

### 4.3 Transportation

Another major focus of SEA’s analysis was to evaluate the potential effects of the Proposed Action and the proposed new constructions on roadway traffic and transportation. SEA used the analysis thresholds listed in Table 4.3-1, below, to evaluate the potential traffic and transportation effects of the Proposed Action and the construction alternatives, including:

- Effects on local and regional roadway systems resulting from projected increases and decreases in rail traffic and the location of new rail line connections
- Effects on emergency vehicle response and potential delays
- Effects on navigation operations
- Effects on airports

<b>Transportation Impact Area</b>	<b>Analysis Threshold(s)</b>
Truck-to-Rail/Rail-to-Truck Diversions	All anticipated diversion of freight from truck to rail or rail to truck will be studied for current and future operations if applicable.
Highway/Rail At-Grade Crossings (existing and new construction)	Expected 2015 traffic volumes greater than 2,500 average daily traffic (ADT) on intersecting roadways; or Change of three or more trains per day on roadways with greater than 2,500 ADT. Crossings closer than 800 feet apart
Intermodal Facilities	Increase of 50 or more trucks per day; or ADT increase of 10% or more on access roads.
Emergency Vehicle Response	Increase of eight or more trains per day on segments with community facilities within 2 miles of the rail line.
Navigation	Increase of three or more freight trains per day.
Airports	Increase of three or more freight trains per day.

Source: Board, December 6, 2002, Draft Environmental Impact Statement, Construction and Operation of a Rail Line from the Bayport Loop in Harris County, Texas, Finance Docket No. 34079, San Jacinto Rail Limited and The Burlington Northern Santa Fe Railway Company.

Sections 4.3.1 and 4.3.2 present additional methodology information specific to vehicular delays and emergency response, respectively. Detailed calculations and aerial map type exhibits are included in Appendix E.

The following is a summary of the findings presented in this section:

- SEA evaluated the potential effects of increased rail traffic and the location of new rail line connections on local and regional roadway systems, emergency vehicle response and potential delays, navigation operations, and airports. SEA also concluded that the Proposed Action and associated construction would not result in truck-to-rail or rail-to-truck diversions and would not affect intermodal facilities.
- Of the 112 highway/rail at-grade crossings along the EJ&E rail line, 87 met STB’s threshold for environmental analysis, with the remainder either having no train increases due to the Proposed Action or having less than 2,500 vehicles in Average Daily Traffic (ADT). SEA performed a detailed analysis for the 87 crossings to evaluate vehicle delays and mobility issues and length of vehicle queues as a means of assessing the potential effects of the Proposed Action on the area’s transportation system. SEA took into account the expected increase in freight rail traffic and predicted traffic growth

forecasts unrelated to the Proposed Action. [Section 4.3.1.1] On the basis of this analysis, SEA concluded that 15 of the 87 EJ&E crossings and 1 of the CN crossings would be “substantially affected;” defined as a situation in which the Proposed Action queue length would block a major thoroughfare that is not blocked under the No-Action alternative, the crossing would be at- or over-capacity (Level of Service E-F), or the crossing would experience more than 40 hours of delay per day. The “substantially affected” designation indicated that possible mitigation measures should be considered, for these crossings are considered in more detail in Chapter 6, below. Other crossings would be “moderately affected,” defined as a situation in which the Proposed Action queue length would block a roadway that is also blocked under the No-Action Alternative and the roadway would be at a functioning level of capacity (Level of Service D or better). [Section 4.3.1.3]

- Construction associated with the Proposed Action would not result in vehicle delays. However, the Proposed Matteson and Matteson Alternative – Northeast and Southwest Quadrants rail connections would result in a new grade crossing. Double tracking would result in physical changes to some crossings but would not affect vehicle delays. Vehicle delays would generally decrease along the CN subdivisions. [Section 4.3.1.4]
- SEA also thoroughly examined potential impacts to emergency services in communities along the EJ&E and CN rail lines. SEA used an increase of 30 seconds or more in average delay per delayed vehicle and 30 minutes or more for the total delay time that the crossing would be blocked as a screening tool. SEA assured that delays exceeding 30 seconds could potentially cause a serious effect on emergency service response times. Based on this analysis, SEA concluded that 11 fire and emergency medical service providers near the EJ&E rail line would experience substantial effects as a result of the Proposed Action. [Section 4.3.3.3] Mitigation strategies for all 11 crossings are explored in Chapter 6.
- In addition, 3 rail connections (Munger Alternative – Northwest Quadrant, Proposed Munger Connection, and Matteson Alternative – Northeast and Southwest Quadrants) would affect emergency service providers and facilities. Mitigation strategies are explored for these crossings in Chapter 6. The proposed double track locations would not affect emergency service responders. [Section 4.3.3.4]
- The EJ&E rail line crosses 8 navigable waterways on railroad bridges; 5 of the 8 are moveable and 3 are fixed spans. The Proposed Action would increase train traffic on the EJ&E Bridge over the Des Plaines River, a lift bridge. Vessel traffic on the river takes precedence over rail operations on the bridge. Therefore, the Proposed Action would not affect navigation. The remaining moveable bridges are on subdivisions of the railroad that have reductions or no change in rail traffic. [Section 4.3.4.2]
- None of the proposed connections or segments of double track would be constructed in the vicinity of the 8 navigable waterways. Thus, no impacts from construction are expected. [Section 4.3.4.3]
- The Gary/Chicago International Airport is adjacent to the EJ&E rail line. The Proposed Action would not affect current operations at the airport. However, the Proposed Action could affect the placement of a highway/rail at-grade crossing to be installed in connection with planned improvements to the airport. [Section 4.3.5.2]. The Gary/Chicago International Airport has entered into a Preliminary Memo of Understanding with EJ&E, CSX, and NS covering the expansion of the airport’s runway and relocation of the EJ&E. [Section 4.3.5.3]

### 4.3.1 Regional and Local 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 under the No-Action Alternatives (i.e., current conditions) and then assessing how increased delays that would result from the Proposed Action could affect regional mobility. The No-Action

**What is mobility?**

Mobility is the ease of moving people and goods within a transportation network.

and Proposed Action alternatives both parallel an existing rail line. Communities along the rail line currently experience some delay from current rail operations. Thus, some of the potential delay under the Proposed Action would result from existing conditions. No-Action delay along the EJ&E line is shown on Table 4.3-4. The Proposed Action anticipates re-routing trains from existing CN lines to the EJ&E line. Delay reductions for the CN lines are presented in Table 4.3-6. This analysis is described below.

#### 4.3.1.1 Methodology

Trains cause delays at highway/rail at-grade crossings when vehicles must stop to yield to trains. This interrupts roadway traffic flow for a period of time, depending on the speed and length of the train. The proposed changes in freight train activity as a result of the Proposed Action would cause vehicle delays at highway/rail at-grade crossings on rail line segments where the Applicants project increased train traffic would occur. SEA calculated crossing delay for every highway/rail at-grade public crossing where train traffic would increase by three or more trains per day under the Proposed Action. Crossing delays were totaled for all crossings to assess the total of delay increases and decreases on the EJ&E and CN subdivisions under the Proposed Action. SEA then evaluated vehicle delays at highway/rail at-grade crossings that exceeded the thresholds of average daily traffic (ADT) volumes of 2,500 or more vehicles per day on rail line segments that would meet the Board's threshold for environmental analysis. The Board's thresholds for environmental analysis are set out in Table 4.3-1, above.

SEA recognized that closely spaced crossings could be more affected by the increase in freight activity. Therefore, SEA also evaluated affected highway/rail at-grade crossings where two or more crossings are located within 800 feet of each other.

In Chapter 3.3, SEA identified 112 existing highway/rail at-grade crossings along the EJ&E rail line. These crossings experience delays due to current EJ&E rail road operations. SEA's analysis showed that 13 of the 112 crossings would have no train increases from the Proposed Action—the other 99 would have three or more train increases. SEA further concluded that 12 of the 99 crossings would have less than 2,500 ADT, leaving a total of 87 highway/rail at-grade crossings which met the Board's threshold for environmental analysis. Detailed analyses were prepared for these 87 crossings.

The 87 crossings were assessed by evaluating a single train event, which is defined as a single train passing through a highway/rail at-grade crossing then applying those results to daily activities. Total effects were obtained by multiplying the single train event by the expected number of trains that would move through the crossing under the Proposed Action and No-Action Alternatives. The analysis of vehicle delays encompasses various passenger cars, trucks, vans, motorcycles, and school buses.

Factors used 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 ( $D_v$ )

The “average delay per delayed vehicle” is the average amount of time that a driver would be delayed at a highway/rail at-grade crossing as a result of a single train event. It assumes uniform vehicle arrival. The relationship between arriving vehicles and departing vehicles is illustrated below in Figure 4.3-1.

Figure 4.3-1. Single Train Event

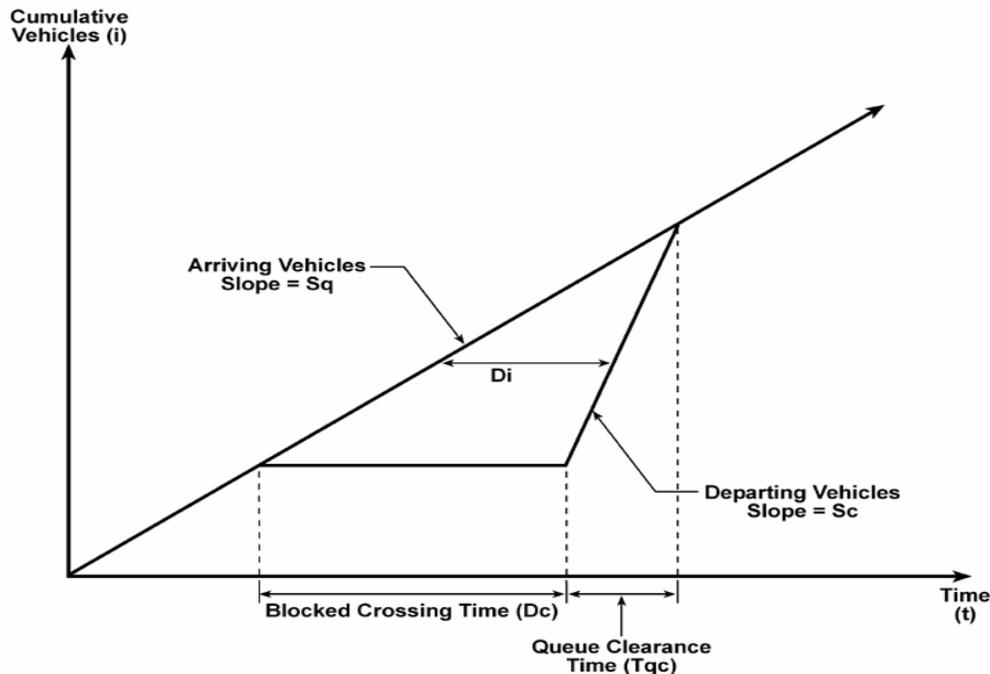


Figure 4.3-1 graphically represents what happens at a highway/rail at-grade crossing when a train arrives. A single train event is modeled to include the time a crossing would be blocked from the time the crossing gates start down until they come up again. This time is then multiplied by the forecast number of trains to give the total time the crossing is closed to motor vehicle traffic. This calculation is described below.

Vehicles arrive at a constant rate of  $S$ , expressed as so many cars per minute and as shown by the arrival curve’s constant slope. When the train arrives and the blocked crossing period commences, vehicles begin to queue since none are being discharged. When the blocked crossing period ends, queued vehicles begin to depart at the constant vehicle departure rate of  $Sc$ . The departure rate continues until the departure and arrival curves intersect, signifying the dissipation of the queue and a return to normal traffic flow. The arrival and departure curves then coincide until the next train operation. In this model:

- The delay for vehicle  $i$ , noted as  $Di$ , is given by the time scale (horizontal) difference between the arrival and departure curves.
- The aggregate delay for all vehicles passing through the crossing is the area between the arrival and departure curves.
- The number of vehicles that incur delay as a result of a train is equal to the number of vehicles that arrive during the blocked crossing period and the queue clearance time.

- The average delay per delayed vehicle ( $Da$ ) is equal to the aggregate delay divided by the number of vehicles that are delayed. Assuming uniform arrival, the equation for the average delay per delayed vehicle was calculated as follows:

$$\begin{aligned}
 Da &= \frac{\text{Aggregate Delay}}{\text{Delayed Vehicles}} \times 1.3 \\
 &= \frac{0.5 \times Sq \times Dc \times (Dc + Tqc)}{Sq \times (Dc + Tqc)} \times 1.3 \\
 &= 0.5 \times Dc \times 1.3
 \end{aligned}$$

where:

- $Da$  = Average delay per delayed vehicle (minutes)
- $Sq$  = Average arrival rate of traffic (vehicles per minute per lane)
- $Dc$  = Blocked crossing time per train (minutes)
- $Tqc$  = Queue clearance time (minutes)
- 0.5 = Factor used in the calculation of the area of a triangle
- 1.3 = Factor which is widely used in the traffic engineering profession to account for initial deceleration, queue move-up time, and final acceleration of vehicles that are delayed

#### *Number of Vehicles Delayed Per Day*

The number of vehicles delayed per day equals the number of drivers in a 24-hour period that would be stopped for trains at highway/rail at-grade crossings. SEA estimated the number of vehicles delayed per day per crossing using the following equation:

$$T_D = \frac{Dc}{1,440} \times N \times ADT$$

where:

- $T_D$  = Vehicles delayed per day
- $Dc$  = Blocked crossing time per train (in minutes)
- 1,440 = Minutes per day
- $N$  = Trains per day
- $ADT$  = ADT for highway/rail at-grade crossing

#### *Vehicle Queue Length*

The vehicle queue is the estimated number of vehicles in line at the end of the blocked crossing time of a single train event. The vehicle queue is equal to the number of vehicles that arrive during the blocked crossing time ( $Dc$ ). SEA estimated the vehicle queue during the peak hour of roadway traffic. SEA assumes the peak-hour traffic is equal to 10 percent of the ADT volume—a typical assumption made by traffic engineers. It estimated the vehicle queue at the end of the blocked crossing time using the following equation:

$$Q = ADT \times 0.1 \times \frac{0.6}{60} \times \frac{Dc}{NL/2}$$

where:

- $Q$  = Vehicle queue (number of vehicles)
- $ADT$  = ADT for highway/rail at-grade crossing
- 0.1 = Ten percent factor to convert ADT to peak-hour traffic
- 0.6 = 60 percent factor to convert two-way traffic to peak-direction traffic
- 60 = Factor to convert traffic volume per hour to traffic volume per minute
- $Dc$  = Time required for the train to pass the highway/rail at-grade crossing, including time for gate closing and opening, in minutes
- $NL$  = Highway lanes at the highway/rail at-grade crossing as reported by the FRA database
- 2 = Factor to convert total number of roadway lanes to number of lanes in peak direction

#### *Average Delay for All Vehicles*

The average delay for all vehicles is the estimated average delay experienced by all drivers at the affected highway/rail at-grade crossing. The average delay includes both drivers who would and would not be delayed by trains. The average delay for all vehicles ( $Dv$ ), including vehicles not delayed by train traffic, is most easily defined as the aggregate delay incurred by vehicles that are delayed divided by the total traffic at the crossing. Therefore, SEA used the following equation for calculating the average delay for all vehicles:

$$Dv = \frac{(Td \times Da) \times 2}{ADT}$$

where:

- $Dv$  = Average delay for all vehicles (minutes per vehicle)
- $Td$  = Vehicles delayed per day
- $Da$  = Average delay per delayed vehicle (minutes)
- $ADT$  = Average daily traffic for the highway/rail at-grade crossing, in vehicles per day
- 2 = Factor which approximates a 95 percent confidence level that the peak delay would not exceed the average. This practice is generally accepted in traffic engineering analyses to produce a conservative delay estimate.

#### *Total Traffic Delay*

SEA estimated the total vehicular delay effects at all highway/rail at-grade crossings that would be affected by the Proposed Action and compared them to the amount of delay that currently takes place (No-Action Alternative). It applied an average delay per vehicle factor to the total crossing travel demand at every at-grade crossing to yield a regional total delay at the highway/rail at-grade crossings resulting from train operations under the Proposed Action.

#### *Data for Analysis*

The above factors were calculated based on existing and proposed values for the number of trains (N), 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 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.

To analyze the existing traffic delays under the No-Action Alternatives and compare them to traffic delays projected to occur under the Proposed Action highway/rail at-grade crossings, SEA compiled data from several sources, including:

- FRA location and inventory databases, which include information about highway/rail at-grade crossings, such as ADT data
- Interstate Commerce Commission (ICC) database for existing traffic and train delay data
- CN and EJ&E company databases for train lengths and speeds
- State and local department of transportation databases for roadway ADT data
- The Applicants’ Operating Plan, traffic studies, and historical operating data from intermodal facilities

SEA used 2007 ADTs to calculate existing traffic delays and county-specific growth factors (detailed in Table 4.3-2, below) to develop ADTs for the years 2015 and 2020. The LOS methodology discussed in Chapter 3 has been used for the analysis of conditions in 2015. Local and regional transportation plans have been reviewed to account for future changes and upgrades in roadway characteristics.

County	Percentage Used for Growth Forecast
Lake (Illinois)	3.0
Cook (West side)	2.0
Cook (South/East side)	1.0
DuPage	3.0
Will	3.0
Lake (Indiana)	3.0

*Regional Mobility*

As stated in Chapter 3, SEA evaluated the operations of roadways that cross rail line segments expected to experience a change in rail traffic under the Proposed Action. This evaluation identified operations on roadways crossing the EJ&E rail line segments in two ways: 1) a detailed analysis of roadway operations to identify and evaluate those roadways that are operating at or over capacity (LOS E-F), and 2) provide a broader, evaluation of each community’s overall mobility.

Year 2015 forecasted traffic volumes were estimated by applying a growth rate to the 2007 roadway volumes. Local and regional transportation plans were reviewed to account for future changes and upgrades in roadway characteristics.

For the critical locations, planned/programmed improvements in the community’s roadway network were identified and incorporated in the future condition analysis.

**4.3.1.2 No-Action Alternative**

As regional traffic volumes on the roadways increase between 2007 and 2015, delays would increase across the Study Area’s roadway network, thereby decreasing LOS. The roadway LOS listed in Table 4.3-4 and Table 4.3-6 on the following pages is SEA’s calculated 2015 roadway segment LOS for roadways that cross the EJ&E and CN rail lines, respectively. SEA has reviewed regional travel

growth and believes that increases in demand on area roadways would continue as represented by the increase in ADT from 2007 to 2015.

Queue lengths at study crossings calculated for the 2015 No-Action Alternative are based upon existing freight movements remaining constant in 2015. The queue lengths calculated for the 2015 No-Action Alternative are typically higher than the 2007 queue lengths due to the anticipated increases in roadway traffic volumes that would occur without the Proposed Action. There are several communities that have planned roadway improvements that would decrease queue lengths; SEA identified and considered these planned improvement projects in its evaluations.

Existing regional congestion has encouraged cut-through traffic in communities along the EJ&E rail line. A majority of communities along the EJ&E rail line have grid pattern streets designed to accommodate local access trips. Roadways with residences fronting the roadway and local access roadways are generally not designed to handle additional cut-through traffic. Cut-through traffic could increase independent of train operations due to the anticipated growth in regional travel demand.

**What is cut-through traffic?**  
 Cut-through traffic uses local streets rather than the collector/arterial roadway network to avoid congestion.

**4.3.1.3 Proposed Action**

*Proposed Changes in Rail Line Operations*

SEA evaluated vehicle delays and mobility issues in each community in the Study Area as a means of assessing potential Proposed Action effects on the area’s transportation system. To analyze these effects, SEA identified the existing highway/rail at-grade crossings along the EJ&E rail line that exceed the Board’s transportation system analysis threshold for vehicular delays (see Table 4.3-1, above). Crossing locations are shown on aerial map exhibits included in Appendix E, Figure E-1. It then calculated potential changes in vehicular delays for No-Action and Proposed Action conditions at locations where 2015 ADT volumes would meet these thresholds. The vehicles referred to in this analysis represent the total vehicle mix that travel the area’s public roadways. Passenger cars and trucks, commercial trucks, school buses, and motorcycles are representative vehicle types. Year 2015 forecasted traffic volumes were estimated by applying a growth rate to 2007 roadway volumes. The growth rate was developed based on assumptions outlined earlier in Table 4.3-2. SEA has reviewed the 2015 traffic volumes developed by this process and believes they represent traffic demand that could reasonably be expected to occur based on area growth trends.

SEA calculated the total change in regional vehicular traffic delay due to the Proposed Action. This delay is the sum of all increases and decreases in vehicular delay on the EJ&E and CN rail line crossings. Table 4.3-3 summarizes all of the delay calculations from Table 4.3-4 and Table 4.3-6.

<b>Table 4.3-3. Total Vehicle Delay</b>				
	<b>No-Action (hours/day)</b>	<b>Proposed Action (hours/day)</b>	<b>No-Action (hours/year)</b>	<b>Proposed Action (hours/year)</b>
EJ&E	275	2,030	1,670	12,370
CN	1,600	320	9,710	1,960
Total	1,875	2,350	11,380	14,330
Difference	475		2,950	

SEA evaluated vehicle queues that would result from the accumulation of vehicles at highway/rail at-grade crossings temporarily closed due to passing trains as projected in CN’s proposed Operating Plan. These calculations estimate the effect or impact on the mobility and circulation of traffic in the immediate area of the crossing. SEA determined that under the Proposed Action, queue lengths in

2015 would typically be higher than 2007 queue lengths due to greater traffic volumes and proposed train movement increases. However, several communities have planned roadway improvements that may reduce queue lengths by increasing street capacity. For the 2015 delay calculations, these planned improvements were assumed to have been completed if they are included in an existing planning program programmed or scheduled to be in place by 2015.

Existing roadway congestion exists today in many communities along the EJ&E rail line. Additional effects from the Proposed Action could be masked by existing conditions that already cause congestion. This congestion is evidenced by a number of reports of cut-through traffic in residential neighborhoods. A number of the communities along the EJ&E rail line currently do not have grade-separated crossings within close proximity of the village core. Those communities could experience longer traffic queues and a greater number of traffic diversions to alternate routes as a result of the Proposed Action, which could possibly increase cut-through movements. Communities with grade-separated crossings near the village core could experience additional traffic through increased use of the grade separate crossing as the public attempts to avoid the blocked at-grade crossings. In many of these locations, a viable alternative route exists that is designed to handle the diverted traffic. Communities that currently experience congestion and cut-through traffic would likely continue to experience those conditions regardless of increased train traffic as a result of the Proposed Action. The following analyses examine the extent of any increase in delayed traffic that could cause increased queues and cut-through demand.

To assess this, SEA began by estimating local area mobility conditions. The LOS of roadway segments away from the highway/rail at-grade crossings was calculated to reflect present roadway conditions. The resulting “2015 Roadway Level of Service” detailed in Table 4.3-4 and Table 4.3-6 on the following pages is a measure of congestion occurring along the roadway independent of any delay that could be caused by increasing the number of trains at the rail crossing due to the Proposed Action. These calculations show that many of the roadways crossing the EJ&E rail line experience congestion at points away from the rail crossings. This congestion would occur regardless of any increased train operations. Detailed descriptions of existing and forecast conditions in each of the communities along the EJ&E and CN rail lines are included in Appendix E.

Vehicle delays, LOS, and queue lengths were calculated for the approaching roadways and crossings at each of the 87 highway/rail at-grade crossings that met the Board’s thresholds for analysis. Roadway crossing locations in each community were analyzed to determine the potential effects of the Proposed Action. Results of the crossing analysis for the EJ&E and CN rail lines are shown in Table 4.3-4 and Table 4.3-6, respectively. The extent of increase or decrease in motorist delay and vehicle queues is directly affected by the increase or decrease in average train length, train speed and the average number of trains expected per day. On the following pages, Table 4.3-5 provides SEA’s analysis the EJ&E lines and Table 4.3-7 discloses them for the CN lines.

Each of these calculations reveals some degree of effect on each crossing and roadway due to the Proposed Action. The significance of these effects was evaluated. Vehicle queue lengths were studied to determine effects on local access and circulation due to the queued vehicles blocking crossing roadways. The effect of increased vehicular delay was also considered. The FHWA Railroad-Highway Grade Crossing Handbook lists threshold criteria for consideration of grade separated crossings. The threshold criterion includes conditions where vehicle delay exceeds 40 vehicle hours per day. The resulting effect at each crossing was evaluated and assigned one of three levels of effect.

Under SEA’s analysis, effects were separated into minimal, moderate, and serious, depending upon the results of the calculations:

- Minimal: when the Proposed Action calculated queue length blocks no roadways and the crossing LOS is D or better.

- Moderate: when the Proposed Action calculated queue length blocks a roadway that is also blocked under the No-Action Alternative and the crossing LOS is D or better.
- Serious: when the Proposed Action queue length blocks a roadway that is not blocked under the No-Action Alternative or the crossing LOS is reduced to E-F, or the Total Vehicle Traffic Delay in a 24-hour period exceeds 40 hours (2,400 minutes).

SEA determined that sixteen crossings would be substantially affected. The “Substantially Affected” designation indicates that the increased crossing delays and/or queue lengths and/or Total Vehicle Traffic Delays in a 24-hour period have reached a threshold requiring examination for mitigation. SEA therefore prepared additional analysis of these crossings, which are discussed in a detailed series of tables. Table 4.3-10 presents the roadway and crossing LOS for each of these sixteen locations and Table 4.3-11 summarizes the queue lengths and major thoroughfares that would be blocked, and if the Total Vehicle Traffic Delay in a 24-hour period is 40 hours or more due to the Proposed Action. Figure 4.3-2 through Figure 4.3-12, following the tables, show the location of the substantially affected highway/rail at-grade crossings. As noted above, the roadway LOS is independent of the highway/rail at-grade crossing and thus not a result of the Proposed Action. Appendix E presents a detailed discussion of the vehicle delay calculations and analyses. Also presented in Appendix E are detailed discussions of queue lengths and mobility within the communities along the EJ&E and CN rail line segments affected by the Proposed Action.

SEA notes that the N. Rowell Street crossing near Joliet, Illinois, (see Table 4.3-4) would experience a decrease in crossing LOS from a No-Action LOS A to a Proposed Action LOS D. While this crossing does not meet the criteria for Substantially Affected roadways, the crossing LOS would approach the threshold.

Detailed descriptions of the analysis of conditions in each community are included in Appendix E. These discussions include descriptions of crossing delays from existing operations and the Proposed Action. Regional roadway mobility conditions are also described for each community. Figures E-A1 through E-A33 (found in Appendix E) graphically show the relationship of the existing rail way to crossings, community facilities and proposals for new construction.

**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		No-Action	Proposed Action				
<b>Near Libertyville, IL</b>												
Diamond Lake Road	8,998	5.3	20.3	A	B	D	384	784	1.1	2.3	62.7	1,016.6
<b>Near Mundelein, IL</b>												
IL 60 & 83	29,659	5.3	20.3	A	B	F	1,201	1,215	1.1	2.1	194.7	2,872.8
<b>Near Hawthorn Woods, IL</b>												
Gilmer Road	18,658	5.3	20.3	A	A	F	721	1,330	1.0	1.9	106.0	1,425.0
Old McHenry Road	32,424	5.3	20.3	A	A	F	641	1,186	1.0	1.9	189.0	2,540.3
<b>Near Lake Zurich, IL</b>												
Oakwood Road	6,783	5.3	20.3	A	B	C	282	523	1.1	2.0	45.1	590.0
<b>Lake Zurich, IL</b>												
Main Street	17,471	5.3	20.3	A	B	E	726	1,348	1.1	2.0	117.7	1,520.0
Old Rand Road	10,659	5.3	20.3	A	A	C	432	800	1.1	2.0	70.4	902.0
Ela Road	21,398	5.3	20.3	A	A	F	517	947	0.9	1.7	102.6	1,361.7
<b>Near Barrington, IL</b>												
Cuba Road	12,982	5.3	20.3	A	A	D	445	808	0.9	1.6	59.4	729.6
<b>Barrington, IL</b>												
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)	33,662	5.3	20.3	A	A	E	558	1,048	0.9	1.6	147.6	1,891.2
Hough Street (IL 59 & 63)	24,056	5.3	20.3	A	A	F	810	1,497	0.9	1.6	107.1	1,350.4
<b>Barrington, IL</b>												
Lake Cook Road/Main Street	14,222	5.3	20.3	A	A	F	479	885	0.9	1.6	63.9	798.4
<b>Near Barrington, IL</b>												
Penny Road	4,786	5.3	20.3	A	A	B	170	311	0.9	1.7	22.5	297.5
<b>Hoffman Estates, IL</b>												
Shoe Factory Road	9,202	5.3	20.3	A	A	D	334	598	0.9	1.7	44.1	572.9

**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		
<b>Near Elgin, IL</b>												
West Bartlett Road	17,209	5.5	22.5	A	A	F	587	978	0.9	1.5	81.0	918.0
<b>Near Bartlett, IL</b>												
Stearns Road	21,129	5.5	22.5	A	A	D	325	625	0.9	1.5	102.6	1,168.5
<b>Wayne, IL</b>												
Army Trail Road	7,392	4.4	23.4	A	A	C	224	452	0.8	1.6	21.6	470.4
<b>Near West Chicago, IL</b>												
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	694	1,430	0.9	1.9	76.5	1,765.1
<b>West Chicago, IL</b>												
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	1,508	10.7	31.6	A	C	A	23	32	1.6	2.2	11.2	61.6
<b>Naperville, IL</b>												
Diehl Road	21,933	10.7	31.6	A	B	D	986	1,339	1.2	1.6	351.6	1,880.0
<b>Near Aurora, IL</b>												
Liberty Street.	20,696	15.7	39.5	A	B	F	1,171	1,474	1.5	1.9	766.5	3,074.2
Ogden Avenue (US 34)	45,828	15.7	39.5	A	B	F	1,076	1,322	1.2	1.5	1,125.6	4,351.5
Montgomery Road/83 <sup>rd</sup> Street	27,131	15.7	39.5	A	B	F	1,274	1,597	1.2	1.5	667.2	2,629.5
<b>Near Plainfield, IL</b>												
Hafenrichter Road	6,506	15.7	39.5	A	B	C	305	383	1.2	1.5	159.6	630.0
Wolf's Crossing Road	13,150	15.7	39.5	A	B	F	632	791	1.2	1.6	331.2	1,388.8
111 <sup>th</sup> Street	12,320	15.7	39.5	A	B	F	592	741	1.2	1.6	309.6	1,300.8
Ferguson Road - 119 <sup>th</sup> Street	5,468	15.7	39.5	A	B	C	269	336	1.3	1.6	152.1	590.4
127 <sup>th</sup> Street	6,437	15.7	39.5	A	B	C	325	424	1.3	1.7	184.6	790.5

**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		No-Action	Proposed Action				
135 <sup>th</sup> Street	11,766	15.7	39.5	A	B	E	539	721	1.2	1.6	282.0	1,267.2
Van Dykes Road	6,921	18.5	42.3	A	B	C	295	389	1.1	1.5	167.2	685.5
Renwick Road	12,873	18.5	42.3	A	B	C	249	328	1.0	1.4	265.0	1,143.8
<b>Plainfield, IL</b>												
143 <sup>rd</sup> Street	5,952	18.5	42.3	A	B	A	187	247	1.1	1.4	140.8	539.0
Plainfield-Naperville Road	4,568	18.5	42.3	A	B	F	907	1,197	1.1	1.4	105.6	406.0
Main Street	22,175	18.5	42.3	A	B	A	75	100	1.1	1.4	512.6	1,969.8
Center Street	1,845	18.5	42.3	A	B	A	158	209	1.1	1.4	42.9	163.8
Eastern Avenue	3,876	18.5	42.3	A	B	E	464	613	1.1	1.4	89.1	344.4
Lockport Road	11,351	18.5	42.3	A	B	D	516	695	1.1	1.4	262.9	1,008.0
<b>Near Crest Hill, IL</b>												
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
<b>Crest Hill, IL</b>												
Gaylord Road	5,758	18.5	42.3	A	B	C	271	362	1.2	1.6	166.8	680.0
<b>Near Joliet, IL</b>												
South Rowell Avenue	3,184	6.4	28.3	A	D	E	1,056	1,814	1.8	3.2	70.2	995.2
<b>Joliet, IL</b>												
Woodruff Road	10,659	18.5	42.3	B	F	C	1,550	2,371	2.6	4.4	1,411.8	9,380.8
Washington Street	11,714	6.4	28.3	A	F	A	220	395	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
<b>Near New Lenox, IL</b>												
South Gougar Road	8,555	6.4	28.3	A	B	D	436	585	1.3	1.8	101.4	828.0

**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		
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	3,391	6.4	28.3	A	B	A	160	221	1.2	1.7	34.8	295.8
School House Road	8,721	6.4	28.3	A	B	D	412	569	1.2	1.7	87.6	759.9
<b>Near Frankfort, IL</b>												
Wolf Road	9,966	6.4	28.3	A	B	C	508	698	1.3	1.8	117.0	988.2
<b>Frankfort, IL</b>												
Center Avenue	7,752	6.4	28.3	A	B	C	385	530	1.2	1.7	33.6	300.9
<b>Near Frankfort, IL</b>												
Old Sauk Trail	3,461	6.4	28.3	A	B	A	160	226	1.1	1.5	76.8	676.6
Pfeiffer Road / 88 <sup>th</sup> Avenue	7,752	6.4	28.3	A	B	D	358	506			104.5	855.0
Harlem Avenue	12,336	6.4	28.3	A	A	D	534	726	1.3	1.8	88.4	748.8
<b>Near Matteson, IL</b>												
Ridgeland Avenue	3,642	6.4	28.3	A	A	B	158	214	1.1	1.5	30.8	252.0
Cicero Avenue	30,598	6.4	28.3	A	B	E	663	1,150	1.1	2.0	259.6	3,646.0
<b>Matteson, IL</b>												
Main Street	4,375	6.4	28.3	A	C	B	186	475	1.1	2.8	36.3	1,036.0
<b>Park Forest, IL</b>												
Western Avenue	24,717	8.6	31.6	A	B	D	528	875	1.1	1.9	277.2	2,958.3
<b>Chicago Heights, IL</b>												
Chicago Road	26,842	8.6	31.6	A	C	E	824	1,252	1.6	2.4	630.4	5,275.2
West End Avenue/Halsted Street	7,267	8.6	31.6	A	C	C	484	737	1.7	2.6	197.2	1,682.2
East End Avenue	5,086	8.6	31.6	A	C	B	338	515	1.7	2.6	137.7	1,175.2
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

**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							
Cottage Grove Avenue	5,578	10.2	34.2	A	B	A	121	179	1.1	1.7	75.9	578.0
<b>Sauk Village, IL</b>												
Torrence Avenue	8,968	10.2	34.2	A	A	C	337	486	1.0	1.4	95.0	645.4
<b>Lynwood, IL</b>												
Lincoln Highway (US 30)	39,656	10.2	34.2	A	B	F	860	1,274	1.1	1.7	535.7	4,115.7
<b>Dyer, IN</b>												
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
<b>Schererville, IN</b>												
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
<b>Griffith, IN</b>												
Broad Street	19,572	7.6	28.6	A	B	F	901	1,615	1.2	2.1	228.0	2,694.3
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 <sup>th</sup> Avenue	23,486	7.6	28.6	A	A	E	439	727	1.0	1.6	185.0	1,848.0
East 40 <sup>th</sup> Place	14,222	7.6	28.6	A	A	F	521	861	1.0	1.6	110.0	1,094.4
<b>Gary, IN</b>												
West 25 <sup>th</sup> Avenue	4,187	9.7	29.7	A	A	B	162	238	1.0	1.5	44.0	294.0
West 15 <sup>th</sup> Avenue	19,890	9.7	29.7	A	A	F	771	1,131	1.0	1.5	208.0	1,399.5
West 9 <sup>th</sup> Avenue	4,187	9.7	29.7	A	A	B	159	233	1.0	1.4	43.0	268.8
West 5 <sup>th</sup> 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. 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
<b>Near Libertyville, IL</b>						
Diamond Lake Road	2,760	6,829	26	26	5.3	20.3
<b>Near Mundelein, IL</b>						
IL 60 & 83	2,760	6,829	28	28	5.3	20.3
<b>Near Hawthorn Woods, IL</b>						
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
<b>Near Lake Zurich, IL</b>						
Oakwood Road	2,760	6,829	27	30	5.3	20.3
<b>Lake Zurich, IL</b>						
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
<b>Near Barrington, IL</b>						
Cuba Road	2,760	6,829	36	39	5.3	20.3
<b>Barrington, IL</b>						
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
<b>Barrington, IL</b>						
Lake Cook Road / Main Street	2,760	6,829	37	39	5.3	20.3
<b>Near Barrington, IL</b>						
Penny Road	2,760	6,829	34	37	5.3	20.3
<b>Hoffman Estates, IL</b>						
Shoe Factory Road	2,760	6,829	33	37	5.3	20.3
<b>Near Elgin, IL</b>						
West Bartlett Road	3,042	6,714	40	43	5.5	22.5
<b>Near Bartlett, IL</b>						
Stearns Road	3,042	6,714	38	41	5.5	22.5
<b>Wayne, IL</b>						
Army Trail Road	2,264	6,843	36	40	4.4	23.4
<b>Near West Chicago, IL</b>						
Smith Road	2,264	6,843	35	40	4.4	23.4
Hawthorne Lane	2,264	6,843	29	33	4.4	23.4
<b>West Chicago, IL</b>						
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
<b>Naperville, IL</b>						
Diehl Road	3,769	6,494	33	38	10.7	31.6
<b>Near Aurora, IL</b>						
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
Montgomery Road / 83rd Street	3,881	6,203	32	38	15.7	39.5
<b>Near Plainfield, IL</b>						

**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
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 <sup>th</sup> 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 <sup>th</sup> Street	3,881	6,203	29	33	15.7	39.5
135 <sup>th</sup> Street	3,398	5,842	29	34	15.7	39.5
Van Dyke Road	3,398	5,842	32	38	18.5	42.3
<b>Plainfield, IL</b>						
143 <sup>rd</sup> Street	3,398	5,842	33	39	18.5	42.3
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
<b>Near Crest Hill, IL</b>						
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
<b>Crest Hill, IL</b>						
Gaylord Road	3,398	5,842	28	33	18.5	42.3
<b>Near Joliet, IL</b>						
South Rowell Avenue	3,795	6,684	19	17	6.4	28.3
<b>Joliet, IL</b>						
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
<b>Near New Lenox, IL</b>						
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
<b>Near Frankfort, IL</b>						
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
<b>Near Frankfort, IL</b>						
Old Sauk Trail	3,795	6,684	32	36	6.4	28.3
Pfeiffer Road / 88 <sup>th</sup> Avenue	3,795	6,684	32	36	6.4	28.3
Harlem Avenue	3,795	6,684	35	41	6.4	28.3

<b>Table 4.3-5. Train Operations Factors for the EJ&amp;E Rail Line</b>						
<b>Street</b>	<b>Length of Train</b>		<b>Train Speed</b>		<b>Trains per Day</b>	
	<b>No-Action</b>	<b>Proposed Action</b>	<b>No-Action</b>	<b>Proposed Action</b>	<b>No-Action</b>	<b>Proposed Action</b>
<b>Near Matteson, IL</b>						
Ridgeland Avenue	3,795	6,684	35	41	6.4	28.3
Cicero Avenue	3,795	6,684	35	30	6.4	28.3
<b>Matteson, IL</b>						
Main Street	3,795	6,684	36	20	6.4	28.3
<b>Park Forest, IL</b>						
Western Avenue	3,615	6,256	34	30	8.6	31.6
<b>Chicago Heights, IL</b>						
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	19	20	8.6	31.6
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
<b>Sauk Village, IL</b>						
Torrence Avenue	3,261	6,012	37	41	10.2	34.2
<b>Lynwood, IL</b>						
Lincoln Highway (US 30)	3,261	6,012	30	33	10.2	34.2
<b>Dyer, IN</b>						
Lake Street	3,261	6,012	30	34	10.2	34.2
Hart Street	3,261	6,012	31	34	10.2	34.2
<b>Schererville, IN</b>						
Airport Road	3,261	6,012	36	39	10.2	34.2
Kennedy Avenue	3,261	6,012	35	38	10.2	34.2
<b>Griffith, IN</b>						
Broad Street	2,717	5,915	23	24	7.6	28.6
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 <sup>th</sup> Avenue	2,717	5,915	31	34	7.6	28.6
East 40 <sup>th</sup> Place	2,717	5,915	32	35	7.6	28.6
<b>Gary, IN</b>						
West 25 <sup>th</sup> Avenue	3,144	5,777	34	37	9.7	29.7
West 15 <sup>th</sup> Avenue	3,144	5,777	34	37	9.7	29.7
West 9 <sup>th</sup> Avenue	3,144	5,777	35	38	9.7	29.7
West 5 <sup>th</sup> Avenue	3,108	5,758	35	37	9.8	29.8

**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
<b>Waukesha Subdivision</b>												
<b>River Forest, IL</b>												
Forest Avenue	3,035	3.5	0.0	A	A	A	213	0	1.8	0.0	37.8	0.0
Augusta Street	3,035	3.5	0.0	A	A	A	213	0	1.8	0.0	37.8	0.0
Keystone Avenue	3,035	3.5	0.0	A	A	A	213	0	1.8	0.0	37.8	0.0
Thatcher Avenue	10,039	3.5	0.0	A	A	A	471	0	1.8	0.0	124.2	0.0
<b>River Grove, IL</b>												
1 <sup>st</sup> Avenue (IL 171)	32,060	3.5	0.0	A	A	C	1,127	0	1.8	0.0	394.2	0.0
5 <sup>th</sup> Avenue	12,190	3.5	0.0	A	A	C	428	0	1.8	0.0	149.4	0.0
<b>Melrose Park, IL</b>												
George Street	4,661	3.5	0.0	A	A	B	347	0	1.9	0.0	64.6	0.0
<b>Franklin Park, IL</b>												
Fullerton Avenue	4,780	3.5	0.0	A	A	B	391	0	2.1	0.0	79.8	0.0
Belmont Avenue	11,831	19.3	2.0	B	A	B	639	308	2.8	1.4	1,918.0	47.6
<b>Des Plaines, IL</b>												
Pratt Avenue	2,735	19.1	2.0	B	A	B	253	121	2.4	1.2	321.6	8.4
Touhy Avenue	28,085	19.1	2.0	A	A	A	852	434	2.0	1.0	2,260.0	60.0
Frontage Road	3,481	19.1	2.0	A	A	D	264	135	2.0	1.0	280.0	7.0
Oakton Street	29,160	19.1	2.0	A	A	A	1,106	600	2.0	1.1	2,348.0	73.7
Algonquin Road	11,114	19.1	2.0	A	A	D	798	438	1.9	1.0	803.7	24.0
Lee Street/Mannheim Road (US 12)	10,361	19.1	2.0	A	A	C	744	409	1.9	1.0	750.5	23.0
Graceland Avenue (US 12)	23,770	19.1	2.0	A	A	C	1,662	937	1.8	1.0	1,587.6	52.0
Thacker Street/Dempster Street	14,102	19.1	2.0	A	A	F	986	556	1.8	1.0	941.4	31.0
Prairie Avenue	2,873	19.1	2.0	A	A	F	191	111	1.7	1.0	171.7	6.0
Seegers Road	1,781	19.1	2.0	B	A	A	139	75	2.0	1.1	148.0	4.4

**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
Golf Road (IL 58)	34,985	19.1	2.0	B	A	A	1,367	755	2.0	1.1	2,900.0	92.4
Rand Road (US 12)	29,865	19.1	2.0	B	A	E	1,203	644	2.1	1.1	2,679.6	79.2
Central Road	22,348	19.1	2.0	A	A	D	1,453	816	1.7	0.9	1,310.7	40.5
<b>Near Mount Prospect, IL</b>												
Kensington Road/ Foundry Road	10,090	19.1	2.0	A	A	F	614	335	1.6	0.9	521.6	17.1
<b>Mount Prospect, IL</b>												
Euclid Avenue	22,826	19.1	2.0	A	A	D	680	368	1.6	0.8	1,155.2	32.8
<b>Prospect Hts, IL</b>												
Wolf Road	25,216	19.1	2.0	A	A	C	1,474	813	1.5	0.8	1,173.0	36.0
Camp McDonald Road	10,397	19.1	2.0	A	A	F	608	335	1.5	0.8	483.0	15.2
Hintz Road	24,977	19.1	2.0	A	A	A	776	434	1.6	0.9	1,318.4	43.2
<b>Wheeling, IL</b>												
Willow Road	3,585	19.1	2.0	A	A	D	214	117	1.6	0.9	180.8	6.3
Dundee Road (IL 68)	39,374	19.1	2.0	A	A	E	1,107	653	1.5	0.9	1,762.5	65.7
<b>Buffalo Grove, IL</b>												
Deerfield Parkway/ Busch Road	20,764	19.1	2.0	A	A	F	1,350	745	1.7	0.9	32.0	2.0
Buffalo Grove Road	17,857	19.1	2.0	A	A	D	670	384	1.5	0.8	799.5	25.6
<b>Prairie View, IL</b>												
Aptakistic Road	30,176	19.1	2.0	A	A	D	981	542	1.7	0.9	1,769.7	54.0
<b>Near Prairie View, IL</b>												
Half Day Road (IL 22)	25,669	19.1	2.0	A	A	D	1,471	839	1.5	0.9	1,171.5	42.3
<b>Near Vernon Hills, IL</b>												
US 45	23,653	19.1	2.0	A	A	F	531	531	0.9	0.9	379.8	39.6
<b>Vernon Hills, IL</b>												
Butterfield Road	20,071	19.1	2.0	A	A	F	354	354	0.9	0.9	338.4	35.1

**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	No-Action	Proposed Action	No-Action	Proposed Action
<b>Mundelein, IL</b>												
Townline Road (IL 60)	46,768	19.1	2.0	A	A	C	799	799	0.9	0.9	763.2	80.1
Allanson Road	21,179	19.1	19.1	A	B	F	1,434	2,310	1.8	2.8	1,369.8	3,432.8
Hawley Street	8,998	19.1	19.1	A	A	F	406	406	1.8	1.8	581.4	581.4
Park Street	732	19.1	19.1	A	A	D	50	50	1.8	1.8	46.8	46.8
Maple Avenue	15,052	19.1	19.1	A	A	A	1,019	1,019	1.8	1.8	973.8	973.8
Winchester Road	7,475	19.1	19.1	A	A	D	227	227	1.6	1.6	385.6	385.6
<b>Grays Lake, IL</b>												
Peterson Road	22,148	19.1	19.1	A	A	C	491	491	1.4	1.4	911.4	911.4
Harris Road	4,434	19.1	19.1	A	A	F	246	246	1.4	1.4	182.0	182.0
<b>Freeport Subdivision</b>												
<b>Chicago, IL</b>												
Pulaski Road	27,965	2.5	0.0	A	A	D	1,267	175	2.4	0.3	422.4	0.0
<b>Berwyn, IL</b>												
Riverside Drive	5,497	4.4	1.7	A	A	B	487	260	2.3	1.2	135.7	14.4
<b>Riverside, IL</b>												
Harlem Avenue (IL 43)	35,351	4.4	1.7	A	A	E	1,565	836	2.3	1.2	878.6	94.8
<b>North Riverside, IL</b>												
26 <sup>th</sup> Street	16,134	4.4	1.7	A	A	B	714	381	2.3	1.2	402.5	43.2
Des Plaines Avenue	17,807	4.4	1.7	A	A	C	788	421	2.3	1.2	443.9	48.0
<b>Near North Riverside, IL</b>												
Cermak Road	40,633	4.4	1.7	A	A	E	1,439	769	2.3	1.2	1,012.0	109.2
1 <sup>st</sup> Avenue (IL 171)	42,543	4.4	1.7	A	A	F	1,883	1,006	2.3	1.2	1,058.0	114.0
<b>Broadview, IL</b>												
17 <sup>th</sup> Avenue	11,353	4.4	1.7	A	A	A	639	318	2.9	1.5	452.4	45.0

**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	No-Action	Proposed Action
<b>Hillside, IL</b>												
Wolf Road	18,763	3.0	1.7	A	A	C	632	326	1.8	0.9	189.0	27.9
<b>Elmhurst, IL</b>												
York Road	24,190	3.0	1.7	A	A	F	1,557	828	1.7	0.9	221.0	35.1
Vallette Street	4,233	3.0	1.7	A	A	B	285	158	1.7	1.0	40.8	7.0
Argyle Avenue	1,165	3.0	1.7	A	A	A	72	40	1.6	0.9	9.6	1.8
Spring Road	10,886	3.0	1.7	A	A	D	658	373	1.6	0.9	88.0	16.2
Saint Charles Street	11,289	3.0	1.7	A	A	C	455	258	1.6	0.9	91.2	16.2
West Avenue	11,289	3.0	1.7	A	A	D	683	387	1.6	0.9	91.2	16.2
<b>Villa Park, IL</b>												
Villa Avenue	8,870	3.0	1.7	A	A	C	536	304	1.6	0.9	72.0	12.6
Addison Avenue	17,471	3.0	1.7	A	A	B	308	174	1.6	0.9	144.0	26.1
North Avenue (IL 64)	60,476	3.0	1.7	A	A	F	933	526	1.6	0.9	497.6	89.1
<b>Near Addison, IL</b>												
Grace Street	9,139	3.0	1.7	A	A	B	294	156	1.7	0.9	83.3	13.5
Swift Road	22,175	3.0	1.7	A	A	F	860	477	1.5	0.8	162.0	27.2
<b>Near Bloomingdale, IL</b>												
Schmale Road	30,373	3.0	1.7	A	A	E	957	497	1.6	0.9	254.4	42.3
Army Trail Road	41,796	3.0	1.7	A	A	F	1,194	632	1.5	0.8	298.5	48.0
<b>Bloomingdale, IL</b>												
Gary Avenue	37,092	3.0	1.7	A	A	E	1,060	561	1.5	0.8	265.5	42.4
<b>Hanover Park, IL</b>												
County Farm Road	38,705	3.0	1.7	A	A	E	1,106	593	1.5	0.8	276.0	44.8
<b>Bartlett, IL</b>												
Sutton Road (IL 59)	59,939	3.0	1.7	A	A	F	1,777	954	1.5	0.8	444.0	72.0
<b>Near Bartlett, IL</b>												
Powis Road	5,510	3.0	2.6	A	A	C	357	789	1.7	3.7	51.0	210.9

**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							
<b>South Elgin, IL</b>												
IL 25	10,830	3.0	2.6	A	A	D	450	450	1.1	1.1	40.7	35.2
Randall Road	46,189	3.0	2.6	A	A	F	959	959	1.1	1.1	176.0	152.9
<b>Joliet Subdivision</b>												
<b>Lemont, IL</b>												
Pruxne Street/Illinois Street	7,171	1.8	2.0	A	A	C	445	407	1.6	1.5	35.2	34.5
Holmes Street	451	1.8	2.0	A	A	A	28	26	1.6	1.5	1.6	1.5
Stephen Street	14,222	1.8	2.0	A	A	A	925	846	1.7	1.5	78.2	70.5
<b>Romeoville, IL</b>												
Romeo Road/135 <sup>th</sup> Street	19,102	1.8	2.0	A	A	F	904	1,067	1.3	1.5	62.4	88.5
<b>Lockport, IL</b>												
9 <sup>th</sup> Street (IL 7)	30,238	1.8	2.0	A	A	F	1,521	1,877	1.3	1.6	98.8	166.4
10 <sup>th</sup> Street	160	1.8	2.0	A	A	A	8	10	1.3	1.6	0.0	1.6
11 <sup>th</sup> Street	307	1.8	2.0	A	A	A	15	19	1.3	1.6	1.3	1.6
Division Street	6,783	1.8	2.0	A	A	B	341	421	1.3	1.6	22.1	36.8
<b>Joliet, IL</b>												
Ohio Street	7,198	2.9	2.9	B	B	C	1,624	1,624	5.9	5.9	772.9	772.9
Jackson Street	20,380	2.9	2.9	B	B	D	4,597	4,597	5.9	5.9	2,183.0	2,183.0
<b>Chicago Subdivision</b>												
<b>University Park, IL</b>												
University Parkway / Stuenkel Road	13,640	12.8	12.8	A	A	F	318	318	1.2	1.2	271.2	271.2
W. Dralle Road	4,012	12.8	12.8	A	A	F	93	93	1.2	1.2	79.2	79.2
<b>Elsdon/South Bend Subdivision</b>												
<b>Chicago, IL</b>												
55 <sup>th</sup> Street	31,431	3.3	0.0	A	A	F	2,632	0	4.4	0.0	2,125.2	0.0

**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	No-Action	Proposed Action
71 <sup>st</sup> Street	16,612	3.3	0.0	A	A	F	2,783	0	4.4	0.0	1,122.0	0.0
79 <sup>th</sup> Street	29,291	3.4	0.0	A	A	D	2,453	3	4.4	0.0	2,037.2	0.0
Columbus Avenue	18,046	3.4	0.0	A	A	A	1,511	0	4.4	0.0	1,254.0	0.0
83 <sup>rd</sup> Place	1,305	3.4	0.0	A	A	A	219	0	4.4	0.0	92.4	0.0
87 <sup>th</sup> Street	23,663	3.4	0.0	A	A	C	1,321	0	4.4	0.0	1,645.6	0.0
103 <sup>rd</sup> Street	23,782	3.4	0.0	A	A	C	1,992	0	4.4	0.0	1,654.4	0.0
111 <sup>th</sup> Street	19,600	3.4	0.0	A	A	C	1,642	0	4.4	0.0	1,364.0	0.0
115 <sup>th</sup> Street	15,536	3.4	0.0	A	A	F	1,301	0	4.4	0.0	1,082.4	0.0
<b>Evergreen Park, IL</b>												
91 <sup>st</sup> Street	4,482	3.4	0.0	A	A	B	751	0	4.4	0.0	312.4	0.0
Kedzie Avenue	28,802	3.4	0.0	A	A	D	2,412	0	4.4	0.0	2,006.4	0.0
94 <sup>th</sup> Street	3,466	3.4	0.0	A	A	A	290	0	4.4	0.0	242.0	0.0
95 <sup>th</sup> Street (US 12/ US 20)	36,570	3.4	0.0	A	A	C	2,042	0	4.4	0.0	2,547.6	0.0
99 <sup>th</sup> Street	11,592	3.4	0.0	A	A	E	1,942	0	4.4	0.0	805.2	0.0
<b>Blue Island, IL</b>												
119 <sup>th</sup> Street	14,341	3.4	0.0	A	A	E	2,402	0	4.4	0.0	998.8	0.0
123 <sup>rd</sup> Street	6,468	3.4	0.0	A	A	C	1,083	0	4.4	0.0	448.8	0.0
127 <sup>th</sup> Street	27,607	3.4	0.0	A	A	D	2,312	0	4.4	0.0	1,922.8	0.0
Broadway Street	5,916	14.9	1.0	A	A	B	206	149	1.8	1.3	307.8	10.4
<b>Dixmoor, IL</b>												
Western Avenue	10,039	14.9	1.0	A	A	B	420	295	2.2	1.5	763.4	24.0
Robey Street	144	14.9	1.0	A	A	A	11	7	1.9	1.4	7.6	0.0
<b>Harvey, IL</b>												
Lincoln Avenue	886	14.9	1.0	A	A	A	65	46	1.9	1.4	51.3	1.4
Wood Street	15,775	14.9	1.0	A	A	C	563	403	1.9	1.3	885.4	28.6
147 <sup>th</sup> Street / Sibley Boulevard (IL 83)	34,619	14.9	1.0	A	A	E	1,236	885	1.9	1.3	1,943.7	63.7

**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	No-Action	Proposed Action
Center Avenue	886	14.9	1.0	A	A	A	62	45	1.8	1.3	46.8	1.3
Broadway Avenue	886	14.9	1.0	E	A	A	97	77	5.7	4.5	456.0	18.0
Park Avenue	7,051	14.9	1.0	A	A	B	246	177	1.8	1.3	367.2	13.0
Halsted Street (IL 1)	22,064	19.5	1.0	A	A	C	654	564	1.5	1.3	1,062.0	40.3
<b>Phoenix, IL</b>												
155 <sup>th</sup> Street	451	19.5	1.0	A	A	A	27	23	1.5	1.3	21.0	1.3
<b>South Holland, IL</b>												
Thornton-Blue Island Road	4,960	19.5	1.0	A	A	B	301	268	1.6	1.4	260.8	9.8
159 <sup>th</sup> /162 <sup>nd</sup> Street (US 6)	34,741	19.5	1.0	A	A	E	1,053	1,022	1.6	1.5	1,825.6	85.5
South Park Avenue	11,831	22.1	2.9	B	A	B	467	478	2.1	2.1	1,203.3	161.7
170 <sup>th</sup> Street	13,266	22.1	2.9	C	A	C	847	898	3.3	3.5	3,432.0	507.5
<b>Lansing, IL</b>												
Volbrecht Road	3,641	22.1	2.9	A	A	B	211	195	1.5	1.4	195.0	22.4
Torrence Ave (IL 83)	12,799	22.1	2.9	A	A	B	363	331	1.5	1.3	669.0	68.9
186 <sup>th</sup> Street	7,768	22.1	2.9	A	A	C	424	389	1.4	1.3	365.4	40.3
Burnham Avenue	8,724	22.1	2.9	A	A	B	468	437	1.4	1.3	401.8	45.5
Wentworth Avenue	13,027	22.1	2.9	A	A	E	699	653	1.4	1.3	600.6	68.9
<b>Near Thornton, IL</b>												
Thornton-Lansing St	11,951	22.1	2.9	A	A	F	693	639	1.5	1.4	637.5	71.4
<b>Munster, IN</b>												
Calumet Avenue	31,311	22.1	2.9	A	A	F	872	797	1.4	1.3	1,498.0	166.4
White Oak Avenue	11,062	22.1	2.9	A	A	E	641	591	1.5	1.4	591.0	67.2
<b>Highland, IN</b>												
Kennedy Avenue	6,664	22.1	2.9	C	A	B	723	766	2.8	3.0	1,243.2	186.0
<b>Griffith, IN</b>												
Main Street	10,960	22.1	2.9	A	A	F	678	669	1.6	1.6	665.6	86.4

**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
Broad Street	19,572	22.1	2.9	A	A	F	1,184	1,170	1.6	1.6	1,163.2	150.4
Colfax Street	14,139	23.3	23.3	A	A	F	787	787	1.4	1.4	714.0	714.0
<b>Merrillville, IN</b>												
Taft Street	30,473	23.3	23.3	A	A	F	1,697	1,697	1.4	1.4	1,537.2	1,537.2
Madison Street	9,031	23.3	23.3	A	A	D	503	503	1.4	1.4	455.0	455.0
Broadway Street	39,989	23.3	23.3	A	A	F	1,113	1,113	1.4	1.4	2,017.4	2,017.4

<b>Table 4.3-7. Train Operations Factors for the CN Rail Line</b>						
<b>Street</b>	<b>Length of Train</b>		<b>Train Speed</b>		<b>Trains Per Day</b>	
	<b>No-Action</b>	<b>Proposed Action</b>	<b>No-Action</b>	<b>Proposed Action</b>	<b>No-Action</b>	<b>Proposed Action</b>
<b>Waukesha Subdivision</b>						
<b>River Forest, IL</b>						
Forest Avenue	6,104	0	30	0	3.5	0.0
Augusta Street	6,104	0	30	0	3.5	0.0
Keystone Avenue	6,104	0	30	0	3.5	0.0
Thatcher Avenue	6,104	0	30	0	3.5	0.0
<b>River Grove, IL</b>						
1 <sup>st</sup> Avenue (IL 171)	6,104	0	30	0	3.5	0.0
5 <sup>th</sup> Avenue	6,104	0	30.0	0	3.5	0.0
<b>Melrose Park, IL</b>						
George Street	6,104	0	28.0	0.0	3.5	0.0
<b>Franklin Park, IL</b>						
Fullerton Avenue	6,104	0	25.0	0.0	3.5	0.0
Belmont Avenue	6,388	2,645	19.0	19.0	19.3	2.0
<b>Des Plaines, IL</b>						
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
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
<b>Near Mount Prospect, IL</b>						
Kensington Road/Foundry Road	6,468	3,129	38	43	19.1	2.0
<b>Mount Prospect, IL</b>						
Euclid Avenue	6,468	3,129	39	45	19.1	2.0
<b>Prospect Hts, IL</b>						
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
<b>Wheeling, IL</b>						
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
<b>Buffalo Grove, IL</b>						
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

<b>Table 4.3-7. Train Operations Factors for the CN Rail Line</b>						
<b>Street</b>	<b>Length of Train</b>		<b>Train Speed</b>		<b>Trains Per Day</b>	
	<b>No-Action</b>	<b>Proposed Action</b>	<b>No-Action</b>	<b>Proposed Action</b>	<b>No-Action</b>	<b>Proposed Action</b>
<b>Prairie View, IL</b>						
Aptakisic Road	6,468	3,129	35	38	19.1	2.0
<b>Near Prairie View, IL</b>						
Half Day Road (IL 22)	6,468	3,129	41	44	19.1	2.0
<b>Near Vernon Hills, IL</b>						
US 45	3,129	3,129	42	42	19.1	2.0
<b>Vernon Hills, IL</b>						
Butterfield Road	3,129	3,129	39	39	19.1	2.0
<b>Mundelein, IL</b>						
Townline Road (IL 60)	3,129	3,129	41	41	19.1	2.0
Allanson Road	6,800	6,800	35	20	19.1	19.1
Hawley Street	6,800	6,800	35	35	19.1	19.1
Park Street	6,800	6,800	35	35	19.1	19.1
Maple Avenue	6,800	6,800	35	35	19.1	19.1
Winchester Road	6,800	6,800	40	40	19.1	19.1
<b>Grays Lake, IL</b>						
Peterson Road	6,800	6,800	45	45	19.1	19.1
Harris Road	6,800	6,800	45	45	19.1	19.1
<b>Freeport Subdivision</b>						
<b>Chicago, IL</b>						
Pulaski Road	5,224	0	19	19	2.5	0.0
<b>Berwyn, IL</b>						
Riverside Drive	6,690	3,061	25	25	4.4	1.7
<b>Riverside, IL</b>						
Harlem Avenue (IL 43)	6,690	3,061	25	25	4.4	1.7
<b>North Riverside, IL</b>						
26 <sup>th</sup> Street	6,690	3,061	25	25	4.4	1.7
Des Plaines Avenue	6,690	3,061	25	25	4.4	1.7
<b>Near North Riverside, IL</b>						
Cermak Road	6,690	3,061	25	25	4.4	1.7
1 <sup>st</sup> Avenue (IL 171)	6,690	3,061	25	25	4.4	1.7
<b>Broadview, IL</b>						
17 <sup>th</sup> Avenue	6,690	3,061	19	20	4.4	1.7
<b>Hillside, IL</b>						
Wolf Road	6,755	3,060	35	39	3.0	1.7
<b>Elmhurst, IL</b>						
York Road	6,755	3,061	37	40	3.0	1.7
Valette 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
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
<b>Villa Park, IL</b>						
Villa Avenue	6,755	3,061	40	40	3.0	1.7
Addison Avenue	6,755	3,061	39	39	3.0	1.7

<b>Table 4.3-7. Train Operations Factors for the CN Rail Line</b>						
<b>Street</b>	<b>Length of Train</b>		<b>Train Speed</b>		<b>Trains Per Day</b>	
	<b>No-Action</b>	<b>Proposed Action</b>	<b>No-Action</b>	<b>Proposed Action</b>	<b>No-Action</b>	<b>Proposed Action</b>
North Avenue (IL 64)	6,755	3,061	39	39	3.0	1.7
<b>Near Addison, IL</b>						
Grace Avenue	6,755	3,061	37	40	3.0	1.7
Swift Road	6,755	3,061	42	44	3.0	1.7
<b>Near Bloomingdale, IL</b>						
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
<b>Bloomingdale, IL</b>						
Gary Avenue	6,755	3,061	43	49	3.0	1.7
<b>Hanover Park, IL</b>						
County Farm Road	6,755	3,061	43	48	3.0	1.7
<b>Bartlett, IL</b>						
Sutton Road (IL 59)	6,755	3,061	41	45	3.0	1.7
<b>Near Bartlett, IL</b>						
Powis Road	4,600	4,600	25	10	3.0	2.6
<b>South Elgin, IL</b>						
IL 25	4,600	4,600	45	45	3.0	2.6
Randall Road	4,600	4,600	45	45	3.0	2.6
<b>Joliet Subdivision</b>						
<b>Lemont, IL</b>						
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
<b>Romeoville, IL</b>						
Romeo Road/135 <sup>th</sup> Street	4,659	6,108	38	40	1.8	2.0
<b>Lockport, IL</b>						
9 <sup>th</sup> Street (IL 7)	4,659	6,108	35	35	1.8	2.0
10 <sup>th</sup> Street	4,659	6,108	35	35	1.8	2.0
11 <sup>th</sup> Street	4,659	6,108	35	35	1.8	2.0
Division Street	4,659	6,108	35	35	1.8	2.0
<b>Joliet, IL</b>						
Ohio Street	7,500	7,500	10	10	2.9	3.0
Jackson Street	7,500	7,500	10	10	2.9	3.0
<b>Chicago Subdivision</b>						
<b>University Park, IL</b>						
University Parkway / Stuenkel Road	5,400	5,400	45	45	12.8	13.0
W. Dralle Road	5,400	5,400	45	45	12.8	12.8
<b>Elsdon/South Bend Subdivision</b>						
<b>Chicago, IL</b>						
55 <sup>th</sup> Street	4,365	0	8	0	3.3	0.0
71 <sup>st</sup> Street	4,365	0	8	0	3.3	0.0
79 <sup>th</sup> Street	4,365	0	8	0	3.4	0.0
Columbus Avenue	4,365	0	8	0	3.4	0.0
83 <sup>rd</sup> Place	4,365	0	8	0	3.4	0.0

**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
87 <sup>th</sup> Street	4,365	0	8	0	3.4	0.0
103 <sup>rd</sup> Street	4,365	0	8	0	3.4	0.0
111 <sup>th</sup> Street	4,365	0	8	0	3.4	0.0
115 <sup>th</sup> Street	4,365	0	8	0	3.4	0.0
<b>Evergreen Park, IL</b>						
91 <sup>st</sup> Street	4,365	0	8	0	3.4	0.0
Kedzie Avenue	4,365	0	8	0	3.4	0.0
94 <sup>th</sup> Street	4,365	0	8	0	3.4	0.0
95 <sup>th</sup> Street (US 12/US 20)	4,365	0	8	0	3.4	0.0
99 <sup>th</sup> Street	4,365	0	8	0	3.4	0.0
<b>Blue Island, IL</b>						
119 <sup>th</sup> Street	4,365	0	8	0	3.4	0.0
123 <sup>rd</sup> Street	4,365	0	8	0	3.4	0.0
127 <sup>th</sup> Street	4,365	0	8	0	3.4	0.0
Broadway Street	7,256	5,711	36	43	14.9	1.0
<b>Dixmoor, IL</b>						
Western Avenue	7,256	5,711	29	35	14.9	1.0
Robey Street	7,256	5,711	34	41	14.9	1.0
<b>Harvey, IL</b>						
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 <sup>th</sup> Street / Sibley Boulevard (IL 83)	7,256	5,711	35	42	14.9	1.0
Center Avenue	7,256	5,711	36	43	14.9	1.0
Broadway Avenue	7,256	5,711	10	10	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
<b>Phoenix, IL</b>						
155 <sup>th</sup> Street	5,927	5,711	36	42	19.5	1.0
<b>South Holland, IL</b>						
Thornton-Blue Island Road	5,927	5,711	35	39	19.5	1.0
159 <sup>th</sup> /162 <sup>nd</sup> 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 <sup>th</sup> Street	6,081	6,489	15	15	22.1	2.9
<b>Lansing, IL</b>						
Volbrecht Road	6,081	6,489	38	45	22.1	2.9
Torrence Ave (IL 83)	6,081	6,489	39	47	22.1	2.9
186 <sup>th</sup> 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
<b>Near Thornton, IL</b>						
Thornton-Lansing St	6,081	6,489	38	45	22.1	2.9
<b>Munster, IN</b>						
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

<b>Table 4.3-7. Train Operations Factors for the CN Rail Line</b>						
<b>Street</b>	<b>Length of Train</b>		<b>Train Speed</b>		<b>Trains Per Day</b>	
	<b>No-Action</b>	<b>Proposed Action</b>	<b>No-Action</b>	<b>Proposed Action</b>	<b>No-Action</b>	<b>Proposed Action</b>
<b>Highland, IN</b>						
Kennedy Avenue	6,081	6,489	18	18	22.1	2.9
<b>Griffith, IN</b>						
Main Street	6,081	6,489	35	38	22.1	2.9
Broad Street	6,081	6,489	36	39	22.1	2.9
Colfax Street	6,081	6,081	40	40	23.3	23.3
<b>Merrillville, IN</b>						
Taft Street	6,081	6,081	40	40	23.3	23.3
Madison Street	6,081	6,081	40	40	23.3	23.3
Broadway Street	6,081	6,081	40	40	23.3	23.3

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
<b>Near Libertyville, IL</b>													
Diamond Lake Road	8,998	5.3	20.3	26	26	1.1	2.3	57	442	A	B	62.7	1,016.6
<b>Near Hawthorn Woods, IL</b>													
Old McHenry Road	32,424	5.3	20.3	29	32	1.0	1.9	189	1,337	A	A	189.0	2,540.3
<b>Near Lake Zurich, IL</b>													
Ela Road	21,398	5.3	20.3	33	36	0.9	1.7	114	801	A	A	102.6	1,361.7
<b>Barrington, IL</b>													
Hough Street (IL 59 & 63)	24,056	5.3	20.3	37	39	0.9	1.6	119	844	A	A	107.1	1,350.4
<b>Near Aurora, IL</b>													
Liberty Street	20,696	15.7	39.5	25	30	1.5	1.9	511	1,618	A	B	766.5	3,074.2
Ogden Avenue (US 34)	45,828	15.7	39.5	32	39	1.2	1.5	938	2,901	A	B	1,125.6	4,351.5
Montgomery Road/ 83 <sup>rd</sup> Street	27,131	15.7	39.5	32	38	1.2	1.5	556	1,753	A	B	667.2	2,629.5
<b>Near Plainfield, IL</b>													
135 <sup>th</sup> Street	11,766	15.7	39.5	29	34	1.2	1.6	235	792	A	B	282.0	1,267.2
<b>Joliet, IL</b>													
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

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
<b>Near Matteson, IL</b>													
Cicero Avenue	30,598	6.4	28.3	35	30	1.1	2.0	236	1,823	A	B	259.6	3,646.0
<b>Park Forest, IL</b>													
Western Avenue	24,717	8.6	31.6	34	30	1.1	2.9	252	1,557	A	C	277.2	2,958.2
Chicago Road	26,842	8.6	31.6	21	22	1.6	2.4	394	2,198	A	C	630.4	5,275.2
<b>Lynwood, IL</b>													
Lincoln Highway (US 30)	39,656	10.2	34.2	30	33	1.1	1.7	487	2,421	A	B	535.7	4,115.7
<b>Griffith, IN</b>													
Broad Street	19,572	7.6	28.6	23	24	1.2	2.1	190	1,283	A	B	228.0	2,694.3

Table 4.3-9. CN 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
<b>Waukesha Subdivision</b>													
<b>Mundelien, IL</b>													
Allanson Road	21,179	19.1	19.1	35	20	1.8	2.8	761	1,226	A	B	1,369.8	3,432.8

<b>Table 4.3-10. Substantially Affected Highway/Rail At-Grade Crossing LOS under No-Action and Proposed Action Alternatives (Year 2015)</b>					
Illinois County	Street	2015 ADT	Level of Service for:		
			Roadway	Crossing, No-Action (2015)	Crossing, Proposed Action (2015)
Lake	Diamond Lake Road	8,998	D	A	B
Lake	Old McHenry Road	32,424	F	A	A
Lake	Ela Road	21,398	F	A	A
Lake	Hough Street (IL 59 & 63)	24,056	F	A	A
DuPage	Liberty Street	20,696	F	A	B
Du Page	Ogden Avenue (US 34)	45,828	F	A	B
DuPage	Montgomery Road/ 83 <sup>rd</sup> Street	27,131	F	A	B
Will	135 <sup>th</sup> Street	11,766	E	A	B
Will	Woodruff Road	10,659	E	B	F
Will	Washington Street	11,714	C	A	F
Cook	Cicero Avenue	30,598	E	A	B
Cook	Western Avenue	24,717	D	A	B
Cook	Chicago Road	26,842	E	A	C
Cook	Lincoln Highway (US 30)	39,656	F	A	B
Lake, IN	Broad Street	19,572	F	A	B
Lake	Allanson Road	21,179	F	A	B

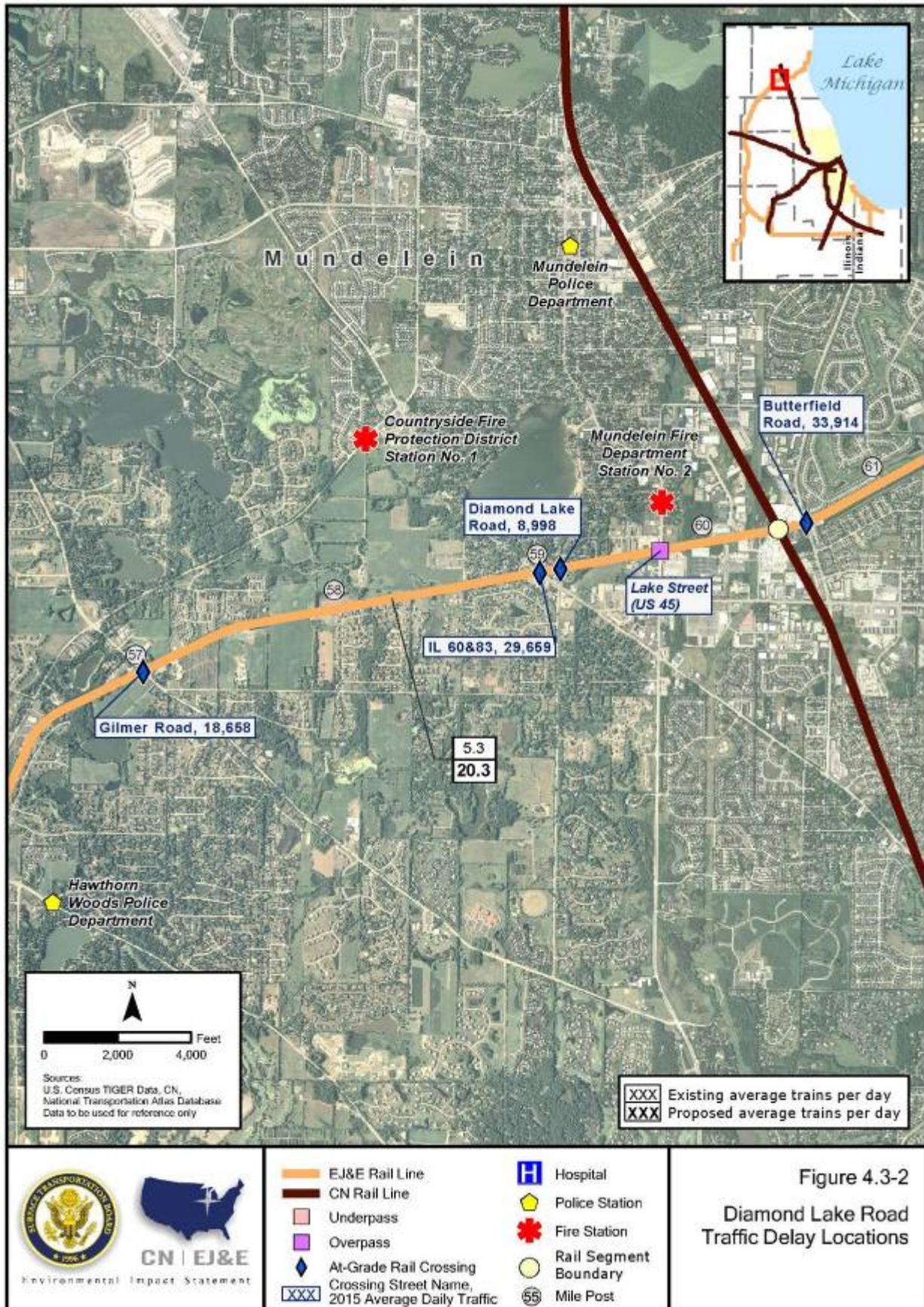
**Table 4.3-11. Substantially Affected Highway/Rail At-Grade Crossing Queue Length under No-Action and Proposed Action Alternatives (Year 2015)**

Illinois County	Street	2015 ADT	Queue Length (feet) for:			
			No-Action	Proposed Action	Major Thoroughfare Blocked due to Proposed Action	Does Total Vehicle Traffic Delay (24-Hr), exceed 40 hours?
Lake	Diamond Lake Road	8,998	384	784	IL 60 & 83	Yes
Lake	Old McHenry Road	32,424	641	1,186	None <sup>b</sup>	Yes
Lake	Ela Road	21,398	517	947	Old Rand Road	No
Lake	Hough Street (IL 59 & 63)	24,056	810	1,497	Northwest Highway	No
DuPage	Liberty Street	20,696	1,171	1,474	None <sup>b</sup>	Yes
DuPage	Ogden Avenue (US 34)	45,828	1,076	1,322	None <sup>b</sup>	Yes
DuPage	Montgomery Road/83 <sup>rd</sup> Street	27,131	1,274	1,597	None <sup>b</sup>	Yes
Will	135 <sup>th</sup> Street	11,766	539	721	US 30	Yes
Will	Woodruff Road	10,659	1,056	1,814	None <sup>a</sup>	Yes
Will	Washington Street	11,714	1,550	2,371	None <sup>a</sup>	Yes
Cook	Cicero Avenue	30,598	663	1,150	None <sup>b</sup>	Yes
Cook	Western Avenue	24,717	528	875	None <sup>b</sup>	Yes
Cook	Chicago Road	26,842	824	1,252	None <sup>b</sup>	Yes
Cook	Lincoln Highway (US 30)	39,656	860	1,274	Sauk Trail	Yes
Lake, IN	Broad Street	19,572	901	1,615	None <sup>b</sup>	Yes
Lake	Allanson Road	21,179	1,434	2,310	None <sup>b</sup>	Yes

Notes:

<sup>a</sup> Queues on Woodruff Road and Washington Street would increase as a result of the Proposed Action and block local streets, but they are not expected to block any major thoroughfares. SEA determined that Woodruff Road and Washington Street would be substantially affected by the increased vehicle delay and the related decreased LOS at the crossing.

<sup>b</sup> Queues on these roadways would increase as a result of the Proposed Action and block local streets, but they are not expected to block any major thoroughfares. SEA determined that these roadways would be substantially affected by vehicle delay exceeding 40 hours per day.



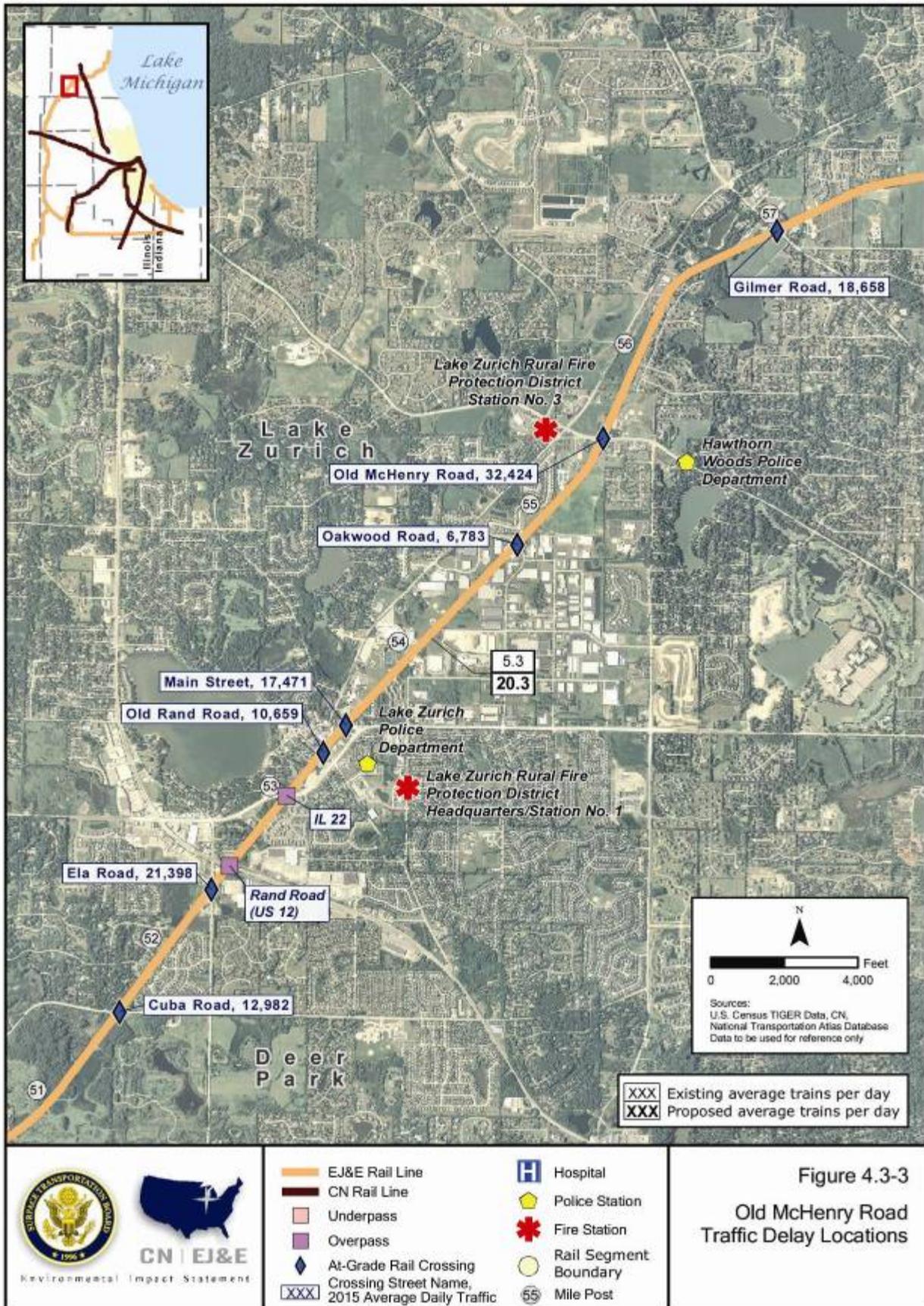


Figure 4.3-3  
Old McHenry Road  
Traffic Delay Locations





Figure 4.3-5  
 Liberty Street, Ogden Avenue (US 34), and Montgomery Road / 83rd Street Traffic Delay Locations

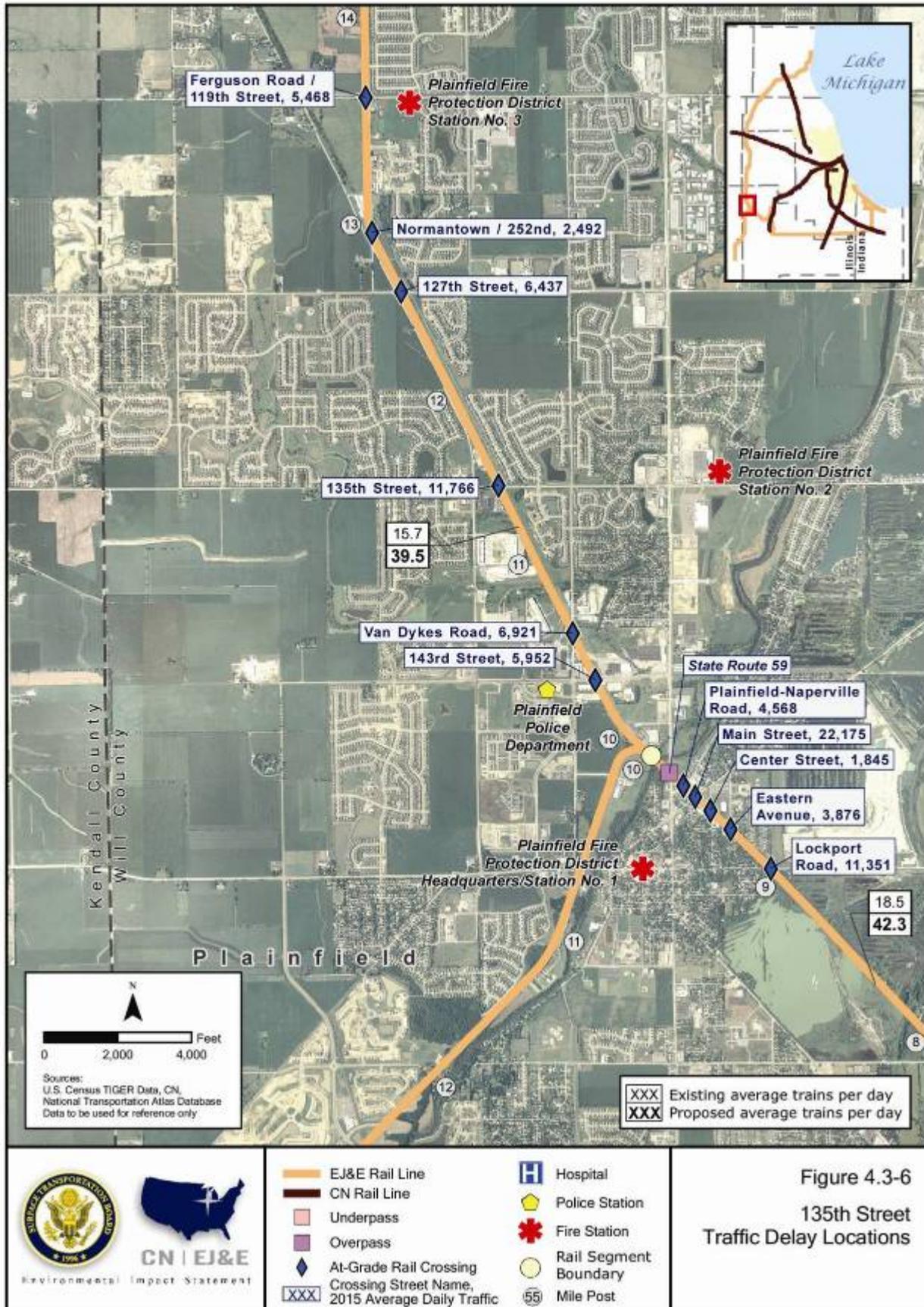


Figure 4.3-6  
135th Street  
Traffic Delay Locations

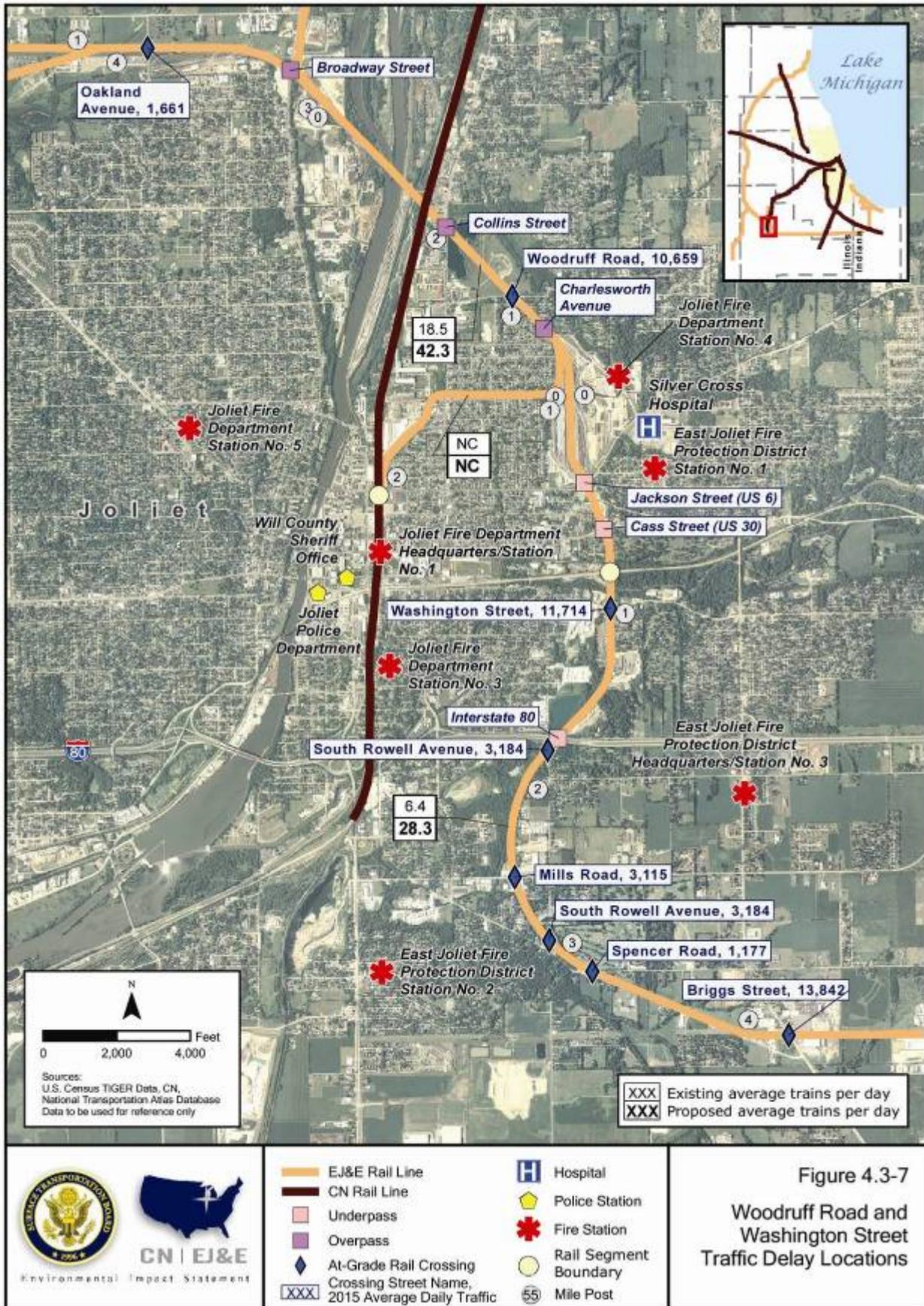
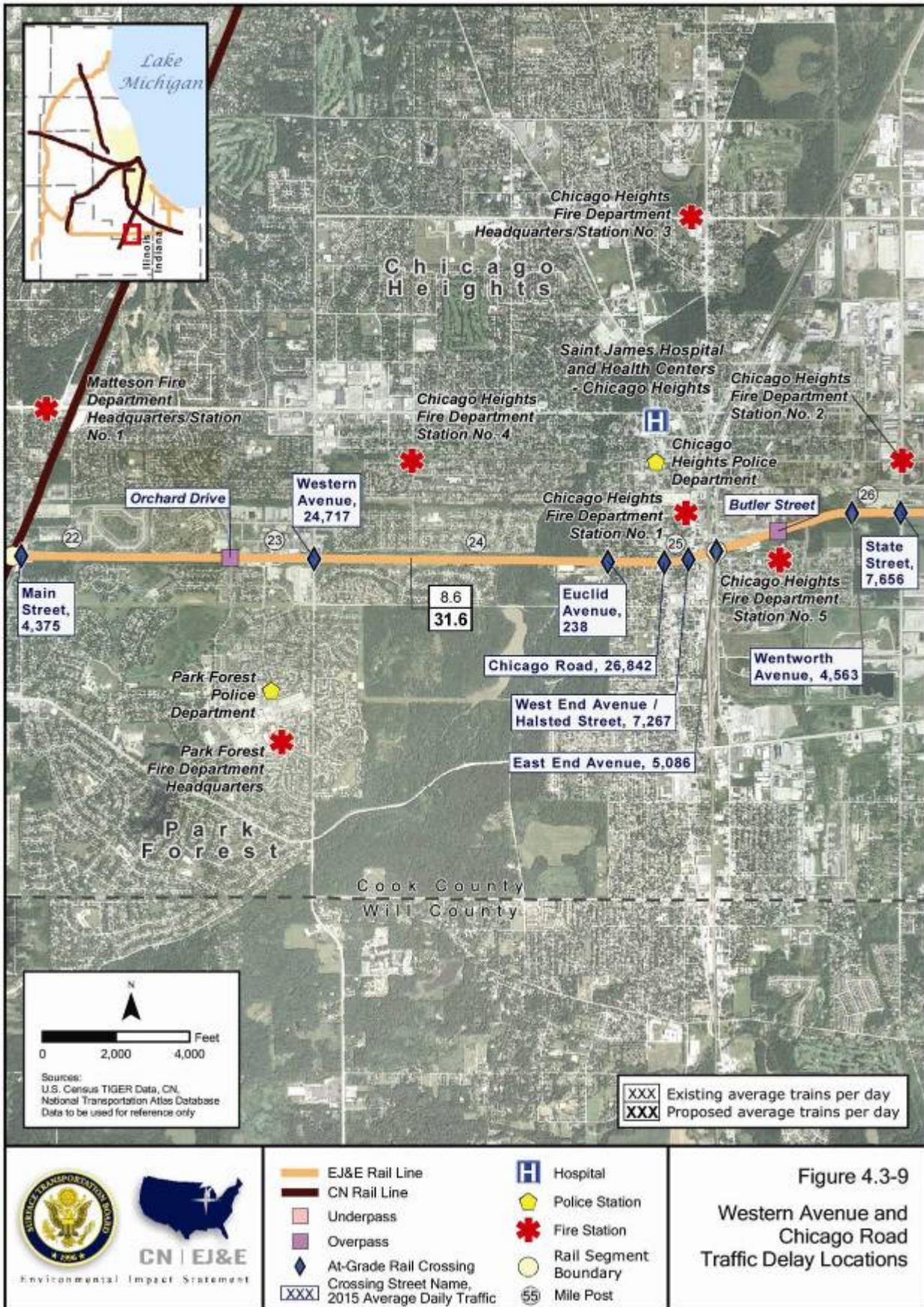




Figure 4.3-8  
Cicero Avenue  
Traffic Delay Locations



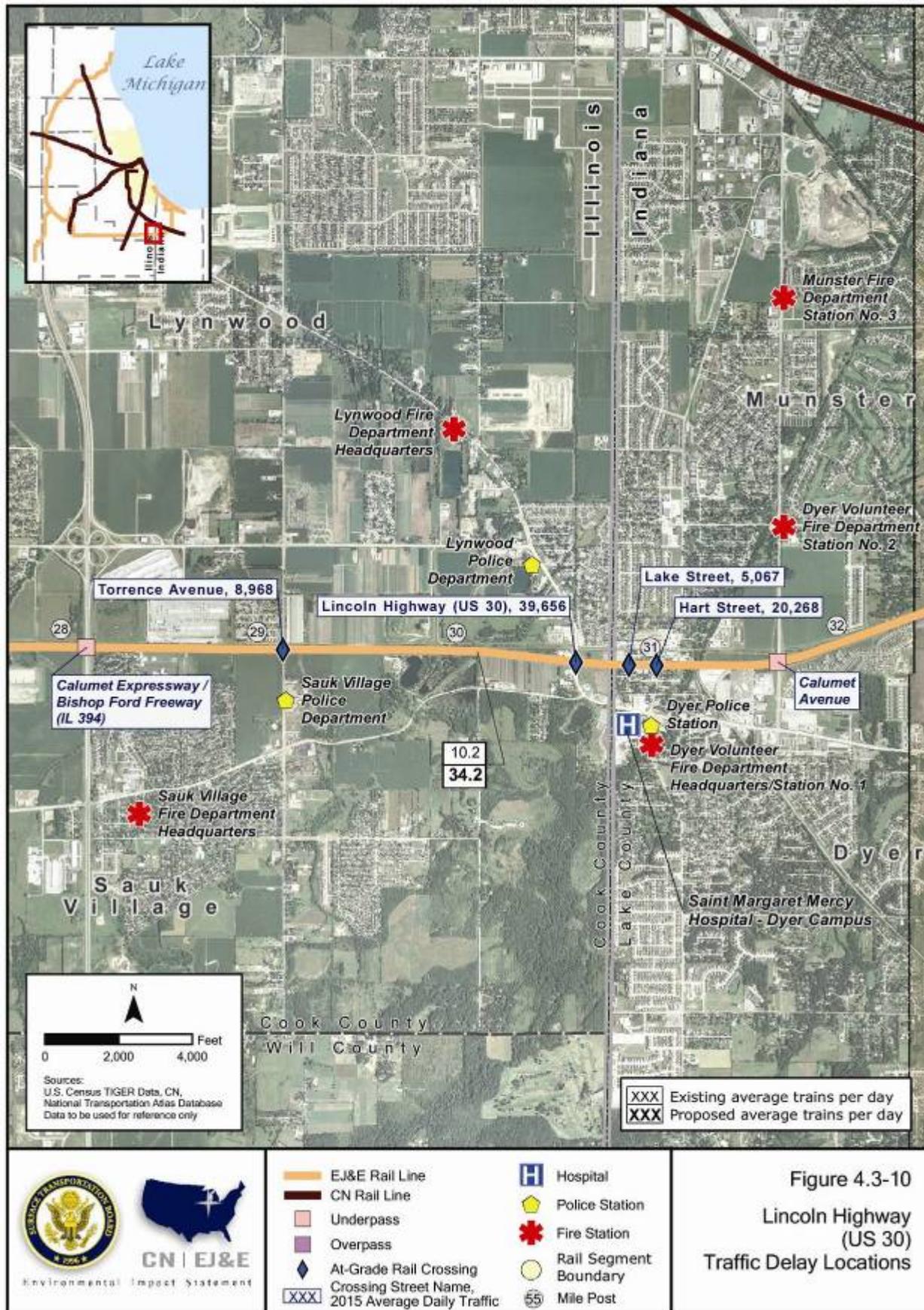


Figure 4.3-10  
Lincoln Highway  
(US 30)  
Traffic Delay Locations

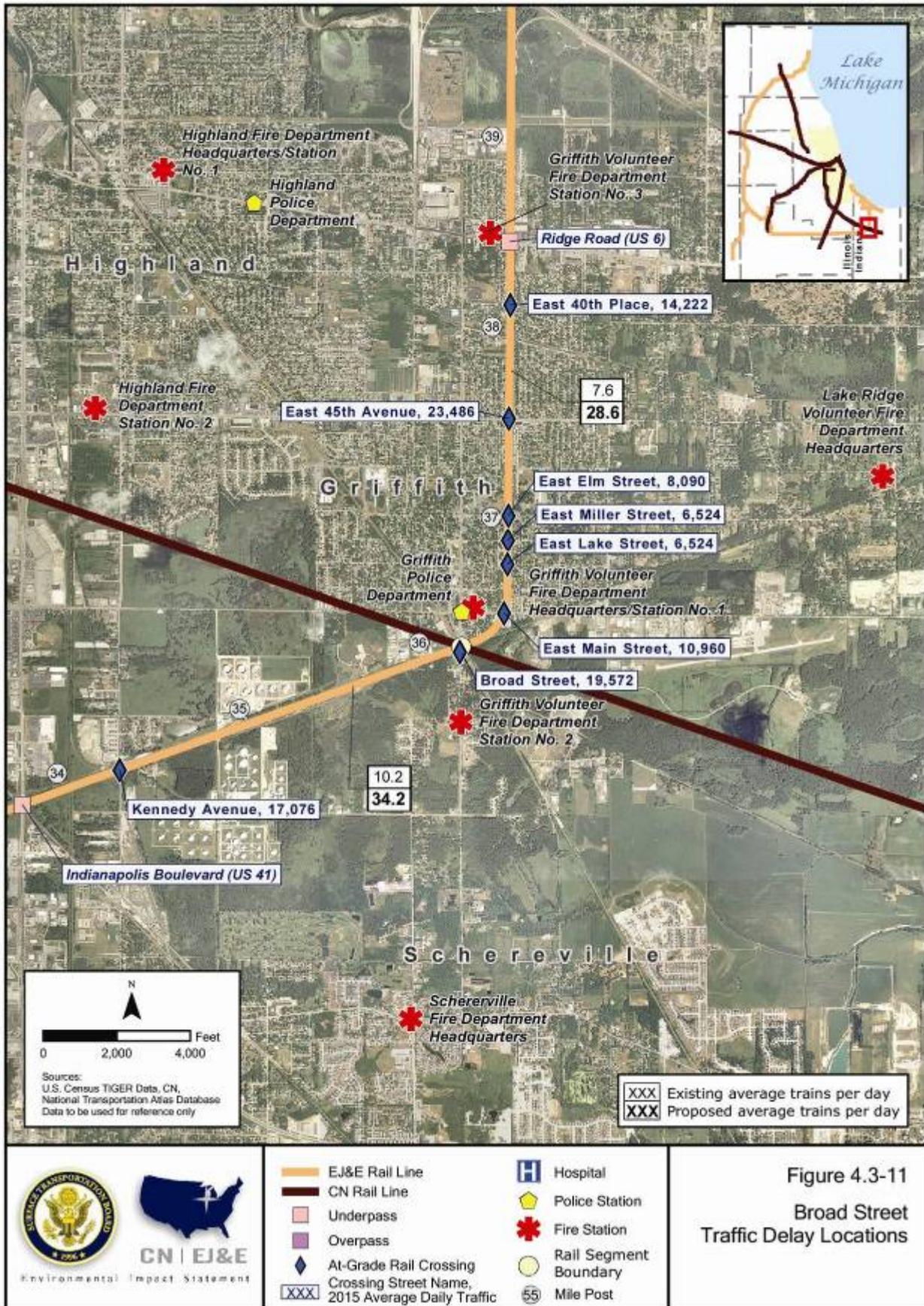


Figure 4.3-11  
Broad Street  
Traffic Delay Locations

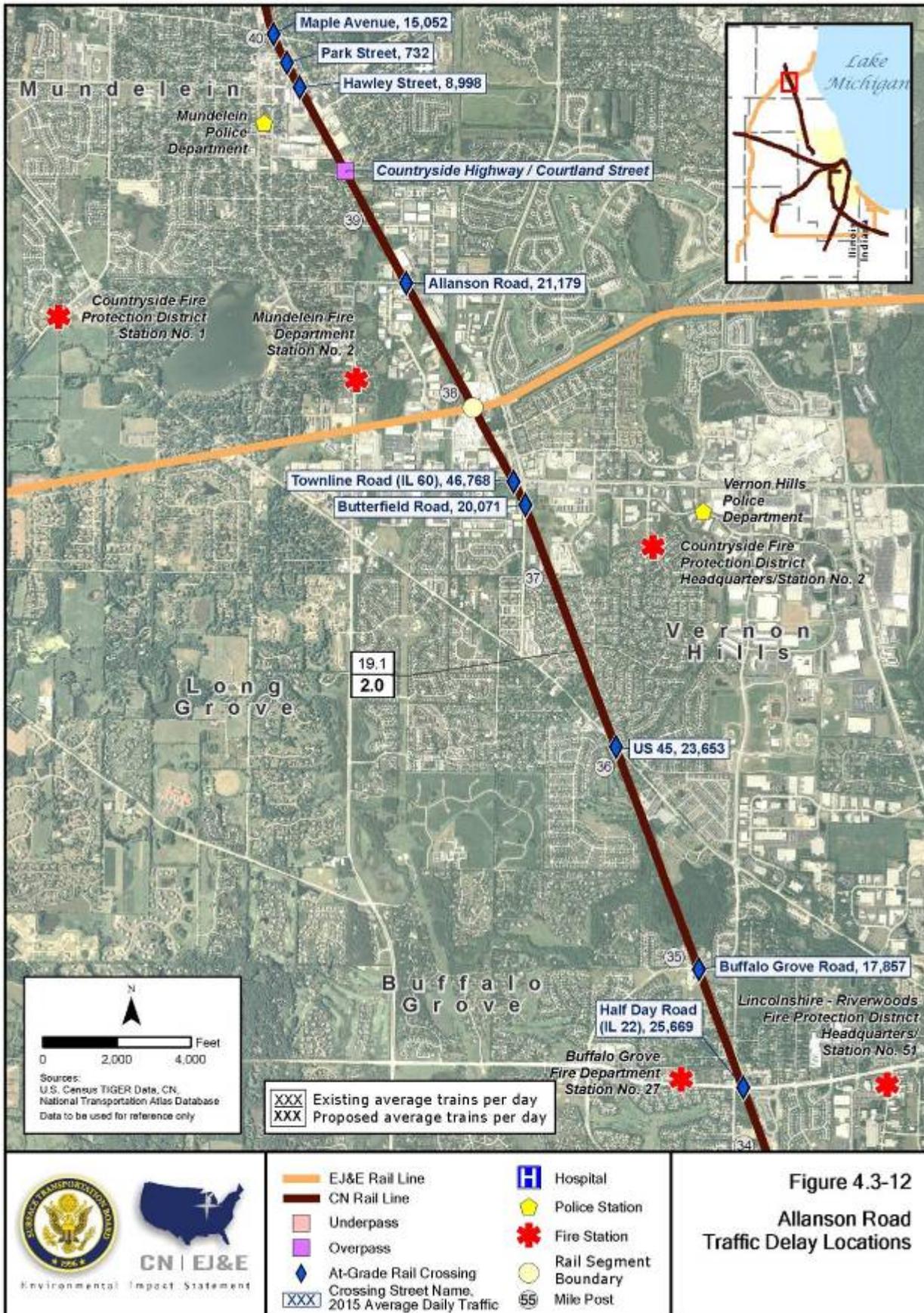


Figure 4.3-12  
Allanson Road  
Traffic Delay Locations

#### 4.3.1.4 *Effects of New Construction*

As discussed in Section 2.2.2, Proposed New Construction, the Proposed Action includes the construction of new connections between the CN rail lines and the EJ&E rail line. Figures 2.4-2 through 2.4-14, in Chapter 2, show the construction limits of the proposed new connections. Section 2.4, Alternatives to the Proposed Connections, discusses alternatives that SEA has considered as part of this analysis. Alternatives to the Munger Connection are shown on Figures 2.4-2 through 2.4-7, the Joliet Connection in Figures 2.4-8 and 2.4-9, and the Matteson Connections in Figures 2.4-10 through 2.4-12, found also in Chapter 2. The Applicants propose to construct 19 miles of double track along the EJ&E rail line. Figures 2.2-2 through 2.2-6 show the areas for the double tracking. The following section discusses the potential transportation effects of the new construction.

##### *No-Action Alternative*

Under the No-Action Alternative, the Applicants would not acquire the EJ&E rail line and no new construction would occur. The No-Action Alternative would have no effect on the transportation system. However, motorists would experience delays due to existing train traffic increases that would occur without the Proposed Action and the projected growth in vehicular traffic for the year 2015. Table 4.3-10 and Table 4.3-11, above, describe the average vehicular delay for existing highway/rail at-grade crossings for the No-Action Alternative.

##### *Proposed Action*

The following subsection describes the Proposed Action's effects on the transportation system. The Proposed Action includes the construction of six new rail connections and double track along the EJ&E rail line. This section discusses the proposed rail connections and double track from north to south and counterclockwise around the arc, starting at Leighton and ending at Kirk Yard.

#### **New Connections**

**Munger, Illinois.** The Applicants propose to construct a connection between CN's Freeport Subdivision and EJ&E's Western Subdivision east of Wayne. The Proposed Munger Connection is discussed in Section 2.2.2 and the Munger alternatives are discussed in Section 2.4. The effects from the construction alternatives are discussed in Appendix E. In summary, the construction alternatives proposed for all of the alternative affect the roadway network.

- Proposed Munger Connection (see Figure 2.4-2), Munger Alternative – Original Proposal (see Figure 2.4-1). The new connection would be located east of Powis Road (south of Wayne, Illinois). However the train speeds would be reduced to 10 mph and 25 mph, respectively, through this area which would result in increased delay at the existing Powis Road crossing.
- Munger Alternative – UP Connection (see Figure 2.4-5). CN's Freeport Subdivision would be connected to the UP Belvidere Subdivision near South Elgin, Illinois and the EJ&E's Western Division would be connected to the UP Belvidere Subdivision near West Chicago, Illinois. Both of these new connections would result in slower train speeds and thus increased delays at the Illinois Route 25, Dunham Road, and Powis Road crossings.
- Munger Alternative – Northwest Quadrant (see Figure 2.4-7). This alternative for the Proposed Action would result in a new highway/rail at-grade crossing with Powis Road. The new crossing would be located approximately 300 feet north of the existing CN crossing at Powis Road. Train speeds across the new connection would be reduced to

25 mph which would result in increased delay at both the existing and the new Powis Road crossings.

**Joliet, Illinois.** The Applicants propose to construct a connection near the existing grade-separated crossing between CN's Joliet Subdivision and EJ&E's Western Subdivision in Joliet. The Proposed Joliet Connection is discussed in Section 2.4.2 (see Figure 2.4-8 in Chapter 2) and the Joliet Alternative – Original Proposal (see Figure 2.4-9 in Chapter 2) is discussed in Section 2.4. There are no transportation effects anticipated for this construction.

**Matteson, Illinois.** The Applicants propose to construct a connection between CN's Chicago Subdivision and EJ&E's Eastern Subdivision in Matteson. The Proposed Matteson Connection is discussed in Section 2.2.2 and the alternatives to this connection are discussed in Section 2.4. The effects from the construction alternatives are as follows:

- Proposed Matteson Connection (see Figure 2.4-10 in Chapter 2). The Proposed Action would realign the EJ&E main track approximately 100 feet to the south of its current location east of Main Street. All trains would operate at slower speeds (15 mph over Main Street for trains using the connection and 25 mph for all other trains) in this area and would affect several highway/rail at-grade crossings. Table 4.3-4 shows the vehicular delay experienced at Main Street, Cicero Avenue, and Western Avenue for the Proposed Action. Slower train speeds through this area would affect the crossing at Main Street, Cicero Avenue, and Western Avenue by increasing delay. A new grade crossing or road closure of 216<sup>th</sup> Street could be required.
- Matteson Alternative – Northeast and Southwest quadrants (see Figure 2.4-11 in Chapter 2). This alternative would have similar transportation impacts as the Proposed Matteson Connection due to slower train speeds (25 mph over Main Street) which would affect the crossings at Main Street, Cicero Avenue, and Western Avenue by increasing delay. A new grade crossing or road closure of 216<sup>th</sup> Street could be required.
- Matteson Alternative – Southwest Quadrant (see Figure 2.4-12 in Chapter 2). No new highway/rail at-grade crossings would be constructed as part of this alternative. However, construction of a new connection would result in lower train speeds which would affect the crossings at Main Street, Cicero Avenue, and Western Avenue by increasing the delay.

**Griffith, Indiana.** The Applicants propose to construct a connection and a universal crossover in the northeast quadrant of the existing crossing between CN's South Bend Subdivision (east of Griffith) and EJ&E's Eastern Subdivision in Griffith (see Figure 2.4-13 in Chapter 2). No new highway/rail at-grade crossings would be constructed. However, slower train speeds in this area would affect several highway/rail at-grade crossings along the EJ&E rail line and the CN rail line in Griffith, Indiana. Along the EJ&E, the affected crossings at East Main Street, East Lake Street, East Miller Street, and East Elm Street would experience an increase in delay and along the CN, the affected crossing at Colfax would also experience an increase in delay.

**Ivanhoe, Indiana.** The Applicants propose to construct a connection and a crossover in the southeast quadrant of the existing crossing between EJ&E's Eastern Subdivision and CSX's Porter Branch in Gary (see Figure 2.4-14 in Chapter 2). No new highway/rail at-grade crossings would be constructed. However, slower train speeds in this area would affect two highway/rail at-grade crossings along the EJ&E rail line in Gary, Indiana. The affected crossings at West 15<sup>th</sup> Avenue and West 9<sup>th</sup> Avenue would experience an increase in delay.

**Kirk Yard, Gary, Indiana.** The Applicants propose to construct a crossover to the NS Chicago Line west of Buchanan Street at the east end of Kirk Yard (see Figure 2.4-15 in Chapter 2). No new

highway/rail at-grade crossings would be constructed; therefore, there are no impacts to the transportation system.

**Double Tracking**

**Leithton, Illinois, and Diamond Lake Road to Gilmer Road.** The Applicants propose to install double track at two locations (see Figure 2.2-3, Proposed Double Track—Leithton, and Figure 2.2-4, Proposed Double Track—Diamond Lake Road to Gilmer Road, in Chapter 2). At the Leithton double track, no highway/rail at-grade crossings would be widened; therefore, there are no impacts to the transportation system.

The proposed double track from Diamond Lake Road to Gilmer Road would require the installation of a second set of tracks which would subsequently lengthen the public at-grade crossings of Illinois Route 60/83 and Diamond Lake Road. Physical changes to existing crossings would involve the addition of new track. The crossings would be longer, but the roadways would not necessarily be widened. The additional track would not affect the roadway’s LOS. There would be temporary construction impacts of the highway/rail at-grade crossings. There would be no long-term impacts to the transportation system.

**East Siding to Walker, Illinois.** The Applicants propose to install double track from East Siding to Walker, Illinois (see Figure 2.2-5, Proposed Double Track—East Siding to Walker, in Chapter 2).

The proposed double track from East Siding to Walker would require the installation of a second set of tracks which would subsequently lengthen several highway/rail at-grade crossings:

- Liberty Street
- Ogden Avenue (US 34)
- Ogden Avenue Bike Path
- Montgomery Road/83<sup>rd</sup> Street
- Keating Drive/87<sup>th</sup> Street
- Hafenrichter Road
- Wolf’s Crossing
- 111<sup>th</sup> Street
- Furguson Rd - 119<sup>th</sup> Street
- Hicks Gas Co. Road
- Normantown - 252<sup>nd</sup> Street
- 127<sup>th</sup> Street

Physical changes to existing crossings would involve the addition of new track to the crossing. However, the additional track would not affect the roadway’s LOS, so there would be no impacts to the transportation system.

**East Joliet and Frankfort, Illinois.** The Applicants propose to install double track between the east side of Joliet and Frankfort on EJ&E’s Eastern Subdivision (see Figure 2.2-6, Proposed Double Track—East Joliet to Frankfort). The proposed double track would require installation of a second set of tracks which would subsequently lengthen several highway/rail at-grade crossings:

- South Rowell Avenue (two crossings)
- Mills Road
- Spencer Road
- Briggs Street
- Cherry Hill Road
- South Gougar Road
- Nelson Road

- Cedar Road
- Spencer Road
- School House Road

Physical changes to existing crossings would involve the addition of new track to the crossing. The crossings would be longer, but the roadways would not necessarily be widened. The additional track would not affect the LOS of the roadway. There would be no long-term impacts to the transportation system.

#### **4.3.1.5      *SEA's Conclusions***

- Sixteen of 87 highway/rail at-grade crossings would be substantially affected by the Proposed Action. Mitigation of the substantial effects of additional delays at 15 of these crossings shall be considered, as discussed in more detail in Chapter 6.
- Woodruff Street, Washington Street and South Rowell Avenue crossings LOS falls below the D level under the Proposed Action. Therefore, Chapter 6 recommends mitigation options for these crossings.
- 44 of the 87 roadways studied would experience 2015 motor vehicle demands that exceed LOS D. These congested conditions are independent of any railroad influence, however. Therefore, SEA does not recommend mitigation for those roadways in the Draft EIS.
- A number of communities along the Proposed Action route along the EJ&E Line currently suffer from motor vehicle congestion independent of the railroad at-grade crossings.
- All of the proposed connection alternatives at Munger would increase vehicle delay at Powis Road on the CN rail line due to the slower train speeds.
- The new connection alternatives in Matteson would have potentially substantial effects because of a slower main track speed on the EJ&E rail line. SEA recommends mitigation be pursued for this crossing, as discussed in Chapter 6..

#### **4.3.2      *Effects on Intermodal Facilities***

No new intermodal facilities are part of the Proposed Action and no changes in the operation of existing intermodal facilities are expected. Therefore, in the Draft EIS SEA evaluated the truck traffic demand characteristics of existing intermodal terminal operations. The following section discusses the potential transportation effects on intermodal operations.

##### **4.3.2.1      *No-Action Alternative***

Under the No-Action Alternative, the Applicants would not acquire the EJ&E rail line and freight trains operation on CN and EJ&E rail line segments would not change. The No-Action Alternative would have no effect on the transportation system or intermodal terminal operations.

##### **4.3.2.2      *Proposed Action***

No new intermodal facilities are part of the Proposed Action and there are no expected changes in the operations of existing intermodal facilities. The truck traffic demand characteristics would not change due to the Proposed Action because the existing intermodal facilities would not be modified and no new intermodal facilities are planned. Moreover, CN's planned modifications to Markham Yard would not be a result of the Proposed Action. Thus, there would be no effects on intermodal operations from the Proposed Action.

### **4.3.2.3 Conclusions**

SEA's analysis shows that there are no effects on intermodal operations from the Proposed Action.

## **4.3.3 Effects on Emergency Response**

### **4.3.3.1 Methodology**

To determine the potential effects that the Proposed Action would have on emergency services in communities within the Study Area, SEA reviewed the vehicular delays at highway/rail at-grade crossings that would result from increases in freight train traffic under the Proposed Action. These emergency service facilities include police, fire protection, and emergency medical services. SEA estimated typical delays at highway/rail at-grade crossings for all of the public at-grade crossings along the EJ&E rail line and CN's Waukesha, Freeport, Joliet, Chicago, and Elsdon/South Bend Subdivisions. All emergency service facilities within 2 miles of a highway/rail at-grade crossing were evaluated. To determine the effects of the Proposed Action on emergency response, SEA's analysis also took into account data on vehicle delays at those crossings, as explained in Section 4.3.1.

This section presents information on the potential effects on emergency services by community; a summary of SEA's analysis for each facility within 2 miles of the CN and EJ&E rail lines is presented in Appendix E. Appendix E also provides exhibits that show the location of each emergency service facility within the two-mile Study Area and includes rail line crossing locations for both public at-grade and grade-separated crossings.

SEA examined each community in the Study Area for police, fire protection, and emergency medical service facilities' proximity to the rail lines and the location of rail line crossings. Location and number of grade separations were noted and the distribution of facilities through the community was evaluated. For communities that have limited or no public grade-separated crossings near emergency service facilities, SEA performed additional analysis to determine the availability of alternative service routes. SEA contacted service providers in several communities and interviewed them about their dispatch procedures, emergency service routes, communications technology, number of emergency service vehicle crossings per day, and the procedures currently followed when an emergency vehicle arrives at a blocked crossing. All of this information is provided with the analysis summaries in Appendix E.

SEA used a screening process to evaluate the effects of the Proposed Action on emergency service facilities. In the first step of the screening process, SEA identified the emergency service facilities that are located within 2 miles of the EJ&E rail line, but that do not have a highway/rail grade separation within 1 mile of the facility. These facilities are considered potentially affected by the Proposed Action. The second step of the screening process used two primary measurements from the highway/rail at-grade crossing delay analysis presented in detail in Section 4.3.1—the average delay per delayed vehicle and the blocked crossing time per train multiplied by the number of trains per day, which produces the total time that a crossing would be blocked in a 24-hour period. Based on the increase in both the average delay per delayed vehicle and the total time that a crossing would be blocked for highway/rail at-grade crossings in close proximity to the potentially affected emergency facilities, SEA then considered location-specific emergency response operational issues to determine if the facilities would be substantially affected by the Proposed Action and, if so whether mitigation, as is discussed in Chapter 6, should be considered.

Historically, the communities in the Study Area developed along existing rail lines. Emergency service responders within these communities had to grow and adapt to rail traffic and have factored rail traffic into their existing procedures and operations. Moreover, as these facilities developed and expanded their coverage areas over time, they had to adapt to fluctuating conditions. Varying

dispatch procedures, altering service routes, building new facilities, and establishing mutual aid agreements with neighboring communities are some ways that emergency service providers adapt to these fluctuating conditions, including the existence (or absence) of any trains. In addition, existing rail lines play an important role when determining where to locate new emergency response facilities. While the presence of rail traffic is not a new factor that emergency service responders within the Study Area must adapt to, the potential increase of it along the EJ&E rail line is. Therefore, this analysis considered delay due to train traffic increases, and not just the presence of train traffic.

#### **4.3.3.2      *No-Action Alternative***

Under the No-Action Alternative, the Applicants would not acquire the EJ&E rail line and train operations on CN and EJ&E rail line segments would not change. There would be no increase or decrease in rail traffic along EJ&E and CN rail line segments as a result of the Proposed Action; thus, no change in delay due to rail traffic that would not take place for reasons other than the proposed transaction. The only change in delay would result from increased ADT along roadway segments that would occur independently of the No-Action Alternative. Therefore, the No-Action Alternative would not affect existing emergency service response.

#### **4.3.3.3      *Proposed Action***

Under the Proposed Action, the Applicants would acquire the EJ&E rail line and EJ&E and CN rail line segments would see increased and decreased train traffic, respectively. Because this alternative would reduce train traffic on CN rail line segments, the net effect to emergency services in communities along the CN rail line would be positive because delay and total time that a crossing is blocked would decrease for nearly all crossings and the average delay time would be lengthy. For this reason, the communities only located along CN rail line segments are not discussed in detail here. SEA did prepare analysis summaries for each facility within 2 miles of the CN rail line, however. They are presented in Appendix E.

SEA also prepared analysis summaries for each facility within 2 miles of the EJ&E rail line; they are presented in Appendix E. For the crossings on the EJ&E rail line, the effect on the average delay per delayed vehicle from the Proposed Action would range from no change to an increase of approximately 111 seconds. The effect on the total daily time that a crossing would be blocked due to the Proposed Action would range from no change to an increase of approximately 215 minutes.

As described above with regard to the two-step screening process, SEA assumed that the Proposed Action would potentially affect emergency services if the facility is located within 2 miles of the EJ&E rail line and more than 1 mile from a public grade-separated crossings, and at least one public highway/rail at-grade crossing within 2 miles of the facility would experience an increase of 30 seconds or more in average delay per delayed vehicle, or an increase of 30 minutes or more for the total daily time that the crossing would be blocked.

SEA used an increase of 30 seconds or more in average delay per delayed vehicle and 30 minutes or more for the total time during every 24-hour period that the crossing would be blocked as relative screening tools to identify emergency response facilities that could be potentially affected by the Proposed Action because SEA believes that longer delays can potentially cause a serious effect on emergency service response time. However, SEA believes that 30 minutes a day typically would not substantially increase the risk of a crossing blockage, particularly if there are alternate routes available. Also, the potential affect of the Proposed Action on emergency response depends on existing congestion. Areas where there is already existing congestion would likely have a higher chance of delaying emergency service.

It is generally recognized that first 4 to 6 minutes following cardiac arrest are critical to successful resuscitation and is also a national standard of emergency response time set forth by the National Fire

Protection Association (NFPA). Fire doubles in size every minute and the delayed response to a structure fire of 5 or more minutes could mean the difference between minimal damage and total destruction. Therefore, for its analysis, SEA assumed that the current response time for many emergency service providers is within (but not much faster than) the 4-to-6 minute time window, so that an increased delay of 30 seconds or more could be serious. For this reason, SEA used the values for 30-second average delay per delayed vehicle and 30-minute total blocked crossing time to identify which facilities could experience serious effects as a result of the Proposed Action.

Table 4.3-12, below, lists the emergency service providers that met the above mentioned screening criteria and therefore would be potentially affected by the Proposed Action. The service providers are listed by the community that they serve, and so may appear more than once. The table also includes the closest grade-separated crossing and distance to that crossing. It shows values for the highway/rail at-grade crossing used by the provider that would experience the greatest increase in average delay per delayed vehicle and total daily time a crossing would be blocked. If the increase in delay would be less than 30 seconds or the increase in total blocked time would be less than 30 minutes per day, the Substantial Effect analysis threshold for further study was not met and an “N” was placed in the table. Additionally, Table 4.3-12 states whether or not the facility was carried forward to Table 4.3-13, Emergency Service Providers Potentially Substantially Affected by the Proposed Action, and provides the reason why.

As discussed earlier, SEA notes that the EJ&E rail line is an existing line and that all of the emergency service providers along the line should have, to some degree, included rail traffic in their existing plans. The Proposed Action would result in more train traffic in some communities, but it would not introduce an entirely new element that emergency responders would have to address.

Figure 4.3-13 through Figure 4.3-22, following the tables, show the locations of the emergency service providers meeting the two screening thresholds and therefore would be potentially substantially affected by the Proposed Action.

From the initial evaluation of fire and emergency medical service providers meeting the two screening thresholds, SEA determined which providers would experience substantial effects as a result of the Proposed Action. If an emergency service provider met the following criteria, then SEA considered them to be subject to substantial effects:

- Located more than 1 mile from a public grade-separated crossing, and
- Had no facility of the same type on the opposite side of the EJ&E rail line within a reasonable distance

Table 4.3-12 below lists the emergency service response facilities that would be potentially substantially affected by the Proposed Action. These facilities are listed by the community that they are located in.

All of the providers listed in Table 4.3-12, below, have an important role in providing emergency services to the communities they serve; however, the building locations differ in their importance based on the type of emergency service that the facility provides. For example, with respect to police services, the protection and emergency services for the community are typically provided by the patrol officers. Therefore, the actual location of the police building is not a critical factor in the level of service provided. The police officers responding to an emergency call are not necessarily stationed within the building, but are deployed throughout the community patrolling in vehicles or on foot. The police responders are mobile units and can react to the increase in train traffic by changing their deployment strategy. For this reason, SEA determined that the Proposed Action would not substantially affect police facilities based on the location of their headquarters.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a)</sup> )
<b>Illinois</b>									
Vernon Hills	Vernon Hills Police Department	260494M	Lake Street (US 45)	1.84	Y (65)	Y (32)	3	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
Vernon Hills	Countryside Fire Protection Dist. Headquarters/ Station No. 2	260494M	Lake Street (US 45)	1.64	N	N	3	N	The EJ&E rail line east of the CN Waukesha Subdivision would have no increase in the volume of train traffic so there would be no negative impact associated with northbound crossing of the EJ&E rail line. A decrease in the volume of train traffic on the CN Waukesha Subdivision would reduce average delay and total blocked crossing time on this rail line, thus 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)	Y (62)	4	Y	No fire stations are south of the EJ&E rail line and west of the CN Waukesha Subdivision. Only one grade separated crossing

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	US DOT	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 <sup>a</sup> )				
									exists to the southeast, Lake Street (US 45), which is over 1.5 miles away. No grade separated crossings exist to the southwest.
Mundelein	Mundelein Police Department	260494M	Lake Street (US 45)	1.64	Y (69)	Y (62)	4	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
Mundelein	Countryside Fire Protection Dist. Headquarters/ Station No. 2	260494M	Lake Street (US 45)	1.64	N	N	3	N	The EJ&E rail line east of the CN Waukesha Subdivision would have no increase in the volume of train traffic so there would be no negative impact associated with northbound crossing of the EJ&E rail line. A decrease in the volume of train traffic on the CN Waukesha Subdivision would reduce average delay and total blocked crossing time on this rail line, thus a positive impact would be associated with the westbound crossing of the CN Waukesha Subdivision.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a)</sup> )				
Mundelein	Countryside Fire Protection Dist. - Station No. 1	260494M	Lake Street (US 45)	1.62	Y (69)	Y (62)	4	Y	No fire stations are south of the EJ&E rail line and west of the CN Waukesha Subdivision. 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.
Long Grove	Countryside Fire Protection Dist. Headquarters/ Station No. 2	260494M	Lake Street (US 45)	1.64	N	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 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)	Y (62)	4	Y	No fire stations are located south of the EJ&E rail line and west of the CN Waukesha Subdivision. Only one grade separated crossing is located to the

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	US DOT	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 <sup>a)</sup> )				
									southeast, Lake Street (US 45), which is over 1.5 miles away. No grade separated crossings exist to the southwest.
Hawthorn Woods	Countryside Fire Protection Dist. Headquarters/ Station No. 2	260494M	Lake Street (US 45)	1.64	N	N	3	N	The EJ&E rail line east of the CN Waukesha Subdivision would have no increase in the volume of train traffic so there would be no negative impact associated with northbound crossing of the EJ&E rail line. A decrease in the volume of train traffic on the CN Waukesha Subdivision would reduce average delay and total blocked crossing time on this rail line, thus 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)	Y (62)	4	Y	No fire stations are located south of the EJ&E rail line and west of the CN Waukesha Subdivision. 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.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a</sup> )				
Hawthorn Woods	Lake Zurich Rural Fire Protection District - Station No. 3	260831B	IL 22	2.31	Y (56)	Y (54)	5	Y	No fire stations are located east of the EJ&E rail line. Only one grade separated crossing is to the southwest, IL 22, which is over 2 miles away. No grade separated crossings exist to the northeast.
Hawthorn Woods	Hawthorn Woods Police Department	260831B	IL 22	2.68	Y (56)	Y (54)	5	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
Hawthorn Woods	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. It is a straight-line drive down IL 22 to Rand Road (US 12) to get to the nearest grade separated crossing at Rand Road (US 12).

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a)</sup> )				
Lake Zurich	Lake Zurich Rural Fire Protection District - Station No. 3	260831B	IL 22	2.31	Y (56)	Y (54)	5	Y	No fire stations are located east of the EJ&E rail line. Only one grade separated crossing is to the southwest, IL 22, which is over 2 miles away. No grade separated crossings exist to the northeast.
Lake Zurich	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. It is a straight-line drive down IL 22 to Rand Road (US 12) to get to the nearest grade separated crossing at Rand Road (US 12).
Barrington	Barrington Police Department	260509A	Rand Road (US 12)	2.54	Y (46)	Y (45)	6	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a)</sup> )				
Barrington	Barrington Fire Department - Station No. 1	260509A	Rand Road (US 12)	2.55	Y (46)	Y (45)	6	Y	No fire stations are located west of the EJ&E rail line. Only one grade separated crossing is located to the northeast, Rand Road (US 12), which is over 2.5 miles away. No grade separated crossings exist to the west or southwest.
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. It is a straight-line drive down IL 22 to Rand Road (US 12) to get to the nearest grade separated crossing 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. It is a straight-line drive down Villa Street (US 20) to Lake Street (US 20) to get to the nearest grade separated crossing at Lake Street (US 20).

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a)</sup> )				
Bartlett	Bartlett Fire Protection District - Future Station No. 3	260529L	Lake Street (US 20)	1.62	Y (40)	Y (45)	9	Y	No fire stations are located west of the EJ&E rail line. 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.
Wayne	Bartlett Fire Protection District - Future Station No. 3	260529L	Lake Street (US 20)	1.62	Y (122)	Y (45)	9	Y	No fire stations are located west of the EJ&E rail line. 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.
Wayne	Wayne Police Department	260537D	North Avenue	2.30	Y (122)	Y (52)	9	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
Wayne	West Chicago Fire Protection Dist. 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.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a</sup> )				
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 is not essential to the protection and emergency services that the mobile patrol officers provide.
West Chicago	West Chicago Fire Protection Dist. 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	1.80	N	Y (56)	11	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
Aurora	Aurora Fire Department - Station No. 9 <sup>b</sup>	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.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a)</sup> )				
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 <sup>c</sup>	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.
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	No fire stations are located west of the EJ&E rail line. Only one grade separated crossing is located to the south, State Route 59, which is over 3.5 miles away. No grade separated crossing exist to the north or west.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a</sup> )				
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. It is a straight-line drive down State Route 59 to get to the nearest grade separated crossing at State Route 59.
Crystal Lawns	Will County Sheriff's Office Headquarters	260600T	Cass Street (US 30)	1.34	Y (111)	Y (215)	20	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
Joliet	Joliet Fire Department - Station No. 8	260591W	Caton Farm Road	1.81	N	Y (72)	18	Y	No fire stations are located northeast of the EJ&E rail line. Only one accessible grade separated crossing exists to the east, Caton Farm Road, which is over 1.5 miles away. No grade separated crossings exist to the north or northeast other than Interstate 55, which is inaccessible to serve the community northeast of the EJ&E rail line.

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	US DOT	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 <sup>a</sup> )				
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. It is a straight-line drive down Ruby Street to Broadway Street to get to the nearest grade separated crossing 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 considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
Joliet	Will County Sheriff's Office Headquarters	260600T	Cass Street (US 30)	1.34	Y (111)	Y (215)	20	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a)</sup> )				
									provided by mobile patrol officers.
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 Dist. 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 considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a)</sup> )				
New Lenox	New Lenox Police Department	260602G	Interstate 80	4.22	N	Y (64)	21	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
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 considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
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.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a</sup> )				
Frankfort	Saint James Hospital and Health Centers Olympia Fields	260634M	Governors Highway	1.92	Y (101)	Y (111)	24	Y	No emergency medical facilities are located south of the EJ&E rail line.
Matteson	Matteson Police Department	260631S	Interstate 57	1.85	Y (51)	Y (75)	24	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
Matteson	Matteson Fire Department Headquarters/ Station No. 1	260634M	Governors Highway	1.01	Y (101)	Y (111)	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)	Y (75)	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)	Y (111)	24	Y	No emergency medical facilities are located south of the EJ&E rail line.
Richton Park	Saint James Hospital and Health Centers Olympia	260634M	Governors Highway	1.92	Y (101)	Y (111)	24	Y	No emergency medical facilities are located south of the EJ&E rail line.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a)</sup> )				
	Fields								
Park Forest	Saint James Hospital and Health Centers Chicago Heights <sup>d</sup>	260637H	Orchard Drive	2.30	Y (60)	Y (114)	25	Y	No emergency medical facilities are located south of the EJ&E rail line.
Chicago Heights	Chicago Heights Fire Department Headquarters/ Station No. 3 <sup>d</sup>	260648V	Calumet Expy/ Bishop Ford (IL 394)	3.44	Y (60)	Y (114)	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 <sup>d</sup>	260637H	Orchard Drive	2.35	Y (60)	Y (114)	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 <sup>d</sup>	260648V	Calumet Expy/ Bishop Ford (IL 394)	2.02	Y (60)	Y (114)	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)	Y (105)	25	N	Chicago Heights Fire Department - Station No. 5 is south of the EJ&E rail line.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a</sup> )				
Chicago Heights	Chicago Heights Fire Department - Station No. 5 <sup>d</sup>	260648V	Calumet Expy/ Bishop Ford (IL 394)	2.63	Y (60)	Y (114)	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 are north of the EJ&E rail line.
Chicago Heights	Saint James Hospital and Health Centers Chicago Heights <sup>d</sup>	260637H	Orchard Drive	2.30	Y (60)	Y (114)	25	Y	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	Y (33)	Y (70)	26	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
Lynwood	Lynwood Police Department	260813D	Calumet Avenue	1.34	Y (33)	Y (70)	26	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a</sup> )				
									provided by mobile patrol officers.
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). Response to the actual scene of an emergency is the most critical activity, not transport to the emergency medical facility.
<b>Indiana</b>									
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). Response to the actual scene of an emergency is the most critical activity, not 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 considered potentially substantially affected because the police building is not essential to the protection and

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a)</sup> )				
									emergency services that are provided by mobile patrol officers.
Schererville	Schererville Fire Department Headquarters	260656M	Indianapolis Boulevard (US 41)	2.28	Y (57)	Y (80)	28	Y	No fire stations are located northwest of the EJ&E rail line. 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.
Griffith	Griffith Police Department	260667A	Ridge Road (US 6)	1.92	Y (57)	Y (80)	28	N	Police facilities would not be considered potentially substantially affected because the police building is not essential to the protection and emergency services that are provided by mobile patrol officers.
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 need to cross the EJ&E rail line to report to the fire station or to respond to an emergency call.

Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action

Community	Facility	US DOT	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 <sup>a</sup> )				
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 need to cross 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)	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 line.

**Table 4.3-12. Emergency Service Providers Potentially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a</sup> )				
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). It is a straight-line drive down Ridge Road (US 6) to get to the nearest grade separated crossing at Ridge Road (US 6).
East Chicago	Saint Catherine Hospital	260930Y	Cline Avenue Ramp	1.17	N	N	29	N	The community of East Chicago does not cross the EJ&E rail line (east of the tracks). Methodist Hospital - Northlake Campus and Methodist Hospital - Midlake Campus are east of the EJ&E rail line.

Notes:

- <sup>a</sup> The delay time shown in the table reflects the greatest increase in delay calculated for all available routes from the facility.
- <sup>b</sup> 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.
- <sup>c</sup> 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.
- <sup>d</sup> 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.

**Table 4.3-13. Emergency Service Providers Potentially Substantially Affected by the Proposed Action**

Community	Facility	US DOT	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 <sup>a</sup> )		
Mundelein, IL	Countryside Fire Protection Distr. - Station No. 1	260494M	Lake Street (US 45)	1.62	Y (69)	Y (62)	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)	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)	Y (111)	4.3-19
Chicago Heights, IL	Saint James Hospital and Health Centers - Chicago Heights <sup>b</sup>	260637H	Orchard Drive	2.30	Y (60)	Y (114)	4.3-20
Schererville, IN	Schererville Fire Department Headquarters	260656M	Indianapolis Boulevard (US 41)	2.28	Y (57)	Y (80)	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

<sup>a</sup> The delay time shown in the table reflects the greatest increase in delay calculated for all available routes from the facility.

<sup>b</sup> 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.

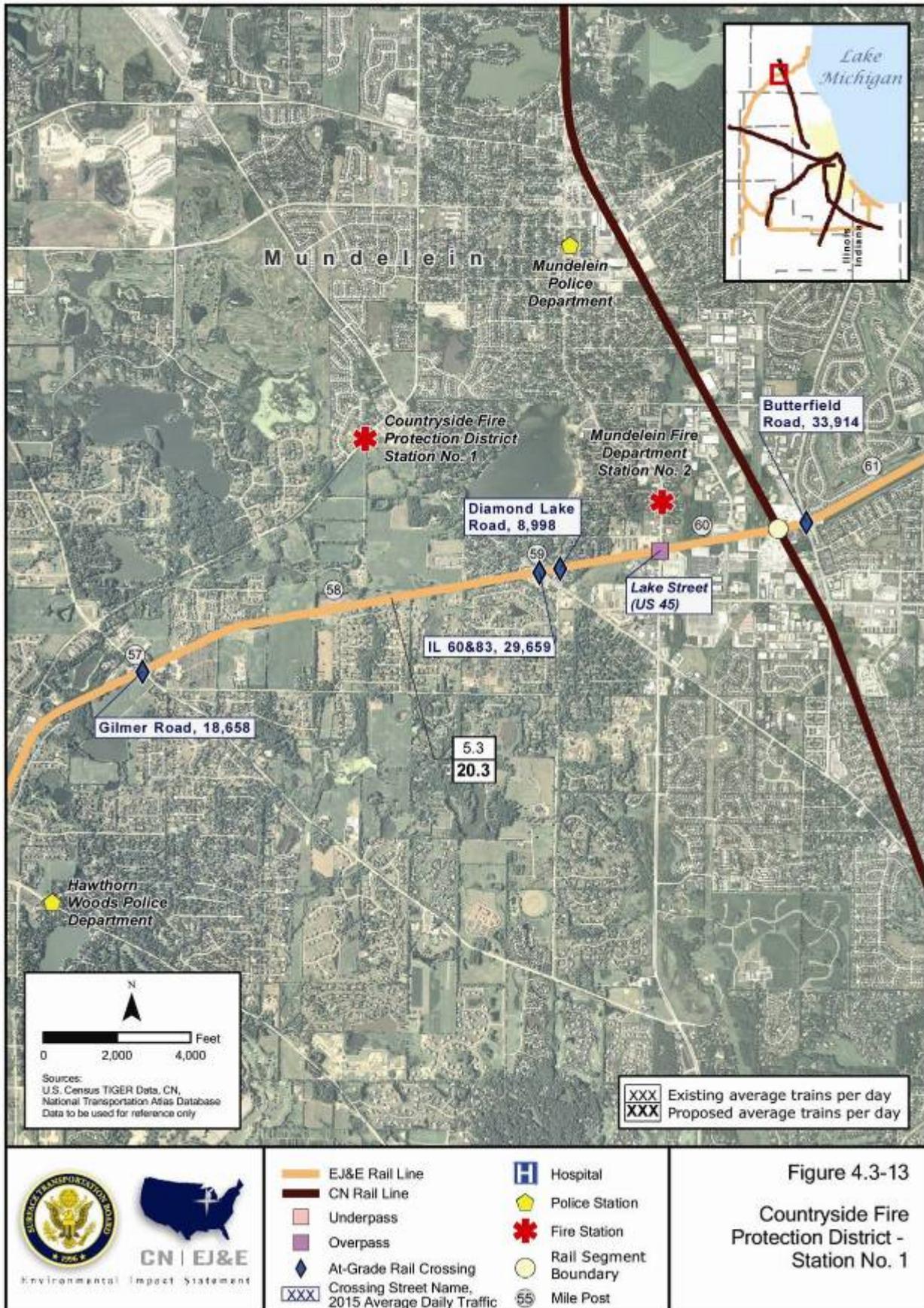


Figure 4.3-13  
Countryside Fire Protection District - Station No. 1





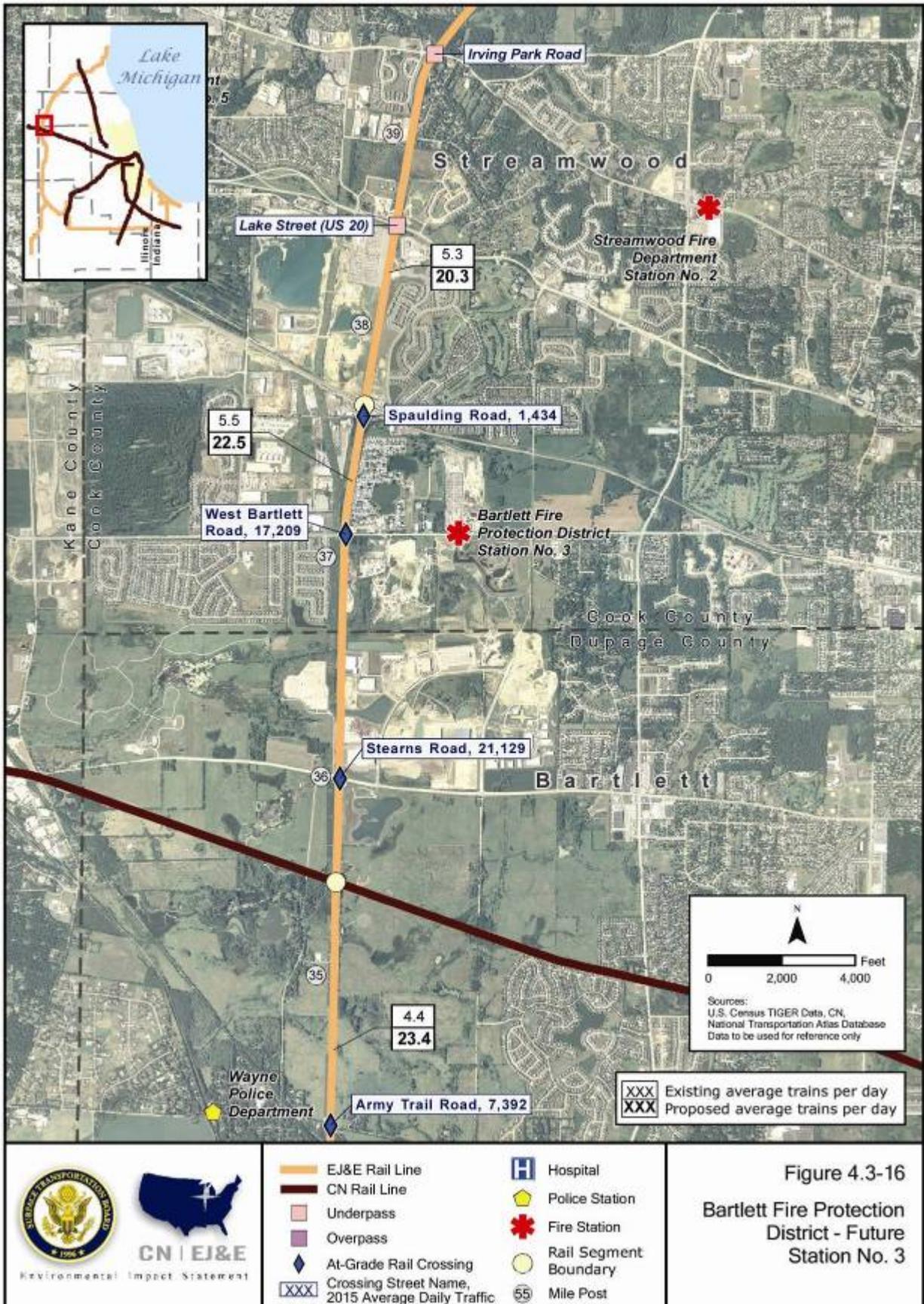
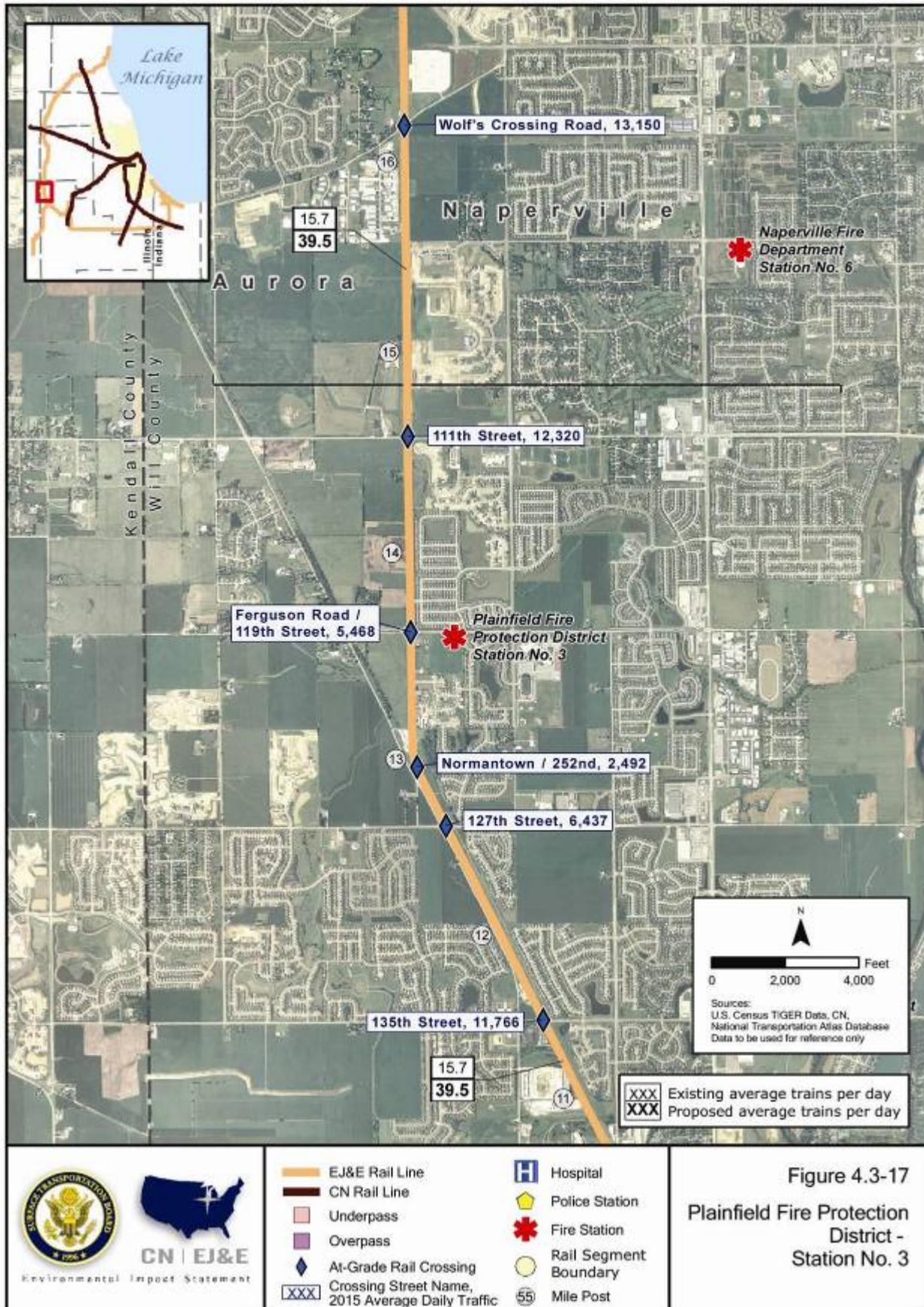
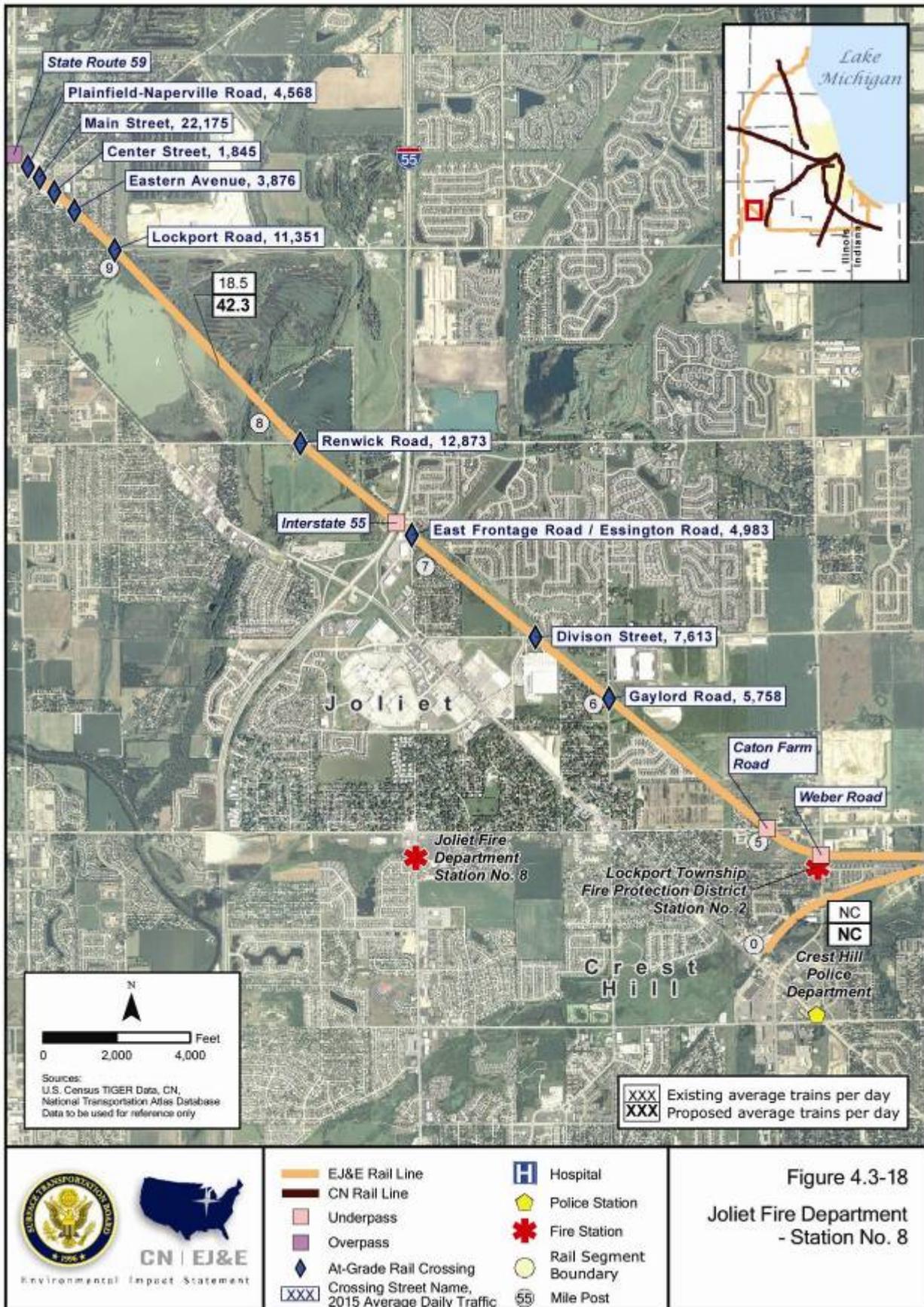


Figure 4.3-16  
 Bartlett Fire Protection District - Future Station No. 3





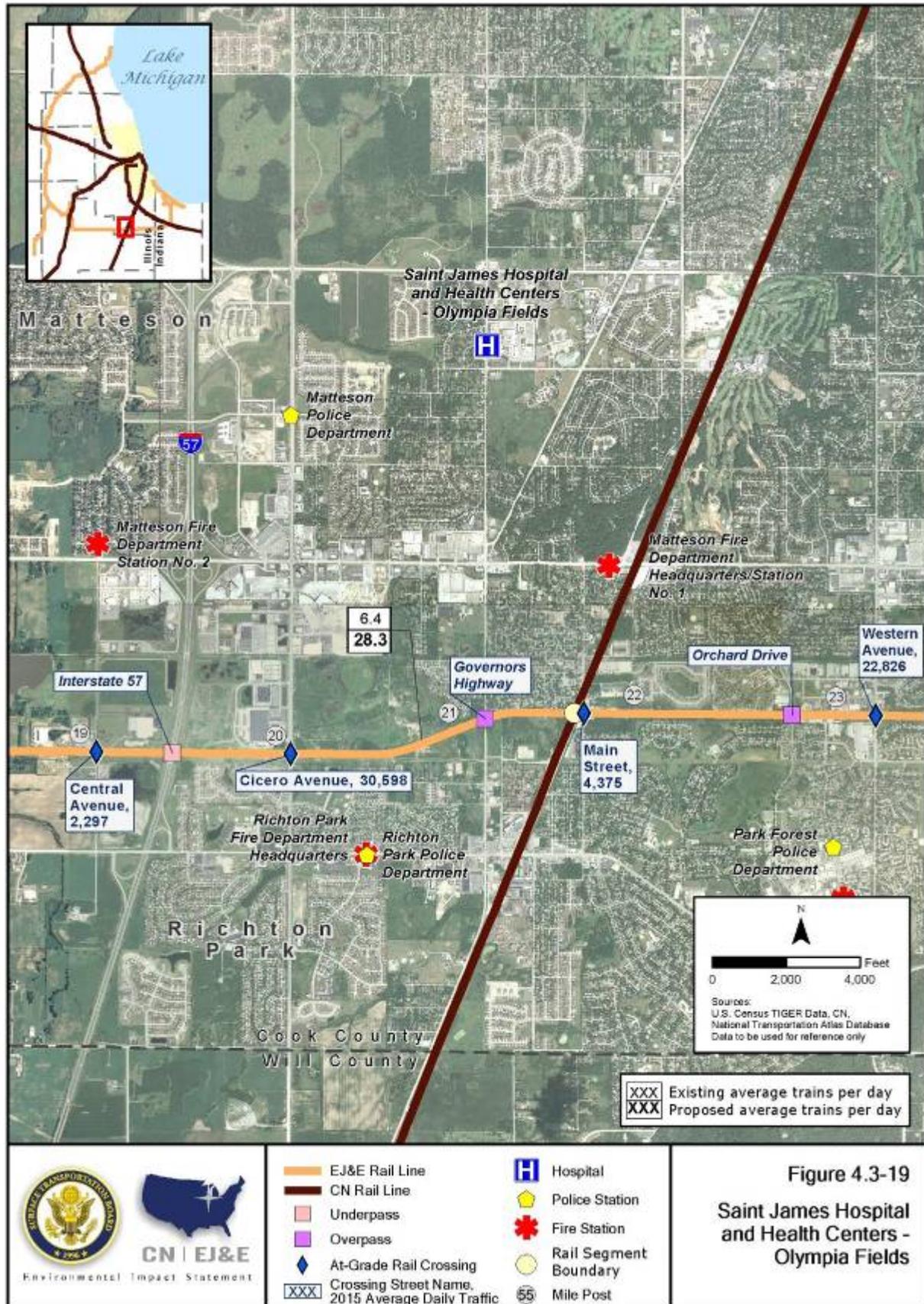
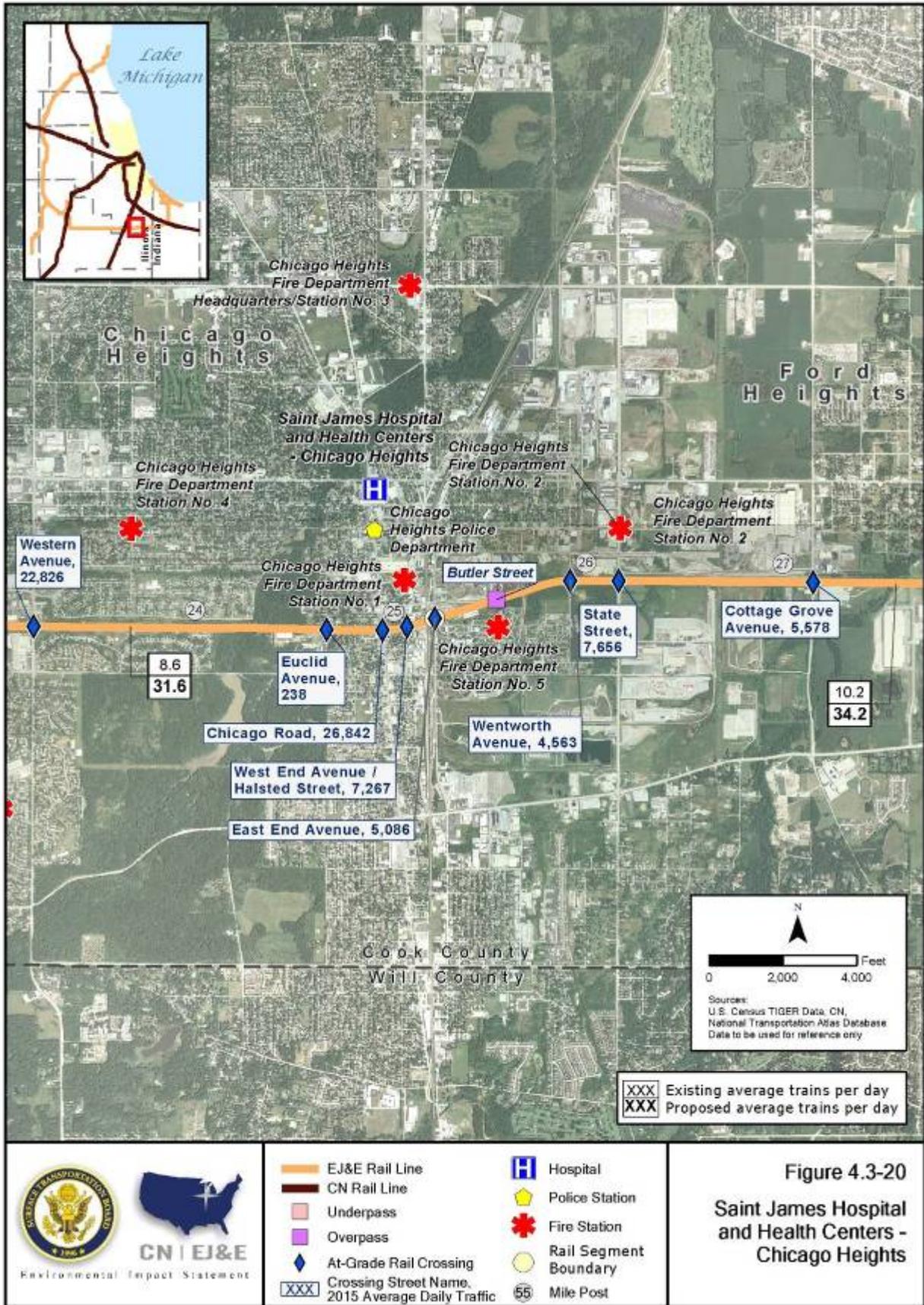


Figure 4.3-19  
Saint James Hospital and Health Centers - Olympia Fields



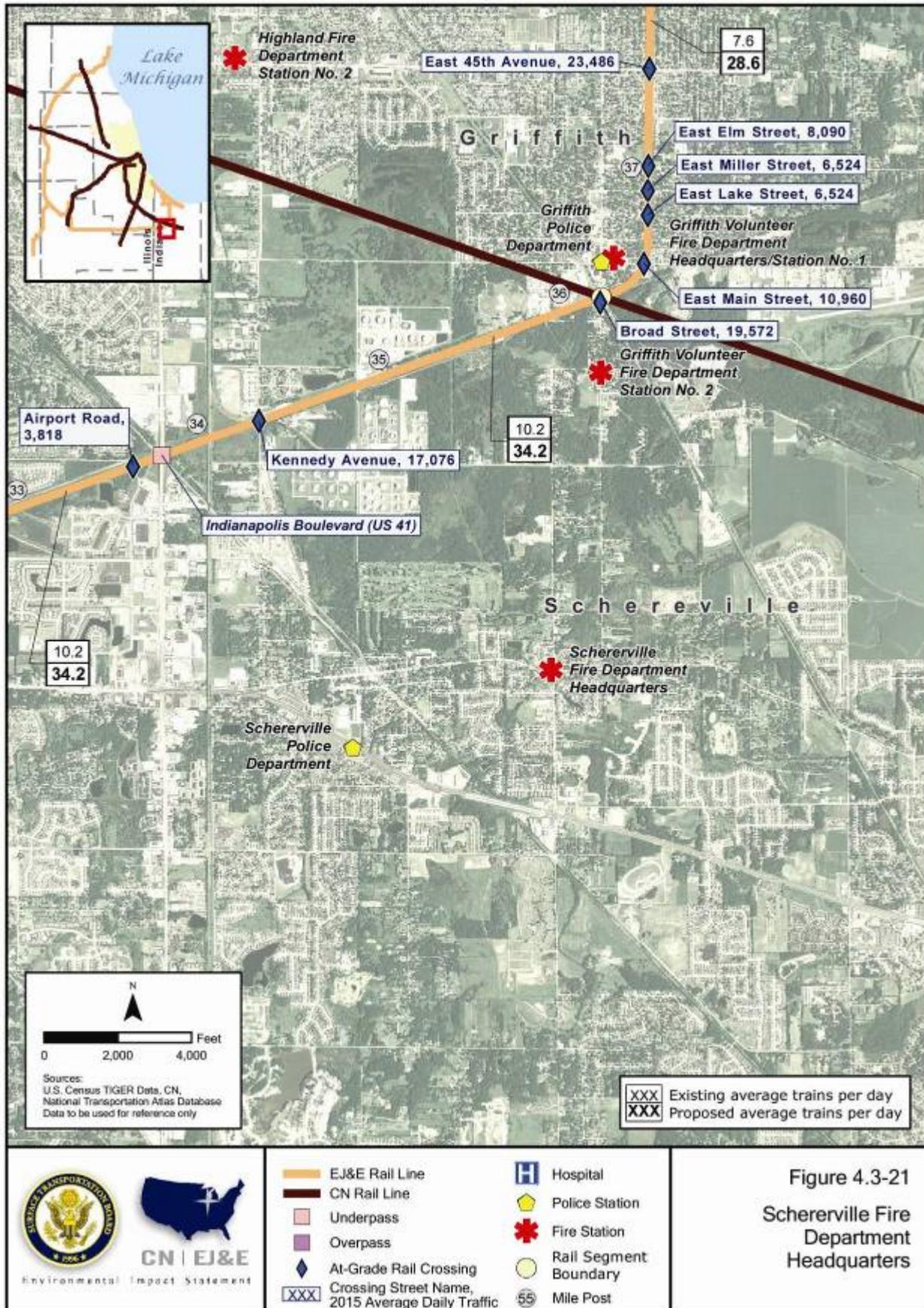


Figure 4.3-21  
Schererville Fire Department Headquarters

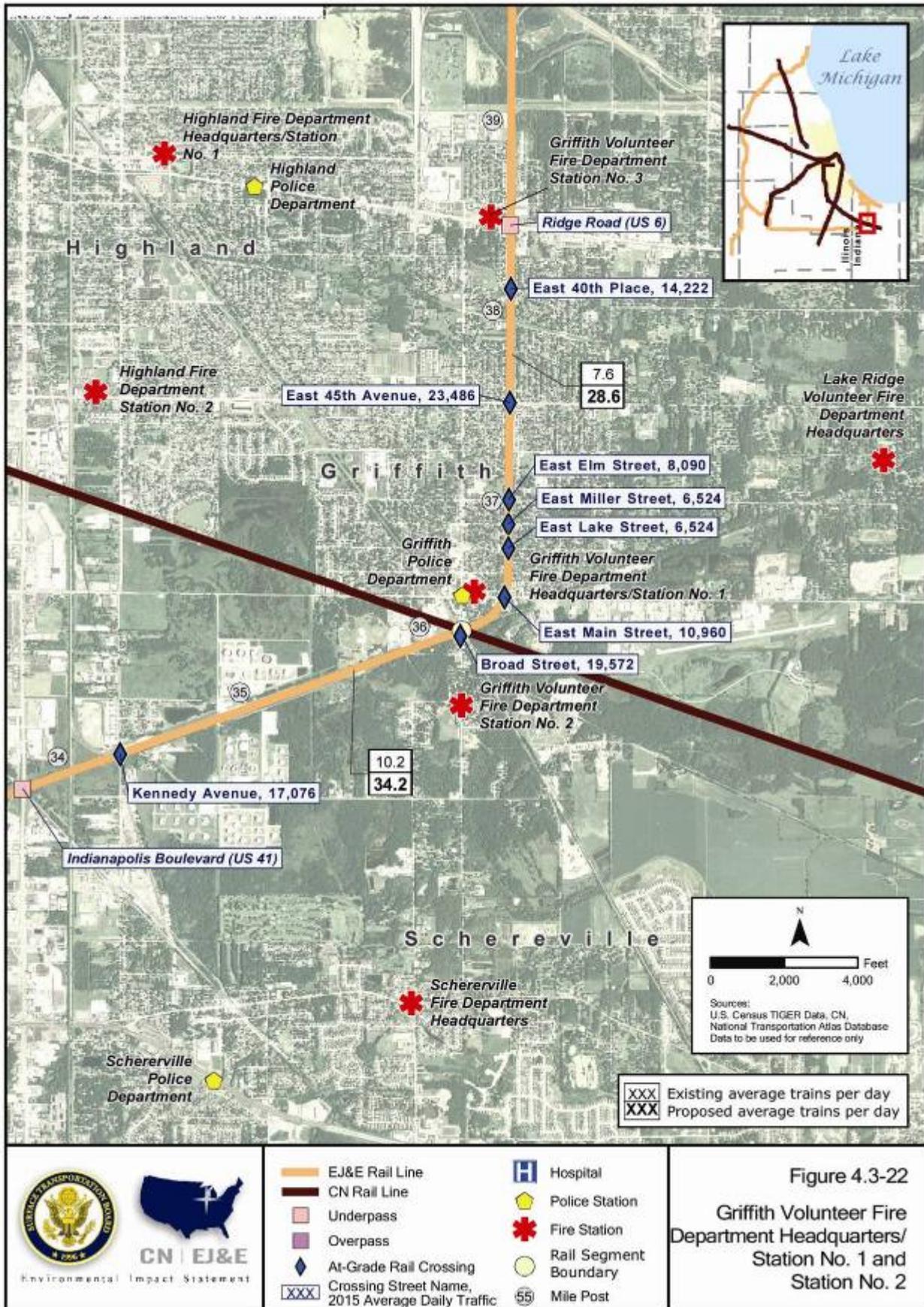


Figure 4.3-22  
Griffith Volunteer Fire Department Headquarters/  
Station No. 1 and  
Station No. 2

#### **4.3.3.4      *Constructions***

Effects on emergency service providers from construction of the connections or double track would occur largely because of temporary changes in vehicular traffic patterns or slower speeds within construction zones. While the duration of construction activities would vary depending on construction activities and schedule, road closures that could result due to these activities would occur for a much more limited time period and only on a temporary basis. Effects on emergency service responders could occur as a result of the proposed instruction, but could be addressed through potential mitigation activities (see Section 6.2.4.1).

#### *Connections*

The No Build alternatives would not involve any construction. The only effect on emergency service providers would be the change in delay from increased ADT along roadway segments, which would occur independently of the No Build alternatives. Therefore, the No Build alternatives would not affect existing emergency service response.

The following is a list of proposed connection alternatives that would not have an effect on emergency service responders. Construction limits for these locations would not include any existing highway/rail at-grade crossings, nor would any new highway/rail at-grade crossings be required. Therefore, these proposed connections would have no impact to the transportation system and thus would not have an effect on emergency service responders. Refer to Section 4.3.1.4 above for a description of the effects on the transportation system due to these proposed connection alternatives.

- Munger Alternative – UP Connection (see Figure 2.4-5)
- Proposed Joliet Connection (see Figure 2.4-8)
- Joliet Alternative – Original Proposal (see Figure 2.4-9)
- Matteson Alternative – Southwest Quadrant (see Figure 2.4-12)
- Proposed Griffith Connection (see Figure 2.2-13)
- Proposed Ivanhoe Connection (see Figure 2.2-14)
- Proposed Kirk Yard Connection (see Figure 2.2-16)

The following is a list of proposed connection alternatives that would potentially affect emergency service responders. Construction at these locations would either affect existing highway/rail at-grade crossings or would require new highway/rail at-grade crossings. Refer to Section 4.3.1.4 above for a description of the effects on the transportation system due to these proposed connection alternatives.

- Proposed Munger Connection (see Figure 2.4-2), Munger Alternative – Original Proposal (see Figure 2.4-4)
  - Bartlett Fire Protection District Station No. 3 (scheduled to open in fall 2008). While the proposed connection would be east of Powis Road, the reduced train speeds for two trains per day through this area would result in increased delay at the existing Powis Road crossing and thus could delay fire service emergency response.
  - Wayne Police Department. While the proposed connection would be east of Powis Road, the reduced train speeds for two trains per day through this area would result in increased delay at the existing Powis Road crossing and thus could delay police response.

- Munger Alternative – UP Connection (see Figure 2.4-5)
  - Bartlett Fire Protection District Station No. 3 (scheduled to open in fall 2008). The proposed connection would result in reduced train speeds for two trains per day through this area and thus increase delays at the existing Illinois Route 25, Dunham Road, and Powis Road crossings. This increased delay at these crossings could delay fire service emergency response.
  - Wayne Police Department. The proposed connection would result in reduced train speeds for two trains per day through this area and thus increase delays at the existing Illinois Route 25, Dunham Road, and Powis Road crossings. This increased delay at these crossings could delay police response.
- Munger Alternative – Northwest Quadrant (see Figure 2.4-7)
  - Bartlett Fire Protection District Station No. 3 (scheduled to open in fall 2008). The proposed connection would result in a new highway/rail at-grade crossing with Powis Road. The reduced train speeds for two trains per day through this area would result in increased delay at both the existing and the new Powis Road crossings. This increased delay at these crossings could delay fire service emergency response.
  - Wayne Police Department. The proposed connection would result in a new highway/rail at-grade crossing with Powis Road. The reduced train speeds for two trains per day through this area would result in increased delay at both the existing and the new Powis Road crossings. This increased delay at these crossings could delay police response.
- Proposed Matteson Connection (see Figure 2.2-10)
  - Matteson Fire Department Headquarters/Station No. 1. The proposed connection would result in reduced train speeds through this area and thus increase delays at the existing Main Street, Cicero Avenue, and Western Avenue crossings. This increased delay at these crossings could delay fire service emergency response. Additionally, a new grade crossing or road closure of 216<sup>th</sup> Street could be required which could also affect fire service emergency response.
- Matteson Alternative – Northeast and Southwest Quadrants (see Figure 2.4-11)
  - Matteson Fire Department Headquarters/Station No. 1. The proposed connection would result in reduced train speeds through this area and thus increase delays at the existing Main Street, Cicero Avenue, and Western Avenue crossings. This increased delay at these crossings could delay fire service emergency response. Additionally, a new grade crossing or road closure of 216<sup>th</sup> Street could be required which could also affect fire service emergency response.
- Matteson Alternative – Southwest Quadrant (see Figure 2.4-12)
  - Matteson Fire Department Headquarters/Station No. 1. The proposed connection would result in reduced train speeds through this area and thus increase delays at the existing Main Street, Cicero Avenue, and Western Avenue crossings. This increased delay at these crossings could delay fire service emergency response.
- Proposed Griffith Connection (see Figure 2.4-13)
  - The proposed connection would have no affect on emergency services in Griffith.

- Proposed Ivanhoe Connection (see Figure 2.4-14)
  - Gary Fire Department Station No. 9. The proposed connection would result in a reduction in train speeds for two trains per day through this area and thus increase delays at the existing West 15<sup>th</sup> Avenue and West 9<sup>th</sup> Avenue crossings. This increased delay at these crossings could delay fire service emergency response.
  - Hammond Fire Department Station No. 8. The proposed connection would result in a reduction in train speeds for two trains per day through this area and thus increase delays at the existing West 15<sup>th</sup> Avenue and West 9<sup>th</sup> Avenue crossings. This increased delay at these crossings could delay fire service emergency response.

#### *Double Track*

The proposed double track locations (Leithton, Diamond Lake Road to Gilmer Road, East Siding to Walker, and East Joliet to Frankfort) would require installation of a second set of tracks in some instances, which would subsequently lengthen several public at-grade crossings. The additional track would not affect the LOS of the roadways in any case. No new highway/rail at-grade crossings would be required for regular operations and signal warning devices are present at existing highway/rail at-grade crossings. While there would be temporary construction impacts of the highway/rail at-grade crossings, there would be no long-term impacts to the transportation system and thus no effect on emergency service responders

#### **4.3.3.5**      *Conclusions*

SEA evaluated the potential effect of the Proposed Action on emergency service providers in communities that would be affected by the Proposed Action. SEA evaluated all of the emergency service facilities (police, fire, and emergency medical) within two miles of the rail lines affected by the Proposed Action. SEA determined that nine fire protection facilities and two emergency medical facilities would be potentially substantially affected by the Proposed Action and proposed mitigation for emergency response in Chapter 6.

#### **4.3.4**      **Effects on Navigation**

As discussed in Section 3.3.3, Navigation, the EJ&E rail line crosses eight navigable waterways via railroad bridges. Five of the eight bridges are moveable—either vertical lift or Scherzer rolling lift bascule bridges—and the remaining three are fixed spans. Bridge crossings of the region’s navigable waterways could affect waterways, rail lines, and local vehicular traffic operations. This section discusses these potential effects.

##### **4.3.4.1**      *No-Action Alternative*

The No-Action Alternative would have no effect on operations of the waterways, bridges, or highway/rail at-grade crossings of the EJ&E and CN rail lines. Railway operations over navigable waterway bridges would not change. Vehicle delays at highway/rail at-grade crossings that are affected by the operations of lift bridges would not vary from current levels. Waterway operations would not change either.

##### **4.3.4.2**      *Proposed Action*

The following subsections describe the Proposed Action’s effects on navigation and rail operations. Train traffic would only change on the rail line segment that includes the EJ&E Bridge over the Des Plaines River in Joliet. Because train traffic would not change on the rail line segments where the other seven bridges are located, the Proposed Action would not affect navigation on the other navigable waterways or rail operations on the other bridges.

### *Effects on Navigation at the EJ&E Bridge*

The lift span of the EJ&E Bridge over the Des Plaines River, located at Lockport (river mile 290.1) in Joliet, is operated remotely from the EJ&E offices in East Joliet. The lift bridge is normally maintained in the fully open to navigation position. When rail traffic approaches the bridge, the remote bridge operator initiates a procedure pursuant to Coast Guard regulations at 33 CFR 117.393 that prescribes how the bridge can be closed to vessel traffic. In summary, the bridge can be closed only when it has been determined by the bridge operator that there are no vessels operating near or approaching the bridge. Vessel passage receives priority over train traffic.

The Proposed Action would increase train traffic over this bridge from approximately 18 to 42 trains per day. To smoothly accommodate the increase in train traffic, the bridge would close more often to allow for train operations. However, as noted, the applicable regulations specify that precedence be given to vessel traffic, which would limit the amount of time available for the bridge to be in the closed position to allow trains to pass.

The following calculation shows the total amount of daily time required for trains to cross the bridge. Trains move over the bridge at approximately 10 miles per hour, and the average train length for this rail line segment (No. EJ&E-8A) under the Proposed Action would be approximately 5,552 feet, requiring approximately 6.3 minutes to cross the bridge. At a length of 2,742 feet, the existing average train requires approximately 3.0 minutes to cross the bridge. A 5.0-minute clearance period to confirm the train has passed or another train is ready to approach is added to the minimum time for a train to cross. EJ&E Bridge operators estimate that it takes approximately 2.0 minutes for the bridge to fully open and 2.0 minutes for it to fully close. Therefore, under the Proposed Action, the average minimum time that a train would need to cross the bridge is estimated to be 15.3 minutes, up from the current 12.0-minute cycle. Applying this average time to individual train crossings, 42 longer trains would require 10.5 hours per day to cross the bridge, compared with approximately 3.7 hours for 18 shorter trains under the No-Action Alternative.

Vessel traffic on the Des Plaines River varies significantly by day and season. SEA's estimates of vessel traffic are based on study of the lock system at Lockport, Illinois. SEA reviewed lockage data and supplemented that information with lock operator interviews. The Lockport Lock is closed from December 15 through March 15 each year. U.S. Army Corps of Engineers web reports for the Illinois River system at the Lockport Lock show 3,831 vessels passed through the lock between April 3, 2007 and April 3, 2008. Therefore, the average number of vessels crossing the lock at Lockport is estimated to be approximately 15 per day.

According to Coast Guard regulations, vessel traffic on the Des Plaines River would have precedence over railroad operations at the bridge. Therefore, the Proposed Action would not likely affect navigation.

#### **4.3.4.3**      *Constructions*

None of the proposed connections or segments of double track would be constructed in the vicinity of the eight navigable waterways. Therefore, the proposed connections and segments of double track would not affect bridge or rail operations at navigable waterway crossings.

#### **4.3.4.4**      *Conclusions*

The Proposed Action would not affect navigation. Operations of the bridge are regulated, giving priority to water vessel traffic.

### **4.3.5 Airports**

As discussed in Section 3.3.4, Airports, Gary/Chicago International Airport is the only airport adjacent to the EJ&E rail line potentially affected by the Proposed Action. Figure 3.3-3 shows the interim (Alignment 1E) and final alternatives (Alignment 1D or Alignment 1D North Shift) for the EJ&E rail line relocation as proposed for the Gary airport expansion plan. On June 27, 2008, CN agreed that they would honor the four-party preliminary Memorandum of Understanding entered into by Gary/Chicago International Airport, EJ&E, CSX, and NS concerning the relocation of the EJ&E rail line as part of the airport's expansion of the main runway. The following section discusses the potential transportation effects on the Gary/Chicago International Airport based on current conditions and also the final alternative configurations.

#### ***4.3.5.1 No-Action Alternative***

Under the No-Action Alternative, the Applicants would not acquire the EJ&E rail line and freight train operations on the CN and EJ&E rail line segments would not change. The No-Action Alternative would not affect the operations of Gary/Chicago International Airport based on the existing airport configuration. With the preferred alternative for the proposed airport expansion, the EJ&E rail line would be relocated in Joliet as shown in Figure 3.3-3 (Alignment 1D or Alignment 1D North Shift). The first step for this rail line relocation would result in a highway/rail at-grade crossing over Industrial Highway on EJ&E rail line segment No. 1 at MP 43.8; the second step ultimately would replace the at-grade crossing with a grade-separated crossing. The No-Action Alternative would not affect the ultimate configuration of the Industrial Highway crossing because it would be grade separated. However, motorists would experience delays due to existing train traffic while the highway/rail at-grade crossing is in use. Because there would be no change in train operation, the No-Action Alternative would have no effect on Gary/Chicago International Airport's operations or on the proposed airport expansion.

#### ***4.3.5.2 Proposed Action***

The following subsection describes the transportation effects from the Proposed Action on the current configuration of Gary/Chicago International Airport and on the proposed final airport expansion plans. More details describing plans for the Gary Airport expansion can be found in Section 3.3.4.2, Proposed Expansion at Gary International Airport.

Under the current airport configuration, the EJ&E rail line is grade separated over Industrial Highway. The Proposed Action would result in an increase in train traffic along the rail line segment that borders the northwest portion of the airport property. However, because the rail line is an existing condition and is outside the airport ROW and there are no highway/rail at-grade crossings along the airport property, the Proposed Action would not affect current operations of Gary/Chicago International Airport.

The preferred alternative for the proposed airport expansion would relocate the EJ&E rail line to the northwest as shown in Figure 3.3-3 (Alignment 1D or Alignment 1D North Shift) of Chapter 3. The Proposed Action would not affect the ultimate configuration of the Industrial Highway crossing because it would be grade separated.

The airport expansion project and planned relocation of the EJ&E line are not connected to the Proposed Action but would be done to facilitate the planned airport expansion. Therefore, SEA considers any effects to be cumulative. Section 5.0 presents further evaluation of the indirect and cumulative effects of the Gary/Chicago International Airport's proposed expansion.

**4.3.5.3 Construction**

None of the proposed connections or segments of double track would be constructed near the Gary/Chicago International Airport. Therefore, the proposed connections and double track would not affect airport operations or plans for expansion.

**4.3.5.4 Conclusion**

Because the Applicants have committed to honor the four-party Memorandum of Understanding, SEA concludes that the Proposed Acton would have no affect on the Gary/Chicago International Airport, or the airport's expansion plans.

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