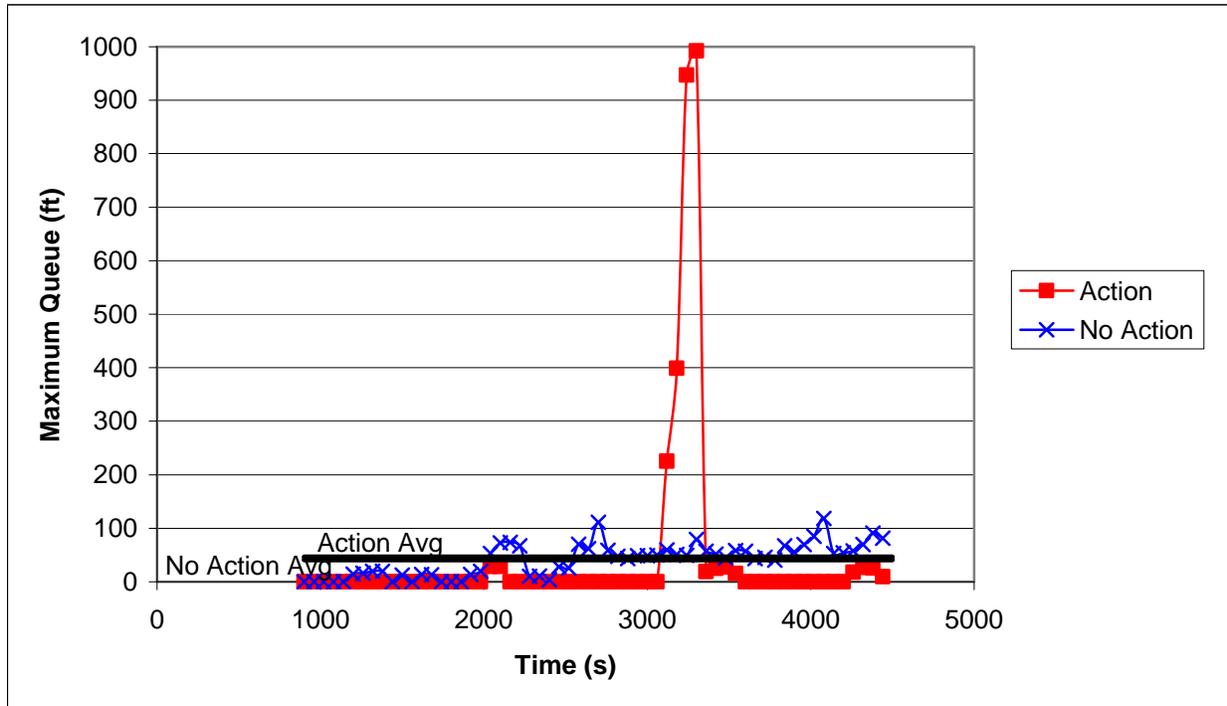


FIGURE 5-15
 HOUGH STREET SOUTHBOUND PERFORMANCE - AM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

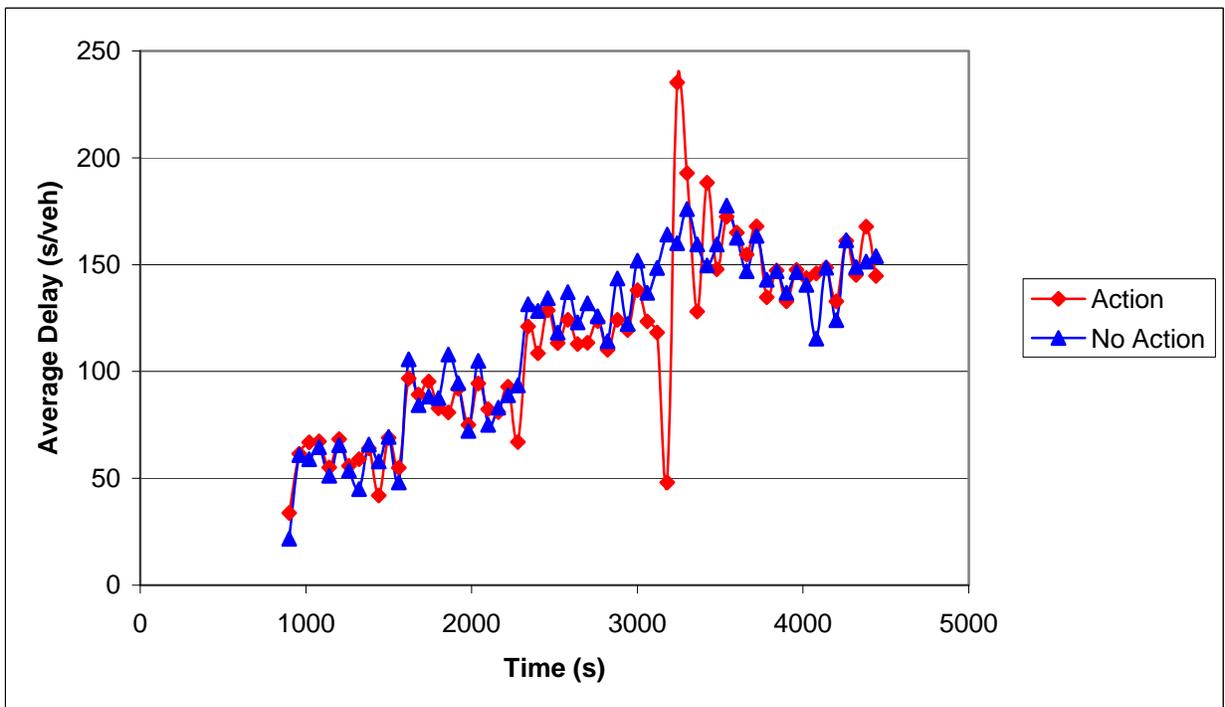
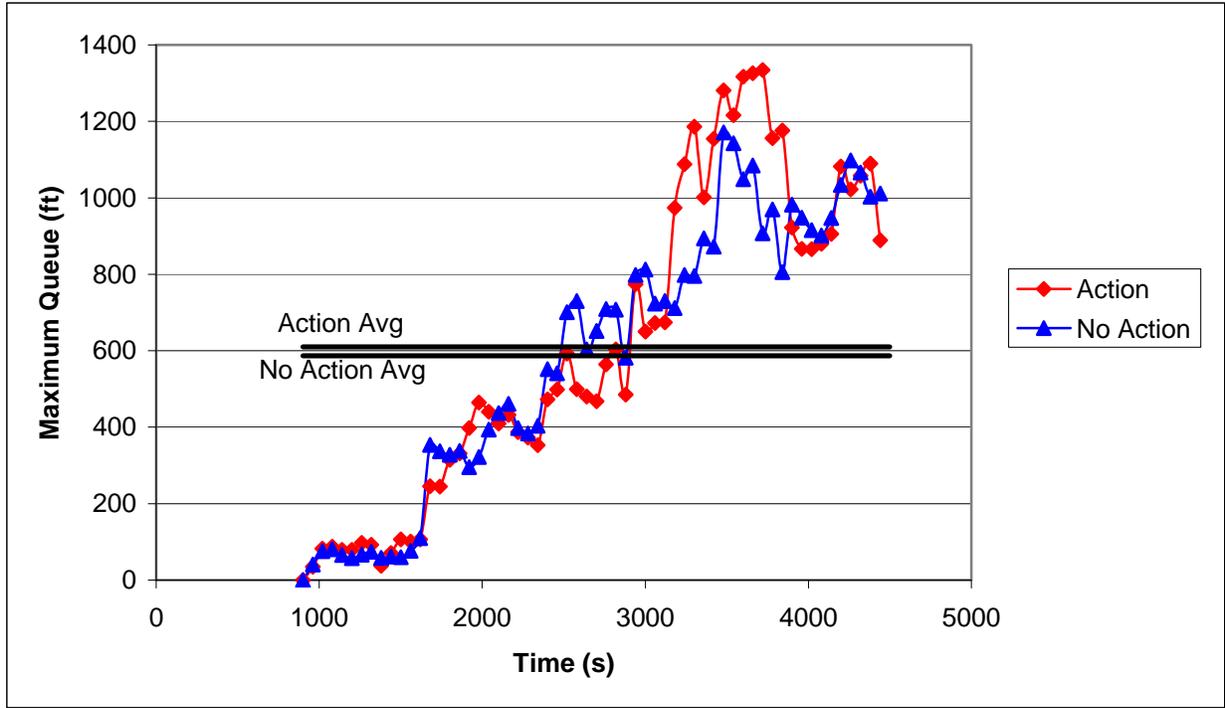


FIGURE 5-16
 HOUGH STREET NORTHBOUND PERFORMANCE – PM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

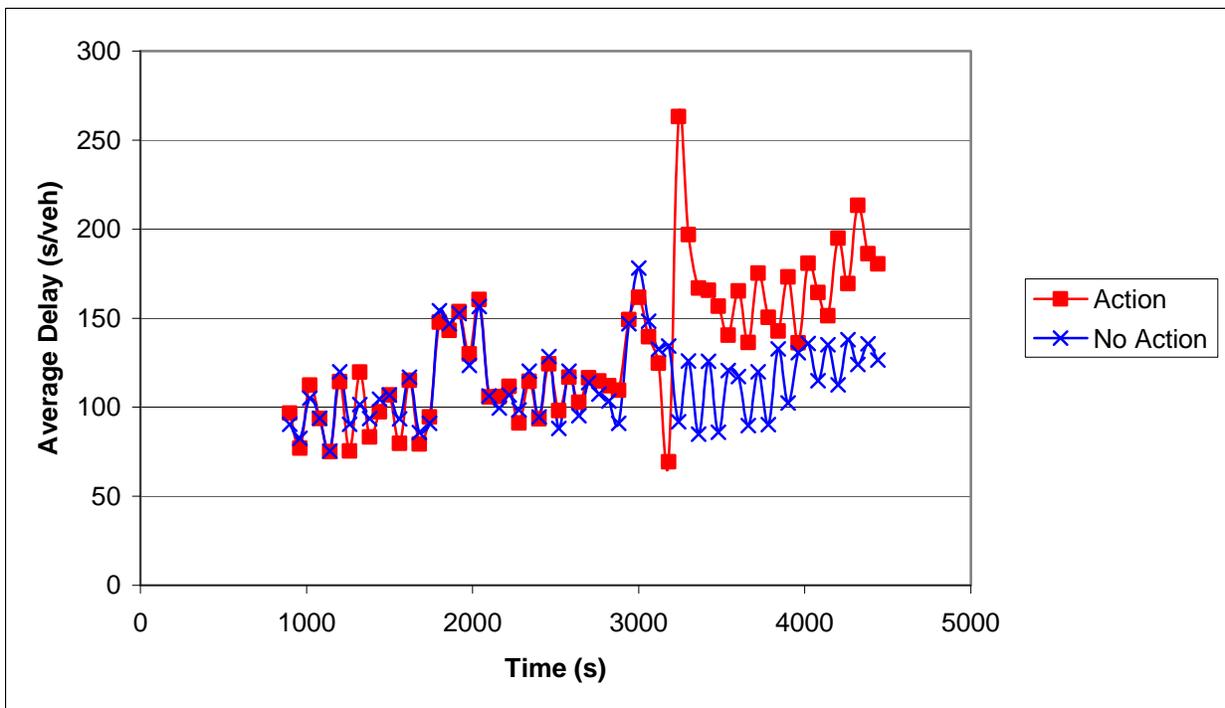
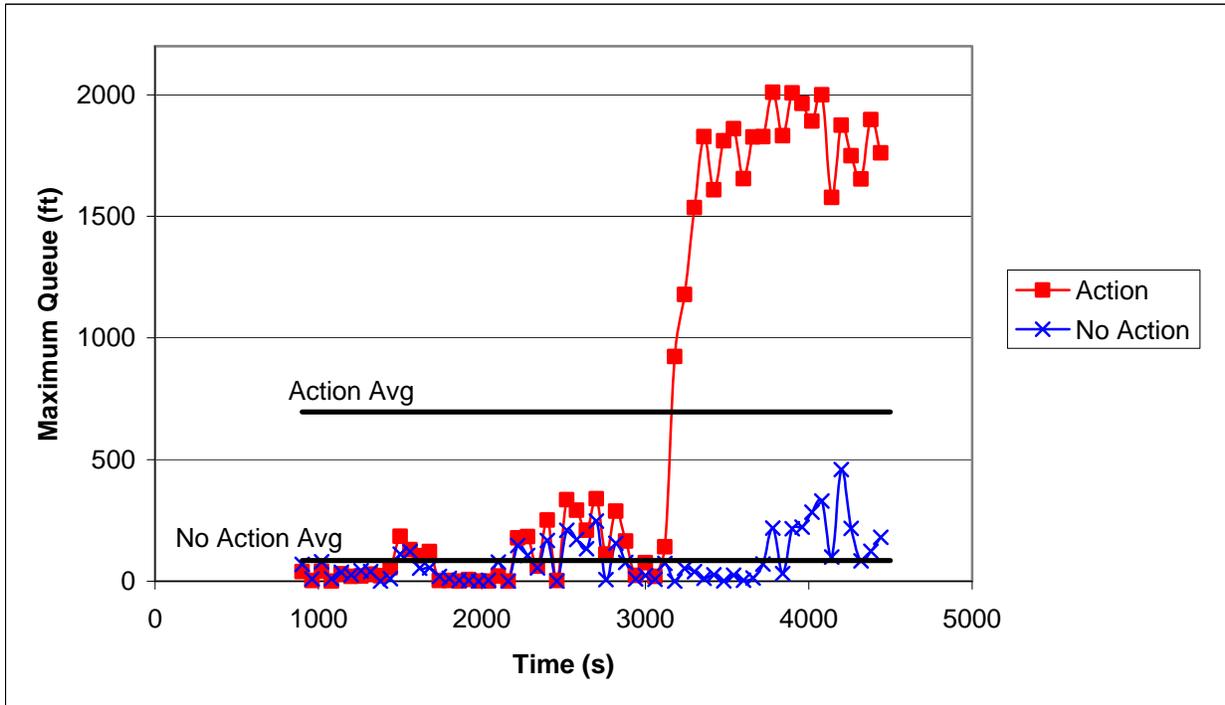
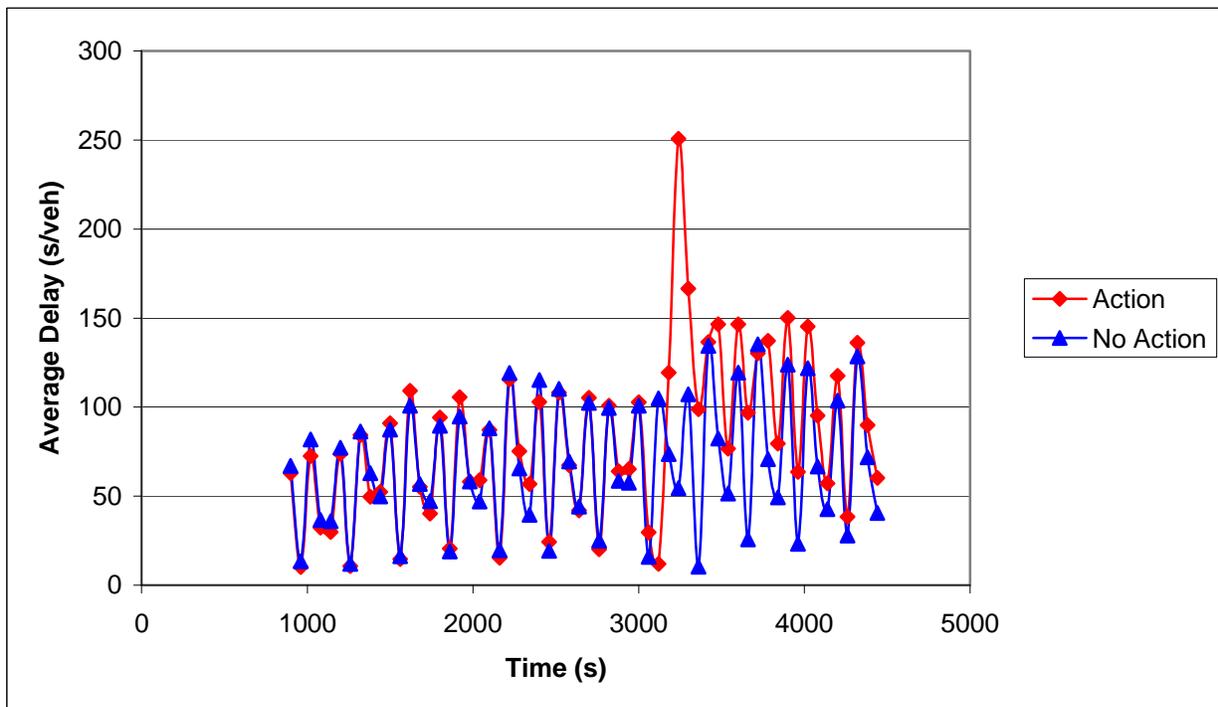
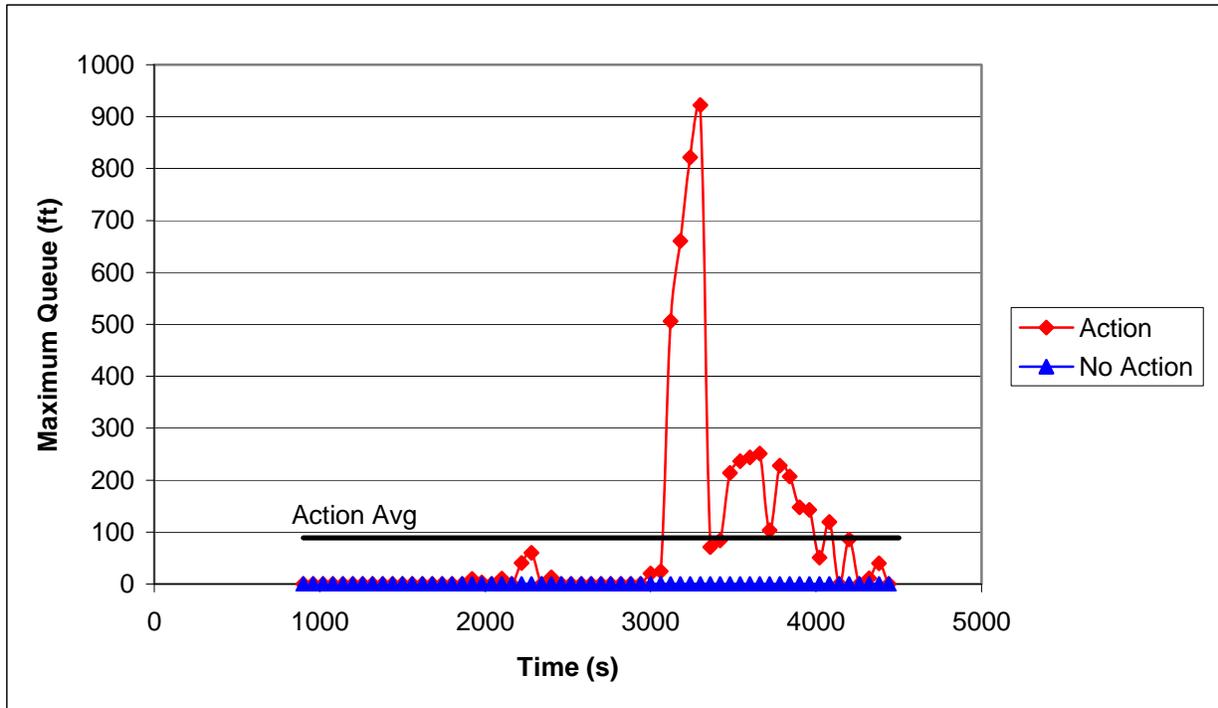


FIGURE 5-17
 HOUGH STREET SOUTHBOUND PERFORMANCE - PM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS



Main Street/Lake Cook Road Crossing

No Action Conditions.

During the AM peak period under the No Action scenario, the Main Street/Lake Cook Road at-grade crossing experienced 2900 feet of vehicle queuing in the eastbound direction because of spillback due to insufficient capacity at the intersection with Hough Street. No vehicle queuing was exhibited in the westbound direction. During the PM peak period, neither direction of travel experienced vehicle queuing. Table 5-8 summarizes the travel times along Main Street/Lake Cook Road in each direction of travel between Hart Road and Northwest Highway under the No Action and Action scenarios.

Proposed Action Conditions

During the AM and PM peak periods, the addition of a freight train on the EJ&E line resulted in minimal increases in travel time along Main Street/Lake Cook Road over the peak period. Travel time increased during and immediately following the freight train but soon returned to No Action conditions.

Table 5-9 provides a comparison of the maximum queue lengths at the Main Street/Lake Cook Road at-grade crossing under the No Action and Proposed Action scenarios. Figure 5-18 and Figure 5-19 show the effects of the EJ&E train on maximum queue lengths and average delay at the Main Street/Lake Cook Road at-grade crossing during the AM peak period. In the eastbound direction of travel, vehicle queuing was similar under both scenarios while vehicle queues dissipated after approximately four (4) minutes in the westbound direction. Figure 5-20 and Figure 5-21 show the effects of the EJ&E train on the same MOEs at Main Street/Lake Cook Road during the PM peak period. In both directions of travel, vehicle queues dissipated after approximately six (6) minutes.

Table 5-8 shows that travel times along the Main Street/Lake Cook Road would increase over the peak hour study period.

TABLE 5-8
MAIN STREET/LAKE COOK ROAD TRAVEL TIMES
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Direction of Travel	AM Peak				PM Peak			
	No Action		Proposed Action		No Action		Proposed Action	
	Speed	Travel Time	Speed	Travel Time	Speed	Travel Time	Speed	Travel Time
Eastbound	5.3 mph	12.8 min.	5.3 mph	12.9 min.	13.9 mph	4.9 min.	13.1 mph	5.2 min.
Westbound	17.9 mph	3.8 min.	16.2 mph	4.2 min.	9.9 mph	6.9 min.	9.5 mph	7.2 min.

TABLE 5-9
MAIN STREET/LAKE COOK ROAD MAXIMUM QUEUE LENGTHS
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

Direction of Travel	AM Peak		PM Peak	
	No Action	Proposed Action	No Action	Proposed Action
Eastbound	2,900 ft.	2,900 ft.	0	1,000 ft.
Westbound	0	300 ft.	0	1,050 ft.

FIGURE 5-18
 MAIN STREET/LAKE COOK ROAD EASTBOUND PERFORMANCE - AM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

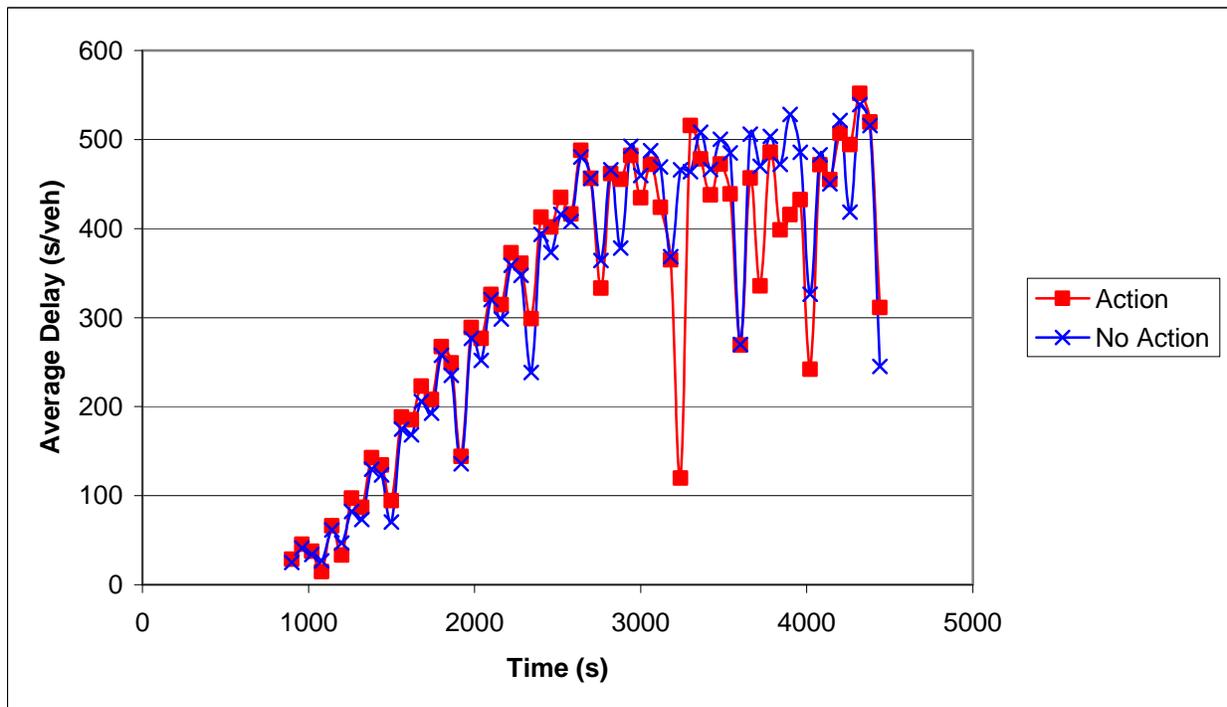
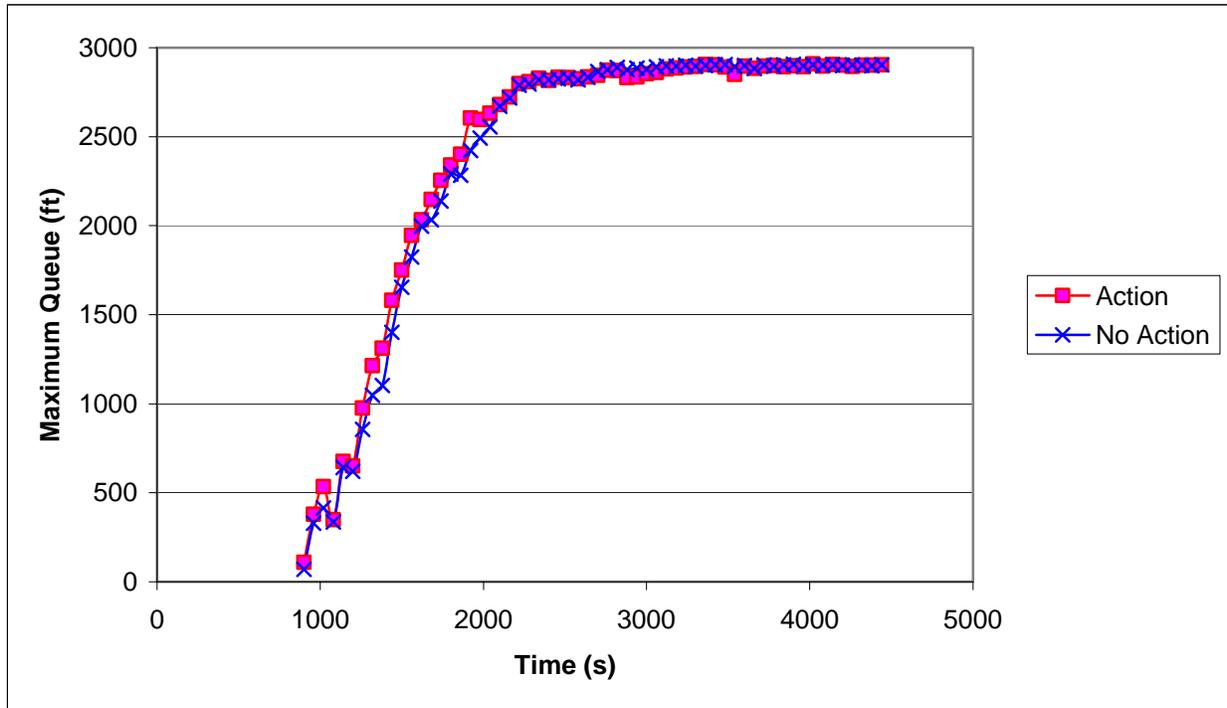


FIGURE 5-19
 MAIN STREET/LAKE COOK ROAD WESTBOUND PERFORMANCE – AM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

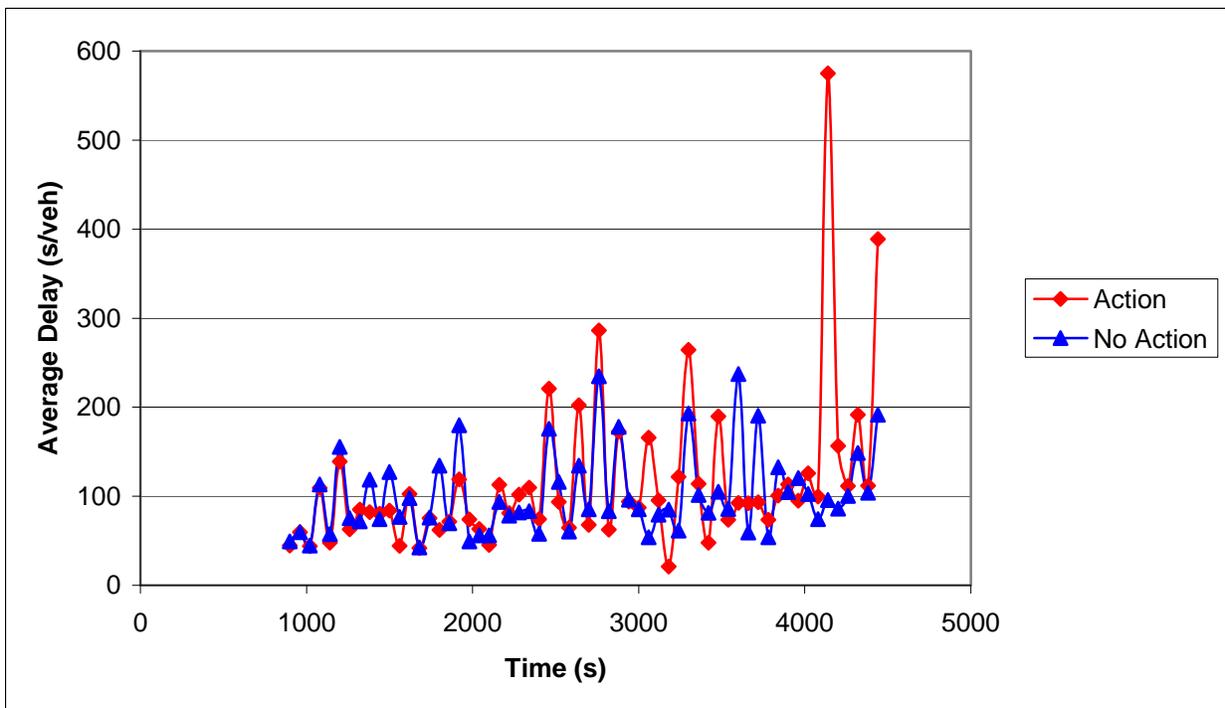
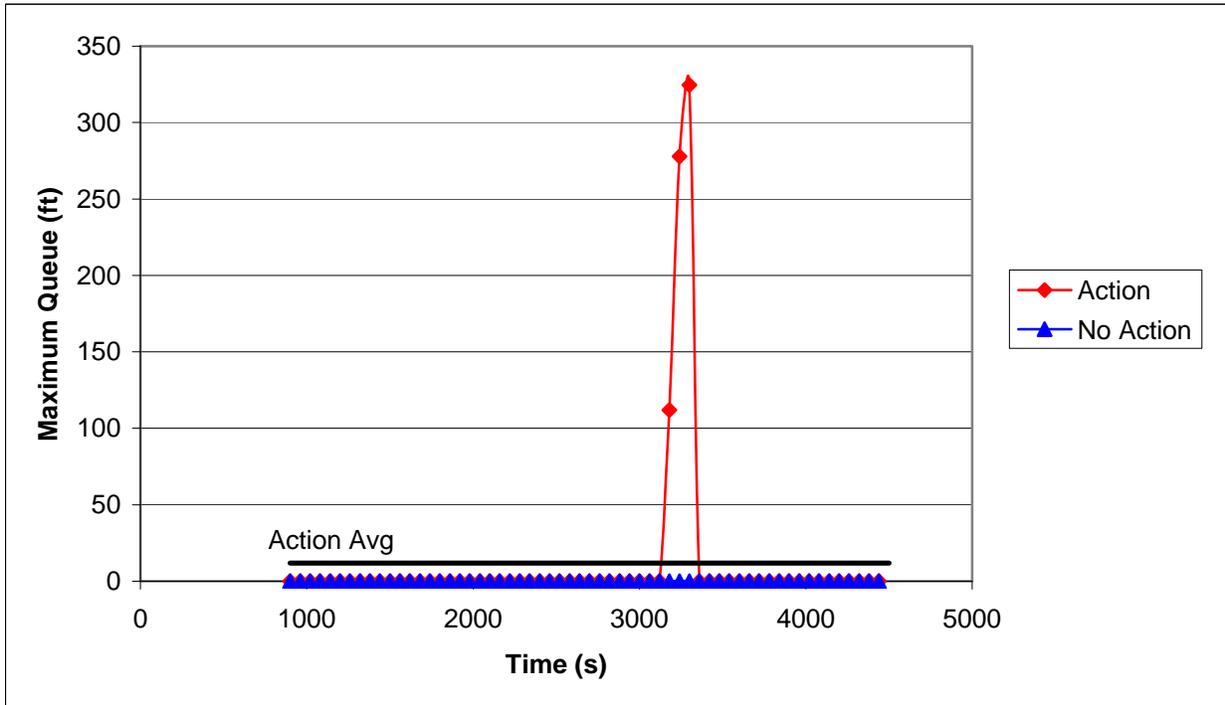


FIGURE 5-20
 MAIN STREET/LAKE COOK ROAD EASTBOUND PERFORMANCE - PM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS

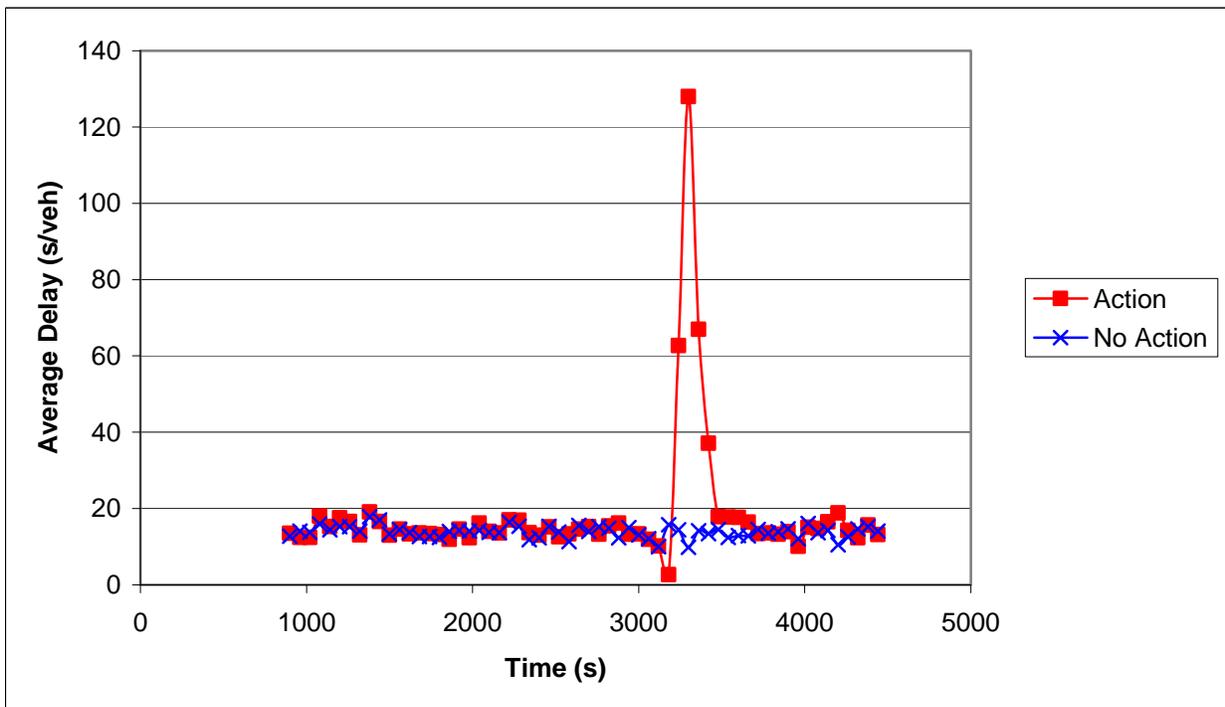
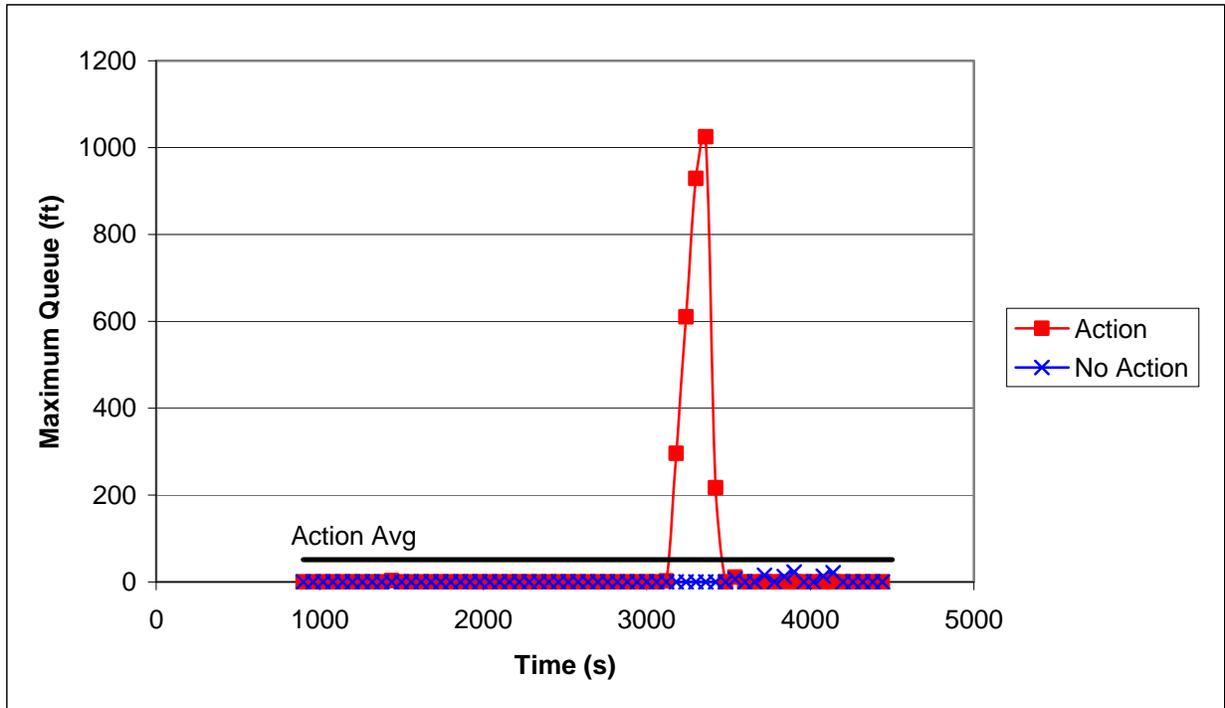
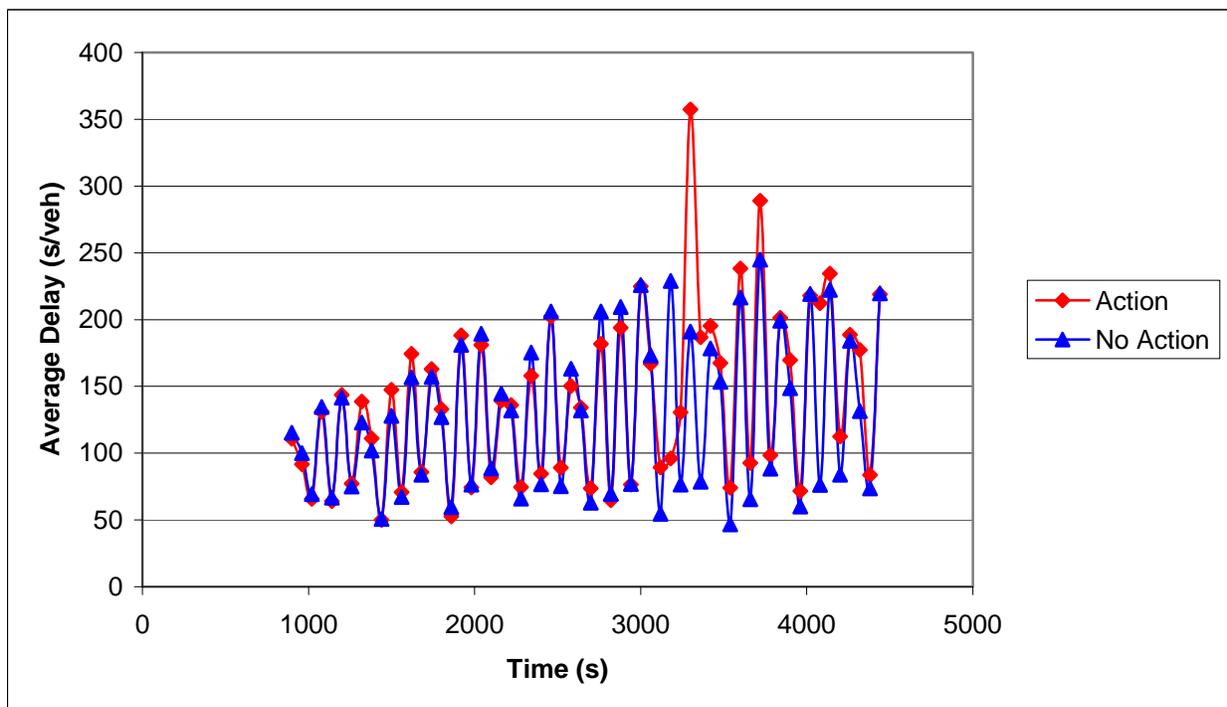
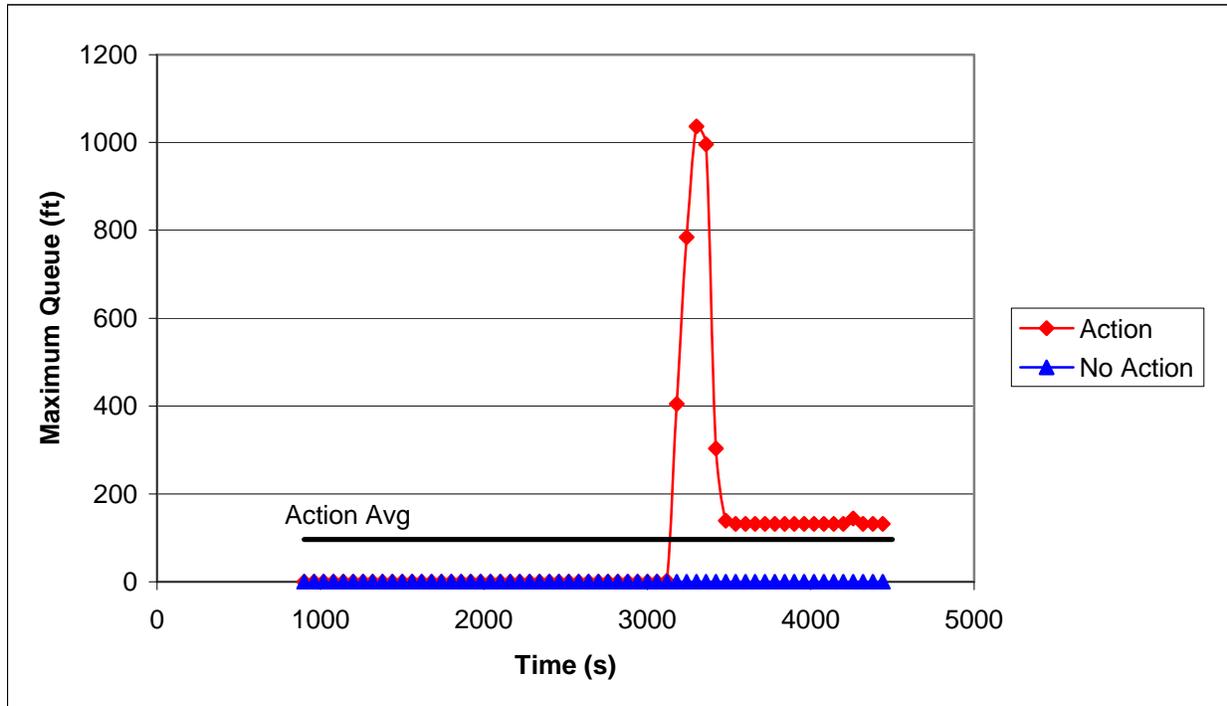


FIGURE 5-21
 MAIN STREET/LAKE COOK ROAD WESTBOUND PERFORMANCE - PM PEAK
 VILLAGE OF BARRINGTON TRAFFIC OPERATIONAL ANALYSIS
 BARRINGTON, ILLINOIS



5.5 Summary of 2015 No Action and Proposed Action Results

The following is a summary of the changes in measures of effectiveness for the 2015 No Action and Proposed Action scenarios for the network as a whole and at the intersection level:

- For the study area, the total travel time increased by 1.5 percent and 1.4 percent during the AM and PM peak periods, respectively, under the Proposed Action scenario when compared to the No Action scenario.
- For the study corridors, Northwest Highway, Hough Street and Main Street/Lake Cook Road, travel times did not change during the peak hour study periods between the No Action and Proposed Action conditions.
- For the study area, the total delay time increased by 2.7 percent and 3.3 percent during the AM and PM peak periods, respectively, under the Proposed Action scenario when compared to the No Action scenario.
- In the No Action scenario, four intersections operated at an unacceptable LOS (E and F) during both the AM and PM peak periods. There was no increase in the number of intersections operating at an unacceptable LOS under the Proposed Action scenario.
- The Proposed Action plan does not seriously affect any of the Measures of Effectiveness.

The following is a summary of the changes in MOEs under the 2015 No Action and Proposed Action scenarios at the EJ&E railroad crossing locations:

Northwest Highway Crossing:

- Under the No Action scenario, vehicle queuing was present at the crossing in the eastbound direction during the AM peak period and in the westbound direction during the PM peak period due to insufficient capacity at the intersections with Main Street/Lake Cook Road and Hough Street, respectively.
- There was a minimal increase in travel time along Northwest Highway between Hart Road and Eastern Avenue under the Proposed Action scenario compared to the No Action scenario.
- During the AM peak period under the Proposed Action scenario, the eastbound and westbound maximum queue lengths increased by 1,750 feet and 500 feet, respectively, over the No Action scenario. These queues dissipated after approximately three (3) minutes in both directions of travel. Although the maximum queue length increased by 1,750 feet for eastbound traffic in the AM peak, the average vehicle queue length only increased by 450 feet for the time period compared to the No Action scenario.
- During the PM peak period under the Proposed Action scenario, the eastbound and westbound maximum queue lengths increased by 700 feet and 2,100 feet, respectively, over the No Action scenario. These queues dissipated after approximately six (6) minutes in the eastbound direction but remained for over twenty minutes in the westbound direction due to high traffic volumes and a lack of capacity at the intersection of Northwest Highway and Hough Street. Although the maximum queue length increased by 2,100 feet for westbound traffic in the PM peak, the average vehicle queue length only increased by 800 feet for the time period compared to the No Action scenario.

Hough Street Crossing:

- Under the No Action scenario, vehicle queuing was present at the crossing in the southbound direction during the AM peak period and in the northbound direction during the PM peak period from queue spillback due to insufficient capacity at the intersections with Main Street/Lake Cook Road and Northwest Highway, respectively.
- During the AM peak period under the Proposed Action scenario, the northbound maximum queue length increased by 900 feet over the No Action scenario. This queue dissipated after five (5) minutes. There was no significant increase in the southbound maximum queue length over the No Action scenario.

- During the PM peak period under the Proposed Action scenario, the northbound and southbound maximum queue lengths increased by 1,400 feet and 900 feet, respectively, over the No Action scenario. These queues remained for over twenty minutes in the northbound direction but mostly dissipated after five (5) minutes in the southbound direction. Although the maximum queue length increased by 1,400 feet for northbound traffic in the PM peak, the average vehicle queue length only increased by 600 feet for the time period compared to the No Action scenario.
- There was a minimal increase in travel time along Hough Street between Cuba Road and Hawthorne Road under the Proposed Action scenario compared to the No Action scenario.

Main Street/Lake Cook Road:

- Under the No Action scenario, vehicle queuing was present at the crossing in the eastbound direction during the AM peak period from queue spillback due to insufficient capacity at the intersection with Hough Street.
- During the AM peak period under the Proposed Action scenario, the westbound maximum queue length increased by 100 feet over the No Action scenario. This queue dissipated after three (3) minutes. The eastbound maximum queue length remained unchanged over the No Action scenario.
- During the PM peak period under the Proposed Action scenario, the eastbound and westbound maximum queue lengths increased by 1,000 feet and 1,100 feet, respectively, over the No Action scenario. These queues dissipated after six (6) minutes.
- There was a minimal increase in travel time along Main Street/Lake Cook Road between Hart Road and Northwest Highway under the Proposed Action scenario compared to the No Action scenario.

5.6 Conclusion

This study was prepared to address the following issues:

- 1). Commenter and local agency concerns regarding worsening of the Barrington community congestion and mobility resulting from the Proposed Action;
- 2). Concerns regarding the inter-related effects of the Proposed Action on Barrington's transportation network due to the close proximity of major roadway intersections and railway crossings;
- 3). Analysis of reasonable and feasible alternatives for mitigation of the serious transportation system effects of the queuing predicted for the Hough Street and EJ&E line at-grade crossing.

Impacts to or from these issues is summarized below.

Worsening Barrington Congestion

Results of the Village of Barrington Traffic Operational Analysis show that the increase in train traffic on the EJ&E line will likely have some impacts on traffic congestion in Barrington but will not considerably worsen traffic congestion or mobility. The analysis shows that congestion will worsen and mobility will decline with predictions of continued traffic growth. Under the Proposed Action scenario, network-wide total delay time increased by four (4) percent and five (5) percent during the AM and PM peak periods, respectively, over the No Action scenario. Individual intersection levels of service, however, did not degrade under the Proposed Action scenario.

In the VISSIM analysis, a freight train passing through Barrington on the EJ&E line during the AM and PM peak periods caused increases in maximum vehicular queue lengths at most of the study at-grade crossing approaches. In many of these cases, however, the queuing did not last for more than six minutes. Queuing was significant at the Hough Street crossing for the northbound direction during the PM peak. The maximum queue length increased by approximately 1,400 feet at this location and the queue length does not diminish to No Action level for over 20 minutes due to high traffic volumes during the peak travel periods. Hough Street at this crossing is primarily a 2-lane

roadway in this section and the lack of available capacity causes this high level of queuing and inability for the queuing to dissipate quickly. Queuing due to the EJ&E line was most significant at the Northwest Highway crossing in the PM peak for the westbound direction. Due to the high traffic volumes traveling in the westbound direction in the PM peak, the maximum queue increases by over 2,100 feet and does not diminish to No Action levels for over 20 minutes. Northwest Highway is a four-lane undivided roadway near the crossing, carrying high traffic volumes throughout the day, and existing capacity is constrained by the signalized intersections upstream and downstream of the crossing. Even with the available capacity of two-lanes in each direction, the maximum queue is still increased by 2,100 feet over both lanes. This results in a greater delay experienced by all vehicles at this crossing location.

Inter-relation of Thoroughfares and Railways

Public meeting commentors and local officials expressed concerns that the combination of a closely spaced major thoroughfare network and two rail line crossings in the area could result in traffic grid lock during EJ&E train crossing events. This simulation determined that this would not occur. The simulation does show that the extent of existing and proposed traffic congestion does create potential for long traffic queues in the region.

Reasonable and Feasible Alternatives for Mitigation

Results of this analysis show that the major source of congestion in Barrington is the excess vehicle demand at existing major thoroughfare intersections. Existing congestion at these intersections backs traffic up into significant queues. Construction of a grade separation at Hough Street and the EJ&E will not prevent traffic queues on Hough Street, Northwest Highway or Main Street/Lake Cook Street. Therefore, construction of a grade separation alone at either the Hough Street or Northwest Highway crossings is not a feasible way to address regional congestion due to capacity constraints at existing signalized intersections. Construction of a grade separation at either crossing location would only be beneficial if capacity improvements are incorporated at the upstream and downstream signalized intersections.

Table A.5-1 Total Vehicle Traffic Delay and Percent Increase

Street	2015 ADT	Trains per Day		2015 Level of Service			Queue Length (Feet)		Average Delay per Delayed Vehicle (Minutes)		Total Vehicle Traffic Delay (24-Hr)			
		No-Action	Proposed Action	Crossing		Roadway	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Prop. Action	Increase	Percent Increase
				No-Action	Proposed Action									
Washington Street	11,714	6.4	28.3	A	F	C	1,550	2,371	3.4	5.3	938.4	9,879.20	8940.8	91%
Woodruff Road	10,659	18.5	42.3	B	F	E	1,056	1,814	2.6	4.4	1,411.80	9,380.80	7969	85%
Chicago Road	23,390	8.6	31.6	A	C	D	718	1,091	1.6	2.4	548.8	4,596.00	4047.2	88%
Ogden Avenue (US 34)	46,110	15.7	39.5	A	B	F	1,083	1,330	1.2	1.5	1,132.80	4,377.00	3244.2	74%
Broad Street	19,572	7.6	23.6	A	B	F	1,311	1,916	1.7	2.5	470.9	3,140.00	2669.1	85%
Lincoln Highway (US 30)	29,237	10.2	34.2	A	B	E	634	939	1.1	1.7	394.9	3,034.50	2639.6	87%
Western Avenue	24,717	8.6	31.6	A	B	D	528	863	1.1	1.8	277.2	2,727.00	2449.8	90%
Old McHenry Road	32,494	5.3	20.3	A	A	F	641	1,186	1	1.9	189	2,540.30	2351.3	93%
IL 60 & 83	29,009	5.3	20.3	A	A	F	1,175	2,121	1.1	2	190.3	2,272.40	2082.1	92%
Washington Street	12,095	10.7	31.6	A	C	D	768	1,121	1.7	2.4	387.6	2,361.60	1974	84%
Montgomery Road/83 rd Street	27,131	15.7	39.5	A	B	F	1,274	1,597	1.2	1.5	667.2	2,629.50	1962.3	75%
Cicero Avenue	23,281	6.4	28.3	A	B	D	504	777	1.1	1.7	196.9	2,077.40	1880.5	91%
Liberty Street.	16,111	15.7	39.5	A	B	F	912	1,148	1.5	1.9	597	2,392.10	1795.1	75%
Northwest Highway (US 14)	33,949	5.3	20.3	A	A	E	562	1,057	0.9	1.6	149.4	1,907.20	1757.8	92%
West 5 th Avenue	28,467	9.8	29.8	A	A	D	537	807	1	1.5	292	2,004.00	1712	85%
Hawthorne Lane	20,024	4.4	23.4	A	B	F	694	1,430	0.9	1.9	76.5	1,765.10	1688.6	96%
Hart Street	20,268	10.2	34.2	A	B	F	859	1,272	1.1	1.6	267.3	1,932.80	1665.5	86%
East 45 th Avenue	23,486	7.6	28.6	A	A	E	439	727	1	1.6	185	1,848.00	1663	90%
Stearns Road	27,604	5.5	22.5	A	A	E	486	815	0.9	1.5	134.1	1,527.00	1392.9	91%
East Main Street	10,960	7.6	28.6	A	B	E	505	904	1.2	2.1	128.4	1,507.80	1379.4	91%
State Street	7,656	10.2	34.2	A	C	A	418	690	1.4	2.3	165.2	1,508.80	1343.6	89%
Gilmer Road	18,662	5.3	20.3	A	A	F	719	1,328	1	1.9	106	1,421.30	1317.10	93%

Main Street	20,015	18.5	42.3	A	B	E	818	1,081	1.1	1.4	463.1	1,778.00	1314.9	74%
Ela Road	21,408	5.3	20.3	A	A	F	776	1,421	0.9	1.7	102.6	1,361.70	1259.1	92%
127 th Street	13,160	15.7	39.5	A	B	F	665	867	1.3	1.7	377	1,618.40	1241.4	77%
West End Avenue/Halsted Street	5,956	8.6	31.6	A	C	C	396	604	1.7	2.6	161.5	1,378.00	1216.5	88%
Kennedy Avenue	17,076	10.2	34.2	A	A	F	665	981	1	1.5	189	1,398.00	1209	86%
Diehl Road	17,341	10.7	31.6	A	B	C	779	1,059	1.2	1.6	278.4	1,486.40	1208	81%
Briggs Street	13,842	6.4	28.3	A	B	E	654	946	1.2	1.8	139.2	1,339.20	1200	90%
West 15 th Avenue	19,890	9.7	29.7	A	A	F	771	1,131	1	1.5	208	1,399.50	1191.5	85%
Hough Street (Il 59)	22,549	5.3	20.3	A	A	F	760	1,404	0.9	1.6	100.8	1,265.60	1164.8	92%
East End Avenue	5,086	8.6	31.6	A	C	B	325	515	1.7	2.6	132.6	1175.20	1042.60	88%
135 th Street	13,898	15.7	39.5	A	B	F	636	852	1.2	1.6	333.6	1,496.00	1162.40	78%
Wentworth Avenue	4,563	10.2	34.2	A	C	B	292	467	1.7	2.7	141.1	1,198.80	1057.7	88%
East 40 th Place	14,222	7.6	28.6	A	A	F	521	861	1	1.6	110	1,094.40	984.4	90%
South Rowell Avenue	3,184	6.4	28.3	A	D	A	220	395	1.8	3.2	70.2	995.2	925	93%
Broad Street Connector	19,572	2.6	10.7	A	A	F	970	1,582	1.3	2.1	91	987	896	91%
Wolf Road	9,966	6.4	28.3	A	B	C	508	698	1.3	1.8	117	988.2	871.2	88%
111 th Street	10,454	15.7	39.5	A	B	E	502	629	1.2	1.6	262.8	1,104.00	841.2	76%
West Bartlett Road	17,209	5.5	22.5	A	A	F	587	978	0.9	1.5	81	918	837	91%
Renwick Road	11,807	18.5	42.3	A	B	D	473	637	1	1.4	243	1,048.60	805.6	77%
Cedar Road	10,299	6.4	28.3	A	B	E	499	672	1.3	1.7	115.7	897.6	781.9	87%
Wolf's Crossing Road	9,593	15.7	39.5	A	B	D	461	577	1.2	1.6	241.2	1,012.80	771.6	76%
Harlem Avenue	12,336	6.4	28.3	A	A	D	267	363	1.1	1.8	104.5	855	750.5	88%
Lake Cook Road/Main Street	14,222	5.3	20.3	A	A	F	479	885	0.9	1.6	63.9	798.4	734.5	92%
South Gougar Road	8,063	6.4	28.3	A	B	D	411	551	1.3	1.8	94.9	779.4	684.5	88%
School House Road	8,721	6.4	28.3	A	B	D	412	569	1.2	1.7	87.6	759.9	672.3	88%
East Lake Street	6,524	7.6	28.6	A	B	C	275	488	1.1	1.9	63.8	735.3	671.5	91%

Cuba Road	12,921	5.3	20.3	A	A	D	443	804	0.9	1.6	58.5	726.4	667.9	92%
Lockport Road	10,085	18.5	42.3	A	B	E	412	545	1.1	1.4	233.2	896	662.8	74%
143 rd Street	9,716	15.7	39.5	A	B	D	406	535	1.1	1.4	194.7	821.8	627.1	76%
East Miller Street	6,524	7.6	28.6	A	B	C	261	460	1	1.8	55	657	602	92%
Pfeiffer Road /88th Avenue	7,752	6.4	28.3	A	B	D	358	506	1.2	1.7	76.8	676.6	599.8	89%
Main Street	7,474	5.3	20.3	A	B	B	310	577	1.1	2	50.6	650	599.4	92%
Division Street	7,613	18.5	42.3	A	B	B	332	446	1.1	1.5	188.1	786	597.9	76%
Old Rand Road	7,474	5.3	20.3	A	A	B	303	561	1.1	2	49.5	632	582.5	92%
East Elm Street	8,090	7.6	28.6	A	A	C	316	501	1	1.6	67	636.8	569.8	89%
Nelson Road	7,336	6.4	28.3	A	B	C	347	479	1.2	1.7	74.4	639.2	564.8	88%
Torrence Avenue	8,968	10.2	34.2	A	A	C	337	486	1	1.4	95	645.4	550.4	85%
Plainfield/Naperville Road	8,117	18.5	42.3	A	B	B	332	438	1.1	1.4	188.1	721	532.9	74%
Shoe Factory Road	9,202	5.3	20.3	A	A	D	334	598	0.9	1.7	44.1	572.9	528.8	92%
Cottage Grove Avenue	5,578	10.2	34.2	A	B	A	121	179	1.1	1.7	75.9	578	502.1	87%
Van Dyke Road	6,921	15.7	39.5	A	B	C	295	389	1.1	1.5	141.9	640.5	498.6	78%
Gaylord Road	5,591	18.5	42.3	A	B	C	263	351	1.2	1.6	162	659.2	497.2	75%
Main Street Connector (North)	4,375	--	8	--	B	B	--	608	--	3.6	--	486	486	100%
Diamond Lake Road	6,207	5.3	20.3	A	A	C	265	466	1.1	2	42.9	526	483.1	92%
Center Avenue	5,320	6.4	28.3	A	B	B	264	364	1.3	1.7	61.1	514.8	453.7	88%
Army Trail Road	7,392	4.4	23.4	A	A	C	224	452	0.8	1.6	21.6	470.4	448.8	95%
Smith Road	7,123	4.4	23.4	A	A	C	220	435	0.8	1.6	21.6	452.8	431.2	95%
Lake Street	5,067	10.2	34.2	A	B	B	220	318	1.1	1.6	68.2	483.2	415	86%
Hafenrichter Road	5,657	15.7	39.5	A	B	C	266	333	1.2	1.5	139.2	547.5	408.3	75%
Oakwood Road	4,750	5.3	20.3	A	B	B	197	367	1.1	2	31.9	414	382.1	92%
East Frontage Road/ Essington Road	4,983	18.5	42.3	A	B	B	208	274	1.1	1.4	117.7	450.8	333.1	74%
Mills Road	3,115	6.4	28.3	A	B	A	163	236	1.4	2	40.6	372	331.4	89%
Keating Drive/87th Street	4,182	15.7	39.5	A	B	B	196	246	1.2	1.5	103.2	405	301.8	75%

Ferguson Road - 119 th Street	3,690	15.7	39.5	A	B	B	182	227	1.3	1.6	102.7	398.4	295.7	74%
Main Street Connector (South)	4,375	10	15	A	B	B	526	608	3.1	3.6	99.2	381.6	282.4	74%
South Rowell Avenue	3,184	6.4	28.3	A	B	A	158	223	1.3	1.8	36.4	315	278.6	88%
Penny Road	4,786	5.3	20.3	A	A	B	170	311	0.9	1.7	22.5	297.5	275	92%
Old Sauk Trail	3,461	6.4	28.3	A	B	A	160	226	1.2	1.7	33.6	300.9	267.3	89%
East End Avenue Connector	5,086	1.6	2.6	A	A	B	586	967	3	4.9	78	343	265	77%
Airport Road	3,818	10.2	34.2	A	A	B	146	215	1	1.5	41	306	265	87%
West 25 th Avenue	4,187	9.7	29.7	A	A	B	162	238	1	1.5	44	294	250	85%
Spencer Road	3,104	6.4	28.3	A	B	A	147	202	1.2	1.7	31.2	270.3	239.1	88%
Eastern Avenue	3,444	18.5	42.3	A	B	A	141	186	1.1	1.4	79.2	305.2	226	74%
West 9 th Avenue	4,187	9.7	29.7	A	A	B	159	233	1	1.4	43	268.8	225.8	84%
Ridgeland Avenue	3,642	6.4	28.3	A	A	B	158	214	1.1	1.5	30.8	252	221.2	88%
Main Street	4,375	6.4	20.3	A	C	B	173	262	1.1	1.6	31	236.8	205.8	87%
Lake Zurich Road	3,131	5.3	20.3	A	A	A	102	187	0.8	1.6	12	169.6	157.6	93%
Center Street	1,845	18.5	42.3	A	B	A	75	100	1.1	1.4	42.7	163.8	121.1	74%
Church Street	364	10.7	31.6	A	C	A	22	31	1.6	2.2	11.2	61.6	50.4	82%
Aurora Street	364	10.7	31.6	A	B	A	22	30	1.6	2.2	11.2	59.4	48.2	81%

A.6

Environmental Justice Statistical Analysis

HDR Engineering

Environmental Justice Statistical Analysis

In their comments on the DEIS, USEPA stated that Appendix I in the DEIS should have provided additional information to explain the statistical analysis and conclusions of the Environmental Justice analysis. USEPA asked the following five questions:

- How were the marginal probabilities derived?
- What do the different marginal probabilities demonstrate?
- Why are the marginal probabilities in Tables I.2-2 in Appendix I in the DEIS (Actual noise impacts) and I.2.3 (Expected noise impacts) identical?
- Why are there only 2 tables? Shouldn't there be four: minority/actual; minority/expected; low-income/actual; low income/expected?
- The DEIS states, "Further analysis revealed that the high and adverse train noise impacts are not disproportionately borne by minority or low-income environmental justice populations." What analysis supports that statement?

The following analysis is SEA's response to USEPA's questions. This analysis includes the revisions that are discussed in Section 2.9 of the FEIS.

The environmental justice analysis evaluated the effects on environmental justice populations where high and adverse impacts were identified. SEA completed a statistical analysis using the chi-squared test of independence to determine if the probability of a census block group experiencing high and adverse impacts is independent of a census block group being classified as an environmental justice population. If not statistically independent, then additional analysis is conducted to determine if the impacts are disproportionately borne by the environmental justice populations.

Chi-Squared Test of Independence for Train Noise Impacts Between Minority Groups

The 161 census block groups were categorized into two groups based on degree of train noise impacts: (i) those experiencing no to low impacts from train noise impacts along EJ&E rail lines; and (ii) those experiencing high and adverse impacts as a result of train noise impacts along the EJ&E rail lines. Furthermore, within each of these two groups, the number of minority and non-minority census block groups was determined and provided in Table A (a 2-row by 2-column contingency table).

Marginal probabilities are calculated by dividing the number of census block groups in a row or column by the total number of census block groups. The marginal probabilities reveal that 26% of the census blocks experience a "no to low" noise impact. In addition it reveals that 42% of the census blocks are considered minority.

Table A Minority Environmental Justice Census Block Group Analysis: Actual Train Noise Impacts			
	Number of Minority Census Block Groups	Number of non-Minority Census Block Groups	Marginal Probability for Train Noise Impacts
No to Low Impact (ERS 0 or 3)	23	19	26%
High and adverse impact (ERS 5)	44	75	74%
Marginal Probability for Minority/Non-Minority	42%	58%	

A chi-squared test of independence is conducted to determine evaluates whether train noise impacts are distributed independently across minority/non-minority census block groups. The hypothesis is that these impacts are independent.

The next step in the statistical analysis is to determine the expected number of census block counts in the contingency table under the assumption of independence. For example, if independent, the number of census block groups with “no to low” noise impact that are classified as minority should equal the total number of census blocks (e.g., 161) times the marginal probability for “no to low” noise impact (26%) times the marginal probability for minority (42%). This yields an expected count of 17 for “no to low” impact and minority classified. Table B summarizes all expected census block counts.

	Number of Minority	Number of non-Minority	Marginal Probability for Train Noise Impacts
No to Low Impact (ERS 0 or 3)	17	25	26%
High and adverse impact (ERS 5)	50	69	74%
Marginal Probability for Minority/Non-Minority	42%	58%	

The chi-squared test of independence assesses whether the actual and observed results are statistically “close” and therefore independent. The square of the difference in observed versus expected counts divided by the observed counts are totaled across all 4 cells. In this case, the total is 4.04. Comparing this value to a chi-squared distribution with one degree of freedom, it is determined that the probability that independence exists is only 4.4 percent. Therefore, we can be more than 95 percent certain that census block groups experiencing high and adverse impacts is not independent of environmental justice classifications.

After SEA determined that the two variables are not independent, the ratio of observed environmental justice census block groups with high and adverse impacts to the expected number of environmental census block groups with high and adverse impacts was calculated. A ratio of greater than one would indicate that a high and adverse impact would occur more frequently in environmental justice census block groups. In the case of minority census block groups, the ratio is 0.89 (or 44 divided by 50 from Tables A and B above) and therefore the impacts are not disproportionately borne by minority populations.

Chi-Squared Test of Independence for Train Noise Impacts Between Low Income Groups

The same process was used to ascertain whether train noise impacts were independent of income level. The observed actual and expected census block counts blocks by train noise impact and low income group are provided in Table C and Table D respectively. Again, the square of the difference in observed versus expected counts divided by the observed counts are totaled across all 4 cells. In this case, the total is 0.25. Comparing this value to a chi-squared distribution with one degree of freedom, it is determined that the probability that independence exists is 62 percent. Therefore, we can only be 38 percent certain that census block groups experiencing high and adverse impacts are not independent of the low income environmental justice classification. Since the certainty that census block groups experiencing high and adverse impacts are not independent of the low income environmental justice classification is less than 50 percent, the two variables are statistically independent. As a result, the impacts are not disproportionately borne by low-income populations.

Table C Low-Income Environmental Justice Census Block Group Analysis: Actual Train Noise Impacts			
	Number of Low-Income	Number of non-Low-Income	Marginal Probability for Train Noise Impacts
No to Low Impact (ERS 0 or 3)	7	35	26%
High and adverse impact (ERS 5)	24	95	74%
Marginal Probability for Income Group	19%	81%	

Table D Low-Income Environmental Justice Census Block Group Analysis: Expected Train Noise Impacts			
	Number of Low-Income	Number of non-Low-Income	Marginal Probability for Train Noise Impacts
No to Low Impact (ERS 0 or 3)	8	34	26%
High and adverse impact (ERS 5)	23	96	74%
Marginal Probability for Income Group	19%	81%	

A.7 Air Quality

Modeled Impacts for East-West Oriented Moving Trains vs NAAQS and Air Toxics Thresholds

		5-Year Maximum Modeled Impact for 1.0 grams/second Emission Rate				
		1-hour	3-hour	8-hour	24-hour	Annual
Rank						
Highest					4,851.4	767.1
Annual 2nd High		24,003.1	15,105.5	11,309.7	4,419.9	
98th Percentile					2,642.1	

NAAQS Pollutant (Rank)	Averaging Period	Per Source Emission Rate (g/s)	Modeled Max. Conc. (ug/m3)	(In)Significant Impact Level (ug/m3)	Will County Monitored Backgd (ug/m3)	Modeled + Monitored Total (ug/m3)	NAAQS (ug/m3)
CO (2nd high)	1-hour	2.11E-03	51	2,000	1,410	1,461	40,000
CO (2nd high)	8-hour	2.11E-03	24	500	914	938	10,000
NO2 (high)	Annual	2.22E-02	12.8	1	53	66	100
PM10 (2nd high)	24-hour	4.17E-04	1.8	5	40	42	150
PM2.5 (98th %)	24-hour	4.17E-04	1.1	1.2-5.0****	36.7	38	35
PM2.5 (high)	Annual	4.17E-04	0.3	0.3-1.0****	14.1	14.4	15
SO2 (2nd high)	3-hour	9.38E-06	0.14	25	133	133	1,300
SO2 (2nd high)	24-hour	9.38E-06	0.04	5	45	45	365
SO2 (high)	Annual	9.38E-06	0.01	1	11.4	11.4	80

MSAT Pollutant***	Averaging Period	Per Source Emission Rate (g/s)	Modeled Max. Conc. (ug/m3)	IRIS Threshold (ug/m3)
Acetaldehyde	24-hour	1.31E-05	0.063	9**
Acetaldehyde	Annual	1.31E-05	0.010	50*
Acrolein	24-hour	1.76E-06	0.009	0.02**
Benzene	24-hour	2.46E-06	0.012	30**
Benzene	Annual	2.46E-06	0.002	45*
1,3-Butadiene	24-hour	2.09E-06	0.010	2**
1,3-Butadiene	Annual	2.09E-06	0.002	3*
Formaldehyde	Annual	2.63E-05	0.020	8*
Diesel Exhaust (DPM)	24-hour	4.17E-04	2.0	5**

* Concentration estimated to cause a 1/10,000 lifetime risk of developing cancer, based on 70-year exposure to average concentration.

** EPA-estimated "safe" level to prevent acute effects on exposed, sensitive individuals based on 24-hour average concentration.

***MSAT pollutants are typically analyzed incrementally without regard to existing risks and exposures, which are typically orders of magnitude larger.

****Range of proposed values, per EPA proposed rule publication in Sept. 21, 2007 Federal Register

***** NO2 concentration estimated by multiplying NOx by EPA conservative 75% NO2/NOx ratio.

Modeled Impacts for North-South Oriented Moving Trains vs NAAQS and Air Toxics Thresholds

		5-Year Maximum Modeled Impact for 1.0 grams/second Emission Rate				
		1-hour	3-hour	8-hour	24-hour	Annual
Rank						
Highest					5,722.7	906.6
Annual 2nd High		23,122.4	14,618.7	8,502.6	3,976.4	
98th Percentile					2,526.0	

NAAQS Pollutant (Rank)	Averaging Period	Per Source Emission Rate (g/s)	Modeled Max. Conc. (ug/m3)	(In)Significant Impact Level (ug/m3)	Will County Monitored Backgd (ug/m3)	Modeled + Monitored Total (ug/m3)	NAAQS (ug/m3)
CO (2nd high)	1-hour	2.11E-03	49	2,000	1,410	1,459	40,000
CO (2nd high)	8-hour	2.11E-03	18	500	914	932	10,000
NO2 (high)	Annual	2.22E-02	15.1	1	53	68	100
PM10 (2nd high)	24-hour	4.17E-04	1.7	5	40	42	150
PM2.5 (98th %)	24-hour	4.17E-04	1.1	1.2-5.0****	36.7	38	35
PM2.5 (high)	Annual	4.17E-04	0.4	0.3-1.0****	14.1	14.5	15
SO2 (2nd high)	3-hour	9.38E-06	0.14	25	133	133	1,300
SO2 (2nd high)	24-hour	9.38E-06	0.04	5	45	45	365
SO2 (high)	Annual	9.38E-06	0.01	1	11.4	11.4	80

MSAT Pollutant***	Averaging Period	Per Source Emission Rate (g/s)	Modeled Max. Conc. (ug/m3)	IRIS Threshold (ug/m3)
Acetaldehyde	24-hour	1.31E-05	0.075	9**
Acetaldehyde	Annual	1.31E-05	0.012	50*
Acrolein	24-hour	1.76E-06	0.010	0.02**
Benzene	24-hour	2.46E-06	0.014	30**
Benzene	Annual	2.46E-06	0.002	45*
1,3-Butadiene	24-hour	2.09E-06	0.012	2**
1,3-Butadiene	Annual	2.09E-06	0.002	3*
Formaldehyde	Annual	2.63E-05	0.024	8*
Diesel Exhaust (DPM)	24-hour	4.17E-04	2.4	5**

* Concentration estimated to cause a 1/10,000 lifetime risk of developing cancer, based on 70-year exposure to average concentration.

** EPA-estimated "safe" level to prevent acute effects on exposed, sensitive individuals based on 24-hour average concentration.

***MSAT pollutants are typically analyzed incrementally without regard to existing risks and exposures, which are typically orders of magnitude larger.

****Range of proposed values, per EPA proposed rule publication in Sept. 21, 2007 Federal Register

***** NO2 concentration estimated by multiplying NOx by EPA conservative 75% NO2/NOx ratio.

Modeled Impacts for East-West Oriented Idling Trains vs NAAQS and Air Toxics Thresholds

		5-Year Maximum Modeled Impact for 1.0 grams/second Emission Rate				
		1-hour	3-hour	8-hour	24-hour	Annual
Rank	Idling Fraction =>	1	1	1	0.50	0.50
Highest					1890.51	143.62
Annual 2nd High		6267.37	3671.73	2839.15	1578.76	
98th Percentile					1094.33	

NAAQS Pollutant (Rank)	Averaging Period	Per Source Emission Rate (g/s)	Modeled Max. Conc. (ug/m3)	(In)Significant Impact Level (ug/m3)	Will County Monitored Backgd (ug/m3)	Modeled + Monitored Total (ug/m3)	NAAQS (ug/m3)
CO (2nd high)	1-hour	4.23E-02	265	2,000	1,410	1,675	40,000
CO (2nd high)	8-hour	4.23E-02	120	500	914	1,034	10,000
NO2 (high)	Annual	1.51E-01	10.8	1	53	64	100
PM10 (2nd high)	24-hour	6.39E-03	5.0	5	40	45	150
PM2.5 (98th %)	24-hour	6.39E-03	3.5	1.2-5.0****	36.7	40.2	35
PM2.5 (high)	Annual	6.39E-03	0.5	0.3-1.0****	14.1	14.6	15
SO2 (2nd high)	3-hour	1.74E-04	0.6	25	133	134	1,300
SO2 (2nd high)	24-hour	1.74E-04	0.1	5	45	45	365
SO2 (high)	Annual	1.74E-04	0.01	1	11.4	11.4	80

MSAT Pollutant***	Averaging Period	Per Source Emission Rate (g/s)	Modeled Max. Conc. (ug/m3)	IRIS Threshold (ug/m3)
Acetaldehyde	24-hour	1.15E-03	1.08	9**
Acetaldehyde	Annual	1.15E-03	0.08	50*
Acrolein	24-hour	2.36E-04	0.22	0.02**
Benzene	24-hour	1.39E-04	0.13	30**
Benzene	Annual	1.39E-04	0.01	45*
1,3-Butadiene	24-hour	1.46E-04	0.14	2**
1,3-Butadiene	Annual	1.46E-04	0.01	3*
Formaldehyde	Annual	2.52E-03	0.18	8*
Diesel Exhaust (DPM)	24-hour	6.39E-03	6.0	5**

* Concentration estimated to cause a 1/10,000 lifetime risk of developing cancer, based on 70-year exposure to average concentration.

** EPA-estimated "safe" level to prevent acute effects on exposed, sensitive individuals based on 24-hour average concentration.

***MSAT pollutants are typically analyzed incrementally without regard to existing risks and exposures, which are typically orders of magnitude larger.

****Range of proposed values, per EPA proposed rule publication in Sept. 21, 2007 Federal Register

Modeled Impacts for North-South Oriented Idling Trains vs NAAQS and Air Toxics Thresholds

		5-Year Maximum Modeled Impact for 1.0 grams/second Emission Rate				
		1-hour	3-hour	8-hour	24-hour	Annual
Rank	Idling Fraction =>	1	1	1	0.50	0.50
Highest					1927.6	173.7
Annual 2nd High		6706.0	4205.4	2312.5	1551.3	
98th Percentile					1110.0	

NAAQS Pollutant (Rank)	Averaging Period	Per Source Emission Rate (g/s)	Modeled Max. Conc. (ug/m3)	(In)Significant Impact Level (ug/m3)	Will County Monitored Backgd (ug/m3)	Modeled + Monitored Total (ug/m3)	NAAQS (ug/m3)
CO (2nd high)	1-hour	4.23E-02	284	2,000	1,410	1,694	40,000
CO (2nd high)	8-hour	4.23E-02	98	500	914	1,012	10,000
NO2 (high)	Annual	1.51E-01	13.1	1	53	66	100
PM10 (2nd high)	24-hour	6.39E-03	5.0	5	40	45	150
PM2.5 (98th %)	24-hour	6.39E-03	3.5	1.2-5.0****	36.7	40	35
PM2.5 (high)	Annual	6.39E-03	0.6	0.3-1.0****	14.1	14.7	15
SO2 (2nd high)	3-hour	1.74E-04	0.7	25	133	134	1,300
SO2 (2nd high)	24-hour	1.74E-04	0.1	5	45	45	365
SO2 (high)	Annual	1.74E-04	0.02	1	11.4	11.4	80

MSAT Pollutant***	Averaging Period	Per Source Emission Rate (g/s)	Modeled Max. Conc. (ug/m3)	IRIS Threshold (ug/m3)
Acetaldehyde	24-hour	1.15E-03	1.10	9**
Acetaldehyde	Annual	1.15E-03	0.10	50*
Acrolein	24-hour	2.36E-04	0.23	0.02**
Benzene	24-hour	1.39E-04	0.13	30**
Benzene	Annual	1.39E-04	0.01	45*
1,3-Butadiene	24-hour	1.46E-04	0.14	2**
1,3-Butadiene	Annual	1.46E-04	0.01	3*
Formaldehyde	Annual	2.52E-03	0.22	8*
Diesel Exhaust (DPM)	24-hour	6.39E-03	6.2	5**

* Concentration estimated to cause a 1/10,000 lifetime risk of developing cancer, based on 70-year exposure to average concentration.

** EPA-estimated "safe" level to prevent acute effects on exposed, sensitive individuals based on 24-hour average concentration.

***MSAT pollutants are typically analyzed incrementally without regard to existing risks and exposures, which are typically orders of magnitude larger.

****Range of proposed values, per EPA proposed rule publication in Sept. 21, 2007 Federal Register

Note: Background based on average of most recent 3 years of complete data for maximum impact monitor in Will County

**Emission Calculation for Moving Train Modeling Scenario, Per 100-Foot Rail Segment
Based on Emission Rates for Notch 3 Throttle Setting**

Inputs	Value	Units
Source Length	100	feet
Train Number	42.3	trains/day
Train Speed	10	miles/hour
Locomotives/Train	2	locomotives

Pollutant	Locomotive Notch 3 Emission Rate (g/s)	Train Speed (feet/sec)	Per Train Emissions Per 100 Feet (g/s)	Trains Per Day	Daily Emissions Per 100 Feet (g/day)	Daily Emissions Per 100 Feet (g/sec)
CO	0.316	14.67	4.309	42.3	182.2	2.11E-03
NOx	3.325	14.67	45.345	42.3	1918.1	2.22E-02
PM	0.062	14.67	0.851	42.3	36.0	4.17E-04
SO2	0.0014	14.67	0.019	42.3	0.81	9.38E-06
Benzene	3.68E-04	14.67	0.0050	42.3	0.21	2.46E-06
1,3-Butadiene	3.13E-04	14.67	0.0043	42.3	0.18	2.09E-06
Formaldehyde	3.94E-03	14.67	0.054	42.3	2.28	2.63E-05
Acetaldehyde	1.96E-03	14.67	0.027	42.3	1.13	1.31E-05
Acrolein	2.64E-04	14.67	0.0036	42.3	0.15	1.76E-06

Note: Locomotive Notch 3 average emission rates calculated on separate linked sheet.

Tested Emissions for 3 BNSF SD70MAC Locomotives (Appendix A, B, C) and 3 UP Dash-9 Locomotives (Appendix D, E, F) of Referenced Report Testing with CARB Diesel Fuel, at 0.005 & sulfur (50 ppm sulfur by weight)

Pollutant	Throttle Setting	Emission Rates for Each Pollutant and Listed Notch Setting in Units of Grams Per Hour																		Single Locomotive	
		Appendix A			Appendix B			Appendix C			Appendix D			Appendix E			Appendix F			Overall Average	Overall Average
		Run 1	Run 2	Run 3	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3	g/hr	g/sec
CO	Lowest Idle	137	151	158	116	164	143	57	59	61	282	251	228	189	128	163	167	165	123	152.3	0.0423
NOx	Lowest Idle	687	703	714	735	820	792	756	768	840	311	242	238	397	376	380	370	372	289	543.9	0.1511
PM	Lowest Idle	15	14	18	20	16	18	12	13	31	49	51	44	22	23	22	17	17	12	23.0	0.0064
CO	Notch 3	549	555	572	570	577	355	368	389	319	1,942	1,737	1,730	1,620	2,121	1,132	2,151	1,887	1,900	1,137	0.3160
NOx	Notch 3	9,850	10,333	10,270	10,078	10,173	10,346	9,813	9,889	9,757	12,427	12,517	12,386	14,326	13,933	13,675	15,580	15,424	14,703	11,971	3.3253
PM	Notch 3	243	230	277	290	310	385	216	229	230	256	245	221	176	203	135	137	128	135	225	0.0624

		Measured Fuel Rate in Pounds Per Hour																		avg lb/hr	SO2 g/sec
SO2	Lowest Idle	24	24.9	24.5	28.2	27.6	26.8	24.5	25.5	27.5	25.2	21.4	20	20.6	19.8	20.3	20.1	19.4	15.2	23	0.000087
SO2	Notch 3	352.8	356	354.5	353	351	351.2	355	355	353	391	390.6	389.5	387	389.4	384	396	398	387	372	0.00140

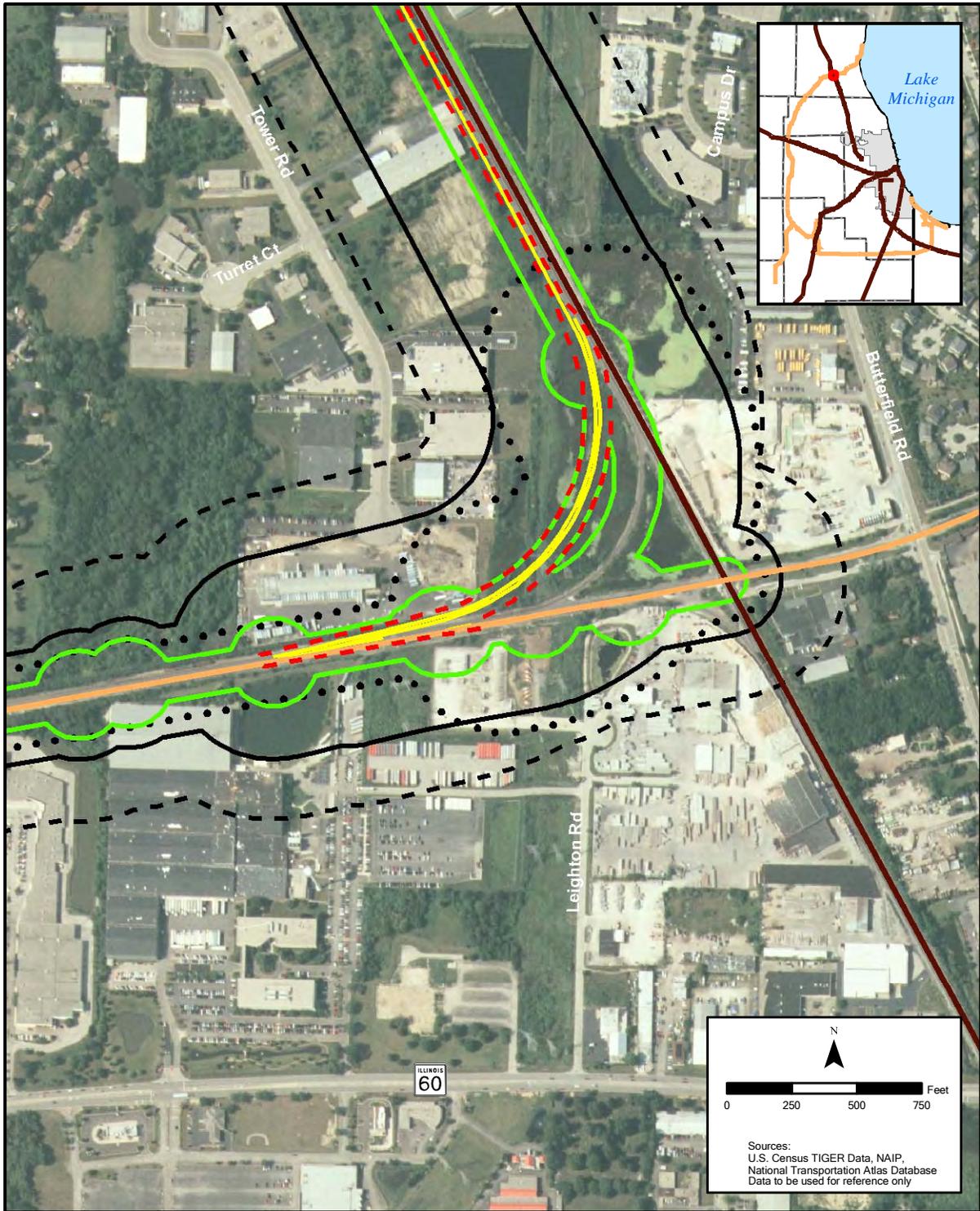
MSATs		Single Loco.					
		#9693	#9754	#9715	#9724	Avg.	Avg.
		g/hr	g/hr	g/hr	g/hr	g/hr	g/sec
Benzene	Lowest Idle	0.2	0.1	0.5	1.2	0.50	1.39E-04
1,3-Butadiene	Lowest Idle	0	0.2	0.6	1.3	0.53	1.46E-04
Formaldehyde	Lowest Idle	2.3	2.6	18.7	12.7	9.08	2.52E-03
Acetaldehyde	Lowest Idle	1.2	1.5	8.3	5.5	4.13	1.15E-03
Acrolein	Lowest Idle	0	0.1	2	1.3	0.85	2.36E-04
Benzene	Notch 3	0.6	0.4	1.4	2.9	1.33	3.68E-04
1,3-Butadiene	Notch 3	0	0.4	2	2.1	1.13	3.13E-04
Formaldehyde	Notch 3	6.8	9.2	22.3	18.5	14.20	3.94E-03
Acetaldehyde	Notch 3	4.3	6.7	10	7.2	7.05	1.96E-03
Acrolein	Notch 3	1.4	0.7	1.4	0.3	0.95	2.64E-04

SO2 Calculation Inputs

MW Sulfur: 32.064
 MW SO2: 64.0628
 Sulfur Content: 0.0015 % (15 ppm)

Source for Data: DIESEL FUEL EFFECTS ON LOCOMOTIVE EXHAUST EMISSIONS, Report No. SwRI™ 08.02062, prepared for California Air Resources Board, October 2000

A.8
Noise and Vibration

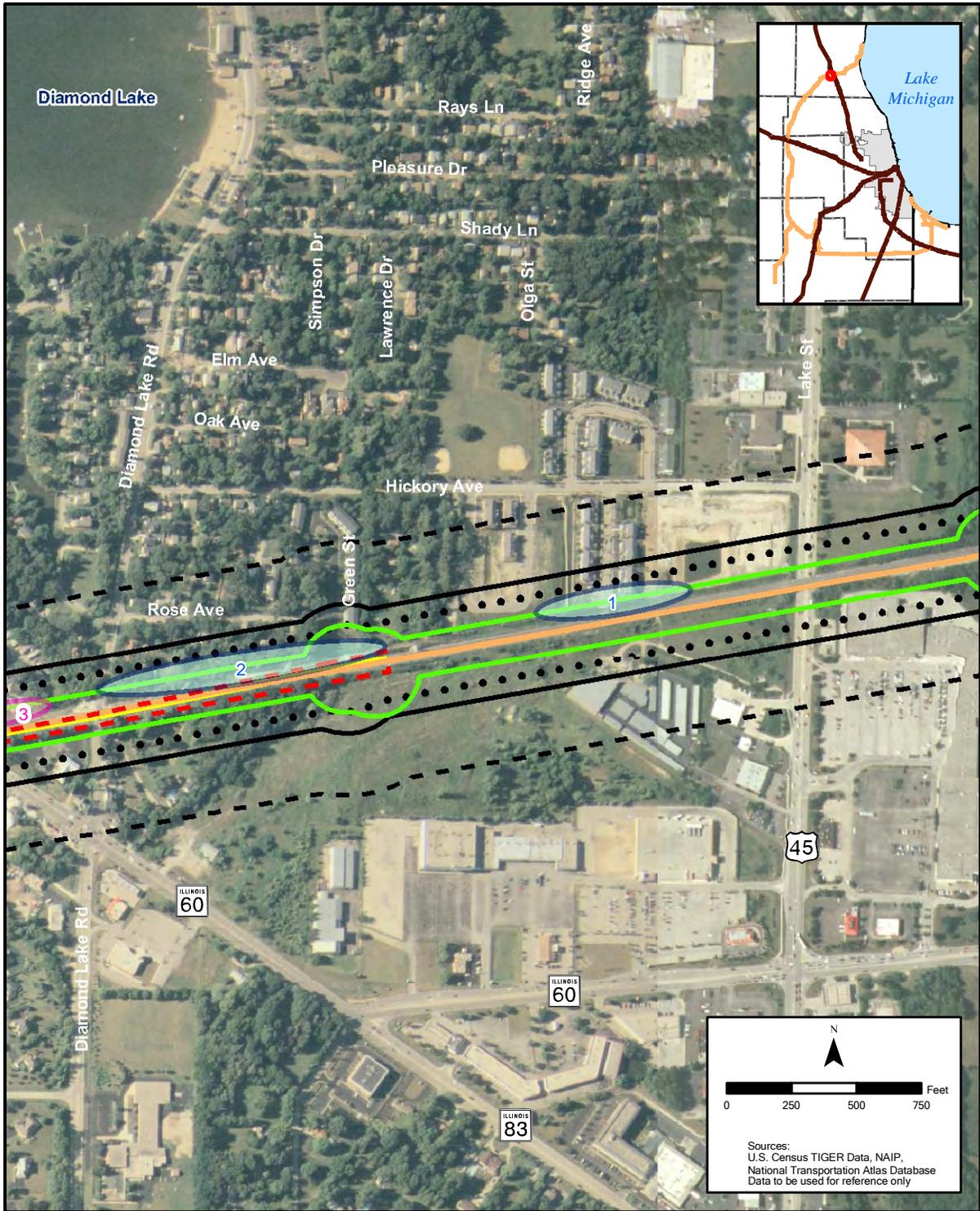


Environmental Impact Statement

- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
-
- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - - - 65 dBA Contour
 - 70 dBA Contour
 - Vibration Contour

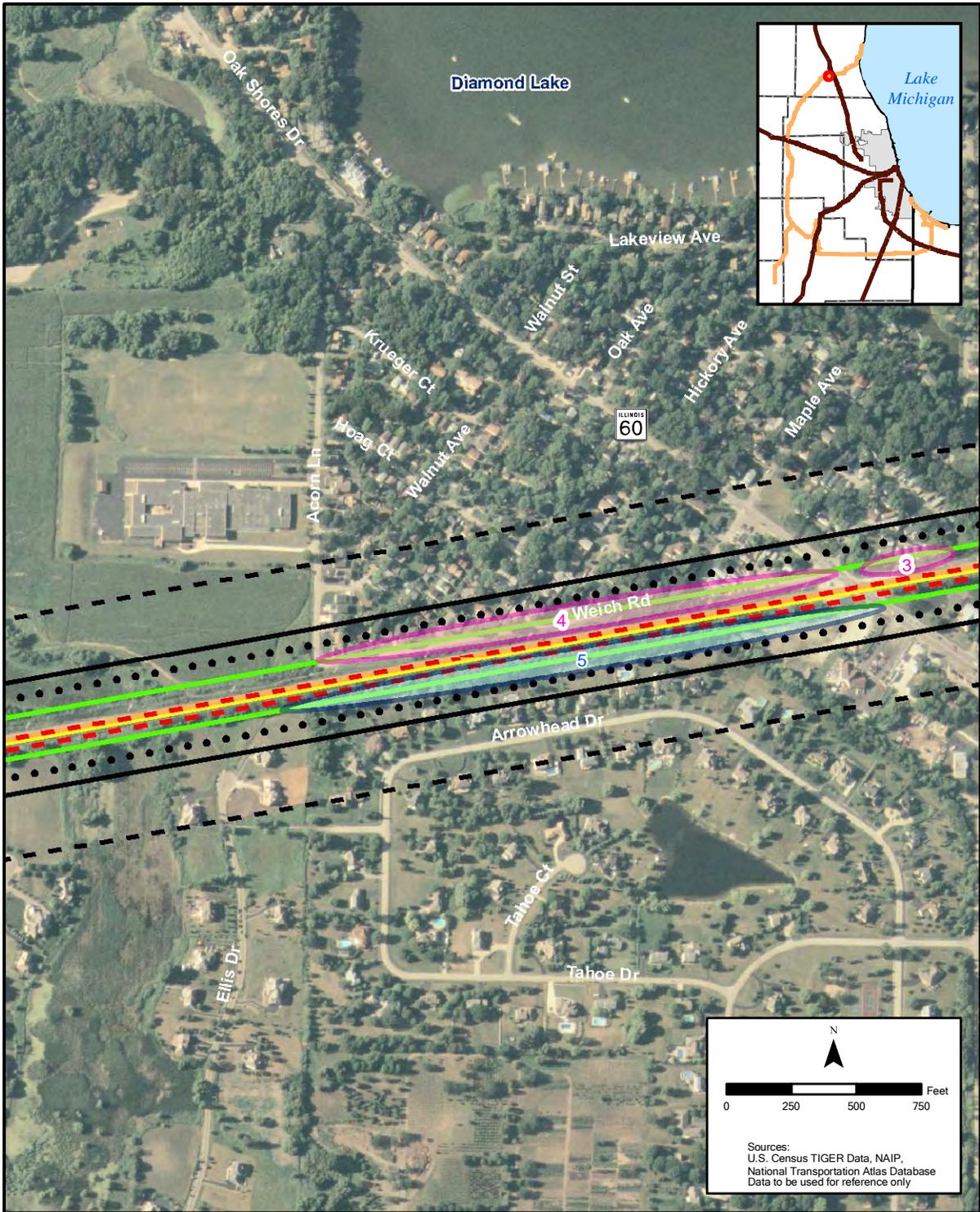
Figure L-1
Noise and Vibration
Contours

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 	CN Rail Line EJ&E Rail Line Proposed Track Construction Limits Cost-Effective Barrier Barrier Not Cost-Effective	Existing 65 dBA Contour Proposed Action 65 dBA Contour 70 dBA Contour Vibration Contour
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Figure L-1
Noise and Vibration
Contours
 Sheet 2 of 139

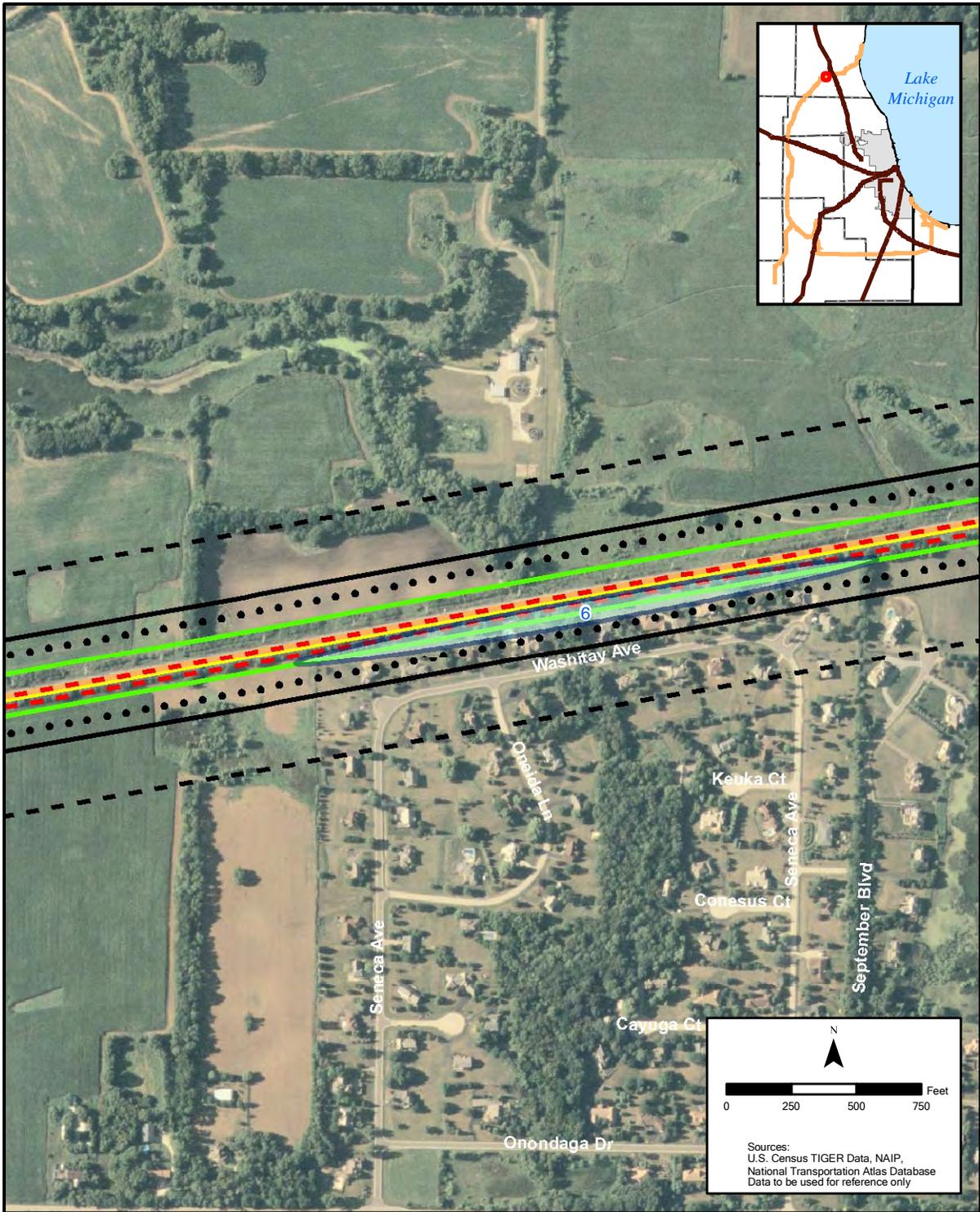


Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



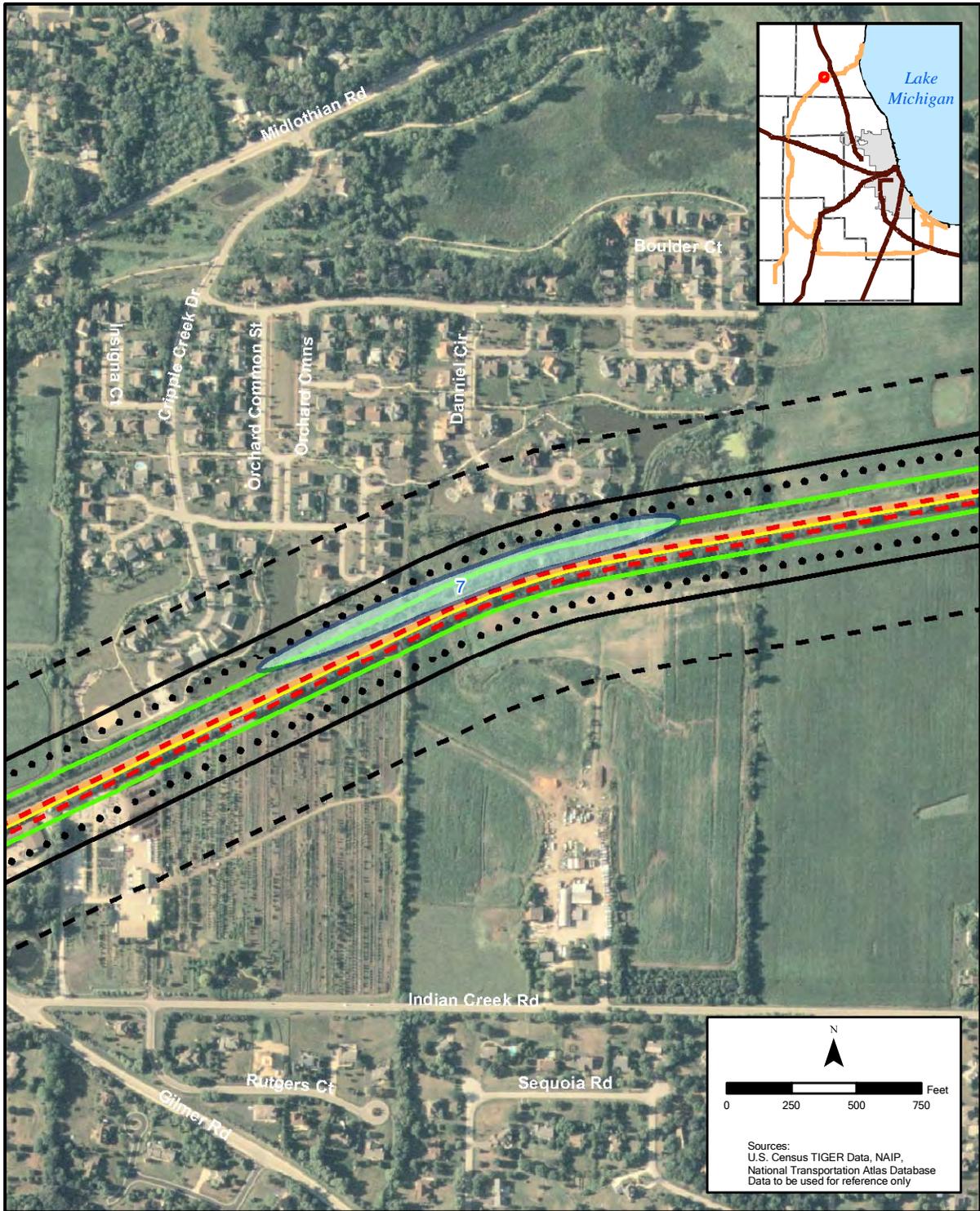
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|--|----------------------------|-----------------|-------------------|
| | CN Rail Line | Existing | |
| | EJ&E Rail Line | Existing | |
| | Proposed Track | Proposed Action | |
| | Construction Limits | | 65 dBA Contour |
| | Cost-Effective Barrier | | 70 dBA Contour |
| | Barrier Not Cost-Effective | | Vibration Contour |
| | | | 65 dBA Contour |

Figure L-1
 Noise and Vibration
 Contours



- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
-
- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - 65 dBA Contour
 - 70 dBA Contour
 - Vibration Contour

Figure L-1
Noise and Vibration
Contours
 Sheet 4 of 139



N

0 250 500 750 Feet

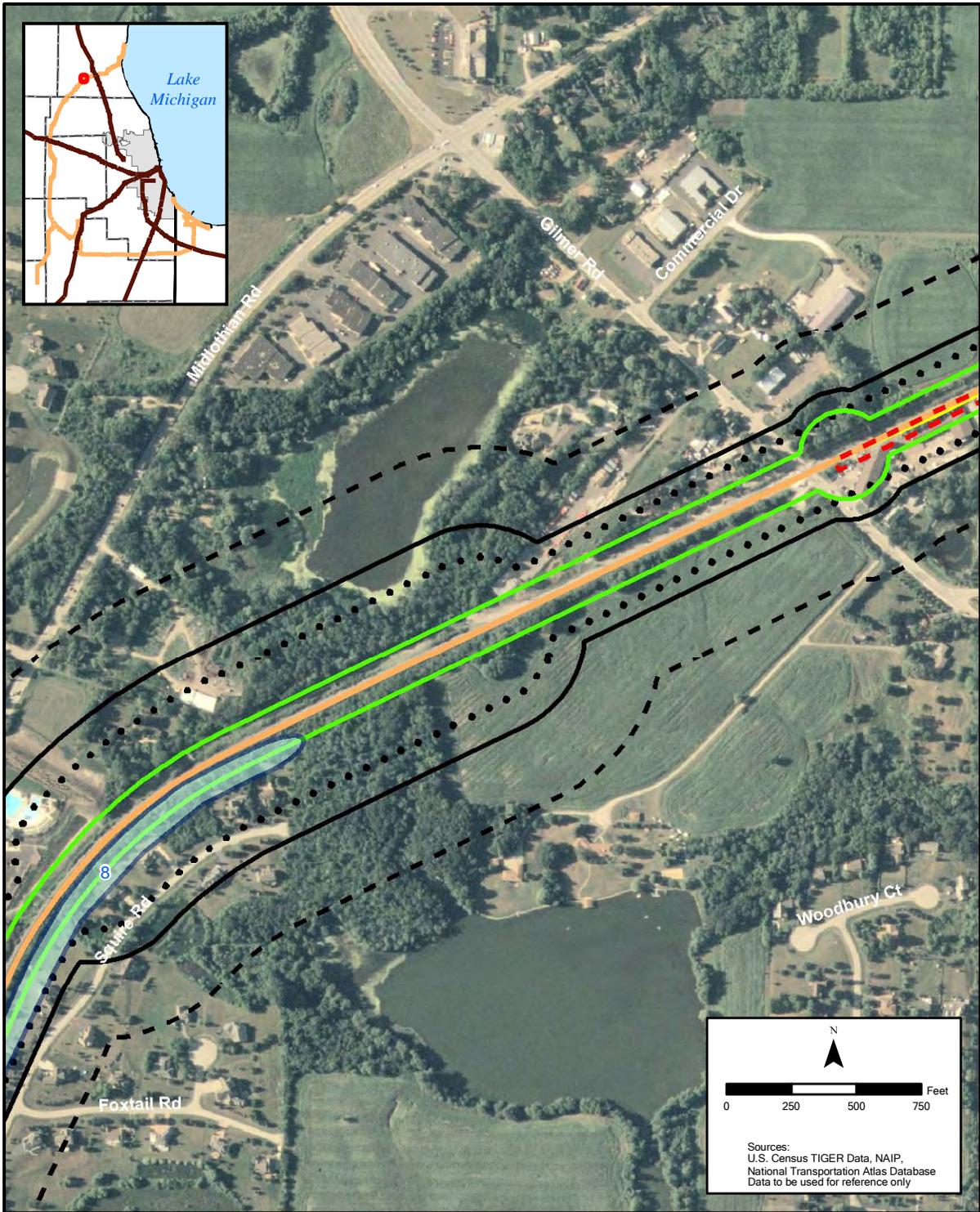
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



- | | |
|----------------------------|-------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | 65 dBA Contour |
| Cost-Effective Barrier | 70 dBA Contour |
| Barrier Not Cost-Effective | Vibration Contour |

Figure L-1
Noise and Vibration
Contours

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Environmental Impact Statement

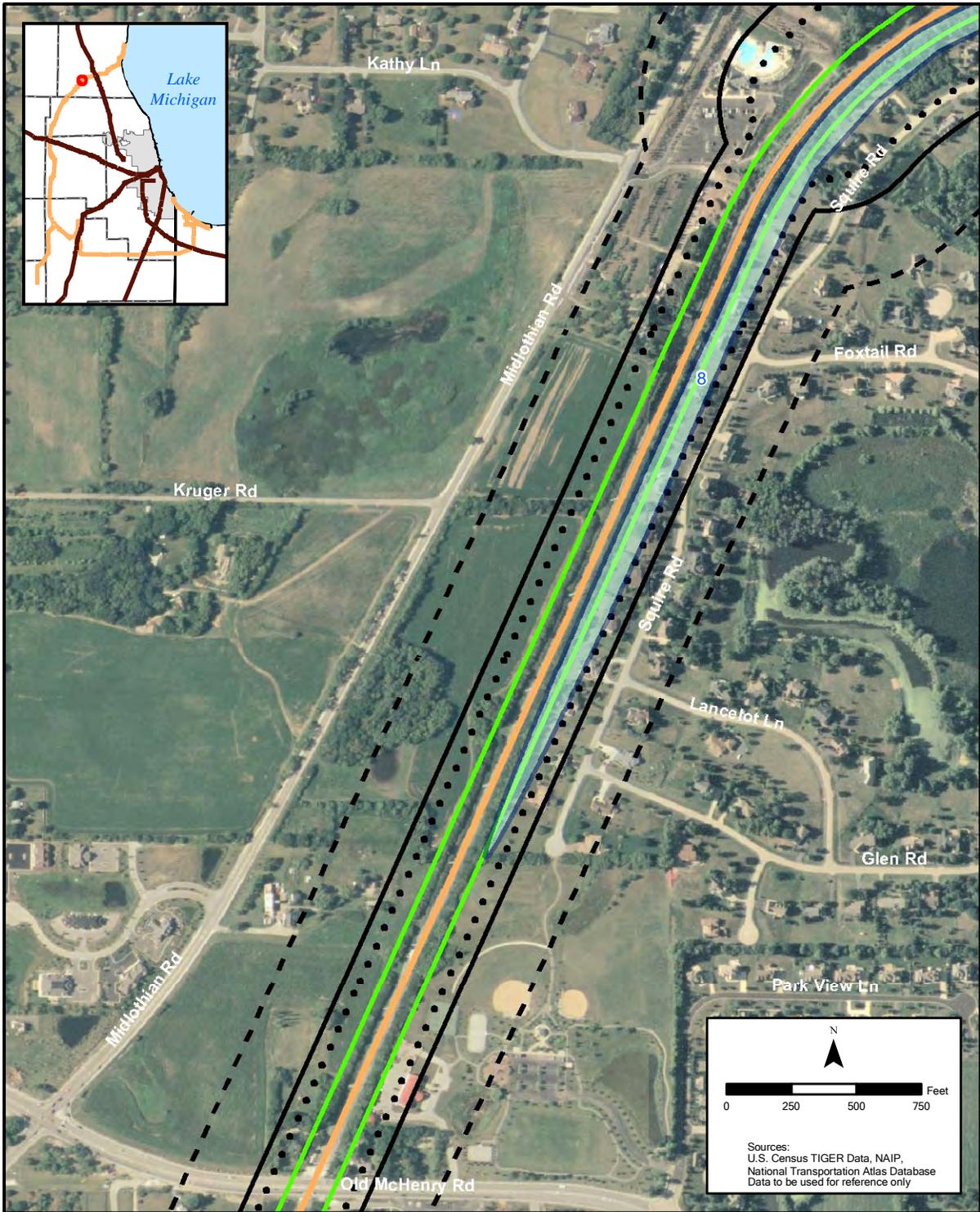
- | | | |
|--|----------------------------|----------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | - - - 65 dBA Contour |
| | Cost-Effective Barrier | - - - 70 dBA Contour |
| | Barrier Not Cost-Effective | — Vibration Contour |

N

0 250 500 750 Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

Figure L-1
Noise and Vibration
Contours



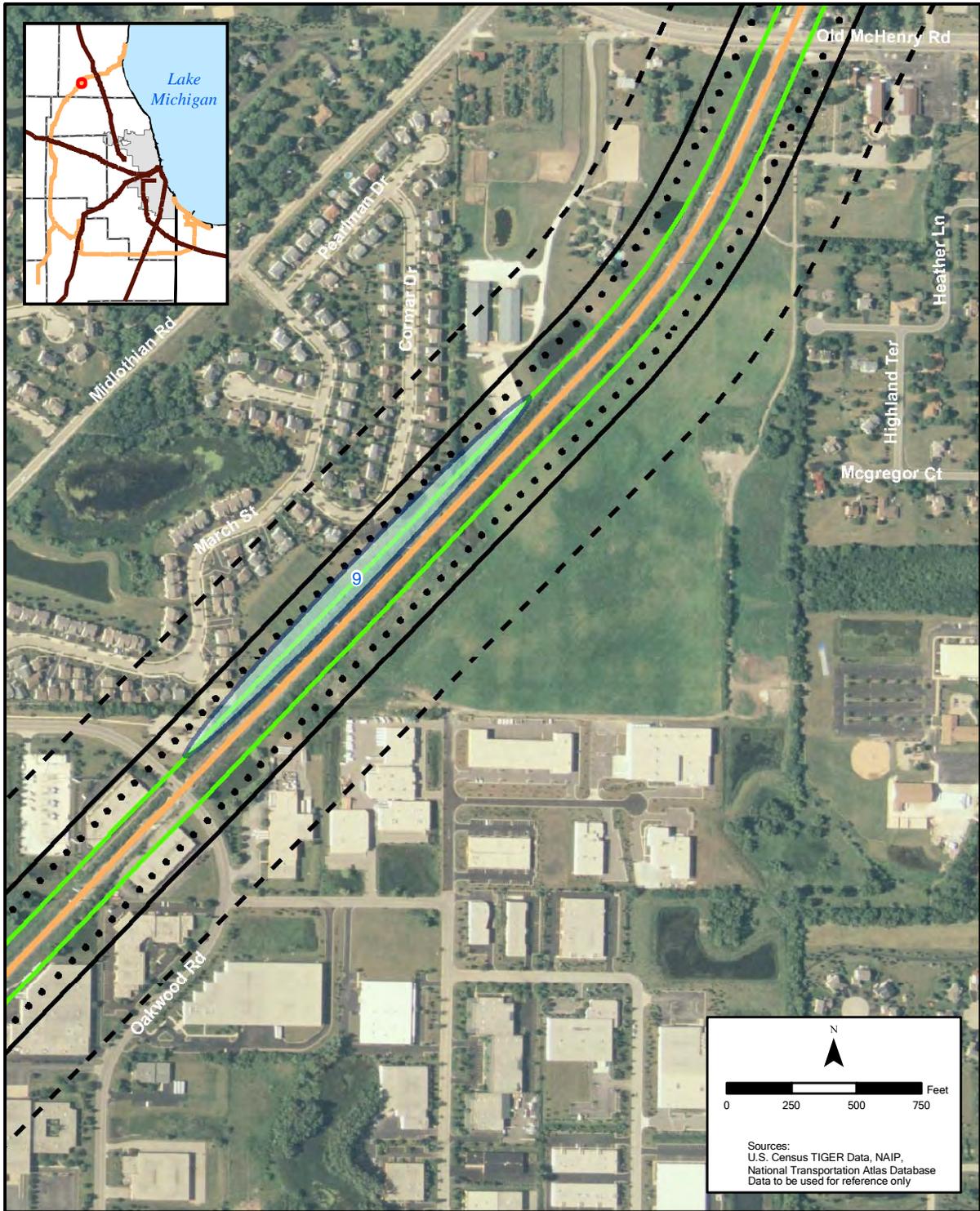
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|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

N

0 250 500 750 Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

Figure L-1
 Noise and Vibration
 Contours
 Sheet 7 of 139



Environmental Impact Statement

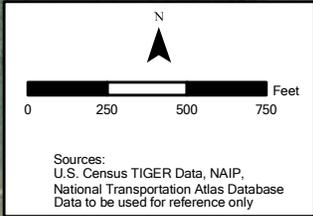
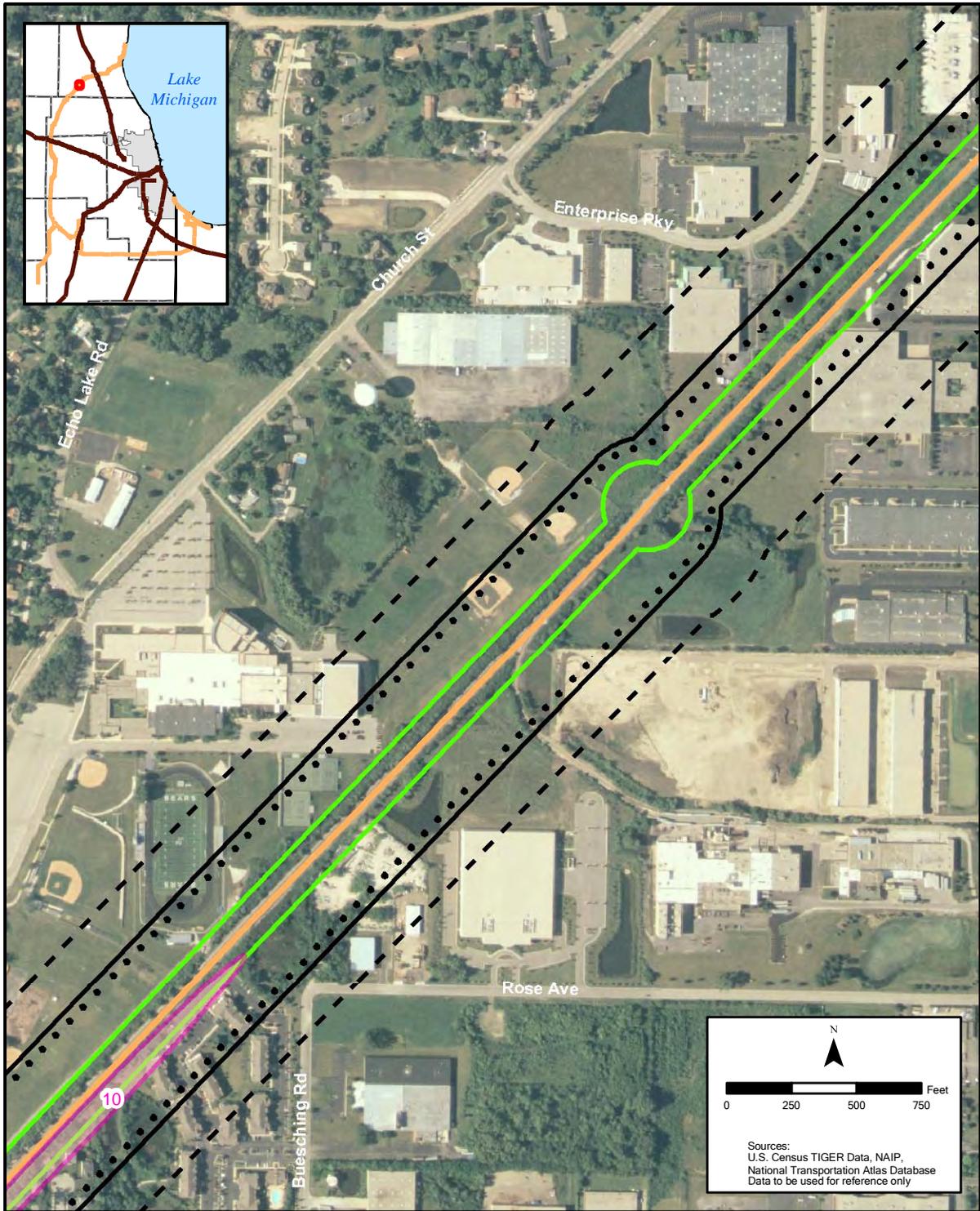
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| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Proposed Action |
| | Construction Limits | Proposed Action |
| | Cost-Effective Barrier | Proposed Action |
| | Barrier Not Cost-Effective | Proposed Action |
| | 65 dBA Contour | Existing |
| | 70 dBA Contour | Proposed Action |
| | Vibration Contour | Proposed Action |

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Feet

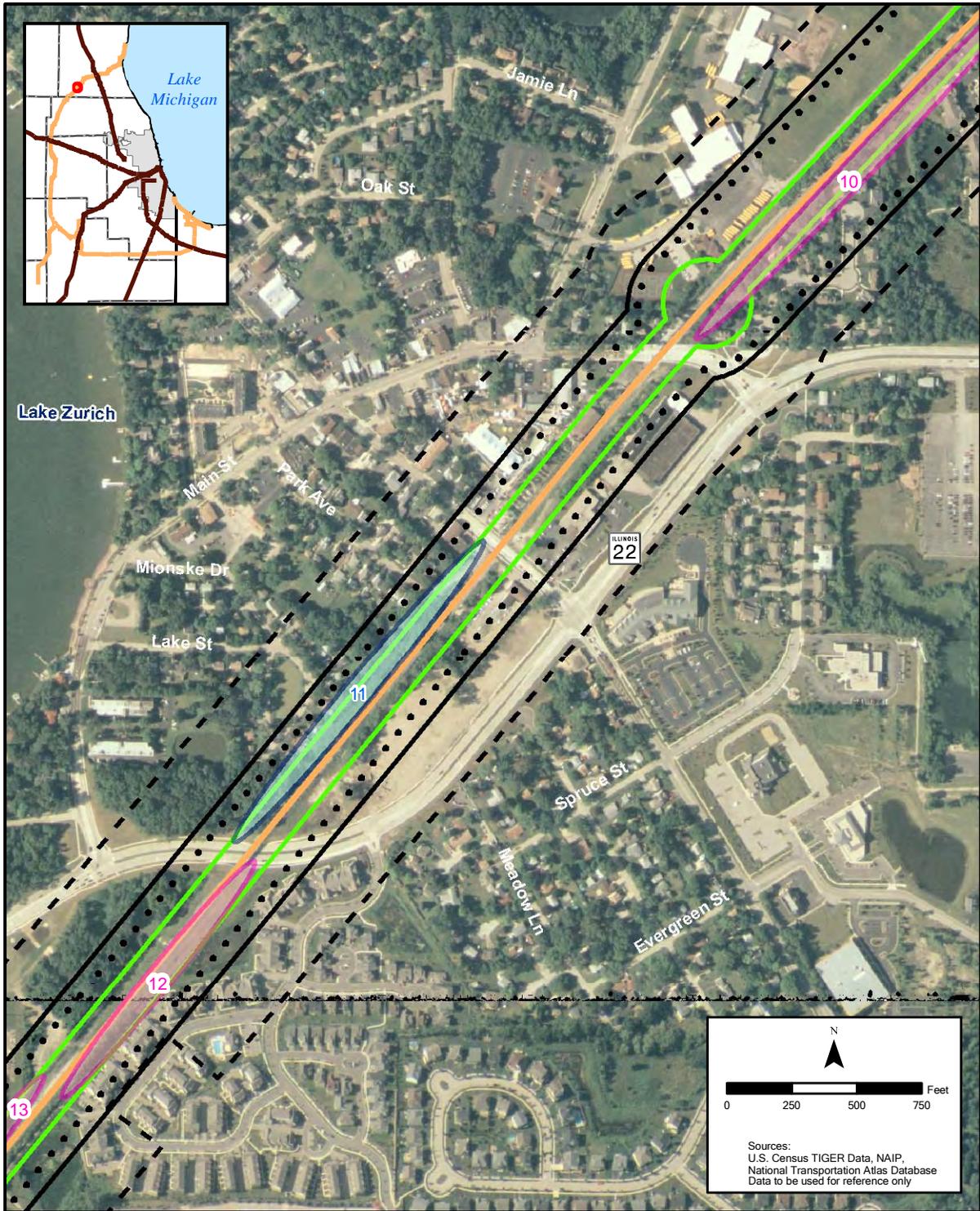
Sources:
U.S. Census TIGER Data, NAIP,
National Transportation Atlas Database
Data to be used for reference only

Figure L-1
Noise and Vibration
Contours



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| | CN Rail Line | Existing | |
| | EJ&E Rail Line | • • • 65 dBA Contour | |
| | Proposed Track | Proposed Action | |
| | Construction Limits | - - - 65 dBA Contour | |
| | Cost-Effective Barrier | - - - 70 dBA Contour | |
| | Barrier Not Cost-Effective | | Vibration Contour |

Figure L-1
Noise and Vibration
Contours

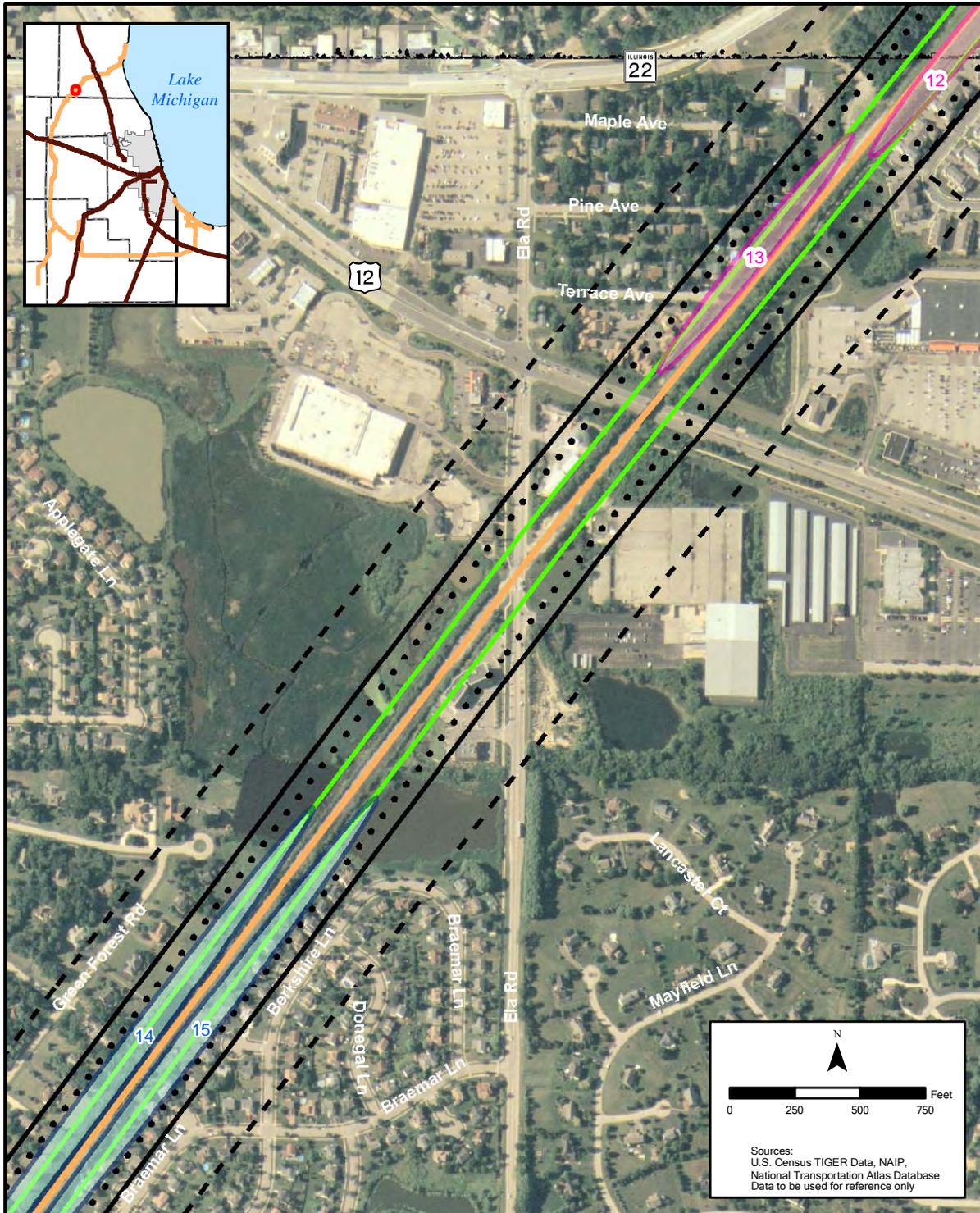


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 Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



- CN Rail Line
- EJ&E Rail Line
- Proposed Track
- - - Construction Limits
- Cost-Effective Barrier
- Barrier Not Cost-Effective
- • • Existing 65 dBA Contour
- - - Proposed Action 65 dBA Contour
- - - Proposed Action 70 dBA Contour
- Vibration Contour

Figure L-1
 Noise and Vibration
 Contours
 Sheet 10 of 139



Environmental Impact Statement

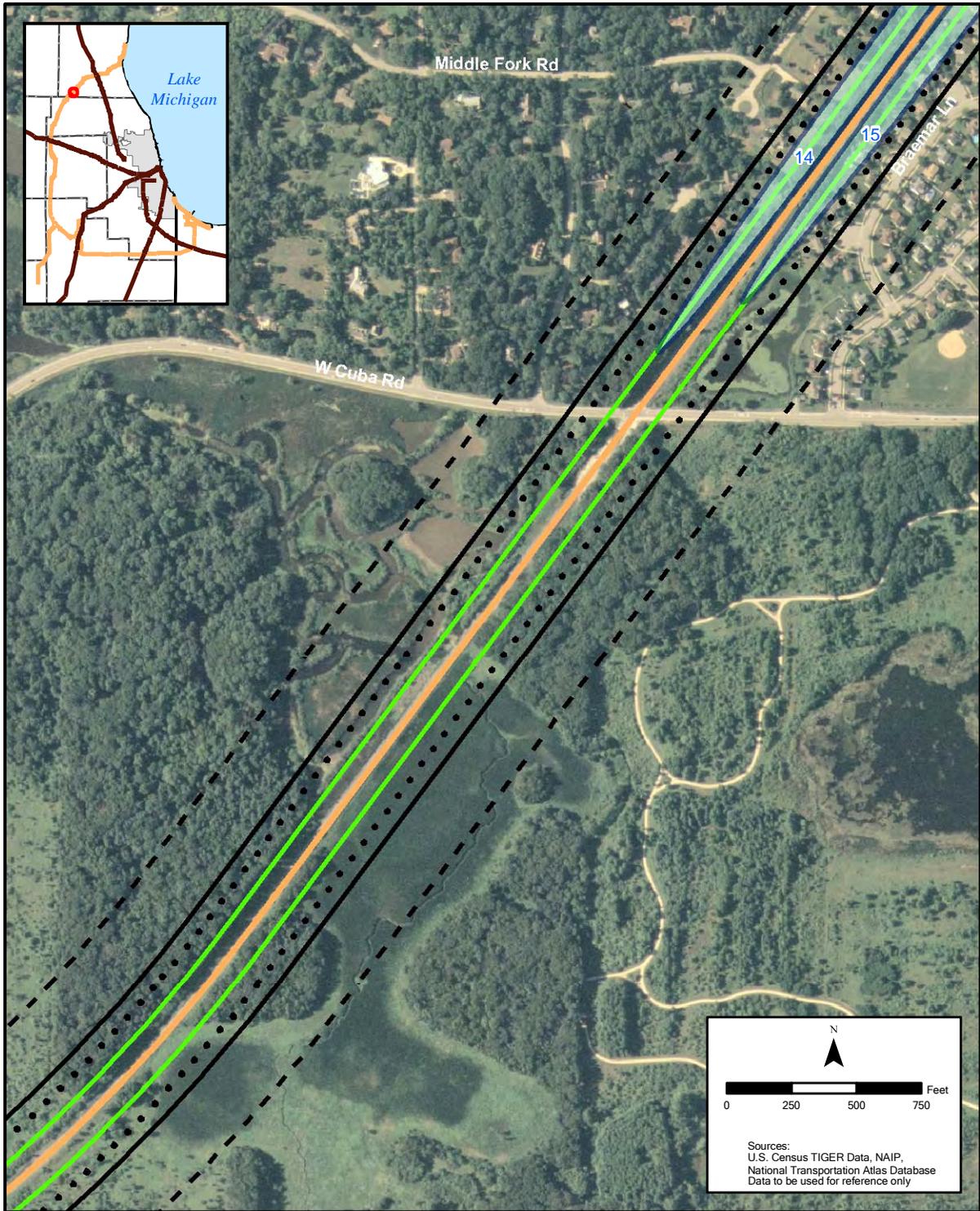
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|----------------------------|-------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | 65 dBA Contour |
| Cost-Effective Barrier | 70 dBA Contour |
| Barrier Not Cost-Effective | Vibration Contour |

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Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

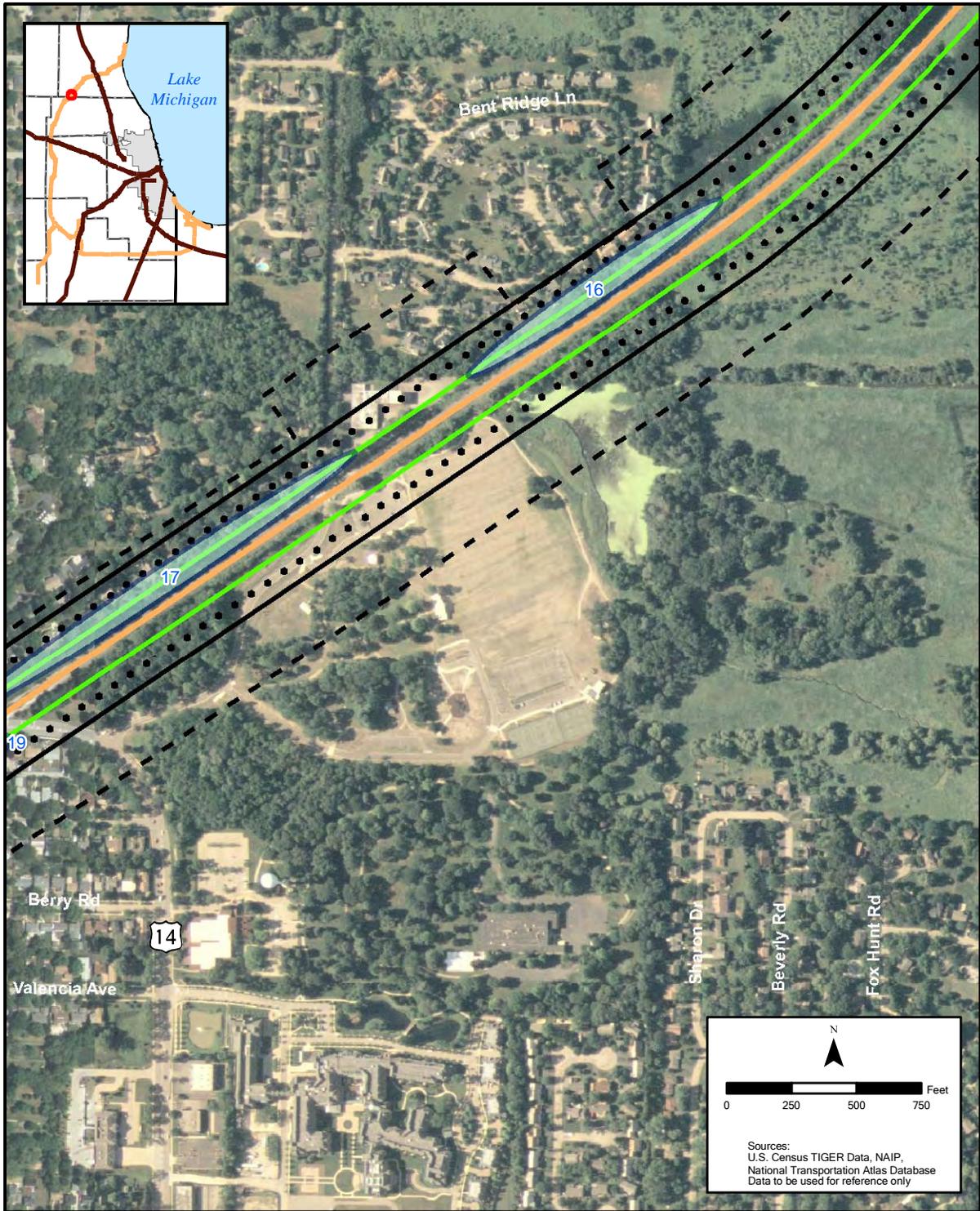
Figure L-1
Noise and Vibration
Contours



Environmental Impact Statement

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|  | EJ&E Rail Line | • • • 65 dBA Contour | |
|  | Proposed Track | Proposed Action | |
|  | Construction Limits | - - - 65 dBA Contour | |
|  | Cost-Effective Barrier | - - - 70 dBA Contour | |
|  | Barrier Not Cost-Effective |  | Vibration Contour |

Figure L-1
Noise and Vibration
Contours
Sheet 12 of 139

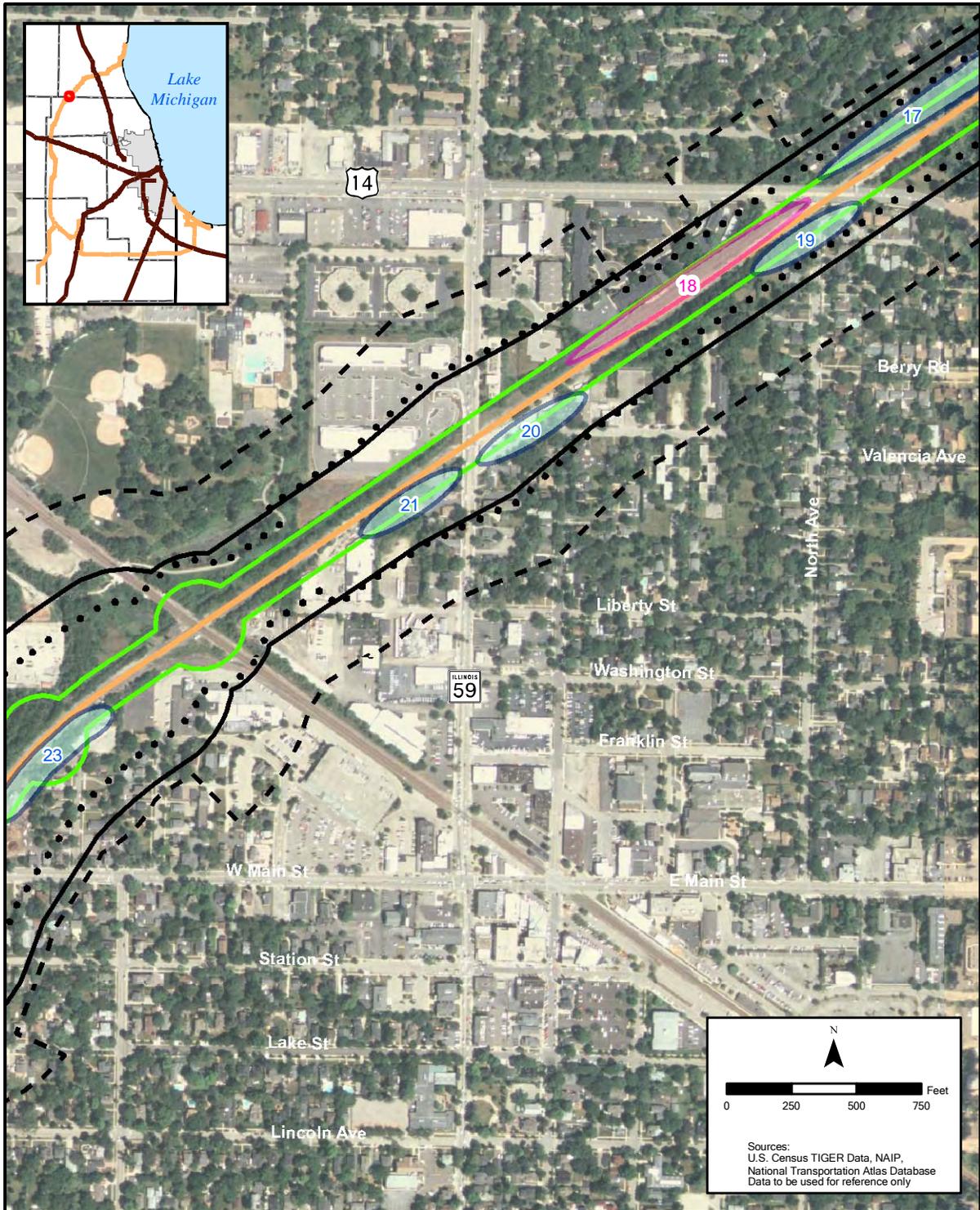


Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

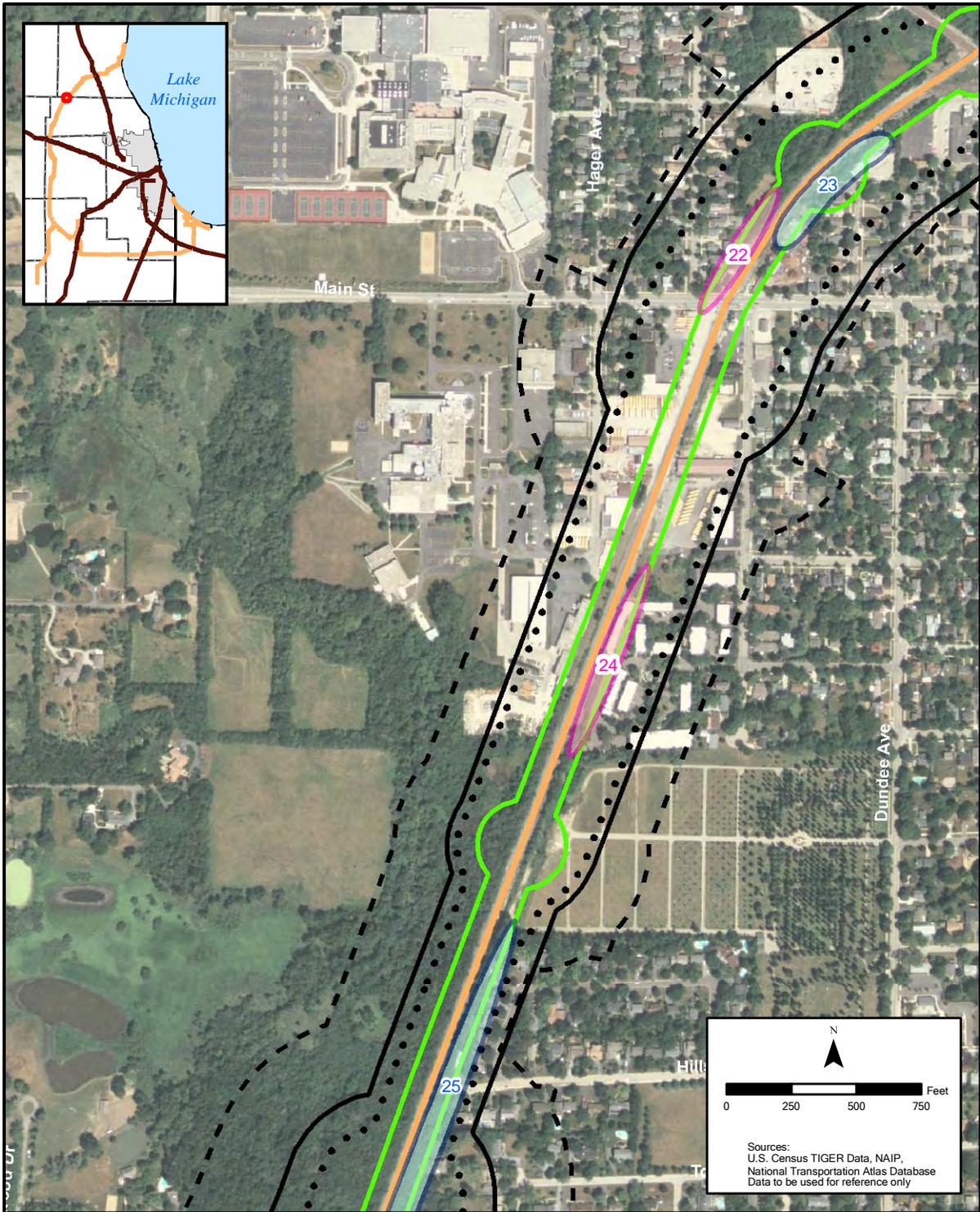
Figure L-1
Noise and Vibration
Contours
 Sheet 13 of 139



Environmental Impact Statement

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|  EJ&E Rail Line | • • • 65 dBA Contour |
|  Proposed Track | Proposed Action |
|  Construction Limits | — — — 65 dBA Contour |
|  Cost-Effective Barrier | — — — 70 dBA Contour |
|  Barrier Not Cost-Effective |  Vibration Contour |

Figure L-1
Noise and Vibration
Contours
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0 250 500 750 Feet

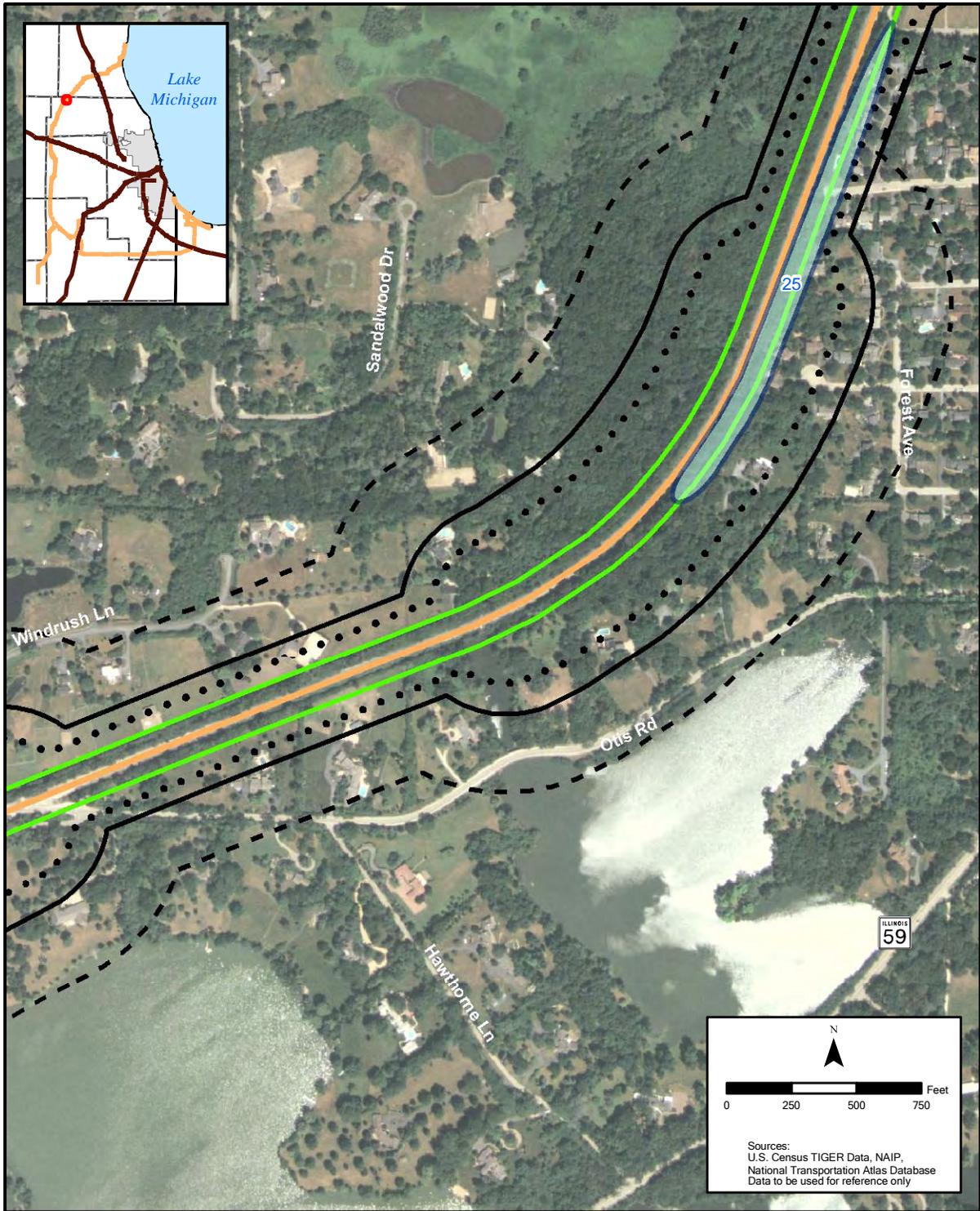
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Proposed Action |
| | Construction Limits | 65 dBA Contour |
| | Cost-Effective Barrier | 70 dBA Contour |
| | Barrier Not Cost-Effective | Vibration Contour |

Figure L-1
Noise and Vibration
Contours

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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

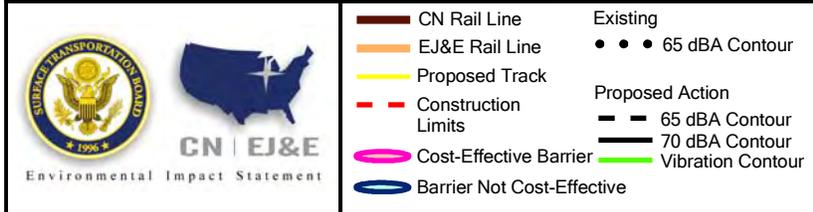
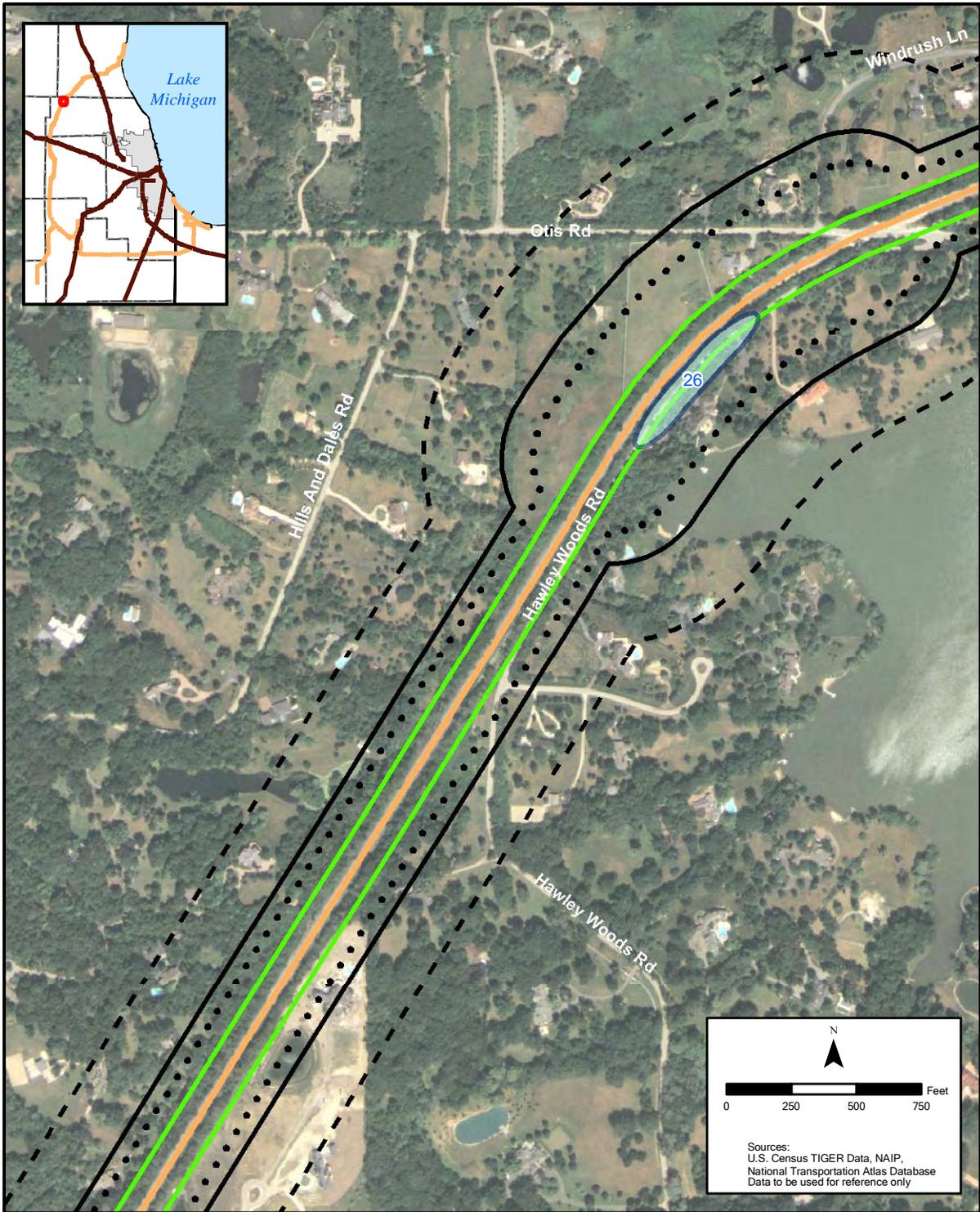


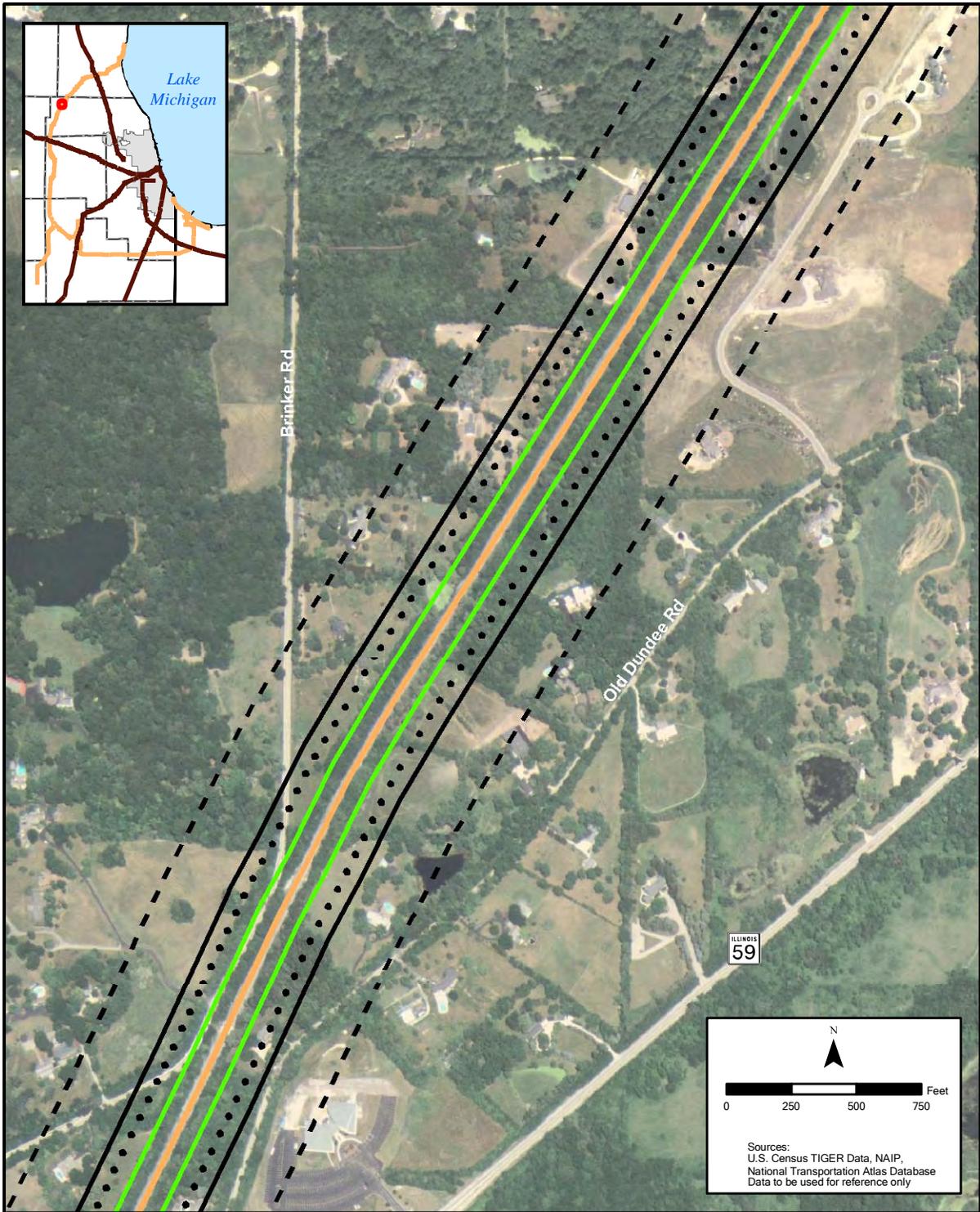
Figure L-1
Noise and Vibration
Contours
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- | | |
|----------------------------|-------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | 65 dBA Contour |
| Cost-Effective Barrier | 70 dBA Contour |
| Barrier Not Cost-Effective | Vibration Contour |

Figure L-1
Noise and Vibration
Contours

Sheet 17 of 139



- | | |
|----------------------------|-------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | 65 dBA Contour |
| Cost-Effective Barrier | 70 dBA Contour |
| Barrier Not Cost-Effective | Vibration Contour |

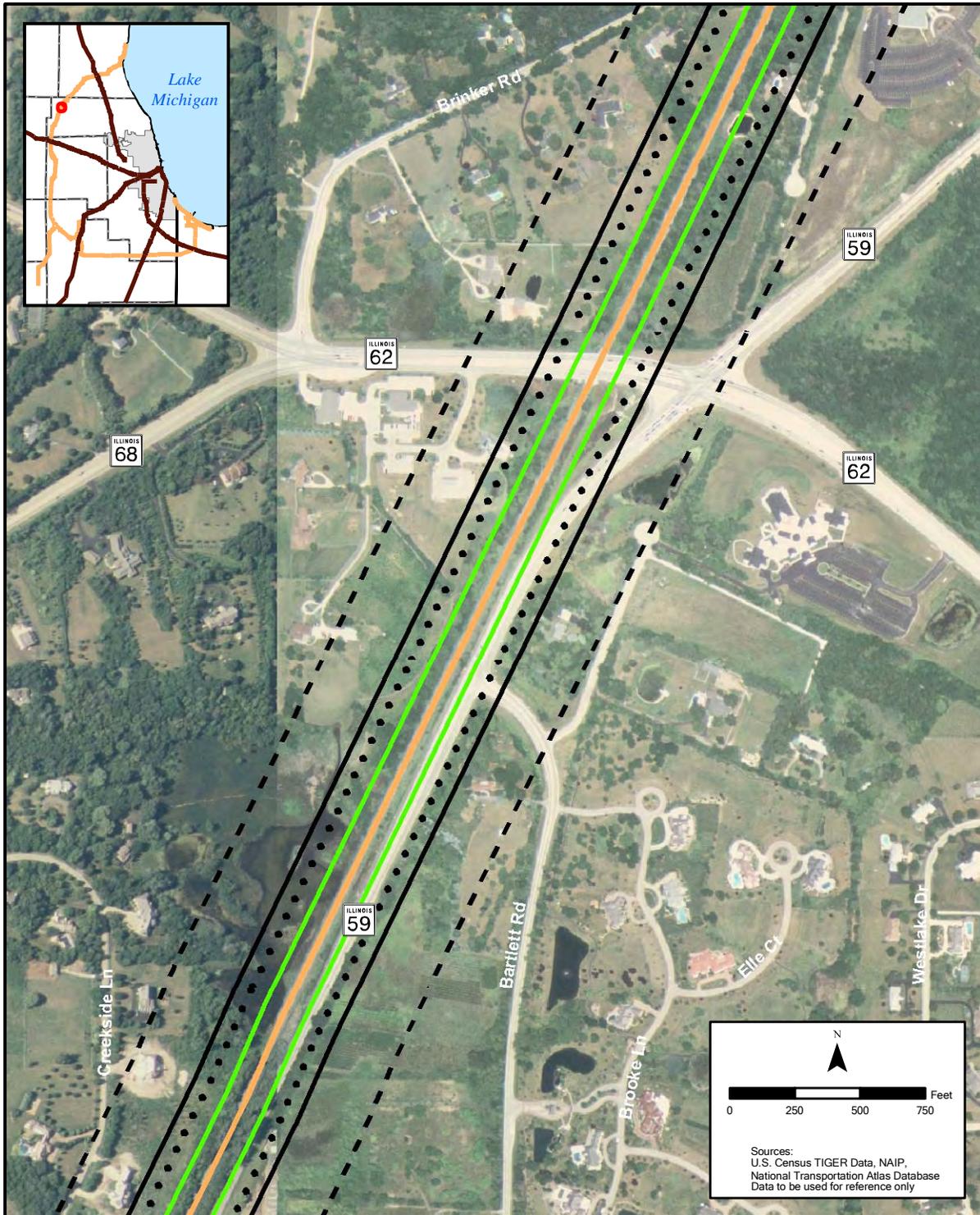
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Sources:
U.S. Census TIGER Data, NAIP,
National Transportation Atlas Database
Data to be used for reference only

Figure L-1
Noise and Vibration
Contours

Sheet 18 of 139



- | | | |
|---|----------------------------|-----------------------|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | --- 65 dBA Contour |
|  | Cost-Effective Barrier | --- 70 dBA Contour |
|  | Barrier Not Cost-Effective | --- Vibration Contour |

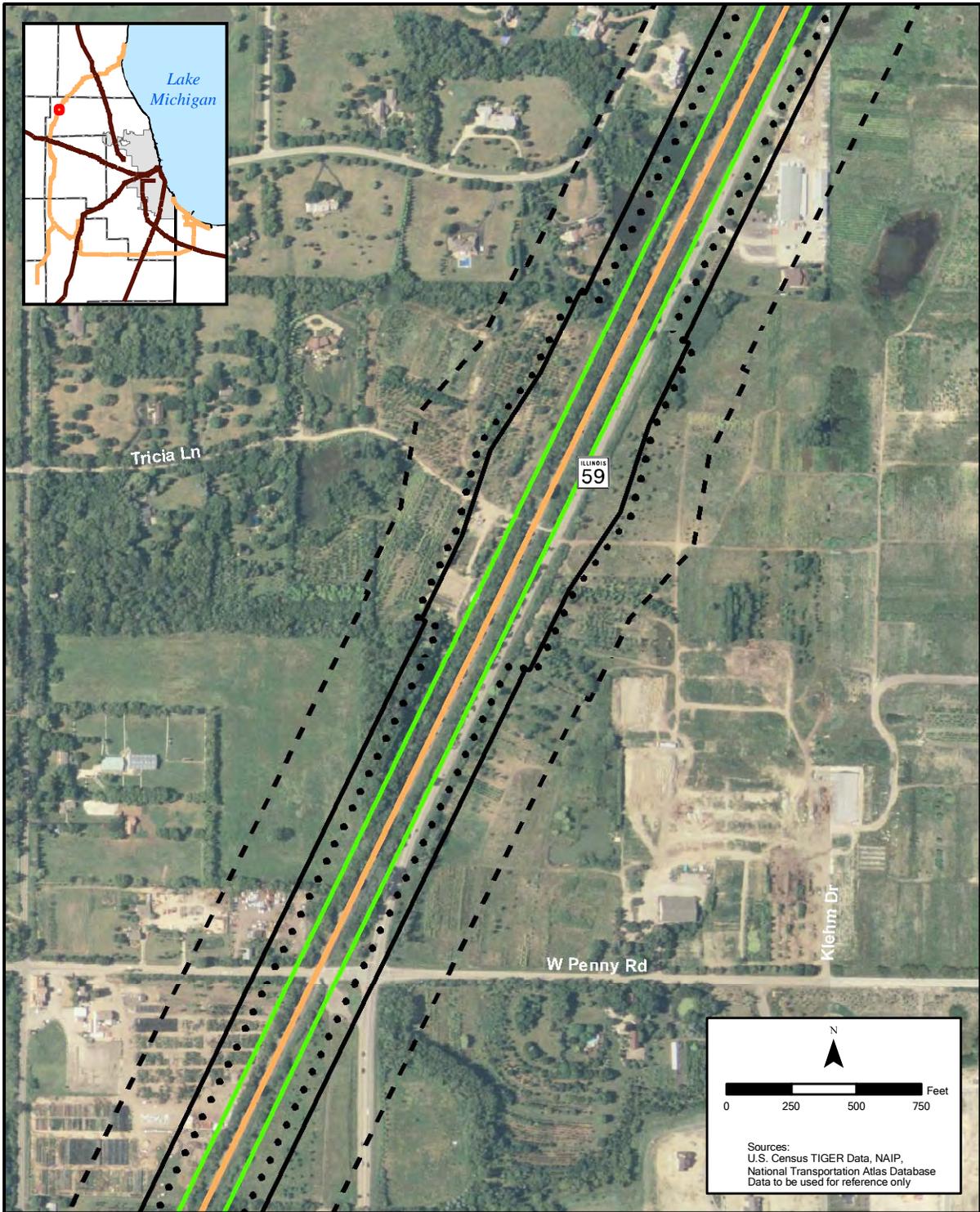
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0 250 500 750 Feet

Sources:
U.S. Census TIGER Data, NAIP,
National Transportation Atlas Database
Data to be used for reference only

Figure L-1
Noise and Vibration
Contours



- | | | |
|---|----------------------------|----------------------|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | - - - 65 dBA Contour |
|  | Cost-Effective Barrier | - - - 70 dBA Contour |
|  | Barrier Not Cost-Effective | — Vibration Contour |

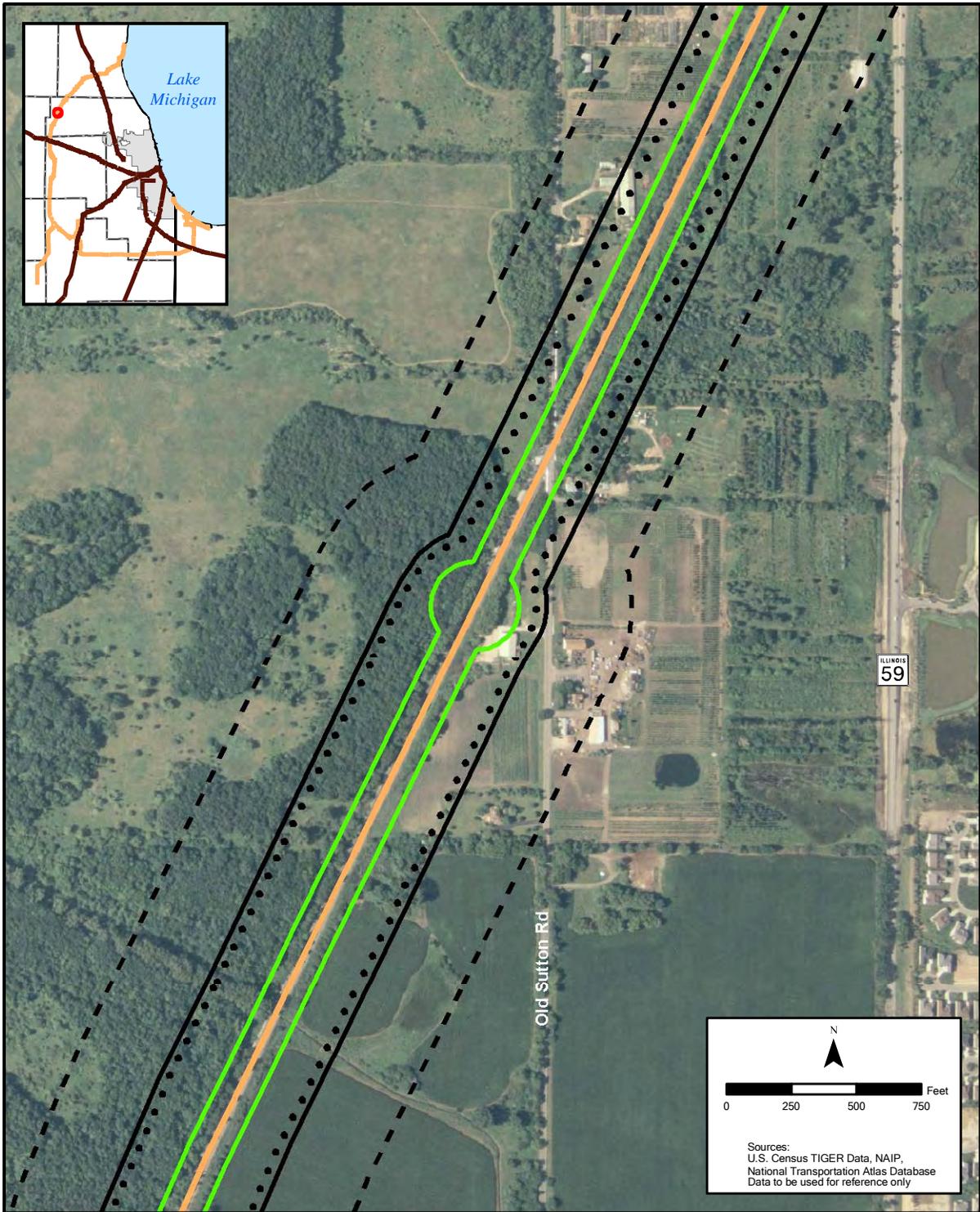
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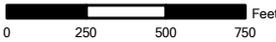
Sources:
U.S. Census TIGER Data, NAIP,
National Transportation Atlas Database
Data to be used for reference only

Figure L-1
Noise and Vibration
Contours
Sheet 20 of 139



- | | | | |
|---|----------------------------|---|-------------------|
|  | CN Rail Line | Existing | |
|  | EJ&E Rail Line | • • • 65 dBA Contour | |
|  | Proposed Track | Proposed Action | |
|  | Construction Limits | - - - 65 dBA Contour | |
|  | Cost-Effective Barrier | - - - 70 dBA Contour | |
|  | Barrier Not Cost-Effective |  | Vibration Contour |

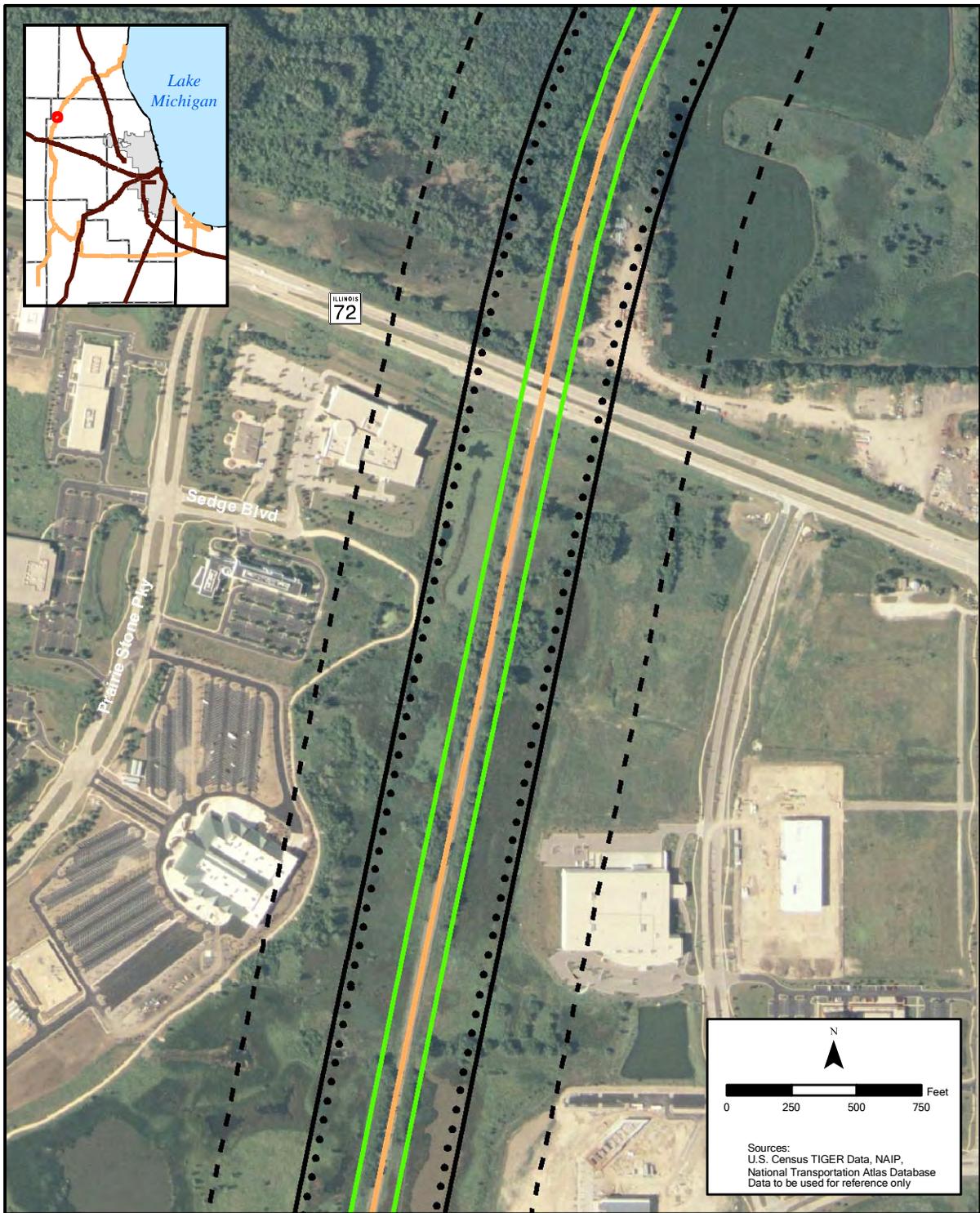
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Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

Figure L-1
Noise and Vibration
Contours
 Sheet 21 of 139



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 Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|--|----------------------------|-----------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Existing |
| | Construction Limits | Existing |
| | Cost-Effective Barrier | Proposed Action |
| | Barrier Not Cost-Effective | Proposed Action |
| | 65 dBA Contour | Proposed Action |
| | 65 dBA Contour | Proposed Action |
| | 70 dBA Contour | Proposed Action |
| | Vibration Contour | Proposed Action |

Figure L-1
 Noise and Vibration
 Contours
 Sheet 22 of 139

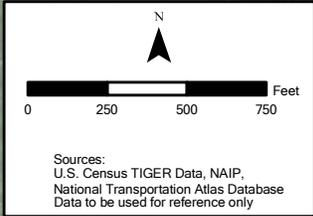
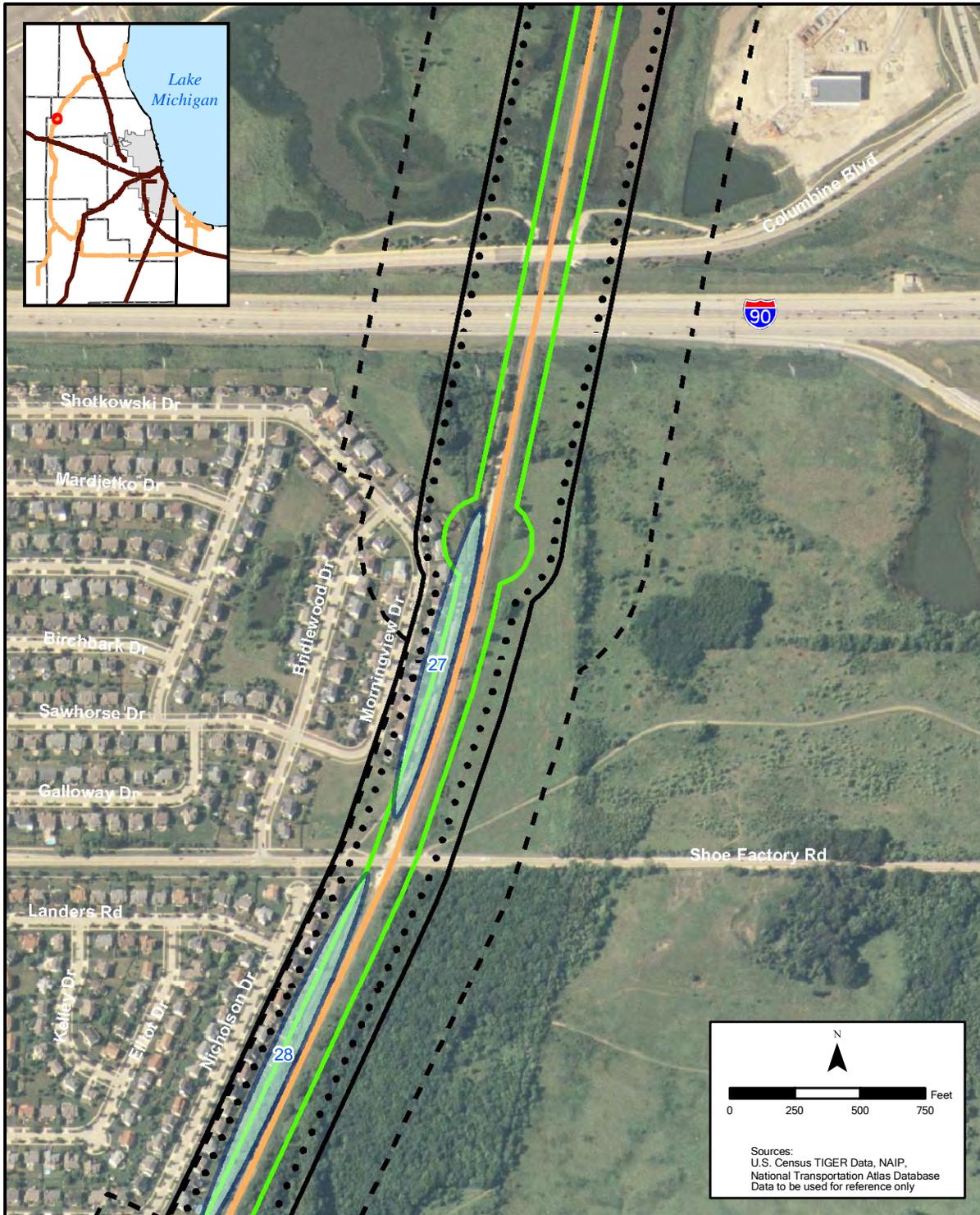
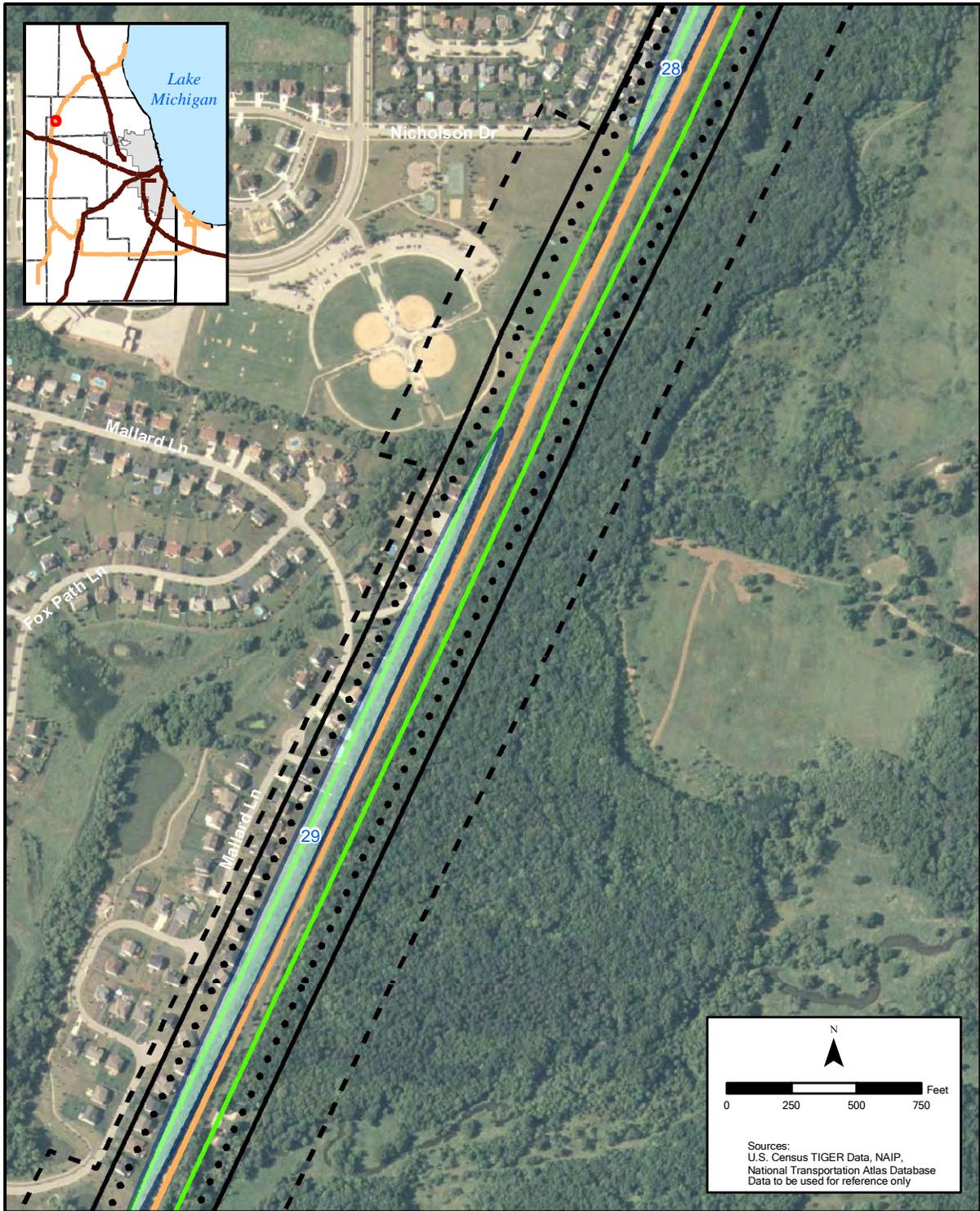
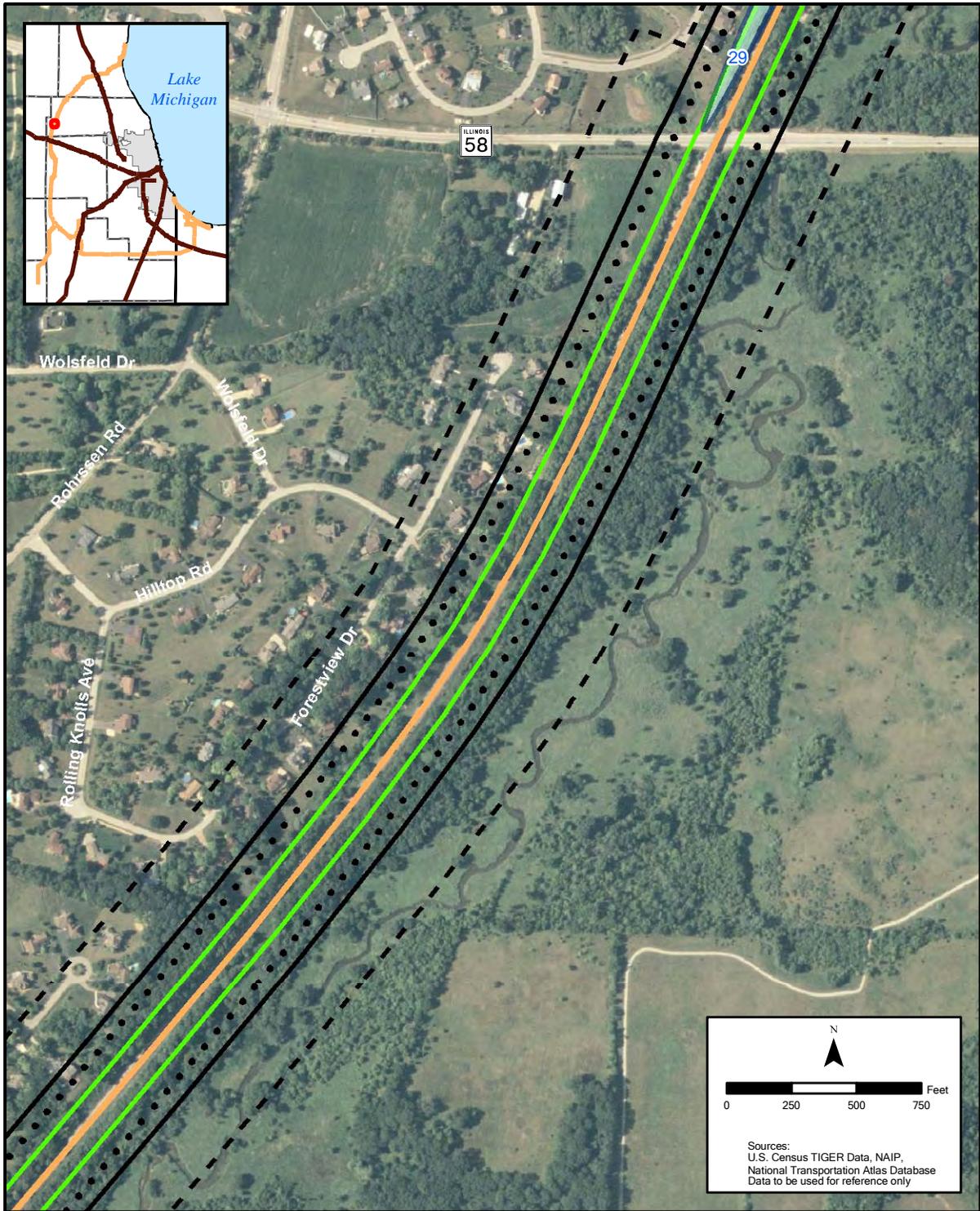


Figure L-1
Noise and Vibration
Contours
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- | | | |
|---|----------------------------|----------------------|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | - - - 65 dBA Contour |
|  | Cost-Effective Barrier | — 70 dBA Contour |
|  | Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours
 Sheet 24 of 139



- | | |
|----------------------------|-------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | 65 dBA Contour |
| Cost-Effective Barrier | 70 dBA Contour |
| Barrier Not Cost-Effective | Vibration Contour |

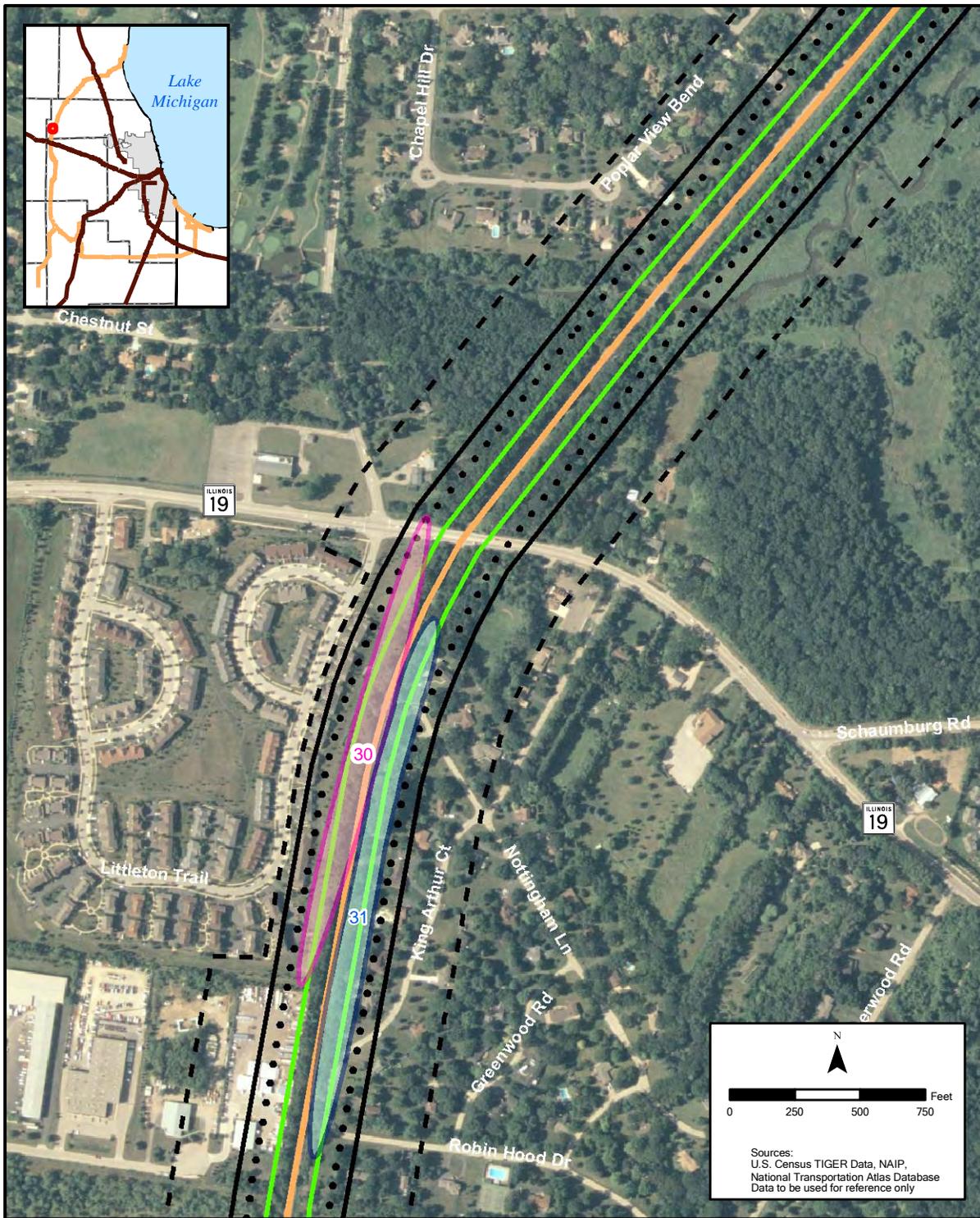
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Sources:
U.S. Census TIGER Data, NAIP,
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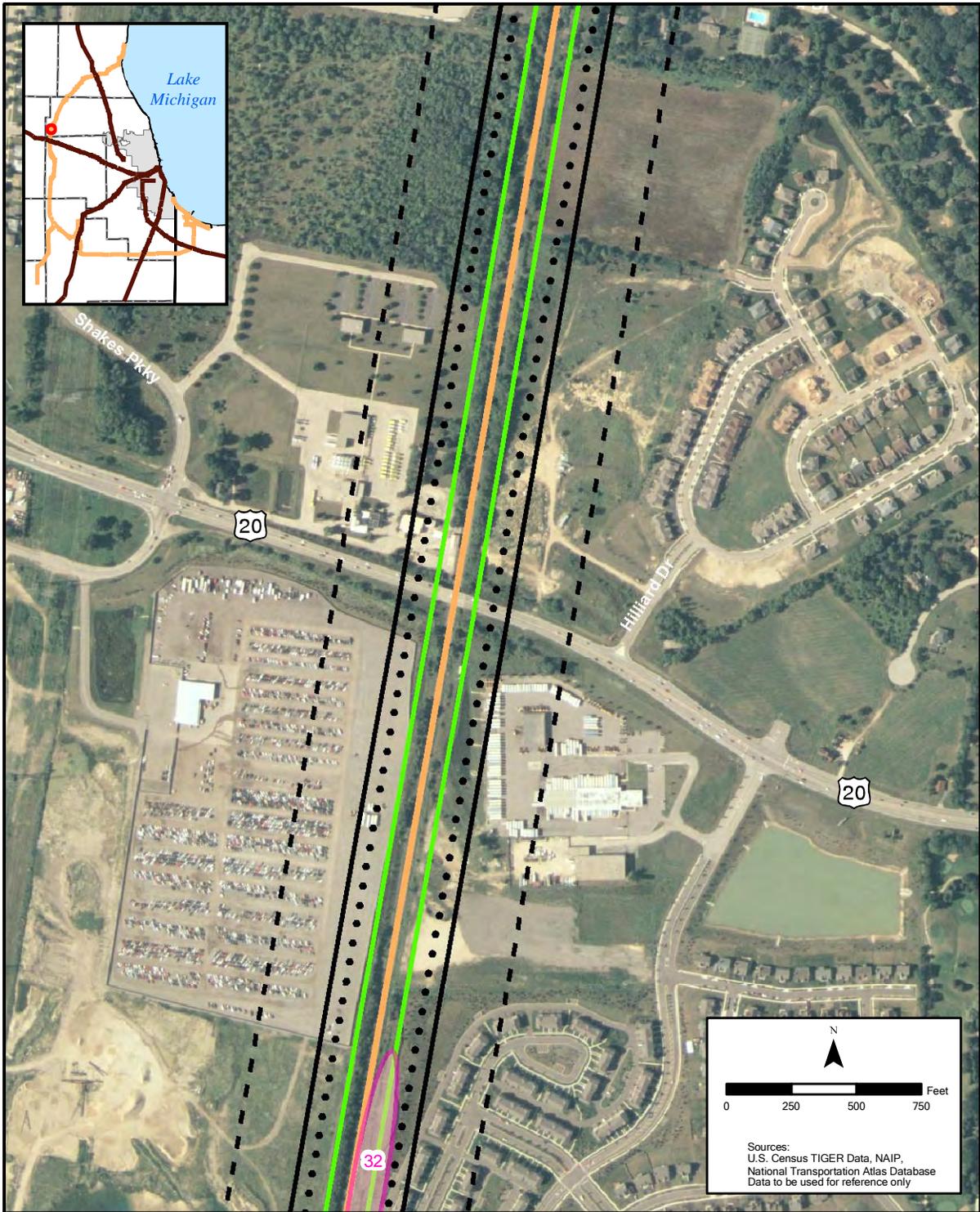
Figure L-1
Noise and Vibration
Contours

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- | | |
|----------------------------|-------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | 65 dBA Contour |
| Cost-Effective Barrier | 70 dBA Contour |
| Barrier Not Cost-Effective | Vibration Contour |

Figure L-1
Noise and Vibration
Contours
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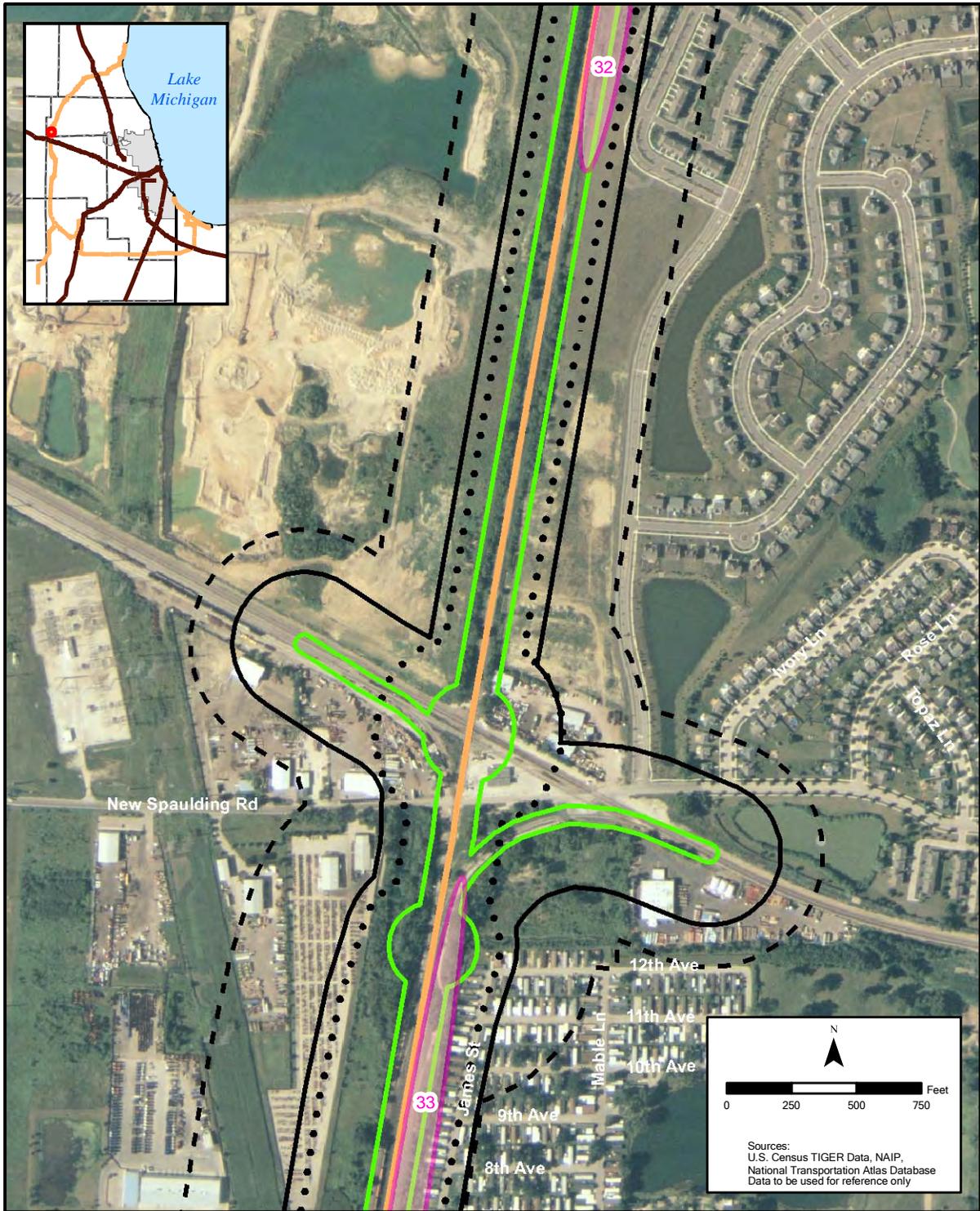


Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|--|----------------------------|----------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | - - - 65 dBA Contour |
| | Cost-Effective Barrier | - - - 70 dBA Contour |
| | Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours
 Sheet 27 of 139



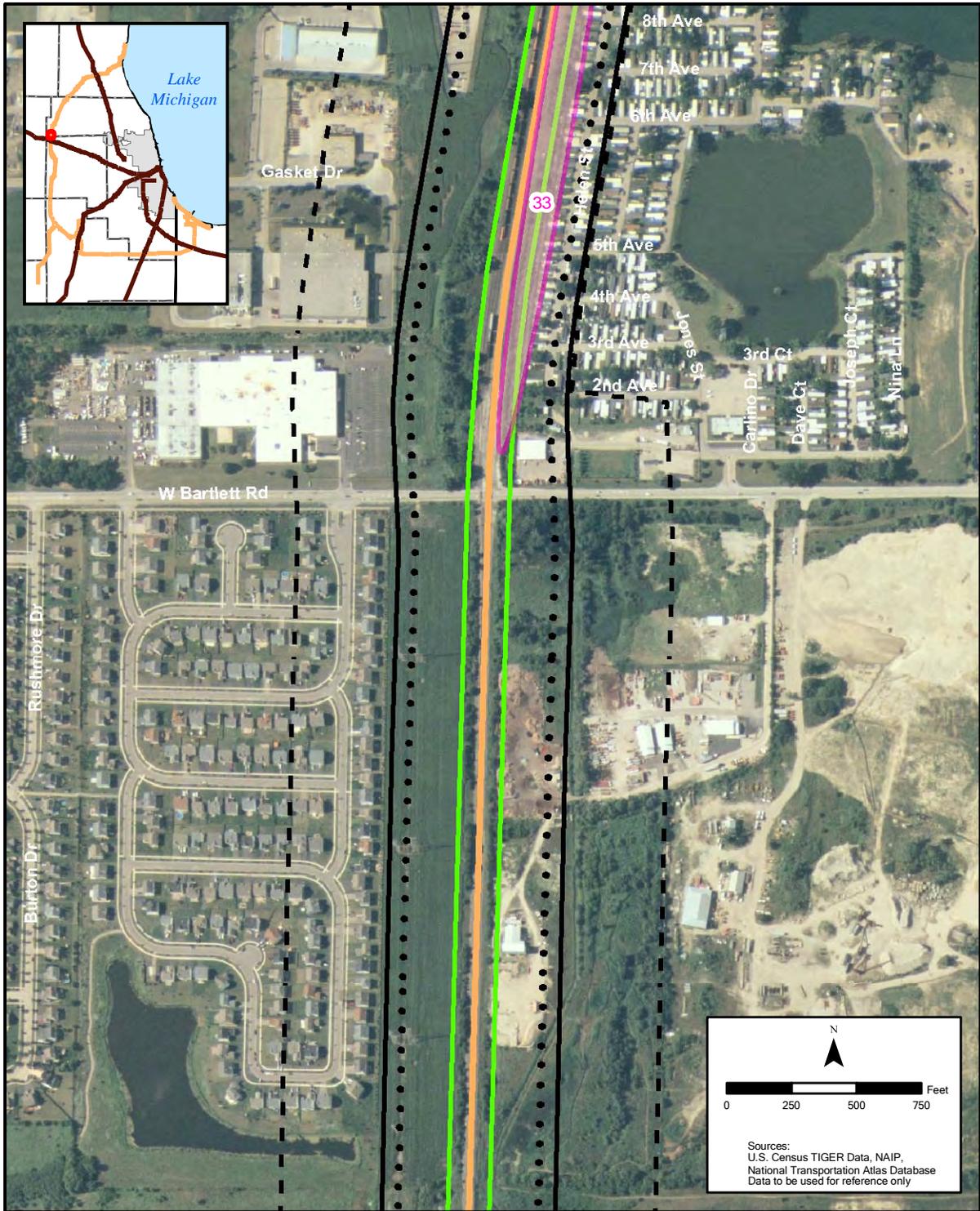
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| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Existing |
| | Construction Limits | Existing |
| | Cost-Effective Barrier | Proposed Action |
| | Barrier Not Cost-Effective | Proposed Action |
| | 65 dBA Contour | Proposed Action |
| | 65 dBA Contour | Proposed Action |
| | 70 dBA Contour | Proposed Action |
| | Vibration Contour | Proposed Action |

N

0 250 500 750 Feet

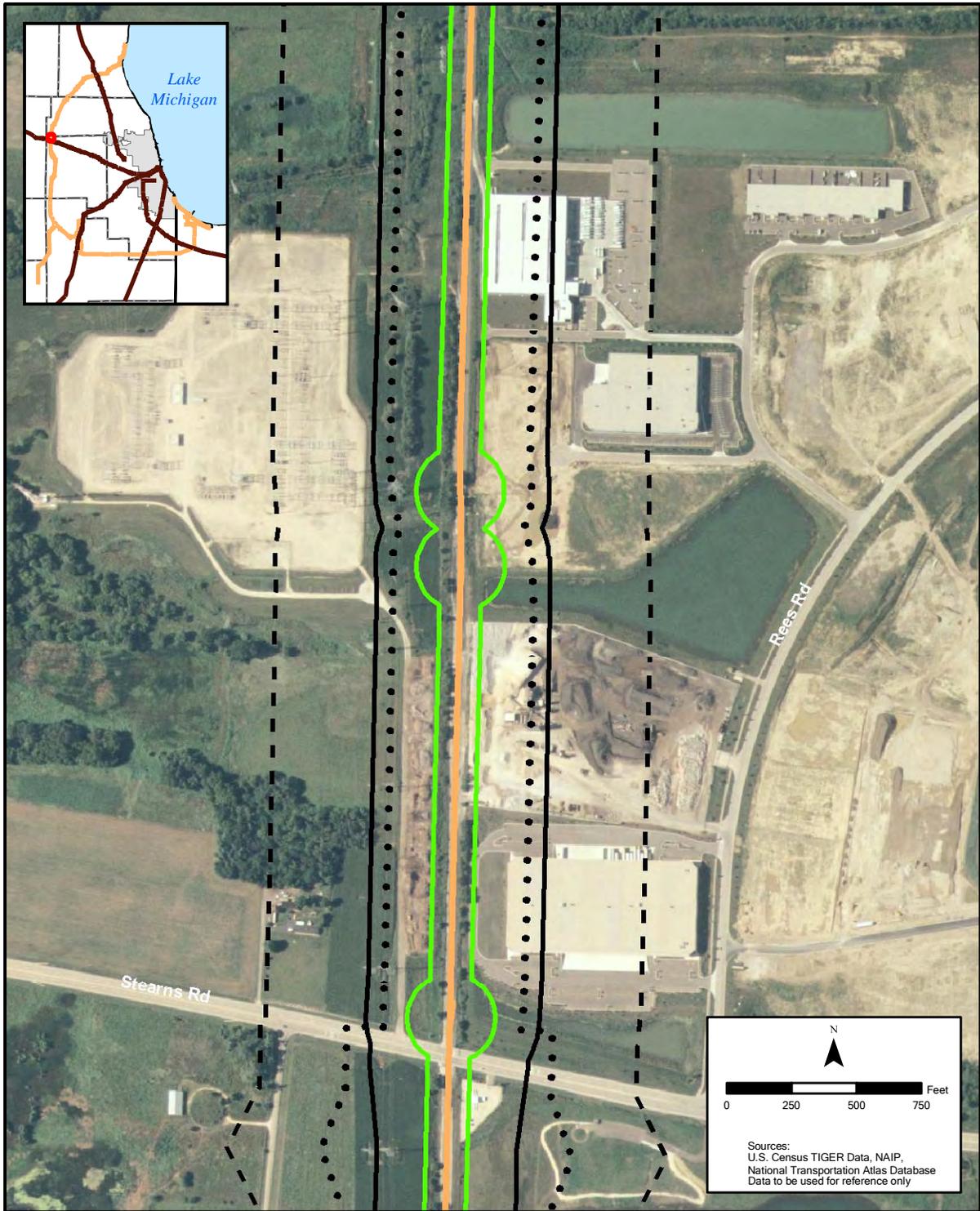
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 National Transportation Atlas Database
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Figure L-1
Noise and Vibration
Contours
 Sheet 28 of 139



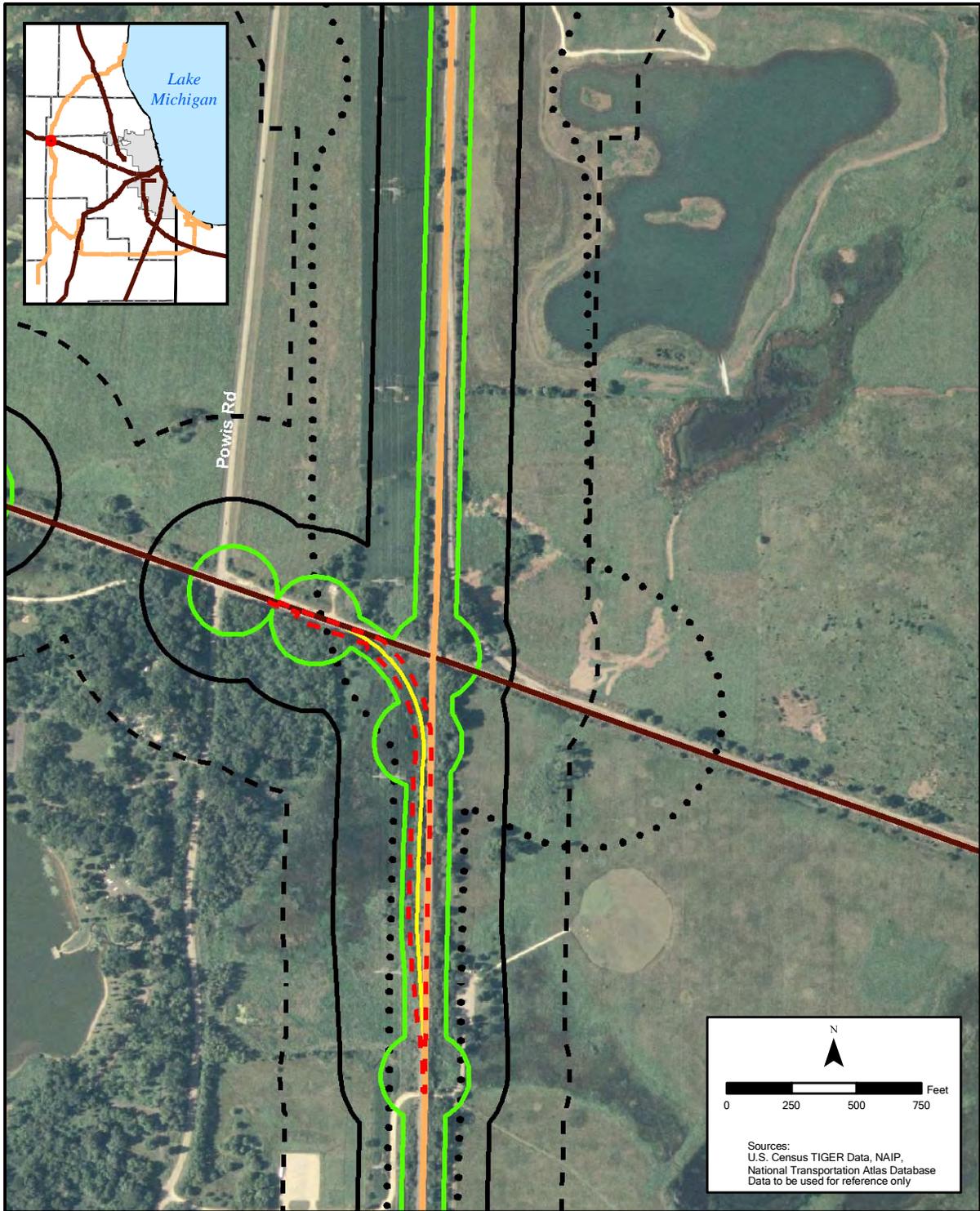
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|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | Existing |
|  | Proposed Track | Existing |
|  | Construction Limits | Existing |
|  | Cost-Effective Barrier | Proposed Action |
|  | Barrier Not Cost-Effective | Proposed Action |
|  | | Existing |
|  | | Proposed Action |
|  | | Proposed Action |

Figure L-1
Noise and Vibration
Contours
 Sheet 29 of 139



- | | | |
|--|----------------------------|----------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — 65 dBA Contour |
| | Cost-Effective Barrier | — 70 dBA Contour |
| | Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours
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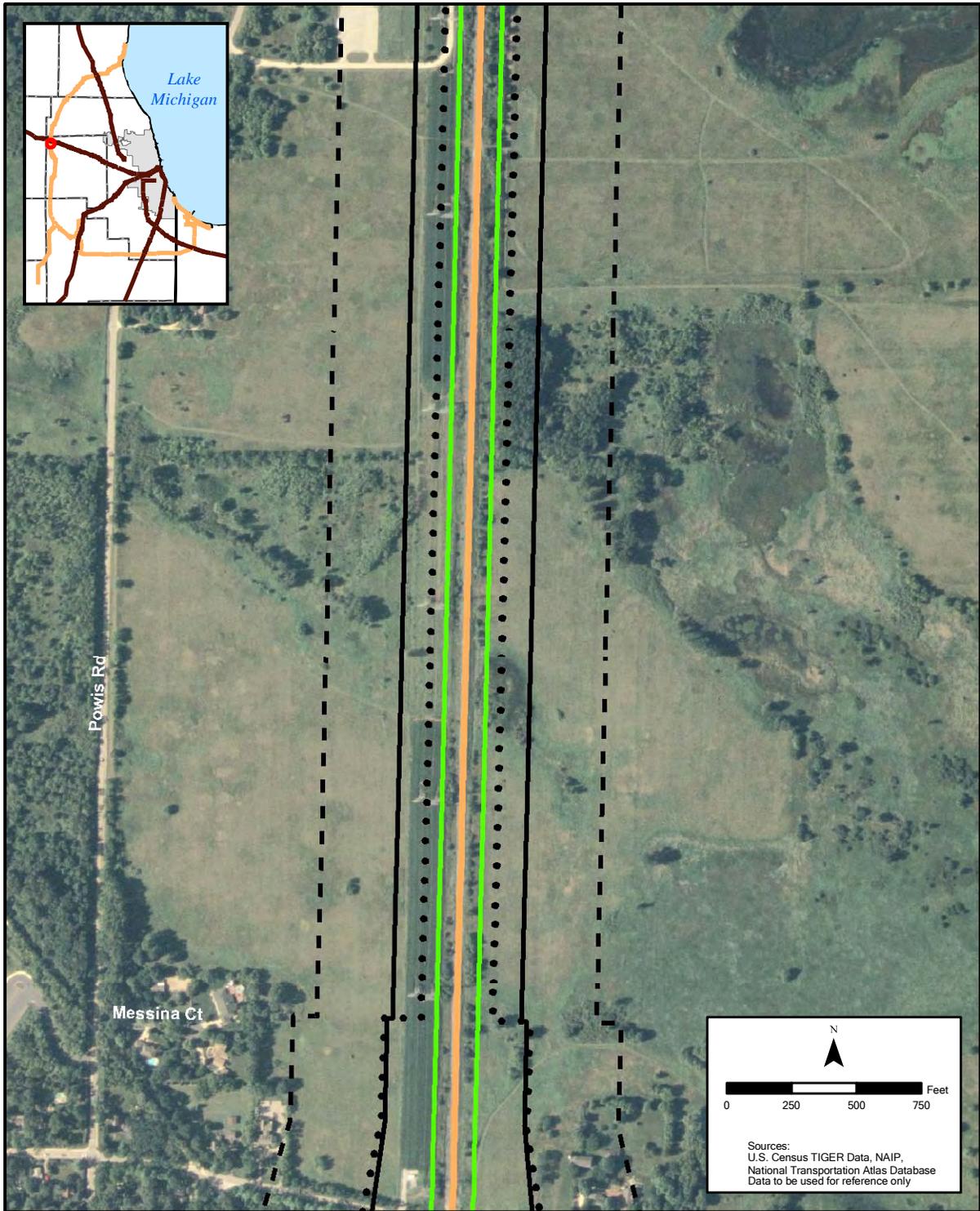
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| | CN Rail Line | Existing | |
| | EJ&E Rail Line | Existing | |
| | Proposed Track | Proposed Action | |
| | Construction Limits | | 65 dBA Contour |
| | Cost-Effective Barrier | | 70 dBA Contour |
| | Barrier Not Cost-Effective | | Vibration Contour |

N

0 250 500 750 Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

Figure L-1
Noise and Vibration
Contours
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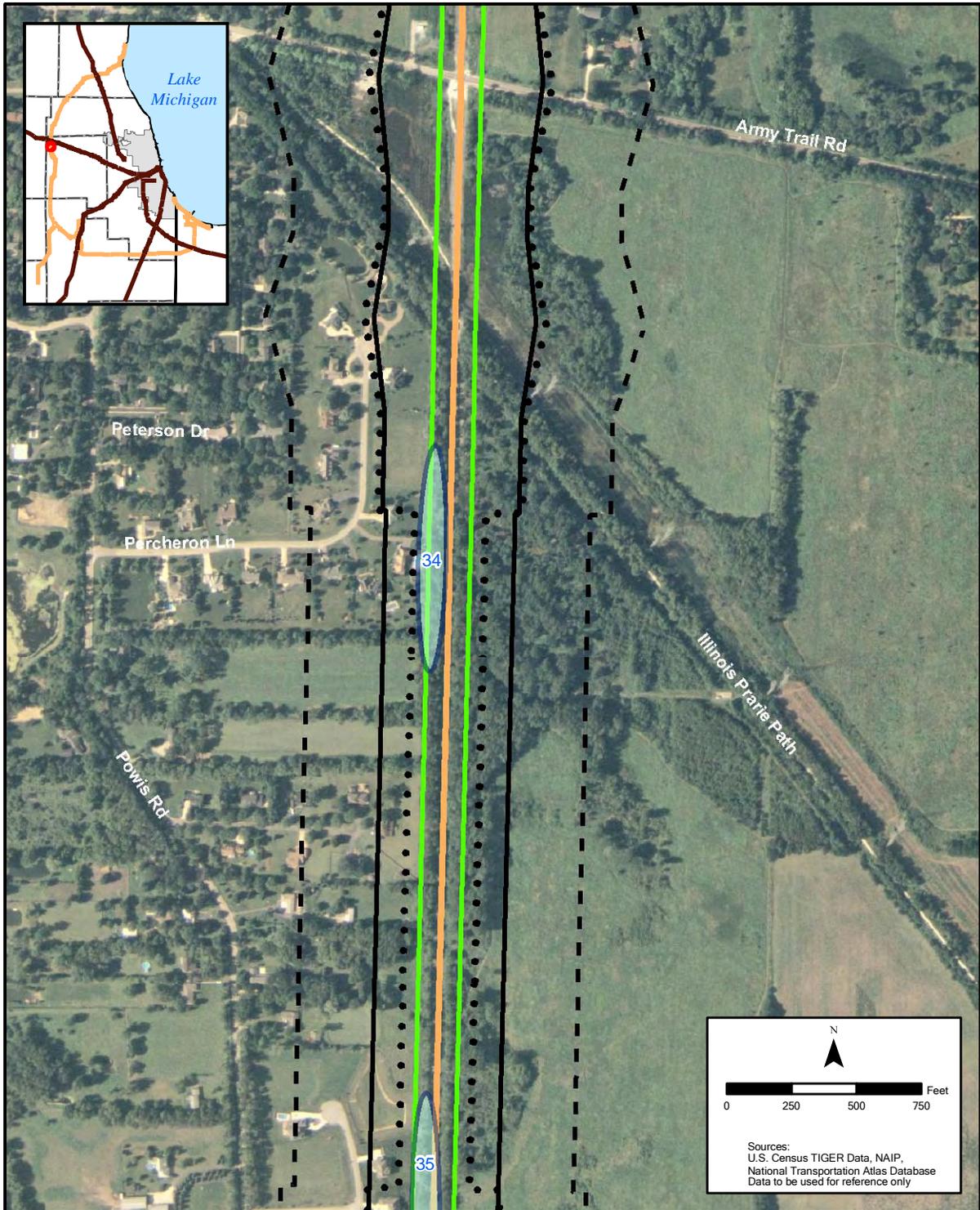
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

CN | EJ&E
 Environmental Impact Statement

CN Rail Line	Existing
EJ&E Rail Line	65 dBA Contour
Proposed Track	Proposed Action
Construction Limits	65 dBA Contour
Cost-Effective Barrier	70 dBA Contour
Barrier Not Cost-Effective	Vibration Contour

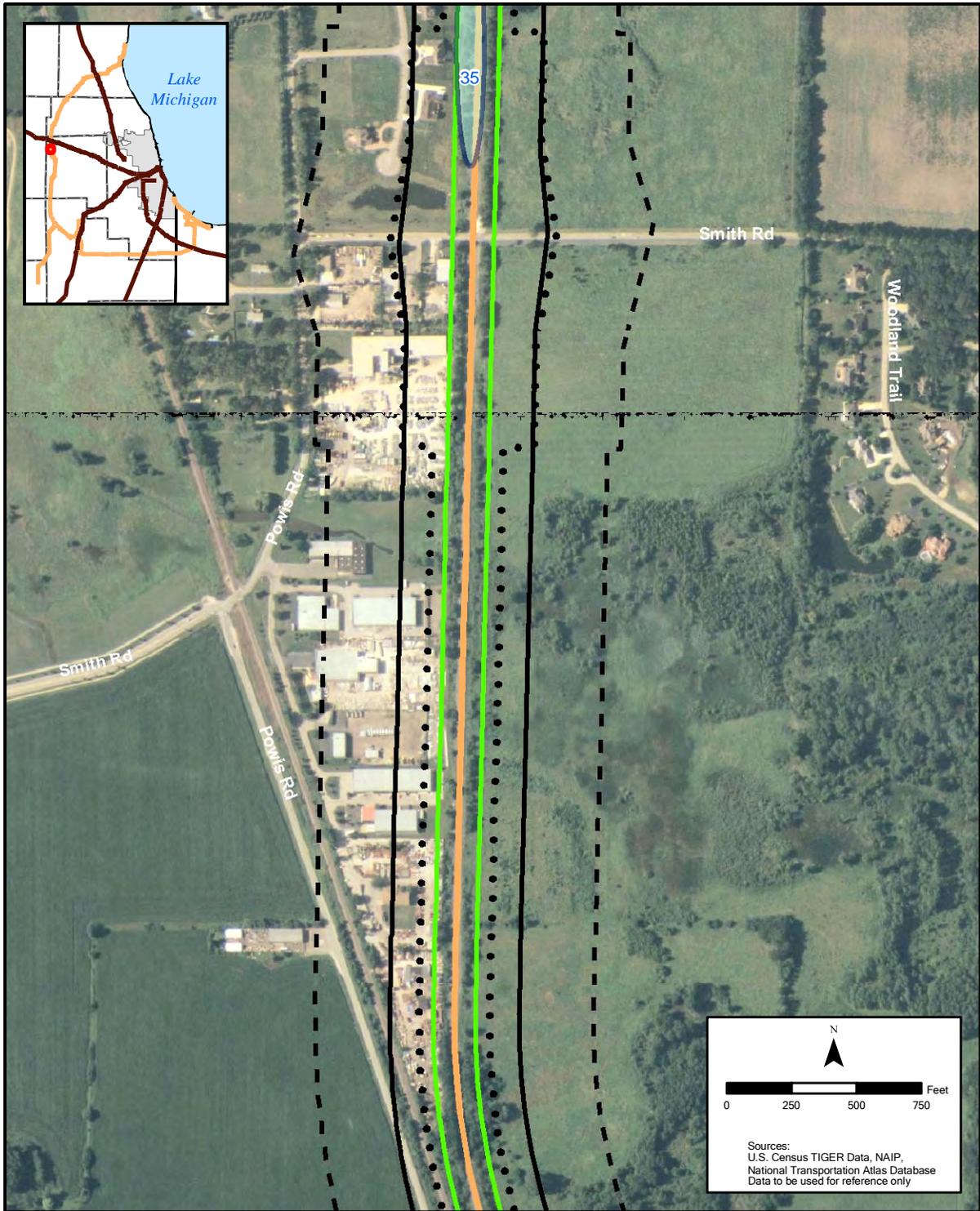
Figure L-1
Noise and Vibration
Contours



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| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Existing |
| | Construction Limits | Existing |
| | Cost-Effective Barrier | Proposed Action |
| | Barrier Not Cost-Effective | Proposed Action |
| | 65 dBA Contour | Proposed Action |
| | 70 dBA Contour | Proposed Action |
| | Vibration Contour | Proposed Action |

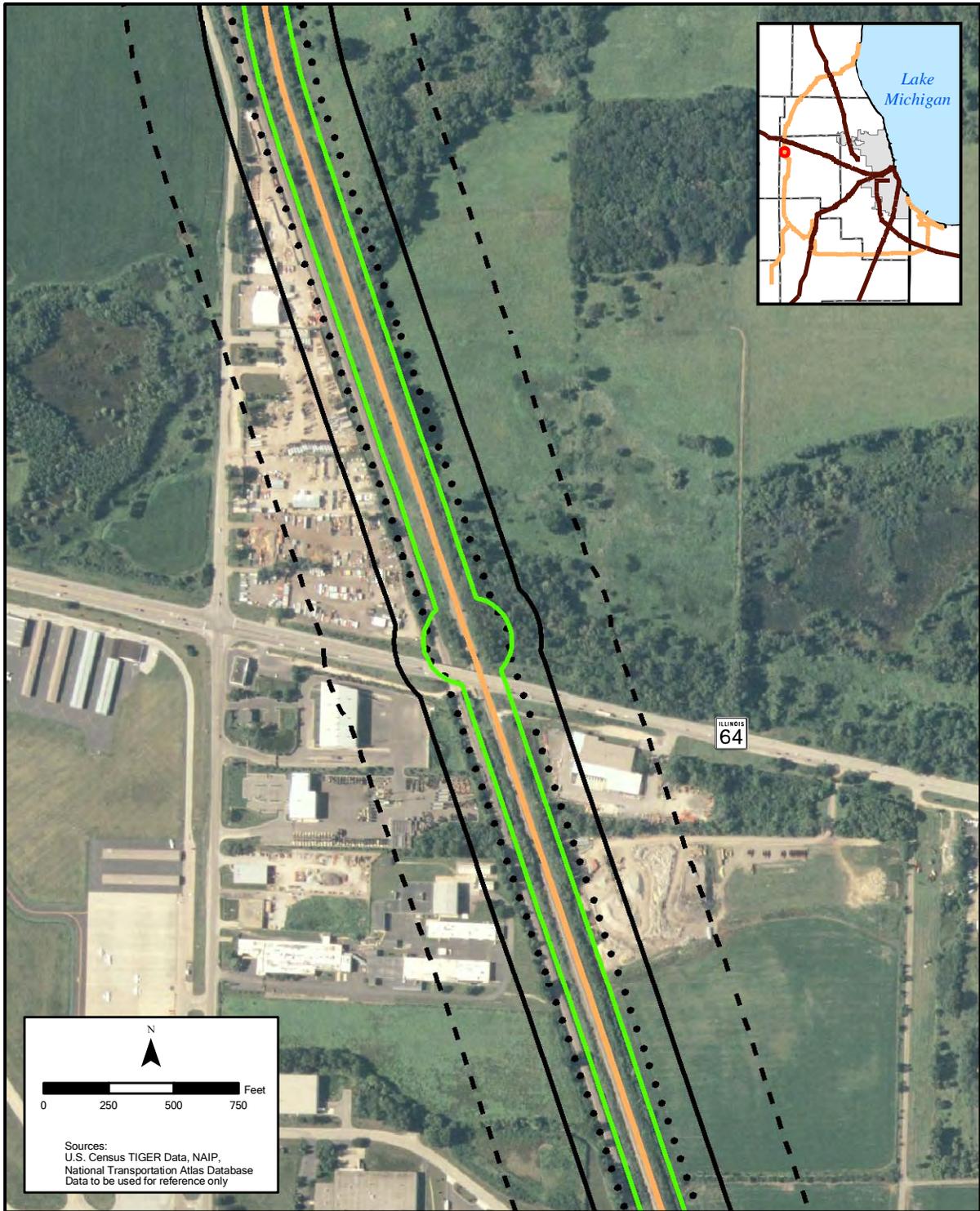
Figure L-1
Noise and Vibration
Contours

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|---|----------------------------|---|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | Existing |
|  | Proposed Track | Proposed Action |
|  | Construction Limits |  65 dBA Contour |
|  | Cost-Effective Barrier |  70 dBA Contour |
|  | Barrier Not Cost-Effective |  Vibration Contour |

Figure L-1
Noise and Vibration
Contours



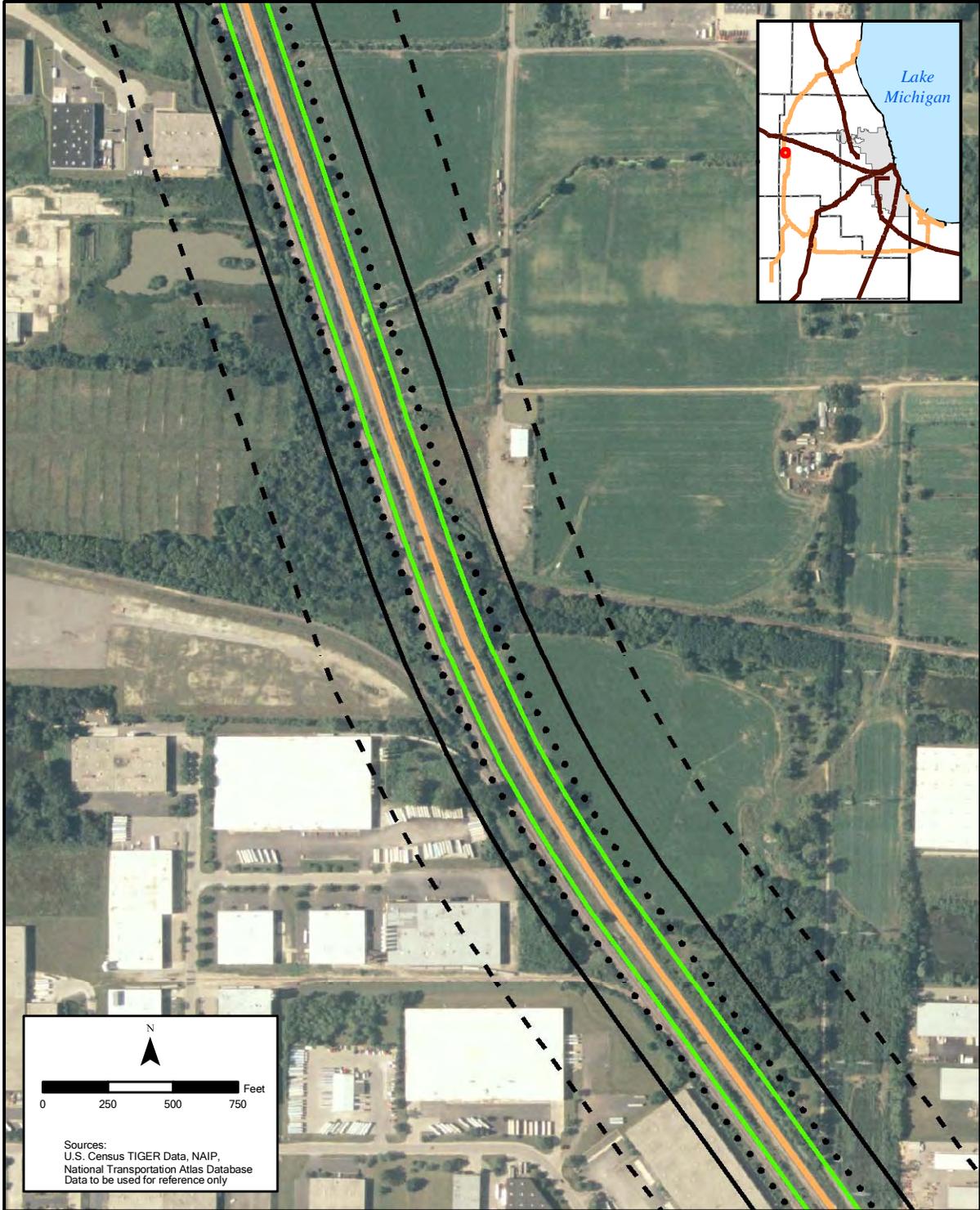

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 Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|---|----------------------------|---|-------------------|
|  | CN Rail Line | Existing | |
|  | EJ&E Rail Line | • • • 65 dBA Contour | |
|  | Proposed Track | Proposed Action | |
|  | Construction Limits | - - - 65 dBA Contour | |
|  | Cost-Effective Barrier | - - - 70 dBA Contour | |
|  | Barrier Not Cost-Effective |  | Vibration Contour |

Figure L-1
Noise and Vibration
Contours

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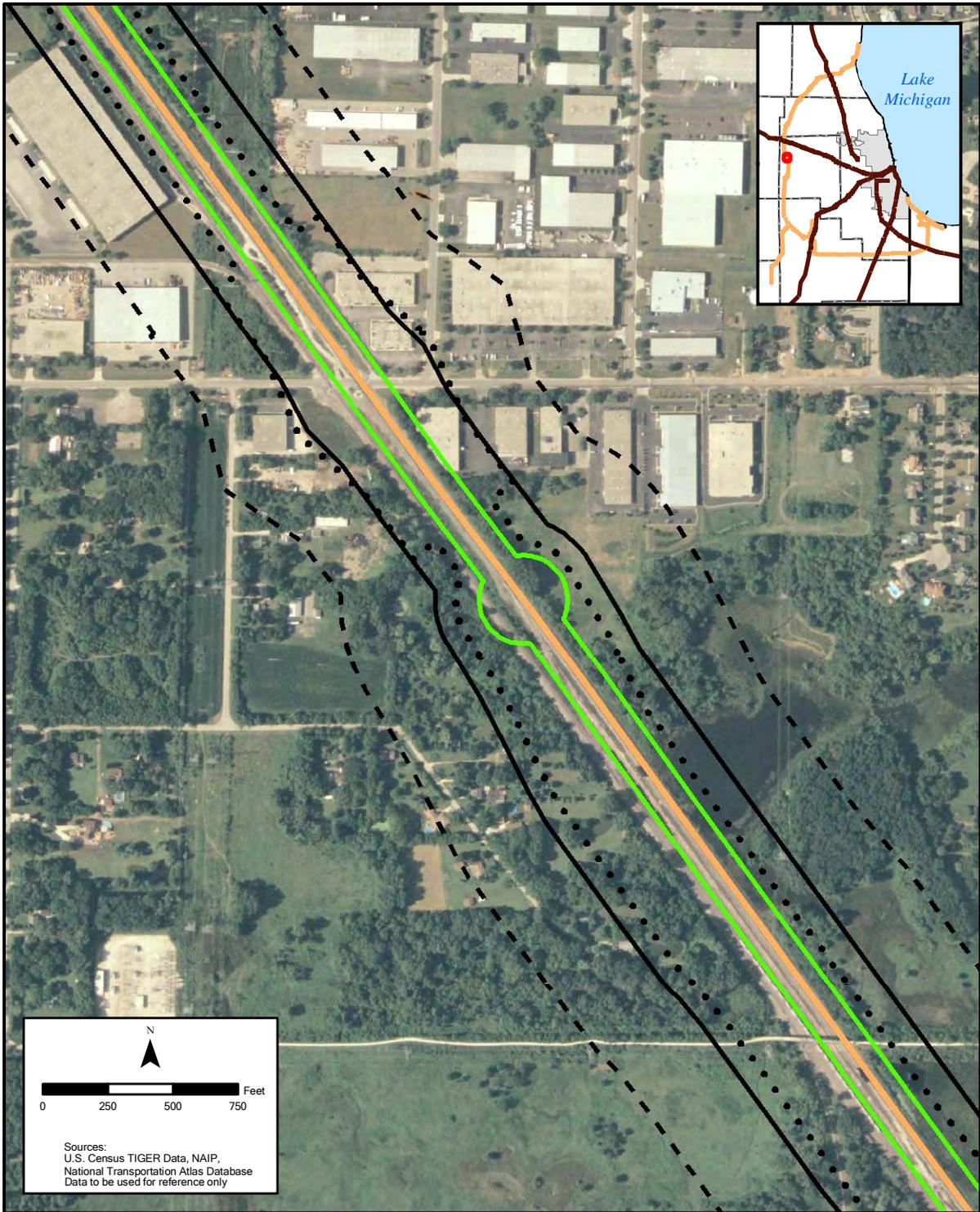



 0 250 500 750 Feet
 Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|---|----------------------------|-----------------------|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | --- 65 dBA Contour |
|  | Cost-Effective Barrier | --- 70 dBA Contour |
|  | Barrier Not Cost-Effective | --- Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours



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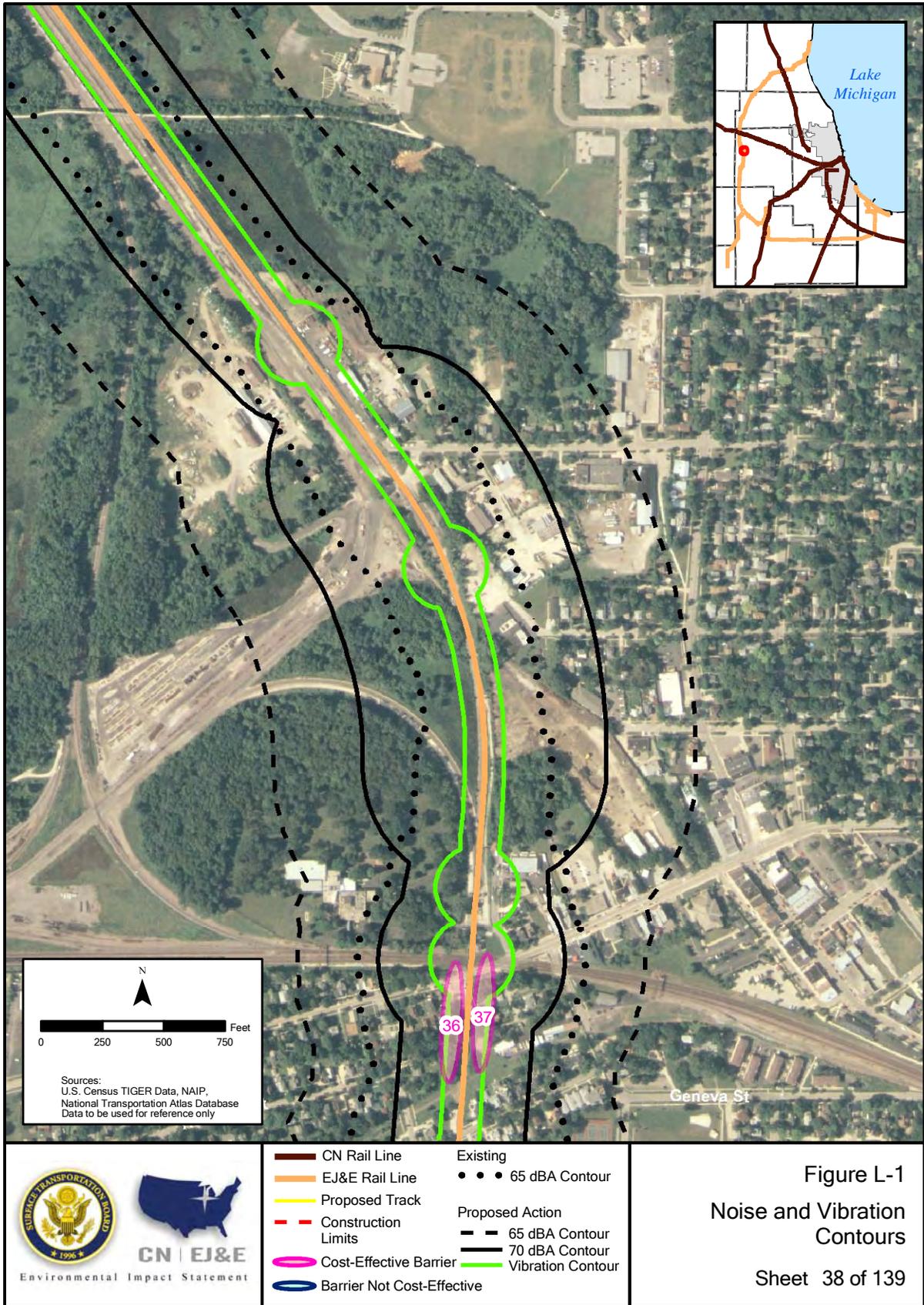
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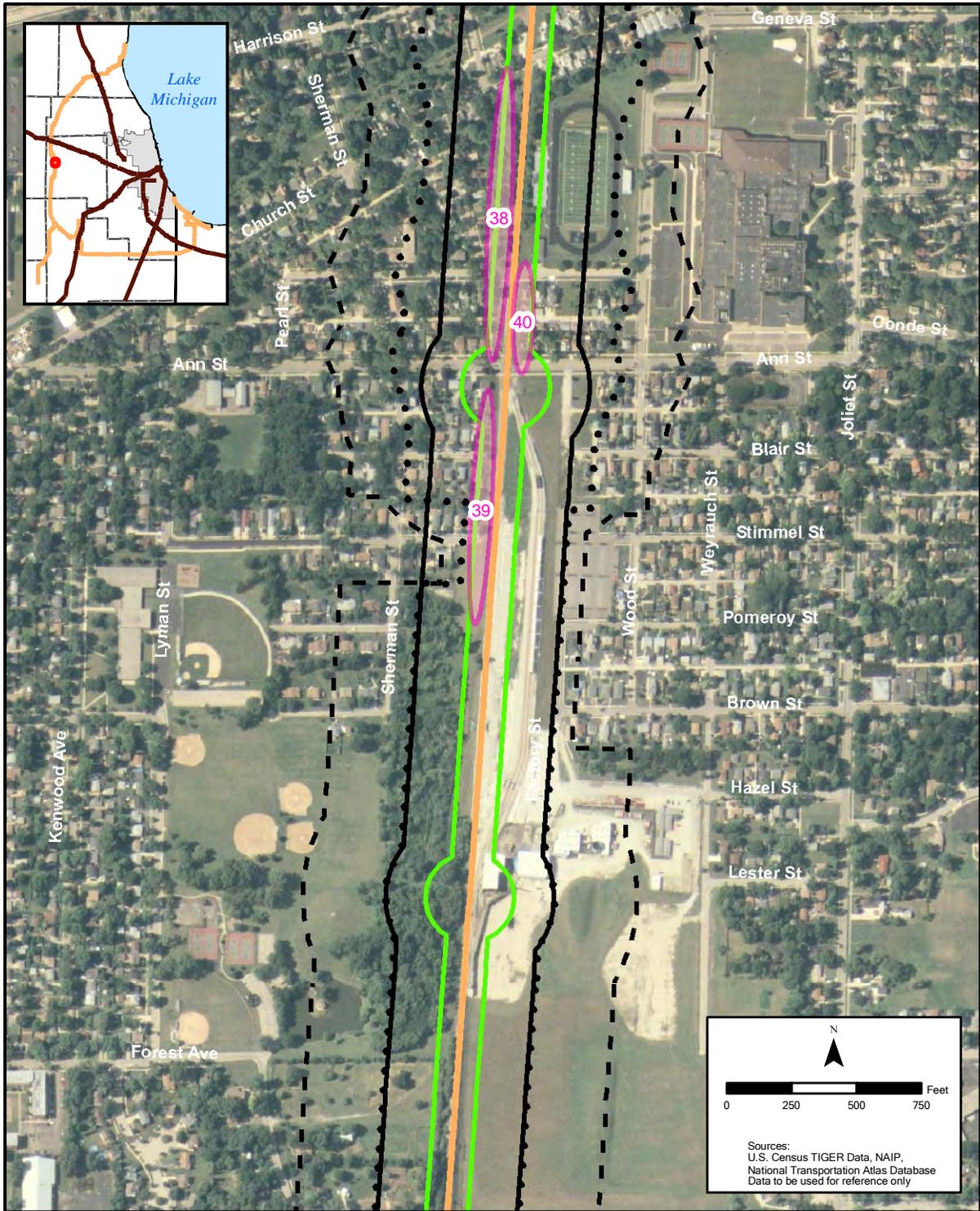
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



- | | | |
|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | - - - 65 dBA Contour |
| | Cost-Effective Barrier | - - - 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours





Environmental Impact Statement

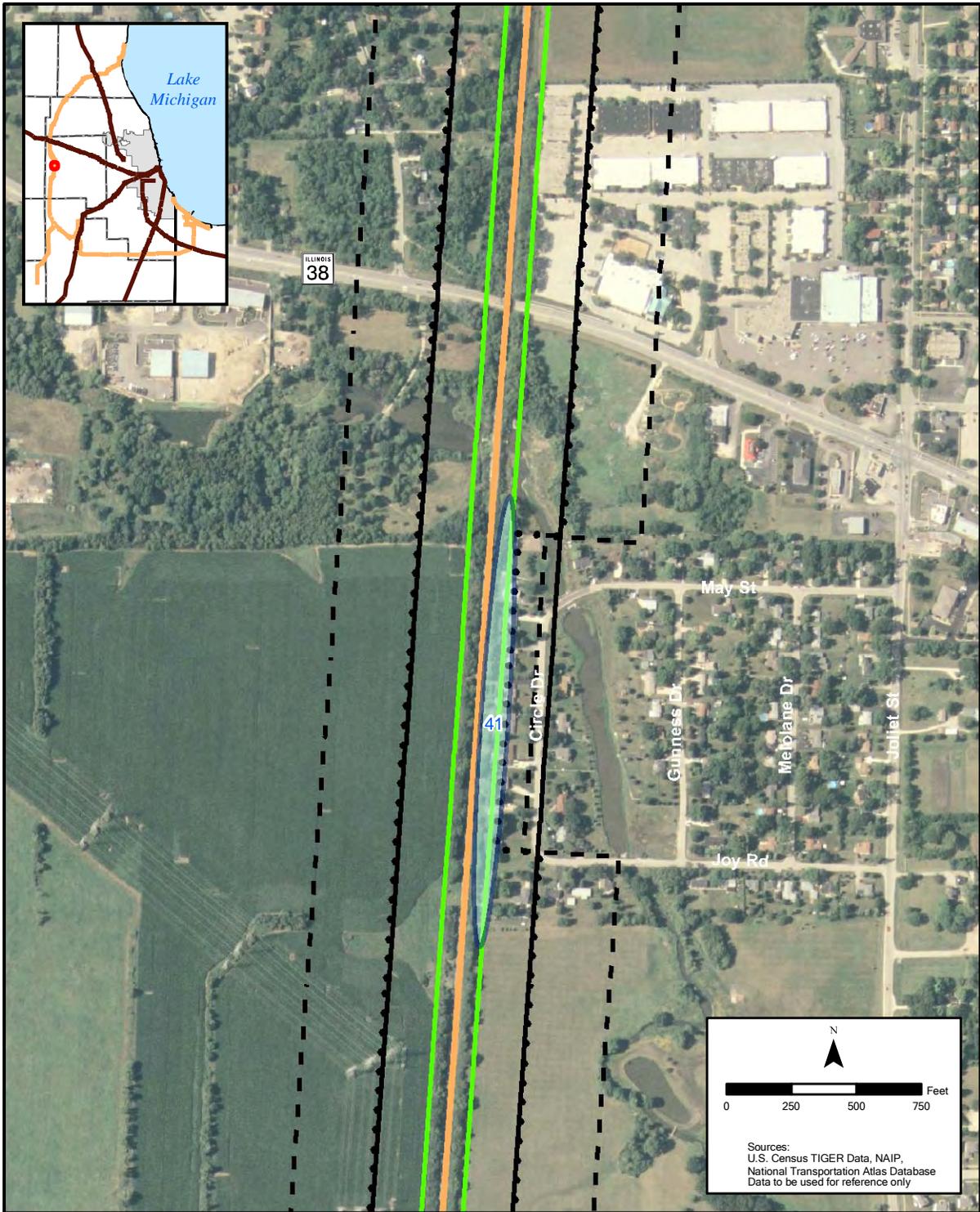
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- EJ&E Rail Line
- Proposed Track
- - - Construction Limits
- Cost-Effective Barrier
- Barrier Not Cost-Effective
- ● ● Existing 65 dBA Contour
- - - Proposed Action 65 dBA Contour
- - - Proposed Action 70 dBA Contour
- Vibration Contour

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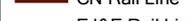
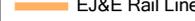
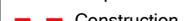
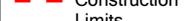
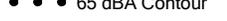
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Sources:
U.S. Census TIGER Data, NAIP,
National Transportation Atlas Database
Data to be used for reference only

Figure L-1
Noise and Vibration
Contours



Environmental Impact Statement

- | | | |
|---|----------------------------|-----------------|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | Existing |
|  | Proposed Track | Existing |
|  | Construction Limits | Existing |
|  | Cost-Effective Barrier | Proposed Action |
|  | Barrier Not Cost-Effective | Proposed Action |
|  | 65 dBA Contour | Existing |
|  | 70 dBA Contour | Existing |
|  | Vibration Contour | Proposed Action |

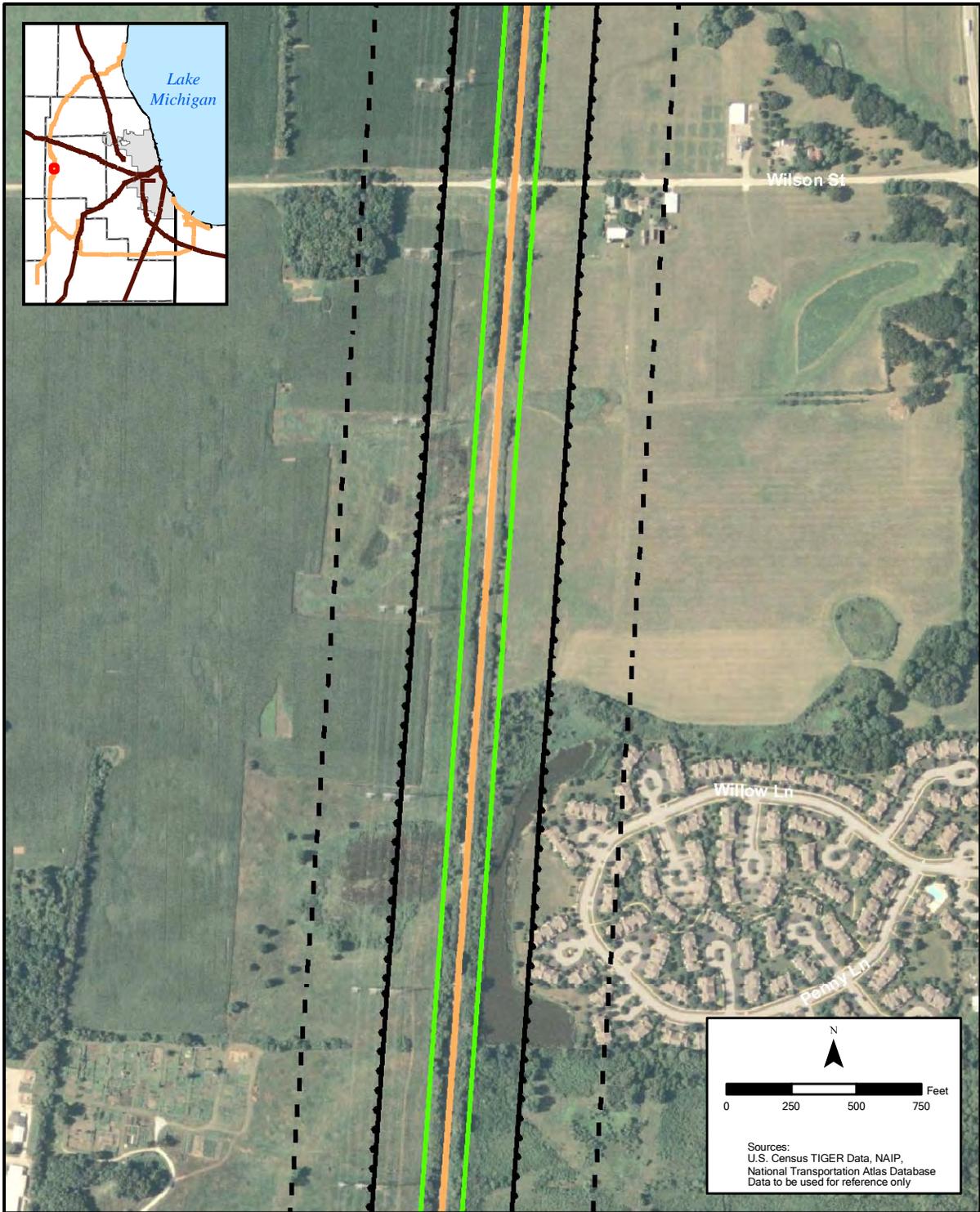
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0 250 500 750 Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

Figure L-1
Noise and Vibration
Contours
 Sheet 40 of 139



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0 250 500 750 Feet

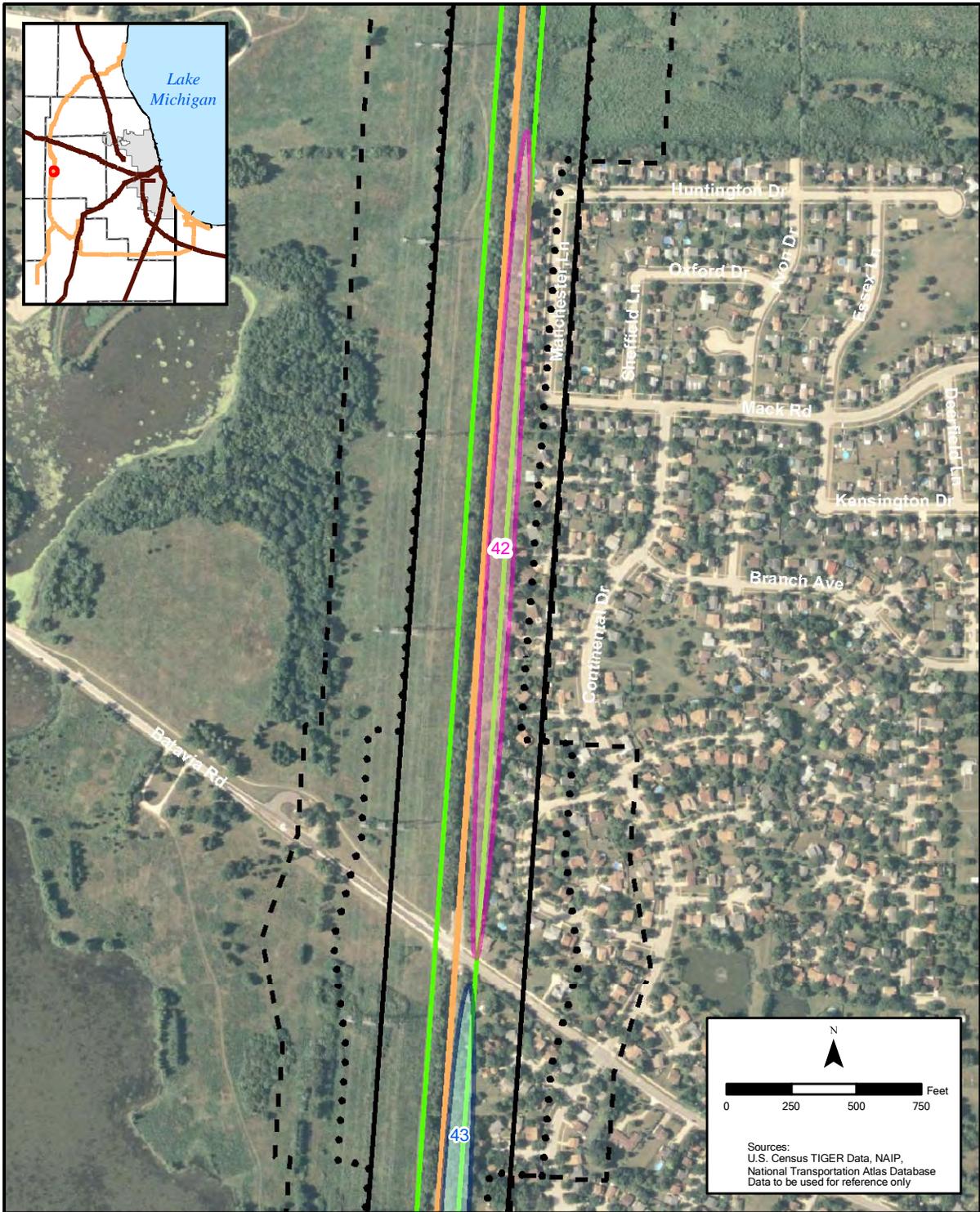
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

CN | EJ&E
 Environmental Impact Statement

	CN Rail Line	Existing
	EJ&E Rail Line	Existing
	Proposed Track	Proposed Action
	Construction Limits	Proposed Action
	Cost-Effective Barrier	Proposed Action
	Barrier Not Cost-Effective	Proposed Action
	65 dBA Contour	Existing
	65 dBA Contour	Proposed Action
	70 dBA Contour	Proposed Action
	Vibration Contour	Proposed Action

Figure L-1
Noise and Vibration
Contours

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Environmental Impact Statement

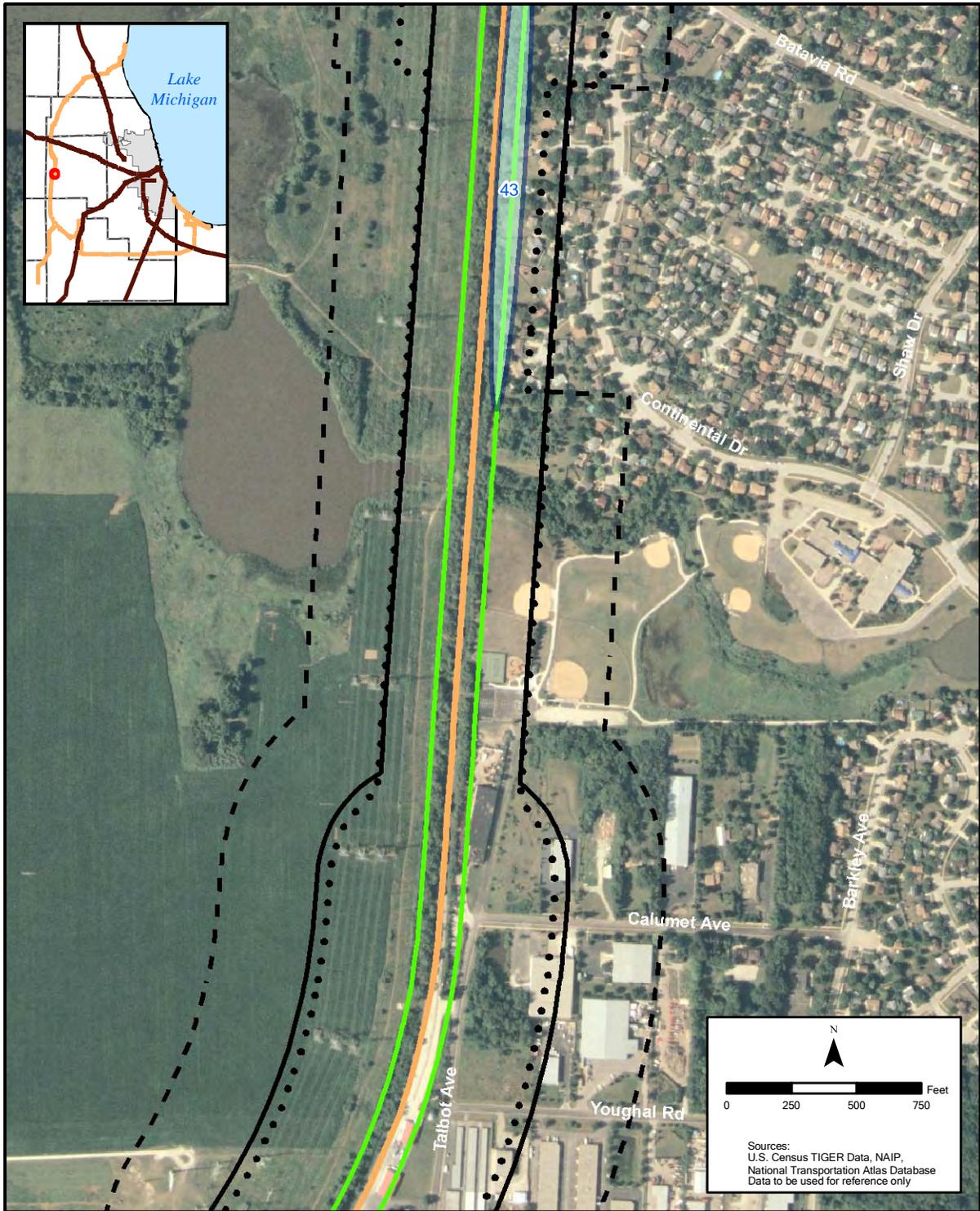
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|--|----------------------------|-------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Existing |
| | Construction Limits | Existing |
| | Cost-Effective Barrier | Proposed Action |
| | Barrier Not Cost-Effective | Proposed Action |
| | | 65 dBA Contour |
| | | 65 dBA Contour |
| | | 70 dBA Contour |
| | | Vibration Contour |
| | | Vibration Contour |

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0 250 500 750 Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

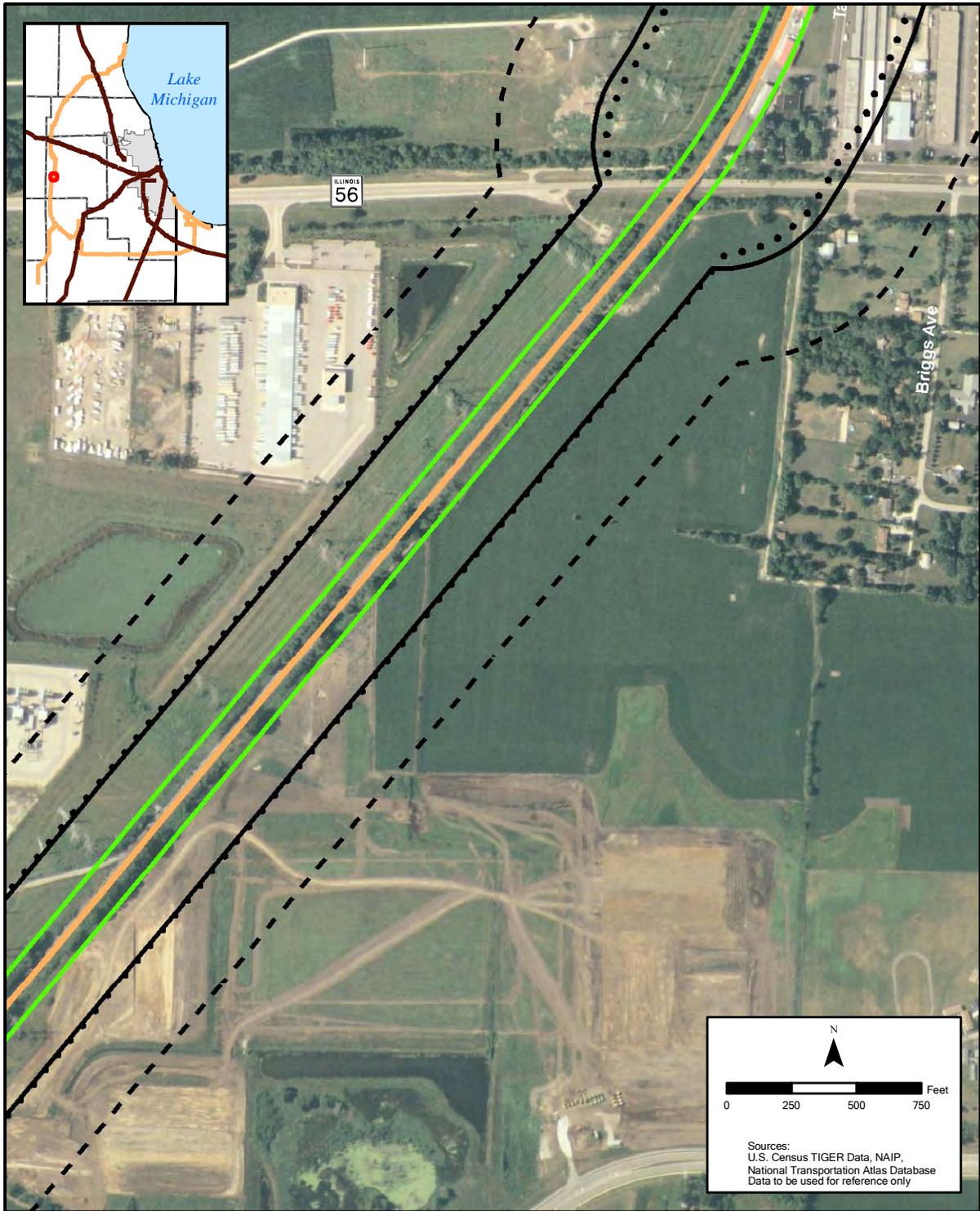
Figure L-1
Noise and Vibration
Contours
 Sheet 42 of 139



Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

	CN Rail Line EJ&E Rail Line Proposed Track Construction Limits Cost-Effective Barrier Barrier Not Cost-Effective	Existing 65 dBA Contour Proposed Action 65 dBA Contour 70 dBA Contour Vibration Contour
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Figure L-1
Noise and Vibration
Contours
 Sheet 43 of 139



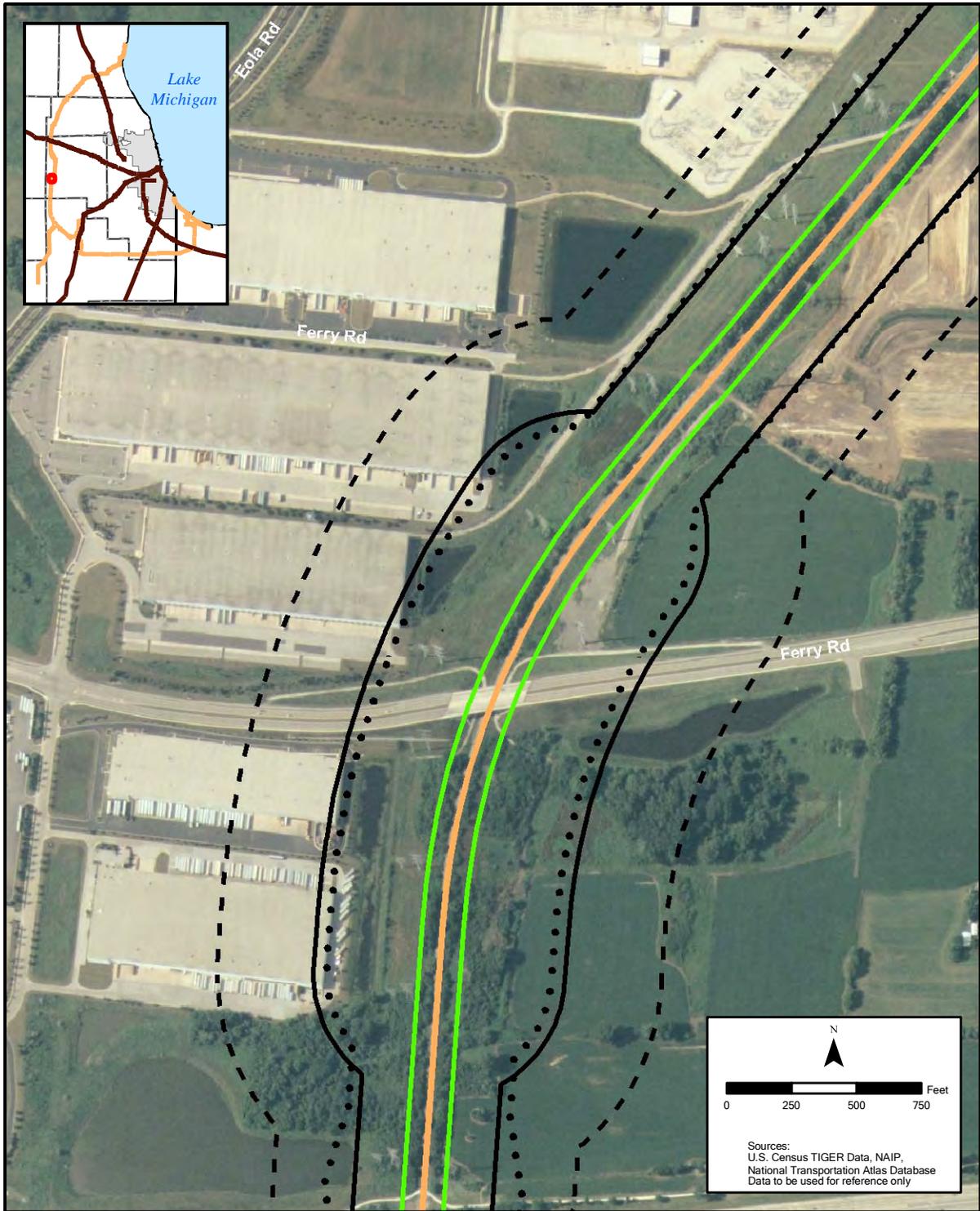
- | | | |
|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

N

Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

Figure L-1
Noise and Vibration
Contours
 Sheet 44 of 139



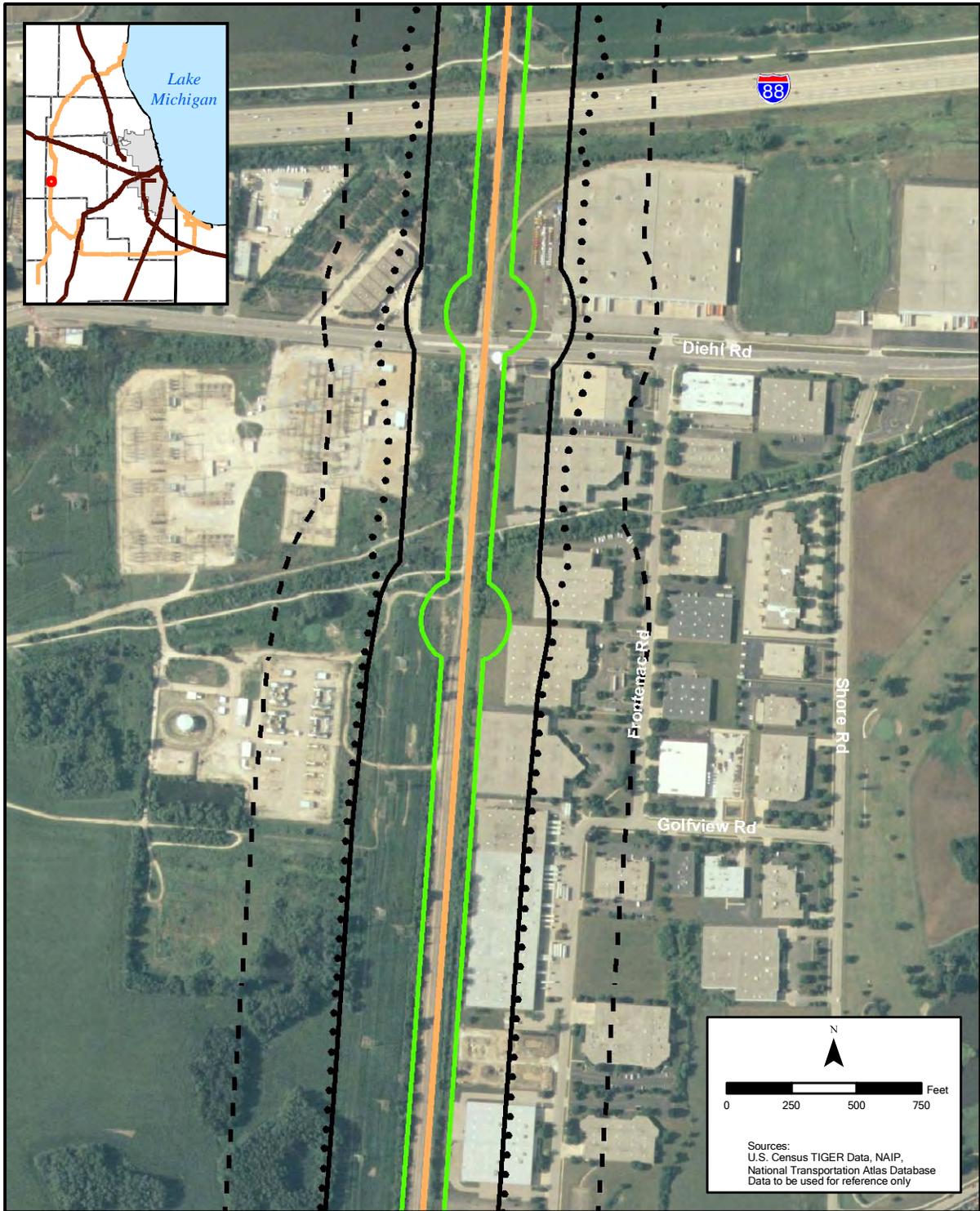
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|--|----------------------------|-----------------|-------------------|
| | CN Rail Line | Existing | |
| | EJ&E Rail Line | | 65 dBA Contour |
| | Proposed Track | Proposed Action | |
| | Construction Limits | | 65 dBA Contour |
| | Cost-Effective Barrier | | 70 dBA Contour |
| | Barrier Not Cost-Effective | | Vibration Contour |

N

0 250 500 750 Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

Figure L-1
Noise and Vibration
Contours
 Sheet 45 of 139



- | | | | |
|---|----------------------------|---|-------------------|
|  | CN Rail Line | Existing | |
|  | EJ&E Rail Line | • • • 65 dBA Contour | |
|  | Proposed Track | Proposed Action | |
|  | Construction Limits | - - - 65 dBA Contour | |
|  | Cost-Effective Barrier | - - - 70 dBA Contour | |
|  | Barrier Not Cost-Effective |  | Vibration Contour |

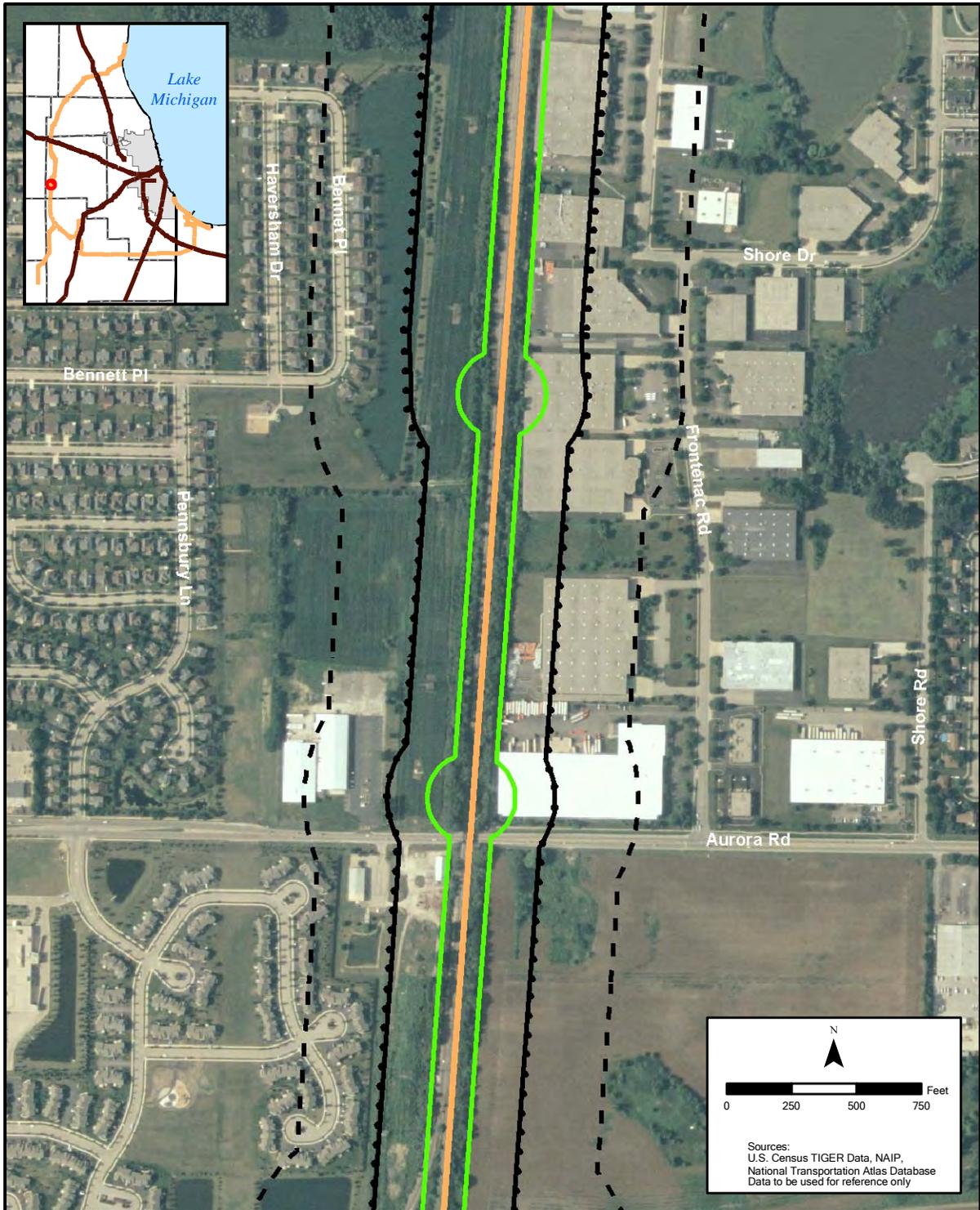
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0 250 500 750 Feet

Sources:
U.S. Census TIGER Data, NAIP,
National Transportation Atlas Database
Data to be used for reference only

Figure L-1
Noise and Vibration
Contours
Sheet 46 of 139



N

0 250 500 750 Feet

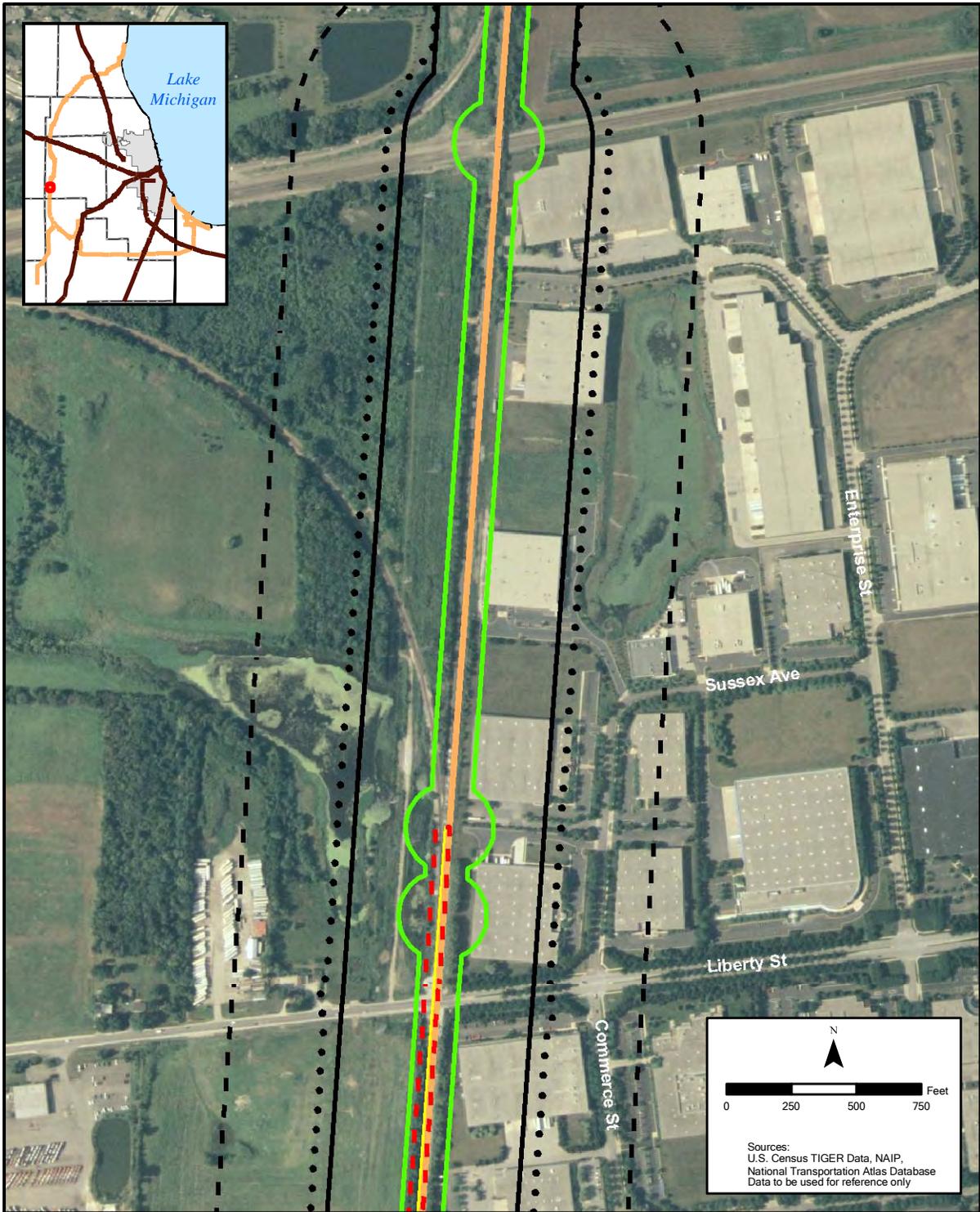
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



- | | | |
|--|----------------------------|-------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Proposed Action |
| | Construction Limits | 65 dBA Contour |
| | Cost-Effective Barrier | 70 dBA Contour |
| | Barrier Not Cost-Effective | Vibration Contour |
| | | 65 dBA Contour |
| | | 70 dBA Contour |

Figure L-1
Noise and Vibration
Contours

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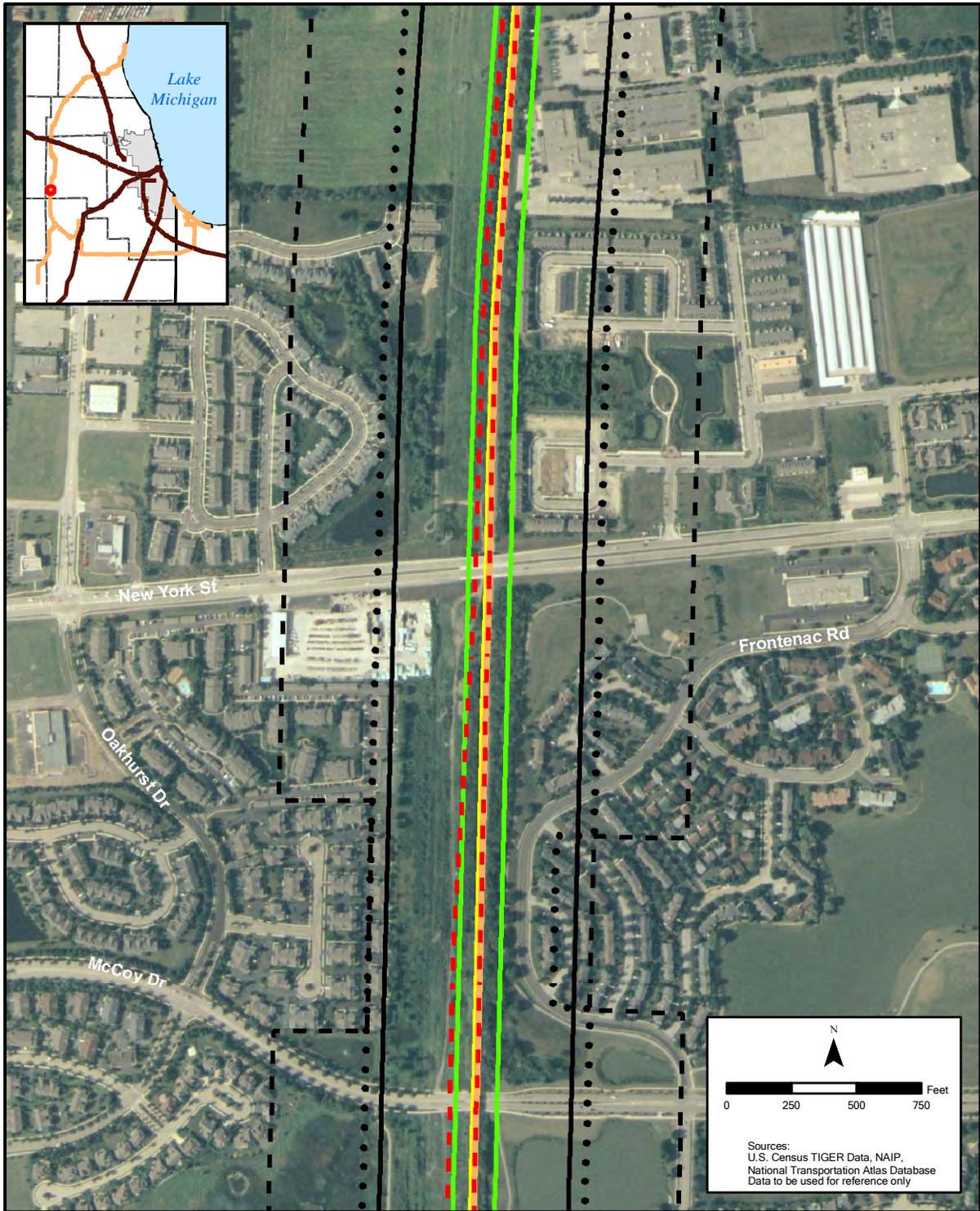
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|--|----------------------------|--|-------------------|
| | CN Rail Line | | Existing |
| | EJ&E Rail Line | | 65 dBA Contour |
| | Proposed Track | | Proposed Action |
| | Construction Limits | | 65 dBA Contour |
| | Cost-Effective Barrier | | 70 dBA Contour |
| | Barrier Not Cost-Effective | | Vibration Contour |

N

Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

Figure L-1
Noise and Vibration
Contours
 Sheet 48 of 139



CN | E&E

Environmental Impact Statement

- | | | |
|--|----------------------------|-----------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Proposed Action |
| | Construction Limits | Proposed Action |
| | Cost-Effective Barrier | Proposed Action |
| | Barrier Not Cost-Effective | Proposed Action |
| | 65 dBA Contour | Existing |
| | 70 dBA Contour | Existing |
| | Vibration Contour | Existing |

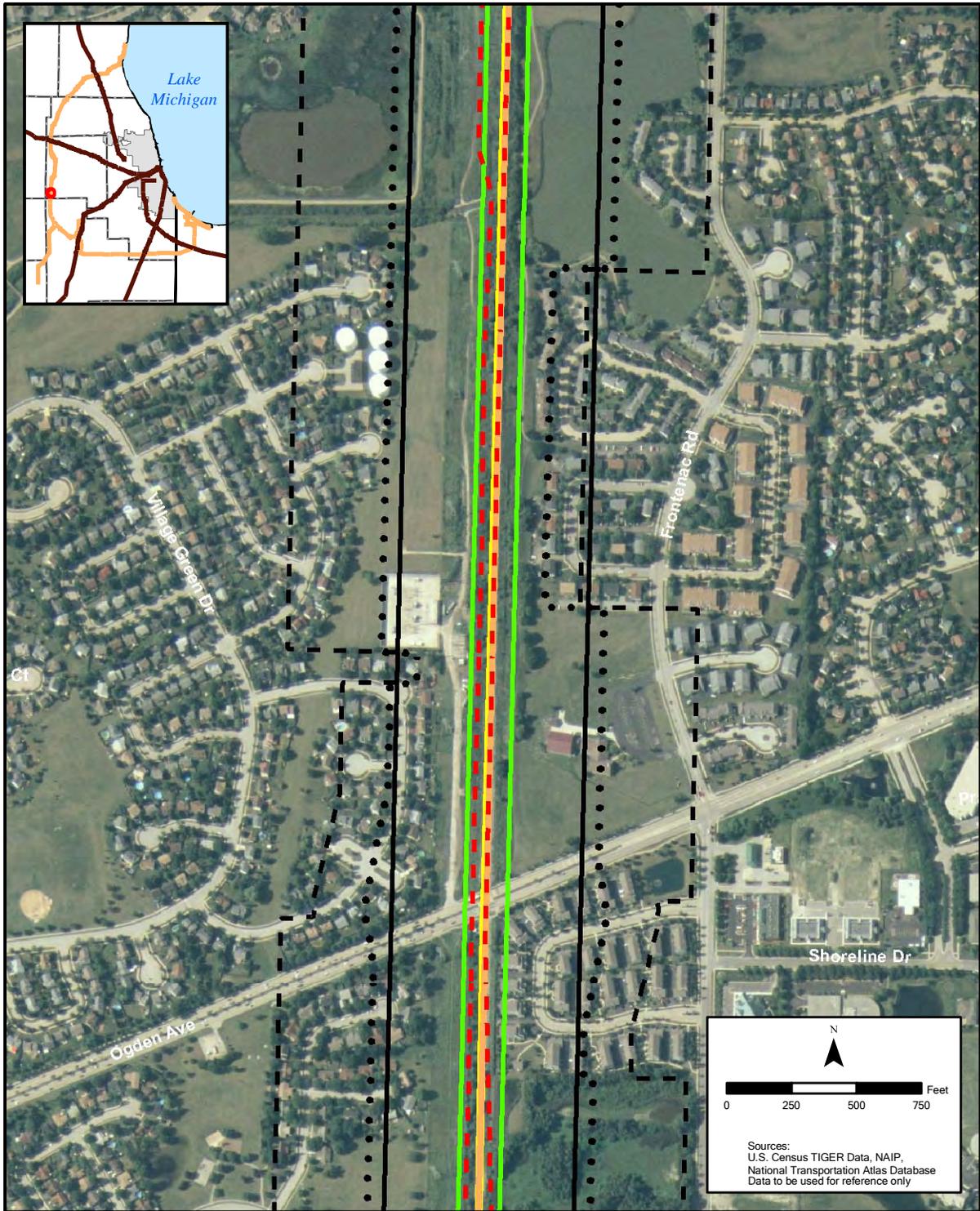
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0 250 500 750 Feet

Sources:
U.S. Census TIGER Data, NAIP,
National Transportation Atlas Database
Data to be used for reference only

Figure L-1
Noise and Vibration
Contours

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Environmental Impact Statement

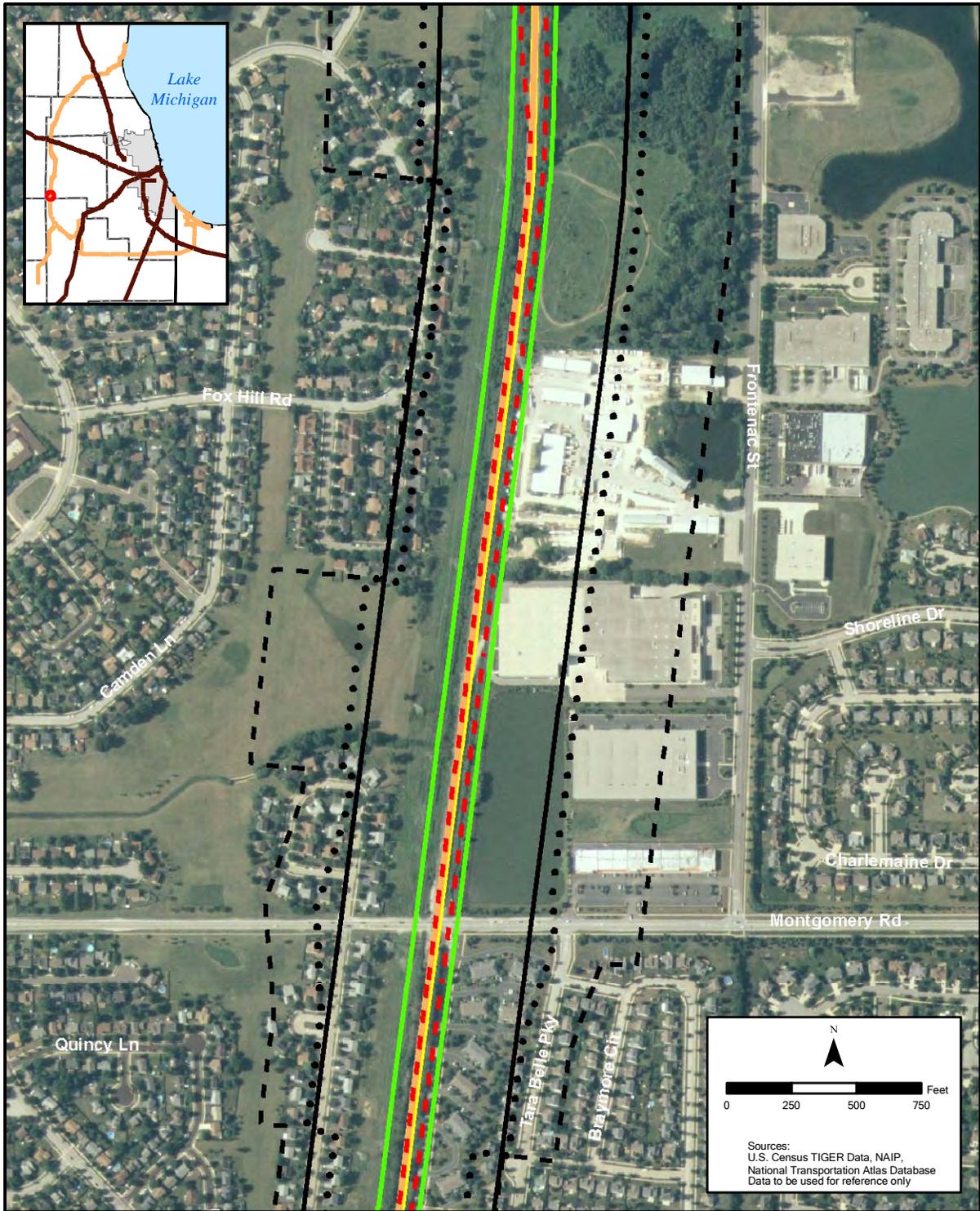
- | | | | |
|--|----------------------------|-----------------|-------------------|
| | CN Rail Line | Existing | |
| | EJ&E Rail Line | Existing | |
| | Proposed Track | Proposed Action | |
| | Construction Limits | | 65 dBA Contour |
| | Cost-Effective Barrier | | 70 dBA Contour |
| | Barrier Not Cost-Effective | | Vibration Contour |
| | | | 65 dBA Contour |

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0 250 500 750 Feet

Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

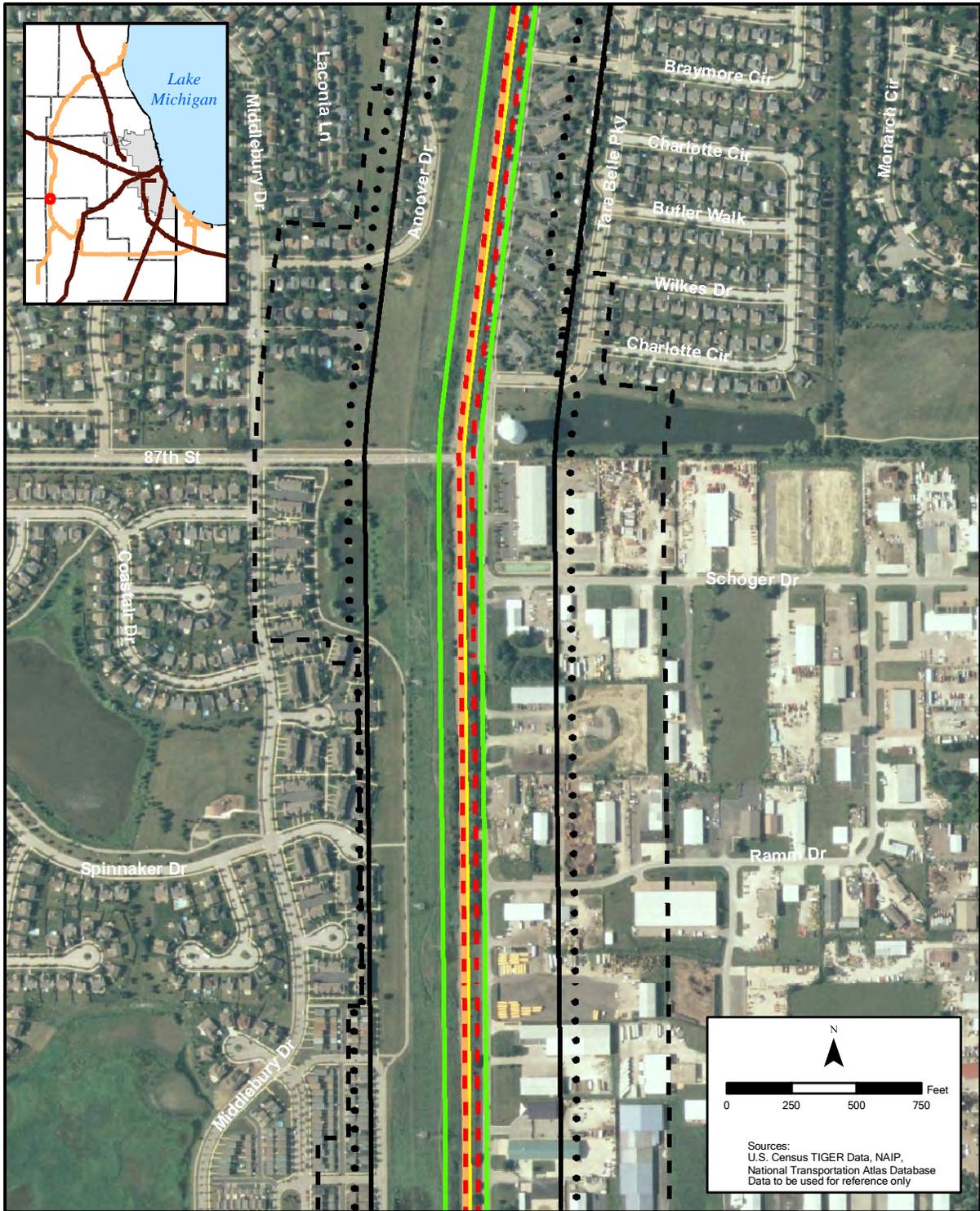
Figure L-1
Noise and Vibration
Contours



Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

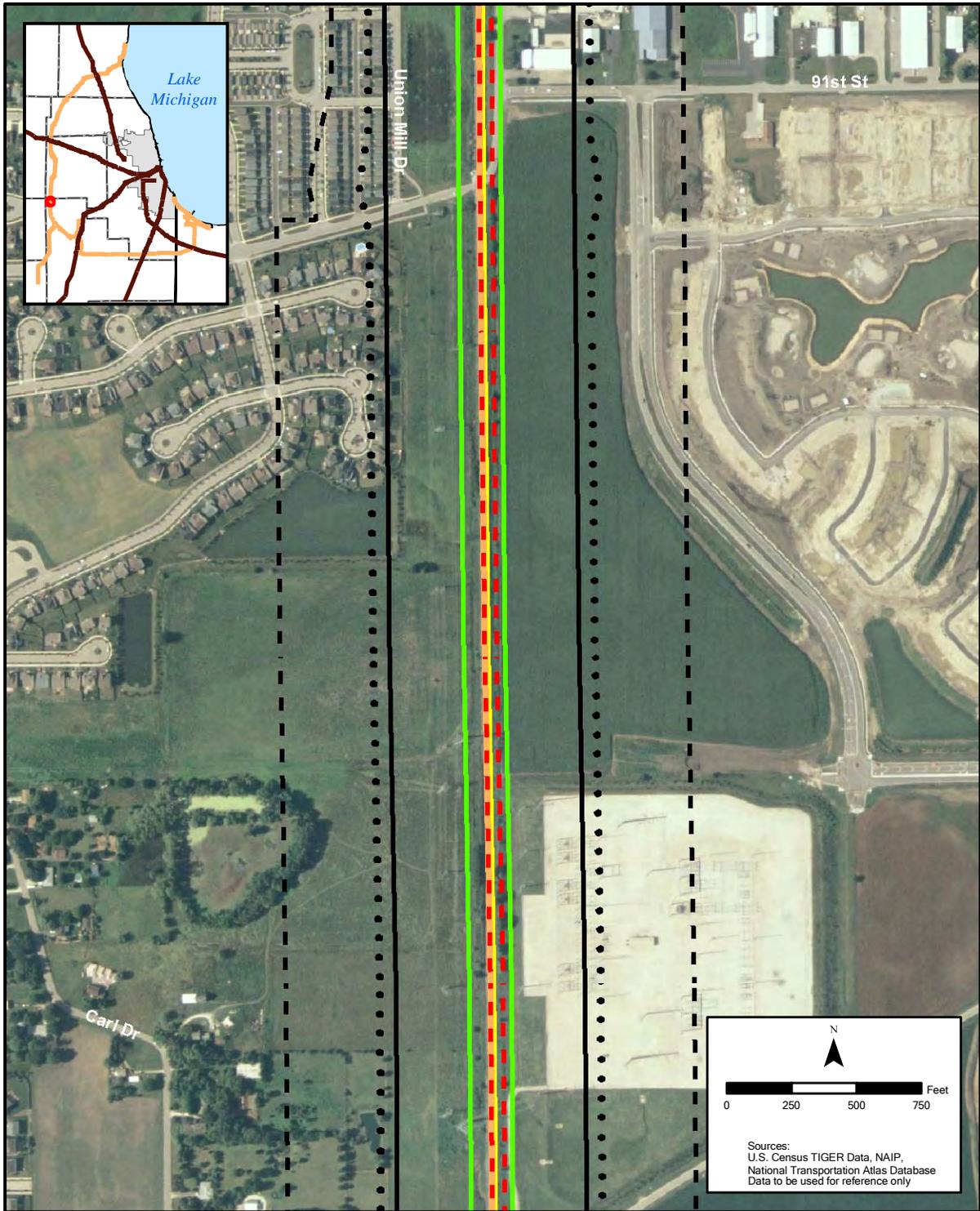
  GN EJ&E Environmental Impact Statement	 CN Rail Line  EJ&E Rail Line  Proposed Track  Construction Limits  Cost-Effective Barrier  Barrier Not Cost-Effective	Existing  65 dBA Contour Proposed Action  65 dBA Contour  70 dBA Contour  Vibration Contour
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Figure L-1
Noise and Vibration
Contours
 Sheet 51 of 139



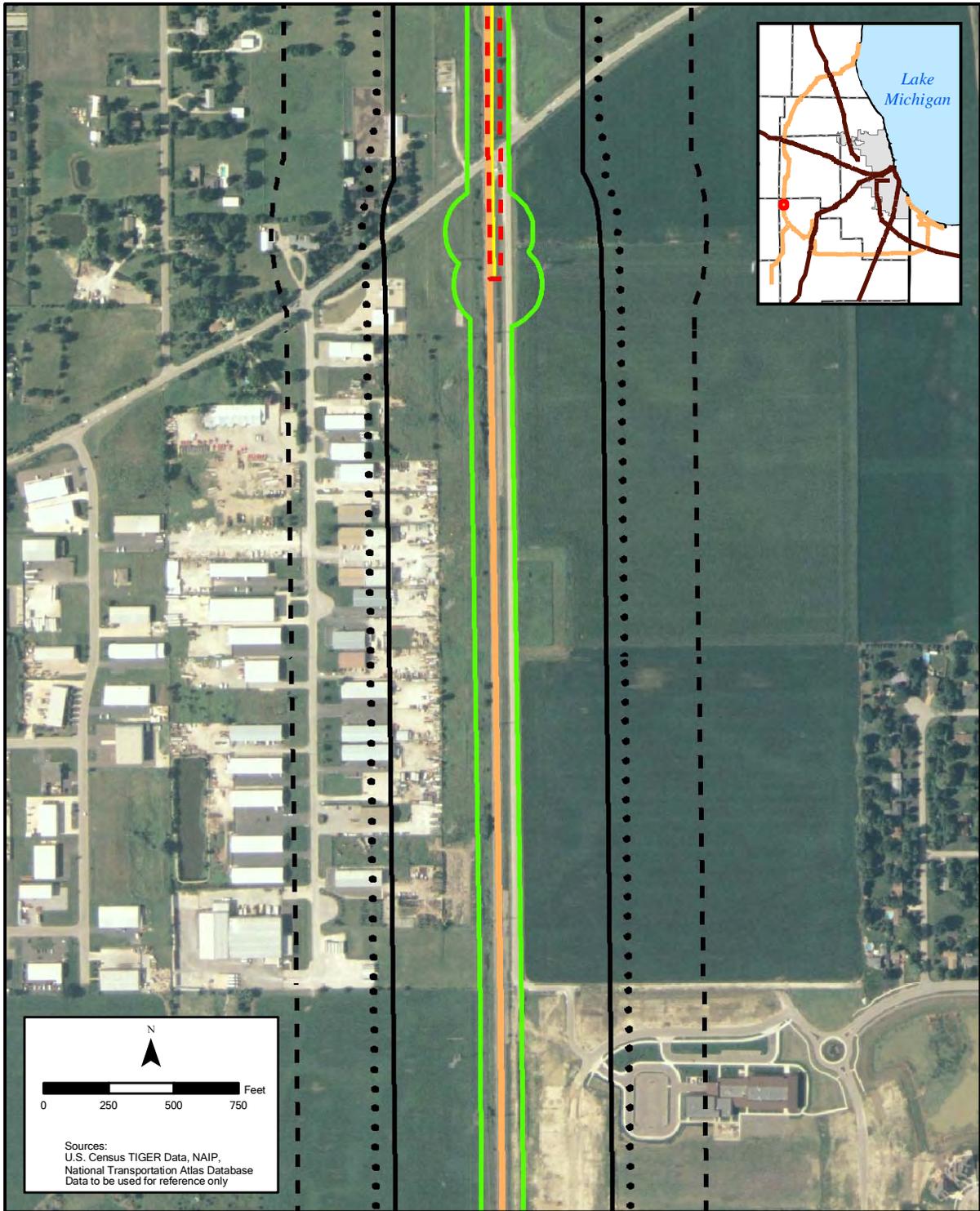
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|---|----------------------------|-------------------|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | Existing |
|  | Proposed Track | Existing |
|  | Construction Limits | Existing |
|  | Cost-Effective Barrier | Proposed Action |
|  | Barrier Not Cost-Effective | Proposed Action |
|  | | 65 dBA Contour |
|  | | 65 dBA Contour |
|  | | 70 dBA Contour |
|  | | Vibration Contour |

Figure L-1
Noise and Vibration
Contours
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- | | | |
|--|----------------------------|----------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — 65 dBA Contour |
| | Cost-Effective Barrier | — 70 dBA Contour |
| | Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
Noise and Vibration
Contours
 Sheet 53 of 139



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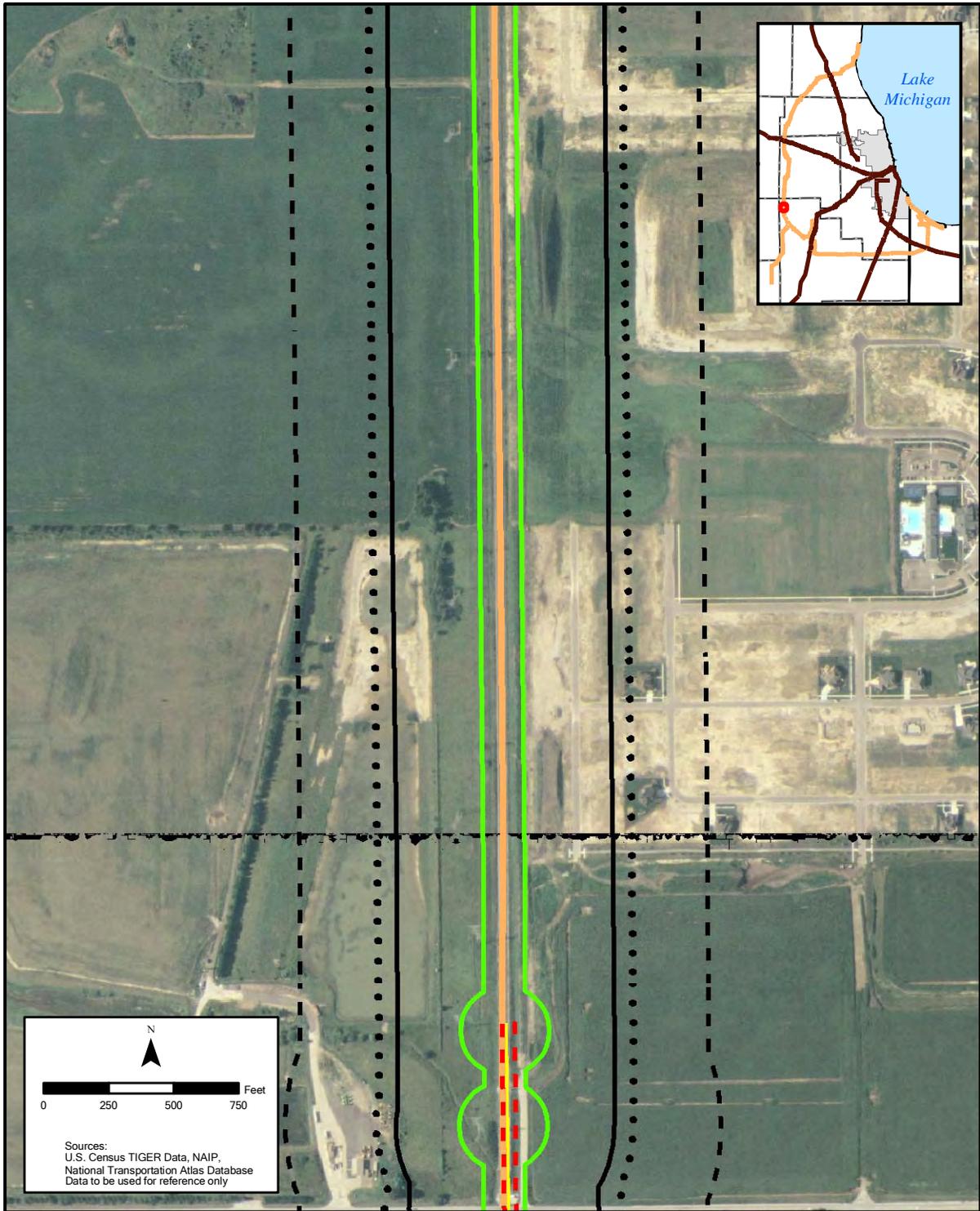
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|--|----------------------------|-----------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Proposed Action |
| | Construction Limits | Proposed Action |
| | Cost-Effective Barrier | Proposed Action |
| | Barrier Not Cost-Effective | Proposed Action |
| | 65 dBA Contour | Existing |
| | 65 dBA Contour | Proposed Action |
| | 70 dBA Contour | Proposed Action |
| | Vibration Contour | Proposed Action |

Figure L-1
 Noise and Vibration
 Contours
 Sheet 54 of 139



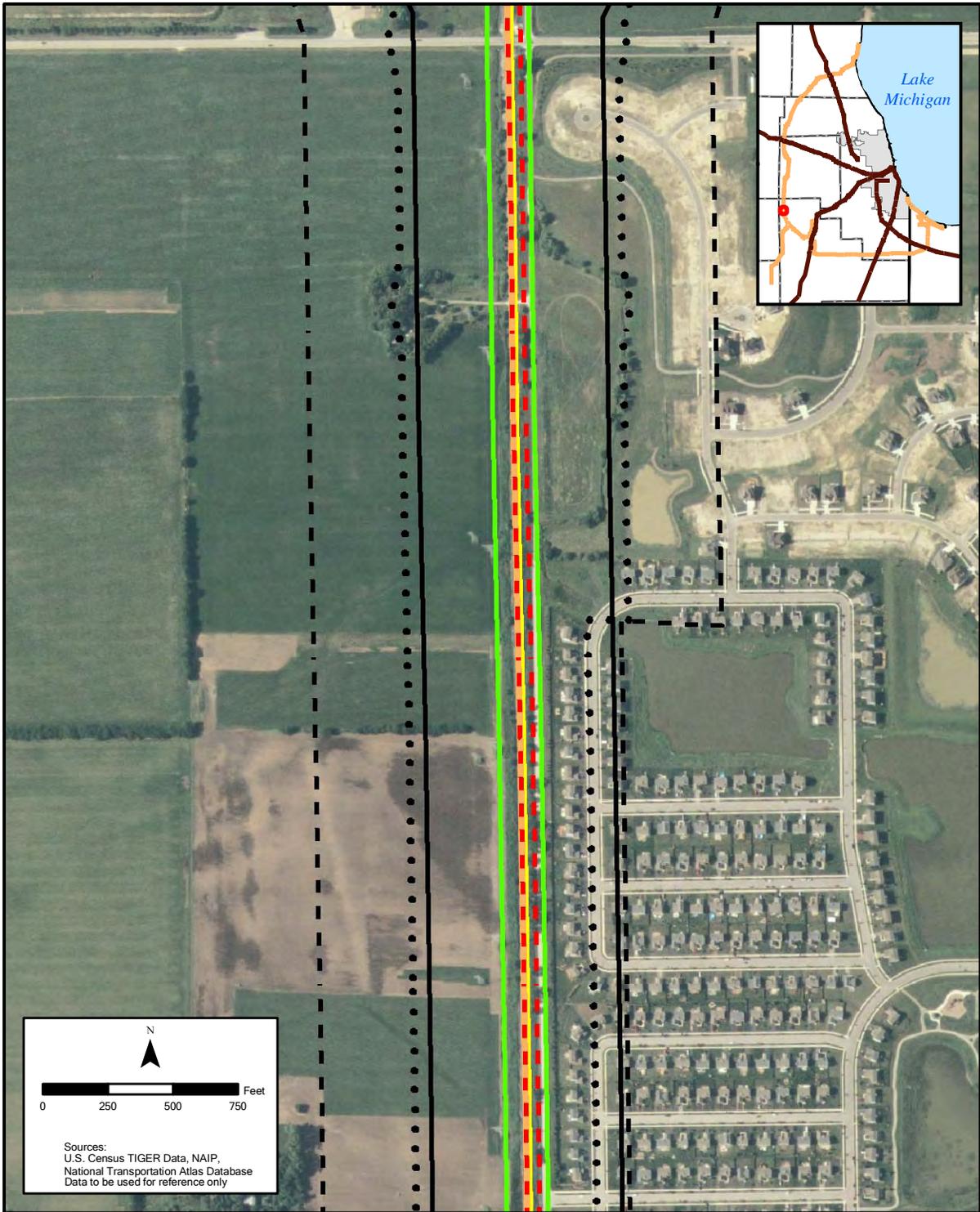

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 Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|---|----------------------------|-------------------------|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | — — — 65 dBA Contour |
|  | Cost-Effective Barrier | — — — 70 dBA Contour |
|  | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours

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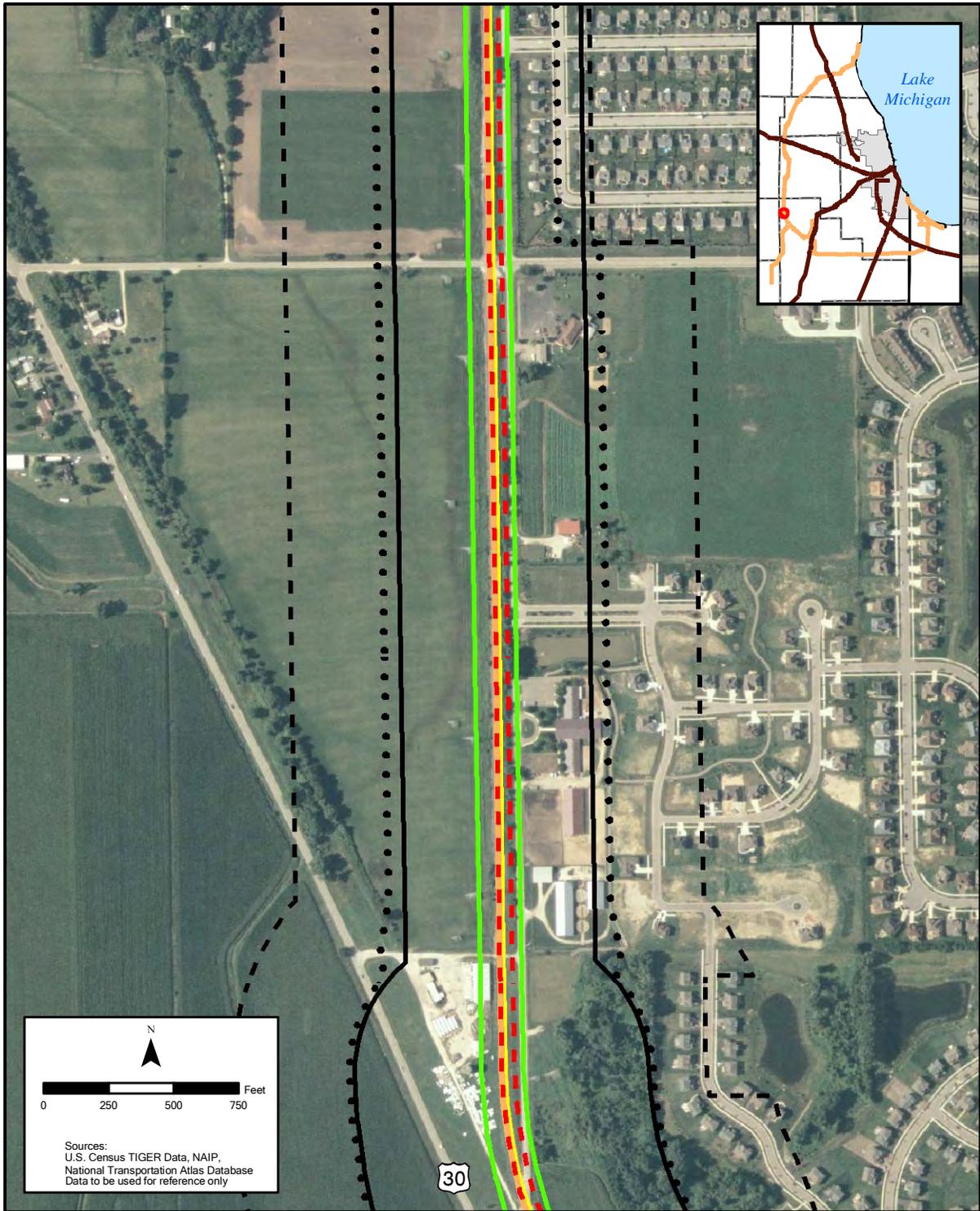
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|--|----------------------------|-----------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | |
| | Proposed Track | |
| | Construction Limits | |
| | Cost-Effective Barrier | |
| | Barrier Not Cost-Effective | |
| | 65 dBA Contour | Existing |
| | 65 dBA Contour | Proposed Action |
| | 70 dBA Contour | |
| | Vibration Contour | |

Figure L-1
 Noise and Vibration
 Contours



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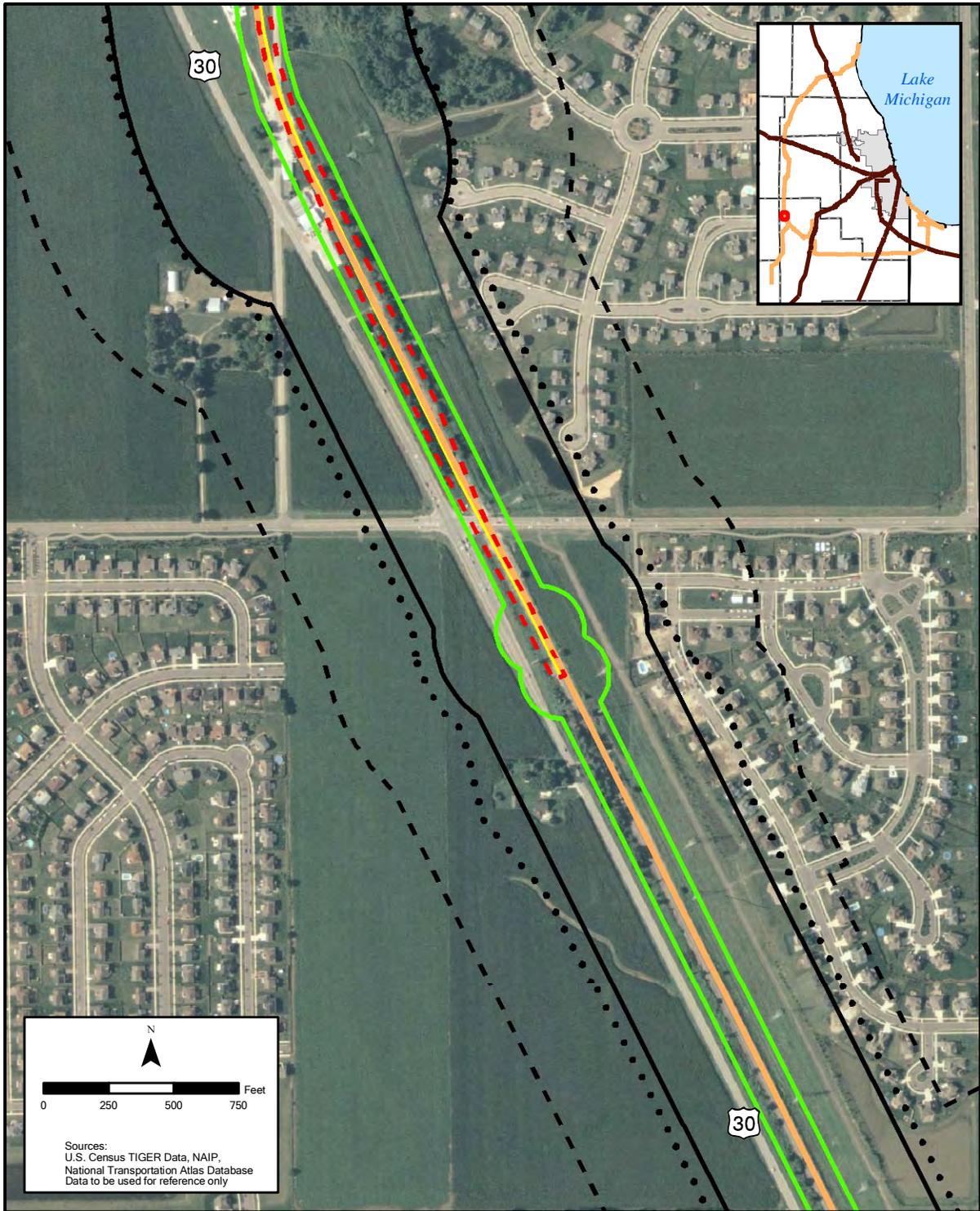
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|--|----------------------------|-----------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Proposed Action |
| | Construction Limits | Existing |
| | Cost-Effective Barrier | Proposed Action |
| | Barrier Not Cost-Effective | Proposed Action |
| | 65 dBA Contour | Existing |
| | 65 dBA Contour | Proposed Action |
| | 70 dBA Contour | Proposed Action |
| | Vibration Contour | Proposed Action |

Figure L-1
 Noise and Vibration
 Contours



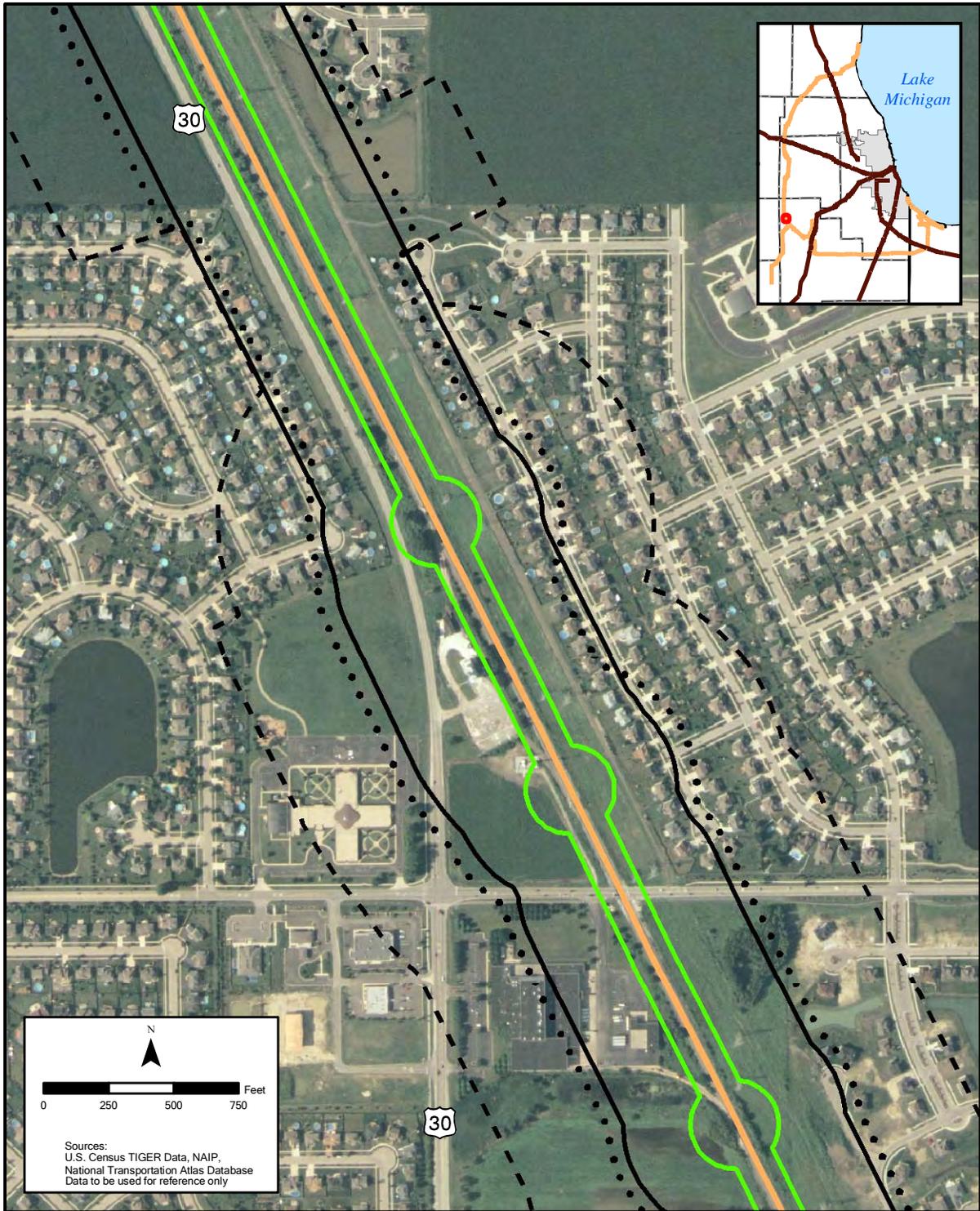
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|------------------------------|----------------------|
| — CN Rail Line | Existing |
| — EJ&E Rail Line | • • • 65 dBA Contour |
| — Proposed Track | Proposed Action |
| — Construction Limits | — 65 dBA Contour |
| — Cost-Effective Barrier | — 70 dBA Contour |
| — Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours

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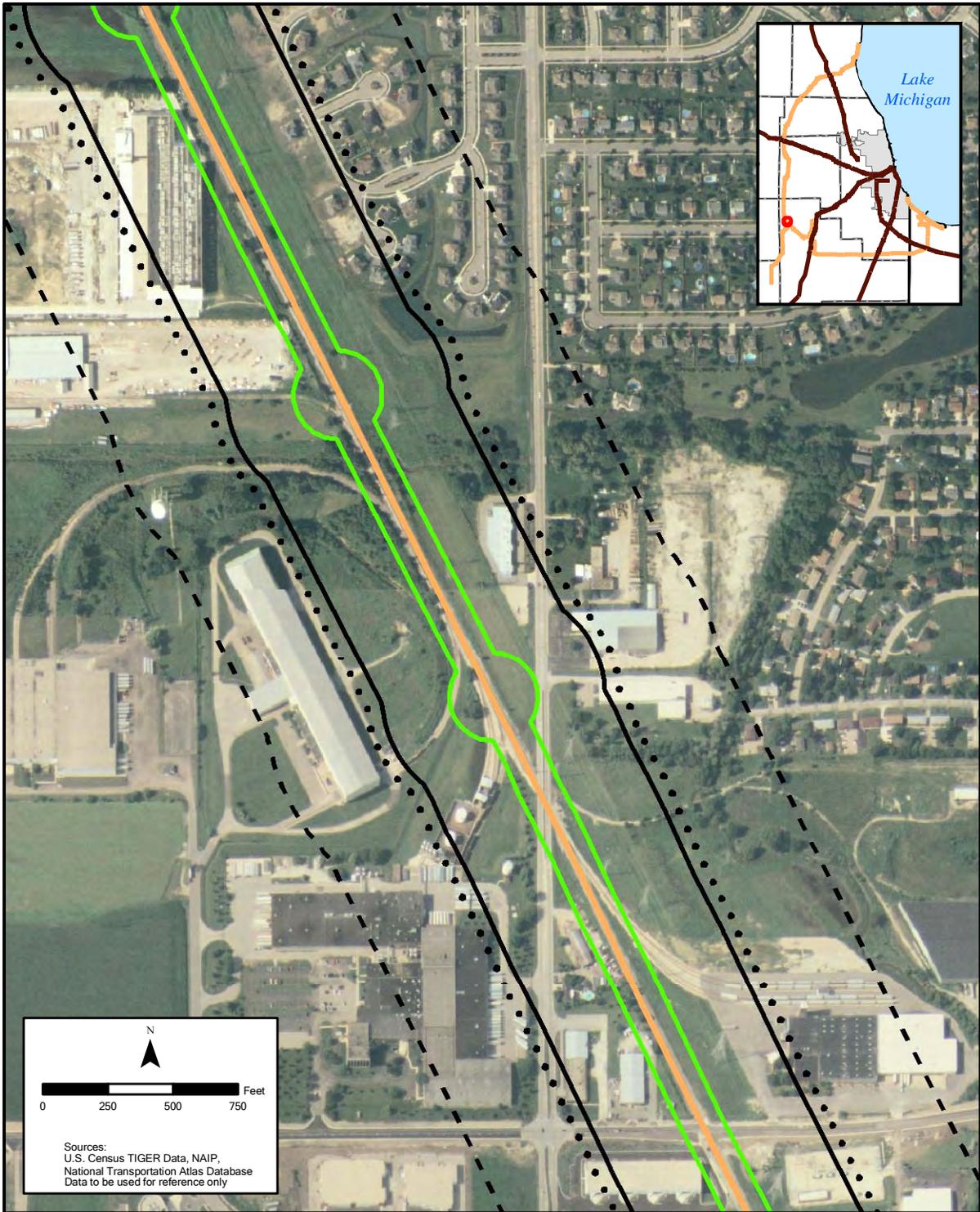



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 Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|---|----------------------------|---|-------------------|
|  | CN Rail Line | Existing | |
|  | EJ&E Rail Line | • • • 65 dBA Contour | |
|  | Proposed Track | Proposed Action | |
|  | Construction Limits | - - - 65 dBA Contour | |
|  | Cost-Effective Barrier | - - - 70 dBA Contour | |
|  | Barrier Not Cost-Effective |  | Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours



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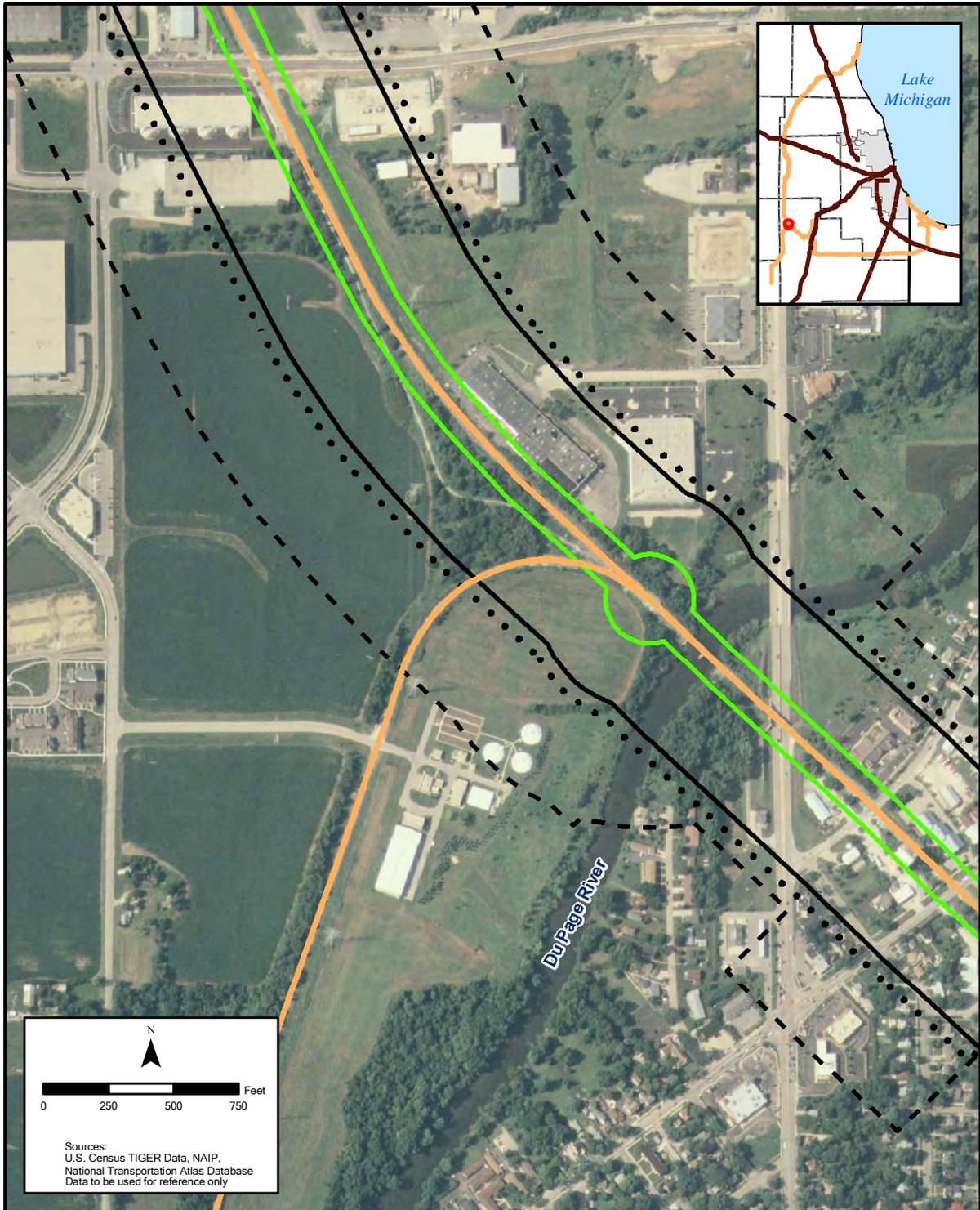
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Sources:
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 National Transportation Atlas Database
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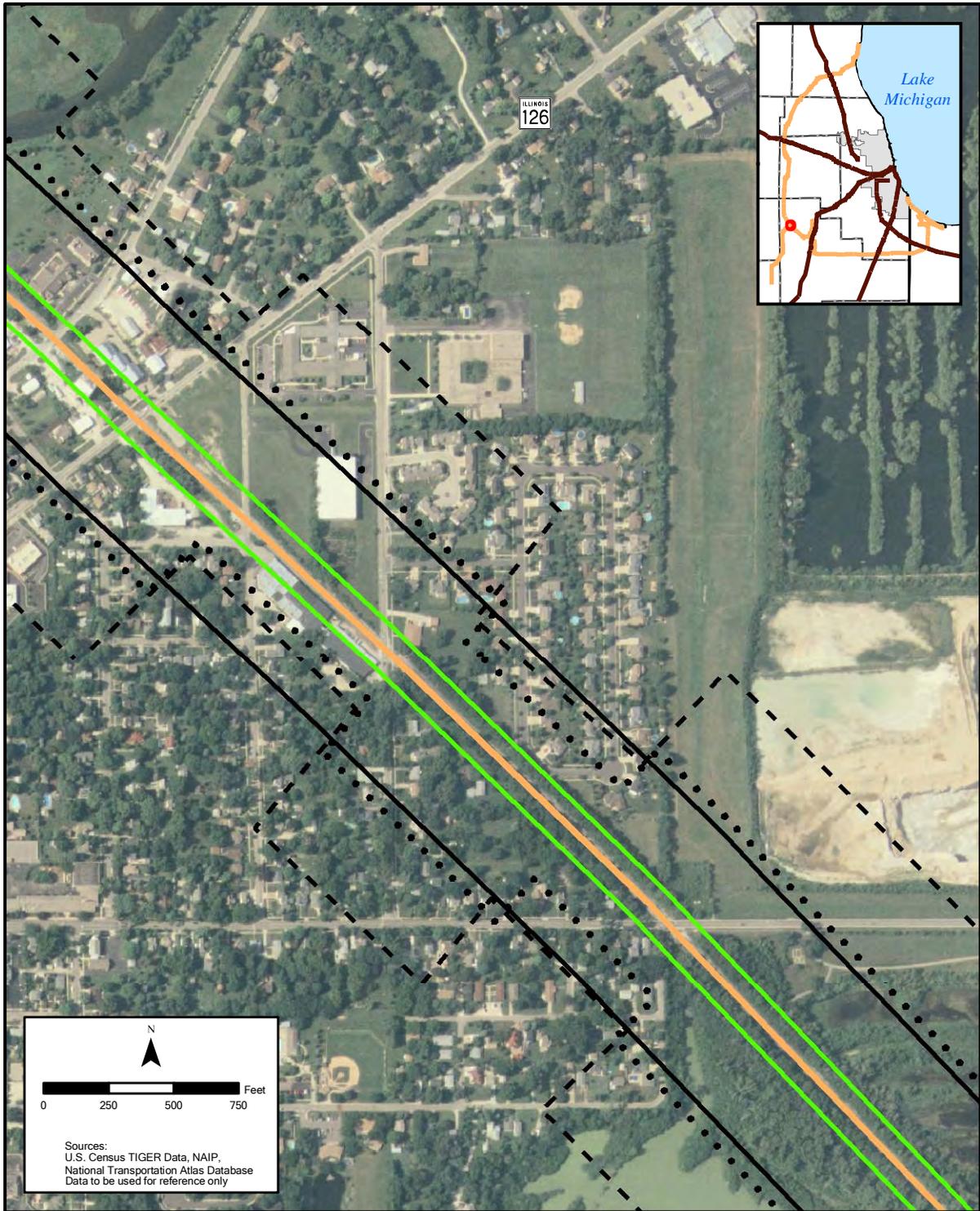
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|--|----------------------------|----------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | |
| | Proposed Track | |
| | Construction Limits | |
| | Cost-Effective Barrier | |
| | Barrier Not Cost-Effective | |
| | | • • • 65 dBA Contour |
| | | --- 65 dBA Contour |
| | | — 70 dBA Contour |
| | | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours



	CN Rail Line	Existing	
	EJ&E Rail Line	• • • 65 dBA Contour	
	Proposed Track	Proposed Action	
	Construction Limits	- - - 65 dBA Contour	
	Cost-Effective Barrier	- - - 70 dBA Contour	
	Barrier Not Cost-Effective		Vibration Contour

Figure L-1
 Noise and Vibration
 Contours
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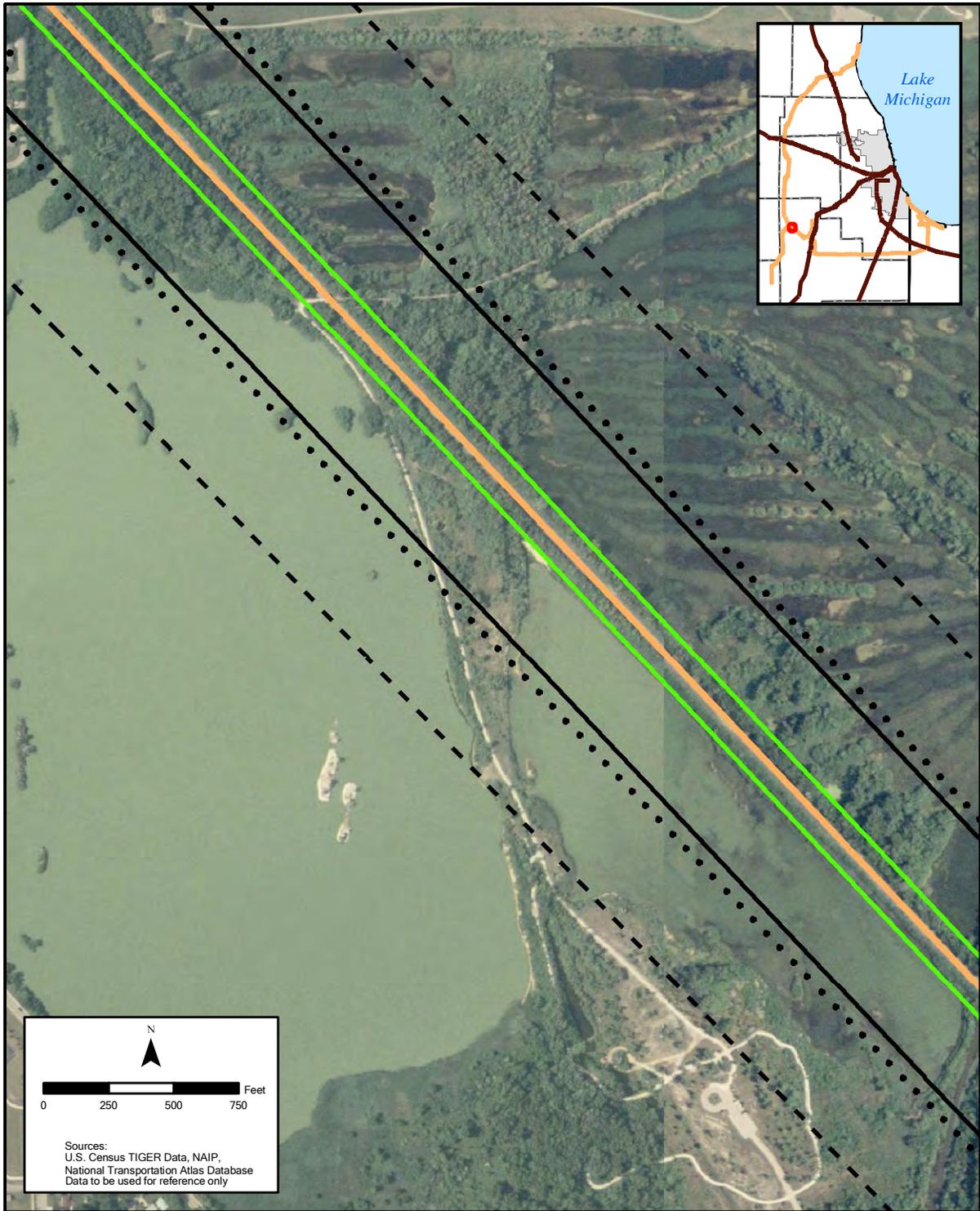

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 0 250 500 750
 Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|---|----------------------------|-------------------------|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | — — — 65 dBA Contour |
|  | Cost-Effective Barrier | — — — 70 dBA Contour |
|  | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
Noise and Vibration
Contours

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0 250 500 750 Feet

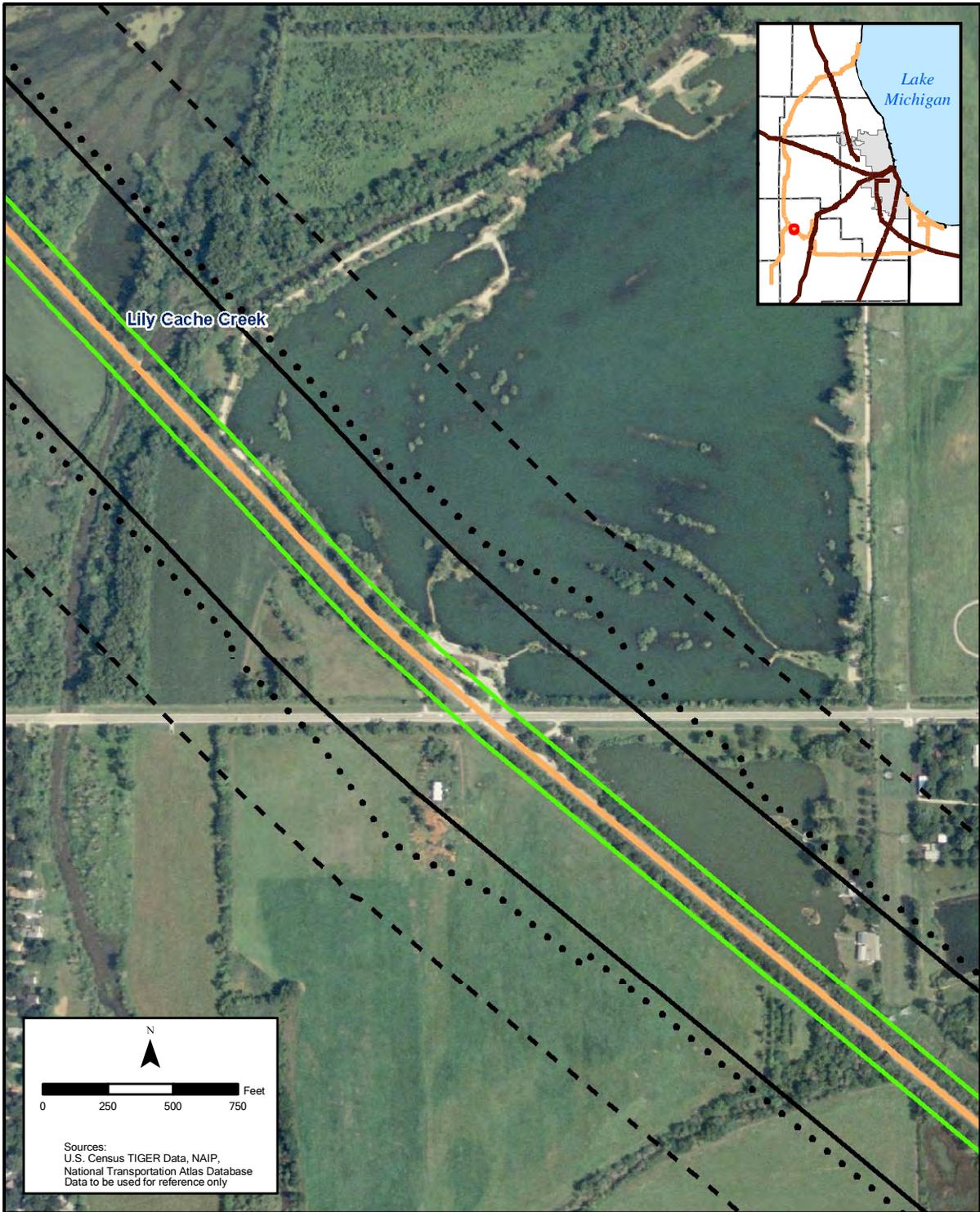
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



- | | |
|----------------------------|-------------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | • • • 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | — — — 65 dBA Contour |
| Cost-Effective Barrier | — — — 70 dBA Contour |
| Barrier Not Cost-Effective | — — — Vibration Contour |

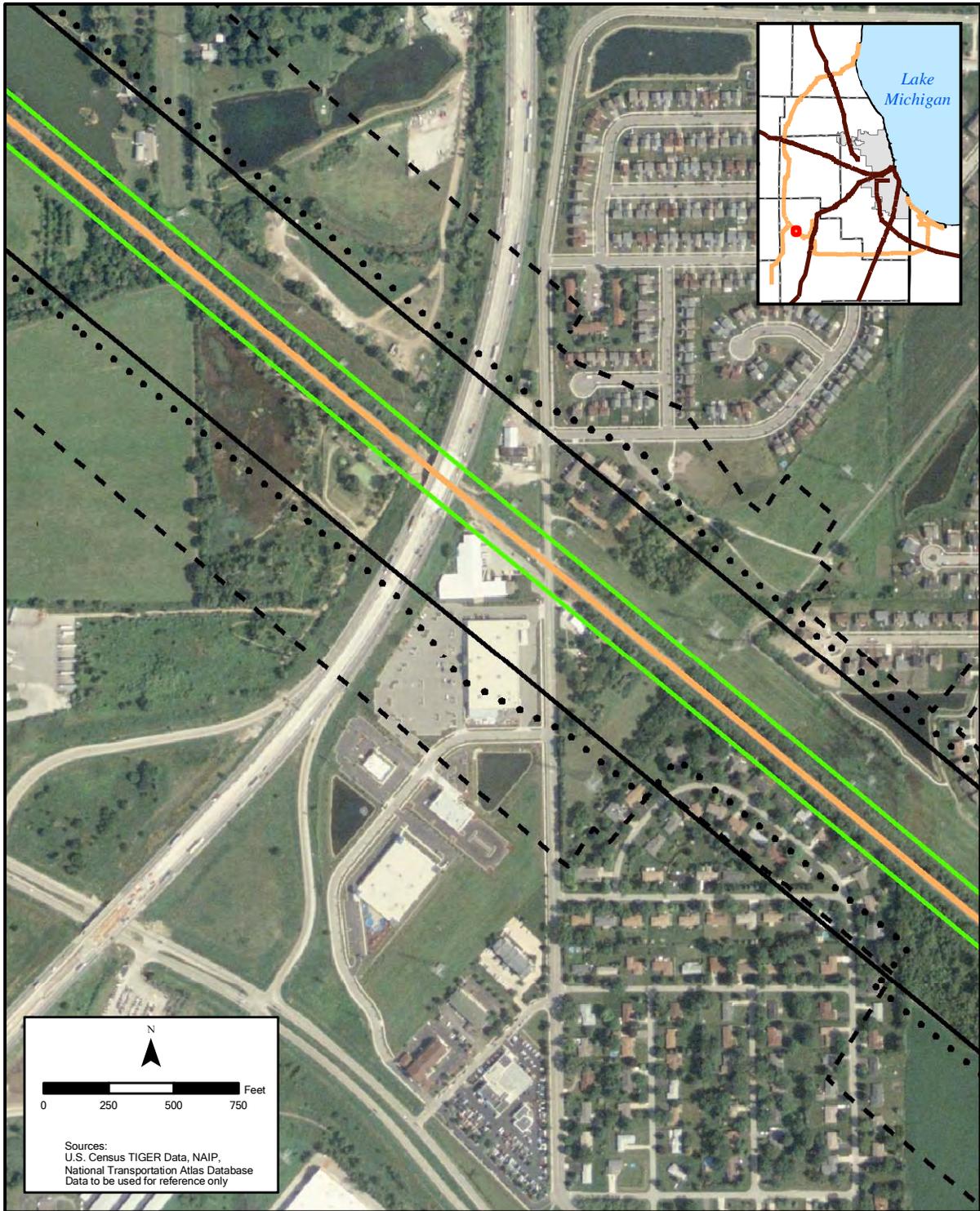
Figure L-1
 Noise and Vibration
 Contours

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- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
- Existing
 - 65 dBA Contour
 - Proposed Action
 - 65 dBA Contour
 - 70 dBA Contour
 - Vibration Contour

Figure L-1
Noise and Vibration
Contours
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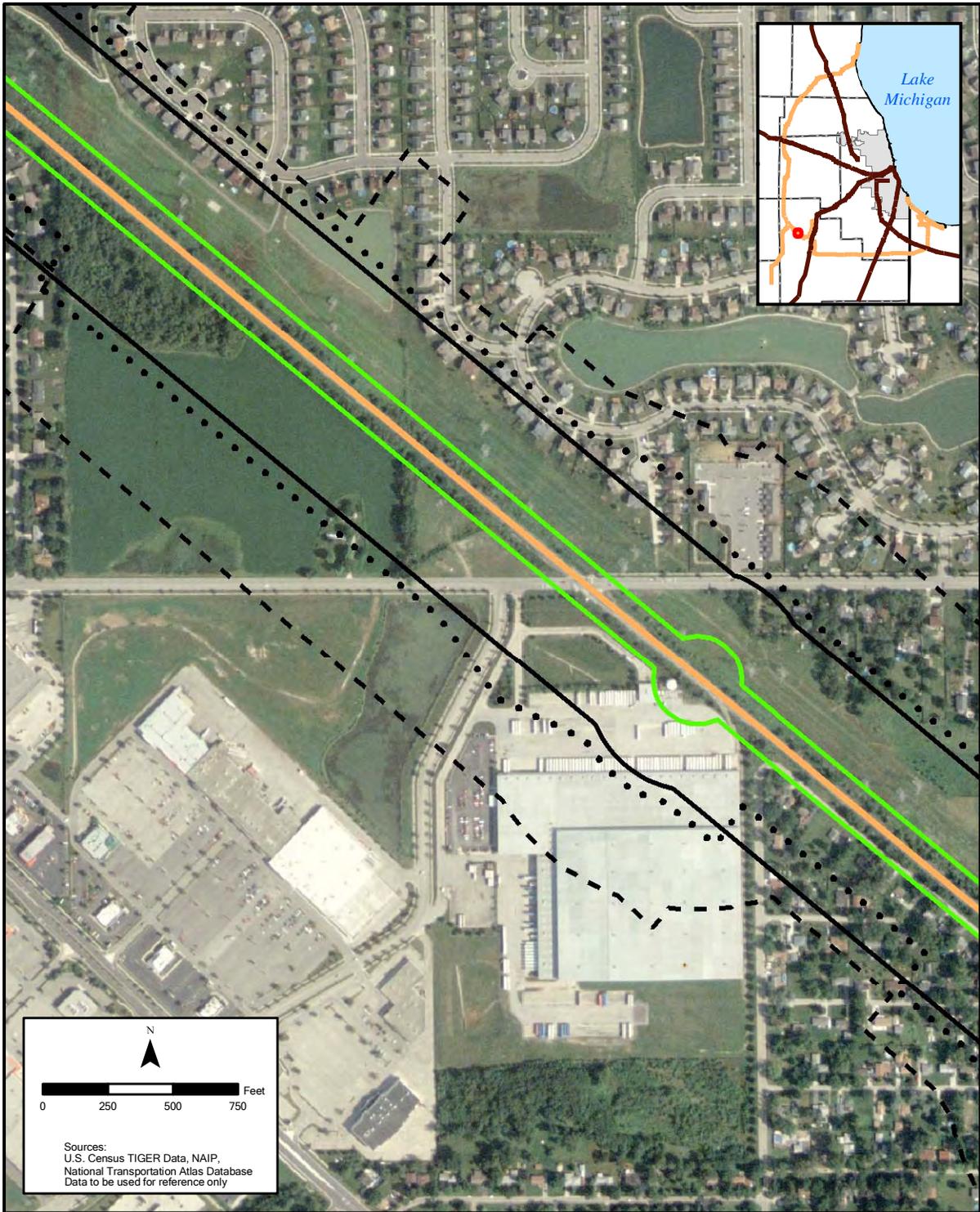
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|---|---|
| <ul style="list-style-type: none"> CN Rail Line EJ&E Rail Line Proposed Track Construction Limits Cost-Effective Barrier Barrier Not Cost-Effective | <p>Existing</p> <ul style="list-style-type: none"> 65 dBA Contour <p>Proposed Action</p> <ul style="list-style-type: none"> 65 dBA Contour 70 dBA Contour Vibration Contour |
|---|---|

Figure L-1
 Noise and Vibration
 Contours



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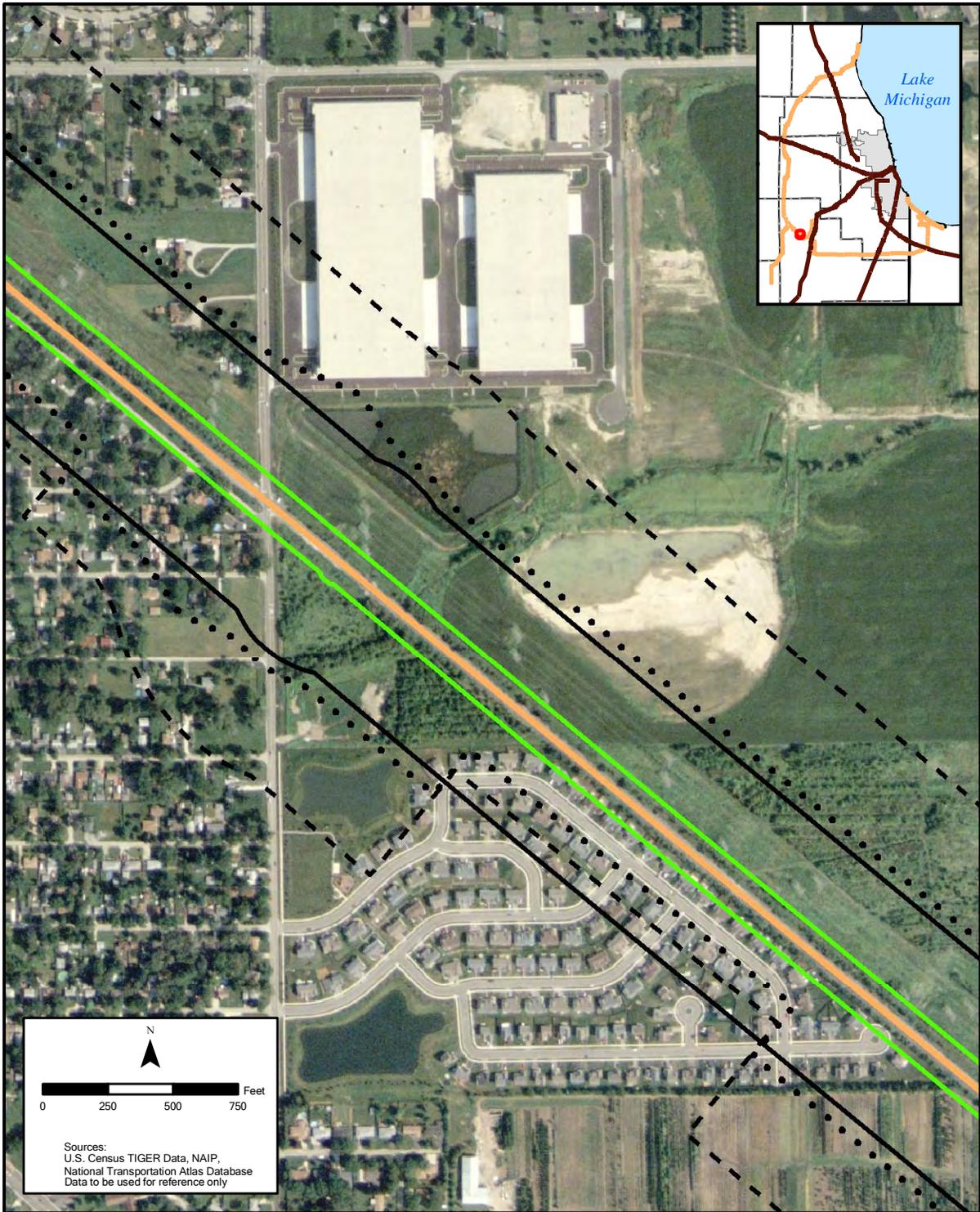
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



- | | | |
|--|----------------------------|----------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | --- 65 dBA Contour |
| | Cost-Effective Barrier | --- 70 dBA Contour |
| | Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours



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0 250 500 750 Feet

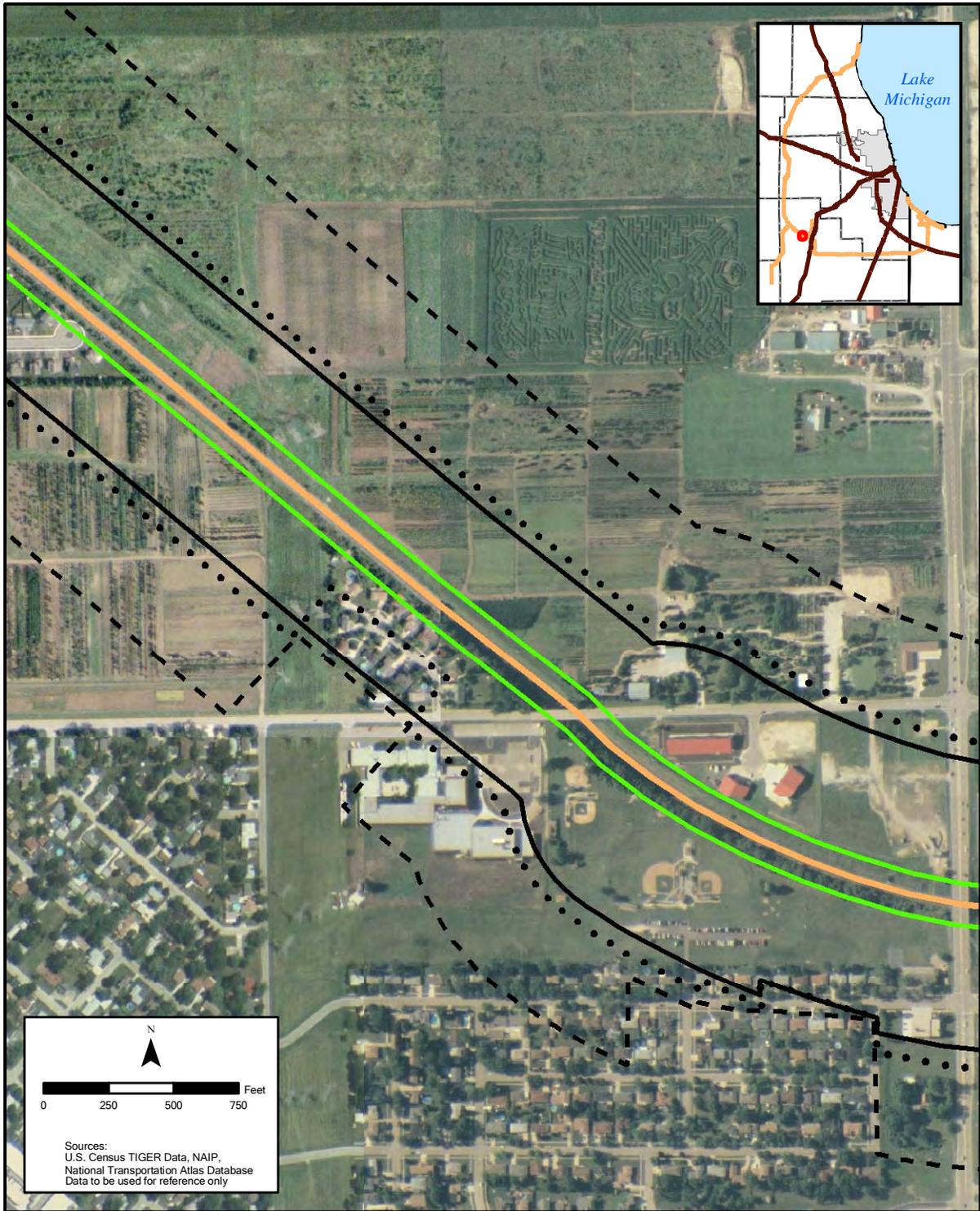
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | - - - 65 dBA Contour |
| | Cost-Effective Barrier | - - - 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours

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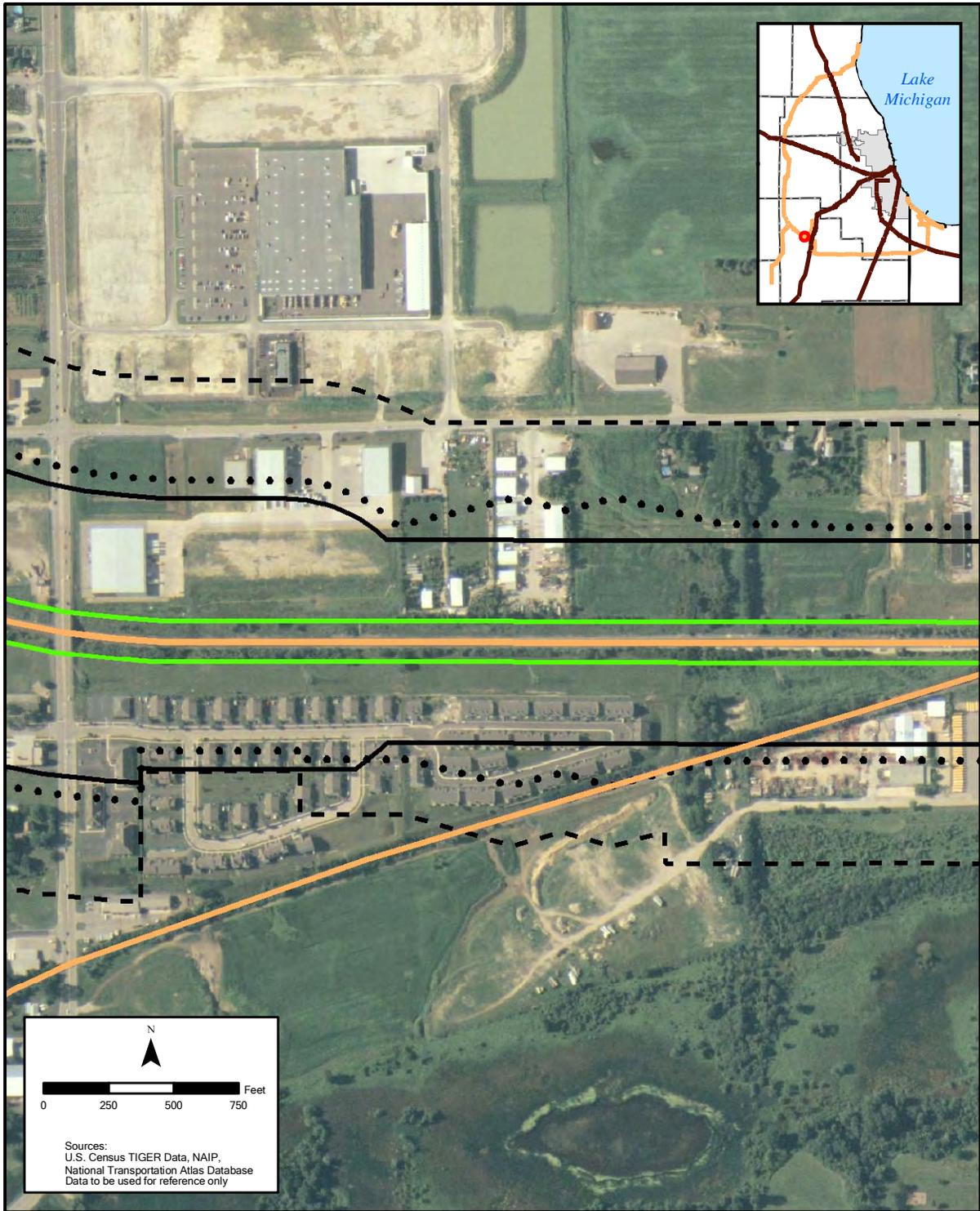


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 0 250 500 750 Feet
 Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



- | | | |
|--|----------------------------|----------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | - - - 65 dBA Contour |
| | Cost-Effective Barrier | - - - 70 dBA Contour |
| | Barrier Not Cost-Effective | |
| | | Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours
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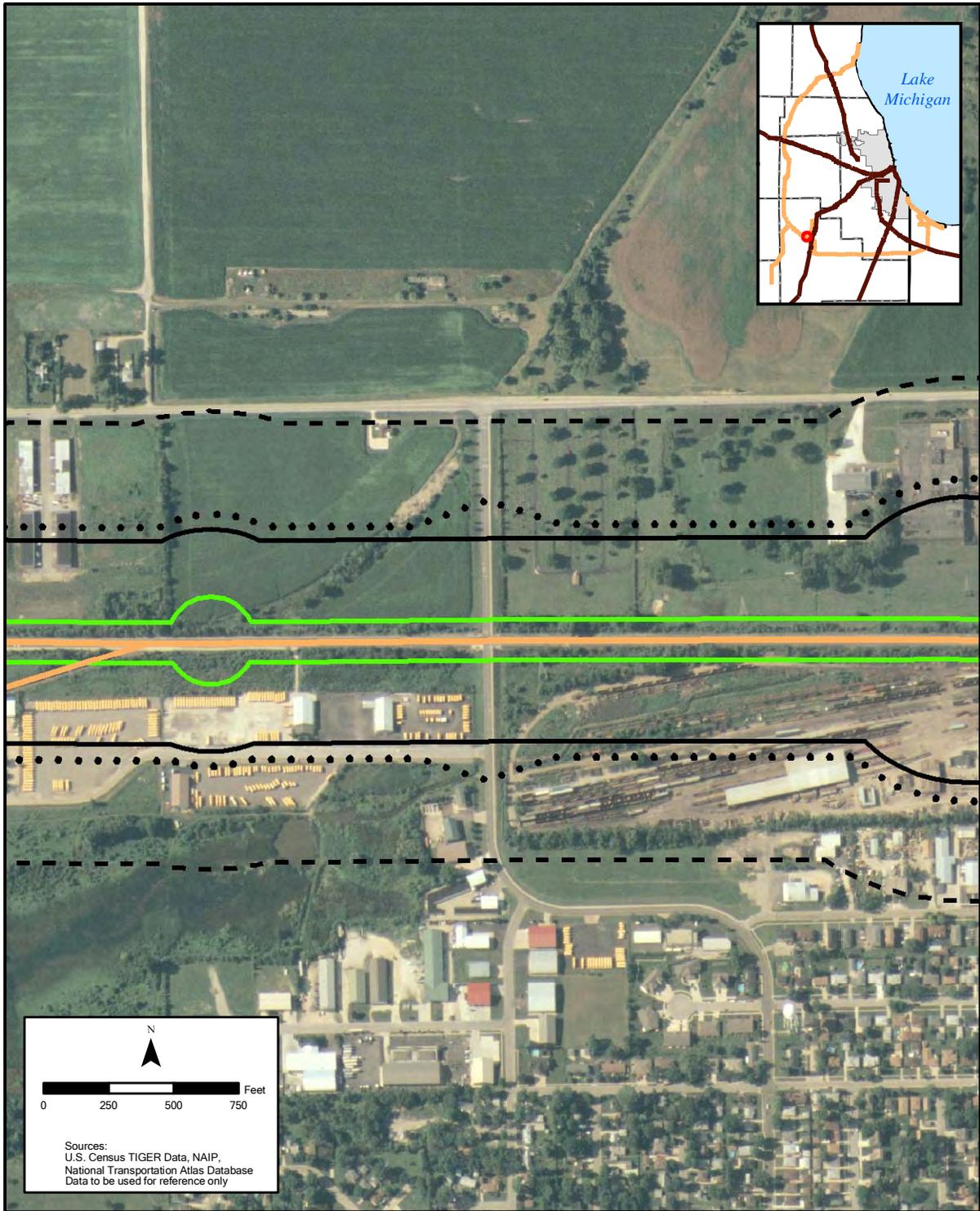


Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | - - - 65 dBA Contour |
| | Cost-Effective Barrier | - - - 70 dBA Contour |
| | Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours



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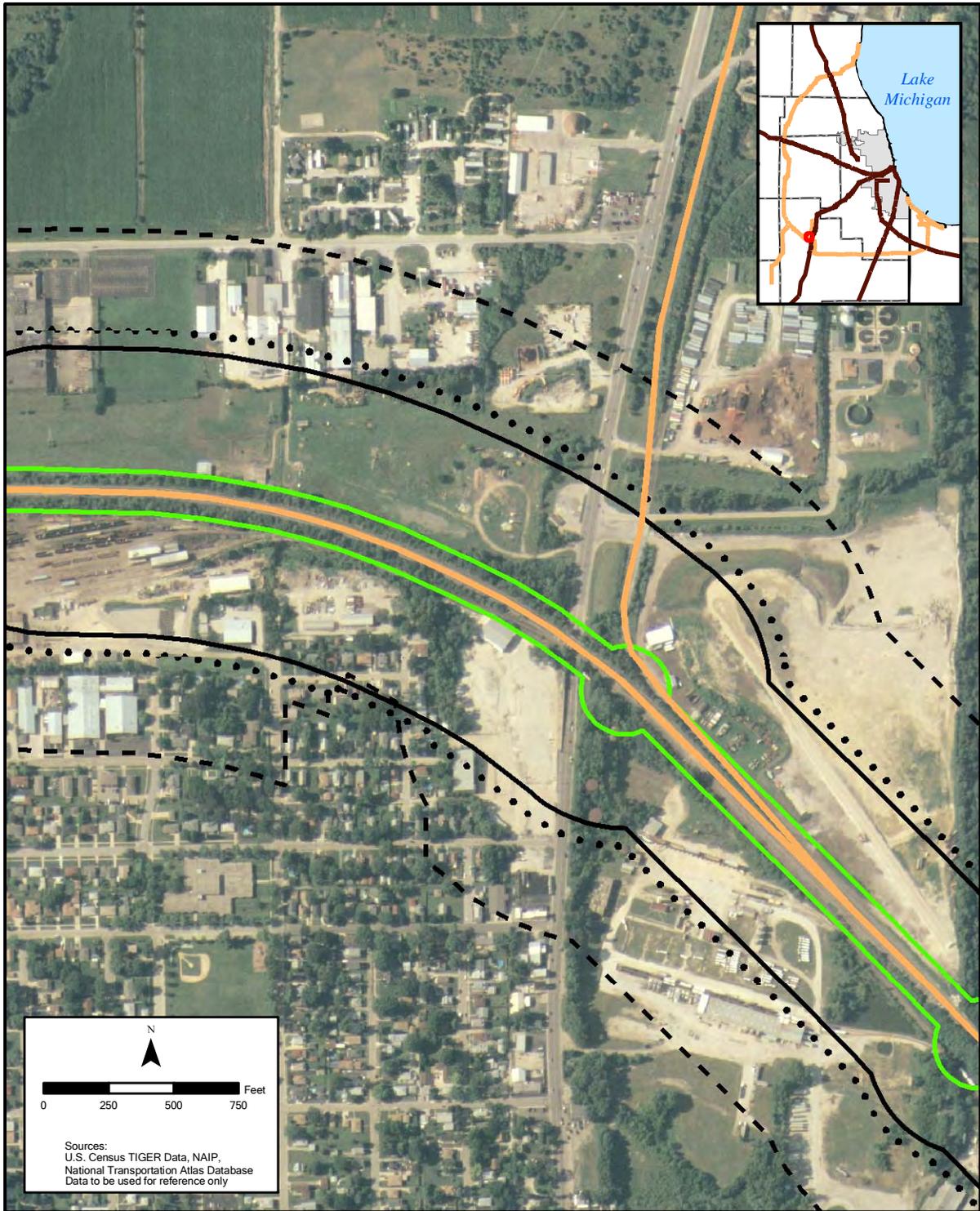
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours



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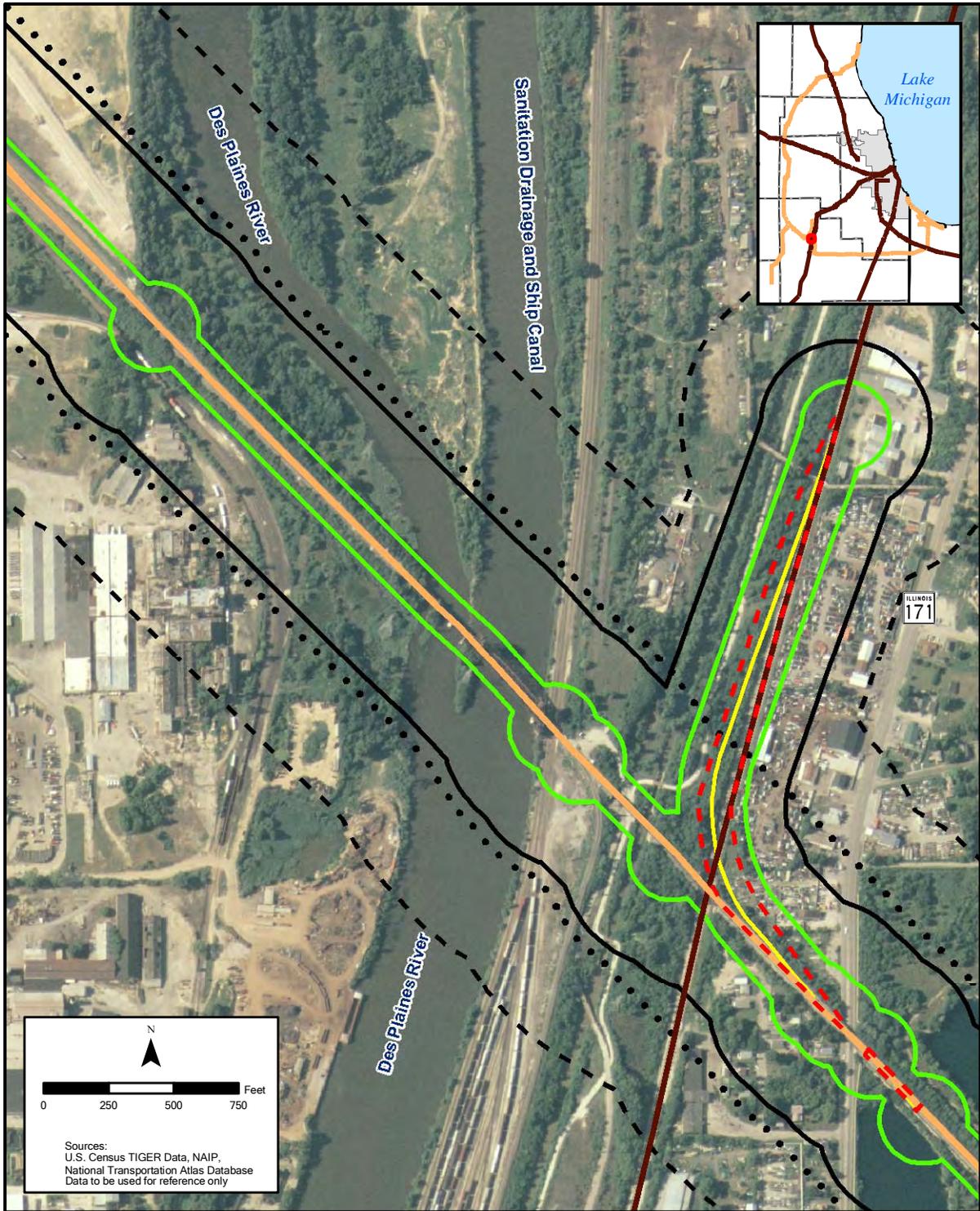
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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Figure L-1
 Noise and Vibration
 Contours

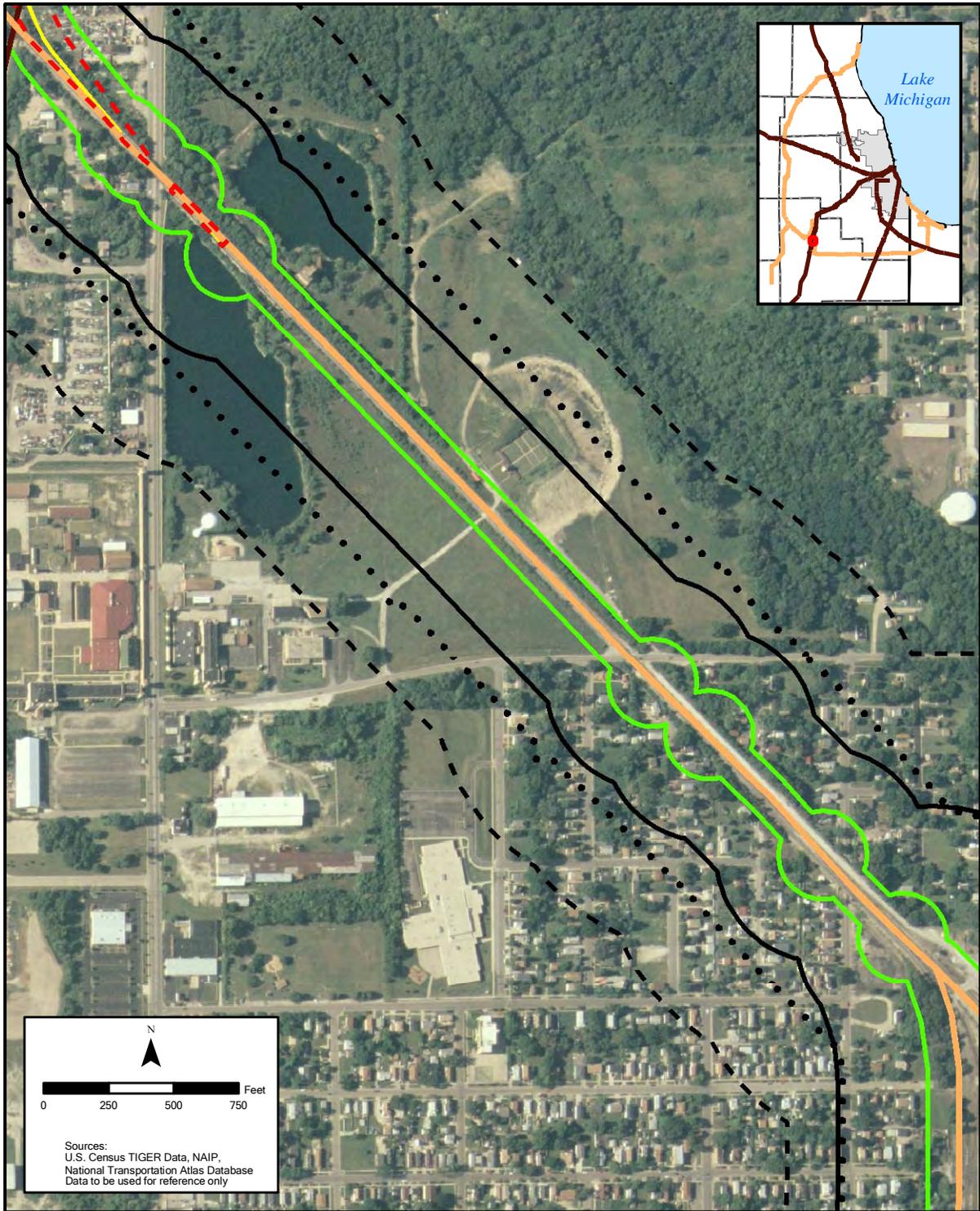


Environmental Impact Statement

- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - - - 65 dBA Contour
 - - - 70 dBA Contour
 - Vibration Contour

Figure L-1
Noise and Vibration
Contours

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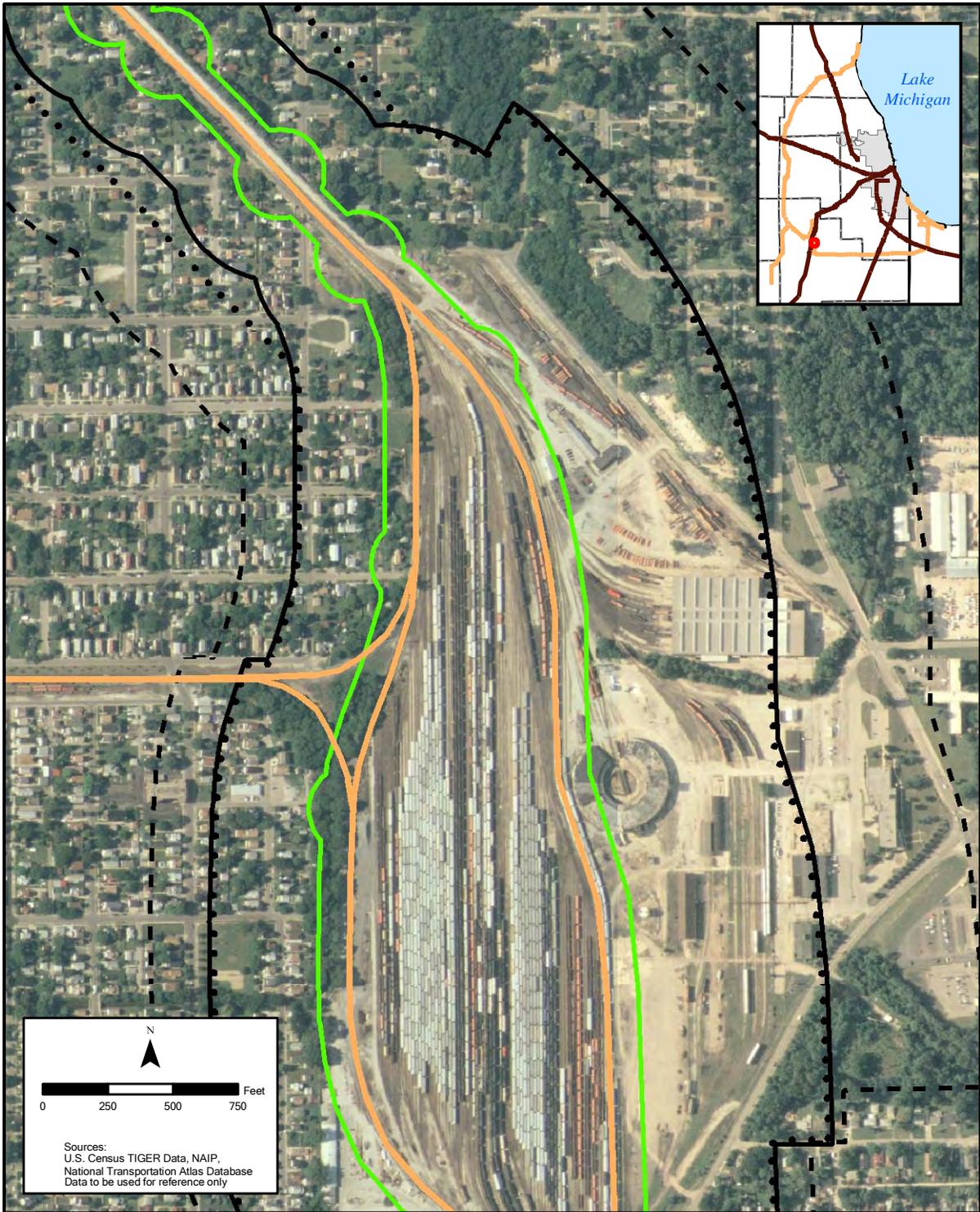
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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| — CN Rail Line | Existing |
| — EJ&E Rail Line | • • • 65 dBA Contour |
| — Proposed Track | Proposed Action |
| - - - Construction Limits | — 65 dBA Contour |
| — Cost-Effective Barrier | — 70 dBA Contour |
| — Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours

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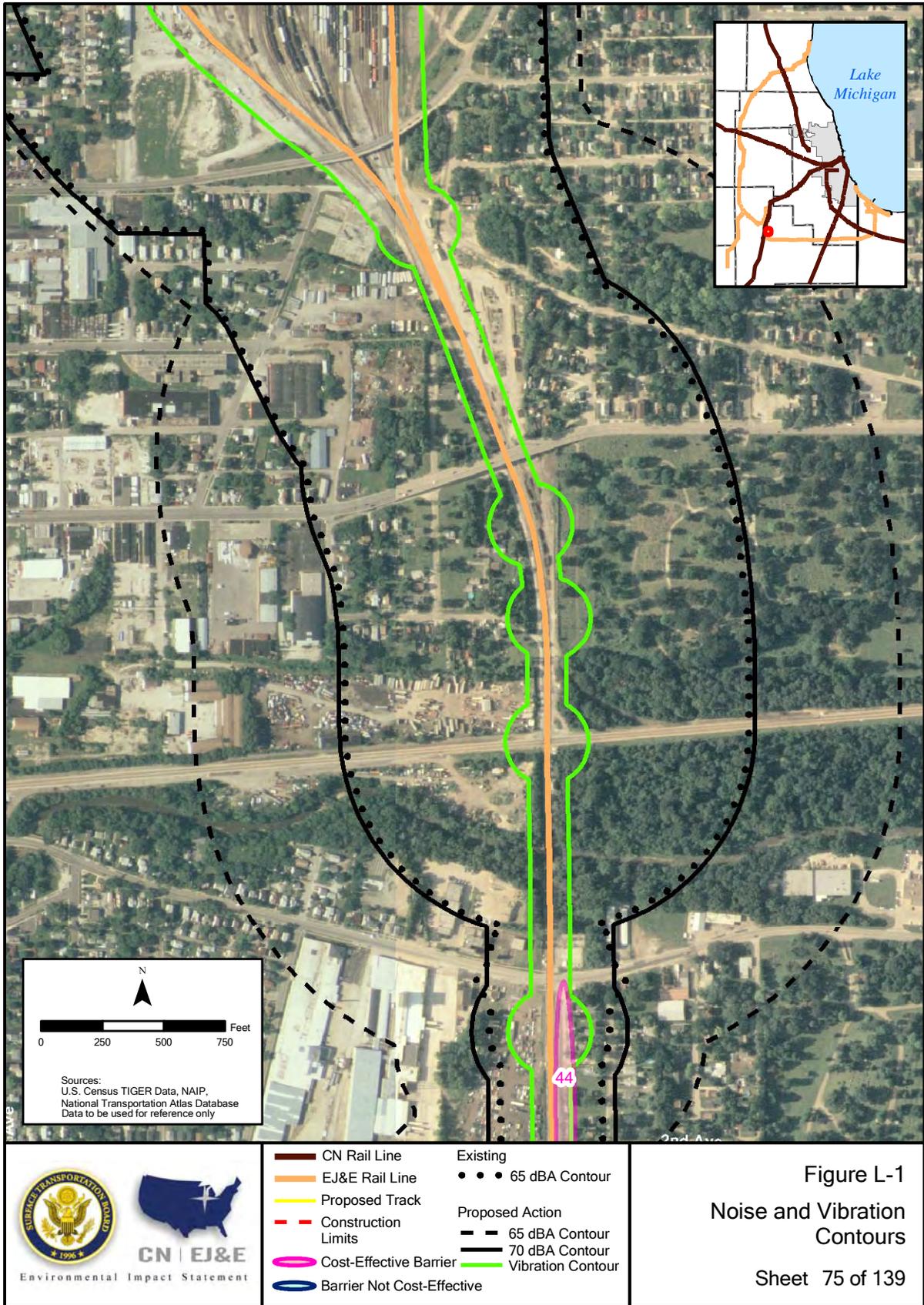
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 U.S. Census TIGER Data, NAIP,
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 Data to be used for reference only

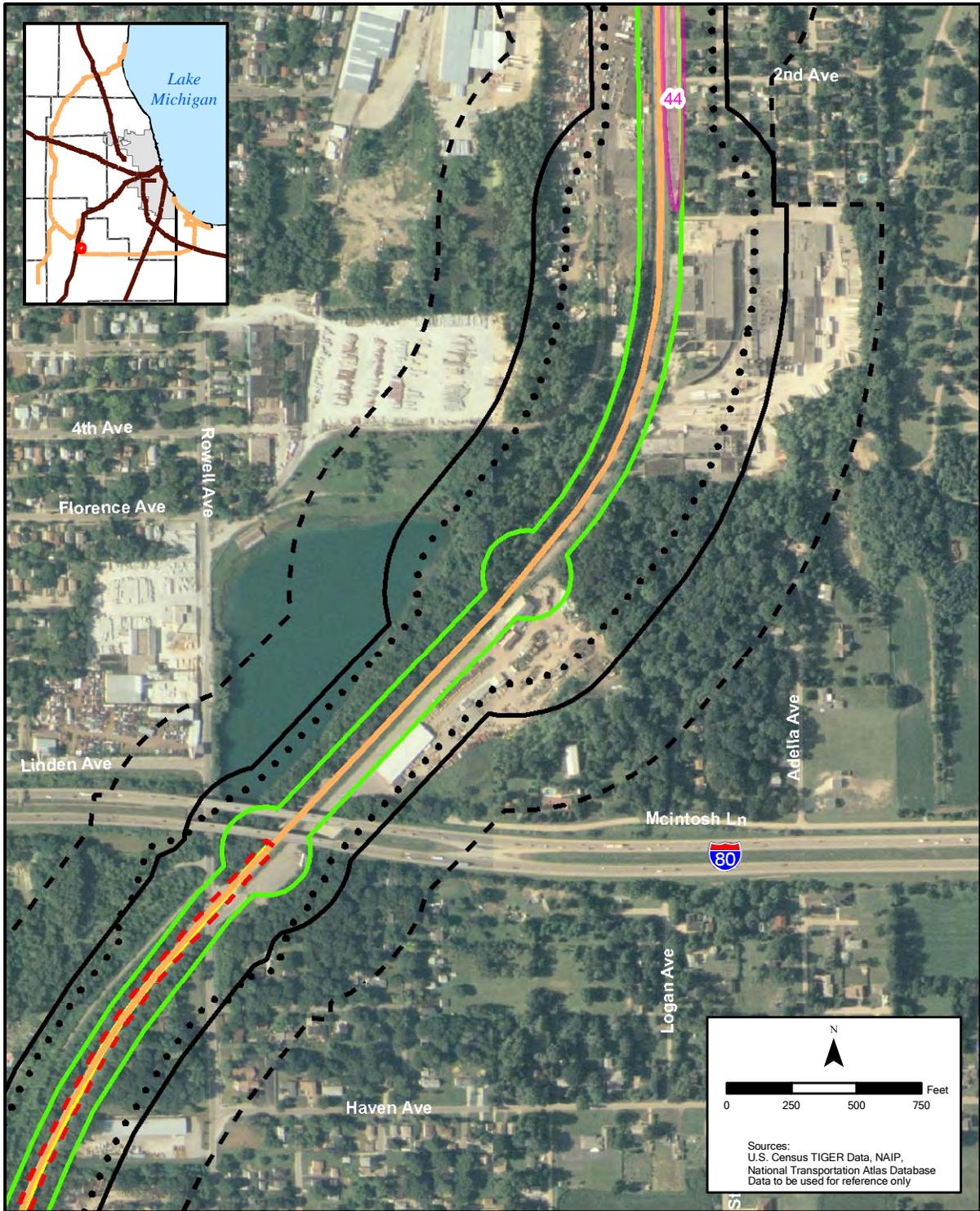


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| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours

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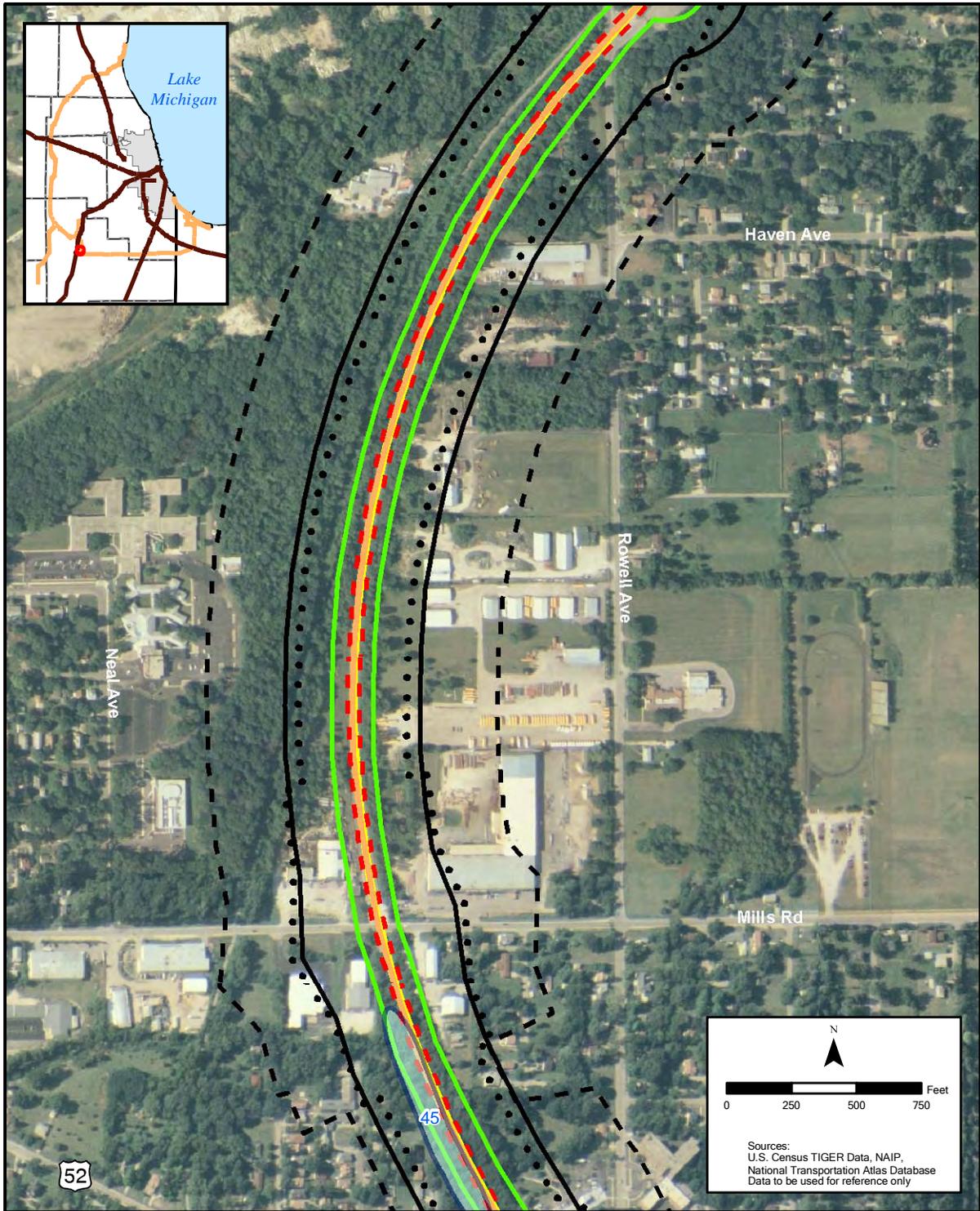




Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

  GN EJ&E Environmental Impact Statement	— CN Rail Line — EJ&E Rail Line — Proposed Track - - Construction Limits  Cost-Effective Barrier  Barrier Not Cost-Effective	Existing • • • 65 dBA Contour Proposed Action - - 65 dBA Contour - - 70 dBA Contour — Vibration Contour
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Figure L-1
 Noise and Vibration
 Contours
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Environmental Impact Statement

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|--|----------------------------|----------------------|-------------------|
| | CN Rail Line | Existing | |
| | EJ&E Rail Line | • • • 65 dBA Contour | |
| | Proposed Track | Proposed Action | |
| | Construction Limits | - - - 65 dBA Contour | |
| | Cost-Effective Barrier | - - - 70 dBA Contour | |
| | Barrier Not Cost-Effective | | Vibration Contour |

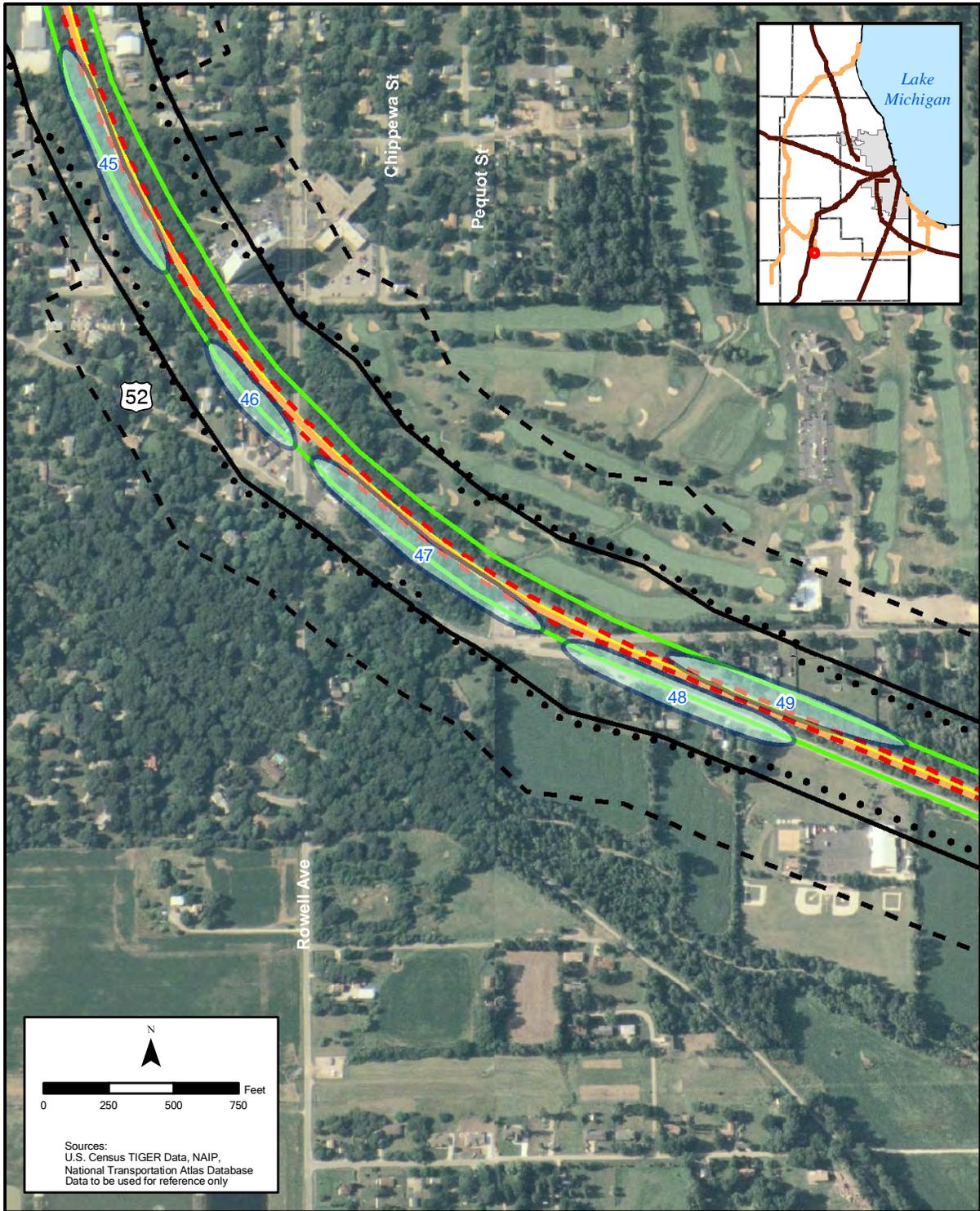
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Sources:
U.S. Census TIGER Data, NAIP,
National Transportation Atlas Database
Data to be used for reference only

Figure L-1
Noise and Vibration
Contours

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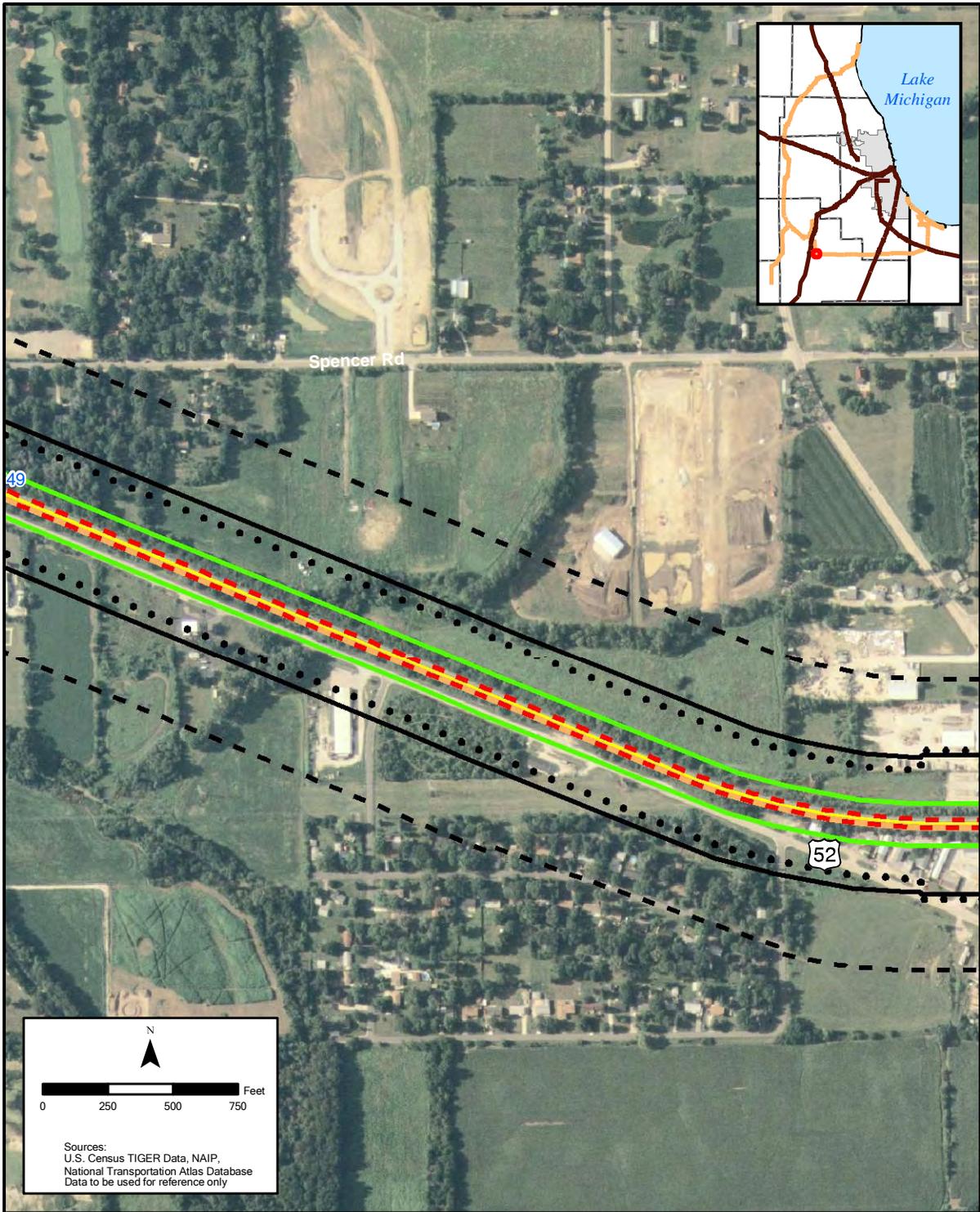
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Sources:
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 Data to be used for reference only



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| CN Rail Line | Existing |
| EJ&E Rail Line | 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | 65 dBA Contour |
| Cost-Effective Barrier | 70 dBA Contour |
| Barrier Not Cost-Effective | Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours



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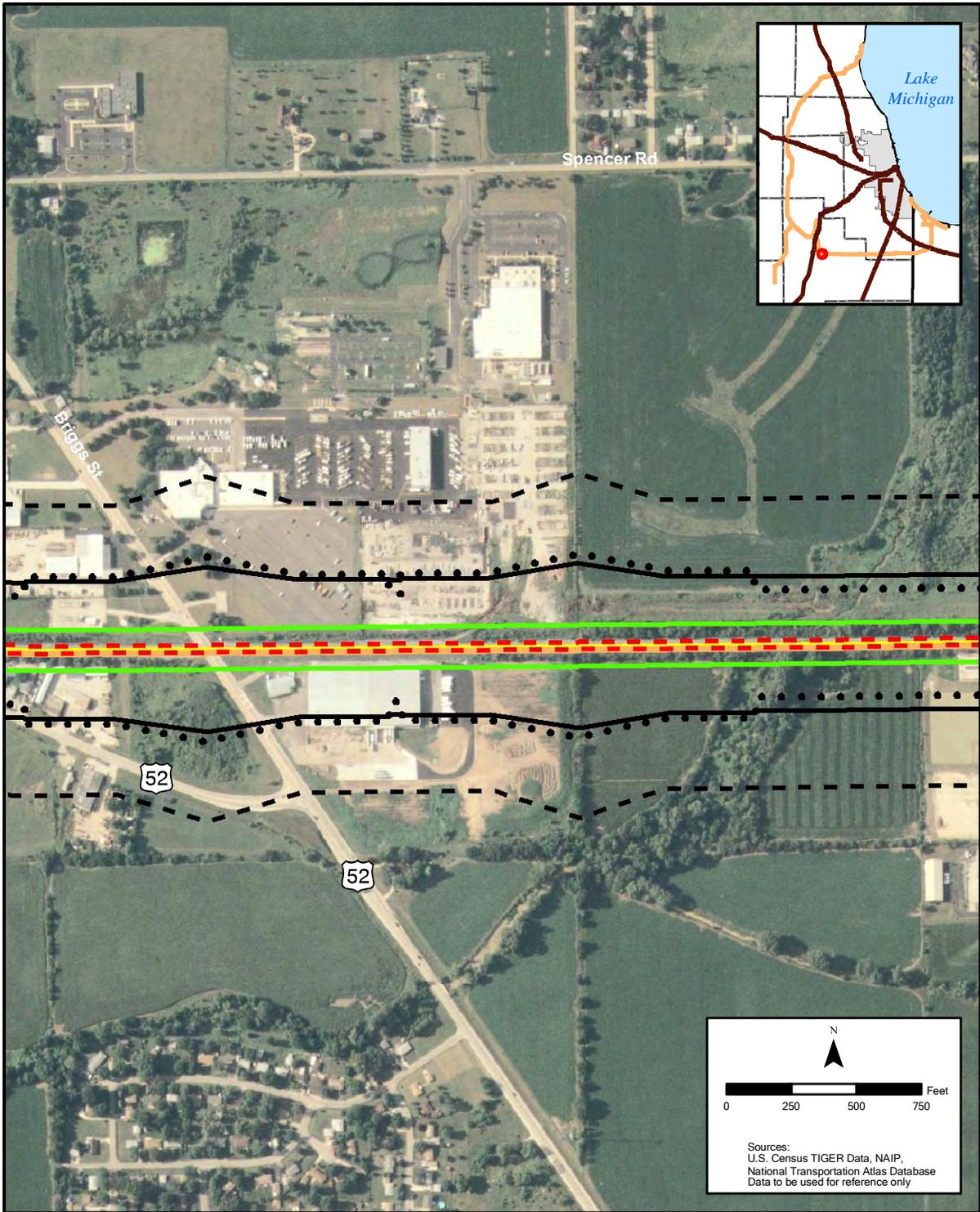
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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Figure L-1
 Noise and Vibration
 Contours



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 Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

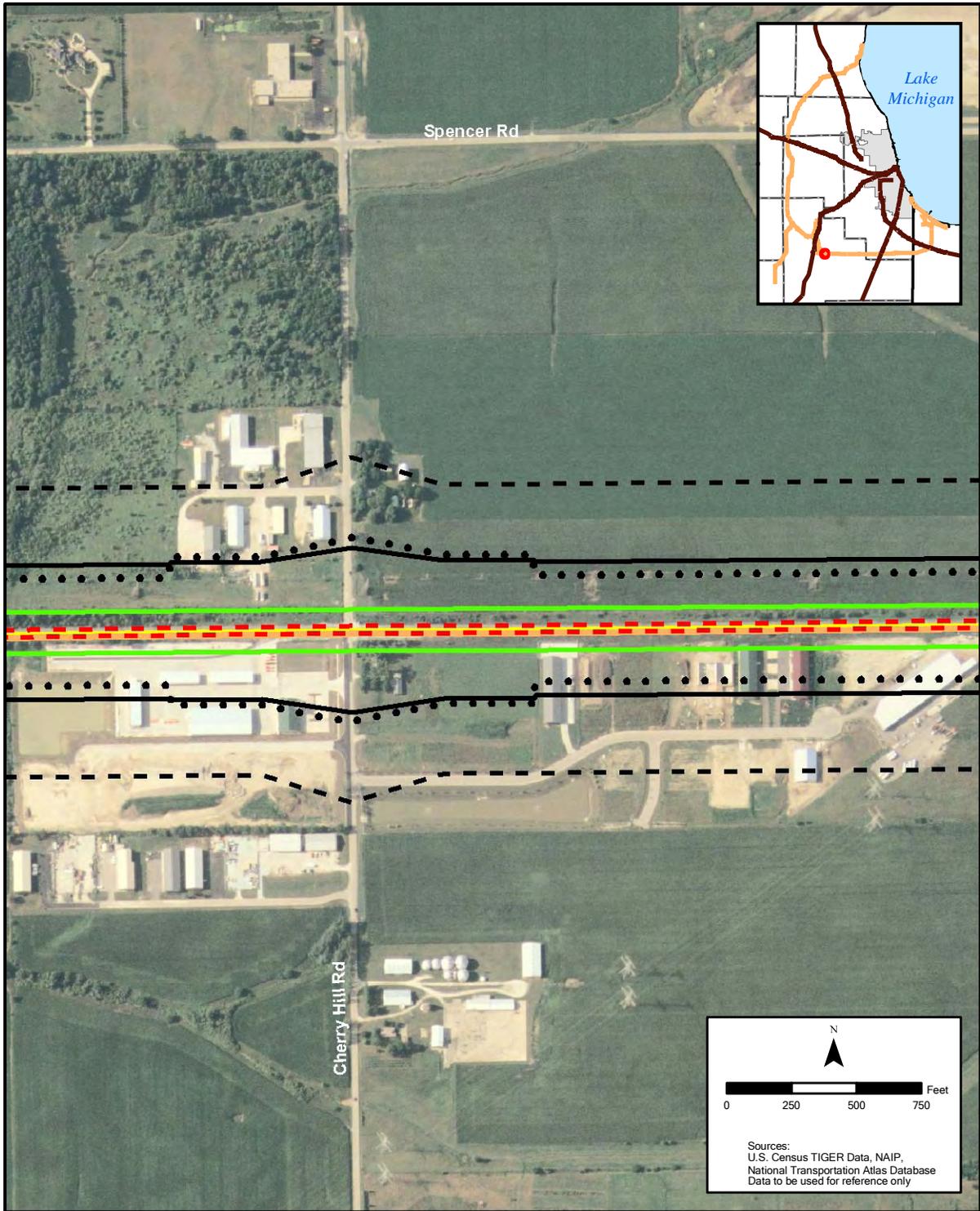


Environmental Impact Statement

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|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

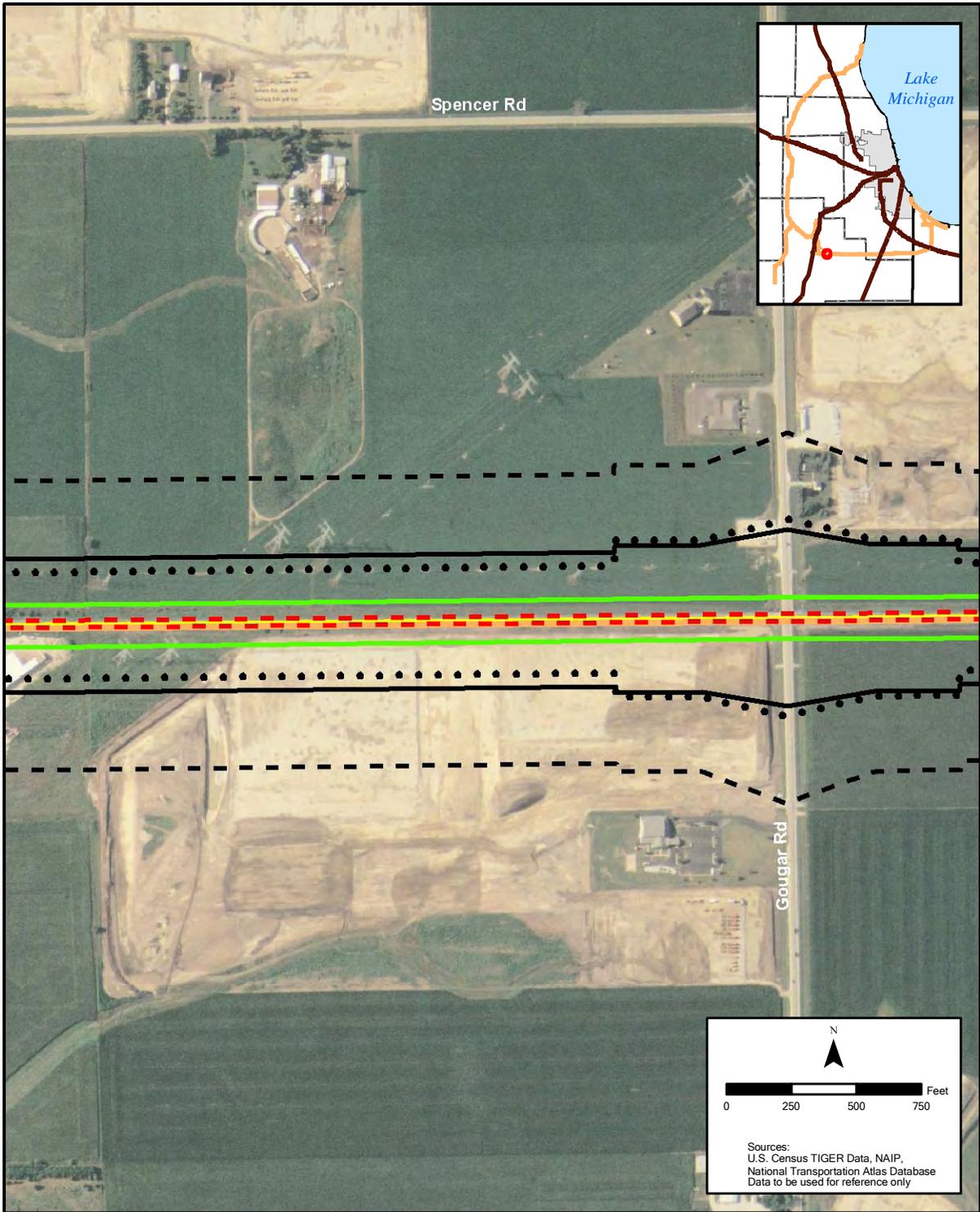
Figure L-1
Noise and Vibration
Contours

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  <p>Environmental Impact Statement</p>	<p>— CN Rail Line</p> <p>— EJ&E Rail Line</p> <p>— Proposed Track</p> <p>— Construction Limits</p> <p>— Cost-Effective Barrier</p> <p>— Barrier Not Cost-Effective</p>	<p>Existing</p> <p>• • • 65 dBA Contour</p> <p>Proposed Action</p> <p>— 65 dBA Contour</p> <p>— 70 dBA Contour</p> <p>— Vibration Contour</p>
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Figure L-1
Noise and Vibration
Contours
Sheet 81 of 139

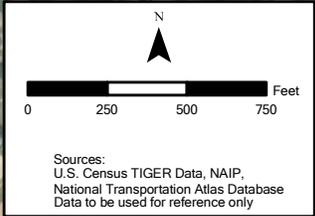
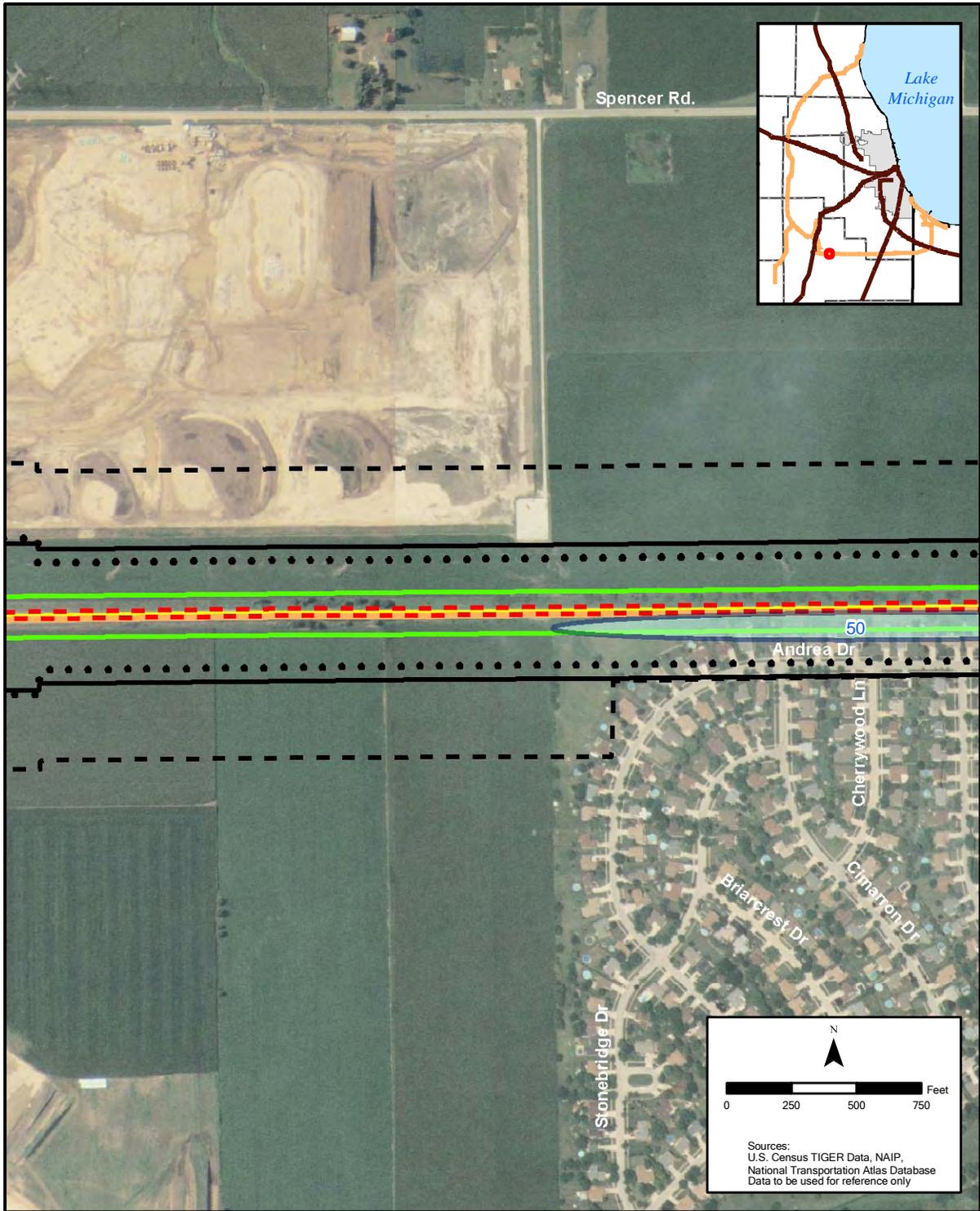


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 Sources:
 U.S. Census TIGER Data, NAIP,
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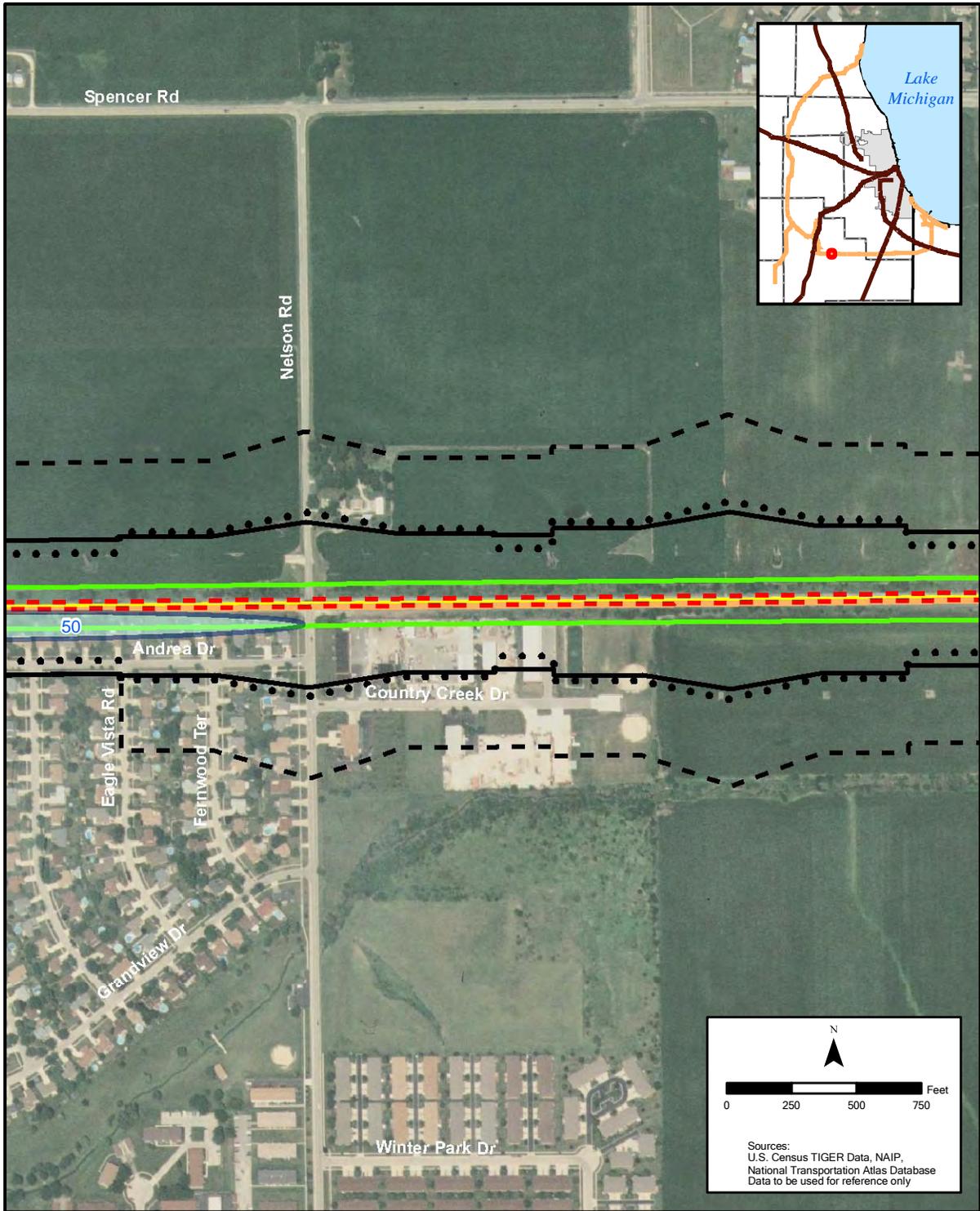
- CN Rail Line
- EJ&E Rail Line
- Proposed Track
- - - Construction Limits
- Cost-Effective Barrier
- Barrier Not Cost-Effective
- Existing
- • • 65 dBA Contour
- Proposed Action
- - - 65 dBA Contour
- 70 dBA Contour
- Vibration Contour

Figure L-1
 Noise and Vibration
 Contours
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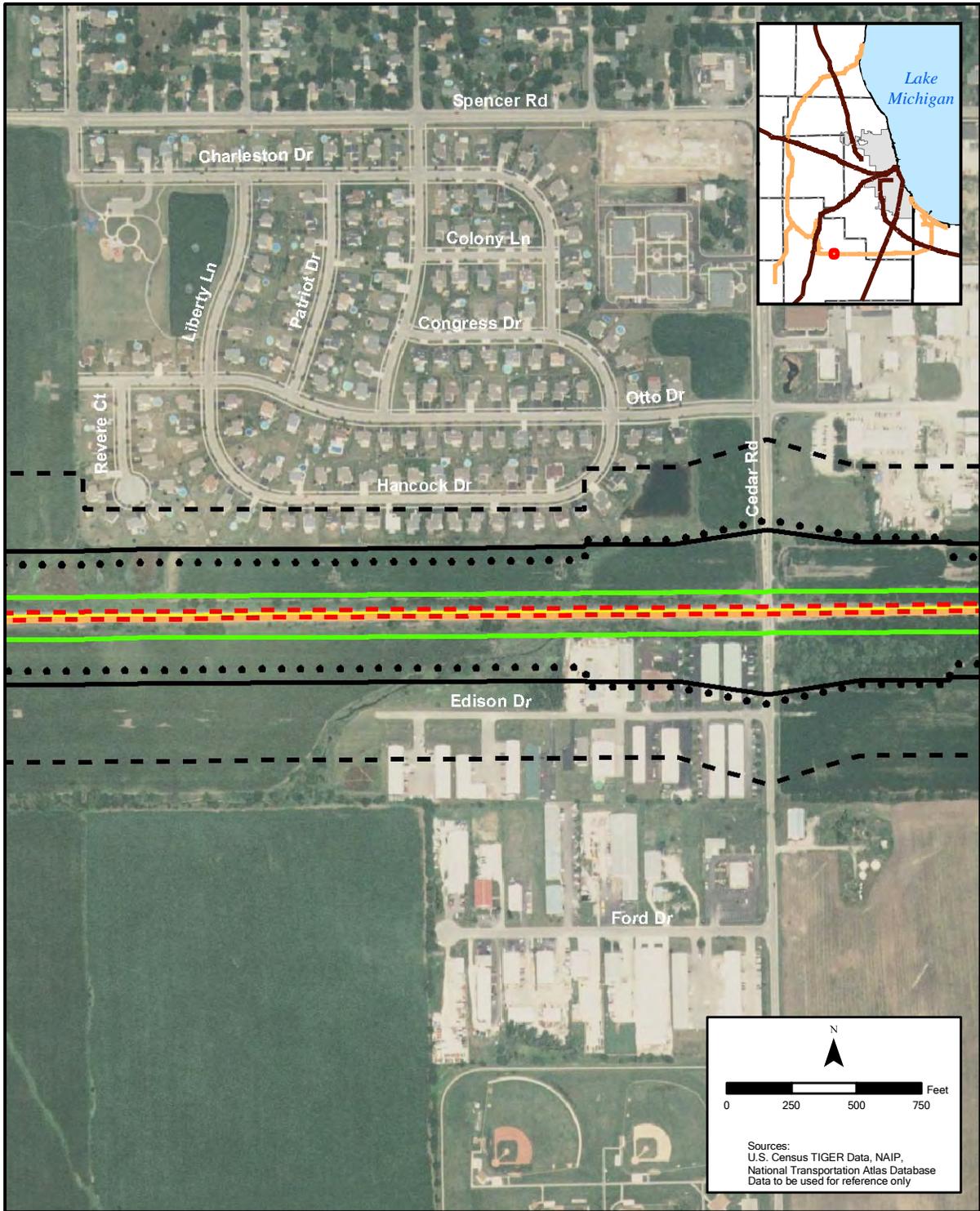
- CN Rail Line
- EJ&E Rail Line
- Proposed Track
- - - Construction Limits
- Cost-Effective Barrier
- Barrier Not Cost-Effective
- • • Existing 65 dBA Contour
- - - Proposed Action 65 dBA Contour
- - - Proposed Action 70 dBA Contour
- Vibration Contour

Figure L-1
Noise and Vibration
Contours
 Sheet 83 of 139



	CN Rail Line EJ&E Rail Line Proposed Track Construction Limits Cost-Effective Barrier Barrier Not Cost-Effective	Existing 65 dBA Contour Proposed Action 65 dBA Contour 70 dBA Contour Vibration Contour
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Figure L-1
Noise and Vibration
Contours
 Sheet 84 of 139

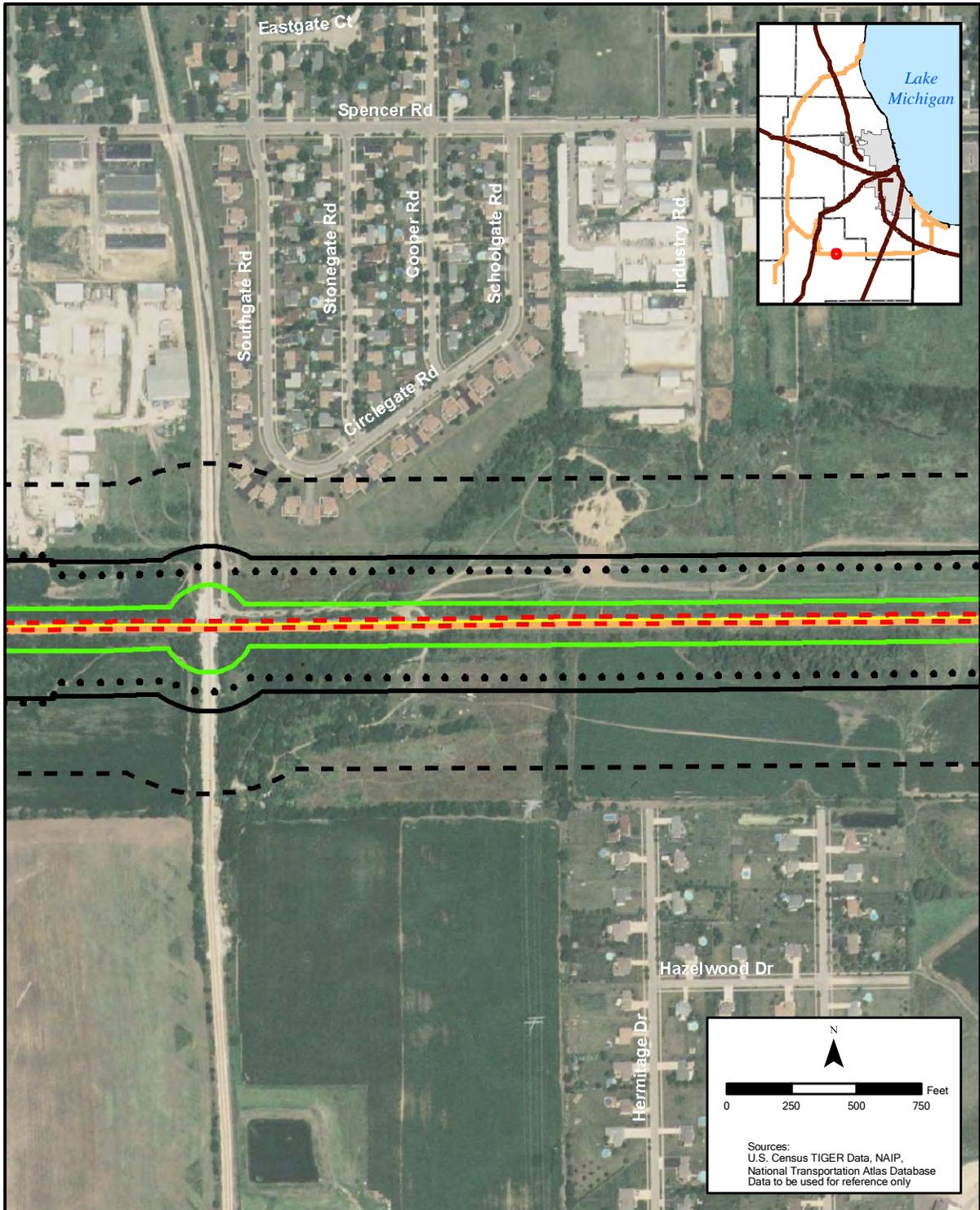


Environmental Impact Statement

- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
-
- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - 65 dBA Contour
 - 70 dBA Contour
 - Vibration Contour

Figure L-1
Noise and Vibration
Contours

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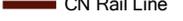
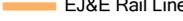
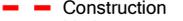
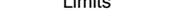
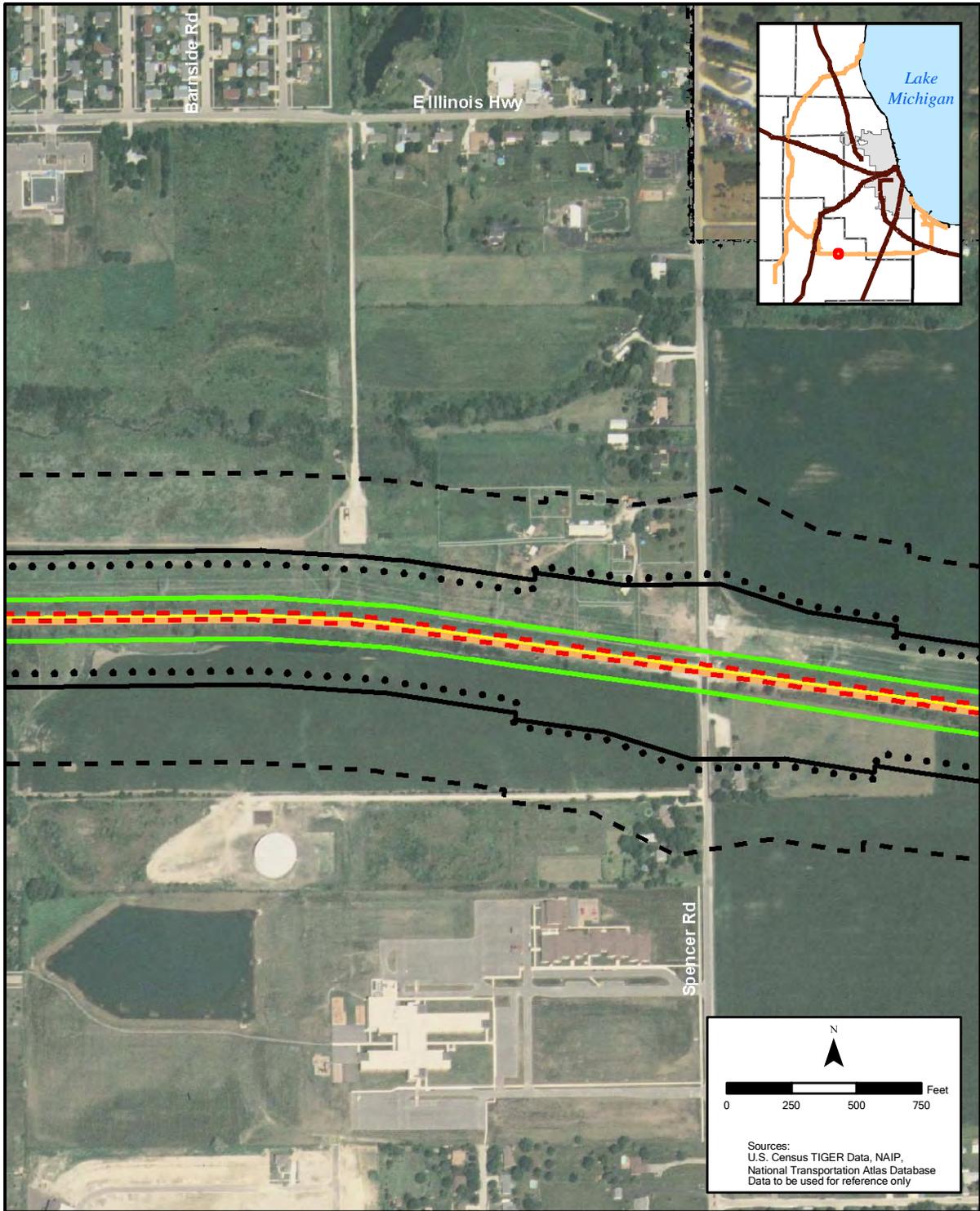
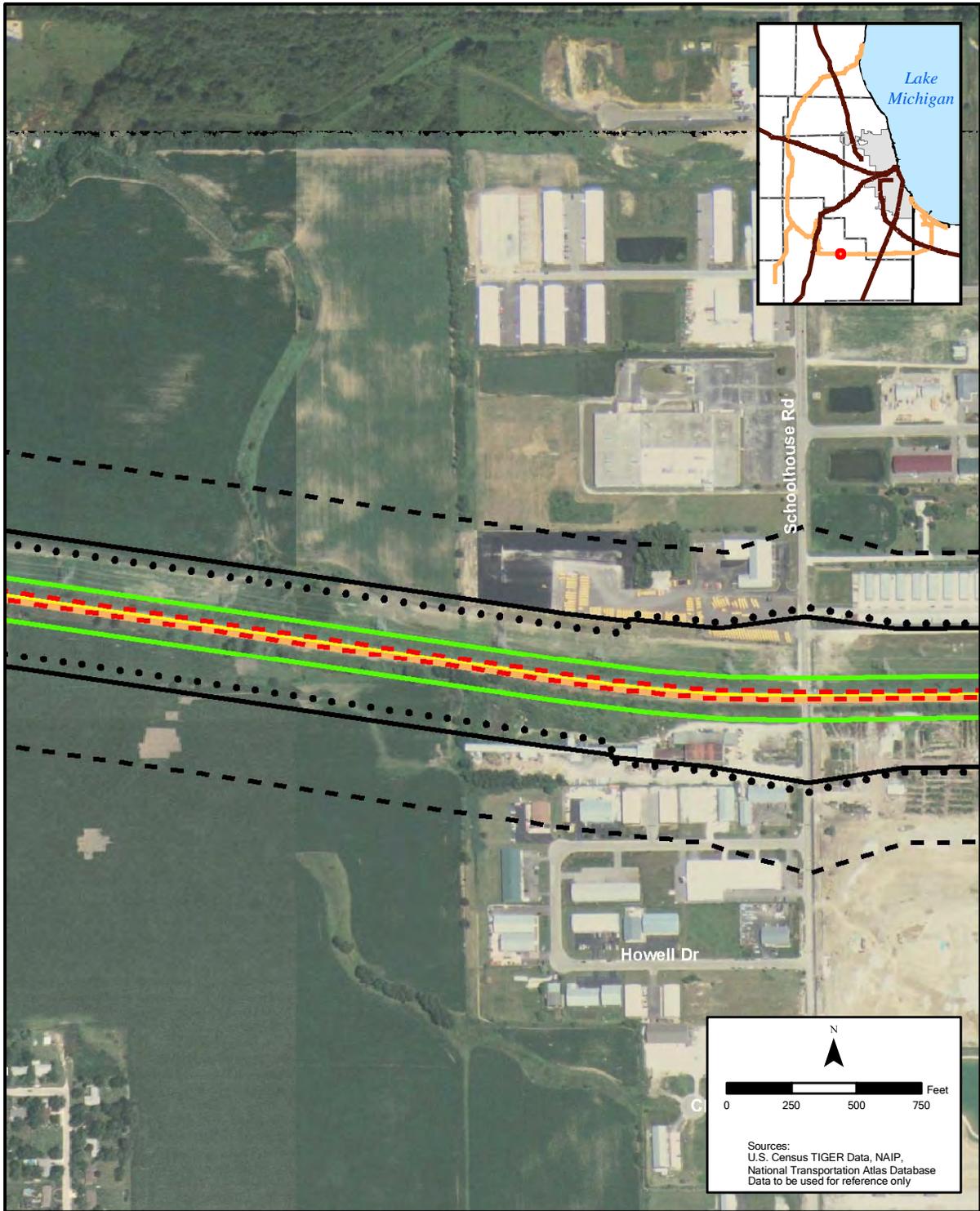
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|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | — — — 65 dBA Contour |
|  | Cost-Effective Barrier | — — — 70 dBA Contour |
|  | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours
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- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
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- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - - - 65 dBA Contour
 - - - 70 dBA Contour
 - Vibration Contour

Figure L-1
Noise and Vibration
Contours
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Environmental Impact Statement

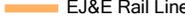
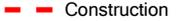
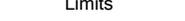
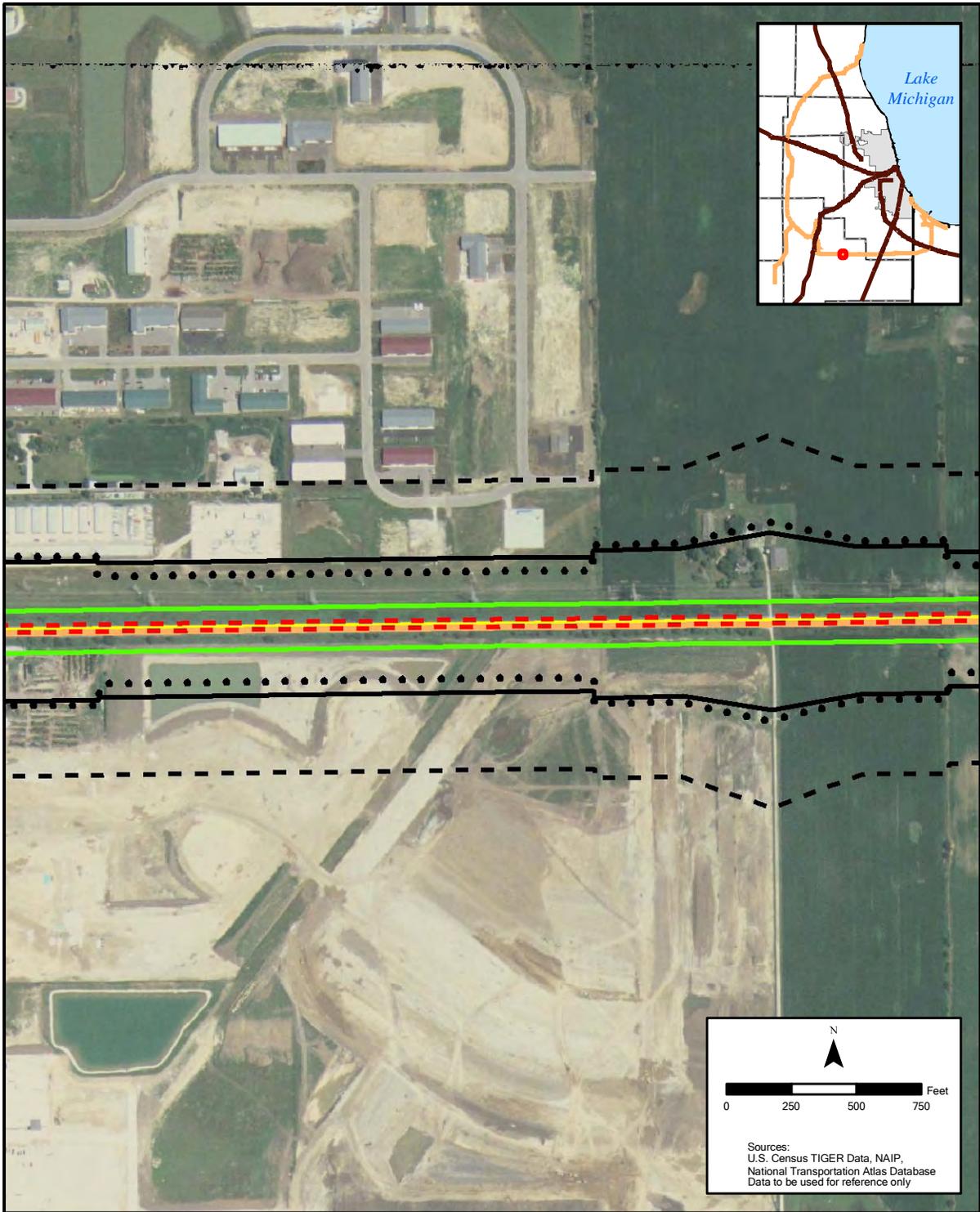
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|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | - - - 65 dBA Contour |
|  | Cost-Effective Barrier | — 70 dBA Contour |
|  | Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
Noise and Vibration
Contours

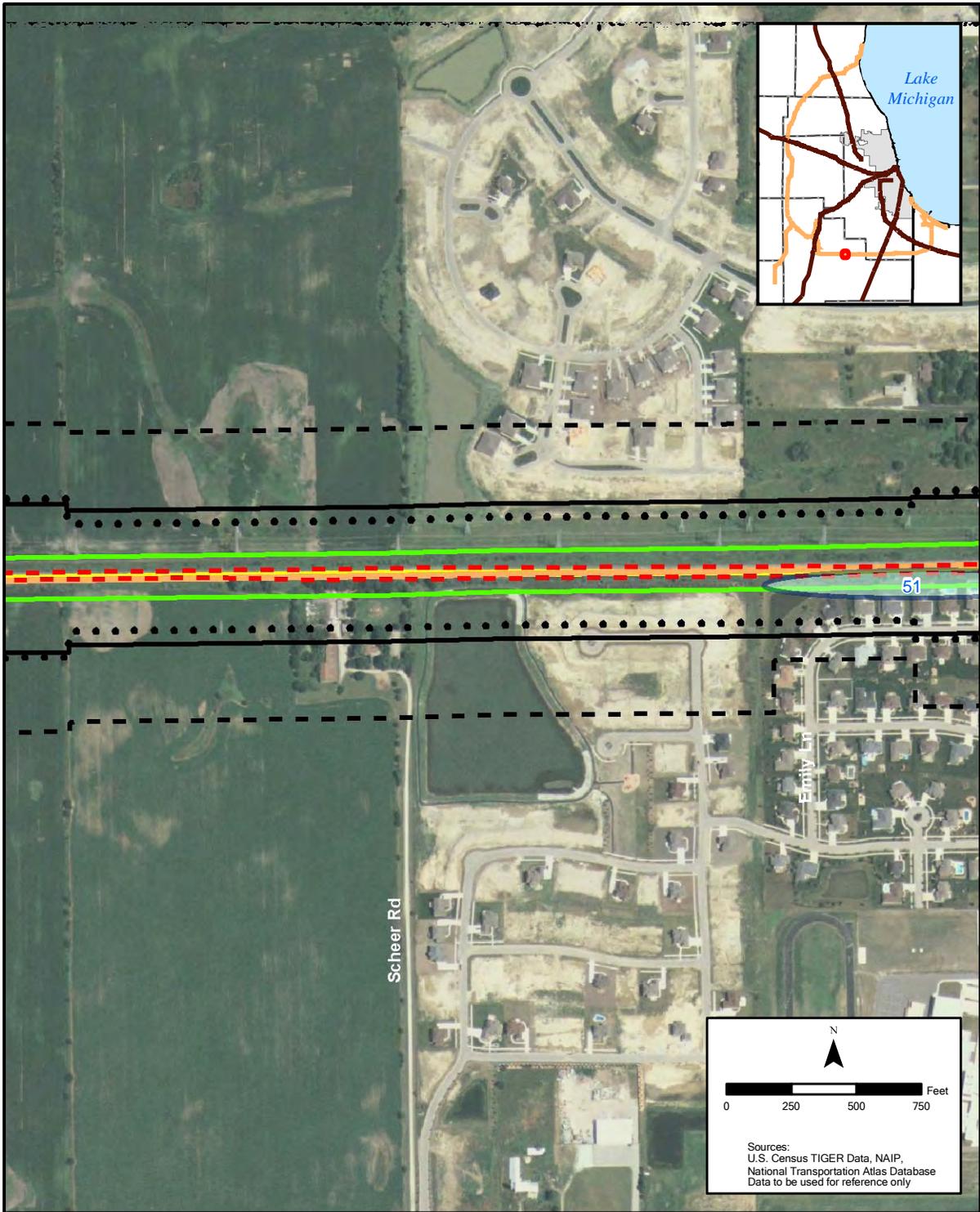
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Environmental Impact Statement

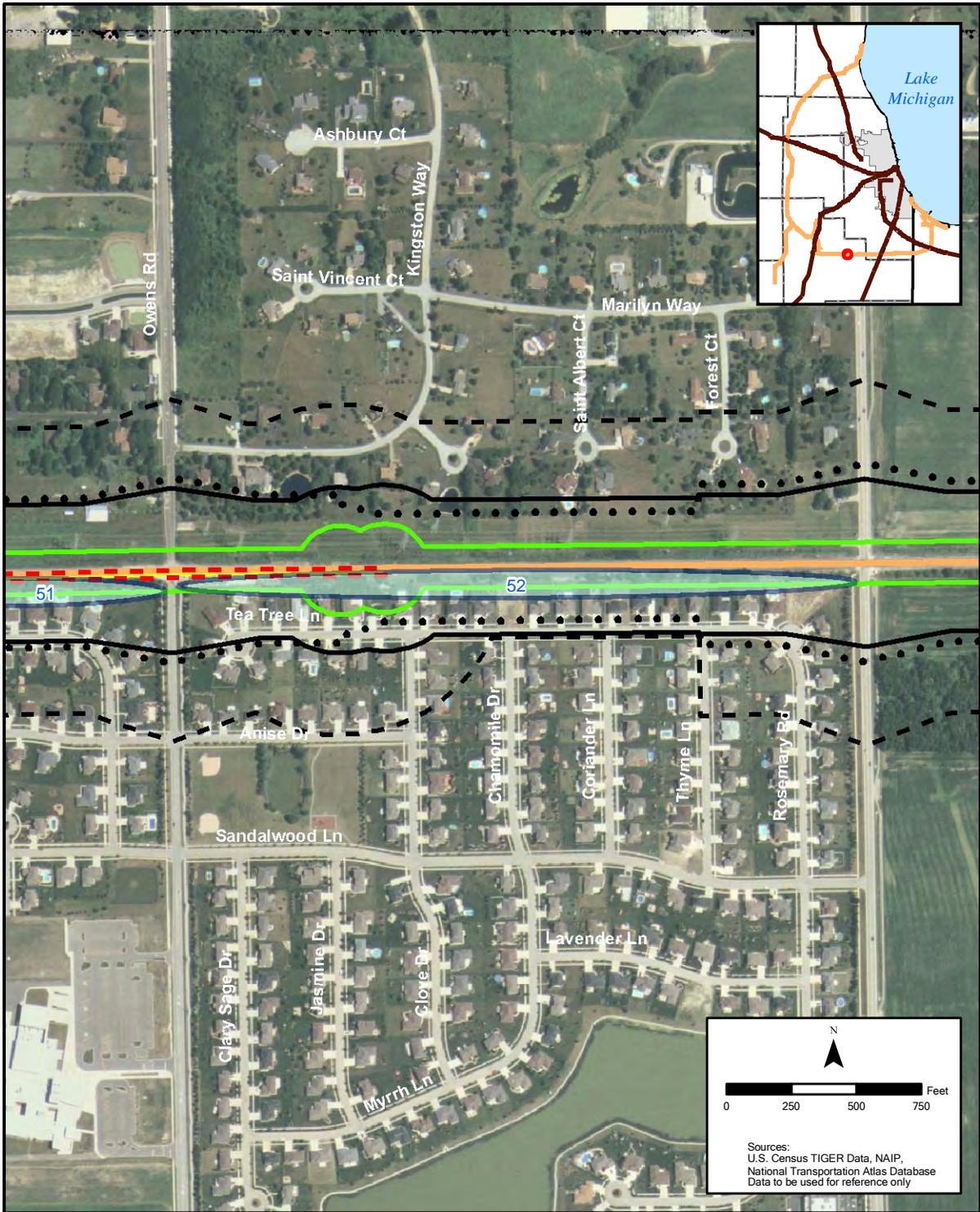
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| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours
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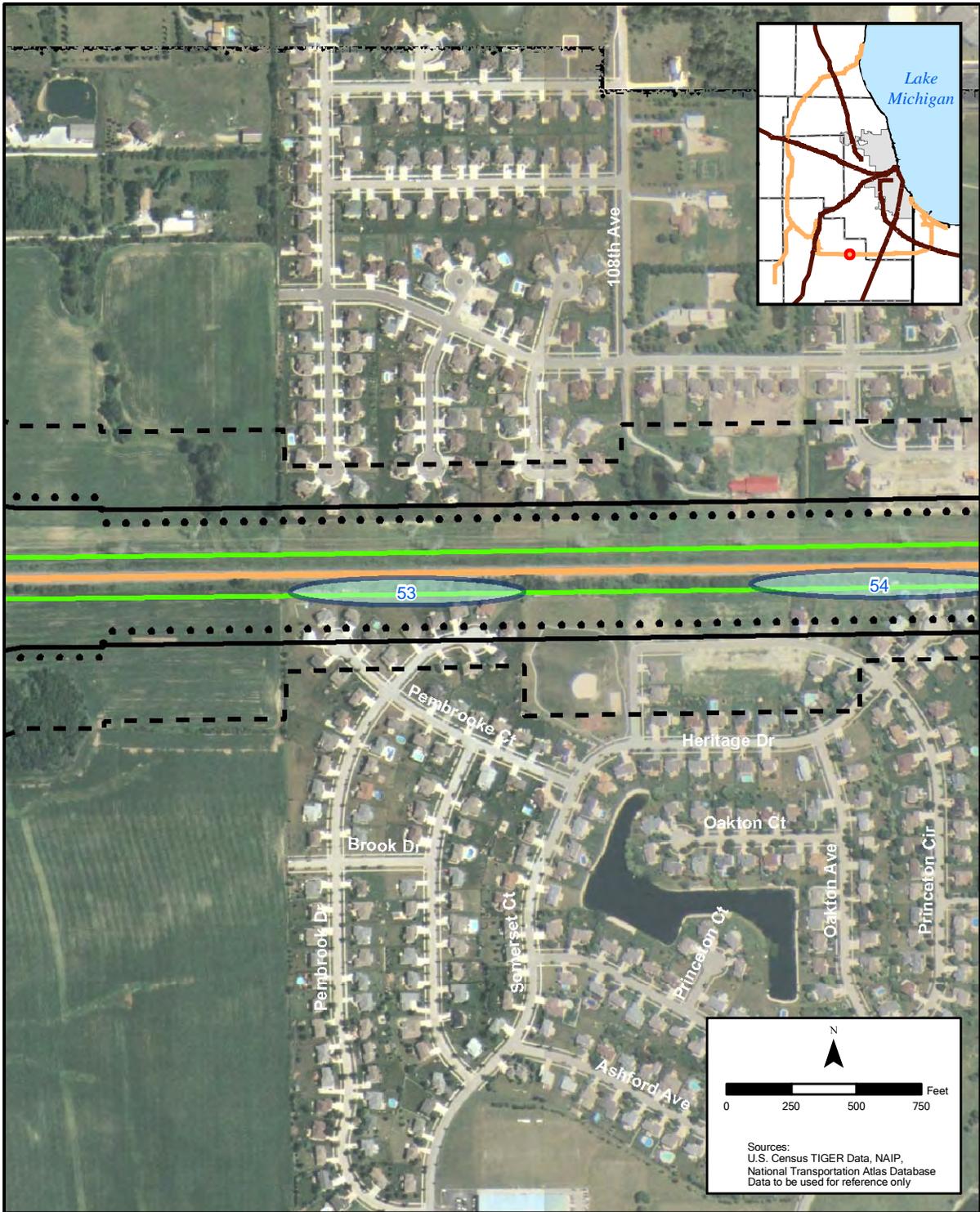
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| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | --- 65 dBA Contour |
| | Cost-Effective Barrier | --- 70 dBA Contour |
| | Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours
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- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
-
- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - - - 65 dBA Contour
 - - - 70 dBA Contour
 - Vibration Contour

Figure L-1
Noise and Vibration
Contours
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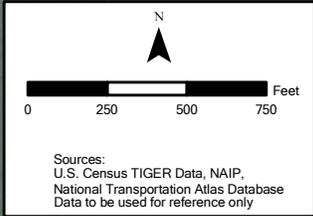
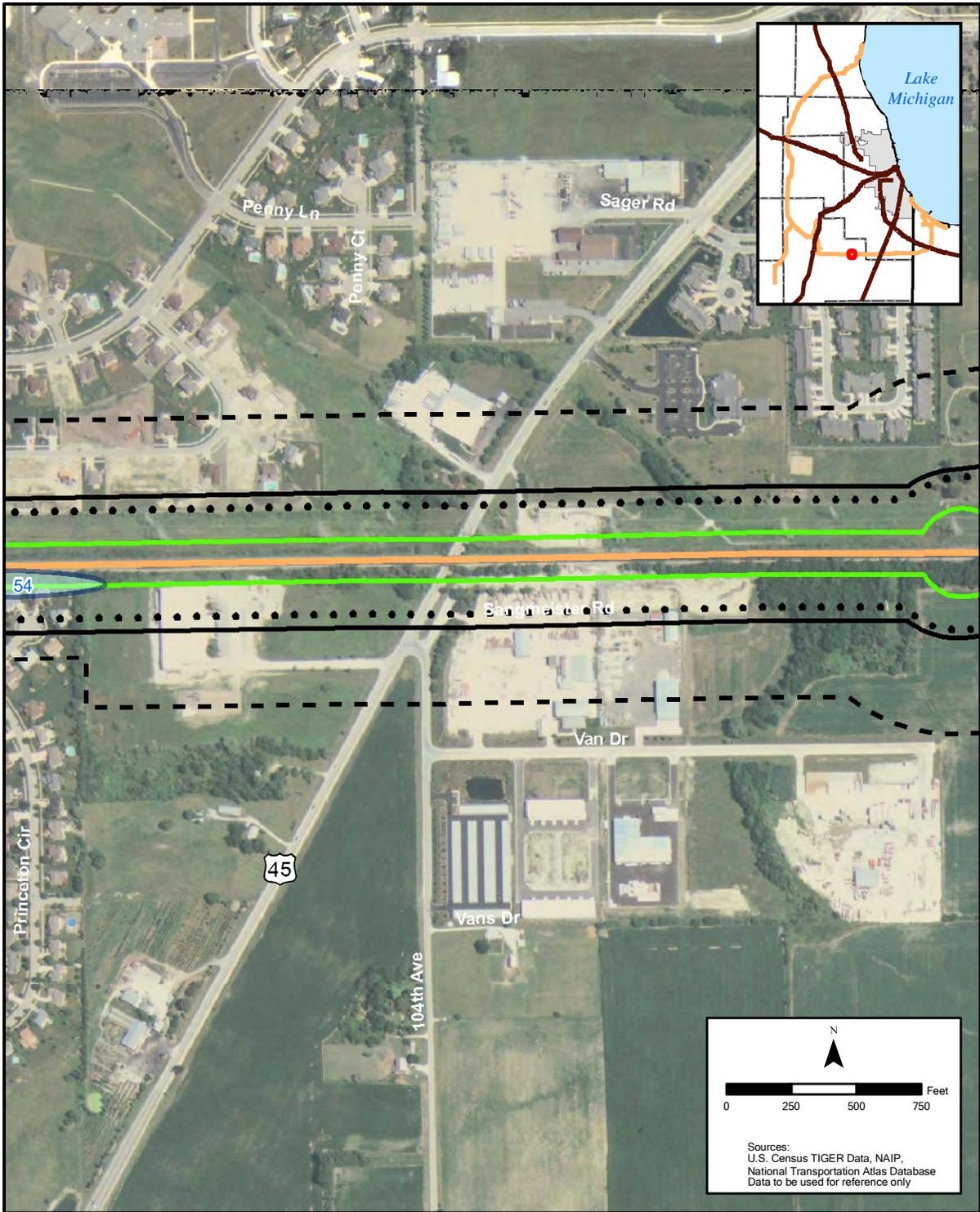


Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



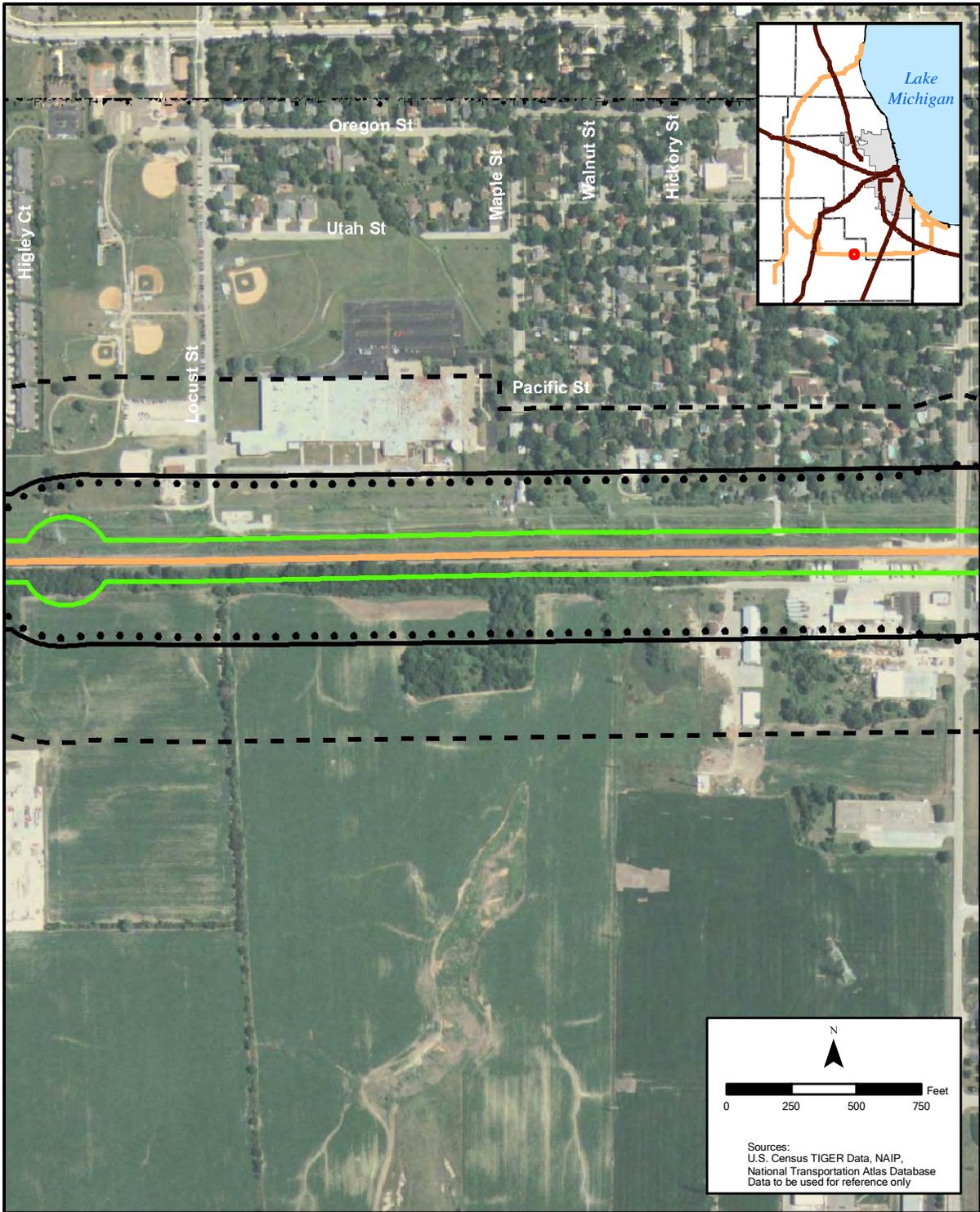
- CN Rail Line
- EJ&E Rail Line
- Proposed Track
- - - Construction Limits
- Cost-Effective Barrier
- Barrier Not Cost-Effective
- • • 65 dBA Contour
- — — 65 dBA Contour
- — — 70 dBA Contour
- Vibration Contour

Figure L-1
 Noise and Vibration
 Contours
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- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - - - 65 dBA Contour
 - - - 70 dBA Contour
 - Vibration Contour

Figure L-1
 Noise and Vibration
 Contours
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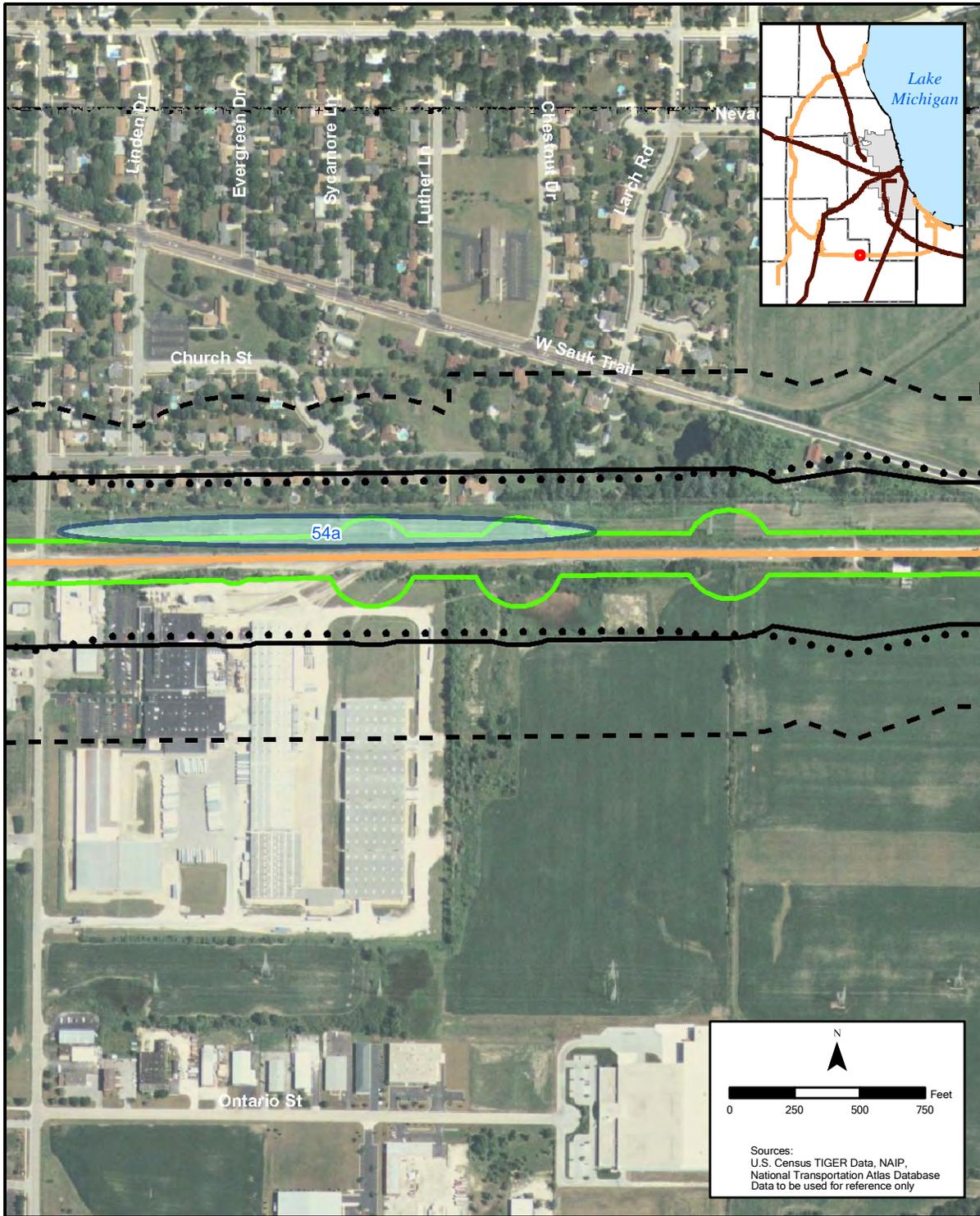
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
-
- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - - - 65 dBA Contour
 - - - 70 dBA Contour
 - Vibration Contour

Figure L-1
Noise and Vibration
Contours

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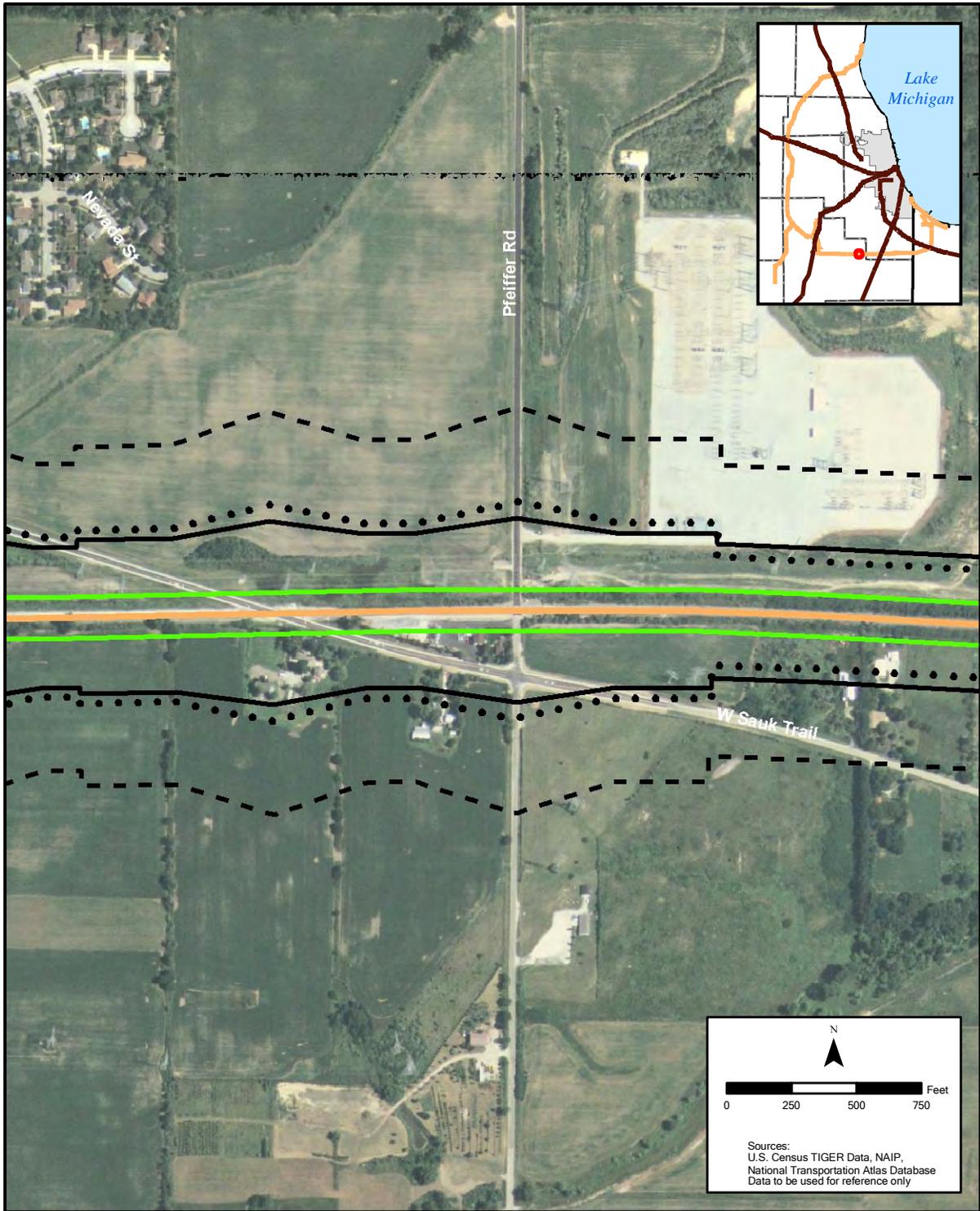
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Sources:
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 National Transportation Atlas Database
 Data to be used for reference only



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|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
Noise and Vibration
Contours
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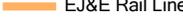
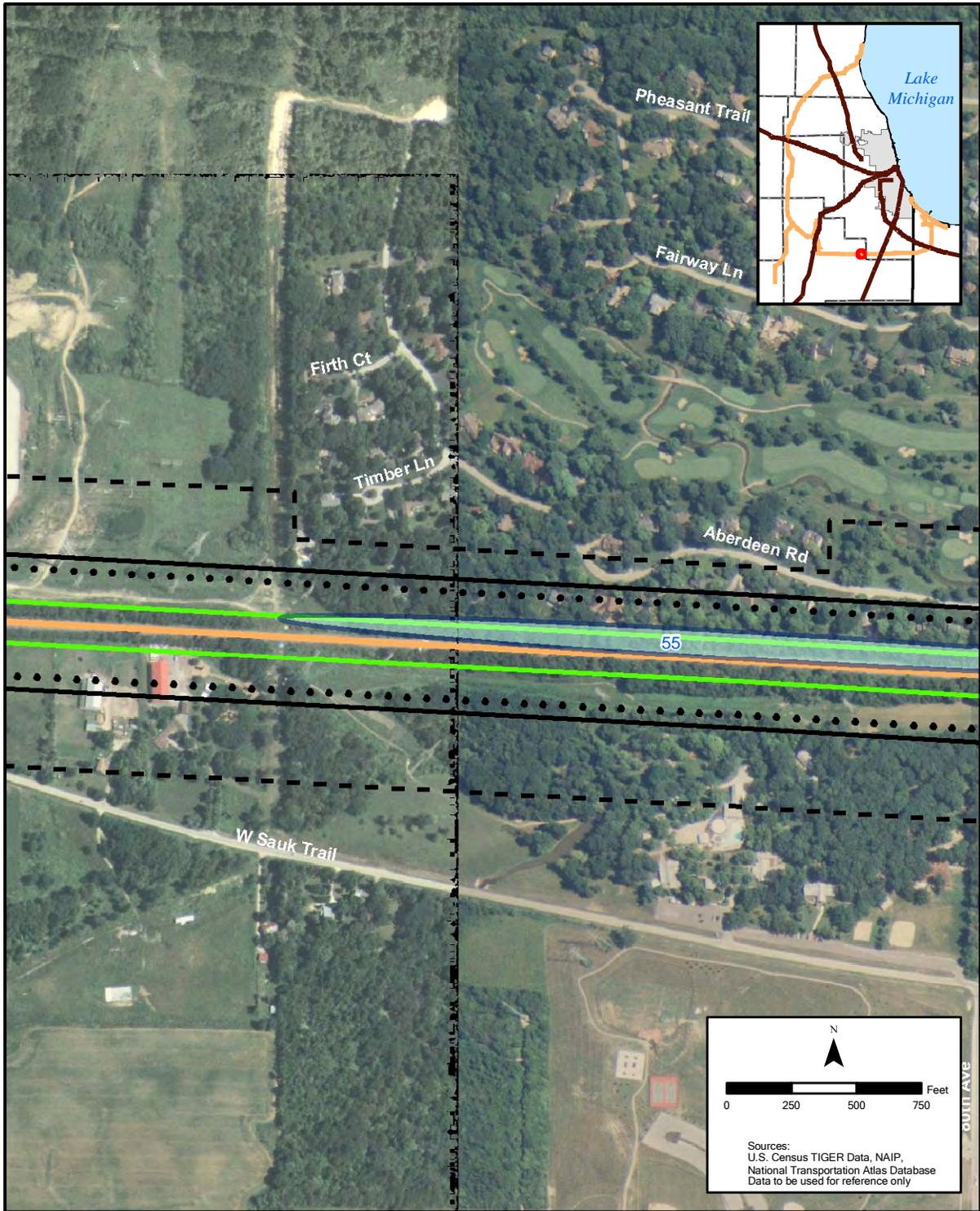
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|  | EJ&E Rail Line | • • • 65 dBA Contour | |
|  | Proposed Track | Proposed Action | |
|  | Construction Limits | - - - 65 dBA Contour | |
|  | Cost-Effective Barrier | - - - 70 dBA Contour | |
|  | Barrier Not Cost-Effective |  | Vibration Contour |

Figure L-1
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 Contours
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

 Environmental Impact Statement	CN Rail Line EJ&E Rail Line Proposed Track Construction Limits Cost-Effective Barrier Barrier Not Cost-Effective	Existing 65 dBA Contour Proposed Action 65 dBA Contour 70 dBA Contour Vibration Contour
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Figure L-1
 Noise and Vibration
 Contours
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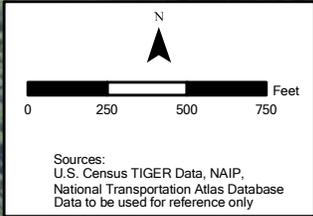
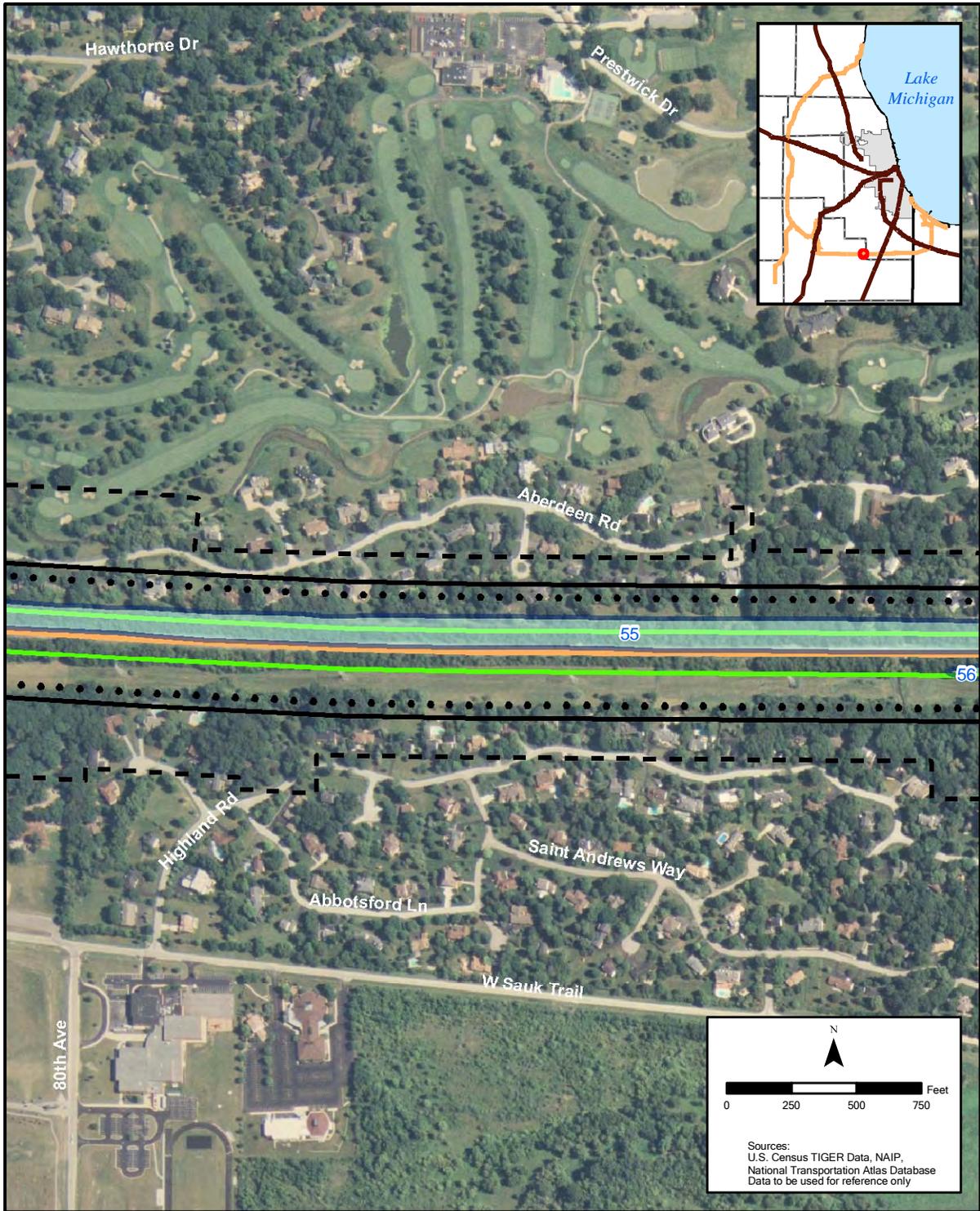
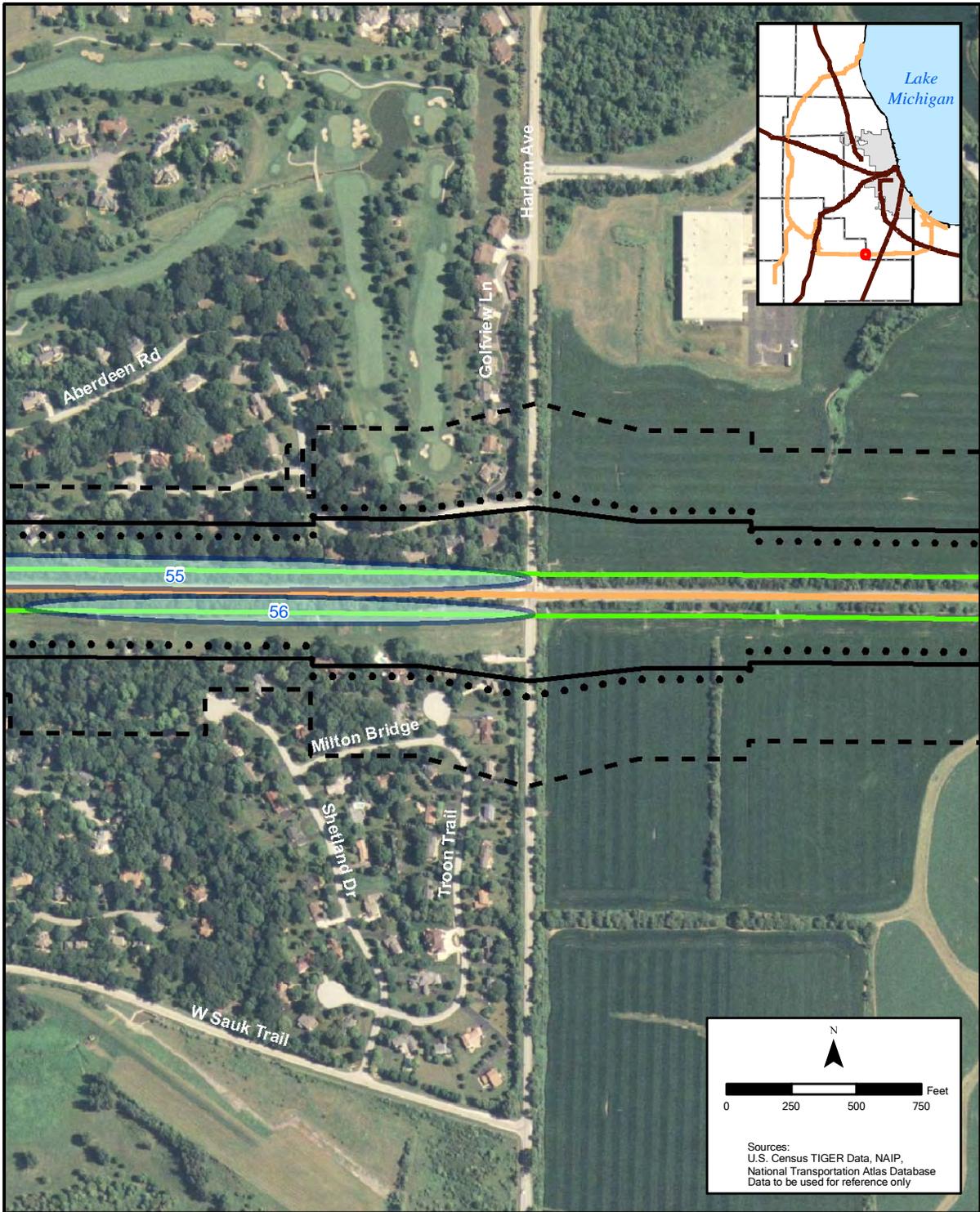


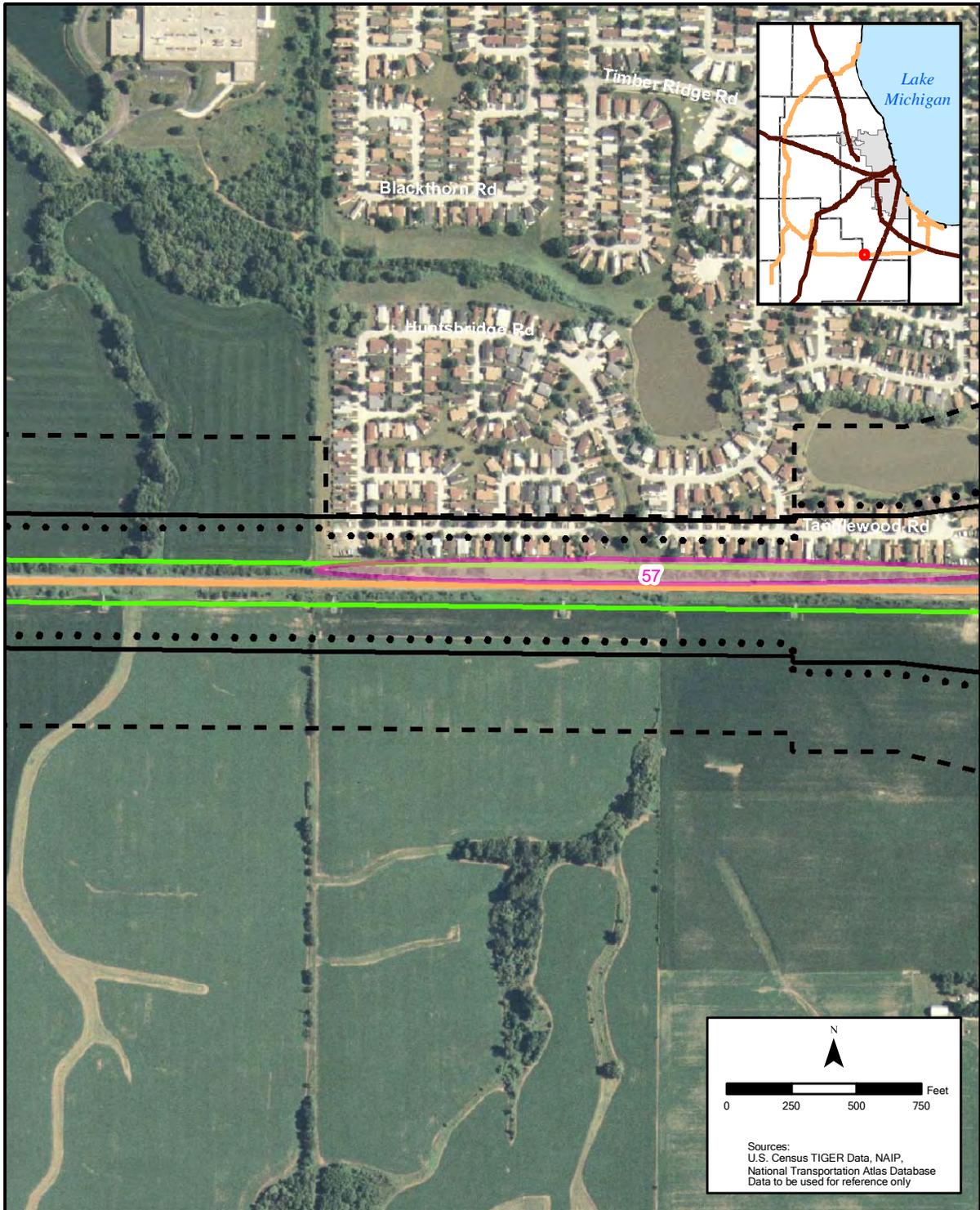
Figure L-1
 Noise and Vibration
 Contours
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- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
- Existing
- • • 65 dBA Contour
- Proposed Action
- - - 65 dBA Contour
 - - - 70 dBA Contour
 - Vibration Contour

Figure L-1
Noise and Vibration
Contours
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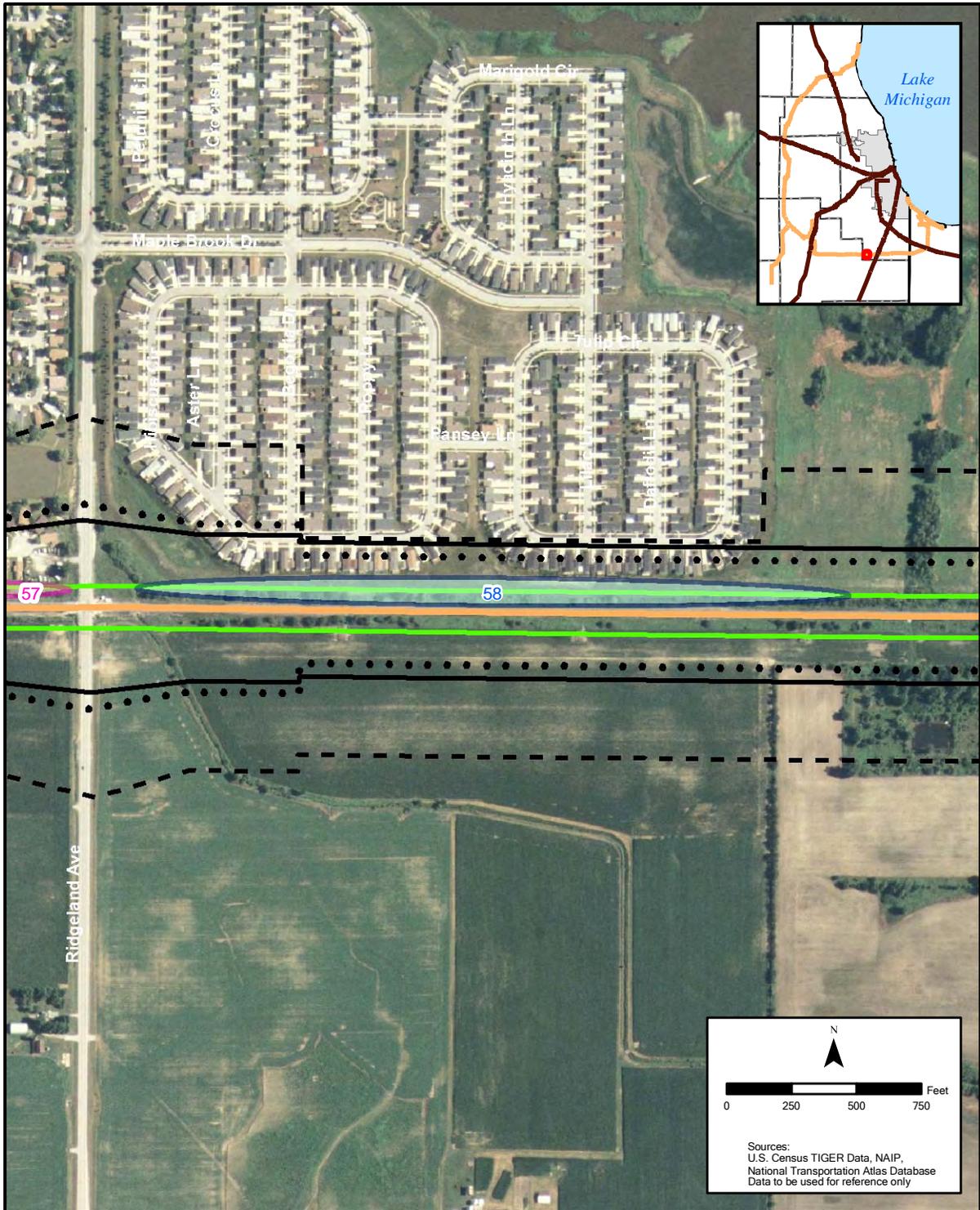
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 Sources:
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- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
-
- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - 65 dBA Contour
 - 70 dBA Contour
 - Vibration Contour

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 Noise and Vibration
 Contours

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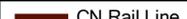
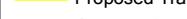
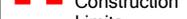
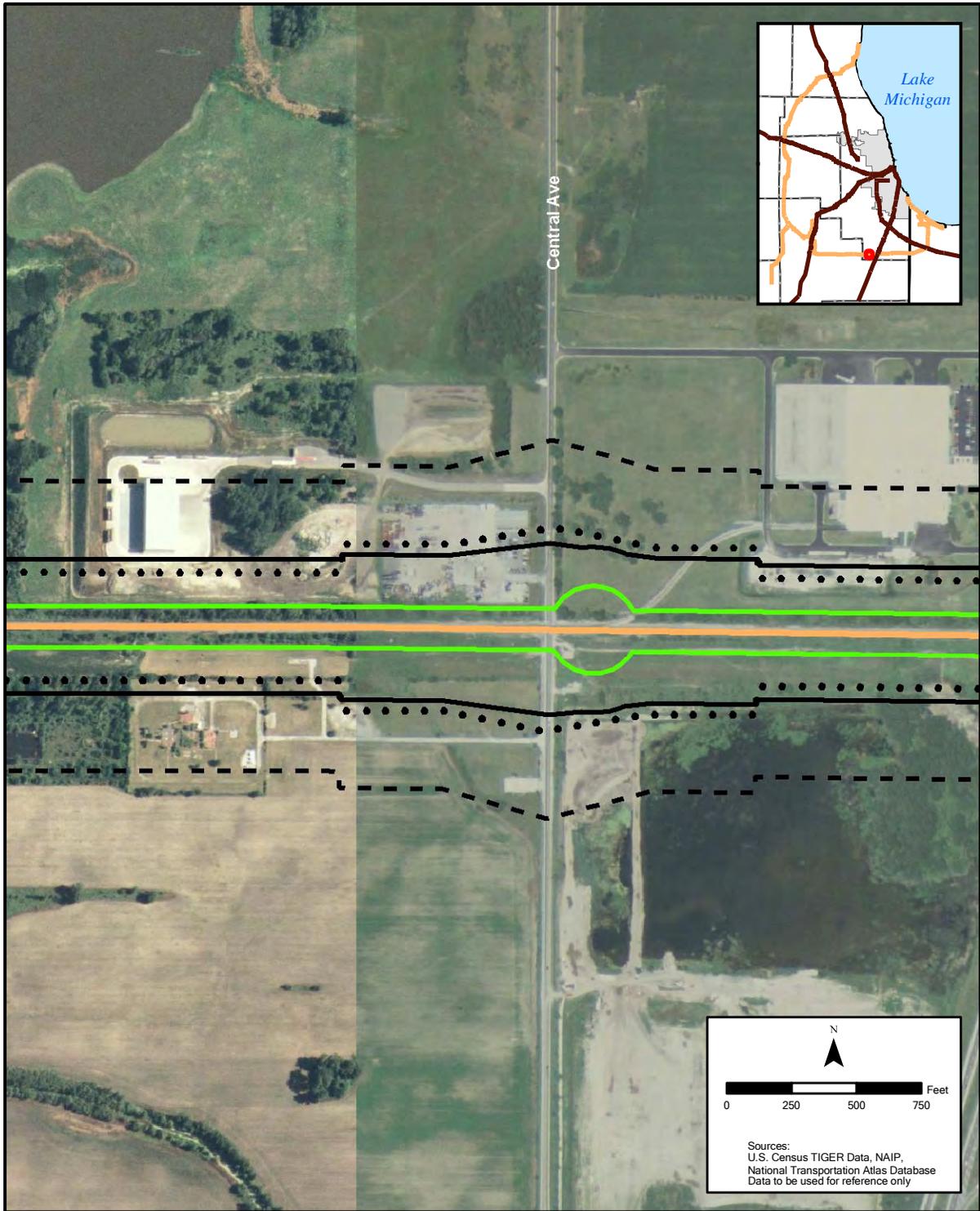
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|  | EJ&E Rail Line | Existing |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | Existing |
|  | Cost-Effective Barrier | Proposed Action |
|  | Barrier Not Cost-Effective | Proposed Action |
|  | 65 dBA Contour | Existing |
|  | 65 dBA Contour | Proposed Action |
|  | 70 dBA Contour | Existing |
|  | Vibration Contour | Proposed Action |

Figure L-1
Noise and Vibration
Contours

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Environmental Impact Statement

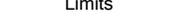
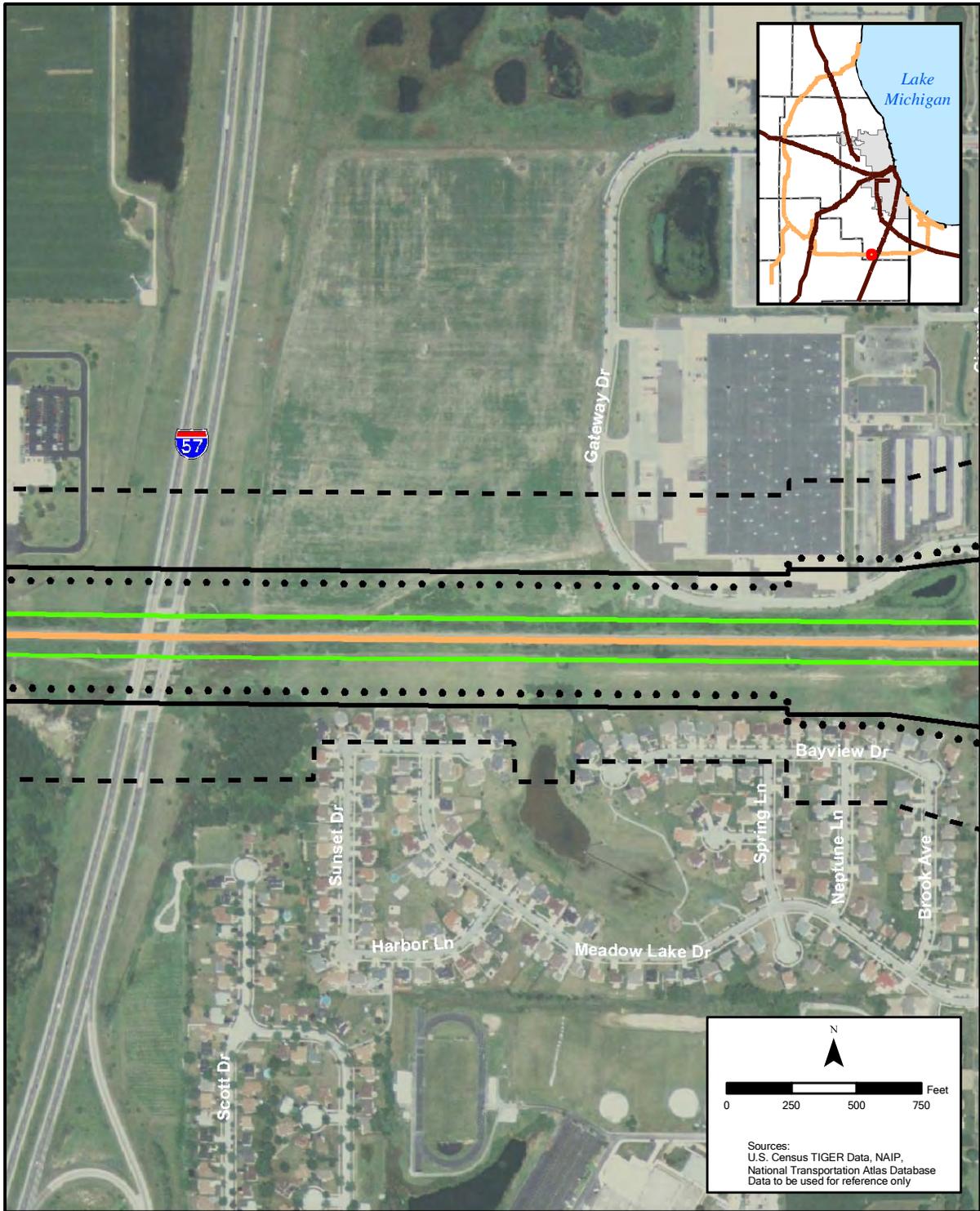
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|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | - - - 65 dBA Contour |
|  | Cost-Effective Barrier | — — — 70 dBA Contour |
|  | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
Noise and Vibration
Contours

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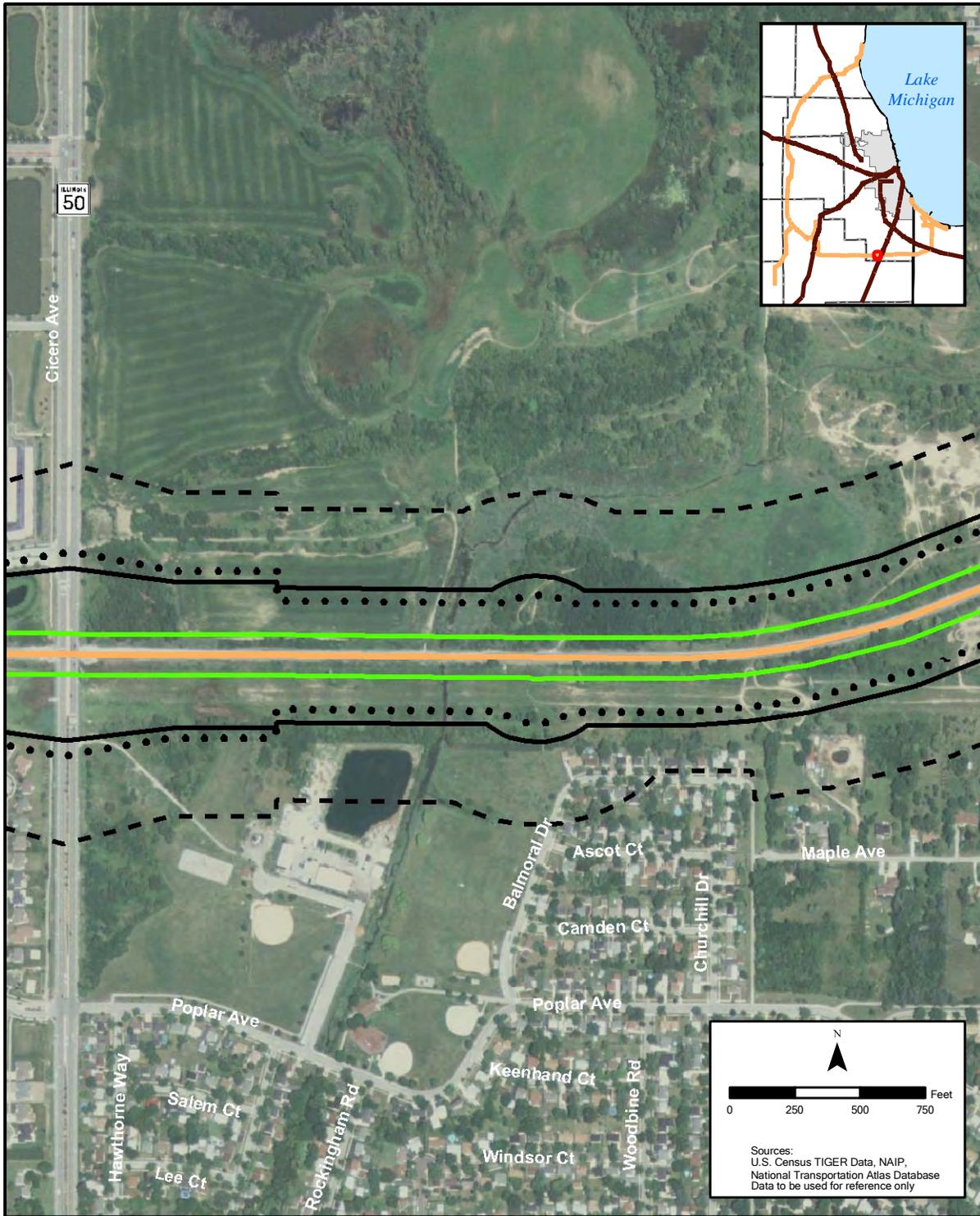


Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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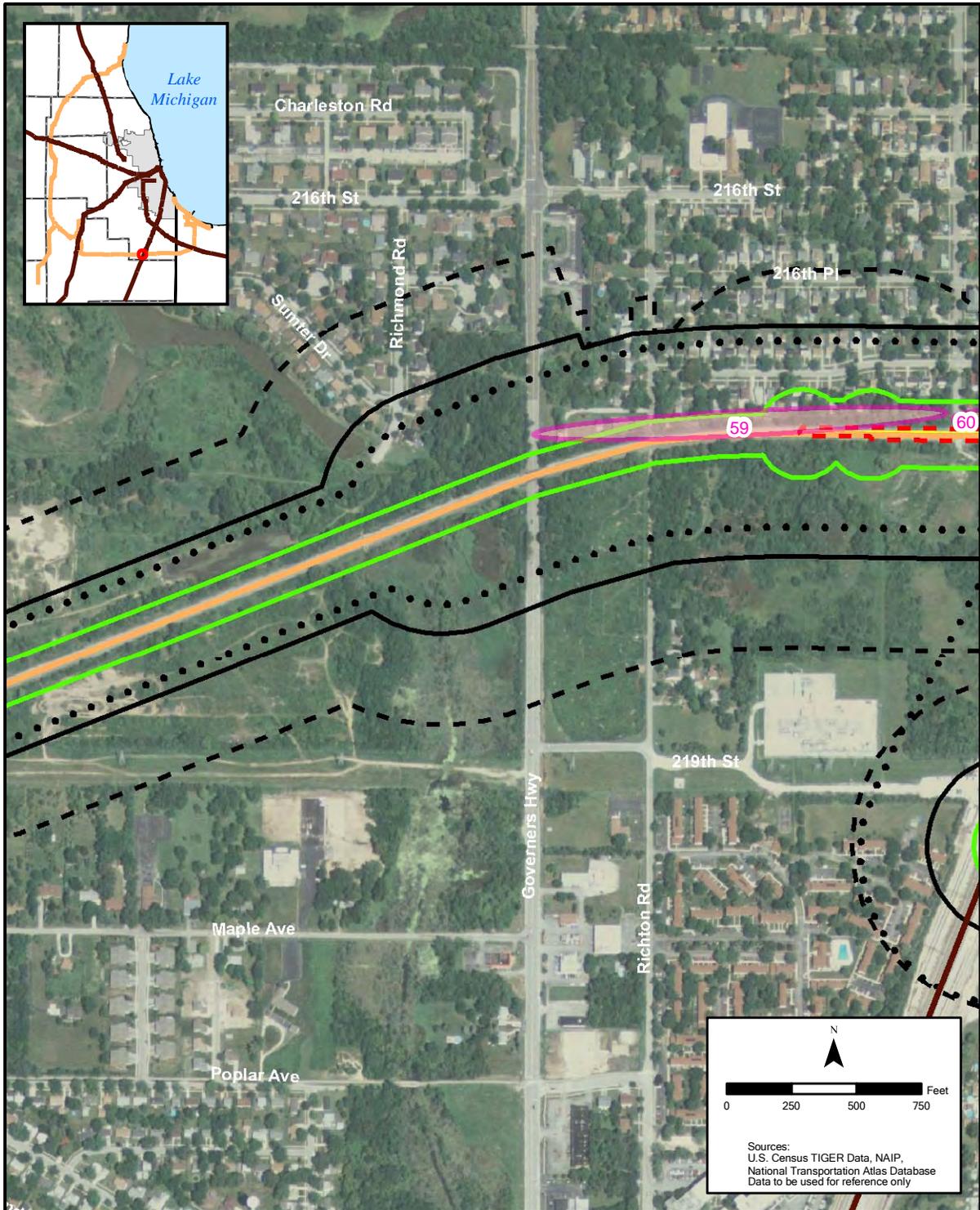
Figure L-1
Noise and Vibration
Contours
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Environmental Impact Statement

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|---|----------------------------|---|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | Existing |
|  | Proposed Track | Existing |
|  | Construction Limits | Proposed Action |
|  | Cost-Effective Barrier |  65 dBA Contour |
|  | Barrier Not Cost-Effective |  65 dBA Contour |
| | |  70 dBA Contour |
| | |  Vibration Contour |

Figure L-1
Noise and Vibration
Contours
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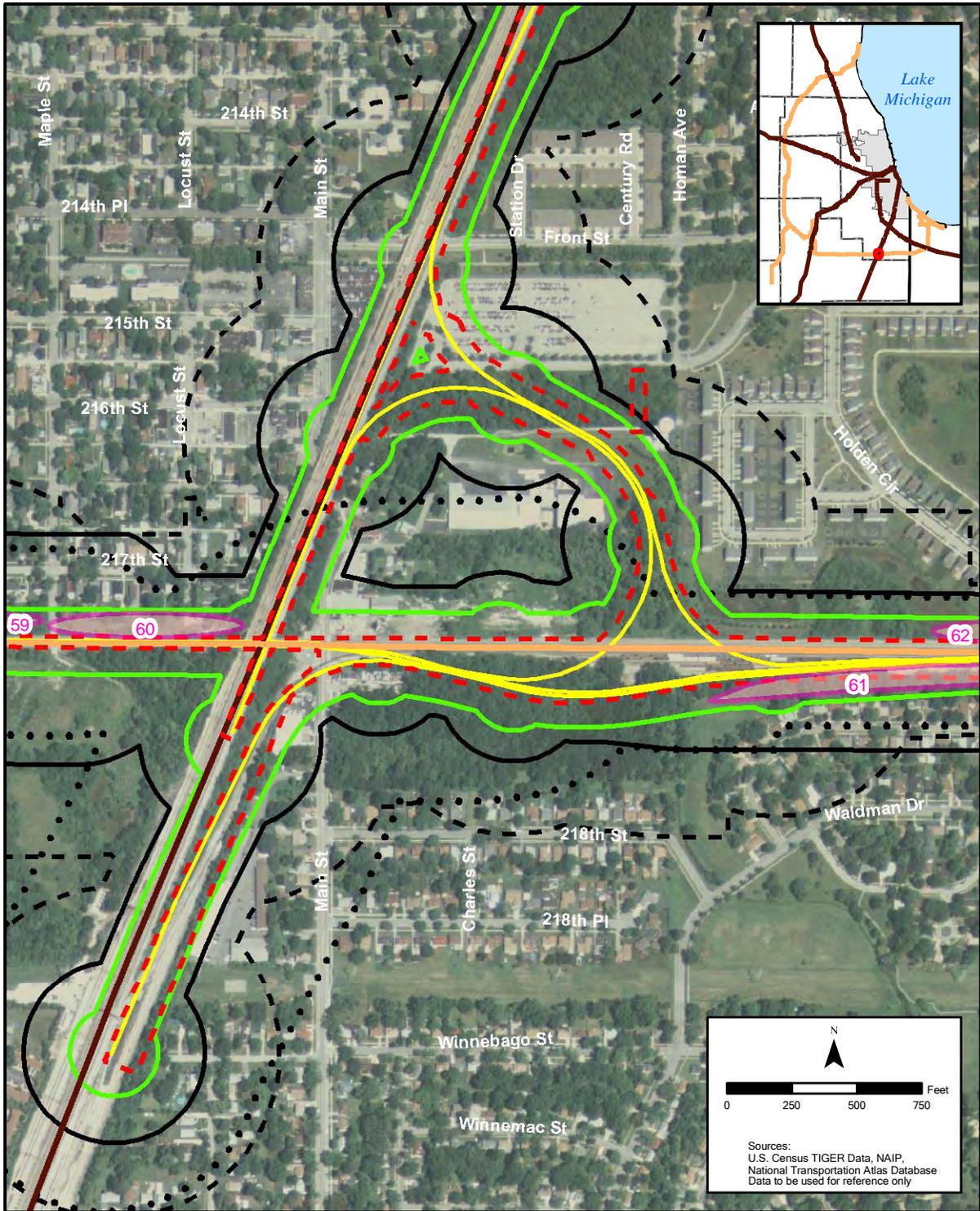
Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|----------------------------|-------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | 65 dBA Contour |
| Cost-Effective Barrier | 70 dBA Contour |
| Barrier Not Cost-Effective | Vibration Contour |

Figure L-1
Noise and Vibration
Contours

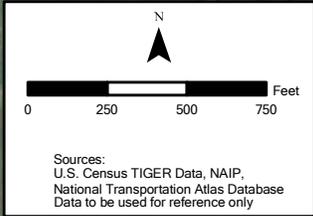
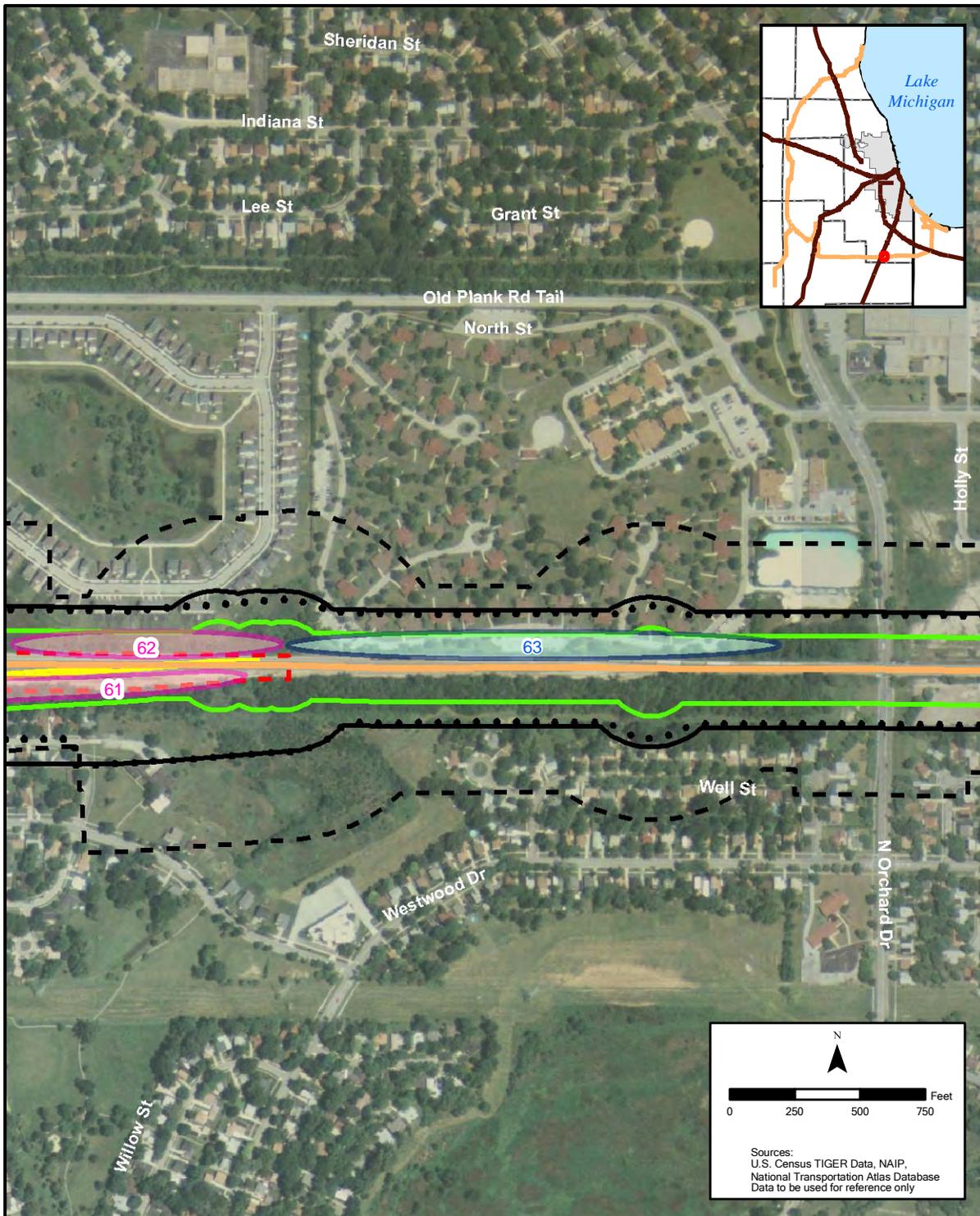
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

	— CN Rail Line — EJ&E Rail Line — Proposed Track - - - Construction Limits — Cost-Effective Barrier — Barrier Not Cost-Effective	••• Existing 65 dBA Contour ••• Proposed Action 65 dBA Contour — Proposed Action 70 dBA Contour — Vibration Contour
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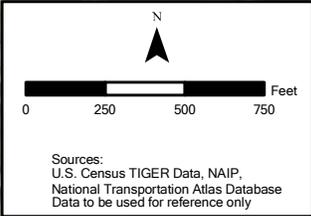
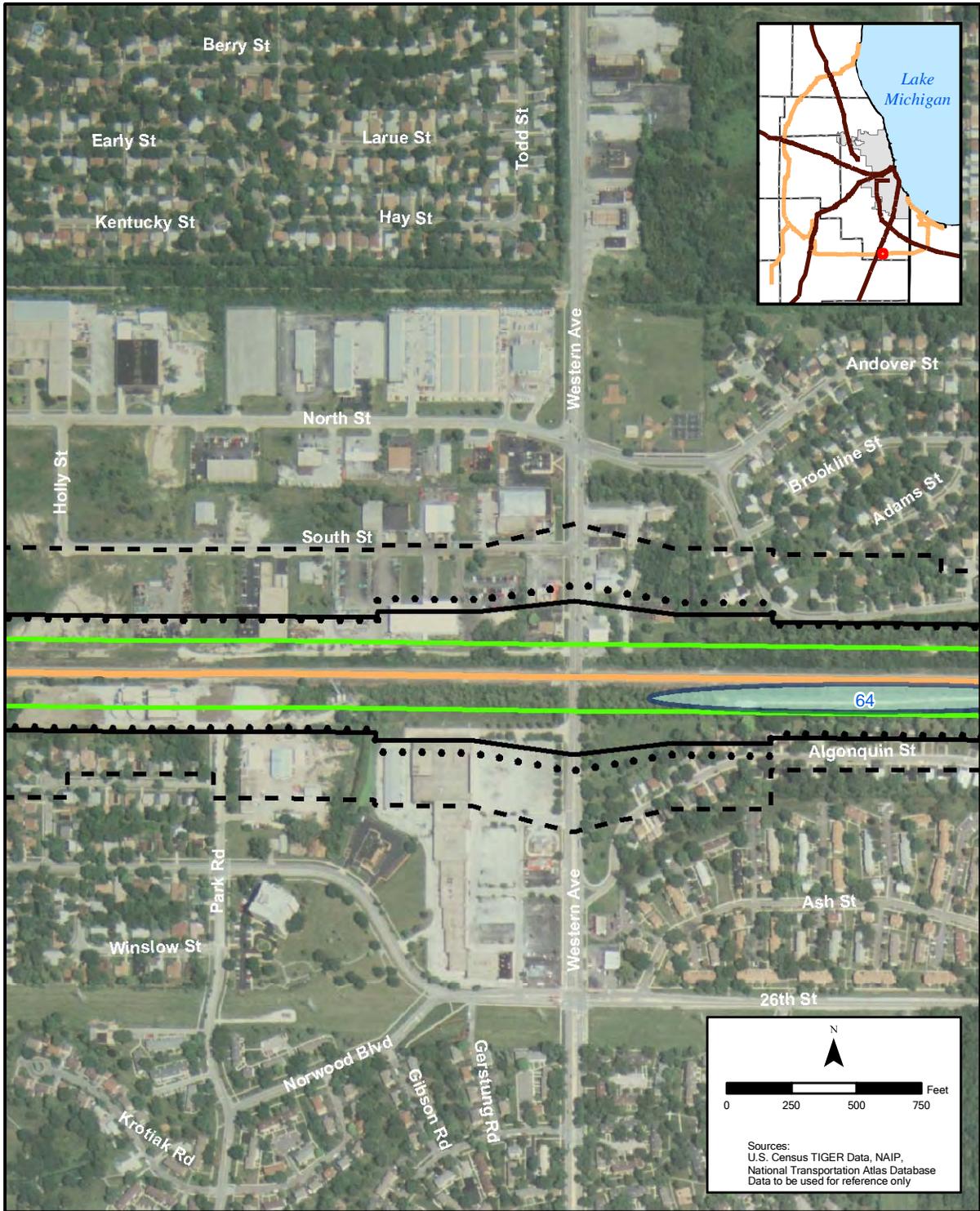
Figure L-1
Noise and Vibration
Contours
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- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
- Existing
- • • 65 dBA Contour
- Proposed Action
- - - 65 dBA Contour
 - - - 70 dBA Contour
 - Vibration Contour

Figure L-1
 Noise and Vibration
 Contours

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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



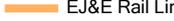
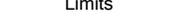
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|---|----------------------------|----------------------|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | - - - 65 dBA Contour |
|  | Cost-Effective Barrier | - - - 70 dBA Contour |
|  | Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours
 Sheet 108 of 139

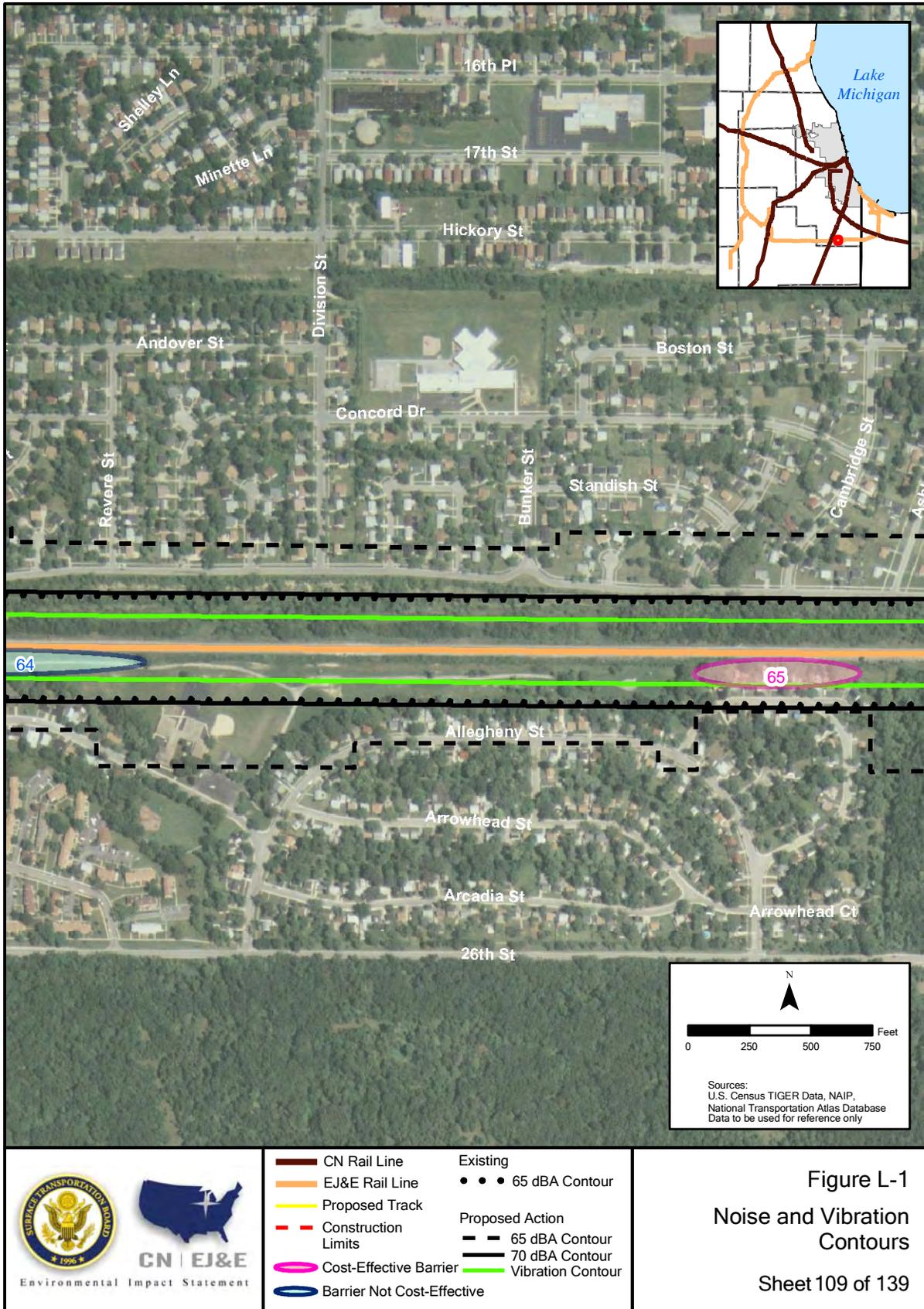
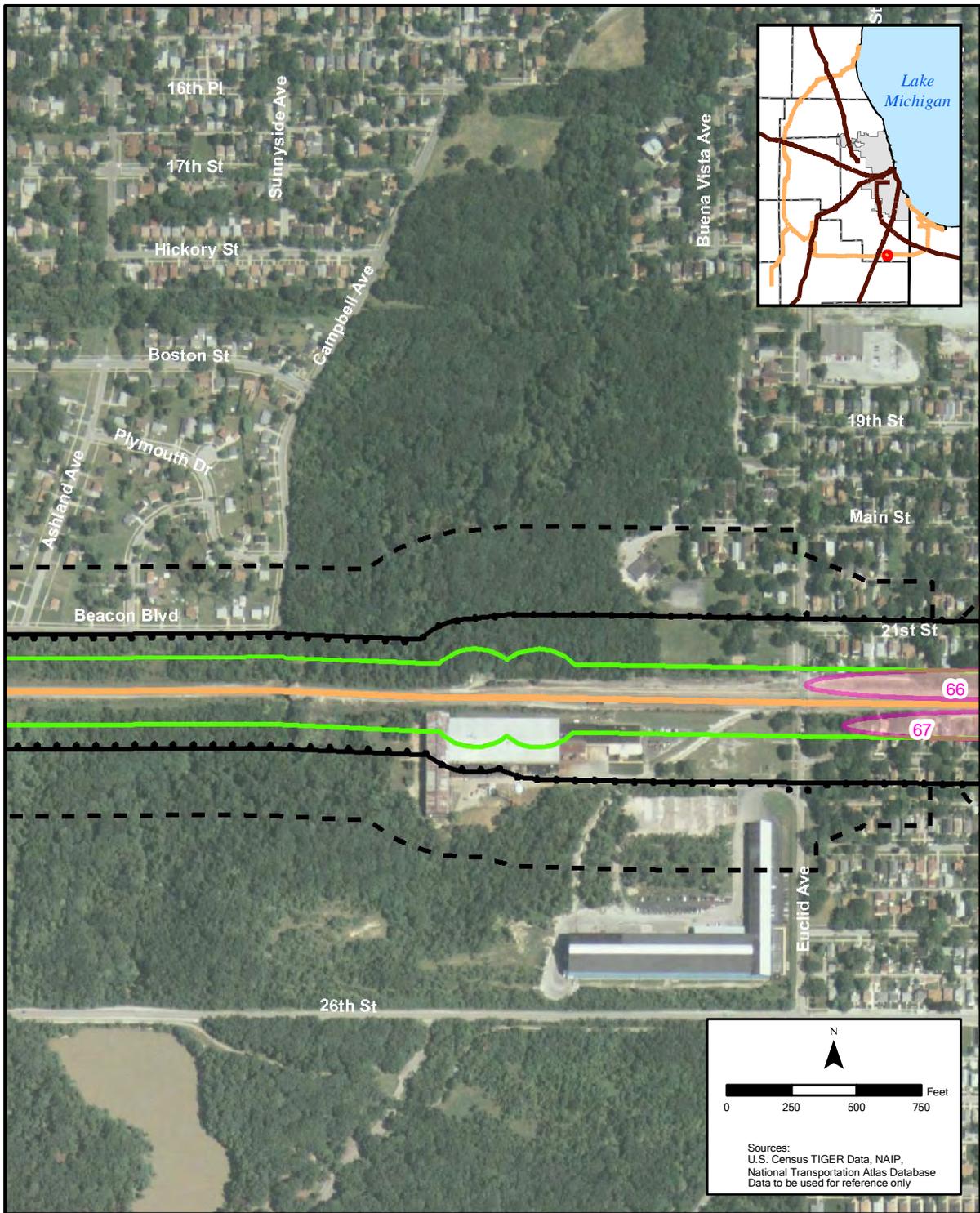


Figure L-1
Noise and Vibration
Contours

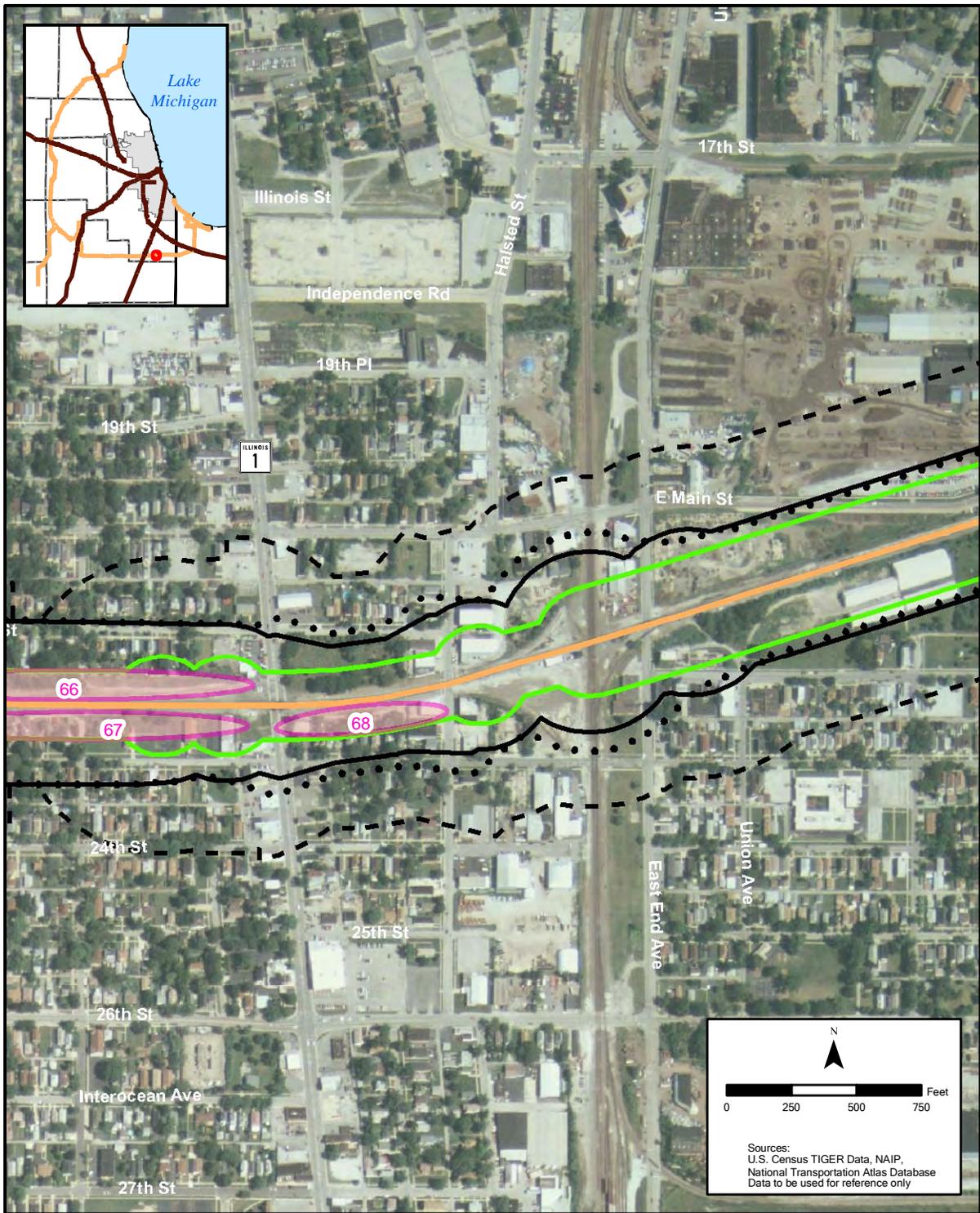


Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



- | | |
|----------------------------|----------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | • • • 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | --- 65 dBA Contour |
| Cost-Effective Barrier | — 70 dBA Contour |
| Barrier Not Cost-Effective | — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours
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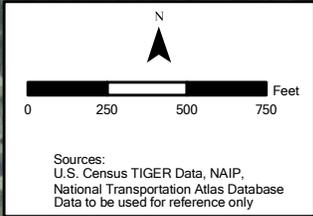
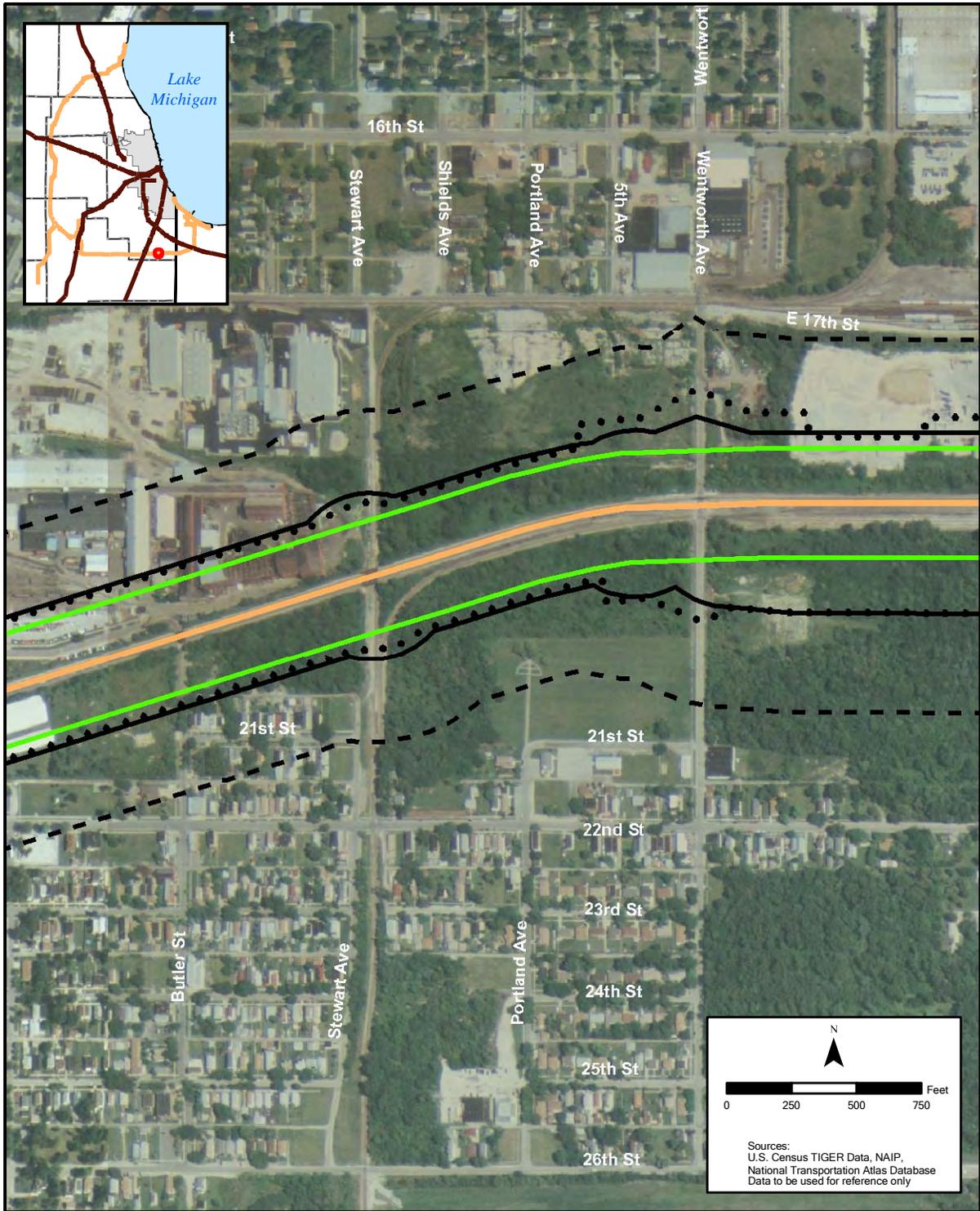
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|----------------------------|-------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | 65 dBA Contour |
| Cost-Effective Barrier | 70 dBA Contour |
| Barrier Not Cost-Effective | Vibration Contour |

Figure L-1
Noise and Vibration
Contours
 Sheet 111 of 139

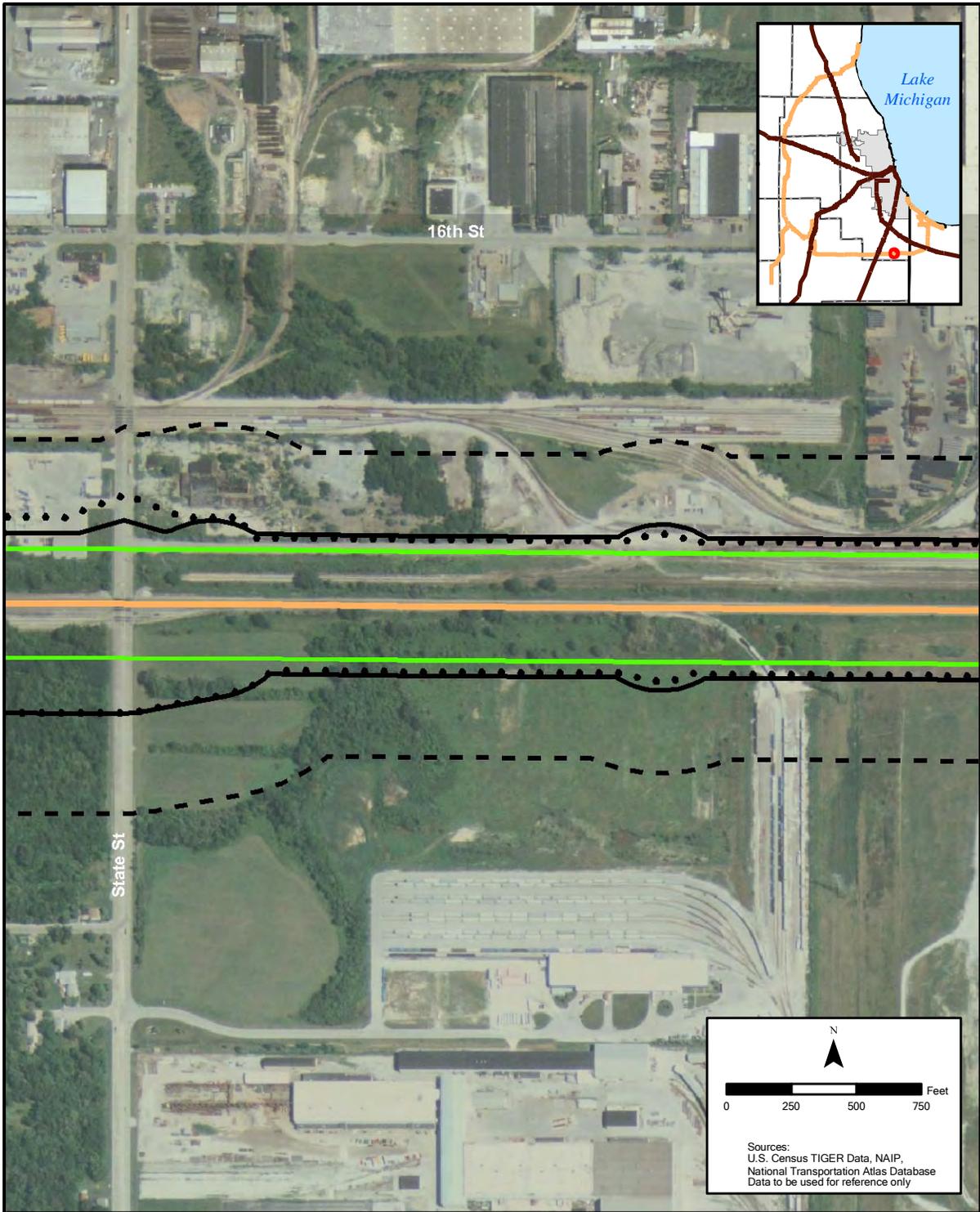


Sources:
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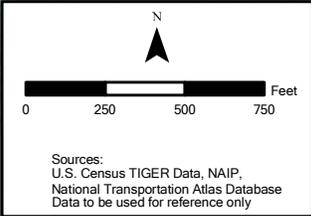
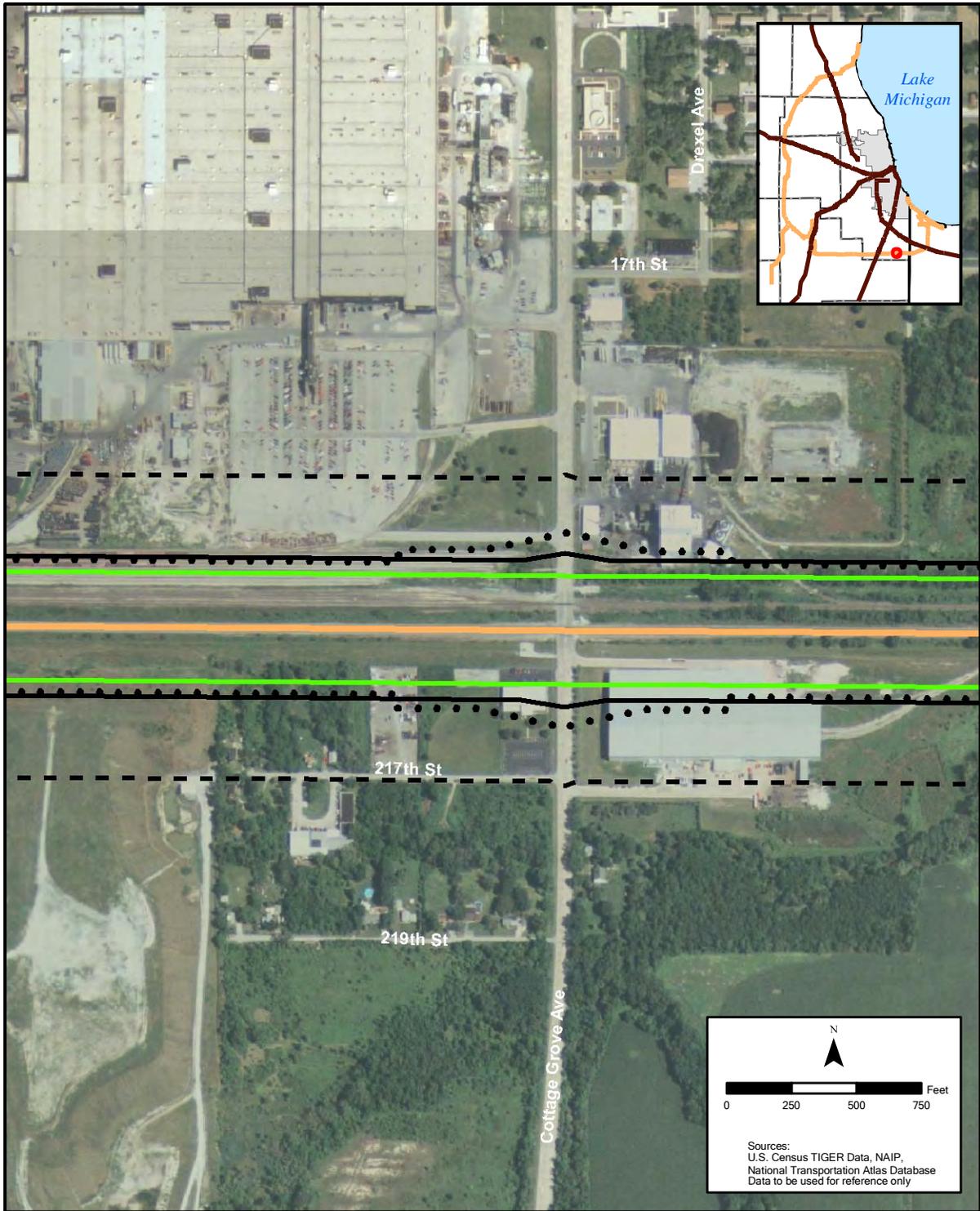
- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
- Existing
 - 65 dBA Contour
 - Proposed Action
 - 65 dBA Contour
 - 70 dBA Contour
 - Vibration Contour

Figure L-1
 Noise and Vibration
 Contours
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- | | | |
|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | - - - 65 dBA Contour |
| | Cost-Effective Barrier | - - - 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

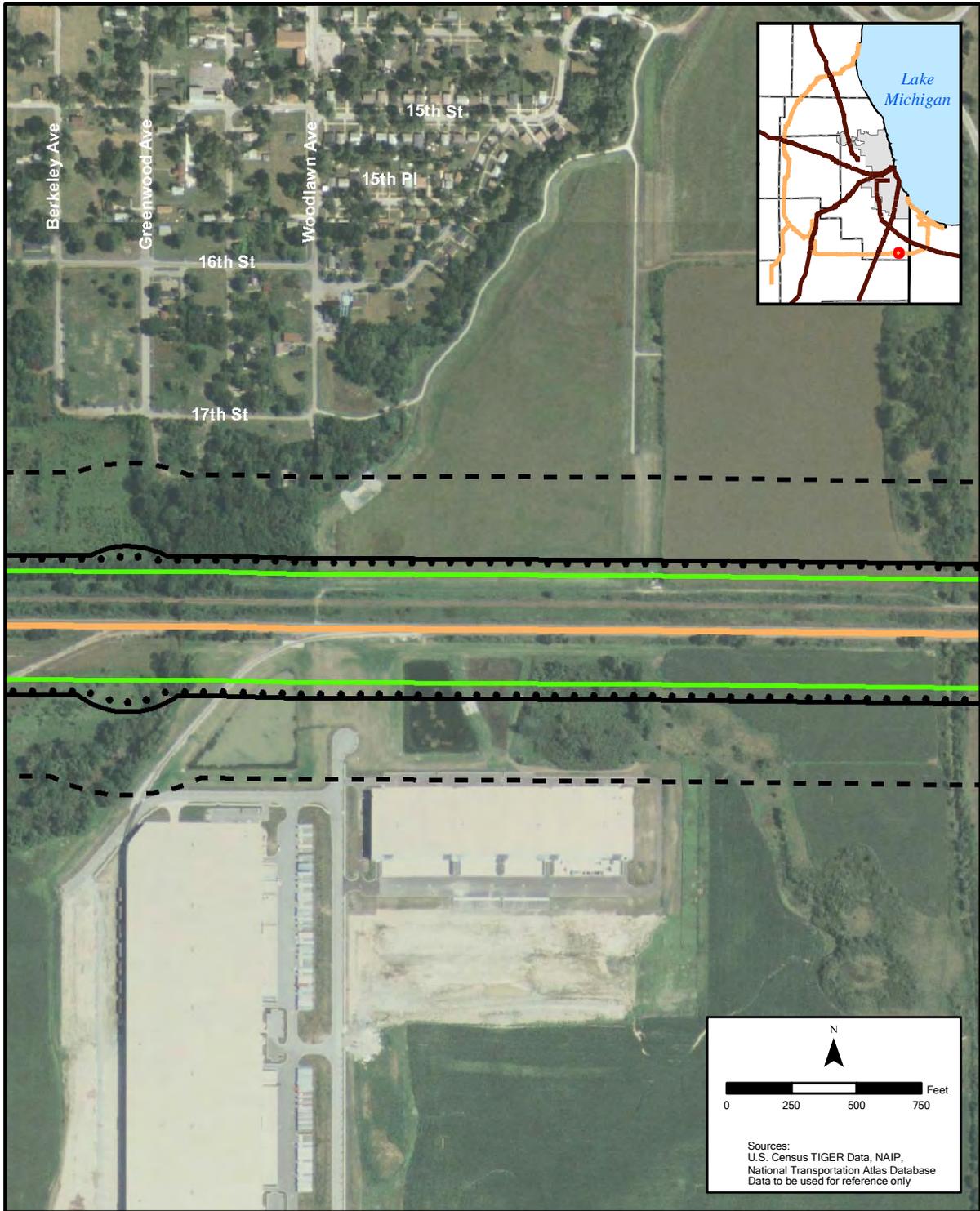
Figure L-1
 Noise and Vibration
 Contours
 Sheet 113 of 139



- | | | |
|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours

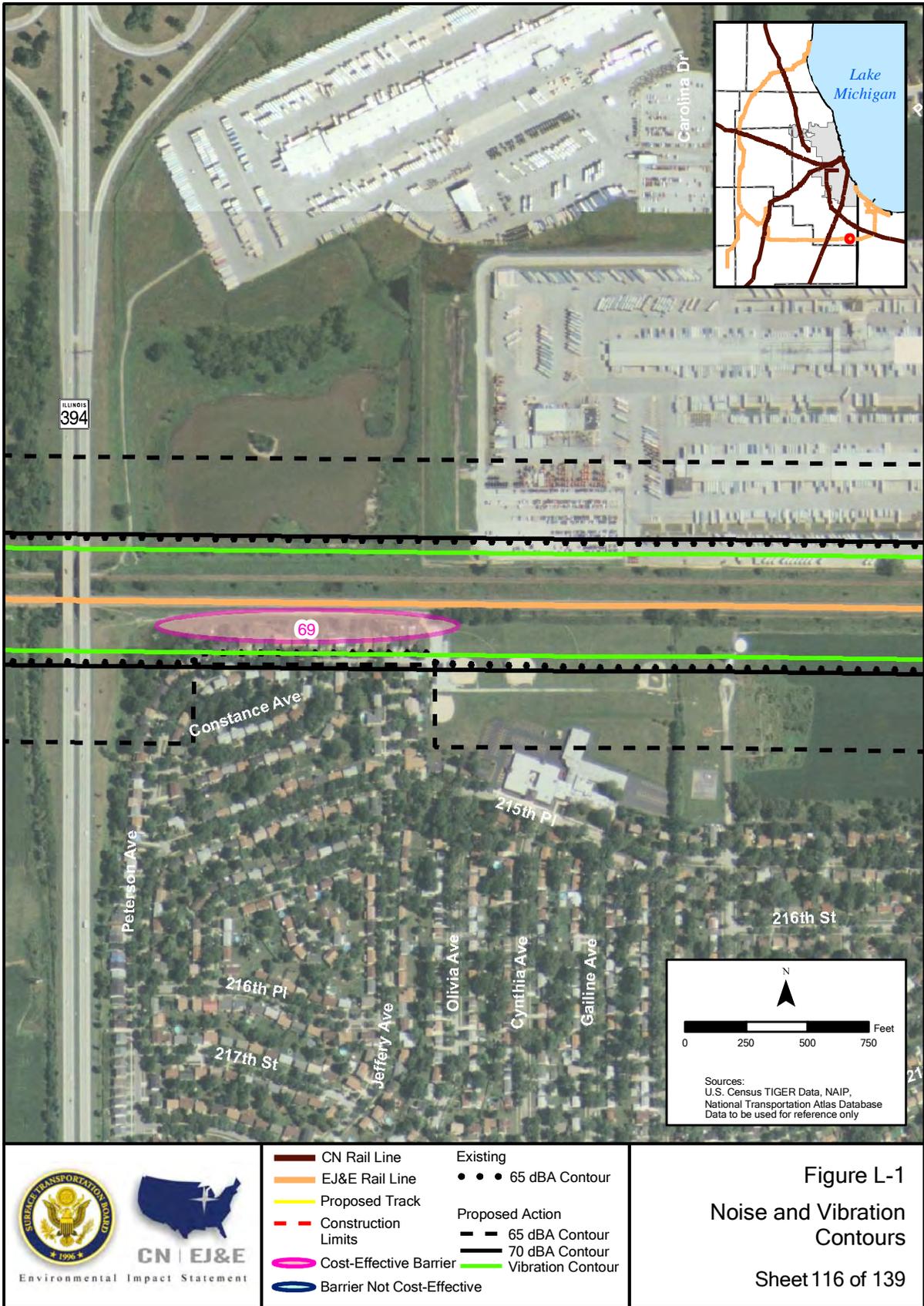
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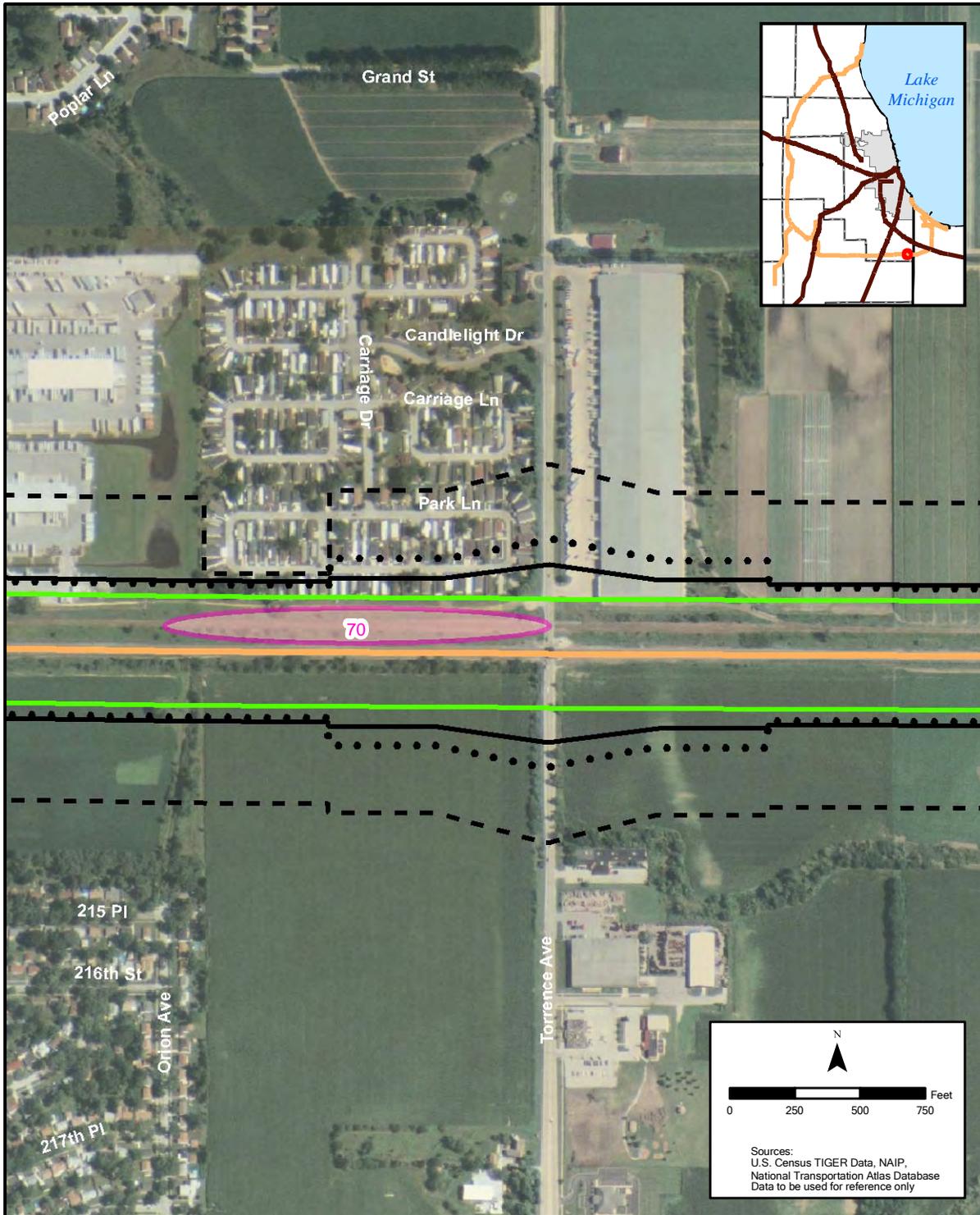


Environmental Impact Statement

- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
-
- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - - - 65 dBA Contour
 - - - 70 dBA Contour
 - Vibration Contour

Figure L-1
Noise and Vibration
Contours
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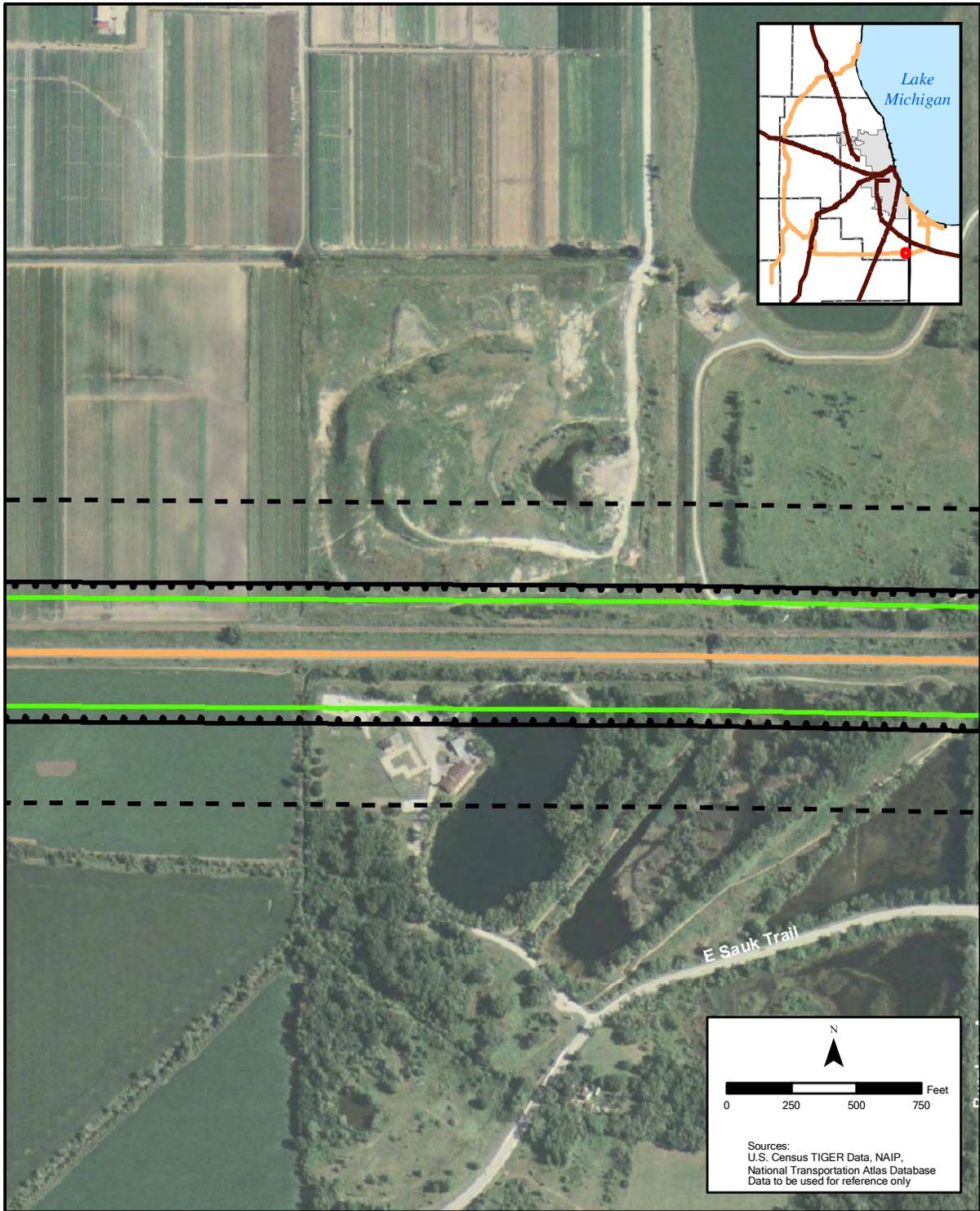
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 Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|--|----------------------------|-------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Proposed Action |
| | Construction Limits | Proposed Action |
| | Cost-Effective Barrier | Proposed Action |
| | Barrier Not Cost-Effective | Proposed Action |
| | | Existing |
| | | 65 dBA Contour |
| | | Proposed Action |
| | | 65 dBA Contour |
| | | 70 dBA Contour |
| | | Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours

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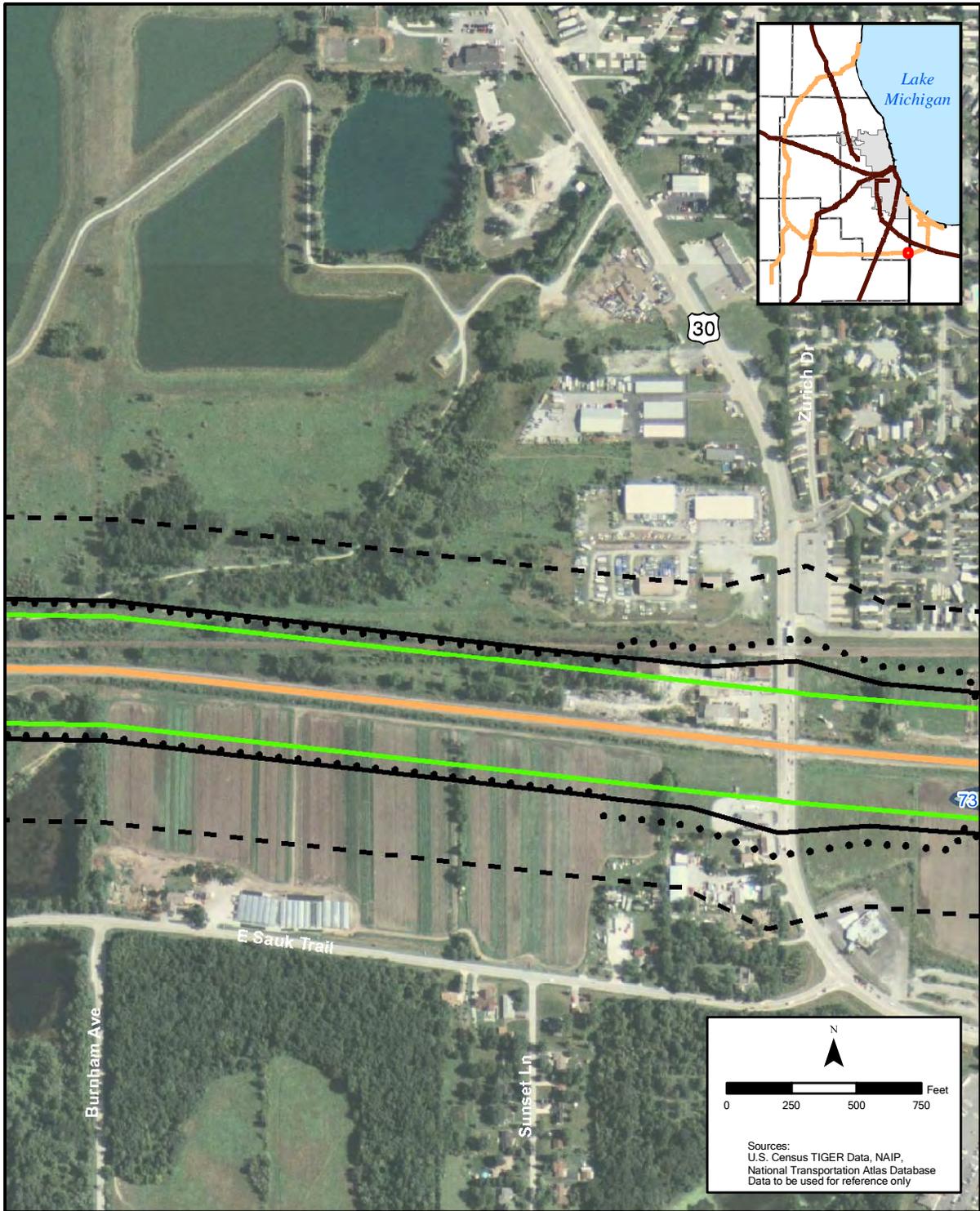


Environmental Impact Statement

- CN Rail Line Existing
- EJ&E Rail Line
- Proposed Track
- - - Construction Limits
- Cost-Effective Barrier
- Barrier Not Cost-Effective
- • • 65 dBA Contour
- - - Proposed Action 65 dBA Contour
- 70 dBA Contour
- Vibration Contour

Figure L-1
Noise and Vibration
Contours

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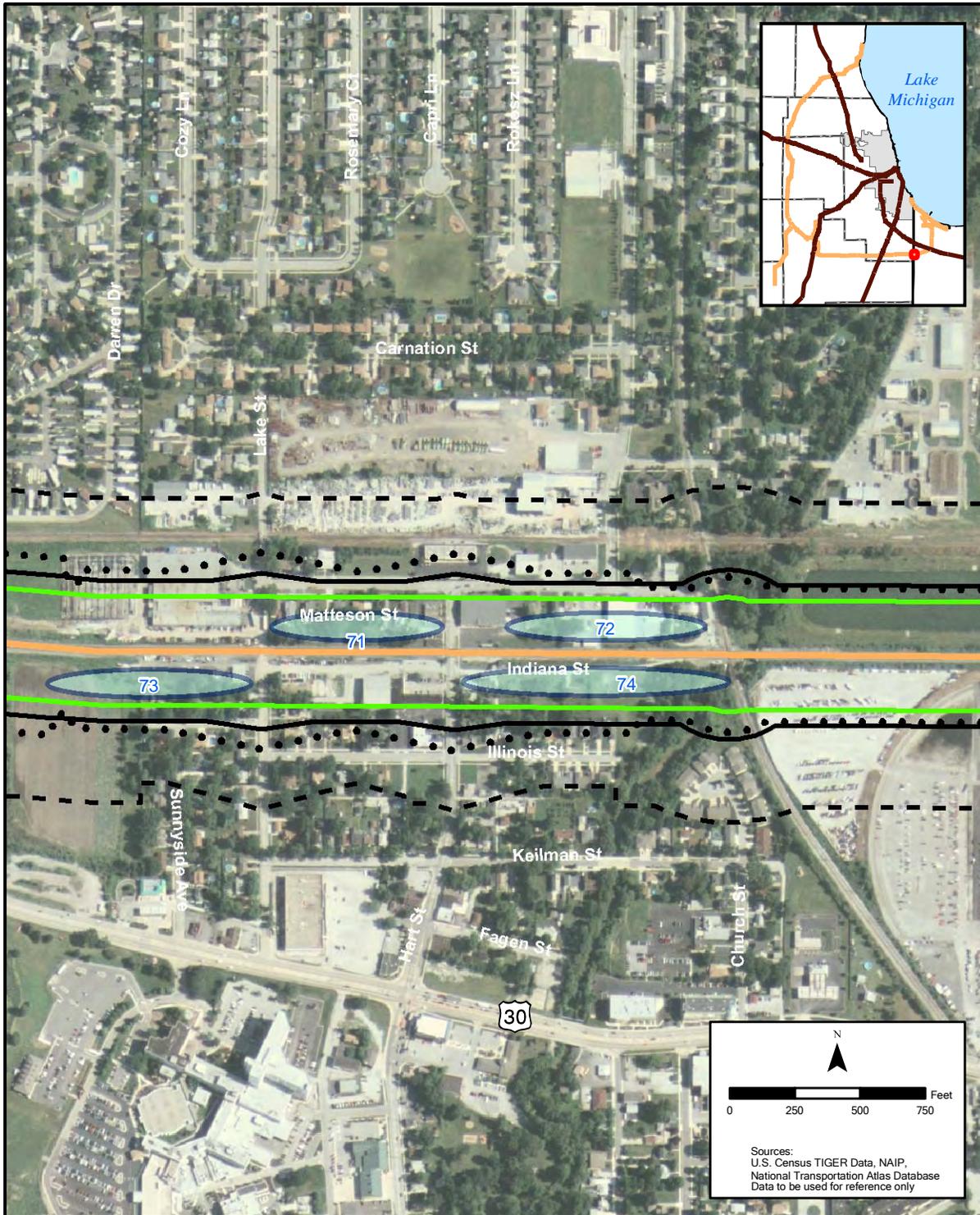


Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



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|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours
 Sheet 119 of 139

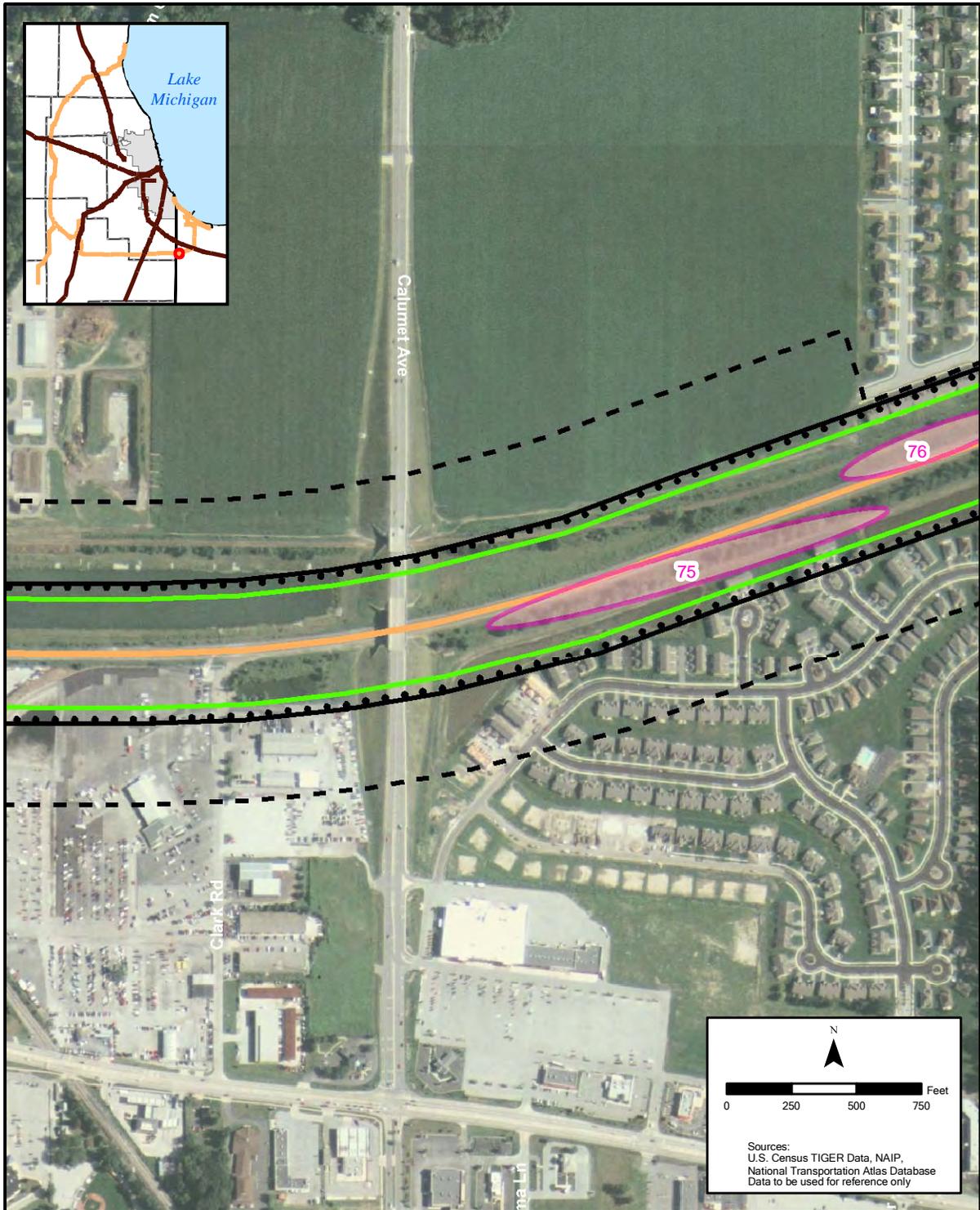


Environmental Impact Statement

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|---|----------------------------|-------------------------|
|  | CN Rail Line | Existing |
|  | EJ&E Rail Line | • • • 65 dBA Contour |
|  | Proposed Track | Proposed Action |
|  | Construction Limits | - - - 65 dBA Contour |
|  | Cost-Effective Barrier | - - - 70 dBA Contour |
|  | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
Noise and Vibration
Contours

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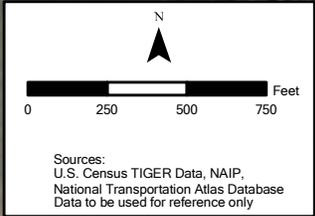
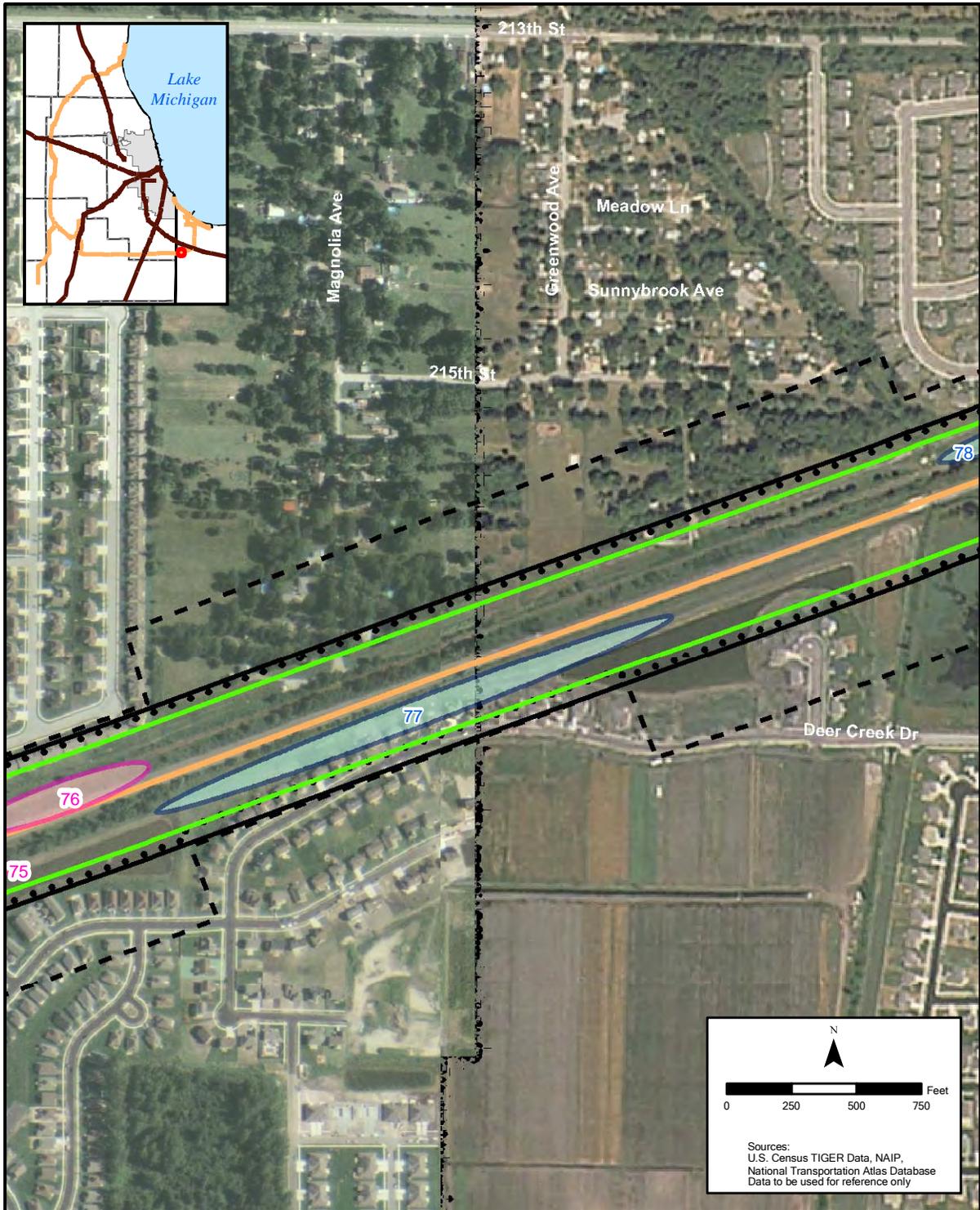
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 National Transportation Atlas Database
 Data to be used for reference only



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|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours

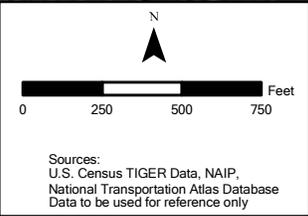
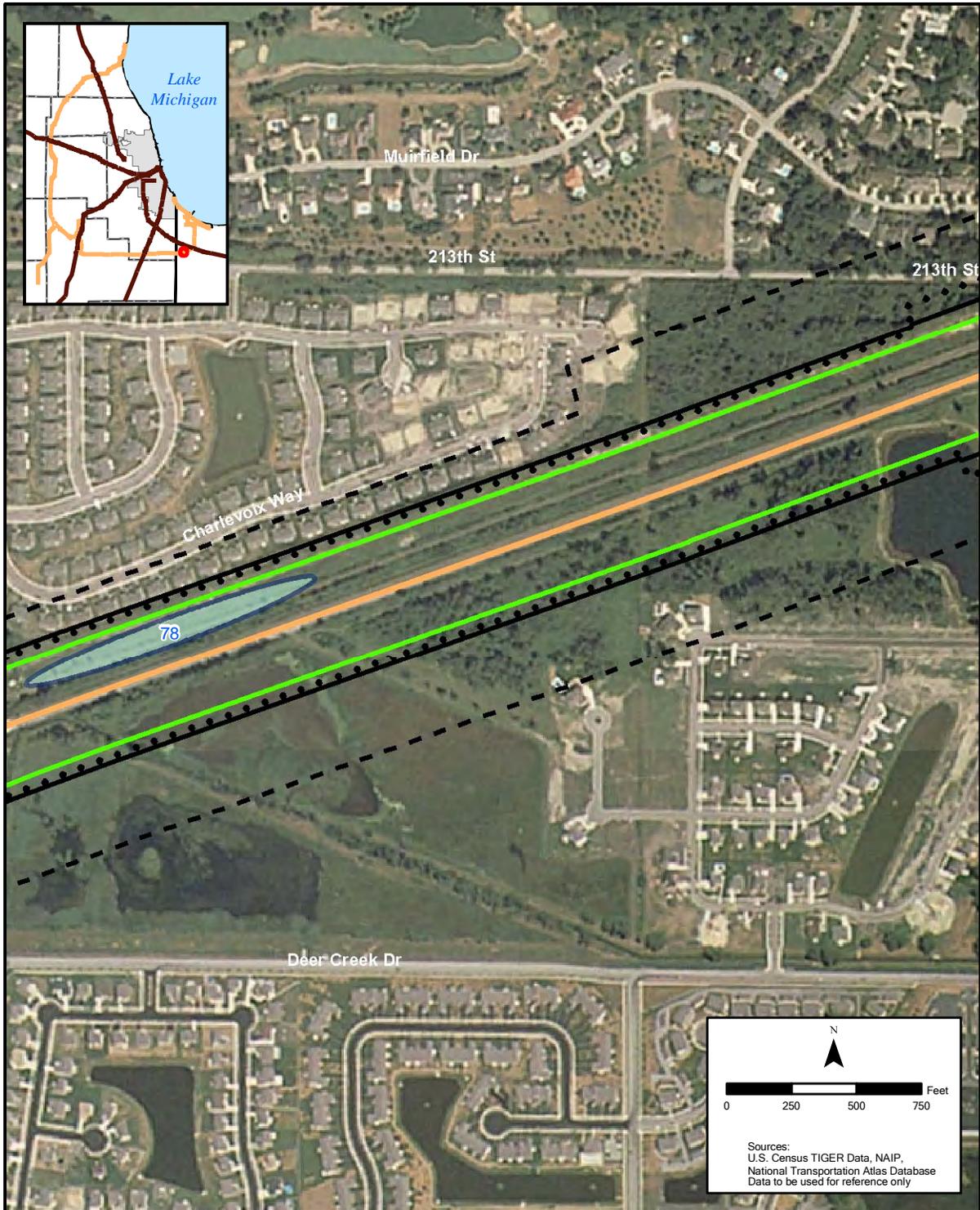
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|----------------------------|-------------------|
| CN Rail Line | Existing |
| EJ&E Rail Line | 65 dBA Contour |
| Proposed Track | Proposed Action |
| Construction Limits | 65 dBA Contour |
| Cost-Effective Barrier | 70 dBA Contour |
| Barrier Not Cost-Effective | Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours

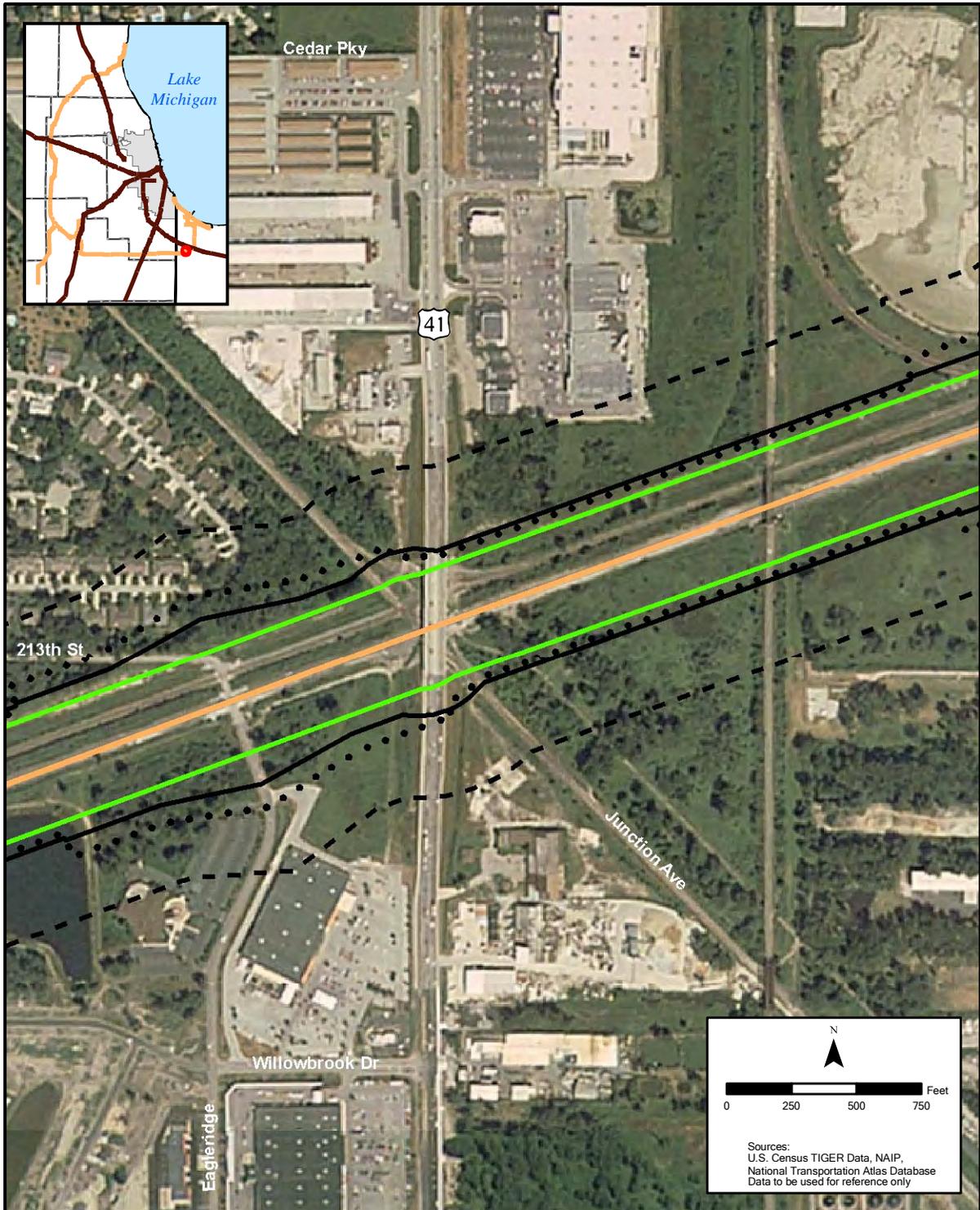
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|--|----------------------------|-------------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | • • • 65 dBA Contour |
| | Proposed Track | Proposed Action |
| | Construction Limits | — — — 65 dBA Contour |
| | Cost-Effective Barrier | — — — 70 dBA Contour |
| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
 Contours

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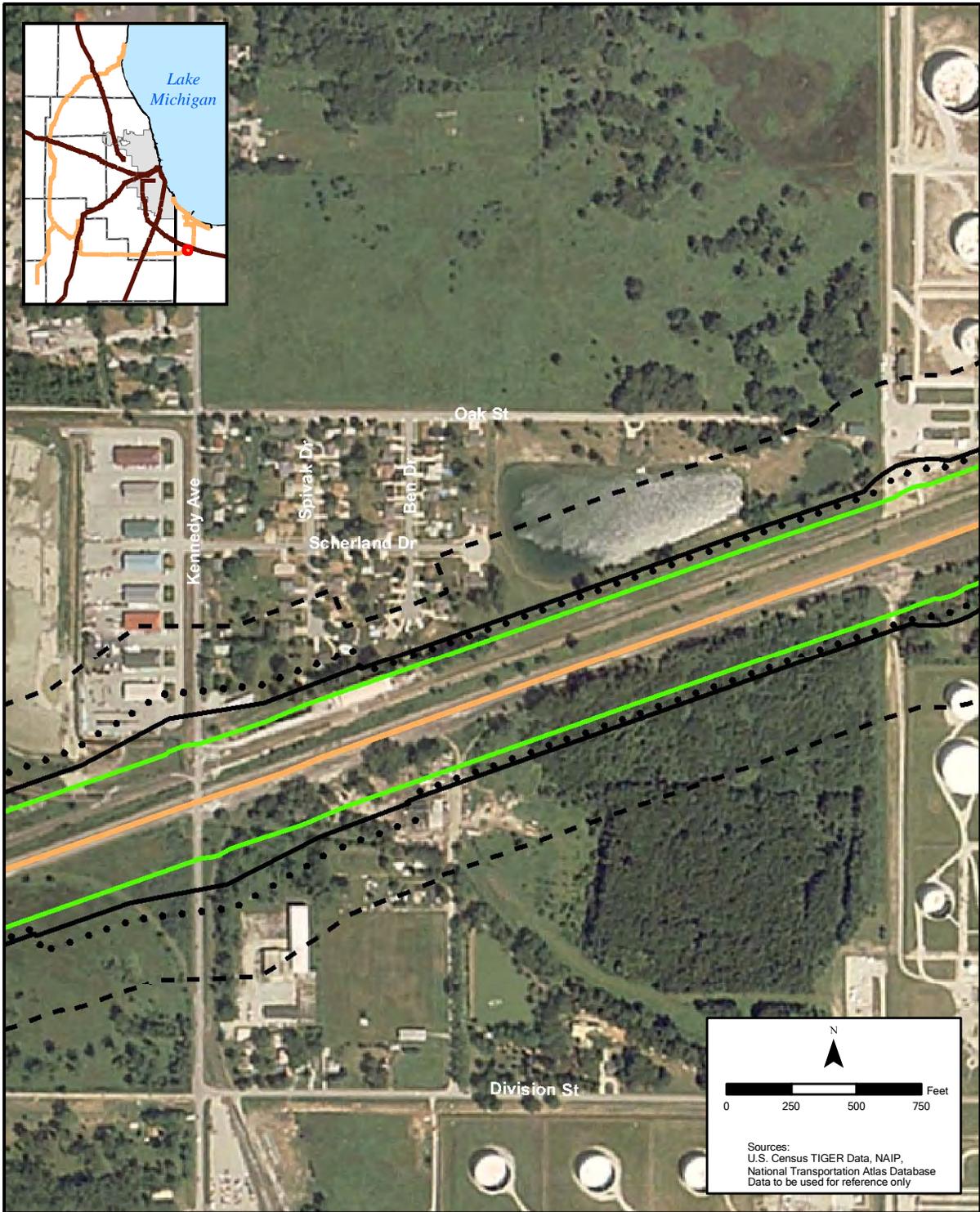


Environmental Impact Statement

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|---|----------------------------|---|-------------------|
|  | CN Rail Line | Existing | |
|  | EJ&E Rail Line | • • • 65 dBA Contour | |
|  | Proposed Track | Proposed Action | |
|  | Construction Limits | - - - 65 dBA Contour | |
|  | Cost-Effective Barrier | - - - 70 dBA Contour | |
|  | Barrier Not Cost-Effective |  | Vibration Contour |

Figure L-1
Noise and Vibration
Contours

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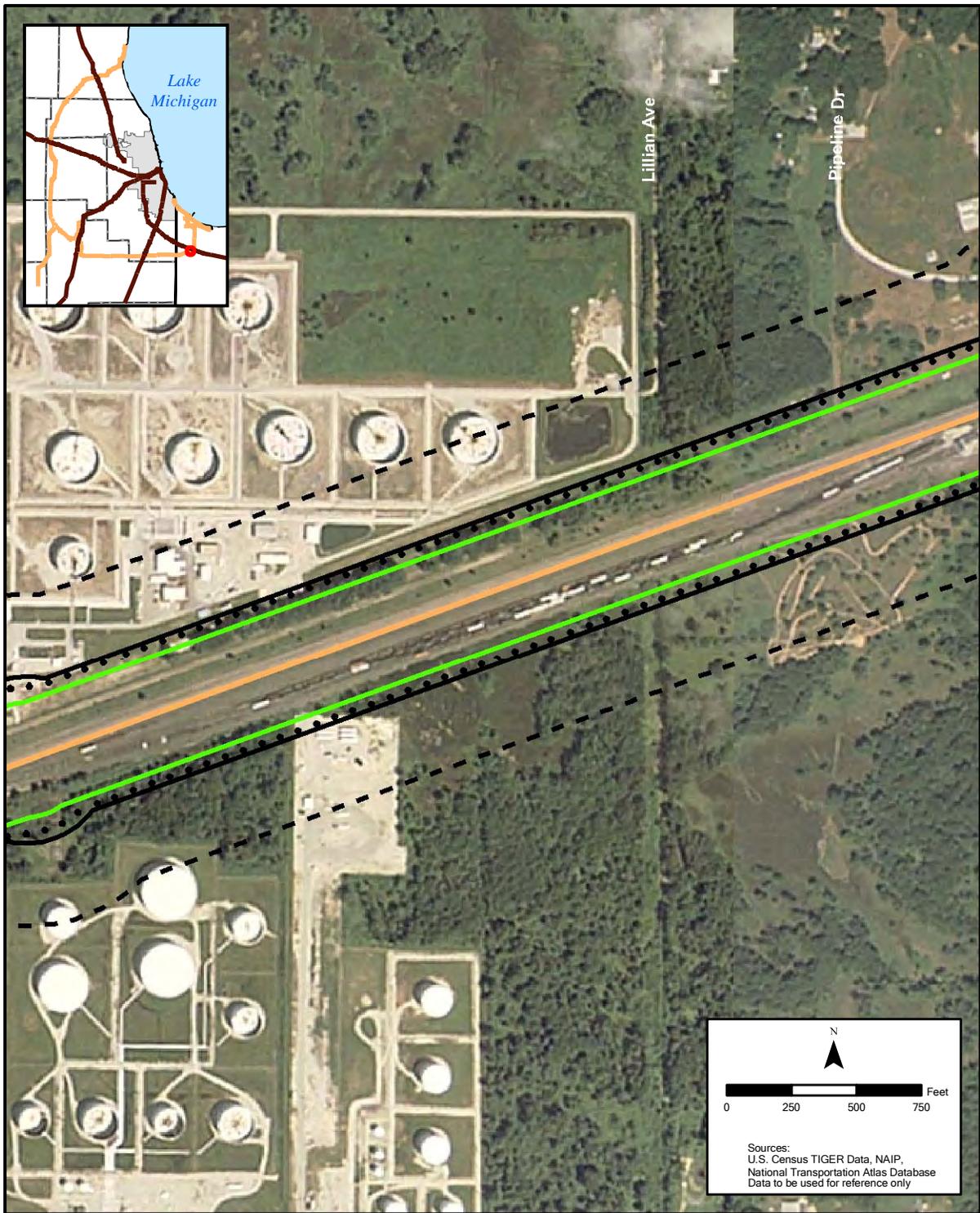
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

CN | EJ&E
 Environmental Impact Statement

- | | | |
|--|----------------------------|-----------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Proposed Action |
| | Construction Limits | Proposed Action |
| | Cost-Effective Barrier | Proposed Action |
| | Barrier Not Cost-Effective | Proposed Action |
| | 65 dBA Contour | Existing |
| | 65 dBA Contour | Proposed Action |
| | 70 dBA Contour | Proposed Action |
| | Vibration Contour | Proposed Action |

Figure L-1
Noise and Vibration
Contours



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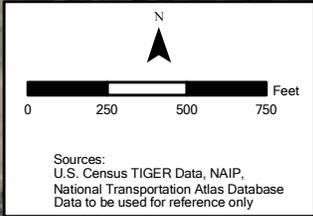
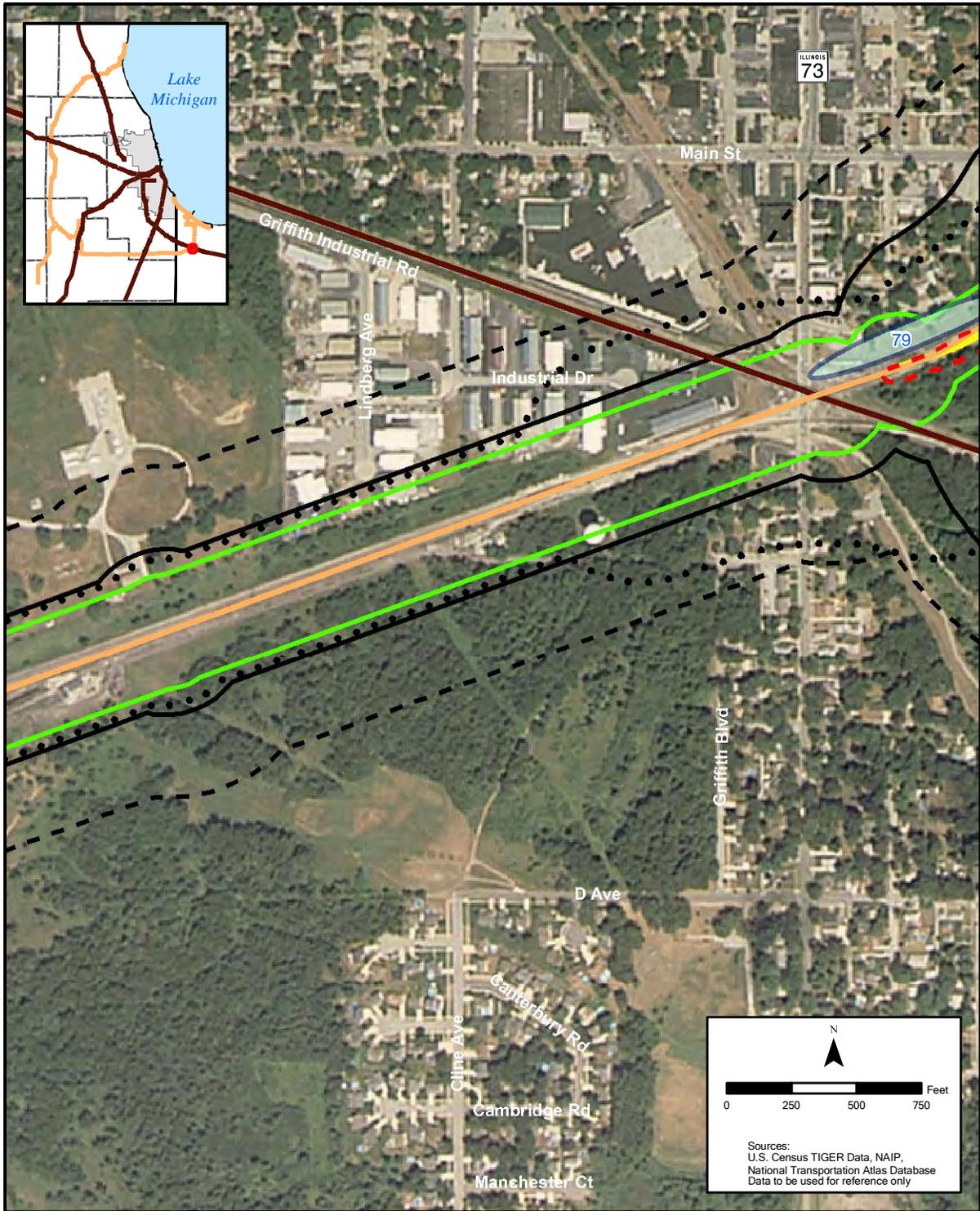
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only

Environmental Impact Statement

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|--|----------------------------|-------------------|
| | CN Rail Line | Existing |
| | EJ&E Rail Line | Existing |
| | Proposed Track | Proposed Action |
| | Construction Limits | Existing |
| | Cost-Effective Barrier | 65 dBA Contour |
| | Barrier Not Cost-Effective | 70 dBA Contour |
| | | Vibration Contour |

Figure L-1
Noise and Vibration
Contours
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Sources:
 U.S. Census TIGER Data, NAIP,
 National Transportation Atlas Database
 Data to be used for reference only



- CN Rail Line
- EJ&E Rail Line
- Proposed Track
- - - Construction Limits
- Cost-Effective Barrier
- Barrier Not Cost-Effective
- • • Existing 65 dBA Contour
- - - Proposed Action 65 dBA Contour
- - - Proposed Action 70 dBA Contour
- Vibration Contour

Figure L-1
 Noise and Vibration
 Contours
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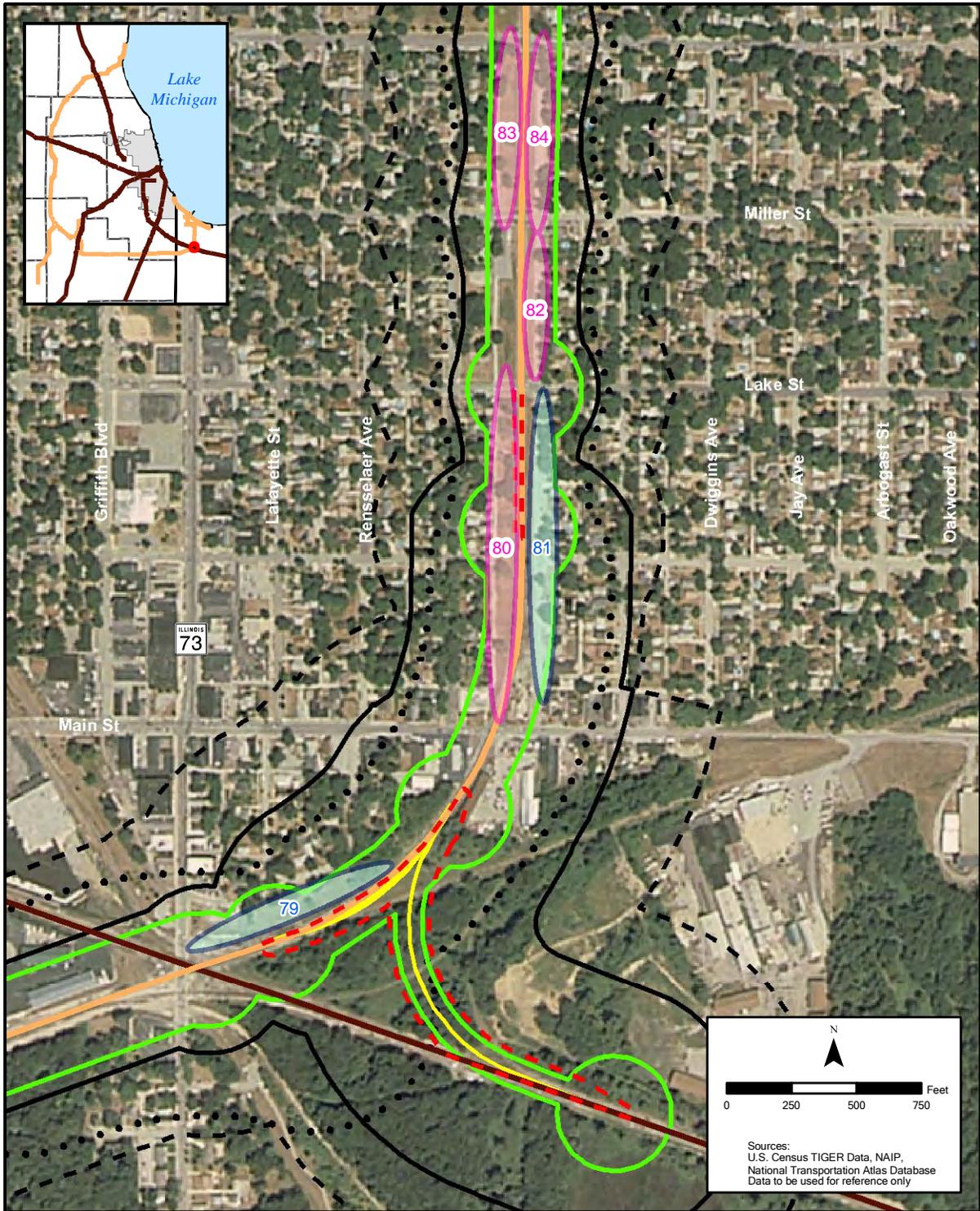
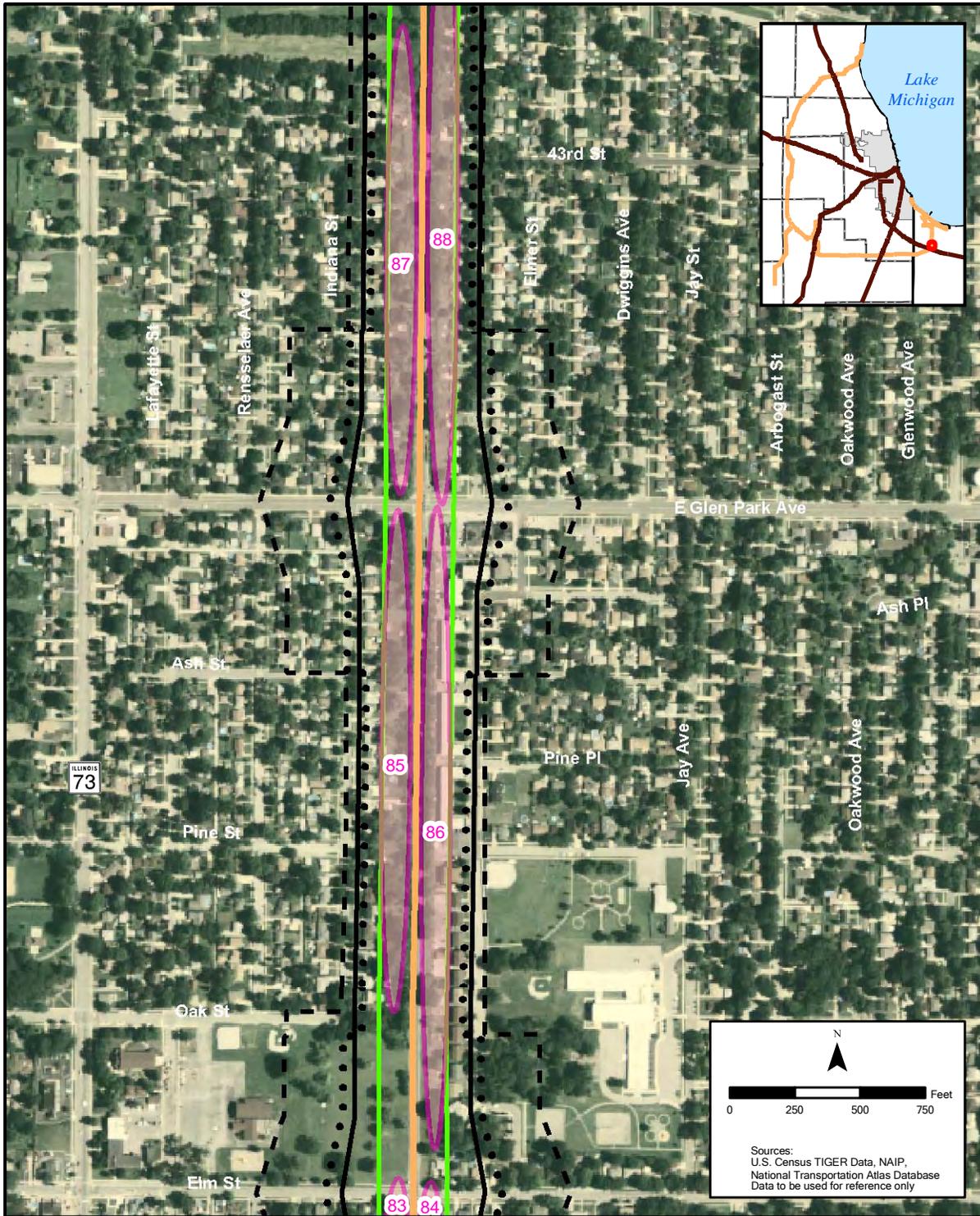


Figure L-1
Noise and Vibration
Contours

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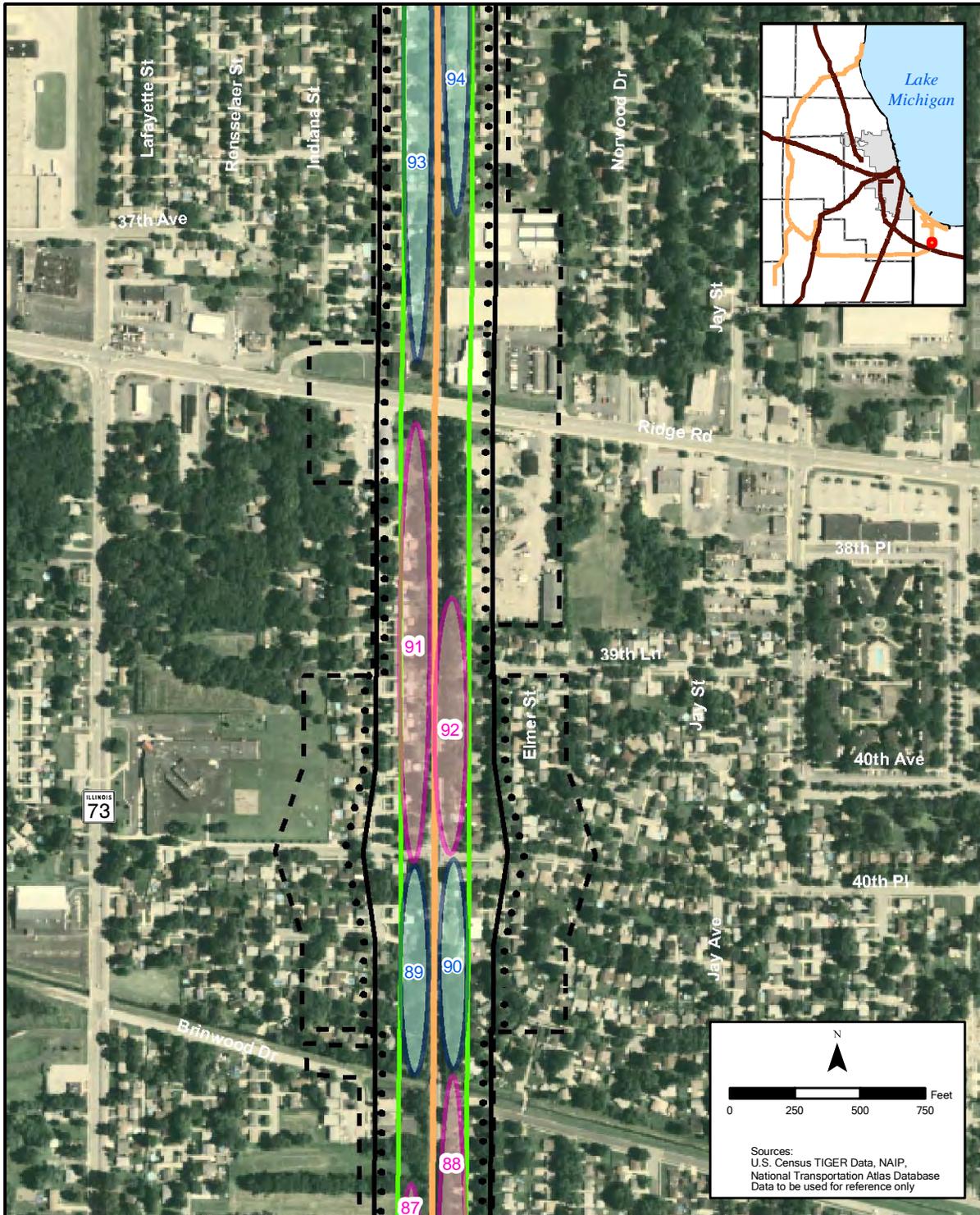


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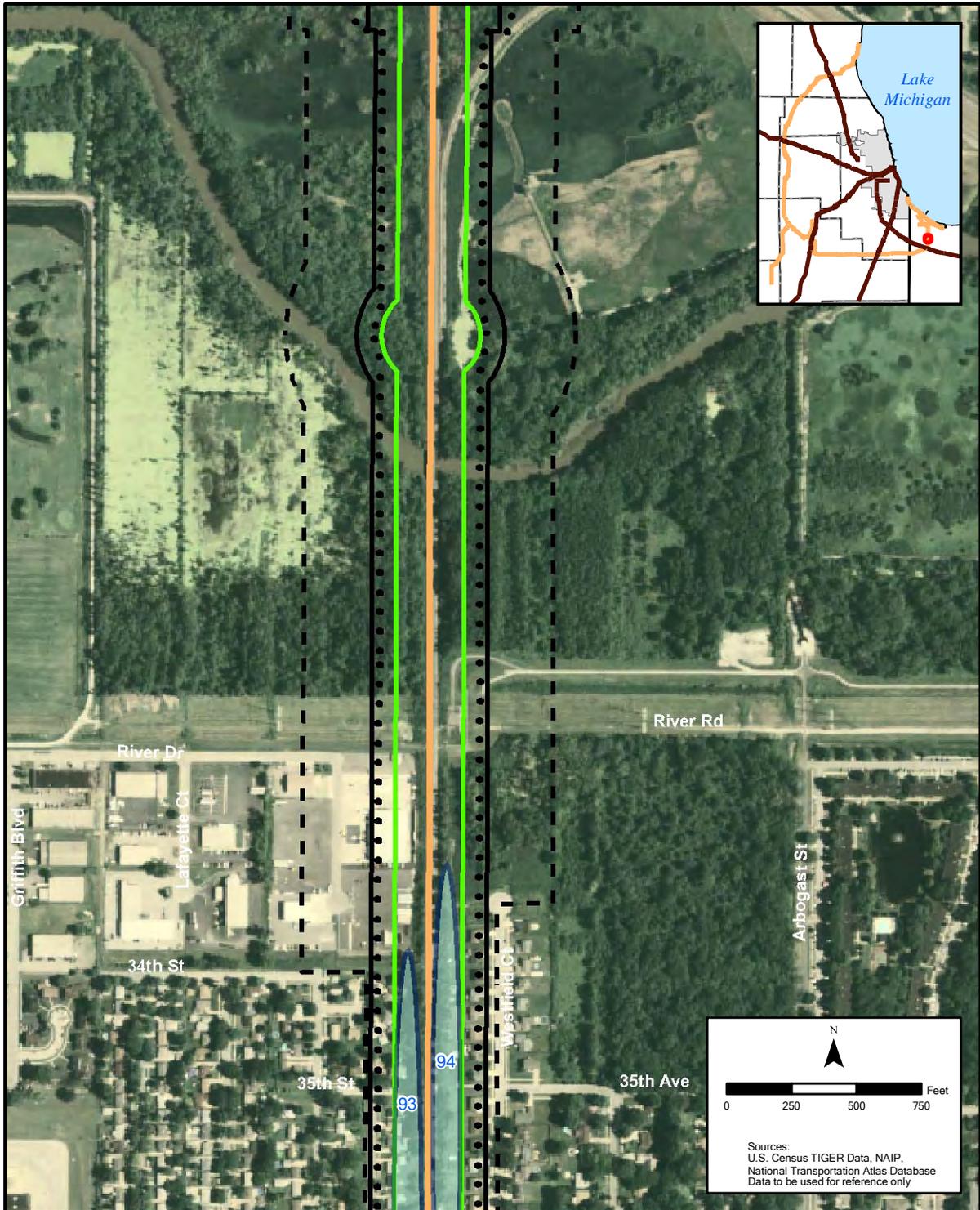
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Figure L-1
Noise and Vibration
Contours
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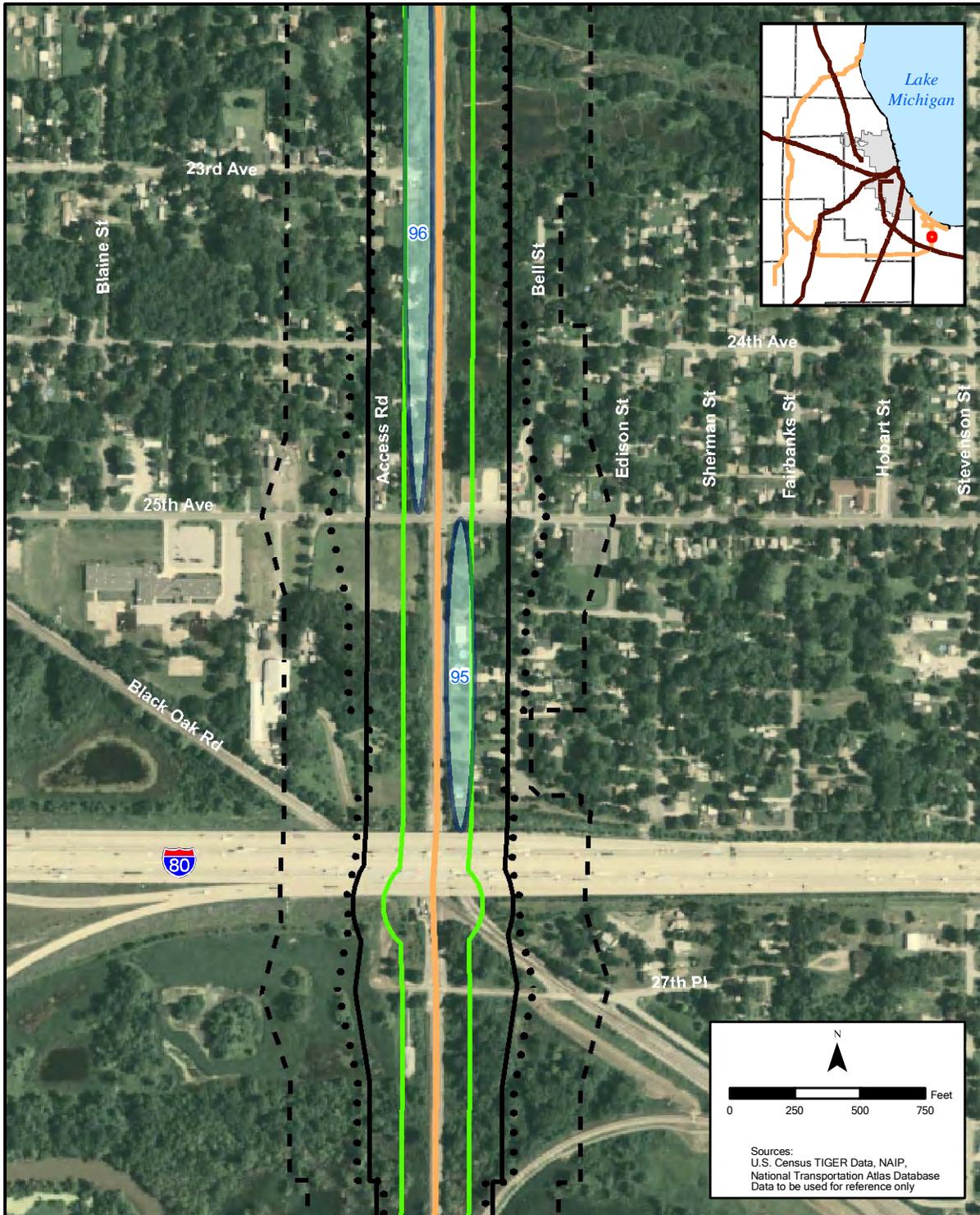
- CN Rail Line
 - EJ&E Rail Line
 - Proposed Track
 - - - Construction Limits
 - Cost-Effective Barrier
 - Barrier Not Cost-Effective
-
- Existing
 - • • 65 dBA Contour
 - Proposed Action
 - - - 65 dBA Contour
 - - - 70 dBA Contour
 - Vibration Contour

Figure L-1
Noise and Vibration
Contours
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  <p>GN EJ&E Environmental Impact Statement</p>	<p>— CN Rail Line</p> <p>— EJ&E Rail Line</p> <p>— Proposed Track</p> <p>— Construction Limits</p> <p>— Cost-Effective Barrier</p> <p>— Barrier Not Cost-Effective</p>	<p>Existing</p> <p>• • • 65 dBA Contour</p> <p>Proposed Action</p> <p>— 65 dBA Contour</p> <p>— 70 dBA Contour</p> <p>— Vibration Contour</p>
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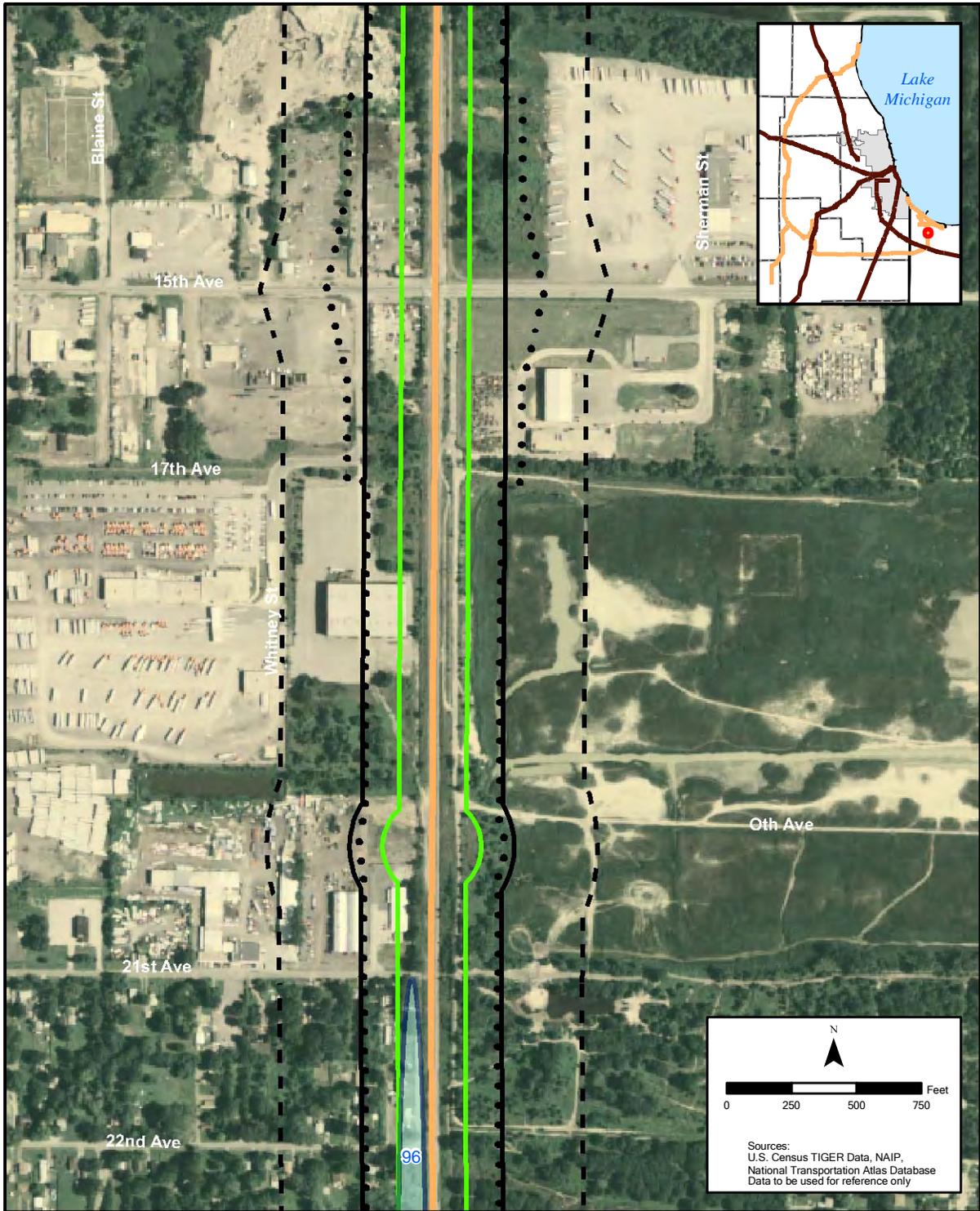
Figure L-1
Noise and Vibration
Contours
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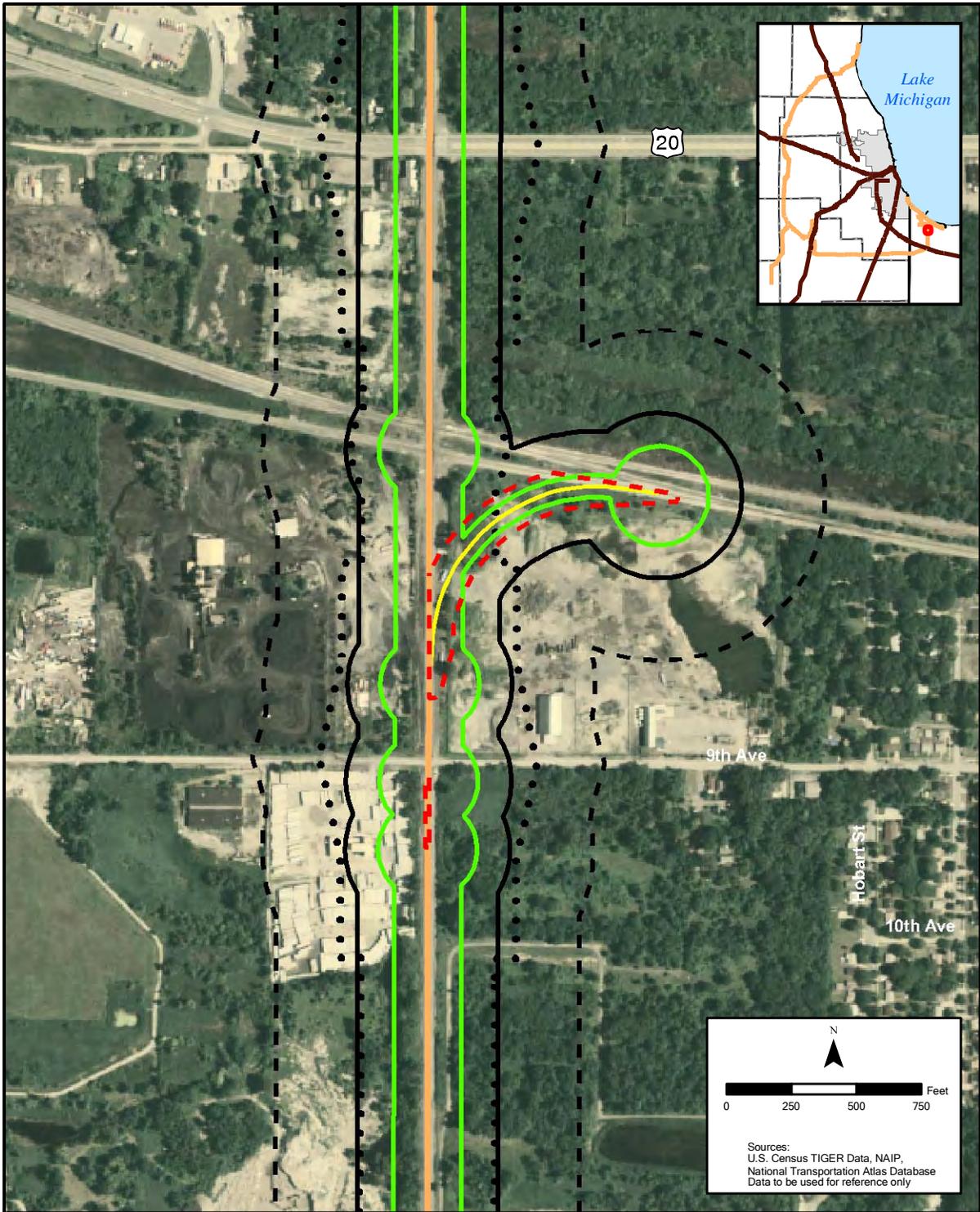
Figure L-1
Noise and Vibration
Contours

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 	CN Rail Line EJ&E Rail Line Proposed Track Construction Limits Cost-Effective Barrier Barrier Not Cost-Effective	Existing 65 dBA Contour Proposed Action 65 dBA Contour 70 dBA Contour Vibration Contour
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Figure L-1
Noise and Vibration
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 Sheet 133 of 139

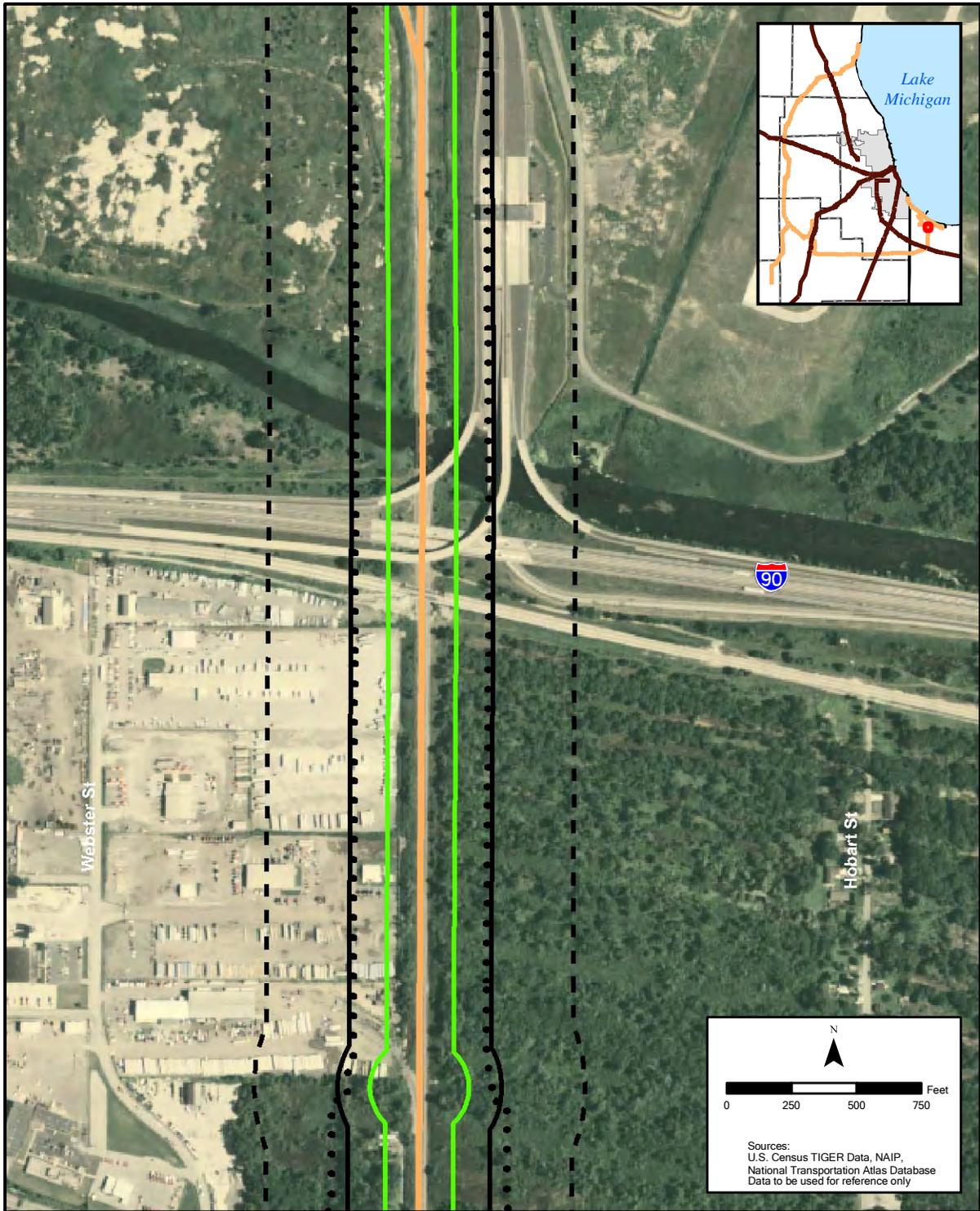


Sources:
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 National Transportation Atlas Database
 Data to be used for reference only



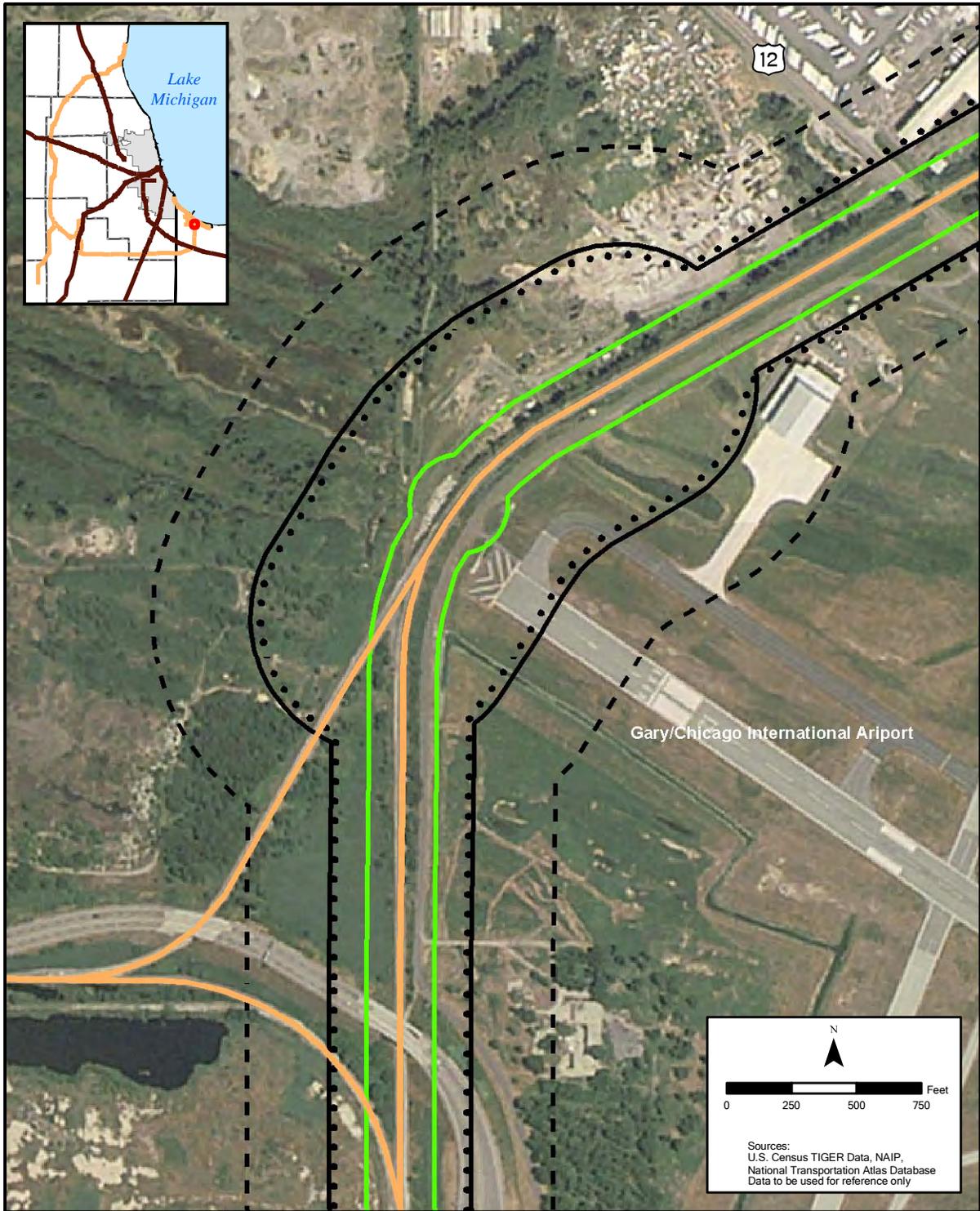
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Figure L-1
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Contours
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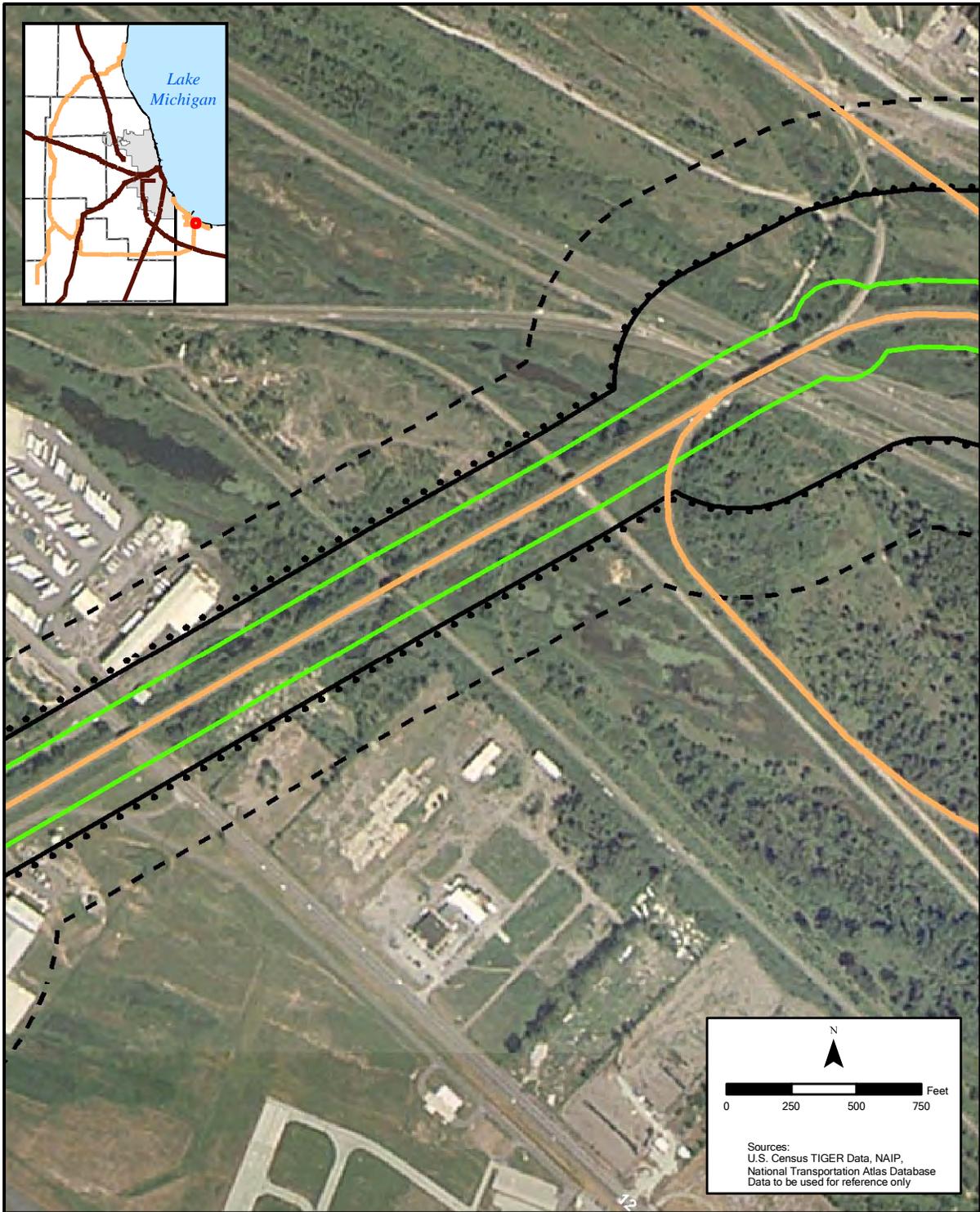
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Figure L-1
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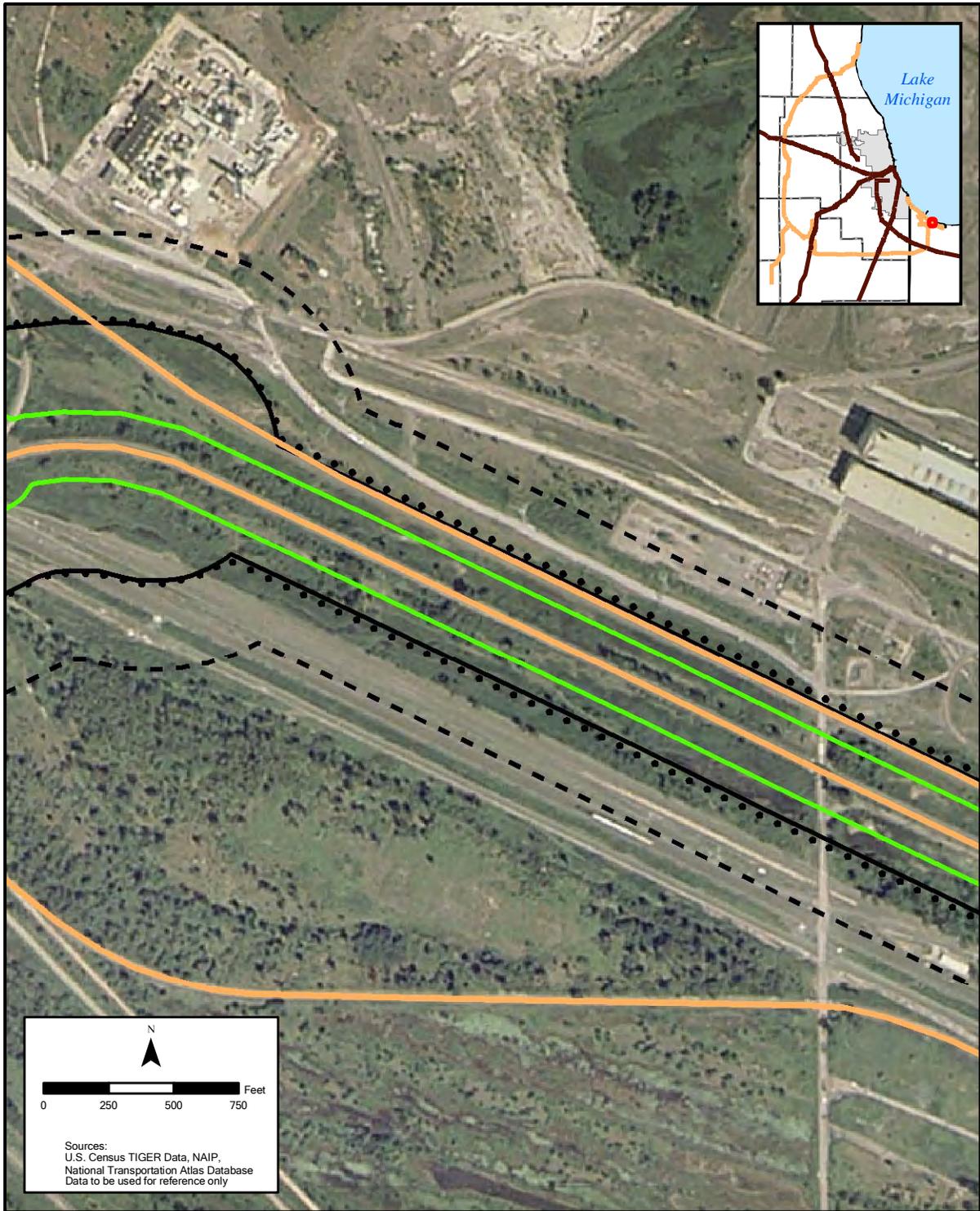


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 Sources:
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 National Transportation Atlas Database
 Data to be used for reference only



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| | Barrier Not Cost-Effective | — — — Vibration Contour |

Figure L-1
 Noise and Vibration
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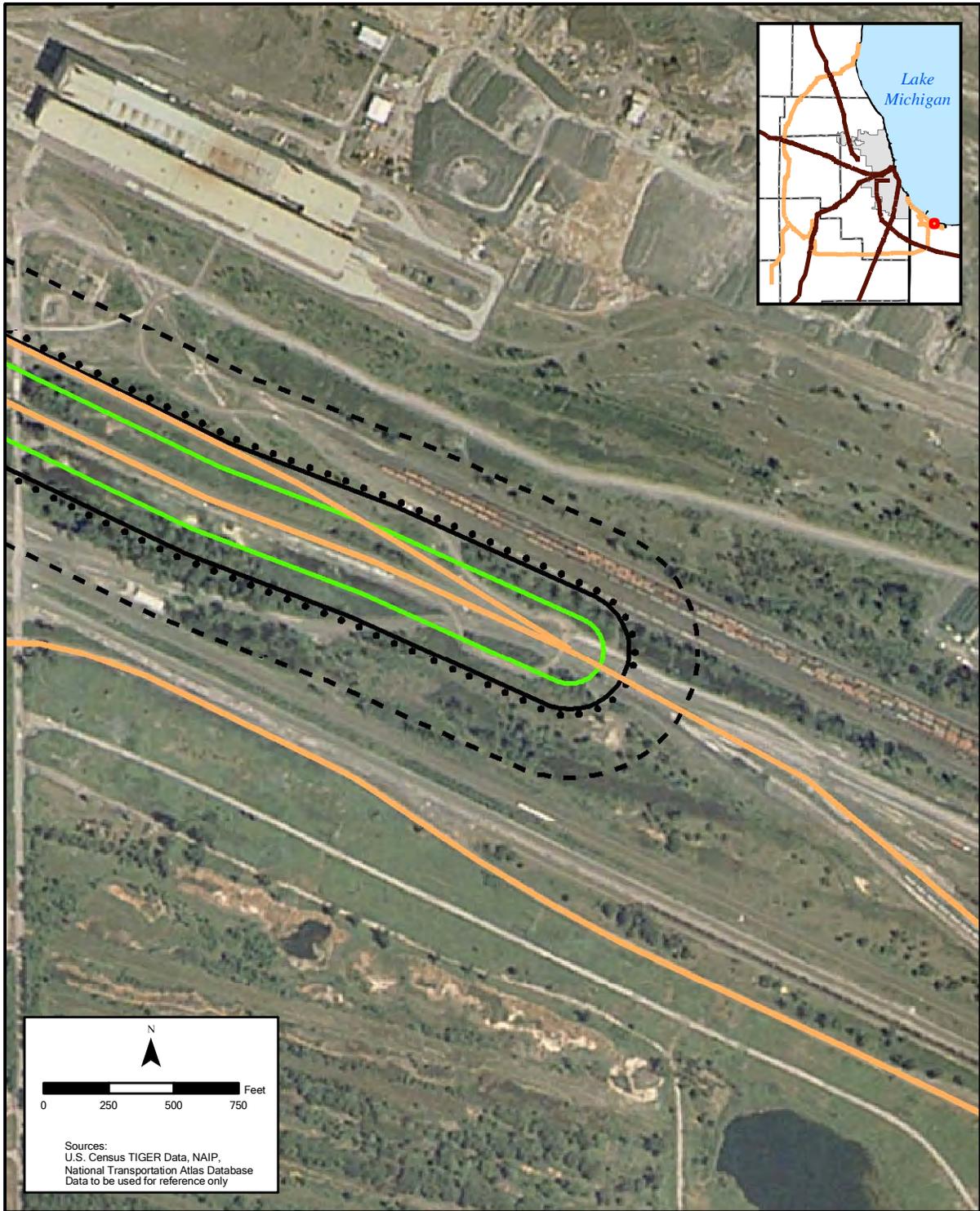



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Figure L-1
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Figure L-1
 Noise and Vibration
 Contours

A.9
Biological Resources



SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Section of Environmental Analysis

November 21, 2008

Mr. John D. Rogner, Field Supervisor
Chicago Ecological Services Field Office
U.S. Fish and Wildlife Service
United States Department of the Interior
1250 South Grove Avenue, Suite 103
Barrington, IL 60010

Re: STB Finance Docket No. 35087, Canadian National Railway Company
and Grand Trunk Corporation – Control – EJ&E West Company;
Submission of Biological Report and Request for Concurrence

Dear Mr. Rogner:

In response to the comment letter on the Draft EIS submitted by the Department of Interior (DOI) on September 29, 2008, and subsequent conference calls, meetings, and site visits, the Surface Transportation Board, Section of Environmental Analysis (SEA) is submitting the enclosed Biological Report.

The purpose of the Biological Report is to help us answer this question: to what extent could the Proposed Action (which is Canadian National Railway Company's proposed acquisition of the Elgin, Joliet & Eastern Railway Company) and transaction-related constructions affect Federally threatened, endangered, candidate, or proposed species, and designated or proposed critical habitat? We believe that the Biological Report answers this question, using the best scientific and commercial information available.

Five species (Indiana bat, Hine's emerald dragonfly, Karner blue butterfly, Eastern prairie fringed orchid, and leafy prairie clover) are evaluated in the Biological Report because preliminary information indicated that they do occur or might occur in or near the area of the Transaction. An additional four plant species (Mead's milkweed, Prairie bush clover, Lakeside daisy and Pitcher's thistle) were eliminated from further consideration because they do not presently occur in proximity to the area of proposed activity, or because they occur only in areas where no construction or operational impacts are reasonably anticipated.

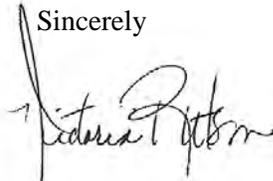
After a detailed review of the available information, and completion of habitat-level field surveys, SEA has made a determination of "may affect but is not likely to adversely affect" for all five species evaluated in the Biological Report. For the Eastern prairie fringed orchid, the Applicants have agreed to conduct pre-construction surveys, and SEA will re-initiate

consultation if orchid species are found within an area of proposed activity. For the Hines' emerald dragonfly, Applicants have submitted a voluntary mitigation measure that would require CN to cooperate with its rail customer, Midwest Generation, to ensure that Midwest would receive coal deliveries on time and when needed, thus negating the need for Midwest to expand its existing Romeoville siding into Hines' emerald dragonfly habitat.

We request your review of and concurrence with SEA's conclusions within the enclosed Biological Report. Please provide a copy of your response as soon as possible to Phillis Johnson-Ball of my staff and to our independent third-party consultant, John Morton, at HDR, 8404 Indian Hills Drive, Omaha, Nebraska, 68114-4098.

Thank you for your continued assistance and your willingness to work with us to help us meet our obligations under the Endangered Species Act.

Sincerely



Victoria Rutson
Chief

Section of Environmental Analysis

Enclosure

Cc (w/enclosure:

Karla Kramer, USFWS
Shawn Cirton, USFWS
Elizabeth McCloskey, USFWS
Phillis Johnson-Ball, STB
John Morton, HDR Engineering, Inc.
Ken Mierzwa, Winzler & Kelly

Biological Report ¹

for the

Proposed Canadian National Railway Company Acquisition of the Elgin, Joliet & Eastern Railway Company

Finance Docket No. 35087

November 2008

¹ This Biological Report has been prepared by Kenneth S. Mierzwa and Lia Webb of Winzler and Kelly, acting as a subconsultant to HDR, Inc., with support by HDR Inc.

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INTRODUCTION

The purpose of this biological report is to review the proposed Canadian National Railway Company acquisition of the Elgin, Joliet & Eastern Railway Company and Transaction-related connections and double-track in sufficient detail to determine to what extent the Proposed Action and Transaction-related construction may affect any of the Federally threatened, endangered, candidate, or proposed species and designated or proposed critical habitats listed below. The following information is provided to comply with statutory requirements to use the best scientific and commercial information available when assessing the risks posed to Federally listed, and/or candidate or proposed species, and designated and/or proposed critical habitat by proposed Federal actions.

Threatened, Endangered, Proposed Threatened, or Proposed Endangered Species

Based on correspondence from Illinois and Indiana U.S. Fish and Wildlife Service (USFWS) and a preliminary review of available information on endangered and threatened species in the greater Chicago region, the following five listed species may be affected by the Proposed Action and Transaction-related construction:

- Indiana bat (*Myotis sodalis*) **Endangered**
- Hine's emerald dragonfly (HED) (*Somatochlora hineana*) **Endangered**
- Karner blue butterfly (KBB) (*Lycaeides melissa samuelis*) **Endangered**
- Eastern prairie fringed orchid (EPFO) (*Platanthera leucophaea*) **Threatened**
- Leafy prairie clover (*Dalea foliosa*) **Endangered**

These species are addressed in greater detail in the body of this document.

Four additional listed species were eliminated from further consideration after preliminary review:

- Mead's milkweed (*Asclepias meadii*) (T) is not currently known to exist within the EJ&E rail line vicinity except for possibly introduced populations. The nearest known extant natural populations are in southern Illinois, in Saline County, and in south-central Iowa. The species has been extirpated in Wisconsin and Indiana (USFWS, 2003b). The last known natural population in the northern part of Illinois, in Ford County, was destroyed in 2001 (Bowles, 2001). Mead's milkweed has been introduced into a number of prairie restorations in Illinois and Indiana in recent years including at a few locations in the Chicago region. An introduced population in DuPage County is 1,500 feet from the rail line and well outside the Action Area (defined below). An introduced population at Vermont Cemetery Prairie in Will County has apparently been extirpated (S. Cirton, USFWS biologist, pers. comm.) and potential habitat is separated from the project area by a road and will not be disturbed. No new construction is proposed near either of these locations.
- Prairie bush clover (*Lespedeza leptostachya*) (T) is present at a preserve in northwest Cook County, but the population is more than 4,000 feet from the nearest rail line and is well outside the Action Area.

-
- Lakeside daisy (*Hymenoxys acaulis* var. *glabra*) (T) is present in Will County but populations are well studied and are outside the Action Area.
 - Pitcher's thistle (*Cirsium picheri*) (T) historically occurred in the vicinity of EJ&E Segment 1 and Kirk Yard. The thistle was last recorded in the Study Area in 1909 in Lake County, Indiana.

The Proposed Action will have no affect on these four species.

Candidate, Proposed and Sensitive, and Species of Concern

No Federally listed candidate or proposed species occur in the Action Area.

Numerous state-listed and state species of concern are known to be, or may be present in or near the Action Area. These species were addressed in Sections 3.11 and 4.11 in the Draft EIS for the Proposed Canadian National Railway Company Acquisition of the Elgin, Joliet & Eastern Railway Company. Potential impacts to these species are not further addressed in this Biological Report.

Critical Habitat

Critical habitat was designated for the Hine's emerald dragonfly effective September 5, 2007 (USFWS 2007). Portions of the lower Des Plaines River Valley, including parts of the Action Area, are included within the area designated as critical habitat for this species.

Indiana bat Critical Habitat has been designated only for hibernacula. The nearest designated critical habitat is in LaSalle County, Illinois, well outside the Action Area.

The action addressed within this document does not fall within critical habitat for any other species.

CONSULTATION TO DATE

In a letter dated September 29, 2008, the USFWS, through the Department of the Interior, requested that SEA either provide additional information for informal consultation or initiate formal consultation (USFWS, 2008; Attachment A). After discussions at a meeting held on October 23rd, 2008, USFWS agreed to continue with informal consultation pending collection of additional information. After two field meetings (October 29, 2008 and November 6, 2008), the USFWS, on November 7th, 2008, agreed that formal consultation would not be necessary at this time, pending the receipt of additional information. This biological report has been prepared to document the information gathered during this process. Though not intended to function as a formal biological assessment, it generally follows the format of a biological assessment.

A brief timeline of activities to date follows:

- **January 23, 2008** – Illinois agency scoping meeting.
- **January 24, 2008** – Indiana agency scoping meeting.
- **January 25, 2008** – USFWS in Illinois and Indiana contacted for information on natural resources within the Study Area.
- **February 8, 2008** – Letter received from Illinois USFWS.

-
- **February 12, 2008** – Follow-up email to phone calls to Liz McCloskey (Indiana USFWS) and Shawn Cirton (Illinois USFWS) requesting natural resource information.
 - **February 18, 2008** – Scoping letter and natural resource materials received from Indiana USFWS.
 - **March 5, 2008** – Shawn Cirton (USFWS) was contacted to see if there were any other resources (maps, reports, journal articles, web sites, etc.) the USFWS may be able to provide for us to complete our analysis for the Draft Environmental Impact Study (EIS). Also talked about several of the endangered species. Mr. Cirton indicated the Mead's milkweed population at Vermont Cemetery Prairie Nature Preserve in Will County is no longer deemed viable by the USFWS. In response to discussion about migratory birds and the impacts of noise, Mr. Cirton agreed there were very few studies that specifically address railroad noise impacts. He did indicate that vehicle noise is well studied and provided a link to FHWA's website.
 - **March 5, 2008** – Jeff Mengler was contacted to discuss issues related to the HED. Jeff has headed up the ROW Management Team for a period of 8-10 years and is involved with HED and the development of a Habitat Conservation Plan (HCP) for the species. The ROW Management Team has now merged into the HCP group. The goal of the HCP is to provide a broad scale, cohesive plan for all parties. The HCP covers impacts of continued activities and provides an incidental take permit to the private entities (Com Ed, Hansen Material Services Company, Midwest Generation, and EJ&E) while providing more comprehensive mitigation strategies that benefit the HED. The HCP is not published yet, but a draft may be ready in about a month. Jeff mentioned that the EJ&E spur is very old and is not built to current rail standards and the track actually "floats on the surface." He indicated the spur has a storied history, in that COM Ed and the Metropolitan Water Reclamation District (MWRD) own the ROW, while Midwest Generation actually owns the tracks. EJ&E only provides operation and delivery of goods. Rail Works does all of the maintenance on the tracks. Mr. Mengler described the current status of the HED, and indicated the presence of larval naiads within mere feet of the rail bed. Jeff stated that operation of the line is restricted to between 4-6 mph to reduce mortality to adults, but indicated the impacts to larval habitat from hydraulic pumping and sediment releases has continued and is still a major threat to the existence of the species. Vibration of the tracks and vertical deflection causes native sediments to "squirt" from the rail bed into the cracks and fissures in the dolomite. Groundwater from the recharge area west of the site constantly flows under the tracks and numerous measures (new culverts, French drains, etc.) have not stopped this problem from occurring. Mr. Mengler indicated the ROW Management team has no good summary documents of the ROW Management team activities and stated there are file cabinets full of data and would need to visit the USFWS to sift through the documents.
 - **April 24, 2008** – First natural resources stakeholder meeting in Illinois
 - **April 30, 2008** – First natural resources stakeholder meeting in northern Indiana
 - **July 25, 2008** – Draft EIS issued
 - **September 2, 2008** – Second natural resources stakeholder meeting in Illinois

-
- **September 3, 2008** – Second natural resources stakeholder meeting in northern Indiana
 - **September 4, 2008** – Natural resources stakeholder meeting in Indianapolis
 - **September 29, 2008** – Date of Department of Interior’s response letter to the Draft EIS; the USFWS requests formal consultation based on their review
 - **October 10, 2008** – Begin preparation of Biological Assessment
 - **October 18, 2008** – Site visit (HED habitat) by HDR and Winzler & Kelly
 - **October 23, 2008** – Meeting attended by USFWS, HDR, Winzler & Kelly, SEA (via phone) and CN to discuss project related endangered species issues. Agreement to continue with informal consultation on the HED and to conduct habitat surveys for EPFO
 - **October 29, 2008** – Field meeting attended by Indiana USFWS, The Nature Conservancy (TNC), INDNR, HDR, Winzler & Kelly, and CN to discuss Indiana sites
 - **October 30, 2008** – Hi-rail survey of EJ&E rail line by HDR, Winzler & Kelly, CN, and EJ&E to identify potential EPFO habitat
 - **November 6, 2008** – Field visit by HDR and Illinois USFWS to assess habitat suitability for EPFO in Transaction-related construction areas in Illinois
 - **November 7, 2008** – Meeting with USFWS, HDR, SEA, Midwest Generation, and CN and to discuss HED and EPFO issues, resulting in an agreement that formal consultation would not be necessary

DESCRIPTION OF THE PROPOSED ACTION

Background Information

The Applicants are Canadian National Railway Company and Grand Trunk Corporation (contact is Devin Sprinkle, Regional Manager – Environment, CN). The Federal Action is consideration to acquire control of the EJ&E West Company, which is a wholly-owned noncarrier subsidiary of EJ&E. The Surface Transportation Board would be authorizing the activity and is the Action agency (contact is Victoria J. Rutson, Chief, Section of Environmental Analysis and Phillis Johnson-Ball, Deputy Chief, Section of Environmental Analysis).

On October 30, 2007, the Applicants filed an application with the Surface Transportation Board (the Board) seeking its approval to acquire control of EJ&E West Company, a wholly owned noncarrier subsidiary EJ&E. The Applicants propose to acquire control of EJ&E West Company and to use EJ&E’s main rail line to connect all five of CN’s rail lines in the Chicago, Illinois metropolitan area (herein referred to as the Proposed Action). The EJ&E main line, located in northeastern Illinois and northwestern Indiana, extends in an arc around Chicago as follows:

- From Waukegan, Illinois, southwest to Joliet, Illinois
- From Joliet eastward to Gary, Indiana
- From Gary northwest to Chicago, along Lake Michigan

Figure 1, Project Vicinity (on the next page), shows the existing CN and EJ&E rail systems.



Figure 1
Project Vicinity



- EJ&E Rail Line
- CN Rail Line
- Other Rail Line

The Applicants attribute delays in Chicago to congested rail lines and too much dependence on the BRC Clearing Yard for switching traffic between rail subdivisions. Most of the Class I freight railroads in Chicago now use the BRC Clearing Yard for train classification. According to the Applicants, acquisition of Kirk Yard and other EJ&E yards located along the EJ&E main line and near the edge of the congested Chicago Terminal District would permit CN to use these yards to classify and switch trains passing through the Chicago metropolitan area. The Applicants state that the Proposed Action would allow trains that stop in the Chicago metropolitan area for crew changes, locomotive inspections, and set-outs to use the EJ&E main line, and Kirk and East Joliet yards. The Applicants expect this to reduce the number of CN trains that, though bound for other destinations, would otherwise need to travel into Chicago. The Proposed Action is expected to reduce classification work at CN's Glenn, Hawthorne, and Markham yards and at the BRC Clearing Yard.

Under the Applicants' Proposed Action, EJ&E would transfer all of its land, rail, and related assets west of the centerline of Buchanan Street in Gary, Indiana, to EJ&E West Company. These assets include EJ&E's main line as well as double-track, branch lines, and yards. At that time, EJ&E West Company would become a rail common carrier. EJ&E would retain its land, rail, and related assets east of the centerline. If the Board approves the Proposed Action, EJ&E would change its name to Gary Railway Company and EJ&E West Company would assume the Elgin, Joliet and Eastern Railway Company name.

CN would shift much of the rail traffic currently moving over CN's rail lines in Chicago to the EJ&E main line. Rail traffic on CN rail lines inside the EJ&E arc would generally decrease, and those areas would see environmental benefits. The number of trains operating on the EJ&E main line outside Chicago would increase by approximately 15 to 24 trains per day, resulting in potential adverse effects. The Proposed Action would also involve construction of six short rail connections for operational efficiency. CN would construct these connections within, or very close to, existing rail right-of-way (ROW). In addition, CN would construct five segments of siding extensions, or second mainline track (double-track), totaling approximately 19 miles, within existing ROW. The Applicants state that they do not anticipate any rail line abandonments in conjunction with the Proposed Action (Canadian National, 2007).

Project Objectives

The Applicants give three primary reasons for seeking to acquire control of the EJ&E rail assets (Federal Register, 2007; Canadian National, 2007):

- To improve the Applicants' operations in and beyond the Chicago metropolitan area by providing a continuous rail route around Chicago, under CN's ownership, that would connect its five rail lines radiating from Chicago.
- To make EJ&E's Kirk Yard, as well as smaller facilities at Joliet, Illinois, and Whiting, Indiana, available to the Applicants, thus enabling them to consolidate rail car classification work, thereby reducing the use of the BRC Clearing Yard.
- To enable the CN system to benefit from an important supply line EJ&E provided for North American steel, chemical, and petrochemical industries, as well as utility

companies, thereby allowing the Applicants to develop more extensive relationships with these industries and the companies that serve them.

The Proposed Action is intended to contribute to the implementation of these goals.

Project Description

Proposed Action

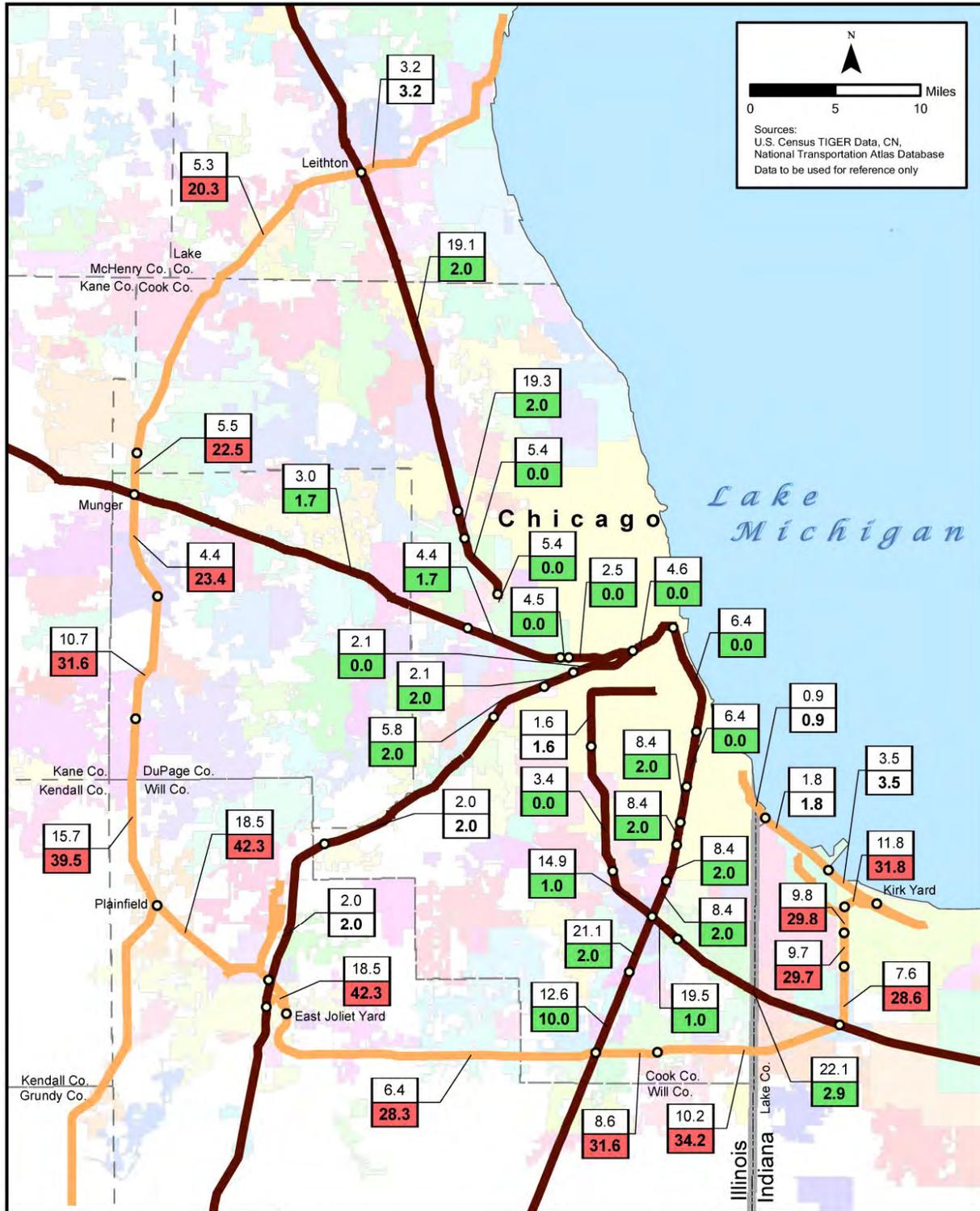
The Applicants are seeking the Board's authorization, under 49 USC 11323-11325, to acquire control of EJ&E's land, rail line, and related assets. Under the Proposed Action, the Applicants would redirect trains from the five CN subdivisions in Chicago to the EJ&E rail line, increasing the volume of freight rail traffic along the EJ&E rail line, which would result in a corresponding decrease in the volume of freight rail traffic along the CN subdivisions. Figure 2, below, shows the proposed changes in rail traffic volume.

The Proposed Action would also result in: 1) the construction of six new rail connecting tracks between existing rail lines at Munger (near Wayne, Illinois), Joliet, Illinois, and Matteson, Illinois and at Griffith, Indiana, Ivanhoe (in Gary, Indiana), and Kirk Yard in Gary, Indiana; 2) the construction of five segments totaling 19 miles of double-track (parallel track) to augment the existing single track, at or near Leithton, Illinois (near Mundelein, Illinois); Diamond Lake Road to Gilmer Road near Mundelein, Illinois; East Siding to Walker, Illinois (two segments) near Aurora, Illinois, Naperville, Illinois, and Plainfield, Illinois; and East Joliet to Frankfort, Illinois; and 3) an increased use of Kirk Yard and East Joliet Yard for rail car classification and train assembly and disassembly.

Although the proposed construction activities and changes in yard operations do not require prior Board approval, SEA analyzed the potential environmental impacts of these related actions because they would not occur but for the Proposed Action. Figure 3, below, shows the locations of the proposed new double-track construction, the connecting tracks between existing rail lines, and the location of Kirk Yard and East Joliet Yard. Figure 4, below, shows a typical cross section for areas that would have new connections.

Connecting Tracks between Existing Railroad Lines and Double Track

SEA conducted an independent examination of the Applicants' six proposed connecting tracks between existing railroad lines to determine if alternative locations or configurations would meet the purpose of, and need for, the Proposed Action while minimizing potential environmental effects. For each connection, SEA considered the Applicants' proposed connection, a No-Build Alternative, and alternative configurations developed by SEA where appropriate. Including the No-Build Alternative, SEA considered five alternatives for the proposed connection at Munger (near Wayne, Illinois), three alternatives at Joliet (near Joliet, Illinois), four alternatives for the proposed connection at Matteson (near Matteson, Illinois), and two alternatives at Griffith (near Griffith, Indiana), Ivanhoe (in Gary, Indiana), and Kirk Yard (near Gary, Indiana). SEA also developed tailored environmental mitigation for the six connections.






Environmental Impact Statement

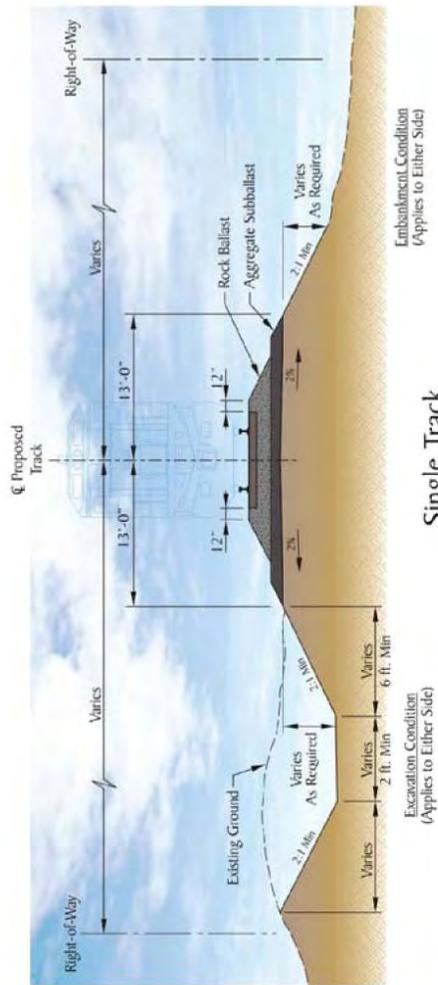
Average Trains / Day

XXX	Existing ¹		Increase
XXX	Proposed ²		Decrease

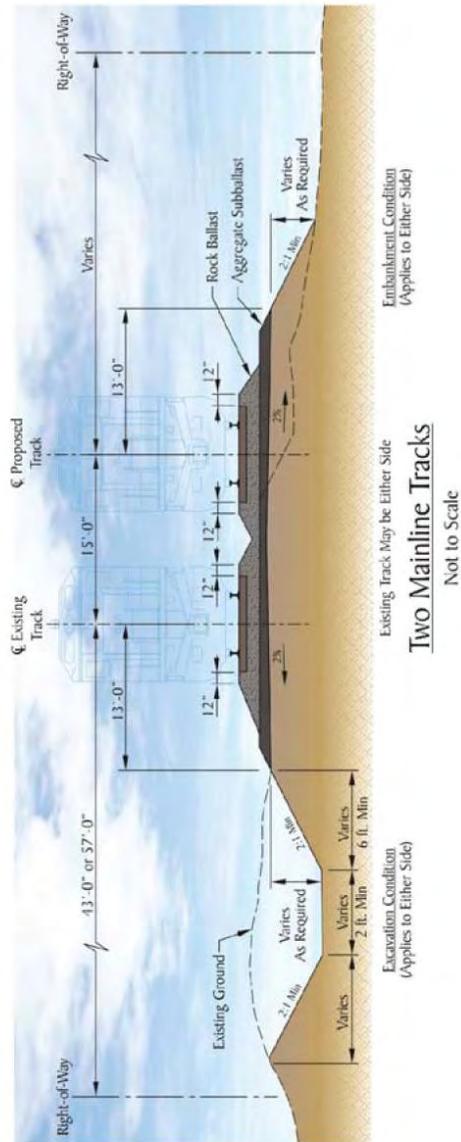
¹ Average Train Length = 2,590 feet
² Average Train Length = 6,321 feet

Figure 2

Proposed Changes to Rail Traffic Volumes



Single Track
Not to Scale



Two Mainline Tracks
Not to Scale



Figure 4
Typical Cross Section
for Areas with
New Connections

The Proposed Action would also result in: 1) the construction of six new rail connecting tracks between existing rail lines at Munger (near Wayne, Illinois), Joliet, Illinois, and Matteson, Illinois and at Griffith, Indiana, Ivanhoe (in Gary, Indiana), and Kirk Yard in Gary, Indiana; 2) the construction of five segments totaling 19 miles of double-track (parallel track) to augment the existing single track, at or near Leithton, Illinois (near Mundelein, Illinois); Diamond Lake Road to Gilmer Road near Mundelein, Illinois; East Siding to Walker, Illinois (two segments) near Aurora, Illinois, Naperville, Illinois, and Plainfield, Illinois; and East Joliet to Frankfort, Illinois; and 3) an increased use of Kirk Yard and East Joliet Yard for rail car classification and train assembly and disassembly.

Although the proposed construction activities and changes in yard operations do not require prior Board approval, SEA analyzed the potential environmental impacts of these related actions because they would not occur but for the Proposed Action. Figure 3, below, shows the locations of the proposed new double-track construction, the connecting tracks between existing rail lines, and the location of Kirk Yard and East Joliet Yard. Figure 4, below, shows a typical cross section for areas that would have new connections.

Connecting Tracks between Existing Railroad Lines and Double Track

SEA conducted an independent examination of the Applicants' six proposed connecting tracks between existing railroad lines to determine if alternative locations or configurations would meet the purpose of, and need for, the Proposed Action while minimizing potential environmental effects. For each connection, SEA considered the Applicants' proposed connection, a No-Build Alternative, and alternative configurations developed by SEA where appropriate. Including the No-Build Alternative, SEA considered five alternatives for the proposed connection at Munger (near Wayne, Illinois), three alternatives at Joliet (near Joliet, Illinois), four alternatives for the proposed connection at Matteson (near Matteson, Illinois), and two alternatives at Griffith (near Griffith, Indiana), Ivanhoe (in Gary, Indiana), and Kirk Yard (near Gary, Indiana). SEA also developed tailored environmental mitigation for the six connections.

Under the Proposed Action, the Applicants propose construction of 19 miles of double-track and changes in yard operations within the existing EJ&E rail line ROW. No feasible alternatives to the double-track or yard operations were identified by SEA. Therefore, SEA did not analyze alternatives to the planned construction of double-track or changes to yard operations.

Action Area

In defining the Action Area, factors considered included construction activity and changes in levels of operational activity, and associated potential direct and indirect impacts.

The Action Area as discussed in this document includes a 500-foot corridor on either side of all northeast Illinois and northwest Indiana CN and EJ&E rail lines where there are proposed operational changes or Transaction-related construction of connections or double-track as shown in Figures 1 through 3. The 500-foot limit includes areas subject to direct proposed construction impacts as well as noise, vibration, hydrology, or other direct or indirect potential impacts.

STATUS OF THE SPECIES IN THE ACTION AREA

Indiana Bat

Overview

The Indiana bat (*Myotis sodalis*) is relatively small and nondescript, dull dark brown or grayish-brown. The species is distinguished from the similar *Myotis lucifugus*, which is common near the Action Area, by the presence of a keel on the calcar, hairs on the toes and foot not extending beyond the tip of the claws, and dull rather than glossy fur (Hoffmeister, 1989).

Life History

Indiana bats hibernate for the winter, generally October through April (LaVal and LaVal, 1980), in a limited number of caves or mines with very specific temperature and humidity conditions. Upon arriving at the caves in August or September, bats swarm each evening for a period of up to several weeks. Mating occurs during this time. Males are mature in their second year, females in their first autumn (USFWS, 2007a).

Dispersal occurs in the spring, with females emerging first. Some individuals can potentially migrate considerable distances. In Illinois, females reach summer habitat beginning in mid-April (Gardner et al, 1991a) and possibly into mid-May. The female gives birth to a single young.

Maternity colonies usually contain less than 100 bats (USFWS, 1999). Roosts are established under the exfoliating bark of dead or, in some cases, living trees. Young Indiana bats are able to fly about a month after birth, usually by mid-to-late July (Clark et al, 1987) or early August (Gardner et al, 1991a; Brack, 1983).

Indiana bats forage on a wide variety of flying insects; the composition of the diet varies depending on location, season, and individual condition (USFWS, 2007a).

Population Dynamics

Indiana bat population size has dropped dramatically over the past 40 years; much of the decline which took place from the 1960s through the 1980s has been attributed to human disturbance of hibernating caves, including vandalism and intentional modification of cave entrances. However, recent declines are less well understood (USFWS, 2007a).

Natural factors including flooding and cave collapse, sometimes aggravated or induced by off-site disturbances; and unusually cold weather, have also affected some populations (USFWS, 2007a).

The total Indiana bat population was estimated at 353,000 individuals in 1997 (USFWS, 2007a). Kentucky and Missouri experienced big population declines since the first surveys in 1960, but estimated numbers have increased for Indiana and a few other states. Illinois supports a relatively small portion of the population. Estimated Illinois population sizes have been 4,140 (1960), 3,990 (1980) and 4,530 (1995-97) (USFWS, 2007a).

Because Indiana bats congregate in such large numbers to hibernate, they are subject to occasional catastrophic events, both natural and human induced, capable of decimating regional populations. Relatively low fecundity limits the potential recovery rate.

Habitat

Hibernating caves or mines maintain a narrow temperature range, optimally 3 to 6 degrees C, during mid-winter in the areas utilized by bats. Hibernating sites have a low risk of freezing, but are also unlikely to rise above levels that might raise metabolism enough to exhaust fat reserves before the end of winter. Humidity is usually above 74 percent at hibernating sites, although exceptions are known (Humphrey, 1978). Relatively few caves or mines are known to maintain low and stable temperatures within the suitable range.

Summer habitat is less understood. Floodplain and upland forest are used for roosting, with foraging occurring in these communities and in nearby old fields and pastures with scattered trees (Gardner et al., 1991b; Callahan et al., 1997). Dead or dying trees, or living trees with loose or exfoliating bark, are used for roosts. Certain kinds of disturbance (damage from hogs, mine subsidence) can actually create habitat by killing mature trees, and this may be important in areas which consist largely of even-age stands.

It has been suggested that the Indiana bat may be a savanna species, especially in the western part of the range, and this may help to explain the apparent tolerance of fragmented forest landscapes (USFWS, 2007a). Most unmanaged savanna remnants are now badly overgrown as a result of fire suppression.

A wide variety of tree species are used for roosting, as long as the appropriate structure of loose, exfoliating bark is present (Gardner et al., 1991a; Callahan, 1997). Roost trees tend to be large and isolated, or located at the edge of woodlots, and in areas with an open canopy and understory (USFWS, 1999). Maternity colonies use one to three primary roost trees, with a number of alternate roost trees (up to 17) nearby. Choice of roost trees may be influenced at least in part by thermoregulation needs (USFWS, 2007a; Callahan et al. 1997).

Trees with exfoliating bark are an ephemeral resource, with dead trees maintaining suitable conditions for not more than a few years. A few tree species, including slippery elm, cottonwood, green ash, certain oaks, and hickories may provide useful habitat for four to eight years (Gardner et al. 1991a; Callahan et al. 1997; USFWS, 2007a). Indiana bats return to the same roosting areas over time, with females sometimes returning to the same tree in subsequent years (Humphrey et al., 1977). Good habitat includes a number of roost trees within the maternity colony vicinity (Kurta et al., 1993, Callahan et al., 1997), thus allowing bats to move among trees in response to changing weather conditions or loss of individual trees to natural or unnatural factors.

Foraging occurs along riparian forest, and to a lesser extent among open canopy of upland forest or in early successional fields, along wooded fencerows, or over farm ponds (Clark et al., 1987; Gardner et al., 1991b). Cope et al., (1987) identified wooded riparian corridors of at least 30 meters (98.4 feet) width on each side of a stream as excellent foraging habitat. Foraging areas may be up to 2.5

kilometers (1.55 miles) from upland roosts (Gardner et al. 1991b). Areas of riparian forest 0.8 to 1.2 kilometers (0.5 to 0.75 miles) in length are used for foraging (Humphrey et al. 1977; Cope et al. 1978; Gardner et al. 1991b).

Rangewide Status

The Indiana bat occurs through much of the lower Midwestern and northeastern U. S. However, winter habitat (hibernating caves) is limited to a few states, with as much as half the population wintering in Indiana. Eighty-five percent of the population winters in nine 'Priority One' caves, three each in Indiana, Kentucky, and Missouri.

Garner and Gardner (1992) summarized the Illinois distribution of the Indiana bat, based on their own work and a review of earlier literature. Counties where reproductive females or juveniles had been reported up to that time included: Adams, Bond, Jackson, Johnson, Perry, Pike, Pulaski, Schuyler, Scott, Union, and Wabash/Edwards. Garner and Gardner (1992) sampled 190 sites in 75 Illinois counties and documented the presence of Indiana bats at 48 sites (25.3%), including new records for 13 counties. All but three of these (Vermilion, Ford, and Henderson) were in southern Illinois.

In Illinois, 'Priority Two' hibernacula (more than 500 bats) are present in: Jackson, LaSalle, and Monroe Counties. 'Priority Three' hibernacula are known in: Adams, Alexander, JoDaviess, Johnson, Madison, Pike, Pope, and Union Counties.

The Indiana bat was listed as endangered on March 11, 1967, and it has retained that status because of a continued and accelerated decline in total numbers, especially in certain parts of the range.

Project Area Status

The Indiana bat is present within the floodplain of the East Branch of the Little Calumet River in Porter County, where a maternal roosting colony is known approximately 17 km east of the EJ&E crossing of the Little Calumet River. No other recent records are known from the immediate region.

Hine's Emerald Dragonfly

Overview

The Hine's emerald dragonfly (HED) (*Somatochlora hineana*) is a moderately large species, with a wingspan of 3.5 to 3.7 inches (90-95 mm) and a body length of 2.3 to 2.5 inches (60-65 mm). The body is dark chocolate brown to dark metallic green, with a pair of yellow lateral stripes on each side. The eyes are bright green (brown for the first day or two in teneral (newly emerged) individuals). The wings are clear and without large or obvious markings.

The larval form is robust, brown, with size depending on age and possibly temperature range and food supply. Cashatt and Vogt (2001) provide a detailed description

Life History

HED spends most of its life as an aquatic larva. The exact length of the larval phase may vary depending on water temperature, food supply, or other factors, but is thought to last for at least two to

five years (Soluk et al., 1996, 1998; Soluk and Satyshur, 2005). Larval HED are sit-and-wait predators, relying on cryptic coloration to hide among detritus and capture passing prey (USFWS, 2001). Their ecology appears to be linked with the ecology and behavior of the burrowing "devil" crayfish (*Cambarus diogenes*). The burrows of the devil crayfish provide refuges for HED larva from dry conditions in mid to late summer, and from temperature extremes in winter (Soluk et al., 2007).

Adults emerge in the summer months, normally from June to August. In northeastern Illinois the peak of adult emergence normally occurs in July, with some variation related to temperature and precipitation patterns. Teneral adults may perch on wetland vegetation, shrubs, or trees for up to several hours after emergence. The adults are thought to survive for up to at least several weeks although little precise information is available for this species; survival of individual adult HEDs for a minimum of 14 days has been documented (Mierzwa and Smyth, 1995).

Adult males establish territorial patrols over suitable wetland habitat including small open channels in marsh or sedge meadow. Males fly slowly back and forth within or just over the bordering vegetation; patrols may last from a few seconds to at least several minutes. Males sometimes move back and forth between multiple nearby locations.

Mating occurs on the wing; afterwards females may deposit more than 500 eggs in shallow water or soft mud. The length of time to hatching may be variable.

Population Dynamics

HED occurs in distribution patterns consistent with a regional metapopulation model although detailed information is limited to a few of the better studied sites (Mierzwa and Smyth, 1995). Illinois populations inhabit an approximately 17 km (10.6 mile) length of the Des Plaines River Valley, with the largest populations in the southern part of the area. Historically, good quality foraging habitat probably occurred through most of the area with exposed or near-surface dolomite and cool shallow wetlands. However, optimal breeding sites are less regularly distributed and depend on the presence of seepage outlets, gradient, and appropriate vegetation structure. At least some movement occurs between these breeding sites. During a 1995 study, four dragonflies out of 180 marked (2.2 percent) moved between sites; movements between Lockport Prairie, River South Parcel, and Middle Parcel were documented (Mierzwa and Smyth, 1995). Today the once nearly continuous habitat in the river valley has been fragmented, primarily by past industrial use.

Distribution is typically described using preserve or site names; however this can be somewhat misleading. For example, Lockport Prairie Nature Preserve and the privately owned River South Parcel include multiple documented breeding sites, and numerous locations with documented male territorial patrols. Other Illinois localities include only very small areas of potential breeding habitat, and in some cases successful reproduction remains unverified.

Some breeding sites are relatively reliable, and support larvae in most years. However breeding sites are subject to stochastic disturbances of different types and at different frequencies. Sites in lower parts of the floodplain are slower to dry, but subject to frequent flooding by the Des Plaines River;

some seepage fed sites near the bluff base are relatively reliable but slow to recharge after severe and prolonged drought, while others respond rapidly to rainfall events.

There is considerable annual fluctuation in adult population size. Long term monitoring at River South Parcel (1995-2008) noted densities ranging from 0.20 to 6.91 adult dragonflies per hectare (Mierzwa, 2008a). At the much smaller Middle Parcel, density estimates ranged from 0.00 to 6.06 dragonflies per hectare. Estimating actual adult population size is difficult because of multiple cohorts of emergence and a lack of information on individual adult life spans, but conservative minimum population estimates for River South Parcel ranged from 9 to 308 adult dragonflies (Mierzwa, 2008a). An attempt to estimate adult density at other Illinois sites was made in 1995, using randomly located transects at all eight populations identified up to that time; density estimates were obtained for Lockport Prairie (1.22/ha.) and Long Run Seep (0.51/ha.) as well as for the Hanson Material Service sites cited above. No observations were made on transects at the other four localities (Romeoville Prairie, Black Partridge, Waterfall Glen, and McMahan Woods), thus adult populations were below detection levels for the methods and level of effort employed (Mierzwa and Smyth, 1995).

Larval population sizes are presumably much larger at any given time, represent multiple age classes, and may be somewhat more stable.

Considerable annual variation in adult population size appears to be characteristic of this species. The relatively high fecundity of individual adult females holds the potential for rapid population growth when reasonably stable conditions are present over several consecutive years for the aquatic larvae, or when habitat diversity accounts for variation in hydrological cycles.

Habitat

HED inhabits locations where shallow soils overlie dolomite bedrock, and where cool groundwater feeds shallow emergent wetlands. Breeding occurs in small channels or rivulets through marshes, typically with slow flow and organic detritus on the channel bottoms; and in small pools or soft organic substrate fed by sheet flow through sedge meadows and fens. Larvae may retreat into crayfish burrows during dry spells (Soluk et al, 2007). Ponds or other deep or warm water areas are generally not utilized. Breeding hydrology is influenced by within-site factors as well as by conditions over a much larger ground watershed.

Adults forage in proximity to breeding sites, utilizing a variety of open habitats including marsh, sedge meadow, graminoid fen, dolomite prairie, and successional field. Areas with a break in vegetation height, for example *Typha* marsh adjacent to sedge meadow, or a tree/shrub edge adjacent to marsh, tend to be favored (Nuzzo, 1995). Dragonflies sometimes forage within open portions of floodplain forest and may perch in trees especially on windy days, but they are not present in the interior of dense shrub or sapling thickets which offer limited room for flight. Vegetation structure appears to be more important than vegetation quality for foraging habitat (Nuzzo, 1995); however, high-quality wetland complexes offering a diverse mosaic of vegetation types tend to provide suitable structure.

Rangewide Status

Originally described from sites in northwestern Ohio (Williamson, 1931), the HED is currently known from localities in northeastern Illinois, eastern Wisconsin, the upper peninsula of Michigan, and a portion of the Missouri Ozarks. Single specimens, possibly transients, are available from Indiana and Alabama.

Illinois populations are limited to a small portion of the lower Des Plaines River valley in Will, DuPage, and Cook Counties. The presence of *Somatochlora hineana* in the region was confirmed in 1987 (Vogt and Cashatt, 1994), and extensive studies have since been conducted. All known populations are confined to the floor of the river valley where as a result of post-glacial scouring dolomite is at or near the surface, or to immediately adjacent seepage areas on slopes.

Somatochlora hineana was added to the Federal list of endangered species effective January 26, 1995 (Shumate, 1995). Reasons for listing included limited distribution and need for protection because of threats related to habitat fragmentation and destruction, and changes in groundwater hydrology.

New populations have been identified since the original listing. However, some populations have since been reduced in size

Project Area Status

The two largest Illinois populations are at the Hanson Material Service River South Parcel, and at the Forest Preserve District of Will County's Lockport Prairie Nature Preserve, both on the west side of the Des Plaines River and both straddling the EJ&E Paul Ales Branch line. A much smaller population is known from the Hanson Material Service Middle Parcel, located west of the Paul Ales Branch line, and separated from it by an expanse of weedy successional field on old fly ash fill material.

Extensive information on population density and habitat use is available for the Hanson Material Service sites (Mierzwa, 2008a). Density has been relatively low in recent years, at least in part because of several years of drought conditions; numbers increased slightly in 2007-2008, but remain toward the low end of the documented range (Mierzwa, 2008a). Lockport Prairie was monitored in 1995, and at that time supported a large and high density population (Mierzwa et al., 1995). More recently, quantitative larval monitoring (Soluk et al., 2006) and qualitative adult observations suggest that the Lockport Prairie population is also currently at low density.

A smaller breeding site has been documented approximately 1.0 km south of Lockport Prairie, near the Crest Hill Wastewater Treatment Plant (WWTP) and along the Des Plaines River. Adult observations have been reported west of this location along the Paul Ales Branch line, at or near the WWTP entrance, in 2004 and 2007 (USFWS, 2008; D. Soluk, University of South Dakota, Professor of Biology, pers. comm.). "Many" adults have been reported moving along the rail line here, more than would be expected to originate from the small WWTP breeding site, implying that these observations represent adults dispersing from the Lockport Prairie site to the north (D. Soluk, University of South Dakota, Professor of Biology, pers. comm.). These southernmost observations are within a short distance, 150 meters, of EJ&E segment 9B.

On the east side of the river, Long Run Seep Nature Preserve is located on the valley slope east of New Avenue and CN's Joliet Subdivision rail line. Monitoring in 1995 documented high dragonfly density at this site, but a relatively small total population size is limited by the small size of the preserve (Mierzwa et al, 1995). More recently a small population has been well documented at the Hanson Material Service Long Run/Com Ed parcel located northwest of the nature preserve. Although successful breeding remains undocumented at this location, territorial males have been observed on numerous occasions including within a sedge meadow immediately west of the Joliet Subdivision rail line in the northeast corner of the site (Mierzwa, 2008b).

A few individual observations of adult dragonflies have been made south of this area, at Lockport Prairie East and the adjacent Dellwood Park West. Because no suitable breeding habitat has thus far been identified at these sites, the observations are believed to represent individuals dispersing from Lockport Prairie or Long Run Seep.

Karner Blue Butterfly

Background

The Karner blue butterfly (*Lycaeides melissa samuelis*) (KBB) is a small (wingspan 0.9 to 1.25 inches) butterfly. Males are silvery-blue to dark blue above, with dark wing margins; females are grayish-brown, with dark wing margins bordered on the inside by irregular orange bands. Both sexes are slate gray below, with orange bands and black spots with white margins (Shull, 1987).

Life History

The KBB is bivoltine, having two generations per year. First brood eggs overwinter, hatching in mid-to-late April. Larvae pass through four instars while feeding over a span of several weeks, and pupate in late May to early June. Pupation lasts from 7 to 11 days (Dirig, 1976). First flight adults are present from late May through late June (Swengel and Swengel, 1996), although individual adults may live for an average of only four or five days; maximum adult lifespan may be two to three weeks (USFWS, 2003a). Females deposit eggs on lupine plants or in nearby leaf litter.

Eggs hatch in five to 10 days, with second brood larvae present on lupine from early June through late July. Second brood adults have been observed from early July through late August, and in some years into early September. Second broods may be considerably larger than first broods, possibly because of overwintering mortality of first brood eggs (USFWS, 2003a).

Larvae are tended by ants. The presence of ants is reported to substantially decrease predation rates on larvae (Savignano, 1994).

Population Dynamics

The KBB is a classic example of a metapopulation associated with a temporally and spatially dynamic habitat type. Populations may be extirpated by wildfire, gradual canopy closure, or a variety of other causes, and are able to colonize or recolonize available habitat as long as a source population is present within a reasonable distance (Swengel, 1981).

Habitat

The KBB inhabits sand savanna and sand barrens habitats, typically black oak sand savanna in northwest Indiana. Larvae are associated with lupine (*Lupinus perennis*) which is the only known host plant for this subspecies.

Canopy cover at most localities is variable, with both open/sunlit and denser and more heavily shaded areas. However, Lane (1994) found that in Minnesota, areas with less than 5 percent woody canopy cover were more likely to have adult butterflies present. At those study sites, open and sunlit areas were more likely to support high densities of nectar plants in flower.

Nectar plants used by adults in Indiana include: *Helianthus divaricatus*, *Erigeron* sp., *Arabis lyrata*, *Coreopsis lanceolata*, *Phlox pilosa*, *Rubus* sp., *Asclepias tuberosa*, *Asclepias verticillata*, *Ceanothus americanus*, *Euphorbia corrolata*, *Melilotus alba*, *Monarda fistulosa*, *Monarda punctata*, and *Tephrosia virginiana* (Martin, 1994).

The KBB offers an excellent example of the complexity associated with managing for a rare species within a temporally and spatially dynamic ecosystem. For example, in the absence of fire canopy closure, shrub encroachment, and loss of lupine will eventually result in extirpation of a population. Too frequent, too hot, or too extensive burning may result in catastrophic short-term loss of habitat and resulting loss of a population, as happened at Ivanhoe in 1996. Thus, the use of prescribed fire must be carefully balanced to maintain open savanna habitat and lupine presence. Paradoxically, low levels of fire-related larval mortality may be necessary to ensure the longer-term maintenance of suitable habitat.

Several documents also note the importance of utility corridors and rail lines in facilitating KBB movement among metapopulation core and satellite sites (USFWS, 2003a; USFWS, 2006; TNC, 2008). For example, USFWS (2003a) stated that “the remnant habitat along railroad right-of-ways may be critical in linking populations, but it is not currently managed or protected.” Use of rail corridors may put individual butterflies briefly at risk, but without availability of corridors recolonization of unpopulated or extirpated satellite sites may not occur. Recent occurrence within rail corridors has been documented, for example in 1990 along a segment of the Chicago-South Bend South Shore Railroad in Porter County (Martin, 1994).

Rangewide Status

The KBB formerly occurred in a broad band extending from Minnesota to Maine. At present extant populations are known from seven states: Minnesota, Wisconsin, Indiana, Michigan, New York, New Hampshire, and Ohio. The largest clusters of populations are in Wisconsin and Michigan.

Habitat loss, fragmentation, and succession (encroachment of shrubs and closure of tree canopies) are among the threats to the KBB. In the West Gary area, the most serious threats include poor habitat quality and fragmentation (USFWS, 2003).

Martin (1994) surveyed 35 sites in Indiana, including historic localities and areas with potentially suitable habitat. She found KBBs at 10 of those sites, all in Lake and Porter Counties.

Project Area Status

In West Gary, 21 individual tracts within 11 defined preserves were identified as “potentially able to periodically support” KBBs (Shuey, undated; cited in USFWS, 2003).

Through the mid-1990s, KBBs inhabited small portions of Ivanhoe East, where only about 10 to 15 acres of suitable habitat persisted (TNC and USFWS, 2006). At that time Ivanhoe West had little open habitat and did not support the species. There was also a small population at the nearby Toleston Ridges Nature Preserve.

In 1996 two extensive wildfires and a cold, wet spring contributed to the extirpation of the KBB at Ivanhoe and within the West Gary recovery unit (TNC and USFWS, 2006). A few individuals persisted through 1997, but by 1998 the population had been extirpated (P. Labus, TNC, pers. comm.).

In 2001, a reintroduction project was initiated at Ivanhoe but quickly identified a need for additional site management. Extensive restoration work continued, including clearing of shrubs and saplings from the overgrown and mostly shaded sand ridges and application of prescribed fire. This opened up and expanded the available habitat from about 15 acres in the early 1990s to about 80 acres at present (TNC, 2008). Additional KBB releases began in the summer of 2006, using a “gentle release” strategy, with relatively low numbers of butterflies to be released each year for five consecutive years.

KBBs currently inhabit three sites in West Gary: Ivanhoe, Toleston Ridges Nature Preserve, and the DuPont Tract, presumably colonized by animals dispersing from Toleston Ridges. At present most of Ivanhoe East is inhabited, with presence on Ivanhoe West limited to approximately the northern half of the preserve and especially on the northernmost four ridges (P. Labus, TNC, pers. comm.).

Shull (1987) reported observing “dozens” of KBBs on lupine at Hoosier Prairie in June of 1980. He does not give a precise location within the large site, but the only portion of the preserve which is proximate to project-related rail lines will see a substantial decrease in traffic. Martin (1994) did not find the species at Hoosier Prairie during a 1990 survey.

Eastern Prairie Fringed Orchid

Background

On September 28, 1989, the USFWS determined Eastern prairie fringed-orchid (*Platanthera leucophaea* [Nuttall] Lindley) (EPFO) to be a Federally Threatened species under authority of the Endangered Species Act (Act) of 1973, as amended. The USFWS-Great Lakes-Big Rivers Region (Region 3) is charged with oversight for this species. According to the final listing, the species has been extirpated throughout much of its former range by conversion of habitat for crop fields, grazing, intensive and continuous hay mowing, drainage, fire protection activities, and subsequent decline of prairie habitat. At the time of listing, *P. leucophaea* remained extant in approximately 52 populations in seven States and two Canadian Provinces; however, many of these were small, unprotected, and unmanaged populations (USFWS, 1989).

According to the species recovery plan (USFWS, 1999), the EPFO is one of at least 200 North American orchid species, and is limited in distribution primarily by temperature and drought extremes (Correll, 1950). This showy orchid species of North American grasslands is adapted to fire and periodic drought. Its populations are characterized by occasional periods of dormancy or mass flowering. Hawkmoths (*Sphingidae*) pollinate the EPFO at night (Bowles 1983, Sheviak and Bowles 1986, Bowles *et al.* 1992). The EPFO was formerly widespread in prairies and wetlands primarily east of the Mississippi River, while its western species pair, *Platanthera praeclara*, (Sheviak and Bowles 1981) ranged west of the Mississippi.

In September 1999 a recovery plan was completed by the USFWS which delineates reasonable actions needed to recover and/or protect this orchid. The purpose of the plan is to promote the conservation of the threatened EPFO by implementing identified tasks, including protection of habitat, management of habitat, increasing the size and number of populations, conducting surveys of known populations, conducting research, and reviewing progress. The species recovery plan defines a highly viable population as typically having more than 50 flowering plants; a population trend that is stable or increasing over a monitoring period of 5 years; available habitat of at least 50 hectares (125 acres) in size; assurances of ongoing management to reduce impacts from drainage, invasive plant species or woody vegetation encroachment; and protection through long term conservation easements, legal dedication as nature preserves, or other means (Bowles, 1999).

Life History

The EPFO was formerly included within the genus *Habenaria* (Correll, 1950), and is now widely recognized as appropriately belonging to *Platanthera* (Case, 1987). The species is in the Kingdom *Plantae*, Class *Liliopsida*, Order *Orchidales*, and Family *Orchidaceae*.

The EPFO is a perennial herb which regenerates from a fusiform tuber rootstock. This species is characterized by an upright leafy stem and flower cluster (inflorescence) rising 20 to 100 centimeters (cm) (8 to 40 inches) from the underground tuber. Leaves sheath the stem, and are 8 to 20 cm (3 to 8 inches) long, elliptical to lance-shaped, and progressively larger toward the stem base. The single flower spike is usually composed of 5 to 40 creamy white flowers above lance-shaped bracts 1 to 4 cm (less than 2 inches) long. The flowers at the top of the spike open last. The flowers are distinguished by a three-parted fringed lip 1.5 to 3 cm long (less than 1 inch) and a distally thickened nectar spur (tube-like structure) 2 to 5.5 cm long (about 1 to 2 inches) (USFWS, 1999). Leaves and an inflorescence usually emerge in May (if flower primordia were set the prior year), and flowering begins by late June to early July and lasts for approximately 7 to 10 days. Seed capsules mature over the growing season and are dispersed by the wind from late August through September.

The flowers are fragrant after sunset and adapted to pollination by night flying hawkmoths which ingest a high volume nectar resource from long nectar spurs (Bowles 1983). Long term population maintenance requires reproduction from seed, which is accomplished apparently only with pollination by hawkmoths (USFWS, 1999; Pollack, 2005). Reproduction by vegetative spread is apparently rare (USFWS, 1999). Pollination is required for seed production, while seedling establishment depends upon development of mycorrhizae with a favorable soil inhabiting fungi (Bowles, 1983) and

maintenance of graminoid habitat, usually by fire (USFWS, 1999). The EPFO and its western species pair are separated by morphologically different flower structures that prevent hybridization (Sheviak and Bowles 1986). The eastern species places pollen on the proboscis of visiting moths. In contrast, the western species (west of the Mississippi) has larger flowers adapted to placing pollinia (pollen masses) on the compound eyes of visiting pollinators. Increasing pesticide use may impact both pollinators and fungi. A 1998 survey of large sites in Michigan and Ohio identified the following species carrying EPFO pollen: *Eumorpha pandorus*, *Eumorpha achemon*, and *Sphinx eremitus* (D. Cuthrell, Michigan Natural Features Inventory, in litt. 1998). Pollination by *S. eremitus* (or *Lintneria eremitus*; Tuttle, 2007) has been confirmed at Illinois sites (Pollack, 2005). Some Illinois records of larval host plants for *Eumorpha pandorus* and *Eumorpha achemon* are *Ampelopsis* spp., and *Vitis* spp.; and for *Sphinx eremitus* are *Monarda* spp., *Mentha* spp., *Lycopsis* spp., and *Salvia* spp. The garden pest tomato and tobacco hornworms have been observed visiting the orchids. A number of additional moth species have been identified as potential pollinators by correlating their proboscis length with the depth to nectar in the EPFO's nectar spur. Surveys have not confirmed their status as pollinators.

The EPFO also has slightly smaller flowers, and often a more elongated and open flower cluster. Two other orchid species may be confused with the EPFO. *Platanthera lacera*, a species of less calcareous habitats, has similar flower color and structure, but has smaller flowers with shorter nectar spurs, ovaries, and flower bracts. *Platanthera blephariglottis*, a species of acid bogs, has smaller and morphologically different white flowers.

Population Dynamics

Specific requirements for seedling establishment require development of a mycorrhizal association with a favorable soil-inhabiting fungus (Stoutamire 1974). The fungus provides nutrients to the seedling, which may remain underground for several years. Once the seedling emerges from the ground and produces leaves and begins photosynthesis, this relationship may become symbiotic. The root systems of terrestrial orchids are reduced, and require fungal mycorrhizal associations for proper water uptake and nutrition (Sheviak 1990), especially under stress (Hadley and Pegg 1989). Spring burning of prairie stimulates mycorrhizal productivity (Bentivenga and Hetrick 1991), and could be ecologically important in promoting orchid seedling establishment or performance of established orchids. Thus the stability of orchid populations is closely related to the ecological conditions of their mycorrhizae (Sheviak 1974), which may be in part affected by the increased mycorrhizal productivity that occurs after spring burning of prairie (Bentivenga and Hetrick 1991). Disturbance also appears important in EPFO seedling establishment. Although the EPFO is pre-adapted to dormant season disturbances, such as prairie fires, growing season damage to vegetative material may weaken plants by limiting food storage. Mowing or cropping of plants early in the growing season may also result in failure to form the next season's flower bud, inducing dormancy or even death the following season (Sheviak 1990).

Under some conditions, the EPFO can be extremely long-lived. Case (1987) reported plants surviving up to 30 years in gardens, and small populations have persisted in cemetery prairies where annual mowing prevented seed production for decades (Bowles *et al.* 1992). However, dramatic fluctuations

in plant numbers may occur in natural populations, with flowering correlated positively with rainfall and negatively with temperature cycles, as evidenced by data from an Illinois wet prairie (Bowles *et al.* 1992).

In habitats with large scale disturbance patterns, EPFO populations shift spatially over time, with high population turnover, decline, or total loss (Bowles 1983, Case and Case 1990). Continual recolonization of successional habitats is dependent on massive seed production and dispersal, which requires high pollinator visitation rates and presence of appropriate soil fungi. The most remarkable natural population fluctuations of the EPFO have occurred in relation to cyclic Lake Huron and Lake Erie shoreline fluctuations and water level fluctuations caused by human management (Case 1987, Case and Case 1990, Watson 1998). Ohio populations around Lake Erie have reached the highest flowering population counts at intermediate lake levels, suggesting that there may be an optimal level that promotes flowering (Windus and Cochrane 1997). Orchids apparently colonize early-successional habitat 2 to 5 years after lake flooding or diking. After about 5 years, flowering orchids appear, but may gradually decline with invasion by dogwood (*Cornus* sp.) on mesic sites, and by purple loosestrife or reed canary grass (*Phalaris arundinacea*) on wet sites. Maintenance of a series of advancing successional stages may ensure that suitable sites are available for prairie orchid colonization as water levels fluctuate. Managers of sites with artificially controlled water levels should ensure that orchid populations remain undisturbed for at least 5 years, allowing time for seed production and dispersal to other suitable areas within the site (USFWS 1999).

Habitat

The EPFO requires full sun for optimum growth and reproduction and a grassy habitat with little or no woody encroachment. It occurs in habitats ranging from mesic prairie such as tallgrass, calcareous silt-loams, or sub irrigated sand prairies, to wetlands such as sedge meadows, fens, occasionally sphagnum bogs, marsh edges, and other groundwater maintained habitats (Bowles 1983). The substrate of the sites where it occurs ranges from more or less neutral to mildly calcareous (Case 1987, Sheviak 1974, Bowles 1983). It appears to be adapted to natural patch disturbances, or areas with dynamic disturbance regimes; occasionally the orchid colonizes successional habitats or recolonizes previously occupied areas (Bowles 1999). According to the 1999 recovery plan, the tubers are dormant during winter and thus are adapted to dormant season prairie fires; such fires and high precipitation levels appear to promote flowering (Sheviak 1974; Roosa and Eilers 1979; Bowles 1983; Currier 1984). Blossoms often rise just above the height of the surrounding grasses and sedges. The more exposed flower clusters are more likely to be visited by the hawkmoth pollinators, though they are also at greater risk of being eaten by deer. A symbiotic relationship between the seed and soil fungi (mycorrhizae) is necessary for seedlings to become established. The fungi helps the seeds assimilate nutrients in the soil.

Potential habitats occur across various six physiographic regions, including the lake plains of the Lake Michigan, Lake Huron, and Lake Erie basins that support prairie habitat. Disjunct populations also occur in unglaciated sedge meadow, and formerly were documented to occur in unglaciated prairie in Oklahoma. The EPFO can occupy a broad moisture gradient. In sand prairies, this gradient ranges from mesic prairie along the tops of low dune ridges to wet prairie in shallow interdunal

swales (Bowles 1985). Sand prairies are occupied in areas with adequate calcareous groundwater supplies, primarily in the lake plains of the Great Lakes. Most midwestern EPFO populations occur in silt-loam soils derived from loess or glacial till. Loess deposits over glacial till or outwash predominate in Illinois, but become thin or absent northward in Wisconsin. In silt-loam soils, most populations are found in level mesic prairie or in wet prairie along the borders of prairie potholes and watercourses; but the orchid occasionally occurs in upland sites, such as along ridges created by glacial deposits (Bowles *et al.* 1992).

Rangewide Status

The EPFO historically occurred primarily east of the Mississippi River with a distribution pattern extending from Oklahoma north to Manitoba and east in a narrowing peninsula through the Great Lakes states to Maine. It historically was documented to occur in 13 US states and one Canadian province (COSEWIC 2003).

At the time of Federal Listing in 1989, *Platanthera leucophaea* distribution was reported to have declined over 70 percent from original records with approximately 52 extant populations reported in seven states. The final rule states, “Primarily due to the destruction of large grasslands east of the Mississippi River, extremely large or extensive populations of this orchid do not exist in the United States” (USFWS 1989). Early decline appears due to conversion of natural habitats to cropland and pasture. At the time of US Federal listing, states in which the EPFO was known to occur included Illinois, Iowa, Maine, Michigan, Ohio, Virginia, and Wisconsin. In Canada, 20 populations were documented in fens and prairie habitats in 12 Ontario counties; and one fen population was estimated at 2,000 plants (COSEWIC 2003).

At the time of preparation of the recovery plan in 1999, *Platanthera leucophaea* was reported to persist in 59 populations in 6 states, most populations being in Wisconsin, Illinois, Michigan, and Ohio. Only 15 of these extant populations in the United States had full legal protection. Six U.S. populations were considered to have high viability with potential for long term persistence, four of which had full legal protection (Bowles 1999).

Most remaining habitats are small, with fewer than 50 plants, and are not representative of the once vast prairie populations of this orchid (Sheviak 1974, Bowles 1983, Case 1987). Only a few population census counts in the US have exceeded 500 flowering plants, and these numbers are from successional habitats that fluctuate widely over time (USFWS 1999). Currently, known populations appear to be consistent with those historically reported in the 1999 recovery plan. Current population decline appears mainly due to the loss of habitat from the drainage and development of wetlands. Other reasons for the current decline include succession to woody vegetation, competition from non-native species and over-collection. A decline in the species-specific pollinator from pesticides and loss of habitats also likely affects the regeneration capabilities of the orchid.

Project Area Status

According to the 1999 recovery plan, Illinois may have contained the largest and most extensive pre-European settlement populations of the EPFO, and has sustained the most drastic decline in

populations out of any state. Originally the species was known from tallgrass prairie in 33 Illinois counties across the northern two thirds of the state, an area now almost totally converted to agriculture (Sheviak 1974, Bowles and Kurz 1981). As many as 20 populations may occur in six counties concentrated in the Chicago region, and single populations occur in cemetery prairies in eastern and west-central Illinois counties (Bowles *et al.* 1992). Though 14 Illinois populations are protected and managed, only two of these contain more than 100 plants. This orchid was successfully introduced by seed broadcast into three sites in Cook County, Illinois (Packard 1991). Based on the success of these introductions, seeds produced by hand pollination have been introduced into 14 additional northeastern Illinois sites and one Wisconsin site (Keibler *et al.* 1993; Keibler 1994, 1995, 1998).

Within the project-specific vicinity, there is one documented population in DuPage County. The population is approximately 1,200 feet west of an existing EJ&E train line, and no construction activities are currently planned within the general vicinity of this location.

EPFO populations in Lake and DuPage Counties, Illinois were examined as reference sites on October 27, 2008, and were located at the wet prairie/mesic prairie interface. *Calamagrostis canadensis* was common at both sites. On October 29, 30 and November 6, surveys were conducted along the EJ&E line to identify areas of potentially suitable habitat. Several small wet prairie remnants were identified, all of them small and of low to moderate quality. Survey results are included in Appendix B.

Leafy Prairie Clover

Background

Leafy prairie-clover (*Dalea foliosa* [Gray] Barneby) is a short-lived herbaceous perennial in the Legume family (*Fabaceae*). The species was first described as *Petalostemum foliosum* by Asa Gray in 1868 (USFWS 1996) and is considered one of America's rarest plants (Swink and Wilhelm 1994). *Dalea foliosa* grows in open, rocky habitats such as glades and dolomite prairies.

Individual plants grow from a central root crown at or just below the surface and may have one to as many as 20 stems, ranging from 2 to 8 decimeters tall. Stems are smooth and leaves are alternate and oddly, pinnately, compound. Flowers are clustered in dense, cylindric heads up to 8.9 centimeters long. Individual flowers have a lavender-purple calyx up to 5 millimeters long, with five petals and five exerted anthers.

Life History

Leafy prairie clover shoots develop in early spring from buds generated at the base of the previous year's growth (Baskin and Baskin 1973). Plants do not flower until their second or third year or later (Baskin and Baskin 1989). Mature plants may not flower every year; may have diminished vegetative growth; or may go dormant for years (USFWS 1996).

Flowering adults may have one or many stems with multiple flower spikes (Baskin and Baskin 1989; USFWS 1996). Flowering begins in July and continues through early September (Swink 1994; USFWS 1996). Yearly seed production is typically high (Baskin and Baskin 1973). In a 1990 study

of Illinois populations, seed set was greater than 70 percent (USFWS 1996). Seeds ripen by October, but may remain on the old flower stalks through early spring.

Leafy prairie clover does not spread vegetatively, but reproduces from yearly seed production and a persistent seed bank (Baskin and Baskin 1973; USFWS 1996). Seeds overwinter and may remain dormant for several years. Germination occurs in April and by late May; seedlings have several leaves (Baskin and Baskin 1973). Seedling mortality is high and the life span of most mature plants is less than 8 years (USFWS 1996).

Population Dynamics

A rangewide 1992 census of all leafy prairie clover populations created arbitrary categories of population size and age structure in order to compare populations in Illinois, Tennessee, and Alabama. Populations were classed as small (<100 plants), moderate (>=100 but <500 plants), or large (500+). Plants were classified by reproductive/growth stages into: Flowering plants; Non-flowering plants (>=10cm tall); and Seedlings (single stem <10cm tall) (USFWS 1996).

In moderate and large populations, flowering plants ranged from 11.6 to nearly 53 percent of all plants, non-flowering plants ranged from 34.5 to 43.7 percent, and seedlings ranged from 3.4 to nearly 53 percent (USFWS 1996). Small populations are more variable in structure; the entire population may consist of a few persistent mature plants or non-flowering plants, or entirely of immature plants. In small populations, seedlings make up a smaller percentage than in moderate and large populations. Surveys of Illinois populations since 1990 have found that patches occasionally go dormant or disappear altogether, and may reappear years later (USFWS 1996).

Habitat

Leafy prairie clover is found in open habitats with thin soils over flat, often fractured, limestone bedrock (USFWS 1996). References to the habitat of *Dalea foliosa* compiled from historic sources by Baskin and Baskin (1973) include a variety of habitats on rocky substrates such as “river banks,” “rocky hills,” “gravelly soil,” “cedar glades,” and “barrens.” In Illinois, *D. foliosa* populations are found in “shallow-soil prairies where dolomitic bedrock is near the surface” (Swink and Wilhelm 1994).

In the project area, the Keepataw population occurs in a small remnant dolomite prairie. This community was once found along much of the Des Plaines River Valley, before the extensive quarrying and industrial activities of the last 150 years. Taft (1989) described the Keepataw site as wet-mesic to mesic dolomite prairie and sedge meadow. He listed the following species as dominants in this habitat: *Schizachyrium scoparium*, *Deschampsia caespitosa*, *Liatris pycnostachya*, *Pycnanthemum virginicum*, *Carex spartwellii*, *Carex stricta*, *Calamagrostis canadensis*, *Glyceria striata*, *Juncus dudleyii*, and *Lythrum alatum*.

Rangewide Status

Leafy prairie clover was listed as endangered by the USFWS on May 31, 1991; previously, it had been listed as endangered in Tennessee (1989) and Illinois (1990). Leafy prairie clover is narrowly

restricted to cedar glades, barrens, and dolomite prairies in these states. Habitat destruction and degradation has reduced historic population levels by over 45 percent and continues to threaten current sites.

The USFWS *Recovery Plan for the Leafy Prairie-clover* (USFWS 1996) lists 31 known populations: two in Alabama; three in Illinois; and 29 in Tennessee. Since the publication of the Recovery Plan, two other Illinois populations have been discovered. Currently, all naturally- occurring Illinois populations are found in Will County. Four of these sites are within the Des Plaines River Valley: Keepataw Forest Preserve, Romeoville Prairie, Lockport Prairie Nature Preserve, and a newly-discovered population on private land east of the river in Romeoville. The fifth Will County population was discovered in 1998 at the Midewin National Tallgrass Prairie. In 1996, another population was discovered at the Jarrett Prairie in Ogle County, but it is suspected that this population is an escape from cultivation at the nature center (Bowles *et al* 1999).

A range-wide census of leafy prairie clover populations, done in 1992, tallied over 10,000 plants (USFWS 1996). Most populations are small (<100 plants) or moderate (>100 but <500 plants) in size. Several Tennessee populations have over 1000 plants and a large population, estimated at over 5000 plants, is found in the Lockport Prairie Nature Preserve in Illinois (USFWS 1996).

In Illinois, leafy prairie clover has been successfully introduced into three prairie restorations: a wet-mesic prairie at the College of DuPage in Glen Ellyn, Illinois; a recreated gravel and dolomite prairie at the Morton Arboretum in Lisle, Illinois; and a dry-mesic gravel prairie restoration in Waterfall Glen Forest Preserve in DuPage County, Illinois (USFWS 1996).

Project Area Status

Leafy prairie clover is known to occur at Lockport Prairie Nature Preserve, at Lockport East Preserve, and at the Hanson Material Service Long Run/Com Ed Parcel (slightly more than 200 meters from the CN Joliet Subdivision line).

ENVIRONMENTAL BASELINE

Environmental Baseline

Inventories and Surveys

A series of habitat-level surveys were conducted to characterize existing conditions within the Action Area. Initial surveys were completed in the early spring of 2008, followed by more focused surveys emphasizing HED and EPFO habitat in October and early November 2008. These latter visits are summarized below.

Illinois sites in the lower Des Plaines River Valley, including two segments of the Paul Ales Branch line, the proposed Joliet connection, and Dellwood Park West were investigated for potential HED habitat on October 18th, 2008.

Indiana sites including Kirk Yard and the proposed Griffith and Ivanhoe connections were visited on October 29th, 2008. Representatives of HDR, Winzler & Kelly, CN, EJ&E, USFWS, IN DNR, and TNC were present.

A subsequent hi-rail survey was carried out by representatives of HDR and Winzler & Kelly on October 30th, 2008, with CN and EJ&E representatives present. All areas of proposed Illinois double-track or connection construction were examined, except for the proposed Matteson connection. A subsequent visit was made to areas of remnant natural habitat and the Matteson connection on November 6, 2008, by HDR and USFWS, with CN and EJ&E representatives.

The following description is based on these site visits, supplemented by earlier field visits and published information.

Existing Environmental Conditions

Most of the immediate rail corridor is heavily disturbed, and dominated by weedy or ruderal vegetation. Extensive areas are overgrown with shrubs and saplings, with the understory shaded and nearly barren. Other areas are covered by weedy herbaceous vegetation. Excavated drainage ditches are common. In many areas residential lawns, agricultural fields, or paved and developed areas are present in immediate proximity to the rail line. Even where the rail line passes through public open space, the area immediately adjacent to the rail line tends to be heavily disturbed. Within preserves, areas more distant from the tracks support a range of natural and disturbed communities, including areas currently under restoration.

Better quality natural communities are extremely limited in extent within the railroad ROW where construction activities are proposed. The few wet to mesic prairie remnants identified are summarized below; more detailed information is included in Attachment B.

Lake County, Illinois: a small mesic prairie remnant was identified near Mundelein, and extended for several hundred feet. The remnant was on the opposite (north) side of the tracks from the proposed new double-track, and will not be disturbed. The work area included dense shrub cover and a near-barren substrate within what appeared to be an excavated ditch.

DuPage County, Illinois: Proposed Munger Connection. This area is dominated by reed canary grass and cattails, but includes several small openings of remnant wet prairie and sedge meadow vegetation. The largest opening measured approximately 8 by 15 meters, and other openings were considerably smaller.

Normantown: near 91st Street, a wet prairie dominated by bluejoint grass parallels the east side of the rail line for several hundred feet. The prairie occupies a narrow (25-30 feet) wide corridor between the railroad and a parallel segment of Normantown Road. A second, smaller wet prairie remnant was observed a short distance to the south.

Gougar Road: A small wet prairie is present in a shallow ditch adjacent to the rail line.

Schoolhouse Road: A wet prairie remnant of small to moderate size is present north of the rail line, which is on an elevated embankment at this location.

Lake County, Indiana: Several high quality natural areas including Ivanhoe Nature Preserve and Lakeshore Railroad Prairie are in close proximity to the Action Area, although the immediate rail

corridor is generally disturbed. Site visits with USFWS, INDNR, and TNC to areas of proposed construction did not identify any habitat for Federally listed species immediately adjacent to the rail lines.

EFFECTS OF THE ACTION

Direct Effects

Indiana Bat

There will be no direct effects on the Indiana bat, which is not known to occur within the Action Area. The nearest documented locality is approximately 17 km east of the EJ&E line crossing of the Little Calumet River.

Hine's Emerald Dragonfly

There will be no direct effects of the Action on the HED, for the reasons documented below for each of four rail segments.

No increase in operations or construction activity is proposed on the Paul Ales Branch line as a result of the Transaction, which passes in close proximity to high-quality HED habitat. Thus there would be no affect. The Final EIS will be revised to reflect that speed restrictions on the Paul Ales Line are a result of the special conditions of the 1996 U.S. Army Corps of Engineers (COE) permit (Permit # 199600211) issued to Commonwealth Edison. SEA has included this as a condition within mitigation in Chapter 4 of the Final EIS.

There would be no construction related effects from the proposed Joliet connection, which runs for a short distance through unsuitable HED habitat. Most of the area consists of dense buckthorn and other invasive shrubs and saplings. No HED observations have been made in the interior of dense shrub habitat in 14 years of monitoring at other Illinois sites (Mierzwa, 1995; Mierzwa, 2008a). There is a narrow herbaceous opening and a crossing of a small stream in the northern half of the connection, however the stream is larger than known HED breeding sites (more than a meter in width), and stagnant. The stream provides good habitat for common dragonflies such as Libellulids, and competitive interactions with these species would preclude use by HED. Fish (cyprinid minnows, many of which are insectivores) were observed in the stream during an October 2008 site visit, providing additional support to the non-habitat determination.

There would be an increase in traffic on EJ&E segment 9B, from 18.5 to 42.3 trains per day. However, train speed would not exceed 10 mph in these areas because of track and bridge constraints. Observations on the nearby Paul Ales Branch line have indicated that HED have no difficulty evading slow-moving trains. Mierzwa (unpublished observations) watched HED forage over slow-moving trains, even darting between cars without difficulty. Fast moving trains (or other vehicles) could potentially cause dragonfly mortality, but in the areas identified above higher speeds are either prohibited or precluded by infrastructure constraints.

Discussions with the Applicant indicate that contrary to information included in the Draft EIS, there will be no increase in train traffic on CN's Joliet Subdivision line. Operations are currently at 2.0

trains per day, plus 10 Amtrak trains per day and 4.3 Metra trains (3 trains Monday through Friday in each direction) using the same lines, and will remain at identical levels (Cunningham 2008). A HED breeding population at Long Run Seep Nature Preserve and a probable breeding population at the Long Run/Com Ed Parcel occur in proximity to the Joliet Subdivision, and there are isolated records away from the tracks of what are assumed to be dispersing individual dragonflies to the south at Lockport East and Dellwood West. CN has conducted preliminary studies on the interactions of dragonflies and the relatively fast moving trains on the Joliet Subdivision and plans to continue these studies. Preliminary surveys of this segment of the CN line did not note dragonfly mortality, but the findings were based on only six days of field effort (AECOM 2008).

HED larval presence is assumed but not confirmed within an extensive sedge meadow complex immediately west of the Joliet Subdivision tracks at the Long Run/Com Ed Parcel. Adult territorial observations are common in areas 50 to 150 meters east of the tracks, as many as three in one morning; (Mierzwa 2008b). There are no well-defined rivulets at this location and a near absence of visible flow, the inner track is inactive, and there is no evidence of settling along the tracks. Because there is no proposed change in operations at this location, there will be no new adverse impacts to adults or larvae.

Karner Blue Butterfly

There would be no direct effect on the KBB. No potential habitat was noted in the immediate vicinity of the proposed Ivanhoe or Griffith connections, and the documented presence of the species is within the Ivanhoe preserve, not along the sparsely vegetated rail corridor.

Eastern Prairie Fringed Orchid

There would be no direct effect on the EPFO, based on the currently available information. Habitat surveys were conducted on October 28, 30, and November 6 within the Action Area, and a few areas of remnant wet prairie were identified which are unlikely to support EPFOs because of small size (less than one acre, usually much less), relative isolation from other/larger natural areas, and relatively degraded condition (FQI less than 20, and usually less than 10). Preconstruction surveys will be conducted in the growing season and prior to any project-related disturbance to verify that the species is not present.

Leafy Prairie Clover

There would be no project-related effects on leafy prairie clover, because populations are more than 200 meters from the nearest active rail line, and because there would be no increase in operations in proximity to these populations.

Indirect Effects

On October 23, 2008, Midwest Generation informed USFWS that the proposed acquisition of EJ&E would result in the loss of coal train storage areas serving their Will County facility, and would have required Midwest Generation to “increase the number of rail sidings/lines within the River South area.” This would result in impacts to known HED breeding and foraging habitat.

After detailed review of the Midwest Generation proposal and discussions with Midwest Generation, USFWS, SEA and CN; it has been determined that there is no cause and effect relationship between the CN acquisition of EJ&E and the construction of additional rail sidings at River South. Midwest Generation has indicated that the construction of additional rail sidings at River South is not its preferred alternative to solve its coal storage capacity issues. CN has committed to a voluntary mitigation measure which would result in discussions with Midwest Generation to identify reasonable alternative locations for coal train storage. The analysis and the CN discussion of alternatives are included in Attachment D.

Interdependent and Interrelated Actions

No interdependent or interrelated actions have been identified

Cumulative effects

A HCP has been proposed for the HED in the lower Des Plaines River Valley (IDNR 2005). The HCP has not yet been published, and the specific proposals of the various participants are not at this time public knowledge. It is reasonable to assume that the HCP would permit impacts to HED habitat, and that provisions of the HCP would also result in beneficial effects in the form of habitat restoration or enhancement, some of it likely to occur within the Action Area. Details are not currently known.

No other reasonably foreseeable cumulative impacts have been identified at this time.

FINDINGS

The proposed activity **may affect, but is not likely to adversely affect, the Indiana bat**. A population is known from the floodplain of the East Branch Little Calumet River in Porter County, 17 kilometers east of the EJ&E line crossing. No construction is proposed in this area.

The proposed activity **may affect, but is not likely to adversely affect, the Hine's emerald dragonfly**. There will be no direct construction-related impacts to adults or larvae. Increases in daily operations on EJ&E Segment 9B including the Des Plaines River Bridge and on the proposed Joliet Connection will be subject to 10 mph speed limitations which, based on past observations at nearby sites (Mierzwa, unpublished data), will avoid risk of adverse train-HED interactions. The number of daily operations on the Joliet Subdivision will not change.

The proposed activity is **not likely to adversely affect Hine's emerald dragonfly critical habitat**. There is no new construction proposed as part of the project within the area designated as critical habitat.

The proposed activity **may affect, but is not likely to adversely affect, the Karner blue butterfly**. Populations occur near EJ&E rail lines at Ivanhoe and at the DuPont Tract, but there is no evidence that populations occur in immediate proximity to or utilize the rail corridor at this time.

Based on currently available information, the proposed activity **may affect, but is not likely to adversely affect, the Eastern prairie fringed orchid**. The only known extant population in the

Action Area is approximately 1,200 feet from the active rail line. No construction will occur at this location, although there will be a substantial increase in daily rail operations. Habitat surveys in October and November 2008 identified five small areas of remnant native wet prairie and related communities. The Applicants have committed to conduct preconstruction habitat and species surveys, and if a currently unknown population is discovered, USFWS will be notified immediately and consultation will be re-initiated.

The proposed activity **may affect, but is not likely to adversely affect leafy prairie clover**. Populations occur slightly over 200 meters from the Joliet Subdivision and Paul Ales Branch line, but there would be no construction and no increase in operations in the vicinity of these populations.

MITIGATION MEASURES

The Applicants committed to voluntary mitigation (VM) measures for effects on biological resources. The Applicants offered additional measures in response to SEA's recommendations in the Draft EIS. SEA recommends that compliance with the voluntary mitigation be made a condition of any approval of the Transaction.

Based on comments received on the Draft EIS, SEA has recommended conditions to enhance several VM's. SEA also re-analyzed the Applicants' voluntary mitigation measures developed to mitigate the potential effects of the Proposed Action on biological resources in response to Draft EIS comments received on biological resources either during the formal Draft EIS comment period or at SEA's public meetings. As a result, SEA recommended mitigation measures to supplement the voluntary mitigation measures to which the Applicants have committed.

Voluntary measures and SEA conditions related to endangered species are listed below. Several are specifically related to Federally threatened or endangered species.

- CN VM In accordance with their Emergency Response Plan, Applicants shall make the required notifications to the appropriate Federal and state environmental agencies in the event of a reportable hazardous materials release. Applicants shall work with the appropriate agencies such as the United States Fish and Wildlife Service, Illinois Environmental Protection Agency and Indiana Department of Environmental Management to respond to and remediate hazardous materials releases with the potential to affect wetlands or wildlife habitat(s), particularly those of Federally threatened or endangered species.
- CN VM Before beginning construction activity, Applicants shall survey all suitable habitats potentially impacted by the construction activity for Federally- and state-listed threatened or endangered plant species. If any listed plant species are located, Applicants shall implement a mitigation plan in consultation with the appropriate Federal and state agencies.
- CN VM If identified in the area, Applicants shall coordinate with USFWS-Indiana and The Nature Conservancy (TNC) to monitor effects on the Karner blue butterfly in the West Gary Recovery Unit.

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- CN VM Applicants shall continue with the existing agreements for Paul Ales Branch operation for the protection of the Federally-listed Hine's emerald dragonfly.
- CN VM For impacts to non-jurisdictional isolated wetlands habitat along the new line, Applicants shall survey the route to determine if the Hine's emerald dragonfly is present along the ROW.
- CN VM Upon consultation with USFWS, should the Hine's emerald dragonfly be observed on the site of Transaction-related construction activities, Applicants shall implement appropriate measures prior to and during construction to reduce or eliminate impacts on the Hine's emerald dragonfly.
- CN VM Applicants shall cooperate with Midwest Generation, LLC ("MWG"), to identify locations on Applicants' property, or available to Applicants, on which loaded coal trains could be staged while awaiting delivery to MWG's Will County Generating Station and Joliet Generating Station and which would make unnecessary the construction of additional train storage capacity on MWG property that would adversely affect the Hine's emerald dragonfly or its habitat. If no adequate existing train storage locations can be identified, Applicants shall make reasonable efforts to acquire or construct, at MWG's expense, new train storage capacity, at locations where construction would not have adverse impacts on the Hine's emerald dragonfly or its habitat, and which would make construction of additional storage capacity on MWG's property unnecessary, and shall make that capacity available as needed for staging of coal trains destined for Will County and Joliet Stations.
- CN VM In consultation with the U.S. Fish and Wildlife Service (USFWS) and relevant natural resource stakeholders, Applicants shall participate in the development of a Habitat Conservation Plan for the Hine's emerald dragonfly or necessary work plans applicable to State and Federally listed threatened and endangered species and take the necessary measures to ensure that rail operations do not cause undue impact to those species.
- CN VM [Karner Blue Butterfly] In consultation with USFWS, Applicants shall identify areas of suitable habitat of the Karner blue butterfly within Kirk Yard and in the vicinity of all planned Transaction-related construction of double-track and new or improved connections within the State of Indiana for potential habitat protection and/or enhancement. Applicants shall contact TNC about participation in the Safe Harbor Agreement for the Karner blue butterfly.
- CN VM [Indiana Dune and Swale] In consultation with appropriate Federal and State natural resource stakeholders, including USFWS, INDNR and TNC, Applicants shall designate EJ&EW-owned areas of prime prairie and dune swale habitat for potential land management agreement and/or conservation easement. Should modifications to Kirk Yard be proposed in the future, Applicants shall review proposed plans for upgrading and expansion of Kirk Yard in order to avoid construction in identified dune swale areas. In the event that unavoidable impacts are identified, the Applicants shall work with TNC to develop a plan for mitigation of those impacts and improvement of the quality of remaining dune swale areas.

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- CN VM [Eastern prairie fringed orchid] Prior to any ground disturbing activities, Applicants shall hire a qualified biologist to survey for the Eastern prairie fringed orchid (*Platanthera leucophaea*) in areas containing suitable habitat. Applicants shall survey each area on at least three non-consecutive days between June 28 and July 11, as this is when the orchid typically flowers and is most identifiable. If the Applicants' biologist finds orchids, Applicants shall not conduct any construction activities in that area and Applicants shall notify USFWS and the Board immediately. The Board shall reinstate consultation with USFWS. Applicants shall work with the Board and USFWS to determine appropriate measures to offset impacts, most likely providing funding for an ongoing hand pollination project, or providing funding to be used to enhance another orchid site (that is, brush cutting, prescribed burning).
- CN VM During construction, temporary barricades, fencing, and/or flagging shall be used in sensitive habitats to contain construction-related impacts to the area within the construction Right Of Way ("ROW"). Staging areas shall be located in previously disturbed sites and not in sensitive habitat areas.
- SEA Applicants shall establish a local resource agency liaison(s) with expertise in environmental and natural resource management to work closely with Federal, state, and local natural and water resource agencies (including Fermilab) for the purpose of improved adaptive natural resource management. Applicants shall name their liaison(s) within 1 month of the effective date of the Board's final decision. Applicants' liaison(s) shall ensure that the adaptive management measures developed shall be incorporated into all relevant railroad ROW maintenance contracts. Applicants' liaison(s) shall be available to consult with resource agencies for a minimum of 5 years following the effective date of the Board's final decision.
- SEA Applicants shall work with relevant natural resource stakeholder groups, forest preserve districts, TNC, INDNR, IDNR, and USFWS to establish appropriate monitoring programs. These programs include identifying baseline conditions and post-transaction conditions, in areas adjacent to forest preserves and designated natural areas on species of concern to the above groups. The Applicants shall fund the monitoring programs beginning within 1 year of the effective date of the Board's final decision and for a period of 4 years thereafter.
- SEA Applicants shall continue to abide by the special conditions of the 1996 USACE Permit #19960211 for train operations on the Paul Ales Branch in order to minimize further effects on Hine's emerald dragonflies.
- SEA To avoid any direct take of Indiana bats, the Applicants shall not remove trees within the former EJ&E ROW with a diameter of 3 or more inches between April 15 and September 15. The Applicants shall avoid or minimize tree clearing and snag removal within project-related construction area limits. In the railroad ROW (former EJ&E), outside the clear zone and considering other safety factors, the Applicants shall minimize tree clearing to maintain woods in a natural state, to the extent practicable.

SEA Applicants shall immediately cease transaction-related construction in the event that a previously unidentified Federally- or state-listed threatened or endangered species is encountered during construction activities. In that event, the Applicants shall consult with USFWS for Federally-listed species and IDNR and/or INDNR for state-listed species for guidance on how to minimize transaction-related effects and protect these species, and shall comply with the reasonable solutions suggested by those agencies. The Applicants' resource agency liaison(s) shall serve as coordinator(s).

SEA Prior to transaction-related construction activities, the Applicants shall reexamine the Federal and state lists of threatened and endangered species for any newly listed species and shall consult with the appropriate resource agencies on any newly listed species. The Applicants' resource agency liaison(s) shall serve as coordinator(s).

Analysis of Alternate Actions

SEA evaluated three alternatives: No-Action, the Proposed Action, and the Proposed Action with conditions, including environmental mitigation measures. SEA initially considered another four alternatives (discussed in Section 1.6.4 of the DEIS, Alternatives Eliminated from Detailed Analysis), but eliminated them from detailed study.

The Proposed Action is described in detail in the project description section of this document. To reach its decision, the Board will consider the Draft and Final EIS, including SEA's final recommended mitigation, the comments received on the Draft EIS, and other environmental information provided by interested parties. If the application is approved, the Board will identify what, if any, mitigation measures, including environmental mitigation, should be imposed as conditions.

No-Action Alternative

CEQ's regulations implementing NEPA (40 CFR 1502.14(d)) require consideration of a No-Action Alternative. The No-Action Alternative provides a basis for understanding the impacts of the Proposed Action. Under the No-Action Alternative, the Applicants would not acquire control of the EJ&E land, rail line, and related assets; SEA assessed rail operations on the EJ&E rail line at existing levels. The Applicants would continue to make connecting train movements through the Chicago Terminal District in the same way as these movements now occur, would not construct the six connections or the double-track, and would not make changes to existing yard operations.

Alternatives Eliminated from Detailed Analysis

SEA considered four additional alternatives, but found them to be unreasonable and infeasible because they would not meet the Applicants' purpose of, and need for, the Proposed Action. These alternatives were: 1) expanded trackage rights to CN; 2) implementation of the Chicago Region Environmental and Transportation Efficiency (CREATE) Program in lieu of CN's acquisition of the EJ&E rail line; 3) acquisition of a different rail line within the Chicago metropolitan area; and 4) construction of a bypass outside of the EJ&E rail line in Northern Illinois. In general, SEA found

these alternatives to be unreasonable because they would not give CN full ownership and use of a continuous rail route around Chicago, or the Applicant's could not gain access to EJ&E rail yards.

CONCLUSION

This biological report evaluates Federally listed species known to occur at present or historically in the greater Chicago region. Four species were eliminated from further consideration because they do not presently occur in proximity to the Action Area, or because they occur only in areas where no construction or operational impacts are reasonably anticipated. Five species (Indiana bat, Hine's emerald dragonfly, Karner blue butterfly, Eastern prairie fringed orchid, and leafy prairie clover) were evaluated because preliminary information indicated that they do occur or might occur in or near the Action Area. After a detailed review of available information and habitat-level field surveys, determinations of "may affect but not likely to adversely affect" were made for all five species. For one species, the EPFO, the Applicant has agreed to conduct pre-construction surveys and to re-initiate consultation if the species is found within an area of proposed activity. Several mitigation measures have been proposed by the Applicant and by SEA, some of which are expected to benefit listed species or protect or manage habitat.

LIST OF DOCUMENTS

Surface Transportation Board, Section of Environmental Analysis. July 2008. *Draft Environmental Impact Statement for the Proposed Canadian National Railway Company Acquisition of the Elgin, Joliet & Eastern Railway Company*. Finance Docket No. 35087. Canadian National Railway Company and Grand Trunk Corporation—Control—EJ&E West Company.

Surface Transportation Board, Section of Environmental Analysis. December 2008. *Final Environmental Impact Statement for the Proposed Canadian National Railway Company Acquisition of the Elgin, Joliet & Eastern Railway Company*. Finance Docket No. 35087. Canadian National Railway Company and Grand Trunk Corporation—Control—EJ&E West Company.

GLOSSARY

Action Area	Under the Federal Endangered Species Act, the area potentially subject to direct or indirect project-related impacts.
Anthers	The part of a flower which contains pollen.
Barrens	A sparsely vegetated natural community, with few trees or widely scattered trees; often, with exposed bedrock or very shallow soils
Bivoltine	Two generations per year.
Buckthorn	A weedy shrub or small tree, originally Eurasian, introduced to the U.S. as an ornamental probably in the 1850s. It tends to form solid stands and shade out native species.
Calcar	A spur-like projection on the leg of a bat.
Calcareous	With a high proportion of calcium carbonate; alkaline, with a relatively high pH. In the Chicago region, usually referring to soils associated with limestone or dolomite bedrock.
Calyx	A part of a flower, lying underneath the more conspicuous petals.
Cohorts	A group of individuals experiencing events within the same timeframe.
Conservation easement	A legal restriction on land use; usually used to ensure that land is maintained as open space. Usually the landowner accepts a cash payment or receives a lower tax rate in return for giving up development rights.
Critical habitat	A designation under the Federal Endangered Species Act, defined as (1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species but essential for conservation. All Federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species, or destroy or adversely modify its designated critical habitat.
Cyprinid	A type of minnow, or small fish; referring to a large and widely distributed family of species.
Density	Number of individual animals per unit of area; for example “six dragonflies per acre” is a measure of density.
Detritus	Accumulated organic material, in this context found on the bottom of aquatic habitat.
Disjunct	Separate from, isolated.
Distally	Remote, farther from a point of reference.
Dolomite	A type of rock composed of calcium magnesium carbonate. Similar to limestone but with the presence of magnesium. The dominant underlying bedrock of the Chicago region.
Dolomite prairie	A grassland community on thin soils over dolomite bedrock. Variants ranging from wet to dry have been described.
Dormancy	A period when growth, development, and (in animals) physical activity is suspended.
Elliptical	Generally, an elongated oval.

Exfoliating bark	Loose bark on a living or dead tree, with a gap or space beneath. Often the condition is temporary, with the bark falling away after months to years.
Extant	Still in existence, not extinct.
Extirpated	Local extinction, as when a species ceases to exist at a given location but still exists elsewhere. Loss of a population.
Fecundity	The ability to reproduce; reproductive potential.
Fen	A type of wetland fed by alkaline groundwater.
Formal consultation	Under Section 7 of the Federal Endangered Species Act, a process for Federal Agencies to determine to effects of an action on one or more protected species, resulting in the issuance by U.S. Fish and Wildlife Service or National Marine Fisheries Service of a biological opinion.
Fusiform	A spindle-like shape, wider in the middle and tapered at both ends.
Glades	Open communities with sparse vegetation on exposed bedrock or very thin soils.
Graminoid	Dominated by grasses.
Habitat Conservation Plan	Under Section 10 of the Federal Endangered Species Act, a mechanism to authorize “take” of a protected species in return for habitat preservation, habitat management, or some other set of actions intended to help conserve the species.
Habitat fragmentation	The breaking up of once continuous habitat into smaller and more isolated remnants as a result of agriculture, urban development, or some other (often human-caused) event or set of events.
Herbaceous	Low-growing plants that die back to the soil level at the end of the growing season. In this context, referring to the ground layer of vegetation.
Hibernacula	Places of hibernation or dormancy, for example caves where bats spend the winter in a state of inactivity.
Hydrology	Study of the movement, distribution, or quality of water.
Incidental take	Under the Federal Endangered Species Act, the “take” (loss of or harassment of) a species “incidental” to some other action; that is, the take is not the primary intent of the activity, but it is a result of the activity.
Inflorescence	A group or cluster of flowers on a stem.
Informal consultation	Under Section 7 of the Federal Endangered Species Act, informal discussions or correspondence between Federal Agencies to determine whether a proposed activity might affect protected species. Informal consultation can end when the agencies agree that there will be no adverse affect, or it can be elevated to formal consultation.
Insectivores	Animals which feed primarily on insects.
Instar	A developmental stage of arthropods or insects, with each instar separated by a molt, or a shedding of the exoskeleton.
Interdunal	Low, usually wet, areas between dune ridges.
Jurisdictional wetlands	Wetlands regulated by the U.S. Army Corps of Engineers.
Larva (or larvae)	The young or juvenile stage of an animal.
Libellulids	A group or family of dragonflies, including many common and widespread

	species.
Loess	A type of soil deposited by wind.
Marsh	A type of wetland dominated by emergent vegetation such as cattail or bulrush, but usually without trees or shrubs.
Mesic	A habitat type with a moderate or well-balanced amount of moisture.
Mesic prairie	A moderately moist prairie or grassland.
Metapopulation	A group of populations connected by occasional or infrequent dispersal; thus, if one sub-population goes extinct, it may eventually be recolonized from a nearby source population.
Mycorrhizae	A usually symbiotic association between a fungus and the roots of a plant.
Perennial	A plant that lives for more than two years, with root stock persisting through dormant periods.
Photosynthesis	The process by which plants convert sunlight to energy.
Physiographic	Referring to a region described on the basis of topography, rock type, geology, or related physical processes.
Pinnately	Feather-like or multi-divided leaves.
Pollination	The process that transfers pollen grains from one plant to another; in the context of this document, pollination by insects carrying pollen among plants.
Prescribed burning	Intentional or planned burning as a management tool, usually to halt the spread of woody plants and to encourage native fire-adapted species.
Post-glacial	Usually referring to events, such as water and windborne sediment deposition, associated with the melting and retreat of the glaciers approximately 12,000 years before present.
Primordia	Young leaves, recently formed from the shoot.
Proximate	Nearby, in proximity.
Pupae	A life stage of some insects, a period of dormancy during metamorphosis from larva to adult.
Qualitative	Involving a high degree of subjectivity; not quantitative.
Quantitative	Measured, or measurable; documented in numbers.
Riparian	The interface between land and stream; often, a distinctive vegetation community along a streambank.
Rivulets	Small streamlets, in the context of this document referring to Hine's emerald dragonfly habitat, and usually less than a foot wide and less than a foot deep; usually with slow but visible flow, and usually originating from a seep or spring and flowing through marsh or sedge meadow.
Safe Harbor Agreement	Under the Federal Endangered Species Act, an agreement between U.S. Fish and Wildlife Service and a private landowner which assures that the landowner will not be penalized for actions such as land management which attract or increase populations of protected species. A Safe Harbor Agreement can authorize certain levels of "take" consistent with the overall land management objectives.
Savanna	An open wooded community, in the Chicago region usually defined as widely spaced oaks with a canopy cover of 5 to 30 percent.
Sedge meadow	A type of wetland dominated by sedges, often with a tussock-forming growth

	habit.
Seed broadcast	Spreading seed by hand or with light machinery.
State-listed	An animal or plant protected under a state endangered species act.
Stochastic	A process with both predictable and unpredictable outcomes; a certain amount of randomness limits predictive ability. For example, wildfire and flooding are stochastic processes which occur at variable intervals. In the long term, stochasm results in a more diverse ecosystem.
Successional	The process by which one plant community replaces another in a relatively predictable sequence; for example, gradual encroachment of woody vegetation into a prairie in the absence of fire.
Symbiotic	A cooperative relationship, one which benefits both parties. For example, a fungus may draw nutrients from a plant root, and also increase water uptake ability, thus enhancing survival during drought.
Temporally	Relating to time.
Teneral	A state immediately following metamorphosis of an insect from larva to adult; usually characterized by a soft exoskeleton or wings and with adult coloration not yet completely present. In the case of Hine's emerald dragonfly, the condition is though to last hours to a day or two, during which time the wings are soft, flight ability is limited, and eyes gradually change color from dark brown to bright green.
Thermoregulation	Using air or ground temperature, sunlight, or shade to regulate body temperature.
Transects	Straight lines with defined start and end points and known direction, traversed by biologists during the gathering of data.
Typha	Cattails.
Wet prairie	A grassland community with the water table at or above the ground surface for part of the year.

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Attachment A
Department of Interior Correspondence



IN REPLY REFER TO:

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September 29, 2008

ER 08/833

Ms. Phillis Johnson-Ball
Surface Transportation Board
395 E Street, SW
Washington, DC 20423
Ref: STB Finance Docket No. 35087

Dear Ms. Johnson-Ball:

The Department of the Interior (Department) has reviewed the July 2008 Draft Environmental Impact Statement (DEIS) for the proposed Canadian National Railway Company and Grand Trunk Corporation (Applicants) acquisition of the Elgin, Joliet, and Eastern Railway Company (EJ&E). Coordination between the Surface Transportation Board's (STB) Section of Environmental Analysis (SEA) and the U.S. Fish and Wildlife Service (Service) began during the scoping process. With respect to resources or issues for which the Department or its bureaus have jurisdiction or special expertise, we offer the following comments and recommendations for your consideration.

GENERAL COMMENTS

The DEIS provides a considerable amount of general information on issues of concern to the Department, but detailed analysis is often lacking. The proposed action and alternatives, which include the construction of six new connections and the installation of 19 miles of double track, would result in environmental impacts of varying severity depending on the particular location within the project area. All alternatives would result in greater environmental impacts than the no action alternative. The DEIS does not adequately identify adverse impacts to the Service's trust resources (federally listed species and migratory birds) and does not fully disclose impacts to other wildlife. As a result, the DEIS fails to consider and describe appropriate mitigation for these environmental impacts.

There is confusion about which agencies own or manage conservation lands in the two affected States, where conservation lands are located in relation to either the EJ&E or CN tracks, and about lands that have utilized Land and Water Conservation Fund monies, among other issues. A major problem in sections of the DEIS dealing with the Indiana portion of the project is a failure to provide adequate maps and descriptions of the main line and other tracks in the

Gary/Hammond/East Chicago/Whiting area (Lake Front Line, City Track, etc.) so that specific locations of important natural resources areas can be ascertained in relation to the tracks (Figures 2.1-1, 3.1-1, and 3.11-1 are not of sufficient detail to be adequate; Figure E-1, Sheets 29 through 32, provide better detail but do not name the tracks or provide the Segment numbers that are used throughout the text). The text does not clearly distinguish between the EJ&E main line and other EJ&E tracks in the discussion of project impacts. In particular, the proximity of any EJ&E tracks to the Indiana Dunes National Lakeshore is not clearly apparent, other than the Gaylord Tract in Griffith.

The specific comments below address these concerns in more detail and provide recommendations to correct these deficiencies in the final EIS. We also recommend that SEA coordinate further with the Service to resolve differences of opinion concerning project impacts to Service trust resources. If differences remain, SEA should ensure that the opposing views are disclosed and adequately discussed in the final EIS.

SPECIFIC COMMENTS

Proposed Action and Alternatives (Chapter 2)

Section 2.2.1.4, Planned Phased Integration of Applicants' Operating Plan: This section discusses the proposed phased implementation of the CN take-over of the EJ&E system. The Lake Front Line and Whiting Branch are mentioned several times, but no mention is made about the Hammond Branch, City Track, or the other tracks listed on Table 3.3-2 of Appendix E. It is indicated that service would not change on the Whiting Branch, but in Phase 3 there would be longer trains on the Lake Front Line, which essentially borders Lake Michigan through northwestern Gary and northern East Chicago, Whiting, and Hammond, Indiana to South Chicago, Illinois. These longer trains on the Lake Front Line are not discussed in Chapter 4, Environmental Consequences, section of the DEIS, despite the fact that these longer trains could adversely impact other existing and proposed uses of the Lake Michigan shoreline (e.g., the Marquette Plan, including a trail).

It is also not clear which track borders the north side of Clarke and Pine and Pine Station State Nature Preserves, west and east, respectively, of Clark Road in Gary. (Table 3.3-2 in Appendix E lists 2 at-grade crossings of Clark Road using names not found anywhere in the text.) Because these habitats are unique, this track and any changes or lack of changes in operation need to be mentioned here and discussed in Chapter 4, Environmental Consequences.

Section 2.4.1, Rail Connection Alternatives-Munger, Illinois: This section describes all of the alternatives considered for the six proposed rail connections, including the proposed and no-build alternatives. The Service supports the No-build at Munger alternative to avoid direct or indirect impacts (noise) to Service trust resources (migratory birds) that would result from the Munger build alternatives in Pratt's Wayne Woods Forest Preserve (PWWFP). As the DEIS notes in Section 3.11.6.3, PWWFP provides important habitat for state listed, wetland, and grassland birds. If a build alternative is chosen, the Service supports the Applicant's Proposed Munger Connection (Section 2.4.1.2) because changes were made to the Original Munger alternative to avoid PWWFP land (wetlands in particular). The Munger Alternative-UP Connection would also avoid wetland impacts at PWWFP; however, other offsite environmental

impacts (impacts to the southern end of Pratt's Wayne Woods and Brewster Creek Fen Nature Preserve) would result from this alternative.

Section 2.4.2, Rail Connection Alternatives-Joliet, Illinois: The Service supports the No-build at Joliet alternative to avoid direct impacts with the Hine's emerald dragonfly which occupies habitat in the vicinity of this alternative. This issue will be addressed in Section 4.11, Biological Resources and should be addressed in the final EIS.

Table 2-9: This table presents a summary of potential environmental impacts due to changes in rail operations. We disagree with several of the conclusions made by SEA in regard to impacts on biological resources. The conclusions are located in the proposed action column. Specifically, we disagree with SEA's conclusions that the proposed action would not have an adverse effect on plant communities, wildlife, conservation and natural areas, wetlands, federally listed species (including the Hine's emerald dragonfly), state listed species, and water resources. Since land not currently used for railroad purposes will be taken for the proposed rail connections, plant communities and wildlife habitat will be affected and, in some cases, wetlands will be filled. Stating that wetlands would not be affected "as no changes in drainage patterns would occur" is incorrect. The filling of wetlands will adversely affect the wetlands whether or not drainage patterns are modified by the filling. Some conservation lands will be adversely affected by increases in numbers of trains passing them, with resultant noise and air pollution impacts. We disagree with the conclusion that the noise level increase of 65 dBA or greater would not result in adverse effects. These statements in Table 2-9 do not agree with the discussion of project impacts in Chapter 4, Environmental Consequences. These discrepancies should be addressed in the final EIS.

Table 2-10: This table presents a summary of potential environmental impacts for the Munger Connection. We agree with SEA's conclusion that the Proposed Munger Connection would result in "increased noise and indirect loss of habitat, potentially decreasing the breeding activity of marsh birds." However, this conclusion should be made for the Munger-Original Proposal and Munger-Northwest Quadrant alternatives.

We disagree with SEA's conclusion that there would be no effects to federally listed species. This determination cannot be made for the eastern prairie fringed orchid without conducting a habitat assessment or surveys in suitable wetland habitat. The conclusion in the table should be revised in the final EIS. This issue is addressed in greater detail in our comments regarding Section 4.11, Biological Resources.

Table 2-11: This table presents a summary of potential environmental impacts for the Joliet Connection. We disagree with SEA's conclusion that there would be no effects to federally listed species. As noted above, the proposed construction could result in take of the Hine's emerald dragonfly. The conclusion in the table should be revised in the final EIS. This issue is addressed in greater detail in our comments regarding Section 4.11, Biological Resources.

Tables 2-12 and 2-16: These tables present summaries of potential environmental impacts for the Matteson Connection and for proposed double tracking. We disagree with SEA's conclusion that there would be no effects to federally listed species since this determination cannot be made for the eastern prairie fringed orchid without conducting a habitat assessment or surveys in

suitable wetland habitat. The conclusions in the tables should be revised in the final EIS. This issue is addressed in greater detail in our comments on Section 4.11, Biological Resources.

Table 2-13, Summary of Potential Environmental Impacts – Griffith Connection: This table indicates that there would not be an effect on local parks, but in Chapter 4, Environmental Consequences, it is acknowledged that the Griffith Historical Park and Depot Museum may be affected to some extent because it is immediately adjacent to the proposed connection. This table also states that there would be no effect on wildlife, despite the fact that several acres of prairie, woodland, and wetland habitat would be converted to railroad embankments and tracks. Chapter 4, Environmental Consequences, acknowledges that wildlife will be impacted by this connector. These discrepancies should be addressed in the final EIS.

Table 2-14, Summary of Potential Environmental Impacts – Ivanhoe Connection: This table also states that there will be no effect on wildlife. However, birds and small mammals that utilize the existing remnant prairie along the south side of the CSXT tracks will lose habitat. Under Biological Resources, it is indicated that there will be “potential effect on wetlands and dry woodlands species” of State-listed threatened and endangered species, but under Water Resources, it is stated that the project “would not affect wetlands.” This inconsistency needs to be addressed.

Table 2-15, Summary of Potential Environmental Impact – Kirk Yard Connection: This table makes similar statements about potentially affecting wetland and prairie species of threatened wildlife, while not affecting wildlife or wetlands. These inconsistencies need to be corrected.

Affected Environment (Chapter 3)

Section 3.1.2.2, Yard Operations: This section states that the Whiting Yard in Indiana is located “just southeast of Kirk Yard,” although it is actually about 6 miles northwest of Kirk Yard.

Section 3.3.1, Regional and Local Highway Systems: The discussion in this section, as well as in section 4.3.1, of existing conditions and with-the-project conditions of highway/rail at-grade crossings in Gary, Indiana, does not adequately describe the crossing situation in that community. At this time, the only grade-separated crossing of the EJ&E tracks with a roadway in Gary is Industrial Highway (former US 12) near Gary-Chicago International Airport. Industrial Highway has an at-grade crossing of the CSXT Railroad double main line track a short distance northwest of the EJ&E grade separation. However, Chicago Avenue intersects Industrial Highway in the same general area, parallel to the CSXT tracks, and has an interchange with Cline Avenue/SR912. This configuration will change, however, when the EJ&E tracks are moved around Gary-Chicago International Airport, at which time the grade-separation will be removed and at-grade crossings will be provided at Industrial Highway and Chicago Avenue. At some unknown date, a grade separation will again be provided over Industrial Highway and Chicago Avenue will be closed. However, the airport’s ultimate plans, not covered under the 2005 FAA Record of Decision, are to close Industrial Highway entirely in order to lengthen the north-south runway.

Fifth Avenue (US 12-20) is a 4-lane highway that is the main entrance to the west side of Gary and includes an interchange with Cline Avenue about 0.5 mile west of the EJ&E at-grade crossing; it is a Department of Transportation designated heavy truck route that traverses the city

west to east. This highway is not even mentioned on page 3.3-37. Ninth Avenue is a 2-lane city street that crosses the EJ&E at-grade. It does not intersect with Cline Avenue and currently does not proceed into Hammond but connects with a service road parallel to Cline Avenue that connects with 15th Avenue. Therefore, it is not an alternative to either 5th or 15th Avenues. Fifteenth Avenue is a 2-lane city street serving commercial and industrial properties near the EJ&E at-grade crossing and mostly residential properties to the east; 15th Avenue intersects with Cline Avenue. Twenty-fifth Avenue is a 2-lane city street primarily serving residential areas; it does not intersect with Cline Avenue, but does proceed into Hammond. The seven unnamed roadways that have grade separated crossings of some part of the EJ&E tracks in Gary need to be named, and it should be acknowledged that they are not main entrances to the city from the west over the EJ&E double track main line.

Therefore, at this time, only Industrial Highway and Chicago Avenue are available to provide unobstructed access to the west side of Gary from Cline Avenue, which is the main north-south highway connection to Interstate Highways 80-94 and 90, area steel mills, and adjacent communities west of Gary. This unobstructed entrance will be lost during the unknown time period after the initial relocation of the EJ&E tracks around Gary-Chicago International Airport and before the construction of the Industrial Highway grade separation over the EJ&E (even though Industrial Highway may eventually be closed). With increased numbers of trains and longer trains on the EJ&E tracks with the project, access to and from the west side of Gary to Cline Avenue and adjacent communities could be significantly compromised unless another grade separation is provided.

This possible traffic impairment into and out of Gary is of concern to this Department because of the proximity of Ivanhoe Dune and Swale Nature Preserve and Ivanhoe South Dune and Swale to both the EJ&E tracks and 5th Avenue. Since 5th Avenue/US 12-20 is the major highway access for western Gary, it would appear that a grade separation will be needed at this location, regardless of the current and estimate traffic volumes (Level of Service) discussed in the DEIS. Either a grade separation of the EJ&E over 5th Avenue or 5th Avenue over the EJ&E would likely adversely impact the Ivanhoe Dune and Swale natural area complex. These preserves support the federally endangered Karner blue butterfly (*Lycaeides melissa samuelis*) and numerous Indiana-listed species of plants and animals. These dune and swale habitats are recognized as a Globally Imperiled Ecosystem.

Therefore, we request that the Surface Transportation Board provide a detailed discussion of the possible need for a grade separation at 5th Avenue/US 12-20 and the EJ&E Railroad, as well as the environmental consequences of such a separation, in the final EIS. Either grade separation structure would require retaining walls rather than side slopes in order to reduce the footprint of the structure and the impact on the Ivanhoe preserves. We believe that it is necessary for STB to address this issue because a grade separation would not be needed at this location "but for" the proposed project.

The discussions about Hammond, East Chicago, and Whiting need to make clear that the EJ&E lines being addressed are not the main line extending south and west from Kirk Yard into Illinois, which is the line that will experience the increases in numbers and sizes of trains. These cities are instead along lightly used spur lines that apparently would not have increased traffic as a consequence of the project.

Section 3.3.4, Airports: This section, as well as section 4.3.4, needs to discuss the ultimate plans of Gary-Chicago International Airport to close Industrial Highway at some unknown time in the future if the north-south runway is to be extended.

Section 3.5, Land Use: This section describes the land at the proposed Griffith connection between the CN and EJ&E Railroads as “vacant land.” This land is apparently not zoned but is just there, unoccupied by a specific use. Based upon the Service’s review of the area, it would more naturally be called “open space” since it consists of dry sand prairie, wetland, and savanna/woodland. Several abandoned rail rights-of-way cross the site, but native habitats dominate. Zoned “land use” does not necessarily describe the current land use, as is the case at this site. This same type of distinction can be made at the proposed Ivanhoe connector site, which is apparently zoned “open space” but is primarily industrial land, except for remnant prairie along the south side of the CXST track. “Open space” is the correct designation for the Ivanhoe dune and swale complex north of the proposed Ivanhoe connector.

Section 3.5.5, Public Lands: This section discusses various types of public lands in the project area but leaves the reader very confused about the subject. Both Indiana and Illinois have Nature Preserve systems; Indiana has County Park systems and no Forest Preserve systems; Illinois has Forest Preserve systems and no County Park systems within the counties affected by the proposed project. These distinctions are not made clear in this Public Lands discussion. This section needs to clearly explain the similarities and differences in the public land systems between Indiana and Illinois. For example, Table 3.5-2, Forest Preserves Adjacent to the EJ&E Rail Line, does not make clear that this system exists only in Illinois; all it states is that there are no forest preserves located near the EJ&E rail line in Lake County, Indiana. A reviewer unfamiliar with the distinctions between the two State systems would therefore believe that there are no designated, significant natural habitats along the EJ&E line in Indiana, which is not the case.

Section 3.5.5.6, Nature Preserves, and Table 3.5-3: The information provided in this section is also confusing. Listed lands are described as “south of” or “west of” the EJ& E line, but there is no indication if they are immediately adjacent to the main rail line or one of the spur lines, which is the important issue. Hoosier Prairie in Griffith is, in fact, along both the CN line and the EJ&E line. When the entire site is considered, it is about 600 acres in size, not the 430 acres listed in the table. Ivanhoe Dune and Swale is east, not west, of the EJ&E main line. Clarke and Pine and Pine Station Nature Preserves are along the south side of one of the spur lines of the EJ&E; this line should be named in the table.

Table 3.5-4, Resource-Rich and Protected Areas Adjacent to the EJ&E Rail Line: This table is also very confusing. Apparently, this terminology is used only in Illinois for specific resources; however, this is not made clear either in the discussion or in this Table. The last line of the table states that “No protected areas are located near the EJ&E rail line in Lake County, Indiana.” This would lead the reviewer to conclude that there is nothing of importance along the EJ&E Railroad in Indiana, which is clearly not the case. Therefore, it must be made clear that this Resource-Rich and Protected Areas designation refers only to Illinois; any references to Indiana need to be removed.

Table 3.5-9, Trails and Greenways in Lake County, Indiana: This table is incorrect about most of the trails. The Northwest Indiana Regional Planning Commission (NIRPC) does not manage

the trails, although they published the regional trail map and are involved in trail planning. The Little Calumet River Trail is a component of the Little Calumet River Flood Protection and Recreation Project being constructed by the Chicago District, U.S. Army Corps of Engineers, with the Little Calumet River Basin Development Commission (LCRBDC) being the local sponsor and the trail manager, in conjunction with the cities and towns the trail passes through. The trail is located, or will be located, along levees either north or south of the river and crosses the EJ&E min line tracks in Griffith. The Grand Calumet River and Marquette Corridor Trails do not exist, although there is a Marquette Trail on a portion of an abandoned Indiana Harbor Belt (IHB) rail corridor within the Indiana Dunes National Lakeshore (INDU) in Gary. The Marquette Trail is administered by INDU. The plan is for a trail near the Lake Michigan shoreline of Indiana between Illinois and Michigan, not Ohio. The only part presently existing is in the vicinity of Whihala Beach County Park in Whiting, which may mean it is near the EJ&E Lake Front Line. Portions of the Grand Calumet River trail are in the planning stage; it will be constructed on city streets and the river shoreline both north and south of I-90/Indiana Toll Road. The Oak Savanna Trail is along an abandoned railroad grade and is administered by the Lake County Parks and Recreation Department. The Prairie Duneland Trail is also along an abandoned railroad grade and is administered by Portage, Chesterton, and Porter County.

Table 3.5-11, Land and Water Conservation Fund Properties: This table omits Hoosier Prairie and Clarke and Pine Nature Preserves, although both have received funding from the Land and Water Conservation Fund. We acknowledge that the National Park Service Website references (<http://waso-lwcf.nrc.nps.gov/public/index.cfm>) do not list these two properties, but information about the funding is available from the Indiana Department of Natural Resources, Divisions of Outdoor Recreation and Nature Preserves.

Section 3.10.2, Existing Conditions: This section describes the existing conditions with respect to noise and vibration. It describes the Kirk Yard as being “between the shore of Lake Michigan to the north, the US Steel Gary Works to the east, an interstate highway to the south, and rail lines to the west.” However, Kirk Yard is not along the shoreline of Lake Michigan; it is inland about a mile and the US Steel Gary Works is between it and the Lake.

Section 3.11, Biological Resources: This section describes the biological resources of the Study Area, which is a 1-mile-wide corridor centered on the EJ&E and CN rail lines.

Section 3.11.1, Background, and 3.11.6, Conservation and Natural Areas within the Illinois Study Area: Figure 3.11-1 in section 3.11.1 displays natural areas that would be affected by the proposed action and section 3.11.6 describes the natural areas. We note that the northern portions of MacArthur Woods and Middle Fork Savanna were not highlighted on the figure and were not described in these sections. These forest preserves are located along the EJ&E arch and provide habitat for Service trust resources. Therefore, the final EIS should highlight and describe these natural areas.

Figure 3.11-1 should be revised to designate the rail lines by segment number, since segment numbers are used in the text.

Table 3.11-1, Invasive and Nonnative Plant Species: Spotted knapweed (*Centaurea maculosa*) is another significant nonnative, invasive plant species that should be added to the list in this table and discussed in section 3.11.3.2, particularly since it is prevalent along railroad rights-of-way.

Table 3.11-2, Common Wildlife Species in the Study Area, and Table 3.11-3, Common Migratory Birds in the Study Area: These tables actually list many species that are very uncommon in the area, including those that are Indiana and/or Illinois listed rare species, as shown in Table 3.11-7, State-listed Threatened & Endangered Species Potentially within Illinois and Indiana Study Area. Common species would instead include American robin, blue jay, gray squirrel, white-tailed deer, and similar species that have adapted to living in human-dominated habitats. The rarer species are most often found within the Nature Preserves, Forest Preserves, and other significant habitats. Osprey, black-crowned night heron, and common loon are not “common” migratory birds within the study area (Table 3.11-3). Some of the birds listed migrate through the area but are not known to nest, while others on the list are known nesters.

There is also a large heron rookery in Lake County, Indiana, west of Cline Avenue and south of the Little Calumet River, which is about a mile west of the EJ&E main line. Although the rookery itself is outside of the mile-wide Study Area, the birds feed along the river in the vicinity of the railroad river bridge and numerous other locations along the river and area wetlands. Great blue heron, great egret, green heron, and black-crowned night heron have been known to nest at this rookery.

Section 3.11.7, Conservation and Natural Areas within the Indiana Study Area: This section mentions “county forest preserves,” but Indiana does not have a County Forest Preserve system, instead having a County Park system. This section continues the confusing conservation land discussions mentioned previously in our comments and needs clarification. Table 3.11-5 and the discussion in this section need to indicate what community the various lands are located in, particularly since some of them are not shown on Figure 3.11-1. We have no idea if any of the unnamed high quality natural communities discussed include the EJ&E prairie, which is located east of Clark Road at the west end of the Kirk Yard. This sand prairie and wetland complex is a remnant dune and swale habitat not far from Clarke and Pine and Pine Station Nature Preserves and is an area the Indiana natural resources agencies are interested in preserving and enhancing, possibly as mitigation for the impacts of this STB project. This area is discussed further in our comments on Chapter 6, Mitigation.

Except for the Gaylord Butterfly Tract, the Hoosier Prairie State Nature Preserve is owned and managed by the Indiana Division of Nature Preserves, even though it is a component of the Indiana Dunes National Lakeshore and a National Natural Landmark. The Gaylord parcel is south of the main section of Hoosier Prairie and is adjacent to the south side of the EJ&E right-of-way in Segment 5B. Hoosier Prairie also includes an 18-acre parcel adjacent to the south side of the EJ&E main line immediately west of Kennedy Avenue.

The discussion of Clarke and Pine and Pine Station Nature Preserves should identify which EJ&E track is adjacent to the properties. Pine Station is both north and south of the Grand Calumet River and it is both owned and managed by the Indiana Division of Nature Preserves.

It is not clear why the Indiana Dunes National Lakeshore is mentioned, because other than owning the Gaylord Butterfly Tract in Griffith, it appears that INDU is not located along any of the EJ&E tracks. Therefore, the proximity of INDU to any of the EJ&E tracks needs to be clarified.

Section 3.11.8, Threatened, Endangered, and Sensitive Species: This section describes the federally listed species that have the potential to occur in the study area. In reference to the Hine's emerald dragonfly, it is noted that the Service has an agreement with EJ&E rail line for train operations on the Paul Ales Branch and that trains operate between 4 to 6 miles per hour to reduce adult mortality from direct train collisions. Furthermore, the DEIS notes that the reduced speeds minimize impacts to larval Hine's emerald dragonflies from "squishing" ground water from beneath the railbed, releasing sediments into larval habitat next to the railroad embankment. The final EIS should clarify that the speed limits were imposed by the special conditions of the 1996 U.S. Army Corps of Engineers (COE) permit (Permit # 199600211). Additionally, it should be clarified that there is not an agreement in place between EJ&E and the Service; Commonwealth Edison was the applicant for the 1996 permit. It is our understanding that EJ&E operates trains on the line, the Metropolitan Water Reclamation District owns the land within the right-of-way, and Midwest Generation owns the rail line.

In reference to habitat for the eastern prairie fringed orchid, the EIS should also list wet to mesic prairie and marsh edges as suitable habitats. The DEIS notes two locations where the orchid was last recorded in the vicinity of the EJ&E. However, the orchid could be found in suitable wetland habitat throughout the study area and, as noted above, habitat assessments need to be conducted to determine whether suitable habitat is present.

Concerning the Karner blue butterfly, no critical habitat has been designated for the species anywhere throughout its range, so the Study Area is not the only area with no designated critical habitat. All of the Karner blue's larval stages utilize wild lupine (*Lupinus perennis*) as their sole food source, not just "several" of them.

In its February 12, 2008, letter to STB concerning the Draft Scope of Study for Finance Docket No. 35087, the Service's Bloomington, Indiana, Ecological Services Field Office stated that the proposed project area is within the range of the federally endangered Indiana bat (*Myotis sodalis*). The Service indicated that this species may be found along the floodplain of the Little Calumet River, which is crossed by the EJ&E main line tracks. However, this species is not listed on table 3.11-6 and is not discussed in this section of the DEIS. Based upon knowledge of the species, it is the position of the Service that the Indiana bat is considered to be present in suitable habitat unless proven otherwise. The Little Calumet River floodplain is considered suitable habitat although no studies have been undertaken along the river corridor in Lake County to prove or disprove the presence of the Indiana bat. The species is known along the East Branch of the river in adjacent Porter County. We therefore request that the Indiana bat be addressed in this section of the final EIS, as well as in section 4.11.

Section 3.12, Water Resources: This section discusses the various permits that may be needed by the Applicants because of project impacts to wetlands and/or Waters of the United States or Waters of the States. However, it confuses the Indiana Department of Environmental Management's (IDEM) Section 401 authority with the Federal Consistency Review requirements of the Indiana Department of Natural Resources. These are two separate and distinct reviews done by different agencies. Also, the discussion only addresses use of Nationwide Permits or the Indiana Regional General Permit No. 1, not the procedure if an individual permit is required under Section 404 of the Clean Water Act or Section 10 of the 1899 Rivers and Harbors Act. Both types of permits need to be discussed.

Section 3.12.5, Wetlands: This section notes that the Applicants would be required to conduct wetland delineations as part of Section 404 of the Clean Water Act. The Service recommends that the delineations and habitat assessments (e.g., Floristic Quality Assessments) be conducted during the growing season for greatest accuracy and reliability.

This section also needs to acknowledge publicly owned wetlands along the Little Calumet River in Lake County, Indiana. These wetlands are owned by the LCRBDC as part of the flood control project lands.

Environmental Consequences (Chapter 4)

As stated previously, we believe that a grade separation will likely be needed at 5th Avenue in Gary, Indiana, because it is the main west-side access into and out of the city. Therefore, the consequences of such a structure need to be addressed in this section.

Section 4.2.5, Hazardous Material Transportation Safety: This section needs to indicate whether or not herbicides and pesticides that could impact wildlife will be carried by the trains and may be released in an accident. If such materials spilled near a site containing endangered wildlife, such as the Karner blue butterfly, the population could be decimated before containment and clean-up is achieved. Temporarily restricting use of a water body that has received a spill may help keep humans away, but it will not help the wildlife that utilize the water body and cannot escape it.

Section 4.5, Land Use: This section states that the proposed action would not affect public lands in Indiana (page 4.5-3). We disagree. The Gaylord Butterfly Tract and the Hoosier Prairie 18-acre Kennedy Avenue tract would be affected by proximity effects, such as increased noise, because they are immediately adjacent to the EJ&E main line. The 18-acre Kennedy Avenue tract could also be impacted by any changes to the at-grade crossing at location. As previously noted, both Clarke and Pine and Hoosier Prairie Nature Preserves are Section 6(f) Land and Water Conservation Fund properties.

Construction of the Griffith connector (page 4.5-11) may not impact land use patterns, but it would certainly impact current use at the site, which is undeveloped open space. This is described as 3.25 acres of vacant land, which is actually sand prairie, wetland, and savanna/woodland. Section 4.11, Biological Resources, states that although there are natural habitats in the proposed connection areas, “the affected wildlife habitat is general minor [sic] and wildlife is mobile” so the proposed construction would not affect wildlife. This no-effect is not accurate. Wildlife forced to move from their habitat or die are “affected”; any eggs or immobile individuals will be killed. Wildlife do not necessarily have other habitats to move into because those habitats are already occupied. Wildlife have specific home ranges of certain sizes, and wildlife cannot be “stacked” into remaining habitats. Therefore, all of the wildlife species utilizing the 3.25 acres of natural habitat at the Griffith connector will be adversely affected through loss of habitat. These wildlife include insects, amphibians, reptiles, birds, and mammals. More detailed descriptions of the habitats at the Griffith connector site are necessary (page 4.11-16). The wetland at the Griffith connector site is not just a palustrine emergent seasonal type; it also includes scrub-shrub and forested components (Table 4.12-7, Wetland Effects from Proposed Connections). We agree that a botanical survey is necessary at the Griffith connector site prior to construction. Such a survey is also needed at the Ivanhoe connector site because of the remnant prairie along the south side of the CSXT tracks.

Section 4.10, Noise and Vibration: This section discusses noise impacts from the proposed action and estimates the number of noise-sensitive receptors that would be affected by increased average noise levels (in dBA). However, SEA's analyses only considered noise impacts on humans and did not consider the effects of noise on wildlife (specifically migratory birds), although the effects on wildlife are mentioned in Section 4.11. In this section, SEA determined that noise levels less than 65 dBA are generally not considered adverse to human health and welfare. SEA also determined that the majority of the EJ&E segments would experience noise levels of 65 dBA or greater and that seven of the segments would experience noise levels of 70 dBA or greater. The noise levels for some of these segments could approach 100 dBA since the existing noise levels at some of the monitoring stations in Table 3.10-2 show dBAs currently above 80 dBA and up to 92 dBA. In addition, average sound exposure levels (SEL) for locomotives horns, locomotives, and rail cars along the EJ&E are 104.1 dBA, 93.9 dBA, and 91.7 dBA, respectively.

Section 4.10.1.1 of the DEIS notes that the Board requires an evaluation of potential noise effects as part of an environmental analysis. However, SEA did not evaluate the potential noise effects on a major component of the environment, wildlife. Research exists that indicates thresholds for which adverse effects would be seen in wildlife, particularly in migratory birds. The issue of noise impacts to migratory birds is discussed in more detail in our comments on Section 4.11. Because of the numerous natural areas located adjacent to the EJ&E arch and the potential for adverse effects from the increased noise levels, noise impacts and their effects on wildlife should be considered and discussed in this section of the final EIS.

Sections 4.11.1 and 4.11.3, Biological Resources: These sections present the methodology SEA used to determine potential effects from the proposed action on biological resources and details the potential effects by category. In the summary of findings, we agree with the statement that wildlife and natural areas would experience a higher probability of exposure to hazardous material spills and that bird populations may experience behavioral or physiological effects and masking of communication signals because of increased noise. We also agree that several forest preserves, nature preserves, and state parks would be affected by the increased train traffic. However, we do not agree with the determination that only bird populations within 500 feet of the rail line could be affected. This issue is discussed in greater detail in our comments below on Section 4.11.3.1, Proposed Changes in Rail Line Operations-Wildlife.

We disagree with the finding that only the Hine's emerald dragonfly and Karner blue butterfly could be affected by the proposed action. As noted above, determinations about the eastern prairie fringed orchid cannot be made without surveys or habitat assessments such as a Floristic Quality Assessment. We also disagree with the finding that changes in rail operations would not affect the Hine's emerald dragonfly and that the orchid only has the potential to occur at the Proposed Griffith Connection.

We disagree with several of the conclusions at the end of section 4.11.3, which are:

- (1) the risk of hazardous materials spills would increase but the probability is still remote,
- (2) the probability of train/animal collisions would increase but would remain low,
- (3) the noise effects to wildlife, particularly migratory birds, would increase but effects are expected to remain slight, and
- (4) impacts to the Hine's emerald dragonfly from ground vibration are not expected to change.

The final EIS should discuss the benefits of the proposed actions on wildlife, as a result of reduced train activity inside of the EJ&E arch. For example, based on maps provided, existing adverse impacts (e.g., noise, collisions) to wildlife would be reduced on the Freeport Subdivision (south of Schiller Woods Forest Preserve), the Joliet Subdivision (along the Palos Preserves), and the South Bend Subdivision (north of Wampum Lake Woods and Thornton Lansing Road Nature Preserve).

Section 4.11.3.1, Proposed Changes in Rail Line Operations -Wildlife: This section acknowledges that rail line operations would lead to increased noise (see above). Numerous studies investigating the effect of noise on wildlife have been conducted. In this regard, birds have been studied the most (with most of those studies involving the effects of traffic on birds). Very little research has been completed showing the affect of railroad noise on birds. However, a recent study by Waterman et al. (2004) on meadow birds in the Netherlands showed that wetland birds were adversely affected by railroad noise levels ranging from 42 to 49 dBA.

The DEIS notes that several of the highway studies documented lower species diversity and lower breeding densities near roads and highway traffic. However, most of these studies do not conclusively show that noise is the main cause of these effects and that other variables associated with noise (e.g., visual disturbance) are not factors. In a series of studies in the Netherlands, Reijnen et al. (1987, 1995, 1996, 1997), Reijnen and Foppen (1994, 1995), and Foppen and Reijnen (1994) have shown that the number of breeding woodland and grassland birds have declined significantly near roads as a result of noise. The farthest distance for which reductions in the numbers of breeding birds were still observed from the roads was 1500 meters (4,921 feet). These studies also showed that noise levels as low as 50 dBA resulted in an adverse effect on breeding birds (with several studies showing an effect below 60 dBA). In these studies, 33 of 45 investigated woodland bird species were adversely affected by noise and 7 of 12 grassland species were adversely affected. Forman et al. (2002) also showed that several species of grassland birds (especially bobolink and eastern meadowlark) decreased in numbers and breeding densities near roads. Waterman et al. (2004) found adverse effects of railway noise in meadow/wetland bird species within 15 areas along existing railroads. These birds consisted mostly of shorebirds and ducks. The threshold noise level at which bird densities were adversely affected varied little among the species studied and, as noted above, ranged from 42 to 49 dBA.

Although it can be argued that the studies indicating an adverse effect on birds do not clearly isolate noise as an exclusive source of disturbance, it is widely agreed that noise has a negative effect on birds. The reference to the 500-foot distance as a threshold for reduction of adverse effects to birds can be disputed based on other studies showing an effect at longer distances (up to 1500 meters).

The DEIS identifies the numerous natural areas along the EJ&E arch and describes the vast numbers of migratory birds (including state listed species) that frequent these natural areas. Thus, the DEIS highlights the importance of these natural areas as bird concentration areas.

The final EIS should compare the predicted noises levels from the proposed action (including the increased number and frequency of trains) to noise levels and distances that have shown an adverse effect on migratory birds. Based on the studies reviewed by the Service showing adverse effects at greater distances than noted in the DEIS and adverse effects on breeding bird

densities at lower noise levels than noted in the DEIS, the proposed action would adversely affect migratory birds.

This section also notes that wildlife and natural areas would experience a higher probability of exposure to hazardous material spills and train collisions. SEA acknowledges the potential increase in the possibility of hazardous materials releases; however, due to regulatory and other safeguards in place, SEA believes the possibility of hazardous materials releases are remote. We disagree with this conclusion because, as SEA highlights, the increase in hazardous materials releases would increase with the increased amount of train activity. This increased probability would occur regardless of the regulatory safeguards currently in place. SEA evaluated the frequency of release (before and after the proposed action) of hazardous materials based on statistics provided by the Applicants. The results are shown in Table 4.2-23. However, these results and other results fail to support SEA's determination that hazardous releases are remote. The final EIS should provide data that shows the potential frequency of spills with the proposed number of carloads transporting hazardous materials per day (anticipated at up to 500 carloads per day). Table 4.2-23 shows potential intervals between anticipated hazardous material releases in years. The final EIS should also provide data that compares the frequency of spills (with the proposed number of carloads) with other rail lines transporting comparable numbers of cars per day over similar distances. This comparison of data could show whether the possibility of hazardous materials releases is remote.

Section 4.11.3.1, Proposed Changes in Rail Line Operations - Natural Areas: This section identifies four categories of risk to natural areas. Again, the 500-foot distance is provided; however, it is noted that animals in the area already live with daily noise from trains and therefore, noise could only have minor effects on wildlife and natural areas adjacent to the EJ&E arch. These statements do not take into account the increased number of trains proposed to operate on the EJ&E arch and the subsequent increased frequency of disturbance. Although it is acknowledged that some bird species habituate to increased noise levels, this ability to avoid the impacts of noise may be due to the fact that species able to habituate are native generalists or non-native colonizers (Kasloo and Tyson 2004, Slabbekoorn and Ripmeester 2008). Slabbekoorn and Ripmeester (2008) note that several of the native generalists or non-native colonizers are able to adapt to urban noise conditions. Rare and declining bird species along the EJ&E arch that would be subject to the increased number of trains may not be able to habituate to the increased disturbance levels because they are not native generalists, non-native colonizers, or urban species. Several of these species are on the Service's Region 3 Fish and Wildlife Resource Conservation Priorities (RCP) list and have also been identified as focal species by the Service's "Focal Species Strategy for Migratory Birds." In addition, several of these bird species are listed as endangered or threatened species by the state of Illinois.

The DEIS also notes that animals living in and passing along the EJ&E arch may be at higher risk of being struck by trains due to increased traffic. However, the DEIS goes on to state that these animals have adapted to the existing train traffic, and there would not be an effect on animal populations. For both conclusions, the final EIS should use analyses to support these claims, factoring in the increased number of trains and increased frequency of the trains traveling along the EJ&E arch. Lower densities and diversity of wildlife near roadways may be due in part to increased mortality from collisions with vehicles. We would expect to see increased mortality from collisions with trains if there is an increase in the number of trains.

Section 4.11.3.1, Proposed Changes in Rail Line Operations - Federally Listed Species: This section notes that vibration of the tracks causes sediments to be pushed from the rail bed into larval Hine's emerald dragonfly habitat, resulting in adverse impacts to Hine's emerald dragonfly larvae. It is also noted that the proposed action would not change operations on the Paul Ales Branch; therefore, the DEIS concludes that Hine's emerald dragonfly larvae would not be affected beyond current operations.

The DEIS notes the dispersal ability of adults, indicates (in Figure 2.2-1) that 42.3 trains would pass through the area per day, and that the risk of collisions for adults could increase in EJ&E Segment 9B (at the southern most end of designated Critical Habitat). A study in Door County Wisconsin demonstrated Hine's emerald dragonfly mortality that resulted from collisions with vehicles (Soluk and Moss 2003). We believe that Hine's emerald dragonflies would also be vulnerable to passing trains and that more trains would increase this risk. However, SEA concludes that increases in traffic on this segment are not likely to adversely affect the Hine's emerald dragonfly. The Service disagrees with this conclusion and questions how SEA made this determination given the information provided to them. As noted in Section 3.11.8.1, adult Hine's emerald dragonflies were observed in 2004 in the area of Segment 9B. More recent surveys in 2007 also identified adults in this area, which is less than 0.12 miles north of Segment 9B, well within the flight distance of an adult dragonfly.

We do not concur with SEA's conclusion that the proposed action would not adversely affect the Hine's emerald dragonfly. For this reason, we recommend that SEA consider requesting formal consultation as described in section 7 of the Endangered Species Act of 1973, as amended. We recommend that SEA inform the Applicants to consider carrying out actions that would enhance the habitat for Hine's emerald dragonflies, but that would not create an attractive nuisance near railroad tracks. SEA should request formal consultation if its actions would result in adverse effects to the listed species. For example, if SEA's actions would modify train speeds or modify numbers of trains on specific lines, then SEA's actions would directly or indirectly lead to adverse effects on the Hine's emerald dragonfly. SEA and the Applicants should also seriously consider joining in the effort to develop a Habitat Conservation Plan (HCP) in the lower Des Plaines River Valley. At present, the Applicants do not have the permission to take the federally listed species. The Endangered Species Act provides two possible approaches to an applicant to gain permission from the Service to take listed species. That permission may be granted after conducting a review necessary as part of a formal consultation. Permission to take may also be granted following review and approval of an HCP and accompanying section 10(a)(1)(b) permit application.

Table 4.11-2, Potential Effects on Federally Listed Species Along the EJ&E Rail Line Due to Operational Changes: Contrary to the information provided in this table, the Karner blue butterfly is not present in EJ&E Segment 5B.

Section 4.11.3.1, Proposed Changes in Rail Line Operations - State Listed Species: This section discusses the state listed species that occur in the study area. Although this section discusses state listed species, we provide comment because all the grassland, marsh, and rookery bird species listed in Table 4.11-3 are Service trust resources and most of them are listed as rare and declining bird species by the Service. Of the species listed in Table 4.11-3, Henslow's sparrow, short-eared owl, upland sandpiper, and king rail are on the Service's RCP and Focal Species lists. Black tern, common moorhen, least bittern, black-crowned night heron, and American

bittern are on the RCP list. Sandhill crane is on the Focal Species list. All of the birds on the RCP list are listed due to their rare or declining status and, therefore, have a need for special conservation attention. Focal species are those the Service is targeting for a return to healthy and sustainable levels.

Table 4.11-3 needs to include black-crowned night heron and Franklin's ground squirrel in the segment along Clarke and Pine and Pine Station Nature Preserves, since both species are found at these preserves. Henslow's sparrow is listed in the table as likely being present in Segment 4, which is the developed town of Griffith. We strongly doubt that this grassland species is present in the developed community, although it may be present along the CN Segment 33 at Oak Ridge County Park or CN Segment 23A at Hoosier Prairie.

This section also discusses increased Blanding's and spotted turtle mortality due to increased rail traffic. Although we agree with this assessment, we do not agree with SEA's conclusion that only minor effects are expected because habitat structure would not change and both species currently occur in the rail environment. The final EIS should address turtles being trapped between railroad rails and how increased train activity would result in longer periods of being trapped. Research has shown that prolonged periods of being trapped between railroad rails can result in mortality and physiological stress (overheating) on turtles (Kornilev et al. 2006).

Rookery species of birds could be adversely impacted by any activity that adversely impacts the Grand Calumet River and Little Calumet River, because herons and egrets regularly feed along these rivers, including near the EJ&E bridges.

Concerning Dune Invertebrate Species (page 4.11-13), the Gaylord Butterfly Tract and Hoosier Prairie Kennedy Avenue tract are directly adjacent to the EJ&E main line tracks and are not buffered from them by petroleum storage facilities.

Section 4.11.3.2, Proposed New Constructions/Connections - Wildlife: As noted above and in the DEIS, PWWFP is an important bird area and noise would adversely affect birds in the area. In addition to the increased numbers of trains, noise from construction could adversely affect breeding birds during the breeding season. This could be minimized by restricting construction during the breeding season (April – August). This recommendation holds true for all Munger alternatives except for the Munger-UP Connection alternative.

The section also states that “because the affected wildlife habitat is generally minor and wildlife is mobile, SEA determined the construction of the connections would not affect wildlife.” We disagree with the determination and again note that the DEIS emphasizes the habitat value and diversity of state listed bird species at the Munger location. The presence of the high number of state listed species does not support the conclusion that the affected habitat is generally minor. Furthermore, no wildlife survey data have been provided for the Matteson alternatives, although the DEIS indicates that wetlands and wetland birds are likely present in the area of this connection. Therefore, based on the lack of supporting information, we cannot concur with SEA's determination. The final EIS should address these issues.

Section 4.11.3.2, Proposed New Constructions/Connections - Natural Areas: Refer to the comments above.

Section 4.11.3.2, Proposed New Constructions/Connections - Federally Listed Species:

Figure 2.2-1 indicates that train activity would increase to two trains per day along the Joliet Subdivision, in the area of the Proposed Joliet Connection. Take of adult Hine's emerald dragonflies may be currently occurring on the Joliet Subdivision. An increase in train activity would result in further take. Adult Hine's emerald dragonflies were observed approximately 0.17 miles west of the Joliet Subdivision and approximately 1.10 miles northwest of the Proposed Joliet Connection in 2004. The Service has tried unsuccessfully to address the issue of take with Canadian National in the past (see enclosed letter). Due to the proposed increased train activity within the flight distance of an adult dragonfly, the Service concludes that the proposed action would likely adversely affect the Hine's emerald dragonfly and take could occur.

The DEIS notes that the eastern prairie fringed orchid could occur at the proposed Griffith Connection or wetland margins. As stated above, the orchid could be found in suitable wetland habitat throughout the study area, and surveys or habitat assessments need to be conducted in areas of new construction or double tracking to determine whether suitable habitat is present. Therefore, there is insufficient information to conclude that the orchid is not likely to be adversely affected.

Section 4.11.3.2, Proposed New Constructions/Connections - State Listed Species: Refer to the comments above.

Section 4.11.3.2, Proposed New Constructions/Double Track - Federally Listed Species: The Service agrees with SEA's determination that the orchid, mead's milkweed, and prairie bush clover could be affected by double track construction if suitable habitat is present. In addition to the proposed surveys, wetland delineations and habitat assessments should be conducted in wetland areas.

Section 4.12 and 4.12.3.2, Water Resources: The Service agrees with SEA's findings in this section that increases in rail traffic would result in a corresponding increase in the risk of hazardous spills, which could affect water resources. The DEIS notes that wetlands would be directly impacted during construction of connections and double tracking and that wetland delineations would be conducted as part of the permitting process. The final EIS should also indicate that habitat assessments should be conducted as well to determine if suitable habitat is present for the orchid and to help determine mitigation ratios for proposed wetland impacts.

Table 4.12-1, Potentially Affected Lakes and Preserves: This table lists conservation lands that contain water but fails to include Ivanhoe Dune and Swale and Ivanhoe South. These areas contain water/wetlands in the form of interdunal swales and should be listed on this table and discussed in the text.

Indirect and Cumulative Effects (Chapter 5)

Section 5.3, Potential Indirect Effects of the Proposed Action: In Section 5.3, SEA concludes that the proposed action could result in indirect effects from increased rail activity in the East Joliet and Kirk Yards and general indirect effects throughout the region. Section 5.3.1 discusses the general indirect effects of the project, **but does not** address any potential indirect effects on biological resources. This section does not disclose indirect impacts from the proposed action

and does not address indirect impacts to biological resources in the study area. The final EIS should address indirect effects to all biological resources listed in Chapter 4, or provide substantial documentation if the conclusion is that the proposed action would not result in indirect effects on biological resources.

Section 5.4, Related Projects, and Section 5.5, Site-Specific Cumulative Effects Analysis of Related Projects: These sections discuss past, present, and foreseeable cumulative effects on natural resources from the proposed action and at other areas outside the EJ&E right-of-way which should be considered in the cumulative impacts analysis as described in the National Environmental Policy Act (NEPA). In section 5.5.1, SEA concludes that the interaction between the proposed action impacts and the proposed Metra Star Line could result in minor cumulative impacts. Table 5.5-1 indicates that PWWFP would be affected and effects to biological resources would be minor. We believe that the impacts will be far more substantial than indicated in the DEIS. Departmental comments regarding Chapter 4 describe our concerns with respect to impacts of the proposed project to biological resources, particularly migratory birds. The impacts from the proposed action and the proposed Metra Star Line would occur along the same areas of the EJ&E arch and would adversely impact (specifically via noise) migratory birds in the same natural areas along the EJ&E arch. Furthermore, it is noted that the proposed Metra Star Line could result in a new dedicated track within the EJ&E right-of-way. A new track could have far greater direct construction impacts than the Applicants' proposal. The final EIS should more fully disclose the cumulative effects of the proposed Metra Star Line and the proposed project. The final EIS should address increased noise impacts and the increased probability of collisions with wildlife. Additionally, in the final EIS, Section 5.5.2 should provide figures depicting the locations of the proposed Star Line commuter stations so that determinations could be made about potential adverse impacts to natural areas and wildlife.

Mitigation (Chapter 6)

Section 6.2, Applicants' Voluntary Mitigation Measures: Chapter 6 discusses mitigation, including proposed voluntary mitigation measures offered by the Applicants as described in this section. We believe that a significant number of the Applicants' proposed mitigation measures are, in fact, best management practices that should be automatically required as part of the proposed action. Others, such as VM 64 concerning wetland fills and VM 65 concerning NPDES permits, are actions that are required by law and are not voluntary. Air quality VM 43, concerning switching to locomotives that emit fewer air pollutants, is commendable, but a time table needs to be established and adhered to. As stated, the proposal is open-ended on when it will occur, which could be many years away. The Applicants did not propose any mitigation measures to compensate for unavoidable impacts to biological resources.

Section 6.3, SEA's Preliminary Environmental Mitigation Measures: This section discusses the preliminary recommended environmental mitigation measures that are based on SEA's environmental analysis of the proposed action. SEA proposes mitigation measures to address effects not addressed by the Applicants' voluntary mitigation. We do not understand why adherence to required safety plans, including Occupational Safety and Health Administration (OSHA) requirements, is considered mitigation.

Several of the SEA proposed mitigation measures use terms such as "regularly inspect" or "communicate regularly" with other entities concerning noise and vibration (Nos. 24 and 26),

without defining “regularly”. Noise and possibly vibration also affect wildlife, so a clearly defined inspection schedule should be required.

The Department’s Recommendations for Additional Mitigation

As noted in our above comments, we believe that the DEIS does not fully disclose all potential project impacts to natural resources. To address these potential impacts, as well as to augment some of SEA’s proposed mitigation measures, we offer the recommendations below. These recommendations should be added to the indicated subsections in Chapter 6 in the final EIS.

Section 6.3.10.1, Noise:

- The Applicants should construct noise barriers in all locations where the EJ&E arch crosses through or is adjacent to a natural area that has been identified in the DEIS as an area where birds are concentrated. These areas have been discussed previously and are identified in various places in the DEIS. The noise barriers should be constructed on the outside of the existing or proposed tracks (both sides) and the Applicants should review existing research that discusses the heights, shapes, and materials used to construct the barriers (e.g., use of absorbent material) in order to mitigate noise impacts to birds and wildlife. These should be designed in association with designated wildlife crossings to permit the safe crossing by wildlife. The Service can provide technical assistance in the noise barrier review. The Applicants should construct these barriers to keep the noise levels below 50 dBA in these areas. Noise barriers should also be discussed as a potential mitigation measure in section 6.3.11.2.

Section 6.3.11.3, Federally-Listed and State-Listed Threatened and Endangered Species:

- The Applicants should continue to abide by the special conditions of the 1996 COE Permit # 199600211 for train operations on the Paul Ales Branch in order to minimize further impacts to larval Hine’s emerald dragonflies.
- The Applicants should conduct wetland delineations and habitat assessments in all construction areas to determine if suitable habitat is present for the eastern prairie fringed orchid. If suitable habitat is present, the Applicants should conduct orchid searches during the bloom date: June 28 through July 11, with searches conducted a minimum of three non-consecutive days within this time period.
- The Applicants should construct turtle ramps, drop boxes, or other structures that reduce the possibility of turtles becoming trapped within railroad rails, in all locations where the EJ&E arch crosses through or is adjacent to wetland areas. These structures should be placed at regular intervals in identified wetland areas. The Applicants should also construct turtle crossings in areas where turtles are concentrated (e.g., PWWFP). The Service can provide technical assistance in the selection and placement of these structures.

Section 6.3.14.6, Biological Resources:

- We agree with proposed Mitigation 30 concerning the Karner blue butterfly in the West Gary Recovery Unit. However, we do not agree with proposed Mitigation 57 concerning development and implementation of a plan for the restoration of dune and swale in the Ivanhoe connector area.

Based upon experience with attempts to recreate dune and swale habitat, we know that it has not been successful, even in areas not as heavily disturbed as the industrial property that would be affected by most of the connector. Therefore, we request that this proposed mitigation be deleted and replaced with mitigation to require the preservation and enhancement of the EJ&E prairie at the northwest end of the Kirk Yard. As previously mentioned, this area retains many natural qualities and is considered significant habitat for native plants and animals. It also supports wetlands, which likely need enhancement due to the encroachment of invasive species of plants and possibly animals. Therefore, it may be suitable to serve as required mitigation for the loss of wetlands at the Griffith connector, subject to approval by the regulatory agencies. Preservation of this prairie/wetland complex could be through a deed restriction and management agreement with the Indiana Division of Nature Preserves or through gift or sale to that agency.

- As discussed in our comments regarding section 3.3.1, we believe that a grade separation of the EJ&E over 5th Avenue or 5th Avenue over the EJ&E in Gary will likely be needed, resulting in impacts to the Ivanhoe dune and swale preserves. Mitigation measures to avoid, minimize, and offset any impacts need to be developed and included in the final EIS.
- The Applicants should avoid construction at PWWFP during the bird breeding season (April – August) to avoid disturbance of breeding birds in the vicinity.
- The Applicants should construct a hazardous materials containment system at PWWFP to capture hazardous materials in the event an accidental spill in this important wetland and bird habitat.
- We agree that Mitigation 62, concerning clearing of all equipment to reduce or prevent spread of invasive plant species, is necessary and desirable. However, the equipment would also need to be cleaned to remove invasive animal species, many of which are microscopic, such as veligers of invasive mussels that could spread into natural lakes and streams.

Section 6.3.14.7, Water Resources:

- The Applicants should conduct wetland delineations and associated habitat assessments to determine the floristic quality of wetlands that would be impacted by construction activities. The habitat assessments would be useful in determining the wetland mitigation replacement ratios, which could be higher than the 3:1 ratio noted in section 6.3.14.7.
- The Service believes that areas adjacent to the existing rail lines that currently support breeding grassland and wetland birds would become less suitable due to the increased number of trains and associated noise. We recommend that the Applicants consider conducting wetland and habitat restoration at one or more sites more remote from the rail lines to offset any reduced breeding bird productivity. There are a number of publically owned sites near the EJ&E arch that are currently undergoing habitat restoration or may be suitable candidates for restoration where impacts could be adequately offset. If this option is pursued, the Service could provide technical assistance in identifying potential sites.

Short-Term Use versus Long-Term Productivity of the Environment (Chapter 7)

In this chapter, SEA concludes that there would be some short-term construction disturbance which could have some impacts on resources. However, these would be eliminated upon completion of the construction activities. SEA also concludes that there would be no long-term impacts to resources. We disagree with SEA's conclusion that there would be no long-term impacts to resources and that short-term or long-term impacts would only result from disturbance associated with construction.

We believe that noise impacts to birds would be a long-term impact on birds. In addition, mortality of wildlife from train collisions and wildlife being trapped for longer periods between rails would also be long-term impacts. The final EIS should address these impacts on resources.

Section 7.2, Potential Hazardous Material Release: We disagree with SEA's conclusion that there would be no short or long-term impacts resulting from hazardous materials releases in the proposed construction areas. Due to the increased number of trains, the proposed action would create long-term impacts on resources (e.g., at PWWFP). The final EIS should address this issue more thoroughly.

Section 7.3.1, Wetlands: We agree with SEA's statement in section 7.3 that wetland productivity could be affected through permanent losses and adverse impacts to wetland function. However, section 7.3.1 states that long-term productivity would not be affected because the wetlands and wetland functions would be restored or replaced via mitigation. In addition, SEA states that wetlands and wetland functions would be protected by best management practices. We disagree with both conclusions.

Typically, wetland mitigation through section 404 of the Clean Water Act has focused on mitigating direct loss of habitat. However, we have suggested that increased noise would have a long-term impact on breeding bird productivity, which would not likely be considered during permit review, nor is it adequately considered in the DEIS. Offsite bird habitat restoration, as suggested previously in our comments, should be considered as a means of maintaining wetland bird productivity. Similarly, best management practices would offset some water quality and quantity impacts at the area of impact but would not address the impacts to wetland wildlife associated with increased rail noise. The final EIS should address these issues.

Irreversible and Irretrievable Commitments of Resources (Chapter 8)

Section 8.1.3, Protected Species: We disagree with SEA's conclusion that the proposed action would not irreversibly or irretrievably affect any particular animal populations. We believe that there would be ongoing impacts to wildlife that would not be fully mitigated with the mitigation measures presently proposed in the EIS. Our comments include recommendations that could improve the mitigation and lend support to SEA's conclusions.

Appendix M – Biological Resources Analysis

Section M.3.1, Natural Areas with Potential for Impacts: As noted previously, Middlefork Savanna Forest Preserve and MacArthur Woods Forest Preserve should be added to this section

and other applicable sections in the final EIS. Descriptions of these areas and the resources that could be affected should also be included in the final EIS.

For most of the natural areas listed in the section, SEA makes the same determinations that increased noise could only affect animal behavior within 500 feet of the rail line (and these animals already live with daily noise) and that the increased potential for animal/train collisions is not likely to adversely affect any particular animal populations. Again, we disagree with these conclusions. The language in the final EIS should be changed in this section to reflect our other requested changes listed throughout our comment letter.

Section M.3.1.1.9, Lake Renwick Forest Preserve: This section discusses the significance of the Lake Renwick Heron Rookery Nature Preserve. This section also acknowledges that flushing events from trains or train noise have been documented at the rookery. We do not agree with SEA's conclusion that there would not be a measurable impact on birds in the rookery from increased train noise. We also do not agree that SEA's determination that the increased potential for animal/train collisions would not likely adversely affect the rookery. The final EIS should address these issues.

Section M.3.1.1.14, Sauk Trail Woods and Indian Woods Forest Preserve: We disagree with SEA's determination that minimal impacts from increased noise and collisions on wildlife or habitat because this area is not being managed for wildlife or habitat. Just because a natural area is not being managed for wildlife or habitat does not mean wildlife is not present (and could be adversely affected). This language should be changed in the final EIS for this section and any other section for which this determination was made.

Table M.3.2-1, Natural Areas with No Impacts from the Proposed Action: We do not agree with SEA's inclusion in this section of natural areas that provide habitat for migratory birds and which are in close proximity to the EJ&E arch. The final EIS should address these issues.

SUMMARY COMMENTS

The DEIS provides general information on natural resources of concern to the Department, but detailed information and associated analysis is often lacking. Confusing information is presented about which agencies own or manage conservation lands in the two affected States and where conservation lands are located in relation to either the EJ&E or CN tracks. The DEIS inadequately identifies adverse impacts to the Service's trust resources (federally listed species and migratory birds) and does not fully disclose impacts to other wildlife. As a result, the DEIS inadequately identifies appropriate mitigation for these environmental impacts.

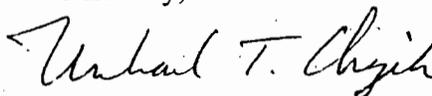
We offered numerous recommendations in these comments to address the aforementioned inadequacies of the environmental impact statement and thereby assist the SEA in fully disclosing and appropriately mitigating anticipated adverse environmental impacts.

The Department recommends that SEA coordinate with the appropriate Service field office(s) to discuss the concerns expressed and attempt to resolve the opposing views of the two agencies about anticipated project impacts to Service trust resources and mitigation needed to address the impacts. The results of the coordination, particularly any remaining differences of opinion, should be disclosed and adequately discussed in the final EIS.

The Department looks forward to continued coordination with SEA and the Applicants to ensure that project impacts to resources of concern to the Department are adequately addressed. For matters related to fish and wildlife resources and federally listed threatened and endangered species in the Illinois portion of the study area, please continue to coordinate with Mr. Shawn Cirton, U.S. Fish and Wildlife Service, 1250 South Grove Ave., Suite 103, Barrington, Illinois 60010, phone (847) 381-2253, extension 19, fax (847) 381-2285. For the Indiana portion of the study area, please continue to coordinate with Ms. Elizabeth McCloskey, P.O. Box 2616, Chesterton, Indiana 46304, phone (219) 983-9753, fax: 219-983-9816.

We appreciate the opportunity to review the document and provide comments.

Sincerely,



Michael T. Chezik
Regional Environmental Officer

Enclosure

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cc:

L. Maclean, FWS, Fort Snelling, MN

S. Cirton, FWS, Barrington, IL

E. McCloskey, Chesterton, IN



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chicago Ecological Services Field Office
1250 South Grove Avenue, Suite 103
Barrington, Illinois 60010
Phone: (847) 381-2253 Fax: (847) 381-2285

FILE COPY

IN REPLY REFER TO:
FWS/AES-CIFO

February 15, 2007

Mr. Jim Kvedaras
U.S. Public and Government Affairs
Canadian National
17641 S. Ashland Avenue
Homewood, Illinois 60430

Dear Mr. Kvedaras:

The U.S. Fish and Wildlife Service is responsible for leading protection and recovery efforts for federally endangered plants and animals in the United States. I want to let you know about an exciting conservation project in the lower Des Plaines River valley that hopes to secure the future for an animal listed as endangered under both federal and state law: the Hines emerald dragonfly. I believe Canadian National's participation is crucial to the success of this effort, and I hope to engage you as an active partner in a collaborative process that is already underway.

The Hine's emerald is currently only found in a few regions of the Midwestern United States. One of these regions includes the lower Des Plaines River Valley. Some of the wetlands within the Valley are considered important habitat for the dragonfly. These wetlands receive groundwater flows from adjacent upland areas. One of these important areas is along your railroad line that runs along the west side of New Avenue, and east of the Des Plaines River and the canals. We are specifically concerned about the stretch that is south of 135th Street in Romeoville, Illinois (*Learn more about the dragonfly in the Fact Sheet enclosed*). Our goal is to bring together a diverse group of stakeholders to work together to create a **Habitat Conservation Plan (HCP)** to help the dragonfly (*see the enclosed brochure about the HCP process*).

We have previously met on a few occasions with representatives from the Illinois Department of Transportation and the Environmental Law and Policy Center regarding the addition of Amtrack trains to the daily schedule on that rail line. We have also discussed with them the ongoing possibility of high speed rail service to St. Louis that would be on the same line. We are concerned about both the ongoing (existing) "take" of the Hine's emerald dragonfly from existing train operations on this line, as well as, increased "take" from new operations. It has come to our attention that there are several entities that operate trains on this line potentially contributing to the impacts to this listed species, Canadian National, Metra, Amtrack, and possibly BNSF. We

Mr. Jim Kvedaras

Page 2

are endeavoring to bring all of the relevant railroad interests together to address this issue, but as the track owner CN's involvement is particularly essential.

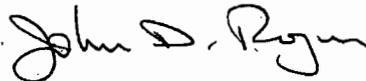
Working together, we can create a future that helps each HCP partner's organization comply with federal and state law and co-exist successfully with protected species. Therefore, *we invite you to join us* in this creative and proactive problem-solving process. The intent is that both you and the dragonfly will benefit from your participation in this habitat conservation planning process.

The next meeting of the HCP team will be March 14, 2007 starting at 9am in the Bodine Community Room at the Romeoville Recreation Center located at 900 W Romeo Rd, Romeoville, Illinois 60446.

We invite you or someone from your staff to participate in that meeting. We would also like to meet with you and/or someone from your staff ahead of time, to provide you with more detailed background information and the anticipated role that Metra might have in the planning process. Please contact Mr. Jeff Mengler of my staff by phone at 847-381-2253, ext. 17 or by email at jeffrey_mengler@fws.gov, to arrange a meeting to discuss this further. You may also contact me directly at extension 11.

Thank you for considering our invitation and we look forward to hearing from you at your earliest convenience.

Sincerely,



John D. Rogner
Field Supervisor

Enclosure

cc: Devin Sprinkle
Manager of Environmental Compliance
CN/IC
Corporate Environmental Affairs
17641 S. Ashland Avenue
Homewood, Illinois 60430

Attachment B
Eastern Prairie Fringed Orchid Surveys

Attachment B - Eastern Prairie Fringed Orchid (EPFO) Habitat Surveys

HDR, Winzler and Kelly, CN and EJE site visits: October 28 and 30, 2008

In response to the comment letter submitted by the Department of Interior (DOI) on behalf of the USFWS, a meeting was requested with the Illinois and Indiana USFWS to resolve issues raised in their letter regarding the DEIS. The meeting was a continuation of the informal consultation process and resulted in a decision to carry out more detailed habitat assessments and additional analysis for the EPFO within construction areas of the project study area. Additional habitat surveys were conducted for suitable EPFO habitat within construction areas on October 28 and 30, 2008 by a multi-disciplinary team including HDR, W&K, EJ&E, and CN. Areas of remnant native vegetation, including marsh, sedge meadow, wet prairie, and mesic prairie sites were identified by HDR personnel during the survey. No attempt was made to identify areas of suitable habitat outside of proposed construction zones. HDR identified a total of six sites that appeared to include potential habitat suitable for the occurrence of the EPFO within proposed construction limits.

The Applicant has developed Voluntary Mitigation measures to address any potential impacts to EPFO individuals working in conjunction with the USFWS. One of these measures states:

[Eastern prairie fringed orchid] Prior to any ground disturbing activities, Applicants shall hire a qualified biologist to survey for the Eastern prairie fringed orchid (*Platanthera leucophaea*) in areas containing suitable habitat. Applicants shall survey each area on at least three non-consecutive days between June 28 and July 11, as this is when the orchid typically flowers and is most identifiable. If the Applicants' biologist finds orchids, Applicants shall not conduct any construction activities in that area and Applicants shall notify USFWS and the Board immediately. The Board shall reinstate consultation with USFWS. Applicants shall work with the Board and USFWS to determine appropriate measures to offset impacts, most likely providing funding for an ongoing hand pollination project, or providing funding to be used to enhance another orchid site (that is, brush cutting, prescribed burning).

The summaries below document the site conditions at the six locations HDR identified as potential EPFO habitat during the October 28 and 30th site visits.

Site 1: Pratt’s Wayne Woods

Site 1 is located near the corner of the Munger connection within Powis Marsh. Powis Marsh is located south of CN Segment 30A and West of EJ&E Segment 12. The marsh is dominated by invasive *Phalaris arundinacea* and *Typha x glauca* with scattered native species and areas of mixed native species dominated communities. Throughout the marsh, mixed willows and dogwoods are common in areas where open water is not present. A small area of native species dominated wet meadow was noted along the drainageway south of CN Segment 30A within Powis Marsh within the proposed construction limits of the Applicants revised, preferred alternative. This community is largely dominated by Lake Sedge (*Carex lacustris*) and Canada bluejoint (*Calamagrostis canadensis*) with heavy presence of invasive *Phalaris* and *Typha*.

Plants noted at Pratt’s Wayne Woods Wet Meadow location during the October 28 site visit include:

#	Species	% Composition
1	<i>Asclepias incarnata</i>	2
2	<i>Aster praealtus</i>	2
3	<i>Boehmeria cylindrica</i>	4
4	<i>Calamagrostis canadensis</i>	20
5	<i>Carduus nutans</i>	2
6	<i>Carex lacustris</i>	10
7	<i>Carex spp.</i>	2
8	<i>Carex spp.</i>	3
9	<i>Conium maculatum</i>	1
10	<i>Cornus racemosa</i>	5
11	<i>Euthamia graminifolia</i>	4
12	<i>Helianthus tuberosus</i>	2
13	<i>Juncus torreyi</i>	1
14	<i>Pastinaca sativa</i>	1
15	<i>Phalaris arundinacea</i>	15
16	<i>Phragmites australis</i>	15
17	<i>Rhamnus cathartica</i>	2
18	<i>Rumex crispus</i>	3
19	<i>Salix exigua</i>	3
20	<i>Salix discolor</i>	2
21	<i>Salix nigra</i>	5
22	<i>Scirpus atrovirens</i>	5
23	<i>Solidago canadensis</i>	3
24	<i>Typha angustifolia</i>	10
25	<i>Verbena hastata</i>	2
26	<i>Zizea aurea</i>	2



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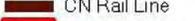
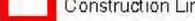
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Sources:
 CN, National Transportation Atlas Database, USDA NAIP

Data to be used for reference only

Site 1: Munger Connection/Powis Marsh



-  EJ&E Rail Line
-  CN Rail Line
-  Construction Limits

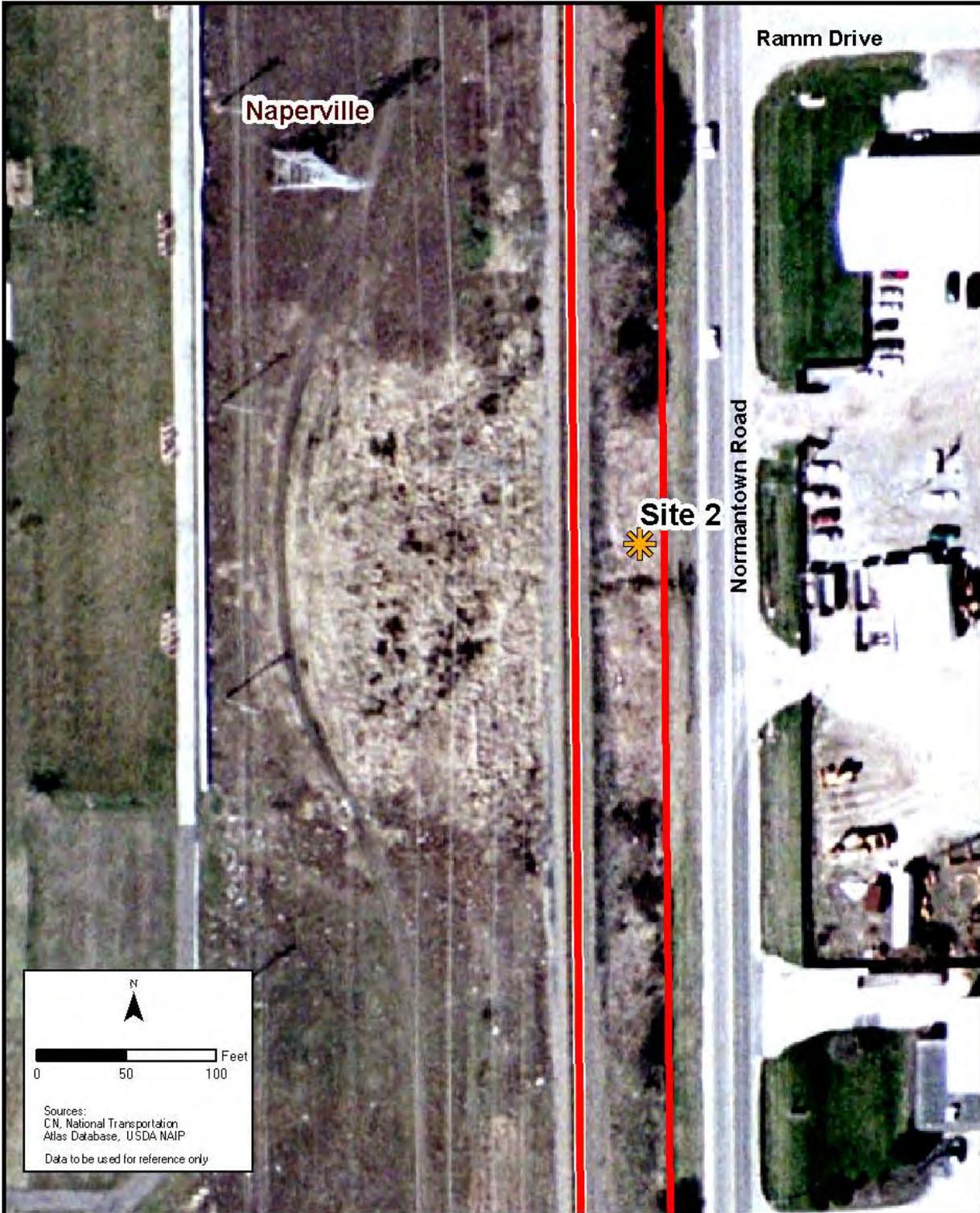
EPFO Identified Potential Habitat

Site 2: Naperville, Normantown Road and Ramm Drive

Site 2 is a small isolated wet meadow with a road drainage ditch bisecting the site from the east. This wet meadow is dominated by Canada bluejoint (*Calamagrostis canadensis*) with mixed willows and dogwoods at the north and south margins.

Plants noted at Site 2 during the October 30 site visit include:

#	Species	% Composition
1	<i>Apocynum cannabinum</i>	2
2	<i>Calamagrostis canadensis</i>	70
3	<i>Carduus nutans</i>	5
4	<i>Carex sp. (stricta (cf.))</i>	10
5	<i>Cornus racemosa</i>	3
6	<i>Epilobium coloratum</i>	2
7	<i>Euthamia graminifolia</i>	3
8	<i>Geum canadense</i>	1
9	<i>Helianthus tuberosus</i>	1
10	<i>Iris virginica</i>	3
11	<i>Onoclea biennis</i>	1
12	<i>Phalaris arundinacea</i>	3
13	<i>Phragmites australis</i>	5
14	<i>Polygonum sp.</i>	1
15	<i>Sambucus canadensis</i>	1
16	<i>Silphium terebinthinaceum</i>	1
17	<i>Solidago canadensis</i>	1
18	<i>Spartina pectinata</i>	3
19	<i>Verbena hastata</i>	2



Site 2: Normantown Road and Ramm Drive Wet Meadow




EJ&E Rail Line

CN Rail Line

Construction Limits

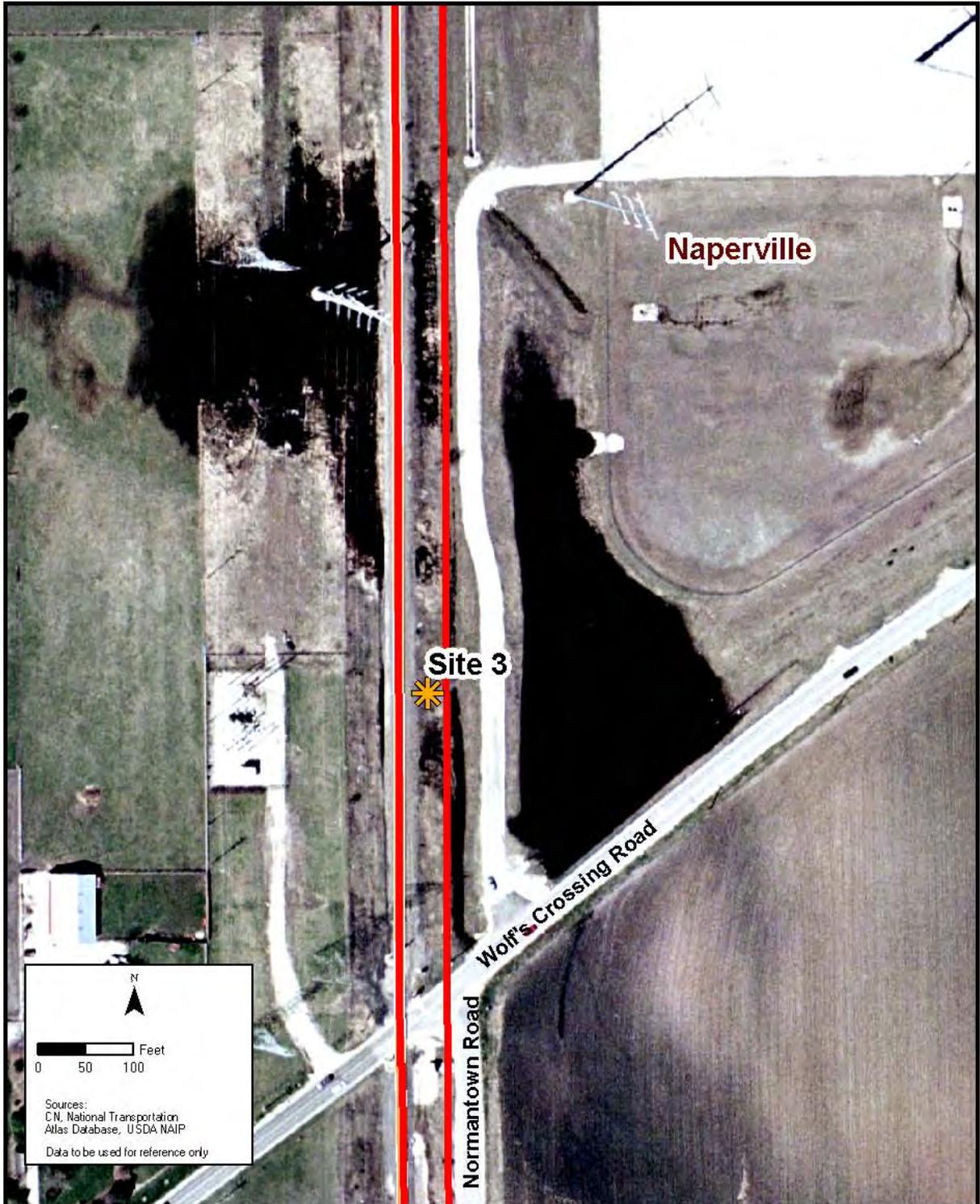
EPFO Identified
Potential Habitat

Site 3- Naperville

Site 3 is comprised of a ditched area between Normantown Road and the EJ&E. Species composition along the EJ&E ditched area is dominated by Reed Canary Grass with mixed composition of native wet meadow species and non-native weedy species.

Plants noted within Site 3 during October 30 site visit include:

#	Species	% Composition
1	<i>Arctium minor</i>	5%
2	<i>Asparagus officinalis</i>	1%
3	<i>Calamagrostis Canadensis</i>	20%
4	<i>Iris virginica</i>	1%
5	<i>Phalaris arundinacea</i>	40%
6	<i>Phragmites australis</i>	2%
7	<i>Polygonum spp.</i>	5%
8	<i>Setaria glauca</i>	20%
9	<i>Typha angustifolia</i>	10%



Site 3: Wolf's Crossing Road Railroad Ditch

-  EJ&E Rail Line
-  CN Rail Line
-  Construction Limits

EPFO Identified Potential Habitat

Site 4 – Gougar Road, Unincorporated Will County

Site 4 is a mixed wet prairie/wet meadow, ditched area north of the EJ&E near Gougar Road in unincorporated Will County. New development is occurring both south of the EJ&E and northeast of this location along Gougar Road. This wet meadow is dominated by Canada bluejoint (*Calamagrostis canadensis*), big bluestem, sedge species and prairie cordgrass.

Additional plants noted within Site 4 during the October 30 site visit include:

#	Species	% Composition
1	<i>Ambrosia trifida</i>	15
2	<i>Andropogon gerardii</i>	25
3	<i>Aster pilosus</i>	5
4	<i>Bidens spp.</i>	3
5	<i>Bromus inermis</i>	3
6	<i>Carex lacustris</i>	2
7	<i>Carex spp.</i>	3
8	<i>Chenopodium album</i>	3
9	<i>Daucus carota</i>	1
10	<i>Helianthus tuberosus</i>	5
11	<i>Melilotus officinalis</i>	3
12	<i>Onothera biennis</i>	1
13	<i>Panicum virgatum</i>	5
14	<i>Phalaris arundinacea</i>	5
15	<i>Rumex crispus</i>	2
16	<i>Setaria glauca</i>	2
17	<i>Solidago sp.</i>	1
18	<i>Spartina pectinata</i>	25
19	<i>Ulmus pumila</i>	3

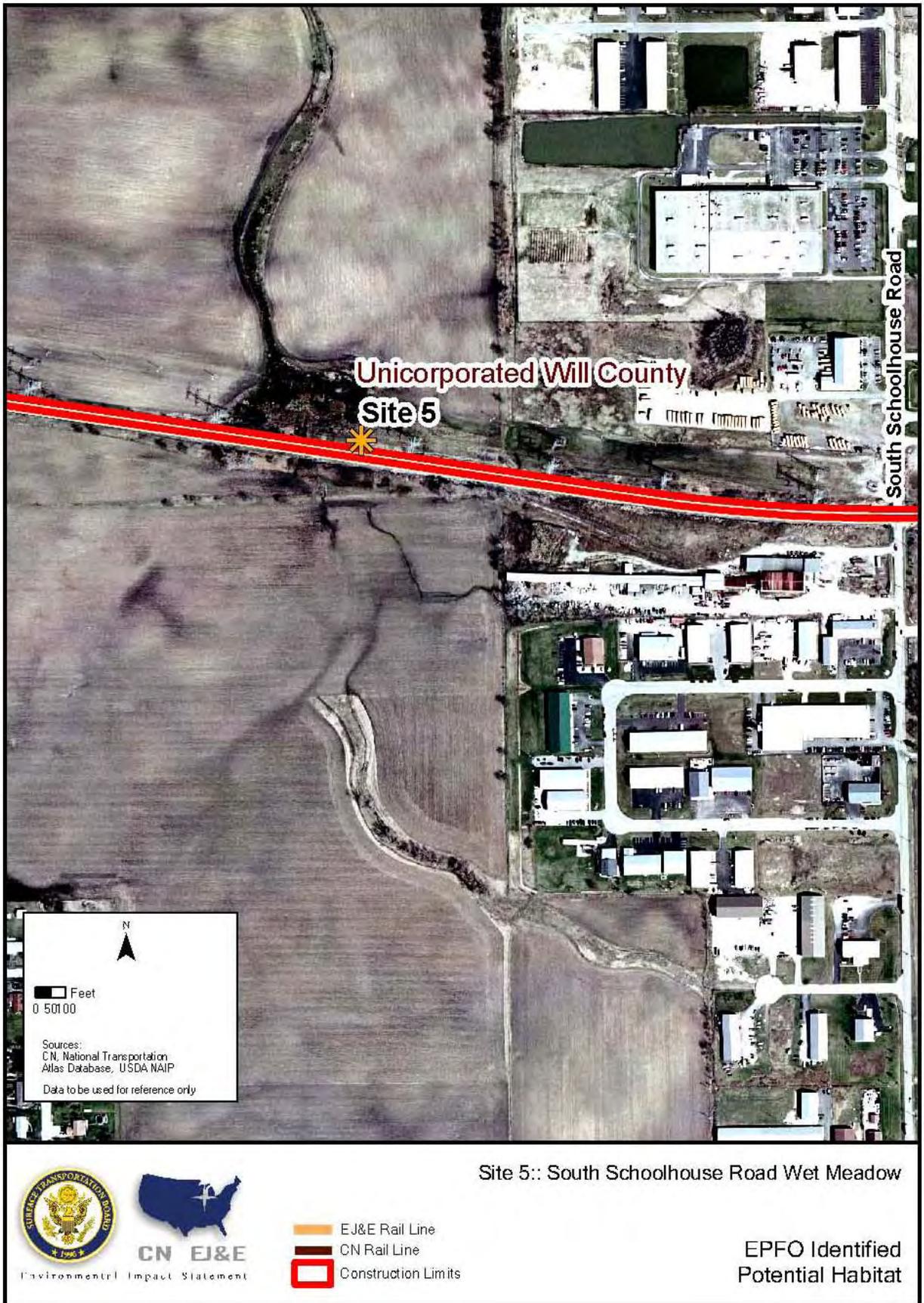


Site 5 – Schoolhouse Road

Site 5 is a mixed wet prairie/wet meadow, ditched area north of the EJ&E near South Schoolhouse Road in unincorporated Will County. This is a large site with some open water and wet prairie. Native grasses and sedges, including bluejoint grass and tussock sedge dominate the area along the EJ&E railroad embankment. Potential impacts could include fill along the northern edge of the rail embankment.

Plants noted in Site 5 during the October 30 site visit include:

#	Species	% Composition
1	<i>Asclepias incarnate</i>	2
2	<i>Asclepias syriaca</i>	2
3	<i>Calamagrostis canadensis</i>	50
4	<i>Polygonum spp.</i>	5
5	<i>Silphium terebinthinaceum</i>	2
6	<i>Salix nigra</i>	3
7	<i>Scirpus fluviatilis</i>	10
8	<i>Rumex crispus</i>	2
9	<i>Iris versicolor</i>	1
10	<i>Cornus racemosa</i>	2
11	<i>Helianthus tuberosus</i>	4
12	<i>Solidago gigantea</i>	3
13	<i>Solidago canadensis</i>	5
14	<i>Phragmites australis</i>	5
15	<i>Phalaris arundinacea</i>	10
16	<i>Spartina pectinata</i>	5
17	<i>Verbena hastata</i>	2

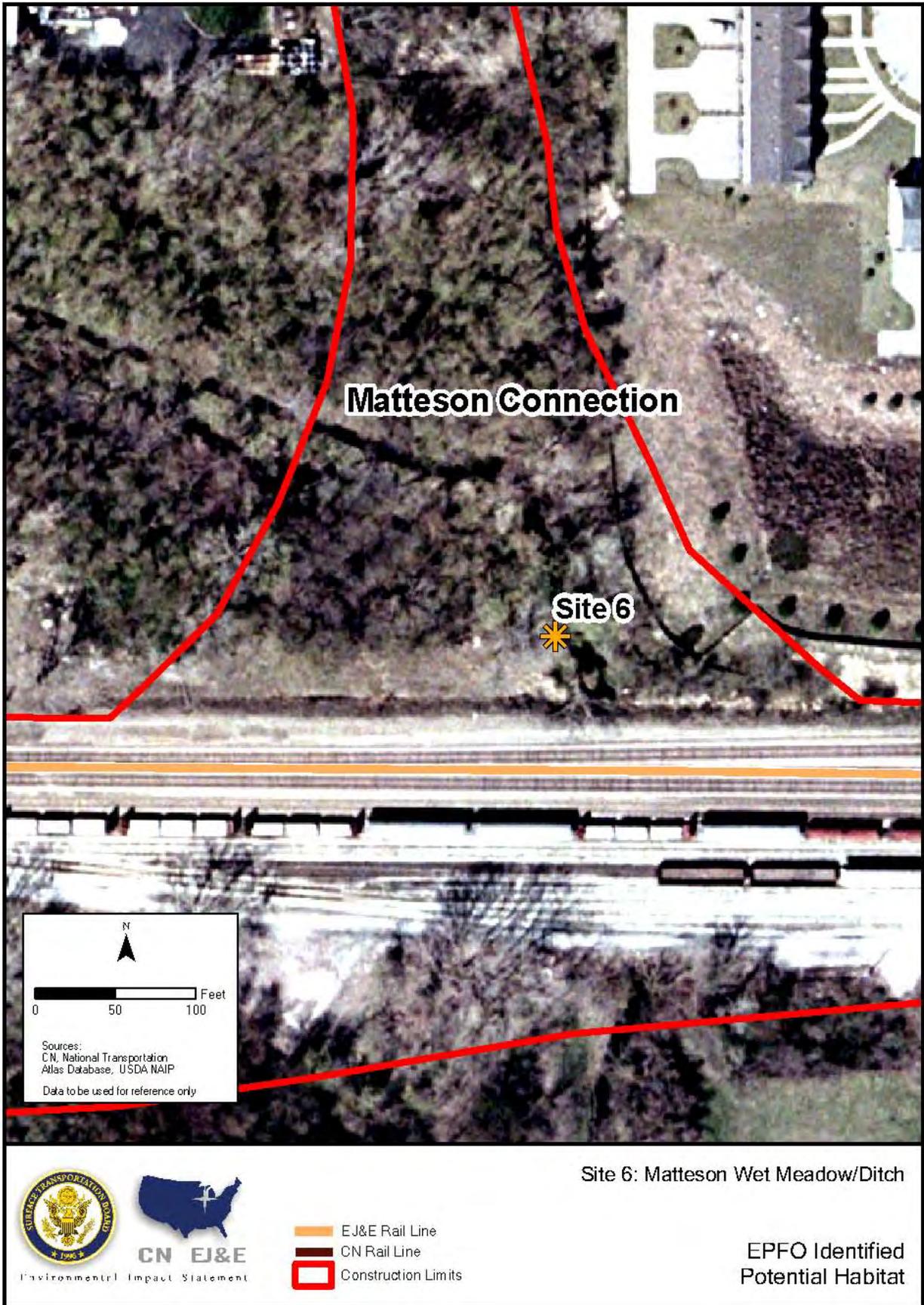


Site 6 – Matteson Illinois

Site 6 is located within the footprint of the Matteson connection along the eastern edge of the construction area, in a ditch north of the EJ&E tracks. The remainder of the construction areas of the Matteson connection were determined to be non-suitable habitat for the EPFO, and are characterized as wet forest, immature upland forest, turf grass, and pavement. Site 6 is characterized as a small linear wet meadow located at the base of the rail embankment in a small drainage way. Site 6 is dominated by invasive reed canary grass; however, the site contains a few conservative native species such as lake sedge, prairie cordgrass and Canada bluejoint grass. Hydrology appears to be influenced by local runoff from the railroad embankment, flowing into an unnamed tributary of Butterfield Creek.

Plants noted in Site 6 include:

#	Species	% Composition
1	<i>Phalaris arundinacea</i>	60
2	<i>Scirpus cyperinus</i>	5
3	<i>Calamagrostis canadensis</i>	5
4	<i>Carex lacustris</i>	2
5	<i>Scirpus fluviatilis</i>	2
6	<i>Phragmites australis</i>	10
7	<i>Juncus</i> sp.	20
8	<i>Carex stricta</i>	2
9	<i>Spartina pectinata</i>	1
10	<i>Fraxinus pennsylvanica</i>	5
11	<i>Acer saccharinum</i>	5
12	<i>Typha latifolia</i>	2
13	<i>Rhamnus cathartica</i>	10



HDR/USFWS Site Visit: November 6, 2008

During the surveys conducted on October 28 and 30, HDR personnel observed numerous wetland delineation flags in wetland sites within some of the proposed construction areas. CN confirmed that growing season wetland delineations had been conducted by Hey and Associates for the majority of the construction areas in 2008. CN supplied this information to HDR on November 5th, 2008 for review and use in our additional analysis. Table 1 below summarizes the information contained within the five wetland reports.

Typically the USFWS requests a Floristic Quality Assessment (FQA) to determine if a project site contains suitable habitat for the EPFO. Floristic Quality Assessments are conducted during the growing season to document all plant species within a particular site and determine its quality. From the plant data collected, each site is given an FQA score called an FQI. The USFWS looks at the FQI score and the mean C value (a measure of the coefficient of conservatism) to make determinations on the potential for EPFO to occur within mesic prairie, wet prairie, and sedge meadow habitats.

An additional site survey was conducted on November 6th by HDR and USFWS to observe the six habitat areas identified within two sites.

The Matteson connection (Site 6) was the first site visited by HDR and USFWS on November 6th. The Service determined most of the construction area was not habitat for the EPFO; however, not all areas within the construction foot print could be ruled out as EPFO. A small sedge meadow community was identified on the eastern edge of the construction area in a ditch north of the EJ&E tracks. Because this area did not have a growing season plant survey or an FQI score, we recommend this area be surveyed according to the methods outlined below, prior to any construction activities.

The next site visited on the November 6th site survey was located in an area of double tracking just west of South Schoolhouse Road (Site 5) in unincorporated Will County. This site consisted of a wet prairie/wet meadow north of the EJ&E. Native grasses and sedges dominated this wetland site and the Service agreed it would definitely be classified as potential EPFO habitat. Because this area did not have a growing season plant survey or an FQI score, we recommend this area be surveyed according to the methods outlined below, prior to any construction activities. CN may take the avoidance approach and construct a small retaining wall to contain fill.

The third site visited was located north of the EJ&E immediately west of Gougar Road (Site 4). This wet prairie site is located in an area of double tracking, however, during the site meeting it was determined that the available right of way within the footprint of the existing embankment was sufficient to support the new double tracking without impacting the adjacent wetlands. If this is the case, no additional habitat surveys will be needed within this site. However, if this site cannot be avoided, we recommend this area be surveyed according to the methods outlined below, prior to any construction activities.

The fourth site was located north of the EJ&E, west of Wolf's Crossing Road (Site 3). This wetland was in an area where CN had completed wetland delineations. The site, identified in the CN delineation report as Wetland 14, maintained an FQI of 14.1 and a mean C value of 3.4. The Service indicated this site is likely not habitat for the EPFO, however, because the site had a mean C of 3.4, a closer look at the species present within the wetland would likely be required before the USFWS can determine if suitable habitat for the EPFO exists.

The fifth site (Site 2) identified by HDR was not visited by the USFWS on November 6th, 2008, because of time constraints. The service chose to skip this site based on the fact that this wetland site had been delineated and a growing season FQI was performed. The site, identified in the CN delineation report as Wetland 12, maintained an FQI of 12.1 and a mean C value of 3.1. Because the site had a mean C of 3.1, a closer look at the species present within the wetland would likely be required before the USFWS can determine if suitable habitat for the EPFO exists.

The final site visited during the November 6th field visit was the connection at Munger (Site 1). This wetland was in an area where CN had completed wetland delineations. Based on an FQI score of 24, and a mean C value of 3.2, the Service agreed that this area would require an orchid survey.

EPFO Habitat Surveys

The Applicant (CN) shall perform a Floristic Quality Assessment (FQA) in all wetland and mesic prairie locations within areas of proposed construction of double track or new or improved connections. FQAs are required to be conducted during the growing season (generally: May 1-October 1). FQA data will be submitted to the USFWS to identify if habitat suitable for the orchid is present in the locations of proposed Transaction-related construction of double track or new or improved connections. If suitable habitat is identified by the USFWS Service Orchid surveys will be required. Orchid surveys should be conducted during the bloom period from June 28 through July 11, with searches conducted on a minimum of three non-consecutive days within this time period.

CN may already have much of the data the USFWS needs to make a determination; however, it is recommended that CN submit this information to the USFWS for their determination under their own cover letter.

Table 1: Floristic Quality Index Data from Wetland Reports Provided by CN on November 5th, 2008

Date (2008)	Site	Wetland	Area (acres)	FQI	Native Mean C	HQAR	Wetland Type	Potential EPFO Habitat
June 17	Leithton	1	0.02	11.2	2.5	No	Wet Meadow, Scrub Shrub	No
June 17	Leithton	2	0.01	3.0	1.5	No	Wet Meadow, Scrub Shrub	No
June 17	Leithton	3	0.07	11.8	3.1	No	Wet Meadow, Scrub Shrub	No
June 17	Leithton	4	1.96	18.8	2.9	No	Emergent Marsh	No
June 17	Leithton	5	0.54	14.1	3.0	No	Pond, Emergent Marsh	No
June 17	Leithton	6	0.01	8.4	2.4	No	Wet Meadow	No
July 3 and 8	Diamond Lake, DT	1	0.17	5.1	1.6	No	Wet Meadow, Scrub Shrub	No
July 3 and 8	Diamond Lake, DT	2	0.04	2.9	1.2	No	Wet Meadow, Scrub Shrub	No
July 3 and 8	Diamond Lake, DT	3	0.01	4.5	1.7	No	Wet Meadow	No
July 3 and 8	Diamond Lake, DT	4	0.04	4.2	1.6	No	Wet Meadow	No
July 3 and 8	Diamond Lake, DT	5	0.04	8.9	2.5	No	Wet Meadow	No
July 3 and 8	Diamond Lake, DT	6	0.02	5.3	2.2	No	Wet Meadow	No
July 3 and 8	Diamond Lake, DT	7	0.04	6.6	2.0	No	Wet Meadow	No
July 3 and 8	Diamond Lake, DT	8	0.02	1.2	0.7	No	Wet Meadow	No
July 3 and 8	Diamond Lake, DT	9	0.01	2.1	1.5	No	Wet Meadow, Scrub Shrub	No
July 3 and 8	Diamond Lake, DT	10	0.01	4.3	1.4	No	Wet Meadow, Scrub Shrub	No
July 3 and 8	Diamond Lake, DT	11	0.01	4.5	1.7	No	Wet Meadow	No
July 3 and 8	Diamond Lake, DT	12	0.04	6.7	2.2	Yes	Creek	No
July 3 and 8	Diamond Lake, DT	13	0.01	3.6	1.6	No	Wet Meadow, Scrub Shrub	No
July 3 and 8	Diamond Lake, DT	14	0.05	3.9	1.2	No	Wet Meadow	No
July 3 and 8	Diamond Lake, DT	15	0.28	11.0	2.5	No	Wet Meadow, Emergent Marsh	No
July 3 and 8	Diamond Lake, DT	16	0.10	11.9	2.5	No	Wet Meadow, Scrub Shrub	No
July 3 and 8	Diamond Lake, DT	17	0.09	4.3	1.4	No	Wet Meadow, Scrub Shrub	No
July 3 and 8	Diamond Lake, DT	18	0.15	11.7	3.1	No	Pond, Drainage Way	No
July 3 and 8	Diamond Lake, DT	19	0.04	9.0	2.1	No	Wet Meadow	No
May 29,	Munger	1	1.21	24.0	3.2	Yes	Emergent Marsh, Wet Meadow	Yes
July 10-11 and Aug. 8	Aurora to Joliet, DT	1	0.09	10.5	2.6	No	Open Water Pond, Marsh, Wet Meadow	No

Date (2008)	Site	Wetland	Area (acres)	FQI	Native Mean C	HQAR	Wetland Type	Potential EPFO Habitat
July 10-11 and Aug. 8	Aurora to Joliet, DT	2	0.03	4.9	2.2	No	Wet Meadow	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	3	- - -	8.1	2.9	No	Wet Meadow, Marsh	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	4	0.02	2.3	1.3	No	Wet Meadow, Marsh	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	5	0.20	12.5	2.9	No	Wet Meadow	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	6	0.43	12.8	3.2	No	Wet Meadow	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	7	0.15	6.3	1.9	No	Marsh, Wet Meadow, Drainage Swale	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	8	0.05	9.6	2.6	No	Wet Meadow, Marsh	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	9	0.01	6.9	2.8	No	Excavated Channel	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	10	0.02	1.4	1.0	No	Drainage Swale	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	11	0.11	13.0	3.6	Yes	Wet Meadow, Drainage Swale	Yes
July 10-11 and Aug. 8	Aurora to Joliet, DT	12	0.17	12.1	3.1	Yes	Sedge Meadow, Wet Meadow	Yes
July 10-11 and Aug. 8	Aurora to Joliet, DT	13	0.21	18.8	3.8	Yes	Wet Meadow, Drainage Swale	Yes
July 10-11 and Aug. 8	Aurora to Joliet, DT	14	0.50	14.1	3.4	No	Marsh, Wet Meadow, Drainage Swale	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	15	- - -	11.0	2.9	No	Wet Meadow	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	16	0.18	14.6	3.2	No	Wet Meadow, Drainage Swale	No

Date (2008)	Site	Wetland	Area (acres)	FQI	Native Mean C	HQAR	Wetland Type	Potential EPFO Habitat
July 10-11 and Aug. 8	Aurora to Joliet, DT	17	0.02	4.5	1.8	No	Excavated Channel	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	18	0.04	6.3	2.8	No	Wet Meadow, Drainage Swale	No
July 10-11 and Aug. 8	Aurora to Joliet, DT	19	0.50	14.5	2.8	Yes	Sedge Meadow, Wet Meadow, Drainage Swale	Yes
July 10-11 and Aug. 8	Aurora to Joliet, DT	20	0.01	2.8	0.9	No	Depressional basin	No
May 15	Joliet Connection	1	0.01	10.7	2.9	No	Depressional, Wet Meadow, Scrub Shrub	No
May 15	Joliet Connection	2	0.02	10.6	3.2	No	Drainage Way, Depressional, Wet Meadow, Scrub Shrub	No
May 15	Joliet Connection	3	0.01	1.0	1.0	No	Excavated Depression	No
May 15	Joliet Connection	4	0.03	2.1	1.5	No	Open water, Pond	No

Attachment C
Midwest Generation-related Correspondence and
Documentation

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November 6, 2008

BY E-MAIL (John Rogner@fws.gov; Shawn Cirton@fws.gov)
AND FIRST CLASS MAIL

Mr. John D. Rogner, Field Supervisor
Chicago Ecological Services Field Office
U.S. Fish and Wildlife Service
United States Department of the Interior
1250 South Grove Avenue, Suite 103
Barrington, IL 60010

Mr. Shawn Cirton
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United States Department of the Interior
1250 South Grove Avenue, Suite 103
Barrington, IL 60010

**Re: *Canadian National Railway Company and Grand Trunk Corporation –
Control – EJ&E West Company (STB Finance Docket No. 35087)***

Dear Messrs. Rogner and Cirton:

I have been informed by the Section of Environmental Analysis (“SEA”) of the Surface Transportation Board (“STB”) and by SEA’s third-party consultant in the above-captioned proceeding, HDR Engineering, Inc. (“HDR”), that Midwest Generation, LLC (“MWG”), has suggested to the U.S. Fish and Wildlife Service (“USFWS”) that the transaction proposed in this proceeding could require MWG to seek to construct additional rail storage capacity near its Will County Generating Station, in Romeoville, Illinois. As we understand from SEA and HDR, your office has expressed concern that construction of that capacity, which could have adverse impacts on the habitat of the Hines emerald dragonfly (“HED”), would therefore be an indirect effect of the proposed transaction.

Because it appears that USFWS may not have been provided with a complete explanation of the situation regarding storage of coal trains for MWG, changes in that situation that would result from the proposed transaction, and effects of those changes on the HED and its habitat, we have prepared the enclosed paper summarizing those facts, and explaining why, contrary to the

HARKINS CUNNINGHAM LLP

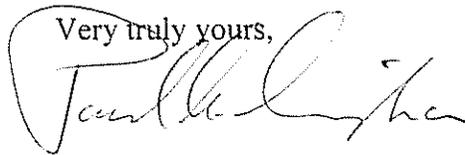
Attorneys at Law

Mr. John D. Rogner
Mr. Shawn Cirton
November 6, 2008
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suggestion apparently raised by MWG, adverse impacts on the HED are not likely as a result of the proposed transaction. We believe that you will find this paper helpful in preparation for the conference call scheduled for this Friday, November 7, 2008, at 2:00 p.m. Central Time to discuss issues related to MWG.

The enclosed paper describes voluntary mitigation conditions which CN would be willing for the STB to impose on its approval of the proposed transaction, in order to ensure that the transaction would have no adverse impacts on the HED. For your convenience, I have also enclosed a list setting forth language of specific conditions that CN is considering submitting to SEA to mitigate potential impacts of coal delivery to MWG, and to address several other issues (regarding migratory birds, rare and listed turtles, Karner blue butterfly, and Indiana dune and swale) that were raised at the October 23 meeting.¹ I would appreciate it if you would review those draft conditions and let me know whether they would adequately address USFWS's concerns, so that we may decide whether to propose them to SEA as conditions that CN would consent to have imposed on it in any STB decision approving the transaction.

I look forward to hearing from you.

Very truly yours,

Paul A. Cunningham

Enclosures

¹ Two separate habitat assessments (April and October 2008) have been conducted, in cooperation with the USFWS, The Nature Conservancy ("TNC"), and representatives of the Indiana Department of Natural Resources (IDNR), at Kirk Yard as well as at the locations of proposed Transaction-related construction of double-track and new or improved connections, to identify potential voluntary mitigation measures. The enclosed list reflects the findings of those habitat assessments.

HARKINS CUNNINGHAM LLP

Attorneys at Law

Mr. John D. Rogner

Mr. Shawn Cirton

November 6, 2008

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cc: Michael T. Chezik
Victoria J. Rutson
Phillis Johnson-Ball
John H. Morton
Theodore K. Kalick
Normand Pellerin
Devin Sprinkle

STORAGE OF COAL TRAINS BY MIDWEST GENERATION LLC
ON TRACKS OF ELGIN, JOLIET AND EASTERN RAILROAD COMPANY

Coal Trains Destined for MWG Plants Are Currently Staged on EJ&E Property, Under an Informal, Non-Binding Arrangement Between the Parties

Midwest Generation, LLC (“MWG”), operates two coal-burning electric power plants in the Joliet area: the Joliet Generating Station, including units on both sides of the Des Plaines River south of Joliet, and the Will County Generating Station, located in Romeoville, at the end of the Paul Ales Branch (also known as the Romeoville Branch) of Elgin, Joliet and Eastern Railroad Company (“EJ&E”). Union Pacific Railroad Company (“UP”) originates coal in the Powder River Basin (“PRB”) which it delivers to the Joliet Station by means of haulage rights over EJ&E between West Chicago and the plant. UP interchanges PRB-originated coal with EJ&E at West Chicago for delivery by EJ&E to Will County Station.

Currently, MWG can hold two coal trains (one loaded and one empty) on tracks at the Romeoville Yard, located on the Paul Ales Branch near Will County Station, and two coal trains (one loaded and one empty) at the Joliet Station. If coal trains are delivered by UP in bunches, rather than coming at even intervals, they must be held at locations some distance away from the MWG plants. Accordingly, for the convenience of UP and MWG, EJ&E currently permits those trains to be staged at three locations on EJ&E’s property when those locations are not otherwise in use – Normantown siding (ca. MP 14.5- ca. MP16), Turner siding (ca. MP 2-ca. MP5.5), and at East Joliet Yard – while awaiting delivery to Joliet and Will County Stations. To the best of EJ&E’s knowledge and belief (determined after a search of EJ&E’s records¹), EJ&E has no formal agreement with MWG that obligates it to permit these trains to be stored on its property; at most, there is an informal arrangement between the parties that EJ&E has the right to terminate at any time.

The Proposed CN/EJ&EW Transaction Would Place CN in the Same Position EJ&E Now Stands; CN Has Made No Decision to Terminate EJ&E’s Current Informal Arrangements with MWG

The transaction proposed in CN’s application to the Surface Transportation Board (“STB”) calls for EJ&E to transfer most of its rail assets to a subsidiary, EJ&E West Company (“EJ&EW”), and for CN to acquire control of EJ&EW through purchase of all of EJ&EW’s stock. As a result of that transaction, CN would step into the shoes of EJ&E with respect to any arrangement EJ&E now has with MWG. Thus, CN would have the same right that EJ&E now has to decide, on a case-by-case basis, whether to store

¹ E-mail from James H. Danzl (General Manager Marketing and Raw Material Transportation, EJ&E) to Gordon T. Trafton (Senior Vice-President, Southern Region, CN) (Nov. 4, 2008, 08:20 a.m. CST) (copy attached).

undeliverable MWG trains and to unilaterally terminate any informal arrangements under which EJ&E coal trains are staged on the EJ&E yard and sidings.

Although CN representatives informed MWG representatives, at a meeting held August 7, 2008, that it is not CN's normal business practice to store customers' trains on its property, CN has never represented to MWG, at the August 7 meeting or otherwise, that it would terminate the informal arrangements under which MWG stages trains on EJ&E property, nor has it made any decision to do so. Nevertheless, MWG has categorically asserted that "should the CN acquire the EJ&E, we will lose all three of our train 'landing spots' for Will County Station"² and has made representations to USFWS that "unless we expand our track storage capability within the 5 miles of our track, we will not have a sufficient coal supply to sustain operating of our three generating facilities which rely on this rail line for fuel."³ Accordingly, MWG has approached USFWS to discuss MWG's plans to provide storage space for additional coal trains by "increase[ing] the number of rail sidings/lines within the River South area" on the Paul Ales Branch that has "heretofore been considered 'off-limits', due to heightened environmental concerns."⁴

Construction of MWG's Proposed Sidings Is Not an Effect of the CN/EJ&EW Transaction

Because the proposed new sidings would be located in the environmentally sensitive habitat of the Hine's emerald dragonfly ("HED"), USFWS suggests that it may not be able to concur that STB approval of the proposed CN/EJ&EW transaction "is not likely to adversely affect [the HED] or critical habitat," 50 C.F.R. §§ 402.13(a), 402.15(b)(1), because the effects of the construction of those sidings would be indirect effects of that transaction.

Under USFWS regulations, however, indirect effects of a proposed action "are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur." 50 C.F.R. § 402.02. There is, however, no certainty that the construction of the sidings would be necessary, much less occur, if CN were to acquire control of EJ&EW (and with it EJ&E's present lines).

MWG's position, as we understand it, is that, because coal trains may be delivered by UP at times when MWG's existing storage capacity is filled, if no space is available on the EJ&E lines to hold those trains, MWG will have no choice but to create additional storage locations on its own property, which necessarily will adversely affect

² E-mail from Julia Wozniak (Environmental Program Manager, Midwest Generation Environment Services) to Shawn Cirton (Fish and Wildlife Biologist, U.S. Fish and Wildlife Service ("USFWS")) (Oct. 29, 2008, 09:20 a.m.).

³ E-mail from Julia Wozniak to Jeffrey Mengler (Botanist/Wetland Ecologist, Chicago Illinois Field Office, USFWS) (Oct. 23, 2008, 03:16 p.m.).

⁴ *Id.*

the HED and its habitat. This is not the case. First of all, as noted above, no decision has been made by CN to terminate the informal arrangements under which MWG coal trains have been staged on EJ&E property. In addition, CN has not yet begun to examine the range of possible alternatives to Normantown and Turner sidings and to the East Joliet Yard that might be available for staging MWG trains. CN stands ready, however, to cooperate with MWG in an effort to identify alternative locations on CN property, or available to CN, on which loaded coal trains could be staged while awaiting delivery to MWG's plants and which would make unnecessary even the contemplation of any construction of additional train storage capacity on MWG property that would adversely affect the Hine's emerald dragonfly or its habitat. If no adequate existing train storage locations could be identified, CN would make reasonable efforts to acquire or construct, at MWG's expense, new train storage capacity, at locations where construction would not have adverse impacts on the Hine's emerald dragonfly or its habitat, and which would make construction of additional storage capacity on MWG's property unnecessary, and would make that capacity available as needed for staging of coal trains destined for Will County and Joliet Stations. CN is willing for the STB to condition its approval of the proposed CN/EJ&EW transaction on a requirement that CN make these efforts to identify and provide storage space for MWG trains.

Moreover, CN can ensure that there will be no need for MWG to construct additional train storage space on its environmentally sensitive property by committing that it will work with UP (or other railroads that may forward coal trains for delivery to MWG) to meter coal trains to assure that they do not come upon the EJ&E line unless there is sufficient storage capacity, and that its dispatchers will not permit coal trains to move onto the EJ&E line from the other railroads' lines unless CN has confirmed that space will be available on MWG's existing tracks, or on available facilities on the EJ&E line, to receive those trains. CN is willing to have this commitment imposed by the STB as a condition of its approval of the proposed transaction.

Given CN's willingness to make these commitments, there is no ground for believing that the CN/EJ&EW transaction would adversely affect the HED or its habitat. But there is a further reason that construction of MWG's proposed sidings, and consequent impacts on the HED, cannot be considered "reasonably certain to occur." CN understands that MWG has been seeking authority to construct additional sidings on the Paul Ales Branch for several years.⁵ The fact that MWG has been unsuccessful for so long indicates that obtaining that authority is far from "reasonably certain."

CN understands, on the basis of discussions with Ken Mierzwa, Senior Scientist with the consulting firm of Winsler & Kelly,⁶ that construction of additional sidings on the Paul Ales Branch is likely to destroy so much of the HED habitat remaining in

⁵ MWG's Julia Wozniak alludes to these efforts in her e-mail message of October 23, 2008, to USFWS's Jeffrey Mengler.

⁶ Winsler & Kelly is a subcontractor to HDR Engineering, Inc., the third-party consultant retained by the STB's Section of Environmental Analysis to assist it in preparing the Environmental Impact Statement for the CN/EJ&EW transaction.

northeast Illinois as to significantly threaten the continued existence of the species in Illinois. This level of harm would appear to constitute a “take” under the Endangered Species Act, and would accordingly require a permit from the USFWS before any action could be taken. *See* 16 U.S.C. §§ 1532(19), 1538(a)(1)(B), 1539(a)(1). The likelihood of obtaining such a permit appears remote, especially in light of the potentially devastating impacts of the construction on the remaining HED habitat. Moreover, it appears that construction of the proposed additional sidings would require wetlands permitting from the U.S. Army Corps of Engineers, which apparently has not hitherto been forthcoming.⁷

It thus appears that construction of the additional sidings would only occur if necessary permission were granted, not only by USFWS itself, but perhaps also by the Corps of Engineers. USFWS cannot reasonably conclude that either it or the Corps is more likely to grant that permission now than it has been in the past, or that the resulting construction impacts are now more “reasonably certain to occur” than they were previously.⁸

In any event, CN has previously declared its willingness to discuss with USFWS the possibility of contributing to the development of a Habitat Conservation Plan for the HED (though without prematurely conceding any need for CN to seek a USFWS permit for itself).⁹ That willingness is consistent with CN’s consent, described above, to imposition of a condition that would require it to commit to cooperate with MWG in examining alternative storage options, including if necessary construction of new storage for the use of MWG coal trains. USFWS should therefore conclude that adverse impacts on the HED are not likely, both because it is not reasonably certain that MWG could obtain the permits necessary for construction of sidings on MWG property, and because CN stands ready to take steps that would foreclose the need for any such construction and that would not adversely affect the HED.

⁷ Again, Ms. Wozniak’s message to Mr. Mengler alludes to the need to obtain “work closely with . . . the U.S. Army Corps, if necessary, to ensure that appropriate measures are taken to continue to protect and enhance HED habitat.”

⁸ Even if MWG were to claim that it now has greater need for such authority, USFWS could not reasonably rely on that as grounds for granting a permit under the Endangered Species Act, as the impacts of the construction on the HED do not change because of a change in MWG’s circumstances. If USFWS were to take those circumstances into account in determining whether to grant a permit, it would, in effect, be weighing MWG’s need to construct additional sidings to permit efficient operation of its plants against CN’s need to consummate the CN/EJ&EW transaction to permit efficient operation of its system in and through Chicago. We assume that USFWS recognizes that nothing in the Endangered Species Act requires or authorizes USFWS to mediate between business interests in such way, especially if its choice would be to favor the business that would be directly causing harm to listed species rather than the one whose impact would be, at most, indirect and attenuated.

⁹ Letter from Paul A. Cunningham (Counsel for CN) to John D. Rogner (Field Supervisor, Chicago Ecological Services Field Office, USFWS) and Shawn Cirton at 4 (Oct. 23, 2008).

From: James H Danzl [JHDanzl@uss.com]

Sent: 04/11/2008 08:20 AM CST

To: Gordon Trafton

Cc: Normand Pellerin; "David M. Gevaudan" <DMGevaudan@uss.com>

Subject: Midwest Generation

Gordon:

Regarding your questions on whether or not EJE has a commitment to hold trains short of Midwest Generation's Will County plant. we have conducted a thorough search of our files in Marketing to determine if a commitment actually exists. None of the formal documents(the original Transportation Contract and all amendments, the Spur Track Agreement and Bill of Sale Agreement), between the EJE have any commitment by EJE to hold trains short of Midwest Generation's plants.

In the development of this project and at a meeting with Commonwealth Edison (now Midwest Generation), EJE operations did indicate that the EJE could hold two trains in front of Midwest Generation-one at West Chicago and the other between West Chicago to and including Joliet Yard. To my knowledge there was never any written commitment which bound EJE to this statement on how EJE could or would operate. The meeting was held on February 13, 1997 and was attend by Mr. M. Turner-GM EJE, Mr. C. Curran-Supt Transportation EJE, Mr. J. Jamrus-Account Manager EJE, a host of Commonwealth Edison people-both plant and headquarters including Larry Siler and several UPRR Operating and Marketing representatives.

My read of this Gordon is that we explained how we intended to operate (or react) should the bunching of trains occur or a sudden spike in coal demand occur, but at no time did EJE ever commit in writing to a long term obligation to hold or store trains. I believe a question was asked on what would happen if multiple trains arrived in Chicago, the answer was that EJE could hold two train sets. Again, I do not and did not see this as a commitment-either short or long term.

Hope this answers your questions.

Jim

Midwest Generation Coal Storage Capacity

I. Introduction

During the preparation of this Report, an issue emerged relating to one of the customers of the EJ&E. The customer, Midwest Generation (MGen), raised the issue of coal storage at its Will County electric generating facility at Romeoville. MGen has an arrangement with the EJ&E where coal trains are held on sidings on the EJ&E until MGen is ready to unload the trains. According to CN, there is no written agreement to support this arrangement. MGen is concerned that the Proposed Action will remove the holding areas and limit MGen's flexibility. MGen believes it may need to expand its rail yard at Romeoville to regain lost flexibility. Expansion of the Romeo yard (MGen's proposal) would most likely have an adverse effect on the Hine's Emerald Dragonfly (HED).

SEA has characterized the issue of MGen's storage capacity as unrelated to the Proposed Action. Before MGen could ever expand its Romeo yard, it would need a Section 404 permit from the Army Corps of Engineers, Chicago District which would require consultation with the U.S. Fish & Wildlife Service (FWS). SEA believes that the process for issuance of such a permit would involve the evaluation of alternatives which would, most likely, show that the rail yard expansion was not needed. SEA believes that MGen's need to expand its yard is not an indirect or cumulative effect of the Proposed Action under the Council on Environmental Quality (CEQ) regulations that govern compliance with the National Environmental Policy Act (NEPA) and the Interagency Cooperation regulations that govern consultation under Section 7 of the Endangered Species Act (ESA).

FWS has characterized the issue of MGen's storage capacity limitations as closely related to the Proposed Action. FWS would prefer not to postpone the consideration of this issue until a Section 404 permit is needed if postponement would limit the range of alternatives. FWS believes the expansion of the Romeo yard may be reasonably foreseeable and could be an indirect and cumulative effect of the Proposed Action under NEPA and ESA.

This Report will present information on the rail operations that surround this issue, the statutes and regulations that govern STB's and FWS's decisions on this issue, and make recommendations on the proper resolution of the issue.

II. Background-Rail Delivery

A reliable coal supply to MGen's Will County Generating Station located in Romeoville, Illinois is strongly dependent on a reliable rail delivery network. This facility supplies coal not only to the Will County Generating Station but also supplies coal through a rail-barge transfer to MGen's Fisk and Crawford Generating Stations, both located in Chicago, Illinois.

The three power plants obtain 100% of their coal from the Southern Powder River Basin (PRB) in Wyoming. All three plants were originally designed to use Illinois Basin coal and switched to the PRB for coal supply approximately in 1995. All three plants are "merchant plants" selling generated capacity to transmission companies. The three plants were originally Commonwealth Edison plants. Illinois Basin coal was delivered both by barge (via the rail-to-water transfer at Havana, Illinois) to all three plants and by rail to Will County. Rail service, if it existed previously to the Fisk and Crawford facility, apparently no longer exists at these two locations.

Current consumption of the three plants is approximately a total of 6 million tons per year. Approximately 3 million tons/year is consumed by Will County, and 3 million by Fisk and Crawford. Storage for all three plants is primarily at Will County. Crawford has a very small storage capability. Fisk has no storage capability and barges serve as its live coal supply. MGen expects to consume 6.2 million tons at the three plants in 2008 and plans to consume 6.2 million tons in 2009 compared to 6.1 million tons in 2007 and 6.2 million tons in 2006. Current planned total coal consumption is approximately 20,500 tons/day at a 70% capacity factor. MGen indicated that it is a merchant generating company, and that it is in their best interest to maximize the generation from their coal

plants. MGen stated it tries to keep 40 days of coal inventory on hand and that it does not know of any regulatory limits on maximum or minimum inventory size.

MGen also receives PRB coal by rail to its Waukegan Generating Station north of Chicago (served UP direct or UP-EJ&E) and to its Powerton Generating Station in central Illinois, served UP-Illinois Midland Railway.

Union Pacific holds the contract with MGen for coal delivery through 2011. Union Pacific handles 50-60% of all coal trains generated daily out of the PRB with BNSF handling the balance. Most of this coal (400 million tons mined and shipped in 2007) moved east and south from the PRB. Typically, UP loads 35 to 36 trains and repositions the same number of empty coal trains returning to the PRB each day. These seventy trains are added to another 70 to 80 trains that operate daily on the UP mainline through Wyoming and Nebraska. To handle this volume, UP has constructed a three-track mainline that is at capacity. Discussions are underway to potentially add a fourth main track at congested locations. To handle this ever increasing volume, UP is also expending capital dollars on increasing capacity on the Sunset Route through southern tier states. In addition to physical plant improvements, both BNSF and UP are modifying their operating practices by operating longer and heavier trains in order to increase "slot utilization:". In other words, if main track capacity is constrained, one method of improving throughput is to have each train handle more. What is driving these railroads to handle longer and heavier trains is the fact that UP and BNSF shipping rates are not regulated except by the market and it is therefore incumbent on each railroad to operate as efficiently as possible. These trains were 100 to 115 cars in length only a few years ago but developments in the reliability of remotely controlling locomotives (labeled Distributed Power) placed throughout the train to ensure better train handling characteristics enable the western railroads to begin 135 car operations. Trains 150 cars in length are now seriously being considered.

UP delivers loaded coal trains to EJ&E at West Chicago. EJ&E is a handling-line carrier from West Chicago to Romeoville via the Paul Ales Branch, which connects to the EJ&E main line near Joliet. The branch line connection opens only to the south, requiring arriving loaded coal trains moving south from West Chicago toward Joliet to pass the Paul Ales Branch connection, enter Joliet Yard, reverse direction, then return northward and enter the branch line. MGen was uncertain whether departing empty trains also enter Joliet Yard before reversing direction northward on the EJ&E main line. Arriving trains travel northward on the Paul Ales Branch to the Romeo Yard approximately one mile prior to the end of the branch. The yard consists of two through tracks of 118-car capacity on the east side of the main track (Romeo 1 and 2), and one through track of 40-car capacity on the west side of the main track (Romeo 3 and 4), subdivided into two 20-car tracks by a universal crossover connecting to the main track.

UP delivers the coal trains as 135 car trains with Distributed Power, using 2 A.C.-type locomotives on the head end and one on the rear. Typically, EJ&E will move the head-end locomotives to the rear of the train in East Joliet Yard when they prepare to reverse the train onto the Paul Ales Branch. Usually EJ&E removes the UP locomotives from the arriving inbound trains and returns with UP locomotives when the trains are made empty. Prior to 2004 coal trains were 115 cars long. The trains increased to 135 cars that year. MGen has prepared conceptual engineering drawings for enlarging the Romeo Yard to accept 150 car trains by extending Romeo Track 1, 2, and 4 in a southward compass direction. MGen currently attempts to limit train operations at the south end of the yard (starting 22 cars from the south end) per agreement with U.S. Fish & Wildlife Service as they are aware that this is one of the locations identified as critical habitat for the HED.

EJ&E crews are prohibited from proceeding past the dual use bridge located just north of the Romeo Yard. EJ&E crews deliver a loaded train to Romeo Track 1 or 2, then move whatever doesn't fit into these tracks (usually 20 cars) over to Romeo Track 3 or 4. After the loaded train is delivered, MGen uses a switch engine (under contract to MGen) to pull 40 car cuts to its rotary dumper. The loaded cars are pulled into the dumper bypass track, then split in half. The first 20 cars are pulled past the dumper, then pushed through the dumper and emptied. The switch engine then pulls the second 20 cars past the dumper, shoves through the dumper pit onto the first 20 empties, and when all are empty pushes the 40

cars back to Romeo Yard and returns with a second 40 cars, and so forth until the train is made empty. MGen states it usually takes 10-12 hours to empty a train, barring mechanical problems with the dumper or associated coal handling machinery. MGen has two switch engines, both SD9 (six-axle, 1,750 hp, D.C.) type. One engine is essentially a spare, and MGen rarely uses both at once. MGen is staffed to dump trains around the clock, 365 days a year. The dumper nameplate capacity is 4,000 tons per hour. The dumper was installed in 1996.

MGen notifies EJ&E approximately two hours before it expects to have a train emptied. EJ&E sends car department personnel to connect the air hoses for the train's braking system and inspect the train. Romeo Yard is equipped with a yard-air compressor which is then attached to the assembled train in order to expedite train departure. EJ&E train crews return with UP locomotives and depart. Bad-order cars that cannot be repaired on site are set out and removed by an EJ&E local train to either the East Joliet yard or Kirk yard in Gary for repair.

Normal train operation provides for a loaded train to be emptied and departed before the next loaded train arrives. At times there will be two trains at the Romeo Yard simultaneously. MGen stated it can completely dump one train and 80 cars of a second train before it runs out of space for empties and must await EJ&E to depart an empty train. EJ&E uses the Crest Hill Siding north of the Paul Ales Branch and other sidings such as the siding at Normantown on the EJ&E rail line to stage inbound loaded trains if they arrive bunched and overtax the capacity of the Romeo Yard and the dumper operation.

MGen has 4,000 cars in its fleet. All are 286K, aluminum, rotary-dump type.

MGen normally has 8 to 9 trains in the cycle between the Southern PRB and Will County; at times up to 11 depending upon coal demand and cycle-time fluctuations. MGen can divert trains to Waukegan or Powerton from Will County, or vice versa, depending on demand, inventory, and railroad traffic conditions. MGen uses the KCBX Rail-to-Water transfer at Calumet Harbor in Chicago as an alternative to direct rail delivery to Will County as required by rail delivery delays on the EJ&E or plant mechanical or dumping interruptions at Will County. Coal dumped at KCBX is moved by barge to Fisk and Crawford. Will County at present does not have capability to transfer coal from barge to its inventory as the barge unloaders previously used at Will County have been decommissioned. MGen stated it prefers not to divert trains to KCBX due to the greater cost necessary to use the KCBX facility and the additional cost for the longer barge movement and greater required barge inventory from KCBX to Fisk and Crawford. Midwest stated in 2007 it diverted 12 trains to KCBX, and to date in 2008 has diverted 40 trains. Delivery of 6.2 million tons/year to Will County requires an average of 1.3 trains received daily at Will County, or an average of approximately 9 per week. MGen stated at present it is receiving only an average of 7 trains per week at Will County, with the remaining trains diverted to KCBX.

MGen states it believes it owns the track materials on the Paul Ales Branch, and maintains the track to the junction with the EJ&E main track, while the underlying land continues to be owned by Commonwealth Edison. MGen holds a use license from Commonwealth Edison.

MGen stated that service problems are at present occurring mostly on the EJ&E. While there are issues on UP, MGen's concern is EJ&E's capability to handle the trains effectively. MGen states it communicates constantly with both UP and EJ&E to track train movements and schedule trains at its receiving facilities. MGen stated that it perceives the issues with EJ&E center on lack of crews. Often crews run out of Hours of Service while still at Romeo Yard with empty trains, or EJ&E does not have rested crews to take trains from UP at West Chicago all the way to Romeo Yard and deliver. MGen stated that the sidings on EJ&E are useful to it to stage inbound trains to work around dumping capacity at Will County. MGen is concerned that if the sidings are converted into second main track as a result of the CN-EJ&E merger that it will no longer have the ability to stage trains close to Will County. MGen is concerned this trend will result in greater diversions to KCBX. MGen stated it had discussions with CN about post-merger service levels and that CN listened to MGen concerns and

stated it had no solutions other than possibly using Glenn Yard as an overflow or staging point. MGen stated a related problem is a six-hour daily curfew due to the Metra trains at West Chicago.

CN sent a letter dated November 6, 2008 addressing MGen's issue. The letter stated that CN was proposing two voluntary mitigation conditions for consideration by FWS and SEA that CN believed would resolve MGen's issue. The first proposed voluntary mitigation condition stated that CN would commit to work with MGen to identify sites either on CN's property, or available to CN, that would provide for storage of coal trains headed for the Will County facility. If no sites can be found, additional storage capacity could be built at MGen's expense. Whether an existing site is designated or a new one built, there would be no need for MGen to expand its Romeo yard. The second voluntary mitigation measure stated that CN would agree not to accept coal trains from UP unless it had available capacity to deliver the trains to MGen in a timely fashion.

III. Statutory Bases for Decisions

A. Interstate Commerce Commission Termination Act

STB is required to issue a certificate authorizing the acquisition of a railroad unless STB finds the application is inconsistent with the public interest. The certificate may require compliance with conditions STB finds necessary in the public interest (49 USC 10901(c)).

B. National Environmental Policy Act

Federal agencies such as STB are required to prepare an environmental impact statement (EIS) to accompany each major Federal action which significantly affects the quality of the human environment. (42 USC 4322(2)(c)). On November 23, 2007 STB issued a Decision effective November 26, 2007 which stated that STB would prepare an EIS for this transaction. On December 21, 2007, SEA issued a Notice of Intent to Prepare an EIS.

C. Endangered Species Act

Each Federal agency such as STB shall, in consultation with the Secretary of the Interior, insure that any action authorized by such agency is not likely to jeopardize the continued existence of any endangered species or result in the adverse modification of critical habitat of such species. (16 USC 1536(a)(2)).

IV. Administrative Standards and Procedures

A. SEA Regulations

SEA regulations (49 CFR 1105.7(d)) state the required content of any environmental report, including an EIS, that is prepared as part of a proceeding before STB. The regulations provide in part as follows:

(2) *Transportation System.* Describe the effects of the proposed action on regional or local transportation systems and patterns. Estimate the amount of traffic (passenger or freight) that will be diverted to other transportation systems or modes as a result of the proposed action.

(8) *Biological Resources.* (i) Based on consultation with the U.S. Fish and Wildlife Service, state whether the proposed action is likely to adversely affect endangered species or areas designated as critical habitat, and if so, describe the effects.

(ii) State whether wildlife sanctuaries or refuges, National or State parks or forests will be affected, and describe any effects.

(11) *Additional Information for Rail Constructions.* The following additional information should be included for rail construction proposals (including connecting track construction):

(v) Describe the effects, including indirect or down-line impacts, of the new or diverted traffic over the line if the thresholds governing noise, energy, noise and air impacts in Sections 1105.7(e)(4), (5), or (6) are met.

B. Relationship of SEA Process to STB Decisions

On November 23, 2007 STB issued a Decision effective November 26, 2007 which accepted CN's application, classified the proposed transaction as minor under 49 CFR 1108.2(c), and established a procedural schedule. STB stated that any person who wished to participate as a Party of Record on the merits side of the transaction needed to file a notice of intent to participate no later than December 13, 2007 and written materials no later than January 28, 2008.

On December 12, 2007 STB issued press release No. 07-42 with guidance for the public on participation in the economic and environmental analyses for this transaction. The press release indicated that if a person's interests are focused on potential impacts on environmental issues, then the appropriate forum is SEA's environmental process. The press release pointed out that filings addressing the competitive and economic aspects of the proposed transaction must be filed in accordance with the STB Decision which was effective on November 26, 2007.

On July 24, 2008 STB issued a Decision effective July 25, 2008 which established a schedule for completion of the EIS process and issuance of a final decision on the merits of the transaction. The Decision effective July 25, 2008 called for the Final EIS to be completed between December 1, 2008 and January 31, 2009 with a final decision incorporating the issues on the merits or economic side and the environmental side as soon as possible after the FEIS is approved. On September 8, 2008 STB issued a Decision that rejected CN's request to decide the merits side first and adhered to the procedural schedule set in the Decision effective July 25, 2008.

C. NEPA Regulations and Procedures

The regulations that govern the preparation of EIS's were adopted by the Council on Environmental Quality and are published at 40 CFR Part 1500. These regulations require SEA to assess indirect and cumulative effects as well as the direct effects of the Proposed Action. The CEQ regulations define indirect effects as those that are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable"(40 CFR 1508.8(b)). The CEQ regulations define cumulative effects as "the impact on the environment which results from the incremental impact of the proposed 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" (40 CFR 1508.7).

D. Endangered Species Act Existing Regulations

The regulations that govern consultation between SEA and FWS over the effects of the Proposed Action on endangered species are codified at 50 CFR Part 402, Subpart B. These regulations apply to "...all actions in which there is discretionary Federal involvement or control." (50 CFR 402.03) These regulations provide for resolution of these effects through informal consultation (50 CFR 402.13) or formal consultation (50 CFR 402.14). Informal consultation can terminate the consultation process if SEA determines and FWS concurs that the Proposed Action is not likely to adversely affect endangered species or critical habitat. (50 CFR 402.13(a)). During informal consultation, FWS can suggest modifications to the Proposed Action that SEA and CN could implement to avoid the likelihood of adverse effects on endangered species or critical habitat (50 CFR 402.13(b))

Formal consultation can be initiated by SEA or FWS. If FWS requests formal consultation, the request must be in writing and the basis for the request must be stated (50 CFR 402.14(a)).

During formal consultation, FWS must consider the effects of the Proposed Action and cumulative effects on endangered species and critical habitat (50 CFR 402.14(g)(3)) and formulate a biological opinion as to whether the Proposed Action, taken together with cumulative effects, is likely to jeopardize the continued existence of an endangered species or result in the destruction or adverse modification of critical habitat (50 CFR 402.14(g)(4)). If FWS determines that the Proposed Action, taken together with cumulative effects, is likely to jeopardize the continued existence of an endangered species or result in the adverse modification of critical habitat; FWS may discuss with SEA and CN the availability of reasonable and prudent alternatives that SEA and CN can take to avoid jeopardy.

The regulations that govern consultation define “cumulative effects” as follows:

Cumulative effects are those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.” (50 CFR 402.02)

The same regulation defines “action area” as follows:

Action area means all areas to be affected directly or *indirectly* by the Federal action and not merely the immediate area involved in the action.

The same regulation defines “effects of the action” as follows:

Effects of the action refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all *proposed* actions in the action area that have already undergone formal or early section 7 consultation, and impacts of State or private actions which are contemporaneous with the consultation in process. Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.

At a meeting on November 7, 2008, FWS indicated that they interpret the definition of “indirect effects” in the definition of “effects of the action” to include the effects of actions that are the preferred alternative of the entity that would carry out those actions.

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October 31, 2008

BY HAND

Ms. Victoria J. Rutson, Chief
Section of Environmental Analysis
Surface Transportation Board
395 E Street, S.W.
Washington, D.C. 20423-0001

**Re: *Canadian National Railway Company and Grand Trunk Corporation –
Control – EJ&E West Company (STB Finance Docket No. 35087)***

Dear Ms. Rutson:

I am writing, on behalf of Applicants Canadian National Railway Company and Grand Trunk Corporation (together, "Applicants"; together with their rail carrier subsidiaries, "CN"), to provide you and HDR Engineering, Inc. ("HDR"), with the response to your seventh request for information in this proceeding, as made in your letter of October 23, 2008, to Normand Pellerin of CN.

Please clarify the pre-transaction and post-transaction train traffic on the CN Joliet subdivision. We need to know whether there is actually a change or not.

CN's Joliet Subdivision includes CN segments 14 (between Bridgeport and Lemoyne), 15 (between Lemoyne and Glenn Yard), 16 (between Glenn Yard and Argo), 17 (between Argo and Lemont), and 18 (between Lemont and Joliet), as identified in the Operating Plan. At present, an average of 10 Amtrak trains per day (5 trains daily in each direction) and 4.3 Metra trains per day (3 trains Monday through Friday in each direction) are scheduled to operate over the Joliet Subdivision. In addition, BNSF has trackage rights on the Joliet Subdivision between Joliet and Glenn Yard (segments 16 and 17), and it operates two trains per day (one in each direction) over those segments. In addition, CN operates a number of unscheduled local trains out of Glenn Yard to serve industries on the Joliet Subdivision.

The train counts reported for these segments in Attachment A.1 to CN's Operating Plan, as filed with the Application and corrected by CN-14 (filed January 2, 2008), did

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not include Amtrak or Metra passenger trains, or any CN local freight trains, because operations of those trains were not expected to change as a result of the Transaction.

Information about pre-Transaction freight traffic (reported in the "Base" column under "Freight – Trains/Day" in Attachment A.1) was based on actual traffic data from 2006, the last year for which complete data were available at the time the Operating Plan was prepared. Those data indicated that BNSF operated an average of 1.8 trains per day between Joliet and Glenn Yard (*i.e.*, on CN segments 16, 17, and 18), where they would be interchanged to or from CN. (Since 2006, BNSF traffic has increased sufficiently that the railroad now regularly operates two trains per day over segments 16, 17, and 18 (one train in each direction), as reported earlier.) Attachment A.1 indicates that, in addition to the 1.8 BNSF trains per day, an average of 4.0 CN trains per day operates over segment 16 between Argo (where they move to or from the IHB line) and Glenn Yard. (If the train counts in the "Base" column of Attachment A.1 were revised to reflect the change in BNSF's operations since 2006, it should show 6.0 trains per day on segment 16, and 2.0 trains per day on segments 17 and 18.)

CN expects that, after implementation of the proposed Transaction, the BNSF trains now operating between Joliet and Glen Yard would instead be interchanged with CN at Eola, and thus would not move on the Joliet Subdivision at all. CN also expects that the 4.0 trains now moving between Glenn Yard and Argo would not longer do so, because CN would route those trains over the EJ&EW line instead of via IHB. On the other hand, CN expects that it would operate two trains a day between East Joliet Yard (which would become available to CN as a result of the Transaction) and Glenn Yard. (These 2.0 trains per day are reported in the "Total" column for segments 16, 17, and 18 under "Freight – Trains/Day" in Attachment A.1. If the "Change" column under "Freight – Trains/Day" is revised to reflect the change in BNSF's operations, it would show a decrease of 4.0 trains per day on segment 16, and a net change of 0.0 trains per day on segments 17 and 18.)

North of Glenn Yard, Attachment A.1 indicates that an average of 2.1 trains per day currently operate over segments 15 (between Glenn Yard and Lemoyne) and 14 (between Lemoyne and Bridgeport). At Bridgeport, CN's Freeport Subdivision meets the Joliet Subdivision, and the train count on CN segment 9 (between Bridgeport and 16th Street) therefore includes, not only the 2.1 trains per day that operate between Glenn Yard and Bridgeport, but also 2.5 trains a day that move to or from the Freeport Subdivision, for a total of 4.6 trains per day. These numbers are reported in the "Base" column under "Freight – Trains/Day" on Attachment A.1. These numbers do not include local trains, which would not be affected by the Transaction.

Following implementation of the Transaction, CN expects that all the trains shown on Attachment A.1 as moving on segments 9, 14, and 15 would be rerouted to operate

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over the EJ&EW line. The post-Transaction train counts for segments 9 and 14 are therefore shown as 0.0 trains per day in the "Total" column under "Freight - Trains/Day" on Attachment A.1. The "Total" column for segment 15, however, erroneously shows 2.0 trains per day. This number represents a BRC "puller," which operates once a day in each direction between Lemoyne (where it moves to and from the BRC line) and Glenn Yard. This train was omitted from the pre-Transaction train counts reported in the "Base" column, and should therefore have been omitted from the post-Transaction train counts in the "Total" column. If the post-Transaction train count for segment 15 is corrected to 0.0 trains per day, then the "Change" from pre-Transaction to post-Transaction train volumes would be a decrease of 4.6 trains per day on segment 9, and a decrease of 2.1 trains per day on segments 14 and 15.

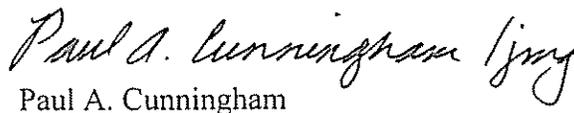
To summarize, the train counts on the Joliet Subdivision, as shown in Attachment A.1 but revised to reflect the corrections explained above, are as follows:

Rail Line Segment Description				Freight - Trains/Day		
Road	Segment Number	From Station	To Station	Base (pre-Transaction)	Change	Total (post-Transaction)
CN	9	16thSt	Bridgeport	4.6	(4.6)	0.0
CN	14	Bridgeport	Lemoyne	2.1	(2.1)	0.0
CN	15	Lemoyne	Glenn Yard	2.1	(2.1)	0.0
CN	16	Glenn Yard	Argo	6.0	(4.0)	2.0
CN	17	Argo	Lemont	2.0	0.0	2.0
CN	18	Lemont	Joliet	2.0	0.0	2.0

As you can see from this table, the Transaction is expected to result in no net change in the number of trains moving on CN segments 17 and 18, and to result in a decrease in the number of trains moving on CN segments 9, 14, 15, and 16.

If you need any further explanation of CN's calculations of pre-Transaction and post-Transaction train numbers, please let me know, and I will provide you whatever additional information I can.

Very truly yours,


Paul A. Cunningham

cc: Phillis Johnson-Ball
John H. Morton
Normand Pellerin

A.10

Brief History of the EJ&E Railway

Indiana Department of Natural Resources Concurrence Letter

Illinois SHPO Concurrence Letter

Brief History of the EJ&E Railroad

Chicago has long been associated with American railroading. During the 1840's the city had become the focal point for much of the railroad construction in the country. By the 1850's numerous main lines radiated out of Chicago.² Chicago quickly became the Midwest's center for commerce and trade and within a few decades the city grew to be the hub of an immense transportation network that stretched across the nation (Stover 1997). Nineteenth century Chicago was transformed into a web of neighborhoods, farm communities, and industrial towns, many connected to the city by the railroad (see Figure 1). Farmers used trains to transport produce into the city daily; businessmen rode the rails to their homes in the outlying communities; and families took vacations mere miles outside the downtown Chicago residential areas. Railroads linked together Chicago's settlements—farm centers, industrial towns, commuter suburbs, and recreational and institutional centers (Keating 2005; Reiff et al. n.d.).

Following the initial wave of railroad construction in the 1840s-1850s, a second wave of railroad building exploded upon the Chicago scene in the 1880s.³ It was this second wave that spurred the rise of belt line railways around Chicago. Through merger and acquisition the railroads ultimately expanded into four major belt systems, one of which became known as the Elgin, Joliet & Eastern Railway (Young 2005).⁴

The Elgin, Joliet & Eastern Railway (EJ&E, but also known as the Chicago Outer Belt Line or, colloquially, the "J") began as a homegrown project in the southwest Chicago suburban satellite city of Joliet in 1884, with the incorporation of the Joliet, Aurora & Northern Railway. In 1887, financier J. P. Morgan's banking house bought out the local investors and created the EJ&E of Illinois and the EJ&E of Indiana. The following year the two railways merged to become the Elgin, Joliet & Eastern Railway Company. The EJ&E constructed new tracks and acquired existing lines over the next five years. By 1892, coal hauling, which had been the EJ&E's principal source of revenue, was surpassed by interchange traffic services as the use of the belt lines became accepted railroad practice. The following year, the EJ&E's 130-mile main line extended from Waukegan (IL) to Porter (IN) and connected with every line-haul steam railroad serving Chicago. Two years later, with the mushrooming of the belt line trade, the EJ&E recorded its first profitable year. Between 1894 and 1901, the EJ&E extended its line to the Gary-East Chicago-Hammond area on the southern shore of Lake Michigan. By 1899, the "J" had expanded to a 190-mile belt line hauling more than quadruple the freight it had carried only a decade earlier (Dale 2002; Blaszk 1989).

By the dawn of the 20th century and continuing to the present-day, the EJ&E developed a close partnership with the steel industry. In 1898, the EJ&E was acquired by the Federal Steel Company and by 1901 the latter company was consolidated under the newly-created U.S. Steel (USS) corporation. With the construction of USS's huge Gary Works (1906-

² Among the early railroads were the Chicago & North Western; the Chicago, Burlington & Quincy; the Gulf, Mobile & Ohio; the Illinois Central; the New York Central; and the Chicago, Rock Island & Pacific.

³ Among this second wave of railroads were the Grand Trunk & Western; the Erie; the Wabash, St. Louis & Pacific; New York, Chicago & St. Louis (the Nickel Plate); the Atchison, Topeka & Santa Fe; the Chicago Great Western; and the Wisconsin Central (later the Soo Line); and the Chicago, Indianapolis & Louisville (later the Monon).

⁴ The other three systems were the Belt Railway of Chicago; the Indiana Harbor Belt; and the Baltimore & Ohio Chicago Junction.

1909), EJ&E was in the steel business for good. It was the extension of trackage to the Gary Works that essentially completed the EJ&E main line (Blaszak 1989). A map of the EJ&E main line and its connections as of 1909 is shown in Figure 1.

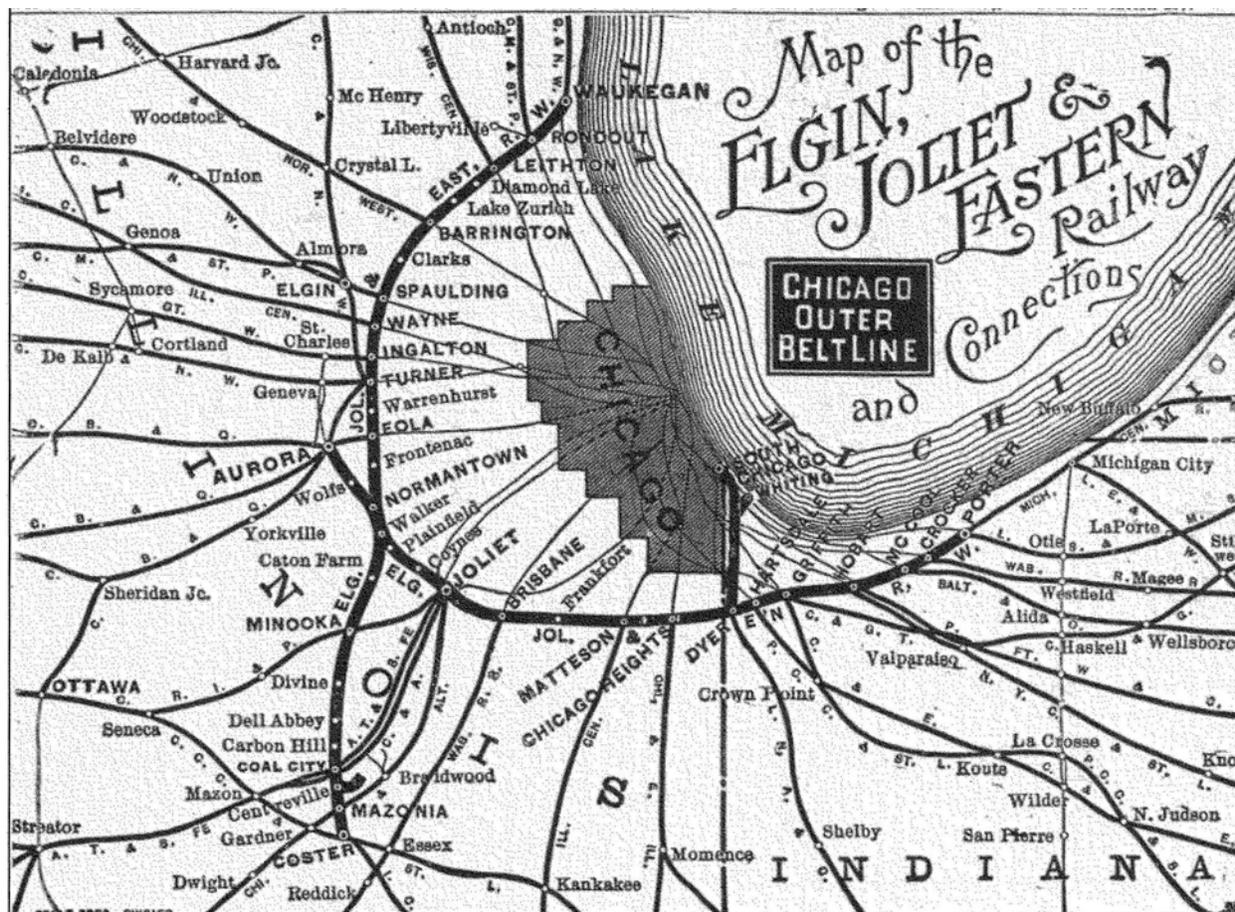


Figure 1. EJ&E Railway connections in 1909.

By World War I, the EJ&E had become an “established and highly profitable carrier.” Wartime demand for armaments and post-war production of automobiles and other steel-based products kept the steel industry – and the EJ&E – very busy. Industrial development proceeded apace with the growth of satellite cities along the EJ&E main line, providing the railroad with a “wealth of carloadings” (Blaszak 1989). On the eve of the Great Depression, the EJ&E was “a major player on the Chicagoland scene, providing USS with reliable service to the steel mills, interchanging with all the trunk lines, and hauling huge amounts of coal”. Revenues during the 1920’s reached nearly \$40 million before the Great Depression set in at decade’s end (Blaszak 1989).

The EJ&E was not only a freight hauler and trunk line interchanger. In the late 1800’s and early 1900’s, regular passenger service was provided. In those days, there a double-daily run between Joliet and Aurora and short-lived first-class service along the entire Waukegan, IL-to-Porter, IN main line. This service was described as “plain Jane” (Blaszak 1989). After 1900, however, the interurban lines built between Aurora, Joliet, and Chicago Heights, which

offered faster and cheaper service, quickly usurped most of the EJ&E's passenger service. Dedicated passenger service disappeared by 1907, replaced by mixed-train (passengers in the caboose) service, which survived into the 1960's (Blaszak 1989; Jaenicke and Eisenbrandt 2007).

The Depression years were tough on the steel industry. The EJ&E's prosperity in the 1920's evaporated quickly, with traffic and revenues plummeting to less than a third its levels attained just three years earlier. Big cutbacks in the coal and steel industries eroded EJ&E's traffic base, which was further aggravated by major litigation involving alleged violations of the Interstate Commerce Act (Blaszak 1989).

Traffic and revenues quickly rebounded for the EJ&E with America's entry into World War II. The EJ&E supported as many as fifty train movements per day to support Chicago's steel and heavy manufacturing industries during the war years (ICC 1943). The EJ&E's prosperity continued well into the 1950s, with shipments averaging 41 million tons per year. However, problems were also beginning to mount due to several factors, including the trunk lines' improved ability to interchange traffic and bypassing the belt lines, the increasing loss of short-haul freight business to trucks, USS shifting its operations and diverting some shipments to trucks, and a severe economic downturn in 1958-1961. By the decade's close, EJ&E's traffic had dropped to 28 million tons per year (Blaszak 1989). A map of the railroad pattern in the Chicago region as it appeared in 1950 is reproduced in Figure 2.

During the 1960s and 1970s, EJ&E labored to offset these losses. Chicago's urban expansion was converting farmland into bedroom communities and many industries were following their employees' emigration pattern, abandoning their Chicago plant locations for new suburban locations. EJ&E agents successfully attracted more than 30 new plants to sites along its tracks during the 1960s and 1970s. Coal also made a comeback during the 1960s and by 1975 had resumed its position as EJ&E's highest volume commodity, displacing iron and steel. Meanwhile, the American steel industry had its own problems, as it was losing ground to low-cost foreign competitors and more and more products were being manufactured using plastics. This, and the unabated rise of truck freighting, cut into the EJ&E operating margin. The railroad, however, managed to recapture some of this eroding business through operational changes (e.g., SCAT program, short for Service Commitments Attract Tonnage) and acquiring the Chicago, Rock Island & Pacific, which provided a boost in steel, grain, sand, and chemical traffic (Blaszak 1989).

The 1980s and beyond witnessed the declining fortunes of the American steel industry. USS's Joliet Works and South Works, which was between Rainbow Beach and Calumet Park, vastly reduced operations. EJ&E's traffic was drastically reduced in lock-step with these trends and its income declined from a 1979 peak of \$20 million to \$7.4 million in 1984. The three-year steel strike (1984-1987) was very costly. EJ&E abandoned some of its mainlines (Aurora, Griffith to Porter), and single-tracked double main lines in some areas in the mid-1980s ((Blaszak 1989). Finally, in 1988, USX (the renamed USS) sold EJ&E to Transtar, only to have USX reacquire EJ&E during a reorganization in 2001 (Dale 2002).

During the 1990s, the EJ&E became an alternative for freight moving through Chicago such as coal and containerized import/export freight, in order to avoid the congestion on rail lines that pass through the center of Chicago. Despite all changes in economic activity, however, the EJ&E was at all times an integral part of the rail system and economic infrastructure of

Chicago, supporting the needs of Class 1 railroads, numerous local rail-dependent shippers, and Chicago's role as a principal manufacturing, transportation, and commercial hub for North America.

Communities along the EJ&E benefited from the freight and passenger transportation services provided by the EJ&E. These services enabled or enhanced the ability of these communities to become centers for commerce and services, and function as a shipping point for farm commodities. The EJ&E strengthened that aspect of community growth, and encouraged the development of economic activity that required rail transportation such as farming of grain and general manufacturing. The EJ&E also enabled homes and businesses to purchase coal for home heating moved by rail from southern and central Illinois coal fields, thus encouraging growth of the communities.

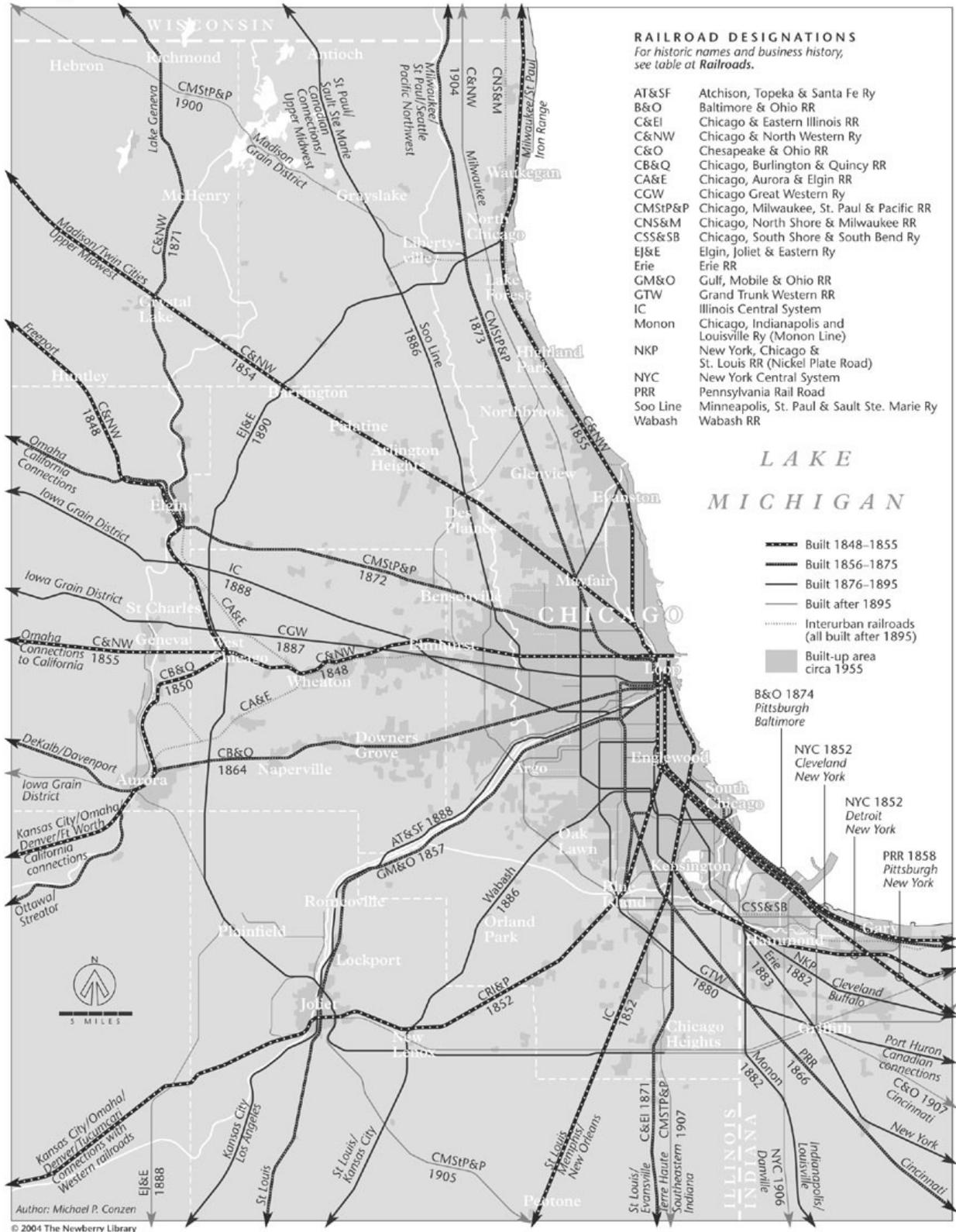


Figure 2. Chicago rail pattern in 1950 (reproduced by permission of the Newberry Library).

SEA recognizes that train volumes on the EJ&E, as well as the trunk lines it intersects, have fluctuated during its history in response to technological and economic changes. Historically, train volumes along the EJ&E generally ranged between 10 and 20 trains per day (see Table 1).

The availability of multiple modes of transportation has spurred population growth throughout human history, and this is well documented in the settlement and growth of the United States. Rail and shipping routes played significant roles in defining the early and ongoing development patterns of the Great Lakes region, including the area along the current-day alignment of the EJ&E. By the time the EJ&E's immediate predecessor arrived in the area (1886), it was following the establishment of numerous other railroads in the area surrounding Chicago from the 1850s on; and in fact, it acquired existing rail properties to incorporate into its own system. The EJ&E began its own operations in 1889.

The reciprocal relationships between the early railroads and towns like Matteson, Barrington, North Chicago, Waukegan, and Joliet had already developed, as freight service hauling grain and supplies allowed development, and agricultural and increasingly urbanized development spurred further rail service. An examination of the changes in population between 1880 and 1900, with the appearance of the EJ&E in the middle of that time period, shows two trends. In one set of instances, growth appears either to begin (the founding of U.S. Steel-dependent Gary, Indiana, and the population footholds at Matteson and Lake Zurich, Illinois, for example) or jump significantly (as in Waukegan and Joliet, Illinois) during the period that includes introduction of the EJ&E. Joliet nearly tripled its population from 11,657 in 1880 to 29,353 in 1900. In other cases, there appears to be steady growth alongside the railroads, with new rail development such as the EJ&E simply co-existing and reciprocally supporting development of village populations—for example, Plainfield, West Chicago, and Barrington. In Barrington, however, a near doubling of population did occur, between 1890 (pop 848) and 1910 (1,444) during a time at which many rail connections, including interurban electrified railroads were being built. In at least two cases, the extension of the EJ&E rail line (or a predecessor line) directly led to the birth of one community (Lake Zurich) and sparked a real estate boom in another community (Plainfield) (Reiff et al., and Blaszak 1989).

Table 1. Regular Scheduled Freight and Passenger Trains 1893-1970 (Freight unless designated by "P")								
Year	Waukegan to Spaulding	Spaulding to Normantown	Normantown to Joliet	Joliet to Griffith	Griffith to Porter	Aurora to Normantown	Extra Train Factor	Extra Trains Joliet to Waukegan
1893	2P	2P	2P	2P	2P	4P	Unknown	
1899	5P	5P	5P	4P	2P	4P	Unknown	
1909	7	8	8	8	5	4P, 2F	30%	4
1916	8	8	8	7	6	4	100%	8
1945	8	10	12	12	6	2	100%	12
1946	9	10	12	11	6	2	100%	12
1952	7	8	10	7	4	2	30%	4
1954	8	8	10	8	4	2	30%	4
1955	8	8	10	8	4	2	30%	4
1962	8	8	10	8	4	2	20%	2
1963	8	8	10	8	4	2	20%	2
1964	8	8	10	8	4	2	10%	2
1965	8	8	10	8	4	2	10%	2
1966	8	8	10	8	4	2	10%	2
1967	8	8	10	8	4	2	10%	2
1969	8	8	10	8	4	2	10%	2
1970	8	8	10	8	4	2	10%	2
1971	No Freight Schedules Published Beyond 1970							

Notes:

Aurora-Normantown were daily except Sundays.

Extra Train Factor is derived from ICC Annual Abstracts of Steam Railways, Gross Tonnage, Gross Train-Miles, and Gross Locomotive-Miles, averaged to balance crew and locomotive utilization.

Sources:

National Railway Publication Company, "The Official Guide of the Railways of the United States", 1893-1971 (various years)

Interstate Commerce Commission, "Statistics of Steam Railways in the United States", 1890-1970 (various years)

Elgin Joliet & Eastern Railway, Employee Timetables

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A10 Indiana Department of Natural Resources Letter of Concurrence



Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.IN.gov



August 27, 2008

Victoria J. Rutson
Chief, Section of Environmental Analysis
Surface Transportation Board
395 "E" Street SW
Washington, DC 20423

Federal Agency: Surface Transportation Board

Re: Draft Environmental Impact Statement (EIS) concerning the acquisition of Elgin, Joliet and Eastern Railway Company (EJ&E) by the Canadian National Railway Corporation and Grand Trunk Corporation resulting in increases in rail traffic and the necessity for future rail construction (Docket #35087; DHPA #3488)

Dear Ms. Rutson:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated July 25, 2008 and received on July 29, 2008 for the above indicated project in Calumet and North townships, Lake County, Indiana.

Based upon the documentation available to the staff of the Indiana SHPO, we have not identified any historic buildings, structures, districts, or objects listed in or eligible for inclusion in the National Register of Historic Places within the probable area of potential effects.

In terms of archaeology, no currently known archaeological resources eligible for inclusion in the National Register of Historic Places have been recorded within the proposed project area. No archaeological investigations appear necessary provided that all project activities remain within areas disturbed by previous construction.

If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and 29 does not obviate the need to adhere to applicable federal statutes and regulations.

At this time, it would be appropriate for the Surface Transportation Board to analyze the information that has been gathered from the Indiana SHPO, the general public, and any other consulting parties and make the necessary determinations and findings. Please refer to the following comments for guidance:

- 1) If the Surface Transportation Board believes that a determination of "no historic properties affected" accurately reflects its assessment, then it shall provide documentation of its finding as set forth in 36 C.F.R. §800.11 to the Indiana SHPO, notify all consulting parties, and make the documentation available for public inspection (36 C.F.R. §§ 800.4[d][1] and 800.2[d][2]).
- 2) If, on the other hand, the Surface Transportation Board finds that an historic property may be affected, then it shall notify the Indiana SHPO, the public and all consulting parties of its finding and seek views on effects in accordance with 36 C.F.R. §§ 800.4(d)(2) and 800.2(d)(2). Thereafter, the Surface Transportation Board may proceed to apply the criteria of adverse effect and determine whether the project will result in a "no adverse effect" or an "adverse effect" in accordance with 36 C.F.R. § 800.5.

Victoria J. Rutson
August 27, 2008
Page 2

A copy of the revised 36 C.F.R. Part 800 that went into effect on August 5, 2004, may be found on the Internet at www.achp.gov for your reference. If you have questions about archaeological issues please contact Cathy Draeger at (317) 234-3791 or cdraeger@dnr.IN.gov. If you have questions about buildings or structures please contact Chad Slider at (317) 234-5366 or cslider@dnr.IN.gov. Additionally, in all future correspondence regarding the above indicated project, please refer to DHPA #3488.

Very truly yours,


James A. Glass, Ph.D.
Deputy State Historic Preservation Officer
JAG:CWS:CLD:cld

cc: Barry Wharton, HDR Engineering, Inc.

A.10 Illinois SHPO Concurrence Letter

16343



**Illinois Historic
Preservation Agency**

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

Various County

PLEASE REFER TO: IHPA LOG #022010708

Waukegan to South Chicago

Waukegan South to Plainfield and East and North to South Chicago; Plainfield South to Goose Lake,

STB-35087,

Acquisition, New Construction of Six Rail Connections and New Sidings and Double Tracking

September 29, 2008

Phillis Johnson-Ball
Surface Transportation Board
395 E Street, SW
Environmental Filing
Washington, DC 20423

Dear Ms. Johnson-Ball:

Acre(s): 0 Site(s): 0
Archaeological Contractor:

Thank you for submitting the results of the archaeological reconnaissance. Our comments are required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties".

Our staff has reviewed the archaeological Phase I reconnaissance report performed for the project referenced above. The Phase I survey and assessment of the archaeological resources appear to be adequate. Accordingly, we have determined, based upon this report, that no significant historic, architectural, and archaeological resources are located in the project area.

Please submit a copy of this letter with your application to the state or federal agency from which you obtain any permit, license, grant, or other assistance. Please retain this letter in your files as evidence of compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

Sincerely,

Anne E. Haaker
Deputy State Historic
Preservation Officer

AEH

cc: Victoria J. Rutson, Chief, Surface Transportation Board

A.11 Corrections to the Draft EIS

This section reflects updated information since publication of the Draft EIS.

New information that was not previously published is shown in red.

Train Operations

Rail Line Segments

							Trains (per day)			Haz Mat Rail Cars (per day)		
Segment #	Subdivision	Length miles	Begin Station	Begin Milepost	End Station	End Milepost	Existing Trains ¹	Proposed Trains ¹	Delta	Existing ¹	Proposed ¹	Delta
EJE 23	Phoenix Lead	1.1	Spragues	0.0	Joliet	1.1	NC	NC	N/A	NC	NC	N/A
EJE 22	City Track	6.6	Kirk Yard	0.0	Miller	6.6	NC	NC	N/A	NC	NC	N/A
EJE 21	Whiting Branch	5.2	Cavanaugh	43.0	Whiting	48.2	NC	NC	N/A	NC	NC	N/A
EJE 20	Hammond Branch	1.0	Shearson	44.0	Indianapolis Blvd	45.0	NC	NC	N/A	NC	NC	N/A
EJE 19	Downtown Line Track (H Yard)	1.4	Collins Street	0.7	Joliet	2.1	NC	NC	N/A	NC	NC	N/A
EJE 18	Romeoville/Paul Ales Branch	6.0	East Bridge Jet Junction	0.0	Romeoville	6.0	NC	NC	N/A	NC	NC	N/A
EJE 17	Illinois River Line	20.4	Plainfield	9.8	Goose Lake	30.2	NC	NC	N/A	NC	NC	N/A
EJE 16	Western	9.1	Waukegan	74.6	Rondout	65.5	NC	NC	N/A	NC	NC	N/A
EJE 15	Western	5.2	Rondout	65.5	Leithton (begin existing siding)	60.3	3.2	3.2	0.0	9.4	9.4	0.0
EJE 14A	Western	1.0	Leithton (connection and begin existing siding)	60.3	Diamond Lake (end of existing siding)	59.3	5.3	20.3	15.0	18.1	183.3	165.2
EJE 14B	Western	2.3	Diamond Lake (begin proposed siding)	59.3	Gilmer (end of proposed siding)	57.0	5.3	20.3	15.0	18.1	183.3	165.2

Rail Line Segments

Segment #	Subdivision	Length miles	Begin Station	Begin Milepost	End Station	End Milepost	Trains (per day)			Haz Mat Rail Cars (per day)		
							Existing Trains ¹	Proposed Trains ¹	Delta	Existing ¹	Proposed ¹	Delta
EJE 14C	Western	7.7	Gilmer (end of proposed siding)	57.0	Lake/Cook County line	49.3	5.3	20.3	15.0	18.1	183.3	165.2
EJE 14D	Western	11.7	Lake/Cook County line	49.3	Spaulding	37.6	5.3	20.3	15.0	18.1	183.3	165.2
EJE 13A	Western	0.9	Spaulding	37.6	Cook/DuPage County line	36.7	5.5	22.5	17.0	29.0	209.4	180.4
EJE 13B	Western	1.2	Cook/DuPage County line	36.7	Munger	35.5	5.5	22.5	17.0	29.0	209.4	180.4
EJE 12	Western	6.6	Munger	35.5	West Chicago	28.9	4.4	23.4	19.0	21.1	271.3	250.2
EJE 11	Western	7.8	West Chicago	28.9	East Siding	21.1	10.7	31.6	20.9	30.7	315.2	284.5
EJE 10A	Western	3.9	East Siding (begin proposed double track)	21.1	DuPage/Will County line	17.2	15.7	39.5	23.8	43.4	392.6	349.2
EJE 10B	Western	1.0	DuPage/Will County line	17.2	95th St (end prop-DT proposed double track, begin existing siding)	16.2	15.7	39.5	23.8	43.4	392.6	349.2
EJE 10C	Western	1.5	95th St (end prop-DT proposed double track, begin existing siding)	16.2	111th St (existing siding becomes double track)	14.7	15.7	39.5	23.8	43.4	392.6	349.2

Rail Line Segments												
Segment #	Subdivision	Length miles	Begin Station	Begin Milepost	End Station	End Milepost	Trains (per day)			Haz Mat Rail Cars (per day)		
							Existing Trains ¹	Proposed Trains ¹	Delta	Existing ¹	Proposed ¹	Delta
EJE 10D	Western	2.2	111th St (existing siding becomes double track)	14.7	Normantown (begin proposed double track)	12.5	15.7	39.5	23.8	43.4	392.6	349.2
EJE 10E	Western	1.6	Normantown (begin proposed double track)	12.5	Walker (end proposed double track)	10.9	15.7	39.5	23.8	43.4	392.6	349.2
EJE 9A	Western	1.1	Walker	10.9	IRL Jet Illinois River Line Junction	9.8	18.5 15.7	42.3 39.5	23.8	48.9 43.4	398.1 392.6	349.2
EJE 9B	Western	7.5	IRL Jet Illinois River Line Junction	9.8	E Bridge Jet East Bridge Junction	2.3	18.5	42.3	23.8	48.9	398.1	349.2
EJE 8A	Western	2.3	E Bridge Jet East Bridge Junction	2.3	East Joliet	0.0	18.5	42.3	23.8	48.9	398.1	349.2
EJE 8B	Eastern	0.8	East Joliet	0.0	Rock Island Jet Junction	0.8	18.5	42.3	23.8	48.9	398.1	349.2
EJE 7A	Eastern	1.0	Rock Island Jet Junction	0.8	Marble Falls (end of existing DT double track)	1.8	6.4	28.3	21.9	49.0	360.8	311.8

Rail Line Segments												
Segment #	Subdivision	Length miles	Begin Station	Begin Milepost	End Station	End Milepost	Trains (per day)			Haz Mat Rail Cars (per day)		
							Existing Trains ¹	Proposed Trains ¹	Delta	Existing ¹	Proposed ¹	Delta
EJE 7B	Eastern	9.8	Marble Falls (end of existing DT double track, begin proposed DT double track)	1.8	West Frankfort (end prop-DT proposed double track, begin existing siding)	11.6	6.4	28.3	21.9	49.0	360.8	311.8
EJE 7C	Eastern	3.0	West Frankfort (end prop-DT proposed double track, begin existing siding)	11.6	East Frankfort (end of existing siding, begin single track)	14.6	6.4	28.3	21.9	49.0	360.8	311.8
EJE 7D	Eastern	2.5	East Frankfort (end of existing siding, begin single track)	14.6	Will/Cook County line	17.1	6.4	28.3	21.9	49.0	360.8	311.8
EJE 7E	Eastern	3.3	Will/Cook County line	17.1	West End Matteson (Begin existing DT double track)	20.4	6.4	28.3	21.9	49.0	360.8	311.8
EJE 7F	Eastern	1.3	West End Matteson (Begin existing DT double track)	20.4	Matteson (CN/METRA OH)	21.65	6.4	28.3	21.9	49.0	360.8	311.8

Rail Line Segments

Segment #	Subdivision	Length miles	Begin Station	Begin Milepost	End Station	End Milepost	Trains (per day)			Haz Mat Rail Cars (per day)		
							Existing Trains ¹	Proposed Trains ¹	Delta	Existing ¹	Proposed ¹	Delta
EJE-6	Eastern	3.5	Matteson (CN/METRA OH)	21.7	Chicago Heights	25.2	8.6	31.6	23.0	78.7	496.0	417.3
EJE 6A	Chicago/Eastern Connection	0.93	Matteson (CN/METRA OH)	21.65	MP CN 29.70 - CN/EJE Connection	29.70	2.2	6.3	4.1	29.7	No Data	No Data
EJE 6B	Eastern	0.06	MP EJE 21.65	21.65	MP EJE 21.71	21.71	8.6	35.6	27.0	78.7	No Data	No Data
EJE 6C	Eastern	0.26	MP EJE 21.71	21.71	MP EJE 21.97	21.97	8.6	27.6	19.0	78.7	No Data	No Data
EJE 6D	Proposed Matteson Connection SW	0.30	MP EJE 0.0	0.00	MP EJE 0.30	0.30	0.0	8.0	8.0	No Data	No Data	No Data
EJE 6E	Proposed Matteson Connection SE	0.20	MP EJE 0.30	0.30	MP EJE 0.50	0.50	0.0	4.0	4.0	No Data	No Data	No Data
EJE 6F	Proposed Matteson Connection NE	0.20	MP EJE 0.30	0.30	MP EJE 0.50	0.50	0.0	8.0	8.0	No Data	No Data	No Data
EJE 6G	Proposed Matteson Connection NW	0.30	MP EJE 0.0	0.00	MP EJE 0.30	0.30	0.0	4.0	4.0	No Data	No Data	No Data
EJE 6H	Eastern	3.23	MP EJE 21.97	21.97	Chicago Heights	25.20	8.6	31.6	23.0	78.7	496.0	417.3
EJE 6I	Eastern/UP Connection	0.02	MP EJE 25.20	25.20	MP EJE 25.18	25.18	1.6	2.6	1.0	No Data	No Data	No Data

Rail Line Segments												
Segment #	Subdivision	Length miles	Begin Station	Begin Milepost	End Station	End Milepost	Trains (per day)			Haz Mat Rail Cars (per day)		
							Existing Trains ¹	Proposed Trains ¹	Delta	Existing ¹	Proposed ¹	Delta
EJE 5A	Eastern	5.7	Chicago Heights	25.2	Dyer (State Line)	30.9	10.2	34.2	24.0	71.6	496.5	424.9
EJE 5B	Eastern	5.3	Dyer (State Line)	30.9	Griffith	36.2	10.2	34.2	24.0	71.6	496.5	424.9
EJE 4	Eastern	3.6	Griffith	36.2	Van Loon	39.8	7.6	28.6	21.0	44.7	421.5	376.8
EJE 4B	Eastern	0.17	Griffith	36.2	MP EJE 36.37	36.37	7.6	23.6	16.0	No Data	No Data	No Data
EJE 4A	Eastern	3.43	MP EJE 36.37	36.37	Van Loon	39.8	7.6	28.6	21.0	44.7	421.5	376.8
EJE 3	Eastern	2.0	Van Loon	39.8	Ivanhoe	41.8	9.7	29.7	20.0	45.5	399.3	353.8
EJE 2	Eastern	1.4	Ivanhoe	41.8	Cavanaugh	43.2	9.8	29.8	20.0	45.5	399.3	353.8
EJE 1	Eastern	2.2	Cavanaugh	43.2	Gary (Kirk Yard Jet)	45.4	11.8	31.8	20.0	52.5	406.3	353.8
EJE 0	Lakefront Lake Front Line	3.4	Gary (Kirk Yard)	12.2	Indiana Harbor	8.8	3.5	3.5	0.0	0.0	11.0	11.0
EJE -1	Lakefront Lake Front Line	4.6	Indiana Harbor	8.8	Hammond	4.2	1.8	1.8	0.0	0.0	1.4	1.4
EJE -2A	Lakefront Lake Front Line	1.1	Hammond	4.2	ILL-IN State Line	3.1	0.9	0.9	0.0	0.0	1.4	1.4
EJE -2B	Lakefront Lake Front Line	3.1	ILL-IN State Line	3.1	South Chicago	0.0	0.9	0.9	0.0	0.0	1.4	1.4
CN 19	Waukesha	0.1	Madison St	10.9	Forest Park	11.0	5.4	0.0	-5.4	76.8	0.0	-76.8
CN 20	Waukesha	4.5	Forest Park	11.0	Tower B12	15.5	5.4	0.0	-5.4	76.8	0.0	-76.8

Rail Line Segments

							Trains (per day)			Haz Mat Rail Cars (per day)		
Segment #	Subdivision	Length miles	Begin Station	Begin Milepost	End Station	End Milepost	Existing Trains ¹	Proposed Trains ¹	Delta	Existing ¹	Proposed ¹	Delta
CN 21	Waukesha	2.3	Tower B12	15.5	Schiller Park	17.8	19.3	2.0	-17.3	157.0	5.2	-151.8
CN 22	Waukesha	20.1	Schiller Park	17.8	Leithton	37.9	19.1	2.0	-17.1	156.9	6.2	-150.7
CN 29	Waukesha	5.0	Leithton	37.9	Gray's Lake	42.9	19.1 <u>20.8</u>	19.1 <u>17.8</u>	0.0 <u>-3.0</u>	No Data	No Data	No Data
CN 9	Freeport	2.3	16th St	2.1	Bridgeport	4.4	4.6	0.0	-4.6	67.9	0.0	-67.9
CN 10	Freeport	3.9	Bridgeport	4.4	Belt Xing Crossing	8.3	2.5	0.0	-2.5	62.0	0.0	-62.0
CN 11	Freeport	0.6	Belt Xing Crossing	8.3	Hawthorne	8.9	4.5	0.0	-4.5	84.2	0.0	-84.2
CN 12	Freeport	5.8	Hawthorne	8.9	Broadview (IHB)	14.7	4.4	1.7	-2.7	71.5	18.6	-52.9
CN 13A	Freeport	3.6	Broadview (IHB)	14.7	DuPage-Cook Co Line	18.3	3.0	1.7	-1.3	61.1	18.5	-42.6
CN 13B	Freeport	17.4	DuPage-Cook Co Line	18.3	Munger (EJE)	35.7	3.0	1.7	-1.3	61.1	18.5	-42.6
CN 30A	Freeport	1.6	Munger (EJE)	35.7	DuPage-Kane Co Line	37.3	3.0 <u>2.0</u>	2.6 <u>2.0</u>	-0.4 <u>0.0</u>	No Data	No Data	No Data
CN 30B	Freeport	3.4	DuPage-Kane Co Line	37.3	Coleman	40.7	3.0 <u>2.0</u>	2.6 <u>2.0</u>	-0.4 <u>0.0</u>	No Data	No Data	No Data
CN 14*	Joliet	4.4	Bridgeport	3.5	Lemonye	7.9	2.1	0.0	-2.1	59.4	0.0	-59.4
CN 15*	Joliet	2.5	Lemonye	7.9	Glenn Yard	10.4	2.1	0.0	-2.1	90.6	11.5	-79.1

Rail Line Segments												
Segment #	Subdivision	Length miles	Begin Station	Begin Milepost	End Station	End Milepost	Trains (per day)			Haz Mat Rail Cars (per day)		
							Existing Trains ¹	Proposed Trains ¹	Delta	Existing ¹	Proposed ¹	Delta
CN 16*	Joliet	2.7	Glenn Yard	10.4	Argo	13.1	6.0	2.0	-4.0	139.6	56.1	-83.5
CN 17*	Joliet	12.2	Argo	13.1	Lemont	25.3	2.0	2.0	0.0	71.9	56.1	-15.8
CN 18*	Joliet	11.5	Lemont	25.3	Joliet	36.8	2.0	2.0	0.0	39.0	89.0	50.0
CN 31 (UP) ²	Joliet	2.3	Joliet	36.8	Se. South Joliet	39.1	<u>2.0</u>	<u>0.0</u>	<u>-2.0</u>	No Data	No Data	No Data
CN 8	Chicago	6.6	16th St	1.5	67th St	8.1	6.4	0.0	-6.4	76.0	0.0	-76.0
CN 7	Chicago	3.6	67th St	8.1	94th St	11.7	6.4	0.0	-6.4	76.0	0.0	-76.0
CN 6	Chicago	2.8	94th St	11.7	Kensington	14.5	8.4	2.0	-6.4	77.0	0.0	-77.0
CN 5	Chicago	1.0	Kensington	14.5	Wildwood	15.5	8.4	2.0	-6.4	82.0	0.0	-82.0
CN 4	Chicago	2.4	Wildwood	15.5	Riverdale	17.9	8.4	2.0	-6.4	82.0	0.0	-82.0
CN 3	Chicago	2.1	Riverdale	17.9	Harvey	20.0	8.4	2.0	-6.4	94.4	0.0	-94.4
CN 2	Chicago	1.8	Harvey	20.0	Markham	21.8	21.1	2.0	-19.1	249.1	0.0	-249.1
CN 1	Chicago	7.9	Markham	21.8	Matteson	29.7	12.6	10.0	-2.6	191.2	19.5	-171.7
CN 1A	Chicago	6.6	Markham Yard	21.8	Matteson - NE Connection	28.4	12.6	10.0	-2.6	191.2	19.5	-171.7
CN 1B	Chicago	0.3	Matteson - NE Connection	28.4	Matteson - NW Connection	28.7	12.6	2.0	-10.6	No Data	No Data	No Data
CN 1C	Chicago	1.0	Matteson - NW Connection	28.7	Matteson - CN/EJE Connection	29.7	12.6	6.0	-6.6	No Data	No Data	No Data

Rail Line Segments

							Trains (per day)			Haz Mat Rail Cars (per day)		
Segment #	Subdivision	Length miles	Begin Station	Begin Milepost	End Station	End Milepost	Existing Trains ¹	Proposed Trains ¹	Delta	Existing ¹	Proposed ¹	Delta
CN 32	Chicago	5.0	Matteson - CN/EJE Connection	29.7	Mill Street	34.7	12.8 13.8	12.8 12.3	0.0 -1.5	No Data	No Data	No Data
CN 28	Elsdon	3.7	Union Ave	5.0	Elsdon	8.7	No Data	No Data	No Data	No Data	No Data	No Data
CN 27	Elsdon	3.1	Elsdon	8.7	Hayford	11.8	1.6	1.6	0.0	No Data	No Data	No Data
CN 26	Elsdon	7.5	Hayford	11.8	Blue Island	19.3	3.4	0.0	-3.4	38.8	0.0	-38.8
CN 25	Elsdon	3.9	Blue Island	19.3	CN Jct.	23.2	14.9	1.0	-13.9	160.2	8.9	-151.3
CN 24	Elsdon	2.0	CN Jct.	23.2	Thornton Jct. Junction (UP)	25.2	19.5	1.0	-18.5	272.9	8.9	-264.0
CN 23B	Elsdon	5.4	Thornton Jct. Junction (UP)	25.2	ILL-IN State Line	30.6	22.1	2.9	-19.2	280.6	9.0	-271.6
CN 23A	Elsdon	5.5	ILL-IN State Line	30.6	Griffith	36.1	22.1	2.9	-19.2	280.6	9.0	-271.6
CN 33	South Bend	5.0	Griffith	36.1	Broadway	41.1	23.3	23.3	0.0	-	-	-
CN 33E	Elsdon	0.18	Griffith (MP CN 36.10)	36.10	MP CN 36.28	36.28	22.1	2.9	-19.2	280.6	9.0	-271.6
CN 33D	South Bend (East Wye)	0.22	MP CN 36.28	36.28	MP CN 36.06 (EJE 36.20)	36.06	2.7	10.7	8.0	No Data	No Data	No Data
CN 33C	South Bend	0.07	MP CN 36.28	36.28	MP CN 36.35	36.35	24.8	13.6	-11.2	No Data	No Data	No Data

Rail Line Segments

Segment #	Subdivision	Length miles	Begin Station	Begin Milepost	End Station	End Milepost	Trains (per day)			Haz Mat Rail Cars (per day)		
							Existing Trains ¹	Proposed Trains ¹	Delta	Existing ¹	Proposed ¹	Delta
CN 33B	South Bend (Prop Proposed West Wye)	0.23	MP CN 36.36	36.35	MP CN 36.58 (EJE 36.37)	36.58	0.0	5.0	5.0	No Data	No Data	No Data
CN 33A	South Bend	4.75	MP CN 36.35	36.35	Broadway	41.10	24.8	18.6	-6.2	No Data	No Data	No Data

Notes:

¹ NC = No Change. N/A = Not Applicable.

~~1.~~ ² Line Segment CN 31 (UP). CN has trackage rights over UP-owned track.

~~2.~~ For purposes of analysis, SEA used 3.5 trains per day for CN Rail Line Segments 19 and 20, as provided by BN in correspondence dated February 29, 2008. Subsequent correspondence from CN was received that changed the value to 5.4 trains per day; however, analyses were already complete. The lower value (3.5) will yield a more conservative estimate of potential benefits.

* = Changes in Segments CN 14 through 18 reflect modifications to trains per day as indicated by CN's Letter to SEA dated October 31, 2008.

Safety

CN-EJE Highway-Rail Crossings

EJE Highway-Rail Crossings

USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
260461A	EJE 16	Dahringher Road	74.10	Western (MP74-60)	JohnmansvilleLD	PUB	AG	X-Bucks
260463N	EJE 16	Sea Horse Drive	0.62	Western (MP74-60)	Huron Cement	PUB	AG	X-Bucks
260464V	EJE 16	Clayton Street	73.20	Western (MP74-60)	East-West YD LD	PUB	AG	FLS
260465C	EJE 16	East Madison Street	73.10	Western (MP74-60)	East-West YD LD	PUB	AG	FLS
260796P	EJE 16	South Harbor Drive	73.00	Western (MP74-60)	Mainline	PUB	AG	FLS
260466J	EJE 16	East Water Street	72.85	Western (MP74-60)	East-West YD LD	PUB	AG	FLS w Gates
260479K	EJE 16	South Water Street	72.77	Western (MP74-60)	Waukegan YD	PVT	AG	X-B w Stops
260467R	EJE 16	Lake Shore Foundry	72.32	Western (MP74-60)	Mainline	PVT	AG	X-Bucks
260470Y	EJE 16	Foss Park Avenue	70.74	Western (MP74-60)	Mainline	PUB	GS	Grade Separation
260471F	EJE 16	Sheridan Road	70.45	Western (MP74-60)	Mainline	PUB	GS	Grade Separation
260474B	EJE 16	Commonwealth Avenue	70.07	Western (MP74-60)	Mainline	PUB	GS	Grade Separation
260816Y	EJE 16	EMCO Plant	0.00	Western (MP74-60)	Industry LDS	PVT	AG	X-Bucks
260473U	EJE 16	Martin L King Jr Drive / 22nd Street	69.75	Western (MP74-60)	Mainline	PUB	AG	CFLS w Gates
260472M	EJE 16	Martin L King Jr Drive / 22nd Street	69.96	Western (MP74-60)	EJE-UP-JT Lead	PUB	AG	X-Bucks
260475H	EJE 16	Morrow Avenue	69.58	Western (MP74-60)	Mainline	PUB	AG	FLS w Gates
260480E	EJE 16	Morrow Avenue	69.52	Western (MP74-60)	EJE-UP JT Lead	PUB	AG	X-Bucks
260476P	EJE 16	Spaulding Street	69.52	Western (MP74-60)	EJE-UP JT Lead	PUB	AG	X-Bucks
260798D	EJE 16	Ray Street Connector	4.85	Western (MP74-60)	Industry Spur	PUB	AG	none
260477W	EJE 16	US Navy Private Crossing	69.29	Western (MP74-60)	Mainline	PVT	AG	X-Bucks
260478D	EJE 16	Buckley Road	69.00	Western (MP74-60)	Mainline	PUB	AG	CFLS w Gates
260812W	EJE 16	US Navy Private Crossing	68.43	Western (MP74-60)	Mainline	PVT	GS	Grade Separation
260481L	EJE 16	Green Bay Road	67.73	Western (MP74-60)	Mainline	PUB	GS	Grade Separation
260482T	EJE 16	Skokie Highway (US 41)	66.90	Western (MP74-60)	Mainline	PUB	GS	Grade Separation
260483A	EJE 16	Waukegan Road	66.42	Western (MP74-60)	Mainline	PUB	AG	CFLS w Gates
260484G	EJE 16	Park Avenue / Rockland Road	65.75	Western (MP74-60)	Mainline	PUB	AG	FLS w Gates
260811P	EJE 16	Private Pedestrian Crossing	65.70	Western (MP74-60)	Mainline	PED	GS	Grade Separation
260485N	EJE 16	Arcadia Road / Elm Road	65.62	Western (MP74-60)	Mainline	PUB	AG	X-B w Stops
260486V	EJE 15	Bradley Road	65.16	Western (MP74-60)	Mainline	PUB	AG	FLS w Gates
260487C	EJE 15	Tri-State Tollway (I-94)	64.67	Western (MP74-60)	Mainline	PUB	GS	Grade Separation
260488J	EJE 15	Old School Road	63.87	Western (MP74-60)	Mainline	PUB	AG	FLS w Gates
260852U	EJE 15	Old School Road Pedestrian Crossing	63.87	Western (MP74-60)	Mainline	PED	AG	X-Bucks
260489R	EJE 15	St Marys Road	63.33	Western (MP74-60)	Mainline	PUB	AG	FLS w Gates
260490K	EJE 15	Milwaukee Avenue	62.20	Western (MP74-60)	Mainline	PUB	AG	CFLS w Gates
260906X	EJE 15	Lakeview Parkway	61.70	Western (MP74-60)	Mainline	PUB	AG	FLS w Gates
260934B	EJE 15	Lakeview Parkway Pedestrian Crossing	61.69	Western (MP74-60)	Mainline	PED	AG	FLS w Gates
260493F	EJE 15	Butterfield Road	60.42	Western (MP74-60)	Mainline	PUB	AG	CFLS w Gates
260494M	EJE 14A	Lake Street (US 45)	59.65	Western	Mainline	PUB	GS	Grade Separation
260495U	EJE 14B	Diamond Lake Road	59.13	Western	Mainline	PUB	AG	FLS w Gates
260496B	EJE 14B	IL 60&83	59.02	Western	Mainline	PUB	AG	FLS w Gates
260500N	EJE 14C	Gilmer Road	56.90	Western	Mainline	PUB	AG	FLS w Gates
260503J	EJE 14C	Old McHenry Road	55.45	Western	Mainline	PUB	AG	CFLS w Gates
260794B	EJE 14C	Oakwood Road	54.73	Western	Mainline	PUB	AG	CFLS w Gates
260507L	EJE 14C	Main Street	53.44	Western	Mainline	PUB	AG	FLS w Gates
260508T	EJE 14C	Old Rand Road	53.27	Western	Mainline	PUB	AG	FLS w Gates
260831B	EJE 14C	IL 22	53.01	Western	Mainline	PUB	GS	Grade Separation
260509A	EJE 14C	Rand Road (US 12)	52.52	Western	Mainline	PUB	GS	Grade Separation
260510U	EJE 14C	Ela Road	52.33	Western	Mainline	PUB	AG	CFLS w Gates
260511B	EJE 14C	Cuba Road	51.56	Western	Mainline	PUB	AG	FLS w Gates
260513P	EJE 14C	Lake Zurich Road	50.40	Western	Mainline	PUB	AG	FLS w Gates
260514W	EJE 14C	Northwest Highway (US 14)	50.10	Western	Mainline	PUB	AG	CFLS w Gates
260515D	EJE 14C	Hough Street (IL 59&63)	49.80	Western	Mainline	PUB	AG	CFLS w Gates
260516K	EJE 14C	Lake Cook Road / Main Street	49.30	Western	Mainline	PUB	AG	CFLS w Gates
260517S	EJE 14D	Otis Road	47.90	Western	Mainline	PUB	AG	FLS w Gates
260518Y	EJE 14D	Algonquin Road (IL 62)	45.84	Western	Mainline	PUB	GS	Grade Separation
260519F	EJE 14D	Kiehm Nursery	44.86	Western	Mainline	PVT	AG	X-Bucks
260520A	EJE 14D	Penny Road	44.47	Western	Mainline	PUB	AG	FLS w Gates
260521G	EJE 14D	Old Sutton Road	44.00	Western	Mainline	PUB	AG	FLS w Gates
260522N	EJE 14D	Higgins Road (IL 72)	43.09	Western	Mainline	PUB	GS	Grade Separation
260953F	EJE 14D	Columbine Boulevard	42.45	Western	Mainline	PUB	GS	Grade Separation
260524C	EJE 14D	Northwest Tollway (I-90)	42.33	Western	Mainline	PUB	GS	Grade Separation
260525J	EJE 14D	Shoe Factory Road	41.90	Western	Mainline	PUB	AG	FLS w Gates
260526R	EJE 14D	Golf Road (IL 58)	40.72	Western	Mainline	PUB	GS	Grade Separation
260527X	EJE 14D	Irving Park Road	39.48	Western	Mainline	PUB	GS	Grade Separation
260529L	EJE 14D	Lake Street (US 20)	38.57	Western	Mainline	PUB	GS	Grade Separation
260815S	EJE 14D	Gifford Road Extension	0.00	Western	Industry	PUB	AG	FLS w Gates
260819U	EJE 14D	Private Crossing	0.00	Western	Industry	PVT	AG	X-Bucks
260530F	EJE 14D	Spaulding Road	37.60	Western	Mainline	PUB	AG	FLS w Gates
260532U	EJE 13A	West Bartlett Road	36.95	Western	Mainline	PUB	AG	FLS w Gates
260533B	EJE 13B	Stearns Road	35.88	Western	Mainline	PUB	AG	CFLS w Gates
260810H	EJE 12	Private Crossing	34.83	Western	Mainline	PVT	GS	Grade Separation
260535P	EJE 12	Army Trail Road	33.90	Western	Mainline	PUB	AG	FLS w Gates
260803X	EJE 12	Army Trail Bike Path	33.70	Western	Mainline	PED	AG	X-Bucks
260536W	EJE 12	Smith Road	32.94	Western	Mainline	PUB	AG	FLS w Gates
260537D	EJE 12	North Avenue	31.76	Western	Mainline	PUB	AG	Grade Separation
260538K	EJE 12	Hawthorne Lane	30.24	Western	Mainline	PUB	AG	FLS w Gates
260901N	EJE 12	Pedestrian Arch	29.63	Western	Mainline	PED	GS	Grade Separation
260539S	EJE 12	Private Crossing	29.29	Western	Mainline	PVT	AG	X-Bucks
260540L	EJE 12	NW Flavors	28.93	Western	Mainline	PVT	AG	X-Bucks w Stops

Highway-Rail Crossing Inventory

USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
260541T	EJE 11	Washington Street	28.90	Western	Mainline	PUB	AG	FLS w Gates
260542A	EJE 11	Aurora Street	28.87	Western	Mainline	PUB	AG	X-Bucks
260543G	EJE 11	Church Street	28.77	Western	Mainline	PUB	AG	FLS w Gates
260544N	EJE 11	George Street	28.62	Western	Mainline	PED	AG	X-Bucks
260545V	EJE 11	Ann Street	28.50	Western	Mainline	PUB	AG	FLS w Gates
260806T	EJE 11	Pedestrian Subway	28.27	Western	Mainline	PED	GS	Grade Separation
260549X	EJE 11	Roosevelt Road	27.76	Western	Mainline	PUB	GS	Grade Separation
260550S	EJE 11	Batavia Road (Fermi Lab)	25.63	Western	Mainline	PVT	AG	FLS w Gates
260551Y	EJE 11	Butterfield Road	24.55	Western	Mainline	PUB	GS	Grade Separation
260814K	EJE 11	Ferry Road	23.26	Western	Mainline	PUB	GS	Grade Separation
260804E	EJE 11	Illinois Prairie Path	23.02	Western	Mainline	PED	AG	X-Bucks
260554U	EJE 11	East-West Tollway (I-88)	22.97	Western	Mainline	PUB	GS	Grade Separation
260556H	EJE 11	Diehl Road	22.80	Western	Mainline	PUB	AG	CFLS w Gates
260805L	EJE 11	Illinois Prairie Path	22.65	Western	Mainline	PED	AG	X-Bucks
260557P	EJE 11	North Aurora Road	21.50	Western	Mainline	PUB	GS	Grade Separation
260558W	EJE 10A	Liberty Street	20.63	Western	Mainline	PUB	AG	FLS w Gates
260559D	EJE 10A	New York Street / Naperville Road	20.12	Western	Mainline	PUB	GS	Grade Separation
260902V	EJE 10A	McCoy Drive	19.37	Western	Mainline	PUB	GS	Grade Separation
260560X	EJE 10A	Ogden Avenue (US 34)	19.05	Western	Mainline	PUB	AG	CFLS w Gates
260935H	EJE 10A	Ogden Bike Path	19.02	Western	Mainline	PED	AG	X-Bucks
260562L	EJE 10A	Montgomery Road / 83rd Street	18.18	Western	Mainline	PUB	AG	FLS w Gates
260563T	EJE 10B	Keating Drive / 87th Street	17.17	Western	Mainline	PUB	AG	FLS w Gates
260564A	EJE 10B	Hafenrichter Road	17.08	Western	Mainline	PUB	AG	FLS w Gates
260565G	EJE 10B	Wolf's Crossing Road	16.20	Western	Mainline	PUB	AG	FLS w Gates
260567V	EJE 10D	111th Street	14.63	Western	Mainline	PUB	AG	FLS w Gates
260568C	EJE 10D	Private Crossing	14.41	Western	Mainline	PVT	AG	X-Bucks
260569J	EJE 10D	Ferguson Road / 119th Street	13.59	Western	Mainline	PUB	AG	FLS w Gates
260570D	EJE 10D	Hicks Gas Co Road	13.10	Western	Mainline	PVT	AG	X-Bucks
260571K	EJE 10D	Normantown / 252nd	12.92	Western	Mainline	PUB	AG	FLS w Gates
260573Y	EJE 10D	127th Street	12.56	Western	Mainline	PUB	AG	FLS w Gates
260574F	EJE 10E	Private Crossing	12.37	Western	Mainline	PVT	AG	X-Bucks
260575M	EJE 10E	135th Street	11.43	Western	Mainline	PUB	AG	FLS w Gates
260576U	EJE 9A	Van Dykes Road	10.68	Western	Mainline	PUB	AG	CFLS w Gates
260577B	EJE 9A	143rd Street	10.33	Western	Mainline	PUB	AG	FLS w Gates
260590P	EJE 9B	State Route 59	9.72	Western	Mainline	PUB	GS	Grade Separation
260580J	EJE 9B	Plainfield-Naperville Road	9.62	Western	Mainline	PUB	AG	FLS w Gates
260581R	EJE 9B	Main Street	9.53	Western	Mainline	PUB	AG	FLS w Gates
260582X	EJE 9B	Center Street	9.33	Western	Mainline	PUB	AG	FLS w Gates
260583E	EJE 9B	Eastern Avenue	9.27	Western	Mainline	PUB	AG	FLS w Gates
260584L	EJE 9B	Lockport Road	9.00	Western	Mainline	PUB	AG	FLS w Gates
260809N	EJE 9B	Private Crossing	8.68	Western	Mainline	PVT	GS	Grade Separation
260585T	EJE 9B	Renwick Road	7.60	Western	Mainline	PUB	AG	FLS
260586A	EJE 9B	Interstate 55	6.98	Western	Mainline	PUB	GS	Grade Separation
260587G	EJE 9B	East Frontage Road / Essington Road	6.87	Western	Mainline	PUB	AG	FLS
260588N	EJE 9B	Divison Street	6.05	Western	Mainline	PUB	AG	CFLS w Gates
260589V	EJE 9B	Gaylord Road	5.57	Western	Mainline	PUB	AG	FLS w Gates
260591W	EJE 9B	Caton Farm Road	4.50	Western	Mainline	PUB	GS	Grade Separation
260592D	EJE 9B	Weber Road	4.19	Western	Mainline	PUB	GS	Grade Separation
260593K	EJE 9B	Private Crossing	3.74	Western	Mainline	PVT	AG	X-Bucks
260594S	EJE 9B	Private Crossing	3.68	Western	Mainline	PVT	AG	X-Bucks
260807A	EJE 9B	Private Crossing	3.40	Western	Rockdale Spur	PVT	AG	X-Bucks
260799K	EJE 9B	Oakland Avenue	3.20	Western	Mainline	PUB	AG	FLS w Gates
260595Y	EJE 9B	Broadway Street	2.44	Western	Mainline	PUB	GS	Grade Separation
260596F	EJE 8A	Collins Street	1.30	Western	Mainline	PUB	GS	Grade Separation
260905R	EJE 8A	Private Crossing	0.95	Western	Mainline	PVT	AG	X-Bucks
260597M	EJE 8A	Woodruff Road	0.82	Western	Mainline	PUB	AG	FLS w Gates
260598U	EJE 8A	Charlesworth Avenue	0.57	Western	Mainline	PUB	GS	Grade Separation
260817F	EJE 8A	Private Crossing	0.00	Western	Joliet Yard	PVT	AG	X-Bucks
260599B	EJE 8A	Jackson Street (US 6)	0.31	Eastern	Mainline	PUB	GS	Grade Separation
260818M	EJE 8B	Private Crossing	0.00	Eastern	Joliet Yard	PVT	AG	X-Bucks
260600T	EJE 8B	Cass Street (US 30)	0.55	Eastern	Mainline	PUB	GS	Grade Separation
260601A	EJE 7A	Washington Street	0.95	Eastern	Mainline	PUB	AG	FLS w Gates
260602G	EJE 7A	Interstate 80	1.71	Eastern	Mainline	PUB	GS	Grade Separation
260603N	EJE 7B	South Rowell Avenue	1.80	Eastern	Mainline	PUB	AG	FLS w Gates
260604V	EJE 7B	Mills Road	2.50	Eastern	Mainline	PUB	AG	FLS w Gates
260605C	EJE 7B	South Rowell Avenue	2.86	Eastern	Mainline	PUB	AG	FLS w Gates
260606J	EJE 7B	Spencer Road	3.15	Eastern	Mainline	PUB	AG	FLS w Gates
260607R	EJE 7B	Briggs Street	4.22	Eastern	Mainline	PUB	AG	FLS w Gates
260608X	EJE 7B	Private Crossing	4.44	Eastern	Mainline	PVT	AG	X-Bucks
260609E	EJE 7B	Cherry Hill Road	5.00	Eastern	Mainline	PUB	AG	FLS w Gates
260611F	EJE 7B	South Gougar Road	6.00	Eastern	Mainline	PUB	AG	FLS w Gates
260612M	EJE 7B	Nelson Road	7.00	Eastern	Mainline	PUB	AG	FLS w Gates
260613U	EJE 7B	Private Crossing	7.26	Eastern	Mainline	PVT	AG	X-Bucks
260614B	EJE 7B	Cedar Road	8.00	Eastern	Mainline	PUB	AG	FLS w Gates
260616P	EJE 7B	Spencer Road	9.24	Eastern	Mainline	PUB	AG	FLS w Gates
260617W	EJE 7B	School House Road	10.00	Eastern	Mainline	PUB	AG	FLS w Gates
260618D	EJE 7B	Private Crossing	10.63	Eastern	Mainline	PVT	AG	X-Bucks
260620E	EJE 7B	Owens Road / 116th Avenue	11.49	Eastern	Mainline	PUB	AG	FLS
260621L	EJE 7C	Wolf Road	11.96	Eastern	Mainline	PUB	AG	FLS w Gates
260622T	EJE 7C	South LaGrange Road (US 45)	13.03	Eastern	Mainline	PUB	GS	Grade Separation
260623A	EJE 7C	Center Road	14.05	Eastern	Mainline	PUB	AG	FLS w Gates
260625N	EJE 7D	Private Crossing	14.64	Eastern	Mainline	PVT	AG	X-Bucks
260626V	EJE 7D	Old Sauk Trail	14.83	Eastern	Mainline	PUB	AG	FLS w Gates

Highway-Rail Crossing Inventory

USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
260627C	EJE 7D	Pfeiffer Road / 88th Avenue	15.06	Eastern	Mainline	PUB	AG	FLS w Gates
260628J	EJE 7D	Harlem Avenue	17.06	Eastern	Mainline	PUB	AG	FLS w Gates
260629R	EJE 7E	Ridgeland Avenue	18.07	Eastern	Mainline	PUB	AG	FLS w Gates
260630K	EJE 7E	Central Avenue	19.07	Eastern	Mainline	PUB	AG	FLS w Gates
260631S	EJE 7E	Interstate 57	19.47	Eastern	Mainline	PUB	GS	Grade Separation
260632Y	EJE 7E	Cicero Avenue	20.06	Eastern	Mainline	PUB	AG	FLS w Gates
260634M	EJE 7F	Governors Highway	21.20	Eastern	Mainline	PUB	GS	Grade Separation
260636B	EJE 7F, 6A	Main Street	21.61	Eastern	Mainline	PUB	AG	FLS w Gates
260637H	EJE 6H	Orchard Drive	22.69	Eastern	Mainline	PUB	GS	Grade Separation
260638P	EJE 6H	Western Avenue	23.12	Eastern	Mainline	PUB	AG	CFLS w Gates
260639W	EJE 6H	Euclid Avenue	24.63	Eastern	Mainline	PUB	AG	FLS w Gates
260640R	EJE 6H	Chicago Road	24.91	Eastern	Mainline	PUB	AG	CFLS w Gates
260641X	EJE 6H	West End Avenue / Halsted Street	25.04	Eastern	Mainline	PUB	AG	FLS w Gates
260642E	EJE 6H, 6I	East End Avenue	25.19	Eastern	Mainline	PUB	AG	FLS w Gates
260643L	EJE 5A	Butler Street	25.53	Eastern	Mainline	PUB	GS	Grade Separation
260644T	EJE 5A	Wentworth Avenue	25.92	Eastern	Mainline	PUB	AG	FLS w Gates
260645A	EJE 5A	State Street	26.16	Eastern	Mainline	PUB	AG	FLS w Gates
260646G	EJE 5A	Cottage Grove Avenue	27.17	Eastern	Mainline	PUB	AG	CFLS w Gates
260820N	EJE 5A	Mark Collins Drive	0.00	Eastern	Industry	PVT	AG	X-Bucks
260648V	EJE 5A	Calumet Expressway / Bishop Ford Fr	28.17	Eastern	Mainline	PUB	GS	Grade Separation
260649C	EJE 5A	Torrence Avenue	29.18	Eastern	Mainline	PUB	AG	FLS w Gates
260651D	EJE 5A	Lincoln Highway (US 30)	30.69	Eastern	Mainline	PUB	AG	CFLS w Gates
260652K	EJE 5B	Lake Street	30.96	Eastern	Mainline	PUB	AG	FLS w Gates
260653S	EJE 5B	Hart Street	31.10	Eastern	Mainline	PUB	AG	CFLS w Gates
260813D	EJE 5B	Calumet Avenue	31.71	Eastern	Mainline	PUB	GS	Grade Separation
260655F	EJE 5B	Airport Road	33.66	Eastern	Mainline	PUB	AG	FLS w Gates
260656M	EJE 5B	Indianapolis Boulevard (US 41)	33.82	Eastern	Mainline	PUB	GS	Grade Separation
260657U	EJE 5B	Kennedy Avenue	34.36	Eastern	Mainline	PUB	AG	CFLS w Gates
283201W	EJE 4B; CN 23A, 33D	Broad Street	36.22	Eastern	Mainline	PUB	AG	CFLS w Gates
260658B	EJE 5B	Divison Street	34.40	Eastern	Joint Lead Track	PUB	AG	X-Bucks
230081L	EJE 4A	Cofax Street	36.50	Eastern	Ameri Chem	PUB	AG	X-Bucks
230082T	EJE 4B	Broad Street	36.33	Eastern	Pkg Corp Ameri	PUB	AG	FLS w Gates
230083A	EJE 4A	Main Street	38.33	Eastern	Pkg Corp Ameri	PUB	AG	FLS
230084G	EJE 4B	Cline Avenue	36.33	Eastern	Pkg Corp Ameri	PUB	AG	X-Bucks
260659H	EJE 4A	East Main Street	36.52	Eastern	Mainline	PUB	AG	FLS w Gates
260661J	EJE 4A	East Lake Street	36.77	Eastern	Mainline	PUB	AG	X-Bucks
260662R	EJE 4A	East Miller Street	36.89	Eastern	Mainline	PUB	AG	X-Bucks
260663X	EJE 4A	East Elm Street	37.00	Eastern	Mainline	PUB	AG	FLS w Gates
260664E	EJE 4A	East 45th Avenue	37.52	Eastern	Mainline	PUB	AG	CFLS w Gates
260665L	EJE 4A	East 40th Place	38.11	Eastern	Mainline	PUB	AG	CFLS w Gates
260667A	EJE 4A	Ridge Road (US 6)	38.34	Eastern	Mainline	PUB	GS	Grade Separation
260668G	EJE 4A	Private Crossing	39.68	Eastern	Mainline	PVT	AG	X-Bucks
260669N	EJE 4A	I-94 / I-80	39.77	Eastern	Mainline	PUB	GS	Grade Separation
260670H	EJE 3	West 25th Avenue	40.03	Eastern	Mainline	PUB	AG	FLS w Gates
260671P	EJE 3	West 15th Avenue	41.03	Eastern	Mainline	PUB	AG	CFLS w Gates
260672W	EJE 3	West 9th Avenue	41.52	Eastern	Mainline	PUB	AG	FLS
260673D	EJE 2	West 5th Avenue	41.97	Eastern	Mainline	PUB	AG	CFLS w Gates
260824R	EJE 2	I-90 to Cline Avenue Ramp	42.51	Eastern	Mainline	PUB	GS	Grade Separation
260674K	EJE 2	Indiana East-West Tollway (I-90)	42.53	Eastern	Mainline	PUB	GS	Grade Separation
260823J	EJE 2	Cline Avenue to I-90 Ramp	42.57	Eastern	Mainline	PUB	GS	Grade Separation
260821V	EJE 2	Indiana East-West Tollway (I-90) Ramp	43.08	Eastern	Mainline	PUB	GS	Grade Separation
260675S	EJE 1	Industrial Highway (US 12)	43.80	Eastern	Mainline	PUB	GS	Grade Separation
260728N	EJE 1	Clark Road	45.10	Eastern	Pine Jct Lead	PUB	AG	X-Bucks
260676Y	EJE 1	Clark Road	46.06	Eastern	Mainline	PUB	GS	Grade Separation
260727G	EJE 1	Clark Road	0.00	Eastern	N&W Interchange	PUB	AG	X-Bucks
260833P	EJE 22	Private Crossing	0.00	City Track	City Track	PVT	AG	X-Bucks
260923N	EJE 22	STA 123.50	2.32	City Track	City Track	PVT	AG	X-Bucks
260729V	EJE 22	Clark Road	3.66	City Track	City Track	PUB	AG	FLS w Gates
260730P	EJE 22	Buchanan Street	6.02	City Track	City Track	PUB	GS	Grade Separation
260832H	EJE 22	Private Crossing	6.62	City Track	City Track	PVT	AG	X-Bucks
260731W	EJE 22	Broadway Street	6.86	City Track	City Track	PUB	GS	Grade Separation
260732D	EJE 22	Virginia Street	7.26	City Track	City Track	PUB	AG	X-Bucks
260733K	EJE 22	Indiana East-West Tollway (I-90)	7.39	City Track	City Track	PUB	GS	Grade Separation
260734S	EJE 22	Tennessee Street	7.67	City Track	City Track	PUB	AG	X-Bucks
260735Y	EJE 22	Ohio Street	7.73	City Track	City Track	PUB	AG	X-Bucks
260736F	EJE 22	Taylor Road	8.50	City Track	City Track	PUB	AG	FLS
260737M	EJE 22	Indiana East-West Tollway (I-90)	8.50	City Track	City Track	PUB	GS	Grade Separation
260738U	EJE 22	Dunes Highway (US 12)	0.00	City Track	Ind. Lead	PUB	AG	CFLS
260797W	EJE- -2B	Private Crossing	1.48	Lake Front	Lake Front Line	PVT	AG	X-Bucks
260698Y	EJE- -2B	East 95th Street	1.83	Lake Front	Lake Front Line	PUB	AG	CFLS w Gates
260697S	EJE- -2B	East 98th Street	2.20	Lake Front	Lake Front Line	PUB	AG	FLS w Gates
260696K	EJE- -2B	East 99th Street	2.33	Lake Front	Lake Front Line	PUB	AG	FLS w Gates
260695D	EJE- -2B	East 100th Street	2.46	Lake Front	Lake Front Line	PUB	AG	FLS w Gates
260694W	EJE- -2B	Private Crossing	0.00	Lake Front	Lake Front Line	PVT	AG	none
260808G	EJE- -2A	Marina Lot Drive	3.67	Lake Front	Lake Front Line	PVT	AG	CFLS w Gates
260925C	EJE- -2A	Casino Center Drive (Horseshoe Cassi	4.07	Lake Front	Lake Front Line	PUB	GS	Grade Separation
260692H	EJE- -1	Calumet Avenue	4.36	Lake Front	Lake Front Line	PUB	AG	FLS w Gates
260691B	EJE- -1	Lake Street	4.60	Lake Front	Lake Front Line	PUB	AG	X-Bucks
260690U	EJE- -1	117th Street	5.51	Lake Front	Lake Front Line	PUB	AG	FLS w Gates
260689A	EJE- -1	Front Street	5.83	Lake Front	Lake Front Line	PUB	AG	FLS w Gates
260926J	EJE- -1	Private Crossing	6.38	Lake Front	Lake Front Line	PVT	AG	X-Bucks
260927R	EJE- -1	Private Crossing	6.38	Lake Front	Lake Front Line	PVT	AG	X-Bucks
260687L	EJE- -1	Private Crossing	6.76	Lake Front	Lake Front Line	PVT	AG	X-Bucks

Highway-Rail Crossing Inventory

USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
260830U	EJE- -1	Mittal Private Road	7.12	Lake Front	Lake Front Line	PVT	GS	Grade Separation
260686E	EJE- -1	Private Crossing (Riley Road)	7.68	Lake Front	Lake Front Line	PVT	GS	Grade Separation
260685X	EJE- -1	Inland Met Subway	8.13	Lake Front	Lake Front Line	PVT	GS	Grade Separation
260975F	EJE- -1	Hot Metal Tunnel	8.29	Lake Front	Lake Front Line	PVT	GS	Grade Separation
260928X	EJE- -1	Private Crossing	8.72	Lake Front	Lake Front Line	PVT	AG	X-Bucks
260929E	EJE- -1	Pedestrian Crossing	8.75	Lake Front	Lake Front Line	PED	GS	Grade Separation
260684R	EJE- -1	Michigan Avenue	8.77	Lake Front	Lake Front Line	PUB	GS	Grade Separation
260930Y	EJE-0	Cline Avenue Ramp	9.20	Lake Front	Lake Front Line	PUB	GS	Grade Separation
260931F	EJE-0	Pedestrian Crossing	10.12	Lake Front	Lake Front Line	PED	GS	Grade Separation
260683J	EJE-0	Center Road	10.19	Lake Front	Lake Front Line	PVT	AG	CFLS w Gates
260829A	EJE-0	Casino Parking Garage Access	10.32	Lake Front	Lake Front Line	PUB	GS	Grade Separation
260932M	EJE-0	Private Crossing	10.30	Lake Front	Lake Front Line	PVT	AG	FLS w Gates
260681V	EJE-0	Buffington Road	0.00	Lake Front	Limestone Dock	PVT	AG	none
260682C	EJE-0	Buffington Road	0.00	Lake Front	Edgemoor Lead	PVT	AG	none
260677F	EJE-0	Clark Road	11.86	Lake Front	Lake Front Line	PUB	AG	FLS w Gates
260936P	EJE 17	Private Crossing	10.12	Western	Illinois River Line	PVT	AG	FLS w Gates
261002H	EJE 17	Lockport Street (US 30)	10.61	Western	Illinois River Line	PUB	AG	FLS w Gates
261003P	EJE 17	West Renwick Road	11.96	Western	Illinois River Line	PUB	AG	CFLS
261004W	EJE 17	Drauden Road	12.49	Western	Illinois River Line	PUB	AG	CFLS w Gates
261006K	EJE 17	Caton Farm Road	14.17	Western	Illinois River Line	PUB	AG	FLS
261007S	EJE 17	Theodore Road	15.16	Western	Illinois River Line	PUB	AG	FLS w Gates
261008Y	EJE 17	Black Road	16.16	Western	Illinois River Line	PUB	AG	FLS w Gates
261009F	EJE 17	West Jefferson Street (US 52) / Troy R	17.16	Western	Illinois River Line	PUB	AG	FLS w Gates
261012N	EJE 17	West Seil Road / West Beith Road	18.16	Western	Illinois River Line	PUB	AG	FLS
261013V	EJE 17	Private Crossing	18.88	Western	Illinois River Line	PVT	AG	X-Bucks
261014C	EJE 17	Mound Road	19.23	Western	Illinois River Line	PUB	AG	None
261016R	EJE 17	Private Crossing	20.22	Western	Illinois River Line	PVT	AG	X-Bucks
261017X	EJE 17	County Line Road	20.46	Western	Illinois River Line	PUB	AG	FLS
261018E	EJE 17	Holt Road	21.00	Western	Illinois River Line	PUB	AG	FLS
261019L	EJE 17	Wabena Avenue	21.42	Western	Illinois River Line	PUB	AG	FLS
261020F	EJE 17	Interstate 80	21.59	Western	Illinois River Line	PUB	GS	Grade Separation
261022U	EJE 17	Mondamin Street	22.18	Western	Illinois River Line	PUB	GS	Grade Separation
261023B	EJE 17	Ridge Road / Clennon Road	22.38	Western	Illinois River Line	PUB	GS	Grade Separation
261026W	EJE 17	McLindon Road	23.63	Western	Illinois River Line	PUB	AG	FLS
261025P	EJE 17	Private Crossing	24.27	Western	Illinois River Line	PVT	AG	X-Bucks
261027D	EJE 17	Private Crossing	24.84	Western	Illinois River Line	PVT	AG	X-Bucks
261028K	EJE 17	US 6	25.42	Western	Illinois River Line	PUB	AG	FLS
261029S	EJE 17	Cemetery Road / Canal Road	26.42	Western	Illinois River Line	PUB	GS	Grade Separation
261030L	EJE 17	Cemetery Road (Industry Track Cross	0.00	Western	Illinois River Line	PUB	AG	X-Bucks
261031T	EJE 17	Private Crossing	27.11	Western	Illinois River Line	PVT	AG	X-Bucks
261032A	EJE 17	Collins Road	27.64	Western	Illinois River Line	PUB	AG	X-Bucks
261053T	EJE 18	Private Crossing	0.47	Western	Romeoville Line	PVT	AG	X-Bucks
260912B	EJE 18	Crest Hill Sewage Treatment Plant	0.48	Western	Romeoville Line	PVT	AG	X-Bucks
261052L	EJE 18	Broadway Storage	0.54	Western	Romeoville Line	PVT	AG	X-Bucks
261051E	EJE 18	Private Crossing	0.82	Western	Romeoville Line	PVT	AG	X-Bucks
261050X	EJE 18	Division Street / 167th Street	1.78	Western	Romeoville Line	PUB	AG	X-Bucks
261049D	EJE 18	9th Street	2.66	Western	Romeoville Line	PUB	GS	Grade Separation
260913H	EJE 18	Concrete Pipe	2.73	Western	Romeoville Line	PVT	AG	X-Bucks
260914P	EJE 18	Material Service	5.07	Western	Romeoville Line	PVT	AG	X-Bucks
260915W	EJE 18	Private Crossing	5.13	Western	Romeoville Line	PVT	AG	FLS w Gates
260916D	EJE 18	Material Service	5.17	Western	Romeoville Line	PVT	AG	FLS w Gates
260917K	EJE 18	Material Service	5.33	Western	Romeoville Line	PVT	AG	FLS w Gates
260918S	EJE 18	Material Service	5.62	Western	Romeoville Line	PVT	AG	X-Bucks
260919Y	EJE 18	Com Ed	5.85	Western	Romeoville Line	PVT	AG	X-Bucks
260920T	EJE 18	Com Ed	5.88	Western	Romeoville Line	PVT	AG	X-Bucks
261060D	EJE 19	Henderson Avenue	1.09	Western	Downtown Line	PUB	AG	FLS w Gates
261061K	EJE 19	Royce Avenue	1.28	Western	Downtown Line	PUB	AG	FLS w Gates
261058C	EJE 19	Collins Street	1.51	Western	Downtown Line	PUB	AG	CFLS w Gates
260822C	EJE 20	Indiana East-West Tollway (I-90) Ramp	43.00	Calumet	Hammond Branch	PUB	GS	Grade Separation
260700X	EJE 20	Cline Avenue	43.43	Calumet	Hammond Branch	PUB	GS	Grade Separation
260701E	EJE 20	Cline Avenue Ramp	43.45	Calumet	Hammond Branch	PUB	AG	CFLS
260702L	EJE 20	Incinerator Road	43.64	Calumet	Hammond Branch	PVT	AG	X-Bucks
260703T	EJE 20	Gary Avenue (Industry Track Crossing	43.46	Calumet	Hammond Branch	PUB	AG	X-Bucks
260704A	EJE 20	Eugene Huish Drive	45.06	Calumet	Hammond Branch	PUB	AG	FLS w Gates
260705G	EJE 20	151st Street	45.09	Calumet	Hammond Branch	PUB	AG	FLS w Gates
260706N	EJE 20	Railroad Avenue	45.87	Calumet	Hammond Branch	PUB	AG	FLS
260716U	EJE 21	149th Street	45.03	Calumet	Whiting Branch	PUB	AG	FLS
260717B	EJE 21	148th Street	45.18	Calumet	Whiting Branch	PUB	AG	FLS
260718H	EJE 21	Chicago Avenue (SR 312)	45.34	Calumet	Whiting Branch	PUB	AG	CFLS w Gates
260921A	EJE 21	Private Crossing	45.85	Calumet	Whiting Branch	PVT	AG	X-Bucks
260719P	EJE 21	Columbus Drive (US 12)	46.02	Calumet	Whiting Branch	PUB	GS	Grade Separation
260720J	EJE 21	Michigan Avenue	46.30	Calumet	Whiting Branch	PUB	AG	CFLS w Gates
260721R	EJE 21	Canal Street	46.40	Calumet	Whiting Branch	PUB	AG	X-Bucks
260722X	EJE 21	Private Crossing	46.72	Calumet	Whiting Branch	PVT	AG	X-Bucks
260723E	EJE 21	Private Crossing	46.72	Calumet	Whiting Branch	PVT	AG	X-Bucks
260724L	EJE 21	US Gypsum Road	47.02	Calumet	Whiting Branch	PVT	AG	X-Bucks
260725T	EJE 21	Riley Road	47.22	Calumet	Whiting Branch	PUB	AG	CFLS w Gates
260922G	EJE 21	Cline Avenue	47.25	Calumet	Whiting Branch	PUB	GS	Grade Separation
260726A	EJE 21	129th Street	47.87	Calumet	Whiting Branch	PUB	AG	CFLS w Gates
260909T	EJE 23	Private Crossing	0.68	Western	Phoenix Line	PVT	AG	X-Bucks
260910M	EJE 23	Private Crossing	0.72	Western	Phoenix Line	PVT	AG	X-Bucks
260911U	EJE 23	Private Crossing	0.94	Western	Phoenix Line	PVT	AG	X-Bucks
260908L	EJE 23	Private Crossing	2.73	Western	East Morris LD	PVT	AG	X-Bucks

Highway-Rail Crossing Inventory

USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
261036C		Private Crossing	2.69	Western	East Morris LD	PVT	AG	X-B w Stops
260801J		Tabler Road / Equistar Road	1.70	Western	East Morris LD	PVT	AG	FLS
261035V		Private Crossing	1.16	Western	East Morris LD	PVT	AG	FLS
260802R		South Tabler Road	1.14	Western	East Morris LD	PUB	AG	FLS
261034N		Private Crossing	0.63	Western	East Morris LD	PVT	AG	none
261038R		Lock Road	0.00	Western	Dresden Spur	PUB	AG	X-Bucks
261037J		Devine Bridge Road	0.00	Western	Dresden Spur	PVT	AG	X-Bucks
261039X		Collins Road	0.00	Western	GE Spur	PUB	AG	X-Bucks

EJE Crossing Summary

Public At-Grade								178
Public Grade Separated								67
Private At-Grade								68
Private Grade Separated								7
Pedestrian At-Grade								7
Pedestrian Grade Separated								5
SUBTOTAL								332

CN Highway-Rail Crossings

USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
689618T	CN-20	Washington Boulevard	11.15	Waukesha	Mainline	PUB	GS	Grade Separation
689619A	CN-20	Hawthorne Avenue	11.41	Waukesha	Mainline	PUB	GS	Grade Separation
689620U	CN-20	Central Avenue	11.41	Waukesha	Mainline	PUB	GS	Grade Separation
689621B	CN-20	Lake Street	11.51	Waukesha	Mainline	PUB	GS	Grade Separation
689622H	CN-20	Oak Avenue	11.76	Waukesha	Mainline	PUB	GS	Grade Separation
689623P	CN-20	Chicago Avenue	11.91	Waukesha	Mainline	PUB	GS	Grade Separation
689624W	CN-20	Forest Avenue	12.10	Waukesha	Mainline	PUB	AG	FLS w Gates
689625D	CN-20	Augusta Street	12.19	Waukesha	Mainline	PUB	AG	FLS w Gates
689626K	CN-20	Keystone Avenue	12.24	Waukesha	Mainline	PUB	AG	FLS w Gates
689627S	CN-20	Thatcher Avenue	12.39	Waukesha	Mainline	PUB	AG	CFLS w Gates
689628Y	CN-20	1st Avenue (IL 171)	13.04	Waukesha	Mainline	PUB	AG	CFLS w Gates
689629F	CN-20	North Avenue	13.25	Waukesha	Mainline	PUB	GS	Grade Separation
689630A	CN-20	5th Avenue	13.41	Waukesha	Mainline	PUB	AG	FLS w Gates
689631G	CN-20	George Street	14.14	Waukesha	Mainline	PUB	AG	FLS w Gates
689632N	CN-20	Fullerton Avenue	14.58	Waukesha	Mainline	PUB	AG	FLS w Gates
689633V	CN-20	Grand Avenue	15.05	Waukesha	Mainline	PUB	GS	Grade Separation
689634C	CN-20	Chestnut Avenue	15.22	Waukesha	Mainline	PUB	AG	FLS w Gates
689638E	CN-21	Belmont Avenue	15.60	Waukesha	Mainline	PUB	AG	CFLS w Gates
689640F	CN-21	Irving Park Road	16.88	Waukesha	Mainline	PUB	GS	Grade Separation
689641M	CN-21	Lawrence Avenue	17.65	Waukesha	Mainline	PUB	GS	Grade Separation
800022O	CN-21	Lawrence Avenue	17.65	Waukesha	Mainline	PUB	GS	Grade Separation
689644H	CN-22	Tri-State Tollway (I-294)	17.93	Waukesha	Mainline	PUB	GS	Grade Separation
689673T	CN-22	Balmoral Avenue	18.44	Waukesha	Mainline	PUB	GS	Grade Separation
689646W	CN-22	O'Hare Airport LD (I-190)	18.85	Waukesha	Mainline	PUB	GS	Grade Separation
689647D	CN-22	Higgins Road (IL 72)	19.91	Waukesha	Mainline	PUB	GS	Grade Separation
689648K	CN-22	Northwest Tollway (I-90)	20.10	Waukesha	Mainline	PUB	GS	Grade Separation
689649S	CN-22	Pratt Avenue	20.28	Waukesha	Mainline	PUB	AG	FLS w Gates
689651T	CN-22	Touhy Avenue	20.80	Waukesha	Mainline	PUB	AG	FLS w Gates
689652A	CN-22	Frontage Road	21.22	Waukesha	Mainline	PUB	AG	FLS w Gates
689653G	CN-22	Prospect Avenue	21.44	Waukesha	Mainline	PUB	AG	FLS w Gates
689654N	CN-22	Oakton Street	21.82	Waukesha	Mainline	PUB	AG	CFLS w Gates
689655V	CN-22	Algonquin Road	22.33	Waukesha	Mainline	PUB	AG	FLS w Gates
689656C	CN-22	Lee Street / Mannheim Road (US 12)	22.55	Waukesha	Mainline	PUB	AG	CFLS w Gates
689657J	CN-22	Graceland Avenue (US 12)	22.67	Waukesha	Mainline	PUB	AG	CFLS w Gates
689658R	CN-22	Thacker Street / Dempster Street	22.84	Waukesha	Mainline	PUB	AG	CFLS w Gates
689659X	CN-22	Prairie Avenue	22.98	Waukesha	Mainline	PUB	AG	FLS w Gates
689660S	CN-22	Woodlawn Avenue	23.17	Waukesha	Mainline	PUB	AG	FLS w Gates
689661Y	CN-22	Northwest Highway (US 14)	23.44	Waukesha	Mainline	PUB	GS	Grade Separation
689675G	CN-22	Seegers Road	23.86	Waukesha	Mainline	PUB	AG	FLS w Gates
689676N	CN-22	Golf Road (IL 58)	23.94	Waukesha	Mainline	PUB	AG	FLS w Gates
689677V	CN-22	Rand Road (US 12)	24.05	Waukesha	Mainline	PUB	AG	CFLS w Gates
689678C	CN-22	Central Road	24.78	Waukesha	Mainline	PUB	AG	FLS w Gates
689680D	CN-22	Kensington Road / Foundry Road	25.80	Waukesha	Mainline	PUB	AG	FLS w Gates
689681K	CN-22	Euclid Avenue	26.32	Waukesha	Mainline	PUB	AG	FLS w Gates
689682S	CN-22	Wolf Road	26.78	Waukesha	Mainline	PUB	AG	FLS w Gates
689683Y	CN-22	Camp McDonald Road	26.86	Waukesha	Mainline	PUB	AG	FLS w Gates
694918S	CN-22	Willow Road	27.37	Waukesha	Mainline	PUB	AG	CFLS w Gates
689684F	CN-22	Palatine Road	27.91	Waukesha	Mainline	PUB	GS	Grade Separation
689688H	CN-22	Hintz Road	28.96	Waukesha	Mainline	PUB	AG	FLS w Gates
689689P	CN-22	Dundee Road (IL 68)	30.06	Waukesha	Mainline	PUB	AG	CFLS w Gates
694915W	CN-22	East Lake Cook Road	31.08	Waukesha	Mainline	PUB	GS	Grade Separation
694865V	CN-22	Deerfield Parkway / Busch Road	32.37	Waukesha	Mainline	PUB	AG	CFLS w Gates
689692X	CN-22	Aptakisic Road	33.21	Waukesha	Mainline	PUB	AG	FLS w Gates
689693E	CN-22	Half Day Road (IL 22)	34.18	Waukesha	Mainline	PUB	AG	CFLS w Gates
689694L	CN-22	Buffalo Grove Road	34.82	Waukesha	Mainline	PUB	AG	FLS w Gates
689697G	CN-22	US 45	36.05	Waukesha	Mainline	PUB	AG	CFLS w Gates
689698N	CN-22	Butterfield Road	37.37	Waukesha	Mainline	PUB	AG	CFLS w Gates
689699V	CN-22	Townline Road (IL 60)	37.50	Waukesha	Mainline	PUB	AG	FLS w Gates
689701U	CN-29	Allanson Road	38.65	Waukesha	Mainline	PUB	AG	FLS w Gates
689702B	CN-29	Countryside Highway / Courtland Stre	39.30	Waukesha	Mainline	PUB	GS	Grade Separation

Highway-Rail Crossing Inventory

USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
689703H	CN-29	Hawley Street	39.80	Waukesha	Mainline	PUB	AG	CFLS w Gates
694871X	CN-29	Pedestrian Crossing	39.90	Waukesha	Mainline	PED	AG	X-Bucks
689704P	CN-29	Park Street	39.94	Waukesha	Mainline	PUB	AG	CFLS w Gates
689705W	CN-29	Maple Avenue	40.10	Waukesha	Mainline	PUB	AG	FLS w Gates
689706D	CN-29	US 45	40.55	Waukesha	Mainline	PUB	GS	Grade Separation
689707K	CN-29	Dunbar Road	40.85	Waukesha	Mainline	PUB	AG	FLS w Gates
689709Y	CN-29	Winchester Road	41.78	Waukesha	Mainline	PUB	AG	CFLS
689710T	CN-29	Peterson Road	42.38	Waukesha	Mainline	PUB	AG	FLS w Gates
689712G	CN-29	Harris Road	43.03	Waukesha	Mainline	PUB	AG	FLS w Gates
289779J	CN-9	Indiana Avenue	1.60	Freeport	S St Cal Wye	PUB	GS	Grade Separation
289780D	CN-9	Alley	1.65	Freeport	S St Cal Wye	PUB	GS	Grade Separation
289781K	CN-9	Michigan Avenue	1.70	Freeport	Mainline	PUB	GS	Grade Separation
289782S	CN-9	Alley	1.75	Freeport	Mainline	PUB	GS	Grade Separation
289783Y	CN-9	Wabash Avenue	1.80	Freeport	Mainline	PUB	GS	Grade Separation
289784F	CN-9	Alley	1.85	Freeport	Mainline	PUB	GS	Grade Separation
289785M	CN-9	State Street	1.90	Freeport	Mainline	PUB	GS	Grade Separation
289787B	CN-9	Clark Street	2.10	Freeport	Mainline	PUB	GS	Grade Separation
289788H	CN-9	18th Street	2.45	Freeport	Mainline	PUB	GS	Grade Separation
NA001	CN-9	19th Street Pedestrian Crossing	2.51	Freeport	Mainline	PED	AG	
289789P	CN-9	Cermak Road / 22nd Street	2.76	Freeport	Mainline	PUB	GS	Grade Separation
289790J	CN-9	Canal Street	2.80	Freeport	Mainline	PUB	GS	Grade Separation
289792X	CN-9	Normal Avenue	3.00	Freeport	Mainline	PUB	GS	Grade Separation
289794L	CN-9	Archer Avenue / Wallace Street	3.20	Freeport	Mainline	PUB	GS	Grade Separation
NA002	CN-9	Dan Ryan Expressway (I-90 / I-94)	3.32	Freeport	Mainline	PUB	GS	Grade Separation
289795T	CN-9	Halsted Street	3.34	Freeport	Mainline	PUB	GS	Grade Separation
289796A	CN-9	Corbett Street	3.45	Freeport	Mainline	PUB	GS	Grade Separation
289797G	CN-9	Senour Avenue	3.52	Freeport	Mainline	PUB	GS	Grade Separation
289798N	CN-9	Throop Street	3.82	Freeport	Mainline	PUB	GS	Grade Separation
289799V	CN-9	Loomis Street	4.01	Freeport	Mainline	PUB	GS	Grade Separation
289800M	CN-9	Fuller Street at Short Street	4.12	Freeport	Mainline	PUB	GS	Grade Separation
289801U	CN-9	Lock Street	4.30	Freeport	Mainline	PUB	GS	Grade Separation
289802B	CN-10	Ashland Avenue	4.50	Freeport	Mainline	PUB	GS	Grade Separation
289804P	CN-10	Damen Avenue	5.00	Freeport	Mainline	PUB	GS	Grade Separation
289805W	CN-10	Western Avenue	5.50	Freeport	Mainline	PUB	GS	Grade Separation
840379H	CN-10	California Avenue	0.50	Freeport	Mainline	PUB	GS	Grade Separation
840382R	CN-10	Kedzie Avenue	1.03	Freeport	Mainline	PUB	GS	Grade Separation
289808S	CN-10	South Lawndale Avenue	7.21	Freeport	Mainline	PUB	AG	FLS w Gates
289809Y	CN-10	Pulaski Road	7.59	Freeport	Mainline	PUB	AG	CFLS w Gates
289810T	CN-11	Cicero Avenue (IL 50)	8.65	Freeport	Mainline	PUB	GS	Grade Separation
289811A	CN-12	Laramie Avenue / 52nd Avenue	9.10	Freeport	Mainline	PUB	GS	Grade Separation
289813N	CN-12	Central Avenue / 56th Avenue	9.55	Freeport	Mainline	PUB	GS	Grade Separation
289814V	CN-12	Clyde Avenue / 59th Avenue	9.99	Freeport	Mainline	PUB	GS	Grade Separation
289815C	CN-12	Austin Boulevard at Ogden Avenue	10.15	Freeport	Mainline	PUB	GS	Grade Separation
289816J	CN-12	Lombard Avenue	10.40	Freeport	Mainline	PUB	GS	Grade Separation
289817R	CN-12	Ridgeland Avenue	10.70	Freeport	Mainline	PUB	GS	Grade Separation
289818X	CN-12	East Avenue	10.90	Freeport	Mainline	PUB	GS	Grade Separation
289819E	CN-12	Oak Park Avenue	11.20	Freeport	Mainline	PUB	GS	Grade Separation
289820Y	CN-12	Home Avenue Pedestrian Crossing	11.50	Freeport	Mainline	PED	GS	Grade Separation
289821F	CN-12	Riverside Drive	11.70	Freeport	Mainline	PUB	AG	FLS w Gates
289822M	CN-12	Harlem Avenue (IL 43)	11.78	Freeport	Mainline	PUB	AG	CFLS w Gates
289824B	CN-12	26th Street	11.95	Freeport	Mainline	PUB	AG	CFLS w Gates
840408R	CN-12	Veterans Drive	12.13	Freeport	Mainline	PUB	AG	FLS w Gates
289830E	CN-12	Hainsworth Avenue	12.45	Freeport	Mainline	PUB	AG	FLS
289831L	CN-12	Des Plaines Avenue	12.85	Freeport	Mainline	PUB	AG	FLS w Gates
289832T	CN-12	Cermak Road / 22nd Street	13.25	Freeport	Mainline	PUB	AG	CFLS w Gates
289833A	CN-12	1st Avenue (IL 171)	13.45	Freeport	Mainline	PUB	AG	CFLS w Gates
289834G	CN-12	17th Avenue	14.50	Freeport	Mainline	PUB	AG	CFLS w Gates
289835N	CN-13A	25th Avenue	15.06	Freeport	Mainline	PUB	GS	Grade Separation
289836V	CN-13A	Gardner Road	15.30	Freeport	Mainline	PUB	GS	Grade Separation
289837C	CN-13A	Roosevelt Road	15.70	Freeport	Mainline	PUB	GS	Grade Separation
289838J	CN-13A	Westchester Boulevard / Bellwood Av	15.80	Freeport	Mainline	PUB	GS	Grade Separation
289839R	CN-13A	Mannheim Road (US 12)	16.10	Freeport	Mainline	PUB	GS	Grade Separation
289840K	CN-13A	Oak Ridge Avenue	16.60	Freeport	Mainline	PUB	AG	FLS
289841S	CN-13A	Harrison Street	17.10	Freeport	Mainline	PUB	AG	FLS
289843F	CN-13A	Wolf Road	17.25	Freeport	Mainline	PUB	AG	FLS
289845U	CN-13A	Eisenhower Expressway (I-290)	17.60	Freeport	Mainline	PUB	GS	Grade Separation
289847H	CN-13A	Butterfield Road	17.90	Freeport	Mainline	PUB	GS	Grade Separation
289848P	CN-13A	Tri-State Tollway (I-294)	18.20	Freeport	Mainline	PUB	GS	Grade Separation
289849W	CN-13B	Poplar Avenue	18.80	Freeport	Mainline	PED	GS	Grade Separation
289850R	CN-13B	York Street	19.35	Freeport	Mainline	PUB	AG	CFLS w Gates
289851X	CN-13B	Vallette Street	19.50	Freeport	Mainline	PUB	AG	FLS w Gates
289852E	CN-13B	Pedestrian Trail	19.65	Freeport	Mainline	PED	AG	
289853L	CN-13B	Argyle Avenue	19.80	Freeport	Mainline	PUB	AG	FLS
289854T	CN-13B	Spring Road	19.98	Freeport	Mainline	PUB	AG	FLS w Gates
289855A	CN-13B	Saint Charles Road	20.20	Freeport	Mainline	PUB	AG	CFLS w Gates
289856G	CN-13B	West Avenue	20.60	Freeport	Mainline	PUB	AG	FLS w Gates
289857N	CN-13B	Kingery Highway (IL 83)	20.90	Freeport	Mainline	PUB	GS	Grade Separation
289858V	CN-13B	Villa Avenue	21.25	Freeport	Mainline	PUB	AG	FLS w Gates
289859C	CN-13B	Ardmore Avenue	21.80	Freeport	Mainline	PUB	GS	Grade Separation
289860W	CN-13B	Addison Avenue	22.30	Freeport	Mainline	PUB	AG	CFLS w Gates
289861D	CN-13B	North Avenue (IL 64)	22.35	Freeport	Mainline	PUB	AG	CFLS w Gates
289870C	CN-13B	Westwood Avenue	22.85	Freeport	Mainline	PUB	AG	FLS w Gates
289871J	CN-13B	Grace Street	23.40	Freeport	Mainline	PUB	AG	CFLS w Gates

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USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
289875L	CN-13B	Rohlfing Road (IL 53)	24.75	Freeport	Mainline	PUB	GS	Grade Separation
908226Y	CN-13B	Veterans Memorial Tollway (I-355)	25.01	Freeport	Mainline	PUB	GS	Grade Separation
289876T	CN-13B	Swift Road	25.30	Freeport	Mainline	PUB	AG	CFLS w Gates
289877A	CN-13B	Glen Eilyn Road	26.30	Freeport	Mainline	PUB	GS	Grade Separation
289878G	CN-13B	Bloomngdale Road	27.40	Freeport	Mainline	PUB	GS	Grade Separation
289880H	CN-13B	Schmale Road	28.48	Freeport	Mainline	PUB	AG	CFLS w Gates
289890N	CN-13B	Gary Avenue	29.55	Freeport	Mainline	PUB	AG	CFLS w Gates
289891V	CN-13B	Army Trail Road	29.70	Freeport	Mainline	PUB	AG	CFLS w Gates
840415B	CN-13B	Madsen Drive	30.44	Freeport	Mainline	PUB	AG	FLS w Gates
911764J	CN-13B	County Farm Road	31.17	Freeport	Mainline	PUB	AG	CFLS w Gates
289896E	CN-13B	Schick Road	32.10	Freeport	Mainline	PUB	GS	Grade Separation
289899A	CN-13B	Bartlett Road	33.05	Freeport	Mainline	PUB	GS	Grade Separation
289901Y	CN-13B	Sutton Road (IL 59)	34.15	Freeport	Mainline	PUB	AG	CFLS w Gates
289902F	CN-13B	Munger Road	35.15	Freeport	Mainline	PUB	AG	FLS w Gates
289903M	CN-30A	Powis Road	36.05	Freeport	Mainline	PUB	AG	FLS
289904U	CN-30B	Dunham Road	37.50	Freeport	Mainline	PUB	GS	Grade Separation
NA003	CN-30B	Pedestrian Trail	37.60	Freeport	Mainline	PED	GS	Grade Separation
289905B	CN-30B	IL 25	38.15	Freeport	Mainline	PUB	AG	FLS
289906H	CN-30B	Private Road	39.00	Freeport	Mainline	PVT	GS	Grade Separation
289907P	CN-30B	IL 31	39.10	Freeport	Mainline	PUB	GS	Grade Separation
289908W	CN-30B	McLean Boulevard	40.07	Freeport	Mainline	PUB	GS	Grade Separation
289909D	CN-30B	McDonald Road	40.99	Freeport	Mainline	PUB	GS	Grade Separation
289910X	CN-30B	Randall Road	41.55	Freeport	Mainline	PUB	AG	FLS
289693A	CN-14	31st Street	3.90	Joliet	Mainline	PUB	GS	Grade Separation
289694G	CN-14	Stevenson Expressway (I-55)	3.95	Joliet	Mainline	PUB	GS	Grade Separation
289695N	CN-14	Wood Street	4.05	Joliet	Mainline	PUB	GS	Grade Separation
289696V	CN-14	33rd Street	4.20	Joliet	Mainline	PUB	GS	Grade Separation
289697C	CN-14	Damen Avenue	4.40	Joliet	Mainline	PUB	GS	Grade Separation
289698J	CN-14	34th Street	4.45	Joliet	Mainline	PUB	GS	Grade Separation
289699R	CN-14	Hoyne Avenue	4.50	Joliet	Mainline	PUB	GS	Grade Separation
289700H	CN-14	35th Street	4.60	Joliet	Mainline	PUB	GS	Grade Separation
289701P	CN-14	Leavitt Street	4.70	Joliet	Mainline	PUB	GS	Grade Separation
289702W	CN-14	Oakley Avenue at 36th Street	4.90	Joliet	Mainline	PUB	GS	Grade Separation
289703D	CN-14	Western Avenue / Western Boulevard	5.05	Joliet	Mainline	PUB	GS	Grade Separation
289704K	CN-14	Rockwell Street	5.30	Joliet	Mainline	PUB	GS	Grade Separation
289705S	CN-14	Washtenaw Avenue	5.40	Joliet	Mainline	PUB	GS	Grade Separation
289706Y	CN-14	California Avenue	5.60	Joliet	Mainline	PUB	GS	Grade Separation
289707F	CN-14	Albany Avenue	5.90	Joliet	Mainline	PUB	GS	Grade Separation
289708M	CN-14	Kedzie Avenue	6.05	Joliet	Mainline	PUB	GS	Grade Separation
289710N	CN-14	Pulaski Road	7.10	Joliet	Mainline	PUB	GS	Grade Separation
289711V	CN-15	Cicero Avenue (IL 50)	8.15	Joliet	Mainline	PUB	GS	Grade Separation
289712C	CN-15	Central Avenue	9.30	Joliet	Mainline	PUB	GS	Grade Separation
289717L	CN-16	Harlem Avenue (IL 43)	11.50	Joliet	Mainline	PUB	GS	Grade Separation
289719A	CN-16	Lawndale Avenue	12.10	Joliet	Mainline	PUB	GS	Grade Separation
289720U	CN-16	IL 171	12.25	Joliet	Mainline	PUB	GS	Grade Separation
289721B	CN-17	Corn Products Refinery Drive	13.65	Joliet	Mainline	PVT	GS	Grade Separation
289722H	CN-17	Gen Amer Trans	14.30	Joliet	Mainline	PVT	AG	FLS w Gates
289723P	CN-17	Shell Oil Crossing	14.70	Joliet	Mainline	PVT	AG	other
289724W	CN-17	La Grange Road (US 12 / US 20 / US	15.98	Joliet	Mainline	PUB	GS	Grade Separation
289725D	CN-17	Tri-State Tollway (I-294)	16.10	Joliet	Mainline	PUB	GS	Grade Separation
004340A	CN-17	Willow Springs Road	17.34	Joliet	Mainline	PUB	GS	Grade Separation
289726K	CN-17	Old Willow Springs Road	17.54	Joliet	Mainline	PUB	AG	FLS w Gates
289727S	CN-17	Publicker Chemical Company	19.85	Joliet	Mainline	PVT	AG	FLS w Gates
289728Y	CN-17	Kingery Highway (IL 83)	21.50	Joliet	Mainline	PUB	GS	Grade Separation
289729F	CN-17	Grant Road / Dundee Cement	21.55	Joliet	Mainline	PVT	GS	Grade Separation
289730A	CN-17	Alexander Chemical Company	22.00	Joliet	Mainline	PVT	GS	Grade Separation
289731G	CN-17	Private Road / McGuire Parkway	23.50	Joliet	Mainline	PVT	AG	None
289732N	CN-17	Private Road / Boyer Street	24.65	Joliet	Mainline	PVT	AG	None
289733V	CN-17	Pruxne Street / Illinois Street	24.71	Joliet	Mainline	PUB	AG	FLS w Gates
289734C	CN-17	Holmes Street	24.95	Joliet	Mainline	PUB	AG	FLS w Gates
289735J	CN-17	Stephen Street	25.10	Joliet	Mainline	PUB	AG	CFLS w Gates
289736R	CN-17	Lemont Street	25.18	Joliet	Mainline	PUB	AG	FLS w Gates
289737X	CN-17	State Street	25.27	Joliet	Mainline	PUB	GS	Grade Separation
289738E	CN-18	Industrial Avenue	25.80	Joliet	Mainline	PUB	AG	FLS w Gates
289739L	CN-18	Private Road	26.50	Joliet	Mainline	PVT	AG	other
289740F	CN-18	Ceco Steel Company	27.15	Joliet	Mainline	PVT	AG	FLS w Gates
289741M	CN-18	Union-Collier	27.25	Joliet	Mainline	PVT	AG	FLS w Gates
289742U	CN-18	Seneca Petroleum Company	27.67	Joliet	Mainline	PVT	AG	FLS w Gates
289743B	CN-18	Uno-Ven Crossing	27.93	Joliet	Mainline	PVT	AG	FLS w Gates
289744H	CN-18	Romeo Road / 135th Street	28.98	Joliet	Mainline	PUB	AG	CFLS w Gates
289745P	CN-18	Private Road	29.70	Joliet	Mainline	PVT	AG	None
289749S	CN-18	2nd Street	32.06	Joliet	Mainline	PUB	AG	FLS w Gates
289750L	CN-18	6th Street	32.36	Joliet	Mainline	PUB	AG	FLS w Gates
289751T	CN-18	8th Street Pedestrian Crossing	32.51	Joliet	Mainline	PED	AG	FLS
289752A	CN-18	9th Street (IL 7)	32.59	Joliet	Mainline	PUB	AG	FLS w Gates
289753G	CN-18	10th Street	32.70	Joliet	Mainline	PUB	AG	FLS w Gates
289754N	CN-18	11th Street	32.74	Joliet	Mainline	PUB	AG	FLS w Gates
289755V	CN-18	13th Street	32.89	Joliet	Mainline	PUB	AG	FLS w Gates
289756C	CN-18	Division Street	33.11	Joliet	Mainline	PUB	AG	FLS w Gates
840410S	CN-18	Park District Pedestrian Crossing	33.70	Joliet	Mainline	PED	AG	FLS
289757J	CN-18	Coke Plant Entrance	34.95	Joliet	Mainline	PVT	GS	Grade Separation
289759X	CN-18	Ohio Street	36.64	Joliet	Mainline	PUB	AG	CFLS w Gates
289760S	CN-18	Jackson Street	36.77	Joliet	Mainline	PUB	AG	FLS w Gates

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USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
004372F	CN-31	Cass Street (US 30 / US 6)	37.00	Joliet	Corwith-MP 59	PUB	GS	Grade Separation
004373M	CN-31	Clinton Street	37.10	Joliet	Corwith-MP 59	PUB	GS	Grade Separation
004374U	CN-31	Van Buren Street	37.15	Joliet	Corwith-MP 59	PUB	GS	Grade Separation
004375B	CN-31	Jefferson Street (US 30 / US 6)	37.20	Joliet	Corwith-MP 59	PUB	GS	Grade Separation
289761Y	CN-31	Washington Street	37.30	Joliet	Mainline	PUB	GS	Grade Separation
289762F	CN-31	Osgood Street	37.60	Joliet	Mainline	PUB	GS	Grade Separation
289764U	CN-31	4th Avenue	37.80	Joliet	Mainline	PUB	GS	Grade Separation
289765B	CN-31	5th Avenue	37.90	Joliet	Mainline	PUB	GS	Grade Separation
004379D	CN-31	Interstate 80	38.37	Joliet	Corwith-MP 59	PUB	GS	Grade Separation
289766H	CN-31	Chicago Street (US 52)	38.50	Joliet	Mainline	PUB	GS	Grade Separation
289508D	CN-08	18th Street Pedestrian Crossing	2.18	Chicago	Mainline	PED	GS	Grade Separation
289511L	CN-08	Stevenson Expressway (I-55)	2.90	Chicago	Mainline	PUB	GS	Grade Separation
289512T	CN-08	East 31st Street	3.57	Chicago	Mainline	PUB	GS	Grade Separation
289513A	CN-08	35th Street Pedestrian Crossing	4.10	Chicago	Mainline	PED	GS	Grade Separation
289514G	CN-08	East Oakwood Boulevard	4.61	Chicago	Mainline	PUB	GS	Grade Separation
289515N	CN-08	43rd Street Pedestrian Crossing	5.25	Chicago	Mainline	PED	GS	Grade Separation
289516V	CN-08	East 47th Street	5.79	Chicago	Mainline	PUB	GS	Grade Separation
289517C	CN-08	East 51st Street / East Hyde Park Bou	6.35	Chicago	Mainline	PUB	GS	Grade Separation
289518J	CN-08	East 53rd Street	6.60	Chicago	Mainline	PUB	GS	Grade Separation
289519R	CN-08	East 55th Street	6.80	Chicago	Mainline	PUB	GS	Grade Separation
289520K	CN-08	East 56th Street	7.00	Chicago	Mainline	PUB	GS	Grade Separation
289521S	CN-08	East 57th Street	7.12	Chicago	Mainline	PUB	GS	Grade Separation
289522Y	CN-08	East 59th Street / Midway Westbound	7.38	Chicago	Mainline	PUB	GS	Grade Separation
289523F	CN-08	East 60th Street / Midway Eastbound	7.51	Chicago	Mainline	PUB	GS	Grade Separation
289524M	CN-08	East 63rd Street	7.88	Chicago	Mainline	PUB	GS	Grade Separation
289525U	CN-08	East 64th Street	8.01	Chicago	Mainline	PUB	GS	Grade Separation
289526B	CN-07	East 65th Street	8.14	Chicago	Mainline	PUB	GS	Grade Separation
289527H	CN-07	East 66th Street / East Marquette Roa	8.28	Chicago	Mainline	PUB	GS	Grade Separation
289528P	CN-07	East 67th Street	8.41	Chicago	Mainline	PUB	GS	Grade Separation
289527C	CN-07	East 70th Street	8.80	Chicago	Mainline	PUB	GS	Grade Separation
289573J	CN-07	East 71st Street	8.90	Chicago	Mainline	PUB	GS	Grade Separation
289574R	CN-07	East 72nd Street	9.00	Chicago	Mainline	PUB	GS	Grade Separation
289575X	CN-07	East 73rd Street	9.10	Chicago	Mainline	PUB	GS	Grade Separation
289576E	CN-07	East 75th Street / South Chicago Ave	9.30	Chicago	Mainline	PUB	GS	Grade Separation
289578T	CN-07	East 76th Street / Chicago Skyway (I-	9.44	Chicago	Mainline	PUB	GS	Grade Separation
289579A	CN-07	East 79th Street	9.90	Chicago	Mainline	PUB	GS	Grade Separation
289580U	CN-07	East 82nd Street	10.31	Chicago	Mainline	PUB	GS	Grade Separation
289581B	CN-07	East 83rd Street	10.44	Chicago	Mainline	PUB	GS	Grade Separation
289582H	CN-07	East 87th Street	10.95	Chicago	Mainline	PUB	GS	Grade Separation
289584W	CN-07	East 91st Street	11.46	Chicago	Mainline	PUB	GS	Grade Separation
289585D	CN-07	East 93rd Street	11.69	Chicago	Mainline	PUB	GS	Grade Separation
289586K	CN-06	East 95th Street (US 12 / US 20)	11.96	Chicago	Mainline	PUB	GS	Grade Separation
289587S	CN-06	Bishop Ford Freeway (I-94)	12.55	Chicago	Mainline	PUB	GS	Grade Separation
289588Y	CN-06	East 100th Street	12.60	Chicago	Mainline	PUB	GS	Grade Separation
289589F	CN-06	East 103rd Street	13.00	Chicago	Mainline	PUB	GS	Grade Separation
289590A	CN-06	East 105th Street	13.24	Chicago	Mainline	PUB	GS	Grade Separation
289591G	CN-06	East 107th Street	13.51	Chicago	Mainline	PUB	GS	Grade Separation
289593V	CN-06	East 109th Street	13.73	Chicago	Mainline	PUB	GS	Grade Separation
289594C	CN-06	East 111th Street	14.00	Chicago	Mainline	PUB	GS	Grade Separation
289595J	CN-06	East 113th Street	14.26	Chicago	Mainline	PUB	GS	Grade Separation
289596R	CN-05	East 115th Street	14.51	Chicago	Mainline	PUB	GS	Grade Separation
289597X	CN-05	East Kensington Avenue	14.64	Chicago	Mainline	PUB	GS	Grade Separation
289628U	CN-04	East 130th Street / South Indiana Ave	16.30	Chicago	Mainline	PUB	GS	Grade Separation
289631C	CN-04	West 137th Street	17.20	Chicago	Mainline	PUB	GS	Grade Separation
289632J	CN-04	West 138th Street	17.40	Chicago	Mainline	PUB	GS	Grade Separation
289633R	CN-03	West 144th Street	18.20	Chicago	Mainline	PUB	GS	Grade Separation
289634X	CN-03	East 147th Street (IL 83)	19.10	Chicago	Mainline	PUB	GS	Grade Separation
289635E	CN-03	Vincennes Rd (IL 1)	19.50	Chicago	Mainline	PUB	GS	Grade Separation
289637T	CN-03	East 152nd Street	19.60	Chicago	Mainline	PUB	GS	Grade Separation
289638A	CN-03	East 154th Street	19.95	Chicago	Mainline	PUB	GS	Grade Separation
289641H	CN-02	East 155th Street	20.10	Chicago	Mainline	PUB	GS	Grade Separation
289645K	CN-02	East 157th Street	20.40	Chicago	Mainline	PUB	GS	Grade Separation
289646S	CN-02	East 159th Street (US 6)	20.60	Chicago	Mainline	PUB	GS	Grade Separation
289664P	CN-01A	171st Street	22.30	Chicago	Mainline	PUB	GS	Grade Separation
289665W	CN-01A	Tri-State Tollway (I-294 / I-80)	22.40	Chicago	Mainline	PUB	GS	Grade Separation
289667K	CN-01A	Dixie Highway	23.30	Chicago	Mainline	PUB	GS	Grade Separation
289669Y	CN-01A	183rd Street	23.90	Chicago	Mainline	PUB	GS	Grade Separation
289672G	CN-01A	Flossmoor Road	24.95	Chicago	Mainline	PUB	GS	Grade Separation
289673N	CN-01A	Vollmer Road	26.10	Chicago	Mainline	PUB	GS	Grade Separation
289674V	CN-01A	Olympia Fields Pedestrian Crossing	26.56	Chicago	Mainline	PED	GS	Grade Separation
289675C	CN-01A	Lincoln Highway (US 30)	27.65	Chicago	Mainline	PUB	GS	Grade Separation
289676J	CN-01A	Front Street	28.20	Chicago	Mainline	PUB	GS	Grade Separation
289677R	CN-01B	Main Street	28.40	Chicago	Mainline	PUB	GS	Grade Separation
289678X	CN-01B	Sauk Trail	29.30	Chicago	Mainline	PUB	GS	Grade Separation
289680Y	CN-32	University Parkway / Stuenkel Road	31.40	Chicago	Mainline	PUB	AG	FLS w Gates
289681F	CN-32	West Dralle Road	32.50	Chicago	Mainline	PUB	AG	FLS w Gates
288900N	CN-32	West Court Street	34.05	Chicago	Mainline	PUB	GS	Grade Separation
288901V	CN-32	West Main Street	34.15	Chicago	Mainline	PUB	GS	Grade Separation
288904R	CN-32	South Governors Highway (IL 50)	34.65	Chicago	Mainline	PUB	GS	Grade Separation
283105U	CN-28	Union Avenue	4.97	Elsdon	Mainline	PUB	GS	Grade Separation
283106B	CN-28	Halsted Street	5.10	Elsdon	Mainline	PUB	GS	Grade Separation
283107H	CN-28	Morgan Street	5.35	Elsdon	Mainline	PUB	GS	Grade Separation
283108P	CN-28	Aberdeen Street	5.48	Elsdon	Mainline	PUB	GS	Grade Separation

Highway-Rail Crossing Inventory

USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
283109W	CN-28	Racine Avenue	5.60	Elsdon	Mainline	PUB	GS	Grade Separation
283110R	CN-28	Throop Street	5.73	Elsdon	Mainline	PUB	GS	Grade Separation
283112E	CN-28	Loomis Street	5.85	Elsdon	Mainline	PUB	GS	Grade Separation
283113L	CN-28	Lafin Street	5.98	Elsdon	Mainline	PUB	GS	Grade Separation
283114T	CN-28	Justine Street	6.04	Elsdon	Mainline	PUB	GS	Grade Separation
283115A	CN-28	Ashland Avenue	6.10	Elsdon	Mainline	PUB	GS	Grade Separation
283116G	CN-28	Marshfield Avenue	6.17	Elsdon	Mainline	PUB	GS	Grade Separation
283117N	CN-28	Paulina Street	6.23	Elsdon	Mainline	PUB	GS	Grade Separation
283118V	CN-28	Hermitage Avenue	6.29	Elsdon	Mainline	PUB	GS	Grade Separation
283119C	CN-28	Wood Street	6.36	Elsdon	Mainline	PUB	GS	Grade Separation
283120W	CN-28	Honore Street	6.42	Elsdon	Mainline	PUB	GS	Grade Separation
283121D	CN-28	Wolcott Avenue / Lincoln Street	6.48	Elsdon	Mainline	PUB	GS	Grade Separation
283122K	CN-28	Winchester Avenue	6.54	Elsdon	Mainline	PUB	GS	Grade Separation
283123S	CN-28	Damen Avenue	6.60	Elsdon	Mainline	PUB	GS	Grade Separation
283124Y	CN-28	Seeley Avenue	6.66	Elsdon	Mainline	PUB	GS	Grade Separation
283125F	CN-28	Hoyne Avenue	6.73	Elsdon	Mainline	PUB	GS	Grade Separation
283126M	CN-28	Western Avenue	7.06	Elsdon	Mainline	PUB	GS	Grade Separation
283127U	CN-28	California Avenue	7.61	Elsdon	Mainline	PUB	GS	Grade Separation
283128B	CN-28	Kedzie Avenue	8.12	Elsdon	Mainline	PUB	GS	Grade Separation
283129H	CN-27	51st Street	8.78	Elsdon	Mainline	PUB	AG	FLS w Gates
283130C	CN-27	51st Street	8.78	Elsdon	Mainline	PUB	AG	FLS w Gates
283131J	CN-27	55th Street	9.28	Elsdon	Mainline	PUB	AG	CFLS w Gates
283133X	CN-27	58th Street	9.66	Elsdon	Mainline	PUB	GS	Grade Separation
283134E	CN-27	59th Street	9.78	Elsdon	Mainline	PUB	GS	Grade Separation
283135L	CN-27	60th Street	9.91	Elsdon	Mainline	PUB	GS	Grade Separation
283136T	CN-27	61st Street	10.04	Elsdon	Mainline	PUB	GS	Grade Separation
283137A	CN-27	62nd Street	10.16	Elsdon	Mainline	PUB	GS	Grade Separation
283138G	CN-27	63rd Street	10.29	Elsdon	Mainline	PUB	GS	Grade Separation
283139N	CN-27	64th Street	10.41	Elsdon	Mainline	PUB	GS	Grade Separation
283140H	CN-27	65th Street	10.54	Elsdon	Mainline	PUB	GS	Grade Separation
283141P	CN-27	66th Street	10.66	Elsdon	Mainline	PUB	GS	Grade Separation
283142W	CN-27	67th Street / Marquette Road	10.79	Elsdon	Mainline	PUB	GS	Grade Separation
283143D	CN-27	71st Street	11.28	Elsdon	Mainline	PUB	AG	FLS w Gates
283144K	CN-26	79th Street	12.30	Elsdon	Mainline	PUB	AG	FLS w Gates
283145S	CN-26	Columbus Avenue	12.74	Elsdon	Mainline	PUB	AG	CFLS w Gates
283146Y	CN-26	83rd Place	12.87	Elsdon	Mainline	PUB	AG	FLS w Gates
283147F	CN-26	87th Street	13.31	Elsdon	Mainline	PUB	AG	CFLS w Gates
283148M	CN-26	91st Street	13.86	Elsdon	Mainline	PUB	AG	FLS w Gates
283149U	CN-26	Kedzie Avenue	14.33	Elsdon	Mainline	PUB	AG	CFLS w Gates
283150N	CN-26	94th Street	14.33	Elsdon	Mainline	PUB	AG	FLS w Gates
283151V	CN-26	95th Street (US 12 / US 20)	14.48	Elsdon	Mainline	PUB	AG	FLS w Gates
283152C	CN-26	99th Street	15.03	Elsdon	Mainline	PUB	AG	FLS w Gates
283153J	CN-26	103rd Street	15.53	Elsdon	Mainline	PUB	AG	FLS w Gates
283154R	CN-26	111th Street	16.54	Elsdon	Mainline	PUB	AG	CFLS w Gates
283155X	CN-26	115th Street	17.04	Elsdon	Mainline	PUB	AG	CFLS w Gates
283156E	CN-26	119th Street	17.54	Elsdon	Mainline	PUB	AG	FLS w Gates
283157L	CN-26	123rd Street	18.05	Elsdon	Mainline	PUB	AG	FLS w Gates
283158T	CN-26	127th Street	18.58	Elsdon	Mainline	PUB	AG	CFLS w Gates
283159A	CN-26	Pedestrian Crossing	18.80	Elsdon	Mainline	PED	AG	X-Bucks
283160U	CN-26	Union Street	18.87	Elsdon	Mainline	PUB	AG	FLS w Gates
283161B	CN-26	Vermont Street	19.13	Elsdon	Mainline	PUB	GS	Grade Separation
283162H	CN-25	Broadway Street	19.49	Elsdon	Mainline	PUB	AG	CFLS w Gates
283163P	CN-25	139th Street	20.16	Elsdon	Mainline	PUB	GS	Grade Separation
283164W	CN-25	Western Avenue	20.83	Elsdon	Mainline	PUB	AG	CFLS w Gates
283165D	CN-25	Interstate 57	21.15	Elsdon	Mainline	PUB	GS	Grade Separation
283166K	CN-25	Robey Street	21.58	Elsdon	Mainline	PUB	AG	FLS w Gates
283167S	CN-25	Lincoln Avenue	21.73	Elsdon	Mainline	PUB	AG	FLS w Gates
283168Y	CN-25	Wood Street	21.88	Elsdon	Mainline	PUB	AG	CFLS w Gates
283169F	CN-25	147th Street / Sibley Boulevard (IL 83)	22.00	Elsdon	Mainline	PUB	AG	CFLS w Gates
283170A	CN-25	Ashland Avenue	22.20	Elsdon	Mainline	PUB	AG	FLS w Gates
283171G	CN-25	150th Street	22.64	Elsdon	Mainline	PUB	AG	FLS w Gates
283172N	CN-25	Center Avenue	22.84	Elsdon	Mainline	PUB	AG	FLS w Gates
283173V	CN-25	Broadway Avenue	22.95	Elsdon	Mainline	PUB	AG	CFLS w Gates
283174C	CN-25	Park Avenue	23.13	Elsdon	Mainline	PUB	AG	CFLS w Gates
283177X	CN-24	Halsted Street (IL 1)	23.52	Elsdon	Mainline	PUB	AG	CFLS w Gates
283178E	CN-24	155th Street	23.57	Elsdon	Mainline	PUB	AG	FLS w Gates
283179L	CN-24	Thornton-Blue Island Road	23.87	Elsdon	Mainline	PUB	AG	FLS w Gates
283180F	CN-24	159th Street / 162nd Street (US 6)	24.32	Elsdon	Mainline	PUB	AG	CFLS w Gates
283181M	CN-24	Indiana Avenue / State Street	24.88	Elsdon	Mainline	PUB	GS	Grade Separation
283182U	CN-23B	South Park Avenue	25.53	Elsdon	Mainline	PUB	AG	CFLS w Gates
283183B	CN-23B	170th Street	25.85	Elsdon	Mainline	PUB	AG	FLS w Gates
283184H	CN-23B	Tri-State Tollway (I-294 / I-80)	26.77	Elsdon	Mainline	PUB	GS	Grade Separation
283185P	CN-23B	Calumet Expressway / Bishop Ford Fr	27.18	Elsdon	Mainline	PUB	GS	Grade Separation
283186W	CN-23B	Volbrecht Road	27.49	Elsdon	Mainline	PUB	AG	FLS w Gates
283188K	CN-23B	Thornton-Lansing Road	27.74	Elsdon	Mainline	PUB	AG	FLS w Gates
283189S	CN-23B	182nd Street / Ridge Road	28.41	Elsdon	Mainline	PUB	AG	FLS w Gates
283190L	CN-23B	Torrence Avenue (IL 83)	28.65	Elsdon	Mainline	PUB	AG	CFLS w Gates
283191T	CN-23B	186th Street	29.42	Elsdon	Mainline	PUB	AG	FLS w Gates
283193G	CN-23B	Burnham Avenue	29.80	Elsdon	Mainline	PUB	AG	FLS w Gates
283194N	CN-23B	Wentworth Avenue	30.39	Elsdon	Mainline	PUB	AG	FLS w Gates
283195V	CN-23A	Calumet Avenue	31.62	Elsdon	Mainline	PUB	AG	CFLS w Gates
283197J	CN-23A	White Oak Avenue	32.65	Elsdon	Mainline	PUB	AG	FLS w Gates
283198R	CN-23A	Indianapolis Boulevard (US 41)	33.70	Elsdon	Mainline	PUB	GS	Grade Separation

Highway-Rail Crossing Inventory

USDOT	Segment	Street	MP	Sub-division	Branch or Line Name	Class	Type	Warning Device
283199X	CN-23A	Kennedy Avenue	34.23	Elsdon	Mainline	PUB	AG	CFLS w Gates
283200P	CN-23A	Main Street	35.55	Elsdon	Mainline	PUB	AG	FLS
283201W	EJE 4B; CN 23A, 33D	Broad Street	36.09	Elsdon	Mainline	PUB	AG	FLS w Gates
283202D	CN-33A	Colfax Street	36.82	South Bend	Mainline	PUB	AG	FLS w Gates
283205Y	CN-33A	Hendricks Street	38.73	South Bend	Mainline	PUB	AG	FLS w Gates
283206F	CN-33A	Taft Street	39.55	South Bend	Mainline	PUB	AG	FLS w Gates
283207M	CN-33A	Turkey Creek Golf Course	40.40	South Bend	Mainline	PVT	AG	None
NA004	CN-33A	Turkey Creek Golf Course	40.50	South Bend	Mainline	PVT	GS	Grade Separation
283208U	CN-33A	Madison Street	40.62	South Bend	Mainline	PUB	AG	FLS w Gates
283209B	CN-33A	Broadway Street	41.05	South Bend	Mainline	PUB	AG	CFLS w Gates
CN Crossing Summary								
Public At-Grade								155
Public Grade Separated								216
Private At-Grade								12
Private Grade Separated								6
Pedestrian At-Grade								6
Pedestrian Grade Separated								7
SUBTOTAL								329
CN-EJE Crossing Summary								
Public At-Grade								333
Public Grade Separated								283
Private At-Grade								80
Private Grade Separated								13
Pedestrian At-Grade								13
Pedestrian Grade Separated								12
TOTAL								734

Corrections to APPENDIX C of the Draft EIS RAIL SAFETY

Attachment C4, Pages C4-1 through -7, Table 3.2-6 (This is only a portion of the table):

Table 3.2-6 Emergency Contact Information					
County/ Community	Website	Hazmat	Documents Found	Contact Name and Information	Document Website
Illinois					
DuPage County					
<u>Forest Preserve District DuPage County</u>	www.dupageforest.com	<u>HazMat</u>	<u>Environmental Services</u>	<u>Drew Bergenthal, Environmental Compliance Director, Office of Environmental Services, Mail: P.O. Box 5000, Wheaton, IL 60189- 5000; Delivery: 3 S. 580 Naperville Rd., Wheaton, IL 60187</u>	<u>dbergenthal@dupageforest. com</u>

Source: Data obtained by contacting local community agencies.

USDOT	Street	County	State	Segment	MP	2015 ADT	Trains Per Day		Number of Tracks		Accident Prediction			Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes		
							No Action	Proposed Action	No Action	Proposed Action	No Action	Proposed Action	Change	No Action	Proposed Action	No Action	Proposed Action	Change
Waukesha Subdivision																		
Cook County, Illinois																		
River Forest																		
689624W	Forest Avenue	Cook	IL	CN-20	12.10	3,035	5.4	0.0	1	1	0.0147	0.0004	-0.0143	A	A	37.8 58.5	0	-58.5
689625D	Augusta Street	Cook	IL	CN-20	12.19	3,035	5.4	0.0	1	1	0.0147	0.0004	-0.0143	A	A	37.8 58.5	0	-58.5
689626K	Keystone Avenue	Cook	IL	CN-20	12.24	3,035	5.4	0.0	1	1	0.0147	0.0004	-0.0143	A	A	37.8 58.5	0	-58.5
689627S	Thatcher Road	Cook	IL	CN-20	12.39	10,039	5.4	0.0	1	1	0.0223	0.0004	-0.0219	A	A	193.2	0	-193.2
River Grove																		
689628Y	1st Avenue (IL 171)	Cook	IL	CN-20	13.04	36,321	5.4	0.0	1	1	0.0334	0.0005	-0.0329	A	A	700.1	0	-700.1
689630A	5th Avenue	Cook	IL	CN-20	13.41	12,190	5.4	0.0	1	1	0.0713	0.0250	-0.0463	A	A	235	0	-235
Melrose Park																		
689631G	George Street	Cook	IL	CN-20	14.14	4,661	5.4	0.0	1	1	0.0537	0.0248	-0.0289	A	A	100.7	0	-100.7
Franklin Park																		
689632N	Fullerton Avenue	Cook	IL	CN-20	14.58	4,780	5.4	0.0	1	1	0.0165	0.0004	-0.0161	A	A	124.9	0	-124.9
689634C	Chestnut Avenue	Cook	IL	CN-20	15.22	2,343	5.4	0.0	1	1	0.0137	0.0004	-0.1340	A	A			
689638E	Belmont Avenue	Cook	IL	CN-21	15.60	11,831	19.3	2.0	3	1	0.0962	0.0565	-0.0397	B	A	1294.1	46.3	-1247.8
Des Plaines																		
689649S	Pratt Avenue	Cook	IL	CN-22	20.28	2,735	19.1	2.0	2	2	0.0265	0.0109	-0.0156	B	A	322.1	7.7	-314.4
689651T	Touhy Avenue	Cook	IL	CN-22	20.80	28,085	19.1	2.0	2	2	0.1243	0.0747	-0.0496	A	A	2229.6	60.6	-2169
689652A	Frontage Lane	Cook	IL	CN-22	21.22	3,481	19.1	2.0	2	2	0.0280	0.0117	-0.0163	A	A	276.4	7.5	-268.9
689653G	Prospect Avenue	Cook	IL	CN-22	21.44	4,906	19.1	2.0	2	2	0.0302	0.0128	-0.0174	A	A	389.5	10.6	-378.9
689654N	Oakton Street	Cook	IL	CN-22	21.82	29,160	19.1	2.0	2	2	0.1828	0.1142	-0.0686	A	A	2315	71.4	-2243.6
689655V	Algonquin Road	Cook	IL	CN-22	22.33	11,114	19.1	2.0	2	2	0.0360	0.0158	-0.0202	A	A	789.8	25	-764.8
689656C	Lee Street NB (US 12)	Cook	IL	CN-22	22.56	10,193	19.1	2.0	2	2	0.0353	0.0155	-0.0198	A	A	724.4	22.9	-701.5
689657J	Graceland Avenue (US 12)	Cook	IL	CN-22	22.67	24,956	19.1	2.0	2	2	0.2162	0.1383	-0.0779	A	A	1683.1	56.1	-1627
689658R	Thacker Street	Cook	IL	CN-22	22.84	14,102	19.1	2.0	1	1	0.0340	0.0147	-0.0193	A	A	951.1	31.7	-919.4
689659X	Prairie Avenue	Cook	IL	CN-22	22.98	2,873	19.1	2.0	1	1	0.0238	0.0097	-0.0141	A	A	175.5	6.2	-169.3
689660S	Woodlawn Avenue	Cook	IL	CN-22	23.17	659	19.1	2.0	1	1	0.0166	0.0064	-0.0102					
689675G	Seegers Road	Cook	IL	CN-22	23.86	1,781	19.1	2.0	1	1	0.0212	0.0085	-0.0127	B	A	149.9	4.6	-145.3
689676N	Golf Road (IL 58)	Cook	IL	CN-22	23.94	33,861	19.1	2.0	1	1	0.0486	0.0233	-0.0253	B	A	2850.9	91.9	-2759
689677V	Rand Road (US 12)	Cook	IL	CN-22	24.05	26,714	19.1	2.0	1	1	0.0466	0.0220	-0.0246	B	A	2391.3	71.9	-2319.4
689678C	Central Road	Cook	IL	CN-22	24.78	22,348	19.1	2.0	1	1	0.0914	0.0540	-0.0375	A	A	1302.5	43.1	-1259.4
Near Mount Prospect																		
689680D	Kensington / Foundry Road	Cook	IL	CN-22	25.80	10,090	19.1	2.0	2	2	0.0353	0.0154	-0.0199	A	A	515.5	16	-499.5
Mount Prospect																		
689681K	Euclid Avenue	Cook	IL	CN-22	26.32	22,826	19.1	2.0	2	2	0.0496	0.0239	-0.0257	A	A	1119.1	34.3	-1084.8
Prospect HTS																		
689682S	Wolf Road	Cook	IL	CN-22	26.78	25,216	19.1	2.0	2	2	0.1004	0.0591	-0.0413	A	A	1187.9	37.9	-1150
689683Y	Camp McDonald Road	Cook	IL	CN-22	26.86	10,397	19.1	2.0	2	2	0.0355	0.0155	-0.0200	A	A	489.8	15.6	-474.2
689688H	Hintz Road	Cook	IL	CN-22	28.96	24,977	19.1	2.0	3	2	0.0504	0.0244	-0.0259	A	A	1331.4	43.5	-1287.9
Wheeling																		
694918S	Willow Road	Cook	IL	CN-22	27.37	3,585	19.1	2.0	2	2	0.0276	0.0114	-0.0167	A	A	175.8	5.5	-170.3
689689P	Dundee Road (IL 22)	Cook	IL	CN-22	30.06	40,188	19.1	2.0	2	2	0.0282	0.0118	0.0164	A	A	1754.1	63.9	-1690.2
Lake County, Illinois (Waukesha Subdivision)																		
Buffalo Grove																		
694865V	Deerfield Road / Busch Parkway	Lake	IL	CN-22	32.37	23,182	19.1	2.0	2	2	0.0497	0.0240	-0.0257	A	A	1351.1	43.1	-1,308
689694L	Buffalo Grove Road	Lake	IL	CN-22	34.82	16,341	19.1	2.0	2	2	0.0428	0.0196	-0.0232	A	A	713.2	24.6	-689

USDOT	Street	County	State	Segment	MP	2015 ADT	Trains Per Day		Number of Tracks		Accident Prediction			Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes		
							No Action	Proposed Action	No Action	Proposed Action	No Action	Proposed Action	Change	No Action	Proposed Action	No Action	Proposed Action	Change
Prairie View																		
689692X	Aptakisic Road	Lake	IL	CN-22	33.21	29,009	19.1	2.0	2	2	0.0517	0.0253	-0.0264	A	A	1690.7	54	-1,637
Near Prairie View																		
689693E	Half Day Road (IL 22)	Lake	IL	CN-22	34.18	24,195	19.1	2.0	2	1	0.0380	0.0169	-0.0211	A	A	1096.5	37.4	-1,059
Near Vernon Hills																		
689697C	US 45	Lake	IL	CN-22	36.05	22,295	19.1	2.0	2	2	0.0453	0.0212	-0.0241	A	A	973.1	36.5	-937
Vernon Hills																		
689698N	Butterfield Road	Lake	IL	CN-22	37.37	18,368	19.1	2.0	2	2	0.0477	0.0227	-0.0250	A	A	900.5	33	-868
Mundelein																		
689699V	Townline Road (IL 60)	Lake	IL	CN-22	37.50	44,048	19.1	2.0	2	2	0.1238	0.0743	-0.0495	A	A	1997.8	74.1	-1,924
689701U	Allanson Road	Lake	IL	CN-29	38.65	19,382	20.8	17.8	2	2	0.0986	0.0950	-0.0036	A	B	1230.1	2116.3	886
689703H	Hawley Street	Lake	IL	CN-29	39.83	8,234	20.8	17.8	2	2	0.0384	0.0365	-0.0019	A	A	522.6	578.4	56
689704P	Park Street	Lake	IL	CN-29	39.94	732	20.8	17.8	2	2	0.0200	0.0188	-0.0012	A	A	46.5	51.5	5
689705W	Maple Street	Lake	IL	CN-29	40.10	14,568	20.8	17.8	2	2	0.0391	0.0372	-0.0019	A	A	924.6	1024.2	100
689707K	Dunbar Road	Lake	IL	CN-29	40.85	494	20.8	17.8	2	2	0.0181	0.0170	-0.0011	A	A	350.9	947.3	596
689709Y	Winchester Road	Lake	IL	CN-29	41.78	6,841	20.8	17.8	2	2	0.0529	0.0510	-0.0019	A	A	350.9	947.3	596
Grays Lake Near Mundelein																		
689710T	Peterson Road	Lake	IL	CN-29	42.38	20,268	20.8	17.8	2	2	0.1213	0.1173	-0.0040	A	A	866.1	947.3	81
Near Libertyville																		
689712G	Harris Road	Lake	IL	CN-29	43.03	4,434	20.8	17.8	2	2	0.0304	0.0288	-0.0016	A	A	189.5	207.2	18
Freepoint Subdivision																		
Cook County, Illinois																		
Chicago																		
289808S	South Lawndale Avenue	Cook	IL	CN-10	7.21	886	2.5	0.0	2	2	0.0088	0.0004	-0.0084					
289809Y	Pulaski Road	Cook	IL	CN-10	7.59	27,965	2.5	0.0	2	2	0.0730	0.0252	-0.0478	A	A	414.6	0	-415
Berwyn																		
289821F	Riverside Drive	Cook	IL	CN-12	11.70	5,497	4.4	1.7	2	2	0.0179	0.0123	-0.0056	A	A	136.9	15.1	-122
Riverside																		
289822M	Harlem Avenue (IL 43)	Cook	IL	CN-12	11.78	39,485	4.4	1.7	2	2	0.0354	0.0257	-0.0097	A	A	983.3	108.4	-875
North Riverside																		
289824B	26th Street	Cook	IL	CN-12	11.95	16,134	4.4	1.7	2	2	0.0259	0.0183	-0.0077	A	A	401.8	44.3	-358
840408R	Veterans Drive	Cook	IL	CN-12	12.13	695	4.4	1.7	2	2	0.0118	0.0080	-0.0038					
289830E	Hainsworth Avenue	Cook	IL	CN-12	12.45	1,195	4.4	1.7	2	2	0.0133	0.0087	-0.0046					
289831L	Des Plaines Avenue	Cook	IL	CN-12	12.85	17,807	4.4	1.7	2	2	0.0265	0.0187	-0.0078	A	A	443.4	48.9	-395
Near North Riverside																		
289832T	Cermak Road	Cook	IL	CN-12	13.25	40,633	4.4	1.7	2	2	0.0353	0.0257	-0.0097	A	A	1011.8	111.5	-900
289833A	1st Avenue (IL 171)	Cook	IL	CN-12	13.45	37,727	4.4	1.7	2	2	0.0314	0.0225	-0.0089	A	A	939.5	103.6	-836
Broadview																		
289834G	17th Avenue	Cook	IL	CN-12	14.50	11,353	4.4	1.7	2	2	0.0239	0.0167	-0.0072	A	A	456.9	43.7	-413
Hillside																		
289843F	Wolf Road	Cook	IL	CN-13A	17.25	18,763	3.0	1.7	1	1	0.0352	0.0292	-0.0060	A	A	184.3	27.9	-156
289840K	Oak Ridge Avenue	Cook	IL	CN-13A	16.60	144	3.0	1.7	1	1	0.0051	0.0038	-0.0013					
289841S	Harrison Street	Cook	IL	CN-13A	17.10	10,984	3.0	1.7	1	1	0.0242	0.0194	-0.0048	A	A	103.1	16.3	-87
Cook County, Illinois (Freepoint Subdivision)																		
Elmhurst																		
289850R	York Road	DuPage	IL	CN-13A	19.35	24,190	3.0	1.7	1	1	0.0197	0.0159	-0.0038	A	A	217.1	34.8	-182
289851X	Vallette Street	DuPage	IL	CN-13B	19.50	4,233	3.0	1.7	1	1	0.0126	0.0100	-0.0026	A	A	41.5	7.2	-34
289853L	Argyle Avenue	DuPage	IL	CN-13B	19.80	1,165	3.0	1.7	1	1	0.0089	0.0068	-0.0021	A	A	9.6	1.7	-8
289854T	Spring Road	DuPage	IL	CN-13B	19.98	10,886	3.0	1.7	1	1	0.0161	0.0129	-0.0032	A	A	86.3	15.7	-71
289855A	St Charles Street	DuPage	IL	CN-13B	20.20	11,289	3.0	1.7	1	1	0.0184	0.0148	-0.0036	A	A	89.5	16.2	-73
289856G	West Avenue	DuPage	IL	CN-13B	20.60	11,289	3.0	1.7	1	1	0.0163	0.0130	-0.0032	A	A	89.5	16.2	-73
Villa Park																		
289858V	Villa Avenue	DuPage	IL	CN-13B	21.25	8,870	3.0	1.7	1	1	0.0153	0.0122	-0.0031	A	A	70.3	12.8	-58
289860W	Addison Avenue	DuPage	IL	CN-13B	22.30	17,471	3.0	1.7	1	1	0.0320	0.0264	-0.0056	A	A	144.1	26	-118
289861D	North Avenue (IL 64)	DuPage	IL	CN-13B	22.35	58,778	3.0	1.7	1	1	0.1051	0.0927	-0.0124	A	A	484.9	87.4	-398
28987C	Westwood Avenue	DuPage	IL	CN-13B	22.85	478	3.0	1.7	1	1	0.0070	0.0055	-0.0015					
Near Addison																		
289871J	Grace Avenue	DuPage	IL	CN-13B	23.40	9,139	3.0	1.7	1	1	0.0197	0.0158	-0.0038	A	A	82	13.2	-69
289876T	Swift Road	DuPage	IL	CN-13B	25.30	22,175	3.0	1.7	1	1	0.0217	0.0176	-0.0041	A	A	162.7	28.3	-134

Vehicle Safety and Delay Table

USDOT	Street	County	State	Segment	MP	2015 ADT	Trains Per Day		Number of Tracks		Accident Prediction			Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes		
							No Action	Proposed Action	No Action	Proposed Action	No Action	Proposed Action	Change	No Action	Proposed Action	No Action	Proposed Action	Change
Near Bloomingdale																		
289880H	Schmale Road	DuPage	IL	CN-13B	28.48	30,373	3.0	1.7	1	1	0.0262	0.0214	-0.0048	A	A	261.2	39.9	-221
289891V	Army Trail Road	DuPage	IL	CN-13B	29.70	41,796	3.0	1.7	1	1	0.0749	0.0657	-0.0092	A	A	295.6	46.9	-249
Bloomingdale																		
289890N	Gary Avenue	DuPage	IL	CN-13B	29.55	37,092	3.0	1.7	1	1	0.0274	0.0224	-0.0050	A	A	262.3	41.7	-221
840415B	Madsen Drive	DuPage	IL	CN-13B	30.44	705	3.0	1.7	1	1	0.0170 0.0078	0.0136 0.0061	0.0034 0.0016					

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							No Action	Proposed Action	No Action	Proposed Action	No Action	Proposed Action	Change	No Action	Proposed Action	No Action	Proposed Action	Change
Hanover Park																		
911764J	County Farm Road	DuPage	IL	CN-13B	31.17	38,705	3.0	1.7	1	1	0.0277	0.0227	-0.0050	A	A	273.7	44.5	-229
Bartlett																		
289901Y	Sutton Road (IL 59)	DuPage	IL	CN-13B	34.15	52,951	3.0	1.7	1	1	0.0297	0.0244	-0.0053	A	A	403.5	65.8	-338
289902F	Munger Road	DuPage	IL	CN-13B	35.15	2,016	3.0	1.7	2	1	0.0104	0.0082	-0.0022					
Near Bartlett																		
289903M	Powis Road	DuPage	IL	CN-30A	36.05	5,510	2.0	2.0	1	1	0.0161	0.0161	0.0000	A	A	33.4	163.2	130
Kane County, Illinois (Freeport Subdivision)																		
South Elgin																		
289905B	IL Route 25	Kane	IL	CN-30B	38.10	10,830	2.0	2.0	1	1	0.0234	0.0224	0.0000	A	A	27	27	0
289910X	Randall Road	Kane	IL	CN-30B	41.55	46,189	2.0	2.0	1	1	0.0309	0.0309	0.0000	A	A	115.1	115.1	0
Joliet Subdivision																		
Cook County, Illinois																		
Willow Spring																		
289729K	Old Willow Springs Road	Cook	IL	CN-17	17.54	2,271	1.8	2.0	2	2	0.0100	0.0104	0.0004					
Lemont																		
289733V	Prunex Street / Illinois Street	Cook	IL	CN-17	24.71	7,171	1.8	2.0	2	2	0.0135	0.0141	0.0006	A	A	35.9	33.4	-3
289734C	Holmes Street	Cook	IL	CN-17	24.95	451	1.8	2.0	2	2	0.0057	0.0060	0.0003	A	A	2.3	2.1	0
289735J	Stephen Street	Cook	IL	CN-17	25.10	14,222	1.8	2.0	2	2	0.0106	0.0110	0.0004	A	A			-6
289736R	Lemont Street	Cook	IL	CN-17	25.18	1,172	1.8	2.0	2	2	0.0083	0.0087	0.0004			78.2	72.7	
Will County, Illinois (Joliet Subdivision)																		
Romeoville																		
289738E	Industrial Avenue	Cook	IL	CN-18	25.80	277	1.8	2.0	2	2	0.0342	0.0347	0.0005					
289744H	Romeoville Road / 135th Street	Will	IL	CN-18	28.98	19,102	1.8	2.0	2	2	0.0174	0.0181	0.0007	A	A	55.6	86.2	31
Lockport																		
289749S	2nd Street	Will	IL	CN-18	32.06	43	1.8	2.0	2	2	0.0033	0.0034	0.0001					
289750L	6th Street	Will	IL	CN-18	32.36	160	1.8	2.0	3	2	0.0048	0.0050	0.0002					
289752A	9th Street (IL 7)	Will	IL	CN-18	32.59	31,796	1.8	2.0	2	2	0.0198	0.0205	0.0007	A	A	104.6	177	72
289753G	10th Street	Will	IL	CN-18	32.70	160	1.8	2.0	2	2	0.0048	0.0050	0.0002	A	A	0.5	0.9	0
289754N	11th Street	Will	IL	CN-18	32.74	307	1.8	2.0	2	2	0.0057	0.0060	0.0003	A	A	1	1.7	1
289755V	13th Street	Will	IL	CN-18	32.89	160	1.8	2.0	2	2	0.0048	0.0050	0.0002					
289756C	Division Street	Will	IL	CN-18	33.11	6,783	1.8	2.0	2	2	0.0133	0.0139	0.0006	A	A	22.3	37.8	16
Joliet																		
289759X	Ohio Street	Will	IL	CN-18	36.64	7,198	2.0	2.0	2	2	0.0136	0.0141	0.0006	A	A	196.4	359.8	163
289760S	Jackson Street	Will	IL	CN-18	36.77	20,380	2.0	2.0	3	3	0.0136	0.0142	0.0006	A	A	555.9	1018.7	463
Chicago Subdivision																		
Cook County, Illinois																		
Richton Park																		
289680Y	University Parkway / Stuenkel Rd	Will	IL	CN-32	31.40	13,640	13.8	12.3	2	2	0.0337	0.0325	-0.0012	A	A	295.1	263	-32
University Park																		
289681F	W Dralle Road	Will	IL	CN-32	32.90	4,012	13.8	12.3	1	1	0.0255	0.0245	-0.0010	A	A	86.8	77.4	-9
Elsdon/Southbend Subdivision																		
Cook County, Illinois																		
Chicago																		
283126H	54th Street	Cook	IL	CN-27	8.78	2,397	1.6	1.6	3	3	0.0084	0.0084	0.0000					
283130C	51st Street	Cook	IL	CN-27	8.78	2,397	1.6	1.6	3	3	0.0084	0.0084	0.0000					
283131J	55th Street	Cook	IL	CN-27	9.28	31,431	1.6	1.6	1	1	0.0211	0.0211	0.0000	A	A	1019.1	1019.1	0
283143D	71st Street	Cook	IL	CN-27	11.28	16,612	1.6	1.6	1	1	0.0141	0.0141	0.0000	A	A	538.6	538.6	0
283144K	79th Street	Cook	IL	CN-26	12.30	29,291	3.4	0.0	2	2	0.0305	0.0006	-0.0299	A	A	2018.2	0	-2,018
283145S	Columbus Avenue	Cook	IL	CN-26	12.74	18,046	3.4	0.0	2	2	0.0136	0.0006	0.0113	A	A	1243.4	0	-1,243
283146Y	83rd Place	Cook	IL	CN-26	12.87	1,305	3.4	0.0	2	2	0.0098	0.0004	-0.0094	A	A	89.9	0	-90
283147F	87th Street	Cook	IL	CN-26	13.31	23,663	3.4	0.0	2	2	0.0358	0.0008	-0.0350	A	A	1630.4	0	-1,630
283153J	103rd Street	Cook	IL	CN-26	15.53	23,782	3.4	0.0	2	2	0.0765	0.0252	-0.0513	A	A	1638.6	0	-1,639
283154R	111th Street	Cook	IL	CN-26	16.54	19,600	3.4	0.0	2	2	0.0278	0.0006	-0.0273	A	A	1350.4	0	-1,350
283155X	115th Street	Cook	IL	CN-26	17.04	15,536	3.4	0.0	2	2	0.0264	0.0006	-0.0258	A	A	1070.4	0	-1,070
Evergreen Park																		
283148M	91st Street	Cook	IL	CN-26	13.86	4,482	3.4	0.0	2	2	0.0154	0.0004	-0.0150	A	A	308.8	0	-309
283149U	Kedzie Avenue	Cook	IL	CN-26	14.33	28,802	3.4	0.0	2	2	0.0302	0.0006	0.0297	A	A	1984.4	0	-1,984

Vehicle Safety and Delay Table

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283150N	94th Street	Cook	IL	CN-26	14.33	3,466	3.4	0.0	2	2	0.0183	0.0006	-0.0178	A	A	238.8	0	-239
283151V	95th Street (US 12)	Cook	IL	CN-26	14.48	27,768	3.4	0.0	2	2	0.0370	0.0008	-0.0362	A	A	1913.2	0	-1,913
283152C	99th Street	Cook	IL	CN-26	15.03	11,592	3.4	0.0	2	2	0.0196	0.0004	-0.0191	A	A	798.7	0	-799

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							No Action	Proposed Action	No Action	Proposed Action	No Action	Proposed Action	Change	No Action	Proposed Action	No Action	Proposed Action	Change
Blue Island																		
283156E	119th Street	Cook	IL	CN-26	17.54	14,341	3.4	0.0	2	2	0.0206	0.0004	-0.0202	A	A	988.1	0	-988
283157L	123rd Street	Cook	IL	CN-26	18.05	6,468	3.4	0.0	2	2	0.0169	0.0004	-0.0165	A	A	445.6	0	-446
283158T	127th Street	Cook	IL	CN-26	18.58	27,607	3.4	0.0	2	2	0.0783	0.0252	-0.0531	A	A	1902.1	0	-1,902
283160U	Union Street	Cook	IL	CN-26	18.87	886	3.4	0.0	2	2	0.0100	0.0004	-0.0096					
283162H	Broadway Street	Cook	IL	CN-25	19.49	5,916	14.9	1.0	2	2	0.0355	0.0132	-0.0223	E	A	3043	130.5	-2,913
Dixmoor																		
283164W	Western Avenue	Cook	IL	CN-25	20.83	10,039	14.9	1.0	2	2	0.0954	0.0515	-0.0439	A	A	745.7	25.1	-721
283166K	Robey Street	Cook	IL	CN-25	21.58	144	14.9	1.0	2	2	0.0111	0.0036	0.0079	A	A	8.3	0.3	-8
Harvey																		
283167S	Lincoln Avenue	Cook	IL	CN-25	21.73	886	14.9	1.0	2	2	0.0166	0.0054	0.0112	A	A	51	1.7	-49
283168Y	Wood Street	Cook	IL	CN-25	21.88	15,775	14.9	1.0	2	2	0.0184	0.0061	0.0123	A	A	865.3	29.8	-836
283169F	147th Street / Sibley Blvd (IL 83)	Cook	IL	CN-25	22.00	33,509	14.9	1.0	2	2	0.1770	0.1017	-0.0753	A	A	1838.1	63.3	-1,775
283170A	Ashland Avenue	Cook	IL	CN-26	22.20	13,944	14.9	1.0	2	2	0.1906	0.1162	-0.0744					
283171G	150th Street	Cook	IL	CN-27	22.64	1,408	14.9	1.0	2	2	0.0259	0.0090	-0.0169					
283172N	Center Street	Cook	IL	CN-25	22.84	886	14.9	1.0	2	2	0.0566	0.0349	0.0218	A	A	46.9	1.6	-45
283173V	Broadway Street Avenue	Cook	IL	CN-25	22.95	886	14.9	1.0	2	2	0.0572	0.0351	0.0153	A	A	46.4	1.6	-45
283174C	Park Avenue	Cook	IL	CN-25	23.13	7,051	14.9	1.0	2	2	0.0228	0.0078	0.0154	A	A	369.3	12.8	-357
283177X	Halsted St (IL 1)	Cook	IL	CN-24	23.52	14,411	19.5	1.0	3	2	0.0368	0.0139	-0.0230	A	A	713	27.2	-686
Phoenix																		
283178E	155th Street	Cook	IL	CN-24	23.57	451	19.5	1.0	3	2	0.0456	0.0045	0.0111	A	A	22.3	0.9	-21
South Holland																		
283188K	Thornton-Blue Island Road	Cook	IL	CN-24	23.87	4,960	19.5	1.0	2	2	0.0184	0.0061	0.0123	A	A	256.6	10.5	-246
283180F	162nd / 159th Street (US 6)	Cook	IL	CN-24	24.32	34,741	19.5	1.0	2	2	0.0305	0.0098	-0.0208	A	A	17973	6.9	-17,966
283182U	South Park Avenue	Cook	IL	CN-23B	25.53	11,831	22.1	2.9	2	2	0.0535	0.0207	-0.0328	A	A	1176.9	161.7	-1,015
283183B	170th Street	Cook	IL	CN-23B	25.85	13,266	22.1	2.9	2	2	0.0460	0.0234	-0.0226	B	A	3451.2	509.3	-2,942
Lansing																		
283186W	Volbrecht Road	Cook	IL	CN-23B	27.49	3,641	22.1	2.9	2	2	0.1087	0.0674	-0.0412	A	A	195.3	21.8	-174
283189S	182nd Street / Ridge Road	Cook	IL	CN-23B	28.41	9,336	22.1	2.9	2	2	0.0298	0.0137	-0.0161	A	A	659	71.9	-587
283190L	Torrence Avenue (IL 83)	Cook	IL	CN-23B	28.65	12,799	22.1	2.9	2	2	0.0364	0.0174	-0.0190	A	A	370.1	40.9	-329
283191T	186th Street	Cook	IL	CN-23B	29.42	7,768	22.1	2.9	2	2	0.0467	0.0238	-0.0228	A	A	400.5	45.9	-355
283193G	Burnham Avenue	Cook	IL	CN-23B	29.80	8,724	22.1	2.9	2	2	0.0873	0.0541	-0.0331	A	A	598.1	68.5	-530
283194N	Wentworth Avenue	Cook	IL	CN-23B	30.39	13,027	22.1	2.9	2	2	0.0359	0.0171	-0.0188	A	A	400.5	45.9	-355
Near Thornton																		
283188K	Thornton-Lansing Road	Cook	IL	CN-23B	27.74	11,951	22.1	2.9	2	2	0.0390	0.0190	-0.0200	A	A	640.8	71.6	-569
Lake County, Indiana (Elsdon/Subdivision)																		
Munster																		
283195V	Calumet Avenue	Lake	IN	CN-23A	31.62	31,311	22.1	2.9	2	2	0.0383	0.0186	-0.0197	A	A	1549.9	169.9	-1,380
283197J	White Oak Avenue	Lake	IN	CN-23A	32.65	11,062	22.1	2.9	2	2	0.0377	0.0182	-0.0195	A	A	593.2	66.2	-527
Highland																		
283199X	Kennedy Avenue	Lake	IN	CN-23A	34.23	6,664	22.1	2.9	2	2	0.0853	0.0530	-0.0323	C	A	1251.6	184.3	-1,067
Griffith																		
283200P	Main Street	Lake	IN	CN-23A	35.55	10,960	22.1	2.9	2	2	0.0546	0.0341	0.0235	A	A	669.4	184.3	-485
283201W	Broad Street	Lake	IN	CN-23A	36.09	19,572	32.4	37.4	2	6	0.0497	0.0268	0.0229	A	A	1142.9	140.7	-1,002
283202D	Colfax Street	Lake	IN	CN-33	36.82	14,139	24.8	18.6	2	2	0.1216	0.1059	-0.0157	A	A	785.4	986.6	201
Near Merrillville																		
283205Y	Hendricks Street	Lake	IN	CN-33	38.73	555	24.8	18.6	2	2	0.0981	0.0916	-0.0065					
Merrillville																		
283206F	Taft Street	Lake	IN	CN-33	39.55	30,473	24.8	18.6	2	2	0.0200	0.0179	-0.0021	A	A	1692.7	1269.5	-423
283208U	Madison Street	Lake	IN	CN-33	40.62	9,031	24.8	18.6	2	2	0.0474	0.0436	-0.0038	A	A	501.6	376.2	-125
283209B	Broadway Street	Lake	IN	CN-33	41.05	39,989	24.8	18.6	2	2	0.0376	0.0342	-0.0034	A	A	2221.3	1665.9	-555
CN Subtotal											6.4057	3.8797	-2.5260			111342.9	18308.2	-93210

EJ and E
Vehicle Safety Delay Table

USDOT	Street	County	State	Segment	MP	2015 ADT	Trains Per Day		Number of Tracks		Accident Prediction			Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes		
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Western Subdivision																		
Waukegan																		
260796P	South Harbor Drive	Lake	IL	EJE 16	73.00	684	3.0	3.0	1	1	0.0091	0.0091	0.0000					
North Chicago																		
260473U	Martin L King Dr/22nd Avenue	Lake	IL	EJE 16	69.75	14,396	3.0	3.0	1	1	0.0228	0.0220	-0.0008					
260475H	Morrow Road	Lake	IL	EJE 16	69.58	326	3.0	3.0	1	1	0.0066	0.0063	-0.0003					
260478D	Buckley Road	Lake	IL	EJE 16	69.00	27,819	3.0	3.0	1	1	0.0227	0.0227	0.0000					
Near Lake Bluff																		
260483A	Waukegan Road	Lake	IL	EJE 16	66.42	30,104	3.0	3.0	1	1	0.0261	0.0261	0.0000					
260484G	Park Avenue/Rockland Road	Lake	IL	EJE 16	65.75	21,099	3.0	3.0	1	1	0.0204	0.0167	-0.0036					
Mettawa																		
260488J	Old School Road	Lake	IL	EJE 15	63.87	1,439	3.2	3.2	1	1	0.0097	0.0097	0.0000					
260489R	St Marys Road	Lake	IL	EJE 15	63.33	16,375	3.2	3.2	1	1	0.0183	0.0183	0.0000					
Vernon Hills																		
260493F	Butterfield Road	Lake	IL	EJE 15	60.42	33,914	3.2	3.2	1	1	0.0275	0.0275	0.0000					
Near Libertyville																		
260485N	Arcadia/Elm Road	Lake	IL	EJE 16	65.62	381	3.0	3.0	2	2	0.0211	0.0167	-0.0044					
260486V	Bradley Road	Lake	IL	EJE 15	65.16	12,931	3.2	3.2	1	1	0.0173	0.0173	0.0000					
260490K	Milwaukee Avenue	Lake	IL	EJE 15	62.20	38,839	3.2	3.2	1	1	0.0283	0.0283	0.0000					
260906X	Lakeview Parkway	Lake	IL	EJE 15	61.70	8,412	3.2	3.2	1	1	0.0155	0.0155	0.0000					
260495U	Diamond Lake Road	Lake	IL	EJE 14	59.13	6,207	5.3	20.3	1	2	0.0556	0.0764	0.0208	A	A	42.9	526	483.1
Near Mundelein																		
260496B	IL 60&83	Lake	IL	EJE 14	59.02	29,009	5.3	20.3	1	2	0.0227	0.0364	0.0137	A	A	190.3	2456	2265.7
Near Hawthorn Woods																		
260500N	Gilmer Road	Lake	IL	EJE 14	56.90	18,622	5.3	20.3	1	1	0.0229	0.0367	0.0138	A	A	106	1425	1319
260503J	Old McHenry Road	Lake	IL	EJE 14	55.45	32,429	5.3	20.3	1	1	0.0324	0.0490	0.0167	A	A	189	2540.3	2351.3
Near Lake Zurich																		
260794B	Oakwood Road	Lake	IL	EJE 14	54.73	4,750	5.3	20.3	1	1	0.0163	0.0273	0.0110	A	B	31.9	414	382.1
Lake Zurich																		
260507L	Main Street	Lake	IL	EJE 14	53.44	7,474	5.3	20.3	1	1	0.0183	0.0302	0.0119	A	B	50.6	650	599.4
260508T	Old Rand Road	Lake	IL	EJE 14	53.27	7,474	5.3	20.3	1	1	0.0183	0.0302	0.0119	A	A	49.5	632	582.5
260510U	Ela Road	Lake	IL	EJE 14	52.33	21,408	5.3	20.3	1	1	0.0265	0.0416	0.0151	A	A	102.6	1361.7	1259.1
Near Barrington																		
260511B	Cuba Road	Lake	IL	EJE 14	51.56	12,921	5.3	20.3	1	1	0.0210	0.0340	0.0130	A	A	58.5	726.4	667.9
Barrington																		
260513P	Lake Zurich Road	Lake	IL	EJE 14	50.40	3,131	5.3	20.3	1	1	0.0147	0.0248	0.0101	A	A	12	169.6	157.6
260514W	Northwest Highway	Lake	IL	EJE 14	50.10	33,949	5.3	20.3	1	1	0.0327	0.0494	0.0167	A	A	149.4	1907.2	1757.8
260515D	Hough Street IL 59 & 63	Lake	IL	EJE 14	49.80	22,549	5.3	20.3	1	1	0.0240	0.0382	0.0142	A	A	100.8	1265.6	1164.8
Barrington																		
260516K	Lake Cook Road	Cook	IL	EJE 14	49.30	14,222	5.3	20.3	2	2	0.0215	0.0347	0.0133	A	A	63.9	798.4	734.5
260517S	Otis Road	Cook	IL	EJE 14	47.90	1,673	5.3	20.3	1	1	0.0125	0.0214	0.0089	A	A	8.1	103.4	95.3
Near Barrington																		
260520A	Penny Road	Cook	IL	EJE 14	44.47	4,786	5.3	20.3	1	1	0.0164	0.0274	0.0110	A	A	22.5	297.5	275
260521G	Old Sutton Road	Cook	IL	EJE 14	44.00	2,070	5.3	20.3	1	1	0.0132	0.0225	0.0093	A	A	10.0	127.9	117.9
Hoffman Estates																		
260525J	Shoe Factory Road	Cook	IL	EJE 14	41.90	9,202	5.3	20.3	1	1	0.0193	0.0317	0.0124	A	A	44.1	572.9	528.8
260530F	Spaulding Road	Cook	IL	EJE 14	37.60	1,434	5.3	20.3	2	2	0.0137	0.0233	0.0096	A	A	5.7	69.8	64.1
Near Elgin																		
260532U	West Bartlett Road	Cook	IL	EJE 13	36.95	17,209	5.5	22.5	3	3	0.0755	0.1053	0.0298	A	A	81	918	837
Near Bartlett																		
260533B	Stearns Road	DuPage	IL	EJE 13	35.88	27,604	5.5	22.5	1	1	0.0316	0.0491	0.0175	A	A	134.1	1527	1392.9

EJ and E
Vehicle Safety Delay Table

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Wayne																		
260535P	Army Trail Road	DuPage	IL	EJE 12	33.90	7,392	4.4	23.4	1	1	0.0170	0.0317	0.0147	A	A	21.6	470.4	448.8
Near West Chicago																		
260536W	Smith Road	DuPage	IL	EJE 12	32.94	7,123	4.4	23.4	1	1	0.0168	0.0315	0.0146	A	A	21.6	452.8	431.2
260538K	Hawthorne Lane	DuPage	IL	EJE 12	30.24	20,024	4.4	23.4	2	2	0.0217	0.0390	0.0173	A	B	76.5	1765.1	1688.6
West Chicago																		
260541T	Washington Street	DuPage	IL	EJE 11	28.39	12,095	10.7	31.6	1	1	0.0268	0.0388	0.0120	A	C	387.6	2361.6	1974
260542A	Aurora Street	DuPage	IL	EJE 11	28.87	364.0	10.7	31.6	1	1	0.0266	0.0414	0.0148	A	B	11.2	59.4	48.2
260543G	Church Street	DuPage	IL	EJE 11	28.77	364	10.7	31.6	1	1	0.0112	0.0175	0.0063	A	C	11.2	61.6	50.4
260545V	Ann Street	DuPage	IL	EJE 11	28.50	1,127	10.7	31.6	2	2	0.0150	0.0230	0.0080	A	C	33.6	197.2	163.7
Naperville																		
260556H	Diehl Road	DuPage	IL	EJE 11	22.80	17,341	10.7	31.6	1	1	0.0886	0.1137	0.0251	A	B	278.4	1486.4	1208
Near Aurora																		
260558W	Liberty Street	DuPage	IL	EJE 10	20.63	16,111	15.7	39.5	1	2	0.0327	0.0483	0.0156	A	B	597	2392.1	1795.1
260560X	Ogden Ave US 34	DuPage	IL	EJE 10	19.05	46,110	15.7	39.5	1	2	0.0485	0.0660	0.0175	A	B	1132.8	4377	3244.2
260562L	Montgomery Road	DuPage	IL	EJE 10	18.18	27,131	15.7	39.5	1	2	0.0365	0.0528	0.0163	A	B	667.2	2629.5	1962.3
260563T	Kealing Drive/ 87th Street	Will	IL	EJE 10	17.17	4,182	15.7	39.5	1	2	0.0241	0.0374	0.0133	A	B	130.2	405.0	274.8
Near Plainfield																		
260564A	Hafenrichter Road	Will	IL	EJE 10	17.08	5,657	15.7	39.5	1	2	0.0259	0.0397	0.0138	A	B	139.2	547.5	408.3
260565G	Wolf's Crossing	Will	IL	EJE 10	16.20	9,593	15.7	39.5	1	2	0.0292	0.0439	0.0147	A	B	241.2	1012.8	771.6
260567V	111th Street	Will	IL	EJE 10	14.63	10,454	15.7	39.5	1	2	0.0298	0.0446	0.0148	A	B	262.8	1104	841.2
260569J	Furguson Road - 119th Street	Will	IL	EJE 10	13.59	3,690	15.7	39.5	1	2	0.0234	0.0364	0.0130	A	B	102.7	398.4	295.7
260571K	Normantown - 252nd	Will	IL	EJE 10	12.92	2,492	15.7	39.5	1	2	0.0213	0.0335	0.0122	A	B	68.5	294.2	225.6
260573Y	127th Street - Chapins Road	Will	IL	EJE 10	12.56	13,160	15.7	39.5	1	2	0.0347	0.0507	0.0160	A	B	377	1618.4	1241.4
260575M	135th Street	Will	IL	EJE 10	11.43	13,898	15.7	39.5	2	2	0.0812	0.1088	0.0276	A	B	282	1267.2	985.2
260576U	Van Dykes Road	Will	IL	EJE 9	10.68	6,921	18.5	42.3	1	1	0.0288	0.0381	0.0093	A	B	141.9	640.5	498.6
260585T	Renwick Road	Will	IL	EJE 9	7.60	11,807	18.5	42.3	1	1	0.1324	0.1584	0.0260	A	B	265	1143.8	878.8
Plainfield																		
260577B	143rd Street	Will	IL	EJE 9	10.33	9,716	18.5	42.3	1	1	0.0299	0.0402	0.0103	A	B	194.7	821.8	627.1
260580J	Plainfield-Naperville Road	Will	IL	EJE 9	9.62	8,117	18.5	42.3	1	1	0.0298	0.0394	0.0096	A	B	188.1	721	532.9
260581R	Main Street	Will	IL	EJE 9	9.53	20,015	18.5	42.3	1	1	0.0362	0.0467	0.0105	A	B	463.1	1778	1314.9
260582X	Center Street	Will	IL	EJE 9	9.33	1,845	18.5	42.3	1	1	0.0211	0.0288	0.0076	A	B	42.7	163.8	121.1
260583E	Eastern Avenue	Will	IL	EJE 9	9.27	3,444	18.5	42.3	1	1	0.0245	0.0330	0.0085	A	B	79.2	305.2	226
260584L	Lockport Road	Will	IL	EJE 9	9.00	10,085	18.5	42.3	1	1	0.0313	0.0411	0.0098	A	B	233.2	896	662.8
Near Crest Hill																		
260587G	East Frontage Road NB/Essington	Will	IL	EJE 9	6.87	4,983	18.5	42.3	1	1	0.0359	0.0456	0.0098	A	B	117.7	450.8	333.1
260588N	Divison Street	Will	IL	EJE 9	6.05	7,613	18.5	42.3	1	1	0.0294	0.0389	0.0095	A	B	188.1	786	597.9
Crest Hill																		
260589V	Gaylord Road	Will	IL	EJE 9	5.57	5,591	18.5	42.3	1	1	0.0274	0.0365	0.0091	A	B	162	659.2	497.2
260799K	Oakland Street	Will	IL	EJE 9	3.20	1,661	18.5	42.3	2	2	0.0206	0.0281	0.0075	A	B	54.7	246.7	192.1
Near Joliet																		
260603N	N Rowell Street	Will	IL	EJE 7	1.80	3,184	6.4	28.3	1	2	0.0159	0.0315	0.0156	A	D	70.2	995.2	925
260609E	Cherry Hill Rd	Will	IL	EJE 7	5.00	1,107	6.4	28.3	1	2	0.0121	0.0248	0.0128	A	B	11.4	100.9	89.4
Joliet																		
260597M	Woodruff Road	Will	IL	EJE 8	0.82	10,659	18.5	42.3	2	2	0.1801	0.2136	0.0335	B	F	1411.8	9380.8	7969
Eastern Subdivision																		
260601A	Washington Street	Will	IL	EJE 7	0.95	11,714	6.4	28.3	2	2	0.0248	0.0412	0.0164	A	F	938.4	9879.2	8940.8
260604V	Mills Road	Will	IL	EJE 7	2.50	3,115	6.4	28.3	1	2	0.0158	0.0314	0.0156	A	B	40.6	372	331.4
260605C	S Rowell Street	Will	IL	EJE 7	2.86	3,184	6.4	28.3	1	2	0.0159	0.0315	0.0156	A	B	36.4	315	278.6
260606J	W Spencer Road	Will	IL	EJE 7	3.15	1,177	6.4	28.3	1	2	0.0123	0.0252	0.0129	A	B	12.8	112.3	99.6
260607R	Briggs Street	Will	IL	EJE 7	4.22	13,842	6.4	28.3	1	2	0.0256	0.0466	0.0209	A	B	139.2	1339.2	1200

EJ and E
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Near New Lenox																		
260611F	S Gougar Road	Will	IL	EJE 7	6.00	8,063	6.4	28.3	1	2	0.0201	0.0383	0.0182	A	B	94.9	779.4	684.5
260612M	Nelson Road	Will	IL	EJE 7	7.00	7,336	6.4	28.3	1	2	0.0196	0.0376	0.0180	A	B	74.4	639.2	564.8
260614B	Cedar Road	Will	IL	EJE 7	8.00	10,299	6.4	28.3	1	2	0.0213	0.0402	0.0189	A	B	115.7	897.6	781.9
260616P	S Spencer Road	Will	IL	EJE 7	9.24	3,104	6.4	28.3	1	2	0.0158	0.0314	0.0156	A	B	31.2	270.3	239.1
260617W	School House Road	Will	IL	EJE 7	10.00	8,721	6.4	28.3	1	2	0.0610	0.0942	0.0332	A	B	87.6	759.9	672.3
Near Frankfort																		
260620E	Owens Road (116 St)	Will	IL	EJE 7	11.49	1,246	6.4	28.3	1	2	0.0159	0.0325	0.0167	A	B	14.2	119.0	104.7
260621L	Wolf Road	Will	IL	EJE 7	11.96	9,966	6.4	28.3	2	2	0.0212	0.0400	0.0188	A	B	117	988.2	871.2
260626V	Sauk Trail	Will	IL	EJE 7	14.83	3,461	6.4	28.3	1	2	0.0163	0.0321	0.0159	A	B	33.6	300.9	267.3
260627C	Pfeiffer Road / 88th Avenue	Will	IL	EJE 7	15.06	7,752	6.4	28.3	1	2	0.0199	0.0380	0.0181	A	B	76.8	676.6	599.8
260628J	Harlem Avenue	Will	IL	EJE 7	17.06	12,336	6.4	28.3	1	2	0.0279	0.0497	0.0218	A	A	104.5	855	750.5
Frankfort																		
260623A	Center Road	Cook	IL	EJE 7	14.05	5,320	6.4	28.3	2	2	0.0181	0.0352	0.0171	A	B	61.1	514.8	453.7
Near Matteson																		
260629R	Ridgeland Avenue	Cook	IL	EJE 7	18.07	3,642	6.4	28.3	1	2	0.0165	0.0325	0.0160	A	A	30.8	252	221.2
260630K	Central Avenue	Cook	IL	EJE 7	19.07	2,297	6.4	28.3	1	2	0.0146	0.0293	0.0147	A	A	20.7	168.8	148.1
260632Y	Cicero Avenue	Cook	IL	EJE 7	20.06	23,281	6.4	28.3	1	2	0.0321	0.0552	0.0231	A	A	196.9	2077.4	1880.5
Matteson																		
260636B	Main Street	Cook	IL	EJE 7	21.61	4,375	8.6	34.6	3	3	0.0220	0.0357	0.0137	A	A	130.2	618.4	488.2
Park Forest																		
260638P	Western Avenue	Cook	IL	EJE 6	23.12	24,717	8.6	31.6	2	2	0.0398	0.0573	0.0175	A	B	277.2	2727	2449.8
Chicago Heights																		
260639W	Euclid Avenue	Cook	IL	EJE 6	24.63	238	8.6	31.6	6	6	0.0104	0.0179	0.0074	A	B	4.8	37.9	33.1
260640R	Chicago Road	Cook	IL	EJE 6	24.91	23,390	8.6	31.6	3	3	0.0394	0.0568	0.0174	A	C	548.8	4596	4047.2
260641X	West End Avenue/South Halsted St	Cook	IL	EJE 6	25.04	5,956	8.6	31.6	2	2	0.0236	0.0373	0.0137	A	C	161.5	1378	1216.5
260642E	East End Avenue	Cook	IL	EJE 6	25.19	5,086	10.2	34.2	3	3	0.0237	0.0367	0.0130	A	C	210.6	1518.2	1307.6
260644T	Wentworth Avenue	Cook	IL	EJE 5	25.92	4,563	10.2	34.2	3	3	0.0237	0.0363	0.0126	A	C	141.1	1198.8	1057.7
260645A	State Street	Cook	IL	EJE 5	26.16	7,656	10.2	34.2	6	6	0.0331	0.0482	0.0151	A	C	165.2	1508.8	1343.6
260646G	Cottage Grove Avenue	Cook	IL	EJE 5	27.17	5,578	10.2	34.2	2	2	0.0797	0.1061	0.0264	A	B	75.9	578	502.1
Sauk Village																		
260649C	Torrence Avenue	Cook	IL	EJE 5	29.18	8,988	10.2	34.2	3	3	0.0277	0.0415	0.0138	A	A	95	645.4	550.4
Lynwood																		
260651D	Lincoln Highway	Cook	IL	EJE 5	30.69	29,237	10.2	34.2	2	2	0.1021	0.1320	0.0299	A	B	394.9	3034.5	2639.6
Dyer																		
260652K	Lake Street	Lake	IN	EJE 5	30.96	5,067	10.2	34.2	2	2	0.0243	0.0371	0.0128	A	B	68.2	483.2	415
260653S	Hart Street	Lake	IN	EJE 5	31.10	20,268	10.2	34.2	2	2	0.0331	0.0483	0.0152	A	B	267.3	1932.8	1665.5
Schererville																		
260655F	Airport Road	Lake	IN	EJE 5	33.66	3,818	10.2	34.2	2	2	0.0227	0.0350	0.0123	A	A	41	306	265
260657U	Kennedy Avenue	Lake	IN	EJE 5	34.36	17,076	10.2	34.2	3	3	0.0319	0.0468	0.0149	A	A	189	1398	1209
Griffith																		
283201W	Broad Street	Lake	IN	EJE 4	36.09	19,572	32.4	37.4	2	2	0.1253	0.1289	0.0036	A	B	561.9	4127	3565.1
260659H	East Main Street	Lake	IN	EJE 4	36.52	10,960	7.6	28.6	2	2	0.0261	0.0408	0.0148	A	B	128.4	1507.8	1379.4
260661J	EastLake Street	Lake	IN	EJE 4	36.77	6,524	7.6	28.6	2	2	0.1242	0.1675	0.0433	A	B	63.8	735.3	671.5
260662R	East Miller Street	Lake	IN	EJE 4	36.89	6,524	7.6	28.6	2	2	0.1242	0.1675	0.0433	A	B	55	657	602
260663X	East Elm Street	Lake	IN	EJE 4	37.00	8,090	7.6	28.6	2	2	0.0678	0.0934	0.0255	A	A	67	636.8	569.8
260664E	East 45th Avenue	Lake	IN	EJE 4	37.52	23,486	7.6	28.6	2	2	0.0379	0.0555	0.0176	A	A	185	1848	1663
260665L	East 40th Place	Lake	IN	EJE 4	38.11	14,222	7.6	28.6	2	2	0.0277	0.0429	0.0153	A	A	110	1094.4	984.4
Gary																		
260670H	West 25th Avenue	Lake	IN	EJE 3	40.03	4,187	9.7	29.7	2	2	0.0651	0.0854	0.0202	A	A	44	294	250
260671P	West 15th Avenue	Lake	IN	EJE 3	41.03	19,890	9.7	29.7	2	2	0.0324	0.0462	0.0138	A	A	208	1399.5	1191.5
260672W	West 9th Avenue	Lake	IN	EJE 3	41.52	4,187	9.7	29.7	2	2	0.0313	0.0442	0.0129	A	A	43	268.8	225.8

EJ and E
Vehicle Safety Delay Table

USDOT	Street	County	State	Segment	MP	2015 ADT	Trains Per Day		Number of Tracks		Accident Prediction			Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes		
							No Action	Proposed Action	No Action	Proposed Action	No Action	Proposed Action	Change	No Action	Proposed Action	No Action	Proposed Action	Change
260673D	West 5th Avenue	Lake	IN	EJE 2	41.97	28,467	9.8	29.8	2	2	0.0426	0.0577	0.0152	A	A	292	2004	1712

EJ and E
Vehicle Safety Delay Table

USDOT	Street	County	State	Segment	MP	2015 ADT	Trains Per Day		Number of Tracks		Accident Prediction			Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes		
							No Action	Proposed Action	No Action	Proposed Action	No Action	Proposed Action	Change	No Action	Proposed Action	No Action	Proposed Action	Change
Illinois River Line																		
Plainfield																		
261002H	Lockport Street/ US 30	Will	IL	EJE 17	10.61	24,400	4.0	4.0	1	1	0.0220	0.0220	0.0000					
Near Plainfield																		
261003P	West Renwick Road	Will	IL	EJE 17	11.96	4,300	4.0	4.0	1	1	0.0197	0.0197	0.0000					
261004W	Drauden Road	Will	IL	EJE 17	12.49	5,200	4.0	4.0	1	1	0.0150	0.0150	0.0000					
Near Joliet																		
261006K	Caton Farm Road	Will	IL	EJE 17	14.17	22,000	4.0	4.0	1	1	0.0319	0.0319	0.0000					
261007S	Theodore	Will	IL	EJE 17	15.16	5,000	4.0	4.0	1	1	0.0508	0.0508	0.0000					
261008Y	Black Road	Will	IL	EJE 17	16.16	1,450	4.0	4.0	1	1	0.0761	0.0761	0.0000					
261009F	Troy Road	Will	IL	EJE 17	17.16	8,300	4.0	4.0	1	1	0.0169	0.0169	0.0000					
Near Minooka																		
261012N	W Beith Rd	Will	IL	EJE 17	18.16	3,600	4.0	4.0	1	1	0.0186	0.0186	0.0000					
261014C	Mound Road	Will	IL	EJE 17	19.23	400	4.0	4.0	1	1	0.0576	0.0576	0.0000					
261017X	Co Line Rd	Will	IL	EJE 17	20.46	2,300	4.0	4.0	1	1	0.0160	0.0160	0.0000					
261018E	Holt	Kendall	IL	EJE 17	21.00	3,350	4.0	4.0	1	1	0.0181	0.0181	0.0000					
261019L	Wabena Ave	Kendall	IL	EJE 17	21.42	3,350	4.0	4.0	1	1	0.0181	0.0181	0.0000					
261026W	McLindon Rd	Grundy	IL	EJE 17	23.63	1,050	4.0	4.0	1	1	0.0122	0.0122	0.0000					
261028K	US Route 6	Grundy	IL	EJE 17	25.42	6,800	4.0	4.0	1	1	0.0227	0.0227	0.0000					
261032A	Collins Rd	Grundy	IL	EJE 17	27.64	450	2.0	2.0	1	1	0.0115	0.0115	0.0000					
Romeoville Line																		
Near Lockport																		
261050X	Divison/167th St	Will	IL	EJE 18	1.78	6,100	4.0	4.0	1	1	0.0351	0.0351	0.0000					
Downtown Line																		
Joliet																		
261060D	Henderson	Will	IL	EJE 19	1.09	6,200	2.0	2.0	2	2	0.0119	0.0119	0.0000					
261061K	Royce Ave	Will	IL	EJE 19	1.28	29	2.0	2.0	6	6	0.0027	0.0027	0.0000					
261058C	Collins St	Will	IL	EJE 19	1.51	7,600	2.0	2.0	1	1	0.0125	0.0125	0.0000					
Hammond Branch																		
Gary																		
260701E	Cline Ave Ramp	Lake	IN	EJE 20	43.45	750	2.0	2.0	1	1	0.0078	0.0078	0.0000					
260703T	Gary Ave	Lake	IN	EJE 20	43.46	750			1	1	0.0004	0.0004	0.0000					
East Chicago																		
260704A	Eugene Huish Dr	Lake	IN	EJE 20	45.06	10,409	2.0	2.0	1	1	0.0174	0.0174	0.0000					
260705G	151st St	Lake	IN	EJE 20	45.09	3,000	2.0	2.0	1	1	0.0098	0.0098	0.0000					
260706N	Railroad Ave	Lake	IN	EJE 20	45.87	5,625	3.0	3.0	1	1	0.0220	0.0220	0.0000					
Whiting Branch																		
East Chicago																		
260716U	149th St	Lake	IN	EJE 21	45.03	1,000	6.0	6.0	2	2	0.0143	0.0143	0.0000					
260717B	148th St	Lake	IN	EJE 21	45.18	800	6.0	6.0	1	1	0.0132	0.0132	0.0000					
260718H	SR 312/Chicago Ave	Lake	IN	EJE 21	45.34	16,350	6.0	6.0	4	4	0.0291	0.0291	0.0000					
260720J	Michigan Ave	Lake	IN	EJE 21	46.30	7,827	6.0	6.0	1	1	0.0245	0.0245	0.0000					
260721R	Canal St	Lake	IN	EJE 21	46.40	500	2.0	2.0	1	1	0.0119	0.0119	0.0000					
260725T	Riley Rd	Lake	IN	EJE 21	47.22	7,601	6.0	6.0	2	2	0.0244	0.0244	0.0000					
260726A	129th St	Lake	IN	EJE 21	47.87	8,380	6.0	6.0	3	3	0.0249	0.0249	0.0000					

EJ and E
Vehicle Safety Delay Table

USDOT	Street	County	State	Segment	MP	2015 ADT	Trains Per Day		Number of Tracks		Accident Prediction			Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes			
							No Action	Proposed Action	No Action	Proposed Action	No Action	Proposed Action	Change	No Action	Proposed Action	No Action	Proposed Action	Change	
City Track																			
Gary																			
260729V	Clark Rd	Lake	IN	EJE 22	3.66	1,568	4.0	4.0	1	1	0.0109	0.0073	-0.0036						
260732D	Virginia St	Lake	IN	EJE 22	7.26	3,000	1.0	1.0	1	1	0.0157	0.0129	-0.0028						
260734S	Tennessee St	Lake	IN	EJE 22	7.67	5,460	1.0	1.0	2	2	0.0191	0.0157	-0.0034						
260735Y	Ohio St	Lake	IN	EJE 22	7.73	250	1.0	1.0	2	2	0.0067	0.0054	-0.0013						
260736F	Taylor St	Lake	IN	EJE 22	8.50	750	1.0	1.0	1	1	0.0057	0.0050	-0.0007						
Lake Front Line																			
Chicago																			
260729V	E 95th St	Cook	IL	EJE -2	1.83	109	0.9	0.9	1	1	0.0037	0.0037	0.0000						
260732D	E 98th St	Cook	IL	EJE -2	2.20	109	0.9	0.9	1	1	0.0028	0.0028	0.0000						
260734S	E 99th St	Cook	IL	EJE -2	2.33	109	0.9	0.9	1	1	0.0028	0.0028	0.0000						
260735Y	E 100th St	Cook	IL	EJE -2	2.46	109	0.9	0.9	1	1	0.0028	0.0028	0.0000						
Hammond																			
260692H	Calumet Ave	Lake	IN	EJE -1	4.36	9,940	1.8	1.8	1	1	0.0129	0.0129	0.0000						
260691B	Lake St	Lake	IN	EJE -1	4.60	750	1.8	1.8	1	1	0.0144	0.0144	0.0000						
Whiting																			
260690U	117th St	Lake	IN	EJE -1	5.51	3,000	1.8	1.8	1	1	0.0094	0.0094	0.0000						
260689A	Front St	Lake	IN	EJE -1	5.83	3,000	1.8	1.8	1	1	0.0094	0.0094	0.0000						
260677F	Clark Rd	Lake	IN	EJE 0	11.86	1,568	3.5	3.5	1	1	0.0103	0.0103	0.0000						
EJE Subtotal											4.4717	6.0179	1.5461						
															18086	118329	101655		

EJE Vehicle Safety and Delay																		
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							No Action	Prop. Action	No Action	Prop. Action	No Action	Prop. Action	Change	No Action	Prop. Action	No Action	Proposed Action	Change
Western Subdivision																		
Waukegan																		
260796P	South Harbor Drive	Lake	IL	EJE 16	73.00	684	3.0	3.0	1	1	0.0091	0.0091	0.0000	No Data	No Data	No Data	No Data	No Data
North Chicago																		
260473U	Martin L King Dr/22nd Avenue	Lake	IL	EJE 16	69.75	14,396	3.0	3.0	1	1	0.0228	0.0220	-0.0008	No Data	No Data	No Data	No Data	No Data
260475H	Morrow Road	Lake	IL	EJE 16	69.58	326	3.0	3.0	1	1	0.0066	0.0063	-0.0003	No Data	No Data	No Data	No Data	No Data
260478D	Buckley Road	Lake	IL	EJE 16	69.00	27,819	3.0	3.0	1	1	0.0227	0.0227	0.0000	No Data	No Data	No Data	No Data	No Data
Near Lake Bluff																		
260483A	Waukegan Road	Lake	IL	EJE 16	66.42	30,104	3.0	3.0	1	1	0.0261	0.0261	0.0000	No Data	No Data	No Data	No Data	No Data
260484G	Park Avenue/Rockland Road	Lake	IL	EJE 16	65.75	21,099	3.0	3.0	1	1	0.0204	0.0167	-0.0036	No Data	No Data	No Data	No Data	No Data
Mettawa																		
260488J	Old School Road	Lake	IL	EJE 15	63.87	1,439	3.2	3.2	1	1	0.0097	0.0097	0.0000	No Data	No Data	No Data	No Data	No Data
260489R	St Mary's Road	Lake	IL	EJE 15	63.33	16,375	3.2	3.2	1	1	0.0183	0.0183	0.0000	No Data	No Data	No Data	No Data	No Data
Vernon Hills																		
260493F	Butterfield Road	Lake	IL	EJE 15	60.42	33,914	3.2	3.2	1	1	0.0275	0.0275	0.0000	No Data	No Data	No Data	No Data	No Data
Near Libertyville																		
260485N	Arcadia/Elm Road	Lake	IL	EJE 16	65.62	381	3.0	3.0	2	2	0.0211	0.0167	-0.0044	No Data	No Data	No Data	No Data	No Data
260486V	Bradley Road	Lake	IL	EJE 15	65.16	12,931	3.2	3.2	1	1	0.0173	0.0173	0.0000	No Data	No Data	No Data	No Data	No Data
260490K	Milwaukee Avenue	Lake	IL	EJE 15	62.20	38,839	3.2	3.2	1	1	0.0283	0.0283	0.0000	No Data	No Data	No Data	No Data	No Data
260906X	Lakeview Parkway	Lake	IL	EJE 15	61.70	8,412	3.2	3.2	1	1	0.0155	0.0155	0.0000	No Data	No Data	No Data	No Data	No Data

EJE Vehicle Safety and Delay																		
USDOT	Street	County	State	Segment	MP	2015 ADT	Trains Per Day		Number of Tracks		Accident Prediction			Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes		
							No Action	Prop. Action	No Action	Prop. Action	No Action	Prop. Action	Change	No Action	Prop. Action	No Action	Proposed Action	Change
260495U	Diamond Lake Road	Lake	IL	EJE 14	59.13	8,998	5.3	20.3	1	2	0.0587	0.0809	0.0222	A	B	63	1,017	954
Near Mundelein																		
260496B	IL 60&83	Lake	IL	EJE 14	59.02	29,659	5.3	20.3	1	2	0.0228	0.0366	0.0138	A	B	195	2,873	2,678
Near Hawthorn Woods																		
260500N	Gilmer Road	Lake	IL	EJE 14	56.90	18,658	5.3	20.3	1	1	0.0229	0.0367	0.0138	A	A	106	1,425	1,319
260503J	Old McHenry Road	Lake	IL	EJE 14	55.45	32,424	5.3	20.3	1	1	0.0324	0.0490	0.0167	A	A	189	2,540	2,351
Near Lake Zurich																		
260794B	Oakwood Road	Lake	IL	EJE 14	54.73	6,783	5.3	20.3	1	1	0.0179	0.0296	0.0117	A	B	45	590	545
Lake Zurich																		
260507L	Main Street	Lake	IL	EJE 14	53.44	17,471	5.3	20.3	1	1	0.0226	0.0363	0.0137	A	B	118	1,520	1,402
260508T	Old Rand Road	Lake	IL	EJE 14	53.27	10,659	5.3	20.3	1	1	0.0200	0.0327	0.0127	A	A	70	902	832
260510U	Ela Road	Lake	IL	EJE 14	52.33	21,398	5.3	20.3	1	1	0.0265	0.0416	0.0151	A	A	103	1,362	1,259
Near Barrington																		
260511B	Cuba Road	Lake	IL	EJE 14	51.56	12,982	5.3	20.3	1	1	0.0210	0.0341	0.0131	A	A	59	730	670
Barrington																		
260513P	Lake Zurich Road	Lake	IL	EJE 14	50.40	3,131	5.3	20.3	1	1	0.0147	0.0248	0.0101	A	A	12	170	158
260514W	Northwest Highway	Lake	IL	EJE 14	50.10	33,662	5.3	20.3	1	1	0.0326	0.0494	0.0167	A	A	148	1,891	1,744
260515D	Hough Street IL 59 & 63	Lake	IL	EJE 14	49.80	24,056	5.3	20.3	1	1	0.0243	0.0387	0.0144	A	A	107	1,350	1,243
Barrington																		
260516K	Lake Cook Road	Cook	IL	EJE 14	49.30	14,222	5.3	20.3	2	2	0.0215	0.0347	0.0133	A	A	64	798	735
260517S	Otis Road	Cook	IL	EJE 14	47.90	1,673	5.3	20.3	1	1	0.0125	0.0214	0.0089	A	A	8	103	95
Near Barrington																		

EJE Vehicle Safety and Delay																		
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							No Action	Prop. Action	No Action	Prop. Action	No Action	Prop. Action	Change	No Action	Prop. Action	No Action	Proposed Action	Change
260520A	Penny Road	Cook	IL	EJE 14	44.47	4,786	5.3	20.3	1	1	0.0164	0.0274	0.0110	A	A	23	298	275
260521G	Old Sutton Road	Cook	IL	EJE 14	44.00	2,070	5.3	20.3	1	1	0.0132	0.0225	0.0093	A	A	10	128	118
Hoffman Estates																		
260525J	Shoe Factory Road	Cook	IL	EJE 14	41.90	9,202	5.3	20.3	1	1	0.0193	0.0317	0.0124	A	A	44	573	529
260530F	Spaulding Road	Cook	IL	EJE 14	37.60	1,434	5.3	20.3	2	2	0.0137	0.0233	0.0096	A	A	6	70	64
Near Elgin																		
260532U	West Bartlett Road	Cook	IL	EJE 13	36.95	17,209	5.5	22.5	3	3	0.0755	0.1053	0.0298	A	A	81	918	837
Near Bartlett																		
260533B	Stearns Road	DuPage	IL	EJE 13	35.88	21,129	5.5	22.5	1	1	0.0264	0.0424	0.0159	A	A	103	1,169	1,066
Wayne																		
260535P	Army Trail Road	DuPage	IL	EJE 12	33.90	7,392	4.4	23.4	1	1	0.0170	0.0317	0.0147	A	A	22	470	449
Near West Chicago																		
260536W	Smith Road	DuPage	IL	EJE 12	32.94	7,123	4.4	23.4	1	1	0.0168	0.0315	0.0146	A	A	22	453	431
260538K	Hawthorne Lane	DuPage	IL	EJE 12	30.24	20,024	4.4	23.4	2	2	0.0217	0.0390	0.0173	A	B	77	1,765	1,689
West Chicago																		
260541T	Washington Street	DuPage	IL	EJE 11	28.39	12,095	10.7	31.6	1	1	0.0268	0.0388	0.0120	A	C	388	2,362	1,974
260542A	Aurora Street	DuPage	IL	EJE 11	28.87	364.0	10.7	31.6	1	1	0.0266	0.0414	0.0148	A	B	11	59	48
260543G	Church Street	DuPage	IL	EJE 11	28.77	1,508	10.7	31.6	1	1	0.0162	0.0247	0.0085	A	C	11	62	50
260545V	Ann Street	DuPage	IL	EJE 11	28.50	1,508	10.7	31.6	2	2	0.0162	0.0247	0.0085	A	C	34	197	164
Naperville																		
260556H	Diehl Road	DuPage	IL	EJE 11	22.80	21,933	10.7	31.6	1	1	0.0918	0.1173	0.0255	A	B	352	1,880	1,528
Near Aurora																		

EJE Vehicle Safety and Delay																		
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							No Action	Prop. Action	No Action	Prop. Action	No Action	Prop. Action	Change	No Action	Prop. Action	No Action	Proposed Action	Change
260558W	Liberty Street.	DuPage	IL	EJE 10	20.63	20,696	15.7	39.5	1	2	0.0345	0.0504	0.0159	A	B	767	3,074	2,308
260560X	Ogden Ave US 34	DuPage	IL	EJE 10	19.05	45,828	15.7	39.5	1	2	0.0485	0.0660	0.0175	A	B	1,126	4,352	3,226
260562L	Montgomery Road	DuPage	IL	EJE 10	18.18	27,131	15.7	39.5	1	2	0.0365	0.0528	0.0163	A	B	667	2,630	1,962
260563T	Keating Drive/ 87th Street	Will	IL	EJE 10	17.17	2,007	15.7	39.5	1	2	0.0202	0.0320	0.0118	A	B	50	198	148
Near Plainfield																		
260564A	Hafenrichter Road	Will	IL	EJE 10	17.08	6,506	15.7	39.5	1	2	0.0267	0.0408	0.0141	A	B	160	630	470
260565G	Wolf's Crossing	Will	IL	EJE 10	16.20	13,150	15.7	39.5	1	2	0.0313	0.0466	0.0153	A	B	331	1,389	1,058
260567V	111th Street	Will	IL	EJE 10	14.63	12,320	15.7	39.5	1	2	0.0309	0.0460	0.0152	A	B	310	1,301	991
260569J	Ferguson Road - 119th Street	Will	IL	EJE 10	13.59	5,468	15.7	39.5	1	2	0.0257	0.0394	0.0137	A	B	152	590	438
260571K	Normantown - 252nd	Will	IL	EJE 10	12.92	2,492	15.7	39.5	1	2	0.0213	0.0335	0.0122	A	B	69	294	226
260573Y	127th Street - Chapins Road	Will	IL	EJE 10	12.56	6,437	15.7	39.5	1	2	0.0297	0.0446	0.0149	A	B	185	791	606
260575M	135th Street	Will	IL	EJE 10	11.43	11,766	15.7	39.5	2	2	0.0791	0.1063	0.0272	A	B	282	1,267	985
260576U	Van Dykes Road	Will	IL	EJE 9	10.68	6,921	18.5 15.7	42.3 39.5	1	1	0.0288 0.0277	0.0384 0.0376	0.0093 0.0099	A	B	167 143	686 623	548 480
260585T	Renwick Road	Will	IL	EJE 9	7.60	12,873	18.5	42.3	1	1	0.1340	0.1602	0.0262	A	B	265	1,144	879
Plainfield																		
260577B	143rd Street	Will	IL	EJE 9	10.33	5,952	18.5 15.7	42.3 39.5	1	1	0.0278 0.0268	0.0370 0.0365	0.0092 0.0097	A	B	444	118 515	398 397
260580J	Plainfield-Naperville Road	Will	IL	EJE 9	9.62	4,568	18.5	42.3	1	1	0.0262	0.0350	0.0088	A	B	106	406	300
260581R	Main Street	Will	IL	EJE 9	9.53	22,175	18.5	42.3	1	1	0.0369	0.0476	0.0106	A	B	513	1,970	1,457
260582X	Center Street	Will	IL	EJE 9	9.33	1,845	18.5	42.3	1	1	0.0211	0.0288	0.0076	A	B	43	164	121
260583E	Eastern Avenue	Will	IL	EJE 9	9.27	3,876	18.5	42.3	1	1	0.0252	0.0338	0.0086	A	B	89	344	255

EJE Vehicle Safety and Delay																		
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260584L	Lockport Road	Will	IL	EJE 9	9.00	11,351	18.5	42.3	1	1	0.0321	0.0420	0.0099	A	B	263	1,008	745
Near Crest Hill																		
260587G	East Frontage Road NB/Essington	Will	IL	EJE 9	6.87	4,983	18.5	42.3	1	1	0.0359	0.0456	0.0098	A	B	118	451	333
260588N	Divison Street	Will	IL	EJE 9	6.05	7,613	18.5	42.3	1	1	0.0294	0.0389	0.0095	A	B	188	786	598
Crest Hill																		
260589V	Gaylord Road	Will	IL	EJE 9	5.57	5,758	18.5	42.3	1	1	0.0276	0.0367	0.0091	A	B	167	680	513
260799K	Oakland Street	Will	IL	EJE 9	3.20	1,661	18.5	42.3	2	2	0.0206	0.0281	0.0075	A	B	55	247	192
Near Joliet																		
260603N	N Rowell Street	Will	IL	EJE 7	1.80	3,184	6.4	28.3	1	2	0.0159	0.0315	0.0156	A	D	70	995	925
260609E	Cherry Hill Rd	Will	IL	EJE 7	5.00	1,107	6.4	28.3	1	2	0.0121	0.0248	0.0128	A	B	11	101	89
Joliet																		
260597M	Woodruff Road	Will	IL	EJE 8	0.82	10,659	18.5	42.3	2	2	0.1801	0.2136	0.0335	B	F	1,412	9,381	7,969
Eastern Subdivision																		
260601A	Washington Street	Will	IL	EJE 7	0.95	11,714	6.4	28.3	2	2	0.0248	0.0412	0.0164	A	F	938	9,879	8,941
260604V	Mills Road	Will	IL	EJE 7	2.50	3,115	6.4	28.3	1	2	0.0158	0.0314	0.0156	A	B	41	372	331
260605C	S Rowell Street	Will	IL	EJE 7	2.86	3,184	6.4	28.3	1	2	0.0159	0.0315	0.0156	A	B	36	315	279
260606J	W Spencer Road	Will	IL	EJE 7	3.15	1,177	6.4	28.3	1	2	0.0123	0.0252	0.0129	A	B	13	112	100
260607R	Briggs Street	Will	IL	EJE 7	4.22	13,842	6.4	28.3	1	2	0.0256	0.0466	0.0209	A	B	139	1,339	1,200
Near New Lenox																		
260611F	S Gougar Road	Will	IL	EJE 7	6.00	8,555	6.4	28.3	1	2	0.0204	0.0388	0.0184	A	B	101	828	727
260612M	Nelson	Will	IL	EJE 7	7.00	7,336	6.4	28.3	1	2	0.0196	0.0376	0.0180	A	B	74	639	565

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260614B	Cedar Road	Will	IL	EJE 7	8.00	10,299	6.4	28.3	1	2	0.0213	0.0402	0.0189	A	B	116	898	782
260616P	S Spencer Road	Will	IL	EJE 7	9.24	3,391	6.4	28.3	1	2	0.0162	0.0320	0.0158	A	B	35	296	261
260617W	School House Road	Will	IL	EJE 7	10.00	8,721	6.4	28.3	1	2	0.0610	0.0942	0.0332	A	B	88	760	672
Near Frankfort																		
260620E	Owens Road (116 St)	Will	IL	EJE 7	11.49	1,246	6.4	28.3	1	2	0.0159	0.0325	0.0167	A	B	14	119	105
260621L	Wolf Road	Will	IL	EJE 7	11.96	9,966	6.4	28.3	2	2	0.0212	0.0400	0.0188	A	B	117	988	871
260626V	Sauk Trail	Will	IL	EJE 7	14.83	3,461	6.4	28.3	1	2	0.0163	0.0321	0.0159	A	B	34	301	267
260627C	Pfeiffer Road / 88th Avenue	Will	IL	EJE 7	15.06	7,752	6.4	28.3	1	2	0.0199	0.0380	0.0181	A	B	77	677	600
260628J	Harlem Avenue	Will	IL	EJE 7	17.06	12,336	6.4	28.3	1	2	0.0279	0.0497	0.0218	A	A	105	855	751
Frankfort																		
260623A	Center Road	Cook	IL	EJE 7	14.05	7,752	6.4	28.3	2	2	0.0199	0.0380	0.0181	A	B	88	749	660
Near Matteson																		
260629R	Ridgeland Avenue	Cook	IL	EJE 7	18.07	3,642	6.4	28.3	1	2	0.0165	0.0325	0.0160	A	A	31	252	221
260630K	Central Avenue	Cook	IL	EJE 7	19.07	2,297	6.4	28.3	1	2	0.0146	0.0293	0.0147	A	A	21	169	148
260632Y	Cicero Avenue	Cook	IL	EJE 7	20.06	30,598	6.4	28.3	1	2	0.0340	0.0577	0.0236	A	A	260	2,309	2,049
Matteson																		
260636B	Main Street	Cook	IL	EJE 7	21.61	4,375	6.4	28.3	3	3	0.0204 0.022	0.0342 0.0357	0.0138 0.0137	A	A D	36 67	330 1,522	293 1,455
Park Forest																		
260638P	Western Avenue	Cook	IL	EJE 6	23.12	24,717	8.6	31.6	2	2	0.0398	0.0573	0.0175	A	B	277	2,101	1,824
Chicago Heights																		
260639W	Euclid Avenue	Cook	IL	EJE 6	24.63	238	8.6	31.6	6	6	0.0104	0.0179	0.0074	A	B	5	38	33

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260640R	Chicago Road	Cook	IL	EJE 6	24.91	26,842	8.6	31.6	3	3	0.0404	0.0581	0.0176	A	C	630	5,275	4,645
260641X	West End Avenue/South Halsted Street	Cook	IL	EJE 6	25.04	7,267	8.6	31.6	2	2	0.0284	0.0436	0.0152	A	C	197	1,682	1,485
260642E	East End Avenue	Cook	IL	EJE 6	25.19	5,086	8.6 10.2	31.6 34.2	3	3	0.0228 0.0237	0.0361 0.0367	0.0134 0.0130	A	C D	438 166	1,175 1,721	1,038 1,555
260644T	Wentworth Avenue	Cook	IL	EJE 5	25.92	4,563	10.2	34.2	3	3	0.0237	0.0363	0.0126	A	C	141	1,199	1,058
260645A	State Street	Cook	IL	EJE 5	26.16	7,656	10.2	34.2	6	6	0.0331	0.0482	0.0151	A	C	165	1,509	1,344
260646G	Cottage Grove Avenue	Cook	IL	EJE 5	27.17	5,578	10.2	34.2	2	2	0.0797	0.1061	0.0264	A	B	76	578	502
Sauk Village																		
260649C	Torrence Avenue	Cook	IL	EJE 5	29.18	8,968	10.2	34.2	3	3	0.0277	0.0415	0.0138	A	A	95	645	550
Lynwood																		
260651D	Lincoln Highway	Cook	IL	EJE 5	30.69	39,656	10.2	34.2	2	2	0.1066	0.1369	0.0303	A	B	536	4,116	3,580
Dyer																		
260652K	Lake Street	Lake	IN	EJE 5	30.96	5,067	10.2	34.2	2	2	0.0243	0.0371	0.0128	A	B	68	483	415
260653S	Hart Street	Lake	IN	EJE 5	31.10	20,268	10.2	34.2	2	2	0.0331	0.0483	0.0152	A	B	267	1,933	1,666
Schererville																		
260655F	Airport Road	Lake	IN	EJE 5	33.66	3,818	10.2	34.2	2	2	0.0227	0.0350	0.0123	A	A	41	306	265
260657U	Kennedy Avenue	Lake	IN	EJE 5	34.36	17,076	10.2	34.2	3	3	0.0319	0.0468	0.0149	A	A	189	1,398	1,209
Griffith																		
283201W	Broad Street	Lake	IN	EJE 4	36.09 36.22	19,572	7.6 32.4	28.6 37.4	2 6	2 6	0.0849 0.0334	0.0997 0.1077	0.0148 0.0743	A	B C	228 482	2,694 4,257	2,466 3,775
260659H	East Main Street	Lake	IN	EJE 4	36.52	10,960	7.6	28.6	2	2	0.0261	0.0408	0.0148	A	B	128	1,508	1,379
260661J	EastLake Street	Lake	IN	EJE 4	36.77	6,524	7.6	28.6	2	2	0.1242	0.1675	0.0433	A	B	64	735	672

EJE Vehicle Safety and Delay																		
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260662R	East Miller Street	Lake	IN	EJE 4	36.89	6,524	7.6	28.6	2	2	0.1242	0.1675	0.0433	A	B	55	657	602
260663X	East Elm Street	Lake	IN	EJE 4	37.00	8,090	7.6	28.6	2	2	0.0678	0.0934	0.0255	A	A	67	637	570
260664E	East 45th Avenue	Lake	IN	EJE 4	37.52	23,486	7.6	28.6	2	2	0.0379	0.0555	0.0176	A	A	185	1,848	1,663
260665L	East 40th Place	Lake	IN	EJE 4	38.11	14,222	7.6	28.6	2	2	0.0277	0.0429	0.0153	A	A	110	1,094	984
Gary																		
260670H	West 25th Avenue	Lake	IN	EJE 3	40.03	4,187	9.7	29.7	2	2	0.0651	0.0854	0.0202	A	A	44	294	250
260671P	West 15th Avenue	Lake	IN	EJE 3	41.03	19,890	9.7	29.7	2	2	0.0324	0.0462	0.0138	A	A	208	1,400	1,192
260672W	West 9th Avenue	Lake	IN	EJE 3	41.52	4,187	9.7	29.7	2	2	0.0313	0.0442	0.0129	A	A	43	269	226
260673D	West 5th Avenue	Lake	IN	EJE 2	41.97	28,467	9.8	29.8	2	2	0.0426	0.0577	0.0152	A	A	292	2,004	1,712
Illinois River Line																		
Plainfield																		
261002H	Lockport Street/ US 30	Will	IL	EJE 17	10.61	24,400	4.0	4.0	1	1	0.0220	0.0220	0.0000	No Data	No Data	No Data	No Data	No Data
Near Plainfield																		
261003P	West Renwick Road	Will	IL	EJE 17	11.96	4,300	4.0	4.0	1	1	0.0197	0.0197	0.0000	No Data	No Data	No Data	No Data	No Data
261004W	Drauden Road	Will	IL	EJE 17	12.49	5,200	4.0	4.0	1	1	0.0150	0.0150	0.0000	No Data	No Data	No Data	No Data	No Data
Near Joliet																		
261006K	Caton Farm Road	Will	IL	EJE 17	14.17	22,000	4.0	4.0	1	1	0.0319	0.0319	0.0000	No Data	No Data	No Data	No Data	No Data
261007S	Theodore	Will	IL	EJE 17	15.16	5,000	4.0	4.0	1	1	0.0508	0.0508	0.0000	No Data	No Data	No Data	No Data	No Data
261008Y	Black Road	Will	IL	EJE 17	16.16	1,450	4.0	4.0	1	1	0.0761	0.0761	0.0000	No Data	No Data	No Data	No Data	No Data
261009F	Troy Road	Will	IL	EJE 17	17.16	8,300	4.0	4.0	1	1	0.0169	0.0169	0.0000	No Data	No Data	No Data	No Data	No Data

EJE Vehicle Safety and Delay																		
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Near Minooka																		
261012N	W Beith Rd	Will	IL	EJE 17	18.16	3,600	4.0	4.0	1	1	0.0186	0.0186	0.0000	No Data	No Data	No Data	No Data	No Data
261014C	Mound Road	Will	IL	EJE 17	19.23	400	4.0	4.0	1	1	0.0576	0.0576	0.0000	No Data	No Data	No Data	No Data	No Data
261017X	Co Line Rd	Will	IL	EJE 17	20.46	2,300	4.0	4.0	1	1	0.0160	0.0160	0.0000	No Data	No Data	No Data	No Data	No Data
261018E	Holt	Kendall	IL	EJE 17	21.00	3,350	4.0	4.0	1	1	0.0181	0.0181	0.0000	No Data	No Data	No Data	No Data	No Data
261019L	Wabena Ave	Kendall	IL	EJE 17	21.42	3,350	4.0	4.0	1	1	0.0181	0.0181	0.0000	No Data	No Data	No Data	No Data	No Data
261026W	McLindon Rd	Grundy	IL	EJE 17	23.63	1,050	4.0	4.0	1	1	0.0122	0.0122	0.0000	No Data	No Data	No Data	No Data	No Data
261028K	US Route 6	Grundy	IL	EJE 17	25.42	6,800	4.0	4.0	1	1	0.0227	0.0227	0.0000	No Data	No Data	No Data	No Data	No Data
261032A	Collins Rd	Grundy	IL	EJE 17	27.64	450	2.0	2.0	1	1	0.0115	0.0115	0.0000	No Data	No Data	No Data	No Data	No Data
Romeoville Line Paul Ales Branch																		
Near Lockport														No Data	No Data	No Data	No Data	No Data
261050X	Divison/167th St	Will	IL	EJE 18	1.78	6,100	4.0	4.0	1	1	0.0351	0.0351	0.0000	No Data	No Data	No Data	No Data	No Data
Downtown Line Track																		
Joliet														No Data	No Data	No Data	No Data	No Data
261060D	Henderson	Will	IL	EJE 19	1.09	6,200	2.0	2.0	2	2	0.0119	0.0119	0.0000	No Data	No Data	No Data	No Data	No Data
261061K	Royce Ave	Will	IL	EJE 19	1.28	29	2.0	2.0	6	6	0.0027	0.0027	0.0000	No Data	No Data	No Data	No Data	No Data
261058C	Collins St	Will	IL	EJE 19	1.51	7,600	2.0	2.0	1	1	0.0125	0.0125	0.0000	No Data	No Data	No Data	No Data	No Data
Hammond Branch																		
Gary														-	-	-	-	-

EJE Vehicle Safety and Delay																		
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260701E	Cline Ave Ramp	Lake	IN	EJE 20	43.45	750	2.0	2.0	1	1	0.0078	0.0078	0.0000	No Data	No Data	No Data	No Data	No Data
260703T	Gary Ave	Lake	IN	EJE 20	43.46	750			1	1	0.0004	0.0004	0.0000	No Data	No Data	No Data	No Data	No Data
East Chicago																		
260704A	Eugene Huish Dr	Lake	IN	EJE 20	45.06	10,409	2.0	2.0	1	1	0.0174	0.0174	0.0000	No Data	No Data	No Data	No Data	No Data
260705G	151st St	Lake	IN	EJE 20	45.09	3,000	2.0	2.0	1	1	0.0098	0.0098	0.0000	No Data	No Data	No Data	No Data	No Data
260706N	Railroad Ave	Lake	IN	EJE 20	45.87	5,625	3.0	3.0	1	1	0.0220	0.0220	0.0000	No Data	No Data	No Data	No Data	No Data
Whiting Branch																		
East Chicago																		
260716U	149th St	Lake	IN	EJE 21	45.03	1,000	6.0	6.0	2	2	0.0143	0.0143	0.0000	No Data	No Data	No Data	No Data	No Data
260717B	148th St	Lake	IN	EJE 21	45.18	800	6.0	6.0	1	1	0.0132	0.0132	0.0000	No Data	No Data	No Data	No Data	No Data
260718H	SR 312/Chicago Ave	Lake	IN	EJE 21	45.34	16,350	6.0	6.0	4	4	0.0291	0.0291	0.0000	No Data	No Data	No Data	No Data	No Data
260720J	Michigan Ave	Lake	IN	EJE 21	46.30	7,827	6.0	6.0	1	1	0.0245	0.0245	0.0000	No Data	No Data	No Data	No Data	No Data
260721R	Canal St	Lake	IN	EJE 21	46.40	500	2.0	2.0	1	1	0.0119	0.0119	0.0000	No Data	No Data	No Data	No Data	No Data
260725T	Riley Rd	Lake	IN	EJE 21	47.22	7,601	6.0	6.0	2	2	0.0244	0.0244	0.0000	No Data	No Data	No Data	No Data	No Data
260726A	129th St	Lake	IN	EJE 21	47.87	8,380	6.0	6.0	3	3	0.0249	0.0249	0.0000	No Data	No Data	No Data	No Data	No Data
City Track																		
Gary																		
260729V	Clark Rd	Lake	IN	EJE 22	3.66	1,568	4.0	4.0	1	1	0.0109	0.0073	-0.0036	No Data	No Data	No Data	No Data	No Data
260732D	Virginia St	Lake	IN	EJE 22	7.26	3,000	1.0	1.0	1	1	0.0157	0.0129	-0.0028	No Data	No Data	No Data	No Data	No Data

EJE Vehicle Safety and Delay																			
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260734S	Tennessee St	Lake	IN	EJE 22	7.67	5,460	1.0	1.0	2	2	0.0191	0.0157	-0.0034	No Data	No Data	No Data	No Data	No Data	
260735Y	Ohio St	Lake	IN	EJE 22	7.73	250	1.0	1.0	2	2	0.0067	0.0054	-0.0013	No Data	No Data	No Data	No Data	No Data	
260736F	Taylor St	Lake	IN	EJE 22	8.50	750	1.0	1.0	1	1	0.0057	0.0050	-0.0007	No Data	No Data	No Data	No Data	No Data	
Lake Front Line																			
Chicago																			
260729V	E 95th St	Cook	IL	EJE -2	1.83	109	0.9	0.9	1	1	0.0037	0.0037	0.0000	No Data	No Data	No Data	No Data	No Data	
260732D	E 98th St	Cook	IL	EJE -2	2.20	109	0.9	0.9	1	1	0.0028	0.0028	0.0000	No Data	No Data	No Data	No Data	No Data	
260734S	E 99th St	Cook	IL	EJE -2	2.33	109	0.9	0.9	1	1	0.0028	0.0028	0.0000	No Data	No Data	No Data	No Data	No Data	
260735Y	E 100th St	Cook	IL	EJE -2	2.46	109	0.9	0.9	1	1	0.0028	0.0028	0.0000	No Data	No Data	No Data	No Data	No Data	
Hammond																			
260692H	Calumet Ave	Lake	IN	EJE -1	4.36	9,940	1.8	1.8	1	1	0.0129	0.0129	0.0000	No Data	No Data	No Data	No Data	No Data	
260691B	Lake St	Lake	IN	EJE -1	4.60	750	1.8	1.8	1	1	0.0144	0.0144	0.0000	No Data	No Data	No Data	No Data	No Data	
Whiting																			
260690U	117th St	Lake	IN	EJE -1	5.51	3,000	1.8	1.8	1	1	0.0094	0.0094	0.0000	No Data	No Data	No Data	No Data	No Data	
260689A	Front St	Lake	IN	EJE -1	5.83	3,000	1.8	1.8	1	1	0.0094	0.0094	0.0000	No Data	No Data	No Data	No Data	No Data	
260677F	Clark Rd	Lake	IN	EJE 0	11.86	1,568	3.5	3.5	1	1	0.0103	0.0103	0.0000	No Data	No Data	No Data	No Data	No Data	
									EJE Subtotal			4.4554	6.0209	1.5655			18196	120854	104070
												4.4042	6.0299	1.6257			18,462	124,068	107,018

EJE Vehicle Safety and Delay																		
USDOT	Street	County	State	Segment	MP	2015 ADT	Trains Per Day		Number of Tracks		Accident Prediction			Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes		
							No Action	Prop. Action	No Action	Prop. Action	No Action	Prop. Action	Change	No Action	Prop. Action	No Action	Proposed Action	Change

Transportation

Appendix A.11 Transportation Analysis

The tables below reflect updated information since publication of the Draft EIS, shown as ~~strike through~~ and underlined text, and new information from additional analysis performed by SEA as a result of comments received on the Draft EIS. New information is shown in **red**.

Table 3.3-3 from the Draft EIS:

Table 3.3-3 Existing Vehicle Delays at EJ&E Highway/Rail At-Grade Crossings														
Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _A	N	T _D	NL	Q	D _V				
Lake County, Illinois														
Waukegan, Illinois														
South Harbor Drive	540	2,760	26	1.7	1.1	3	2	3	1	0.01	A	A		
North Chicago, Illinois														
Martin L King Drive/22 nd Avenue	11,364	2,760	26	1.7	1.1	4	54	4	10	0.01	A	B		
Morrow Avenue	258	2,760	26	1.7	1.1	4	1	3	0	0.01	A	A		
Buckley Road	21,961	2,760	26	1.7	1.1	3	78	4	19	0.01	A	C		
Near Lake Bluff, Illinois														
Waukegan Road	23,764	2,760	26	1.7	1.1	3	84	4	20	0.01	A	C		
Park Avenue/Rockland Road	16,656	2,760	26	1.7	1.1	5	99	2	28	0.01	A	F		
Near Libertyville, Illinois														
Arcadia Road/Elm Road	300	2,760	26	1.7	1.1	5	2	2	1	0.01	A	A		
Bradley Road	10,208	2,760	26	1.7	1.1	3.2	39	2	17	0.01	A	E		
Milwaukee Avenue	30,660	2,760	26	1.7	1.1	3.2	116	4	26	0.01	A	D		
Lakeview Parkway	6,641	2,760	26	1.7	1.1	3.2	25	2	11	0.01	A	C		

Table 3.3-3 Existing Vehicle Delays at EJ&E Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _A	N	T _D	NL	Q	D _V				
Diamond Lake Road	4,900	2,760	26	1.7	1.1	5.3	31	2	8	0.01	A	B		
Mettawa, Illinois														
Old School Road	1,136	2,760	26	1.7	1.1	3.2	4	2	2	0.01	A	A		
Saint Mary's Road	12,927	2,760	26	1.7	1.1	3.2	49	2	22	0.01	A	F		
Vernon Hills, Illinois														
Butterfield Road	26,772	2,760	26	1.7	1.1	3.2	102	4	23	0.01	A	D		
Near Mundelein, Illinois														
IL 60 & 83	22,900	2,760	28	1.6	1.1	5.3	137	2	37	0.01	A	F	930	Diamond Lake Road
Near Hawthorn Woods, Illinois														
Gilmer Road	14,700	2,760	30	1.5	1.0	5.3	84	2	23	0.01	A	E		
Old McHenry Road	25,600	2,760	29	1.6	1.0	5.3	149	4	20	0.01	A	D		
Near Lake Zurich, Illinois														
Oakwood Road	3,750	2,760	27	1.7	1.1	5.3	23	2	6	0.01	A	A		
Lake Zurich, Illinois														
Main Street	5,900	2,760	27	1.7	1.1	5.3	36	2	10	0.01	A	B		
Old Rand Road	5,900	2,760	28	1.6	1.1	5.3	35	2	10	0.01	A	B		
Ela Road	16,900	2,760	33	1.5	0.9	5.3	90	2	25	0.01	A	E		
Near Barrington, Illinois														
Cuba Road	10,200	2,760	36	1.4	0.9	5.3	51	2	14	0.01	A	D		
Barrington, Illinois														
Lake Zurich Road	2,472	2,760	39	1.3	0.8	5.3	12	2	3	0.01	A	A		

Table 3.3-3 Existing Vehicle Delays at EJ&E Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _A	N	T _D	NL	Q	D _V				
Northwest Highway (US 14)	26,800	2,760	38	1.3	0.9	5.3	131	4	18	0.01	A	D		
Hough Street/ (IL 59 & 63)	17,800	2,760	37	1.3	0.9	5.3	88	2	24	0.01	A	E		
Northwestern Cook County, Illinois														
Barrington, Illinois														
Lake Cook Road/Main Street	11,227	2,760	37	1.3	0.9	5.3	56	2	15	0.01	A	D		
Near Barrington, Illinois														
Otis Road	1,428	2,760	34	1.4	0.9	5.3	7	2	2	0.01	A	A		
Penny Road	4,085	2,760	34	1.4	0.9	5.3	21	2	6	0.01	A	B		
Old Sutton Road	1,767	2,760	34	1.4	0.9	5.3	9	2	3	0.01	A	A		
Hoffman Estates, Illinois														
Shoe Factory Road	7,854	2,760	33	1.5	0.9	5.3	42	2	11	0.01	A	D		
Near Elgin, Illinois														
Spaulding Road	1,224	2,760	40	1.3	0.8	5.3	6	2	2	0.01	A	A		
West Bartlett Road	14,688	3,042	40	1.4	0.9	5.5	77	2	20	0.01	A	F		
DuPage County, Illinois														
Near Bartlett, Illinois														
Stearns Road	9,760	3,042	38	1.4	0.9	5.5	53	4	7	0.01	A	B		
Wayne, Illinois														
Army Trail Road	5,835	2,264	36	1.2	0.8	4.4	22	2	7	0.01	A	B		
Near West Chicago, Illinois														

Table 3.3-3 Existing Vehicle Delays at EJ&E Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _A	N	T _D	NL	Q	D _V				
Smith Road	5,623	2,264	35	1.2	0.8	4.4	21	2	7	0.01	A	C		
Hawthorne Lane	15,807	2,264	29	1.4	0.9	4.4	67	2	22	0.01	A	F		
West Chicago, Illinois														
Washington Street	9,548	3,769	21	2.5	1.7	10.7	180	2	24	0.06	A	C		
Aurora Street	287	3,769	22	2.4	1.6	10.7	5	2	1	0.06	A	A		
Church Street*	296	3,769	22	2.4	1.6	10.7	5	2	1	0.06	A	A		
Ann Street*	916	3,769	22	2.4	1.6	10.7	17	2	2	0.06	A	A		
Near Aurora, Illinois														
Liberty Street*	13,100	3,881	25	2.3	1.5	15.7	323	2	30	0.07	A	D		
Ogden Avenue (US 34)	36,400	3,881	32	1.9	1.2	15.7	745	4	34	0.05	A	F		
* 2008 ADT														
Montgomery Road/83 rd Street	21,417	3,881	32	1.9	1.2	15.7	439	2	40	0.05	A	F		
Naperville, Illinois														
Diehl Road*	14,100	3,769	33	1.8	1.2	10.7	188	2	25	0.03	A	C		
Will County, Illinois														
Near Aurora, Illinois														
Keating Drive/ 87 th Street*	3,400	3,881	32	1.9	1.2	15.7	70	2	6	0.05	A	A		
Near Plainfield, Illinois														
Hafenrichter Road*	4,600	3,881	32	1.9	1.2	15.7	94	2	9	0.05	A	B		

Table 3.3-3 Existing Vehicle Delays at EJ&E Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _A	N	T _D	NL	Q	D _V				
Wolf's Crossing Road*	7,800	3,881	31	1.9	1.2	15.7	164	2	15	0.05	A	D		
111 th Street*	8,500	3,881	31	1.9	1.2	15.7	178	2	16	0.05	A	D		
Ferguson Road/119 th Street*	3,000	3,881	30	2.0	1.3	15.7	64	2	6	0.06	A	A		
Normantown/252 nd Street ^a	NA	3,881	30	2.0	1.3	15.7	0	2	0	0.00	NA A	NA A		
127 th Street *	10,700	3,881	29	2.0	1.3	15.7	236	2	22	0.06	A	E	545	Lincoln Highway/ US 30
135 th Street*	11,300	3,398	29	1.8	1.2	15.7	226	2	21	0.05	A	D		
Van Dyke Road	5,464	3,398	32	1.7	1.1	18.5 15.7	120 102	2	9	0.05 0.04	A	B		
Renwick Road*	9,600	3,398	35	1.6	1.0	18.5	198	2	15	0.04	A	C		
Plainfield, Illinois														
143 rd Street*	7,900	3,398	33	1.7	1.1	18.5 15.7			13	0.04	A	D		
Plainfield-Naperville Road*	6,660	3,398	34	1.6	1.1	18.5	139	2	11	0.04	A	B		
* 2008 ADT														
Main Street	15,800	3,398	34	1.6	1.1	18.5	332	2	26	0.04	A	D		
Center Street	1,457	3,398	34	1.6	1.1	18.5	31	2	2	0.04	A	A		
Eastern Avenue*	2,800	3,398	34	1.6	1.1	18.5	59	2	5	0.04	A	A		
Lockport Road*	8,200	3,398	34	1.6	1.1	18.5	172	2	13	0.04	A	D		

Table 3.3-3 Existing Vehicle Delays at EJ&E Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _A	N	T _D	NL	Q	D _V				
Near Crest Hill, Illinois														
East Frontage Road Northbound/ Essington Road	3,934	3,398	33	1.7	1.1	18.5	84	2	7	0.05	A	B		
Division Street	6,010	3,398	31	1.7	1.1	18.5	135	2	10	0.05	A	A		
Crest Hill, Illinois														
Gaylord Road	4,413	3,398	28	1.9	1.2	18.5	107	2	8	0.06	A	B		
Oakland Avenue	1,311	3,398	26	2.0	1.3	18.5	33	2	3	0.07	A	A		
Near Joliet, Illinois														
South Rowell Avenue	2,513	3,795	19	2.8	1.8	6.4	31	2	7	0.04	A	A		
Cherry Hill Road	874	3,795	31	1.9	1.2	6.4	7	2	2	0.02	A	A		
Joliet, Illinois														
Woodruff Road	8,414	2,743	9	4.0	2.6	18.5	428	2	33	0.26	B	D		
Washington Street	9,247	3,795	9	5.3	3.4	6.4	217	2	49	0.16	A	C		
Mills Road	2,459	3,795	27	2.1	1.4	6.4	23	2	5	0.03	A	A		
South Rowell Avenue	2,513	3,795	29	2.0	1.3	6.4	22	2	5	0.02	A	A		
Spencer Road	929	3,795	30	1.9	1.3	6.4	8	2	2	0.02	A	A		
Briggs Street	10,927	3,795	31	1.9	1.2	6.4	92	2	21	0.02	A	D		
* 2008 ADT														
Near New Lenox, Illinois														
South Gougar Road	6,365	3,795	28	2.0	1.3	6.4	58	2	13	0.02	A	C		

Table 3.3-3 Existing Vehicle Delays at EJ&E Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _A	N	T _D	NL	Q	D _V				
Nelson Road	5,791	3,795	31	1.9	1.2	6.4	49	2	11	0.02	A	C		
Cedar Road	8,130	3,795	30	1.9	1.3	6.4	70	2	16	0.02	A	D		
Spencer Road	2,450	3,795	31	1.9	1.2	6.4	21	2	5	0.02	A	A		
School House Road	6,884	3,795	31	1.9	1.2	6.4	58	2	13	0.02	A	C		
Near Frankfort, Illinois														
Owens Road/ 116 th Street	983	3,795	29	2.0	1.3	6.4	9	2	2	0.02	A	A		
Wolf Road	7,868	3,795	28	2.0	1.3	6.4	71	2	16	0.02	A	C		
Old Sauk Trail	2,732	3,795	32	1.8	1.2	6.4	22	2	5	0.02	A	A		
Pfeiffer Road/ 88 th Avenue	6,119	3,795	32	1.8	1.2	6.4	50	2	11	0.02	A	C	285	Sauk Trail
Harlem Avenue	9,738	3,795	35	1.7	1.1	6.4	75	2	17	0.02	A	C		
Frankfort, Illinois														
Center Road	4,200	3,795	29	2.0	1.3	6.4	37	2	8	0.02	A	A		
Southeastern Cook County, Illinois														
Near Matteson, Illinois														
Ridgeland Avenue	3,363	3,795	35	1.7	1.1	6.4	26	2	6	0.02	A	A		
Central Avenue	2,121	3,795	34	1.8	1.1	6.4	17	2	4	0.02	A	A		
Cicero Avenue	21,500	3,795	35	1.7	1.1	6.4	166	4	19	0.02	A	D		
Matteson, Illinois														
Main Street	4,040	3,795	40	1.6	1.0	6.4	28	2	6	0.01	A	B		
Park Forest, Illinois														
Western Avenue	22,826	3,615	34	1.7	1.1	8.6	233	4	19	0.02	A	D		
Chicago Heights, Illinois														

Table 3.3-3 Existing Vehicle Delays at EJ&E Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _A	N	T _D	NL	Q	D _V				
Euclid Avenue	220	3,615	23	2.3	1.5	8.6	3	2	1	0.04	A	A		
Chicago Road	21,600	3,615	21	2.5	1.6	8.6	317	4	27	0.05	A	D		
West End Avenue/ Halsted Street	5,500	3,615	19	2.7	1.7	8.6	87	2	15	0.06	A	C		
East End Avenue	4,697	3,615	20	2.6	1.7	8.6	72	2	12	0.05	A	B		
Wentworth Avenue	4,213	3,261	18	2.6	1.7	10.2	76	2	11	0.06	A	B		
State Street	7,070	3,261	22	2.2	1.4	10.2	109	2	15	0.04	A	A		
Cottage Grove Avenue	5,151	3,261	30	1.7	1.1	10.2	63	4	4	0.03	A	A		
Sauk Village, Illinois														
Torrence Avenue	8,282	3,261	37	1.5	1.0	10.2	88	2	12	0.02	A	C		
Lynwood, Illinois														
Lincoln Highway (US 30)	27,000	3,261	30	1.7	1.1	10.2	332	4	23	0.03	A	E		
Lake County, Indiana														
Dyer, Indiana														
Lake Street	4,000	3,261	30	1.7	1.1	10.2	49	2	7	0.03	A	B		
Hart Street	16,000	3,261	31	1.7	1.1	10.2	192	2	27	0.03	A	F	680	Matteson Street
Schererville, Indiana														
Airport Road	3,014	3,261	36	1.5	1.0	10.2	33	2	5	0.02	A	A		
Kennedy Avenue	13,480	3,261	35	1.6	1.0	10.2	149	2	21	0.02	A	F		
Griffith, Indiana														
Broad Street	15,450	2,717	<u>23</u> 17	<u>1.8</u> 2.7	<u>1.2</u> 1.7	7.6	<u>150</u> 219	2	<u>28</u> 41	<u>0.02</u> 0.05	A	E	1,035	Main Street

Table 3.3-3 Existing Vehicle Delays at EJ&E Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _A	N	T _D	NL	Q	D _V				
East Main Street	8,652	2,717	23	1.8	1.2	7.6	84	2	16	0.02	A	D		
East Lake Street	5,150	2,717	26	1.7	1.1	7.6	46	2	9	0.02	A	B		
East Miller Street	5,150	2,717	28	1.6	1.0	7.6	44	2	8	0.02	A	B		
East Elm Street	6,386	2,717	29	1.6	1.0	7.6	53	2	10	0.02	A	C		
East 45 th Avenue	18,540	2,717	31	1.5	1.0	7.6	146	4	14	0.02	A	D		
East 40 th Place	11,227	2,717	32	1.5	1.0	7.6	87	2	16	0.01	A	D		
Gary, Indiana														
West 25 th Avenue	3,305	3,144	34	1.6	1.0	9.7	35	2	5	0.02	A	A		
West 15 th Avenue	15,702	3,144	34	1.6	1.0	9.7	164	2	24	0.02	A	F		
West 9 th Avenue	3,305	3,144	35	1.5	1.0	9.7	34	2	5	0.02	A	A		
West 5 th Avenue	22,473	3,108	35	1.5	1.0	9.8	231	4	17	0.02	A	C		

Table 3.3-5 from the Draft EIS:

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings														
Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _a	N	T _D	N/L	Q	D _V				
Cook County, Illinois (Waukesha Subdivision)														
River Forest, Illinois														
Forest Avenue	2,590	6,104	30	2.8	1.8	3.5 5.4	18 27	2	7	0	A	A		
Augusta Street	2,590	6,104	30	2.8	1.8	3.5 5.4	18 27	2	7	0	A	A		
Keystone Avenue	2,590	6,104	30	2.8	1.8	3.5 5.4	18 27	2	7	0	A	A		
Thatcher Avenue	8,568	6,104	30	2.8	1.8	3.5 5.4	59 90	3	16	0	A	C		
River Grove, Illinois														
1 st Avenue (IL 171)	31,000	6,104	30	2.8	1.8	3.5 5.4	327	4	44	0	A	C	1,100	North Avenue (IL 64)
5 th Avenue	10,404	6,104	30	2.8	1.8	3.5 5.4	74 110	4	15	0	A	B		
Melrose Park, Illinois														
George Street	3,978	6,104	28	3.0	1.9	3.5 5.4	29 44	2	12	0	A	A		
Franklin Park, Illinois														
Fullerton Avenue	4,080	6,104	25	3.3	2.1	3.5 5.4	32 50	2	13	0	A	B		
Chestnut Avenue	2,000	6,104	19	4.2	2.7	3.5 5.4	29 31	2	8	0	A	A		
Belmont Avenue	10,098	6,388	19	4.3	2.8	19.3	585	4	22	0	B	A		
Des Plaines, Illinois														
Pratt Avenue	2,335	6,468	23	3.7	2.4	19.1	114	2	9	0	B	A		
Touhy Avenue	23,970	6,468	29	3.0	2.0	19.1	965	5	29	0	A	C	725	Rand Road (US 12)

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _a	N	T _D	N _L	Q	D _V				
Frontage Road	2,971	6,468	29	3.0	2.0	19.1	120	2	9	0	A	A		
Prospect Avenue	4,188	6,468	29	3.0	2.0	19.1	169	2	13	0	A	A B	325	Rand Road (US 12)
Oakton Street	24,888	6,468	29	3.0	2.0	19.1	1,002	4	38	0	A	C		
Algonquin Road	9,486	6,468	31	2.9	1.9	19.1	361	2	27	0	A	C	675	Rand Road (US 12)
Lee Street/Mannheim Road (US 12)	8,700	6,468	31	2.9	1.9	19.1	331	2	25	0	A	B		
Graceland Avenue (US 12)	21,300	6,468	32	2.8	1.8	19.1	790	2	60	0	A	F		
Thacker Street/Dempster Street	12,036	6,468	32	2.8	1.8	19.1	447	2	34	0	A	E	850	Graceland Avenue (IL 58)
Prairie Avenue	2,452	6,468	34	2.7	1.7	19.1	87	2	7	0	A	A		
Woodlawn Avenue	562	6,468	33	2.7	1.8	19.1	20	2	2	0	A	A		
Seegers Road	1,520	6,468	28	3.1	2.0	19.1	63	2	5	0	B	A		
Golf Road (IL 58)	28,900	6,468	28	3.1	2.0	19.1	1,198	4	45	0	B	D	1,125	Rand Road (US 12)
Rand Road (US 12)	22,800	6,468	27	3.2	2.1	19.1	974	4	37	0	B	C	925	Gold Rd (IL 58)
Central Road	19,074	6,468	35	2.6	1.7	19.1	658	2	50	0	A	E		
Near Mount Prospect, Illinois														
Kensington Road/Foundry Road	8,612	6,468	38	2.4	1.6	19.1	278	2	21	0	A	C		
Mount Prospect, Illinois														
Euclid Avenue	19,482	6,468	39	2.4	1.6	19.1	616	4	23	0	A	C	575	Wolf Road
Prospect Heights, Illinois														
Wolf Road	21,522	6,468	40	2.3	1.5	19.1	667	2	50	0	A	F		
Camp McDonald Road	8,874	6,468	40	2.3	1.5	19.1	275	2	21	0	A	D	525	Wolf Road

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _a	N	T _D	N L	Q	D _V				
Hintz Road	21,318	6,468	37	2.5	1.6	19.1	703	4	27	0	A	D		
Wheeling, Illinois														
Willow Road	3,060	6,468	39	2.4	1.6	19.1	97	2	7	0	A	A		
Dundee Road (IL 68)	34,300	6,468	42	2.3	1.5	19.1	1,024	4	39	0	A	E		
Lake County, Illinois (Waukesha Subdivision)														
Buffalo Grove, Illinois														
Deerfield Parkway/Busch Road	18,300	6,468	35	2.6	1.7	19.1	631	2	48	0	A	D		
Buffalo Grove Road	12,900	6,468	42	2.3	1.5	19.1	385	3	19	0	A	E		
Prairieview, Illinois														
Aptakisic Road	22,900	6,468	35	2.6	1.7	19.1	822	4	31	0	A	C	775	Weiland Road
Near Prairieview, Illinois														
Half Day Road (IL 22)	19,100	6,468	41	2.3	1.5	19.1	616	2	46	0	A	C		
Vernon Hills, Illinois														
Butterfield Road	14,500	6,468	39	2.4	1.6	19.1	459	4	17	0	A	B		
Near Vernon Hills, Illinois														
US 45	17,600	6,468	42	3.1 2.3	0.9 1.5	19.1	525	3	26	0	A	E		
Mundelein, Illinois														
Townline Road (IL 60)	34,800	6,468	41	1.4 2.3	0.4 1.5	20.8	1,058	4	40	0	A	E	1,000	Butterfield Road
Allanson Road	15,300	6,468	35	2.6	1.7	19.1 20.8	575	2	40	0	A	F		
Hawley Street	6,500	6,468	35	2.6	1.7	19.1 20.8	244	3	11	0	A	C		
Park Street	578	6,468	35	2.6	1.7	19.1 20.8	22	2	2	0	A	A		
Maple Avenue	11,500	6,468	35	2.6	1.7	19.1 20.8	432	2	30	0	A	C	750	Lake Street (US 45)

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _a	N	T _D	N L	Q	D _V				
Dunbar Road	390	6,468	40	2.3	1.5	19.1 20.8	13	2	1	0	A	A		
Winchester Road	5,400	6,468	40	2.3	1.5	19.1 20.8	182	4	6	0	A	C	150	Lake Street (US 45)
Near Mundelein, Illinois														
Peterson Road	16,000	6,468	45	2.1	1.4	19.1 20.8	493	5	14	0	A	F		
Near Libertyville Illinois														
Harris Road	3,500	6,468	45	2.1	1.4	19.1 20.8	108	2	7	0	A	A		
Cook County, Illinois (Freeport Subdivision)														
Chicago, Illinois														
South Lawndale Avenue	756	5,224	14	4.7	3.1	2.5	6	2	4	0	A	A		
Pulaski Road	23,868	5,224	19	3.6	2.4	2.5	150	4	43	0	A	C		
Berwyn, Illinois														
Riverside Drive	4,692	6,690	25	3.5	2.3	4.4	51	2	17	0	A	B		
Riverside, Illinois														
Harlem Avenue (IL 43)	33,700	6,690	25	3.5	2.3	4.4	365	4	60	0	A	E	1,500	26 th Street
North Riverside, Illinois														
26 th Street	13,770	6,690	25	3.5	2.3	4.4	149	4	24	0	A	B		
Veterans Drive	593	6,690	25	3.5	2.3	4.4	6	4	1	0	A	A		
Hainsworth Avenue	1,020	6,690	25	3.5	2.3	4.4	11	2	4	0	A	A		
Des Plaines Avenue	15,198	6,690	25	3.5	2.3	4.4	164	4	27	0	A	C		
Near North Riverside, Illinois														
Cermak Road/22 nd Street	34,680	6,690	25	3.5	2.3	4.4	375	5	49	0	A	D	1,225	1 st Avenue (IL 171)
1 st Avenue (IL 171)	32,200	6,690	25	3.5	2.3	4.4	348	4	57	0	A	F	1,425	Cermak Road

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _a	N	T _D	N L	Q	D _V				
Broadview, Illinois														
17 th Avenue	9,690	6,690	19	5.0 4.5	3.0 2.9	4.0 4.4	133	4	22	0	A	A		
Hillside, Illinois														
Oak Ridge Avenue	123	6,755	35	2.7	1.8	3.0	1	2	0	0	A	A		
Harrison Street	9,375	6,755	36	2.6	1.7	3.0	51	2	25	0	A	C		
Wolf Road	16,014	6,755	35	2.7	1.8	3.0	90	4	22	0	A	B		
Du Page County, Illinois (Freeport Subdivision)														
Elmhurst, Illinois														
York Street	19,096	6,755	37	2.6	1.7	3.0	102	2	49	0	A	E		
Valette Street	3,342	6,750	35	3.0 2.7	2.0 1.7	3.0	19	2	9	0	A	A		
Argyle Avenue	919	6,755	39	2.5	1.6	3.0	5	2	2	0	A	A		
Spring Road	8,593	6,755	40	2.0 2.4	2.0 1.6	3.0	43	2	21	0	A	C		
Saint Charles Street	8,912	6,755	40	2.4	1.6	3.0	45	3	14	0	A	C		
West Avenue	8,912	6,755	40	2.4	1.6	3.0	45	2	22	0	A	D		
Villa Park, Illinois														
Villa Avenue	7,002	6,755	40	2.4	1.6	3.0	35	2	17	0	A	B		
Addison Avenue	13,792	6,755	39	2.5	1.6	3.0	71	7	10	0	A	B	250	North Avenue (IL 64)
North Avenue (IL 64)	46,400	6,755	39	2.5	1.6	3.0	239	8	29	0	A	D	725	Addison Avenue
Near Addison, Illinois														
Grace Street	7,214	6,755	37	2.6	1.7	3.0	39	4	9	0	A	B		
Swift Road	17,505	6,755	42	2.3	1.5	3.0	85	3	27	0	A	F	675	Collins Avenue
Addison, Illinois														
Westwood Avenue	377	6,755	37	2.6	1.7	3.0	2	2	1	0	A	A		

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _a	N	T _D	N L	Q	D _V				
Near Bloomingdale, Illinois														
Schmale Road	23,976	6,755	38	2.5	1.6	3.0	126	4	30	0	A	D		
Army Trail Road	32,994	6,755	43	2.3	1.5	3.0	157	4	38	0	A	D		
Bloomingdale, Illinois														
Gary Avenue	29,281	6,755	43	2.3	1.5	3.0	139	4	33	0	A	D	850	Army Trail Road
Hanover Park, Illinois														
Madsen Drive	556	6,755	43	2.3	1.5	3.0	3	2	1	0	A	A		
County Farm Road	30,554	6,755	43	2.3	1.5	3.0	145	4	35	0	A	D		
Bartlett, Illinois														
Sutton Road (IL 59)	41,800	6,755	41	2.4	1.5	3.0	207	4	50	0	A	F		
Near Bartlett, Illinois														
Munger Road	1,591	6,755	35	2.7	1.8	2.0	9	2	4	0	A	A		
Powis Road	4,350	4,600	25	2.6	1.7	3.0 2.0	23 16	2	11	0	A	B		
Kane County, Illinois (Freeport Subdivision)														
South Elgin, Illinois														
IL 25	8,549	4,600	45	1.7	1.1	3.0	30 20	2	14	0	A	C		
Randall Road	36,462	4,600	45	1.7	1.1	3.0 2.0	126 84	4	30	0	A	F		
Cook County, Illinois (Joliet Subdivision)														
Willow Springs, Illinois														
Old Willow Springs Road	8,054 1,938	6,103	40	2.2	1.5	1.8	50 55	2	40 44	0	A	A		
Lemont, Illinois														
Pruxne Street/Illinois Street	6,120	6,103	35	2.0 2.5	2.0 1.6	1.8	19	2	15	0	A	C	380	Main Street

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _a	N	T _D	N _L	Q	D _V				
Holmes Street	385	6,103	35	2.0 2.5	2.0 1.6	1.8	1	2	1	0	A	A		
Stephen Street	12,138	6,103	33	3.0 2.6	2.0 1.7	1.8	39	2	32	0	A	A E	800	Main Street
Lemont Street	1,000	6,103	32	3.0 2.7	2.0 1.7	1.8	3	2	3	0	A	F A	75	Main Street
Industrial Avenue	236	4,659	35	2.0	1.3	1.8	1	2	0	0	A	A		
Will County, Illinois (Joliet Subdivision)														
Romeoville, Illinois														
Romeo Road/135 th Street	15,080	4,659	38	1.9	1.2	1.8	36	2	29	0	A	F		
Lockport, Illinois														
2 nd Street	34	4,659	35	2.0	1.0 1.3	1.8	0	2	0	0	A	A		
6 th Street	126	4,659	35	2.0	1.0 1.3	1.8	0	2	0	0	A	A		
9 th Street (IL 7)	25,100	4,659	35	2.0	1.0 1.3	1.8	63	2	51	0	A	F	1,275	State Street (IL 171)
10 th Street	126	4,659	35	2.0	1.0 1.3	1.8	0	2	0	0	A	A		
11 th Street	242	4,659	35	2.0	1.3	1.8	1	2	0	0	A	A		
13 th Street	126	4,659	35	2.0	1.3	1.8	0	2	0	0	A	A		
Division Street	5,354	4,659	35	2.0	1.3	1.8	13	2	11	0	A	A	275	State Street (IL 171)
Joliet, Illinois														
Ohio Street	5,682	4,659	35 10	2.0 5.8	1.0 3.8	1.8	14 41	2	11 33	0	A	B	275 825	Scott Street (IL 53) & Chicago Street (IL 53))
Jackson Street	16,088	4,659	35 10	2.0 5.8	1.0 3.8	1.8	40 117	2	32 93	0	A	C	1,175	Scott Street (IL 53) & Ottawa Street

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007										Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection	
		L	V	D _C	D _a	N	T _D	N L	Q	D _V						
Will County, Illinois (Chicago Subdivision)																
Richton Park, Illinois																
University Parkway/Stuenkel Road	10,768	5,400	45	1.9	1.0 1.2	12.8 13.8	178 192	4	10	0	A	E	250	South Governors Highway		
University Park, Illinois																
W Dralle Road	3,167	5,400	45	2.0 1.9	1.0 1.2	13 13.8	52 57	4	3	0	A	A				
Cook County, Illinois (Elsdon/Southbend Subdivision)																
Chicago, Illinois																
51 st Street	2,046	4,365	8	7.0 6.7	4.0 4.4	3.0 1.6	31 15	2	14	0	A	A				
55 th Street	26,826	4,365	8	7.0 6.7	4.0 4.4	3.0 1.6	412 200	4	90	0	A	F				
71 st Street	14,178	4,365	8	7.0 6.7	4.0 4.4	3.0 1.6	218 106	2	95	0	A	F				
79 th Street	25,000	4,365	8	7.0 6.7	4.0 4.4	3.4	396	4	84	0	A	C				
Columbus Avenue	15,402	4,365	8	7.0 6.7	4.0 4.4	3.4	244	4	52	0	A	A B				
83 rd Place	1,114	4,365	8	7.0 6.7	4.0 4.4	3.4	18	2	7	0	A	A				
87 th Street	20,196	4,365	8	6.7	4.4	3.4	320	6	45	0	A	B				
103 rd Street	20,298	4,365	8	6.7	4.4	3.4	321	4	68	0	A	C				
111 th Street	16,728	4,365	8	6.7	4.4	3.4	265	4	56	0	A	B	1,400	S Kedzie Avenue		
115 th Street	13,260	4,365	8	7.0	4.0	3.4	210	4	44	0	A	E				
Evergreen Park, Illinois																
91 st Street	3,825	4,365	8	6.7	4.4	3.4	61	2	26	0	A	A				
Kedzie Avenue	24,582	4,365	8	6.7	4.4	3.4	389	4	82	0	A	C				

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _a	N	T _D	N _L	Q	D _V				
94 th Street	2,958	4,365	8	6.7	4.4	3.4	47	4	10	0	A	A		
95 th Street (US 12/US 20)	23,700	4,365	8	6.7	4.4	3.4	375	6	53	0	A	B		
99 th Street	9,894	4,365	8	6.7	4.4	3.4	157	2	66	0	A	D		
Blue Island, Illinois														
119 th Street	12,240	4,365	8	7.0 6.7	4.0 4.4	3.4	194	2	82	0	A	D	2,050	S Kedzie Avenue
123 rd Street	5,520	4,365	8	7.0 6.7	4.0 4.4	3.4	87	2	37	0	A	C		
127 th Street	23,562	4,365	8	7.0 6.7	4.0 4.4	3.4	373	4	79	0	A	C		
Union Street	756	4,365	8	7.0 6.7	4.0 4.4	3.4	12	2	5	0	A	A		
Broadway Street	5,049	7,256	10	2.8 8.7	1.8 5.7	14.9	146 457	4	7 22	0 1	A E	A		
Dixmoor, Illinois														
Western Avenue	8,568	7,256	29	3.0 3.3	2.9	14.9	296	4	14	0	A	A		
Robey Street	123	7,256	34	3.0 2.9	2.0 1.9	14.9	4	2	0	0	A	A		
Harvey, Illinois														
Lincoln Avenue	756	7,256	34	3.0 2.9	2.0 1.9	14.9	23	2	2	0	A	A		
Wood Street	13,464	7,256	35	2.9	1.9	14.9	398	4	19	0	A	C		
147 th Street/Sibley Boulevard (IL 83)	28,600	7,256	35	3.0 2.9	2.0 1.9	14.9	845	4	41	0	A	D		
Ashland Avenue	11,901	7,256	35	3.0 2.9	2.0 1.9	14.9	352	2	34	0	A	E	850	147 th Street/Sibley Blvd (IL 83)
150 th Street	1,202	7,256	36	2.8	1.8	14.9	35	4	2	0	A	A		

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _a	N	T _D	N _L	Q	D _V				
Center Avenue	756	7,256	36	3.0 2.8	2.0 1.8	14.9	22	2	2	0	A	A		
Broadway Avenue	756	7,256	40 36	8.7 2.8	5.7 1.8	14.9	68 22	4	3	1	E	A		
Park Avenue	6,018	7,256	36	2.8	1.8	14.9	174	4	8	0	A	B		
Halsted Street (IL 1)	12,300	5,927	36	2.0 2.4	2.0 1.5	19.5	395	4	15	0	A	B		
Phoenix, Illinois														
155 th Street	385	5927	36	2.4	1.5	19.5	12	2	1	0	A	A		
South Holland, Illinois														
Thornton-Blue Island Road	4,233	5,927	35	2.0 2.4	2.0 1.6	19.5	139	2	10	0	A	A		
159 th /162 nd Street (US 6)	29,651	5,927	35	2.4	1.6	19.5	973	4	36	0	A	D		
South Park Avenue	10,098	6,081	26	3.2	2.1	22.1	489	4	16	0	B	B		
170 th Street	11,322	6,081	15	5.1	3.3	22.1	887	4	29	1	C	B		
Near Thornton, Illinois														
Thornton-Lansing Road	10,200	6,081	38	2.0 2.3	2.0 1.5	22.1	363	2	24	0	A	E		
Lansing, Illinois														
Volbrecht Road	3,108	6,081	38	2.3	1.5	22.1	111	2	7	0	A	A		
182 nd Street/Ridge Road	7,969	6,081	39	2.0 2.3	1.0 1.5	22.1	278	2	18	0	A	A C		
Torrence Avenue (IL 83)	10,924	6,081	39	2.3	1.5	22.1	381	4	12	0	A	A		
186 th Street	6,630	6,081	41	2.2	1.4	22.1	222	2	14	0	A	C		
Burnham Avenue	7,446	6,081	42	2.1	1.4	22.1	245	2	16	0	A	B		
Wentworth Avenue	11,118	6,081	42	2.1	1.4	22.1	366	2	24	0	A	D		
Lake County, Indiana (Elsdon/Southbend Subdivision)														

Table 3.3-5 Existing Vehicle Delays At CN Highway/Rail At-Grade Crossings

Street	2007 ADT	2007									Crossing LOS	Roadway LOS	Queue Length	Blocked Major Intersection
		L	V	D _C	D _a	N	T _D	N L	Q	D _V				
Munster, Indiana														
Calumet Avenue	24,717	6,081	40	2.2	1.4	22.1	845	4	28	0	A	D		
White Oak Avenue	8,733	6,081	38	2.0 2.3	2.0 1.5	22.1	311	2	20	0	A	D		
Highland, Indiana														
Kennedy Avenue	5,261	6,081	18	4.3	2.8	22.1	350	2	23	0	C	B		
Griffith, Indiana														
Main Street	8,652	6,081	35	2.5	1.6	22.1	332 329	2	22 21	0	A	C		
Broad Street	15,450	6,081	36	2.4	1.6	22.1	574	2	37	0	A	E		
Colfax Street	11,162	6,081	40	2.0 2.2	1.0 1.4	23.0 24.8	402 428	2	25	0	A	E		
Near Merrillville, Indiana														
Hendricks Street	438	6,081	40	2.0 2.2	1.0 1.4	23.0 24.8	16 17	2	1	0	A	A		
Merrillville, Indiana														
Taft Street	24,056	6,081	40	2.2	1.4	23.3 24.8	867 923	2	54	0	A	F		
Madison Street	7,129	6,081	40	2.0 2.2	1.0 1.4	23.0 24.8	257 273	2	16	0	A	C		
Broadway Street	31,568	6,081	40	2.0 2.2	1.0 1.4	23.0 24.8	1,138 1,211	4	35	0	A	F		

Table 4.3-2 2007 LOS Summary of Roadways Crossing CN Subdivisions						
LOS	Total	Waukesha (Illinois)	Freeport (Illinois)	Joliet (Illinois)	Chicago (Illinois)	Elsdon (Illinois/ Indiana)
LOS A - B	74	20	17	9	1	27
LOS C - D	49	17	13	2	0	17
LOS E - F	29	10	6	3	1	9

Table 4.3-4 from the Draft EIS:

Table 4.3-4 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the EJ&E Rail Line												
Street	2015 ADT	Trains per Day		2015 Level of Service		Queue Length (Feet)		Average Delay per Delayed Vehicle (Minutes)		Total Vehicle Traffic Delay (24-Hr) (Minutes)		
				Crossing								Roadway
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action			
Near Libertyville, IL												
Diamond Lake Road	6,207	5.3	20.3	A	A	C	265	466	1.1	2.0	42.9	526.0
Near Mundelein, IL												
IL 60 & 83	29,009	5.3	20.3	A	A	F	1,175 587	2,124 1,061	1.1	2.0	190.3 189.0	2,456.0 2,272.4
Near Hawthorn Woods, IL												
Gilmer Road	18,662	5.3	20.3	A	A	F	719	1,328	1.0	1.9	106.0	1,425.0
Old McHenry Road	32,494 32,429	5.3	20.3	A	A	F	641	1,186	1.0	1.9	189.0	2,540.3
Near Lake Zurich, IL												
Oakwood Road	4,750	5.3	20.3	A	B	B	197	367	1.1	2.0	31.9	414.0
Lake Zurich, IL												
Main Street	7,474	5.3	20.3	A	B	B	310	577	1.1	2.0	50.6	650.0
Old Rand Road	7,474	5.3	20.3	A	A	B	303	561	1.1	2.0	49.5	632.0
Ela Road	21,408	5.3	20.3	A	A	F	776	1,421	0.9	1.7	102.6	1,361.7
Near Barrington, IL												
Cuba Road	12,921	5.3	20.3	A	A	D	443	804	0.9	1.6	58.5	726.4
Barrington, IL												
Lake Zurich Road	3,131	5.3	20.3	A	A	A	102	187	0.8	1.6	12.0	169.6
Northwest Highway (US 14)	33,949	5.3	20.3	A	A	E	562	1,057	0.9	1.6	1479.4 149.4	1,907.2
Hough Street (IL 59)	22,549	5.3	20.3	A	A	F	760	1,404	0.9	1.6	100.8	1,265.6
Barrington, IL												

Table 4.3-4 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the EJ&E Rail Line

Street	2015 ADT	Trains per Day		2015 Level of Service			Queue Length (Feet)		Average Delay per Delayed Vehicle (Minutes)		Total Vehicle Traffic Delay (24-Hr) (Minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action		
Lake Cook Road/Main Street	14,222	5.3	20.3	A	A	F	479	885	0.9	1.6	63.9	798.4
Near Barrington, IL												
Penny Road	4,786	5.3	20.3	A	A	B	170	311	0.9	1.7	22.5	297.5
Hoffman Estates, IL												
Shoe Factory Road	9,202	5.3	20.3	A	A	D	334	598	0.9	1.7	44.1	572.9
Near Elgin, IL												
West Bartlett Road	17,209	5.5	22.5	A	A	F	587	978	0.9	1.5	81.0	918.0
Near Bartlett, IL												
Stearns Road	27,604	5.5	22.5	A	A	E	486	815	0.9	1.5	134.1	1,527.0
Wayne, IL												
Army Trail Road	7,392	4.4	23.4	A	A	C	224	452	0.8	1.6	21.6	470.4
Near West Chicago, IL												
Smith Road	7,123	4.4	23.4	A	A	C	220	435	0.8	1.6	21.6	452.8
Hawthorne Lane	20,024	4.4	23.4	A	B	D E	694	1,430	0.9	1.9	76.5	1,765.1
West Chicago, IL												
Washington Street	12,095	10.7	31.6	A	C	D	768	1,121	1.7	2.4	387.6	2,361.6
Aurora Street	364	10.7	31.6	A	B	A	22	30	1.6	2.2	11.2	59.4
Church Street	364	10.7	31.6	A	C	A	22	31	1.6	2.2	11.2	61.6
Naperville, IL												
Diehl Road	17,341	10.7	31.6	A	B	C	779	1,059	1.2	1.6	278.4	1,486.4
Near Aurora, IL												
Liberty Street.	16,111	15.7	39.5	A	B	F	912	1,148	1.5	1.9	597.0	2,392.1
Ogden Avenue (US 34)	46,110	15.7	39.5	A	B	F	1,083	1,330	1.2	1.5	1,132.8	4,377.0

Table 4.3-4 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the EJ&E Rail Line

Street	2015 ADT	Trains per Day		2015 Level of Service			Queue Length (Feet)		Average Delay per Delayed Vehicle (Minutes)		Total Vehicle Traffic Delay (24-Hr) (Minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action		
Montgomery Road/83 rd Street	27,131	15.7	39.5	A	B	F	1,274	1,597	1.2	1.5	667.2	2,629.5
Keating Drive/87 th Street	4,182	15.7	39.5	A	B	B	196	246	1.2	1.5	103.2	405.0
Near Plainfield, IL												
Hafenrichter Road	5,657	15.7	39.5	A	B	C	266	333	1.2	1.5	139.2	547.5
Wolf's Crossing Road	9,593	15.7	39.5	A	B	D	461	577	1.2	1.6	241.2	1,012.8
111 th Street	10,454	15.7	39.5	A	B	E	502	629	1.2	1.6	262.8	1,104.0
Ferguson Road - 119 th Street	3,690	15.7	39.5	A	B	B	182	227	1.3	1.6	102.7	398.4
127 th Street	13,160	15.7	39.5	A	B	F	665	867	1.3	1.7	377.0	1,618.4
135 th Street	13,898	15.7	39.5	A	B	F	636	852	1.2	1.6	282.0	1,267.2
Van Dyke Road	6,921	18.5 15.7	42.3 39.5	A	B	C	295	389	1.1	1.5	167.2 141.9	640.5
Renwick Road	11,807	18.5	42.3	A	B	D	473	637	1.0	1.4	243.0	1,048.6
Plainfield, IL												
143 rd Street	9,716	18.5 15.7	42.3 39.5	A	B	D	406	247 535	1.1	1.4	194.7	821.8
Plainfield/Naperville Road	8,117	18.5	42.3	A	B	B	332	438	1.1	1.4	188.1	721.0
Main Street	20,015	18.5	42.3	A	B	A E	818	1,081	1.1	1.4	463.1	1,778.0
Center Street	1,845	18.5	42.3	A	B	A	1,587 75	209 100	1.1	1.4	42.7	163.8
Eastern Avenue	3,444	18.5	42.3	A	B	E A	141	186	1.1	1.4	79.2	305.2

Table 4.3-4 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the EJ&E Rail Line

Street	2015 ADT	Trains per Day		2015 Level of Service			Queue Length (Feet)		Average Delay per Delayed Vehicle (Minutes)		Total Vehicle Traffic Delay (24-Hr) (Minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action		
Lockport Road	10,085	18.5	42.3	A	B	D E	412	545	1.1	1.4	233.2	896.0
Near Crest Hill, IL												
East Frontage Road/ Essington Road	4,983	18.5	42.3	A	B	B	208	274	1.1	1.4	117.7	450.8
Division Street	7,613	18.5	42.3	A	B	B	332	446	1.1	1.5	188.1	786.0
Crest Hill, IL												
Gaylord Road	5,591	18.5	42.3	A	B	C	263	351	1.2	1.6	162.0	659.2
Near Joliet, IL												
South Rowell Avenue	3,184	6.4	28.3	A	D	A	220	395	1.8	3.2	70.2	995.2
Joliet, IL												
Woodruff Road	10,659	18.5	42.3	B	F	E	1,056	1,814	2.6	4.4	1,411.8	9,380.8
Washington Street	11,714	6.4	28.3	A	F	C	1,550	2,371	3.4	5.3	938.4	9,879.2
Mills Road	3,115	6.4	28.3	A	B	A	163	236	1.4	2.0	40.6	372.0
South Rowell Avenue	3,184	6.4	28.3	A	B	A	158	223	1.3	1.8	36.4	315.0
Briggs Street	13,842	6.4	28.3	A	B	E	654	946	1.2	1.8	139.2	1,339.2
Near New Lenox, IL												
South Gougar Road	8,063	6.4	28.3	A	B	D	411	551	1.3	1.8	94.9	779.4
Nelson Road	7,336	6.4	28.3	A	B	C	347	479	1.2	1.7	74.4	639.2
Cedar Road	10,299	6.4	28.3	A	B	E	499	672	1.3	1.7	115.7	897.6
Spencer Road	3,104	6.4	28.3	A	B	A	147	202	1.2	1.7	31.2	270.3
School House Road	8,721	6.4	28.3	A	B	D	412	569	1.2	1.7	87.6	759.9
Near Frankfort, IL												
Wolf Road	9,966	6.4	28.3	A	B	C	508	698	1.3	1.8	117.0	988.2

Table 4.3-4 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the EJ&E Rail Line

Street	2015 ADT	Trains per Day		2015 Level of Service		Queue Length (Feet)		Average Delay per Delayed Vehicle (Minutes)		Total Vehicle Traffic Delay (24-Hr) (Minutes)		
				Crossing								Roadway
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action			
Frankfort, IL												
Center Avenue	5,320	6.4	28.3	A	B	B	264	364	1.3	1.7	61.1	514.8
Near Frankfort, IL												
Old Sauk Trail	3,461	6.4	28.3	A	B	A	160	226	1.2	1.7	33.6	300.9
Pfeiffer Road / 88 th Avenue	7,752	6.4	28.3	A	B	D	358	506	1.2	1.7	76.8	676.6
Harlem Avenue	12,336	6.4	28.3	A	A	D	267	363	1.1	1.8	104.5	855.0
Near Matteson, IL												
Ridgeland Avenue	3,642	6.4	28.3	A	A	B	158	214	1.1	1.5	30.8	252.0
Cicero Avenue	23,281	6.4	28.3	A	B	D	504	777	1.1	1.7	196.9	2,077.4
Matteson, IL												
Main Street	4,375	6.4	20.3	A	C	B	173	262	1.1	1.6	31.0	236.8
<u>Main Street Connector (North)</u>	<u>4,375</u>	=	<u>8.0</u>	=	<u>B</u>	<u>B</u>	=	<u>608</u>	=	<u>3.6</u>	=	<u>486</u>
<u>Main Street Connector (South)</u>	<u>4,375</u>	<u>10</u>	<u>15</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>526</u>	<u>608</u>	<u>3.1</u>	<u>3.6</u>	<u>99.2</u>	<u>381.6</u>
Park Forest, IL												
Western Avenue	24,717	8.6	31.6	A	B	D	528	863	1.1	1.8	277.2	2,727.0
Chicago Heights, IL												
Chicago Road	23,390	8.6	31.6	A	C	D	718	1,091	1.6	2.4	548.8	4,596.0
West End Avenue/Halsted Street	5,956	8.6	31.6	A	C	C	396	604	1.7	2.6	161.5	1,378.0
East End Avenue	5,086	8.6	31.6	A	C	B	325	515	1.7	2.6	32.6	
<u>East End Avenue Connector</u>	<u>5,086</u>	<u>1.6</u>	<u>2.6</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>586</u>	<u>967</u>	<u>3.0</u>	<u>4.9</u>	<u>78.0</u>	<u>343.0</u>

Table 4.3-4 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the EJ&E Rail Line

Street	2015 ADT	Trains per Day		2015 Level of Service			Queue Length (Feet)		Average Delay per Delayed Vehicle (Minutes)		Total Vehicle Traffic Delay (24-Hr) (Minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action		
Wentworth Avenue	4,563	10.2	34.2	A	C	B	292	467	1.7	2.7	141.1	1,198.8
State Street	7,656	10.2	34.2	A	C	A	418	690	1.4	2.3	165.2	1,508.8
Cottage Grove Avenue	5,578	10.2	34.2	A	B	A	121	179	1.1	1.7	75.9	578.0
Sauk Village, IL												
Torrence Avenue	8,968	10.2	34.2	A	A	C	337	486	1.0	1.4	95.0	645.4
Lynwood, IL												
Lincoln Highway (US 30)	29,237	10.2	34.2	A	B	E	634	939	1.1	1.7	394.9	3,034.5
Dyer, IN												
Lake Street	5,067	10.2	34.2	A	B	B	220	318	1.1	1.6	68.2	483.2
Hart Street	20,268	10.2	34.2	A	B	F	859	1,272	1.1	1.6	267.3	1,932.8
Schererville, IN												
Airport Road	3,818	10.2	34.2	A	A	B	146	215	1.0	1.5	41.0	306.0
Kennedy Avenue	17,076	10.2	34.2	A	A	F	665	981	1.0	1.5	189.0	1,398.0
Griffith, IN												
Broad Street	19,572	7.6	23.6	A	B	F	1,311	1,916	1.7	2.5	470.9	3,140.0
Broad Street Connector	19,572	2.6	10.7	A	A	F	970	1,582	1.3	2.1	91.0	987.0
East Main Street	10,960	7.6	28.6	A	B	E	505	904	1.2	2.1	128.4	1,507.8
East Lake Street	6,524	7.6	28.6	A	B	C	275	488	1.1	1.9	63.8	735.3
East Miller Street	6,524	7.6	28.6	A	B	C	261	460	1.0	1.8	55.0	657.0
East Elm Street	8,090	7.6	28.6	A	A	C	316	501	1.0	1.6	67.0	636.8
East 45 th Avenue	23,486	7.6	28.6	A	A	E	439	727	1.0	1.6	185.0	1,848.0
East 40 th Place	14,222	7.6	28.6	A	A	F	521	861	1.0	1.6	110.0	1,094.4
Gary, IN												

Table 4.3-4 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the EJ&E Rail Line

Street	2015 ADT	Trains per Day		2015 Level of Service			Queue Length (Feet)		Average Delay per Delayed Vehicle (Minutes)		Total Vehicle Traffic Delay (24-Hr) (Minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action		
West 25 th Avenue	4,187	9.7	29.7	A	A	B	162	238	1.0	1.5	44.0	294.0
West 15 th Avenue	19,890	9.7	29.7	A	A	F	771	1,131	1.0	1.5	208.0	1,399.5
West 9 th Avenue	4,187	9.7	29.7	A	A	B	159	233	1.0	1.4	43.0	268.8
West 5 th Avenue	28,467	9.8	29.8	A	A	D	537	807	1.0	1.5	292.0	2,004.0

Table 4.3-5 from the Draft EIS:

Table 4.3-5 Train Operations Factors for the EJ&E Rail Line						
Street	Length of Train		Train Speed		Trains per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Near Libertyville, IL						
Diamond Lake Road	2,760	6,829	26	31	5.3	20.3
Near Mundelein, IL						
IL 60 & 83	2,760	6,829	28	32	5.3	20.3
Near Hawthorn Woods, IL						
Gilmer Road	2,760	6,829	30	33	5.3	20.3
Old McHenry Road	2,760	6,829	29	32	5.3	20.3
Near Lake Zurich, IL						
Oakwood Road	2,760	6,829	27	30	5.3	20.3
Lake Zurich, IL						
Main Street	2,760	6,829	27	30	5.3	20.3
Old Rand Road	2,760	6,829	28	31	5.3	20.3
Ela Road	2,760	6,829	33	36	5.3	20.3
Near Barrington, IL						
Cuba Road	2,760	6,829	36	39	5.3	20.3
Barrington, IL						
Lake Zurich Road	2,760	6,829	39	41	5.3	20.3
Northwest Highway (US 14)	2,760	6,829	38	39	5.3	20.3
Hough Street (IL 59&63)	2,760	6,829	37	39	5.3	20.3
Barrington, IL						
Lake Cook Road / Main Street	2,760	6,829	37	39	5.3	20.3
Near Barrington, IL						
Penny Road	2,760	6,829	34	37	5.3	20.3
Hoffman Estates, IL						
Shoe Factory Road	2,760	6,829	33	37	5.3	20.3
Near Elgin, IL						
West Bartlett Road	3,042	6,714	40	43	5.5	22.5
Near Bartlett, IL						
Stearns Road	3,042	6,714	38	41	5.5	22.5
Wayne, IL						
Army Trail Road	2,264	6,843	36	40	4.4	23.4
Near West Chicago, IL						
Smith Road	2,264	6,843	35	40	4.4	23.4
Hawthorne Lane	2,264	6,843	29	33	4.4	23.4
West Chicago, IL						
Washington Street	3,769	6,494	21	23	10.7	31.6
Aurora Street	3,769	6,494	22	26	10.7	31.6
Church Street	3,769	6,494	22	25	10.7	31.6
Naperville, IL						
Diehl Road	3,769	6,494	33	38	10.7	31.6
Near Aurora, IL						
Liberty Street	3,881	6,203	25	30	15.7	39.5
Ogden Avenue (US 34)	3,881	6,203	32	39	15.7	39.5

Table 4.3-5 Train Operations Factors for the EJ&E Rail Line						
Street	Length of Train		Train Speed		Trains per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Montgomery Road / 83rd Street	3,881	6,203	32	38	15.7	39.5
Near Plainfield, IL						
Hafenrichter Road	3,881	6,203	32	38	15.7	39.5
Wolf's Crossing Road	3,881	6,203	31	37	15.7	39.5
111 th Street	3,881	6,203	31	37	15.7	39.5
Ferguson Road / 119th Street	3,881	6,203	30	36	15.7	39.5
127 th Street	3,881	6,203	29	33	15.7	39.5
135 th Street	3,398	5,842	29	34	15.7	39.5
Van Dyke Road	3,398	5,842	32	38	18.5 15.7	42.3 39.5
Plainfield, IL						
143 rd Street	3,398	5,842	33	39	18.5 15.7	42.3 39.5
Plainfield-Naperville Road	3,398	5,842	34	40	18.5	42.3
Main Street	3,398	5,842	34	40	18.5	42.3
Center Street	3,398	5,842	34	40	18.5	42.3
Eastern Avenue	3,398	5,842	34	40	18.5	42.3
Lockport Road	3,398	5,842	34	40	18.5	42.3
Renwick Road	3,398	5,842	35	40	18.5	42.3
Near Crest Hill, IL						
East Frontage Road / Essington Road	3,398	5,842	33	39	18.5	42.3
Division Street	3,398	5,842	31	36	18.5	42.3
Crest Hill, IL						
Gaylord Road	3,398	5,842	28	33	18.5	42.3
Near Joliet, IL						
South Rowell Avenue	3,795	6,684	19	17	6.4	28.3
Joliet, IL						
Woodruff Road	2,743	5,552	9	10	18.5	42.3
Washington Street	3,795	6,684	9	10	6.4	28.3
Mills Road	3,795	6,684	27	30	6.4	28.3
South Rowell Avenue	3,795	6,684	29	33	6.4	28.3
Briggs Street	3,795	6,684	31	34	6.4	28.3
Near New Lenox, IL						
South Gougar Road	3,795	6,684	28	34	6.4	28.3
Nelson	3,795	6,684	31	36	6.4	28.3
Cedar Road	3,795	6,684	30	36	6.4	28.3
Spencer Road	3,795	6,684	31	36	6.4	28.3
School House Road	3,795	6,684	31	36	6.4	28.3
Near Frankfort, IL						
Wolf Road	3,795	6,684	28	33	6.4	28.3
Frankfort, IL						
Center Avenue	3,795	6,684	29	34	6.4	28.3
Near Frankfort, IL						

Table 4.3-5 Train Operations Factors for the EJ&E Rail Line						
Street	Length of Train		Train Speed		Trains per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Old Sauk Trail	3,795	6,684	32	36	6.4	28.3
Pfeiffer Road / 88 th Avenue	3,795	6,684	32	36	6.4	28.3
Harlem Avenue	3,795	6,684	35	41	6.4	28.3
Near Matteson, IL						
Ridgeland Avenue	3,795	6,684	35	41	6.4	28.3
Cicero Avenue	3,795	6,684	35	35	6.4	28.3
Matteson, IL						
Main Street	3,795	6,684	40	40	6.4	20.3
Main Street Connector (North)	=	<u>6,684</u>	=	<u>15</u>	=	<u>8.0</u>
Main Street Connector (South)	3,795	6,684	10	15	2.2	6.3
Park Forest, IL						
Western Avenue	3,615	6,256	34	31	8.6	31.6
Chicago Heights, IL						
Chicago Road	3,615	6,256	21	22	8.6	31.6
West End Avenue / Halsted Street	3,615	6,256	19	20	8.6	31.6
East End Avenue	3,615	6,256	20	20	8.6	31.6
East End Connector	3,615	6,256	10	10	1.6	2.6
Wentworth Avenue	3,261	6,012	18	19	10.2	34.2
State Street	3,261	6,012	22	22	10.2	34.2
Cottage Grove Avenue	3,261	6,012	30	33	10.2	34.2
Sauk Village, IL						
Torrence Avenue	3,261	6,012	37	41	10.2	34.2
Lynwood, IL						
Lincoln Highway (US 30)	3,261	6,012	30	33	10.2	34.2
Dyer, IN						
Lake Street	3,261	6,012	30	34	10.2	34.2
Hart Street	3,261	6,012	31	34	10.2	34.2
Schererville, IN						
Airport Road	3,261	6,012	36	39	10.2	34.2
Kennedy Avenue	3,261	6,012	35	38	10.2	34.2
Griffith, IN						
Broad Street	2,717 <u>3,261</u>	5,915 <u>6,012</u>	23 <u>17</u>	24 <u>20</u>	7.6	28.6 <u>23.6</u>
Broad Street Connector	3,261	6,012	25	25	2.6	10.7
East Main Street	2,717	5,915	23	24	7.6	28.6
East Lake Street	2,717	5,915	26	27	7.6	28.6
East Miller Street	2,717	5,915	28	29	7.6	28.6
East Elm Street	2,717	5,915	29	34	7.6	28.6
East 45 th Avenue	2,717	5,915	31	34	7.6	28.6
East 40 th Place	2,717	5,915	32	35	7.6	28.6
Gary, IN						
West 25 th Avenue	3,144	5,777	34	37	9.7	29.7
West 15 th Avenue	3,144	5,777	34	37	9.7	29.7

Street	Length of Train		Train Speed		Trains per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
West 9 th Avenue	3,144	5,777	35	38	9.7	29.7
West 5 th Avenue	3,108	5,758	35	37	9.8	29.8

Table 4.3-6 from the Draft EIS:

Table 4.3-6 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Line													
Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)		
				Crossing		Roadway							
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Waukesha Subdivision													
River Forest, IL													
Forest Avenue	3,035	3.5 5.4	0.0	A	A	A	213	0	1.8	0.0	37.8 58.5	0.0	
Augusta Street	3,035	3.5 5.4	0.0	A	A	A	213	0	1.8	0.0	37.8 58.5	0.0	
Keystone Avenue	3,035	3.5 5.4	0.0	A	A	A	213	0	1.8	0.0	37.8 58.5	0.0	
Thatcher Avenue	10,039	3.5 5.4	0.0	A	A	A C	471	0	1.8	0.0	193.2	0.0	
River Grove, IL													
1 st Avenue (IL 171)	36,321	3.5 5.4	0.0	A	A	C	1,277	0	1.8	0.0	700.1	0.0	
5 th Avenue	12,190	3.5 5.4	0.0	A	A	C B	428	0	1.8	0.0	149.4 235.0	0.0	
Melrose Park, IL													
George Street	4,661	3.5 5.4	0.0	A	A	B	347	0	1.9	0.0	64.6 100.7	0.0	
Franklin Park, IL													
Fullerton Avenue	4,780	3.5 5.4	0.0	A	A	B	391	0	2.1	0.0	79.8 124.9	0.0	
Belmont Avenue	11,831	19.3	2.0	B	A	B	639	308	2.8	1.4	1,924.1	46.3	
Des Plaines, IL													
Pratt Avenue	2,735	19.1	2.0	B	A	B A	253	121	2.4	1.2	322.1	7.7	

Table 4.3-6 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Line

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
				No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action
Touhy Avenue	28,085	19.1	2.0	A	A	A D	852	434	2.0	1.0	2,229.6	60.6
Frontage Road	3,481	19.1	2.0	A	A	D A	264	135	2.0	1.0	276.4	7.5
Oakton Street	29,160	19.1	2.0	A	A	D	1,106	600	2.0	1.1	2,315.0	71.4
<u>Prospect Avenue</u>	<u>4,906</u>	<u>19.1</u>	<u>2.0</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>372</u>	<u>190</u>	<u>2.0</u>	<u>1.0</u>	<u>389.5</u>	<u>10.6</u>
Algonquin Road	11,114	19.1	2.0	A	A	D C	798	438	1.9	1.0	789.8	25.0
Lee Street/Mannheim Road (US 12)	10,193	19.1	2.0	A	A	C	732	402	1.9	1.0	724.4	22.9
Graceland Avenue (US 12)	24,956	19.1	2.0	A	A	G E	1,745	984	1.8	1.0	1683.1	56.1
Thacker Street/Dempster Street	14,102	19.1	2.0	A	A	F	986	556	1.8	1.0	951.1	31.7
Prairie Avenue	2,873	19.1	2.0	A	A	F A	191	111	1.7	1.0	175.5	6.2
Seegers Road	1,781	19.1	2.0	B	A	A	139	75	2.0	1.1	149.9	4.6
Golf Road (IL 58)	33,861	19.1	2.0	B	A	A E	1,323	731	2.0	1.1	2,850.9	91.1
Rand Road (US 12)	26,714	19.1	2.0	B	A	E D	1,076	576	2.1	1.1	2,391.3	71.9
Central Road	22,348	19.1	2.0	A	A	D E	1,453	816	1.7	0.9	1,302.5	43.1
Near Mount Prospect, IL												
Kensington Road/Foundry Road	10,090	19.1	2.0	A	A	F D	614	335	1.6	0.9	515.5	16.0

Table 4.3-6 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Line

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
				No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action
Mount Prospect, IL												
Euclid Avenue	22,826	19.1	2.0	A	A	D C	680	368	1.6	0.8	1,119.1	34.3
Prospect Hts, IL												
Wolf Road	25,216	19.1	2.0	A	A	G F	1,474	813	1.5	0.8	1,187.9	37.9
Camp McDonald Road	10,397	19.1	2.0	A	A	F D	608	335	1.5	0.8	489.8	15.6
Hintz Road	24,977	19.1	2.0	A	A	E A	776	434	1.6	0.9	1,331.4	43.5
Wheeling, IL												
Willow Road	3,585	19.1	2.0	A	A	D A	214	117	1.6	0.9	175.8	5.5
Dundee Road (IL 68)	40,188	19.1	2.0	A	A	E E	1,130	667	1.5	0.9	1,754.1	63.9
Buffalo Grove, IL												
Deerfield Parkway/ Busch Road	23,182	19.1	2.0	A	A	F E	1,507	832	1.7	0.9	1,351.1	43.1
Buffalo Grove Road	16,341	19.1	2.0	A	A	D E	613	351	1.5	0.8	713.2	24.6
Prairie View, IL												
Aptakisic Road	29,009	19.1	2.0	A	A	D	943	521	1.7	0.9	1,690.7	54.0
Near Prairie View, IL												
Half Day Road (IL 22)	24,195	19.1	2.0	A	A	D C	1,387	791	1.5	0.9	1,096.5	37.4
Near Vernon Hills, IL												
US 45	22,295	19.1	2.0	A	A	F	836	500	1.5	0.9	973.1	36.5

Table 4.3-6 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Line												
Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Vernon Hills, IL												
Butterfield Road	18,368	19.1	2.0	A	A	F C	548	324	1.6	0.9	900.5	33.0
Mundelein, IL												
Townline Road (IL 60)	44,084	19.1	2.0	A	A	G E	1,263	753	1.5	0.9	1,997.8	74.1
Allanson Road	19,382	20.8	17.8	A	B	F	1,260	1,786	1.7	2.4	1,230.1	2,116.3
Hawley Street	8,234	20.8	17.8	A	A	F C	357	406	1.7	1.9	522.6	578.4
Park Street	732	20.8	17.8	A	A	D A	48	54	1.7	1.9	46.5	51.5
Maple Avenue	14,568	20.8	17.8	A	A	A D	947	1,077	1.7	1.9	924.6	1024.2
Winchester Road	6,841	20.0	17.8	A	A	D C	200	227	1.5	1.7	350.9	386.2
Near Mundelein, IL												
Peterson Road	20,268	20.8	17.8	A	A	G E	432	489	1.4	1.6	866.1	947.3
Near Libertyville, IL												
Harris Road	4,434	20.8	17.8	A	A	F B	236	267	1.4	1.6	189.5	207.2
Freeport Subdivision												
Chicago, IL												
Pulaski Road	27,965	2.5	0.0	A	A	D	1,267	175	2.4	0.3	414.6	0.0
Berwyn, IL												
Riverside Drive	5,497	4.4	1.7	A	A	B	487	260	2.3	1.2	136.9	15.1

Table 4.3-6 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Line

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Riverside, IL												
Harlem Avenue (IL 43)	39,485	4.4	1.7	A	A	F	1,748	984	2.3	1.2	983.3	108.4
North Riverside, IL												
26 th Street	16,134	4.4	1.7	A	A	B	714	381	2.3	1.2	401.8	44.3
Des Plaines Avenue	17,807	4.4	1.7	A	A	C	788	421	2.3	1.2	443.4	48.9
Near North Riverside, IL												
Cermak Road	40,633	4.4	1.7	A	A	E	1,439	769	2.3	1.2	1,011.8	111.5
1 st Avenue (IL 171)	37,727	4.4	1.7	A	A	F	1,670	892	2.3	1.2	939.5	103.6
Broadview, IL												
17 th Avenue	11,353	4.4	1.7	A	A	A	639	318	2.9	1.5	456.9	43.7
Hillside, IL												
Harrison Street	10,984	<u>3.0</u>	<u>1.7</u>	<u>A</u>	<u>A</u>	<u>C</u>	<u>723</u>	<u>382</u>	<u>1.7</u>	<u>0.9</u>	103.1	16.3
Wolf Road	18,763	3.0	1.7	A	A	C	632	326	1.8	0.9	184.3	27.9
Elmhurst, IL												
York Road	24,190	3.0	1.7	A	A	F	1,557	828	1.7	0.9	217.1	34.8
Vallette Street	4,233	3.0	1.7	A	A	B	285	158	1.7	1.0	41.5	7.2
Argyle Avenue	1,165	3.0	1.7	A	A	A	72	40	1.6	0.9	9.6	1.7
Spring Road	10,886	3.0	1.7	A	A	D	658	373	1.6	0.9	86.3	15.7
Saint Charles Street	11,289	3.0	1.7	A	A	C	455	258	1.6	0.9	89.5	16.2
West Avenue	11,289	3.0	1.7	A	A	D	683	387	1.6	0.9	89.5	16.2
Villa Park, IL												
Villa Avenue	8,870	3.0	1.7	A	A	C	536	304	1.6	0.9	70.3	12.8
Addison Avenue	17,471	3.0	1.7	A	A	B	308	174	1.6	0.9	144.1	26.0
North Avenue (IL 64)	58,778	3.0	1.7	A	A	E	907	511	1.6	0.9	484.9	87.4

Table 4.3-6 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Line

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Near Addison, IL												
Grace Street	9,139	3.0	1.7	A	A	B	294	156	1.7	0.9	82.0	13.2
Swift Road	22,175	3.0	1.7	A	A	F	860	477	1.5	0.8	162.7	28.3
Near Bloomingdale, IL												
Schmale Road	30,373	3.0	1.7	A	A	E	957	497	1.6	0.9	261.2	39.9
Army Trail Road	41,796	3.0	1.7	A	A	F	1,194	632	1.5	0.8	295.6	46.9
Bloomingdale, IL												
Gary Avenue	37,092	3.0	1.7	A	A	E	1,060	561	1.5	0.8	262.3	41.7
Hanover Park, IL												
County Farm Road	38,705	3.0	1.7	A	A	E	1,106	593	1.5	0.8	273.7	44.5
Bartlett, IL												
Sutton Road (IL 59)	52,951	3.0	1.7	A	A	F	1,570	843	1.5	0.8	403.5	65.8
Near Bartlett, IL												
Powis Road	5,510	3.0 2.0	2.6 2.0	A	A	C	357	789	1.7	3.7	51.0 33.4	210.9 163.2
South Elgin, IL												
IL 25	10,830	3.0 2.0	2.6 2.0	A	A	D	450	450	1.1	1.1	40.7 27.0	35.2 27.0
Randall Road	46,189	3.0 2.0	2.6 2.0	A	A	F	959	959	1.1	1.1	176.0 115.1	152.9 115.1
Joliet Subdivision												
Lemont, IL												
Pruxne Street/Illinois Street	7,171	1.8	2.0	A	A	C	445	407	1.6	1.5	35.9	33.4
Holmes Street	451	1.8	2.0	A	A	A	28	26	1.6	1.5	2.3	2.1
Stephen Street	14,222	1.8	2.0	A	A	A	925	846	1.7	1.5	78.2	72.7

Table 4.3-6 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Line

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
				No-Action	Proposed Action	No-Action						
						E						
Romeoville, IL												
Romeo Road/ 135 th Street	19,102	1.8	2.0	A	A	F	904	1,067	1.3 1.2	1.5	55.6	86.2
Lockport, IL												
9 th Street (IL 7)	31,796	1.8	2.0	A	A	F	1,600	1,974	1.3	1.6	104.6	177.0
10 th Street	160	1.8	2.0	A	A	A	8	10	1.3	1.6	0.5	0.9
11 th Street	307	1.8	2.0	A	A	A	15	19	1.3	1.6	1.0	1.7
Division Street	6,783	1.8	2.0	A	A	B	341	421	1.3	1.6	22.3	37.8
Joliet, IL												
Ohio Street	7,198	2.9 1.8	2.9 2.0	B A	B A	C	1,624 1,043	1,624 1,339	5.9 3.8	5.9 4.8	196.4	359.8
Jackson Street	20,380	2.9 1.8	2.9 2.0	B A	B A	D	1,476	1,596	5.9 3.8	5.9 4.8	555.9	1,018.7
Chicago Subdivision												
Richton Park, IL												
University Parkway / Stuenkel Road	13,640	12.8 13.8	12.8 12.3	A	A	F	318	318	1.2	1.2	271.2 295.1	271.2 263.0
University Park, IL												
W. Dralle Road	4,012	12.8 13.8	12.8 12.3	A	A	F B	93	93	1.2	1.2	79.2 86.8	79.2 77.4
Elsdon/South Bend Subdivision												
Chicago, IL												
55 th Street	31,431	3.3 1.6	0.0 1.6	A	A	F	2,632	0 2,632	4.4	0.0 4.4	1,019.1	1,019.1
71 st Street	16,612	3.3	0.0	A	A	F	2,783	0	4.4	0.0	538.6	538.6

Table 4.3-6 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Line

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
		<u>1.6</u>	<u>1.6</u>					<u>2,783</u>		<u>4.4</u>		
79 th Street	29,291	3.4	0.0	A	A	D	2,453	3 <u>0</u>	4.4	0.0	2,018.2	0.0
Columbus Avenue	18,046	3.4	0.0	A	A	C	1,511	0	4.4	0.0	1,243.4	0.0
83 rd Place	1,305	3.4	0.0	A	A	A	219	0	4.4	0.0	89.9	0.0
87 th Street	23,663	3.4	0.0	A	A	C	1,321	0	4.4	0.0	1,630.4	0.0
103 rd Street	23,782	3.4	0.0	A	A	C	1,992	0	4.4	0.0	1,638.6	0.0
111 th Street	19,600	3.4	0.0	A	A	C	1,642	0	4.4	0.0	1,350.4	0.0
115 th Street	15,536	3.4	0.0	A	A	F	1,301	0	4.4	0.0	1,070.4	0.0
Evergreen Park, IL												
91 st Street	4,482	3.4	0.0	A	A	B	751	0	4.4	0.0	308.8	0.0
Kedzie Avenue	28,802	3.4	0.0	A	A	D	2,412	0	4.4	0.0	1,984.4	0.0
94 th Street	3,466	3.4	0.0	A	A	A	290	0	4.4	0.0	238.8	0.0
95 th Street (US 12/ US 20)	27,768	3.4	0.0	A	A	C	1,550	0	4.4	0.0	1,913.2	0.0
99 th Street	11,592	3.4	0.0	A	A	E	1,942	0	4.4	0.0	798.7	0.0
Blue Island, IL												
119 th Street	14,341	3.4	0.0	A	A	E	2,402	0	4.4	0.0	988.1	0.0
123 rd Street	6,468	3.4	0.0	A	A	C	1,083	0	4.4	0.0	445.6	0.0
127 th Street	27,607	3.4	0.0	A	A	D	2,312	0	4.4	0.0	1,902.1	0.0
Broadway Street	5,916	14.9	1.0	A <u>E</u>	A	B	206 <u>647</u>	149 <u>517</u>	1.8 <u>5.7</u>	1.3 <u>4.5</u>	3,043.0	130.5
Dixmoor, IL												
Western Avenue	10,039	14.9	1.0	A	A	B	420	295	2.2	1.5	754.7	25.1
Robey Street	144	14.9	1.0	A	A	A	11	7	1.9	1.4	8.3	0.3
Harvey, IL												

Table 4.3-6 Summary of Proposed Action Effects on Highway/Rail At-Grade Crossings on the CN Rail Line

Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
				No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action
Lincoln Avenue	886	14.9	1.0	A	A	A	65	46	1.9	1.4	1.0	1.7
Wood Street	15,775	14.9	1.0	A	A	C	563	403	1.9	1.3	865.3	29.8
147 th Street / Sibley Boulevard (IL 83)	33,509	14.9	1.0	A	A	E	1,196	857	1.9	1.3	1,838.1	63.3
Ashland Ave	13,944	14.9	1.9	A	A	F	996	713	1.9	1.3	764.9	26.3
Center Avenue	886	14.9	1.0	A	A	A	62	45	1.8	1.3	46.4	1.6
Broadway Avenue	886	14.9	1.0	E A	A	A	97 31	77 22	5.7 1.8	4.5 1.3	46.4	1.6
Park Avenue	7,051	14.9	1.0	A	A	B	246	177	1.8	1.3	369.3	12.8
Halsted Street (IL 1)	14,411	19.5	1.0	A	A	C	427	368	1.5	1.3	713.0	27.2
Phoenix, IL												
155 th Street	451	19.5	1.0	A	A	A	27	23	1.5	1.3	22.3	0.9
South Holland, IL												
Thornton-Blue Island Road	4,960	19.5	1.0	A	A	B	301	268	1.6	1.4	256.6	10.5
159 th /162 nd Street (US 6)	34,741	19.5	1.0	A	A	E	1,053	1,022	1.6	1.5	1,797.3	86.9
South Park Avenue	11,831	22.1	2.9	B	A	B	467	478	2.1	2.1	1,176.9	161.7
170 th Street	13,266	22.1	2.9	C	A	C	847	898	3.3	3.5	3,451.2	509.3
Lansing, IL												
Volbrecht Road	3,641	22.1	2.9	A	A	B	211	195	1.5	1.4	195.3	21.8
182 nd Street	9,336	22.1	2.9	A	A	D	530	491	1.5	1.4	480.7	54.1
Torrence Ave (IL 83)	12,799	22.1	2.9	A	A	B	363	331	1.5	1.3	659.0	71.7
186 th Street	7,768	22.1	2.9	A	A	C	424	389	1.4	1.3	370.1	40.9
Burnham Avenue	8,724	22.1	2.9	A	A	B	468	437	1.4	1.3	400.5	45.9
Wentworth Avenue	13,027	22.1	2.9	A	A	E	699	653	1.4	1.3	598.1	68.5

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Street	2015 ADT	Trains per Day		2015 Level Of Service			Queue Length (feet)		Average Delay per Delayed Vehicle (minutes)		Total Vehicle Traffic Delay (24-Hr) (minutes)	
				Crossing		Roadway						
		No-Action	Proposed Action	No-Action	Proposed Action		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Near Thornton, IL												
Thornton-Lansing St	11,951	22.1	2.9	A	A	F	693	639	1.5	1.4	640.8	71.6
Munster, IN												
Calumet Avenue	31,311	22.1	2.9	A	A	F	872	797	1.4	1.3	1549.9	169.9
White Oak Avenue	11,062	22.1	2.9	A	A	E	641	591	1.5	1.4	593.2	66.2
Highland, IN												
Kennedy Avenue	6,664	22.1	2.9	C	A	B	723	766	2.8	3.0	1,251.9	184.3
Griffith, IN												
Main Street	10,960	22.1	2.9	A	A	F	678	669	1.6	1.6	669.4	85.5
Broad Street	19,572	22.1	2.9	A	A	F	1,184	1,147	1.6	1.5	1,142.9	140.7
Colfax Street	14,139	24.8	18.6	A	A	F	787	1,019	1.4	1.9	714.0 785.4	986.6
Merrillville, IN												
Taft Street	30,473	23.3 24.8	23.3 18.6	A	A	F	1,697	1,697	1.4	1.4	1537.2 1,692.7	1537.2 1,269.5
Madison Street	9,031	23.3 24.8	23.3 18.6	A	A	D	503	503	1.4	1.4	455.0 501.6	455.0 376.2
Broadway Street	39,989	23.3 24.8	23.3 18.6	A	A	F	1,113	1,113	1.4	1.4	2,017.4 2,221.3	1,665.9

Table 4.3-7 from the Draft EIS:

Table 4.3-7 Train Operations Factors for the CN Rail Line						
Street	Length of Train		Train Speed		Trains Per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Waukesha Subdivision						
River Forest, IL						
Forest Avenue	6,104	0	30	0	5.4	0.0
Augusta Street	6,104	0	30	0	5.4	0.0
Keystone Avenue	6,104	0	30	0	5.4	0.0
Thatcher Avenue	6,104	0	30	0	5.4	0.0
River Grove, IL						
1 st Avenue (IL 171)	6,104	0	30	0	5.4	0.0
5 th Avenue	6,104	0	30.0	0	5.4	0.0
Melrose Park, IL						
George Street	6,104	0	28.0	0.0	5.4	0.0
Franklin Park, IL						
Fullerton Avenue	6,104	0	25.0	0.0	5.4	0.0
Belmont Avenue	6,388	2,645	19.0	19.0	19.3	2.0
Des Plaines, IL						
Pratt Avenue	6,468	3,129	23	28	19.1	2.0
Touhy Avenue	6,468	3,129	29	34	19.1	2.0
Frontage Road	6,468	3,129	29	34	19.1	2.0
Prospect Avenue	6,468	3,129	29	34	19.1	2.0
Oakton Street	6,468	3,129	29	31	19.1	2.0
Algonquin Road	6,468	3,129	31	33	19.1	2.0
Lee Street/Mannheim Road (US 12)	6,468	3,129	31	33	19.1	2.0
Graceland Avenue (US 12)	6,468	3,129	32	33	19.1	2.0
Thacker Street/Dempster Street	6,468	3,129	32	33	19.1	2.0
Prairie Avenue	6,468	3,129	34	34	19.1	2.0
Seegers Road	6,468	3,129	28	30	19.1	2.0
Golf Road (IL 58)	6,468	3,129	28	29	19.1	2.0
Rand Road (US 12)	6,468	3,129	27	29	19.1	2.0
Central Road	6,468	3,129	35	37	19.1	2.0
Near Mount Prospect, IL						
Kensington Road/Foundry Road	6,468	3,129	38	43	19.1	2.0
Mount Prospect, IL						
Euclid Avenue	6,468	3,129	39	45	19.1	2.0
Prospect Hts, IL						
Wolf Road	6,468	3,129	40	45	19.1	2.0
Camp McDonald Road	6,468	3,129	40	45	19.1	2.0
Hintz Road	6,468	3,129	37	40	19.1	2.0
Wheeling, IL						
Willow Road	6,468	3,129	39	44	19.1	2.0
Dundee Road (IL 68)	6,468	3,129	42	43	19.1	2.0
Buffalo Grove, IL						

Table 4.3-7 Train Operations Factors for the CN Rail Line						
Street	Length of Train		Train Speed		Trains Per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Deerfield Parkway/Busch Road	6,468	3,129	35	38	19.1	2.0
Buffalo Grove Road	6,468	3,129	42	45	19.1	2.0
Prairie View, IL						
Aptakisic Road	6,468	3,129	35	38	19.1	2.0
Near Prairie View, IL						
Half Day Road (IL 22)	6,468	3,129	41	44	19.1	2.0
Near Vernon Hills, IL						
US 45	3,129	3,129	42	42	19.1	2.0
Vernon Hills, IL						
Butterfield Road	3,129	3,129	39	39	19.1	2.0
Mundelein, IL						
Townline Road (IL 60)	6,468	7,571	41	41	20.8	17.8
Allanson Road	6,468	7,571	35	27	20.8	17.8
Hawley Street	6,468	7,571	35	35	20.8	17.8
Park Street	6,468	7,571	35	35	20.8	17.8
Maple Avenue	6,468	7,571	35	35	20.8	17.8
Winchester Road	6,468	7,571	40	40	20.8	17.8
Near Mundelein, IL						
Peterson Road	6,468	7,571	45	45	19.1	17.8
Near Libertyville, IL						
Harris Road	6,468	7,571	45	45	19.1	17.8
Freeport Subdivision						
Chicago, IL						
Pulaski Road	5,224	0	19	19	2.5	0.0
Berwyn, IL						
Riverside Drive	6,690	3,061	25	25	4.4	1.7
Riverside, IL						
Harlem Avenue (IL 43)	6,690	3,061	25	25	4.4	1.7
North Riverside, IL						
26 th Street	6,690	3,061	25	25	4.4	1.7
Des Plaines Avenue	6,690	3,061	25	25	4.4	1.7
Near North Riverside, IL						
Cermak Road	6,690	3,061	25	25	4.4	1.7
1 st Avenue (IL 171)	6,690	3,061	25	25	4.4	1.7
Broadview, IL						
17 th Avenue	6,690	3,061	19	20	4.4	1.7
Hillside, IL						
Wolf Road	6,755	3,060	35	39	3.0	1.7
Harison Street	6,755	3,060	36	39	3.0	1.7
Elmhurst, IL						
York Road	6,755	3,061	37	40	3.0	1.7
Vallette Street	6,750	3,050	35	35	3.0	1.7
Argyle Avenue	6,755	3,061	39	40	3.0	1.7
Spring Road	6,755	3,061	40	40	3.0	1.7

Table 4.3-7 Train Operations Factors for the CN Rail Line						
Street	Length of Train		Train Speed		Trains Per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Saint Charles Street	6,755	3,061	40	40	3.0	1.7
West Avenue	6,755	3,061	40	40	3.0	1.7
Villa Park, IL						
Villa Avenue	6,755	3,061	40	40	3.0	1.7
Addison Avenue	6,755	3,061	39	39	3.0	1.7
North Avenue (IL 64)	6,755	3,061	39	39	3.0	1.7
Near Addison, IL						
Grace Avenue	6,755	3,061	37	40	3.0	1.7
Swift Road	6,755	3,061	42	44	3.0	1.7
Near Bloomingdale, IL						
Schmale Road	6,755	3,061	38	43	3.0	1.7
Army Trail Road	6,755	3,061	43	49	3.0	1.7
Bloomingdale, IL						
Gary Avenue	6,755	3,061	43	49	3.0	1.7
Hanover Park, IL						
County Farm Road	6,755	3,061	43	48	3.0	1.7
Bartlett, IL						
Sutton Road (IL 59)	6,755	3,061	41	45	3.0	1.7
Near Bartlett, IL						
Powis Road	4,600	4,600	25	10	2.0	2.0
South Elgin, IL						
IL 25	4,600	4,600	45	45	2.0	2.0
Randall Road	4,600	4,600	45	45	2.0	2.0
Joliet Subdivision						
Lemont, IL						
Pruxne Street / Illinois Street	6,103	5,457	35	35	1.8	2.0
Holmes Street	6,103	5,457	35	35	1.8	2.0
Stephen Street	6,103	5,457	33	33	1.8	2.0
Romeoville, IL						
Romeo Road/135 th Street	4,659	6,108	38	40	1.8	2.0
Lockport, IL						
9 th Street (IL 7)	4,659	6,108	35	35	1.8	2.0
10 th Street	4,659	6,108	35	35	1.8	2.0
11 th Street	4,659	6,108	35	35	1.8	2.0
Division Street	4,659	6,108	35	35	1.8	2.0
Joliet, IL						
Ohio Street	7,500	7,500	10	10	2.9	3.0
	4,659	6,108			1.8	2.0
Jackson Street	7,500	7,500	10	10	2.9	3.0
	4,659	6,108			1.8	2.0
Chicago Subdivision						
Richton Park, IL						
University Parkway / Stuenkel Road	5,400	5,400	45	45	12.8 13.8	13.0 12.3
University Park, IL						

Table 4.3-7 Train Operations Factors for the CN Rail Line						
Street	Length of Train		Train Speed		Trains Per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
W. Dralle Road	5,400	5,400	45	45	12.8 13.8	12.8 12.3
Elsdon/South Bend Subdivision						
Chicago, IL						
55 th Street	4,365	0 4,365	8	0 8	3.3 1.6	0.0 1.6
71 st Street	4,365	0 4,365	8	0 8	3.3 1.6	0.0 1.6
79 th Street	4,365	0	8	0	3.4	0.0
Columbus Avenue	4,365	0	8	0	3.4	0.0
83 rd Place	4,365	0	8	0	3.4	0.0
87 th Street	4,365	0	8	0	3.4	0.0
103 rd Street	4,365	0	8	0	3.4	0.0
111 th Street	4,365	0	8	0	3.4	0.0
115 th Street	4,365	0	8	0	3.4	0.0
Evergreen Park, IL						
91 st Street	4,365	0	8	0	3.4	0.0
Kedzie Avenue	4,365	0	8	0	3.4	0.0
94 th Street	4,365	0	8	0	3.4	0.0
95 th Street (US 12/US 20)	4,365	0	8	0	3.4	0.0
99 th Street	4,365	0	8	0	3.4	0.0
Blue Island, IL						
119 th Street	4,365	0	8	0	3.4	0.0
123 rd Street	4,365	0	8	0	3.4	0.0
127 th Street	4,365	0	8	0	3.4	0.0
Broadway Street	7,256	5,711	36 10	43 10	14.9	1.0
Dixmoor, IL						
Western Avenue	7,256	5,711	29	35	14.9	1.0
Robey Street	7,256	5,711	34	41	14.9	1.0
Harvey, IL						
Lincoln Avenue	7,256	5,711	34	41	14.9	1.0
Wood Street	7,256	5,711	35	42	14.9	1.0
147 th Street / Sibley Boulevard (IL 83)	7,256	5,711	35	42	14.9	1.0
Ashland Avenue	<u>7,256</u>	<u>5,711</u>	<u>35</u>	<u>42</u>	<u>14.9</u>	<u>1.0</u>
Center Avenue	7,256	5,711	36	43	14.9	1.0
Broadway Avenue	7,256	5,711	40 36	40 43	14.9	1.0
Park Avenue	7,256	5,711	36	43	14.9	1.0
Halsted Street (IL 1)	5,927	5,711	36	42	19.5	1.0
Phoenix, IL						
155 th Street	5,927	5,711	36	42	19.5	1.0
South Holland, IL						
Thornton-Blue Island Road	5,927	5,711	35	39	19.5	1.0

Table 4.3-7 Train Operations Factors for the CN Rail Line						
Street	Length of Train		Train Speed		Trains Per Day	
	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
159 th /162 nd Street (US 6)	5,927	5,711	35	35	19.5	1.0
South Park Avenue	6,081	6,489	26	27	22.1	2.9
170 th Street	6,081	6,489	15	15	22.1	2.9
Lansing, IL						
Volbrecht Road	6,081	6,489	38	45	22.1	2.9
182 nd Street/Ridge Road	6,081	6,489	39	46	22.1	2.9
Torrence Ave (IL 83)	6,081	6,489	39	47	22.1	2.9
186 th Street	6,081	6,489	41	49	22.1	2.9
Burnham Avenue	6,081	6,489	42	49	22.1	2.9
Wentworth Avenue	6,081	6,489	42	49	22.1	2.9
Near Thornton, IL						
Thornton-Lansing St	6,081	6,489	38	45	22.1	2.9
Munster, IN						
Calumet Avenue	6,081	6,489	40	48	22.1	2.9
White Oak Avenue	6,081	6,489	38	45	22.1	2.9
Highland, IN						
Kennedy Avenue	6,081	6,489	18	18	22.1	2.9
Griffith, IN						
Main Street	6,081	6,489	35	38	22.1	2.9
Broad Street	6,081	6,489	36	40	22.1	2.9
Colfax Street	6,081	6,081	40	29	23.3 24.8	23.3 18.6
Merrillville, IN						
Taft Street	6,081	6,081	40	40	23.3 24.8	23.3 18.6
Madison Street	6,081	6,081	40	40	23.3 24.8	23.3 18.6
Broadway Street	6,081	6,081	40	40	23.3 24.8	23.3 18.6

Table 4.3-8 EJ&E Substantially Affected Highway/Rail At-Grade Crossing Vehicle Delay Data

Street	2015 ADT	Trains per Day		Train Speed		Average Delay per Delayed Vehicle		Total Delayed Vehicles per Day		Crossing LOS		Total Vehicle Traffic Delay (24-Hr), Minutes	
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Near Libertyville, IL													
Diamond Lake Road	6,207	5.3	20.3	26	31	1.1	2.0	39	263	A	A	42.9	526.0
Near Hawthorn Woods, IL													
Old McHenry Road	32,429	5.3	20.3	29	32	1.0	1.9	189	1,337	A	A	189.0	2,540.3
Lake Zurich, IL													
Main Street	7,474	5.3	20.3	27	30	1.1	2.0	46	325	A	B	50.6	650.0
Barrington, IL													
Hough Street (IL 59 & 63)	22,549	5.3	20.3	37	39	0.9	1.6	112	791	A	A	100.8	1,265.6
Near Aurora, IL													
Ogden Avenue (US 34)	46,110	15.7	39.5	32	39	1.2	1.5	944	2,918	A	B	1,132.8	4,377.0
Montgomery Road/ 83 rd Street	27,131	15.7	39.5	32	38	1.2	1.5	556	1,753	A	B	667.2	2,629.5
Near Plainfield, IL													
Plainfield/Naperville Road	8,117	18.5	42.3	34	40	1.1	1.4	171	515	A	B	332.0	438.0
Joliet, IL													
Woodruff Road	10,659	18.5	42.3	9	10	2.6	4.4	543	2,132	B	F	1,411.8	9,380.8
Washington Street	11,714	6.4	28.3	9	10	3.4	5.3	276	1,864	A	F	938.4	9,879.2
Park Forest, IL													
Western Avenue	24,717	8.6	31.6	34	31	1.1	1.8	252	1,515	A	B	277.2	2,727.0
Chicago Road	23,390	8.6	31.6	21	22	1.6	2.4	343	1,915	A	C	548.8	4,596.0
Lynwood, IL													
Lincoln Highway (US 30)	29,237	10.2	34.2	30	33	1.1	1.7	359	1,785	A	B	394.9	3,034.5
Griffith, IN													
Broad Street	19,572	7.6	23.6	17	20	1.2	2.1	190	1,283	A	B	228.0	2,694.3
Broad Street Connector	19,572	2.6	10.7	25	25	1.3	2.1	70	470	A	A	91	987.0

Emergency Service Providers

Pages 4.3-54-74, Table 4.3-12 (This table is republished in its entirety):

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action									
Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)	Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation	
				(Y/N) (Greatest increase in seconds. See Note ^a)					
Illinois									
Vernon Hills	Vernon Hills Police Department	260494M	Lake Street (US 45)	1.84	Y (65) <u>(42)</u>	Y (32) <u>N</u>	3	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the <u>mobile patrol officers provide</u> .
Vernon Hills	Countryside Fire Protection Dist. Headquarters/ Station No. 2	26049M	Lake Street (US 45)	1.64	N <u>Y</u> <u>(42)</u>	N	3	N	The EJ&E rail line east of the CN Waukesha Subdivision would have <u>has no</u> increase in the volume of train traffic <u>and</u> so there would be <u>is</u> no negative impact associated with northbound crossing of the EJ&E rail line. <u>Additionally, there is a</u> decrease in the volume of train traffic on the CN Waukesha Subdivision would reduce <u>thereby</u>

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
									reducing average delay and total blocked crossing time on this rail line thus and so there is a positive impact would be associated with the westbound crossing of the CN Waukesha Subdivision.
Vernon Hills	Countryside Fire Protection Dist. - Station No. 1	260494M	Lake Street (US 45)	1.62	Y (69) (51)	Y (62) (52)	4	Y	There are no fire stations are south of the EJ&E rail line and west of the CN Waukesha Subdivision. Additionally, there is only one grade separated crossing exists to the southeast, Lake Street (US 45), which is over 1.5 miles away. No grade-separated crossings exist to the southwest. No grade separations to the southwest exist.
Mundelein	Mundelein Police Department	260494M	Lake Street (US 45)	1.64	Y (69) (51)	Y (62) (52)	4	N	Police facilities would not be are not considered potentially substantially affected because the police building itself is not essential to the protection

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
									and emergency services that are provided by the mobile patrol officers provide.
Mundelein	Countryside Fire Protection Dist. Headquarters/ Station No. 2	260494M	Lake Street (US 45)	1.64	N Y (42)	N	3	N	The EJ&E rail line east of the CN Waukesha Subdivision would have has no increase in the volume of train traffic and so there would be is no negative impact associated with northbound crossing of the EJ&E rail line. <u>Additionally, there is a decrease in the volume of train traffic on the CN Waukesha Subdivision would reduce thereby reducing average delay and total blocked crossing time on this rail line, thus and so there is a positive impact would be associated with the westbound crossing of the CN Waukesha Subdivision.</u>

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
Mundelein	Countryside Fire Protection Dist. - Station No. 1	260494M	Lake Street (US 45)	1.62	Y (69) (51)	Y (62) (52)	4	Y	<u>There are no fire stations</u> are south of the EJ&E rail line and west of the CN Waukesha Subdivision. <u>Additionally, there is only one grade separated crossing is located</u> to the southeast, Lake Street (US 45), which is over 1.5 miles away. <u>No grade separated crossings exist to the southwest. No grade separations to the southwest exist.</u>
Long Grove	Countryside Fire Protection Dist. Headquarters/ Station No. 2	260494M	Lake Street (US 45)	1.64	N Y (42)	N	3	N	The EJ&E rail line east of the CN Waukesha Subdivision has no increase in the volume of train traffic and so there is no negative impact associated with northbound crossing of the EJ&E rail line. Additionally, there is a decrease in the volume of train traffic on the CN Waukesha Subdivision thereby reducing average

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
									delay and total blocked crossing time on this rail line and so there is a positive impact associated with westbound crossing of the CN Waukesha Subdivision.
Long Grove	Countryside Fire Protection Dist. - Station No. 1	260494M	Lake Street (US 45)	1.62	Y (69) (51)	Y (62) (52)	4	Y	<u>There are no</u> fire stations are located south of the EJ&E rail line and west of the CN Waukesha Subdivision. <u>Additionally, there is only one</u> grade separated crossing is located to the southeast, Lake Street (US 45), which is over 1.5 miles away. <u>No grade separated crossings exist to the southwest. No grade separations to the southwest exist.</u>
Hawthorn Woods	Countryside Fire Protection Dist. Headquarters/ Station No. 2	260494M	Lake Street (US 45)	1.64	N Y (42)	N	3	N	The EJ&E rail line east of the CN Waukesha Subdivision <u>would have has no</u> increase in the volume of train traffic and so there <u>would be</u> is no negative impact associated

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
									with northbound crossing of the EJ&E rail line. Additionally, there is a decrease in the volume of train traffic on the CN Waukesha Subdivision would reduce thereby reducing average delay and total blocked crossing time on this rail line thus and so there is a positive impact would be associated with the westbound crossing of the CN Waukesha Subdivision.
Hawthorn Woods	Countryside Fire Protection Dist. - Station No. 1	260494M	Lake Street (US 45)	1.62	Y (69) <u>(51)</u>	Y (62) <u>(52)</u>	4	Y	There are no fire stations located south of the EJ&E rail line and west of the CN Waukesha Subdivision. Additionally, there is only one grade separated crossing is located to the southeast, Lake Street (US 45), which is over 1.5 miles away. No grade separated crossings exist to the southwest. No grade separations to the

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
									<u>southwest exist.</u>
Hawthorn Woods	Lake Zurich Rural Fire Protection District - Station No. 3	260831B	IL 22	2.31	Y (56)	Y (54)	5	Y	There are no <u>There are no</u> fire stations are located east of the EJ&E rail line. <u>Additionally, there is only one grade separated crossing is to the southwest, IL 22, which is over 2 miles away. No grade separated crossings exist</u> separations to the northeast exist.
Hawthorn Woods	Hawthorn Woods Police Department	260831B	IL 22	2.68	Y (56)	Y (54)	5	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the <u>mobile patrol officers provide.</u>

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
Hawthorn Woods	Lake Zurich Rural Fire Protection District - Station No. 2	260509A	Rand Road (US12)	1.71	Y (47)	Y (46)	6	N	Lake Zurich Rural Fire Protection District Headquarters/Station No. 1 and Lake Zurich Rural Fire Protection District - Station No. 4 are east of the EJ&E rail line. Barrington Fire Department - Station No. 1 is south of the EJ&E rail line. <u>Additionally</u> , it is a straight-line drive down IL 22 from Lake Zurich Rural Fire Protection District <u>Station No. 2</u> to Rand Road (US 12) to get to the nearest grade separated crossings <u>separation</u> at Rand Road (US 12).
Lake Zurich	Lake Zurich Rural Fire Protection District - Station No. 3	260831B	IL 22	2.31	Y (56)	Y (54)	5	Y	There are no fire stations are located east of the EJ&E rail line. <u>Additionally</u> , there is only one grade separated crossing is to the southwest, IL 22, which is over 2 miles away. No grade separated crossings <u>exist separations</u> to the

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

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					(Y/N) (Greatest increase in seconds. See Note ^a)				
									northeast exist.
Lake Zurich	Lake Zurich Rural Fire Protection District - Station No. 2	260509A	Rand Road (US12)	1.71	Y (47)	Y (46)	6	N	Lake Zurich Rural Fire Protection District Headquarters/Station No. 1 and Lake Zurich Rural Fire Protection District - Station No. 4 are east of the EJ&E rail line. Barrington Fire Department - Station No. 1 is south of the EJ&E rail line. <u>Additionally, it is a straight-line drive down IL 22 from Lake Zurich Rural Fire Protection District - Station No. 2 to Rand Road (US 12) to get to the nearest grade separated crossings separation at Rand Road (US 12).</u>
Barrington	Barrington Police Department	260509A	Rand Road (US 12)	2.54 2.55	Y (46)	Y (45)	6	N	Police facilities would not be are not considered potentially substantially affected because the police building <u>itself</u> is not

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
									essential to the protection and emergency services that are provided by the mobile patrol officers provide.
Barrington	Barrington Fire Department - Station No. 1	260509A	Rand Road (US 12)	2.55	Y (46)	Y (45)	6	Y	There are no fire stations located west of the EJ&E rail line. Additionally, there is only one grade separated crossing located to the northeast, Rand Road (US 12), which is over 2.5 miles away. No grade separated crossings exist separations to the west or southwest exist.
Barrington Hills	Lake Zurich Rural Fire Protection District - Station No. 2	260509A	Rand Road (US 12)	1.71	Y (47)	Y (46)	6	N	Lake Zurich Rural Fire Protection District Headquarters/Station No. 1 and Lake Zurich Rural Fire Protection District - Station No. 4 are east of the EJ&E rail line. Barrington Fire Department - Station No. 1 is south of the EJ&E rail line. Additionally, it is a straight-line drive down IL

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
									22 from Lake Zurich Rural Fire Protection District - Station No. 2 to Rand Road (US 12) to get to the nearest grade separated crossings separation at Rand Road (US 12).
Elgin	Elgin Fire Department - Station No. 5	260529L	Lake Street (US 20)	1.63	N	N	8	N	Streamwood Fire Department - Station No. 2 is east of the EJ&E rail line. <u>Additionally, it is a straight-line drive down Villa Street (US 20) from Elgin Fire Department Station No. 5 to Lake Street (US 20) to get to the nearest grade separated crossing separation at Lake Street (US 20).</u>
Bartlett	Bartlett Fire Protection District - Future Station No. 3	260529L	Lake Street (US 20)	1.62	Y (40) <u>(122)</u>	Y (45)	9	Y	<u>There are no fire stations are located west of the EJ&E rail line. Additionally, there is only one grade separated crossing is located to the north, Lake Street (US 20), which is over 1.5 miles away. No grade separated</u>

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
									crossings exist to the west or southwest. No grade separations to the west or southwest exist.
Wayne	Bartlett Fire Protection District Future Station No. 3	260529L	Lake Street (US 20)	1.62	Y (122)	Y (45)	9	Y	There are no fire stations located west of the EJ&E rail line. Additionally, there is only one grade separated crossing is located to the north, Lake Street (US 20), which is over 1.5 miles away. No grade separated crossings exist to the west or southwest. No grade separations to the west or southwest exist.
Wayne	Wayne Police Department	260537D	North Avenue	2.30	Y (122)	Y (52)	9	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the <u>mobile patrol officers provide.</u>

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
Wayne	West Chicago Fire Protection Distr. Headquarters/ Station No. 1	260549X	Roosevelt Road	1.35	Y (57)	Y (90)	10	N	West Chicago Fire Protection District - Station No. 3 is west of the EJ&E rail line.
West Chicago	West Chicago Police Department	260549X	Roosevelt Road	1.05	Y (57)	Y (90)	10	N	Police facilities are not considered potentially substantially affected because the police building itself is not essential to the protection and emergency services that the mobile patrol officers provide.
West Chicago	West Chicago Fire Protection Distr. Headquarters/ Station No. 1	260549X	Roosevelt Road	1.35	Y (57)	Y (90)	10	N	West Chicago Fire Protection District - Station No. 3 is west of the EJ&E rail line.
Warrenville	Warrenville Police Department	260551Y	Roosevelt Road Butterfield Road	1.80	N	Y (56) N	11	N	Police facilities would not be are not considered potentially substantially affected because the police building itself is not essential to the protection and emergency services that are provided by the mobile patrol officers provide.

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Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
Aurora	Aurora Fire Department - Station No. 9 ^b	260814K	Ferry Road	1.61	N	Y (58)	12	N	Naperville Fire Department - Station No. 4 is east of the EJ&E rail line.
Aurora	Aurora Fire Department - Station No. 12	260902V	McCoy Drive	2.93	N	Y (65)	13	N	Aurora Fire Department - Station No. 8 and Naperville Fire Department - Station No. 6 are east of the EJ&E rail line.
Aurora	Rush-Copley Medical Center	260902V	McCoy Drive	2.59	N	Y (64)	13	N	Edward Hospital is east of the EJ&E rail line (approximately 4.5 miles east). Additionally, response to the actual scene of an emergency is the most critical action, not the transport to the emergency medical facility.
Naperville	Naperville Fire Department - Station No. 4 ^c	260557P	North Aurora Road	1.60	N	Y (58)	11	N	Aurora Fire Department - Station No. 9 is west of the EJ&E rail line.

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					(Y/N) (Greatest increase in seconds. See Note ^a)				
Naperville	Naperville Fire Department - Station No. 6	260902V	McCoy Drive	4.44	N	Y (65)	13	N	Aurora Fire Department - Station No. 12 is west of the EJ&E rail line.
Plainfield	Rush-Copley Medical Center	260902V	McCoy Drive	2.59	N	Y (64)	13	N	Edward Hospital is east of the EJ&E rail line (approximately 4.5 miles east). Additionally, response to the actual scene of an emergency is the most critical action, not the transport to the emergency medical facility.
Plainfield	Plainfield Fire Protection District - Station No. 3	260590P	State Route 59	3.70	N	Y (72)	13	Y	There are no fire stations located west of the EJ&E rail line. Additionally, there is only one grade separated crossing located to the south, State Route 59, which is over 3.5 miles away. No grade separated crossing exist to the north or west. No grade separations to the north or west exist.

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Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
Plainfield	Plainfield Fire Protection District - Station No. 2	260590P	State Route 59	1.57	N	Y (72)	14	N	Plainfield Fire Protection District Headquarters/Station No. 1 is southwest of the EJ&E rail line. <u>Additionally, it is a straight-line drive down State Route 59 from Plainfield Fire Protection District - Station No. 2 to get to the nearest grade separated crossing separation at State Route 59.</u>
Crystal Lawns	Will County Sherriff's Office Headquarters	260600T	Cass Street (US 30)	1.34	Y (111)	Y (215)	20	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that <u>are provided by the</u> mobile patrol officers <u>provide.</u>
Joliet	Joliet Fire Department - Station No. 8	260591W	Caton Farm Road	1.81	N	Y (72)	18	Y	There are no <u>There are no</u> fire stations are located <u>are located</u> northeast of the EJ&E rail line. <u>Additionally, there is only one accessible grade</u>

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					(Y/N) (Greatest increase in seconds. See Note ^a)				
									separated crossing exists to the east, Caton Farm Road, which is over 1.5 miles away. No grade separated crossings exist <u>separations</u> to the north or northeast <u>exist</u> other than Interstate 55, which is an <u>inaccessible crossing</u> to <u>utilize</u> to serve the community northeast of the EJ&E rail line.
Joliet	Joliet Fire Department - Station No. 5	260596F	Collins Street	1.68	Y (111)	Y (215)	20	N	Joliet Fire Department - Station No. 4 and East Joliet Fire Protection District - Station No. 1 are east of the EJ&E rail line. Lockport Township Fire Protection District - Station No. 2 is northwest of Joliet Fire Department - Station No. 5 and is located approximately 500 feet south of the Weber Road grade-separated crossing. <u>Additionally</u> , it is a straight line drive down Ruby Street to Broadway Street

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					(Y/N) (Greatest increase in seconds. See Note ^a)				
									to get to the nearest grade separated crossing <u>separation</u> to the north at Broadway Street.
Joliet	Joliet Police Department	260600T	Cass Street (US 30)	1.51	Y (111)	Y (215)	20	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the <u>mobile patrol officers provide.</u>
Joliet	Will County Sherriff's Office Headquarters	260600T	Cass Street (US 30)	1.34	Y (111)	Y (215)	20	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the <u>mobile patrol officers provide.</u>

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Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
Joliet	Joliet Fire Department Headquarters/ Station No. 1	260600T	Cass Street (US 30)	1.16	Y (111)	Y (215)	20	N	Joliet Fire Department - Station No. 4, East Joliet Fire Protection District Headquarters/Station No. 3 and East Joliet Fire Protection District - Station No. 1 are east of the EJ&E rail line.
Joliet	East Joliet Fire Protection Distr. Headquarters/ Station No. 3	260602G	Interstate 80	1.00	Y (109)	Y (195)	20	N	East Joliet Fire Protection District - Station No. 2 is southwest of the EJ&E rail line.
Joliet	East Joliet Fire Protection District - Station No. 2	260602G	Interstate 80	1.51	Y (86)	Y (123)	20	N	East Joliet Fire Protection District Headquarters/Station No. 3 is northeast of the EJ&E rail line.
Lockport	Illinois State Police - District 5 Headquarters	260595Y	Broadway Street	1.43	Y (31)	Y (81)	19	N	Police facilities would not be are not considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the mobile patrol officers provide.

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
New Lenox	New Lenox Police Department	260602G	Interstate 80	4.22	N	Y (64)	21	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the <u>are provided by the</u> mobile patrol officers provide.
New Lenox	New Lenox Fire District Headquarters/ Station No. 1	260622T	South LaGrange Road (US 45)	5.03	N	Y (62)	21	N	New Lenox Fire District - Station No. 3 is south of the EJ&E rail line.
New Lenox	New Lenox Fire District - Station No. 3	260602G	Interstate 80	4.30	N	Y (64)	21	N	New Lenox Fire District Headquarters/Station No. 1 is north of the EJ&E rail line.
Frankfort	Frankfort Police Department	260622T	South LaGrange Road (US 45)	1.91	Y (30)	Y (65)	23	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the <u>are provided by the</u>

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					(Y/N) (Greatest increase in seconds. See Note ^a)				
									mobile patrol officers provide.
Frankfort	Frankfort Fire Protection District - Future Station No. 4	260622T	South LaGrange Road (US 45)	3.40	Y (30)	Y (62)	23	N	Frankfort Fire Protection District Headquarters/Station No. 1 is north of the EJ&E rail line.
Frankfort	Saint James Hospital and Health Centers Olympia Fields	260634M	Governors Highway	1.92	Y (101) (51)	Y (111) (108)	24	Y	<u>There are no</u> emergency medical facilities <u>are located</u> south of the EJ&E rail line.
Matteson	Matteson Police Department	260631S	Interstate 57	1.85	Y (54) (37)	Y (75) (65)	24	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the <u>mobile patrol officers provide.</u>

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Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
Matteson	Matteson Fire Department Headquarters/ Station No. 1	260634M	Governors Highway	1.01	Y (101) (51)	Y (111) (108)	24	N	Richton Park Fire Department Headquarters Station is south of the EJ&E rail line.
Matteson	Matteson Fire Department - Station No. 2	260631S	Interstate 57	1.14	Y (51) (37)	Y (75) (65)	24	N	Richton Park Fire Department Headquarters Station is south of the EJ&E rail line.
Matteson	Saint James Hospital and Health Centers Olympia Fields	260634M	Governors Highway	1.92	Y (101) (51)	Y (111) (108)	24	Y	<u>There are no emergency medical facilities are located</u> south of the EJ&E rail line.
Richton Park	Saint James Hospital and Health Centers Olympia Fields	260634M	Governors Highway	1.92	Y (101) (51)	Y (111) (108)	24	Y	<u>There are no emergency medical facilities are located</u> south of the EJ&E rail line.
Park Forest	Saint James Hospital and Health Centers Chicago Heights ^d	260637H	Orchard Drive	2.30	Y (60)	Y (114) (119)	25	Y	<u>There are no emergency medical facilities are located</u> south of the EJ&E rail line.

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					(Y/N) (Greatest increase in seconds. See Note ^a)				
Chicago Heights	Chicago Heights Fire Department Headquarters/ Station No. 3 ^d	260648V 260637H	Calumet Expy/ Bishop Ford (IL 394) Orchard Drive	3.44 <u>2.95</u>	Y (60)	Y (114) (<u>119</u>)	25	N	Chicago Heights Fire Department - Station No. 5 is south of the EJ&E rail line.
Chicago Heights	Chicago Heights Fire Department - Station No. 1 ^d	260637H	Orchard Drive	2.35	Y (60)	Y (114) (<u>119</u>)	25	N	Chicago Heights Fire Department - Station No. 5 is south of the EJ&E rail line.
Chicago Heights	Chicago Heights Fire Department - Station No. 2 ^d	260648V	Calumet Expy/ Bishop Ford (IL 394)	2.02	Y (60)	Y (114) (<u>119</u>)	25	N	Chicago Heights Fire Department - Station No. 5 is south of the EJ&E rail line.
Chicago Heights	Chicago Heights Fire Department - Station No. 4	260637H	Orchard Drive	1.06	Y (54) (<u>57</u>)	Y (105) (<u>119</u>)	25	N	Chicago Heights Fire Department - Station No. 5 is south of the EJ&E rail line.
Chicago Heights	Chicago Heights Fire Department - Station No. 5 ^d	260648V	Calumet Expy/ Bishop Ford (IL 394)	2.63	Y (60)	Y (114) (<u>119</u>)	25	N	Chicago Heights Fire Department - Station No. 1, Chicago Heights Fire Department - Station No. 2, Chicago Heights Fire Department Headquarters/Station No. 3 and Chicago Heights Fire Department - Station No. 4

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					(Y/N) (Greatest increase in seconds. See Note ^a)				
									are north of the EJ&E rail line.
Chicago Heights	Saint James Hospital and Health Centers Chicago Heights ^d	260637H	Orchard Drive	2.30	Y (60)	Y (114) (119)	25	Y	There are no emergency medical facilities are located south of the EJ&E rail line.
Sauk Village	Sauk Village Police Department	260648V	Calumet Expy/Bishop Ford (IL 394)	3.44 <u>1.06</u>	Y (33)	Y (70)	26	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the mobile patrol officers <u>provide</u> .
Lynwood	Lynwood Police Department	260813D	Calumet Avenue	1.34	Y (33)	Y (70)	26	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the

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					(Y/N) (Greatest increase in seconds. See Note ^a)				
									mobile patrol officers provide.
Lynwood	Lynwood Fire Department Headquarters	260813D	Calumet Avenue	2.05	Y (33)	Y (70)	26	N	Sauk Village Fire Department Headquarters Station and Dyer Volunteer Fire Department Headquarters/Station No. 1 are south of the EJ&E rail line.
Lynwood	Saint Margaret Mercy Hospital - Dyer Campus	260813D	Calumet Avenue	0.84	Y (33)	Y (70)	27	N	Community Hospital is north of the EJ&E rail line (approximately 3.5 miles north). Additionally, response to the actual scene of an emergency is the most critical activity action, not the transport to the emergency medical facility.
Indiana									
Dyer	Saint Margaret Mercy Hospital - Dyer Campus	260813D	Calumet Avenue	0.84	Y (33)	Y (70)	27	N	Community Hospital is north of the EJ&E rail line (approximately 3.5 miles north). Additionally, response to the actual

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					(Y/N) (Greatest increase in seconds. See Note ^a)				
									scene of an emergency is the most critical activity action, not the transport to the emergency medical facility.
Schererville	Schererville Police Department	260656M	Indianapolis Boulevard (US 41)	1.79	N	Y (63)	27	N	Police facilities would not be are not considered potentially substantially affected because the police building itself is not essential to the protection and emergency services that are provided by the mobile patrol officers provide.
Schererville	Schererville Fire Department Headquarters	260656M	Indianapolis Boulevard (US 41)	2.28	Y (57) (45)	Y (80) (63)	28	Y	There are no fire stations are located northwest of the EJ&E rail line. Additionally, there is only one grade separated crossing is located to the northwest, Indianapolis Boulevard (US 41), which is over 2 miles away. No grade separated crossing exist to the north. separations to the north exist.

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
Griffith	Griffith Police Department	260667A	Ridge Road (US 6)	1.92	Y (57)	Y (80)	28	N	Police facilities would not be <u>are not</u> considered potentially substantially affected because the police building <u>itself</u> is not essential to the protection and emergency services that are provided by the <u>mobile patrol officers provide</u> .
Griffith	Griffith Volunteer Fire Dept. Headquarters/ Station No. 1	260667A	Ridge Road (US 6)	1.89	Y (57)	Y (80)	28	Y	The Griffith Volunteer Fire Department is an all volunteer department with limited staffing at the department facilities. Some volunteer firefighters could <u>may</u> need to cross the EJ&E rail line to report to the fire station or to respond to an emergency call.
Griffith	Griffith Volunteer Fire Dept. - Station No. 2	260656M	Indianapolis Boulevard (US 41)	2.29	Y (57)	Y (80)	28	Y	The Griffith Volunteer Fire Department is an all volunteer department with limited staffing at the department facilities. Some volunteer firefighters could <u>may</u> need to cross

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
									the EJ&E rail line to report to the fire station or to respond to an emergency call.
Gary	Gary Fire Department - Station No. 9	260675S	Industrial Highway (US 12)	2.24	Y (102) (30)	Y (53)	29	N	Hammond Fire Department - Station No. 8 and East Chicago Fire Department - Station No. 4 are west of the EJ&E rail line.
Gary	Lake Ridge Volunteer Fire Department Headquarters	260667A	Ridge Road (US 6)	2.30	Y (51)	Y (73)	28	N	Griffith Volunteer Fire Department Headquarters/Station No. 1 and Griffith Volunteer Fire Department - Station No. 3 are west of the EJ&E rail line.
Gary	Gary Fire Department - Station No. 13	260667A	Ridge Road (US 6)	1.65	Y (37)	Y (58)	29	N	Hammond Fire Department - Station No. 8 and Griffith Volunteer Fire Department - Station No. 3 are west of the EJ&E rail line.
Hammond	Hammond Fire Department - Station No. 8	260669N	I-94 / I-80	2.19	Y (30)	Y (53)	29	N	Gary Fire Department - Station No. 9, Gary Fire Department - Station No. 13 and Gary Fire Department - Station No. 14 are east of the EJ&E rail

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing Blocked in a Day >30 minutes	Appendix E-1: Sheet No.	Carried forward to Table 4.3-13 Emergency Service Providers Potentially Substantially Affected by the Proposed Action (Y/N)	Reason / Explanation
					(Y/N) (Greatest increase in seconds. See Note ^a)				
									line.
Hammond	Highland Fire Department Headquarters/ Central Station	260667A	Ridge Road (US 6)	1.82	Y (37)	Y (58)	28	N	The community of Highland does not cross the EJ&E rail line (east of the tracks). <u>Additionally, it is a straight-line drive down Ridge Road (US 6) from Highland Fire Department Headquarters/Central Station to get to the nearest grade separated crossing separation at Ridge Road (US 6).</u>
East Chicago	Saint Catherine Hospital	260930Y 260675S	Cline Avenue Ramp <u>Industrial Highway (US 12)</u>	1.17 <u>1.84</u>	N	N	29	N	The community of East Chicago does not cross the EJ&E rail line (east of the tracks). <u>Additionally, Methodist Hospital - Northlake Campus and Methodist Hospital - Midlake Campus are east of the EJ&E rail line.</u>

Notes:

^a The delay time shown in the table reflects the greatest increase in delay calculated for all available routes from the facility.

- ^b This facility is closer to East-West Tollway; however, there are access restrictions at this crossing (on-ramp is too far west). This facility is also closer to North Aurora Road; however, Aurora Fire Department - Station No. 8 could respond to calls east of the EJ&E rail line in this location.
- ^c This facility is closer to East-West Tollway; however, there are access restrictions at this crossing (exit ramp on the west side is too far west) and it may not accommodate all emergency service apparatus.
- ^d These facilities are closer to Butler Street; however, there are clearance restrictions at this crossing and it may not accommodate all emergency service apparatus; essentially assuming that this crossing cannot be used by any emergency service responder.

Appendix A - New Analysis and Corrections to Appendix E, Attachment E1 - Grade Crossing Delay Calculations

The following sections describe in detail SEA's evaluation of the highway/rail at-grade crossings that are effected by the Proposed Action. This section contains tables showing delay calculations for at-grade crossings that intersect the EJ&E and CN rail lines. Information that was not available or not published in the Draft EIS is shown in red.

Effects on Local and Regional Highway Systems

SEA evaluated the effects of the Proposed Action and No-Action Alternatives on the regional and local highway systems by first determining the vehicle delays at highway/rail crossings and then assessing how those delays could affect regional mobility. Vehicle crossing delays for EJ&E and CN as well as effects on regional mobility are described in the following section.

SEA analyzed and evaluated 99 highway/rail at-grade crossings along the EJ&E rail line and 155 along the CN subdivisions for the environmental analysis.

Parameters included in the analysis for vehicle delays from a single-train event include:

- Blocked crossing time per train, minutes (D_c)
- Average delay per delayed roadway vehicle, minutes (D_a)
- Vehicle queue, number of vehicles (Q)
- Average delay for all vehicles, minutes (D_v)

To evaluate the effects of a single-train event, SEA analyzed the following for multiple trains on a 24-hour basis:

- Total delayed vehicles per day (T_d)
- Total blocked crossing time, minutes
- Crossing level of service (LOS)

SEA also independently evaluated the roadways that cross the rail lines, in addition to evaluating the highway/rail at-grade crossings. Parameters included in the analysis of the roadway operations include:

- Vehicle queue length, feet
- Roadway LOS

The above parameters were calculated based on the existing number of trains (N), existing average train speed (V), length of trains (L), and the number of traffic lanes (NL) for the highway/rail at-grade crossing. The calculation was based on the 2007 ADT volumes—number of vehicles per day—for the existing roadways. SEA also determined the existing LOS for each highway/rail at-grade crossing. The LOS refers to the efficiency at which a highway/rail at-grade crossing operates when a train passes through. Letters from A to F represent the LOS, with LOS A indicating relatively free-flowing traffic and LOS F indicating extreme congestion.

EJ&E Highway/Rail At-Grade Crossings

SEA used the 2015 ADTs to analyze the No-Action and Proposed Action delays to show what the effect would be to vehicle delay along the EJ&E rail line. Even though Tables 4.4.4-1 and 4.4.4-2

show the vehicle delay calculations for the 99 crossings that SEA evaluated and the results of the analysis for crossing LOS and total vehicle traffic delay for a 24-hour period, only 88 of the 99 highway/rail at-grade crossings are discussed in detail below. Tables E1.2-1 and E1.2-2 provide additional information to supplement subsequent detailed discussions following the tables.

SEA also calculated the delay for the year 2020 using 2015 proposed train data (number of trains, lengths, and speeds) and 2020 ADT data for the purposes of potential future regional planning by local, regional and state government agencies. The year 2020 delay calculations assumed that the number of trains, train speed and length would remain the same as the data provided for the year 2015. The 2020 delay data is not discussed in detail. The delay calculations for 2020 are shown in Table E1.2-3.

E.1.1.1 Introduction to Appendix E

SEA identified 32 crossings along the EJ&E rail line and 26 crossings along CN rail line with 2007 and 2008 updated ADTs from IDOT and Lake County. These include 11 crossings in Lake County, four crossings in DuPage County, 14 crossings in Will County and three crossings in the southeastern Cook County along the EJ&E rail line, and along CN rail line, 18 crossings on the Waukesha Subdivision, four along the Freeport Subdivision, one along the Joliet Subdivision and three along the Elsdon/Southbend Subdivision.

SEA used IDOT's 2007 ADTs and CN's revised train data for an updated crossing delay analysis for specific crossings along four of the five CN subdivisions. Tables E1.2-10 and E1.2-11 present the vehicle delay calculations for 59 crossings in the Waukesha, Freeport, Joliet and Elsdon/Southbend subdivisions and summarizes the results of analysis for LOS and total traffic delay on a 24-hour basis.

SEA had identified that the results of these updates has created revised analysis to reflect the changes. Keating Drive/83rd Street near Aurora has been added to the list of crossings to be analyzed, because it has now an updated ADT higher than 2500 threshold, bringing the total number of crossings to be analyzed from 87 to 88 along the EJ&E rail line. Sea also revised the delay calculation for the year 2020 using the updated 2015 proposed train data and updated 2020 ADT for the purpose of potential future regional planning by local, regional and state government agencies. Tables E1.2-1 through E1.2-3 show the results of the revised analysis.

E.1.1.2 Environmental Consequences Changes

Section 4.3 of the FEIS discussed the environmental consequences of the proposed action versus the no action alternative as it relates to local and regional highway systems, emergency vehicles, navigation, and airports. The following are the changes that occurred to at-grade crossing delays due to the new analysis discussed in section 2.5 of the FEIS.

E.1.1.2.1 At-Grade EJ&E Crossing Delays

The following sections discuss the re-evaluation of the delay analysis as a result of the updated traffic and train data for the EJ&E crossings.

Table E1.2-1. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data																			
STREET	2015 ADT	NO-ACTION (2015)										PROPOSED ACTION (2015)							
		L	V	D _C	D _A	N	T _D	NL	Q	D _V	L	V	D _C	D _A	N	T _D	NL	Q	D _V
Lake County																			
near Libertyville																			
Diamond Lake Road	6,207	2,760	26	1.7	1.1	5.3	39	2	11	0.01	6,829	31	3.0	2.0	20.3	263	2	19	0.17
near Mundelein																			
IL 60&83	29,009	2,760	28	1.6	1.1	5.3	173	4	23	0.01	6,829	32	2.9	1.9	20.3	1,196	4	42	0.16
near Hawthorn Woods																			
Gilmer Road	18,622	2,760	30	1.5	1.0	5.3	106	2	29	0.01	6,829	33	2.9	1.9	20.3	749	2	53	0.15
Old McHenry Road	32,429	2,760	29	1.6	1.0	5.3	189	4	26	0.01	6,829	32	2.9	1.9	20.3	1,337	4	47	0.16
near Lake Zurich																			
Oakwood Road	4,750	2,760	27	1.7	1.1	5.3	29	2	8	0.01	6,829	30	3.1	2.0	20.3	207	2	15	0.17
Lake Zurich																			
Main Street	7,474	2,760	27	1.7	1.1	5.3	46	2	12	0.01	6,829	30	3.1	2.0	20.3	325	2	23	0.17
Old Rand Road	7,474	2,760	28	1.6	1.1	5.3	45	2	12	0.01	6,829	31	3.0	2.0	20.3	316	2	22	0.17
Ela Road	21,408	2,760	33	1.5	0.9	5.3	114	2	31	0.01	6,829	36	2.7	1.7	20.3	801	2	57	0.13
near Barrington																			
Cuba Road	12,921	2,760	36	1.4	0.9	5.3	65	2	18	0.01	6,829	39	2.5	1.6	20.3	454	2	32	0.11
Barrington																			
Lake Zurich Road	3,131	2,760	39	1.3	0.8	5.3	15	2	4	0.01	6,829	41	2.4	1.6	20.3	106	2	7	0.10
Northwest Hwy (US 14)	33,949	2,760	38	1.3	0.9	5.3	166	4	22	0.01	6,829	39	2.5	1.6	20.3	1,192	4	42	0.11
Hough Street (IL 59)	22,549	2,760	37	1.3	0.9	5.3	112	2	30	0.01	6,829	39	2.5	1.6	20.3	791	2	56	0.11
West Cook County																			
Barrington																			
Lake Cook Road / Main Street	14,222	2,760	37	1.3	0.9	5.3	71	2	19	0.01	6,829	39	2.5	1.6	20.3	499	2	35	0.11
near Barrington																			
Otis Road	1,673	2,760	34	1.4	0.9	5.3	9	2	2	0.01	6,829	37	2.6	1.7	20.3	61	2	4	0.12
Penny Road	4,786	2,760	34	1.4	0.9	5.3	25	2	7	0.01	6,829	37	2.6	1.7	20.3	175	2	12	0.12

Table E1.2-1. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data

STREET	2015 ADT	NO-ACTION (2015)									PROPOSED ACTION (2015)								
		L	V	D _C	D _A	N	T _D	NL	Q	D _V	L	V	D _C	D _A	N	T _D	NL	Q	D _V
Old Sutton Road	2,070	2,760	34	1.4	0.9	5.3	11	2	3	0.01	6,829	37	2.6	1.7	20.3	76	2	5	0.12
Hoffman Estates																			
Shoe Factory Road	9,202	2,760	33	1.5	0.9	5.3	49	2	13	0.01	6,829	37	2.6	1.7	20.3	337	2	24	0.12
Near Elgin																			
Spaulding Road	1,434	2,760	40	1.3	0.8	5.3	7	4	1	0.01	6,829	43	2.3	1.5	20.3	47	4	2	0.10
West Bartlett Road	17,209	3,042	40	1.4	0.9	5.5	90	2	23	0.01	6,714	43	2.3	1.5	22.5	612	2	39	0.11
DuPage County																			
near Bartlett																			
Stearns Road	27,604	3,042	38	1.4	0.9	5.5	149	4	19	0.01	6,714	41	2.4	1.5	22.5	1,018	4	33	0.11
Wayne																			
Army Trail Road	7,392	2,264	36	1.2	0.8	4.4	27	2	9	0.01	6,843	40	2.4	1.6	23.4	294	2	18	0.13
near West Chicago																			
Smith Road	7,123	2,264	35	1.2	0.8	4.4	27	2	9	0.01	6,843	40	2.4	1.6	23.4	283	2	17	0.13
Hawthorne Lane	20,024	2,264	29	1.4	0.9	4.4	85	2	28	0.01	6,843	33	2.9	1.9	23.4	929	2	57	0.2
West Chicago																			
Washington Street	12,095	3,769	21	2.5	1.7	10.7	228	2	31	0.06	6,494	23	3.7	2.4	31.6	984	2	45	0.4
Aurora Street	364	3,769	22	2.4	1.6	10.7	7	2	1	0.06	6,494	26	3.3	2.2	31.6	27	2	1	0.3
Church Street	364	3,769	22	2.4	1.6	10.7	7	2	1	0.06	6,494	25	3.5	2.2	31.6	28	2	1	0.3
Ann Street	1,127	3,769	22	2.4	1.6	10.7	20	2	3	0.06	6,494	25	3.5	2.2	31.6	85	2	4	0.3
Naperville																			
Diehl Road	17,341	3,769	33	1.8	1.2	10.7	232	2	31	0.03	6,494	38	2.4	1.6	31.6	929	2	42	0.2
near Aurora																			
Liberty Street.	16,111	3,881	25	2.3	1.5	15.7	398	2	36	0.07	6,203	30	2.8	1.9	39.5	1,259	2	46	0.3
Ogden Avenue (US 34)	46,110	3,881	32	1.9	1.2	15.7	944	4	43	0.05	6,203	39	2.3	1.5	39.5	2,918	4	53	0.2
Montgomery Road	27,131	3,881	32	1.9	1.2	15.7	556	2	51	0.05	6,203	38	2.4	1.5	39.5	1,753	2	64	0.2
Keating Drive / 87th Street	4,182	3,881	32	1.9	1.2	15.7	86	2	8	0.05	6,203	38	2.4	1.5	39.5	270	2	10	0.2

Table E1.2-1. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data

STREET	2015 ADT	NO-ACTION (2015)									PROPOSED ACTION (2015)								
		L	V	D _C	D _A	N	T _D	NL	Q	D _V	L	V	D _C	D _A	N	T _D	NL	Q	D _V
Will County																			
near Plainfield																			
Hafenrichter Road	5,657	3,881	32	1.9	1.2	15.7	116	2	11	0.05	6,203	38	2.4	1.5	39.5	365	2	13	0.2
Wolf's Crossing	9,593	3,881	31	1.9	1.2	15.7	201	2	25	0.05	6,203	37	2.4	1.6	39.5	868	2	32	0.2
111th Street	10,454	3,881	31	1.9	1.2	15.7	219	2	20	0.05	6,203	37	2.4	1.6	39.5	690	2	25	0.2
Ferguson Road / 119 th Street	3,690	3,881	30	2.0	1.3	15.7	79	2	7	0.06	6,203	36	2.5	1.6	39.5	249	2	9	0.2
Normantown - 252nd	2,492	3,881	30	2.0	1.3	15.7	54	2	5	0.06	6,203	34	2.6	1.7	39.5	176	2	6	0.2
127th Street	13,160	3,881	29	2.0	1.3	15.7	290	2	27	0.06	6,203	33	2.6	1.7	39.5	952	2	35	0.2
135th Street	13,898	3,398	29	1.8	1.2	15.7	278	2	25	0.05	5,842	34	2.5	1.6	39.5	935	2	34	0.2
Van Dyke Road	6,921	3,398	32	1.7	1.1	18.5 15.7	152 129	2	12	0.05 0.04	5,842	38	2.2	1.5	42.3 39.5	457 427	2	16	0.2
Renwick Road	11,807	3,398	35	1.6	1.0	18.5	243	2	19	0.04	5,842	40	2.2	1.4	42.3	749	2	25	0.2
Plainfield																			
143rd Street	9,716	3,398	33	1.7	1.1	18.5 15.7	177	2	16	0.05 0.04	5,842	39	2.2	1.4	42.3 39.5	587	2	21	0.2
Plainfield-Naperville Road	8,117	3,398	34	1.6	1.1	18.5	171	2	13	0.04	5,842	40	2.2	1.4	42.3	515	2	18	0.2
Main Street	20,015	3,398	34	1.6	1.1	18.5	421	2	33	0.04	5,842	40	2.2	1.4	42.3	1,270	2	43	0.2
Center Street	1,845	3,398	34	1.6	1.1	18.5	39	2	3	0.04	5,842	40	2.2	1.4	42.3	117	2	4	0.18
Eastern Avenue	3,444	3,398	34	1.6	1.1	18.5	72	2	6	0.04	5,842	40	2.2	1.4	42.3	218	2	7	0.2
Lockport Road	10,085	3,398	34	1.6	1.1	18.5	212	2	16	0.04	5,842	40	2.2	1.4	42.3	640	2	22	0.2
near Crest Hill																			
East Frontage Road / Essington Road	4,983	3,398	33	1.7	1.1	18.5	107	2	8	0.05	5,842	39	2.2	1.4	42.3	322	2	11	0.2
Division Street	7,613	3,398	31	1.7	1.1	18.5	171	2	13	0.05	5,842	36	2.3	1.5	42.3	524	2	18	0.2
Crest Hill																			

Table E1.2-1. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data

STREET	2015 ADT	NO-ACTION (2015)									PROPOSED ACTION (2015)								
		L	V	D _C	D _A	N	T _D	NL	Q	D _V	L	V	D _C	D _A	N	T _D	NL	Q	D _V
Gaylord Road	5,591	3,398	28	1.9	1.2	18.5	135	2	11	0.06	5,842	33	2.5	1.6	42.3	412	2	14	0.2
Oakland Avenue	1,661	3,398	26	2.0	1.3	18.5	42	2	3	0.07	5,842	29	2.8	1.8	42.3	136	2	5	0.3
near Joliet																			
South Rowell Avenue	3,184	3,795	19	2.8	1.8	6.4	39	2	9	0.04	6,684	17	5.0	3.2	28.3	311	2	16	0.6
Cherry Hill Road	1,107	3,795	31	1.9	1.2	6.4	9	2	2	0.02	6,684	35	2.7	1.7	28.3	58	2	3	0.2
Joliet																			
Woodruff Road	10,659	2,743	9	4.0	2.6	18.5	543	2	42	0.26	5,552	10	6.8	4.4	42.3	2,132	2	73	1.8
Washington Street	11,714	3,795	9	5.3	3.4	6.4	276	2	62	0.16	6,684	10	8.1	5.3	28.3	1,864	2	95	1.7
Mills Road	3,115	3,795	27	2.1	1.4	6.4	29	2	7	0.03	6,684	30	3.0	2.0	28.3	186	2	9	0.2
South Rowell Avenue	3,184	3,795	29	2.0	1.3	6.4	28	2	6	0.02	6,684	33	2.8	1.8	28.3	175	2	9	0.2
Spencer Road	1,177	3,795	30	1.9	1.3	6.4	10	2	2	0.02	6,684	34	2.7	1.8	28.3	63	2	3	0.2
Briggs Street	13,842	3,795	31	1.9	1.2	6.4	116	2	26	0.02	6,684	34	2.7	1.8	28.3	744	2	38	0.2
near New Lenox																			
South Gougar Road	8,063	3,795	28	2.0	1.3	6.4	73	2	16	0.02	6,684	34	2.7	1.8	28.3	433	2	22	0.2
Nelson Road	7,336	3,795	31	1.9	1.2	6.4	62	2	14	0.02	6,684	36	2.6	1.7	28.3	376	2	19	0.2
Cedar Road	10,299	3,795	30	1.9	1.3	6.4	89	2	20	0.02	6,684	36	2.6	1.7	28.3	528	2	27	0.2
Spencer Road	3,104	3,795	31	1.9	1.2	6.4	26	2	6	0.02	6,684	36	2.6	1.7	28.3	159	2	8	0.2
School House Road	8,721	3,795	31	1.9	1.2	6.4	73	2	16	0.02	6,684	36	2.6	1.7	28.3	447	2	23	0.2
near Frankfort																			
Owens Road / 116th Avenue	1,246	3,795	29	2.0	1.3	6.4	11	2	2	0.02	6,684	34	2.7	1.8	28.3	67	2	3	0.2
Wolf Road	9,966	3,795	28	2.0	1.3	6.4	90	2	20	0.02	6,684	33	2.8	1.8	28.3	549	2	28	0.2
Old Sauk Trail	3,461	3,795	32	1.8	1.2	6.4	28	2	6	0.02	6,684	36	2.6	1.7	28.3	177	2	9	0.2
Pfeiffer Road / 88th Avenue	7,752	3,795	32	1.8	1.2	6.4	64	2	14	0.02	6,684	36	2.6	1.7	28.3	398	2	20	0.2
Harlem Avenue	12,336	3,795	35	1.7	1.1	6.4	95	4	11	0.02	6,684	41	2.4	1.5	28.3	570	4	15	0.1
Frankfort																			
Center Road	5,320	3,795	29	2.0	1.3	6.4	47	2	11	0.02	6,684	34	2.7	1.8	28.3	286	2	15	0.2
Southeastern Cook County																			

Table E1.2-1. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data																			
STREET	2015 ADT	NO-ACTION (2015)									PROPOSED ACTION (2015)								
		L	V	D _C	D _A	N	T _D	NL	Q	D _V	L	V	D _C	D _A	N	T _D	NL	Q	D _V
near Matteson																			
Ridgeland Avenue	3,642	3,795	35	1.7	1.1	6.4	28	2	6	0.02	6,684	41	2.4	1.5	28.3	168	2	9	0.1
Central Avenue	2,297	3,795	34	1.8	1.1	6.4	18	2	4	0.02	6,684	40	2.4	1.6	28.3	108	2	6	0.1
Cicero Avenue	23,281	3,795	35	1.7	1.1	6.4	179	4	20	0.02	6,684	35	2.7	1.7	28.3	1,222	4	31	0.2
Matteson																			
Main Street	4,375	3,795	40	1.6	1.0	6.4	31	2	7	0.02	6,684	40	2.4	1.6	20.3	148	2	10	0.1
Main Street Connector (North)	4,375	--	--	--	--	--	--	--	--	--	6,684	15	5.6	3.6	8.0	135	2	24	0.2
Main Street Connector (South)	4,375	3,795	10	4.8	3.1	2.2	32	2	21	0.05	6,684	15	5.6	3.6	6.3	106	2	24	0.2
Park Forest																			
Western Avenue	24,717	3,615	34	1.7	1.1	8.6	252	4	21	0.02	6,256	31	2.8	1.8	31.6	1,515	4	35	0.2
Chicago Heights																			
Euclid Avenue	238	3,615	23	2.3	1.5	8.6	3	2	1	0.04	6,256	25	3.3	2.2	31.6	17	2	1	0.3
Chicago Road	23,390	3,615	21	2.5	1.6	8.6	343	4	29	0.05	6,256	22	3.7	2.4	31.6	1,915	4	44	0.4
West End Avenue/Halsted Street	5,956	3,615	19	2.7	1.7	8.6	95	2	16	0.06	6,256	20	4.1	2.6	31.6	530	2	24	0.5
East End Avenue	5,086	3,615	20	2.6	1.7	8.6	78	2	13	0.05	6,256	20	4.1	2.6	31.6	452	2	21	0.5
East End Avenue Connector	5,086	3,615	10	4.6	3.0	1.6	26	2	23	0.03	6,256	10	7.6	4.9	2.6	70	2	39	0.1
Wentworth Avenue	4,563	3,261	18	2.6	1.7	10.2	83	2	12	0.06	6,012	19	4.1	2.7	34.2	444	2	19	0.5
State Street	7,656	3,261	22	2.2	1.4	10.2	118	2	17	0.04	6,012	22	3.6	2.3	34.2	656	2	28	0.4
Cottage Grove Avenue	5,578	3,261	30	1.7	1.1	10.2	69	4	5	0.03	6,012	33	2.6	1.7	34.2	340	4	7	0.2
Sauk Village																			
Torrence Avenue	8,968	3,261	37	1.5	1.0	10.2	95	2	13	0.02	6,012	41	2.2	1.4	34.2	461	2	19	0.1
Lynwood																			
Lincoln Highway (US 30)	29,237	3,261	30	1.7	1.1	10.2	359	4	25	0.03	6,012	33	2.6	1.7	34.2	1,785	4	38	0.2
Lake County, Indiana																			
Dyer																			
Lake Street	5,067	3,261	30	1.7	1.1	10.2	62	2	9	0.03	6,012	34	2.5	1.6	34.2	302	2	13	0.2
Hart Street	20,268	3,261	31	1.7	1.1	10.2	243	2	34	0.03	6,012	34	2.5	1.6	34.2	1,208	2	51	0.2

Table E1.2-1. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data																			
STREET	2015 ADT	NO-ACTION (2015)									PROPOSED ACTION (2015)								
		L	V	D _C	D _A	N	T _D	NL	Q	D _V	L	V	D _C	D _A	N	T _D	NL	Q	D _V
Schererville																			
Airport Road	3,818	3,261	36	1.5	1.0	10.2	41	2	6	0.02	6,012	39	2.3	1.5	34.2	204	2	9	0.2
Kennedy Avenue	17,076	3,261	35	1.6	1.0	10.2	189	2	27	0.02	6,012	38	2.3	1.5	34.2	932	2	39	0.2
Griffith																			
Broad Street	19,572	2,717 <u>3,261</u>	17	2.7	1.7	7.6	277	2	52	0.05	5,915 <u>6,012</u>	20	3.9	2.5	23.6	1,256	2	77	0.3
Broad Street Connector	19,572	3,261	25	2.0	1.3	2.6	70	2	39	0.01	6,012	25	3.2	2.1	10.7	470	2	63	0.1
East Main Street	10,960	2,717	23	1.8	1.2	7.6	107	2	20	0.02	5,915	24	3.3	2.1	28.6	718	2	36	0.3
East Lake Street	6,524	2,717	26	1.7	1.1	7.6	58	2	11	0.02	5,915	27	3.0	1.9	28.6	387	2	20	0.2
East Miller Street	6,524	2,717	28	1.6	1.0	7.6	55	2	10	0.02	5,915	29	2.8	1.8	28.6	365	2	18	0.2
East Elm Street	8,090	2,717	29	1.6	1.0	7.6	67	2	13	0.02	5,915	34	2.5	1.6	28.6	398	2	20	0.2
East 45th Avenue	23,486	2,717	31	1.5	1.0	7.6	185	4	18	0.02	5,915	34	2.5	1.6	28.6	1,155	4	29	0.2
East 40th Place	14,222	2,717	32	1.5	1.0	7.6	110	2	21	0.01	5,915	35	2.4	1.6	28.6	684	2	34	0.2
Gary																			
West 25th Avenue	4,187	3,144	34	1.6	1.0	9.7	44	2	6	0.02	5,777	37	2.3	1.5	29.7	196	2	10	0.1
West 15th Avenue	19,890	3,144	34	1.6	1.0	9.7	208	2	31	0.02	5,777	37	2.3	1.5	29.7	933	2	45	0.1
West 9th Avenue	4,187	3,144	35	1.5	1.0	9.7	43	2	6	0.02	5,777	38	2.2	1.4	29.7	192	2	9	0.1
West 5th Avenue	28,467	3,108	35	1.5	1.0	9.8	292	4	21	0.02	5,758	37	2.3	1.5	29.8	1,336	4	32	0.1

Table E1.2-2. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data								
STREET	2015 ADT	NO-ACTION LOS (2015)	PROPOSED ACTION LOS (2015)	NO-ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	PROPOSED ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	NO-ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PROPOSED ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PERCENT CHANGE TOTAL BLOCKED CROSSING TIME
Lake County								
Near Libertyville								
Diamond Lake Road	6,207	A	A	9.0	61.0	0.6%	4.2%	3.6%
Near Mundelein								
IL 60&83	29,009	A	A	8.6	59.4	0.6%	4.1%	3.5%
Near Hawthorn Woods								
Gilmer Road	18,622	A	A	8.2	57.9	0.6%	4.0%	3.5%
Old McHenry Road	32,429	A	A	8.4	59.4	0.6%	4.1%	3.5%
Near Lake Zurich								
Oakwood Road	4,750	A	B	8.8	62.7	0.6%	4.4%	3.7%
Lake Zurich								
Main Street	7,474	A	B	8.8	62.7	0.6%	4.4%	3.7%
Old Rand Road	7,474	A	A	8.6	61.0	0.6%	4.2%	3.6%
Ela Road	21,408	A	A	7.7	53.9	0.5%	3.7%	3.2%
Near Barrington								
Cuba Road	12,921	A	A	7.3	50.5	0.5%	3.5%	3.0%
Barrington								
Lake Zurich Road	3,131	A	A	6.9	48.6	0.5%	3.4%	2.9%
Northwest Hwy (US 14)	33,949	A	A	7.0	50.5	0.5%	3.5%	3.0%
Hough Street (IL 59)	22,549	A	A	7.1	50.5	0.5%	3.5%	3.0%
West Cook County								
Barrington								
Lake Cook Road / Main Street	14,222	A	A	7.1	50.5	0.5%	3.5%	3.0%

Table E1.2-2. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data								
STREET	2015 ADT	NO-ACTION LOS (2015)	PROPOSED ACTION LOS (2015)	NO-ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	PROPOSED ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	NO-ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PROPOSED ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PERCENT CHANGE TOTAL BLOCKED CROSSING TIME
Near Barrington								
Otis Road	1,673	A	A	7.5	52.7	0.5%	3.7%	3.1%
Penny Road	4,786	A	A	7.5	52.7	0.5%	3.7%	3.1%
Old Sutton Road	2,070	A	A	7.5	52.7	0.5%	3.7%	3.1%
Hoffman Estates								
Shoe Factory Road	9,202	A	A	7.7	52.7	0.5%	3.7%	3.1%
Near Elgin								
Spaulding Road	1,434	A	A	6.8	46.8	0.5%	3.2%	2.8%
West Bartlett Road	17,209	A	A	7.5	51.2	0.5%	3.6%	3.0%
DuPage County								
Near Bartlett								
Stearns Road	27,604	A	A	7.8	53.1	0.5%	3.7%	3.2%
Wayne								
Army Trail Road	7,392	A	A	5.3	57.2	0.4%	4.0%	3.6%
Near West Chicago								
Smith Road	7,123	A	A	5.4	57.2	0.4%	4.0%	3.6%
Hawthorne Lane	20,024	A	B	6.1	66.8	0.4%	4.6%	4.2%
West Chicago								
Washington Street	12,095	A	C	27.2	117.2	1.9%	8.1%	6.3%
Aurora Street	364	A	B	26.2	105.5	1.8%	7.3%	5.5%
Church Street	364	A	C	26.2	109.1	1.8%	7.6%	5.8%
Ann Street	1,127	A	C	26.2	109.1	1.8%	7.6%	5.8%
Naperville								
Diehl Road	17,341	A	B	19.2	77.2	1.3%	5.4%	4.0%

Table E1.2-2. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data								
STREET	2015 ADT	NO-ACTION LOS (2015)	PROPOSED ACTION LOS (2015)	NO-ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	PROPOSED ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	NO-ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PROPOSED ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PERCENT CHANGE TOTAL BLOCKED CROSSING TIME
Near Aurora								
Liberty Street.	16,111	A	B	35.5	112.6	2.5%	7.8%	5.3%
Ogden Avenue (US 34)	46,110	A	B	29.5	91.1	2.0%	6.3%	4.3%
Montgomery Road	27,131	A	B	29.5	93.0	2.0%	6.5%	4.4%
Keating Drive/ 87th Street	4,182	A	B	29.5	93.0	2.0%	6.5%	4.4%
Will County								
Near Plainfield								
Hafenrichter Road	5,657	A	B	29.5	93.0	2.0%	6.5%	4.4%
Wolf's Crossing	9,593	A	B	30.2	95.0	2.1%	6.6%	4.5%
111th Street	10,454	A	B	30.2	95.0	2.1%	6.6%	4.5%
Ferguson Road / 119 th Street	3,690	A	B	30.9	97.1	2.1%	6.7%	4.6%
Normantown - 252nd	2,492	A	B	30.9	101.6	2.1%	7.1%	4.9%
127th Street	13,160	A	B	31.7	104.1	2.2%	7.2%	5.0%
135th Street	13,898	A	B	28.8	96.9	2.0%	6.7%	4.7%
Van Dyke Road	6,921	A	B	31.6 26.8	95.0 88.8	2.2% 1.9%	6.6% 6.2%	4.4% 4.3%
Renwick Road	11,804	A	B	26.8	88.8	1.9%	6.2%	4.3%
Plainfield								
143rd Street	9,716	A	B	30.9 26.2	93.2 87.0	2.1% 1.8%	6.5% 6.0%	4.3% 4.2%
Planfield-Naperville Road	8,117	A	B	30.3	91.4	2.1%	6.3%	4.2%
Main Street	20,015	A	B	30.3	91.4	2.1%	6.3%	4.2%

Table E1.2-2. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data								
STREET	2015 ADT	NO-ACTION LOS (2015)	PROPOSED ACTION LOS (2015)	NO-ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	PROPOSED ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	NO-ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PROPOSED ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PERCENT CHANGE TOTAL BLOCKED CROSSING TIME
Center Street	1,845	A	B	30.3	91.4	2.1%	6.3%	4.2%
Eastern Avenue	3,444	A	B	30.3	91.4	2.1%	6.3%	4.2%
Lockport Road	10,085	A	B	30.3	91.4	2.1%	6.3%	4.2%
Near Crest Hill								
East Frontage Road / Essington Road	4,983	A	B	30.9	93.2	2.1%	6.5%	4.3%
Division Street	7,613	A	B	32.3	99.2	2.2%	6.9%	4.6%
Crest Hill								
Gaylord Road	5,591	A	B	34.8	106.2	2.4%	7.4%	5.0%
Oakland Avenue	1,661	A	B	36.7	118.0	2.6%	8.2%	5.6%
Near Joliet								
South Rowell Street	3,184	A	D	17.7	140.6	1.2%	9.8%	8.5%
Cherry Hill Road	1,107	A	B	12.1	75.6	0.8%	5.2%	4.4%
Joliet								
Woodruff Road	10,659	B	F	73.3	288.0	5.1%	20.0%	14.9%
Washington Street	11,714	A	F	33.9	229.1	2.4%	15.9%	13.6%
Mills Road	3,115	A	B	13.4	85.8	0.9%	6.0%	5.0%
South Rowell Street	3,184	A	B	12.7	79.3	0.9%	5.5%	4.6%
Spencer Road	1,177	A	B	12.4	77.4	0.9%	5.4%	4.5%
Briggs Street	13,842	A	B	12.1	77.4	0.8%	5.4%	4.5%
Near New Lenox								
South Gougar Road	8,063	A	B	13.1	77.4	0.9%	5.4%	4.5%
Nelson Road	7,336	A	B	12.1	73.9	0.8%	5.1%	4.3%

Table E1.2-2. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data								
STREET	2015 ADT	NO-ACTION LOS (2015)	PROPOSED ACTION LOS (2015)	NO-ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	PROPOSED ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	NO-ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PROPOSED ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PERCENT CHANGE TOTAL BLOCKED CROSSING TIME
Cedar Road	10,299	A	B	12.4	73.9	0.9%	5.1%	4.3%
Spencer Road	3,104	A	B	12.1	73.9	0.8%	5.1%	4.3%
School House Road	8,721	A	B	12.1	73.9	0.8%	5.1%	4.3%
Near Frankfort								
Owens Road /116th Avenue	1,246	A	B	12.7	77.4	0.9%	5.4%	4.5%
Wolf Road	9,966	A	B	13.1	79.3	0.9%	5.5%	4.6%
Old Sauk Trail	3,461	A	B	11.8	73.9	0.8%	5.1%	4.3%
Pfeiffer Road / 88th Avenue	7,752	A	B	11.8	73.9	0.8%	5.1%	4.3%
Harlem Avenue	12,336	A	A	11.1	66.6	0.8%	4.6%	3.9%
Frankfort								
Center Road	5,320	A	B	12.7	77.4	0.9%	5.4%	4.5%
Southeastern Cook County								
Near Matteson								
Ridgeland Avenue	3,642	A	A	11.1	66.6	0.8%	4.6%	3.9%
Central Avenue	2,297	A	A	11.3	67.9	0.8%	4.7%	3.9%
Cicero Avenue	23,281	A	B	11.1	75.6	0.8%	5.2%	4.5%
Matteson								
Main Street	4,375	A	A	10.1	48.7	0.7%	3.4%	2.7%
Main Street Connector (South)	4,375	--	B	--	44.5	--	3.1%	3.1%
Main Street Connector (South)	4,375	A	B	10.6	35.1	0.7%	2.4%	1.7%
Park Forest								

Table E1.2-2. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data								
STREET	2015 ADT	NO-ACTION LOS (2015)	PROPOSED ACTION LOS (2015)	NO-ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	PROPOSED ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	NO-ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PROPOSED ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PERCENT CHANGE TOTAL BLOCKED CROSSING TIME
Western Avenue	24,717	A	B	14.7	88.3	1.0%	6.1%	5.1%
Chicago Heights								
Euclid Avenue	238	A	B	19.7	105.7	1.4%	7.3%	6.0%
Chicago Road	23,390	A	C	21.1	117.9	1.5%	8.2%	6.7%
West End Avenue / Halsted Street	5,956	A	C	22.9	128.1	1.6%	8.9%	7.3%
East End Avenue	5,086	A	C	22.0	128.1	1.5%	8.9%	7.4%
East End Avenue Connector	5,086	A	A	7.4	19.8	0.5%	1.4%	0.9%
Wentworth Avenue	4,563	A	C	26.1	140.1	1.8%	9.7%	7.9%
State Street	7,656	A	C	22.3	123.3	1.5%	8.6%	7.0%
Cottage Grove Avenue	5,578	A	B	17.7	87.9	1.2%	6.1%	4.9%
Sauk Village								
Torrence Avenue	8,968	A	A	15.3	74.1	1.1%	5.1%	4.1%
Lynwood								
Lincoln Highway (US 30)	29,237	A	B	17.7	87.9	1.2%	6.1%	4.9%
Lake County, Indiana								
Dyer								
Lake Street	5,067	A	B	17.7	85.8	1.2%	6.0%	4.7%
Hart Street	20,268	A	B	17.3	85.8	1.2%	6.0%	4.8%
Scherverville								
Airport Road	3,818	A	A	15.6	77.0	1.1%	5.3%	4.3%
Kennedy Avenue	17,076	A	A	15.9	78.6	1.1%	5.5%	4.4%
Griffith								
Broad Street	19,572	A	B	14.0	92.4	1.0%	6.4%	5.0%

Table E1.2-2. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data								
STREET	2015 ADT	NO-ACTION LOS (2015)	PROPOSED ACTION LOS (2015)	NO-ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	PROPOSED ACTION - TOTAL BLOCKED CROSSING TIME (24-HR), MINUTES	NO-ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PROPOSED ACTION - PERCENT TOTAL BLOCKED CROSSING TIME	PERCENT CHANGE TOTAL BLOCKED CROSSING TIME
				20.4		1.4%		
Broad Street Connector	19,572	A	A	5.2	34.6	0.4%	2.4%	2.0%
East Main Street	10,960	A	B	14.0	94.4	1.0%	6.6%	5.6%
East Lake Street	6,524	A	B	12.8	85.5	0.9%	5.9%	5.0%
East Miller Street	6,524	A	B	12.2	80.6	0.8%	5.6%	4.8%
East Elm Street	8,090	A	A	11.9	70.8	0.8%	4.9%	4.1%
East 45th Avenue	23,486	A	A	11.4	70.8	0.8%	4.9%	4.1%
East 40th Place	14,222	A	A	11.1	69.2	0.8%	4.8%	4.0%
Gary								
West 25th Avenue	4,187	A	A	15.0	67.5	1.0%	4.7%	3.6%
West 15th Avenue	19,890	A	A	15.0	67.5	1.0%	4.7%	3.6%
West 9th Avenue	4,187	A	A	14.8	66.2	1.0%	4.6%	3.6%
West 5th Avenue	28,467	A	A	14.8	67.6	1.0%	4.7%	3.7%

Table E1.2-3. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data											
STREET	2020 ADT	PROPOSED ACTION (2020)									PROPOSED ACTION LOS (2020)
		L	V	D _C	D _A	N	T _D	NL	Q	D _V	
Lake County											
Diamond Lake Road	7,196	6,829	31	3.0	2.0	20.3	305	2	22	0.2	A
IL 60&83	33,629	6,829	28	3.3	2.1	20.3	1,387	4	49	0.2	A
Gilmer Road	21,587	6,829	33	2.9	1.9	20.3	868	2	62	0.1	A
Old McHenry Road	37,594	6,829	32	2.9	1.9	20.3	1,550	4	55	0.2	A
Oakwood Road	5,507	6,829	30	3.1	2.0	20.3	240	2	17	0.2	B
Main Street	8,664	6,829	30	3.1	2.0	20.3	377	2	27	0.2	B
Old Rand Road	8,664	6,829	31	3.0	2.0	20.3	367	2	26	0.2	A
Ela Road	24,818	6,829	36	2.7	1.7	20.3	929	2	66	0.1	A
Cuba Road	14,979	6,829	39	2.5	1.6	20.3	526	2	37	0.1	A
Lake Zurich Road	3,630	6,829	41	2.4	1.6	20.3	122	2	9	0.1	A
Northwest Hwy	39,357	6,829	39	2.5	1.6	20.3	1,381	4	49	0.1	A
Hough Street (IL 59)	26,140	6,829	39	2.5	1.6	20.3	917	2	65	0.1	A
Cook County											
Lake Cook Road	16,487	6,829	39	2.5	1.6	20.3	579	2	41	0.1	A
Otis Road	1,847	6,829	37	2.6	1.7	20.3	68	2	5	0.1	A
Penny Road	5,285	6,829	37	2.6	1.7	20.3	193	2	14	0.1	A
Old Sutton Road	2,285	6,829	37	2.6	1.7	20.3	84	2	6	0.1	A
Shoe Factory Road	10,160	6,829	37	2.6	1.7	20.3	372	2	26	0.1	A
Spaulding Road	1,583	6,829	43	2.3	1.5	20.3	51	4	2	0.1	A
West Bartlett Road	19,000	6,714	43	2.3	1.5	22.5	675	2	43	0.1	A
DuPage County											
Stearns Road	32,000	6,714	41	2.4	1.5	22.5	1,180	4	38	0.1	A
Army Trail Road	8,569	6,843	40	2.4	1.6	23.4	340	2	21	0.1	A
Smith Road	8,257	6,843	40	2.4	1.6	23.4	328	2	20	0.1	A
Hawthorne Lane	23,214	6,843	33	2.9	1.9	23.4	1,078	2	66	0.2	B
Washington Street	14,022	6,494	23	3.7	2.4	31.6	1,141	2	52	0.4	C

Table E1.2-3. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data											
STREET	2020 ADT	PROPOSED ACTION (2020)									PROPOSED ACTION LOS (2020)
		L	V	D _C	D _A	N	T _D	NL	Q	D _V	
Aurora Street	422	6,494	26	3.3	2.2	31.6	31	2	1	0.3	B
Church Street	422	6,494	25	3.5	2.2	31.6	32	2	2	0.3	C
Ann Street	1,306	6,494	25	3.5	2.2	31.6	99	2	5	0.3	C
Diehl Road	20,103	6,494	38	2.4	1.6	31.6	1,077	2	49	0.2	B
Liberty Street.	18,677	6,203	30	2.8	1.9	39.5	1,460	2	53	0.3	B
Ogden Avenue/US 34	53,455	6,203	39	2.3	1.5	39.5	3,383	4	62	0.2	B
Montgomery Road	31,452	6,203	38	2.4	1.5	39.5	2,032	2	74	0.2	B
Will County											
Keating Drive/ 87th Street	4,848	6,203	38	2.4	1.5	39.5	313	2	11	0.2	B
Hafenrichter Road	6,559	6,203	38	2.4	1.5	39.5	424	2	15	0.2	B
Wolf's Crossing	11,121	6,203	37	2.4	1.6	39.5	734	2	27	0.2	B
111th Street	12,119	6,203	37	2.4	1.6	39.5	800	2	29	0.2	B
Ferguson Road - 119th	4,277	6,203	36	2.5	1.6	39.5	288	2	11	0.2	B
Normantown - 252nd	2,888	6,203	34	2.6	1.7	39.5	204	2	7	0.2	B
127th Street - Chapins	15,256	6,203	33	2.6	1.7	39.5	1,103	2	40	0.2	B
135th Street	16,111	5,842	34	2.5	1.6	39.5	1,084	2	40	0.2	B
Van Dyke Road	8,024	5,842	38	2.2	1.5	42.3 39.5	530 495	2	18	0.2	B
143rd Street	11,264	5,842	39	2.2	1.4	42.3	680	2	25	0.2	B
Plainfield-Naperville Road	9,410	5,842	40	2.2	1.4	42.3	597	2	20	0.2	B
Main Street	23,203	5,842	40	2.2	1.4	42.3	1,472	2	50	0.2	B
Center Street	2,139	5,842	40	2.2	1.4	42.3	136	2	5	0.2	B
Eastern Avenue	3,992	5,842	40	2.2	1.4	42.3	253	2	9	0.2	B
Lockport Road	11,691	5,842	40	2.2	1.4	42.3	742	2	25	0.2	B
Renwick Road	13,687	5,842	40	2.2	1.4	42.3	868	2	30	0.2	B
East Frontage Road Northbound/Essington	5,777	5,842	39	2.2	1.4	42.3	374	2	13	0.2	B

Table E1.2-3. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data											
STREET	2020 ADT	PROPOSED ACTION (2020)									PROPOSED ACTION LOS (2020)
		L	V	D _C	D _A	N	T _D	NL	Q	D _V	
Divison Street	8,826	5,842	36	2.3	1.5	42.3	608	2	21	0.2	B
Gaylord	6,481	5,842	33	2.5	1.6	42.3	478	2	16	0.2	B
Oakland Street	1,926	5,842	29	2.8	1.8	42.3	158	2	5	0.3	B
Woodruff	12,356	5,552	10	6.8	4.4	42.3	2,471	2	84	1.8	F
Washington Street	13,580	6,684	10	8.1	5.3	28.3	2,161	2	110	1.7	F
N Rowell Street	3,691	6,684	17	5.0	3.2	28.3	360	2	18	0.6	D
Mills Road	3,611	6,684	30	3.0	2.0	28.3	215	2	11	0.2	B
S Rowell Street	3,691	6,684	33	2.8	1.8	28.3	203	2	10	0.2	B
W Spencer Road	1,364	6,684	34	2.7	1.8	28.3	73	2	4	0.2	B
Briggs Street	16,047	6,684	34	2.7	1.8	28.3	862	2	44	0.2	B
Cherry Hill Road	1,284	6,684	35	2.7	1.7	28.3	67	2	3	0.2	B
S Gougar Road	9,348	6,684	34	2.7	1.8	28.3	502	2	26	0.2	B
Nelson Road	8,505	6,684	36	2.6	1.7	28.3	436	2	22	0.2	B
Cedar Road	11,939	6,684	36	2.6	1.7	28.3	612	2	31	0.2	B
Spencer Road	3,598	6,684	36	2.6	1.7	28.3	185	2	9	0.2	B
School House Road	10,110	6,684	36	2.6	1.7	28.3	519	2	26	0.2	B
Owens Road (116 Avenue)	1,444	6,684	34	2.7	1.8	28.3	78	2	4	0.2	B
Wolf Road	11,554	6,684	33	2.8	1.8	28.3	636	2	32	0.2	B
Center Road	6,168	6,684	34	2.7	1.8	28.3	483	2	25	0.2	B
Old Sauk Trail	4,012	6,684	36	2.6	1.7	28.3	206	2	10	0.2	B
Pfeiffer Road / 88th Avenue	8,986	6,684	36	2.6	1.7	28.3	461	2	23	0.2	B
Harlem Avenue	14,300	6,684	41	2.4	1.5	28.3	661	4	17	0.1	A
Southeast Cook County											
Ridgeland Avenue	3,828	6,684	41	2.4	1.5	28.3	177	2	9	0.1	A
Central Avenue	2,414	6,684	40	2.4	1.6	28.3	114	2	6	0.1	A
Cicero Avenue	24,469	6,684	35	2.7	1.7	28.3	1,284	4	33	0.2	B
Main Street	4,598	6,684	40	2.4	1.6	20.3	155	2	11	0.1	A

Table E1.2-3. EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data											
STREET	2020 ADT	PROPOSED ACTION (2020)									PROPOSED ACTION LOS (2020)
		L	V	D _C	D _A	N	T _D	NL	Q	D _V	
Western Avenue	25,978	6,256	31	2.8	1.8	31.6	1,592	4	36	0.2	B
Euclid Avenue	250	6,256	25	3.3	2.2	31.6	18	2	1	0.3	B
Chicago Road	24,583	6,256	22	3.7	2.4	31.6	2,013	4	46	0.4	C
West End Avenue/Halsted Street	6,260	6,256	20	4.1	2.6	31.6	557	2	25	0.5	C
East End Avenue	5,345	6,256	20	4.1	2.6	31.6	476	2	22	0.5	C
Wentworth Avenue	4,795	6,012	19	4.1	2.7	34.2	466	2	20	0.5	C
State Street	8,046	6,012	22	3.6	2.3	34.2	689	2	29	0.4	C
Cottage Grove Avenue	5,862	6,012	33	2.6	1.7	34.2	358	4	8	0.2	B
Torrence Avenue	9,426	6,012	41	2.2	1.4	34.2	485	2	20	0.1	A
Lincoln Hwy	30,729	6,012	33	2.6	1.7	34.2	1,876	4	39	0.2	B
Lake County, Indiana											
Lake Street	5,874	6,012	34	2.5	1.6	34.2	350	2	15	0.2	B
Hart Street	23,497	6,012	34	2.5	1.6	34.2	1,400	2	59	0.2	B
Airport Road	4,426	6,012	39	2.3	1.5	34.2	237	2	10	0.2	A
Kennedy Avenue	19,796	6,012	38	2.3	1.5	34.2	1,080	2	45	0.2	A
Broad Street	22,689	5,915 6,012	20	3.9	2.5	34.2 23.6	1,456	2	89	0.3	B
East Main Street	12,706	5,915	24	3.3	2.1	28.6	833	2	42	0.3	B
East Lake Street	7,563	5,915	27	3.0	1.9	28.6	449	2	23	0.2	B
East Miller Street	7,563	5,915	29	2.8	1.8	28.6	423	2	21	0.2	B
East Elm Street	9,378	5,915	34	2.5	1.6	28.6	461	2	23	0.2	A
East 45th Avenue	27,227	5,915	34	2.5	1.6	28.6	1,339	4	34	0.2	A
East 40th Place	16,487	5,915	35	2.4	1.6	28.6	793	2	40	0.2	A
West 25th Avenue	4,853	5,777	37	2.3	1.5	29.7	228	2	11	0.1	A
West 15th Avenue	23,058	5,777	37	2.3	1.5	29.7	1,082	2	52	0.1	A
West 9th Avenue	4,853	5,777	38	2.2	1.4	29.7	223	2	11	0.1	A
West 5th Avenue	33,002	5,758	37	2.3	1.5	29.8	1,549	4	37	0.1	A

The following sections discuss the results of the analysis for the 87 highway/rail at-grade crossings along the EJ&E rail line. The detail discussion for the EJ&E at-grade crossings is organized by counties, beginning with the northern section in Lake County, Illinois and ending with at-grade crossings in Lake County, Indiana. The detail discussion for at-grade crossings in Cook County is separated in to two sections, one on the west side and the other on the southeastern side, because EJ&E rail line crosses Cook County twice.

Lake County, Illinois

SEA calculated vehicle delays for 12 highway/rail at-grade crossings along the EJ&E rail line in Lake County. Table E1.2-4 shows the results of the analysis.

The Proposed Action would not affect the highway/rail at-grade crossings in EJ&E's Western mainline subdivision in Waukegan, North Chicago, Lake Bluff, Libertyville, Mettawa and Vernon Hills because train traffic would not increase on these segments. The effect due to the increase in the number of trains begins where CN and EJ&E rail lines intersect in Lake County near the western edge of Mundelein beginning at segment EJE 14B.

Increased train traffic in Lake County would result in minor increases in vehicle delays at highway/rail at-grade crossings. SEA determined that ~~two~~ ~~four~~ of the crossings would experience a decrease in the crossing LOS under the Proposed Action. These ~~two~~ ~~four~~ locations—~~Diamond Lake Road, IL 60/83~~, Oakwood Road, and Lake Zurich's Main Street—drop from an LOS A to an LOS B. LOS B indicates that the flow of traffic is reasonably unimpeded at average speeds.

SEA's analysis also showed that the average increase in the number of trains from 5.3 to 20.3 for the Proposed Action would result in approximately doubling the average delay per delayed vehicle. However, the average amount of time that a driver would be delayed as a result of a single train event is still minimal for the Proposed Action, such as ~~2.30~~ minutes for Diamond Lake Road.

SEA determined that even though the total delayed vehicles per day at some of the crossings— such as IL 60/83 near Mundelein, Old McHenry Road near Hawthorn Woods, and Northwest Highway in Barrington—show an increase, the increase is approximately sevenfold at all of the crossings. The total number of delayed vehicles per day for Diamond Lake Road increased from ~~57~~ ~~39~~ vehicles to ~~442~~ ~~263~~ for the Proposed Action, and at Cuba Road it increased from ~~66~~ ~~65~~ to ~~456~~ ~~454~~ vehicles.

For the total blocked crossing time in a 24-hour period, SEA determined that the change from the No-Action to the Proposed Action varied between 2.9 percent and ~~4.3~~ ~~3.7~~ percent. The blocked crossing time for a 24-hour period is a measure of how long it would take for all the trains to cross an intersecting roadway. For example, under the No-Action Alternative the total blocked crossing time at Lake Zurich Road is ~~9.0~~ ~~6.9~~ minutes per 24 hours, or ~~0.6~~ ~~0.5~~ percent of the day. Under the Proposed Action, the total blocked crossing time at the same crossing is ~~70.7~~ ~~48.6~~ minutes, or ~~4.9~~ ~~3.4~~ percent of the day. The percent change for the total blocked crossing time at Lake Zurich Road is ~~4.3~~ ~~2.9~~ percent. The percent change is a measure of how much change has occurred as far as total blocked crossing time due to the Proposed Action. For additional information on the results of SEA's vehicle delay analysis, including the blocked crossing time, for the 12 Lake County highway/rail at-grade crossings, see Tables E1.2-1 and E1.2-2.

Traffic volume on all 12 crossings except Lake Zurich Road has been updated with IDOT and Lake County's 2007 and 2008 ADTs, with Diamond Lake Road, Oakwood Road, Main Street and Old Rand Road receiving the highest percentage reduction. Old McHenry Road and Northwest Highway (US 14) were the only roadways whose ADT is higher than what was used in the Draft EIS. Diamond Lake Road and IL 60 & 83 also showed train operation change with train speed updated for the Proposed Action.

The result of the analysis changed the crossing LOS for Diamond Lake Road and IL 60 & 83 from B to A for the Proposed Action scenario. The total delayed vehicles per day also changed for each crossing that has experienced a change in traffic volume. The change in train speed for Diamond Lake Road reduced the average delay per delayed vehicle from 2.3 minutes to 2.0 minutes. The total number of delayed vehicles per day on Diamond Lake Road decreased from 442 to 263 for the Proposed Action.

The total blocked crossing time decreased from 4.3 percent to 3.7 percent for the Proposed Action. As an example, the total blocked crossing time decreased from 70.7 minutes to 48.6 minutes for the Proposed Action. Under the No Action, the total blocked crossing time decreased from 9.0 minutes to 6.9 minutes per 24 hours.

Table E1.2-4. Lake County, Illinois EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data													
ADT (2015)	Trains Per Day, N		Trains Speed, V		Average Delay Per Delayed Vehicle, D _a		Total Delayed Vehicles Per Day, T _d		Crossing Los		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time
	No-Action	Prop. Action	No-Action	Prop. Action	No-Action	Prop. Action	No-Action	Prop. Action	No-Action	Prop. Action	No-Action	Proposed Action	
Near Libertyville													
8,998 <u>6,207</u>	5.3	20.3	26	26 <u>31</u>	1.1	2.3 <u>2.0</u>	57 <u>39</u>	442 <u>263</u>	A	B <u>A</u>	9.0	70.7 <u>61.0</u>	4.3% <u>3.6%</u>
Near Mundelein													
29,659 <u>29,009</u>	5.3	20.3	28	28 <u>32</u>	1.1	2.1 <u>1.9</u>	177 <u>173</u>	1,368 <u>1,196</u>	A	B <u>A</u>	8.6	66.4 <u>59.4</u>	4.0% <u>3.5%</u>
Near Hawthorn Woods													
18,658 <u>18,622</u>	5.3	20.3	30	33	1.0	1.9	106	750 <u>749</u>	A	A	8.2	57.9	3.5%
32,424 <u>32,429</u>	5.3	20.3	29	32	1.0	1.9	189	1,337	A	A	8.4	59.4	3.5%
Near Lake Zurich													
6,768 <u>4,750</u>	5.3	20.3	27	30	1.1	2.0	41 <u>29</u>	295 <u>207</u>	A	B	8.8	62.7	3.7%
Lake Zurich													
17,471 <u>7,474</u>	5.3	20.3	27	30	1.1	2.0	107 <u>46</u>	760 <u>325</u>	A	B	8.8	62.7	3.7%
10,659 <u>7,474</u>	5.3	20.3	28	31	1.1	2.0	64 <u>45</u>	451 <u>316</u>	A	A	8.6	61.0	3.6%
21,398 <u>21,408</u>	5.3	20.3	33	36	0.9	1.7	114	801	A	A	7.7	53.9	3.2%
Near Barrington													
12,982 <u>12,921</u>	5.3	20.3	36	39	0.9	1.6	66 <u>65</u>	456 <u>454</u>	A	A	7.3	50.5	3.0%

West Cook County

The analysis in western Cook County is limited to the area between Lake and DuPage counties. SEA analyzed four highway/rail at-grade crossings in western Cook County. Table E1.2-5 shows the results of the delay analysis.

SEA determined that the crossing LOS for the No-Action Alternative remains unchanged under the Proposed Action. SEA also determined that the Proposed Action results in approximately doubling the average delay per delayed vehicle at the four highway/rail at-grade crossings. There are 71 delayed vehicles per day at the Lake Cook Road at-grade crossing for the No-Action Alternative, and 499 total delayed vehicles for the Proposed Action. Similarly, there are 90 total delayed vehicles per day at West Bartlett Road at-grade crossing for the No-Action Alternative and 612 delayed vehicles for the Proposed Action.

SEA also noted that the total blocked crossing time at Lake Cook Road experienced 7.1 minutes, or 0.5 percent of the day, under the No-Action Alternative. The at-grade crossing is blocked for 7.1 minutes based on the average 5.3 trains per day. The analysis for the Proposed Action showed that the total blocked crossing time for the same location is 50.5, or 3.5 percent of the day. The percent change for the total blocked crossing time at Lake Cook Road is 3.0. For additional information on the results of SEA's analysis of vehicle delay as well as blocked crossing time at each crossing in western Cook County, see Tables E1.2-1 and E1.2-2.

DuPage County

SEA analyzed 11 highway/rail at-grade crossings in DuPage County. The ADT counts for Aurora and Church streets do not meet the analysis threshold of 2,500 or more vehicles; however, they do meet the analysis threshold of crossings that are less than 800 feet apart. Table E1.2-6 shows the results of the delay analysis.

SEA determined that the crossing LOS for the No-Action Alternative changes at several crossings due to the Proposed Action. Particularly, Washington and Church Street crossings change from LOS A to C. Even though the average delay per delayed vehicle for a single-train event results in less than 2.5 minutes for these crossings, SEA determined that the proposed speed of the train through the crossings is lower than the average train speed through the other crossings as shown in Table 4.4.4-7. The slower train speed would result in a longer running time because of physical restrictions near the highway/rail at-grade crossings: a tight curve and the UP crossing north of Washington Street, a UP railroad yard northeast of the two crossings, and another railroad yard south of Church Street. In addition, the number of proposed trains per day at Washington Street would increase to 31.6.

SEA's analysis showed that the increase in the number of trains for the Proposed Action would result in an increase in the average delay per delayed vehicle. At Ogden Avenue and Montgomery Road, the average delay per delayed vehicles changes from 1.2 minutes for the No-Action scenario to 1.5 minutes for the Proposed Action. The increase in the average amount of time that a driver would be delayed as a result of a single train event varies between 0.3 minutes at Ogden Avenue and Montgomery Road to one minute at Hawthorne Lane, where it changed from 0.9 minutes for the No-Action Alternative to 1.9 minutes for the Proposed Action.

The analysis also showed that even though the total number of delayed vehicles per day at Army Trail Road, Smith Road, and Hawthorne Lane is lower than total delayed vehicles at most of the crossings, those crossings have the highest percentage increase for total delayed vehicles.

SEA determined that the total blocked crossing time in 24-hour period for Washington Street would increase from 27.2 minutes, or 1.9 percent of the day, for the No-Action Alternative, to 117.2 minutes

(1.95 hours) for the Proposed Action, or 8.1 percent of the day. The percent change for the total vehicle traffic delay for Washington Street is 6.3 percent, the highest increase compared to the other at-grade crossings. The percent change in total blocked crossing time is lowest at Stearns Road (3.2 percent) and the highest at Washington Street (6.3 percent). The difference in total blocked crossing time for each crossing can be attributed to train length, train speed and number of trains. See Tables E1.2-1 and E1.2-2 for additional information on the results of SEA's analysis of vehicle delay as well as blocked crossing time for each of the 11 crossings in DuPage County.

Only four crossings in DuPage County had updated ADTs. They are Stearns Road, Diehl Road, Liberty Street and Ogden Avenue (US 34). Stearns Road and Ogden Avenue showed an increase in ADT while Diehl Road and Liberty Street showed a reduction in ADT. The increase in ADT showed an increase in the total delayed vehicles per day for Stearns Road and Ogden Avenue and the decrease in ADT for Diehl Road and Liberty Street showed a lesser value for total delayed vehicles per day.

Table E1.2-6. DuPage County, Illinois EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data														
Street	ADT (2015)	Trains Per Day, N		Trains Speed, V		Average Delay Per Delayed Vehicle, D _a		Total Delayed Vehicles Per Day, T _d		Crossing Los		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Near Bartlett														
Stearns Road	21,129 <u>27,604</u>	5.5	22.5	38	41	0.9	1.5	114 <u>149</u>	779 <u>1,018</u>	A	A	7.8	53.1	3.2%
Wayne														
Army Trail Road	7,392	4.4	23.4	36	40	0.8	1.6	27	294	A	A	5.3	57.2	3.6%
Near West Chicago														
Smith Road	7,123	4.4	23.4	35	40	0.8	1.6	27	283	A	A	5.4	57.2	3.6%
Hawthorne Lane	20,024	4.4	23.4	29	33	0.9	1.9	85	929	A	B	6.1	66.8	4.2%
West Chicago														
Washington Street	12,095	10.7	31.6	21	23	1.7	2.4	228	984	A	C	27.2	117.2	6.3%
Aurora Street	364	10.7	31.6	22	26	1.6	2.2	7	27	A	B	26.2	105.5	5.5%
Church Street	375	10.7	31.6	22	25	1.6	2.2	7	28	A	C	26.2	109.1	5.8%
Naperville														
Diehl Road	21,933 <u>17,341</u>	10.7	31.6	33	38	1.2	1.6	293 <u>232</u>	1,175 <u>929</u>	A	B	19.2	77.2	4.0%
Near Aurora														
Liberty Street	20,696 <u>16,111</u>	15.7	39.5	25	30	1.5	1.9	511 <u>398</u>	1,618 <u>1,259</u>	A	B	35.5	112.6	5.3%
Ogden Avenue (US 34)	45,828 <u>46,110</u>	15.7	39.5	32	39	1.2	1.5	938 <u>944</u>	2,901 <u>2,918</u>	A	B	29.5	91.1	4.3%

Table E1.2-6. DuPage County, Illinois EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data														
Street	ADT (2015)	Trains Per Day, N		Trains Speed, V		Average Delay Per Delayed Vehicle, D _a		Total Delayed Vehicles Per Day, T _d		Crossing Los		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Montgomery Road / 83rd Street	27,131	15.7	39.5	32	38	1.2	1.5	556	1,753	A	B	29.5	93.0	4.4%

Will County

SEA analyzed 33 34 highway/rail at-grade crossings along the EJ&E rail line in Will County. The ADT counts for Plainfield-Naperville Road, Center Street, and Eastern Avenue in Plainfield do not meet the analysis threshold of 2,500 or more vehicles, but they meet the analysis threshold of crossings that are less than 800 feet apart. Table E1.2-7 shows the results of the delay analysis.

SEA determined that the Proposed Action would result in minor increases, less than 0.6 minutes, in the average delay per delayed vehicle at the 33 34 highway/rail at-grade crossings, with three exceptions: Woodruff Road and Washington Street showed a 1.8-minute increase in delay, and South Rowell Avenue (the northern crossing) showed a 1.4 minute increase, 1.8 minutes for the No-Action and 3.2 minutes for the Proposed Action.

SEA determined the longest train running time would occur on the rail line segment between Woodruff Road and Washington Street in Joliet. The location of the East Joliet Yard between the two highway/rail at-grade crossings results in slower train speeds as trains approach the yard. The LOS at two crossings, Woodruff Road and Washington Street in Joliet, drops from B and A, respectively, to F, because it takes a longer time for the trains to pass as traffic accumulates at the crossing. The longer it takes for the train to pass, the more vehicles are delayed. The crossing LOS at South Rowell Avenue (northern crossing) also falls from A to D, better than Woodruff Road and Washington Street but worse than the other crossings. Trains traveling southbound from the Washington Street at-grade crossing, pick up speed when they get to South Rowell Avenue and are moving more quickly by the next crossing at Mills Road. The LOS for the majority of other crossings drops from the current level of A to B under the Proposed Action.

SEA determined the total blocked crossing time in a 24-hour period for Woodruff Road would increase from 73.3 minutes, or 5.1 percent of the day, for the No-Action Alternative, to 288 minutes (4.8 hours), or 20 percent of the day. This would give a percent change for total blocked crossing time of 16.7 percent. Similarly, the total vehicle traffic delay in 24-hour period for Washington Street and South Rowell Avenue (northern crossing) is 33.9 and 17.7 minutes, or 2.4 percent and 1.2 percent of the day, respectively, for the No-Action Alternative. For the Proposed Action, the total delay increases to 229.1 minutes (3.8 hours), or 15.9 percent of the day, for Washington Street and 140.6 minutes (2.34 hours), or 9.8 percent of the day, for South Rowell Avenue (northern crossing). The percent change for Washington Street would be 14.4 percent, for South Rowell Avenue (northern crossing), 9.0 percent. For additional information on the results of SEA's analysis of vehicle delays as well as blocked crossing time at each highway/rail at-grade crossing in Will County, see Tables E1.2-1 and E1.2-2.

In the Draft EIS, 33 crossings were analyzed in Will County. The updated ADTs at several of these crossings changed the total number of crossings analyzed from 33 to 34. Keating Drive/87th Street near Aurora now has an ADT that exceeds the 2500 ADT threshold for environmental analysis used in the Draft EIS. All of the crossings with updated ADTs have their total delayed vehicles per day changed. Two of the major increases in ADT occurred at Keating Drive/83rd Street and Van Dyke Road where the increase in ADT more than doubled. The numbers of trains per day at Van Dyke Road and 143rd Street have been updated based on the EJ&E segment revision.

Table E1.2-7. Will County, Illinois EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data														
Street	ADT (2015)	Trains Per Day, N		Trains Speed, V		Average Delay Per Delayed Vehicle, D _a		Total Delayed Vehicles Per Day, T _d		Crossing Los		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Near Aurora														
Keating Drive/87 th St	4,182	15.7	39.5	32	38	1.2	1.5	86	270	A	B	29.5	93.0	4.4%
Near Plainfield														
Hafenrichter Road	5,657	15.7	39.5	32	38	1.2	1.5	116	365	A	B	29.5	93.0	4.4%
Wolf's Crossing Road	9,593	15.7	39.5	31	37	1.2	1.6	201	633	A	B	30.2	95.0	4.5%
111th Street	10,454	15.7	39.5	31	37	1.2	1.6	219	690	A	B	30.2	95.0	4.5%
Ferguson Road / 119th Street	3,690	15.7	39.5	30	36	1.3	1.6	79	249	A	B	30.9	97.1	4.6%
127th Street	13,160	15.7	39.5	29	33	1.3	1.7	290	952	A	B	31.7	104.1	5.0%
135th Street	13,898	15.7	39.5	29	34	1.2	1.6	278	935	A	B	28.8	96.9	4.7%
Van Dyke Road	6,921	18.5 15.7	42.3 39.5	32	38	1.1	1.5	152 129	457 427	A	B	31.6 26.8	95.0 88.8	4.4% 4.3%
Renwick Road	11,807	18.5	42.3	35	40	1.0	1.4	265	817	A	B	29.7	91.4	4.3%
Plainfield														
143rd Street	9,716	18.5 15.7	42.3 39.5	33	39	1.1	1.4	177	587	A	B	30.9 26.2	93.2 87.0	4.3% 4.2%
Plainfield-Naperville Road	8,117	18.5	42.3	34	40	1.1	1.4	171	515	A	B	30.3	91.4	4.2%
Main Street	20,015	18.5	42.3	34	40	1.1	1.4	421	1,270	A	B	30.3	91.4	4.2%
Center	1,845	18.5	42.3	34	40	1.1	1.4	39	117	A	B	30.3	91.4	4.2%

Table E1.2-7. Will County, Illinois EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data

Street	ADT (2015)	Trains Per Day, N		Trains Speed, V		Average Delay Per Delayed Vehicle, D _a		Total Delayed Vehicles Per Day, T _d		Crossing Los		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Street														
Eastern Avenue	3,444	18.5	42.3	34	40	1.1	1.4	72	218	A	B	30.3	91.4	4.2%
Lockport Road	10,085	18.5	42.3	34	40	1.1	1.4	212	640	A	B	30.3	91.4	4.2%
Near Crest Hill														
East Frontage Road / Essington Road	4,983	18.5	42.3	33	39	1.1	1.4	107	322	A	B	30.9	93.2	4.3%
Divison Street	7,613	18.5	42.3	31	36	1.1	1.5	171	524	A	B	32.3	99.2	4.6%
Crest Hill														
Gaylord Road	5,591	18.5	42.3	28	33	1.2	1.6	135	412	A	B	34.8	106.2	5.0%
Near Joliet														
South Rowell Avenue	3,184	6.4	28.3	19	17	1.8	3.2	39	311	A	D	17.7	140.6	8.5%
Joliet														
Woodruff Road	10,659	18.5	42.3	9	10	2.6	4.4	543	2,132	B	F	73.3	288.0	14.9%
Washington Street	11,714	6.4	28.3	9	10	3.4	5.3	276	1,864	A	F	33.9	229.1	13.6%
Mills Road	3,115	6.4	28.3	27	30	1.4	2.0	29	186	A	B	13.4	85.8	5.0%
South Rowell Avenue	3,184	6.4	28.3	29	33	1.3	1.8	28	175	A	B	12.7	79.3	4.6%

Table E1.2-7. Will County, Illinois EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data														
Street	ADT (2015)	Trains Per Day, N		Trains Speed, V		Average Delay Per Delayed Vehicle, D _a		Total Delayed Vehicles Per Day, T _d		Crossing Los		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Briggs Street	13,842	6.4	28.3	31	34	1.2	1.8	116	744	A	B	12.1	77.4	4.5%
Near New Lenox														
South Gougar Road	8,063	6.4	28.3	28	34	1.3	1.8	73	433	A	B	13.1	77.4	4.5%
Nelson Road	7,336	6.4	28.3	31	36	1.2	1.7	62	376	A	B	12.1	73.9	4.3%
Cedar Road	10,299	6.4	28.3	30	36	1.3	1.7	89	528	A	B	12.4	73.9	4.3%
Spencer Road	3,104	6.4	28.3	31	36	1.2	1.7	26	159	A	B	12.1	73.9	4.3%
School House Road	8,721	6.4	28.3	31	36	1.2	1.7	73	447	A	B	12.1	73.9	4.3%
Near Frankfort														
Wolf Road	9,966	6.4	28.3	28	33	1.3	1.8	90	549	A	B	13.1	79.3	4.6%
Old Sauk Trail	3,461	6.4	28.3	32	36	1.2	1.7	28	177	A	B	11.8	73.9	4.3%
Pfeiffer Road / 88th Avenue	7,752	6.4	28.3	32	36	1.2	1.7	64	398	A	B	11.8	73.9	4.3%
Harlem Avenue	12,336	6.4	28.3	35	41	1.1	1.5	95	570	A	A	11.1	66.6	3.9%
Frankfort														
Center Road	5,320	6.4	28.3	29	34	1.3	1.8	47	286	A	B	12.7	77.4	4.5%

Southeastern Cook County

SEA evaluated 12 highway/rail at-grade crossings in southeastern Cook County, located between Will County and the Illinois-Indiana state boundary. Table E1.2-8 shows the result of the delay analysis.

SEA determined that the crossing LOS for the No-Action Alternative changes from A to C at six of the crossings. These crossings are Main Street, Chicago Road, West End Avenue/Halsted Street, East End Avenue, Wentworth Avenue, and State Street.

The increase in the number of trains for the Proposed Action would result in an increase in the average delay per delayed vehicle. The increase in the average amount of time that a driver would be delayed as a result of a single train event varies between 0.4 minutes at Ridgeland Avenue, where the average delay per delayed vehicle is 1.1 for the No-Action and 1.5 minutes for the Proposed Action, to ~~1.9 one~~ minutes at ~~Wentworth Avenue~~ East End Avenue Connector. The average delay per delayed vehicle for these crossings approximately doubles because trains must slow down for CN rail crossings near East End Avenue.

The number of delayed vehicles per day for ~~most all~~ of the crossings increased more than ~~four~~ five times. At Ridgeland Avenue ~~and Cicero Avenue~~, the increase—six fold—is highest.

SEA also determined that the total blocked crossing time in a 24-hour period for Chicago Road would increase from 21.1 minutes, or 1.5 percent of the day, to 117.9 minutes (approximately 2 hours) for the Proposed Action, or 8.2 percent of the day. The percent change for the total vehicle traffic delay for Chicago Road is ~~7.2~~ 6.7 percent. The percent change for the total blocked crossing time at ~~Ridgeland Avenue (3.9 percent)~~ and is the highest at Wentworth Avenue at 8.5 percent. For additional information on the results of the SEA's vehicle delay calculations as well as blocked crossing time, see Tables E1.2-1 and E1.2-2.

The ADT for three crossings have been updated and they all show a reduction in traffic volume. Cicero Avenue and Lincoln Highway both showed significant changes in ADT. SEA received train speed updates from CN for three crossings, Cicero Avenue, Main Street and Western Avenue. In the Draft EIS a weighted average was used for train speed to show the combined effect of the mainline and the connectors at the Main Street and East End Avenue crossings. SEA re-evaluated the results of the delay analysis to include both the mainline and the connectors separately. In order to accommodate this analysis the train speed for Main Street and the connectors at both crossings were revised. The results of the revised analysis showed that the average delay per delayed vehicle is the highest at East End Avenue because the train speed on the connector is the slowest, even though the number of trains, at 2.6 trains per day, is the lowest number.

Table E.2-8. Southeastern Cook County, Illinois EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data

Street	ADT (2015)	Trains per Day, N		Trains Speed, V		Average Delay per Delayed Vehicle, D _a		Total Delayed Vehicles per day, T _d		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Near Matteson														
Ridgeland Avenue	3,642	6.4	28.3	35	41	1.1	1.5	28	168	A	A	11.1	66.6	3.9%
Cicero Avenue	23,281	6.4	28.3	35	35	1.1	2.7	179	1,222	A	B	11.1	75.6	4.5%
Matteson														
Main Street	4,375	6.4	28.3	40	40	1.0	1.6	31	148	A	C	10.1	48.7	2.7%
Main Street Connector (North)	4,375	--	8.0	--	15	--	3.6	--	135	--	B	--	44.5	3.1%
Main Street Connector (South)	4,375	2.2	6.3	10	15	2.2	3.6	32	106	A	B	10.6	35.1	1.7%
Park Forest														
Western Avenue	24,717	8.6	31.6	34	31	1.1	1.8	252	1,515	A	B	14.7	88.3	5.1%
Chicago Heights														
Chicago Road	23,390	8.6	31.6	21	22	1.6	2.4	343	1,915	A	C	21.1	117.9	6.7%
West End Avenue / Halsted Street	7,267	8.6	31.6	19	20	1.7	2.6	116	647	A	C	22.9	128.1	7.3%
East End Avenue	5,956	8.6	31.6	19	20	1.7	2.6	95	530	A	C	22.9	128.1	7.3%
East End Ave Connector	5,086	1.6	2.6	10	10	3.0	4.9	26	70	A	A	7.4	19.8	0.9%
Wentworth Avenue	4,563	10.2	34.2	18	19	1.7	2.7	83	444	A	C	26.1	140.1	7.9%

Table E.2-8. Southeastern Cook County, Illinois EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data

		Trains per Day, N		Trains Speed, V		Average Delay per Delayed Vehicle, D _a		Total Delayed Vehicles per day, T _d		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		
State Street	7,656	10.2	34.2	22	22	1.4	2.3	118	656	A	C	22.3	123.3	7.0%
Cottage Grove Avenue	5,578	10.2	34.2	30	33	1.1	1.7	69	340	A	B	17.7	87.9	4.9%
Sauk Village														
Torrence Avenue	8,968	10.2	34.2	37	41	1.0	1.4	95	461	A	A	15.3	74.1	4.1%
Lynwood														
Lincoln Highway (US 30)	29,237	10.2	34.2	30	33	1.1	1.7	359	1,785	A	B	17.7	87.9	4.9%

Lake County, Indiana

SEA evaluated 15 highway/rail at-grade crossings in Lake County, Indiana. Table E1.2-9 shows the results of the analysis.

SEA determined that the crossing LOS for one-third of the crossings changes from A to B. The increase in the average delay per delayed vehicle is approximately one minute for Broad, East Main, East Lake and East Miller streets and is approximately 0.5 minutes for the rest of the crossings.

SEA also determined that the total blocked crossing time in 24-hour period for ~~Broad and~~ East Main Street would increase from 14.0 minutes, or 1.0 percent of the day for the No-Action Alternative, to 94.4 minutes (1.6 hours), or 6.6 percent of the day for the Proposed Action. The percent change for the total vehicle traffic delay ~~for both streets~~ is 5.6 percent, the highest in the crossings listed in the table below. The percent change in total blocked crossing time is the lowest at West 9th Avenue. For additional information on the results of the SEA's vehicle delay calculations as well as blocked crossing time, see Tables E1.2-1 and E1.2-2.

There were no traffic data updates for roadways crossing the EJ&E rail line. However, similar to the Main Street and the East End Avenue crossings, the delay calculation for Broad Street crossing in Griffith was done using the weighted average of train speed for mainline, connector and the CN rail line. SEA re-evaluated the results of the delay analysis to include the mainline, connector and CN mainline separately. In order to accommodate the delay analysis at Broad Street train speed and number of trains at the EJ&E mainline and connector were evaluated and changed. The result of the revised analysis showed that Broad Street still has the highest average delay per delayed vehicle and East Main Street has now the highest total blocked crossing time and the highest percent change total blocked crossing time.

Table E1.2-9. Lake County, Indiana EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data

Street	ADT (2015)	Trains Per Day, N		Trains Speed, V		Average Delay Per Delayed Vehicle, D _a		Total Delayed Vehicles Per Day, T _d		Crossing Los		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Dyer														
Lake Street	5,067	10.2	34.2	30	34	1.1	1.6	62	302	A	B	17.7	85.8	4.7%
Hart Street	20,268	10.2	34.2	31	34	1.1	1.6	243	1,208	A	B	17.3	85.8	4.8%
Schererville														
Airport Road	3,818	10.2	34.2	36	39	1.0	1.5	41	204	A	A	15.6	77.0	4.3%
Kennedy Avenue	17,076	10.2	34.2	35	38	1.0	1.5	189	932	A	A	15.9	78.6	4.4%
Griffith														
Broad Street.	19,572	7.6	28.6 23.6	23 17	20	1.2 1.7	2.5	190 277	1,256	A	B	14.0 20.4	92.4	5.0%
Broad Street Connector	19,572	2.6	10.7	25	25	1.3	2.1	70	470	A	A	5.2	34.6	2.0%
East Main Street	10,960	7.6	28.6	23	24	1.2	2.1	107	718	A	B	14.0	94.4	5.6%
East Lake Street	6,524	7.6	28.6	26	27	1.1	1.9	58	387	A	B	12.8	85.5	5.0%
East Miller Street	6,524	7.6	28.6	28	29	1.0	1.8	55	365	A	B	12.2	80.6	4.8%
East Elm Street	8,090	7.6	28.6	29	34	1.0	1.6	67	398	A	B	11.9	70.8	4.1%
East 45th Avenue	23,486	7.6	28.6	31	34	1.0	1.6	185	1,155	A	A	11.4	70.8	4.1%
East 40th Place	14,222	7.6	28.6	32	35	1.0	1.6	110	684	A	A	11.1	69.2	4.0%
Gary														

Table E1.2-9. Lake County, Indiana EJ&E Highway/Rail At-grade Crossing Vehicle Delay Data

Street	ADT (2015)	Trains Per Day, N		Trains Speed, V		Average Delay Per Delayed Vehicle, D _a		Total Delayed Vehicles Per Day, T _d		Crossing Los		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
West 25th Avenue	4,187	9.7	29.7	34	37	1.0	1.5	44	196	A	A	15.0	67.5	3.6%
West 15th Avenue	19,890	9.7	29.7	34	37	1.0	1.5	208	933	A	A	15.0	67.5	3.6%
West 9th Avenue	4,187	9.7	29.7	35	38	1.0	1.4	43	192	A	A	14.8	66.2	3.6%
West 5th Avenue	28,467	9.8	29.8	35	37	1.0	1.5	292	1,336	A	A	14.8	67.6	3.7%

CN Highway/Rail At-Grade Crossings

SEA used the 2015 ADTs for analysis for existing delays and projected delays under the Proposed Action to show what the effect would be under the No-Action and Proposed Action alternatives. Tables E1.2-10 and E1.2-11 present the vehicle delay calculations for ~~130~~ 134 crossings in the Waukesha, Freeport, Joliet, Chicago and Elsdon/Southbend subdivisions, and summarize the results of analysis for LOS and total traffic delay on a 24-hour basis

SEA also calculated the delay for the year 2020 using 2015 proposed train data (number of trains, lengths, and speeds) and 2020 ADT data for the purposes of potential future regional planning by local, regional and state government agencies. The year 2020 delay calculations assumed that the number of trains, train speed and length would remain the same as the data provided for the year 2015. The 2020 delay data is not discussed in detail. The delay calculations for 2020 are shown in Table E1.2-12.

The following sections discuss the re-evaluation of the delay analysis as a result of the updated traffic and train data for the CN crossings.

Table E1.2-10. CN Highway/Rail At-grade Crossing Vehicle Delay Data																			
Street	ADT 2015	No-Action (2015)									Proposed Action (2015)								
		L	V	D _c	D _a	N	T _d	NL	Q	D _v	L	V	D _c	D _a	N	T _d	NL	Q	D _v
Forest Avenue	3,035	6,104	30	2.8	1.8	3.5 5.4	21 32	2	9	0	0	0	0.0	0.0	0	0	2	0	0
Augusta Street	3,035	6,104	30	2.8	1.8	3.5 5.4	21 32	2	9	0	0	0	0.0	0.0	0	0	2	0	0
Keystone Avenue	3,035	6,104	30	2.8	1.8	3.5 5.4	21 32	2	9	0	0	0	0.0	0.0	0	0	2	0	0
Thatcher Avenue	10,039	6,104	30	2.8	1.8	3.5 5.4	69 106	3	19	0	0	0	0.0	0.0	0	0	3	0	0
1st Avenue (IL 171)	36,321	6,104	30	2.8	1.8	3.5 5.4	219 383	4	51	0	0	0	0.0	0.0	0	0	4	0	0
5th Avenue	12,190	6,104	30	2.8	1.8	3.5 5.4	83 129	4	17	0	0	0	0.0	0.0	0	0	4	0	0
George Street	4,661	6,104	28	3.0	1.9	3.5 5.4	34 52	2	14	0	0	0	0.0	0.0	0	0	2	0	0
Fullerton Avenue	4,780	6,104	25	3.3	2.1	3.5 5.4	38 59	2	16	0	0	0	0.0	0.0	0	0	2	0	0
Belmont Avenue	11,831	6,388	19	4.3	2.8	19.3	685	4	26	0	2,645	19	2.1	1.4	2.0	34	4	12	0
Pratt Avenue	2,735	6,468	23	3.7	2.4	19.1	134	2	10	0	3,129	28	1.8	1.2	2 2.0	7	2	5	0
Touhy Avenue	28,085	6,468	29	3.0	2.0	49 19.1	1,130	5	34	0	3,129	34	1.5	1.0	2 2.0	60	5	17	0
Prospect Avenue	4,906	6,468	29	3.0	2.0	19.1	197	2	15	0	3,129	34	1.5	1.0	2.0	22	2	8	0
Frontage Road	3,481	6,468	29	3.0	2.0	49 19.1	140	2	11	0	3,129	34	1.5	1.0	2 2.0	7	2	5	0
Oakton Street	29,160	6,468	29	3.0	2.0	49 19.1	1,174	4	44	0	3,129	31	1.6	1.1	2 2.0	67	4	24	0
Algonquin Road	11,114	6,468	31	2.9	1.9	49 19.1	423	2	32	0	3,129	33	1.6	1.0	2 2.0	24	2	18	0

Table E1.2-10. CN Highway/Rail At-grade Crossing Vehicle Delay Data																			
Street	ADT 2015	No-Action (2015)									Proposed Action (2015)								
		L	V	D _c	D _a	N	T _d	NL	Q	D _v	L	V	D _c	D _a	N	T _d	NL	Q	D _v
Lee Street / Mannheim Road (US 12)	10,193	6,468	31	2.9	1.9	49 19.1	388	2	29	0	3,129	33	1.6	1.0	2 2.0	22	2	16	0
Graceland Avenue (US 12)	24,956	6,468	32	2.8	1.8	49 19.1	926	2	70	0	3,129	33	1.6	1.0	2	55	2	39	0
Thacker Street / Dempster St.	14,102	6,468	32	2.8	1.8	19.1	523	2	39	0	3,129	33	1.6	1.0	2	31	2	22	0
Prairie Avenue	2,873	6,468	34	2.7	1.7	49 19.1	101	2	8	0	3,129	34	1.5	1.0	2	6	2	4	0
Seegers Road	1,781	6,468	28	3.1	2.0	49 19.1	74	2	6	0	3,129	30	1.7	1.1	2	4	2	3	0
Golf Road (IL 58)	33,861	6,468	28	3.1	2.0	49 19.1	1,404	4	53	0	3,129	29	1.7	1.1	2	81	4	29	0
Rand Road (US 12)	26,714	6,468	27	3.2	2.1	49 19.1	1,142	4	43	0	3,129	29	1.7	1.1	2	64	4	23	0
Central Road	22,348	6,468	35	2.6	1.7	49 19.1	771	2	58	0	3,129	37	1.5	0.9	2	45	2	33	0
Kensington Road / Foundry Road	10,090	6,468	38	2.4	1.6	49 19.1	326	2	25	0	3,129	43	1.3	0.9	2	19	2	13	0
Euclid Avenue	22,826	6,468	39	2.4	1.6	49 19.1	722	4	27	0	3,129	45	1.3	0.8	2	41	4	15	0
Wolf Road	25,216	6,468	40	2.3	1.5	49 19.1	782	2	59	0	3,129	45	1.3	0.8	2	45	2	33	0
Camp McDonald Road	10,397	6,468	40	2.3	1.5	49 19.1	322	2	24	0	3,129	45	1.3	0.8	2	19	2	13	0
Willow Road	3,585	6,468	39	2.4	1.6	49 19.1	113	2	9	0	3,129	44	1.3	0.9	2	7	2	5	0
Hintz Road	24,977	6,468	37	2.5	1.6	49 19.1	824	4	31	0	3,129	40	1.4	0.9	2	48	4	17	0

Table E1.2-10. CN Highway/Rail At-grade Crossing Vehicle Delay Data																			
Street	ADT 2015	No-Action (2015)									Proposed Action (2015)								
		L	V	D _c	D _a	N	T _d	NL	Q	D _v	L	V	D _c	D _a	N	T _d	NL	Q	D _v
						<u>19.1</u>													
Dundee Road (IL 68)	40,188	6,468	42	2.3	1.5	<u>19</u> <u>19.1</u>	1,199	4	45	0	3,129	43	1.3	0.9	2	74	4	27	0
Deerfield Parkway / Busch Road	23,182	6,468	35	2.6	1.7	<u>19</u> <u>19.1</u>	799	2	60	0	3,129	38	1.4	0.9	2	46	2	33	0
Aptakisic Road	29,009	6,468	35	2.6	1.7	<u>19</u> <u>19.1</u>	1,000	4	38	0	3,129	38	1.4	0.9	2	58	4	21	0
Half Day Road (IL 22)	24,195	6,468	41	2.3	1.5	<u>19</u> <u>19.1</u>	736	2	55	0	3,129	44	1.3	0.9	2	44	2	32	0
Buffalo Grove Road	16,341	6,468	42	2.3	1.5	<u>19</u> <u>19.1</u>	488	3	25	0	3,129	45	1.3	0.8	2	29	3	14	0
US 45	22,295	3,129 <u>6,468</u>	42	2.3	1.5	<u>19</u> <u>19.1</u>	665	3	33	0	3,129	42	1.3	0.9	2	42	3	20	0
Butterfield Road	18,368	3,129 <u>6,468</u>	39	2.4	1.6	<u>19</u> <u>19.1</u>	501	4	22	0	3,129	39	1.4	0.9	2	36	4	13	0
Townline Road (IL 60)	44,084	3,129 <u>6,468</u>	41	2.3	1.5	<u>19</u> <u>19.1</u>	1341	4	51	0	3,129	41	1.4	0.9	2	84	4	30	0
Allanson Road	19,382	6,468	35	2.6	1.7	<u>19</u> <u>20.8</u>	728	2	50	0	7,571	27	3.7	2.4	<u>19</u> <u>17.8</u>	883	2	71	0
Hawley Street	8,234	6,468	35	2.6	1.7	<u>19</u> <u>20.8</u>	309	3	14	0	7,571	35	3.0	1.9	<u>19</u> <u>17.8</u>	323 <u>301</u>	3	16	0
Park Street	732	6,468	35	2.6	1.7	<u>19</u> <u>20.8</u>	28	2	2	0	7,571	35	3.0	1.9	<u>19</u> <u>17.8</u>	27	2	2	0
Maple Avenue	14,568	6,468	35	2.6	1.8	<u>19</u> <u>20.8</u>	547	2	38	0	7,571	35	3.0	1.9	17.8	533	2	43	0
Winchester Road	6,841	6,468	40	2.2 2.3	1.5	<u>19</u> <u>20.8</u>	231	4	8	0	7,571	40	2.7	1.7	<u>19</u> <u>17.8</u>	224	4	9	0

Street	ADT 2015	No-Action (2015)									Proposed Action (2015)								
		L	V	D _c	D _a	N	T _d	NL	Q	D _v	L	V	D _c	D _a	N	T _d	NL	Q	D _v
Peterson Road	20,268	6,468	45	2.1	1.4	19 20.8	625	5	17	0	7,571	45	2.4	1.4	19 17.8	604	5	20	0
Harris Road	4,434	6,468	45	2.1	1.4	19 20.8	130	2	9	0	7,571	45	2.4	1.6	19 17.8	132	2	11	0
Pulaski Road	27,965	5,224	19	3.6	2.4	2.5	176	4	51	0	0	19	0.5	0.3	0	0	4	7	0
Riverside Drive	5,497	6,690	25	3.5	2.3	4.4	59	2	19	0	3,061	25	1.9	1.2	1.7	12	2	10	0
Harlem Avenue (IL 43)	39,485	6,690	25	3.5	2.3	4.4	427	4	70	0	3,061	25	1.9	1.2	1.7	88	4	37	0
26th Street	16,134	6,690	25	3.5	2.3	4.4	175	4	29	0	3,061	25	1.9	1.2	1.7	36	4	15	0
Des Plaines Avenue	17,807	6,690	25	3.5	2.3	4.4	193	4	32	0	3,061	25	1.9	1.2	1.7	40	4	17	0
Cermak Road / 22nd Street	40,633	6,690	25	3.5	2.3	4.4	440	5	58	0	3,061	25	1.9	1.2	1.7	91	5	31	0
1st Avenue (IL 171)	37,727	6,690	25	3.5	2.3	4.4	460	4	67	0	3,061	25	1.9	1.2	1.7	84	4	36	0
17th Avenue	11,353	6,690	19	4.5	2.9	4.4	156	4	26	0	3,061	20	2.2	1.5	1.7	30	4	13	0
Harrison Street	10,984	6,755	36	2.6	1.7	3	60	2	29	0	3,060	39	1.4	0.9	1.7	18	2	15	0
Wolf Road	18,763	6,755	35	2.7	1.8	3	105	4	25	0	3,060	39	1.4	0.9	1.7	31	4	13	0
York Street	24,190	6,755	37	2.6	1.7	3	130	2	62	0	3,061	40	1.4	0.9	1.7	39	2	33	0
Vallette Street	4,233	6,750	35	2.7	1.7	3	24	2	11	0	3,050	35	1.5	1.0	1.7	7	2	6	0
Argyle Avenue	1,165	6,755	39	2.5	1.6	3	6	2	3	0	3,061	40	1.4	0.9	1.7	2	2	2	0
Spring Road	10,886	6,755	40	2.4	1.6	3	55	2	26	0	3,061	40	1.4	0.9	1.7	18	2	15	0
Saint Charles Road	11,289	6,755	40	2.4	1.6	3	57	3	18	0	3,061	40	1.4	0.9	1.7	18	3	10	0
West Avenue	11,289	6,755	40	2.4	1.6	3	57	2	27	0	3,061	40	1.4	0.9	1.7	18	2	15	0
Villa Avenue	8,870	6,755	40	2.4	1.6	3	45	2	21	0	3,061	40	1.4	0.9	1.7	14	2	12	0
Addison Avenue	17,471	6,755	39	2.5	1.6	3	90	7	12	0	3,061	39	1.4	0.9	1.7	29	7	7	0

Table E1.2-10. CN Highway/Rail At-grade Crossing Vehicle Delay Data																			
Street	ADT 2015	No-Action (2015)									Proposed Action (2015)								
		L	V	D _c	D _a	N	T _d	NL	Q	D _v	L	V	D _c	D _a	N	T _d	NL	Q	D _v
North Avenue (IL 64)	58,778	6,755	39	2.5	1.6	3	302	8	36	0	3,061	39	1.4	0.9	1.7	97	8	20	0
Grace Street	9,139	6,755	37	2.6	1.7	3	49	4	12	0	3,061	40	1.4	0.9	1.7	15	4	6	0
Swift Road	22,175	6,755	42	2.3	1.5	3	108	3	<u>34</u>	<u>0</u>	3,061	44	1.0 <u>1.3</u>	0.8	1.7	34	3	19	0
Schmale Road	30,373	6,755	38	2.5	1.6	3	159	4	<u>38</u>	<u>0</u>	3,061	43	1.0 <u>1.3</u>	0.9	1.7	47	4	20	0
Gary Avenue	37,092	6,755	43	2.3	1.5	3	177	4	42	0	3,061	49	1.2	0.8	2 <u>1.7</u>	53	4	22	0
Army Trail Road	41,796	6,755	43	2.3	1.5	3	199	4	48	0	3,061	49	1.2	0.8	2 <u>1.7</u>	60	4	25	0
County Farm Road	38,705	6,755	43	2.3	1.5	3	184	4	44	0	3,061	48	1.2	0.8	2 <u>1.7</u>	56	4	24	0
Sutton Road (IL 59)	52,951	6,755	41	2.4	1.5	3	262	4	63	0	3,061	45	1.3	0.8	2 <u>1.7</u>	80	4	34	0
Powis Road	5,510	4,600	25	2.6	1.7	3 <u>2</u>	20	2	14	0	4,600	10	5.7	3.7	2.6 <u>2</u>	57 <u>44</u>	2	32	0
IL 25	10,830	4,600	45	1.7	1.1	3 <u>2</u>	<u>25</u>	2	18	0	4,600	45	1.7	1.1	2	32 <u>25</u>	2	18	0
Randall Road	46,189	4,600	45	1.7	1.1	3 <u>2</u>	107	4	38	0	4,600	45	1.7	1.1	2.6 <u>2</u>	139 <u>107</u>	4	38	0
Pruxne Street / Illinois Street	7,171	6,103	35	2.5	1.6	1.8	22	2	18	0	5,457	35	2.3	1.5	2	23	2	16	0
Holmes Street	451	6,103	35	2.5	1.6	1.8	1	2	1	0	5,457	35	2.3	1.5	2	1	2	1	0
Stephen Street	14,222	6,103	33	2.6	1.7	1.8	46	2	37	0	5,457	33	2.4	1.5	2	47	2	34	0
Romeo Road / 135th Street	19,102	4,659	38	1.9	1.2	1.8	45	2	36	0	6,108	40	2.2	1.5	2	59	2	43	0

Table E1.2-10. CN Highway/Rail At-grade Crossing Vehicle Delay Data																			
Street	ADT 2015	No-Action (2015)									Proposed Action (2015)								
		L	V	D _c	D _a	N	T _d	NL	Q	D _v	L	V	D _c	D _a	N	T _d	NL	Q	D _v
9th Street (IL 7)	31,796	4,659	35	2.0	1.3	1.8	80	2	64	0	6,108	35	2.5	1.6	2	110	2	79	0
10th Street	160	4,659	35	2.0	1.3	1.8	0	2	0	0	6,108	35	2.0 2.5	1.6	2.0	1	2	0	0
11th Street	307	4,659	35	2.0	1.3	1.8	1	2	1	0	6,108	35	2.0 2.5	1.6	2.0	1	2	1	0
Division Street	6,783	4,659	35	2.0	1.3	1.8	17	2	14	0	6,108	35	2.0 2.5	1.6	2.0	23	2	17	0
Ohio Street	7,198	7,500 4,659	10	9.0 5.8	5.9 3.8	2.9 1.8	131 52	2	65 42	0	7,500 6,108	10	9 7.4	5.9 4.8	2.9 2	131 74	2	65 54	0
Jackson Street	20,380	7,500 4,659	10	9.0 5.8	5.9 3.8	2.9 1.8	370 148	2	184 118	0	7,500 6,108	10	9 7.4	5.9 4.8	2.9 2	370 211	2	## 152	0
University Parkway / Stuenkel Road	13,640	5,400	45	1.9	1.2	12.8 13.8	226 244	4	13	0	5,400	45	2 1.9	1.2	12.3	226 217	4	13	0
West Dralle Road	4,012	5,400	45	1.9	1.2	12.8 13.8	66 72	4	4	0	5,400	45	2 1.9	1.2	12.3	66 64	4	4	0
55th Street	31,431	4,365	8	6.7	4.4	3.3 1.6	483 234	4	105	0	0 4,365	0 8	0 6.7	0.0 4.4	0.0 1.6	0 234	4	0 105	0
71st Street	16,612	4,365	8	6.7	4.4	3.3 1.6	255 124	2	111	0	0 4,365	0 8	0 6.7	0.0 4.4	0.0 1.6	0 124	2	0 111	0
79th Street	29,291	4,365	8	6.7	4.4	3.4	463	4	98	0	0	0	0	0.0	0	0	4	0	0
Columbus Avenue	18,046	4,365	8	6.7	4.4	3.4	285	4	60	0	0	0	0	0.0	0	0	4	0	0
83rd Place	1,305	4,365	8	6.7	4.4	3.4	21	2	9	0	0	0	0	0.0	0	0	2	0	0
87th Street	23,663	4,365	8	6.7	4.4	3.4	374	6	53	0	0	0	0	0.0	0	0	6	0	0
91st Street	4,482	4,365	8	6.7	4.4	3.4	71	2	30	0	0	0	0	0.0	0	0	2	0	0
Kedzie Avenue	28,802	4,365	8	6.7	4.4	3.4	456	4	96	0	0	0	0	0.0	0	0	4	0	0
94th Street	3,466	4,365	8	6.7	4.4	3.4	55	4	12	0	0	0	0	0.0	0	0	4	0	0

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Street	ADT 2015	No-Action (2015)									Proposed Action (2015)								
		L	V	D _c	D _a	N	T _d	NL	Q	D _v	L	V	D _c	D _a	N	T _d	NL	Q	D _v
95th Street (US 12 / US 20)	27,768	4,365	8	6.7	4.4	3.4	439	6	62	0	0	0	0.0	0.0	0	0	6	0	0
99th Street	11,592	4,365	8	6.7	4.4	3.4	183	2	78	0	0	0	0.0	0.0	0	0	2	0	0
103rd Street	23,782	4,365	8	6.7	4.4	3.4	376	4	80	0	0	0	0.0	0.0	0	0	4	0	0
111th Street	19,600	4,365	8	6.7	4.4	3.4	310	4	66	0	0	0	0.0	0.0	0	0	4	0	0
115th Street	15,536	4,365	8	6.7	4.4	3.4	246	4	52	0	0	0	0.0	0.0	0	0	4	0	0
119th Street	14,341	4,365	8	6.7	4.4	3.4	227	2	96	0	0	0	0.0	0.0	0	0	2	0	0
123rd Street	6,468	4,365	8	6.7	4.4	3.4	102	2	43	0	0	0	0.0	0.0	0	0	2	0	0
127th Street	27,607	4,365	8	6.7	4.4	3.4	437	4	92	0	0	0	0.0	0.0	0	0	4	0	0
Broadway Street	5,916	7,256	36 10	2.8 8.7	1.8 5.7	15 14.9	171 535	4	8 26	0 1	5,711	43 10	7.4	1.3 4.5	1 1	8 29	4	6 21	0
Western Avenue	10,039	7,256	29	3.3	2.2	15 14.9	347	4	17	0	5,711	35	2.4	1.5	1	16	4	12	0
Robey Street	144	7,256	34	2.9	1.9	15 14.9	4	2	0	0	5,711	41	2.1	1.4	1	0	2	0	0
Lincoln Avenue	886	7,256	34	2.9	1.9	15 14.9	27	2	3	0	5,711	41	2.1	1.4	1	1	2	2	0
Wood Street	15,775	7,256	35	2.9	1.9	15 14.9	466	4	23	0	5,711	42	2.0	1.3	1	22	4	16	0
147th Street / Sibley Boulevard (IL 83)	33,509	7,256	35	2.9	1.9	15 14.9	900	4	48	0	5,711	42	2.0	1.3	1	48	4	34	0
Ashland Avenue	13,949	7,256	35	2.9	1.9	14.9	412	2	40	0	5,711	42	2	1.3	1	20	2	29	0
Center Avenue	886	7,256	36	2.8	1.8	15 14.9	26	2	2	0	5,711	43	2.0	1.3	1	1	2	2	0
Broadway	886	7,256	40	8.7	5.7	15	80	4	4	1	5,711	40	7.0	4.5	1	4	4	3	0

Table E1.2-10. CN Highway/Rail At-grade Crossing Vehicle Delay Data																			
Street	ADT 2015	No-Action (2015)									Proposed Action (2015)								
		L	V	D _c	D _a	N	T _d	NL	Q	D _v	L	V	D _c	D _a	N	T _d	NL	Q	D _v
Avenue			<u>36</u>	<u>2.8</u>	<u>1.8</u>	<u>14.9</u>	<u>26</u>		<u>1</u>			<u>43</u>	<u>2.0</u>	<u>1.3</u>		<u>1</u>		<u>1</u>	
Park Avenue	7,051	7,256	36	2.8	1.8	<u>45</u> <u>14.9</u>	204	4	10	0	5,711	43	2.0	1.3	1	10	4	7	0
Halsted Street (IL 1)	14,411	5,927	36	2.4	1.5	<u>20</u> <u>19.5</u>	463	4	17	0	5,711	42	2.0	1.3	1	20	4	15	0
155th Street	451	5,927	36	2.4	1.5	<u>20</u> <u>19.5</u>	14	2	1	0	5,711	42	2.0	1.3	1	1	2	1	0
Thornton-Blue Island Road	4,960	5,927	35	2.4	1.6	<u>20</u> <u>19.5</u>	163	2	12	0	5,711	39	2.2	1.4	1	7	2	11	0
159th Street / 162nd Street (US 6)	34,741	5,927	35	2.4	1.6	<u>20</u> <u>19.5</u>	1,141	4	42	0	5,711	35	2.4	1.5	1	57	4	41	0
South Park Avenue	11,831	6,081	26	3.2	2.1	<u>22</u> <u>22.1</u>	573	4	19	0	6,489	27	3.2	2.1	2.9	77	4	19	0
170th Street	13,266	6,081	15	5.1	3.3	<u>22</u> <u>22.1</u>	1040	4	34	1	6,489	15	5.4	3.5	2.9	145	4	36	0
Volbrecht Road	3,641	6,081	38	2.3	1.5	<u>22</u> <u>22.1</u>	130	2	8	0	6,489	45	2.1	1.4	2.9	16	2	8	0
Thornton-Lansing Road	11,951	6,081	38	2.3	1.5	<u>22</u> <u>22.1</u>	425	2	<u>27.7</u> <u>28</u>	<u>0.4</u> <u>0</u>	6,489	45	2.1	1.4	2.9	51	2	26	0
182 nd Street/Ridge Rd	9,336	6,081	39	2.3	1.5	<u>22</u> <u>22.1</u>	326	2	21	0	6,489	46	2.1	1.4	2.9	40	2	20	0
Torrence Avenue (IL 83)	12,799	6,081	39	2.3	1.5	<u>22</u> <u>22.1</u>	446	4	<u>44.5</u> <u>15</u>	<u>0.4</u> <u>0</u>	6,489	47	<u>2</u> <u>2.1</u>	1.3	2.9	53	4	13	0
186th Street	7,768	6,081	41	2.2	1.4	<u>22</u> <u>22.1</u>	261	2	17	<u>0.4</u> <u>0</u>	6,489	49	<u>2</u> <u>2.0</u>	1.3	2.9	31	2	16	0
Burnham Avenue	8,724	6,081	42	2.1	1.4	<u>22</u> <u>22.1</u>	287	2	<u>48.7</u> <u>19</u>	<u>0.4</u> <u>0</u>	6,489	49	<u>2</u> <u>2.0</u>	1.3	2.9	35	2	17	0

Table E1.2-10. CN Highway/Rail At-grade Crossing Vehicle Delay Data																			
Street	ADT 2015	No-Action (2015)									Proposed Action (2015)								
		L	V	D _c	D _a	N	T _d	NL	Q	D _v	L	V	D _c	D _a	N	T _d	NL	Q	D _v
Wentworth Avenue	13,027	6,081	42	2.1	1.4	22.1	429	2	27.9 <u>28</u>	0.4 <u>0</u>	6,489	49	2 <u>2.0</u>	1.3	2.9	53	2	26	0
Calumet Avenue	31,311	6,081	40	2.2	1.4	22.1	1,070	4	34.9 <u>35</u>	0.4 <u>0</u>	6,489	48	2 <u>2.0</u>	1.3	2.9	128	4	32	0
White Oak Avenue	11,062	6,081	38	2.3	1.5	22.1	394	2	25.6 <u>26</u>	0.4 <u>0</u>	6,489	45	2.1	1.4	2.9	48	2	24	0
Kennedy Avenue	6,664	6,081	18	4.3	2.8	22.1	444	2	28.9 <u>29</u>	0.4 <u>0</u>	6,489	18	4.6	3.0	2.9	62	2	31	0
Main Street	10,960	6,081	35	2.5	1.6	22.1	416	2	27	<u>0.1</u> <u>0</u>	6,489	38	2.4	1.6	2.9	54	2	27	0
Broad Street	19,572	6,081	36	2.4	1.6	22.1	727	2	47.7 <u>47</u>	0.4 <u>0</u>	6,489	40	2.3	1.5	2.9	92	2	46	0
Colfax Street	14,139	6,081	40	2.2	1.4	23.3 <u>24.8</u>	510 <u>542</u>	2	31.5 <u>31</u>	0.4 <u>0</u>	6,081	29	2.9	1.9	23 <u>18.6</u>	510 <u>527</u>	2	41	0
Taft Street	30,473	6,081	40	2.2	1.4	23.3 <u>24.8</u>	1,098 <u>1,169</u>	2	67.9 <u>68</u>	0.4 <u>0</u>	6,081	40	2.2	1.4	23 <u>18.6</u>	1,098 <u>877</u>	2	68	0
Madison Street	9,031	6,081	40	2.2	1.4	23.3 <u>24.8</u>	325 <u>346</u>	2	20.1 <u>20</u>	0.4 <u>0</u>	6,081	40	2.2	1.4	23 <u>18.6</u>	325 <u>260</u>	2	20	0
Broadway Street	39,989	6,081	40	2.2	1.4	23.3 <u>24.8</u>	1,441 <u>1,534</u>	4	44.5 <u>45</u>	0.4 <u>0</u>	6,081	40	2.2	1.4	23 <u>18.6</u>	1,441 <u>1,151</u>	4	45	0

Table E1.2-11. CN Highway/Rail At-grade Crossing Vehicle Delay Data

Street	ADT 2015	LOS No-Action 2015	LOS Action 2015	No-Action - Total Blocked Crossing Time (24-Hr), Minutes	Proposed Action - Total Blocked Crossing Time (24-Hr), Minutes	No-Action - Percent Total Blocked Crossing Time	Proposed Action - Percent Total Blocked Crossing Time	Percent Change Total Blocked Crossing Time
Forest Avenue	3,035	A	A	40 15	0	1%	0%	-1%
Augusta Street	3,035	A	A	40 15	0	1%	0%	-1%
Keystone Avenue	3,035	A	A	40 15	0	1%	0%	-1%
Thatcher Avenue	10,039	A	A	40 15	0	1%	0%	-1%
1st Avenue (IL 171)	36,321	A	A	40 15	0	1%	0%	-1%
5th Avenue	12,190	A	A	40 15	0	1%	0%	-1%
George Street	4,661	A	A	40 15	0	1%	0%	-1%
Fullerton Avenue	4,780	A	A	44 18	0	1%	0%	-1%
Belmont Avenue	11,831	B	A	83	4	6%	0%	-6%
Pratt Avenue	2,735	B	A	71	4	5%	0%	-5%
Touhy Avenue	28,085	A	A	58	3	4%	0%	-4%
Frontage Road	3,481	A	A	58	3	4%	0%	-4%
Prospect Ave	4,906	<u>A</u>	<u>A</u>	<u>58</u>	<u>3</u>	<u>4%</u>	<u>0%</u>	<u>-4%</u>
Oakton Street	29,160	A	A	58	3	4%	0%	-4%
Algonquin Road	11,114	A	A	55	3	4%	0%	-4%
Lee Street / Mannheim Road (US 12)	10,193	A	A	55	3	4%	0%	-4%
Graceland Avenue (US 12)	24,956	A	A	53	3	4%	0%	-3%
Thacker Street / Dempster Street	14,102	A	A	53	3	4%	0%	-3%

Street	ADT 2015	LOS No-Action 2015	LOS Action 2015	No-Action - Total Blocked Crossing Time (24-Hr), Minutes	Proposed Action - Total Blocked Crossing Time (24-Hr), Minutes	No-Action - Percent Total Blocked Crossing Time	Proposed Action - Percent Total Blocked Crossing Time	Percent Change Total Blocked Crossing Time
Prairie Avenue	2,873	A	A	51	3	4%	0%	-3%
Seegers Road	1,781	B	A	60	3	4%	0%	-4%
Golf Road (IL 58)	33,861	B	A	60	3	4%	0%	-4%
Rand Road (US 12)	26,714	B	A	62	3	4%	0%	-4%
Central Road	22,348	A	A	50	3	3%	0%	-3%
Kensington Road / Foundry Road	10,090	A	A	46	3	3%	0%	-3%
Euclid Avenue	22,826	A	A	46	3	3%	0%	-3%
Wolf Road	25,216	A	A	45	3	3%	0%	-3%
Camp McDonald Road	10,397	A	A	45	3	3%	0%	-3%
Willow Road	3,585	A	A	46	3	3%	0%	-3%
Hintz Road	24,977	A	A	47	3	3%	0%	-3%
Dundee Road (IL 68)	40,188	A	A	43	3	3%	0%	-3%
Deerfield Parkway / Busch Road	23,182	A	A	50	3	3%	0%	-3%
Aptakisic Road	29,009	A	A	50	3	3%	0%	-3%
Half Day Road (IL 22)	24,195	A	A	44	3	3%	0%	-3%
Buffalo Grove Road	16,341	A	A	43	3	3%	0%	-3%
US 45	22,295	A	A	26 43	3	2% 3%	0%	-3%
Butterfield Road	18,368	A	A	27	3	2%	0%	-3%

Table E1.2-11. CN Highway/Rail At-grade Crossing Vehicle Delay Data

Street	ADT 2015	LOS No- Action 2015	LOS Action 2015	No-Action - Total Blocked Crossing Time (24-Hr), Minutes	Proposed Action - Total Blocked Crossing Time (24-Hr), Minutes	No-Action - Percent Total Blocked Crossing Time	Proposed Action - Percent Total Blocked Crossing Time	Percent Change Total Blocked Crossing Time
				<u>46</u>		<u>3%</u>		
Townline Road (IL 60)	44,084	A	A	26 <u>44</u>	3	2% <u>3%</u>	0%	-3%
Allanson Road	19,382	A	B	54	83 <u>66</u>	4%	6% <u>5%</u>	2% <u>1%</u>
Hawley Street	8,234	A	A	54	53	4%	4%	0%
Park Street	732	A	A	54	53	4%	4%	0%
Maple Avenue	14,568	A	A	54	53	4%	4%	0%
Winchester Road	6,841	A	A	49	47	3%	3%	0%
Peterson Road	20,268	A	A	44	43	3%	3%	0%
Harris Road	4,434	A	A	44	43	3%	3%	0%
Pulaski Road	27,965	A	A	9	0	1%	0%	-1%
Riverside Drive	5,497	A	A	16	3	1%	0%	-1%
Harlem Avenue (IL 43)	39,485	A	A	16	3	1%	0%	-1%
26th Street	16,134	A	A	16	3	1%	0%	-1%
Des Plaines Avenue	17,807	A	A	16	3	1%	0%	-1%
Cermak Road / 22nd Street	40,633	A	A	16	3	1%	0%	-1%
1st Avenue (IL 171)	37,727	A	A	16	3	1%	0%	-1%
17th Avenue	11,353	A	A	20	4	1%	0%	-1%
Harrison Street	<u>10,984</u>	<u>A</u>	<u>A</u>	<u>8</u>	<u>2</u>	7% <u>1%</u>	<u>0%</u>	<u>0%</u>
Wolf Road	18,763	A	A	8	2	1%	0%	0%

Table E1.2-11. CN Highway/Rail At-grade Crossing Vehicle Delay Data								
Street	ADT 2015	LOS No-Action 2015	LOS Action 2015	No-Action - Total Blocked Crossing Time (24-Hr), Minutes	Proposed Action - Total Blocked Crossing Time (24-Hr), Minutes	No-Action - Percent Total Blocked Crossing Time	Proposed Action - Percent Total Blocked Crossing Time	Percent Change Total Blocked Crossing Time
York Street	24,190	A	A	8	2	1%	0%	0%
Vallette Street	4,233	A	A	8	3	1%	0%	0%
Argyle Avenue	1,165	A	A	7	2	1%	0%	0%
Spring Road	10,886	A	A	7	2	1%	0%	0%
Saint Charles Road	11,289	A	A	7	2	1%	0%	0%
West Avenue	11,289	A	A	7	2	1%	0%	0%
Villa Avenue	8,870	A	A	7	2	1%	0%	0%
Addison Avenue	17,471	A	A	7	2	1%	0%	0%
North Avenue (IL 64)	58,778	A	A	7	2	1%	0%	0%
Grace Street	9,139	A	A	8	2	1%	0%	0%
Swift Road	22,175	A	A	7	2	0%	0%	0%
Schmale Road	30,373	A	A	8	2	1%	0%	0%
Gary Avenue	37,092	A	A	7	2	0%	0%	0%
Army Trail Road	41,796	A	A	7	2	0%	0%	0%
County Farm Road	38,705	A	A	7	2	0%	0%	0%
Sutton Road (IL 59)	52,951	A	A	7	2	0%	0%	0%
Powis Road	5,510	A	A	8 5	15 11	1% 0%	1%	0%
IL 25	10,830	A	A	3	4 3	0%	0%	0%
Randall Road	46,189	A	A	5 3	4 3	0%	0%	0%
Pruxne Street / Illinois Street	7,171	A	A	4	5	0%	0%	0%

Table E1.2-11. CN Highway/Rail At-grade Crossing Vehicle Delay Data

Street	ADT 2015	LOS No-Action 2015	LOS Action 2015	No-Action - Total Blocked Crossing Time (24-Hr), Minutes	Proposed Action - Total Blocked Crossing Time (24-Hr), Minutes	No-Action - Percent Total Blocked Crossing Time	Proposed Action - Percent Total Blocked Crossing Time	Percent Change Total Blocked Crossing Time
Holmes Street	451	A	A	4	5	0%	0%	0%
Stephen Street	14,222	A	A	5	5	0%	0%	0%
Romeo Road / 135th Street	19,102	A	A	3	4	0%	0%	0%
9th Street (IL 7)	31,796	A	A	3.6 4	5.0 5	0%	0%	0%
10th Street	160	A	A	4	5	0%	0%	0%
11th Street	307	A	A	4	5	0%	0%	0%
Division Street	6,783	A	A	4	5	0%	0%	0%
Ohio Street	7,198	B A	B A	26 10	26 15	2% 1%	2% 1%	0%
Jackson Street	20,380	B A	B A	26 10	26 15	2% 1%	2% 1%	0%
University Parkway / Stuenkel Road	13,640	A	A	24 26	24 23	2%	2%	0%
West Dralle Road	4,012	A	A	24 26	24 23	2%	2%	0%
55th Street	31,431	A	A	22 11	0 11	2% 1%	0% 1%	-2% 0%
71st Street	16,612	A	A	22 11	0 11	2% 1%	0% 1%	-2% 0%
79th Street	29,291	A	A	23	0	2%	0%	-2%
Columbus Avenue	18,046	A	A	23	0	2%	0%	-2%
83rd Place	1,305	A	A	23	0	2%	0%	-2%
87th Street	23,663	A	A	23	0	2%	0%	-2%
91st Street	4,482	A	A	23	0	2%	0%	-2%

Table E1.2-11. CN Highway/Rail At-grade Crossing Vehicle Delay Data								
Street	ADT 2015	LOS No-Action 2015	LOS Action 2015	No-Action - Total Blocked Crossing Time (24-Hr), Minutes	Proposed Action - Total Blocked Crossing Time (24-Hr), Minutes	No-Action - Percent Total Blocked Crossing Time	Proposed Action - Percent Total Blocked Crossing Time	Percent Change Total Blocked Crossing Time
Kedzie Avenue	28,802	A	A	23	0	2%	0%	-2%
94th Street	3,466	A	A	23	0	2%	0%	-2%
95th Street (US 12 / US 20)	27,768	A	A	23	0	2%	0%	-2%
99th Street	11,592	A	A	23	0	2%	0%	-2%
103rd Street	23,782	A	A	23	0	2%	0%	-2%
111th Street	19,600	A	A	23	0	2%	0%	-2%
115th Street	15,536	A	A	23	0	2%	0%	-2%
119th Street	14,341	A	A	23	0	2%	0%	-2%
123rd Street	6,468	A	A	23	0	2%	0%	-2%
127th Street	27,607	A	A	23	0	2%	0%	-2%
Broadway Street	5,916	<u>A</u>	A	42 130	2 7	3% 9%	0%	-3% -9%
Western Avenue	10,039	A	A	50	2	3%	0%	-3%
Robey Street	144	A	A	44	2	3%	0%	-3%
Lincoln Avenue	886	A	A	44	2	3%	0%	-3%
Wood Street	15,775	A	A	43	2	3%	0%	-3%
147th Street / Sibley Boulevard (IL 83)	33,509	A	A	43	2	3%	0%	-3%
Ashland Avenue	13,949	<u>A</u>	<u>A</u>	<u>43</u>	<u>2</u>	<u>3%</u>	<u>0%</u>	<u>-3%</u>
Center Avenue	886	A	A	42	2	3%	0%	-3%
Broadway Avenue	886	<u>E</u> <u>A</u>	A	430 <u>42</u>	2 <u>2</u>	9% <u>3%</u>	0%	-9% <u>3%</u>

Table E1.2-11. CN Highway/Rail At-grade Crossing Vehicle Delay Data

Street	ADT 2015	LOS No-Action 2015	LOS Action 2015	No-Action - Total Blocked Crossing Time (24-Hr), Minutes	Proposed Action - Total Blocked Crossing Time (24-Hr), Minutes	No-Action - Percent Total Blocked Crossing Time	Proposed Action - Percent Total Blocked Crossing Time	Percent Change Total Blocked Crossing Time
Park Avenue	7,051	A	A	42	2	3%	0%	-3%
Halsted Street (IL 1)	14,411	A	A	46	2	3%	0%	-3%
155th Street	451	A	A	46	2	3%	0%	-3%
Thornton-Blue Island Road	4,960	A	A	47	2	3%	0%	-3%
159th Street / 162nd Street (US 6)	34,741	A	A	47	2	3%	0%	-3%
South Park Avenue	11,831	B	A	70	9	5%	1%	-4%
170th Street	13,266	C	A	113	16	8%	1%	-7%
Volbrecht Road	3,641	A	A	51	6	4%	0%	-3%
Thornton-Lansing Road	11,951	A	A	51	6	4%	0%	-3%
182 nd Street/Ridge Road	9,336	A	A	50	6	3%	0%	-3%
Torrence Avenue (IL 83)	12,799	A	A	50	6	3%	0%	-3%
186th Street	7,768	A	A	48	6	3%	0%	-3%
Burnham Avenue	8,724	A	A	47	6	3%	0%	-3%
Wentworth Avenue	13,027	A	A	47	6	3%	0%	-3%
Calumet Avenue	31,311	A	A	49	6	3%	0%	-3%
White Oak Avenue	11,062	A	A	51	6	4%	0%	-3%
Kennedy Avenue	6,664	C	A	96	13	7%	1%	-6%
Main Street	10,960	A	A	55	7	4%	0%	-3%
Broad Street	19,572	A	A	53	7	4%	0%	-3%
Colfax Street	14,139	A	A	52	52	4%	4%	0%

Street	ADT 2015	LOS No-Action 2015	LOS Action 2015	No-Action - Total Blocked Crossing Time (24-Hr), Minutes	Proposed Action - Total Blocked Crossing Time (24-Hr), Minutes	No-Action - Percent Total Blocked Crossing Time	Proposed Action - Percent Total Blocked Crossing Time	Percent Change Total Blocked Crossing Time
				<u>55</u>	<u>54</u>			
Taft Street	30,473	A	A	<u>52</u> <u>55</u>	<u>52</u> <u>54</u>	4%	<u>4%</u> <u>3%</u>	<u>0%</u> <u>-1%</u>
Madison Street	9,031	A	A	<u>52</u> <u>55</u>	<u>52</u> <u>54</u>	4%	<u>4%</u> <u>3%</u>	<u>0%</u> <u>-1%</u>
Broadway Street	39,989	A	A	<u>52</u> <u>55</u>	<u>52</u> <u>54</u>	4%	<u>4%</u> <u>3%</u>	<u>0%</u> <u>-1%</u>

Street	2020 ADT	Proposed Action (2020)										Proposed Action LOS (2020)
		L	V	D _C	D _a	N	T _D	NL	Q	D _v		
Forest Avenue	3,351	0	0	0	0	0	0	2	0	0	A	
Augusta Street	3,351	0	0	0	0	0	0	2	0	0	A	
Keystone Avenue	3,351	0	0	0	0	0	0	2	0	0	A	
Thatcher Avenue	11,084	0	0	0	0	0	0	3	0	0	A	
1st Avenue (IL 171)	40,102	0	0	0	0	0	0	4	0	0	A	
5th Avenue	13,459	0	0	0	0	0	0	4	0	0	A	
George Street	5,146	0	0	0	0	0	0	2	0	0	A	
Fullerton Avenue	5,278	0	0	0	0	0	0	2	0	0	A	
Belmont Avenue	13,063	2,645	19	2.1	1.4	2	38	4	14	0	A	

Table E1.2-12. CN Highway/Rail At-grade Crossing Vehicle Delay Data

Street	2020 ADT	Proposed Action (2020)									Proposed Action LOS (2020)
		L	V	D _c	D _a	N	T _D	NL	Q	D _v	
Pratt Avenue	3,020	3,129	28	1.8	1.2	2	7	2	5	0	A
Touhy Avenue	31,008	3,129	34	1.5	1.0	2	67	5	19	0	A
Frontage Road	3,844	3,129	34	1.5	1.0	2	8	2	6	0	A
Prospect Avenue	5,417	3,129	34	1.5	1.0	2	12	2	8	0	A
Oakton Street	32,195	3,129	31	1.6	1.1	2	74		27	0	A
Algonquin Road	12,271	3,129	33	1.6	1.0	2	27	2	19	0	A
Lee Street / Mannheim Road (US 12)	11,254	3,129	33	1.6	1.0	2	25	2	18	0	A
Graceland Avenue (US 12)	27,554	3,129	33	1.6	1.0	2	60	2	43	0	A
Thacker Street / Dempster Street	15,570	3,129	33	1.6	1.0	2	34	2	25	0	A
Prairie Avenue	3,173	3,129	34	1.5	1.0	2	7	2	5	0	A
Seegers Road	1,966	3,129	30	1.7	1.1	2	5	2	3	0	A
Golf Road (IL 58)	37,385	3,129	29	1.7	1.1	2	90	4	32	0	A
Rand Road (US 12)	29,494	3,129	29	1.7	1.1	2	71	4	25	0	A
Central Road	24,674	3,129	37	1.5	0.9	2	50	2	36	0	A
Kensington Road / Foundry Road	11,140	3,129	43	1.3	0.9	2	21	2	15	0	A
Euclid Avenue	25,202	3,129	45	1.3	0.8	2	45	4	16	0	A
Wolf Road	27,841	3,129	45	1.3	0.8	2	50	2	36	0	A
Camp McDonald Road	11,479	3,129	45	1.3	0.8	2	21	2	15	0	A
Willow Road	3,958	3,129	44	1.3	0.9	2	7	2	5	0	A
Hintz Road	27,577	3,129	40	1.4	0.9	2	53	4	19	0	A
Dundee Road (IL 68)	44,371	3,129	43	1.3	0.9	2	82	4	29	0	A
Deerfield Parkway / Busch Road	26,874	3,129	38	1.4	0.9	2	54	2	39	0	A

Table E1.2-12. CN Highway/Rail At-grade Crossing Vehicle Delay Data											
Street	2020 ADT	Proposed Action (2020)									Proposed Action LOS (2020)
		L	V	D _c	D _a	N	T _D	NL	Q	D _v	
Aptakisic Road	33,629	3,129	38	1.4	0.9	2	67	4	24	0	A
Half Day Road (IL 22)	28,049	3,129	44	1.3	0.9	2	51	2	37	0	A
Buffalo Grove Road	18,944	3,129	45	1.3	0.8	2	34	3	16	0	A
US 45	25,846	3,129	42	1.3	0.9	2	48	3	23	0	A
Butterfield Road	21,294	3,129	39	1.4	0.9	2	42	4	15	0	A
Townline Road (IL 60)	51,105	3,129	41	1.4	0.9	2	97	4	35	0	A
Allanson Road	22,469	7,571	27	3.7	2.4	19.1 17.8	1,024	2	83	0	B
Hawley Street	9,545	7,571	35	2.7	1.8	19.1	375	3	19	0	A
Park Street	849	7,571	35	2.7	1.8	19.1	30	2	2	0	A
Maple Avenue	16,888	7,571	35	2.7	1.8	19.1	627	2	47	0	A
Winchester Road	7,930	7,571	40	2.4	1.6	19.1	280	4	11	0	A
Peterson Road	23,497	7,571	45	2.2	1.4	19.1	755	5	23	0	A
Harris Road	5,140	7,571	45	2.2	1.4	19.1	151	2	11	0	A
Pulaski Road	30,876	0	19	0.5	0.3	0	0	4	8	0	A
Riverside Drive	6,070	3,061	25	1.9	1.2	1.7	14	2	11	0	A
Harlem Avenue (IL 43)	43,595	3,061	25	1.9	1.2	1.7	97	4	41	0	A
26th Street	17,813	3,061	25	1.9	1.2	1.7	40	4	17	0	A
Des Plaines Avenue	19,660	3,061	25	1.9	1.2	1.7	44	4	19	0	A
Cermak Road / 22nd Street	44,862	3,061	25	1.9	1.2	1.7	100	5	34	0	A
1st Avenue (IL 171)	41,654	3,061	25	1.9	1.2	1.7	93	4	39	0	A
17th Avenue	12,535	3,061	20	2.2	1.5	1.7	33	4	14	0	A
Harrison Street	12,127	3,060	39	1.4	0.9	1.7	20	2	17	0	A
Wolf Road	20,716	3,060	39	1.4	0.9	1.7	34	4	14	0	A

Table E1.2-12. CN Highway/Rail At-grade Crossing Vehicle Delay Data

Street	2020 ADT	Proposed Action (2020)									Proposed Action LOS (2020)
		L	V	D _c	D _a	N	T _D	NL	Q	D _v	
York Street	28,043	3,061	40	1.4	0.9	1.7	45	2	38	0	A
Vallette Street	4,908	3,050	35	1.5	1.0	1.7	9	2	7	0	A
Argyle Avenue	1,350	3,061	40	1.4	0.9	1.7	2	2	2	0	A
Spring Road	12,620	3,061	40	1.4	0.9	1.7	20	2	17	0	A
Saint Charles Road	13,087	3,061	40	1.4	0.9	1.7	21	3	12	0	A
West Avenue	13,087	3,061	40	1.4	0.9	1.7	21	2	18	0	A
Villa Avenue	10,283	3,061	40	1.4	0.9	1.7	17	2	14	0	A
Addison Avenue	20,254	3,061	39	1.4	0.9	1.7	33	7	8	0	A
North Avenue (IL 64)	68,140	3,061	39	1.4	0.9	1.7	112	8	24	0	A
Grace Street	10,594	3,061	40	1.4	0.9	1.7	17	4	7	0	A
Swift Road	25,706	3,061	44	1.3	0.8	1.7	39	3	22	0	A
Schmale Road	35,210	3,061	43	1.3	0.9	1.7	54	4	23	0	A
Gary Avenue	43,000	3,061	49	1.2	0.8	1.7	61	4	26	0	A
Army Trail Road	48,453	3,061	49	1.2	0.8	1.7	69	4	29	0	A
County Farm Road	44,869	3,061	48	1.2	0.8	1.7	65	4	27	0	A
Sutton Road (IL 59)	69,485	3,061	45	1.3	0.8	1.7	92	4	39	0	A
Powis Road	6,388	4,600	25 10	2.6 5.7	1.7 3.7	2.6 2	30 51	2	17 37	0	A
IL 25	12,554	4,600	45	1.7	1.1	2.6 2	38 29	2	21	0	A
Randall Road	53,546	4,600	45	1.7	1.1	2.6 2	161 124	4	44	0	A
Pruxne Street / Illinois Street	7,917	5,457	35	2.3	1.5	2	25	2	21	0	A
Holmes Street	498	5,457	35	2.3	1.5	2	2	2	2	0	A
Stephen Street	15,702	5,457	33	2.4	1.5	2	52	2	37	0	A

Table E1.2-12. CN Highway/Rail At-grade Crossing Vehicle Delay Data											
Street	2020 ADT	Proposed Action (2020)									Proposed Action LOS (2020)
		L	V	D _c	D _a	N	T _D	NL	Q	D _v	
Romeo Road / 135th Street	22,145	6,108	40	2.2	1.5	2	69	2	49	0	A
9th Street (IL 7)	36,860	6,108	35	2.5	1.6	2	127	2	92	0	A
10th Street	186	6,108	35	2.5	1.6	2	1	2	0	0	A
11th Street	356	6,108	35	2.5	1.6	2	1	2	1	0	A
Division Street	7,863	6,108	35	2.5	1.6	2	27	2	20	0	A
Ohio Street	8,344	7,500 6,108	10	9.0 7.4	5.9 4.8	3 2	152 86	2	75 62	0	B A
Jackson Street	23,626	7,500 6,108	10	9.0 7.4	5.9 4.8	3 2	429 244	2	213 88	0	B A
University Parkway / Stuenkel Road	15,813	5,400	45	1.9	1.2	12.8 12.3	262 252	4	15	0	A
West Dralle Road	4,651	5,400	45	1.9	1.2	12.8 12.3	77 74	4	4	0	A
55th Street	34,702	0 4,365	45	67 6.7	0.0 4.4	0 1.6	0 258	4	116	0	A
71st Street	18,341	0 4,365	45	67 6.7	0.0 4.4	0 1.6	0 137	2	123	0	A
79th Street	32,340	0	0	0.0	0.0	0	0	4	0	0	A
Columbus Avenue	19,924	0	0	0.0	0.0	0	0	4	0	0	A
83rd Place	1,441	0	0	0.0	0.0	0	0	2	0	0	A
87th Street	26,126	0	0	0.0	0.0	0	0	6	0	0	A
91st Street	4,948	0	0	0.0	0.0	0	0	2	0	0	A
Kedzie Avenue	31,799	0	0	0.0	0.0	0	0	4	0	0	A
94th Street	3,826	0	0	0.0	0.0	0	0	4	0	0	A
95th Street (US 12 / US 20)	30,658	0	0	0.0	0.0	0	0	6	0	0	A

Table E1.2-12. CN Highway/Rail At-grade Crossing Vehicle Delay Data

Street	2020 ADT	Proposed Action (2020)									Proposed Action LOS (2020)
		L	V	D _c	D _a	N	T _D	NL	Q	D _v	
99th Street	12,799	0	0	0.0	0.0	0	0	2	0	0	A
103rd Street	26,258	0	0	0.0	0.0	0	0	4	0	0	A
111th Street	21,639	0	0	0.0	0.0	0	0	4	0	0	A
115th Street	17,153	0	0	0.0	0.0	0	0	4	0	0	A
119th Street	15,834	0	0	0.0	0.0	0	0	2	0	0	A
123rd Street	7,141	0	0	0.0	0.0	0	0	2	0	0	A
127th Street	30,480	0	0	0.0	0.0	0	0	4	0	0	A
Broadway Street	6,531	5,711	43 10	2.0 7.0	1.3 4.5	1 1	32	4	23	0	A
Western Avenue	11,084	5,711	35	2.4	1.5	1	18	4	13	0	A
Robey Street	159	5,711	41	2.1	1.4	1	0	2	0	0	A
Lincoln Avenue	978	5,711	41	2.1	1.4	1	1	2	2	0	A
Wood Street	17,417	5,711	42	2.0	1.3	1	25	4	18	0	A
147th Street / Sibley Boulevard (IL 83)	36,997	5,711	42	2.0	1.3	1	53	4	38	0	A
Ashland Avenue	15,395	5,711	42	2.0	1.3	1	22	2	31	0	A
Center Avenue	978	5,711	43	2.0	1.3	1	1	2	2	0	A
Broadway Avenue	978	5,711	40 43	7.0 2.0	4.5 1.3	1	1	4	5 1	0	A
Park Avenue	7,785	5,711	43	2.0	1.3	1	11	4	8	0	A
Halsted Street (IL 1)	15,911	5,711	42	2.0	1.3	1	23	4	16	0	A
155th Street	498	5,711	42	2.0	1.3	1	1	2	1	0	A
Thornton-Blue Island Road	5,476	5,711	39	2.2	1.4	1	8	2	12	0	A
159th Street / 162nd Street (US 6)	38,357	5,711	35	2.4	1.5	1	63	4	45	0	A
South Park Avenue	13,063	6,489	27	3.2	2.1	2.9	85	4	21	0	A
170th Street	14,646	6,489	15	5.4	3.5	2.9	160	4	40	0	A

Table E1.2-12. CN Highway/Rail At-grade Crossing Vehicle Delay Data											
Street	2020 ADT	Proposed Action (2020)									Proposed Action LOS (2020)
		L	V	D _c	D _a	N	T _D	NL	Q	D _v	
Volbrecht Road	4,020	6,489	45	2.1	1.4	2.9	17	2	9	0	A
Thornton-Lansing Road	13,195	6,489	45	2.1	1.4	2.9	57	2	28	0	A
182 nd Street/Ridge Road	10,308	6,489	46	2.1	1.4	2.9	44	2	22	0	A
Torrence Avenue (IL 83)	14,132	6,489	47	2.1	1.3	2.9	59	4	15	0	A
186th Street	8,577	6,489	49	2.0	1.3	2.9	35	2	17	0	A
Burnham Avenue	9,632	6,489	49	2.0	1.3	2.9	39	2	19	0	A
Wentworth Avenue	14,382	6,489	49	2.0	1.3	2.9	58	2	29	0	A
Calumet Avenue	36,298	6,489	48	2.0	1.3	2.9	149	4	37	0	A
White Oak Avenue	12,824	6,489	45	2.1	1.4	2.9	55	2	27	0	A
Kennedy Avenue	7,725	6,489	18	4.6	3.0	2.9	72	2	36	0	A
Main Street	12,706	6,489	38	2.4	1.6	2.9	62	2	31	0	A
Broad Street	22,689	6,489	40	2.3	1.5	18.6	107	2	53	0	A
Colfax Street	16,391	6,081	29	2.9	1.9	23.3 18.6	594 610	2	47	0	A
Taft Street	35,327	6,081	40	2.2	1.4	23.3 18.6	1,273 1,016	2	79	0	A
Madison Street	10,469	6,081	40	2.2	1.4	23.3 18.6	377 301	2	23	0	A
Broadway Street	46,359	6,081	40	2.2	1.4	23.3 18.6	1,671 1,334	4	52	0	A

4.4.5.1 Waukesha Subdivision

SEA analyzed ~~43~~ 44 highway/rail at-grade crossings along the Waukesha Subdivision. Table E1.2-13 shows the results of the delay analysis.

SEA reanalyzed 44 highway/rail at-grade crossings along the Waukesha Subdivision. Although all crossings were reanalyzed, the range of results from the new data affected 14 communities. These communities are listed below. The change in the ranges of data are reflected in number of trains (N), vehicular delay in minutes (Da), total delayed vehicles (Td) and total blocked crossing time. Table E1.2-13 shows the results of crossings in the new delay analysis.

River Forest

SEA evaluated four highway/rail at-grade crossings in River Forest: Forest Avenue, Augusta Street, Keystone Avenue, and Thatcher Avenue. Under the Proposed Action, daily train traffic through these crossings drops from ~~3.5~~ 5.4 to zero trains. Additional results include a decrease in vehicular delays. In addition, reduction in train traffic reduces delays from 1.8 minutes to zero seconds per delayed vehicle. In addition, the total number of delayed vehicles falls from ~~21~~ 32 (~~69~~106 at Thatcher Road) to zero vehicles per day. The decrease in the number of trains also reduces the total blocked time for each crossing from ~~40~~ 15 minutes to zero minutes per day. The analysis shows that all crossing criteria would improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of daily train traffic increases to 5.4, from 3.5 that was in the DEIS. The No Action number of delayed vehicles increases to 106, from 69 that was in the DEIS. The No Action total blocked crossing time increases to 15 minutes, from 10 minutes in the DEIS.

River Grove

SEA evaluated two highway/rail at-grade crossings in River Grove: 1st Avenue (IL 171) and 5th Avenue. Under the Proposed Action, daily train traffic through these crossings drops from ~~3.5~~ 5.4 to zero trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.8 minutes to zero seconds per delayed vehicle and reduces the total number of delayed vehicles from ~~219~~ 383 and ~~83~~129, respectively, to zero vehicles per day. The decrease in the number of trains reduces the total blocked time for each crossing from ~~40~~ 15 minutes to zero minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of daily train traffic increases to 5.4, from 3.5 that was in the DEIS. The No Action number of delayed vehicles increases to 383, from 219 that was in the DEIS. The No Action total blocked crossing time increases to 15 minutes, from 10 minutes in the DEIS.

Melrose Park

SEA evaluated one highway/rail at-grade crossing in Melrose Park: George Street. Under the Proposed Action, daily train traffic through the crossing drops from ~~3.5~~ 5.4 to zero trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.9 minutes to zero seconds per delayed vehicle and also reduces the total number of delayed vehicles from ~~34~~ 52 to zero vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from ~~40~~ 16 minutes to zero minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of daily train traffic increases to 5.4, from 3.5 that was in the DEIS. The No Action number of delayed vehicles increases to 52, from 34 that was in the DEIS. The No Action total blocked crossing time increases to 16 minutes, from 10 minutes in the DEIS.

Franklin Park

SEA evaluated two highway/rail at-grade crossings in Franklin Park: Belmont Avenue and Fullerton Avenue. Under the Proposed Action, daily train traffic through these crossings drops from ~~3.5~~ 5.4 and 19.3, respectively, to zero and two trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 2.1 and 2.8 minutes, respectively, to zero seconds and 1.4 minutes per delayed vehicle and also reduces the total number of delayed vehicles from 685 and ~~38~~ 59, respectively, to zero and 34 vehicles per day. The decrease in the number of trains also reduces the total blocked time for each crossing from ~~11~~ 18 and 83 minutes, respectively to zero and four minutes per day. The Proposed Action LOS for Belmont Avenue improves from LOS B to LOS A. Fullerton Avenue has no change from LOS A under the Proposed Action.

Daily train traffic increases to 5.4, from 3.5 in the DEIS. The No Action number of delayed vehicles increases to 59, from 38 that was in the DEIS. The total blocked time for the No Action increases to 18 minutes, from 11 minutes in the DEIS.

Des Plaines

SEA evaluated 13 highway/rail at-grade crossings in Des Plaines: Pratt Avenue, Touhy Avenue, Frontage Road, Prospect Avenue, Oakton Street, Algonquin Road, Lee Street/Mannheim Road (US 12), Graceland Avenue (US 12), Thacker Street/Dempster Street, Prairie Avenue, Golf Road, Rand Road, Seegers Road and Central Road. Under the Proposed Action, daily train traffic through these crossings drops from 19.1 to two trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 2.4 at most to no more than 1.2 minutes per delayed vehicle and also reduces the range of total number of delayed vehicles from ~~1,450~~ 1,404 to ~~84~~ 81 vehicles per day. The decrease in the number of trains also reduces the total range of blocked time for each crossing from 71 minutes to four minutes per day. The analysis shows that all crossing criteria improve. The Proposed Action LOS for Pratt Avenue, Seegers Road, Golf Road and Rand Road improves from LOS B to LOS A. The remaining crossings have no change from LOS A under the Proposed Action.

The No Action number of delayed vehicles decreases to 1,404, from 1,450 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 81, from 84 in the DEIS.

Near Mount Prospect

SEA evaluated one highway/rail at-grade crossing Near Mount Prospect: Kensington Road/Foundry Road. Under the Proposed Action, daily train traffic through the crossing drops from 19.1 to two trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.6 minutes to approximately 55 seconds per delayed vehicle and also reduces the total number of delayed vehicles from 326 to 19 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 46 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Mount Prospect

SEA evaluated one highway/rail at-grade crossing Near Mount Prospect: Euclid Avenue. Under the Proposed Action, daily train traffic through the crossing drops from 19.1 to two trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.6 minutes to approximately 45 seconds per delayed vehicle and also reduces the total number of delayed vehicles from 722 to 41 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 46 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Prospect Heights

SEA evaluated three highway/rail at-grade crossings in Prospect Heights: Camp McDonald Road, Wolf Road, and Hintz Road. Under the Proposed Action, daily train traffic through these crossings drops from 19.1 to two trains. Therefore, vehicular delays decrease. The reduction in train traffic would reduce delays from 1.5 minutes to approximately 45 seconds (1.6 minutes to approximately 55 seconds at Hintz Road) per delayed vehicle and also reduces the total number of delayed vehicles per day from 782 and 322, respectively, to 45 and 19 (824 to 48 at Hintz Road). The decrease in the number of trains reduces the total blocked time for each crossing from 47 and 45 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Wheeling

SEA evaluated two highway/rail at-grade crossings in Wheeling: Willow Road and Dundee Road (IL 68). Under the Proposed Action, daily train traffic through these crossings drops from 19.1 to two trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.6 and 1.5 minutes, respectively, to approximately 55 seconds per delayed vehicle and also reduces the total number of delayed vehicles from 113 and ~~1,175~~ 1,199, respectively, to seven and ~~73~~ 74 vehicles per day. The decrease in the number of trains also reduces the total blocked time for each crossing from 46 and 43 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles increases to 1,199, from 1,175 that was in the DEIS. The Proposed Action number of delayed vehicles increases to 74, from 73 in the DEIS.

Buffalo Grove

SEA evaluated two highway/rail at-grade crossings in Buffalo Grove: Deerfield Parkway/Busch Road and Buffalo Grove Road. Under the Proposed Action, daily train traffic through these crossings drops from 19.1 to two trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.7 and 1.5 minutes, respectively, to approximately 55 and 45 seconds per delayed vehicle and also reduces the total number of delayed vehicles from ~~716~~ 799 and ~~533~~ 488, respectively, to ~~41~~ 46 and ~~32~~ 29 vehicles per day. The decrease in the number of trains also reduces the total blocked time for each crossing from 50 and 43 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles increases to 799, from 716 that was in the DEIS. The Proposed Action number of delayed vehicles increases to 46, from 41 in the DEIS.

Prairie View

SEA evaluated one highway/rail at-grade crossing in Prairie View: Aptakisic Road. Under the Proposed Action, daily train traffic through the crossing drops from 19.1 to two trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.7 minutes to approximately 55 seconds per delayed vehicle and also reduces the total number of delayed vehicles from ~~1,041~~ 1,000 to ~~60~~ 58 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 50 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles decreases to 1,000, from 1,041 that was in the DEIS. The No Action number of delayed vehicles decreases to 58, from 60 in the DEIS.

Near Prairie View

SEA evaluated one highway/rail at-grade crossing Near Prairie View: Half Day Road (IL 22). Under the Proposed Action, daily train traffic through the crossing drops from 19.1 to two trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.5 minutes to approximately 55 seconds per delayed vehicle and also reduces the total number of delayed vehicles from ~~781~~ 736 to ~~47~~ 44 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 44 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles decreases to 736, from 781 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 44, from 47 in the DEIS.

Near Vernon Hills

SEA evaluated one highway/rail at-grade crossing Near Prairie View: US 45. Under the Proposed Action, daily train traffic through the crossing drops from 19.1 to two trains. Therefore, vehicular delays decrease. ~~Although there is no change in train traffic from approximately 55 seconds per delayed vehicle, there is still a reduction in the total number of delayed vehicles from 422 to 44 per day.~~ The reduction in train traffic reduces delays from 1.5 minutes to 55 seconds per delayed vehicle. There is also a reduction in the total number of delayed vehicles from 665 to 42 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from ~~26~~ 43 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles increases to 665, from 422 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 42, from 44 in the DEIS. The No Action average delay per delayed vehicle increases to 1.5 minutes, from 55 seconds in the DEIS. The No Action total blocked crossing time increases to 43 minutes, from 26 minutes in the DEIS.

Vernon Hills

SEA evaluated one highway/rail at-grade crossing Near Prairie View: Butterfield Road. Under the Proposed Action, daily train traffic through the crossing drops from 19.1 to two trains. Therefore, vehicular delays decrease. ~~Although there is no change in train traffic from approximately 55 seconds per delayed vehicle, there is still a reduction in the total number of delayed vehicles from 376 to 39 per day.~~ The reduction in train traffic reduces delays from 1.6 minutes to 55 seconds per delayed vehicle. There is also a reduction in the total number of delayed vehicles from 581 to 36 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from ~~27~~ 46 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles increases to 581, from 376 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 36, from 39 in the DEIS. The No Action average delay per delayed vehicle increases to 1.6 minutes, from 55 seconds in the DEIS. The No Action total blocked crossing time increases to 46 minutes, from 27 minutes in the DEIS.

Mundelein

SEA evaluated six highway/rail at-grade crossings in Mundelein: Townline Road (IL 60), Allanson Road, Hawley Street, Park Street, Maple Avenue, and Winchester Road. Under the Proposed Action, daily train traffic through these crossings ~~does not change from 19.1 trains~~ drops from 20.8 to 17.8

~~(19.1 to two at Townline Road (IL 60)) trains. Therefore, vehicular delays do not decrease. Although the train delay in minutes per delayed vehicle does not change from 1.8 (1.6 at Winchester Road), there is a decrease in the range of total number of delayed vehicles from 848 to 541 vehicles per day. Although there is no change in the number of trains, the total blocked time for Townline Road (IL 60) reduced from 26 minutes to three minutes per day. There is no change in total blocked time for Hawley Street, Park Street and Maple Street at 52 minutes (46 minutes at Winchester Road) per day. Train speed decrease at Allanson Road results in an increase of average delay per delayed vehicle from 1.8 minutes to 2.8 minutes and an increase of total delayed vehicles from 761 to 1226 per day. The total blocked time for Allanson Road increases from 52 minutes to 83 minutes. The range of vehicular delays increase from 1.7 and 1.5 minutes to no more than 2.4 minutes per delayed vehicle. The delay for Townline Road (IL 60) reduces from 1.5 minutes to approximately 55 seconds per delayed vehicle. There is a decrease in the range of total number of delayed vehicles from 1,341 to 883 vehicles per day. Although there is a decrease in trains, the train speed increases the range of total blocked time from 54 to no more than 64 minutes per day. The Proposed Action LOS for Allanson Road worsens from LOS A to LOS B. The remaining crossings have no change from LOS A under the Proposed Action.~~

The No Action number of daily train traffic increases to 20.8, from 19.1 that was in the DEIS. The Proposed Action number of daily train traffic increases to 17.8, from 19.1 that was in the DEIS. The No Action number of delayed vehicles increases to 1,341, from 848 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 883, from 1,226 in the DEIS. The No Action average delay per delayed vehicle decreases to 1.7 minutes, from 1.8 minutes in the DEIS. The Proposed Action average delay per delayed vehicle increases to 2.4 minutes, from 1.9 minutes in the DEIS. The No Action total blocked crossing time increases to 54 minutes, from 52 minutes in the DEIS. The Proposed Action total blocked crossing time decreases to 66 minutes, from 83 minutes in the DEIS.

~~————~~ *Gray's Lake*

~~SEA evaluated two highway/rail at-grade crossings in Gray's Lake: Peterson Road and Harris Road. Under the Proposed Action, daily train traffic through these crossings does not change from 19.1 trains. Therefore, vehicular delays do not decrease. Although the train delay in minutes per delayed vehicle does not change from 1.4, there is no change total number of delayed vehicles from 651 and 130 vehicles per day. There is no change in the number of trains; therefore, the total blocked time for each crossing did not reduced from 42 minutes per day. The analysis shows that there is no change in crossing criteria; therefore, the current LOS A does not change under the Proposed Action.~~
Near Libertyville

Near Mundelein

SEA evaluated one highway/rail at-grade crossing Near Mundelein: Peterson Road. Under the Proposed Action, daily train traffic through the crossing drops from 20.8 to 17.8 trains. Although there is a decrease in train traffic, vehicular delays increase from 1.4 minutes to 1.6 minutes per delayed vehicle. There is a reduction in the total number of delayed vehicles from 625 to 604 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 44 minutes to 43 minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of daily train traffic increases to 20.8, from 19.1 that was in the DEIS. The Proposed Action number of daily train traffic increases to 17.8, from 19.1 that was in the DEIS. The No Action number of delayed vehicles decreases to 625, from 651 that was in the DEIS. The

Proposed Action number of delayed vehicles decreases to 604, from 651 in the DEIS. The Proposed Action average delay per delayed vehicle increases to 1.6 minutes, from 1.4 minutes in the DEIS. The No Action total blocked crossing time increases to 44 minutes, from 42 minutes in the DEIS. The Proposed Action total blocked crossing time increases to 43 minutes, from 42 minutes in the DEIS.

SEA evaluated one highway/rail at-grade crossing Near Mundelein: Harris Road. Under the Proposed Action, daily train traffic through the crossing drops from 20.8 to 17.8 trains. Although there is a decrease in train traffic, vehicular delays increase from 1.4 minutes to 1.6 minutes per delayed vehicle. There is a reduction in the total number of delayed vehicles from 137 to 132 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 44 minutes to 43 minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of daily train traffic increases to 20.8, from 19.1 that was in the DEIS. The Proposed Action number of daily train traffic increases to 17.8, from 19.1 that was in the DEIS. The No Action number of delayed vehicles increases to 137, from 130 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 132, from 130 in the DEIS. The Proposed Action average delay per delayed vehicle increases to 1.6 minutes, from 1.4 minutes in the DEIS. The No Action total blocked crossing time increases to 44 minutes, from 42 minutes in the DEIS. The Proposed Action total blocked crossing time increases to 43 minutes, from 42 minutes in the DEIS.

TABLE E1.2-13. WAUKESHA SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, Da		Total Delayed Vehicles per day, Td		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
River Forest																
Forest Avenue	3,035	3.5 5.4	0	30	0	1.8	0	21 32	0	9	0	A	A	40 15	0	-1%
Augusta Street	3,035	3.5 5.4	0	30	0	1.8	0	21 32	0	9	0	A	A	40 15	0	-1%
Keystone Avenue	3,035	3.5 5.4	0	30	0	1.8	0	21 32	0	9	0	A	A	40 15	0	-1%
Thatcher Avenue	10,039	3.5 5.4	0	30	0	1.8	0	69 106	0	19	0	A	A	40 15	0	-1%
River Grove																
1st Avenue (IL 171)	36,321	3.5 5.4	0	30	0	1.8	0	383	0	51	0	A	A	40 15	0	-1%
5th Avenue	12,190	3.5 5.4	0	30	0	1.8	0	83 129	0	17	0	A	A	40 15	0	-1%
Melrose Park																
George Street	4,661	3.5 5.4	0	28	0	1.9	0	34 52	0	14	0	A	A	40 16	0	-1%
Franklin Park																
Fullerton Avenue	4,780	3.5 5.4	0	25	0	2.1	0	38 59	0	16	0	A	A	41 18	0	-1%
Belmont Avenue	11,831	19.3	2	19	19	2.8	1.4	685	34	26	12	B	A	83	4	-6%
Des Plaines																

TABLE E1.2-13. WAUKESHA SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, Da		Total Delayed Vehicles per day, Td		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Pratt Avenue	2,735	19.1	2	23	28	2.4	1.2	134	7	10	5	B	A	71	4	-5%
Touhy Avenue	28,085	19.1	2	29	34	2.0	1	1,130	60	34	17	A	A	58	3	-4%
Frontage Road	3,481	19.1	2	29	34	2.0	1	140	7	11	5	A	A	58	3	-4%
<u>Prospect Avenue</u>	<u>4,906</u>	<u>19.1</u>	<u>2</u>	<u>29</u>	<u>34</u>	<u>2.0</u>	<u>1</u>	<u>197</u>	<u>11</u>	<u>15</u>	<u>8</u>	<u>A</u>	<u>A</u>	<u>58</u>	<u>3</u>	<u>-4%</u>
Oakton Street	29,160	19.1	2	29	31	2.0	1.1	1,174	67	44	24	A	A	58	3	-4%
Algonquin Road	11,114	19.1	2	31	33	1.9	1	423	24	32	18	A	A	55	3	-4%
Lee Street / Mannheim Road (US 12)	10,193	19.1	2	31	33	1.9	1	388	22	29	16	A	A	55	3	-4%
Graceland Avenue (US 12)	24,956	19.1	2	32	33	1.8	1	926	55	70	39	A	A	53	3	-3%
Thacker Street / Dempster Street	14,102	19.1	2	32	33	1.8	1	523	31	39	22	A	A	53	3	-3%
Prairie Avenue	2,873	19.1	2	34	34	1.7	1	101	6	8	4	A	A	51	3	-3%

TABLE E1.2-13. WAUKESHA SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, Da		Total Delayed Vehicles per day, Td		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Seegers Road	1,781	19.1	2	28	30	2.0	1.1	74	4	6	3	B	A	60	3	-4%
Golf Road (IL 58)	33,861	19.1	2	28	29	2.0	1.1	1,404	81	53	29	B	A	60	3	-4%
Rand Road (US 12)	26,714	19.1	2	27	29	2.1	1.1	1,142	64	43	23	B	A	62	3	-4%
Central Road	22,348	19.1	2	35	37	1.7	0.9	771	45	58	33	A	A	50	3	-3%
Near Mount Prospect																
Kensington Road / Foundry Road	10,090	19.1	2	38	43	1.6	0.9	326	19	25	13	A	A	46	3	-3%
Mount Prospect																
Euclid Avenue	22,826	19.1	2	39	45	1.6	0.8	722	41	27	15	A	A	46	3	-3%
Prospect Heights																
Wolf Road	25,216	19.1	2	40	45	1.5	0.8	782	45	59	33	A	A	45	3	-3%
Camp McDonald Road	10,397	19.1	2	40	45	1.5	0.8	322	19	24	13	A	A	45	3	-3%
Hintz Road	24,977	19.1	2	37	40	1.6	0.9	824	48	31	17	A	A	47	3	-3%
Wheeling																

TABLE E1.2-13. WAUKESHA SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, Da		Total Delayed Vehicles per day, Td		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Willow Road	3,585	19.1	2	39	44	1.6	0.9	113	7	9	5	A	A	46	3	-3%
Dundee Road (IL 68)	40,188	19.1	2	42	43	1.5	0.9	1,199	74	45	27	A	A	43	3	-3%
Buffalo Grove																
Deerfield Parkway / Busch Road	23,182	19.1	2	35	38	1.7	0.9	799	46	60	33	A	A	50	3	-3%
Buffalo Grove Road	16,341	19.1	2	42	45	1.5	0.8	488	29	25	14	A	A	43	3	-3%
Prairie View																
Aptakasic Road	29,009	19.1	2	35	38	1.7	0.9	1,000	58	38	21	A	A	50	3	-3%
Near Prairie View																
Half Day Road (IL 22)	24,195	19.1	2	41	44	1.5	0.9	736	44	55	32	A	A	44	3	-3%
Near Vernon Hills																
US 45	22,295	19.1	2	42	42	0.9 1.5	0.9	665	42	33	20	A	A	43	3	-2%
Vernon Hills																

TABLE E1.2-13. WAUKESHA SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, Da		Total Delayed Vehicles per day, Td		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Butterfield Road	18,368	19.1	2	39	39	0.9 1.6	0.9	581	36	22	13	A	A	46	3	-2%
Mundelein																
Townline Road (IL 60)	44,084	19.1	2	41	41	0.9 1.5	0.9	1,341	84	51	30	A	A	44	3	-2%
Allanson Road	19,382	20.8	17.8	35	27	1.7	2.4	728	883	50	71	A	B	54	66	2%
Hawley Street	8,234	20.8	7.8	35	35	1.7	1.9	309	301	14	16	A	A	54	53	0%
Park Street	732	20.8	17.8	35	35	1.7	1.9	26 28	27	2	2	A	A	54	53	0%
Maple Avenue	14,568	20.8	17.8	35	35	1.7	1.9	547	533	38	43	A	A	54	53	0%
Winchester Road	6,841	20.8	17.8	40	40	1.5	1.7	231	224	8	9	A	A	46 49	47	0%
Near Mundelein																
Peterson Road	20,268	20.8	17.8	45	45	1.4	1.6	625	604	17	20	A	A	44	43	0%
Near Libertyville																
Harris Road	4,434	20.8	17.8	45	45	1.4	1.6	137	132	9	11	A	A	44	43	0%

4.4.5.2 Freeport Subdivision

SEA analyzed ~~28~~ 29 highway/rail at-grade crossings along the Freeport Subdivision. Table E1.2-14 shows the results of the delay analysis.

SEA reanalyzed 10 highway/rail at-grade crossings along the Freeport Subdivision. The range of results from the new data affected six communities. These communities are listed below. The change in the ranges of data are reflected in number of trains (N), vehicular delay in minutes (Da), total delayed vehicles (Td) and total blocked crossing time. Table E1.2-14 shows the results of crossings in the new delay analysis.

Chicago

SEA evaluated one highway/rail at-grade crossing in Chicago: Pulaski Road. Under the Proposed Action, daily train traffic through this crossing drops from 2.5 to zero trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 2.4 minutes to approximately 20 seconds per delayed vehicle and would also reduce the total number of delayed vehicles from 176 to zero vehicles per day. The decrease in the number of trains reduces the total blocked time for the crossing from 9 minutes to zero minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Berwyn

SEA evaluated one highway/rail at-grade crossing in Berwyn: Riverside Drive. Under the Proposed Action, daily train traffic through this crossing drops from 4.4 to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic would reduce delays from 2.3 minutes to 1.2 minutes per delayed vehicle and also reduces the total number of delayed vehicles from 59 to 12 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 16 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Riverside

SEA evaluated one highway/rail at-grade crossing in Riverside: Harlem Avenue (IL 43). Under the Proposed Action, daily train traffic through this crossing drops from 4.4 to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 2.3 minutes to 1.2 minutes per delayed vehicle and reduces the total number of delayed vehicles from ~~382~~ 427 to ~~79~~ 88 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 16 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles increases to 427, from 382 that was in the DEIS. The Proposed Action number of delayed vehicles increases to 88, from 79 in the DEIS.

North Riverside

SEA evaluated ~~four~~ two highway/rail at-grade crossings in North Riverside: 26th Street and Des Plaines Avenue. Under the Proposed Action, daily train traffic through these crossings drops from 4.4 to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 2.3 to 1.2 minutes per delayed vehicle and also reduces the total number of delayed vehicles from 193 and 175, respectively, to 36 and 40 vehicles per day. The decrease in the number of trains also reduces the total blocked time for each crossing from 16 minutes to three minutes per day. The

analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Near North Riverside

SEA evaluated ~~four~~ two highway/rail at-grade crossings near North Riverside: Cermak Road/22nd Street and 1st Avenue (IL 171). Under the Proposed Action, daily train traffic through these crossings drops from 4.4 to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 2.3 to 1.2 minutes per delayed vehicle and also reduces the total number of delayed vehicles from 440 and ~~460~~ 408, respectively, to 91 and ~~95~~ 84 vehicles per day. The decrease in the number of trains also reduces the total blocked time for each crossing from 16 minutes to three minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles decreases to 408, from 460 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 84, from 95 in the DEIS.

Broadview

SEA evaluated one highway/rail at-grade crossing in Broadview: 17th Avenue. Under the Proposed Action, daily train traffic through this crossing drops from 4.4 to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 2.9 minutes to 1.5 minutes per delayed vehicle and also reduces the total number of delayed vehicles from 156 to 30 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 20 minutes to four minutes per day. The analysis shows that all crossing criteria would improve; therefore, the current LOS A does not change under the Proposed Action.

Hillside

SEA evaluated ~~one~~ two highway/rail at-grade crossings in Hillside: Harrison Street and Wolf Road. Under the Proposed Action, daily train traffic through ~~this~~ these crossing drops from three to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.8 minutes to approximately 55 seconds per delayed vehicle and also reduces the total number of delayed vehicles from 105 to 31 per day. The decrease in the number of trains also reduces the total blocked time for the crossings from eight minutes to two minutes per day. The analysis shows that all crossing criteria would improve; therefore, the current LOS A does not change under the Proposed Action.

Elmhurst

SEA evaluated six highway/rail at-grade crossings in Elmhurst: York Street, Vallette Street, Argyle Avenue, Spring Road, Saint Charles Road and West Avenue. Under the Proposed Action, daily train traffic through these crossings drops from three to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces the range of delays from 1.7 minutes to no more than 1 minute per delayed vehicle and also reduces the range of total number of delayed vehicles from 130 to 39 per day. The decrease in the number of trains also reduces the total blocked time for each crossing from from eight minutes and seven minutes, respectively to two minutes (eight minutes to three minutes for Vallette Street) per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Villa Park

SEA evaluated three highway/rail at-grade crossings in Villa Park: Villa Avenue, Addison Avenue and North Avenue (IL 64). Under the Proposed Action, daily train traffic through these crossings

drops from 3 to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.6 minutes to approximately 55 seconds per delayed vehicle and also reduces the range of total number of delayed vehicles from ~~311~~ 307 to 99 97 per day. The decrease in the number of trains also reduces the total blocked time for each crossing from seven minutes to two minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles decreases to 309, from 311 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 97, from 99 in the DEIS.

Near Addison

SEA evaluated two highway/rail at-grade crossings near Addison: Grace Street and Swift Road. Under the Proposed Action, daily train traffic through these crossings drops from three to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.7 and 1.5 minutes, respectively, to approximately 55 and 45 seconds per delayed vehicle and also reduces the total number of delayed vehicles from 49 and 108, respectively, to 15 and 34 per day. The decrease in the number of trains also reduces the total blocked time for each crossing from eight minutes and seven minutes, respectively, to two minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Near Bloomingdale

SEA evaluated two highway/rail at-grade crossings near Bloomingdale: Schmale Road and Army Trail Road. Under the Proposed Action, daily train traffic through these crossings drops from three to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.6 and 1.5 minutes, respectively, to approximately 55 and 45 seconds per delayed vehicle and also reduces the total number of delayed vehicles from 159 and 199, respectively, to 47 and 60 per day. The decrease in the number of trains also reduces the total blocked time for each crossing from eight and seven minutes to two minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Bloomingdale

SEA evaluated one highway/rail at-grade crossings in Bloomingdale: Gary Road. Under the Proposed Action, daily train traffic through this crossing drops from three to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.5 minutes to approximately 55 seconds per delayed vehicle and also reduces the total number of delayed vehicles from 105 to 31 per day. The decrease in the number of trains also reduces the total blocked time for the crossing from seven minutes to two minutes per day. The analysis shows that all crossing criteria would improve; therefore, the current LOS A does not change under the Proposed Action.

Hanover Park

SEA evaluated one highway/rail at-grade crossing in Hanover Park: Country Farm Road. Under the Proposed Action, daily train traffic through this crossing drops from three to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.5 minutes to approximately 45 seconds per delayed vehicle and also reduces the total number of delayed vehicles from 184 to 56 per day. The decrease in the number of trains also reduces the total blocked time for the crossing from seven minutes to two minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Bartlett

SEA evaluated one highway/rail at-grade crossings in Bartlett: Sutton Road (IL 59). Under the Proposed Action, daily train traffic through this crossing drops from three to 1.7 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.5 minutes to approximately 45 seconds per delayed vehicle and also reduces the total number of delayed vehicles from ~~184-262~~ to 56 80 per day. The decrease in the number of trains also reduces the total blocked time for the crossing from seven minutes to two minutes per day. The analysis shows that all crossing criteria would improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles decreases to 262, from 296 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 80, from 90 in the DEIS.

Near Bartlett

SEA evaluated one highway/rail at-grade crossings near Bartlett: Powis Road. Under the Proposed Action, daily train traffic through this crossing does not change ~~drops from three to 2.6~~ trains. Train speed decrease at Powis Road results in an increase of average delay per delayed vehicle from 1.7 minutes to 3.7 minutes and an increase of total delayed vehicles from ~~30 20~~ to 57 44 per day. The total blocked time for Powis Road increases from ~~eight five~~ minutes to 15 11 minutes. Although the analysis shows that most crossing criteria worsens; the current LOS A does not change under the Proposed Action.

The No Action number of daily train traffic decreases to 2, from 3 that was in the DEIS. The Proposed Action number of daily train traffic decreases to 2, from 2.6 that was in the DEIS. The No Action number of delayed vehicles decreases to 20, from 30 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 44, from 57 in the DEIS. The No Action total blocked crossing time decreases to 5 minutes, from 8 minutes in the DEIS. The Proposed Action total blocked crossing time decreases to 11 minutes, from 15 minutes in the DEIS.

South Elgin

SEA evaluated two highway/rail at-grade crossings in South Elgin: IL 25 and Randall Road. Under the Proposed Action, daily train traffic through this crossing does not change from two trains per day ~~drops from three to 2.6~~ trains. This decrease in daily train traffic is not significant enough to change the vehicular delay time from 1.1 minutes, ~~but it does reduce the total number of delayed vehicles from 37 and 160, respectively, to 32 and 139 per day~~ or the total number of delayed vehicles from 25 and 107 per day. The total blocked time for each crossing does not change from three minutes per day. ~~The decrease in the number of trains also reduces the total blocked time for the crossing from five minutes to four minutes per day.~~ The analysis shows that there is no change in crossing criteria; therefore, the current LOS A does not change under the Proposed Action. ~~The analysis shows that all crossing criteria would improve; therefore, the current LOS A does not change under the Proposed Action.~~

The No Action number of daily train traffic decreases to 2, from 3 that was in the DEIS. The Proposed Action number of daily train traffic decreases to 2, from 2.6 that was in the DEIS. The No Action number of delayed vehicles decreases to 107, from 160 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 107, from 139 in the DEIS. The No Action total blocked crossing time decreases to 3 minutes, from 5 minutes in the DEIS. The Proposed Action total blocked crossing time decreases to 3 minutes, from 4 minutes in the DEIS.

TABLE E1.2-14. FREEPORT SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, Da		Total Delayed Vehicles per day, Td		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Chicago																
Pulaski Road	27,965	2.5	0	19	19	2.4	0.3	176	0	51	7	A	A	9	0	-1%
Berwyn																
Riverside Drive	5,497	4.4	1.7	25	25	2.3	1.2	59	12	19	10	A	A	16	3	-1%
Riverside																
Harlem Avenue (IL 43)	39,485	4.4	1.7	25	25	2.3	1.2	427	88	70	37	A	A	16	3	-1%
North Riverside																
26th Street	16,134	4.4	1.7	25	25	2.3	1.2	175	36	29	15	A	A	16	3	-1%
Des Plaines Avenue	17,807	4.4	1.7	25	25	2.3	1.2	193	40	32	17	A	A	16	3	-1%
Near North Riverside																
Cermak Road / 22nd Street	40,633	4.4	1.7	25	25	2.3	1.2	440	91	58	31	A	A	16	3	-1%
1st Avenue (IL 171)	37,727	4.4	1.7	25	25	2.3	1.2	408	84	67	36	A	A	16	3	-1%
Broadview																
17th	11,353	4.4	1.7	19	20	2.9	1.5	156	30	26	13	A	A	20	4	-1%

TABLE E1.2-14. FREEPORT SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, Da		Total Delayed Vehicles per day, Td		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Avenue																
Hillside																
Harrison Street	10,984	3	1.7	36	39	1.7	0.9	60	18	29	15	A	A	8	2	0%
Wolf Road	18,763	3	1.7	35	39	1.8	0.9	105	31	25	13	A	A	8	2	0%
Elmhurst																
York Street	24,190	3	1.7	37	40	1.7	0.9	130	39	62	33	A	A	8	2	0%
Valette Street	4,233	3	1.7	35	35	1.7	1	24	7	11	6	A	A	8	3	0%
Argyle Avenue	1,165	3	1.7	39	40	1.6	0.9	6	2	3	2	A	A	7	2	0%
Spring Road	10,886	3	1.7	40	40	1.6	0.9	55	18	26	15	A	A	7	2	0%
Saint Charles Road	11,289	3	1.7	40	40	1.6	0.9	57	18	18	10	A	A	7	2	0%
West Avenue	11,289	3	1.7	40	40	1.6	0.9	57	18	27	15	A	A	7	2	0%
Villa Park																
Villa Avenue	8,870	3	1.7	40	40	1.6	0.9	45	14	21	12	A	A	7	2	0%
Addison Avenue	17,471	3	1.7	39	39	1.6	0.9	90	29	12	7	A	A	7	2	0%
North Avenue (IL 64)	58,778	3	1.7	39	39	1.6	0.9	309	97	36	20	A	A	7	2	0%

TABLE E1.2-14. FREEPORT SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, Da		Total Delayed Vehicles per day, Td		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Near Addison																
Grace Street	9,139	3	1.7	37	40	1.7	0.9	49	15	12	6	A	A	8	2	0%
Swift Road	22,175	3	1.7	42	44	1.5	0.8	108	34	34	19	A	A	7	2	0%
Near Bloomingdale																
Schmale Road	30,373	3	1.7	38	43	1.6	0.9	159	47	38	20	A	A	8	2	0%
Army Trail Road	41,796	3	1.7	43	49	1.5	0.8	199	60	42	22	A	A	7	2	0%
Bloomingdale																
Gary Avenue	37,092	3	1.7	43	49	1.5	0.8	177	53	48	25	A	A	7	2	0%
Hanover Park																
County Farm Road	38,705	3	1.7	43	48	1.5	0.8	184	56	44	24	A	A	7	2	0%
Bartlett																
Sutton Road (IL 59)	52,951	3	1.7	41	45	1.5	0.8	262	80	63	34	A	A	7	2	0%
Near Bartlett																
Powis Road	5,510	3 2	2.6 2	25	10	1.7	3.7	30 20	57 44	14	32	A	A	8 5	15 11	0%
South Elgin																

TABLE E1.2-14. FREEPORT SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, Da		Total Delayed Vehicles per day, Td		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
IL 25	10,830	<u>3</u>	<u>2.6</u>	45	45	1.1	1.1	<u>37</u>	<u>32</u>	18	18	A	A	<u>5</u>	<u>4</u>	0%
		<u>2</u>	<u>2</u>					<u>25</u>	<u>25</u>					<u>3</u>	<u>3</u>	
Randall Road	46,189	<u>3</u>	<u>2.6</u>	45	45	1.1	1.1	<u>160</u>	<u>139</u>	38	38	A	A	<u>5</u>	<u>4</u>	0%
		<u>2</u>	<u>2</u>					<u>107</u>	<u>107</u>					<u>3</u>	<u>3</u>	

4.4.5.3 Joliet Subdivision

SEA analyzed 10 highway/rail at-grade crossings along the Freeport Subdivision. Table E1.2-15 shows the results of the delay analysis.

Lemont

SEA evaluated three highway/rail at-grade crossings in Lemont: Pruxne Street/Illinois Street, Holmes Street, and Stephen Street. Under the Proposed Action, daily train traffic through these crossings increases from 1.8 to two trains. However, vehicular delays decrease. The reduction in train traffic reduces delays from 1.6 minutes (1.7 at Stephen Street) to 1.5 minutes per delayed vehicle but increases the range of total number of delayed vehicles from 46 to 47 per day. The increase in the number of trains would increase the total blocked time for each crossing from four minutes to five minutes per day (no change from five minutes for Stephen Street). The analysis shows that although most crossing criteria worsen, the current LOS A does not change under the Proposed Action.

Romeoville

SEA evaluated one highway/rail at-grade crossing in Romeoville: Romeo Road/135th Street. Under the Proposed Action, daily train traffic increases from 1.8 to two trains. Therefore, vehicular delays increase. The increase in train traffic through this crossing raises delays from 1.3 to 1.5 minutes per delayed vehicle and also increases the total number of delayed vehicles from 48 to 59 per day. The increase in the number of trains increases the blocked time for the crossing from three minutes to four minutes per day. The analysis shows that although all crossing criteria worsen, the current LOS A does not change under the Proposed Action.

Lockport

SEA evaluated four highway/rail at-grade crossings in Lockport: 9th Street (IL 7), 10th Street, 11th Street, and Division Street. Under the Proposed Action, daily train traffic increases from 1.8 to two trains. Therefore, vehicular delays increase. The increase in train traffic through these crossings raises delays from 1.3 to 1.6 minutes per delayed vehicle and also increases the range of total number of delayed vehicles from ~~76~~ 80 to ~~104~~ 110 at most per day. The increase in the number of trains would increase the blocked time for each crossing from four minutes to five minutes per day. The analysis shows that although all crossing criteria worsen, the current LOS A does not change under the Proposed Action.

The No Action number of delayed vehicles increases to 80, from 76 that was in the DEIS. The Proposed Action number of delayed vehicles increases to 110, from 104 in the DEIS.

Joliet

SEA evaluated two highway/rail at-grade crossings in Joliet: Ohio Street and Jackson Street. Under the Proposed Action, daily train traffic through these crossings does ~~not change~~ increase from ~~2.9~~ 1.8 to 2 trains per day ~~trains~~. Therefore, vehicular delays ~~do not decrease~~ increase. The train delay in minutes per delayed vehicle does not change from ~~5.9~~ 3.8 to 4.8 and ~~there is no change in~~ increases the total number of delayed vehicles from ~~134~~ 52 and ~~370~~ 74, respectively, to 148 and 211 vehicles per day. There is also ~~no change an~~ increase in the total blocked time for each crossing from ~~26~~ 10 to 15 minutes per day. The analysis shows that there is no change in crossing criteria; therefore, the current LOS ~~B~~ A does not change under the Proposed Action.

Joliet Subdivision

SEA reanalyzed one highway/rail at-grade crossings along the Joliet Subdivision. The range of results from the new data affected only one community. This community is listed below. The change in the ranges of data are reflected in number of trains (N), vehicular delay in minutes (D_a), total delayed vehicles (T_d) and total blocked crossing time. Table E1.2-15 shows the results of this crossing in the new delay analysis.

TABLE E1.2-15. JOLIET SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, D _a		Total Delayed Vehicles per day, T _d		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Lemont																
Pruxne Street / Illinois Street	7,171	1.8	2	35	35	1.6	1.5	22	23	18	16	A	A	4	5	0%
Holmes Street	451	1.8	2	35	35	1.6	1.5	1	1	1	1	A	A	4	5	0%
Stephen Street	14,222	1.8	2	33	33	1.7	1.5	46	47	37	34	A	A	5	5	0%
Romeoville																
Romeo Road /135th Street	19,102	1.8	2	38	40	1.2	1.5	45	59	36	43	A	A	3	4	0%
Lockport																
9th Street (IL 7)	31,796	1.8	2	35	35	1.3	1.6	80	110	64	79	A	A	4	5	0%
10th Street	160	1.8	2	35	35	1.3	1.6	0	1	0	0	A	A	4	5	0%
11th Street	307	1.8	2	35	35	1.3	1.6	1	1	1	1	A	A	4	5	0%
Division Street	6,783	1.8	2	35	35	1.3	1.6	17	23	14	17	A	A	4	5	0%
Joliet																
Ohio Street	7,198	2.9	2.9	10	10	5.9	5.9	134	134	65	65	B	B	26	26	0%

Attachment E1

		<u>1.8</u>	<u>2</u>			<u>3.8</u>	<u>4.8</u>	<u>52</u>	<u>74</u>	<u>42</u>	<u>54</u>	A	A	<u>10</u>	<u>15</u>	
Jackson Street	20380	2.9 <u>1.8</u>	2.9 <u>2</u>	10	10	5.9 <u>3.8</u>	5.9 <u>4.8</u>	370 <u>148</u>	370 <u>211</u>	184 <u>59</u>	184 <u>76</u>	B A	B A	26 <u>10</u>	26 <u>15</u>	0%

4.4.5.4 Chicago Subdivision

SEA analyzed two highway/rail at-grade crossings along the Chicago Subdivision. Table E1.2-16 shows the results of the delay analysis.

University Park

SEA evaluated two highway/rail at-grade crossings in University Park: University Parkway/Stuenkel Road and West Dralle Road. Under the Proposed Action, daily train traffic through these crossings does not change ~~drops from 12.8 13.8 to 12.3 trains per day.~~ Therefore, vehicular delays do not decrease ~~increase.~~ The train delay in minutes per delayed vehicle does not change from 1.2 ~~but~~ and there is no change ~~a decrease~~ in the total number of delayed vehicles from 226 ~~244 and 72,~~ respectively to 217 and 64 and 66 vehicles per day. There is also no change ~~a decrease~~ in the total blocked time for each crossing from 2 ~~26 to 23~~ minutes per day. The analysis shows that there is no change in crossing criteria; therefore, the current LOS A does not change under the Proposed Action.

Richton Park

SEA evaluated one highway/rail at-grade crossing in Richton Park: University Parkway/Stuenkel Road. Under the Proposed Action, daily train traffic through this crossing drops from 13.8 to 12.3 trains. The reduction in train traffic does not reduce delays from 1.5 minutes, but does reduce the total number of delayed vehicles from 244 to 217 per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 26 minutes to 23 minutes per day. The analysis shows that all crossing criteria would improve; therefore, the current LOS A does not change under the Proposed Action.

University Park

SEA evaluated one highway/rail at-grade crossing in University Park: West Dralle Road under the Proposed Action, daily train traffic through this crossing drops from 13.8 to 12.3 trains. The reduction in train traffic does not reduce delays from 1.5 minutes, but does reduce the total number of delayed vehicles from 72 to 64 per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 26 minutes to 23 minutes per day. The analysis shows that all crossing criteria would improve; therefore, the current LOS A does not change under the Proposed Action.

TABLE E1.2-16. CHICAGO SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, Da		Total Delayed Vehicles per day, Td		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Richton Park																
University Parkway / Stuenkel Road	13,640	12.8 13.8	12.8 12.3	45	45	1.2	1.2	226 244	226 217	13	13	A	A	24 26	24 23	0%
University Park																
West Dralle Road	4,012	12.8 13.8	12.8 12.3	45	45	1.2	1.2	66 72	66 64	4	4	A	A	24 26	24 23	0%

4.4.5.5 Elsdon/Southbend Subdivision

SEA analyzed 47 ~~49~~ highway/rail at-grade crossings along the Elsdon/Southbend Subdivision. Table E1.2-17 shows the results of the delay analysis.

SEA reanalyzed four highway/rail at-grade crossings along the Elsdon/Southbend Subdivision. The range of results from the new data affected three communities. These communities are listed below. The change in the ranges of data are reflected in number of trains (N), vehicular delay in minutes (Da), total delayed vehicles (Td) and total blocked crossing time. Table E1.2-17 shows the results of crossings in the new delay analysis.

Chicago

SEA evaluated nine highway/rail at-grade crossings in Chicago: 55th Street, 71st Street, 79th Street, Columbus Avenue, 83rd Place, 87th Street, 103rd Street, 111th Street and 115th Street. Under the Proposed Action, daily train traffic through these crossings drops from 3.4 (~~3.3~~ no change from 1.6 at 55th Street and 71st Street) to zero trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 4.4 minutes to zero seconds per delayed vehicle and also reduces the range of total number of delayed vehicles from ~~483~~ 463 to zero per day. The decrease in the number of trains also reduces the total blocked time for each crossing from ~~22 minutes and~~ 23 minutes, ~~respectively,~~ to zero minutes (no change from 11 minutes at 55th and 71st) per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

The No Action number of daily train traffic decreases to 1.6, from 3.3 that was in the DEIS. The Proposed Action number of daily train traffic increases to 1.6, from 0 that was in the DEIS. The No Action number of delayed vehicles decreases to 234, from 483 that was in the DEIS. The Proposed Action number of delayed vehicles increases to 234, from 0 in the DEIS. The Proposed Action average delay per delayed vehicle increases to 4.4 minutes, from 0 minutes in the DEIS. The No Action total blocked crossing time decreases to 11 minutes, from 22 minutes in the DEIS. The Proposed Action total blocked crossing time increases to 11 minutes, from 0 minutes in the DEIS.

Evergreen Park

SEA evaluated five highway/rail at-grade crossings in Evergreen Park: 91st Street, Kedzie Avenue, 94th Street, 95th Street (US 12/US 20) and 99th Street. Under the Proposed Action, daily train traffic through these crossings drops from 3.4 to zero trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 4.4 minutes to zero seconds per delayed vehicle and also reduces the range of total number of delayed vehicles from 579 to zero vehicles per day. The decrease in the number of trains also reduces the total blocked time for each crossing from 23 minutes to zero minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Blue Island

SEA evaluated four highway/rail at-grade crossings in Blue Island: 119th Street, 123rd Street, 127th Street, and Broadway Street. Under the Proposed Action, daily train traffic through these crossings drops from 3.4 to zero (14.9 to 1 at Broadway Street). Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 4.4 and ~~4.8~~ 5.7 minutes, respectively, to zero seconds and ~~4.3~~ 4.5 minutes per delayed vehicle and also reduces the total range of delayed vehicles from ~~437~~ 535 to 29 ~~eight~~ per day. The decrease in the number of trains also reduces the total blocked time for each crossing from 23 minutes to zero minutes (~~42~~ 130 minutes to seven ~~two~~ minutes at Broadway

Street) per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A ~~E~~ does ~~not improve to LOS A~~ ~~change~~ under the Proposed Action.

The No Action number of delayed vehicles increases to 535, from 171 that was in the DEIS. The Proposed Action number of delayed vehicles increases to 29, from 8 in the DEIS. The No Action average delay per delayed vehicle increases to 5.7 minutes, from 1.8 minutes in the DEIS. The Proposed Action average delay per delayed vehicle increases to 4.5 minutes, from 1.3 minutes in the DEIS. The No Action total blocked crossing time increases to 130 minutes, from 42 minutes in the DEIS. The Proposed Action total blocked crossing time increases to 7 minutes, from 2 minutes in the DEIS. The No Action crossing LOS decreases to LOS E, from LOS A in the DEIS.

Dixmoor

SEA evaluated two highway/rail at-grade crossings in Dixmoor: Western Avenue and Robey Street. Under the Proposed Action, daily train traffic through these crossings drops from 14.9 to one train. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 2.2 and 1.9 minutes, respectively, to 1.5 and 1.4 minutes per delayed vehicle and also reduces the total number of delayed vehicles from 347 and four, respectively, to 16 and zero per day. The decrease in the number of trains also reduces the total blocked time for each crossing from 50 and 44 minutes, respectively, to two minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Harvey

SEA evaluated ~~eight seven~~ highway/rail at-grade crossings in Harvey: Lincoln Avenue, Wood Street, Sibley Boulevard/147th Street (IL 83), Ashland Avenue, Center Avenue, Broadway Avenue, Park Avenue and Halsted Street (IL 1). Under the Proposed Action, daily train traffic through these crossings drops from 14.9 trains to one (19.5 to one at Halsted Street). Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from a range of 1.9 minutes to 1.4 minutes (~~5.7 to 4.5 minutes at Broadway Street~~) per delayed vehicle and also reduces the range of total number of delayed vehicles from ~~1,023 990~~ to 49 48 per day. The decrease in the number of trains also reduces the range of total blocked time for each crossing from at most 46 minutes to 2 minutes (~~130 minutes to seven minutes at Broadway Street~~) per day. The analysis shows that all crossing criteria would improve; therefore, the current LOS A does not change under the Proposed Action.

~~Proposed Action LOS for Broadway Street improves from LOS E to LOS A. The remaining crossings have no change from LOS A under the Proposed Action.~~

The No Action number of delayed vehicles decreases to 990, from 1023 that was in the DEIS. The Proposed Action number of delayed vehicles decreases to 48, from 49 in the DEIS. The No Action crossing LOS increases to LOS A, from LOS E in the DEIS.

Phoenix

SEA evaluated one highway/rail at-grade crossing in Phoenix: 155th Street. Under the Proposed Action, daily train traffic through this crossing drops from 19.5 to one trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.5 minutes to 1.3 minutes per delayed vehicle and also reduces the total number of delayed vehicles from 14 to one per day. The decrease in the number of trains also reduces the total delayed time for the crossing from 46 minutes to two minutes per day. The analysis shows that all crossing criteria would improve; therefore, the current LOS A does not change under the Proposed Action.

South Holland

SEA evaluated four highway/rail at-grade crossings in South Holland: Thornton-Blue Island Road, 159th Street/162nd Street (US6), South Park Avenue, and 170th Street. Under the Proposed Action, daily train traffic through these crossings drops from 19.5 trains to one (22.1 to 2.9 at South Park Ave and 170th Street). Therefore, some vehicular delays decrease. Vehicular delays increase from 3.3 to 3.5 minutes per delayed vehicle at 170th Street because under the Proposed Action train lengths increase. The reduction in train traffic reduces the range of delays from 2.1 minutes to 1.6 minutes per delayed vehicle and also reduces the range of total number of delayed vehicles from 1,141 to 145 per day. The decrease in the number of trains also reduces the total range of blocked time for each crossing from 70 minutes to 9 minutes per day (113 minutes to 16 minutes at 170th Street). The Proposed Action LOS for South Park Avenue improved from LOS B to LOS A, while LOS for 170th Street improved from LOS C to LOS A. The remaining crossings have no change from LOS A under the Proposed Action.

Lansing

SEA evaluated ~~five~~six highway/rail at-grade crossings in Lansing: Volbrecht Road, 182nd Street/Ridge Road, Torrence Avenue (IL 83), 186th Street, Burnham Avenue, and Wentworth Avenue. Under the Proposed Action, daily train traffic through these crossings drops from 22.1 to 2.9 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delay range from 1.5 minutes to no more than 1.4 minutes per delayed vehicle and also reduces the range of total number of delayed vehicles from 446 to 53 per day. The decrease in the number of trains also reduces the total range of blocked time for each crossing from 51 minutes to six minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Near Thornton

SEA evaluated one highway/rail at-grade crossing in Thornton: Thornton-Lansing Road. Under the Proposed Action, daily train traffic through this crossing drops from 22.1 to 2.9 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.5 minutes to 1.4 minutes per delayed vehicle and also reduces the total number of delayed vehicles from 425 to 51 vehicles per day. The decrease in the number of trains also reduces the total blocked time for the crossing from 51 to six minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Munster, Indiana

SEA evaluated two highway/rail at-grade crossings in Munster: Calumet Avenue and White Oak Road. Under the Proposed Action, daily train traffic through these crossings drops from 22.1 to 2.9 trains. Therefore, vehicular delays decrease. The reduction in train traffic reduces delays from 1.4 and 1.5 minutes, respectively, to 1.3 and 1.4 minutes per delayed vehicle and also reduces the total number of delayed vehicles from 1,070 and 394, respectively, to 128 and 48 vehicles per day. The decrease in the number of trains also reduces the total blocked time for each crossing from 49 and 51 minutes to six minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action.

Highland, Indiana

SEA evaluated one highway/rail at-grade crossing in Highland: Kennedy Avenue. Under the Proposed Action, daily train traffic through these crossings drops from 22.1 to 2.9 trains. However, vehicular delays increased because under the Proposed Action train lengths increase. The reduction in train traffic and increase in train lengths would increase delays from 2.8 to three minutes per delayed vehicle and also reduce the total number of delayed vehicles from 444 to 62 vehicles per day.

The decrease in the number of trains also reduces the total blocked time for each crossing from 96 minutes to 13 minutes per day. The analysis shows that all crossing criteria improve; therefore, the current LOS C changes to LOS A under the Proposed Action.

Griffith, Indiana

SEA evaluated three highway/rail at-grade crossings in Griffith: Broad Street, Main Street and Colfax Street. Under the Proposed Action, daily train traffic through these crossings drops from 22.1 to 2.9 (no change from ~~23.3~~ 24.8 to 18.6 at Colfax Street) trains. ~~There is no change in vehicular delays~~ Vehicular delays for Main Street do not change from 1.6 minutes per delayed vehicle, while all other crossings increase. The reduction in train traffic does not reduce delays from 1.6 minutes (1.4 minutes at Colfax Street) per delayed vehicle, but does reduce the range of total number of delayed vehicles from 416 to 94 (There is no change from 510 at Colfax Street) vehicles per day ~~The reduction in train traffic also reduces the range of total number of delayed vehicles from 727 to no more than 527 vehicles per day. The decrease in the number of trains did reduce the total blocked time for each crossing from 55 minutes and 53 minutes to seven minutes (no change from 52 minutes in delayed time for Colfax Street) per day~~ The decrease in the number of trains did reduce the total blocked time for each crossing from 55 minutes and 53 minutes to seven minutes (55 minutes to 54 minutes for Colfax Street) per day. The analysis shows that some crossing criteria improve; therefore, the current LOS A does not change under the Proposed Action The analysis shows that some crossing criteria, except for Colfax Street improve; therefore, the current LOS A does not change under the Proposed Action.

Merrillville, Indiana

SEA evaluated three highway/rail at-grade crossings in Merrillville: Taft Street, Madison Street and Broadway Street. Under the Proposed Action, daily train traffic through these crossings ~~does not change~~ drops from 24.8 ~~23.3~~ to 18.6 trains per day. There is no change in vehicular delays. The reduction in train traffic does not reduce delays from 1.4 minutes per delayed vehicle, ~~but does~~ or reduce the range of total number of delayed vehicles from ~~1,098~~ 1,534, 325 and 1,441 to no more than 1,151 vehicles per day. The decrease in the number of trains ~~did not~~ reduced the total blocked time for each crossing from ~~52~~ 55 minutes to 41 minutes per day. The analysis shows no change in crossing criteria; therefore, the current LOS A does not change under the Proposed Action.

TABLE E1.2-17. ELSDON/SOUTHBEND SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, D _a		Total Delayed Vehicles per day, T _d		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Chicago																
55th Street	31,431	3.3 1.6	0 1.6	8	8	4.4	0 4.4	483 234	0 234	105	0 105	A	A	22 11	0 11	-2% 0%
71st Street	16,612	3.3 1.6	0 1.6	8	8	4.4	0 4.4	255 124	0 124	111	0 111	A	A	22 11	0 11	-2% 0%
79th Street	29,291	3.4	0	8	0	4.4	0	463	0	98	0	A	A	23	0	-2%
Columbus Avenue	18,046	3.4	0	8	0	4.4	0	285	0	60	0	A	A	23	0	-2%
83rd Place	1,305	3.4	0	8	0	4.4	0	21	0	9	0	A	A	23	0	-2%
87th Street	23,663	3.4	0	8	0	4.4	0	374	0	53	0	A	A	23	0	-2%
103rd Street	23,782	3.4	0	8	0	4.4	0	376	0	30 80	0	A	A	23	0	-2%
111th Street	19,600	3.4	0	8	0	4.4	0	310	0	96 66	0	A	A	23	0	-2%
115th Street	15,536	3.4	0	8	0	4.4	0	246	0	12 52	0	A	A	23	0	-2%
Evergreen Park																
91st Street	4,482	3.4	0	8	0	4.4	0	71	0	82 30	0	A	A	23	0	-2%
Kedzie Avenue	28,802	3.4	0	8	0	4.4	0	456	0	78 96	0	A	A	23	0	-2%
94th Street	3,466	3.4	0	8	0	4.4	0	55	0	80 12	0	A	A	23	0	-2%
95th Street (US 12 / US 20)	27,768	3.4	0	8	0	4.4	0	439	0	62	0	A	A	23	0	-2%

TABLE E1.2-17. ELSDON/SOUTHBEND SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, D _a		Total Delayed Vehicles per day, T _d		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
99th Street	11,592	3.4	0	8	0	4.4	0	183	0	52 <u>78</u>	0	A	A	23	0	-2%
Blue Island																
119th Street	14,341	3.4	0	8	0	4.4	0	227	0	96	0	A	A	23	0	-2%
123rd Street	6,468	3.4	0	8	0	4.4	0	102	0	43	0	A	A	23	0	-2%
127th Street	27,607	3.4	0	8	0	4.4	0	437	0	92	0	A	A	23	0	-2%
Broadway Street	5,916	14.9	1	36 <u>40</u>	43 <u>10</u>	1.8 <u>5.7</u>	1.3 <u>4.5</u>	174 <u>535</u>	8 <u>29</u>	8 <u>26</u>	6 <u>24</u>	A	A	42 <u>130</u>	2 <u>7</u>	-3% <u>-9%</u>
Dixmoor																
Western Avenue	10,039	14.9	1	29	35	2.2	1.5	347	16	17	12	A	A	50	2	-3%
Robey Street	144	14.9	1	34	41	1.9	1.4	4	0	0	0	A	A	44	2	-3%
Harvey																
Lincoln Avenue	886	14.9	1	34	41	1.9	1.4	27	1	3	2	A	A	44	2	-3%
Wood Street	15,775	14.9	1	35	42	1.9	1.3	466	22	23	16	A	A	43	2	-3%
147th Street / Sibley Boulevard (IL 83)	33,509	14.9	1	35	42	1.9	1.3	990	48	48	34	A	A	43	2	-3%
<u>Ashland Avenue</u>	<u>13,944</u>	<u>14.9</u>	<u>1</u>	<u>35</u>	<u>42</u>	<u>1.9</u>	<u>1.3</u>	<u>412</u>	<u>20</u>	<u>40</u>	<u>29</u>	<u>A</u>	<u>A</u>	<u>43</u>	<u>2</u>	<u>-3%</u>

TABLE E1.2-17. ELSDON/SOUTHBEND SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, D _a		Total Delayed Vehicles per day, T _d		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Center Avenue	886	14.9	1	36	43	1.8	1.3	26	1	2	2	A	A	42	2	-3%
Broadway Avenue	886	14.9	1	40 <u>36</u>	40 <u>43</u>	5.7 <u>1.8</u>	4.5 <u>1.3</u>	80 <u>26</u>	4 <u>1</u>	4 <u>1</u>	3 <u>1</u>	E <u>A</u>	A	130 <u>42</u>	7 <u>2</u>	-9% <u>-3%</u>
Park Avenue	7,051	14.9	1	36	43	1.8	1.3	204	10	10	7	A	A	42	2	-3%
Halsted Street (IL 1)	14,411	19.5	1	36	42	1.5	1.3	463	20	17	15	A	A	46	2	-3%
Phoenix																
155th Street	451	19.5	1	36	42	1.5	1.3	14	1	1	1	A	A	46	2	-3%
South Holland																
Thornton-Blue Island Road	4,960	19.5	1	35	39	1.6	1.4	163	7	12	11	A	A	47	2	-3%
159th Street / 162nd Street (US 6)	34,741	19.5	1	35	35	1.6	1.5	1141	57	42	41	A	A	47	2	-3%
South Park Avenue	11,831	22.1	2.9	26	27	2.1	2.1	573	77	19	19	B	A	70	9	-4%
170th Street	13,266	22.1	2.9	15	15	3.3	3.5	1040	145	34	36	C	A	113	16	-7%
Lansing																
Volbrecht Road	3,641	22.1	2.9	38	45	1.5	1.4	130	16	8	8	A	A	51	6	-3%
<u>182nd Street/Ridge Rd</u>	<u>9,336</u>	<u>22.1</u>	<u>2.9</u>	<u>39</u>	<u>46</u>	<u>1.5</u>	<u>1.4</u>	<u>326</u>	<u>40</u>	<u>21</u>	<u>20</u>	<u>A</u>	<u>A</u>	<u>50</u>	<u>6</u>	<u>-3%</u>

TABLE E1.2-17. ELSDON/SOUTHBEND SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, D _a		Total Delayed Vehicles per day, T _d		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Torrence Avenue (IL 83)	12,799	22.1	2.9	38 39	45 47	1.5	1.3	446	53	28 15	26 13	A	A	50	6	-3%
186th Street	7,768	22.1	2.9	39 41	47 49	1.4	1.3	261	31	45 17	43 16	A	A	48	6	-3%
Burnham Avenue	8,724	22.1	2.9	44 42	49	1.4	1.3	287	35	47 19	46 17	A	A	47	6	-3%
Wentworth Avenue	13,027	22.1	2.9	42	49	1.4	1.3	429	53	49 28	47 26	A	A	47	6	-3%
Near Thornton																
Thornton-Lansing Road	11,951	22.1	2.9	42 38	49 45	1.5	1.4	425	51	28	26	A	A	51	6	-3%
Munster																
Calumet Avenue	31,311	22.1	2.9	40	48	1.4	1.3	1070	128	35	32	A	A	49	6	-3%
White Oak Avenue	11,062	22.1	2.9	38	45	1.5	1.4	394	48	26	24	A	A	51	6	-3%
Highland																
Kennedy Avenue	6,664	22.1	2.9	18	18	2.8	3	444	62	29	31	C	A	96	13	-6%
Griffith																
Main Street	10,960	22.1	2.9	35	38	1.6	1.6	416	54	27	27	A	A	55	7	-3%
Broad Street	19,572	22.1	2.9	36	40	1.6	1.5	727	92	47	46	A	A	53	7	-3%
Colfax	14,139	23.3	23.3	40	29	1.4	1.9	510	510	31	41	A	A	52	54	0%

TABLE E1.2-17. ELSDON/SOUTHBEND SUBDIVISION, CN HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY DATA

Street	2015 ADT	Trains per Day, N		Train Speed, V		Average Delay per Delayed Vehicle, D _a		Total Delayed Vehicles per day, T _d		Number of Vehicles Queued, Q		Crossing LOS		Total Blocked Crossing Time (24-Hr), Minutes		Percent Change Total Blocked Crossing Time per 24-Hr
		No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	
Street		<u>24.8</u>	<u>18.6</u>					<u>542</u>	<u>527</u>					55		
Merrillville																
Taft Street	30,473	23.3 <u>24.8</u>	23.3 <u>18.6</u>	40	40	1.4	1.4	1,098 <u>1,169</u>	1,098 <u>877</u>	68	68	A	A	52 <u>55</u>	52 <u>41</u>	0% <u>-1%</u>
Madison Street	9,031	23.3 <u>24.8</u>	23.3 <u>18.6</u>	40	40	1.4	1.4	325 <u>346</u>	325 <u>260</u>	20	20	A	A	52 <u>55</u>	52 <u>41</u>	0% <u>-1%</u>
Broadway Street	39,989	23.3 <u>24.8</u>	23.3 <u>18.6</u>	40	40	1.4	1.4	1,441 <u>1,534</u>	1,441 <u>1,151</u>	45	45	A	A	52 <u>55</u>	52 <u>41</u>	0% <u>-1%</u>

General Mobility of Roadways near Highway/Rail At-Grade Crossings

As stated in Chapter 4, SEA evaluated the operations of the roadways that cross the EJ&E rail line and the CN subdivisions independently of rail line crossing operations. The purpose of the additional evaluation was to identify operations on roadways crossing the railways in two ways: 1) to identify and evaluate roadways that, under the Proposed Action, would operate at or over capacity (LOS E-F), and 2) to evaluate effects of the Proposed Action on the overall mobility of each community, including impacts to roadways near the rail lines.

SEA estimated traffic volumes for 2015 by applying a growth rate to the 2007 roadway volumes. The growth rate was developed based on the assumptions stated in Table 4.3-2. The LOS methodology discussed in Chapter 4 has been assumed for the analysis of the 2015 conditions. SEA also reviewed local and regional transportation plans to account for future roadway changes and upgrades.

Planned or programmed improvements in the community's roadway network were identified and incorporated in the future condition analysis. Metra commuter rail lines cross the EJ&E rail line and CN subdivisions, and some of them are rail/rail at-grade crossings within the communities discussed below. At-grade interactions between freight and commuter services may increase because Metra plans to expand commuter rail service along the majority of the rail lines. This expansion would include service during the peak and off-peak periods as well as reverse commute service. The interaction between freight and commuter rail lines may result in the commuter rail service being given priority over the freight service using EJ&E rail lines.

The sections below present the analysis results, listed by railway line. LOS analysis results and overall mobility conditions, which include network connectivity, potential queuing issues associated with the railway crossings, and Metra commuter rail impacts are provided first for the EJ&E rail line, and then for the five CN subdivisions.

EJ&E Rail Line Evaluation

The first step in assessing the effects of the Proposed Action on 2015 roadway conditions was to identify the highway/rail at-grade crossings along the EJ&E rail line that meet the Board's analysis thresholds, and to identify the communities in which those crossings are located. Then, SEA calculated the 2015 roadway LOS for each intersecting roadway. The LOS and vehicle queue length results for each EJ&E highway/rail at-grade crossing location are contained in Tables E1.2-19 through E1.2-24, respectively. Roadways with an LOS E or LOS F were designated as critical, while roadways with a LOS A-D provide an acceptable level of service. Based on the LOS and vehicle queue length results, SEA evaluated the 2015 roadway network and overall mobility in the vicinity of each of the critical roadways. The narratives below discuss the 2015 conditions of the roadway networks in the vicinity of the highway/rail at-grade crossings within each community, including the network connectivity and vehicle queue lengths associated with critical crossings. The vehicle queue lengths were calculated for the No-Action and the Proposed Action. The narratives identify only the vehicle queue lengths that would block a major roadway, in turn affecting the community's level of overall mobility.

The evaluation summary has been divided into sections that summarize each community located along the EJ&E rail line. Table E1.2-18 provides a summary of the resulting 2015 roadway LOS by county for all public highway/rail at-grade crossings that meet the evaluation thresholds of 2,500 or more ADT or less than 800 feet between crossings.

The new analysis resulted in several changes in LOS for the EJ&E rail line. Below is a summary of those changes for the 2015 roadway LOS analysis.

LOS	Total		Lake (Illinois)		Cook		DuPage		Will		Lake (Indiana)	
	2007	2015	2007	2015	2007	2015	2007	2015	2007	2015	2007	2015
LOS A - B	37	29	3	4	7	7	4	2	17	12	6	4
LOS C - D	33	29	5	2	6	6	3	4	14	13	5	4
LOS E - F	17	29	4	6	3	3	4	5	2	8	4	7

As indicated in the table above, the number of roadways that would meet or exceed capacity would almost double from 2007 to 2015 due to the increased roadway volume.

SEA evaluated a total of 88 highway/rail at-grade crossings. The results of delay calculations for all of the crossings are summarized in Tables E1.2-1 and E1.2-2.

Lake County, Illinois

Mundelein - No-Action

Mundelein has two roadways that cross the EJ&E rail line at-grade. Diamond Lake Road, a two-lane collector, runs north/south crossing the EJ&E rail line south of the village center. IL 60/IL 83, a two-lane arterial, runs east/west crossing the EJ&E rail line south of the village center.

Diamond Lake Road would operate at LOS C-D with IL 60/IL 83 operating at LOS E-F. According to the 2020 Lake County Transportation Priority Plan, IL 60/IL 83 widens from two to four lanes. Lake County does not plan to change the alignment or its classification as an arterial. Widening IL 60/IL 83 helps alleviate congestion at the crossing by improving the LOS to C-D.

IL 60/IL 83 is the only roadway that has queue lengths that would block a major roadway under the No-Action Alternative. For the peak period, IL 60/IL 83 could experience a calculated queue length of approximately ~~1,205~~ 590 feet, blocking one major roadway, Diamond Lake Road.

~~With the planned improvements, IL 60/83 would experience a calculated queue length of approximately 1,215 feet, blocking Diamond Lake Road.~~

With these planned improvements, the roadway network in the vicinity of the crossings would operate at an acceptable level of service.

- IL 60/83 No Action queue length changes from 1,205 feet to 590 feet. IL 60/83 Proposed Action queue length changes from 1,215 feet to 1,000 feet. Both the No Action queue length and the No Action queue length block Diamond Lake Road, a major cross street east of the crossing. Therefore, IL 60/IL 83 would experience moderate effects due to the Proposed Action.
- Diamond Lake Road No Action queue length changes from 385 to 265 feet. Lake Road Proposed Action queue length changes from 785 to 470 feet. The Proposed Action queue lengths block IL 60/83, a major cross street east of the crossing not blocked by the No Action queue length. Therefore, Diamond Lake Road experiences a significant impact due to the Proposed Action.

Mundelein - Proposed Action

During the peak period under the Proposed Action, IL 60/IL 83 would experience a calculated vehicle queue length of approximately ~~1,215~~ 1,000 feet, compared to ~~600~~ 590 feet for the No-Action Alternative. Both the No-Action and Proposed Action queuing of IL 60/IL 83 would block a major roadway, Diamond Lake Road. Therefore, IL 60/IL 83 would experience moderate effects due to the Proposed Action.

During the peak period under the Proposed Action, Diamond Lake Road would experience a calculated queue length of approximately ~~785~~ 470 feet, compared to ~~385~~ 265 feet for the No-Action Alternative. The Proposed Action conditions would block one major roadway, IL 60/IL 83, which is not blocked under the No-Action Alternative. Therefore, Diamond Lake Road experiences a significant impact due to the Proposed Action.

In Mundelein community near the at-grade crossings of IL 83 and Diamond Lake Road, the diverted traffic may travel on Elmwood Avenue/Lake View Avenue west of Diamond Lake Road and on West Hickory Street to the east of Diamond Lake Road to get to the grade-separated crossing on US 45. These roadways are two lanes with residences fronting on it, which is a configuration not conducive of additional through traffic.

A similar situation may occur in the Richton Park community, where IL 50 crosses the EJ&E line at-grade; however, a grade-separate crossing exists on each side of IL 50. These crossings are in close proximity to IL 50, but to get to these crossing on the south side of the rail line the diverted traffic would be required to travel on local residential streets that are not designed to accommodate the additional traffic.

Hawthorn Woods - No-Action

Hawthorn Woods has two roadways that cross the EJ&E rail line at-grade. Gilmer Road, a two-lane arterial, runs north/south crossing the EJ&E rail line northeast of the village center. Old McHenry Road, a four-lane divided arterial, runs east/west crossing the EJ&E rail line east of the village center.

Gilmer Road and Old McHenry Road would operate at LOS E-F and experience a calculated queue length that blocks no major roadways. According to the Village of Hawthorn Woods Comprehensive Plan 2004 and the 2020 Lake County Transportation Priority Plan, Gilmer Road widens from a two-lane arterial to a four-lane arterial that runs north/south crossing the EJ&E rail line northeast of the village center. The planned improvements to Gilmer Road help alleviate congestion at the crossing by improving the LOS from E-F to C-D.

With Gilmer Road and Old McHenry Road experiencing an LOS E-F, the roadway network in the vicinity of the crossings would operate at an unacceptable level of service.

Hawthorn Woods - Proposed Action

During the peak period under the Proposed Action, Old McHenry Road would experience a calculated queue length of approximately 1,190 feet compared to 645 feet for the No-Action Alternative. The Proposed Action conditions would block one major roadway, Midlothian Road, which is not blocked under the No-Action Alternative. Therefore, Old McHenry Road experiences a significant impact due to the Proposed Action ~~no major intersecting roadways would be blocked by queued vehicles at the crossings. The overall mobility effect of the Proposed Action would be minimal.~~

- **Old McHenry Road would experience a calculated Proposed Action queue length of approximately 1,190 feet compared to 645 feet for the No-Action Alternative. The Proposed Action conditions would block one major roadway, Midlothian Road, which is not blocked under the No-Action Alternative. Therefore, Old McHenry Road experiences a significant impact due to the Proposed Action. The DEIS did not identify Old McHenry Road as a significantly affected crossing.**

Lake Zurich - No-Action

Lake Zurich has four roadways that cross the EJ&E rail line at-grade and two grade-separated crossings. Oakwood Road, a two-lane collector, runs north/south crossing the EJ&E rail line north of the village center. Main Street, a two-lane arterial, runs east/west crossing the EJ&E rail line east of the village center. Old Rand Road, a two-lane arterial, runs east/west crossing the EJ&E rail line south of the village center. Ela Road, a two-lane arterial, runs north /south crossing the EJ&E rail line south of the village center.

Oakwood Road, ~~and~~ Old Rand Road and Main Street would operate at LOS A-B ~~C-D~~ while ~~Main Street~~ and Ela Road operates at LOS E-F.

Under the No-Action Alternative, Old Rand Road and Ela Road is both have queue lengths ~~the only roadway~~ that blocks major roadways because of No-Action queue lengths. During the peak period, Old Rand Road would experience a calculated queue length of approximately 305 feet, blocking one major roadway, IL 22. Ela Road would experience a calculated queue length of

~~approximately 780 feet, blocking one major roadway, South Rand Road (US 12) Old Rand Road would experience a calculated queue length of approximately 435 feet, blocking one major roadway, IL 22.~~

According to the 2020 Lake County Transportation Priority Plan, Ela Road widens from two lanes to four lanes. Lake County does not plan to change the alignment or its classification as an arterial. Widening Ela Road helps alleviate congestion at the crossing by improving the LOS to C-D.

A bypass route for IL 22 has recently been constructed that runs north/south providing a four-lane grade-separated crossing south of the village center. This bypass connects to Main Street and may alleviate congestion and queuing at this crossing. With the implementation of planned improvements and the availability of a viable alternative route, the roadway network would operate at an acceptable level of service.

For the No Action alternative, Oakwood Road, Old Rand Road and Main Street would operate at LOS A-B while Ela Road operates at LOS E-F. Main Street operated at E-F in the DEIS.

Under the No-Action Alternative, Old Rand Road and Ela Road both have queue lengths that block major roadways because of No-Action queue lengths. During the peak period, Old Rand Road would experience a calculated queue length of approximately 305 feet, blocking one major roadway, IL 22. Ela Road would experience a calculated queue length of approximately 780 feet, blocking one major roadway, South Rand Road (US 12). Ela Road No Action DEIS queue length is 775 feet.

Lake Zurich - Proposed Action

Under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the Oakwood Road ~~and Main Street~~ crossings. Therefore, Oakwood Road ~~and Main Street~~ would experience minimal effects due to the Proposed Action.

During the peak period under the Proposed Action, Old Rand Road would experience a calculated vehicle queue length of approximately ~~800~~565 feet, compared to ~~435~~305 feet for the No-Action Alternative. Both the No-Action and the Proposed Action queuing of Old Rand Road would block one major roadway, IL 22. Therefore, Old Rand Road would experience moderate effects due to the Proposed Action.

During the peak period under the Proposed Action, Ela Road would expense a calculated queue length of approximately ~~900~~1,425 feet, compared to ~~520~~780 feet for the No-Action Alternative. Both the No-Action and Proposed Action queuing of Ela Road would block one major roadway, South Rand Road (US 12). Therefore, Ela Road would experience moderate effects due to the Proposed Action.

During peak period under the Proposed Action, Main Street would experience a calculated queue length of approximately 580 feet, compared to 310 feet for the No-Action Alternative. The Proposed Action conditions would block two major roadways, Church Street and IL 22, which are not blocked under the No-Action Alternative. Therefore, Main Street experiences a significant impact due to the Proposed Action.

During the Proposed Action, Old Rand Road queue length changes from 550 to 565 feet. Both the No Action queue length and the Proposed Action queue length blocks IL 22, a major cross street east of the crossing. Therefore, Old Rand Road would experience moderate effects due to the Proposed Action.

During the Proposed Action, Ela Road queue length changes from 950 feet to 1,425 feet. Both the No Action queue length and the Proposed Action queue length blocks South Rand Road (US 12). Therefore, Ela Road would experience moderate effects due to the Proposed Action.

During peak period under the Proposed Action, Main Street would experience a calculated queue length of approximately 580 feet, compared to 310 feet for the No-Action Alternative. The Proposed Action conditions would block two major roadways, Church Street and IL 22, which are not blocked under the No-Action Alternative. Therefore, Main Street experiences a significant impact due to the Proposed Action.

Barrington - No-Action

Barrington has six roadways that cross the EJ&E rail line at-grade. Cuba Road, a four-lane undivided arterial, runs east/west crossing the EJ&E rail line north of the village center. Lake Zurich Road, a two-lane collector, runs north/south crossing the EJ&E rail line east of the village center. Northwest Highway, a four-lane arterial, runs northwest/southeast crossing the EJ&E rail line north of the village center. Hough Street (IL 59/IL 63), a two-lane divided arterial, runs north/south crossing the EJ&E rail line north of the village center. Lake Cook Road, a two-lane arterial, runs east/west crossing the EJ&E rail line south of the village center. Penny Road, a two-lane collector, runs east/west crossing the EJ&E rail line south of the village.

Lake Zurich Road and Penny Road would operate at LOS A-B while Cuba Road at LOS C-D. Northwest Highway, Hough Street (IL 59/IL 63), and Lake Cook Road would operate at LOS E-F.

During the peak periods under the No-Action Alternative, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

According to the 2020 Lake County Transportation Priority Plan, Cuba Road widens from two to four lanes. Widening Cuba Road helps alleviate congestion at the crossing by improving the LOS to A-B. In addition, Cuba Road parallels Lake Cook Road approximately 1.5 miles to the north, and may provide the available capacity to be a viable alternative route to the congested Lake Cook Road.

The village and IDOT are studying the possibility of an IL 59 bypass around the village. This project would occur later than 2015; however, it still helps to alleviate the congestion within the village core. With Northwest Highway, Hough Street (IL 59/IL 63), and Lake Cook Road experiencing an LOS of E-F, even with improvements to Cuba Road, the roadway network in the vicinity of the crossings would operate at an unacceptable level of service.

Barrington - Proposed Action

Under the Proposed Action, Hough Street (IL 59/IL 63) ~~is the only roadway that has~~ and Penny Road have queue lengths that would block a major roadway. During the peak period, Hough Street (IL 59/IL 63) would experience a calculated vehicle queue length of approximately ~~4,500~~ 1,405 feet, compared to ~~810~~760 feet for the No-Action conditions. The Proposed Action queuing of Hough Street (IL 59/IL 63) would block one major roadway, Northwest Highway, which is not blocked under the No-Action Alternative. Hough Street (IL 59/IL 63) would experience significant impacts due to the Proposed Action. During the peak period, Penny Road would experience a calculated vehicle queue length of approximately 315 compared to 170 feet for the No-Action Alternative. The proposed action queuing of Penny Road would block one major roadway, IL 59, which is not blocked under the No-Action Alternative. Therefore, Penny Road would experience significant impacts due to the Proposed Action.

Under the Proposed Action, Hough Street (IL 59/IL 63) ~~is the only roadway that has~~ and Penny Road has queue lengths that would block a major roadway. Hough Street No Action queue length changes from 810 feet to 760 feet. The Proposed Action queuing of Hough Street (IL 59) would block one major roadway, Northwest Highway, which is not blocked under the No-Action Alternative. Hough Street (IL 59) would experience significant impacts due to the Proposed Action.

Table E1.2-19 summarizes the results of the Lake County, Illinois analysis.

TABLE E1.2-19. HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY FOR NO-ACTION AND PROPOSED ACTION CONDITIONS (YEAR 2015)					
County	Street	2015 ADT	Roadway LOS	Queue Length	
				No- Action	Proposed Action
Lake	Diamond Lake Road	6,207	C	265	466
Lake	IL 60&83	29,009	F	590	1,061
Lake	Gilmer Road	18,622	F	719	1,328
Lake	Old McHenry Road	32,429	F	41	1,186
Lake	Oakwood Road	4,750	B	197	367
Lake	Main Street	7,474	B	310	577
Lake	Old Rand Road	7,474	B	303	561
Lake	Ela Road	21,408	F	776	1,421
Lake	Cuba Road	12,921	D	443	804
Lake	Lake Zurich Road	3,131	A	102	187
Lake	Northwest Highway	33,949	E	562	1,057
Lake	Hough Street IL 59&63	22,549	F	760	1,404

Western Cook County

Hoffman Estates - No-Action

Hoffman Estates has one roadway that crosses the EJ&E rail line at-grade and two that have grade-separated crossings. Shoe Factory Road, a two-lane collector, runs east/west crossing the EJ&E rail line west of the village center.

Shoe Factory Road would operate at LOS C-D and experience a calculated queue length that would block no major roadways. The roadway network in the vicinity of the crossing would operate at an acceptable level of service.

Hoffman Estates - Proposed Action

During the peak period under Proposed Action conditions, no major intersecting roadways would be blocked by queued vehicles at the crossing. The overall mobility effect of the Proposed Action would be minimal.

Elgin - No-Action

Elgin has one roadway that crosses the EJ&E rail line at-grade and three that have grade-separated crossings. West Bartlett Road is a collector that runs east/west crossing the EJ&E rail line south of the city. The roadway is a two-lane collector west of the crossing and a four-lane roadway east of the crossing.

West Bartlett Road would operate at LOS ~~C-D~~ E-F.

During the peak periods under the No-Action Alternative, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

According to the Cook County Highway Department's Highway Transportation Plan project list for 2008, West Bartlett Road widens to a four-lane divided roadway between Spitzer Road and IL 59, east of the EJ&E crossing. However, the West Bartlett Road Corridor Plan conducted by the Village of Bartlett suggests that Cook County would facilitate the widening of West Bartlett Road to the EJ&E railroad, with construction of a new at-grade crossing. Without these planned improvements, West Bartlett Road would operate at LOS E-F.

The Cook County Highway Transportation Plan and the Village of Bartlett's West Bartlett Road Corridor Plan recommend upgrading West Bartlett Road to a four-lane divided facility with a new at-grade crossing at the intersection with the EJ&E railroad.

With the proposed improvements, the roadway network would operate at an acceptable level of service.

- West Bartlett Road LOS changes from LOS C-D to LOS E-F.

Elgin - Proposed Action

During the peak period under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossings. The overall mobility effect of the Proposed Action would be minimal.

Table E1.2-20 summarizes the results of the Western Cook County, Illinois analysis.

County	Street	2015 ADT	Roadway LOS	Queue Length	
				No-Action	Proposed Action
Cook	Lake Cook Road	14,222	F	479	885
Cook	Penny Road	4,786	B	170	311
Cook	Shoe Factory Road	9,202	D	334	598
Cook	West Bartlett Road	17,209	F	587	978

Du Page County, Illinois

Bartlett - No-Action

Bartlett has one roadway that crosses the EJ&E rail line at-grade. Stearns Road is a four-lane divided arterial that runs east/west crossing the EJ&E rail line west of the village center. The Metra MD-W commuter rail line has an at-grade crossing with the EJ&E rail line within the community.

The CC&P/Stearns Road Corridor Design Report identifies the realignment of Stearns Road. McDonald Road would be extended from the west with a new bridge over the Fox River and connecting to the new Stearns Road alignment. This new bridge and realignment will result in an increase of the projected traffic volumes on Stearns Road. The construction is scheduled to be complete by 2010. Stearns Road would operate at LOS ~~C-D~~ E-F and experience a calculated queue length that would block no major roadways during the peak periods under the No-Action conditions.

The roadway network in the vicinity of the crossing would operate at an acceptable level of service.

- Stearns Road roadway LOS changes from LOS C-D to LOS E-F.

Bartlett - Proposed Action

During the peak period under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossing. The overall mobility effect of the Proposed Action would be minimal.

Wayne - No-Action

Wayne has one roadway that crosses the EJ&E rail line at-grade. Army Trail Road, a two-lane arterial, runs east/west crossing the EJ&E rail line north of the village center.

Army Trail Road would operate at LOS C-D. During the peak period under No-Action conditions, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

The roadway network in the vicinity of the crossing would operate at an acceptable level of service.

Wayne - Proposed Action

During the peak period under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossing. The overall mobility effect of the Proposed Action would be minimal.

West Chicago - No-Action

West Chicago has five roadways that cross the EJ&E rail line at-grade and two grade-separated crossings. Smith Road, a two-lane collector, runs east/west crossing the EJ&E rail line north of the city center. Hawthorne Lane, a two-lane collector, runs east/west crossing the EJ&E rail line north of the city center. Washington Street, a two-lane arterial, runs east/west crossing the EJ&E rail line north of the city center. Aurora Street, a two-lane collector, runs north/south crossing the EJ&E rail line north of the city center. Church Street, a two-lane collector, runs east/west crossing the EJ&E rail line north of the city center. The Metra UP-W commuter rail line has an at-grade crossing with the EJ&E rail line within the community.

Smith Road, ~~Hawthorne Lane~~, and Washington Street would operate at LOS C-D while Aurora Street and Church Street would operate at LOS A-B. Hawthorne Lane would operate at LOS E-F.

During the peak period under the No-Action Alternative, no major intersecting roadways would be blocked by queued vehicles at the crossings.

According to DuPage County and IDOT plans, no local improvements are planned for Smith Road. In addition, the City of West Chicago, DuPage County, and IDOT do not identify improvements for Washington Street, Aurora Street, or Church Street. However, West Chicago's public works department identifies current construction along Hawthorne Lane in the vicinity of the EJ&E crossing. This project includes upgrading Hawthorne Lane from a rural two-lane section to an urban three-lane section and is scheduled for completion in 2008. The addition of a two-way left-turn lane improves operations in the vicinity of the crossing by removing left-turns from through traffic along the corridor; however, it is not expected to significantly improve level of service or queuing at the railroad crossing. With the key streets operating above capacity, the overall level of mobility for local traffic in the West Chicago community would be unacceptable. However, the availability of a grade-separated crossing along North Avenue (IL 64) may provide relief by removing the through traffic from the congested roadways.

- Hawthorn Lane roadway LOS changes from LOS C-D to LOS E-F.

West Chicago - Proposed Action

During the peak period under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossings. The overall mobility effect of the Proposed Action would be minimal.

Naperville - No-Action

Naperville has one roadway that cross the EJ&E rail line at-grade and two grade-separated crossings. Diehl Road, a four-lane arterial, runs east/west crossing the EJ&E rail line north of the village center.

Diehl Road would operate at LOS C-D. During the peak period under the No-Action Alternative, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

The roadway network in the vicinity of the crossing would operate at an acceptable level of service.

Naperville - Proposed Action

During the peak period under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossing. The overall mobility effect of the Proposed Action would be minimal.

Aurora - No-Action

Aurora has three roadways that cross the EJ&E rail line at-grade and three that have grade-separated crossings. Liberty Street runs east/west crossing the EJ&E rail line; it is a two-lane undivided arterial west of the EJ&E crossing and a four-lane divided arterial east of the crossing. Ogden Avenue (US 34) is a four-lane divided arterial that runs east/west crossing the EJ&E rail line east of the city center. Montgomery Road, a two-lane collector, runs east/west crossing the EJ&E rail line east of the city center.

Liberty Street, Ogden Avenue, and Montgomery Road would operate at LOS E-F. New York Street parallels Liberty Street and provides a grade-separated crossing of the EJ&E rail line approximately 0.5 mile south of Liberty Street, providing a potential alternative route to the congested Liberty Street. McCoy Drive parallels Ogden Avenue (US 34) and provides a grade-separated crossing of the EJ&E rail line approximately 0.7 mile north of Ogden Avenue (US 34), providing a potential alternative route to the congested Ogden Avenue (US 34).

During the peak periods under the No-Action Alternative, no major intersecting roadways would be blocked by queued vehicles at the crossings.

According to DuPage County and IDOT plans, no local roadway improvements are planned for Liberty Street. However, the DuPage County Comprehensive Roadway Plan does identify the need to upgrade intersections along Ogden Avenue (US 34) in the vicinity of the EJ&E crossing. These improvements may improve operations along the roadway, but would not provide additional roadway capacity at the crossing location. DuPage County and IDOT do not currently have plans to upgrade Montgomery Road near the railroad crossing. The City of Aurora Comprehensive Plan identifies a potential extension of US 30 to create a bypass route south of the city. This bypass route would run east/west approximately 1.5 miles south of Montgomery Road and could possibly alleviate congestion along parallel routes. With the key streets operating above capacity, the overall level of mobility for the Aurora community would be unacceptable; however, the availability of alternative, grade-separated routes, along with a planned bypass to the south, may provide a much-needed relief by removing traffic from the congested roadways.

Aurora - Proposed Action

During the peak periods under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossings. The overall mobility effect of the Proposed Action would be minimal.

Table E1.2-21 summarizes the results of the DuPage County, Illinois analysis.

TABLE E1.2-21. HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY FOR NO-ACTION AND PROPOSED ACTION CONDITIONS (YEAR 2015)					
County	Street	2015 ADT	Roadway LOS	Queue Length	
				No- Action	Proposed Action
DuPage	Stearns Road	27,604	E	486	815
DuPage	Army Trail Road	7,392	C	224	452
DuPage	Smith Road	7,123	C	220	435
DuPage	Hawthorne Lane	20,024	D E	694	1,430
DuPage	Washington Street	12,095	D	768	1,121
DuPage	Aurora Street	364	A	22	30
DuPage	Church Street	364	A	22	31
DuPage	Diehl Road	17,341	C	779	1,059
DuPage	Liberty Street	16,111	F	912	1,148
DuPage	Ogden Avenue US 34	46,110	F	1,083	1,330
DuPage	Montgomery Road	27,131	F	1,274	1,597

Will County, Illinois

Plainfield - No-Action

Plainfield has 14 roadways that cross the EJ&E rail line at-grade and two grade-separated crossings. Hafenrichter Road, a two-lane collector, runs east/west crossing the EJ&E rail line north of the village. Wolf’s Crossing Road, a two-lane collector, runs east/west crossing the EJ&E rail line north of the village. 111th Street, a two-lane collector, runs east/west crossing the EJ&E rail line north of the village. 119th Street, a two-lane collector, runs east/west crossing the EJ&E rail line north of the village. 127th Street, a two-lane collector, runs east/west crossing the EJ&E rail line north of the village. 135th Street, a two-lane collector, runs east/west crossing the EJ&E rail line north of the village. Van Dyke Road, a two-lane collector, runs north/south crossing the EJ&E rail line north of the village center. 143rd Street, a two-lane collector, runs east/west crossing the EJ&E rail line north of the village center. Naperville Road, a two-lane undivided arterial, runs northeast/southwest crossing the EJ&E rail line north of the village center. Main Street (IL 126) is a two-lane undivided arterial that runs southwest/northeast crossing the EJ&E rail line east of the village center. Center Street, a two-lane collector, runs north/south crossing the EJ&E rail line east of the village center. Eastern Avenue, a two-lane collector, runs north/south crossing the EJ&E rail line east of the village center. Lockport Road, a two-lane collector, runs east/west crossing the EJ&E rail line south of the village center. Renwick Road is a two-lane undivided arterial that runs east/west crossing the EJ&E rail line south of the village center.

Naperville Road, Center Street, ~~and Eastern Avenue, and 119th Street~~ would operate at LOS A-B. Hafenrichter Road, ~~119th Street, 127th Street, Wolf's Crossing Road,~~ Van Dyke Road, 143rd Street, and Renwick Road would operate at LOS C-D. 127th Street, Wolf's Crossing Road, 111th Street, 135th Street, Main Street (IL 126), and Lockport Road would operate at LOS E-F.

Under the No-Action Alternative, Main Street (IL 126) and 127th Street are the only roadways that have queue lengths that would block a major roadway. 127th Street would experience a calculated queue length of approximately ~~325665~~ feet, blocking one major roadway, US 30. Main Street (IL 126) would experience a calculated queue length of approximately ~~940820~~ feet, blocking one major roadway, Division Street (IL 59).

According to the Village of Plainfield Comprehensive Plan Update and the Will County 2020 Transportation Framework Plan, 119th Street widens from two to four lanes. Widening 119th Street helps alleviate congestion at the crossing by improving the LOS to A-B.

According to the Village of Plainfield Comprehensive Plan Update, 143rd Street widens from a two-lane collector to a five-lane arterial. The plan also calls for extending 143rd Street to connect adjacent arterials and function as a primary truck route around the village. Widening 143rd Street helps alleviate congestion at the crossing by improving the LOS to A-B.

According to the Village of Plainfield Comprehensive Plan Update and the Will County 2020 Transportation Framework Plan, Renwick Road upgrades from a two-lane undivided arterial to a four-lane divided arterial. Widening Renwick Road helps alleviate congestion at the crossing by improving the LOS to A-B.

The Will County 2020 Transportation Framework Plan and the City of Aurora Comprehensive Plan identify the future extension of 95th Street to US 30, parallel to Wolf's Crossing Road, approximately 2,100 feet to the north. In addition, the Village of Plainfield Comprehensive Plan Update suggests closing the connection between Naperville Road and Division Street (IL 59) and re-routing traffic to Main Street (IL 126) east of the EJ&E crossing. Naperville Road would be upgraded north of this realignment from a two-lane arterial to a three or four-lane section. The Village of Plainfield Comprehensive Plan Update also recommends improving Main Street (IL 126) to accommodate bicycles and pedestrians, but no capacity upgrades are planned. The plan does suggest re-assigning IL 126 north to 143rd Street to remove through and truck traffic from the village core. Upgrades to Ferguson Road/119th Street, 143rd Street, and Renwick Road, all approximately 1 mile south of 111th Street, 135th Street, and Lockport Road, respectively, may provide the available capacity to be viable alternative routes for the congested roadways.

In addition to the above-mentioned improvements, the Village of Plainfield Comprehensive Plan Update and the Will County 2020 Transportation Framework Plan also recommend upgrading US 30 from a two-lane undivided arterial to a four-lane divided arterial in the vicinity of the EJ&E railroad. This improvement could provide increased mobility in and around the Plainfield community.

Even with proposed improvements, the roadway network in the vicinity of the crossings would operate at an unacceptable level of service.

Plainfield - Proposed Action

The mobility effects of the Proposed Action would be minimal on all roadways except 127th Street, 135th Street, and Main Street (IL 126):

- 127th Street would experience a calculated queue length of approximately ~~325665~~ 425870 feet, compared with ~~325665~~ feet under the No-Action Alternative. Both the Proposed Action and No-Action alternatives block one major roadway, US 30.

- Main Street (IL 126) would experience a calculated queue length of approximately ~~910~~1,085 feet, compared with ~~1,200~~820 feet under the No-Action Alternative. Both the Proposed Action and No-Action alternatives block one major roadway, Division Street (IL 59). Both 127th Street and Main Street would experience moderate effects due to the Proposed Action.
- 135th Street would experience a calculated queue length of approximately ~~725~~855 feet, compared with ~~540~~640 feet under the No-Action Alternative. The Proposed Action would block one major roadway, US 30, which is not blocked under the No-Action Alternative. 135th Street would experience a significant impact due to the Proposed Action
- Naperville Road would experience a calculated queue length of approximately 440 feet, compared with 335 feet under the No-Action Alternative. The Proposed Action would block one major roadway, Division Street (IL 59). Both Naperville Road and 135th Street would experience a significant impact due to the Proposed Action.
- 119th Street roadway LOS changes from LOS C-D to LOS A-B.
- 127th Street roadway LOS changes from LOS C-D to LOS E-F.
- 127th Street No Action queue length changes from 325 feet to 665 feet, blocking one major roadway, US 30. 127th Street Proposed Action queue length changes from 425 feet to 870 feet. Both the Proposed Action and No-Action alternatives block one major roadway, Division Street (IL 59). 127th Street would experience moderate effects due to the Proposed Action
- Main Street No Action queue length changes from 910 feet to 1,085 feet. Main Street Proposed Action queue length changes from 1,200 feet to 820 feet. Both the Proposed Action and No-Action alternatives block one major roadway, Division Street (IL 59). Main Street would experience moderate effects due to the Proposed Action
- 135th Street No Action queue length changes from 725 feet to 825 feet. 135th Proposed Action queue length changes from 540 feet to 640 feet. Both the Proposed Action and No-Action alternatives block one major roadway, Division Street (IL 59). 135th Street would experience moderate effects due to the Proposed Action.
- Naperville Road No Action queue length changes from 335 feet to 440 feet. Naperville Road Proposed Action queue length changes from 250 feet to 335 feet. The Proposed Action would block one major roadway, Division Street (IL 59), which is not blocked under the No-Action Alternative. Naperville Road would experience a significant impact due to the Proposed Action.

Crest Hill - No-Action

Crest Hill has three roadways that cross the EJ&E rail line at-grade and three that have grade-separated crossings. Essington Road, a two-lane collector, runs north/south crossing the EJ&E rail line north of the village center. Division Street, a four-lane collector, runs east/west crossing the EJ&E rail line north of the village center. Gaylord Road, a two-lane collector, runs north/south crossing the EJ&E rail line south of the village center.

Essington Road, and Division Street would operate at LOS A-B while Gaylord Road would operate at LOS C-D.

During the peak period under the No-Action Alternative, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

With the availability of multiple at-grade and grade-separated crossings operating below capacity, the roadway network in the vicinity of the crossings would operate at an acceptable level of service.

Crest Hill - Proposed Action

Crest Hill has three roadways that cross the EJ&E rail line at-grade and three grade-separated crossings. Essington Road, a two-lane collector, runs north/south crossing the EJ&E rail line north of the village center. Division Street is a four-lane collector that runs east/west crossing the EJ&E rail line north of the village center. Gaylord Road, a two-lane collector, runs north/south crossing the EJ&E rail line south of the village center.

During the peak period under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossings. The overall mobility effect of the Proposed Action would be minimal.

Joliet - No-Action

Joliet has five roadways that cross the EJ&E rail line at-grade and five that have grade-separated crossings. Woodruff Road, a two-lane collector, runs east/west crossing the EJ&E rail line north of the city center. Washington Street, a two-lane undivided arterial, runs east/west crossing the EJ&E rail line east of the city center. Briggs Street, a two-lane undivided arterial, runs north/south crossing the EJ&E rail line east of the city center. Rowell Avenue, a two-lane collector, runs north/south crossing the EJ&E rail line twice east of the city center. Mills Road, a two-lane undivided arterial, runs east/west crossing the EJ&E rail line south of the city center.

Rowell Avenue and Mills Road would operate at LOS A-B, Washington Street would operate at LOS C-D. Woodruff Road and Briggs Street would operate at LOS E-F. Charlesworth Avenue provides a grade-separated crossing approximately 1,200 feet southeast of the Woodruff Road crossing.

Under the No-Action Alternative, Briggs Street is the only roadway that has queue lengths that would block a major roadway. During the peak period under the No-Action Alternative, the queue length along Briggs Street would be approximately 655 feet, which would block one major street, Manhattan Road (US 52). ~~During the peak period under the Proposed Action, the queue length along Briggs Street would be approximately 950 feet, which would block one major street, Manhattan Road (US 52).~~ According to the City of Joliet, Will County, and IDOT plans, no local roadway improvements are planned for Woodruff Road, Washington Street, or Briggs Street; however, Charlesworth Avenue and US 30, approximately 2,100 feet north of Washington Street, provide grade-separated crossings near Woodruff Avenue and Washington Street, respectively. Will County also identifies upgrading the separate-grade crossing of I-80 from four lanes to six lanes south of the city. This project may occur later than 2015; however, it helps alleviate the congestion within the city core. Cherry Hill Road and Gougar Road parallel Briggs Street to the east and may provide alternative routes for the congested Briggs Street. The Metra RI commuter rail line has an at-grade crossing with the EJ&E rail line within the community. With the key streets operating above capacity and experiencing long queues, the overall level of mobility for the Joliet community would not be good. However, the availability of alternative routes may provide much-needed relief by removing traffic from the congested roadways.

Joliet - Proposed Action

The mobility effects of the Proposed Action would be minimal on South Rowell Avenue and Mills Road. Under the Proposed Action, Briggs Street is the only roadway that has queue lengths that would block a major roadway. During the peak period under the Proposed Action, the queue length along Briggs Street would be approximately 950 feet, compared to 655 feet under the No-Action Alternative. Both the Proposed Action and No-Action alternatives would block one major street, Manhattan Road (US 52). The mobility effects of the Proposed Action would be moderate on Briggs Street.

The Crossing LOS under the Proposed Action conditions for both Woodruff Road and Washington Street is a Crossing LOS E-F, compared to Crossing LOS A-B under the No-Action Alternative. Low speeds of the freight trains entering and leaving the train yard in the vicinity of these roadways create this low LOS. This reflects a significant impact to Woodruff Road and Washington Street due to the Proposed Action.

New Lenox - No-Action

New Lenox has five roadways that cross the EJ&E rail line at-grade. Gougar Road, Nelson Road, Cedar Road, Spencer Road and Schoolhouse Road are two-lane collectors that run north/south crossing the EJ&E rail line south of the village center.

Spencer Road would operate at LOS A-B while Gougar Road, Nelson Road and Schoolhouse Road would operate at LOS C-D. Cedar Road operates at LOS E-F. Gougar Road parallels Cedar Road approximately 2 miles to the west, Nelson Road parallels Cedar approximately 1 mile to the west, and Spencer Road, a two-lane collector, parallels Cedar approximately 1.25 miles to the east. These roadways may provide the available capacity to be a viable alternative route for the congested Cedar Road.

During the peak periods under the No-Action Alternative, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

According to Will County and IDOT plans, no local roadway improvements are planned for Nelson Road, Cedar Road, or Schoolhouse Road. However, the Will County 2020 Transportation Framework Plan recommends Gougar Road be widened from a two-lane undivided collector to a four-lane divided arterial that runs north/south crossing the EJ&E rail line south of the village center. Gougar Road would operate at LOS A-B with the improvements. The improvement may have a positive effect on the operations of Cedar Road. In addition, other roadways parallel to Cedar Road may alleviate congestion on this roadway. Only one roadway would operate at over capacity and none of the roadways experience excessive queuing. Therefore, with the availability of alternate routes for Cedar Road, the overall level of mobility for the New Lenox community would be acceptable.

New Lenox - Proposed Action

During the peak periods under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossings. The overall mobility effects of the Proposed Action would be minimal.

Frankfort - No-Action

Frankfort has five roadways that cross the EJ&E rail line at-grade and one that has a grade-separated crossing. Harlem Avenue, Pfeiffer Road/88th Avenue, Center Road, and Wolf Road are two-lane arterials that run north/south crossing the EJ&E rail line. Sauk Trail, a two-lane arterial, runs east/west crossing the EJ&E rail line.

Sauk Trail and Center Road would operate at LOS A-B while Harlem Avenue, Pfeiffer Road/88th Avenue, ~~Center Road~~, and Wolf Road would operate at LOS C-D.

During the peak period under the No-Action Alternative, Pfeiffer Road/88th Avenue is the only roadway that has queue lengths that would block a major roadway. In addition, Pfeiffer Road/88th Avenue would experience a calculated vehicle queue length of approximately 360 feet, which would block one major roadway, Sauk Trail.

According to the Village of Frankfort 2007 Transportation Master Plan, Pfeiffer Road/88th Avenue and Sauk Trail widen from two lanes to three lanes, including a center turn lane. These upgrades, along with other roadway network improvements, may occur later than 2015; however, they may help

to reduce queuing along Pfeiffer Road/88th Avenue at the EJ&E crossing. In addition, the grade-separated crossing, as well as the at-grade crossings operating at LOS D or better in the area, reflect a roadway network that would be serving the local community well by providing an acceptable level of overall mobility.

- **Center Road roadway LOS changes from LOS C-D to LOS A-B.**

Frankfort - Proposed Action

During the peak period under the Proposed Action, Pfeiffer Road/88th Avenue is the only roadway that has queue lengths that would block a major roadway. During the peak period under the Proposed Action, Pfeiffer Road/88th Avenue would experience a calculated vehicle queue length of approximately 510 feet, compared with 360 feet under the No-Action Alternative. Both the Proposed Action and No-Action alternatives would block one major roadway, Sauk Trail.

The overall mobility effects of the Proposed Action would be minimal, with the exception of Pfeiffer Road/88th Avenue. Proposed Action and No-Action queue lengths on Pfeiffer Road/88th Avenue block one major roadway. Pfeiffer Road/88th Avenue would experience moderate effects due to the Proposed Action.

Table E1.2-22 summarizes the results of the Will County, Illinois analysis.

TABLE E1.2-22. HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY FOR NO-ACTION AND PROPOSED ACTION CONDITIONS (YEAR 2015)					
COUNT Y	STREET	2015 ADT	ROADW AY LOS	QUEUE LENGTH	
				NO- ACTI ON	PROPOS ED ACTION
Will	Hafenrichter Road	5,657	C	266	333
Will	Wolf's Crossing Road	9,593	D	461	577
Will	111 th Street	10,454	E	502	629
Will	Ferguson Road - 119 th Street	3,690	B	182	227
Will	127 th Street - Chapins Road	13,160	F	665	867
Will	135 th Street	13,898	F	636	852
Will	Van Dyke Road	6,921	C	295	389
Will	143 rd Street	9,716	D C	406	535
Will	Plainfield-Naperville Road	8,117	B	332	438
Will	Main Street	20,015	F	818	1,081
Will	Center Street	1,845	A	75	100
Will	Eastern Avenue	3,444	A	141	186
Will	Lockport Road	10,085	E	412	545
Will	Renwick Road	11,807	D	473	637
Will	Essington Road	4,983	B	208	274
Will	Division Street	7,613	B	332	446
Will	Gaylord Road	5,591	C	263	351

TABLE E1.2-22. HIGHWAY/RAIL AT-GRADE CROSSING VEHICLE DELAY FOR NO-ACTION AND PROPOSED ACTION CONDITIONS (YEAR 2015)					
COUNT Y	STREET	2015 ADT	ROADW AY LOS	QUEUE LENGTH	
				NO- ACTI ON	PROPOS ED ACTION
Will	Woodruff Road	10,659	E	1,056	1,814
Will	Washington Street	11,714	C	1,550	2,371
Will	North Rowell Avenue	3,184	A	220	395
Will	Mills Road	3,115	A	163	236
Will	South Rowell Avenue	3,184	A	158	223
Will	Briggs Street	13,842	E	654	946
Will	South Gougar Road	8,063	D	411	551
Will	Nelson Road	7,336	C	347	479
Will	Cedar Road	10,299	E	499	672
Will	South Spencer Road	3,104	A	147	202
Will	Schoolhouse Road	8,721	D	412	569
Will	Wolf Road	9,966	C	508	698
Will	Center Road	7,752	B	264	364
Will	Sauk Trail	3,461	A	160	226
Will	Pfeiffer Road / 88 th Avenue	7,752	D	358	506
Will	Harlem Avenue	12,336	D	267	363

Southeastern Cook County, Illinois

Matteson - No-Action

Matteson has three roadways that cross the EJ&E rail line at-grade and three that have grade-separated crossings. Cicero Avenue/IL 50 is a four-lane divided arterial that runs north/south crossing the EJ&E rail line and connects two arterials, Sauk Trail and 211th Street/US 30. Ridgeland Avenue and Main Street are two-lane collectors that run north/south crossing the EJ&E rail line.

Ridgeland Avenue and Main Street operate at LOS A-B while Cicero Avenue/IL 50 would operate at LOS E-F C-D. I-57 parallels Cicero Avenue/IL 50 by approximately 0.5 mile west and can provide the available capacity to be a viable separate grade alternative route for the congested Cicero Avenue/IL 50. During the peak periods under the No-Action Alternative, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

According to Cook County and IDOT plans, no local roadway improvements are planned within the village core. The multiple grade-separated crossings throughout the area reflect a roadway network that would be serving the local community to provide acceptable level of overall mobility.

- Cicero Avenue/IL 50 roadway LOS changes from LOS E-F to LOS C-D.

Matteson - Proposed Action

During the peak periods under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossings. The overall mobility effects of the Proposed Action would be minimal.

Park Forest - No-Action

Park Forest has one roadway that crosses the EJ&E rail line at-grade. Western Avenue, a five-lane arterial, runs north/south crossing the EJ&E rail line.

Western Avenue would operate at LOS C-D; at the peak periods under the No-Action Alternative, no major intersecting roadways would be blocked by the queued vehicles at the crossing. With Western Avenue operating at LOS C-D, the overall level of mobility for the Park Forest community would be acceptable.

Park Forest - Proposed Action

During the peak periods under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossing. The overall mobility effects of the Proposed Action would be minimal.

Chicago Heights - No-Action

Chicago Heights has six roadways that cross the EJ&E rail line at-grade and one grade-separated crossing. Chicago Road/IL 1, a four-lane divided arterial that runs north/south crossing the EJ&E rail line, connects two arterials, 26th Street and 14th Street/US 30. Halsted Street and East End Avenue are two-lane collectors that run north/south crossing the EJ&E rail line south of the city center. State Street and Cottage Grove Avenue are four-lane divided arterials that run north/south crossing the EJ&E rail line east of the city center. Wentworth Avenue, a two-lane collector, runs north/south crossing the EJ&E rail line east of the city center.

East End Avenue, State Street, Cottage Grove Avenue, and Wentworth Avenue would operate at LOS A-B while Halsted Street and Chicago Road/IL 1 would operate at LOS C-D. ~~Chicago Road/IL 1 would operate at LOS E-F. State Street parallels Chicago Road/IL 1 approximately 1.25 miles east and may provide the available capacity to be a viable alternative route for the congested Chicago Road/IL 1.~~ The proposed Metra southeast commuter rail line has an at-grade crossing with the Elsdon Subdivision within the community.

During peak periods under the No-Action Alternative, no major intersecting roadways would be blocked by queued vehicles at the crossings.

According to Cook County and IDOT plans, there are planned improvements within the village core. The Cook County Highway Transportation Plan identifies plans for railroad crossing safety improvements at a railroad crossing along State Street south of Joe Orr Road. This improvement may have a positive effect on the operations of the roadway network within the village core. There are plans to widen the roadway, upgrade the railroad crossing, and improve traffic signal and illumination for Western Avenue between Illinois Street and Steger Road. ~~With the exception of Chicago Road/IL 1, †~~ The grade-separated crossing, as well as the multiple at-grade crossings operate at LOS D or better through the area, reflecting a roadway network that is serving the local community well by providing an acceptable level of overall mobility.

- Chicago Road/IL 1 roadway LOS changes from LOS E-F to LOS C-D.

Chicago Heights - Proposed Action

During the peak periods under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossings. The overall mobility effects of the Proposed Action would be minimal.

Sauk Village - No-Action

Sauk Village has one roadway that crosses the EJ&E rail line at-grade and one that has a grade-separated crossing. Torrence Avenue, a two-lane undivided arterial, runs north/south crossing the EJ&E rail line.

Torrence Avenue would operate at LOS C-D and at peak periods under the No-Action Alternative, no major intersecting roadways would be blocked by queued vehicles at the crossing.

Sauk Village - Proposed Action

During the peak periods under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossing. The overall mobility effects of the Proposed Action would be minimal.

Lynwood - No-Action

Lynwood has one roadway that crosses the EJ&E rail line at-grade. Lincoln Highway/US 30, a four-lane divided arterial, runs north/south crossing the EJ&E rail line and connects two arterials, Sauk Trail and Glenwood Dyer Road.

During the peak period under the No-Action Alternative, no major intersecting roadways would be blocked by queued vehicles at the crossing.

According to Cook County and IDOT plans, no local roadway improvements are planned for Lincoln Highway/US 30 in the vicinity of the crossing. With no alternative routes and Lincoln Highway/US 30 operating over capacity, the overall level of mobility for the Lynwood community would be unacceptable.

Lynwood - Proposed Action

During the peak period under the Proposed Action, Lincoln Highway/US 30 would experience a calculated vehicle queue length of approximately ~~1,275~~ 940 feet, compared with ~~860~~ 635 feet during the No-Action Alternative. The Proposed Action queuing would block one major roadway, Sauk Trail, which is not blocked under the No-Action Alternative. The blockage of Sauk Trail under the Proposed Action is a significant impact to Lincoln Highway/US 30.

- **Lincoln Highway/US 30 No Action queue length changes from 1,275 feet to 940 feet. Lincoln Highway/US 30 Proposed Action queue length changes from 860 feet to 635 feet. The Proposed Action queuing would block one major roadway, Sauk Trail, which is not blocked under the No-Action Alternative. The blockage of Sauk Trail under the Proposed Action is a significant impact to Lincoln Highway/US 30.**

Table E1.2-23 summarizes the results of the Southeastern Cook County, Illinois analysis.

County	Street	2015 ADT	Roadway LOS	Queue Length	
				NO-ACTION	PROPOSED ACTION
Cook	Ridgeland Avenue	3,642	B	158	214
Cook	Cicero Avenue/IL 50	23,281	D	504	777
Cook	Main Street	4,375	B	173	262
Cook	Western Avenue	24,717	D	528	863
Cook	Chicago Road/IL 1	23,390	D	718	1,091
Cook	West End Avenue/South Halsted Street	5,956	C	396	604
Cook	East End Avenue	5,086	B	325	515
Cook	Wentworth Avenue	4,563	B	292	467
Cook	State Street	7,656	A	418	690
Cook	Cottage Grove Avenue	5,578	A	121	179
Cook	Torrence Avenue	8,968	C	337	486
Cook	Lincoln Highway/US 30	29,237	E	634	939

Lake County, Indiana

Dyer - No-Action

Dyer has two roadways that cross the EJ&E rail line at-grade and one that has a grade-separated crossing. Hart Street is a two-lane undivided arterial that runs north/south crossing the EJ&E rail line and connects two arterials, Sauk Trail and Matteson Street. Lake Street, a two-lane collector, runs north/south crossing the EJ&E rail line west of the village center. Hart Street, a two-lane undivided arterial, runs north/south crossing the EJ&E rail line west of the village center. Hart Street becomes Matteson Street north of the EJ&E rail line.

Lake Street would operate at LOS A-B. Hart Street would operate at LOS E-F and no improvements are planned for this roadway. Lake Street parallels Hart Street approximately 700 feet to the west; therefore, Lake Street can provide the available capacity to be a viable alternative route for the congested Hart Street.

During the peak periods under the No-Action Alternative, ~~no major intersecting roadways would be blocked by queued vehicles at the crossings.~~ Hart Street would experience a calculated queue length of approximately 860 feet, which will block one major roadway, Matteson Street.

According to Lake (IN) County and INDOT plans, no local roadway improvements are planned for Hart Street. The close proximity of other alternative crossing routes and available capacity at these crossing locations allow for good overall mobility in the Dyer area.

Dyer - Proposed Action

During the peak periods under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the Lake Street crossings. ~~The overall mobility effects of the Proposed~~

Action would be minimal. Therefore, Lake Street would experience minimal effects due to the Proposed Action

During the peak period under the Proposed Action, Hart Street would experience a calculated vehicle queue length of approximately 1,275 feet, compared to 860 feet for the No-Action Alternative. Both the No-Action and Proposed Action queuing of Hart Street would block one major roadway, Matteson Street. Therefore, Hart Street would experience moderate effects due to the Proposed Action.

Schererville - No-Action

Schererville has two roadways that cross the EJ&E rail line at-grade and one that has a grade-separated crossing. Kennedy Avenue is a two-lane undivided arterial that runs north/south crossing the EJ&E rail line and connects two arterials, Main Street and Joliet Street. Airport Road is a two-lane undivided collector that runs north/south crossing the EJ&E rail line.

Kennedy Avenue would operate at LOS E-F. Indianapolis Boulevard, which runs parallel to Kennedy Avenue approximately 0.5 mile west, is a five-lane divided arterial that provides an alternative access route with a grade separated crossing. Airport Road would operate at LOS A-B.

During peak periods under the No-Action Alternative, no major intersecting roadways would be blocked by queued vehicles at the crossings.

According to Lake (IN) County and INDOT plans, no local roadway improvements are planned within the village core. The close proximity of a grade-separated alternative route would allow for good overall mobility in the Schererville area.

Schererville - Proposed Action

During the peak periods under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossings. The overall mobility effects of the Proposed Action would be minimal.

Griffith - No-Action

Griffith has seven roadways that cross the EJ&E rail line at-grade in close proximity to each other and one grade-separated crossing. Broad Street, a two-lane undivided arterial, runs north/south crossing the EJ&E rail line. Main Street, a two-lane collector, runs east/west. 45th Avenue, a four-lane collector, runs east/west. 40th Place, a two-lane collector, runs east/west. Lake Street, Miller Street, and Elm Street are two-lane collectors that run east/west.

Main Street, Broad Street, 45th Avenue, and 40th Place would operate at LOS E-F and Lake Street, Miller Street, and Elm Street would operate at LOS D or better. Broad Street does not have any good alternative route. Kennedy Avenue runs west of Broad Street and would operate at LOS E-F and Colfax Street runs east of Broad Street and the LOS data is not available during the time of this study. Lake Street is approximately 1,320 feet north of Main Street and would provide the additional capacity needed to be a viable alternative route to the congested Main Street. Elm Street is approximately 2,640 feet south of Main Street would provide the additional capacity needed to be a viable alternative route to the congested 45th Avenue. Ridge Road is a grade-separated crossing approximately 1,690 feet north of 40th Place and would provide the additional capacity needed to be a viable alternative route to the congested 40th Place.

During the peak periods under the No-Action Alternative, Broad Street is the only roadway that has queue lengths that would block a major roadway. At the peak period under the No-Action Alternative, Broad Street would experience a calculated vehicle queue length of approximately ~~905~~1,315 feet, which would block one major roadway, Main Street.

According to Lake (IN) County and INDOT plans, no local roadway improvements are planned within the village core. With Broad Street operating over capacity with no alternative routes, the overall mobility in the Griffith area would not be acceptable.

Griffith - Proposed Action

During the peak periods under the Proposed Action, Broad Street is the only roadway that has queue lengths that would block a major roadway. At peak periods under the Proposed Action, Broad Street would experience a calculated vehicle queue length of approximately ~~1,615~~ 1,920 feet, compared with ~~905~~ 1,315 feet under the No-Action Alternative. Under both the Proposed Action and No-Action alternatives, Broad Street would block one major roadway, Main Street.

The overall mobility effects of the Proposed Action would be minimal, with the exception of Broad Street, which would experience moderate effects due to the Proposed Action.

- Broad Street No Action queue length changes from 905 feet to 1,315 feet. Broad Street Proposed Action queue length changes from 1,615 feet to ~~920~~ 1,920 feet. Both the No-Action and Proposed Action queuing of Broad Street would block one major roadway, Main Street. Therefore, Main Street would experience moderate effects due to the Proposed Action.

Gary - No-Action

Gary has four roadways that cross the EJ&E rail line at-grade in close proximity to each other and seven grade-separated crossings. 25th Avenue, a two-lane collector, runs east/west. 15th Avenue is a two-lane undivided arterial that runs east/west crossing the EJ&E rail line. Ninth Avenue, a two-lane collector, runs east/west crossing the EJ&E rail line. Fifth Avenue, a four-lane arterial, runs east/west crossing the EJ&E rail line.

Ninth Avenue and 25th Avenue would operate at LOS A-B, Fifth Avenue would operate at LOS C-D, and 15th Avenue would operate at LOS E-F. Fifth Avenue is approximately 1 mile north of 15th Avenue and 25th Avenue is approximately 1 mile south of 15th Avenue; both of these roadways would provide the additional capacity needed to be a viable alternative route to the congested 15th Avenue.

During the peak periods under the No-Action Alternative, no major intersecting roadways would be blocked by queued vehicles at the crossings.

According to Lake (IN) County and INDOT plans, no local roadway improvements are planned within the city core. Close proximity of alternative crossing routes and available capacity at existing crossing locations allow for good overall mobility in the Gary area.

Gary - Proposed Action

During the peak periods under the Proposed Action, no major intersecting roadways would be blocked by queued vehicles at the crossings. The overall mobility effects of the Proposed Action would be minimal.

Table E1.2-24 summarizes the results of the Lake County, Indiana analysis.

County	Street	2015 ADT	Roadway LOS	Queue Length	
				NO-ACTION	PROPOSED ACTION
Lake (IN)	Lake Street	5,067	B	220	318
Lake (IN)	Hart Street	20,268	F	859	1,272
Lake (IN)	Airport Road	3,818	B	146	215
Lake (IN)	Kennedy Avenue	17,076	F	665	981
Lake (IN)	Broad Street	19,572	F	904 1,311	1,916
Lake (IN)	Main Street	10,960	E	505	904
Lake (IN)	Lake Street	6,524	C	275	488
Lake (IN)	East Miller Street	6,524	C	261	460
Lake (IN)	Elm Street	8,090	C	316	501
Lake (IN)	45 th Avenue	23,486	E	439	727
Lake (IN)	40 th Place	14,222	F	521	861
Lake (IN)	25 th Avenue	4,187	B	162	238
Lake (IN)	15 th Avenue	19,890	F	771	1,131
Lake (IN)	9 th Avenue	4,187	B	159	233
Lake (IN)	5 th Avenue	28,467	D	537	807

CN Subdivision Evaluation

The second step in assessing the effects of the Proposed Action on 2015 roadway conditions was to summarize highway/rail at-grade crossings along CN subdivisions that meet the Board’s analysis thresholds, and to identify the communities in which those crossings are located. The LOS and vehicle queue length results for each subdivision at-grade crossing location are contained in Table E1.2-11 and Tables E1.2-13 through E1.2-17, respectively. Roadways with an LOS E or LOS F were designated as critical. Based on the LOS and queue length results, SEA evaluated the 2015 roadway network and overall mobility in the vicinity of each of the critical roadways. The narrative below discusses the 2015 conditions of the roadway network in the vicinity of the highway/rail at-grade crossings within each community, which include the network connectivity and vehicle queue lengths associated with critical crossings. The vehicle queue lengths were calculated for the existing conditions and the Proposed Action. The narratives identify only the vehicle queue lengths that may block a major roadway, in turn affecting the community’s level of overall mobility.

The evaluation summary has been divided into sections that summarize each community located along each of the CN subdivisions. Table E1.2-25 summarizes the resulting 2015 roadway LOS for locations along the CN subdivisions. Tables E1.2-13 through E1.2-17 present the resulting 2015 LOS for highway/rail at-grade crossings that meet the evaluation.

The new analysis resulted in several changes in LOS for the CN rail line. Below is a summary of those changes for the 2015 roadway LOS analysis

LOS	Total		Waukesha		Freeport		Joliet		Chicago		Elsdon	
	2007	2015	2007	2015	2007	2015	2007	2015	2007	2015	2007	2015
LOS A - B	74	63	20	18	17	4	9	8	1	1	27	22
LOS C - D	49	44	17	16	13	10	2	3	0	0	17	15
LOS E - F	29	45	10	13	6	12	3	3	1	1	9	16

Waukesha Subdivision

The Proposed Action would not affect the overall mobility in the following three communities along CN's Waukesha Subdivision because all of the crossings in these communities are grade-separated:

- Forest Park (4 grade-separated crossings)
- Schiller Park (4 grade-separated crossing)
- Rosemont (3 grade-separated crossings)

River Forest

River Forest has four roadways that cross the Waukesha Subdivision at-grade and two grade-separated crossings. All of the at-grade crossings would operate at LOS C or better.

During the peak period under the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossings. The multiple grade-separated crossings, as well as the at-grade crossings operating at LOS C or better in the area, provide an acceptable level of overall mobility.

River Grove

River Grove has two roadways that cross the Waukesha Subdivision at-grade and one grade-separated crossing. First Avenue is a six-lane arterial that runs north/south crossing the Waukesha Subdivision south of the village center. All of the at-grade crossings would operate at LOS C or better.

During the peak period under the No-Action Alternative, 1st Avenue would experience a calculated vehicle queue of approximately ~~1,130~~–1,280 feet. This peak hour queue would block North Avenue (IL 64), a major cross street north of the crossing.

During the peak period under the Proposed Action, the calculated peak hour queue length along 1st Avenue would be approximately ~~2000~~ feet. This would not block any major roadways.

Excessive peak hour queuing at 1st Avenue would have an affect on overall mobility within the area. Under the Proposed Action, train reductions would improve the overall mobility by reducing the queues at this crossing.

Melrose Park

Melrose Park has one roadway that crosses the Waukesha Subdivision at-grade, which would operate at LOS B.

During the peak period under the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossing. The crossing would operate at LOS B or better, providing an acceptable level of overall mobility.

Franklin Park

Franklin Park has three roadways that cross the Waukesha Subdivision at-grade and one grade-separated crossing. All of the at-grade crossings would operate at LOS B or better. The Metra MD-W commuter rail line has an at-grade crossing with the Waukesha Subdivision within the community.

During the peak periods under the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossings. The multiple grade-separated crossings, as well as the at-grade crossings, would operate at LOS B or better, providing an acceptable level of overall mobility.

Des Plaines

Des Plaines has ~~45~~ 14 roadways that cross the Waukesha Subdivision at-grade and two that have grade-separated crossings. Three at-grade crossing roadways would continue to operate at LOS E-F. The Metra UP-NW commuter rail line has an at-grade crossing with the Waukesha Subdivision within the community. The roadways are subdivided into three networks, including roadways south of the city center, roadways within the city center, and roadways north of the city center.

South of the city center:

- Pratt Avenue is a two-lane collector that runs east/west and intersects US 12.
- Touhy Avenue is a four-lane divided arterial that runs east/west and intersects Lee Street and US 12.
- The US 12 Frontage Road is a two-lane collector that runs north/south and intersects US 12 and Touhy Avenue.
- Prospect Avenue is a two-lane collector that runs east/west and intersects Lee Street and US 12.
- Oakton Street is a four-lane arterial that runs east/west and intersects Lee Street (US 12). All of the above mentioned roadways would operate at LOS D or better.

Within the city center:

- Algonquin Road is a two-lane arterial that runs east/west and intersects Lee Street (US 12).
- Lee Street (NB US 12) is a two-lane, one-way arterial that runs northbound and intersects Touhy Avenue, Prospect Avenue, US 12, Oakton Street, Algonquin Road, Graceland Avenue (SB US 12), Thacker Street, Prairie Avenue, and Rand Road.
- Graceland Avenue (SB US 12) is a two-lane, one-way arterial that runs southbound and intersects Lee Street (NB US 12), Thacker Street, Prairie Avenue, and Rand Road (US 12).
- Thacker Street is a two-lane collector that runs east/west and intersects Graceland Avenue (SB US 12) and Lee Street (NB US 12).
- Prairie Avenue is a two-lane collector that runs east/west and intersects Graceland Avenue (SB US 12) and Lee Street (NB US 12).

~~Woodlawn Avenue is a two-lane collector that runs east/west~~ Graceland Avenue (SB US 12) and Thacker Street would operate at LOS E-F, while Algonquin Road, Lee Street (US 12 NB) and Prairie Avenue ~~and Woodlawn Avenue~~ would operate at LOS D or better. Prairie Avenue crosses the Waukesha Subdivision approximately 1,600 feet to the north of Graceland Avenue (SB US 12), and Algonquin Road crosses the Waukesha Subdivision approximately 1,800 feet south of Graceland Avenue (SB US 12). Both roadways would provide potential alternative routes to the congested Graceland Avenue (SB US 12). Prairie Avenue crosses the Waukesha Subdivision parallel to

Thacker Street approximately 800 feet to the north, and Algonquin Road crosses the Waukesha Subdivision parallel to Thacker Street approximately 2,700 feet to the south. Both roadways would provide potential alternative routes to the congested Thacker Street.

West of the city center:

- Seegers Road is a two-lane collector that runs east/west and intersects Rand Road (US 12).
- Golf Road (IL 58) is a four-lane divided arterial that runs east/west and intersects Rand Road (US 12).
- Rand Road (US 12) is a four-lane divided arterial that runs north/south and intersects Lee Street, Seegers Road, Golf Road (IL 58), and Central Road.
- Central Road is a two-lane arterial that runs east/west and intersects Rand Road (US 12).

Golf Road (IL 58) and Central Road would operate at LOS E-F, while Seegers Road and Rand Road (US 12) would operate at LOS D or better. Rand Road (US 12) crosses the Waukesha Subdivision approximately 3,900 feet to the south of Central Road and approximately 525 feet to the north of Golf Road (IL 58). This roadway provides potential alternative routes to the congested Central Road and the congested Golf Road (IL 58).

During the peak period under both the No-Action and Proposed Action alternatives alternative, Touhy Avenue (IL 72), Prospect ~~Lane~~ Avenue Lane, Oakton Street, and Algonquin Road would experience a calculated vehicle queue length of approximately 855 feet, ~~1,115~~ 375 feet, 1,110 feet and 800 feet, respectively. The peak-hour queues would block US 12, a major cross street west of each crossing. The peak-hour queue length along Thacker Street would be approximately 990 feet. This would block Graceland Avenue (SB US 12), a major cross street east of the crossing. The queue length along Golf Road (IL 58) would be approximately ~~1,370~~ 1,325 feet. This would block Rand Road (US 12), a major cross street east of the crossing. The queue length along Rand Road (US 12) would be approximately ~~1,115~~ 1,080 feet. This would block Golf Road (IL 58), a major cross street south of the crossing.

During the peak period under the Proposed Action, Touhy Avenue (IL 72), Prospect Lane Avenue, and Algonquin Road would experience queue lengths of approximately 440 ~~435~~ feet, ~~400~~ 190 feet, and 440 feet, respectively. The queues would block US 12, a major cross street west of each crossing. The calculated peak hour queue along Golf Road (IL 58) would be approximately ~~760~~ 735 feet. This would block Rand Road (US 12), a major cross street east of the crossing. One local street would be blocked in addition to Rand Road (US 12).

According to the City of Des Plaines, Cook County, and IDOT, no local roadway improvements are planned within the city core that would have a direct benefit to existing at-grade crossings.

Excessive peak hour queues at multiple at-grade crossings would have a significant affect on overall mobility within the area. Although reduction of railway operations helps alleviate some of these issues, excessive peak hour queues would still exist under the Proposed Action.

- Based on the updated analysis, Woodlawn Avenue is not included in the list of roadways for Des Plaines since it does not meet the SEA criteria of a projected 2015 ADT of greater than 2,500 vpd. Therefore, Des Plaines has changed from having 15 roadways to 14 roadways that cross the Waukesha Subdivision at-grade, as part of the analysis.

Mount Prospect

Mount Prospect has two roadways that cross the Waukesha Subdivision at-grade, both operating at LOS D or better.

During the peak period under the No-Action Alternative, Euclid Avenue would experience a calculated peak hour vehicle queue of approximately ~~675~~ 680 feet. This would block Wolf Road, a major cross street west of the crossing.

During the peak period under the Proposed Action, the queue length along Euclid Avenue would be approximately 370 feet. This would not block any major roadways.

Excessive peak hour queuing at Euclid Avenue would have an affect on overall mobility within the area. Train reductions under the proposed Action would improve the overall mobility by reducing the queues at this crossing.

Prospect Heights

Prospect Heights has three roadways that cross the Waukesha Subdivision at-grade and one grade-separated crossing. Wolf Road is a two-lane arterial that runs north/south crossing the Waukesha Subdivision east of the city center and intersects Camp McDonald Road and Willow Road. Camp McDonald Road is a two-lane collector that runs east/west crossing the Waukesha Subdivision east of the city center and intersects Wolf Road. Willow Road is a two-lane collector that runs east/west crossing the Waukesha Subdivision east of the city center and intersects Wolf Road. Wolf Road would operate at LOS E-F, while Camp McDonald Road and Willow Road would operate at LOS D or better. Camp McDonald Road crosses the Waukesha Subdivision approximately 375 feet to the north of Wolf Road and provides a potential alternative route to the congested Wolf Road.

During the peak period, under the No-Action Alternative, Camp McDonald Road would experience a calculated vehicle queue of approximately 610 feet. This would block Wolf Road, a major cross street east of the crossing.

During the peak period, under the Proposed Action, Camp McDonald Road would experience a calculated vehicle queue length of approximately 335 feet. This would block Wolf Road, a major cross street east of the crossing.

According to Cook County and IDOT, local roadway improvements are planned within the city core: The IDOT plan calls for construction of additional lanes on Wolf Road between Hintz Road and Palatine Road by 2013. This project would help alleviate congestion within the city core; however, it would not improve level of service along Wolf Road in the vicinity of the Waukesha Subdivision at-grade rail crossing.

Excessive peak hour queuing at Camp McDonald Road would have a significant effect on overall mobility within the area. Although reduction of railway operations helps alleviate this issue, excessive peak hour queues would still exist under the Proposed Action.

Wheeling

Wheeling has two roadways that cross the Waukesha Subdivision at-grade and two grade-separated crossings. Hintz Road is a four-lane divided collector that runs east/west crossing the Waukesha Subdivision south of the village center. Dundee Road (IL 68) is a four-lane divided arterial that runs east/west crossing the Waukesha Subdivision north of the village center. Hintz Road and Dundee Road (IL 68) would operate at LOS E-F. Lake Cook Road provides a grade-separated crossing of the Waukesha Subdivision parallel to Dundee Road (IL 68) approximately 1 mile to the north, and would provide a potential alternative route to the congested Dundee Road (IL 68). Palatine Road provides a grade-separated crossing of the Waukesha Subdivision parallel to Hintz Road approximately 1 mile to the south, and would provide a potential alternative route to the congested Hintz Road.

During the peak period under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossings.

According to the Village of Wheeling, Cook County, and IDOT, two local roadway improvements are planned within the Village core that would have a direct impact on mobility within the area: Wheeling proposes construction of one grade-separated crossing on Waukesha Subdivision south of Dundee Road, and construction of an additional at-grade crossing to align with Carpenter Avenue. Both of these crossings would help alleviate the congestion within the village core. The existence of the viable alternative routes to congested roadways within the area would provide an acceptable level of overall mobility within the Wheeling area.

Buffalo Grove

Buffalo Grove has one roadway that crosses the Waukesha Subdivision at-grade, operating at LOS ~~D~~ E-F.

During the peak period under the No-Action Alternative, Deerfield Parkway/Busch Drive would experience a calculated vehicle queue length of approximately ~~1,350~~ 1,510 feet. This would block Busch Road, a major cross street east of the crossing.

During the peak period under the Proposed Action, Deerfield Parkway/Busch Drive would experience a calculated vehicle queue length of approximately ~~750~~ 835 feet. This would still block Busch Road.

During the peak period under both the No-Action and Proposed Action alternatives, one major intersecting roadway (Busch Road) would be blocked by the queued vehicles at the Deerfield Parkway/Busch Road crossing. With the at-grade crossing operating at LOS E-F, ~~an acceptable level of~~ of the level of overall mobility exists. ~~would be affected for the Buffalo Grove area.~~

Prairie View

Prairie View has three roadways that cross the Waukesha Subdivision at-grade. Aptakistic Road is a four-lane divided arterial that runs east/west crossing the Waukesha Subdivision south of the village center and intersects Buffalo Grove Road. Half Day Road (IL 22) is a four-lane arterial that runs east/west crossing the Waukesha Subdivision within the village center and intersects Buffalo Grove Road. Buffalo Grove Road is a two-lane divided collector that runs north/south crossing the Waukesha Subdivision within the Village center and intersects Aptakistic Road and Half Day Road (IL 22). Buffalo Grove Road would operate at LOS E-F, while Aptakistic Road and Half Day Road (IL 22) would operate at LOS D or better. Half Day Road (IL 22) crosses the Waukesha Subdivision approximately 3,400 feet to the south of Buffalo Grove Road, and would provide a potential alternative route to the congested Buffalo Grove Road.

During the peak period under the No-Action Alternative, Aptakistic Road would experience a calculated vehicle queue length of approximately ~~980~~ 945 feet. This would block Weiland Road, a major cross street west of the crossing. The calculated peak hour queue along Half Day Road (IL 22) would be approximately ~~1,475~~ 1,390 feet. This would block Prairie Road, a major cross street east of the crossing.

During the peak period under the Proposed Action, Aptakistic Road would experience a calculated vehicle queue length of approximately ~~540~~ 525 feet. This would still block Weiland Road. The calculated peak hour queue length along Half Day Road (IL 22) would be approximately ~~840~~ 795 feet. This would still block Prairie Road.

According to Lake County and IDOT, several local roadway improvements are planned within the village core. The Lake County plan calls for upgrading traffic signal interconnect equipment and replacing existing controllers at signalized intersections between Parkway Drive and Buffalo Grove Road by 2012. It also calls for widening Buffalo Grove Road at Port Clinton Road and the Wisconsin Central Railroad at-grade crossing, improving mobility in the community.

Excessive peak hour queueing at multiple at-grade crossings within the Prairie View community would have a significant affect on overall mobility within the area. Although reduction of railway operations helps alleviate these issues, excessive peak hour queues would still exist under the Proposed Action.

Vernon Hills

Vernon Hills has two roadways that cross the Waukesha Subdivision at-grade. US 45 is a two-lane arterial that runs east/west crossing the Waukesha Subdivision south of the village center and intersects Butterfield Road. Butterfield Road is a four-lane divided arterial that runs north/south crossing the Waukesha Subdivision west of the village center and intersects US 45. US 45 would operate at LOS E-F, while Butterfield Road would operate at LOS D or better. No potential alternative routes exist within one mile of the US 45 at-grade crossing.

During the peak period under the No-Action Alternative, Butterfield Road would experience a calculated vehicle queue length of approximately ~~600~~ 550 feet. This would block Townline Road (IL 60), a major cross street west of the crossing

During the peak period under the Proposed Action, the queue lengths along Butterfield Road would be approximately ~~345~~ 325 feet. This would not block any major roadways

According to the Village of Vernon Hills, Lake County, and IDOT, the following roadway improvements are planned within the village core: Vernon Hills proposes to widen US 45 from two to four lanes from Milwaukee Avenue to IL 83 with additional turning lanes at area intersections, and to widen Townline Road (IL 60) to a six-lane section between US 41 and IL 83. With the upgrade of US 45 to a four-lane arterial, this roadway would achieve an LOS C, which would improve the level of overall mobility in the area.

Mundelein

Mundelein community has ~~seven~~ six roadways that cross the Waukesha Subdivision at-grade and three grade-separated crossings. Two at-grade crossing roadways operate at unacceptable levels of service. Townline Road (IL 60) is a four-lane, divided arterial that runs east/west crossing the Waukesha Subdivision south of the village center. Allanson Road is a two-lane collector that runs east/west crossing the Waukesha Subdivision south of the village center. Hawley Street is a two-lane collector that runs east/west crossing the Waukesha Subdivision within the village center and intersects Maple Avenue (IL 176). Park Street is a two-lane collector that runs east/west crossing the Waukesha Subdivision within the village center. Maple Avenue (IL 176) is a two-lane arterial that runs east/west crossing the Waukesha Subdivision within the village center and intersects Hawley Street. ~~Dunbar Road is a two-lane collector that runs east/west crossing the Waukesha Subdivision north of the village center.~~ Winchester Road is a two-lane collector that runs east/west crossing the Waukesha Subdivision north of the village center. Townline Road (IL 60) and Allanson Road would operate at LOS E-F, while Hawley Street, Park Street, Maple Avenue (IL 176), ~~Dunbar Road~~, and Winchester Road would operate at LOS D or better. Butterfield Road crosses the Waukesha Subdivision approximately 650 feet to the south of Townline Road (IL 60), and would provide a potential alternative to the congested Townline Road (IL 60). Courtland Street provides a grade-separated crossing parallel to Allanson Road, approximately 3,400 feet to the north, and would provide a potential alternative route to the congested Allanson Road. The Village of Vernon Hills proposes to widen Townline Road (IL 60) from four to six lanes between US 41 and IL 83. With the upgrade of Townline Road (IL 60) to a six-lane arterial, this roadway would achieve an LOS D.

During the peak period under pre-acquisition conditions, Townline Road (IL 60) would experience a calculated vehicle queue length of approximately ~~1,520~~ 1,265 feet. This would block Butterfield Road, a major cross street east of the crossing. During the peak period, Maple Avenue (IL 176)

would experience a calculated vehicle queue length of approximately ~~980~~ 950 feet. This would block Lake Street (US 45), a major cross street west of the crossing. The calculated peak-hour queue length along Winchester Road would be approximately ~~245~~ 200 feet. This would block Lake Street (US 45).

During the peak period under the Proposed Action, Townline Road (IL 60) would experience a calculated vehicle queue length of approximately ~~840~~ 755 feet. This would still block Butterfield Road. During the peak period, Maple Avenue (IL 176) would experience a calculated vehicle queue length of approximately ~~540~~ 1,080 feet. This would still block Lake Street (US 45). ~~In addition, three local streets would block this roadway.~~ The calculated peak hour queue along Winchester Road would be approximately ~~135~~ 230 feet. This would still block Lake Street (US 45).

According to Lake County and IDOT, the following roadway improvements are planned within the village core: The Lake County plan calls for a railroad underpass feasibility study at the Townline Road (IL 60) crossing of the Wisconsin Central Railroad. This project would improve mobility by eliminating the queues produced at the at-grade crossing and would have a positive affect on the intersection of Butterfield Road and Townline Road (IL 60). As stated above, the Village of Vernon Hills proposes to widen Townline Road (IL 60) to a six-lane section between US 41 and IL 83. With upgrade of Townline Road to a six-lane section, this roadway would achieve LOS D.

Excessive peak hour queues at multiple at-grade crossings within the Mundelein community would have a significant affect on overall mobility within the area. Although reduction of railway operations helps alleviate these issues, excessive peak hour queues would still exist under the Proposed Action. With the key streets operating above capacity, and excessive queues at multiple at-grade crossings, the overall level of mobility for the Mundelein community would not be good. However the improvements proposed by Lake County and IDOT may provide much-needed relief by removing traffic from the congested roadways.

- **Based on the updated analysis, Dunbar Road is not included in the list of roadways for Mundelein since it does not meet the SEA criteria of a projected 2015 ADT of greater than 2,500 vpd. Therefore, Mundelein has changed from having seven roadways to six roadways that cross the Waukesha Subdivision at-grade, as part of the analysis.**

Grayslake

Grayslake has two roadways that cross the Waukesha Subdivision at-grade. Peterson Road is a two-lane collector that runs east/west crossing the Waukesha Subdivision south of the village center and intersects Harris Road. Harris Road is a two-lane collector that runs north/south crossing the Waukesha Subdivision south of the village center and intersects Peterson Road. Peterson Road would operate at LOS E-F, while Harris Road would operate at LOS D or better. Harris Road crosses the Waukesha Subdivision approximately 3,300 feet north of Peterson Road, and could provide a potential alternative route to the congested Peterson Road. The Metra MD-N commuter rail line has an at-grade crossing with the Waukesha Subdivision within the community.

During the peak periods under the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossings.

According to the Village of Grayslake, Lake County, and IDOT, the following roadway improvements are planned within the village core: The Lake County plan calls for upgrade of Peterson Road to a divided facility with partial access control between IL 83 and US 45 by 2012; however, this improvement would not significantly improve capacity on the roadway at the at-grade crossing of the Waukesha Subdivision. The existence of viable alternative routes to congested roadways within the area would continue to provide an acceptable level of overall mobility to the area.

Freeport Subdivision

The Proposed Action would not affect the overall mobility in the following four communities along CN's Freeport Subdivision because all of the crossings in these communities are grade-separated:

- Cicero (6 grade-separated crossings)
- Westchester (3 grade-separated crossings)
- Berkeley (1 grade-separated crossing)
- Glendale Heights (2 grade-separated crossings)

Chicago

Chicago has ~~two~~ one roadway that crosses the Freeport Subdivision at-grade and 24 grade-separated crossings. ~~South Lawndale Avenue is a two-lane urban collector that runs north/south crossing the Freeport Subdivision.~~ South Pulaski Road is a four-lane urban arterial that runs north/south crossing the Freeport Subdivision. ~~South Lawndale Avenue and~~ South Pulaski Road operates at LOS D or better and would continue to do so under both the No-Action and Proposed Action alternatives, providing an acceptable level of overall mobility.

During the peak period under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossings.

According to IDOT, Cook County, and City of Chicago plans, no local roadway improvements are planned which would affect the ~~South Lawndale Avenue and~~ South Pulaski Road crossings. The at-grade crossings would operate at LOS C-D in the area, providing an acceptable level of overall mobility.

- **Based on the updated analysis, South Lawndale Avenue is not included in the list of roadways for Chicago since it does not meet the SEA criteria of a projected 2015 ADT of greater than 2,500 vpd. Therefore, Chicago has changed from having two roadways to one roadway that crosses the Freeport Subdivision at-grade, as part of the analysis.**

Berwyn

Berwyn has one roadway that crosses the Freeport Subdivision at-grade and three grade-separated crossings. Riverside Drive is a two-lane urban collector that runs north/south crossing the Freeport Subdivision. Riverside Drive currently operates at LOS ~~C-D~~ A-B and would continue to do so under the No-Action and Proposed Action alternatives. The Metra BNSF commuter rail line has an at-grade crossing with the Freeport Subdivision within the community.

During the peak period under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

According to the IDOT and Cook County plans, no local roadway improvements are planned which would affect the Riverside Drive crossings. The at-grade crossing would operate at LOS C-D in the area which reflects a roadway network that would serve the local community well by providing an acceptable level of overall mobility.

North Riverside

North Riverside has seven roadways that cross the Freeport Subdivision at-grade. Harlem Avenue (IL 43) is a four-lane divided urban arterial that runs north/south crossing the Freeport Subdivision. 26th Street is a four-lane urban arterial that runs east/west crossing the Freeport Subdivision. Des Plaines Avenue is a four-lane suburban arterial that runs north/south crossing the Freeport Subdivision. Cermak Road is a six-lane divided suburban arterial that runs east/west crossing the

Freeport Subdivision. 1st Avenue/Golfview Avenue (IL 171) is a four-lane divided suburban arterial that runs north/south crossing the Freeport Subdivision. Harlem Avenue (IL 43) and First Avenue (IL 171) operate at LOS E-F and would continue to do so under 2015 conditions. Harlem Avenue and Cermak Avenue operate at LOS ~~C-D~~ E-F and would operate at LOS E-F under 2015 conditions. 26th Street and Des Plaines Avenue operate at LOS D or better and would continue to do so under 2015 conditions.

During the peak period under the No-Action Alternative, Harlem Avenue (IL 43) would experience a calculated vehicle queue length of approximately ~~1,565~~ 1,750 feet, which would block two major streets, 26th Street and Riverside Drive. The queue length along 26th Street would be approximately 715 feet, which would block one major street, Harlem Avenue (IL 43). The queue length along Des Plaines Avenue would be approximately 790 feet, which would block one major roadway Cermak Road. The queue length along Cermak Road would be approximately 1,440 feet, which would block two major roadways, 1st Avenue Cutoff and 1st Avenue/Golfview Avenue (IL 171). The queue length along 1st Avenue/Golfview Avenue (IL 171) would be approximately ~~1,885~~ 1,670 feet, which would block two major roadways, 1st Avenue Cutoff and Cermak Road.

During the peak period under the Proposed Action, Harlem Avenue (IL 43) would experience a queue length of approximately ~~840~~935 feet, which would still block 26th Street and Riverside Drive. The queue length along 26th Street would be reduced to approximately 385 feet, which would no longer block Harlem Avenue (IL 43). The queue length along Des Plaines Avenue would be reduced to approximately 425 feet, which would no longer block Cermak Road. The queue length along Cermak Road would be approximately 770 feet, which would still block 1st Avenue Cutoff. The queue length along 1st Avenue/Golfview Avenue (IL 171) would be approximately ~~1,010~~ 895 feet, which would still block 1st Avenue Cutoff and Cermak Road.

According to IDOT and Cook County, no local roadway improvements are planned that would affect the crossings. Excessive peak hour queuing at these at-grade crossings would have an affect on overall mobility within the area. Reduction of railway operations within the area helps alleviate this issue by eliminating three of the seven major blocked streets. While conditions would improve with the reduction of railway operations, mobility would continue to be affected.

Broadview

Broadview has one roadway that crosses the Freeport Subdivision at-grade and two grade-separated crossings. 17th Avenue is a four-lane urban arterial that runs north/south crossing the Freeport Subdivision. The Village of Broadview Comprehensive Plan mentions roadway improvements on 17th Avenue, but does not specify what these improvements would entail. 17th Avenue operates at LOS ~~C-D~~ A-B and would continue to do so under 2015 conditions.

During the peak period under the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossings.

According to IDOT and Cook County, no local roadway improvements are planned that would affect the 17th Avenue crossing. The at-grade crossing would operate at LOS C-D, providing an acceptable level of overall mobility.

Hillside

Hillside has ~~one two~~ roadways that crosses the Freeport Subdivision at-grade and two grade-separated crossings. Wolf Road is a four-lane divided urban arterial that runs north/south crossing the Freeport Subdivision. Harrison Street is a two-lane urban arterial that runs east/west crossing the Freeport Subdivision. Harrison Street and Wolf Road operate at LOS ~~C-D~~ D or better and would continue to do so under 2015 conditions.

During the peak period under the No-Action Alternative, Wolf Road would experience a calculated vehicle queue length of approximately 635 feet, which would block one major street, Harrison Street. During the peak period under the Proposed Action, the calculated peak hour queue length along Wolf Road would be reduced to approximately 330 feet, which would no longer block Harrison Street.

According to IDOT and Cook County, no local roadway improvements are planned that would affect the Wolf Road or Harrison Street crossings. Reduction of railway operations within the area would reduce queues, improve the crossing Level of Service and eliminate blockage of Harrison Street, a major access road for I 290 and I 294.

Elmhurst

Elmhurst has six roadways that cross the Freeport Subdivision at-grade and one grade-separated crossing. York Road is a two-lane urban arterial that runs north/south crossing the Freeport Subdivision. Vallette Street is a two-lane urban collector that runs east/west crossing the Freeport Subdivision. Argyle Avenue is a two-lane urban collector that runs north/south crossing the Freeport Subdivision. Spring Road is a two-lane urban collector that runs north/south crossing the Freeport Subdivision. West St. Charles Road is a two-lane urban arterial that runs east/west crossing the Freeport Subdivision. South West Avenue is a two-lane urban collector that runs north/south crossing the Freeport Subdivision. York Road operates at LOS E-F and would continue to do so under 2015 conditions. Vallette Street, Argyle Avenue, Spring Road, West St. Charles Road, and South West Avenue currently operate at LOS D or better and would continue to do so under 2015 conditions.

During the peak period under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

According to IDOT and DuPage County plans, no local roadway improvements are planned that would affect the crossings. The at-grade crossings operating at LOS C-D in the area provide an acceptable level of overall mobility.

Villa Park

Villa Park has three roadways that cross the Freeport Subdivision at-grade and one grade-separated crossing. Villa Avenue is a two-lane suburban arterial that runs north/south crossing the Freeport Subdivision. Addison Avenue is a four-lane urban arterial that runs north/south crossing the Freeport Subdivision. West North Avenue is a six-lane urban collector that runs east/west crossing the Freeport Subdivision. West North Avenue operates at LOS C-D and would operate at LOS E-F under 2015 conditions. Villa Avenue and Addison Avenue currently operate at LOS D or better and would continue to do so under 2015 conditions. An alternative route to the roadway intersection of Addison Avenue and West North Avenue is the North Ardmore Avenue grade-separated crossing, 0.5 mile to the east of this intersection.

During the peak period under the No-Action Alternative, Addison Avenue would experience a calculated vehicle queue length of approximately 310 feet, which would block one major street, West North Avenue. The queue length along North Avenue (IL 64) would be approximately ~~935~~910 feet, which would block one major street, Addison Avenue.

During the peak period under the Proposed Action, Addison Avenue would experience a queue length of approximately 175 feet, which would still block West North Avenue. The queue length along North Avenue (IL 64) would be approximately ~~530~~515 feet, which would still block Addison Avenue.

According to IDOT and DuPage County, no local roadway improvements are planned that would affect the crossings. With West North Avenue operating above capacity, and queuing blocking several major roadways, mobility would be unacceptable in the area.

Addison

Addison has two roadways that cross the Freeport Subdivision at-grade and two grade-separated crossings. Grace Street is a four-lane suburban collector that runs north/south crossing the Freeport Subdivision. Swift Road is a two-lane divided suburban arterial that runs north/south crossing the Freeport Subdivision. Swift Road operates at LOS E-F and would continue to do so under 2015 conditions. Grace Street currently operates at LOS ~~C-D~~ A-B and would continue to do so under 2015 conditions. An alternate route for Swift Road is to use the nearby grade-separated crossing at South Rohlwing Road, 0.5 mile to the east.

During the peak period under the No-Action Alternative, Swift Road would experience a calculated vehicle queue length of approximately 860 feet, which would block one major street, Collins Avenue.

During the peak period under the Proposed Action, Swift Road would experience a queue length of approximately 480 feet, which would block one major street, Collins Avenue.

According to IDOT and DuPage County, no local roadway improvements are planned that would affect the crossings. The existence of a viable grade-separated alternative route to the congested Swift Road would provide an acceptable level of overall mobility to the Addison area.

Bloomingtondale

Bloomingtondale has three roadways that cross the Freeport Subdivision at-grade. Schmale Road is a four-lane divided suburban arterial that runs north/south crossing the Freeport Subdivision. Gary Avenue is a four-lane divided urban arterial that runs north/south crossing the Freeport Subdivision. Army Trail Road is a four-lane divided urban arterial that runs east/west crossing the Freeport Subdivision. Schmale Road, Gary Avenue, and Army Trail Road operate at LOS C-D and would operate at LOS E-F under 2015 conditions.

During the peak period under the No-Action Alternative, Gary Avenue would experience a calculated vehicle queue length of approximately 1,060 feet, which would block one major street, Army Trail Road.

During the peak period under the Proposed Action, Gary Avenue would experience a calculated vehicle queue length of approximately 565 feet, which would still block Army Trail Road.

According to IDOT and DuPage County, no local roadway improvements are planned that would affect the crossings. The reduction of railway operations would improve the queuing; however, the poor LOS would affect the level of overall mobility for the Bloomingtondale area.

Hanover Park

Hanover Park has one roadway that crosses the Freeport Subdivision at-grade and two grade-separated crossings. Under DuPage County's Comprehensive Road Improvement Plan, Jefferson Street/County Farm Road widens from a four-lane urban arterial to a six-lane urban arterial. Jefferson Street/County Farm Road operates at LOS C-D and would ~~continue to do so under 2015 conditions.~~ operate at LOS E-F under 2015 conditions.

During the peak period under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

DuPage County's plans to widen Jefferson Street/County Farm Road would improve the roadway network, providing an acceptable level of overall mobility.

Bartlett

Bartlett has two roadways that cross the Freeport Subdivision at-grade. Sutton Road (IL 59) is a four-lane suburban arterial that runs north/south crossing the Freeport Subdivision. Powis Road is a two-lane rural collector that runs north/south crossing the Freeport Subdivision. Munger Road parallels Sutton Road (IL 59) by approximately 4,750 feet to the west, providing a potential alternative route to the congested Sutton road (IL 59). Sutton Road (IL 59) currently operates at LOS E-F and would continue to do so under 2015 conditions. Powis Road currently operates at LOS ~~C-D~~ A-B and would ~~continue to do so~~ operate at LOS C-D under 2015 conditions.

During the peak period under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by the queued vehicles at the crossings.

According to IDOT and DuPage County, no local roadway improvements are planned that would affect the crossings. The roadway network would provide an acceptable level of overall mobility.

South Elgin

South Elgin has two roadways that cross the Freeport Subdivision at-grade and six grade-separated crossings. IL 25 is a two-lane rural arterial that runs north/south crossing the Freeport Subdivision. Randall Road is a four-lane suburban arterial that runs north/south crossing the Freeport Subdivision. Randall Road operates at LOS E-F and would continue to do so under 2015 conditions. IL 25 currently operates at LOS D or better and would continue to do so under 2015 conditions. Dunham Road, approximately 0.5 mile east of IL 25, provides a grade-separated alternative route. McDonald Road and Hopps Road, 0.5 mile east and west of Randall Road, provide grade-separated alternative routes.

According to IDOT and DuPage County, no local roadway improvements are planned that would affect the crossings. While the two at-grade crossings would operate above capacity, the six grade-separated crossings would provide viable alternative routes and help provide an acceptable level of overall mobility to the roadway network.

Joliet Subdivision

The Proposed Action would not affect the overall mobility in the following five communities along CN's Joliet Subdivision because all of the crossings in these communities are grade-separated:

- Chicago (19 grade-separated crossings)
- Forest View (two grade-separated crossings)
- Summit (two grade-separated crossings)
- Bedford Park (one grade-separated crossing)
- Willow Springs (four grade-separated crossings)

Lemont

Lemont has ~~four~~ three roadways that cross the Joliet Subdivision at-grade in close proximity to each other and one grade-separated crossing. Pruxne Street is a two-lane divided collector that runs north/south crossing the Joliet Subdivision east of the village center. Holmes Street is a two-lane collector that runs north/south crossing the Joliet Subdivision within the village center. Stephen Street is a two-lane collector that runs north/south crossing the Joliet Subdivision within the village center. ~~Lemont Street is a two-lane collector that runs north/south crossing the Joliet Subdivision within the village center. Lemont~~ Stephen Street would operate at LOS E-F, while Pruxne Street ~~and~~ Holmes Street ~~and Stephen Street~~ would operate at LOS C or better. ~~Stephen Street parallels Lemont Street by approximately 450 feet to the northeast and would provide the additional capacity needed to be a viable alternative route to the congested Lemont Street.~~ During the peak period under

the No-Action Alternative, Pruxne Street would experience a calculated vehicle queue length of approximately 445 feet, which would block one major roadway, Main Street. The queue length along Stephen Street would be approximately ~~180~~ 925 feet, which would block one major roadway, Main Street. ~~The queue length along Lemont Street would be approximately 2,320 feet, which would block two major roadways, Main Street and East Illinois Street.~~

During the peak period under the Proposed Action, Pruxne Street would experience a calculated vehicle queue length of approximately 410 feet, which would still block Main Street. The queue length along Stephen Street would be approximately ~~165~~ 850 feet, which would still block Main Street. ~~The queue length along Lemont Street would be approximately 2,480 feet, which would still block, Main Street and East Illinois Street.~~ The LOS of the viable alternative routes would be C or better; however, long queues would block a number of major streets; therefore, the overall mobility of the network would be affected.

- **Based on the updated analysis, Lemont Street is not included in the list of roadways for Lemont since it does not meet the SEA criteria of a projected 2015 ADT of greater than 2,500 vpd. Therefore, Lemont has changed from having four roadways to three roadways that cross the Joliet Subdivision at-grade, as part of the analysis.**

Romeoville

Romeoville has one roadway that crosses the Joliet Subdivision at-grade. Romeoville Road (135th Street) is a two-lane arterial that runs east/west crossing the Joliet Subdivision east of the village center. Romeoville Road (135th Street) would operate at LOS E-F. No potential alternative routes exist within one mile of the Romeoville Road (135th Street) at-grade crossing.

During the peak periods under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by the queued vehicles at the crossing. No local roadway improvements are planned within the Village of Romeoville. The lack of potential alternative routes within one mile of the Romeoville Road (135th Street) at-grade crossing would continue to affect the overall mobility in the area.

Lockport

Lockport has seven roadways that cross the Joliet Subdivision at-grade in close proximity to each other and one grade-separated crossing. Second Street is a two-lane collector that runs east/west crossing the Joliet Subdivision north of the village center. Sixth Street is a two-lane collector that runs east/west crossing the Joliet Subdivision within the village center. Ninth Street (IL 7) is a two-lane arterial that runs east/west crossing the Joliet Subdivision within the village center. Tenth Street is a two-lane collector that runs east/west crossing the Joliet Subdivision within the village center. Eleventh Street is a two-lane collector that runs east/west crossing the Joliet Subdivision within the village center. Thirteenth Street is a two-lane collector that runs east/west crossing the Joliet Subdivision within the village center and intersecting one collector, Division Street. Division Street is a two-lane collector that runs east/west crossing the Joliet Subdivision within the village center and intersecting one local street, 13th Street. The at-grade crossing at 9th Street (IL 7) would operate at LOS F. All other at-grade crossings would operate at LOS B or higher.

During the peak period under the No-Action Alternative, 9th Street would experience a calculated vehicle queue length of approximately ~~1,520~~ 1,600 feet, which would block one major roadway, South State Street. The queue length along Division Street would be approximately 345 feet, which would also block South State Street.

During the peak period under the Proposed Action, 9th Street would experience a calculated vehicle queue length of approximately ~~1,880~~ 1,975 feet, which would still block South State Street. The

calculated queue length along Division Street would be approximately ~~420~~ 425 feet, which would also still block South State Street. No local roadway improvements are planned within the Village of Lockport. The existence of viable alternative routes to the congested 9th Street would provide an acceptable level of overall mobility to the area.

Joliet

Joliet has two roadways that cross the EJ&E rail line at-grade and 10 grade-separated crossings. Ohio Street and Jackson Street would operate at LOS D or better.

During the peak period under the No-Action Alternative, Ohio Street would experience a calculated vehicle queue length of approximately ~~365~~ 1,045 feet, which would block ~~one~~ two major roadways, Scott Street (NB IL 53) and Chicago Street (SB IL 53). The queue length along Jackson Street would be approximately ~~1,025~~ 1,480 feet, which would block two major roadways, Scott Street (NB IL 53) and Ottawa Street (SB IL 53).

During the peak period under the Proposed Action, Ohio Street would experience a queue length of approximately ~~450~~ 1,340 feet, which would still block Scott Street (NB IL 53) and Chicago Street (SB IL 53). The queue length along Jackson Street would be approximately ~~1,265~~ 1,900 feet, which would still block Scott Street (NB IL 53) and Ottawa Street (SB IL 53), as well as Collins Street (IL 171/US 6).

Lincoln Highway (US 30), a four-lane divided arterial with a grade-separated crossing, parallels both Ohio Street and Jackson Street less than a mile to the south and may provide the available capacity to alleviate queuing along these roadways. The availability of a viable alternative route and the multiple grade-separated crossings, as well as the at-grade crossings operating at LOS D or better in the area, provide an acceptable level of overall mobility.

Chicago Subdivision

The Proposed Action would not affect the overall mobility in the following 10 communities along CN's Chicago Subdivision because all of the crossings in these communities are grade-separated:

- Chicago (45 grade-separated crossings)
- Riverdale (three grade-separated crossings)
- Harvey (seven grade-separated crossings)
- East Hazelcrest (two grade-separated crossings)
- Homewood (two grade-separated crossings)
- Flossmoor (two grade-separated crossings)
- Olympia Fields (two grade-separated crossings)
- Matteson (two grade-separated crossings)
- ~~Richton Park (two grade-separated crossings)~~
- Monee (three grade-separated crossings)

Richton Park

Richton Park has one roadway that cross the Chicago Subdivision at-grade and two grade-separated crossings. Stuenkel Road/University Parkway runs east/west crossing the Chicago Subdivision and intersecting four arterials: La Grange Road (US 45), I 57, South Cicero Avenue (IL 50), and South Governors Highway. Stuenkel Road/University Parkway operates at LOS E-F and will continue to do so under 2015 conditions.

During the peak period under the No-Action Alternative, Stuenkel Road/University Parkway would experience a calculated vehicle queue length of approximately 320 feet, which would block one major roadway, South Governors Highway (IL 50).

During the peak period under the Proposed Action, Stuenkel Road/University Parkway would experience a calculated vehicle queue length of approximately 320 feet, which, although likely reduced due to a planned widening, would still block South Governors Highway (IL 50).

According to the Will County and IDOT plans, no local roadway improvements are planned within the Village core. However, Will County's Recommended Transportation Plan suggests that Stuenkel Road/University Parkway widens from a two-lane undivided collector to a four-lane divided arterial. The Will County plan also calls for an interchange to be added off of I-57 on Stuenkel Road/University Parkway. This improvement may have a positive effect on the operations of Stuenkel Road/University Parkway within the Village core and would provide an alternate route to South Governors Highway during periods of rail use. The widening of Stuenkel Road/University Parkway would improve the LOS from E-F to LOS C-D. With the widening, the roadway network would provide an acceptable level of overall mobility.

University Park

University Park has ~~two~~ one roadways that crosses the Chicago Subdivision at-grade in close proximity to each other. There are no grade-separated crossings. ~~Stuenkel Road/University Parkway runs east/west crossing the Chicago Subdivision and intersecting four arterials: La Grange Road (US 45), I-57, South Cicero Avenue (IL 50), and South Governors Highway. West Dralle Road is a two-lane divided collector that runs east/west, west of the railway, and turns south just east of the railway where it resumes as a two-lane undivided collector that runs east/west approximately 1,300 feet south of the west leg. West Dralle Road operates at LOS A-B and will continue to do so under 2015 conditions.~~

~~During the peak period under the No Action Alternative, Stuenkel Road/University Parkway would experience a calculated vehicle queue length of approximately 530 feet, which would block one major roadway, South Governors Highway (IL 50). The queue length along West Dralle Road would be approximately 155 feet, which would also block South Governors Highway (IL 50).~~

~~During the peak period under the Proposed Action, Stuenkel Road/University Parkway would experience a calculated vehicle queue length of approximately 425 feet, which, although likely reduced due to a planned widening, would still block South Governors Highway (IL 50). The queue length along West Dralle Road would be approximately 125 feet, which would also still block South Governors Highway (IL 50). According to the Will County and IDOT plans, no local roadway improvements are planned within the Village core, aside from surface reconstruction. The at-grade crossing would operate at LOS B or better in the area, providing an acceptable level of overall mobility. However, Will County's Recommended Transportation Plan suggests that Stuenkel Road/University Parkway widens from a two-lane undivided collector to a four-lane divided arterial. The Will County plan also calls for an interchange to be added off of I-57 on Stuenkel Road/University Parkway. This improvement may have a positive effect on the operations of Stuenkel Road/University Parkway within the Village core and would provide an alternate route to South Governors Highway during periods of rail use. The widening of Stuenkel Road/University Parkway would improve the LOS from E-F to LOS A-B. With the widening, the roadway network would provide an acceptable level of overall mobility.~~

- Based on the updated analysis, Stuenkel Road/University Parkway has been re-designated from University Park to Richton Park. Therefore, University Park has changed from having two roadways to one roadway that crosses the Chicago Subdivision at-grade, as part of the analysis.
- West Dralle Road operates at LOS A-B and will continue to do so under 2015 conditions.

- The at-grade crossing would operate at LOS B or better in the area, providing an acceptable level of overall mobility.

Elsdon Subdivision

Chicago

Chicago has 10 roadways that cross the Elsdon Subdivision at-grade and 34 grade-separated crossings. The local and regional planning documents do not designate planned improvements near the at-grade crossings that would affect mobility. Under 2015 conditions, the crossings at 55th Street, 71st Street, and 115th Street would all operate at LOS E-F, which remains unchanged from the 2007 conditions. Since 51st and 58th Streets parallel 55th Street by approximately 0.5 mile and 0.4 mile, respectively, 51st and 58th Streets both provide alternative routes to the congested 55th Street. Likewise, since 67th Street parallels 71st Street by approximately 0.5 mile, 67th Street provides an alternative route to the congested 71st Street. Finally, since 111th and 119th Streets parallel 115th Street by approximately 0.5 mile each, 111th and 119th Streets both provide alternative routes to the congested 115th Street. All other crossings in Chicago would operate at LOS D or better under 2015 conditions. The Metra SWS commuter rail line has an at-grade crossing with the Elsdon Subdivision within the community.

During the peak period under the No-Action Alternative, 55th Street and 71st Street would experience calculated queue lengths of approximately 2,635 feet and 2,785 feet respectively, which would block one major roadway, Pulaski Road. The queue length along 79th Street would experience a calculated vehicle queue length of approximately 2,455 feet, which would block one major roadway, Columbus Avenue. The queue lengths along 103rd Street and 111th Street would be approximately 1,995 feet and 1,645 feet, respectively, which would block one major roadway, Kedzie Avenue.

During the peak period under the Proposed Action, ~~these queue lengths would be reduced such that no major roadways would be impeded.~~ 55th Street and 71st Street would experience calculated queue lengths of approximately 2,635 feet and 2,785 feet respectively, which would still block Pulaski Road. The queue lengths along 79th Street, 103rd Street, and 111th Street would be reduced such that no major roadways would be impeded. ~~Therefore,~~ The close proximity of alternative crossing routes and available capacity at existing crossing locations allow for ~~good~~ acceptable overall mobility.

Evergreen Park

Evergreen Park has five roadways that cross the Elsdon Subdivision at-grade. The local and regional planning documents do not designate planned improvements near the at-grade crossings that would affect mobility. 91st Street, Kedzie Avenue, 94th Street, and 95th Street would operate at LOS D or better under 2015 conditions. Under 2015 conditions, the crossing at 99th Street would operate at LOS E-F, which is a decrease from LOS C-D under 2007 conditions.

During the peak period under the No-Action Alternative, Kedzie Avenue would experience a calculated vehicle queue length of approximately ~~2,365~~ 2,415 feet, which would block one major roadway, 95th Street (US 12). The queue lengths along 95th Street (US 12) and 99th Street would be approximately ~~2,045-1,550~~ feet and 1,945 feet, respectively, which would block Kedzie Avenue.

During the peak period under the Proposed Action condition, the queue lengths would be reduced due to the reduction of trains traveling on the Elsdon Subdivision, such that no major streets would be impeded. Thus, despite the congested conditions at the 99th Street crossing, mobility in the Evergreen Park area would be improved.

Blue Island

Blue Island has four roadways that cross the Elsdon Subdivision at-grade and two grade-separated crossings. The local and regional planning documents do not designate planned improvements near the at-grade crossings that would affect mobility. Under 2015 conditions, the crossing at 119th Street would operate at LOS E-F, which is a decrease from LOS C-D under 2007 conditions. 123rd Street, 127th Street, and Broadway would operate at LOS D or better under 2015 conditions.

During the peak period under the No-Action Alternative, 119th Street would experience a calculated vehicle queue length of approximately 2,405 feet, which would block one major roadway, Kedzie Avenue. The queue length along 127th Street would be approximately 2,315 feet, which would block Kedzie Avenue, and one railroad crossing to the east.

During the peak period under the Proposed Action, these queue lengths would be reduced such that no major roadways would be impeded. Thus, despite the congested conditions at the 119th Street crossing, mobility in the Blue Island area would be improved.

Dixmoor

Dixmoor has two roadways that cross the Elsdon Subdivision at-grade and one grade-separated crossing. Western Avenue and Robey Street would operate at LOS B or better under the 2015 conditions. The local and regional planning documents do not designate planned improvements near the at-grade crossings that would affect mobility.

During the peak period under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by the queued vehicles at the crossings. The multiple grade-separated crossings, as well as the at-grade crossings would operate at LOS B or better in the area, providing an acceptable level of overall mobility.

Harvey

Harvey has ~~seven~~eight roadways that cross the Elsdon Subdivision at-grade. The local and regional planning documents do not designate planned improvements near the at-grade crossings that would affect mobility. Under 2015 conditions, the crossing at Sibley Boulevard/147th Street (IL 83) would operate at LOS E-F, which is a decrease from LOS C-D under 2007 conditions. Under 2015 conditions, the crossing at Ashland Avenue would operate at LOS E-F, which would remain unchanged from the 2007 conditions. Lincoln Avenue, Wood Street, Center Street, Broadway Street, Park Avenue, and Halsted Street (IL 1) would operate at LOS C or better under 2015 conditions.

During the peak period under the No-Action Alternative, Wood Street would experience a calculated vehicle queue length of approximately 565 feet, which would block one major roadway, Sibley Boulevard/147th Street (IL 83). The queue length along Sibley Boulevard/147th Street (IL 83) would be approximately ~~1,240~~ 1,200 feet, which would block one major roadway, Wood Street. The queue length along Ashland Avenue would be approximately 1,000 feet which would block one major roadway, Sibley Boulevard/147th Street (IL 83)

During the peak period under the Proposed Action, Wood Street would experience a queue length of approximately 405 feet, which would still block Sibley Boulevard/147th Street (IL 83). The queue length along Sibley Boulevard/147th Street (IL 83) would be approximately ~~885~~-~~860~~ feet, which would still block Wood Street. The queue length along Ashland Avenue would be approximately 715 feet, which would still block Sibley Boulevard/147th Street (IL 83). Despite the congested conditions around the crossings at Sibley Boulevard/147th Street (IL 83) and Ashland Avenue, overall mobility is adequate in the Harvey area.

- **Based on the updated analysis, Ashland Avenue is included in the list of roadways for Harvey since it meets the SEA criteria for required evaluation. Therefore, Harvey**

has changed from having seven roadways to eight roadways that cross the Elsdon Subdivision at-grade, as part of the analysis.

Phoenix

Phoenix has one roadway that crosses the Elsdon Subdivision at-grade. 155th Street would operate at LOS A-B, under the 2015 condition. The local and regional planning documents do not designate planned improvements near the crossing that would affect mobility.

During the peak period under No-Action and Proposed Action alternatives, no major intersecting streets would be blocked by the queued vehicles at the crossing. The multiple grade-separated crossings, as well as the at-grade crossing would operate at LOS A-B in the area, providing an acceptable level of overall mobility.

South Holland

South Holland has four roadways that cross the Elsdon Subdivision at-grade and two grade-separated crossings. The local and regional planning documents do not designate planned improvements near the at-grade crossings that would affect mobility. Under 2015 conditions, the crossing at 162nd/ 159th Street (US 6) would operate at LOS E-F, which is a decrease from LOS C-D under 2007 conditions. Thornton-Blue Island Road, South Park and 170th Street would operate at LOS C or better under 2015 conditions. The proposed Metra southeast commuter rail line has an at-grade crossing with the Elsdon Subdivision within the community.

During the peak period under the No-Action Alternative, 159th Street (US 6) would experience a calculated vehicle queue length of approximately 1,055 feet, which would block one major roadway, Vincennes Avenue, and a railroad crossing to the west.

During the peak period under the Proposed Action, 159th Street (US 6) would experience a queue length of approximately 1,025 feet, which would still block Vincennes Avenue, and a railroad crossing to the west. The multiple grade-separated crossings, as well as most of the at-grade crossings, would operate at LOS C-D in the area, providing an acceptable level of overall mobility.

Thornton

Thornton has one roadway, Thornton-Lansing Road, which crosses the Elsdon Subdivision at-grade and one grade-separated crossing. The local and regional planning documents do not designate planned improvements near the at-grade crossing that would affect mobility. Under 2015 conditions, the crossing at Thornton-Lansing Road would operate at LOS E-F, which would remain unchanged from the 2007 conditions. Ridge Road parallels Thornton-Lansing Road by approximately 0.65 mile, providing an alternative route to the congested Thornton-Lansing Road.

During the peak period under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossing. Therefore, the close proximity of alternative crossing routes and available capacity at existing crossing locations allow for good overall mobility.

Lansing

Lansing has ~~five~~^{six} roadways that cross the Elsdon Subdivision at-grade. The local and regional planning documents do not designate planned improvements near the at-grade crossings that would affect mobility. Under 2015 conditions, the crossing at Wentworth Avenue would operate at LOS E-F, which is a decrease from LOS C-D under 2007 conditions. Volbrecht Road, 182nd Street/Ridge Road, Torrence Avenue (ILL 83), 186th Street and Burnham Avenue would operate at LOS E or better under 2015 conditions.

During the peak periods under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossing. Despite the congested conditions around the crossing at Wentworth Avenue, overall mobility is adequate in the Lansing area.

- Based on the updated analysis, 182nd Street/Ridge Road is included in the list of roadways for Lansing since it meets the SEA criteria for required evaluation. Therefore, Lansing has changed from having five roadways to six roadways that cross the Elsdon Subdivision at-grade, as part of the analysis.

Munster, Indiana

Munster has two roadways that cross the Elsdon Subdivision at-grade. Northwestern Indiana Regional Planning Commission's transportation program calls for the addition of a center turn lane on Calumet Avenue between Fisher Street and 45th Avenue. This improvement, however, would not affect the roadway LOS. Under 2015 conditions, the crossings at Calumet Avenue and White Oak Avenue would both operate at LOS E-F, which is a decrease from LOS C-D under 2007 conditions. Indianapolis Boulevard (US 41), a four-lane divided arterial with a grade-separated crossing, parallels White Oak Avenue approximately 1.0 mile to the east and may provide the available capacity to be a viable alternative route for the congested White Oak Avenue.

During the peak period under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossing. Mobility is somewhat impeded in the Munster area at the at-grade crossings.

Highland, Indiana

Highland has one roadway, Kennedy Avenue, which crosses the Elsdon Subdivision at-grade and one grade-separated crossing. The local and regional planning documents do not designate planned improvements near the at-grade crossing that would affect mobility. Under 2015 conditions, Kennedy Avenue would operate at LOS A-B.

During the peak period under both the No-Action and Proposed Action alternatives, no major intersecting roadways would be blocked by queued vehicles at the crossing. The grade-separated crossing, as well as the at-grade crossing, would operate at LOS B in the area, providing an acceptable level of overall mobility.

Griffith, Indiana

The Griffith community has three roadways that cross the Elsdon Subdivision at-grade. Under 2015 conditions, ~~all three the crossings at (Main Street, Broad Street and Colfax Street) would operate at LOS E-F, which would remain unchanged from the 2007 conditions. The roadways operated at LOS C, LOS D, and LOS E-F under 2007 conditions, respectively. Under 2015 conditions, Main Street would operate at LOS C-D, which would remain unchanged from the 2007 conditions.~~

During the peak period under the No-Action Alternative, Broad Street would experience a calculated vehicle queue length of approximately ~~2,140~~ 1,185 feet, which would block one major roadway, Main Street.

During the peak period under the Proposed Action, ~~this queue length would be reduced such that no major roadways would be impeded. Broad Street would experience a queue length of approximately 1,150 feet, which would still block Main Street.~~

The local and regional planning documents do not designate planned improvements near the at-grade crossings that would affect mobility. ~~The reduction of railway operations would improve Excessive~~

peak hour queuing along Broad Street and however the poor LOS would affect the level of overall mobility for the Griffith community.

Merrillville, Indiana

Merrillville has three roadways that cross the Elsdon Subdivision at-grade and two grade-separated crossings. The local and regional planning documents do not designate planned improvements near the at-grade crossings that would affect mobility. Under 2015 conditions, the crossings at Taft Street and Broadway would both operate at LOS E-F, which is the same under 2007 conditions. Madison Street would operate at LOS C-D under the 2015 conditions. Since Hendricks Street parallels Taft Street by approximately 4,000 feet and Harrison Street parallels Broadway by approximately 2,000 feet, Hendricks Street and Harrison Street both provide alternative routes to the congested Taft Street and Broadway Street, respectively. Therefore, the close proximity of alternative crossing routes and available capacity at existing crossing locations allow for good overall mobility.

Corrections to Attachment E3 of the Draft EIS

Effects on Emergency Service Response

E3.1 Background

In the Draft EIS, SEA reviewed vehicular delays at highway/rail at-grade crossings as a result of increases in rail-related operations to determine the potential effects of the demands placed on emergency services in the communities within the Study Area. These emergency service facilities included police, fire protection, and emergency medical services. Estimates of typical delays at highway/rail at-grade crossings were made for all of the public at-grade crossings along the EJ&E Eastern and Western Subdivisions and the CN Waukesha, Freeport, Joliet, Chicago, and Elsdon/South Bend Subdivisions. Only those emergency service facilities meeting the threshold parameters of being within two miles of at least one highway/rail at-grade crossing and having train traffic increases or decreases equal to or in excess of eight trains per day were identified and evaluated. Vehicular delays at these grade crossings were evaluated based on the average number of trains, train length, and speed in that particular area. Tables showing Average Daily Traffic (ADT) counts, existing and proposed number of trains, average delay per delayed vehicle and total time that a crossing is blocked in a 24-hour period were prepared for all of these facilities and presented in Appendix Attachment E3 of the Draft EIS.

Following publication of the Draft EIS, SEA received many comments concerning the basis for its conclusions, as well as the status of particular crossings. Some of these comments questioned the validity of ADTs used in the Draft EIS and growth rate factors used to forecast future ADTs. SEA worked with IDOT, local agencies, and communities to obtain updated ADTs. SEA also made appropriate adjustments to the train operations data used in the transportation and rail operations analysis. A full discussion of the updated transportation information and analysis is provided in Section 2.5 of this Final EIS.

Since this revised information affected many of the tables in Appendix Attachment E3 of the Draft EIS, a revised Appendix Attachment E3 has been prepared for this Final EIS. SEA looked at all of the facility tables identified in the Appendix Attachment E3 of the Draft EIS with the revised information, and concluded that no conclusions of potentially substantially affected facilities changed based on these revised tables. Therefore, SEA determined that it is unnecessary to republish all of these tables and instead only published the revised tables for those facilities that were considered potentially substantially affected by the Proposed Action in the Draft EIS and those facilities identified as needing additional analysis (see Section 2.6 of this Final EIS). The revised vehicular delay information found in Appendix A of this Final EIS shows all of the highway/rail at-grade crossings that have been updated with revised information.

The layout of the following sections is as follows:

- Section E3.2 provides the revised tables of those facilities identified as being potentially substantially affected by the Proposed Action in the Draft EIS
- Section E3.3 provides the revised tables (and new tables for Advocate Good Shepherd Hospital, Edward Hospital, Edward Plainfield Outpatient Center & Immediate Care, and Silver Cross Replacement Hospital) of those facilities identified as needing additional analysis

Since some of the facilities identified as needing additional analysis were outside of the two-mile threshold parameter (Advocate Good Shepherd Hospital, Edward Hospital and Silver Cross Replacement Hospital), tables were prepared that show the highway/rail crossings within five miles of the facility’s location.

Table E3.1-1 below provides the heading descriptions for the subsequent tables to follow in Sections E3.2 and E3.3. US DOT numbers are included in these tables to serve as a unique identifier for an individual roadway crossing for instances when the rail line crosses the same roadway more than once.

TABLE E3.1-1. LEGEND FOR TABLES OF CROSSINGS WITHIN TWO MILES OF EMERGENCY SERVICES FACILITIES	
Heading	Description
US DOT	US DOT number from FRA database
MP	Mile Post
N	Number of trains per day
ADT	Average daily traffic, at-grade intersection
D _A	Average delay per delayed vehicle, minutes
T	Total Time crossing is blocked in a day, minutes

E3.2 Substantially Affected Emergency Service Providers Identified in DEIS

Table E3.2-1 below corrects Tables E3.9-3, E3.10-5, E3.11-2 and E3.12-6, and identifies the nine public crossings within two miles of Countryside Fire Protection District – Station No. 1 that can be utilized in order to serve the community south of the EJ&E rail line and east of the CN rail line Waukesha Subdivision. Seven of these nine crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Countryside Fire Protection District – Station No. 1 is US Route 45 Lake Street (US 45), approximately 1.5 miles southeast, while the nearest CN grade separated crossing is Countryside Highway/Courtland Street, approximately 1.5 miles northeast.

TABLE E3.9-3, TABLE E3.10-5, TABLE E3.11-2, TABLE E3.12-6, TABLE E3.2-1. CROSSINGS WITHIN TWO MILES OF COUNTRYSIDE FIRE PROTECTION DISTRICT - STATION NO. 1											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260494M	Lake Street (US 45)	59.65	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260495U	Diamond Lake Road	59.13	At-Grade	5.3	8998 6207	1.11	9.04	20.3	8998 6207	2.27 1.95	70.74 60.97
260496B	IL 60&83	59.02	At-Grade	5.3	29659 29009	1.05	8.59	20.3	29659 29009	2.13 1.90	66.41 59.38
260500N	Gilmer Road	56.90	At-Grade	5.3	18658 18622	1.00	8.19	20.3	18658 18622	1.85	57.89

689701U	Allanson Road	38.65	At-Grade	<u>19.1</u> <u>20.8</u>	<u>21179</u> <u>19382</u>	<u>1.76</u> <u>1.69</u>	<u>51.72</u> <u>54.08</u>	<u>19.1</u> <u>17.8</u>	<u>21179</u> <u>19382</u>	<u>2.84</u> <u>2.40</u>	<u>83.35</u> <u>65.62</u>
689702B	Countryside Highway / Courtland Street	39.30	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
689703H	Hawley Street	39.80	At-Grade	<u>19.1</u> <u>20.8</u>	<u>8998</u> <u>8234</u>	<u>1.76</u> <u>1.69</u>	<u>51.72</u> <u>54.08</u>	<u>19.1</u> <u>17.8</u>	<u>8998</u> <u>8234</u>	<u>1.76</u> <u>1.92</u>	<u>51.72</u> <u>52.65</u>
689704P	Park Street	39.94	At-Grade	<u>19.1</u> <u>20.8</u>	732	<u>1.76</u> <u>1.69</u>	<u>51.72</u> <u>54.08</u>	<u>19.1</u> <u>17.8</u>	732	<u>1.76</u> <u>1.92</u>	<u>51.72</u> <u>52.65</u>
689705W	Maple Avenue	40.10	At-Grade	<u>19.1</u> <u>20.8</u>	<u>15052</u> <u>14568</u>	<u>1.76</u> <u>1.69</u>	<u>51.72</u> <u>54.08</u>	<u>19.1</u> <u>17.8</u>	<u>15052</u> <u>14568</u>	<u>1.76</u> <u>1.92</u>	<u>51.72</u> <u>52.65</u>

Table E3.2-2 below corrects Tables E3.12-4 and E3.13-4, and identifies the four public crossings within two miles of Lake Zurich Rural Fire Protection District – Station No. 3 that can be utilized in order to serve the community ~~west~~ east of the EJ&E rail line. All four of these crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Lake Zurich Rural Fire Protection District – Station No. 3 is ~~IL 22~~ IL 22, approximately 2.5 miles southwest.

TABLE E3.12-4, TABLE E3.13-4, TABLE E3.2-2. CROSSINGS WITHIN TWO MILES OF LAKE ZURICH RURAL FIRE PROTECTION DISTRICT - STATION NO. 3											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260500N	Gilmer Road	56.90	At-Grade	5.3	18658 <u>18622</u>	1.00	8.19	20.3	18658 <u>18622</u>	1.85	57.89
260503J	Old McHenry Road	55.45	At-Grade	5.3	32424 <u>32429</u>	1.03	8.38	20.3	32424 <u>32429</u>	1.90	59.38
260794B	Oakwood Road	54.73	At-Grade	5.3	6783 <u>4750</u>	1.08	8.81	20.3	6783 <u>4750</u>	2.01	62.66
260507L	Main Street	53.44	At-Grade	5.3	17474 <u>7474</u>	1.08	8.81	20.3	17474 <u>7474</u>	2.01	62.66

Table E3.2-3 below corrects Table E3.14-2, and identifies the six public crossings within two miles of Barrington Fire Department – Station No. 1 that can be utilized in order to serve the community ~~north-west~~ northwest of the EJ&E rail line. All six of these crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Barrington Fire Department – Station No. 1 is Rand Road (~~IL 12~~) (US 12), approximately 2.5 miles northeast.

TABLE E3.14-2, TABLE E3.2-3. CROSSINGS WITHIN TWO MILES OF BARRINGTON FIRE DEPARTMENT - STATION NO. 1											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260511B	Cuba Road	51.56	At-Grade	5.3	12982 <u>12921</u>	0.89	7.27	20.3	12982 <u>12921</u>	1.62	50.54

260513P	Lake Zurich Road	50.40	At-Grade	5.3	3131	0.85	6.91	20.3	3131	1.56	48.57
260514W	Northwest Highway (US 14)	50.10	At-Grade	5.3	33662 33949	0.86	7.02	20.3	33662 33949	1.62	50.54
260515D	Hough Street (IL 59 & 63) (IL 59)	49.80	At-Grade	5.3	24056 22549	0.88	7.14	20.3	24056 22549	1.62	50.54
260516K	Lake Cook Road / Main Street	49.30	At-Grade	5.3	14222	0.88	7.14	20.3	14222	1.62	50.54
260517S	Otis Road	47.90	At-Grade	5.3	1673	0.92	7.54	20.3	1673	1.69	52.73

Table E3.2-4 below corrects Tables E3.18-2 and E3.19-3, and identifies the ~~six~~ five public crossings within two miles of the ~~future~~ Bartlett Fire Protection District – Future Station No. 3 (scheduled to open in Fall 2008) that can be utilized in order to serve the community west of the EJ&E rail line and south of the CN rail line Freeport Subdivision. ~~Five~~ Four of these ~~six~~ five crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Bartlett Fire Protection District – Future Station No. 3 is Lake Street (US 20), approximately 1.5 miles north, while the nearest CN grade separated crossing is Dunham Road, approximately 2.5 miles southwest.

TABLE E3.18-2, TABLE E3.19-3, TABLE E3.2-4. CROSSINGS WITHIN TWO MILES OF BARTLETT FIRE PROTECTION DISTRICT - <u>FUTURE</u> STATION NO. 3											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260529L	Lake Street (US 20)	38.57	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260815S	Gifford Road Extension	0.00	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
260530F	Spaulding Road	37.60	At-Grade	5.3	1434	0.83	6.81	20.3	1434	1.50	46.79
260532U	West Bartlett Road	36.95	At-Grade	5.5	17209	0.89	7.50	22.5	17209	1.48	51.17
260533B	Stearns Road	35.88	At-Grade	5.5	21129 27604	0.92	7.75	22.5	21129 27604	1.53	53.12
289903M	Powis Road	36.05	At-Grade	3.0 <u>2.0</u>	5510	1.68	7.77 <u>5.18</u>	2.6 <u>2.0</u>	5510	3.72	14.89 <u>11.45</u>

Table E3.2-5 on the next page corrects Table E3.24-4, and identifies the five public crossings within two miles of the Plainfield Fire Protection District – Station No. 3 that can be utilized in order to serve the community west of the EJ&E rail line. All five of these crossings are at-grade crossings. The nearest EJ&E grade separated crossing to the Plainfield Fire Protection District – Station No. 3 is State Route 59, approximately 3.5 miles southeast.

US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260567V	111th Street	14.63	At-Grade	15.7	12320 10454	1.25	30.19	39.5	12320 10454	1.56	95.00
260569J	Ferguson Road / 119th Street	13.59	At-Grade	15.7	5468 3690	1.28	30.93	39.5	5468 3690	1.60	97.09
260571K	Normantown ^a / 252nd	12.92	At-Grade	15.7	2492	1.28	30.93	39.5	2492	1.67	101.64
260573Y	127th Street	12.56	At-Grade	15.7	6437 13160	1.31	31.73	39.5	6437 13160	1.71	104.12
260575M	135th Street	11.43	At-Grade	15.7	11766 13898	1.19	28.75	39.5	11766 13898	1.59	96.88

Note:

- ^a This crossing is blocked with temporary concrete barrier and road closed signs; therefore it is not presently active.

Table E3.2-6 below corrects Table E3.28-7, and identifies the five public crossings within two miles of the Joliet Fire Department – Station No. 8 that can be utilized in order to serve the community northeast of the EJ&E rail line. Three of these five crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Joliet Fire Department – Station No. 8 is Caton Farm Road, approximately 1.5 2 miles east.

US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260586A	Interstate 55	6.98	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260587G	East Frontage Road / Essington Road	6.87	At-Grade	18.5	4983	1.09	30.90	42.3	4983	1.43	93.15
260588N	Division <u>Division</u> Street	6.05	At-Grade	18.5	7613	1.13	32.29	42.3	7613	1.52	99.15
260589V	Gaylord Road	5.57	At-Grade	18.5	5758 5591	1.22	34.76	42.3	5758 5591	1.63	106.25
260591W	Caton Farm Road	4.50	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table E3.2-7 on the next page corrects Tables E3.31-4, E3.32-4, E3.33-3, E3.82-4, E3.84-4 and E3.85-4, and identifies the six public crossings within two miles of the Saint James Hospital and Health Centers – Olympia Fields that can be utilized in order to serve the community south of the EJ&E rail line and east of the CN rail line Chicago Subdivision. One of these six crossings is an at-grade crossing. The nearest EJ&E grade separated crossing to the Saint James Hospital and Health

Centers – Olympia Fields is ~~Governor's~~ Governors Highway, approximately 2 miles south, while the nearest CN grade separated crossing is Lincoln Highway (~~US 30~~) (US 30), approximately 1.5 miles southeast.

TABLE E3.31-4, TABLE E3.32-4, TABLE E3.33-3, TABLE E3.82-4, TABLE E3.84-4, TABLE E3.85-4, TABLE E3.2-7. CROSSINGS WITHIN TWO MILES OF SAINT JAMES HOSPITAL AND HEALTH CENTERS - OLYMPIA FIELDS

US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260634M	Governors Highway	21.20	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260636B	Main Street ^b	21.61	At-Grade	6.4 <u>8.6</u>	4375	1.10 <u>1.56</u>	10.87 <u>20.69</u>	28.3 <u>34.6</u>	4375	2.79 <u>2.41</u>	121.63 <u>128.26</u>
289673N	Vollmer Road	26.10	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
289675C	Lincoln Highway (US 30)	27.65	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
289676J	Front Street	28.20	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
289677R	Main Street	28.40	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note:

^b This crossing is comprised of a mainline track, a south connector, and a north connector, all of which were individually analyzed for the effects of the Proposed Action. The crossing displayed here shows the sum total of the number of trains (N), and total time that the crossing is blocked in a 24-hr period (T). The average delay per delayed vehicle (D_A) is the weighted average of the average delay per delayed vehicle (D_A) for the mainline, north connector, and the south connector.

Table E3.2-8 on the next page corrects Tables E3.34-3, E3.35-7, E3.82-3, E3.83-1, E3.96-4 and E3.97-4, and identifies the eight public crossings within two miles of ~~The~~ the Saint James Hospital and Health Centers – Chicago Heights that can be utilized in order to serve the community south of the EJ&E rail line. Seven of these eight crossings are at-grade crossings. The nearest EJ&E grade separated crossing to ~~The~~ the Saint James Hospital and Health Centers – Chicago Heights is Butler Street, approximately 0.75 mile southeast; however, ~~the nearest grade separated crossing that can accommodate all emergency medical vehicles is Calumet Expressway (IL 394), approximately 3 miles east this crossing has clearance restrictions that may not accommodate all emergency service apparatus and so SEA assumed this crossing could not be used by any emergency service responder.~~ Therefore, the nearest accessible EJ&E grade separated crossing that can accommodate all emergency vehicles is Orchard Drive, approximately 2.5 miles west.

TABLE E3.34-3, TABLE E3.35-7, TABLE E3.82-3, TABLE E3.83-1, TABLE E3.96-4, TABLE E3.97-4, TABLE E3.2-8. CROSSINGS WITHIN TWO MILES OF SAINT JAMES HOSPITAL AND HEALTH CENTERS - CHICAGO HEIGHTS											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260638P	Western Avenue	23.12	At-Grade	8.6	24717	1.11	14.69	31.6	24717	1.87 <u>1.82</u>	90.68 <u>88.27</u>
260639W	Euclid Avenue	24.63	At-Grade	8.6	238	1.49	19.66	31.6	238	2.17	105.66
260640R	Chicago Road	24.91	At-Grade	8.6	26842 <u>23390</u>	1.60	21.12	31.6	26842 <u>23390</u>	2.43	117.91
260641X	West End Avenue / Halsted Street	25.04	At-Grade	8.6	7267 <u>5956</u>	1.73	22.89	31.6	7267 <u>5956</u>	2.64	128.12
260642E	East End Avenue ^c	25.19	At-Grade	8.6 <u>10.2</u>	5086	1.73 <u>1.87</u>	22.89 <u>29.34</u>	31.6 <u>34.2</u>	5086	2.64 <u>2.81</u>	128.12 <u>147.91</u>
260643L	Butler Street	25.53	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260644T	Wentworth Avenue	25.92	At-Grade	10.2	4563	1.66	26.10	34.2	4563	2.66	140.07
260645A	State Street	26.16	At-Grade	10.2	7656	1.42	22.28	34.2	7656	2.34	123.30

Note:

^c This crossing is comprised of a mainline track and a connector, both of which were individually analyzed for the effects of the Proposed Action. The crossing displayed here shows the sum total of the number of trains (N), and total time that the crossing is blocked in a 24-hr period (T). The average delay per delayed vehicle (D_A) is the weighted average of the average delay per delayed vehicle (D_A) for the mainline and the connector.

Table E3.2-9 below corrects Table E3.39-2, and identifies the ~~six~~ three public crossings within two miles of the Schererville Fire Department Headquarters that can be utilized in order to serve the community northwest of the EJ&E rail line. All ~~six~~ three of these crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Schererville Fire Department Headquarters is Indianapolis Boulevard (~~US-41~~) (US 41), approximately 2.5 miles northwest.

TABLE E3.39-2, TABLE E3.2-9. CROSSINGS WITHIN TWO MILES OF SCHERERVILLE FIRE DEPARTMENT HEADQUARTERS											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260657U	Kennedy Avenue	34.36	At-Grade	10.2	17076	1.01	15.90	34.2	17076	1.49	78.59
283201W	Broad Street ^d	36.09	At-Grade	7.6 <u>32.3</u>	19572	1.20 <u>1.59</u>	14.00 <u>78.99</u>	28.6 <u>37.2</u>	19572	2.15 <u>2.34</u>	94.40 <u>133.80</u>
260658B	Divison Street	34.40	At-Grade	10.2	1367	1.93	30.30	34.2	1367	1.49	78.59

230081L	Colfax Street	36.50	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
230082T	Broad Street	36.33	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
283202D	Colfax Street	36.82	At-Grade	23.3 24.8	14139	1.45	51.90 55.24	23.3 18.6	14139	1.45 1.87	51.90 53.62

Note:

^d This crossing is comprised of an EJ&E mainline track, an EJ&E connector, and a CN mainline track, all of which were individually analyzed for the effects of the Proposed Action. The crossing displayed here shows the sum total of the number of trains (N), and total time that the crossing is blocked in a 24-hr period (T). The average delay per delayed vehicle (D_A) is the weighted average of the average delay per delayed vehicle (D_A) for the EJ&E mainline, EJ&E connector, and the CN mainline.

Table E3.2-10 below corrects Table E3.40-2, and identifies the ~~16~~ 12 public crossings within two miles of the Griffith Volunteer Fire Department Headquarters/Station No. 1 that can be utilized in order to serve the community south and east of the EJ&E rail ~~lines~~ line and south of the CN rail line Elsdon/South Bend Subdivision. ~~15~~ 11 of these ~~16~~ 12 crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Griffith Volunteer Fire Department Headquarters/Station No. 1 is Ridge Road (US 6), approximately 2 miles north, while the nearest CN grade separated crossing is Indianapolis Boulevard (~~US 41~~) (US 41), approximately 2.5 miles west.

TABLE E3.40-2, TABLE E3.2-10. CROSSINGS WITHIN TWO MILES OF GRIFFITH VOLUNTEER FIRE DEPARTMENT HEADQUARTERS/STATION NO. 1											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260657U	Kennedy Avenue	34.36	At-Grade	10.2	17076	1.01	15.90	34.2	17076	1.49	78.59
230081L	Colfax Street	36.50	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
230082T	Broad Street	36.33	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
230083A	Main Street	38.33	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
230084G	Cline Avenue	36.33	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
260659H	East Main Street	36.52	At-Grade	7.6	10960	1.20	14.00	28.6	10960	2.15	94.40
260661J	East Lake Street	36.77	At-Grade	7.6	6524	1.10	12.83	28.6	6524	1.94	85.50
260662R	East Miller Street	36.89	At-Grade	7.6	6524	1.04	12.18	28.6	6524	1.83	80.59
260663X	East Elm Street	37.00	At-Grade	7.6	8090	1.02	11.89	28.6	8090	1.61	70.84
260664E	East 45th Avenue	37.52	At-Grade	7.6	23486	0.97	11.37	28.6	23486	1.61	70.84
260665L	East 40th Place	38.11	At-Grade	7.6	14222	0.95	11.13	28.6	14222	1.57	69.23

260667A	Ridge Road (US 6)	38.34	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
283199X	Kennedy Avenue	34.23	At-Grade	22.1	6664	2.82	95.89	2.9	6664	2.99	13.33
283200P	Main Street	35.55	At-Grade	22.1	10960	1.61	54.68	2.9	10960	1.59	7.08
283201W	Broad Street ^d	36.09	At-Grade	7.6 32.3	19572	1.20 1.59	14.00 78.99	28.6 37.2	19572	2.15 2.34	94.40 133.80
283202D	Colfax Street	36.82	At-Grade	23.3 24.8	14139	1.45	51.90 55.24	23.3 18.6	14139	1.45 1.87	51.90 53.62

Note:

^d This crossing is comprised of an EJ&E mainline track, an EJ&E connector, and a CN mainline track, all of which were individually analyzed for the effects of the Proposed Action. The crossing displayed here shows the sum total of the number of trains (N), and total time that the crossing is blocked in a 24-hr period (T). The average delay per delayed vehicle (D_A) is the weighted average of the average delay per delayed vehicle (D_A) for the EJ&E mainline, EJ&E connector, and the CN mainline.

Table E3.2-11 below corrects Table E3.40-3, and identifies the ~~14~~ nine public crossings within two miles of the Griffith Volunteer Fire Department – Station No. 2 that can be utilized in order to serve the community north and west of the EJ&E rail ~~lines~~ line and north of the CN rail line Elsdon/South Bend Subdivision. All of these ~~14~~ nine of these crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Griffith Volunteer Fire Department – Station No. 2 is Indianapolis Boulevard (~~US 41~~) (US 41), approximately 2.5 miles ~~southwest~~ west, while the nearest CN grade separated crossing is Indianapolis Boulevard (~~US 41~~) (US 41), approximately 2.5 miles northwest.

TABLE E3.40-3, TABLE E3.2-11. CROSSINGS WITHIN TWO MILES OF GRIFFITH VOLUNTEER FIRE DEPARTMENT - STATION NO. 2											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260657U	Kennedy Avenue	34.36	At-Grade	10.2	17076	1.01	15.90	34.2	17076	1.49	78.59
260658B	Divison Street	34.40	At-Grade	10.2	1367	1.93	30.30	34.2	1367	1.49	78.59
230081L	Colfax Street	36.50	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
230082T	Broad Street	36.33	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
230083A	Main Street	38.33	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
230084G	Cline Avenue	36.33	At-Grade	0.0	0	0.00	0.00	0.0	0	0.00	0.00
260659H	East Main Street	36.52	At-Grade	7.6	10960	1.20	14.00	28.6	10960	2.15	94.40
260661J	East Lake Street	36.77	At-Grade	7.6	6524	1.10	12.83	28.6	6524	1.94	85.50
260662R	East Miller Street	36.89	At-Grade	7.6	6524	1.04	12.18	28.6	6524	1.83	80.59

260663X	East Elm Street	37.00	At-Grade	7.6	8090	1.02	11.89	28.6	8090	1.61	70.84
260664E	East 45th Avenue	37.52	At-Grade	7.6	23486	0.97	11.37	28.6	23486	1.61	70.84
283200P	Main Street	35.55	At-Grade	22.1	10960	1.61	54.68	2.9	10960	1.59	7.08
283201W	Broad Street ^d	36.09	At-Grade	7.6 32.3	19572	1.20 1.59	14.00 78.99	28.6 37.2	19572	2.15 2.34	94.40 133.80
283202D	Colfax Street	36.82	At-Grade	23.3 24.8	14139	1.45	51.90 55.24	23.3 18.6	14139	1.45 1.87	51.90 53.62

Note:

^d This crossing is comprised of an EJ&E mainline track, an EJ&E connector, and a CN mainline track, all of which were individually analyzed for the effects of the Proposed Action. The crossing displayed here shows the sum total of the number of trains (N), and total time that the crossing is blocked in a 24-hr period (T). The average delay per delayed vehicle (D_A) is the weighted average of the average delay per delayed vehicle (D_A) for the EJ&E mainline, EJ&E connector, and the CN mainline.

E3.3 Additional Affected Emergency Service Providers Identified during the Draft EIS Comment Period

Table E3.3-1 below identifies the 11 public crossings within five miles of Advocate Good Shepherd Hospital that can be utilized in order to serve the community southeast of the EJ&E rail line. Nine of these 11 crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Advocate Good Shepherd Hospital is Rand Road (US 12), approximately 4 miles east.

US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D_A	T	N	ADT	D_A	T
260507L	Main Street	53.44	At-Grade	5.3	7474	1.08	8.81	20.3	7474	2.01	62.66
260508T	Old Rand Road	53.27	At-Grade	5.3	7474	1.05	8.59	20.3	7474	1.95	60.97
260831B	IL 22	53.01	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260509A	Rand Road (US 12)	52.52	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260510U	Ela Road	52.33	At-Grade	5.3	21408	0.94	7.69	20.3	21408	1.73	53.91
260511B	Cuba Road	51.56	At-Grade	5.3	12921	0.89	7.27	20.3	12921	1.62	50.54
260513P	Lake Zurich Road	50.40	At-Grade	5.3	3131	0.85	6.91	20.3	3131	1.56	48.57
260514W	Northwest Highway (US 14)	50.10	At-Grade	5.3	33949	0.86	7.02	20.3	33949	1.62	50.54

<u>260515D</u>	<u>Hough Street (IL 59)</u>	<u>49.80</u>	<u>At-Grade</u>	<u>5.3</u>	<u>22549</u>	<u>0.88</u>	<u>7.14</u>	<u>20.3</u>	<u>22549</u>	<u>1.62</u>	<u>50.54</u>
<u>260516K</u>	<u>Lake Cook Road / Main Street</u>	<u>49.30</u>	<u>At-Grade</u>	<u>5.3</u>	<u>14222</u>	<u>0.88</u>	<u>7.14</u>	<u>20.3</u>	<u>14222</u>	<u>1.62</u>	<u>50.54</u>
<u>260517S</u>	<u>Otis Road</u>	<u>47.90</u>	<u>At-Grade</u>	<u>5.3</u>	<u>1673</u>	<u>0.92</u>	<u>7.54</u>	<u>20.3</u>	<u>1673</u>	<u>1.69</u>	<u>52.73</u>

Table E3.3-2 below corrects Tables E3.19-4 and E3.20-2, and identifies the six public crossings within two miles of the West Chicago Fire Protection District Headquarters/Station No. 1 that can be utilized in order to serve the community west of the EJ&E rail line. Five of these six crossings are at-grade crossings. The nearest EJ&E grade separated crossing to the West Chicago Fire Protection District Headquarters/Station No. 1 is Roosevelt Road, approximately 1.5 miles southwest south.

TABLE E3.19-4, TABLE E3.20-2, TABLE E3.3-2. CROSSINGS WITHIN TWO MILES OF WEST CHICAGO FIRE PROTECTION DISTRICT HEADQUARTERS/STATION NO. 1											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260538K	Hawthorne Lane	30.24	At-Grade	4.4	20024	0.90	6.10	23.4	20024	1.86	66.84
260541T	Washington Street	28.90	At-Grade	10.7	12095	1.65	27.17	31.6	12095	2.41	117.19
260542A	Aurora Street	28.87	At-Grade	10.7	364	1.59	26.18	31.6	364	2.17	105.49
260543G	Church Street	28.77	At-Grade	10.7	375 <u>364</u>	1.59	26.18	31.6	375 <u>364</u>	2.24	109.08
260545V	Ann Street	28.50	At-Grade	10.7	4160 <u>1127</u>	1.59	26.18	31.6	4160 <u>1127</u>	2.24	109.08
260549X	Roosevelt Road	27.76	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table E3.3-3 below corrects Tables E3.19-6 and E3.20-4, and identifies the six public crossings within two miles of the West Chicago Fire Protection District – Station No. 3 that can be utilized in order to serve the community east of the EJ&E rail line. Five of these six crossings are at-grade crossings. The nearest EJ&E grade separated crossing to the West Chicago Fire Protection District – Station No. 3 is Roosevelt Road, approximately 0.75 1 mile southeast.

TABLE E3.19-6, TABLE E3.20-4, TABLE E3.3-3. CROSSINGS WITHIN TWO MILES OF WEST CHICAGO FIRE PROTECTION DISTRICT - STATION NO. 3											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260538K	Hawthorne Lane	30.24	At-Grade	4.4	20024	0.90	6.10	23.4	20024	1.86	66.84
260541T	Washington Street	28.90	At-Grade	10.7	12095	1.65	27.17	31.6	12095	2.41	117.19

260542A	Aurora Street	28.87	At-Grade	10.7	364	1.59	26.18	31.6	364	2.17	105.49
260543G	Church Street	28.77	At-Grade	10.7	375 364	1.59	26.18	31.6	375 364	2.24	109.08
260545V	Ann Street	28.50	At-Grade	10.7	1160 1127	1.59	26.18	31.6	1160 1127	2.24	109.08
260549X	Roosevelt Road	27.76	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table E3.3-4 below identifies the eight public crossings within five miles of Edward Hospital that can be utilized in order to serve the community west of the EJ&E rail line. Four of these eight crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Edward Hospital is New York Street/Naperville Road, approximately 4.5 miles west.

TABLE E3.3-4. CROSSINGS WITHIN FIVE MILES OF EDWARD HOSPITAL											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260554U	East -West Tollway (I-88)	22.97	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260556H	Diehl Road	22.80	At-Grade	10.7	17341	1.17	19.24	31.6	17341	1.59	77.17
260557P	North Aurora Road	21.50	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260558W	Liberty Street	20.63	At-Grade	15.7	16111	1.47	35.55	39.5	16111	1.85	112.56
260559D	New York Street / Naperville Road	20.12	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260902V	McCoy Drive	19.37	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260560X	Ogden Avenue (US 34)	19.05	At-Grade	15.7	46110	1.22	29.49	39.5	46110	1.50	91.14
260562L	Montgomery Road / 83rd Street	18.18	At-Grade	15.7	27131	1.22	29.49	39.5	27131	1.53	93.02

Table E3.3-5 on the next page corrects Tables E3.22-4 and E3.24-5, and identifies the three public crossings within two miles of the Rush-Copley Medical Center that can be utilized in order to serve the community east of the EJ&E rail line. All three of these crossings are at-grade crossings. The nearest EJ&E grade separated crossing to the Rush-Copley Medical Center is McCoy Road Drive, approximately 2.5 miles northeast.

US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260562L	Montgomery Road / 83rd Street	18.18	At-Grade	15.7	27131	1.22	29.49	39.5	27131	1.53	93.02
260563T	Keating Drive / 87th Street	17.17	At-Grade	15.7	2007 4182	1.22	29.49	39.5	2007 4182	1.53	93.02
260564A	Hafenrichter Road	17.08	At-Grade	15.7	6506 5657	1.22	29.49	39.5	6506 5657	1.53	93.02

Table E3.3-6 below identifies the five public crossings within two miles of the Edward Plainfield Outpatient Center & Immediate Care that can be utilized in order to serve the community west of the EJ&E rail line. All five of these crossings are at-grade crossings. The nearest EJ&E grade separated crossing to the Edward Plainfield Outpatient Center & Immediate Care is State Route 59, approximately 2.5 miles southeast.

US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260569J	Ferguson Road / 119th Street	13.59	At-Grade	15.7	3690	1.28	30.93	39.5	3690	1.60	97.09
260571K	Normantown ^a / 252nd	12.92	At-Grade	15.7	2492	1.28	30.93	39.5	2492	1.67	101.64
260573Y	127th Street	12.56	At-Grade	15.7	13160	1.31	31.73	39.5	13160	1.71	104.12
260575M	135th Street	11.43	At-Grade	15.7	13898	1.19	28.75	39.5	13898	1.59	96.88
260576U	Van Dyke Road	10.68	At-Grade	15.7	6921	1.11	26.79	39.5	6921	1.46	88.76

Note:

^a This crossing is blocked with temporary concrete barrier and road closed signs; therefore it is not presently active.

Table E3.3-7 on the next page corrects Tables E3.28-11, E3.30-4 and E3.74-4, and identifies the 17 public crossings within two miles of Silver Cross Hospital that can be utilized in order to serve the community west of the EJ&E rail line and CN rail line Joliet Subdivision. Five of these 17 crossings are at-grade crossings. The nearest EJ&E grade separated crossing to Silver Cross Hospital is Jackson Street (~~US 6~~) (US 6), approximately 0.5 mile southwest, while the nearest CN grade separated crossing is Cass Street (US 30 / US 6), approximately 1.5 miles southwest.

TABLE E3.28-11, TABLE E3.30-4, TABLE E3.74-4, TABLE E3.3-7. CROSSINGS WITHIN TWO MILES OF SILVER CROSS HOSPITAL											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260596F	Collins Street	1.30	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260597M	Woodruff Road	0.82	At-Grade	18.5	10659	2.58	73.32	42.3	10659	4.43	288.02
260598U	Charlesworth Avenue	0.57	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260599B	Jackson Street (US 6)	0.31	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260600T	Cass Street (US 30)	0.55	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260601A	Washington Street	0.95	At-Grade	6.4	11714	3.44	33.87	28.3	11714	5.26	229.10
260602G	Interstate 80	1.71	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
260603N	South Rowell Avenue	1.80	At-Grade	6.4	3184	1.80	17.73	28.3	3184	3.23	140.59
289759X	Ohio Street	36.64	At-Grade	2.9 1.8	7198	5.86 3.77	26.17 10.43	2.9 2.0	7198	5.86 4.84	26.17 14.88
289760S	Jackson Street	36.77	At-Grade	2.9 1.8	20380	5.86 3.77	26.17 10.43	2.9 2.0	20380	5.86 4.84	26.17 14.88
004372F	Cass Street (US 30 / US 6)	37.00	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
004373M	Clinton Street	37.10	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
004374U	Van Buren Street	37.15	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
004375B	Jefferson Street (US 30 / US 6)	37.20	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
289761Y	Washington Street	37.30	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
289762F	Osgood Street	37.60	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
289764U	4th Avenue	37.80	Grade Separated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table E3.3-8 on the next page corrects Table E3.30-2, and identifies the three public crossings within two miles of the New Lenox Fire District Headquarters/Station No. 1 that can be utilized in order to serve the community south of the EJ&E rail line. All three of these crossings are at-grade crossings. The nearest EJ&E grade separated crossing crossings to the New Lenox Fire District Headquarters/Station No. 1 is US Route 45, approximately 5 miles southeast are Interstate 80, approximately 5 miles west, and South LaGrange Road (US 45), approximately 5 miles southeast.

TABLE E3.30-2, TABLE E3.3-8. CROSSINGS WITHIN TWO MILES OF NEW LENOX FIRE DISTRICT HEADQUARTERS/STATION NO. 1											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260612M	Nelson Road	7.00	At-Grade	6.4	7336	1.23	12.10	28.3	7336	1.70	73.86
260614B	Cedar Road	8.00	At-Grade	6.4	10299	1.26	12.40	28.3	10299	1.70	73.86
260616P	Spencer Road	9.24	At-Grade	6.4	3391 3104	1.23	12.10	28.3	3391 3104	1.70	73.86

Table E3.3-9 below corrects Table E3.30-3, and identifies the three public crossings within two miles of the New Lenox Fire District – Station No. 3 that can be utilized in order to serve the community north of the EJ&E rail line. All three of these crossings are at-grade crossings. The nearest EJ&E grade separated crossings to the New Lenox Fire District – Station No. 3 are Interstate 80, approximately 4.5 miles northwest, and South LaGrange Road (US 45), approximately 6 miles east.

TABLE E3.30-3, TABLE E3.3-9. CROSSINGS WITHIN TWO MILES OF NEW LENOX FIRE DISTRICT - STATION NO. 3											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
260611F	South Gougar Road	6.00	At-Grade	6.4	8555 8063	1.33	13.06	28.3	8555 8063	1.78	77.37
260612M	Nelson Road	7.00	At-Grade	6.4	7336	1.23	12.10	28.3	7336	1.70	73.86
260614B	Cedar Road	8.00	At-Grade	6.4	10299	1.26	12.40	28.3	10299	1.70	73.86

Table E3.3-10 below identifies the six public crossings within five miles of the Silver Cross Replacement Hospital that can be utilized in order to serve the community south of the EJ&E rail line. All six of these crossings are at-grade crossings. The nearest EJ&E grade separated crossings to the Silver Cross Replacement Hospital are Jackson Street (US 6), approximately 5 miles west, and South LaGrange Road (US 45), approximately 6.5 miles southeast.

TABLE E3.3-10. CROSSINGS WITHIN FIVE MILES OF SILVER CROSS REPLACEMENT HOSPITAL											
US DOT	Location	MP	Crossing Type	NO ACTION (2015)				ACTION (2015)			
				N	ADT	D _A	T	N	ADT	D _A	T
<u>260609E</u>	<u>Cherry Hill Road</u>	<u>5.00</u>	<u>At-Grade</u>	<u>6.4</u>	<u>1107</u>	<u>1.23</u>	<u>12.10</u>	<u>28.3</u>	<u>1107</u>	<u>1.74</u>	<u>75.56</u>
<u>260611F</u>	<u>South Gougar Road</u>	<u>6.00</u>	<u>At-Grade</u>	<u>6.4</u>	<u>8063</u>	<u>1.33</u>	<u>13.06</u>	<u>28.3</u>	<u>8063</u>	<u>1.78</u>	<u>77.37</u>

Appendix A.11

<u>260612M</u>	<u>Nelson Road</u>	<u>7.00</u>	<u>At-Grade</u>	<u>6.4</u>	<u>7336</u>	<u>1.23</u>	<u>12.10</u>	<u>28.3</u>	<u>7336</u>	<u>1.70</u>	<u>73.86</u>
<u>260614B</u>	<u>Cedar Road</u>	<u>8.00</u>	<u>At-Grade</u>	<u>6.4</u>	<u>10299</u>	<u>1.26</u>	<u>12.40</u>	<u>28.3</u>	<u>10299</u>	<u>1.70</u>	<u>73.86</u>
<u>260616P</u>	<u>Spencer Road</u>	<u>9.24</u>	<u>At-Grade</u>	<u>6.4</u>	<u>3104</u>	<u>1.23</u>	<u>12.10</u>	<u>28.3</u>	<u>3104</u>	<u>1.70</u>	<u>73.86</u>
<u>260617W</u>	<u>School House Road</u>	<u>10.00</u>	<u>At-Grade</u>	<u>6.4</u>	<u>8721</u>	<u>1.23</u>	<u>12.10</u>	<u>28.3</u>	<u>8721</u>	<u>1.70</u>	<u>73.86</u>

Page 4.3-75, Table 4.3-13:

Table 4.3-13. Emergency Service Providers Potentially Substantially Affected by the Proposed Action							
Community	Facility	USDOT	Closest Grade-Separated Crossing and Direct Line Distance (miles)		Increase in Average Delay per Delayed Vehicle >30 seconds	Increase in Total Time Crossing is Blocked in a Day >30 minutes	Figure No.
					Y/N (greatest increase in seconds. See Note ^a)		
Mundelein, IL	Countryside Fire Protection District - Station No. 1	260494M	Lake Street (US 45)	1.62	Y (69) (51)	Y (62) (52)	4.3-13
Lake Zurich, IL	Lake Zurich Rural Fire Protection District - Station No. 3	260831B	IL 22	2.31	Y (56)	Y (54)	4.3-14
Barrington, IL	Barrington Fire Department - Station No. 1	260509A	Rand Road (US 12)	2.55	Y (46)	Y (45)	4.3-15
Bartlett, IL	Bartlett Fire Protection District - Future Station No. 3	260529L	Lake Street (US 20)	1.62	Y (40) (122)	Y (45)	4.3-16
Plainfield, IL	Plainfield Fire Protection District - Station No. 3	260590P	State Route 59	3.70	N	Y (72)	4.3-17
Joliet, IL	Joliet Fire Department - Station No. 8	260591W	Caton Farm Road	1.81	N	Y (72)	4.3-18
Olympia Fields, IL	Saint James Hospital and Health Centers - Olympia Fields	260634M	Governors Highway	1.92	Y (101) (51)	Y (111) (108)	4.3-19
Chicago Heights, IL	Saint James Hospital and Health Centers - Chicago Heights ^b	260637H	Orchard Drive	2.30	Y (60)	Y (114) (119)	4.3-20
Schererville, IN	Schererville Fire Department Headquarters	260656M	Indianapolis Boulevard (US 41)	2.28	Y (57) (45)	Y (80) (63)	4.3-21
Griffith, IN	Griffith Volunteer Fire Dept. Headquarters/Station No. 1	260667A	Ridge Road (US 6)	1.89	Y (57)	Y (80)	4.3-22
Griffith, IN	Griffith Volunteer Fire Dept. - Station No. 2	260656M	Indianapolis Boulevard (US 41)	2.29	Y (57)	Y (80)	4.3-22

Notes:

^a The delay time shown in the table reflects the greatest increase in delay calculated for all available routes from the facility.

^b This facility is closer to Butler Street; however, there are clearance restrictions at this crossing and it may not accommodate all emergency service apparatus; essentially assuming that this crossing cannot be used by any emergency service responder.

Corrections to APPENDIX H of the Draft EIS SOCIOECONOMIC ANALYSIS

Revisions to Attachment H1 - IMPLAN Estimate for Employment and Income:

IMPLAN
 CNR Project.iap
 Study area: Indiana and Illinois
 IMPACT NAME: G3 Additional revenue to rail MULTIPLIER: Type SAM
Output Impact (Gain)
 Aggregated Report

Industry	Direct*	Indirect*	Induced*	Total*	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$7,395	\$27,307	\$34,702	0.00
19 21 Mining (AGG)	\$0	\$228,543	\$57,072	\$285,615	0.02
30 22 Utilities (AGG)	\$0	\$32,469	\$141,098	\$173,567	0.01
33 23 Construction (AGG)	\$0	\$22,669	\$35,015	\$57,684	0.00
46 31-33 Manufacturing (AGG)	\$0	\$1,267,503	\$758,965	\$2,026,468	0.14
390 42 Wholesale Trade (AGG)	\$0	\$303,573	\$364,839	\$668,413	0.04
391 48-49 Transportation & Warehousing (AGG)	\$14,859,995	\$974,425	\$182,357	\$16,016,776	1.08
401 44-45 Retail trade (AGG)	\$0	\$22,669	\$695,353	\$718,022	0.05
413 51 Information (AGG)	\$0	\$88,654	\$184,769	\$273,423	0.02
425 52 Finance & insurance (AGG)	\$0	\$228,329	\$577,827	\$806,156	0.05
431 53 Real estate & rental (AGG)	\$0	\$714,240	\$349,017	\$1,063,257	0.07
437 54 Professional, scientific & tech svcs (AGG)	\$0	\$785,147	\$299,859	\$1,085,007	0.07
451 55 Management of companies (AGG)	\$0	\$40,432	\$81,102	\$121,534	0.01
452 56 Administrative & waste services (AGG)	\$0	\$195,251	\$138,342	\$333,593	0.02
461 61 Educational svcs (AGG)	\$0	\$16,119	\$111,928	\$128,047	0.01
464 62 Health & social services (AGG)	\$0	\$79	\$920,175	\$920,254	0.06
475 71 Arts, entertainment & recreation (AGG)	\$0	\$12,471	\$86,691	\$99,162	0.01
479 72 Accommodation & food services (AGG)	\$0	\$62,055	\$319,726	\$381,781	0.03
482 81 Other services (AGG)	\$0	\$36,526	\$252,361	\$288,887	0.02
495 92 Government & non NAICS (AGG)	\$0	\$132,072	\$746,818	\$878,890	0.06
30001 Institutions (AGG)	\$0	\$0	\$0	\$0	0.00
TOTAL	\$14,859,995	\$5,173,623	\$6,330,619	\$26,364,236	1.77

*2008 dollars

Assumption: \$14.86M increase in revenue to Rail Transportation sector annually

IMPLAN
 CNR Project.iap
 Study area: Indiana and Illinois
 IMPACT NAME: G4 Revenue loss to trucking MULTIPLIER: Type SAM
Output Impact (Loss)
 Aggregated Report

Industry	Direct*	Indirect*	Induced*	Total*	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$1,192	\$33,056	\$34,248	0.00
19 21 Mining (AGG)	\$0	\$674,414	\$69,888	\$744,303	0.04
30 22 Utilities (AGG)	\$0	\$60,212	\$170,799	\$231,011	0.02
33 23 Construction (AGG)	\$0	\$46,895	\$42,389	\$89,284	0.01
46 31-33 Manufacturing (AGG)	\$0	\$2,264,568	\$718,752	\$2,983,321	0.21
390 42 Wholesale Trade (AGG)	\$0	\$65,792	\$441,658	\$507,450	0.07
391 48-49 Transportation & Warehousing (AGG)	\$14,860,003	\$2,606,087	\$220,754	\$17,686,844	1.19
401 44-45 Retail trade (AGG)	\$0	\$193,072	\$841,778	\$1,034,849	0.07
413 51 Information (AGG)	\$0	\$208,386	\$223,677	\$432,063	0.03
425 52 Finance & insurance (AGG)	\$0	\$773,653	\$699,521	\$1,473,174	0.10
431 53 Real estate & rental (AGG)	\$0	\$408,471	\$422,479	\$830,950	0.06
437 54 Professional, scientific & tech svcs (AGG)	\$0	\$579,791	\$363,000	\$942,791	0.06
451 55 Management of companies (AGG)	\$0	\$233,722	\$90,779	\$324,501	0.02
452 56 Administrative & waste services (AGG)	\$0	\$188,198	\$167,574	\$355,772	0.02
461 61 Educational svcs (AGG)	\$0	\$5,008	\$135,511	\$140,519	0.01
464 62 Health & social services (AGG)	\$0	\$7,258	\$1,113,932	\$1,121,190	0.08
475 71 Arts, entertainment & recreation (AGG)	\$0	\$12,513	\$104,950	\$117,463	0.01
479 72 Accommodation & food services (AGG)	\$0	\$51,043	\$387,064	\$438,107	0.03
482 81 Other services (AGG)	\$0	\$188,006	\$205,512	\$393,518	0.03
495 92 Government & non NAICS (AGG)	\$0	\$88,615	\$904,143	\$992,758	0.07
30001 Institutions (AGG)	\$0	\$0	\$0	\$0	0.00
TOTAL	\$14,860,003	\$9,143,894	\$7,663,717	\$31,667,614	2.13

*2008 dollars

Assumption: \$14.86M decline in revenue to Truck Transportation sector annually

IMPLAN
 CNR Project.iap
 Study area: Indiana and Illinois
 NET IMPACT (DIFFERENCE BETWEEN RAIL AND TRUCKING)
Output Impact (Difference)
 Aggregated Report

Industry	Direct**	Indirect**	Induced**	Total**	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$6,203	-\$5,740	\$463	0.00
19 21 Mining (AGG)	\$0	-\$342,871	-\$12,016	-\$354,887	-0.02
30 22 Utilities (AGG)	\$0	-\$27,743	-\$20,701	-\$48,444	0.00
33 23 Construction (AGG)	\$0	-\$24,226	-\$7,374	-\$31,600	0.00
46 31-33 Manufacturing (AGG)	\$0	-\$997,065	-\$159,700	-\$1,156,765	-0.08
390 42 Wholesale Trade (AGG)	\$0	-\$352,219	-\$76,019	-\$428,238	-0.03
391 48-49 Transportation & Warehousing (AGG)	\$0	-\$1,651,662	-\$30,390	-\$1,682,052	-0.11
401 44-45 Retail trade (AGG)	\$0	-\$170,403	-\$146,425	-\$316,828	-0.02
413 51 Information (AGG)	\$0	-\$110,732	-\$38,008	-\$148,740	-0.01
425 52 Finance & insurance (AGG)	\$0	-\$545,324	-\$121,694	-\$667,018	-0.04
431 53 Real estate & rental (AGG)	\$0	-\$305,740	-\$73,462	-\$379,202	-0.02
437 54 Professional, scientific & tech svcs (AGG)	\$0	\$208,357	-\$63,141	\$145,215	0.01
451 55 Management of companies (AGG)	\$0	-\$193,280	-\$17,077	-\$210,356	-0.01
452 56 Administrative & waste services (AGG)	\$0	\$7,053	-\$29,132	-\$22,079	0.00
461 61 Educational svcs (AGG)	\$0	\$11,111	-\$23,582	-\$12,471	0.00
464 62 Health & social services (AGG)	\$0	-\$7,770	-\$193,757	-\$201,527	-0.01
475 71 Arts, entertainment & recreation (AGG)	\$0	-\$42	-\$18,259	-\$18,301	0.00
479 72 Accommodation & food services (AGG)	\$0	\$11,012	-\$67,338	-\$56,326	0.00
482 81 Other services (AGG)	\$0	-\$151,479	-\$53,151	-\$204,630	-0.01
495 92 Government & non NAICS (AGG)	\$0	\$43,457	-\$157,326	-\$113,869	-0.01
30001 Institutions (AGG)	\$0	\$0	\$0	\$0	0.00
TOTAL	-\$8	-\$3,970,271	-\$1,333,097	-\$5,303,377	-0.36

*2008 dollars

IMPLAN
 CNR Project.iap
 Study area: Indiana and Illinois
 IMPACT NAME: G3 Additional revenue to rail MULTIPLIER: Type SAM
Value Added Impact (Gain)
 Aggregated Report

Industry	Direct*	Indirect*	Induced*	Total*	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$1,682	\$5,870	\$7,552	0.00
19 21 Mining (AGG)	\$0	\$141,710	\$35,210	\$176,920	0.02
30 22 Utilities (AGG)	\$0	\$23,176	\$100,008	\$123,184	0.01
33 23 Construction (AGG)	\$0	\$11,740	\$16,254	\$27,993	0.00
46 31-33 Manufacturing (AGG)	\$0	\$207,097	\$182,893	\$389,990	0.04
390 42 Wholesale Trade (AGG)	\$0	\$204,697	\$246,008	\$450,705	0.05
391 48-49 Transportation & Warehousing (AGG)	\$8,852,231	\$730,897	\$99,609	\$9,682,737	1.09
401 44-45 Retail trade (AGG)	\$0	\$14,826	\$453,332	\$468,159	0.05
413 51 Information (AGG)	\$0	\$42,316	\$85,917	\$128,233	0.01
425 52 Finance & insurance (AGG)	\$0	\$141,035	\$322,042	\$463,077	0.05
431 53 Real estate & rental (AGG)	\$0	\$359,564	\$232,099	\$591,663	0.07
437 54 Professional, scientific & tech svcs (AGG)	\$0	\$507,023	\$173,353	\$680,376	0.08
451 55 Management of companies (AGG)	\$0	\$25,237	\$50,621	\$75,858	0.01
452 56 Administrative & waste services (AGG)	\$0	\$114,517	\$86,700	\$201,217	0.02
461 61 Educational svcs (AGG)	\$0	\$9,626	\$67,959	\$77,585	0.01
464 62 Health & social services (AGG)	\$0	\$39	\$556,398	\$556,437	0.06
475 71 Arts, entertainment & recreation (AGG)	\$0	\$7,548	\$51,879	\$59,427	0.01
479 72 Accommodation & food services (AGG)	\$0	\$35,044	\$158,390	\$193,434	0.02
482 81 Other services (AGG)	\$0	\$19,572	\$133,754	\$153,326	0.02
495 92 Government & non NAICS (AGG)	\$0	\$54,596	\$630,916	\$685,511	0.08
30001 Institutions (AGG)	\$0	\$0	\$0	\$0	0.00
TOTAL	\$8,852,231	\$2,651,943	\$3,689,212	\$15,193,386	1.72

*2008 dollars

IMPLAN
 CNR Project.iap
 Study area: Indiana and Illinois
 IMPACT NAME: G4 Revenue loss to trucking MULTIPLIER: Type SAM
Value Added Impact (Loss)
 Aggregated Report

Industry	Direct*	Indirect*	Induced*	Total*	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$360	\$7,106	\$7,466	0.00
19 21 Mining (AGG)	\$0	\$254,701	\$42,623	\$297,324	0.04
30 22 Utilities (AGG)	\$0	\$40,576	\$121,059	\$161,637	0.02
33 23 Construction (AGG)	\$0	\$21,899	\$19,677	\$41,576	0.00
46 31-33 Manufacturing (AGG)	\$0	\$268,319	\$221,297	\$489,617	0.06
390 42 Wholesale Trade (AGG)	\$0	\$442,195	\$297,807	\$740,002	0.08
391 48-49 Transportation & Warehousing (AGG)	\$7,025,478	\$1,463,110	\$120,582	\$8,609,171	0.97
401 44-45 Retail trade (AGG)	\$0	\$126,276	\$548,792	\$675,069	0.08
413 51 Information (AGG)	\$0	\$100,311	\$104,009	\$204,320	0.02
425 52 Finance & insurance (AGG)	\$0	\$435,160	\$309,862	\$825,022	0.09
431 53 Real estate & rental (AGG)	\$0	\$244,519	\$280,951	\$525,470	0.06
437 54 Professional, scientific & tech svcs (AGG)	\$0	\$346,815	\$209,855	\$556,670	0.06
451 55 Management of companies (AGG)	\$0	\$145,882	\$67,280	\$213,162	0.02
452 56 Administrative & waste services (AGG)	\$0	\$115,510	\$104,957	\$220,467	0.02
461 61 Educational svcs (AGG)	\$0	\$3,010	\$82,278	\$85,287	0.01
464 62 Health & social services (AGG)	\$0	\$3,544	\$673,556	\$677,100	0.08
475 71 Arts, entertainment & recreation (AGG)	\$0	\$7,647	\$62,805	\$70,452	0.01
479 72 Accommodation & food services (AGG)	\$0	\$28,222	\$191,740	\$219,971	0.02
482 81 Other services (AGG)	\$0	\$92,866	\$161,925	\$254,791	0.03
495 92 Government & non NAICS (AGG)	\$0	\$37,230	\$763,829	\$801,060	0.09
30001 Institutions (AGG)	\$0	\$0	\$0	\$0	0.00
TOTAL	\$7,025,478	\$4,278,150	\$4,466,103	\$15,769,732	1.78

*2008 dollars

IMPLAN
 CNR Project.iap
 Study area: Indiana and Illinois
 NET IMPACT (DIFFERENCE BETWEEN RAIL AND TRUCKING)
Value Added Impact (Difference)
 Aggregated Report

Industry	Direct**	Indirect**	Induced**	Total**	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$1,322	-\$1,236	\$86	0.00
19 21 Mining (AGG)	\$0	-\$212,001	-\$7,413	-\$220,404	-0.02
30 22 Utilities (AGG)	\$0	-\$17,401	-\$21,052	-\$38,453	0.00
33 23 Construction (AGG)	\$0	-\$10,159	-\$3,423	-\$13,582	0.00
46 31-33 Manufacturing (AGG)	\$0	-\$61,222	-\$30,505	-\$91,727	-0.01
390 42 Wholesale Trade (AGG)	\$0	-\$237,490	-\$51,799	-\$289,297	-0.03
391 48-49 Transportation & Warehousing (AGG)	\$1,026,754	-\$702,212	-\$20,974	\$1,093,566	0.12
401 44-45 Retail trade (AGG)	\$0	-\$11,440	-\$95,461	-\$106,901	-0.02
413 51 Information (AGG)	\$0	-\$7,995	-\$18,092	-\$26,086	-0.01
425 52 Finance & insurance (AGG)	\$0	-\$294,125	-\$67,820	-\$361,945	-0.04
431 53 Real estate & rental (AGG)	\$0	\$115,045	-\$48,851	\$66,194	0.01
437 54 Professional, scientific & tech svcs (AGG)	\$0	\$160,209	-\$36,502	\$123,706	0.01
451 55 Management of companies (AGG)	\$0	-\$120,645	-\$10,659	-\$131,304	-0.01
452 56 Administrative & waste services (AGG)	\$0	-\$913	-\$18,257	-\$19,170	0.00
461 61 Educational svcs (AGG)	\$0	\$6,516	-\$14,318	-\$7,792	0.00
464 62 Health & social services (AGG)	\$0	-\$3,505	-\$117,159	-\$120,665	-0.01
475 71 Arts, entertainment & recreation (AGG)	\$0	-\$98	-\$10,927	-\$11,025	0.00
479 72 Accommodation & food services (AGG)	\$0	\$6,822	-\$33,359	-\$26,537	0.00
482 81 Other services (AGG)	\$0	-\$73,293	-\$20,171	-\$93,464	-0.01
495 92 Government & non NAICS (AGG)	\$0	\$17,366	-\$132,914	-\$115,548	-0.01
30001 Institutions (AGG)	\$0	\$0	\$0	\$0	0.00
TOTAL	\$1,026,754	-\$1,626,207	-\$776,891	-\$576,346	-0.07

*2008 dollars

IMPLAN
 CNR Project Iap
 Study area: Indiana and Illinois
 IMPACT NAME: G3 Additional revenue to rail MULTIPLIER: Type SAM
Labor Income (Gain)
 Aggregated Report

Industry	Direct*	Indirect*	Induced*	Total*	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$1,091	\$3,868	\$4,960	0.00
19 21 Mining (AGG)	\$0	\$56,763	\$14,119	\$70,881	0.01
30 22 Utilities (AGG)	\$0	\$6,793	\$29,208	\$36,002	0.01
33 23 Construction (AGG)	\$0	\$11,698	\$15,587	\$27,285	0.01
46 31-33 Manufacturing (AGG)	\$0	\$132,731	\$106,731	\$239,463	0.05
390 42 Wholesale Trade (AGG)	\$0	\$114,977	\$138,181	\$253,158	0.05
391 48-49 Transportation & Warehousing (AGG)	\$5,065,701	\$631,779	\$77,975	\$5,775,455	1.14
401 44-45 Retail trade (AGG)	\$0	\$9,143	\$280,934	\$290,078	0.06
413 51 Information (AGG)	\$0	\$24,106	\$41,155	\$65,261	0.01
425 52 Finance & insurance (AGG)	\$0	\$84,575	\$196,873	\$281,448	0.06
431 53 Real estate & rental (AGG)	\$0	\$134,798	\$59,630	\$194,428	0.04
437 54 Professional, scientific & tech svcs (AGG)	\$0	\$427,187	\$149,168	\$576,354	0.11
451 55 Management of companies (AGG)	\$0	\$19,585	\$39,285	\$58,869	0.01
452 56 Administrative & waste services (AGG)	\$0	\$88,224	\$69,778	\$158,002	0.03
461 61 Educational svcs (AGG)	\$0	\$9,263	\$62,692	\$71,955	0.01
464 62 Health & social services (AGG)	\$0	\$29	\$484,754	\$484,783	0.10
475 71 Arts, entertainment & recreation (AGG)	\$0	\$5,867	\$36,285	\$42,152	0.01
479 72 Accommodation & food services (AGG)	\$0	\$21,742	\$107,809	\$129,551	0.03
482 81 Other services (AGG)	\$0	\$17,714	\$108,301	\$126,015	0.02
495 92 Government & non NAICS (AGG)	\$0	\$32,357	\$23,271	\$55,628	0.01
30001 Institutions (AGG)	\$0	\$0	\$0	\$0	0.00
TOTAL	\$5,065,701	\$1,830,424	\$2,045,603	\$8,941,728	1.77

*2008 dollars

IMPLAN
 CNR Project Iap
 Study area: Indiana and Illinois
 IMPACT NAME: G4 Revenue loss to trucking MULTIPLIER: Type SAM
Labor Income (Loss)
 Aggregated Report

Industry	Direct*	Indirect*	Induced*	Total*	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$240	\$4,603	\$4,823	0.00
19 21 Mining (AGG)	\$0	\$140,097	\$17,091	\$158,088	0.03
30 22 Utilities (AGG)	\$0	\$11,076	\$26,367	\$47,233	0.01
33 23 Construction (AGG)	\$0	\$20,776	\$10,869	\$39,665	0.01
46 31-33 Manufacturing (AGG)	\$0	\$120,024	\$129,203	\$249,227	0.05
390 42 Wholesale Trade (AGG)	\$0	\$248,378	\$147,276	\$415,655	0.08
391 48-49 Transportation & Warehousing (AGG)	\$5,345,852	\$1,152,800	\$94,394	\$6,592,046	1.30
401 44-45 Retail trade (AGG)	\$0	\$77,874	\$240,092	\$417,966	0.08
413 51 Information (AGG)	\$0	\$51,378	\$49,821	\$101,199	0.02
425 52 Finance & insurance (AGG)	\$0	\$266,033	\$230,335	\$505,167	0.10
431 53 Real estate & rental (AGG)	\$0	\$70,674	\$72,101	\$142,855	0.03
437 54 Professional, scientific & tech svcs (AGG)	\$0	\$208,461	\$180,578	\$469,039	0.09
451 55 Management of companies (AGG)	\$0	\$113,211	\$47,556	\$160,768	0.03
452 56 Administrative & waste services (AGG)	\$0	\$97,445	\$84,477	\$171,926	0.03
461 61 Educational svcs (AGG)	\$0	\$2,721	\$26,901	\$29,622	0.02
464 62 Health & social services (AGG)	\$0	\$2,565	\$586,827	\$589,392	0.12
475 71 Arts, entertainment & recreation (AGG)	\$0	\$5,941	\$43,928	\$49,868	0.01
479 72 Accommodation & food services (AGG)	\$0	\$17,777	\$120,514	\$148,291	0.03
482 81 Other services (AGG)	\$0	\$69,895	\$131,111	\$201,006	0.04
495 92 Government & non NAICS (AGG)	\$0	\$22,914	\$28,171	\$51,085	0.01
30001 Institutions (AGG)	\$0	\$0	\$0	\$0	0.00
TOTAL	\$5,345,852	\$2,792,017	\$2,476,958	\$10,614,227	2.10

*2008 dollars

IMPLAN
 CNR Project Iap
 Study area: Indiana and Illinois
 NET IMPACT (DIFFERENCE BETWEEN RAIL AND TRUCKING)
Labor Income (Difference)
 Aggregated Report

Industry	Direct*	Indirect*	Induced*	Total*	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	\$0	\$851	-\$814	\$27	0.00
19 21 Mining (AGG)	\$0	-\$84,234	-\$2,973	-\$87,207	-0.02
30 22 Utilities (AGG)	\$0	-\$5,183	-\$6,148	-\$11,331	0.00
33 23 Construction (AGG)	\$0	-\$9,098	-\$3,202	-\$12,300	0.00
46 31-33 Manufacturing (AGG)	\$0	-\$6,360	-\$22,471	-\$28,831	-0.01
390 42 Wholesale Trade (AGG)	\$0	-\$133,401	-\$29,095	-\$162,496	-0.03
391 48-49 Transportation & Warehousing (AGG)	-\$280,151	-\$521,021	-\$76,419	-\$877,591	-0.16
401 44-45 Retail trade (AGG)	\$0	-\$60,731	-\$99,158	-\$127,889	-0.03
413 51 Information (AGG)	\$0	-\$27,272	-\$8,666	-\$36,938	-0.01
425 52 Finance & insurance (AGG)	\$0	-\$182,258	-\$41,462	-\$223,720	-0.04
431 53 Real estate & rental (AGG)	\$0	-\$4,125	-\$12,551	-\$16,676	0.01
437 54 Professional, scientific & tech svcs (AGG)	\$0	\$138,726	-\$31,410	\$107,315	0.02
451 55 Management of companies (AGG)	\$0	-\$93,626	-\$8,272	-\$101,898	-0.02
452 56 Administrative & waste services (AGG)	\$0	\$779	-\$14,693	-\$13,914	0.00
461 61 Educational svcs (AGG)	\$0	\$6,492	-\$12,209	-\$5,717	0.00
464 62 Health & social services (AGG)	\$0	-\$2,536	-\$102,093	-\$104,629	-0.02
475 71 Arts, entertainment & recreation (AGG)	\$0	-\$74	-\$7,642	-\$7,716	0.00
479 72 Accommodation & food services (AGG)	\$0	\$3,965	-\$22,706	-\$18,741	0.00
482 81 Other services (AGG)	\$0	-\$52,180	-\$22,010	-\$74,190	-0.01
495 92 Government & non NAICS (AGG)	\$0	\$9,143	-\$4,900	\$4,543	0.00
30001 Institutions (AGG)	\$0	\$0	\$0	\$0	0.00
TOTAL	-\$280,151	-\$961,593	-\$430,755	-\$1,672,499	-0.33

*2008 dollars

IMPLAN
 CNR Project Iap
 Study area: Indiana and Illinois
 IMPACT NAME: G3 Additional revenue to rail MULTIPLIER: Type SAM
Employment Impact (Gain)
 Aggregated Report

Industry	Direct*	Indirect*	Induced*	Total*	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	0.0	0.0	0.3	0.3	0.01
19 21 Mining (AGG)	0.0	0.2	0.0	0.2	0.00
30 22 Utilities (AGG)	0.0	0.1	0.2	0.3	0.01
33 23 Construction (AGG)	0.0	0.2	0.3	0.5	0.01
46 31-33 Manufacturing (AGG)	0.0	1.8	1.5	3.3	0.06
390 42 Wholesale Trade (AGG)	0.0	1.6	1.9	3.4	0.06
391 48-49 Transportation & Warehousing (AGG)	52.9	8.8	1.6	63.4	1.20
401 44-45 Retail trade (AGG)	0.0	0.3	10.2	10.5	0.20
413 51 Information (AGG)	0.0	0.3	0.6	0.9	0.02
425 52 Finance & insurance (AGG)	0.0	1.1	2.6	3.6	0.07
431 53 Real estate & rental (AGG)	0.0	2.3	1.7	4.0	0.08
437 54 Professional, scientific & tech svcs (AGG)	0.0	5.3	2.1	7.4	0.14
451 55 Management of companies (AGG)	0.0	0.2	0.3	0.5	0.01
452 56 Administrative & waste services (AGG)	0.0	2.6	2.3	4.9	0.09
461 61 Educational svcs (AGG)	0.0	0.2	1.9	2.1	0.04
464 62 Health & social services (AGG)	0.0	0.0	10.4	10.4	0.20
475 71 Arts-entertainment & recreation (AGG)	0.0	0.3	1.5	1.8	0.03
479 72 Accommodation & food services (AGG)	0.0	0.9	5.7	6.7	0.13
482 81 Other services (AGG)	0.0	0.5	4.5	5.0	0.09
495 92 Government & non NAICS (AGG)	0.0	0.6	0.4	1.0	0.02
30001 Institutions (AGG)	0.0	0.0	0.0	0.0	0.00
TOTAL	52.9	27.3	50.0	130.3	2.46

*Number of jobs

IMPLAN
 CNR Project Iap
 Study area: Indiana and Illinois
 IMPACT NAME: G4 Revenue loss to trucking MULTIPLIER: Type SAM
Employment Impact (Loss)
 Aggregated Report

Industry	Direct*	Indirect*	Induced*	Total*	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	0.0	0.0	0.4	0.4	0.01
19 21 Mining (AGG)	0.0	0.5	0.1	0.5	0.01
30 22 Utilities (AGG)	0.0	0.1	0.3	0.4	0.01
33 23 Construction (AGG)	0.0	0.4	0.3	0.7	0.01
46 31-33 Manufacturing (AGG)	0.0	1.1	1.0	2.0	0.06
390 42 Wholesale Trade (AGG)	0.0	3.4	3.5	6.9	0.11
391 48-49 Transportation & Warehousing (AGG)	109.1	21.1	1.0	132.2	2.50
401 44-45 Retail trade (AGG)	0.0	2.0	12.3	15.1	0.29
413 51 Information (AGG)	0.0	0.7	0.7	1.4	0.03
425 52 Finance & insurance (AGG)	0.0	3.5	3.1	6.5	0.12
431 53 Real estate & rental (AGG)	0.0	1.0	2.1	3.0	0.07
437 54 Professional, scientific & tech svcs (AGG)	0.0	3.6	2.5	6.1	0.12
451 55 Management of companies (AGG)	0.0	1.0	0.4	1.4	0.03
452 56 Administrative & waste services (AGG)	0.0	2.0	2.0	5.1	0.10
461 61 Educational svcs (AGG)	0.0	0.1	2.3	2.4	0.04
464 62 Health & social services (AGG)	0.0	0.0	12.6	12.7	0.24
475 71 Arts-entertainment & recreation (AGG)	0.0	0.3	1.0	2.1	0.04
479 72 Accommodation & food services (AGG)	0.0	0.8	7.0	7.7	0.15
482 81 Other services (AGG)	0.0	2.1	5.4	7.6	0.14
495 92 Government & non NAICS (AGG)	0.0	0.4	0.5	0.9	0.02
30001 Institutions (AGG)	0.0	0.0	0.0	0.0	0.00
TOTAL	109.1	46.2	60.5	215.9	4.08

*Number of jobs

IMPLAN
 CNR Project Iap
 Study area: Indiana and Illinois
 NET IMPACT (DIFFERENCE BETWEEN RAIL AND TRUCKING)
Employment Impact (Difference)
 Aggregated Report

Industry	Direct**	Indirect**	Induced**	Total**	Multiplier
1 11 Ag, Forestry, Fish & Hunting (AGG)	0.0	0.0	-0.1	0.0	0.00
19 21 Mining (AGG)	0.0	-0.3	-0.0	-0.3	-0.01
30 22 Utilities (AGG)	0.0	0.0	0.0	-0.1	0.00
33 23 Construction (AGG)	0.0	-0.2	-0.1	-0.2	0.00
46 31-33 Manufacturing (AGG)	0.0	0.6	-0.3	0.3	0.01
390 42 Wholesale Trade (AGG)	0.0	-1.0	-0.4	-2.2	-0.04
391 48-49 Transportation & Warehousing (AGG)	-56.2	-12.3	-0.3	-68.8	-1.30
401 44-45 Retail trade (AGG)	0.0	-2.5	-2.1	-4.6	-0.09
413 51 Information (AGG)	0.0	-0.3	-0.1	-0.5	-0.01
425 52 Finance & insurance (AGG)	0.0	-2.4	-0.5	-2.9	-0.06
431 53 Real estate & rental (AGG)	0.0	0.5	-0.4	0.2	0.00
437 54 Professional, scientific & tech svcs (AGG)	0.0	1.7	-0.4	1.2	0.02
451 55 Management of companies (AGG)	0.0	-0.3	-0.1	-0.4	-0.02
452 56 Administrative & waste services (AGG)	0.0	0.0	-0.5	-0.5	-0.01
461 61 Educational svcs (AGG)	0.0	0.2	-0.4	-0.2	0.00
464 62 Health & social services (AGG)	0.0	0.0	-2.2	-2.2	-0.04
475 71 Arts-entertainment & recreation (AGG)	0.0	0.0	-0.3	-0.3	-0.01
479 72 Accommodation & food services (AGG)	0.0	0.1	-1.2	-1.1	-0.02
482 81 Other services (AGG)	0.0	-1.6	-0.9	-2.6	-0.05
495 92 Government & non NAICS (AGG)	0.0	0.1	-0.1	0.1	0.00
30001 Institutions (AGG)	0.0	0.0	0.0	0.0	0.00
TOTAL	-56.2	-18.9	-10.5	-85.6	-1.62

*Number of jobs

IMPLAN
 CNR Project Iap
 Study area: Indiana and Illinois
 IMPACT NAME: G3 Additional revenue to rail MULTIPLIER: Type SAM
Tax Impact (Gain)
 Inflated to 2008 dollars with GDP deflator

	Employee Compensation	Proprietary Income	Household Expenditures	Enterprises	Indirect Business Taxes	Total
Enterprises (Corporations) - Transfers	\$8,297	\$0	\$0	\$0	\$0	\$8,297
Corporate Profits Tax	\$0	\$0	\$0	\$514,121	\$0	\$514,121
Indirect Business Tax: Custom Duty	\$0	\$0	\$0	\$0	\$22,365	\$22,365
Indirect Business Tax: Excise Taxes	\$0	\$0	\$0	\$0	\$60,286	\$60,286
Indirect Business Tax: Federal Non-taxes	\$0	\$0	\$0	\$0	\$27,330	\$27,330
Personal Tax: Estate and Gift Tax	\$0	\$0	\$0	\$0	\$0	\$0
Personal Tax: Income Tax	\$0	\$0	\$786,588	\$0	\$0	\$786,588
Personal Tax: Non-taxes (Fines, Fees)	\$0	\$0	\$0	\$0	\$0	\$0
Social Insurance Tax - Employee Contribution	\$464,605	\$27,908	\$0	\$0	\$0	\$492,513
Social Insurance Tax - Employer Contribution	\$471,485	\$0	\$0	\$0	\$0	\$471,485
Sub-Total	\$936,090	\$27,908	\$786,588	\$514,121	\$109,981	\$2,374,687
Corporate Profits Tax	\$0	\$0	\$0	\$91,786	\$0	\$91,786
Dividends	\$0	\$0	\$0	\$109,321	\$0	\$109,321
Indirect Business Tax: Motor Vehicle License	\$0	\$0	\$0	\$0	\$10,579	\$10,579
Indirect Business Tax: Other Taxes	\$0	\$0	\$0	\$0	\$27,237	\$27,237
Indirect Business Tax: Property Tax	\$0	\$0	\$0	\$0	\$379,024	\$379,024
Indirect Business Tax: S/L NonTaxes	\$0	\$0	\$0	\$0	\$36,970	\$36,970
Indirect Business Tax: Sales Tax	\$0	\$0	\$0	\$0	\$288,997	\$288,997
Indirect Business Tax: Severance Tax	\$0	\$0	\$0	\$0	\$20	\$20
Personal Tax: Estate and Gift Tax	\$0	\$0	\$0	\$0	\$0	\$0
Personal Tax: Income Tax	\$0	\$0	\$169,925	\$0	\$0	\$169,925
Personal Tax: Motor Vehicle License	\$0	\$0	\$16,210	\$0	\$0	\$16,210
Personal Tax: NonTaxes (Fines- Fees)	\$0	\$0	\$44,072	\$0	\$0	\$44,072
Personal Tax: Other Tax (Fish/Hunt)	\$0	\$0	\$2,292	\$0	\$0	\$2,292
Personal Tax: Property Taxes	\$0	\$0	\$5,551	\$0	\$0	\$5,551
Social Insurance Tax - Employee Contribution	\$5,372	\$0	\$0	\$0	\$0	\$5,372
Social Insurance Tax - Employer Contribution	\$21,494	\$0	\$0	\$0	\$0	\$21,494
Sub-Total	\$26,866	\$0	\$238,051	\$201,107	\$742,826	\$1,208,850
TOTAL	\$971,253	\$27,908	\$1,024,639	\$715,228	\$852,807	\$3,591,835

IMPLAN
 CNR Project Iap
 Study area: Indiana and Illinois
 IMPACT NAME: G4 Revenue loss to trucking MULTIPLIER: Type SAM
Tax Impact (Loss)
 Inflated to 2008 dollars with GDP deflator

	Employee Compensation	Proprietary Income	Household Expenditures	Enterprises	Indirect Business Taxes	Total
Enterprises (Corporations) - Transfers	\$0,215	\$0	\$0	\$0	\$0	\$0,215
Corporate Profits Tax	\$0	\$0	\$0	\$407,187	\$0	\$407,187
Indirect Business Tax: Custom Duty	\$0	\$0	\$0	\$0	\$24,936	\$24,936
Indirect Business Tax: Excise Taxes	\$0	\$0	\$0	\$0	\$67,216	\$67,216
Indirect Business Tax: Federal Non-taxes	\$0	\$0	\$0	\$0	\$30,472	\$30,472
Personal Tax: Estate and Gift Tax	\$0	\$0	\$0	\$0	\$0	\$0
Personal Tax: Income Tax	\$0	\$0	\$952,377	\$0	\$0	\$952,377
Personal Tax: Non-taxes (Fines, Fees)	\$0	\$0	\$0	\$0	\$0	\$0
Social Insurance Tax - Employee Contribution	\$516,026	\$60,372	\$0	\$0	\$0	\$576,398
Social Insurance Tax - Employer Contribution	\$523,667	\$0	\$0	\$0	\$0	\$523,667
Sub-Total	\$1,039,693	\$60,372	\$952,377	\$407,187	\$422,624	\$2,590,253
Corporate Profits Tax	\$0	\$0	\$0	\$72,695	\$0	\$72,695
Dividends	\$0	\$0	\$0	\$86,583	\$0	\$86,583
Indirect Business Tax: Motor Vehicle License	\$0	\$0	\$0	\$0	\$11,705	\$11,705
Indirect Business Tax: Other Taxes	\$0	\$0	\$0	\$0	\$30,368	\$30,368
Indirect Business Tax: Property Tax	\$0	\$0	\$0	\$0	\$422,596	\$422,596
Indirect Business Tax: S/L NonTaxes	\$0	\$0	\$0	\$0	\$41,221	\$41,221
Indirect Business Tax: Sales Tax	\$0	\$0	\$0	\$0	\$322,210	\$322,210
Indirect Business Tax: Severance Tax	\$0	\$0	\$0	\$0	\$22	\$22
Personal Tax: Estate and Gift Tax	\$0	\$0	\$0	\$0	\$0	\$0
Personal Tax: Income Tax	\$0	\$0	\$205,799	\$0	\$0	\$205,799
Personal Tax: Motor Vehicle License	\$0	\$0	\$19,627	\$0	\$0	\$19,627
Personal Tax: NonTaxes (Fines- Fees)	\$0	\$0	\$53,361	\$0	\$0	\$53,361
Personal Tax: Other Tax (Fish/Hunt)	\$0	\$0	\$2,775	\$0	\$0	\$2,775
Personal Tax: Property Taxes	\$0	\$0	\$6,721	\$0	\$0	\$6,721
Social Insurance Tax - Employee Contribution	\$5,966	\$0	\$0	\$0	\$0	\$5,966
Social Insurance Tax - Employer Contribution	\$23,073	\$0	\$0	\$0	\$0	\$23,073
Sub-Total	\$29,039	\$0	\$280,224	\$159,278	\$620,221	\$1,005,562
TOTAL	\$1,070,742	\$60,372	\$1,240,601	\$566,465	\$982,845	\$3,595,815

IMPLAN
 CNR Project Iap
 Study area: Indiana and Illinois
NET IMPACT (DIFFERENCE BETWEEN RAIL AND TRUCKING)
Tax Impact (Difference)
 Inflated to 2008 dollars with GDP deflator

	Employee Compensation	Proprietary Income	Household Expenditures	Enterprises	Indirect Business Taxes	Total
Enterprises (Corporations) - Transfers	-918	\$0	\$0	\$0	\$0	-\$918
Corporate Profits Tax	\$0	\$0	\$0	\$106,934	\$0	\$106,934
Indirect Business Tax: Custom Duty	\$0	\$0	\$0	\$0	-\$2,571	-\$2,571
Indirect Business Tax: Excise Taxes	\$0	\$0	\$0	\$0	-\$6,930	-\$6,930
Indirect Business Tax: Federal Non-taxes	\$0	\$0	\$0	\$0	-\$3,142	-\$3,142
Personal Tax: Estate and Gift Tax	\$0	\$0	\$0	\$0	\$0	\$0
Personal Tax: Income Tax	\$0	\$0	-\$166,789	\$0	\$0	-\$166,789
Personal Tax: Non-taxes (Fines, Fees)	\$0	\$0	\$0	\$0	\$0	\$0
Social Insurance Tax - Employee Contribution	-\$51,421	-\$40,464	\$0	\$0	\$0	-\$91,885
Social Insurance Tax - Employer Contribution	-\$52,182	\$0	\$0	\$0	\$0	-\$52,182
Sub-Total	-\$103,603	-\$40,464	-\$166,789	\$106,934	-\$12,723	-\$215,566
Corporate Profits Tax	\$0	\$0	\$0	\$19,091	\$0	\$19,091
Dividends	\$0	\$0	\$0	\$22,738	\$0	\$22,738
Indirect Business Tax: Motor Vehicle License	\$0	\$0	\$0	\$0	-\$1,216	-\$1,216
Indirect Business Tax: Other Taxes	\$0	\$0	\$0	\$0	-\$3,131	-\$3,131
Indirect Business Tax: Property Tax	\$0	\$0	\$0	\$0	-\$49,572	-\$49,572
Indirect Business Tax: S/L NonTaxes	\$0	\$0	\$0	\$0	-\$4,250	-\$4,250
Indirect Business Tax: Sales Tax	\$0	\$0	\$0	\$0	-\$32,223	-\$32,223
Indirect Business Tax: Severance Tax	\$0	\$0	\$0	\$0	-\$2	-\$2
Personal Tax: Estate and Gift Tax	\$0	\$0	\$0	\$0	\$0	\$0
Personal Tax: Income Tax	\$0	\$0	-\$35,014	\$0	\$0	-\$35,014
Personal Tax: Motor Vehicle License	\$0	\$0	-\$3,477	\$0	\$0	-\$3,477
Personal Tax: NonTaxes (Fines- Fees)	\$0	\$0	-\$9,299	\$0	\$0	-\$9,299
Personal Tax: Other Tax (Fish/Hunt)	\$0	\$0	-\$493	\$0	\$0	-\$493
Personal Tax: Property Taxes	\$0	\$0	-\$1,170	\$0	\$0	-\$1,170
Social Insurance Tax - Employee Contribution	-\$595	\$0	\$0	\$0	\$0	-\$595
Social Insurance Tax - Employer Contribution	-\$2,379	\$0	\$0	\$0	\$0	-\$2,379
Sub-Total	-\$2,973	\$0	-\$50,172	\$41,029	-\$65,395	-\$66,742
TOTAL	-\$107,496	-\$40,464	-\$215,962	\$148,763	-\$68,038	-\$313,106

Noise

Corrections to APPENDIX L of the Draft EIS NOISE AND VIBRATION ANALYSIS

Page L-6, third paragraph:

Tests have shown locomotive noise to change by approximately 2 dBA for each one-step change in throttle setting. As the engineer moves the locomotive throttle from notch one to notch eight, noise levels increase by an average of 16 dBA. Because locomotive engineers constantly adjust throttle setting as necessary, only rough estimates of throttle settings are usually available for noise projections. SEA assumed a base throttle position of ~~six~~ eight unless they obtain more specific information.

Corrections to APPENDIX M of the Draft EIS BIOLOGICAL RESOURCES ANALYSIS

Page M-10, second paragraph:

Sauk Trail Woods and Indian Hill Woods Forest Preserve, part of the Thorn Creek Trail System, are on opposite sides of EJ&E Segment 6. The preserves contain Sauk Lake and Thorn Creek, plus miles of paved bike trails and off-trail dirt paths. Sauk Trail Woods contains numerous ravines and valleys and is mostly dense upland forest. No construction is planned for this segment of the EJ&E. However, the Applicants propose to increase traffic on the segment from 8.6 to 31.6 trains per day. ~~Since this area is not being managed for wildlife or habitat,~~ The existing condition along the EJ&E corridor consists of mired heavy industry and established residential development at a narrow point in forest preserve holdings. SEA anticipates minimal impacts from increased noise and vibration and animal/train collisions on wildlife and/or habitat. Maintenance on the rail embankment through the preserve is expected to be similar to current practices.

Page M-12, Table M.3.2-1:

Table M.3.2-1. Natural Areas with No Impacts from Proposed Action	
Natural Areas	Justification for Decision (Existing Community Types)
Lake County, Illinois	
Mundelein Park and Recreation District	Recreational open space park
Cook County, Illinois (West Subdivision)	
Crabtree Nature Center Forest Preserve; INAI 0266	Forested area across major roadway (Route 59) from EJ&E rail line; (marsh/forest)
DuPage County, Illinois	
Dunham Forest Preserve	EJ&E rail line runs adjacent to cornfield; (agricultural field)
Illinois Natural History Survey (INHS) Railroad Prairie (Site 20)	No construction; appears as though most of area has been developed; (prairie remnant)
Blackwell Forest Preserve	EJ&E rail line adjacent to natural area fragmented by residential areas; (marsh/grassland)
Big Woods Forest Preserve	Site across industrial/commercial area from EJ&E rail line; (marsh/grassland)
Country Lakes Forest Preserve	EJ&E rail line across from highly fragmented area (industrial/residential divide); (marsh)
Night Heron Marsh Forest Preserve	Rookery is surrounded by Eola Road and Liberty Street and existing rail yards; (marsh/rookery)
Will County, Illinois	
Vermont Cemetery Prairie Nature Preserve; INAI 10803	Fragmented, rail line may protect from development; (high quality dry-mesic prairie)
INHS Railroad Prairie (Site 27)	About 0.25 mile from EJ&E rail line; poor-quality prairie remnant, appears unmaintained; (remnant prairie)
INHS Railroad Prairie (Site 28)	East of EJ&E rail line; appears to be largely disturbed (new housing, tilled field, overgrown woods; (remnant prairie)
INHS Railroad Prairie (Site 29)	Prairie appears to be poor quality, mostly farmed and maintained under power corridor; (remnant prairie)
Alessio Prairie Forest Preserve	Commercial, roadway and residential areas between rail line and preserve; (grassland)
Kraske Forest Preserve	Commercial, roadway and residential areas between rail line and preserve; (grassland)
Walnut Hollow Forest Preserve	Located across rail yard; (forest)
Sauk Trail Reservoir Forest Preserve	Fragmented corridor through residential development to preserve (xx)
Old Plank Road Trail2	No quality habitat between trail and rail line; (grassland)

Table M.3.2-1. Natural Areas with No Impacts from Proposed Action	
Natural Areas	Justification for Decision (Existing Community Types)
Cook County, Illinois (East Subdivision)	
Butterfield Creek Headwaters Land and Water Reserve, INAI 0540, Old Plank Road Prairie, and Old Plank Road Nature Preserve	Nature preserve areas 0.5 mile from proposed change in traffic; (prairie)
Sauk Village Railroad Prairie; INAI Site 05423	Fragmented; rail line may protect from development; (dry-mesic prairie)
Plum Creek Forest Preserve	Adjacent to EJ&E rail line (south of tracks); former gravel quarry adjacent to residential development, fragmented from the core of preserve by East Sauk Trail Road (open water, wetland, forest, Shrubland)
Lake County, Indiana	
High-quality natural community (unnamed site A)	Adjacent to EJ&E rail line (north of tracks); adversely affected by recent road building; small and isolated prairie strip; (wet-mesic sand prairie)
High-quality natural community (unnamed site B)	Adjacent to EJ&E (north of tracks); adversely affected by recent road building; small and isolated prairie strip; (dry-mesic sand prairie)
High-quality natural community (St. John prairie site)	Nearly 0.5 mile from EJ&E rail line; (wet-mesic sand prairie)
Hoosier Prairie Nature Preserve	No impacts expected to grassland and savanna wildlife; industry and petroleum storage area between EJ&E rail line and Hoosier Prairie; (wet sand prairie, wet-mesic sand prairie, mesic sand prairie, shrub swamp, dry sand savanna, dry sand prairie, marsh and dry-mesic sand prairie)
Oak Ridge Prairie County Park	Park boundary is nearly 0.5 mile from EJ&E rail line beyond private forest tract; (wet-mesic sand prairie)
Wadsworth Park	Small community park with a few remnant trees and unmowed natural area
Seberger Park	Park is adjacent to EJ&E rail line but appears to have significant on-site disturbance; (remnant dune and swale)
Black Oak Remnant Dune and Swale	Eastern edge of site is opposite an asphalt reprocessing yard; impacts from proposed project unlikely; (dry-mesic sand savanna/ marsh/shrub swamp)
Gibson Woods Nature Preserve	Natural dune and swale habitat; habitat and release site for the Karner blue butterfly, adjacent to EJ&E segment 2; adverse affects possible to mobile species, though plant community impacts are not expected; (mesic sand savanna and dry-mesic sand savanna)
Clarke and Pine Nature Preserve; High-quality natural community	Site is directly adjacent to EJ&E Segment 22, a rail line with no proposed increase in use under the Proposed Action; EJ&E Segment 1 with proposed increase in traffic is approximately 0.2 mile from site boundary; site has been cut off from adjacent natural areas by existing land uses; (marsh/dry-mesic sand prairie/dry sand prairie/dry sand savanna/wet-mesic sand prairie)
Pine Station Nature Preserve; High-quality natural community	Site is adjacent to EJ&E Segment 3 that has no proposed increase in use under the Proposed Action; EJ&E rail line with proposed increase in traffic is approximately 0.2 miles from site boundary; site cut off from adjacent natural areas by existing land uses; (dry-mesic sand prairie)
Jackson Park	Nearly 0.5 mile from EJ&E across major roadways and residential area
Indiana Dunes National Lakeshore	Area is separated from the EJ&E Dixie Lead by two rail lines, and is fragmented by additional rail and road crossings.

Corrections to APPENDIX O of the Draft EIS CULTURAL RESOURCES ANALYSIS

Revisions to Attachment O1 – Illinois SHPO Reports:

