Conrail line near Rutledge Street. The design includes approximately 900 feet of new rail line construction.

NS did not identify any other build alternatives because the proposed alternative meets the purpose and need of the proposed project while minimizing potential environmental impacts. The no-action alternative would not meet the purpose or need of the proposed action and NS did not consider it to be a reasonable alternative; SEA concurs.

Table 5-IN-3
Indiana Constructions

Site ID	Location	Length in feet	County	Description	Setting
CC-05	Willow Creek [a]	2800	Porter	Connecting CSX and Conrail tracks	Industrial
NC-04	Alexandria [a]	1000	Madison	Connecting track between Conrail and NS	Rural
NC-05	Butler	1700	DeKalb	Connecting NS and Conrail tracks	Suburban/Industrial
NC-06	Tolleston	900	Lake	Connecting NS and Conrail tracks	Urban

[a] By a Decision (Sub Nos. 1-7) issued November 25, 1997, the Board Approved, subject to certain environmental conditions, construction of those connections. Operations, however, have not been approved.

Abandonments

South Bend to Dillon Junction Abandonment (St. Joseph and La Porte Counties, IN) (NS). NS proposes to abandon 21.5 miles of rail line segment between South Bend and Dilion Junction. NS would remove track and salvage materials such as rails, ties, and ballast as part of the abandonment process. (See Figure 5-IN-4a through 4g presented at the end of this state discussion.)

Table 5-IN-4
Indiana Abandonments

Site ID	Location	County	Facility Type	Size	Description	Setting
NA-02	South Bend to Dillon Jct.	St. Joseph, La Porte	Rail Segment	21.5 miles	Two trains/day	Rural/Industrial

5-IN.3 INDIANA SUMMARY OF ANALYSIS

Based on the nature of the Acquisition-related activities in Indiana that meet the Board's environmental analysis threshold and the scope for the Draft EIS, SEA determined that a site-specific analysis was not appropriate for the following technical areas:

- Energy.

Details of the environmental analysis for Indiana follow.

5-IN.4 INDIANA SAFETY: FREIGHT RAIL OPERATIONS

SEA conducted a statistical analysis to evaluate the potential change in safety on all rail line segments where the proposed Conrail Acquisition would result in eight or more additional freight trains per day. SEA identified 12 rail line segments within Indiana that would experience this level of increased activity. While increased freight train activity would increase the probability of a freight train accident, SEA did not consider an increase significant unless the predicted accident rate shortened the duration between accidents to one every 100 years or less per mile. Table 5-IN-5 presents results of the analysis, showing the approximate mileage of each rail line segment within the state.

Table 5-IN- 5
Estimated Change in Years Between Accidents - Freight Rail Operations

Site ID	Between	And	Miles in State	Increase in Trains per Day	Pre-Acquisition Accident Interval [a] (yrs)	Post-Acquisition Accident Interval [a] (yrs)
C-020	Adams	Ft. Wayne	5	8.0	769	333
C-021	Evansville	Amqui, TN	9	9.3	193	135
C-025	Vincennes	Evansville	53	8.5	203	144
C-027	Willow Creek	Pine Jct.	12	16.5	225	141
C-062	Bucyrus, OH	Adams	15	8.0	769	333
C-066	Deshler, OH	Willow Creek	129	26.3	211	107
N-040	Alexandria	Muncie	16	9.2	1793	383
N-041	Butler	Ft. Wayne	28	13.7	333	161
N-042	CP501	Indiana Harbor	1	16.9	119	85

Table 5-IN- 5
Estimated Change in Years Between Accidents - Freight Rail Operations

Site ID	Between	And	Miles in State	Increase in Trains per Day	Pre-Acquisition Accident Interval [a] (yrs)	Post-Acquisition Accident Interval [a] (yrs)
N-044	Ft. Wayne	Peru	53	15.9	236	124
N-045	Lafayette	Tilton, IL	40	17.4	189	105
N-046	Peru	Lafayette Jct.	53	21.8	244	107

[a] Accident intervals show the years/mile.

The Federal Railroad Administration (FRA) requires all railroads to submit reports for all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). Train accidents meeting this reporting requirement are relatively infrequent.

The FRA reported about 2,600 accidents (3.69 accidents per million train miles[1]) nationally in 1996. Most of these accidents were relatively minor; almost 90 percent of these accidents caused less than $100,000 in damage. In addition, most of the train accidents did not affect people or non-railroad property.

Accident risk predictions are best expressed by describing the elapsed time expected between any two consecutive events. The current national average is that a main line freight train accident occurs once every 117 years on each mile of route. FRA records, as described in Chapter 4, "System-Wide and Regional Setting Impacts," show a substantial decrease, both in total number of accidents and in accidents per million train miles, a standard industry measure. Because there are few accidents, and most of these accidents are relatively minor, it is not possible for SEA to accurately predict either the frequency or severity of actual accidents.

SEA estimated the change in the risk of an accident resulting from the increased activity on rail line segments as a result of the proposed Conrail Acquisition. Because SEA analyzed rail line segments that vary in length from one mile to more than 100 miles, and because freight train accidents typically have little impact on surrounding areas, SEA expressed all predicted risks of accidents on a route-mile basis. Section 3.2 "Safety: Freight Rail Operations," discusses the analysis process in greater detail.

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[1] "Train miles" are calculated by multiplying the number of trains by the distance traveled. For example, on a typical 100 mile rail line, one million annual train miles results from operating 28 trains per day every day for 365 days.

5-IN.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The rail line segment between CP501 and Indiana Harbor (N-042) meets SEA's criteria for significance: an accident is anticipated once every 85 years. Although this rail line segment has three to four main tracks with a modern train control signal system, SEA considered site specific mitigation measures to reduce the risk of freight train accidents for this rail line segment.

One mitigation measure to reduce risk would be to increase the frequency of inspections of the rail line segment for internal rail flaws. This would be accomplished by basing the inspection intervals on train density as measured by million-gross-ton-miles rather than on an annual inspection. This approach is consistent with the proposed FRA rule (49 CFR, Part 213.237 - Docket No. RST-90-1). In addition, the Applicants would provide annual training for track inspectors who are responsible for the particular rail line segment.

A second recommended mitigation measure would be to ensure that all rail equipment traveling the rail line segment is inspected by knowledgeable mechanical inspectors. This would be accomplished by providing annual training for the mechanical inspectors at the originating yards and initial terminal for trains traversing the rail line segment.

5-IN.5 INDIANA SAFETY: PASSENGER RAIL OPERATIONS

In Indiana, passenger trains share certain tracks with freight trains. SEA evaluated the potential for increased accidents between freight trains and passenger trains, for both intercity and commuter trains. Because changes in the frequency of rail accidents are directly related to changes in overall train activity, SEA's analysis concentrated on rail line segments carrying both passenger and freight trains that would experience an increase in freight train traffic of one or more trains per day.

In Chapter 4, "System-Wide and Regional Setting, Impacts and Proposed Mitigation," SEA addresses the issue of potential increased risk to passenger train operations associated with the proposed Conrail Acquisition. System-wide, SEA identified 197 freight rail line segments that also carry passenger trains. Of these, SEA analyzed 93 rail line segments that would experience an increase of one or more freight trains per day resulting from the proposed Acquisition. Six of these rail line segments are located in Indiana; these rail line segments are part of Amtrak passenger train routes.

The Federal Railroad Administration (FRA) requires reports from railroads concerning all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). FRA requires the same reporting for passenger train accidents. A nationwide average of fewer than 200 passenger train accidents per year (for both Amtrak intercity and urban area commuter trains) has occurred over the last three years. Most of these accidents were relatively minor and rarely involved any fatalities, but because the safety of passengers as well as property is frequently involved, their occurrence is of serious concern.

Given the limited number of passenger rail accidents, SEA was unable to accurately predict the severity, location, or timing of actual accidents. SEA therefore focused on estimating the potential risks of an accident. In this safety analysis, SEA used increased freight activity on rail line segments to estimate the changes in passenger train accident risks. To assess significance, SEA first determined whether the proposed Acquisition-related change in the projected accident rate was greater than an annual increase of 25 percent. SEA then determined if the predicted accident frequency was less than one accident in 150 years. Thus, SEA determined a potential impact to be significant if the projected annual increase in accidents was greater than 25 percent and the frequency was less than one accident in 150 years.

5-IN.5.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The pre-Acquisition accident interval for each rail line segment is shown in Table 5-IN-6. Accidents pose potential threats to passengers on the train; therefore, for each rail line segment, risk is expressed as the expected interval between events over the length of the rail line segment. Table 5-IN-6 shows the expected change in years between accidents for the individual rail line segments.

Table 5-IN-6
Estimated Change in Years Between Accidents for Passenger Operations

Site ID	From	To	Miles in State	Pre-Acquisition Accident Interval [a]	Post-Acquisition Accident Interval [a]
N-042	Control Pt 501	Indiana Hbr	1	5,516	3,970
C-674	Indianapolis	Kraft	3	38,700	30,802
C-675	Kraft	Avon	6	16,845	13,941
C-258	Hamilton, OH	Indianapolis	79	3,049	1,829
N-497	Kalamazoo, MI	Porter	18	1,334	133
C-066	Deshler, OH	Willow Creek, IN	129	115	239 [b]

[a] Accident intervals show years between accidents.
[b] This is based on double tracking currently being constructed.

Based on information provided by the railroads and SEA's independent analysis, SEA determined that the increase in risk for passenger train accidents for one segment, Kalamazoo, Michigan to Porter, exceeded SEA's criteria for significance. For this rail line segment, SEA anticipates that potential conflicts could be minimized by reinforcing passenger trains' priority over freight trains. It is SEA's preliminary recommendation that all freight trains, both opposing and moving in the same direction as passenger trains, be clear of the main track at least 15 minutes prior to the estimated arrival of the passenger train. In doing so, the passenger train can pass safely and without delay.

SEA is aware that Canadian Pacific is negotiating for trackage rights over rail line segments between Porter, IN, and Chicago, IL. In the event that these rights are obtained, it is SEA's preliminary recommendation that passenger trains are also given priority over freight trains on there segments as discussed above.

5-IN.6 INDIANA SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary concern with the rail transportation of hazardous materials is a spill or accidental release resulting from a train accident. SEA analyzed all rail line segments where the number of car loads containing hazardous materials would increase as a result of the proposed Acquisition. This resulted in SEA evaluating rail line segments that were below the Board's thresholds for environmental analysis.

The Association of American Railroads (AAR), in conjunction with the Chemical Manufacturer's Association (CMA), developed standards and practices to manage the risk of a hazardous material spill that the railroads have adopted. The practices include identifying "key routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

5-IN.6.1 Rail Line Segment Analysis

As a result of the proposed Conrail Acquisition, the railroads would change the routing of many car loads of hazardous material. The designation of key routes would change as the railroads shift hazardous material traffic from one rail line to another. In addition, certain rail line segments that are currently key routes would carry increased volumes of cars containing hazardous material.

SEA applied two different criteria to determine if the effects of rerouting hazardous material car loads are potentially significant:

1. The volume of hazardous materials transported on a rail line would be 10,000 or more car loads per year. The Acquisition-related change in volume of hazardous material car loads would upgrade a rail line segment to a key route designation.

2. The volume of hazardous material car loads doubles, and exceeds 20,000 or more car loads per year. SEA has termed rail line segments which meet these criteria a "major key route."

Rail line segments that would meet the first criteria are considered "key routes" and warrant the base level mitigation. Rail line segments that meet the second criteria are considered "major key routes" and warrant expanded mitigation. Depending on the individual circumstances, a rail line segment could meet both criteria and therefore warrant both the base level and the expanded mitigation.

5-IN.6.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Potential Effects. Based on the information provided by the Applicants and SEA's independent analysis, SEA determined that eight rail line segments in Indiana carrying increased amounts of hazardous material are of potential concern. Table 5-IN-7 shows these rail line segments, indicates the estimated annual car loads of hazardous material for both pre- and post-Acquisition, and identifies the key route status of each. SEA determined that two rail line segments currently carry less than 10,000 car loads of hazardous material per year but would increase to at least 10,000 car loads per year due to the proposed Acquisition. A total of seven routes would at least double the volume of hazardous material transported, resulting in 20,000 or more car loads per year. One route meets both of these significance thresholds.

Table 5-IN-7
Rail Line Segments with Significant Increases in Annual Hazardous Material Car Loads

Site ID	Between	And	Miles in State	Estimated Annual Car Loads		Significance Thresholds	
				Pre-Acquisition	Post-Acquisition	New Key Route	Major Key Route
C-025	Vincennes, IN	Evansville, IN	53	21,000	44,000		X
C-027	Willow Creek, IN	Pine Jct., IN	12	17,000	40,000		X
C-066	Deshler, OH	Willow Creek, IN	129	17,000	50,000		X
C-693	Willow Creek, IN	Ivanhoe, IN	13	4,000	10,000	X	
N-041	Butler, IN	Ft. Wayne, IN	28	5,000	28,000	X	X
N-044	Ft. Wayne, IN	Peru, IN	53	11,000	47,000		X
N-045	Lafayette Jct., IN	Tilton, IL	40	10,000	46,000		X
N-046	Peru, IN	Lafayette Jct., IN	53	11,000	47,000		X

Preliminary Mitigation Recommendation. SEA recommends requiring CSX and NS to bring the rail line segments into compliance with AAR key route standards and practices for those segments that would become a new key route.

For the seven segments in Table 5-IN-7 identified as major key routes, where the volume of hazardous material car loads would at least double and exceed 20,000 car loads, SEA recommends that CSX and NS develop a Hazardous Materials Emergency Response Plan to contain and minimize the potential effects of any accidents or incidents. SEA will further recommend that CSX and NS conduct hazardous materials accident simulations with the voluntary participation of emergency service providers along the rail line segments at least once every two years. Participants in these plans include county and municipal government, local fire departments, and medical and other emergency response teams.

5-IN.7 INDIANA SAFETY: HIGHWAY/RAIL AT-GRADE CROSSINGS

Increased train activity could affect the safety of roadway users at highway/rail at-grade crossings. To address potential changes in accident frequency, SEA compared existing accident frequency rates with accident frequency rates at all highway/rail at-grade crossings that would experience a Conrail Acquisition-related increase of eight or more trains per day. At these locations, SEA looked at the most recent five years of accident history available, and calculated the potential change in the number of years between accidents. SEA's analysis procedure considered the type of existing warning devices at the highway/rail at-grade crossings, including passive devices (signs or crossbucks), flashing lights, or gates.

To evaluate the significance of potential changes in accident frequency in Indiana, SEA categorized highway/rail at-grade crossings into two categories:

- Category A consisted of highway/rail at-grade crossings with a history of relatively frequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Indiana with accident frequency rates at or above the state's 50th highest accident frequency rate of one accident every four years (0.2436 accident frequency rate) to be Category A highway/rail at-grade crossings. To be conservative in the analysis process, SEA also considered highway/rail at-grade crossings with accident frequency rates at or above one accident every seven years (0.15 accident frequency rate) as Category A highway/rail at-grade crossings. For all Category A highway/rail at-grade crossings, SEA considered the relatively small accident frequency rate increase of one accident every 100 years (a 0.01 accident frequency rate increase) to be significant.

- Category B consisted of highway/rail at-grade crossings with a history of relatively infrequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Indiana with accident frequency rates less than one accident every seven years (less than 0.15 accident frequency rate) to be Category B highway/rail at-grade crossings. For these crossings, SEA considered an accident frequency rate increase of one accident every 20 years (a 0.05 accident frequency rate increase) to be significant.

Table 5.IN-8 presents the results of SEA's analysis and appears at the end of this state discussion. A county by county summary of results follows.

5-IN.7.1 County Analysis

Allen County

SEA's safety analysis showed that for the 58 highway/rail at-grade crossings studied in Allen County, the predicted increases in accident frequency would range from 0.0040 to 0.0404. This translates into a range of increases from one accident every 250 years to one accident every 25 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at four highway/rail at-grade crossings: Notestine Road, Estella Avenue, Anthony Boulevard, and Engle Road. These crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Carroll County

SEA's safety analysis showed that for the 21 highway/rail at-grade crossings studied in Carroll County, the predicted increases in accident frequency would range from 0.0043 to 0.0296. This translates into a range of increases from one accident every 233 years to one accident every 34 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at two highway/rail at-grade crossings: Washington Street and Meridian Line. These crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Cass County

SEA's safety analysis showed that for the 15 highway/rail at-grade crossings studied in Cass County, the predicted increases in accident frequency would range from 0.0047 to 0.0346. This translates into a range of increases from one accident every 213 years to one accident every 29 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at Cedar Street and 18th Street highway/rail at-grade crossings. These crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

De Kalb County

SEA's safety analysis showed that for the 40 highway/rail at-grade crossings studied in De Kalb County, the predicted increases in accident frequency would range from 0.0036 to 0.0287. This translates into a range of increases from one accident every 278 years to one accident every 35 years, respectively. SEA found these predicted increases to be below the criteria for significance.

Delaware County

SEA's safety analysis showed that for the 24 highway/rail at-grade crossings studied in Delaware County, the predicted increases in accident frequency would range from 0.0056 to 0.0487. This translates into a range of increases from one accident every 179 years to one accident every 21 years, respectively. SEA found these predicted increases to be below the criteria for significance.

Elkhart County

SEA's safety analysis showed that for the eight highway/rail at-grade crossings studied in Elkhart County, the predicted increases in accident frequency would range from 0.0056 to 0.0321. This translates into a range of increases from one accident every 179 years to one accident every 31 years, respectively. SEA determined that the predicted increase resulting from the proposed Conrail Acquisition was significant at the CR 9 crossing. The crossing is classified as Category A. SEA found the predicted increases at other locations to be below the criteria for significance.

Fountain County

SEA's safety analysis showed that for the nine highway/rail at-grade crossings studied in Fountain County, the predicted increases in accident frequency would range from 0.0022 to 0.0103. This translates into a range of increases from one accident every 455 years to one accident every 97 years, respectively. SEA found these predicted increases to be below the criteria for significance.

Gibson County

SEA's safety analysis showed that for the 45 highway/rail at-grade crossings studied in Gibson County, the predicted increases in accident frequency would range from 0.0014 to 0.0236. This translates into a range of increases from one accident every 714 years to one accident every 42 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at the CR 100 N, Spring Street, Mulberry Street, and West John crossings. These crossings are classified as Category A. SEA found the predicted increases at other locations to be below the criteria for significance.

Huntington County

SEA's safety analysis showed that for the 22 highway/rail at-grade crossings studied in Huntington County, the predicted increases in accident frequency would range from 0.0044 to 0.0269. This translates into a range of increases from one accident every 227 years to one accident every 37 years, respectively. SEA determined that the predicted increase resulting from the proposed Conrail Acquisition was significant at Briant Street. This highway/rail at-grade

crossing is classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Knox County

SEA's safety analysis showed that for the 22 highway/rail at-grade crossings studied in Knox County, the predicted increases in accident frequency would range from 0.0018 to 0.0275. This translates into a range of increases from one accident every 556 years to one accident every 36 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at Hart Street, Perry Street, Buntin Street and South 15th Street. These highway/rail at-grade crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Kosciusko County

SEA's safety analysis showed that for the 18 highway/rail at-grade crossings studied in Kosciusko County, the predicted increases in accident frequency would range from 0.0073 to 0.0367. This translates into a range of increases from one accident every 137 years to one accident every 27 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at four highway/rail at-grade crossings: Seventh Street-Front, Huntington Street, Main/SYR-Web, and Oak Street. These highway/rail at-grade crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

La Porte County

SEA's safety analysis showed that for the 14 highway/rail at-grade crossings studied in La Porte County, the predicted increases in accident frequency would range from 0.0059 to 0.0317. This translates into a range of increases from one accident every 169 years to one accident every 32 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at CR 875 E and 500 W. highway/rail at-grade crossings. Both highway/rail at-grade crossings are classified as Category A. SEA found the predicted increases at other locations to be below the criteria for significance.

Lake County

SEA's safety analysis showed that for the six highway/rail at-grade crossings studied in Lake County, the predicted increases in accident frequency would range from 0.0051 to 0.0428. This translates into a range of increases from one accident every 196 years to one accident every 23 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at four highway/rail at-grade crossings: County Line Road; Hobart Road; Lake Street; and Clark Road. These highway/rail at-grade crossings are classified

as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Madison County

SEA's safety analysis showed that for the 11 highway/rail at-grade crossings studied in Madison County, the predicted increases in accident frequency would range from 0.0065 to 0.0537. This translates into a range of increases from one accident every 154 years to one accident every 19 years, respectively. SEA determined that the predicted increase resulting from the proposed Conrail Acquisition was significant at the CR100 E highway/rail at-grade crossing. This highway/rail at-grade crossing is classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Marshall County

SEA's safety analysis showed that for the 16 highway/rail at-grade crossings studied in Marshall County, the predicted increases in accident frequency would range from 0.0062 to 0.0323. This translates into a range of increases from one accident every 161 years to one accident every 31 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at First Road and Thorn Road. These grade crossings are classified as Category A. SEA found these predicted increases at other locations to be below the criteria for significance.

Miami County

SEA's safety analysis showed that for the nine highway/rail at-grade crossings studied in Miami County, the predicted increases in accident frequency would range from 0.0049 to 0.0306. This translates into a range of increases from one accident every 204 years to one accident every 33 years, respectively. SEA determined that the predicted increase resulting from the proposed Conrail Acquisition was significant at CR 250 W. This grade crossing is classified as Category A. SEA found the predicted increases at other locations to be below the criteria for significance.

Noble County

SEA's safety analysis showed that for the 18 highway/rail at-grade crossings studied in Noble County, the predicted increases in accident frequency would range from 0.0078 to 0.0318. This translates into a range of increases from one accident every 128 years to one accident every 31 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at CR 500 W and 900 W. These grade crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Porter County

SEA's safety analysis showed that for the 16 highway/rail at-grade crossings studied in Porter County, the predicted increases in accident frequency would range from 0.0061 to 0.0250. This translates into a range of increases from one accident every 164 years to one accident every 40 years, respectively. SEA determined that the predicted increase resulting from the proposed Conrail Acquisition was significant at 900 North. This highway/rail at-grade crossing is classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

St. Joseph County

SEA's safety analysis showed that for the four highway/rail at-grade crossings studied in St. Joseph County, the predicted increases in accident frequency would range from 0.0074 to 0.0106. This translates into a range of increases from one accident every 135 years to one accident every 94 years, respectively. SEA found these predicted increases to be below the criteria for significance.

Tippecanoe County

SEA's safety analysis showed that for the 39 highway/rail at-grade crossings studied in Tippecanoe County, the predicted increases in accident frequency would range from 0.0055 to 0.1042. This translates into a range of increases from one accident every 182 years to one accident every 10 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at 14 highway/rail at-grade crossings. All 14 highway/rail at-grade crossings are classified as Category A. The affected highway/rail at-grade crossings are: 8th Street; 7th Street; Romig Street; 5th Street; 4th Street/ US 231; Smith Street; Greenbush Street; 18th Street; 17th and Salem Streets; and Union Street. SEA found the predicted increases at the other locations to be below the criteria for significance. The Applicants, FHWA, and the City of Lafayette are currently undertaking the Lafayette Railroad Relocation Project, which will realign the existing railroad corridor through Lafayette. The project, when completed, will eliminate the highway/rail at-grade crossings identified in SEA's analysis as having significant predicted increases in accident frequency.

Vanderburgh County

SEA's safety analysis showed that for the ten highway/rail at-grade crossings studied in Vanderburgh County, the predicted increases in accident frequency would range from 0.0025 to 0.0130. This translates into a range of increases from one accident every 400 years to one accident every 77 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at Stacer Road and Ohio Street. These highway/rail at-grade crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

highway/rail at-grade crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Wabash County

SEA's safety analysis showed that for the 20 highway/rail at-grade crossings studied in Wabash County, the predicted increases in accident frequency would range from 0.0051 to 0.0410. This translates into a range of increases from one accident every 196 years to one accident every 24 years, respectively. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at Olive Street and Wolf Road. These highway/rail at-grade crossing are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Warren County

SEA's safety analysis showed that for the 13 highway/rail at-grade crossings studied in Warren County, the predicted increases in accident frequency would range from 0.0040 to 0.0177. This translates into a range of increases from one accident every 250 years to one accident every 56 years, respectively. SEA found these predicted increases to be below the criteria for significance.

5-IN.7.2 Summary of Potential Effects and Preliminary Recommended Mitigation

SEA determined that the proposed Conrail Acquisition would significantly increase the predicted accident risk at 53 highway/rail at-grade crossings in Indiana. Table 5-IN-9 shows SEA's recommended mitigation to reduce these risks.

SEA analyzed the accident frequencies with and without these upgraded warning devices in place, as shown in Table 5-IN-8. With the mitigation measures, the accident frequencies at these locations would decrease to well below the pre-Acquisition levels. SEA recommends that NS and CSX upgrade the existing warning devices, as shown Table 5-IN-9. For the six locations that currently have gates, SEA's preliminary recommendation is that NS and CSX upgrade the existing warning devices to four-quadrant gates or install median barriers to prevent drivers from going around gates. These recommendations would eliminate the adverse effects on highway/rail at-grade crossing safety resulting from the proposed Conrail Acquisition in Indiana.

Table 5-IN-9
Recommended Mitigation to Improve Safety
Highway/Rail At-Grade Crossings in Indiana

County	Railroad Segment	FRA ID	Grade Crossing	Existing Warning Devices	SEA's Proposed Mitigation
Allen	N-041	478188C	Notestine Road	Passive	Flashing Lights
Allen	N-041	478216D	Estella Avenue	Flashing Lights	Gates
Allen	N-041	478226J	Anthony Boulevard	Gates	Four Quad Gates or Median Barriers
Allen	N-044	478240E	Engle Road	Flashing Lights	Gates
Carroll	N-046	484246J	Washington Street	Passive	Flashing Lights
Carroll	N-046	484248X	Meridian Line	Passive	Flashing Lights
Cass	N-046	484216S	Cedar Street	Passive	Flashing Lights
Cass	N-046	484229T	18th Street	Flashing Lights	Gates
Elkhart	C-066	155419P	CR 9	Passive	Flashing Lights
Gibson	C-025	342470C	CR 100 N	Passive	Flashing Lights
Gibson	C-025	342473X	Spring Street	Passive	Flashing Lights
Gibson	C-025	342481P	Mulberry Street	Passive	Flashing Lights
Gibson	C-025	342493J	W. John	Passive	Flashing Lights
Huntington	N-044	478270W	Briant Street	Flashing Lights	Gates
Knox	C-025	342413N	Hart Street	Flashing Lights	Gates
Knox	C-025	342416J	Perry Street	Passive	Flashing Lights
Knox	C-025	342417R	Buntin Street	Passive	Flashing Lights
Knox	C-025	342425H	S. 15th Street	Flashing Lights	Gates
Kosciusko	C-066	155391B	Seventh St.-Front	Flashing Lights	Gates
Kosciusko	C-066	155392H	Huntington	Gates	Four Quad Gates or Median Barriers
Kosciusko	C-066	155394W	Main/Syr-Web	Flashing Lights	Gates
Kosciusko	C-066	155395D	Oak Street	Passive	Flashing Lights
La Porte	C-066	155484V	CR 875 E	Passive	Flashing Lights
La Porte	C-066	155496P	500 W	Passive	Flashing Lights

Table 5-IN-9
Recommended Mitigation to Improve Safety
Highway/Rail At-Grade Crossings in Indiana

County	Railroad Segment	FRA ID	Grade Crossing	Existing Warning Devices	SEA's Proposed Mitigation
Lake	C-027	155632M	County Line Road	Flashing Lights	Gates
Lake	C-027	155633U	Hobart Road	Flashing Lights	Gates
Lake	C-027	155637W	Lake Street	Gates	Four Quad Gates or Median Barriers
Lake	C-027	155645N	Clark Road	Flashing Lights	Gates
Madison	N-040	474598M	CR 100 E	Passive	Flashing Lights
Marshall	C-066	155465R	First Road Smith	Passive	Flashing Lights
Marshall	C-066	155476D	Thorn Road	Passive	Flashing Lights
Miami	N-046	484209G	CR 250 W	Passive	Flashing Lights
Noble	C-066	155372W	CR 500 W	Passive	Flashing Lights
Noble	C-066	155380N	900 W	Passive	Flashing Lights
Porter	C-066	155615W	900 N	Gates	Four Quad Gates or Median Barriers
Tippecanoe	N-045	484302N	8th Street	Passive	Flashing Lights[a]
Tippecanoe	N-045	484303V	7th Street	Flashing Lights	Gates[a]
Tippecanoe	N-045	484306R	Romig Street	Flashing Lights	Gates[a]
Tippecanoe	N-045	484308E	5th Street	Passive	Flashing Lights[a]
Tippecanoe	N-045	484309L	4th Street/US 231	Gates	Four Quad Gates or Median Barriers[a]
Tippecanoe	N-045	484311M	Smith Street	Flashing Lights	Gates[a]
Tippecanoe	N-045	484323G	CR 172	Passive	Flashing Lights
Tippecanoe	N-046	484267C	CR 900 N	Passive	Flashing Lights
Tippecanoe	N-046	484269R	CR 700 N	Passive	Flashing Lights
Tippecanoe	N-046	484282E	CR 500 E	Passive	Flashing Lights
Tippecanoe	N-046	484291D	Greenbush Street	Flashing Lights	Gates[a]
Tippecanoe	N-046	484292K	18th Street	Flashing Lights	Gates[a]

Table 5-IN-9
Recommended Mitigation to Improve Safety
Highway/Rail At-Grade Crossings in Indiana

County	Railroad Segment	FRA ID	Grade Crossing	Existing Warning Devices	SEA's Proposed Mitigation
Tippecanoe	N-046	484293S	17th & Salem Street	Flashing Lights	Gates[a]
Tippecanoe	N-046	484294Y	Union Street	Gates	Four Quad Gates or Median Barriers[a]
Vanderburgh	C-025	342829D	Stacer Road	Passive	Flashing Lights
Vanderburgh	C-025	342850J	Ohio Street	Flashing Lights	Gates
Wabash	N-044	478313M	Olive Street	Passive	Flashing Lights
Wabash	N-044	478314U	Wolf Road	Flashing Lights	Gates

[a] Also mitigated by completion of Lafayette Railroad Relocation Project.

5-IN.8 INDIANA TRANSPORTATION: PASSENGER RAIL SERVICE

In Indiana, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-related effects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Amtrak currently provides service on four routes utilizing Conrail and CSX rail lines including the cities of South Bend, Elkhart, Muncie, Fort Wayne, Lafayette, and Indianapolis areas on Conrail and CSX lines. Section 4.7.1, "Intercity Passenger Rail Service," discusses intercity passenger rail service effects.

Commuter Rail

No commuter rail service exists in Indiana.

Summary of Potential Effects and Preliminary Recommended Mitigation

Because there is no existing commuter rail service in Indiana, SEA has determined there will be no adverse effects and no mitigation is required.

5-IN.9 INDIANA TRANSPORTATION: ROADWAY CROSSING DELAY

In order to analyze the effects of the proposed Conrail Acquisition on the roadway system at existing highway/rail at-grade crossings, SEA identified the crossings on rail line segments that would exceed the Board's environmental analysis thresholds for air quality. SEA then calculated potential changes in vehicle delay at these crossings where average daily traffic (ADT) volumes are 5,000 or greater. SEA concluded that the potential effect of increased train traffic for highways with ADT volumes below 5,000 would be experienced by very few drivers and the additional vehicular delay would be minimal. The description of levels of service and criteria of significance have been addressed in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," and Appendix C, "Traffic and Transportation."

For crossings that would experience significant effects from the proposed Acquisition on vehicular delay, SEA tested mitigation strategies which involved increasing train speeds by increments of five miles per hour. SEA examined train operation guidelines and made preliminary recommendationsto increase trains speeds where it was easy to implement. At some locations where the post-Acquisition crossing delays were most severe and the Acquisition related increase in train traffic was great, SEA recommended separated grade crossings. At other locations, SEA recommended that the Applicants consult with the local community and with the local highway/transportationdepartment and Indiana Department of Transportation to agree on mitigating measures.

5-IN.9.1 County Analysis

Fourteen counties in Indiana have highway/rail at-grade crossings for which SEA performed vehicle delay calculations. Table 5-IN-10, presented at the end of this state discussion, contains a summary of these results.

Allen County

Nine crossings analyzed in Allen County would have a minimal increase in delay per stopped vehicle. The levels of service under post-Acquisitionconditions would range between A and C. The largest increase in maximum queue would be two vehicles.

Carroll County

The single crossing analyzed in Carroll County would have a minimal increase in delay per stopped vehicle. The level of service under post-Acquisition conditions would be C. There would be no increase in the maximum queue.

De Kalb County

Two crossings analyzed in De Kalb County would have a minimal increase in delay per stopped vehicle. The levels of service under post-Acquisition conditions would be C and F. The largest increase in maximum queue would be one vehicle. One crossing in Garrett, IN (Randolph Street) would experience post-Acquisition level of service F and would involve worsening a pre-Acquisition level of service E condition. It is SEA's preliminary recommendation that a separated grade crossing be considered at the Randolph Street at-grade crossing.

Delaware County

Five crossings analyzed in Delaware County would have a minimal increase in delay per stopped vehicle with level of service B under post-Acquisition conditions. The largest increase in maximum queue would be one vehicle. A discussion of concerns raised by the City of Muncie related to at-grade crossing delay and emergency response delay is included in Section 5-IN.19, "Indiana Areas of Concern."

Elkhart County

The single crossing analyzed in Elkhart County would have a minimal increase in delay per stopped vehicle, with level of service C under post-Acquisition conditions. There would be no increase in the maximum queue.

Gibson County

The single crossing analyzed in Gibson County would have a minimal increase in delay per stopped vehicle, with level of service C under post-Acquisition conditions. There would be a one vehicle increase in the maximum queue.

Huntington County

Three crossings analyzed in Huntington County would have a minimal increase in delay per stopped vehicle with level of service B under post-Acquisition conditions. The largest increase in maximum queue would be one vehicle.

Lake County

Fifteen crossings analyzed in Lake County would have a minimal increase in delay per stopped vehicle. The levels of service under post-Acquisition conditions would be in the range of A to D. The largest increase in maximum queue would be one vehicle. The nine crossings with post-Acquisition level of service D also have pre-Acquisition level of service D. A discussion of the concerns raised by the Four City Consortium (East Chicago, Hammond, Gary and Whiting) is included in Section 5-IN.19, "Indiana Areas of Concern." SEA acknowledges the fact that even

minor increases in delay can exacerbate pre-existing conditions, particularly in urban areas like the four-cities region in northern Lake County. The specific impacts and other considerations in this area of Lake County are discussed in the Indiana Areas of Concern section.

Madison County

SEA analyzed two crossings in Madison County. While neither crossing would experience a change to a post-Acquisition level of service of D or worse, both crossings would have a significant increase in delay per stopped vehicle and meet the criteria for a delay change of 30 seconds or greater. The levels of service under post-Acquisition conditions would be B and C. The largest increase in maximum queue would be 21 vehicles. SEA determined that the increased delays at these crossings are primarily due to the trains moving more slowly through the new Alexandria, IN connection. It is SEA's preliminary recommendation that the Applicants consult with the community and with the appropriate highway/transportation departments to agree on mitigating measures at these two locations to address the increase in delay per stopped vehicle.

Porter County

The four crossings analyzed in Porter County would have a minimal increase in delay per stopped vehicle. The levels of service under post-Acquisition conditions would be in the range of A to C. There would be no increase in maximum queue. The delay calculations at the Willow Creek Road crossing reflect on-going work by CSX to improve the rail crossing "diamond" to permit higher train speed.

St. Joseph County

The single crossing analyzed in St Joseph County would have an minimal increase in delay per stopped vehicle. The level of service under post-Acquisition conditions would be C. There would be no increase in the maximum queue.

Tippecanoe County

Ten crossings analyzed in Tippecanoe County would have a minimal increase in crossing delay per stopped vehicle. All ten of these crossings show a reduction from pre-Acquisition levels of service of B and C to post-Acquisition level of service D. The largest increase in maximum queue would be one vehicle. The Applicants, FHWA, and the City of Lafayette are currently undertaking the Lafayette Railroad Relocation Project, which will relocate the existing railroad corridor through Lafayette. The project, when completed, will eliminate all highway/rail at-grade crossings identified in SEA's analysis, thus eliminating the projected vehicle delays. A discussion of the concerns expressed by the City of Lafayette is included in Section 5-IN.19, "Indiana Areas of Concern."

Vanderburgh County

Three crossings analyzed in Vanderburgh County would have a minimal increase in crossing delay per stopped vehicle. All three of these crossings show a reduction from pre-Acquisition level of service C to post-Acquisition level of service D. The largest increase in maximum queue would be one vehicle. It is SEA's preliminary recommendation that train speed at the W. Maryland Street crossing be increased by five miles per hour. This speed increase would result in level of service C.

The other two crossings, W. Franklin Street and Ohio Street, are on the same line segment as W. Maryland Street but the level of service is not improved above D by the 5 mph increase in train speed. SEA recommends that the Applicants consult with the community and the appropriate highway/transportation department to agree on mitigating measures.

Wabash County

The two crossings analyzed in Wabash County would have a minimal increase in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be B and C. The largest increase in maximum queue would be one vehicle.

5-IN.9.2 Summary of Potential Effects and Preliminary Recommended Mitigation

The proposed Conrail Acquisition would have a significant effect on vehicle delay at 16 highway/rail at-grade crossings in Indiana. SEA's preliminary recommendation is that the Applicants would: (a) increase train speed at one crossing; (b) construct a separated grade crossing at one location; (c) consult with communities on an interim mitigation plan until the Lafayette Railroad Relocation Project is implemented to eliminate highway/rail at-grade crossing delay at ten crossings; and (d) consult with the communities involved and the local highway/transportation departments and the Indiana Department of Transportation to agree on mitigation measures for the remaining four crossings. For the remaining highway/rail at-grade crossings, the proposed Conrail Acquisition would have no significant effect on vehicle delay in Indiana.

5-IN.10 INDIANA TRANSPORTATION: ROADWAY EFFECTS FROM RAIL FACILITY MODIFICATIONS

SEA evaluated the impact on highway/rail at-grade crossing delay resulting from the construction of new rail line connections in Indiana. SEA also evaluated the impact to truck traffic from one abandonment.

5-IN.10.1 Constructions

SEA analyzed the transportation effects of proposed new construction projects in Indiana resulting from the proposed Conrail Acquisition. For the new rail constructions, the transportation effects are related to highway/rail at-grade crossings. Therefore, SEA used the same analysis methods as described for highway/rail at-grade crossing delay and safety.

Summary of Potential Effects and Preliminary Recommended Mitigation

There are two rail constructions proposed by NS in Indiana that require environmental analysis. A description of the transportation analysis for each proposed Acquisition is provided below.

Construction: Butler Connection (DeKalb County) (NS)

NS proposes to build a rail line connection between the northeast-southwest NS rail line and the east-west Conrail line on the east side of the Town of Butler. The connection would be located in the northwest quadrant of the intersecting rail lines and would be approximately 1,750 feet long. It would handle four trains per day. (See Figure 5-IN-2, presented at the end of this state discussion.)

This new rail construction would result in minor changes to the existing Main Street highway/rail at-grade crossing. Based on this alteration, it is SEA's preliminary conclusion that there would be insignificant effects on highway vehicle delay and safety.

The proposed construction would create short-term vehicular delays and would require detours during the construction of this rail line segment connection. NS would perform the construction in accordance with applicable Federal, state, and local regulations for construction projects. Construction traffic would use Main Street to travel to and from the proposed construction site.

Construction: Tolleston Connection (Lake County) (NS)

NS proposes to build a rail line connection between the existing northwest-southeast NS and Conrail lines in the Town of Tolleston. The rail connection would connect the parallel rail lines and would be approximately 900 feet long. It would handle two trains per day. Figure 5-IN-3, presented at the end of this state discussion, shows the area of the proposed rail line connection.

As there are no highway/rail at-grade crossings within the limits of construction, SEA concluded that there would be no effect on highway traffic from this proposed rail line connection.

There would be no short term vehicular delays and detours during construction of this rail connection. NS would perform the construction in accordance with applicable Federal, state, and local regulations for construction projects. Construction traffic would use Taft Street to travel to and from the construction site.

5-IN.10.2 Abandonments

SEA analyzed the transportation effects of proposed abandonments in Indiana resulting from the proposed Conrail Acquisition. For the proposed abandonment, the transportation effects are related to at-grade crossings. Therefore, SEA used the same analysis methods described for highway/rail at-grade crossing delay and safety.

Summary of Potential Effects And Preliminary Recommended Mitigation

Abandonment: South Bend to Dillon Junction (St. Joseph and LaPorte Counties) (NS)

As part of the proposed Acquisition, NS would abandon its existing 21.5 mile long rail line between South Bend and Dillon Junction. The abandonment would eliminate 20 public highway/rail at-grade crossings and 19 private highway/rail at-grade crossings. Tables 5-IN-10 and 5-IN-11, presented at the end of this state discussion, how the reductions in highway/rail at-grade crossing accident risk and highway/rail at-grade crossing delay, respectively, at public roadways that would occur as a result of this proposed abandonment.

The existing NS rail line currently handles only two through trains per day. NS would divert this rail traffic to another former Conrail line that NS would acquire as part of the proposed Acquisition. There are no local freight customers on the NS rail line. Thus, there would be no freight diverted from rail to truck due to the proposed abandonment. Disruption of traffic due to proposed abandonment activities would be temporary in nature.

SEA concluded that the proposed abandonment would result in small reductions in grade crossing delay and accident risk. Other transportation related effects of the abandonment would be insignificant.

5-IN.11 INDIANA TRANSPORTATION: NAVIGATION

To evaluate potential effects of train traffic on shipping where interaction could occur, SEA reviewed proposed Acquisition-related activities on rail line segments, new constructions (rail line connections only), and rail line abandonments that meet or exceed the Board's thresholds for environmental analysis and involve movable bridges.

SEA identified two movable bridges which carry rail traffic over navigable waterways in Indiana that would meet or exceed the Board's environmental analysis thresholds. CSX owns both bridges which are on rail line segment C-023. One bridge crosses the Grand Calumet River in Hammond. The other bridge crosses the Indiana Harbor near East Chicago. The proposed Conrail Acquisition would result in an increase of 5.7 trains per day on both bridges.

As stated in Section 3.9.1 "Methods for Navigation Issues," the U.S. Coast Guard has jurisdiction over specific actions affecting navigable waters of the U.S. and in all instances

waterborne navigation has the right-of-way. Therefore, any operating constraints due to the post-Acquisition activities would be placed on the railroad and not the waterborne users at movable bridges extending across navigable waterways. The railroads operate bridges under conditions established by the U.S. Coast Guard for the convenience of navigation. SEA evaluated the potential effect of the increase in train traffic on moving the bridges for navigation. Based on the analysis and the small proposed increase in train traffic, SEA expects no adverse impacts from the proposed Conrail Acquisition at these two bridges.

5-IN.12 INDIANA AIR QUALITY

This section summarizes the change in air pollutant emissions that would result from the proposed Acquisition-related operational changes in the state of Indiana. The primary air pollutant emission sources from trains and related activities include locomotive emissions on rail line segments, at rail yards, and at intermodal facilities In addition to locomotive emissions, SEA evaluated emissions from other sources at intermodal facilities (idling trucks, lift cranes, etc.), motor vehicles idling near at-grade crossings, and decreases in truck emissions due to truck-to-rail freight diversions.

To analyze the air quality effects of the proposed Acquisition, SEA evaluated rail line segments, rail yards, and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis defined in Chapter 2, "Proposed Action and Alternatives." See Chapter 3, "Analysis Methods and Potential Mitigation Strategies," for additional information and a summary of the air quality analysis methodology. Appendix E, "Air Quality," contains a detailed description of methodology and detailed tables of results.

SEA addressed air pollutant emissions for sulfur dioxide (SO_2), volatile organic compounds (VOCs), particulate matter (PM), lead (Pb), nitrogen oxides (NO_x) and carbon monoxide (CO). SEA determined that emissions for SO_2, VOCs, PM and Pb would not exceed the emission screening thresholds for environmental analysis in any county. However, SEA found that these thresholds would be exceeded for NO_x in various counties in 17 states, and CO in three counties in two states (IL and OH). NO_x air pollutant emissions may affect a region's ability to attain the National Ambient Air Quality Standards for ozone. CO emissions may affect a local area's ability to attain the National Ambient Air Quality Standards for CO.

Seven NS and ten CSX rail line segments, one NS and one CSX rail yard exceeded the Board's threshold for air quality analysis in Indiana. Table 5-IN-13 shows the air quality evaluation process that was followed. SEA identified twenty-four counties in Indiana which include any part of these rail facilities. For these counties, SEA summed emissions increases from changes on rail line segments and other activities and compared them to the air emission screening level that would require a permit if the source were a stationary source (rather than a mobile source, such as trains, trucks, and other vehicles). If the calculated emissions exceeded this screening level, SEA conducted a detailed emissions analysis known as a "netting analysis" in these counties. The netting analysis considered all emissions increases and decreases from proposed

Acquisition-related activity changes. SEA compared the netting analysis results to the air emission screening level and additional analyses were performed for counties where netting analysis results exceeded the air emission screening level. For these counties, SEA inventoried all county air pollutant emissions sources to evaluate if proposed Acquisition-related emissions represented more than one percent of all emissions sources in the county.

Table 5-IN-13
Indiana Counties Evaluated in Air Quality Analysis

Counties Exceeding the Board's Activity Thresholds	O_3 Status [a]	Exceeds Emissions Screening Level Before Netting	Exceeds Emissions Screening Level After Netting	Exceeds 1% of County Emissions
Allen	A	Yes	Yes	Yes
Carroll	A	Yes	Yes	Yes
Cass	A	Yes	Yes	Yes
DeKalb	A	Yes	Yes	Yes
Delaware	A	No	-	-
Fountain	A	No	-	-
Gibson	A	Yes	Yes	No
Huntington	A	Yes	Yes	Yes
Knox	A	Yes	Yes	Yes
Koscuisko	A	Yes	Yes	Yes
Lake	N (Severe)	Yes	Yes	No
Laporte	A	Yes	Yes	No
Madison	A	No	-	-
Marshall	A	Yes	Yes	Yes
Miami	A	Yes	Yes	Yes
Noble	A	Yes	Yes	Yes
Porter	N (Severe)	Yes	Yes	No
St. Joseph	A	No	-	-
Starke	A	No	-	-
Tippecanoe	A	Yes	Yes	Yes
Vanderburgh	N (Marginal)	Yes	Yes	Yes

Table 5-IN-13
Indiana Counties Evaluated in Air Quality Analysis

Counties Exceeding the Board's Activity Thresholds	O_3 Status [a]	Exceeds Emissions Screening Level Before Netting	Exceeds Emissions Screening Level After Netting	Exceeds 1% of County Emissions
Wabash	A	Yes	Yes	Yes
Warren	A	Yes	Yes	Yes
Whitley	A	No	-	-

[a] A = Attainment Area, M = Maintenance Area, N = Nonattainment Area, as defined in the Clean Air Act.

The emissions estimates presented in Appendix E, "Air Quality," show that the increased county-wide air pollutant emissions from the facilities described above exceed the threshold for eighteen counties in Indiana. SEA's analysis results for these counties are presented below:

5-IN.12.1 County Analysis

Allen County

EPA has designated Allen County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-14 shows that the net NO_x emissions increase in Allen County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Allen County are over one percent of the existing (1995) county-wide NO_x emissions. However, Allen County does not currently have, nor has it had, an O_3 nonattainment problem. Given the current O_3 attainment status of the county and the approximately two percent increase in NO_x emissions, SEA does not expect potential adverse air quality impacts in this county.

Table 5-IN-14
Allen County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Butler, IN to Ft Wayne, IN	129.75
Rail Segment (NS)	Ft Wayne, IN to Peru, IN	96.35
Rail Segment (NS)	Ft. Wayne, IN to Hobart, IN	-35.52
Rail Segment (NS)	Hadley, IN to Hobart, IN	-18.90
Rail Segment (NS)	Ft Wayne, IN to Muncie, IN	-30.81
Rail Segment (NS)	Bellevue, OH to Ft Wayne, IN	21.15
Rail Segment (NS)	Ft. Wayne TC, IN to Ft. Wayne Yd, IN	3.30
Rail Segment (NS)	7 mile segment in Ft. Wayne, IN	66.00
Rail Segment (CSX)	Adams, IN to Ft Wayne, IN	31.17
Rail Segment (CSX)	Bucyrus, OH to Adams, IN	85.92
Rail Segment (CSX)	Ft Wayne, IN to Warsaw, IN	40.68
Rail Yard (NS)	Ft. Wayne - Piqua	-6.21
Rail Yard (NS)	Ft. Wayne	14.05
Rail Yard (CSX)	Ft. Wayne - Piqua	-1.33
Intermodal Facility (NS)	Ft. Wayne - Piqua	1.22
Truck Diversions (both)	County-wide	-7.93
At-Grade Crossings (both)	Affected Crossings > 5000 Vehicles/Day[a]	0.27
Total Acquisition-Related Net NO_x Emissions Increase		389.16
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		18,198.56
Percent Increase in County NO_x Emissions		2.14%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis threshoids, and which have vehicle traffic levels over 5000 vehicles/day.

Carroll County

EPA has designated Carroll County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-15 shows that the net NO_x emissions increase in Carroll County, considering all calculated Acquisition-relatedemissions changes, is above the emissions

screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Carroll County are over one percent of the existing (1995) county-wide NO_x emissions. However, Carroll County does not currently have, nor has it had, an O_3 nonattainment problem. Given the very low existing NO_x emissions and the O_3 attainment status of the county, SEA does not expect potential adverse air quality impacts, despite the relatively large percentage increase in NO_x emissions.

Table 5-IN-15
Carroll County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Ft Wayne, IN to Lafayette, IN	162.46
At-Grade Crossings (both)	Affected Crossings > 5000 Vehicles/Day[a]	0.03
Total Acquisition-Related Net NO_x Emissions Increase		162.49
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		1,504.43
Percent Increase in County NO_x Emissions		10.80%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Cass County

EPA has designated Cass County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-16 shows that the net NO_x emissions increase in Cass County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Cass County are over one percent of the existing (1995) county-wide NO_x emissions. However, Cass County does not currently have, nor has it had, an O_3 nonattainment problem. Given the low existing NO_x emissions and the O_3 attainment status of the county, SEA does not expect potential adverse air quality impacts, despite the estimated 4.04 percent increase in county NO_x emissions.

Table 5-IN-16
Cass County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Ft. Wayne, IN to Lafayette, IN	187.82
Total Acquisition-Related Net NO_x Emissions Increase		187.82
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		4,644.39
Percent Increase in County NO_x Emissions		4.04%

DeKalb County

EPA has designated DeKalb County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-17 shows that the net NO_x emissions increase in DeKalb County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in DeKalb County are over one percent of the existing (1995) county-wide NO_x emissions. However, DeKalb County does not currently have, nor has it had, an O_3 nonattainment problem. Given the very low existing NO_x emissions and the O_3 attainment status of the county, SEA does not expect potential adverse air quality impacts, despite the relatively large percentage increase in NO_x emissions.

Table 5-IN-17
DeKalb County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Butler, IN to Ft Wayne, IN	81.53
Rail Segment (NS)	Oakwood, MI to Butler, IN	7.48
Rail Segment (NS)	Airline, OH to Butler, IN	-19.46
Rail Segment (NS)	Butler, IN to Elkhart, IN	-176.51
Rail Segment (CSX)	Deshler, OH to Willow Creek, IN	416.23
Rail Yard (CSX)	Garrett	2.02
Truck Diversions (both)	County-wide	-0.04
At-Grade Crossings (both)	Affected Crossings > 5000 Vehicles/Day[a]	0.74

Table 5-IN-17
DeKalb County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Total Acquisition-Related Net NO_x Emissions Increase		311.99
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		2,509.17
Percent Increase in County NO_x Emissions		12.43%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Gibson County

EPA has designated Gibson County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-18 shows that the net NO_x emissions increase in Gibson County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Gibson County are less than one percent of the existing (1995) county-wide NO_x emissions. Therefore, SEA does not expect potential adverse impacts in Gibson County due to this emissions increase.

Table 5-IN-18
Gibson County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Vincennes, IN to Evansville, IN	311.18
Rail Segment (NS)	Louisville, KY to East St. Louis, IL	-11.17
Rail Yard (NS)	Princeton	-0.04
Truck Diversions (both)	County-wide	-0.19
At-Grade Crossings (both)	Affected Crossings > 5000 Vehicles/Day[a]	0.05
Total Acquisition-Related Net NO_x Emissions Increase		299.83
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		55,412.18

Table 5-IN-18
Gibson County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Percent Increase in County NO_x Emissions		0.54%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Huntington County

EPA has designated Huntington County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-19 shows that the net NO_x emissions increase in Huntington County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Huntington County are over one percent of the existing (1995) county-wide NO_x emissions. However, Huntington County does not currently have, nor has it had, an O_3 nonattainment problem. Given the low existing NO_x emissions and the O_3 attainment status of the county, SEA does not expect potential adverse air quality impacts, despite the estimated seven percent increase in county NO_x emissions.

Table 5-IN-19
Huntington County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Ft. Wayne, IN to Lafayette, IN	193.27
Truck Diversions (both)	County-wide	-0.62
At-Grade Crossings (both)	Affected Crossings > 5000 Vehicles/Day [a]	0.11
Total Acquisition-Related Net NO_x Emissions Increase		192.76
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		2,752.52
Percent Increase in County NO_x Emissions		7.00%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Knox County

EPA has designated Knox County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-20 shows that the net NO_x emissions increase in Knox

County, considering all calculated Acquisition-relatedemissions changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Knox County are over one percent of the existing (1995) county-wide NO_x emissions. However, Knox County does not currently have, nor has it had, an O_3 nonattainment problem. Given the low existing NO_x emissions and the O_3 attainment status of the county, SEA does not expect potential adverse air quality impacts, despite the approximate five percent increase in county NO_x emissions.

Table 5-IN-20
Knox County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Vincennes, IN to Evansville, IN	154.30
Rail Segment (CSX)	Mitchell, IN to Vincennes, IN	-95.39
Rail Segment (CSX)	Vincennes, IN to Terre Haute, IN	150.56
Rail Segment (CSX)	Vincennes, IN to Salem, IL	-3.43
Truck Diversions (both)	County-wide	-0.26
Total Acquisition-Related Net NO_x Emissions Increase		205.78
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		4,133.55
Percent Increase in County NO_x Emissions		4.98%

Kosciusko County

EPA has designated Kosciusko County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-21 shows that the net NO_x emissions increase in Kosciusko County, considering all calculated Acquisition-relatedemissions changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Kosciusko County are over one percent of the existing (1995) county-wide NO_x emissions. However, Kosciusko County does not currently have, nor has it had, an O_3 nonattainment problem. Given the low existing NO_x emissions and the O_3 attainment status of the county, no potential adverse air quality impact is expected, despite the nearly six percent increase in county NO_x emissions.

Table 5-IN-21
Kosciusko County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Willow Creek, IN to Deshler, OH	280.67
Rail Segment (CSX)	Ft Wayne, IN to Warsaw, IN	38.58
Rail Segment (CSX)	Warsaw, IN to Tolleston, IN	34.29
Rail Segment (NS)	Ft Wayne, IN to Hobart, IN	-67.37
Rail Segment (NS)	Hadley, IN to Hobart, IN	-57.25
Rail Segment (NS)	Goshen, IN to Alexandria, IN	72.97
Total Acquisition-Related Net NO_x Emissions Increase		301.89
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		5,239.30
Percent Increase in County NO_x Emissions		5.76%

Lake County

EPA has designated Lake County as a severe nonattainment area for O_3. EPA has designated parts of the county as nonattainment areas for SO_2, CO, and particulate matter. However, NO_x emissions are the only pollutant emissions potentially significantly affected by the proposed Conrail Acquisition. Table 5-IN-22 shows that the net NO_x emissions increase in Lake County, considering all calculated Acquisition-emissions related changes, is above the emissions screening threshold of 25 tons/year used to determine if emissions changes are potentially significant. EPA has approved a NO_x waiver for Lake County. A NO_x waiver is a determination that NO_x is not a significant factor contributing to O_3 formation in the area.

The increased NO_x emissions in Lake County are well under one percent of the existing (1995) county-wide NO_x emissions. Therefore, SEA does not expect potential adverse impacts in Lake County due to this small emissions increase and the NO_x waiver.

Table 5-IN-22
Lake County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Ft Wayne, IN to Hobart, IN	-3.89
Rail Segment (NS)	Hobart, IN to Hammond, IN	-162.46
Rail Segment (NS)	Hammond, IN to Calumet, IL	-4.38
Rail Segment (NS)	Hadley, IN to Hobart, IN	-3.58
Rail Segment (NS)	Control Pt 501, IN to Indiana Harbor, IN	28.13
Rail Segment (NS)	Porter, IN to Control Pt 501, IN	10.08
Rail Segment (NS)	Indiana Harbor, IN to South Chicago, IL	68.90
Rail Segment (NS)	Colehour, IL to Calumet Park, IL	3.63
Rail Segment (NS)	Indiana Harbor, IN to Kankakee, IL	-63.74
Rail Segment (NS)	Schneider, IN to Wheatfield, IN	-0.28
Rail Segment (CSX)	Willow Creek, IN to Pine Jct, IN	143.08
Rail Segment (CSX)	Willow Creek, IN to Ivanhoe, IN	8.26
Rail Segment (CSX)	Munster, IN to Monon, IN	10.59
Rail Segment (CSX)	Pine Jct, IN to Barr Yard, IL	72.01
Rail Segment (CSX)	Warsaw, IN to Tolleston, IN	27.12
Rail Segment (CSX)	Tolleston, IN to Clarke Jct, IN	18.24
Rail Yard (CSX)	Gary - Gibson	-11.34
Rail Yard (CSX)	Curtis	1.98
Truck Diversions (both)	County-wide	-59.60
At-Grade Crossings (both)	Affected Crossings > 5000 Vehicles/Day [a]	1.01
Total Acquisition-Related Net NO_x Emissions Increase		83.76
NO_x Emissions Screening Level		25.00
Existing (1995) County Total NO_x Emissions		81,780.66
Percent Increase in County NO_x Emissions		0.10%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

LaPorte County

EPA has designated Laporte County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-23 shows that the net NO_x emissions increase in LaPorte

County, considering all calculated Acquisition-relatedemissions changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in LaPorte County are slightly under one percent of the existing (1995) county-wide NO_x emissions. LaPorte County does not currently have, nor has it had, an O_3 nonattainment problem. Given the current O_3 attainment status of the county and the approximate one percent increase in NO_x emissions, SEA does not expect potential adverse air quality impacts in this county.

Table 5-IN-23
LaPorte County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Elkhart, IN to Porter, IN	-73.22
Rail Segment (NS)	Argos, IN to Dillon, IN	-3.32
Rail Segment (NS)	Ft. Wayne, IN to Hobart, IN	-36.74
Rail Segment (NS)	Hadley, IN to Hobart, IN	-32.43
Rail Segment (CSX)	Deshler, OH to Willow Creek, IN	416.23
Rail Segment (CSX)	Warsaw, IN to Tolleston, IN	37.41
Rail Segment (CSX)	Waverly, MI to Porter, IN	-22.21
Truck Diversions (both)	County-wide	-56.89
Total Acquisition-Related Net NO_x Emissions Increase		228.83
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		24,302.30
Percent Increase in County NO_x Emissions		0.94%

Marshall County

EPA has designated Marshall County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-24 shows that the net NO_x emissions increase in Marshall County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Marshall County are over one percent of the existing (1995) county-wide NO_x emissions. However, Marshall County does not currently have, nor has it had,

an O_3 nonattainment problem. Given the low existing NO_x emissions and the O_3 attainment status of the county, SEA does not expect potential adverse air quality impacts, despite the sizeable percentage increase in county NO_x emissions.

Table 5-IN-24
Marshall County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Deshler, OH to Willow Creek, IN	410.50
Rail Segment (CSX)	Warsaw, IN to Tolleston, IN	68.27
Rail Segment (NS)	Argos, IN to Dillon, IN	-17.99
Rail Segment (NS)	Hadley, IN to Hobart, IN	-62.05
Rail Segment (NS)	Ft Wayne, IN to Hobart, IN	-67.06
Total Acquisition-Related Net NO_x Emissions Increase		331.67
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		3,446.92
Percent Increase in County NO_x Emissions		9.62%

Miami County

EPA has designated Miami County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-25 shows that the net NO_x emissions increase in Miami County, considering all calculated Acquisition-relatedemissions changes, is above the emissions screening threshold of 100 tons per year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Miami County are over one percent of the existing (1995) county-wide NO_x emissions. However, Miami County does not currently have, nor has it had, an O_3 nonattainment problem. Given the low existing NO_x emissions and the O_3 attainment status of the county, SEA does not expect potential adverse air quality impacts, despite the estimated 4.61 percent increase in county NO_x emissions.

Table 5-IN-25
Miami County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons per year)
Rail Segment (NS)	Ft Wayne, IN to Lafayette, IN	69.11
Rail Segment (NS)	Peru, IN to Lafayette, IN	55.92
Total Acquisition-Related Net NO_x Emissions Increase		125.03
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		2,709.33
Percent Increase in County NO_x Emissions		4.61%

Noble County

EPA has designated Noble County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-26 shows that the net NO_x emissions increase in Noble County, considering all calculated Acquisition-relatedemissions changes, is above the emissions screening threshold of 100 tons per year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Noble County are over one percent of the existing (1995) county-wide NO_x emissions. However, Noble County does not currently have, nor has it had, an O_3 nonattainment problem. Given the low existing NO_x emissions and the O_3 attainment status of the county, SEA does not expect potential adverse air quality impacts, despite the nearly seven percent increase in county NO_x emissions.

Table 5-IN-26
Noble County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Butler, IN to Elkhart, IN	-263.98
Rail Segment (CSX)	Deshler, OH to Willow Creek, IN	479.23
Total Acquisition-Related Net NO_x Emissions Increase		215.25
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		3,228.81
Percent Increase in County NO_x Emissions		6.67%

Porter County

EPA has designated Porter County as a severe nonattainment area for O_3. EPA has approved a NO_x waiver for Porter County. A NO_x waiver is a determination that NO_x is not a significant factor contributing to O_3 formation in the area.

Table 5-IN-27 shows that the net NO_x emissions increase in Porter County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 25 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Porter County are under one percent of the existing (1995) county-wide NO_x emissions. Therefore, SEA does not expect potential adverse impacts in Porter County due to this relatively small emissions increase and the NO_x waiver.

Table 5-IN-27
Porter County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Porter, IN to Control Pt 501, IN	7.62
Rail Segment (NS)	Elkhart, IN to Porter, IN	-23.57
Rail Segment (NS)	Ft Wayne, IN to Hobart, IN	-50.83
Rail Segment (NS)	Hadley, IN to Hobart, IN	-47.95
Rail Segment (CSX)	Willow Creek, IN to Pine Jct, IN	30.86
Rail Segment (CSX)	Deshler, OH to Willow Creek, IN	271.12
Rail Segment (CSX)	Porter, IN to Willow Creek, IN	-5.01
Rail Segment (CSX)	Willow Creek, IN to Ivanhoe, IN	1.59
Rail Segment (CSX)	Waverly, MI to Porter, IN	-20.60
Rail Segment (CSX)	Warsaw, IN to Tolleston, IN	51.75
Truck Diversions (both)	County-wide	-39.07
At-Grade Crossings (both)	Affected Crossings > 5000 Vehicles/Day [a]	0.15
Total Acquisition-Related Net NO_x Emissions Increase		176.06
NO_x Emissions Screening Level		25.00
Existing (1995) County Total NO_x Emissions		40,655.52
Percent Increase in County NO_x Emissions		0.43%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Tippecanoe County

EPA has designated Tippecanoe County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-28 shows that the net NO_x emissions increase in Tippecanoe County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons per year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Tippecanoe County are over one percent of the existing (1995) county-wide NO_x emissions. However, Tippecanoe County does not currently have, nor has it had, an O_3 nonattainment problem. Given the low existing NO_x emissions and the O_3 attainment status of the county, SEA does not expect potential adverse air quality impacts, despite the estimated 2.48 percent increase in county NO_x emissions.

Table 5-IN-28
Tippecanoe County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Peru, IN to Lafayette, IN	154.98
Rail Segment (NS)	Lafayette, IN to Tilton, IL	118.90
Rail Segment (NS)	Lafayette, IN to Alexandria, IN	12.59
Rail Segment (CSX)	Monon, IN to Lafayette, IN	4.71
Rail Segment (CSX)	Lafayette, IN to Crawfordsville, IN	5.42
Rail Yard (NS)	Lafayette	-0.26
Rail Yard (CSX)	Lafayette	-2.44
Truck Diversions (both)	County-wide	-3.33
At-Grade Crossings (both)	Affected Crossings > 5000 Vehicles/Day[a]	0.69
Total Acquisition-Related Net NO_x Emissions Increase		291.26
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		11,763.72
Percent Increase in County NO_x Emissions		2.48%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Vanderburgh County

EPA has designated Vanderburgh County as a marginal nonattainment area for O_3. EPA is in the process of redesignating the county to attainment status for O_3. No O_3 exceedances have been monitored for over three years in the county.

Table 5-IN-29 shows that the net NO_x emissions increase in Vanderburgh County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons per year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Vanderburgh County are over one percent of the existing (1995) county-wide NO_x emissions. While the estimated 2.57 percent increase in NO_x is not a large percentage, the EPA currently designates the county as a marginal nonattainment area and the county has no NO_x waiver. The EPA has not ruled out NO_x as contributing to the formation of O_3 in the county but, it is redesignating the county to attainment for O_3. Therefore, SEA does not anticipate the relatively small increase in NO_x emissions likely to affect O_3 attainment in the county.

Table 5-IN-29
Vanderburgh County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Vincennes, IN to Evansville, IN	198.02
Rail Segment (CSX)	Evansville, IN to Amqui, TN	111.44
Rail Yard (CSX)	Evansville - Howell	2.51
Intermodal Facility (CSX)	Evansville	0.16
Truck Diversions (both)	County-wide	-0.92
At-Grade Crossings (both)	Affected Crossings > 5000 Vehicles/Day [a]	0.18
Total Acquisition-Related Net NO_x Emissions Increase		311.39
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		12,094.44
Percent Increase in County NO_x Emissions		2.57%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Wabash County

EPA has designated Wabash County an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-30 shows that the net NO_x emissions increase in Wabash County, considering all calculated Acquisition-relatedemissions changes, is above the emissions screening threshold of 100 tons per year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Wabash County are over one percent of the existing (1995) county-wide NO_x emissions. However, Wabash County does not currently have, nor has it had, an O_3 nonattainment problem. Given the low existing NO_x emissions and the O_3 attainment status of the county, SEA does not expect potential adverse air quality impacts, despite the estimated 8.38 percent increase in county NO_x emissions.

Table 5-IN-30
Wabash County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Ft Wayne, IN to Peru, IN	156.79
Rail Segment (NS)	Goshen, IN to Alexandria, IN	82.00
At-Grade Crossings (both)	Affected Crossings > 5000 Vehicles/Day[a]	0.06
Total Acquisition-Related Net NO_x Emissions Increase		238.85
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		2,849.04
Percent Increase in County NO_x Emissions		8.38%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Warren County

EPA has designated Warren County as an attainment area for all pollutants, with no maintenance areas for any pollutant. Table 5-IN-31 shows that the net NO_x emissions increase in Warren County, considering all calculated Acquisition-relatedemissions changes, is above the emissions screening threshold of 100 tons per year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Warren County are over one percent of the existing (1995) county-wide NO_x emissions. However, Warren County does not currently have, nor has it had, an O_3 nonattainment problem. Given the very low existing NO_x emissions and the O_3 attainment

status of the county, SEA does not expect potential adverse air quality impacts, despite the relatively large 15.4 percent increase in county NO_x emissions.

Table 5-IN-31
Warren County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Lafayette, IN to Tilton, IL	167.81
Truck Diversions (both)	County-wide	-1.20
Total Acquisition-Related Net NO_x Emissions Increase		166.61
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		1,082.12
Percent Increase in County NO_x Emissions		15.40%

5-IN.12.2 Summary of Potential Effects and Preliminary Mitigation

While there are localized increases in emissions in some counties, the increases are not likely to affect compliance with air quality standards. Therefore, SEA has determined that air quality will not be significantly affected and no mitigation is necessary. See system-wide and regional discussion in Section 4.12 "Air Quality."

5-IN.13 INDIANA NOISE

To analyze the noise impacts of the proposed Acquisition, SEA evaluated rail line segments, rail yards and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis of noise. Although new construction projects and rail line abandonments can result in noise increases, the noise effects would be temporary and therefore, SEA did not evaluate them.

5-IN.13.1 Proposed Activities

Train noise sources include diesel locomotive engine and wheel/rail interaction noise (or wayside noise) and horn noise. Wayside noise affects all locations in the vicinity of the rail facility, and generally diminishes with distance from the source. Horn noise is an additional noise source at grade crossings, and also generally diminishes with distance. SEA performed an analysis to identify rail line segments, rail yards and intermodal facilities where the proposed changes in operations meet or exceed the Board's environmental analysis thresholds at 49 CFR 1105.7(e)(6). Where the proposed rail activity would exceed these thresholds, SEA calculated the 65 dBA L_{dn} noise contours for the pre- and post-Acquisition conditions. SEA based the noise

level impact assessment on the projected activity level data provided by the railroads. SEA counted sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) within the noise contours for both pre-Acquisition and post-Acquisition operating conditions.

The CSX and NS rail line segments and rail yards that would experience increases in traffic or activity meeting the Board's environmental analysis thresholds for Indiana are listed in Tables 5-IN-32 and 5-IN-33. Table 5-IN-34 shows the facilities with noise sensitive receptors exceeding 65 dBA L_{dn}.

The counties where these facilities are located are listed in Section 5-IN.2 "Proposed Conrail Acquisition Activities in Indiana."

Table 5-IN-32
Rail Line Segments in Indiana That Meet or Exceed Board Thresholds for Noise Analysis

Site ID	Segment		Trains Per Day			Percent Change in Gross Ton Miles
	From	To	Pre-Acquisition	Post-Acquisition	Increase	
C-020	Adams	Ft. Wayne	5.9	13.9	8.0	460
C-021 [b]	Evansville	Amqui, TN	23.4	32.7	9.3	53
C-022	Ft. Wayne	Warsaw	2.4	6.4	4.0	214
C-024	Tolleston	Clark Jct.	0	5.0	5.0	[a]
C-025 [b]	Vincennes	Evansville	22.3	30.8	8.5	75
C-026	Warsaw	Tolleston	1.0	5.0	4.0	206
C-027	Willow Creek	Pine Jct.	22.1	38.6	16.4	105
C-062	Bucyrus, OH	Adams	5.9	13.9	8.0	412
C-066	Deshler	Willow Creek	21.4	47.7	26.3	111
N-040	Alexandria	Muncie	2.6	11.8	9.2	370
N-041	Butler	Ft. Wayne	13.6	27.3	13.7	99
N-042 [b]	Control Pt. 501	Indiana Harbor	43.4	60.3	16.9	33
N-043 [b]	Ft. Wayne TC	Ft. Wayne Yard	6.6	9.6	3.0	132
N-044	Ft. Wayne	Peru	19.0	34.9	15.9	100
N-045	Lafayette	Tilton, IL	23.6	41.0	17.4	80
N-046	Peru	Lafayette	18.4	40.2	21.8	113

[a] not applicable (cannot be divided by zero)

[b] SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

Table 5-IN-33
Rail Yard Facilities in Indiana That Meet or Exceed Board Thresholds for Noise Analysis

Site ID	Facility Location	Railcars Per Day		Change in dBA	Approx. distance (feet) to 65 dBA L_{dn} contour
		Pre-Acquisition	Post-Acquisition		
NY-03	Ft. Wayne	283	583	3.1	1000

Table 5-IN-34
Noise Sensitive Receptors In Indiana Exceeding 65 dBA L_{dn}

Site ID	Name	Pre-Acquisition	Post-Acquisition	Increase
Rail Line Segments				
C-020	Adams-Ft. Wayne	24	35	11
C-022	Ft. Wayne-Warsaw	133	662	529
C-024	Tolleston-Clark Jct.	0	158	158
C-026	Warsaw-Tolleston	185	845	660
C-027	Willow Creek-Pine Jct.	340	509	169
C-062	Bucyrus, OH-Adams	759	1685	926
C-066	Deshler-Willow Creek	668	1152	484
N-040	Alexandria-Muncie	85	471	386
N-041	Butler-Ft. Wayne	199	462	268
N-044	Ft. Wayne-Peru	679	1076	397
N-045	Lafayette-Tilton, IL	531	742	211
N-046	Peru-Lafayette	689	1554	865
Rail Yards				
NY-03	Ft. Wayne	16	32	16

5-IN.13.2 Summary of Potential Effects and Preliminary Recommended Noise Mitigation

There are different noise mitigation techniques used to reduce horn noise and wayside noise. These different types of noise and mitigation techniques are as follows:

Grade Crossing Noise Effects. The Federal Railroad Administration (FRA) has indicated that it will propose new rules on train horn blowing procedures in 1998. These new rules may allow communities to apply for an exception to horn blowing at certain grade crossings that meet explicit criteria. These criteria relate to so-called "quiet zones" where FRA would no longer require train engineers to sound the train horn at grade crossings with special upgraded safety features. Examples of such safety features include four-quadrant gates and median barriers that preclude motorists from entering the crossings while the crossing arm is down. Until FRA develops and implements these regulations, these measures are not feasible for SEA to require as mitigation. However, communities will have the opportunity to qualify for "quiet zones" once the FRA regulations are in place.

Wayside Noise Effect. Wayside noise is the sound of a train as it passes by. Wayside noise is comprised of steel wheel/rail interaction noise, and locomotive diesel engine noise. This type of noise can be reduced by constructing barriers between the railway noise source and adjoining land uses, and by installing building sound insulation. Noise barriers include earth berms and walls that block the sound. Rail lubrication can be used to reduce "wheel squeal" noise on curved track. Building sound insulation consists of special windows and other building treatments that reduce interior noise. Noise barriers are the preferred type of noise mitigation for this project since barriers can be built on railroad property. Additional discussion of noise mitigation measures is included in Appendix F, "Noise Methods."

As noted above, for receptors near grade crossings that would experience increases in noise resulting from horn sounding, mitigation is not currently feasible. For areas affected by wayside noise, SEA considered rail line segments eligible for noise mitigation for noise sensitive receptors exposed to at least 70 dBA L_{dn} and an increase of at least 5 dBA L_{dn} due to increased rail activity.

It is SEA's preliminary conclusion that no rail line segments, rail yards, or intermodal facilities in the state of Indiana warrant noise mitigation according to the project mitigation criteria.

5-IN.14 INDIANA CULTURAL RESOURCES

Cultural resources include historic and archaeological features. SEA determined that potential effects to cultural resources would most likely occur during new construction and rail line proposed abandonment activities that meet or exceed the Board's thresholds for environmental analysis.

Based on site visits and evaluation of railroad documents, SEA identified cultural resources that may be affected by Acquisition-related construction and abandonment. SEA included qualified professionals in the fields of architectural history and archaeology specific to the State of Indiana. SEA presented its methods, findings, and supporting documentation to the Indiana State Historic Preservation Office (SHPO) on July 18, 1997.

5-IN.14.1 Construction

Based on records searches and a field survey, SEA did not find any cultural resources eligible for, or listed, on the National Register of Historic Places within the area of potential effects for the construction projects in Indiana. However, SEA identified one building more than 50 years of age at Butler (NS), and background information to support its ineligibility to the National Register of Historic Places is presented below. On July 24, 1997, and October 24, 1997, SEA sent support documentation to the Indiana SHPO and requested concurrence with its findings. Refer to Appendix M for agency correspondence.

Construction: Tolleston Connection (Lake County, IN) (NS). SEA determined there are no cultural resources at the Tolleston site, therefore, there would be no adverse effects, and SEA did not recommend any mitigation.

Construction: Butler Connection (De Kalb County, IN) (NS)

Historical Background. The origin of the Conrail line dates to May 1856 when the Michigan Southern and Northern Indiana Rail Road, under construction from Toledo to Chicago, reached Butler. Later, the rail line served as the New York Central main line between Chicago and New York. It came to be known as the "Air Line," and remains heavily traveled. The NS line dates to 1873 when the Eel River Railroad was constructed. In 1879 the Eel River was leased by Jay Gould, who then assigned it to his Wabash, St. Louis and Pacific Railroad. In 1964 the Wabash came under control of the Norfolk & Western, one of the predecessors of Norfolk Southern.

Resources Identified. SEA identified one residential building more than 50 years of age near the Butler (NS) connection at 646 Main Street, however it appeared ineligible for the National Register of Historic Places because of a lack of integrity.

Potential Effects. Since there are no cultural resources located at this site, SEA determined there would be no adverse effects and SEA did not recommend any mitigation.

5-IN.14.2 Proposed Abandonments

SEA identified one proposed abandonment in Indiana. SEA presented these findings to the Indiana SHPO in a meeting on July 18, 1997, and submitted supporting documentation on October 24, 1997. Refer to Appendix M for agency correspondence.

Proposed Abandonment: South Bend to Dillon Junction (NS)

Historical Background. The proposed South Bend to Dillon Junction (NS) abandonment includes two historically distinct segments. The east-west segment from Dillon Junction to North Liberty was originally constructed in 1893 by the Wabash Railway as part of a short route between Chicago and Detroit. The rail line lost its importance after the Norfolk & Western

acquisition of the Wabash and New York, Chicago and St. Louis Railway (Nickel Plate Road) in 1964 because of better alternate routes. Most of the rail line was abandoned in 1984, but short segments were retained to serve local industries. The north-south segment was originally built in 1905 by the Singer Manufacturing Co., and was named the New Jersey, Indiana & Illinois Railroad, after the locations of Singer's major sewing machine factories. The Wabash purchased the New Jersey, Indiana & Illinois Railroad in 1926. Although the rail line never was constructed to its namesake destination points, it served as an industry supply route for both Singer and the Studebaker Corp. until ownership was transferred to Norfolk Southern in August 1982.

Resources Identified. Based on the field survey and analysis conducted by SEA, which included a qualified architectural historian and a bridge historian, SEA identified five railroad bridges more than 50 years of age along the proposed abandonment, however SEA found that none appeared to be eligible for or to be listed on, the National Register of Historic Places (historic property). The bridges identified included the crossing of the Little Kankakee River at M.P. SK-21.56 (built 1939), the Miller Ditch at M.P. SK-20.01 (built 1923), and three crossings of Potato Creek at M.P. SK-17.73 (built 1942), M.P. 16.03 (built 1936), and M.P. SK-12.08 (built 1904).

Potential Effects. Since SEA found no cultural resources along this proposed abandonment, SEA determined there would be no adverse effects and did not recommend any mitigation.

5-IN.15 INDIANA HAZARDOUS MATERIALS AND WASTE SITES

In analyzing the effects on hazardous waste sites for the proposed Conrail Acquisition, the primary issue addressed was whether proposed construction and abandonment activities would disturb contaminated areas. SEA identified potential impacts on hazardous waste sites and related environmental concerns for each location where proposed Acquisition-related construction or abandonment activities would take place.

SEA investigated the following sites in Indiana for potential hazardous materials or waste impacts:

- Butler Construction.
- Tolleston Construction.
- South Bend to Dillon Junction Abandonment.

5-IN.15.1 Construction- Butler Connection (De Kalb, IN) (NS)

Existing Environment. The Environmental Data Resources, Inc. (EDR, 1997) report identified no hazardous waste sites or related environmental concerns within 500 feet of the proposed connection. However, the EDR report identified four sites that could not be mapped due to inadequate address information. SEA identified one of the sites that could not be mapped more

than one mile from the site. The locations of the three remaining sites could not be determined. SEA supplemented this information through contact with a local official (Fire Chief Husted) and a site visit on July 16, 1997. SEA determined that there are above-ground storage tanks (ASTs) within 500 feet of the construction site. Key site information is summarized below.

1. During the site visit, SEA identified six ASTs located 100 feet north of the site but off the proposed right-of-way.

Potential Effects and Preliminary Recommended Mitigation. SEA identified one environmental concern, the six ASTs, within 500 feet of the proposed connection. These tanks are outside the limits of the right-of-way and should not pose a concern. However, the locations of three sites that could not be mapped are unknown. SEA does not anticipate that the proposed connection would disturb known hazardous materials. Site-specific mitigation measures are not proposed. If hazardous materials are encountered during construction, NS would follow appropriate regulations and procedures described in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," and Appendix H. Because existing regulatory requirements of other agencies and standard construction practices of the railroad adequately address potential disturbance of contaminated areas, it is SEA's preliminary determination that no additional mitigation is necessary.

5-IN.15.2 Construction-Tolleston Connection (Lake County, IN) (NS)

Existing Environment. The EDR report (1997) identified no hazardous waste sites or other waste concerns within 500 feet of the proposed connection. However, the EDR report identified five sites that could not be mapped due to inadequate address information. SEA could not locate these sites. SEA supplemented this information through contact with a local official (Fire Department Captain Thomas) and a site visit on July 17, 1997. SEA determined that there is one environmental concern within 500 feet of the proposed connection. Key site information is summarized below.

1 During the site visit, SEA identified household trash consisting of mattresses and other bedding, carpet, and chairs on the limits of the proposed connection.

Potential Effects and Preliminary Recommended Mitigation. SEA identified one environmental concern, household trash, within 500 feet of the proposed connection. The locations of the five sites that could not be mapped are unknown. SEA does not anticipate that the proposed connection would disturb known hazardous materials. If hazardous materials are encountered during construction, NS would follow appropriate regulations and procedures described in Appendix H. Because existing regulatory requirements of other agencies and standard construction practices of the railroad adequately address potential disturbance of contaminated areas, it is SEA's preliminary determination that no additional mitigation is necessary.

5-IN.15.3 Abandonment-South Bend to Dillon Junction (NS)

Existing Environment. The EDR report (1997) identified 13 sites, one National Priority List/ Comprehensive Environmental Response, Compensation, and Liability System (NPL/CERCLIS) site; two Resource Conservation and Recovery Information System-Treator, Storer, Disposer sites; six Leaking Underground Storage Tank sites; and four IN spill sites within 500 feet of the abandonment. The actual proposed abandonment endpoint is approximately 200 feet northeast of US highway 20/31, about three miles shorter than shown in the Environmental Report. These sites are, therefore, no longer in the area of concern. In addition, the EDR report identified 84 sites that could not be mapped due to inadequate address information. SEA could not locate these sites. SEA supplemented this information through contact with a local official (Fire Chief Praywat) and a site visit on July 15, 1997. SEA determined that there are no known hazardous waste sites or related environmental concerns within 500 feet of the proposed abandonment.

Potential Effects and Preliminary Recommended Mitigation. SEA identified no hazardous waste sites within 500 feet of the proposed connection. However, the locations of the 84 sites that could not be mapped are unknown. SEA does not anticipate that the proposed abandonment would disturb known hazardous materials. If hazardous materials are encountered during construction activities, NS would follow appropriate regulations and procedures described Chapter 3, "Analysis Methods and Potential Mitigation Strategies," and Appendix H. Because existing regulatory requirements of other agencies and standard construction practices of the Applicant adequately address potential disturbance of contaminated areas, it is SEA's preliminary determination that no additional mitigation is necessary.

5-IN.16 INDIANA NATURAL RESOURCES

SEA focused the natural resources analysis on any proposed physical alteration affecting water resources, wetlands, biological resources, and wildlife habitats. SEA determined that the potential for impacts to water resources, wetlands, biological resources, and wildlife habitats would most likely be associated with site-specific projects related to the proposed abandonment of rail lines and construction of new connector lines, rail yards, and intermodal facilities.

SEA evaluated the proposed construction of two new connections and one proposed abandonment in the state of Indiana. SEA contacted appropriate Federal and state regulatory and review agencies for natural resources regarding the proposed projects that would occur within their jurisdictions. Specifically, for the state of Indiana, SEA coordinated with:

- U.S. Department of Agriculture Forest Service.
- U.S. Department of Agriculture Natural Resources Conservation Service.
- U.S. Department of the Army Corps of Engineers.

- U.S. Department of the Interior Fish and Wildlife Service (USFWS).
- U.S. Department of the Interior National Park Service.
- U.S. Environmental Protection Agency.
- Indiana Department of Environmental Management.
- Indiana Department of Natural Resources.

SEA determined that potential impacts to natural resources could occur at:

- Construction: Tolleston.
- Construction: Butler.
- Abandonment: South Bend to Dillon Junction.

The following tables present the Federally protected animal and plant species that occur in Indiana, as identified by the USFWS Division of Endangered Species (August 1997). Based on information from the USFWS local field office in Bloomington, Indiana, SEA identified species known to occur in counties affected by proposed Acquisition-related activities. "Threatened" describes a species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range; "Endangered" describes a species that is in danger of extinction within the foreseeable future throughout all or a significant portion of its range. The USFWS lists the Piping Plover as endangered within the Great Lakes watershed in the state of Indiana; elsewhere, it lists this species as threatened. Appendix I includes brief descriptions of suitable habitats for these threatened and endangered species.

Table 5-IN-35
Federally Protected Animal Species Listed for Indiana

Group	Common Name	Scientific Name	Status	DeKalb County	Lake County	LaPorte County	St. Joseph Co.
Vertebrates							
Mammal	Gray Bat	*Myotis grisescens*	Endangered				
Mammal	Indiana Bat	*Myotis sodalis*	Endangered	x	x	x	x
Bird	Bald Eagle	*Haliaeetus leucocephalus*	Threatened	x	x	x	x
Bird	American Peregrine Falcon	*Falco peregrinus anatum*	Endangered		x	x	x
Bird	Piping Plover	*Charadrius melodus*	Endangered				
Bird	Least Tern	*Sterna antillarum*	Endangered				
Reptile	Northern Copperbelly Water Snake	*Nerodia erythrogaster neglecta*	Threatened	x	x	x	x
Invertebrates							
Insect	Mitchell's Satyr Butterfly	*Neonympha mitchellii mitchellii*	Endangered			x	
Insect	Karner Blue Butterfly	*Lycaeides melissa samuelis*	Endangered		x		
Clam	Clubshell	*Pleurobema clava*	Endangered	x			
Clam	Fanshell	*Cyprogenia stegaria*	Endangered				
Clam	Ring Pink Mussel (= golf stick pearly)	*Obovaria retusa*	Endangered				
Clam	Cracking Pearlymussel	*Hemistena lata*	Endangered				
Clam	Orange-footed Pearlymussel (= pimple back)	*Plethobasus cooperianus*	Endangered				
Clam	Tubercled-blossom Pearlymussel	*Epioblasma torulosa torulosa*	Endangered				
Clam	Pink Mucket Pearlymussel	*Lampsilis abrupta*	Endangered				

Table 5-IN-35
Federally Protected Animal Species Listed for Indiana

Group	Common Name	Scientific Name	Status	DeKalb County	Lake County	LaPorte County	St. Joseph Co.
Clam	White Cat's Paw Pearlymussel	*Epioblasma obliquata perobliqua (=sulcata delicata)*	Endangered	x			
Clam	White Wartyback Pearlymussel	*Plethobasus cicatricosus*	Endangered				
Clam	Northern Riffleshell	*Epioblasma torulosa rangiana*	Endangered	x			
Clam	Rough Pigtoe	*Pleurobema plenum*	Endangered				
Clam	Fat Pocketbook	*Potamilus capax*	Endangered				

Source: USFWS - Region 3 Office

Table 5-IN-36
Federally Protected Plant Species Listed for Indiana

Name	Common Name	Scientific Name	Status	DeKalb County	Lake County	LaPorte County	St. Joseph Co.
Asclepiadaceae	Mead's Milkweed	*Ascelepias meadii*	Threatened				
Asteraceae	Pitcher's Thistle	*Cirsium pitcheri*	Threatened				
Fabaceae	Running Buffalo Clover	*Trifolium stoloniferum*	Endangered				

Source: USFWS - Region 3 Office

5-IN.16.1 Summary of Potential Effects and Preliminary Recommended Mitigation for New Constructions

Construction: Tolleston (Lake County, IN) (NS)

The proposed action at Tolleston involves constructing approximately 900 feet of connecting track. Figure 5-IN-3, presented at the end of this state discussion, depicts the site and the surrounding conditions.

Water Resources

Existing Conditions - Water Resources. Based on review of U.S. Geological Survey topographic maps and observations made during the site visit, SEA determined that there are no water bodies within 500 feet of the proposed construction area or in the immediate vicinity of the Tolleston site. The nearest water resource is the Grand Calumet River, which is located approximately 0.6 miles north of the proposed connection at Tolleston. Based on review of National Wetland Inventory maps and observations made during the site visit, SEA determined that there are no wetlands located in the Tolleston construction area.

Based on review of Federal Emergency Management Agency Flood Insurance Rate Maps, SEA determined that the Tolleston site is not located within the 100-year floodplain.

Potential Effects - Water Resources. Since SEA did not identify any waters or wetlands within or near the construction area, SEA determined that the proposed action would not affect any water resources at the Tolleston site. Therefore, the proposed action may not require authorization under Section 404 of the Clean Water Act. A National Pollutant Discharge Elimination System stormwater permit may not be required pursuant to Section 402 of the Clean Water Act because the total land area to be disturbed during construction activities is estimated to be less than five acres.

SEA also evaluated the potential impacts of soil erosion resulting from cleared vegetation and exposed soil. SEA concluded that the proposed construction would not cause significant erosion since NS will implement Best Management Practices to control runoff and to stabilize the soil. In addition to implementing these Best Management Practices, NS will restore disturbed soil areas located outside the existing railroad bed through re-seeding of grass. These measures would also prevent or minimize any impacts to the Grand Calumet River, located approximately one-half mile north of the Tolleston site.

SEA determined that, because the construction project area is not located within the 100-year floodplain, there would be no impacts to floodplains at the Tolleston site.

Biological Resources

During the site visit, SEA noted that the existing Tolleston site has been heavily disturbed and is surrounded by residential land uses.

Existing Conditions - Vegetation. Gravel covers most of the existing right-of-way at the Tolleston site. Vegetation, consisting of grasses and deciduous trees growing in gravel, covers the area immediately adjacent to the existing right-of-way. In the area surrounding the right-of-way, vegetation consisting of non-native grasses, a strip of shrubs, and scattered deciduous trees cover the landscape. SEA did not observe any wetland vegetation. The vegetation currently existing within and outside the project area at Tolleston is not unique or limited to the proposed construction site.

Potential Effects - Vegetation. SEA determined that the proposed construction at Tolleston would affect common vegetation that is characteristic of disturbed areas. Specifically, the construction would affect grass species and a narrow strip of shrubs and scattered deciduous trees located within the existing railroad right-of-way. SEA concluded that these plant species would naturally revegetate the new railroad right-of-way.

Existing Conditions - Wildlife. During the site visit, SEA observed that most of the Tolleston project site and surrounding area is grassed or wooded and has been disturbed by rail activity. This area contains wildlife habitat suitable as food and cover for bird species, including songbirds, gamebirds, waterfowl, and raptors. Large and small mammals, including deer, foxes, raccoons, rabbits, and field mice, are typical inhabitants of these areas.

Potential Effects - Wildlife. SEA determined that the proposed construction at Tolleston would not adversely affect wildlife populations. Construction activities would temporarily disturb wildlife along the proposed connection, but the wildlife would soon re-inhabit the Tolleston site following the completion of construction activities. In addition, SEA concluded that the proposed project would not adversely affect the movement or migration of wildlife at the Tolleston site or in the surrounding area.

Existing Conditions - Threatened and Endangered Species. Based on coordination with representatives of the USFWS in the Bloomington field office, SEA determined that five animal species Federally listed as threatened or endangered, are known to occur in Lake County. These are shown in Table 5-IN-35. Representatives of the Indiana Department of Natural Resources indicated that there are no reports of any Federally listed threatened or endangered plant or animal species that occur in the Tolleston project vicinity. During the site visit, SEA evaluated the habitat present on the site for its potential to support these species, and found that the area does not support habitat requirements of the listed species. In addition, during the site visit, SEA did not observe any of these listed species. Based on these findings, SEA determined that there is minimal potential for the presence of these Federally listed threatened or endangered species at the Tolleston site.

Potential Effects - Threatened and Endangered Species. Since Federally listed threatened and endangered species, or the habitat needed to support them, are not located at or within the vicinity of the proposed construction, SEA determined that the proposed construction would not adversely affect these species. Additionally, SEA concluded that these findings indicate that the proposed action would not adversely affect critical habitat for any Federally listed species at the Tolleston site.

Existing Conditions - Parks, Forests, Preserves, Refuges, and Sanctuaries. SEA contacted representatives of the USFWS, the National Park Service, and the U.S. Forest Service to identify land within the jurisdiction of these Federal agencies. Based on this coordination, SEA determined that there are no Federal or state parks, forests, preserves, refuges, or sanctuaries located within or adjacent to the proposed construction site at Tolleston.

Potential Effects - Parks, Forests, Preserves, Refuges, and Sanctuaries. Since there are no Federal or state parks, forests, preserves, refuges, and sanctuaries that exist within one mile of the Tolleston site, SEA concluded that the proposed construction would not adversely affect these types of resources.

Preliminary Recommended Mitigation: Tolleston

Due to Best Management Practices used in the railroad's construction specifications and regulatory programs governing effects on wetlands, water resources and protected species, it is SEA's preliminary determination that no mitigation is necessary. However, as a condition of approval, SEA would require NS to conform to its standard specifications during construction. These standard specifications are presented in Chapter 3, Section 3.15, "Natural Resources."

Construction: Butler (De Kalb County, IN) (NS)

The proposed action at Butler involves the construction of a connecting track that would be approximately 1,700 feet long. Figure 5-IN-2, presented at the end of this state discussion, depicts the site and the surrounding conditions.

Existing Conditions - Water Resources. Based on review of U.S. Geological Survey topographic maps and observations made during the site visit, SEA determined that there are no water resources within 500 feet of the proposed construction area or in the immediate vicinity of the Butler site.

Based on review of National Wetland Inventory maps and observations made during the site visit, SEA determined that an unmapped drainage ditch exists on the Butler site. The ditch extends from the northern area of the proposed construction and drains off-site into Big Run Creek, which then empties into the St. Joseph River, located approximately five miles east of the proposed Butler site. This ditch contains a mixture of wetland plants and shrubs and is approximately 180 feet by 10 feet in total area. SEA evaluated this area and determined that it

meets the wetland criteria established by the U.S. Army Corps of Engineers.

Based on review of Federal Emergency Management Agency Flood Insurance Rate Maps, SEA determined that the Butler site is not located within the 100-year floodplain.

Potential Effects - Water Resources. Since there are no surface waters at the Butler construction site, the proposed construction would not adversely affect this type of resource. SEA determined that the Butler construction activities would cause fill material to be placed in the small ditch which it had determined is a wetland. Therefore, the proposed action may require authorization under Section 404 of the Clean Water Act. A National Pollutant Discharge Elimination System stormwater permit may not be required pursuant to Section 402 of the Clean Water Act because the total land area to be disturbed during construction activities is estimated to be less than five acres.

SEA concluded that potential impacts from soil erosion resulting from cleared vegetation and exposed soil would not be significant, since NS would implement Best Management Practices to control runoff and to stabilize the soil. In addition to implementing these Best Management Practices, NS would restore disturbed soil areas located outside the existing railroad bed through re-seeding of grass.

Since the Butler construction area is not located within the 100-year floodplain, the proposed construction would not adversely affect floodplains.

Biological Resources

During the site visit, SEA noted that the existing Butler site consists of an active rail line, which is surrounded by residential, rail, and commercial land uses.

Existing Conditions - Vegetation. Gravel covers most of the Butler construction area and vegetative cover is limited. SEA observed several areas of grass and weedy species. The vegetation surrounding the Butler site consists of immature trees and shrubs, mostly mixed hardwood species. Previous railroad development at this site has significantly disturbed the general area.

The small drainage ditch observed on the Butler site had moist soil conditions and contained cattails (*Typha latifolia*) and immature willows (*Salix* spp.) SEA evaluated this area and determined that it meets the wetland criteria established by the U.S. Army Corps of Engineers.

Potential Effects - Vegetation. SEA determined that the proposed construction at Butler would affect common vegetation that is characteristic of disturbed areas. Specifically, the construction would affect an area approximately 100 feet wide, containing mostly scattered deciduous trees, and various shrubs. SEA concluded that these plant species would naturally revegetate the new railroad right-of-way adjacent to the newly constructed track once construction is completed.

The vegetation located in the filled portion of the small ditch on the Butler site would be eliminated.

Existing Conditions - Wildlife. Grass, weeds, or woody species dominate the vegetation along the existing right-of-way; the current rail activity has disturbed this vegetation. Nevertheless, this area contains wildlife habitat suitable for providing food and cover for bird species, including songbirds, gamebirds, waterfowl, and raptors. Large and small mammals, including deer, foxes, raccoons, rabbits, and field mice, are also typical inhabitants of these areas. SEA also determined that various reptiles and amphibians may inhabit this site.

Potential Effects - Wildlife. SEA determined that the proposed construction at Butler would not adversely affect wildlife populations. Construction activities would temporarily disturb wildlife along the proposed connection, but the wildlife would soon re-inhabit the Butler site following completion of construction activities. In addition, SEA concluded that the proposed project would not adversely affect the movement or migration of wildlife at the Butler site or in the surrounding area.

Existing Conditions - Threatened and Endangered Species. Based on coordination with representatives of the USFWS in the Bloomington field office, SEA determined that six animal species Federally listed as threatened or endangered are known to occur in De Kalb County. Table 5-IN-35 identifies these species. Representatives of the Indiana Department of Natural Resources indicated that there are no reports of any Federally listed threatened or endangered plant or animal species occurring in the project vicinity at Butler. During their site visit, SEA evaluated the habitat present on the site for its potential to support these species and found that the site does not support the habitat requirements of these species. In addition, during the site visit, SEA did not observe any of these listed species. Based on these findings, SEA determined that there is minimal potential for the presence of species that are Federally listed as threatened or endangered at the Butler site.

Potential Effects - Threatened and Endangered Species. Since Federally listed threatened or endangered species, or the habitat needed to support them, do not occur on or within the vicinity of the Butler site, SEA determined that the proposed construction would not adversely affect these species. Additionally, SEA concluded that these findings indicate that the proposed action would not adversely affect any critical habitat for any Federally listed species.

Existing Conditions - Parks, Forests, Preserves, Refuges, and Sanctuaries. SEA contacted representatives of the National Park Service, the USFWS, and the National Forest Service to identify land within the jurisdiction of these Federal agencies. Based on this coordination, SEA determined that there are no Federal or state parks, forests, preserves, refuges, or sanctuaries, located within or next to the proposed construction site at Butler.

Potential Effects - Parks, Forests, Preserves, Refuges, and Sanctuaries. Since there are no Federal or state parks, forests, preserves, refuges, or sanctuaries that exist within the vicinity of

the Butler site, it is SEA's preliminary determination that the proposed construction would not adversely affect these types of resources.

Preliminary Recommended Mitigation: Butler

Due to Best Management Practices used in the railroad's construction specifications and regulatory programs governing effects on wetlands, water resources and protected species, SEA determined that no mitigation is necessary. However, as a condition of approval, SEA would require NS to conform to its standard specifications during construction. These standard specifications are presented in Chapter 3, Section 3.15, "Natural Resources."

5-IN-16.2 Summary of Potential Effects and Preliminary Recommended Mitigation for Rail Line Abandonments

Abandonment: South Bend to Dillon Junction (NS)

The proposed project from South Bend to Dillon Junction involves abandonment of 21.5 miles of branch line. Figure 5-IN-4a-g, presented at the end of this state discussions, depicts the site and the surrounding conditions.

Water Resources

Existing Conditions - Water Resources. Based on review of U.S. Geological Survey topographic maps, SEA determined that the proposed abandonment crosses Potato Creek, the Kankakee River, and the Little Kankakee River. In addition, there are five lakes located adjacent to the existing rail line:

- Dollar Lake, originally a landfill, is located southwest of South Bend on the west side of the existing rail line.
- Wharton Lake is located approximately 3.5 miles southwest of the South Bend city limits, approximately 250 feet east of the existing rail line.
- Catfish Lake is located approximately 1 mile southeast of Wharton Lake on the east side of the existing rail line.
- Rupel and Elizabeth Lakes are located between 0.5 and 1.5 miles west of North Liberty on the south side of the existing rail line.

Based on National Wetland Inventory maps, SEA identified approximately 50 palustrine wetlands, both emergent and forested, that occur in and adjacent to the existing railroad right-of-way along the proposed NS abandonment between South Bend and Dillon Junction.

Based on review of Federal Emergency Management Agency Flood Insurance Rate Maps, SEA determined that most of the 21.5 miles of proposed abandonment segment between South Bend and Dillon Junction are not located within the 100-year floodplain. However, near the Kankakee River, approximately 1 mile of the existing rail line is located within the limits of the 100-year floodplain. In addition, SEA determined that lands adjacent to approximately 500 feet of the existing rail line near Potato Creek and approximately 500 feet of the existing rail line near North Liberty and Rupel Lake are also located within the 100-year floodplain.

Potential Effects - Water Resources. SEA determined that salvage operations associated with the proposed abandonment would have little direct effect on the water quality of the five lakes and approximately 50 wetlands that occur within or adjacent to the existing NS right-of-way between South Bend and Dillon Junction. However, proposed abandonment activities could disturb small areas of soil, thus increasing the potential for soil erosion and sedimentation into these local waterbodies and adjacent wetlands. Therefore, the proposed action may require authorization under Section 404 of the Clean Water Act. A National Pollutant Discharge Elimination System stormwater permit may not be required pursuant to Section 402 of the Clean Water Act because the total land area to be disturbed during abandonment activities is estimated to be less than five acres. NS would restrict vehicles from wetland areas and water-front property. NS will utilize the existing railroad bed for vehicle traffic whenever feasible during removal activities to minimize disturbance to vegetation within the existing right-of-way.

Disturbance to streambeds during possible bridge pier removal would increase water turbidity. However, SEA concluded that such an increase would be temporary and would be restricted to the immediate area of the bridge or a short distance downstream. Furthermore, SEA concluded that levels of such a turbidity increase, would be less for the proposed abandonment activities than levels currently experienced during periods of substantial rainfall and high stream flows. Such activities would likely require a permit from the U.S. Army Corps of Engineers and the permit would regulate the approach and effects of the activity.

SEA concluded that the proposed abandonment would not adversely affect the 100-year floodplains within the project area.

Biological Resources

The proposed South Bend to Dillon Junction abandonment segment is located in a rural setting. Adjacent land uses are primarily agricultural.

Existing Conditions - Vegetation. During the site visit, SEA determined that vegetation along the existing railroad right-of-way of the South Bend to Dillon Junction segment varies. Gravel covers much of the right-of-way. However, the vegetated areas consist of weedy annuals, miscellaneous grasses, and areas of low-growing woody vegetation, including trees and shrubs. In the areas surrounding the right-of-way, vegetation consists of cropland, pasture, fallow fields, and woody vegetation typical of deciduous forests.

Potential Effects - Vegetation. The proposed abandonment activities from South Bend to Dillon Junction would result in the clearing of some herbaceous vegetation. In addition, NS may need to trim some trees located immediately adjacent to the railroad right-of-way in order to safely operate salvage equipment. However, SEA concluded that opportunistic plant species would revegetate these areas following completion of proposed abandonment activities on this rail line segment. In addition, NS would limit ground disturbance occurring during salvage operations to the existing right-of-way.

Following completion of the proposed abandonment, NS would discontinue all current maintenance operations that control vegetation along the existing right-of-way. This action would allow existing vegetation to naturally revegetate adjacent areas. Based on this natural response, SEA projects that eventually, vegetation communities similar to those present in the existing right-of-way would return to the area.

Existing Conditions - Wildlife. SEA determined that the grassy and wooded areas in the South Bend to Dillon Junction segment contain wildlife habitat suitable for providing food and cover for bird species, including songbirds, gamebirds, waterfowl, and raptors. Large and small mammals, including deer, foxes, raccoons, rabbits, and field mice, are also typical inhabitants of these areas, particularly on the adjacent agricultural lands. Various reptiles and amphibians may also occur in the areas near the water resources along this segment; these species could include snakes, turtles, frogs, and salamanders. In addition, the lakes and ponds may provide habitat for a variety of game and non-game fish, including bass, bluegill, catfish, and carp.

Potential Effects - Wildlife. SEA determined that the proposed abandonment along this segment would not adversely affect wildlife populations. Salvage operations would temporarily disturb wildlife along the segment, but the wildlife would soon re-inhabit these areas. In addition, SEA concluded that the proposed abandonment area from South Bend to Dillon Junction would revert to a natural environment after the completion of the proposed abandonment.

The proposed abandonment activities at the South Bend to Dillon Junction segment would temporarily increase soil erosion and sedimentation into local streams and area wetlands, which could affect fish and other aquatic resources. However, NS will implement appropriate sediment control measures and other mitigation procedures to avoid and minimize potential adverse impacts to aquatic habitats and fish populations.

Existing Conditions - Threatened and Endangered Species. Based on coordination with representatives of the USFWS's Bloomington field office, SEA determined that four animal species Federally listed as threatened or endangered are known to occur in St. Joseph County and five are known to occur in La Porte County. Table 5-IN-35 identifies these species.

During the site visit to the South Bend to Dillon Junction segment, SEA evaluated the habitat for its potential to support these threatened and endangered species and found that the area does

not support habitat requirements for the listed species. In addition, during the site visit, SEA did not observe any of these listed species. Based on these findings, SEA determined that there is minimal potential for the presence of these Federally listed threatened or endangered species in the South Bend to Dillon Junction proposed abandonment area.

Potential Effects - Threatened and Endangered Species. Since Federally listed threatened or endangered species, or the habitat needed to support them, are not located on or within the vicinity of the proposed abandonment from South Bend to Dillon Junction, SEA determined that there would be no impacts to these species. Additionally, SEA concluded that these findings indicate that the proposed action would not affect any critical habitat for any Federally listed species.

Existing Conditions - Parks, Forests, Preserves, Refuges, and Sanctuaries. SEA contacted representatives of the National Park Service and the USFWS to identify land within the jurisdiction of these Federal agencies. Based on this coordination, SEA determined that there are two resources adjacent to the proposed South Bend to Dillon Junction abandonment segment. Kingsbury State Fish and Wildlife Area is located approximately one mile southwest of Dillon Junction; and the Potato Creek Recreation Area is located less than one mile north of the proposed abandonment area. There are no other sanctuaries, refuges, national, state or local forests/parks within 500 feet of the existing rail line for the proposed NS abandonment from South Bend to Dillon Junction.

Potential Effects - Parks, Forests, Preserves, Refuges, and Sanctuaries. Based on coordination with representatives of the National Park Service and the USFWS, SEA concluded that the proposed abandonment project between South Bend and Dillon Junction would have minimal adverse impacts on the Kingsbury State Fish and Wildlife Area and the Potato Creek Recreation Area. SEA determined that small, temporary increases in noise levels during salvage operations may affect users of these lands. However, once NS completes operations, all noise from normal rail activity on this segment would cease.

Preliminary Recommended Mitigation: South Bend to Dillon Junction

Due to Best Management Practices used in the railroad's construction specifications and regulatory programs governing effects on wetlands, water resources and protected species, it is SEA's preliminary determination that no mitigation is necessary. However, as a condition of approval, SEA would require NS to conform to its standard specifications during construction. These standard specifications are summarized in Chapter 3, Section 3.15, "Natural Resources."

5-IN.17 INDIANA LAND USE/SOCIOECONOMICS

For the land use/socioeconomics analysis, SEA evaluated potential changes in the physical environment related to the proposed Conrail Acquisition. The issues included consistency with current land use plans and existing Coastal Zone Management plans, potential effects on prime

farmland, and suitability of abandoned rights-of-way for alternative public uses.

SEA has found that, in the State of Indiana, the sites of the proposed rail line abandonment and the new rail line connection constructions associated with the proposed Acquisition are not located within coastal zones. According to the Bureau of Indian Affairs, there are no Federally recognized Native American tribes or reservations in Indiana. All other land use impact analyses are discussed below by site.

SEA investigated potential impacts to land use/socioeconomics at:

- Butler Construction.
- Tolleston Construction.
- South Bend to Dillon Junction Abandonment.

5-IN.17.1 Summary of Potential Effects and Preliminary Recommended Mitigation for New Constructions

Construction: Butler (DeKalb County, IN) (NS)

The proposed activity at the Butler site is the construction and operation of a new rail line connection between the existing NS and Conrail tracks.

In general, commercial, residential, and industrial land uses dominate the area around the proposed construction site at Butler. The proposed construction would require that NS acquire and convert approximately 3.9 acres of currently undeveloped land to rail line right-of-way.

Land Use Plan/Zoning. The 1991 zoning maps for the City of Butler indicate that the areas immediately adjacent to the site are zoned for local and general business, light industry, and limited two-family residential and mobile home residential uses. The Butler Plan Commission is in the process of developing new land use and zoning maps for the City, with only minor changes envisioned in the area of the proposed construction.

Consistency with Local Land Use Plan. According to the City of Butler, the proposed construction is consistent with the local current and future land use maps for the City. According to the DeKalb County Planning Commission, the proposed construction is consistent with the comprehensive land use plan for the county and would be compatible with surrounding land uses.

Prime Farmland. NRCS does not classify the soils at the site as prime farmland.

Based on the findings described above, site visits, and review of available information, it is

SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed Acquisition at the Butler site. Because there are no significant impacts, SEA does not propose any mitigation.

Construction: Tolleston ((Lake County, IN) (NS)

The proposed action at the Tolleston site is the construction and operation of a new rail line connection between the existing parallel NS and Conrail tracks.

The proposed Tolleston construction site is located in an urban setting. The site is within the existing rail right-of-way. A paved alley to the east separates the rail right-of-way from houses to the east and northeast along Wabash Avenue that parallels the tracks.

Land Use Plan/Zoning. The area of the proposed construction site is zoned as a residential district.

Consistency with Local Land Use Plan. According to the City of Gary Office of Planning and Economic Development, the proposed construction is consistent with the Comprehensive Plan and Long Term Planning Objectives.

Prime Farmland. NRCS has not classified the soils at the site as prime farmland.

Based on the findings described above, site visits, and review of available information, it is SEA's preliminary determination that there would be no significant impacts to land use or inconsistencies with land use plans associated with the proposed Acquisition at the Tolleston site. Because there are no significant impacts, SEA does not recommend mitigation.

5-IN.17.2 Summary of Potential Effects and Preliminary Recommended Mitigation for Rail Line Abandonments

Abandonment: South Bend to Dillon Junction (La Porte County/St. Joseph County, IN) (NS)

The proposed action at the South Bend to Dillon Junction is the abandonment of 21.5 miles of existing NS rail line between South Bend and Dillon Junction.

The 21.5-mile segment between South Bend and Dillon Junction is predominantly rural, passing through cropland, open pasture, and deciduous forest. Residential and commercial land uses also occur, although they are less common. The only communities located along the rail line are Pine (population approximately 1,000) and North Liberty (population approximately 1,366).

Approximately 261 acres of land would be affected by the proposed abandonment. The abandoned right-of-way is expected to be compatible with adjacent land uses.

Consistency with Local Land Use Plan. According to the Area Plan Commission of St. Joseph County and the LaPorte County Plan Commission, the proposed abandonment is consistent with and will not affect the local land use plans.

Prime Farmland. NRCS has classified the soils as prime farmland for approximately 6.0 miles along the right-of-way southwest of South Bend. The removal activities associated with the proposed abandonment would not disturb adjacent lands, and therefore would not affect the 6.0 miles of prime farmland along the right-of-way southwest of South Bend.

Alternative Uses: The Michiana Council of Governments suggests that the abandoned line be used as a multi-purpose rails-to-trails facility.

According to the information provided in the Environmental Report, NS does not have fee title to all of the right-of-way underlying the proposed abandonment. As such, upon abandonment, there would not be a continuous corridor available for future public use. Unless an agreement to preserve the right-of-way for public use is completed prior to abandonment, the lack of fee title, together with considerations related to location, physical and adjacent conditions, may make public uses of the right-of-way of the line proposed for abandonment more difficult.

Job Losses. Currently, two trains per day use this branch line. NS would serve all shippers at South Bend via the Conrail line. No overhead traffic exists as the NS branch line ends at South Bend. There will be no direct job losses related to changes in the physical environment as a result of this proposed abandonment.

Based on the findings described above, site visits, and available information, it is SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed Acquisition at the South Bend to Dillon Junction site. Because there are no significant impacts, SEA does not recommend mitigation.

5-IN.18 INDIANA ENVIRONMENTAL JUSTICE

As part of its analysis, SEA examined activities associated with the proposed Conrail Acquisition for environmental justice impacts (disproportionately high and adverse impacts to minority and low-income populations) in accordance with Executive Order 12898. As described in the Environmental Justice Methodology in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," SEA first categorized the nature of the populations in areas where Acquisition-related activities are proposed. SEA determined whether the population in such areas met the following environmental justice thresholds: (1) greater than 50 percent of the population is minority or low-income, or (2) the minority or low-income population percentage is 10 percent greater than the minority or low-income population percentage in the county.

Next, SEA ascertained whether this population fell within an area of potential effect. SEA defined a typical zone on either side of a rail line segment or proposed construction site, or

bordering a railroad intermodal facility or rail yard, as an area of potential effect. In general, the extent of an area of potential effect may vary depending on the nature of the changes in rail activity associated with it, but such areas typically extend 400 to 1500 feet out from the rail line segment or facility being analyzed.

SEA then evaluated these areas of potential effect for proposed Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis. In this analysis, SEA evaluated potential impacts on safety, transportation, air quality, noise, cultural resources, hazardous waste sites, hazardous materials transport, natural resources, and land use/socioeconomic effects. SEA also visited the sites of proposed construction for new rail line connections, rail line segments, intermodal facilities, and rail yards.

SEA developed and executed expanded public outreach efforts for those jurisdictions that met both SEA's thresholds for environmental justice and the Board's thresholds for environmental significance. SEA designed the public outreach process to seek widespread notice and dissemination of SEA's environmental impact analysis; provide additional opportunities for community input to the NEPA process; solicit information about cumulative effects in minority and low-income communities; and allow minority and low-income communities to assist in fashioning appropriate alternatives and mitigation measures. SEA is placing additional copies of the Draft EIS in jurisdictions with high proportions of minority and low-income populations that do not have significant environmental impacts which could result from the proposed Acquisition.

This section presents the results of those evaluations and analysis. A complete list of all the sites analyzed for environmental justice impacts is presented in Appendix K.

5-IN.18.1 Indiana Environmental Justice Settings

There are no proposed changes to intermodal facilities that would meet or exceed the Board's thresholds in the state of Indiana as part of the proposed Conrail Acquisition.

New Constructions

There are four new constructions proposed in Indiana. Two of these constructions are rail line connections approved separately by the Board on November 20, 1997. The following table presents the existing minority and low-income composition of the areas of potential effect surrounding the proposed construction at Tolleston (NX-06), the only site in Indiana where environmental justice population thresholds were exceeded. The construction at Tolleston, in Lake County near the Lake Michigan shoreline, would connect existing parallel NS and Conrail lines, between Marshall Street and Rutledge Streets.

Table 5-IN-37
Indiana Environmental Justice Site Summary for New Constructions

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Lake County	475,594	37.4%	13.8%	NA	
Tolleston (NC-06)	3,321	98.7%	19.1%	Yes	No

Rail Yards

There are two rail yards with proposed changes in activity in Indiana. Only the Curtis rail yard (CY-02) meets environmental justice analysis thresholds. The following table presents the existing minority and low-income composition of the areas of potential effect surrounding the Curtis rail yard.

Table 5-IN-38
Indiana Environmental Justice County and Site Summary for Rail Yards

Area of Potential Effect	Total Population	Total Minority Percentage	Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Lake County	475,594	34.4%	13.8%	NA	
Curtis (Gary) (CY-02)	710	83.9%	22.5%	Yes	No

Rail Line Segments

The following table presents the existing minority and low-income composition of the areas of potential effect surrounding the nine rail line segments in Indiana that meet the environmental justice population thresholds.

Table 5-IN-39
Indiana Environmental Justice Summary for Rail Line Segments

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Delaware, Madison Counties	250,328	8.1%	14.6%	NA	
Alexandria - Muncie (N-040)	5,061	16.0%	27.0%	No	Yes
Allen, Dekalb Counties	336,160	11.9%	7.8%	NA	
Butler - Ft. Wayne (N-041)	3,646	38.4%	17.7%	Yes	No

Table 5-IN-39
Indiana Environmental Justice Summary for Rail Line Segments

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Lake County	475,594	34.4%	13.8%	NA	
CP 501 - Indiana Harbor (N-042)	663	99.5%	73.9%	Yes	Yes
Allen County	300,836	13.2%	7.9%	NA	
Ft. Wayne TC - Ft. Wayne Yd. (N-043)	1,271	16.2%	18.0%	No	Yes
Vermilion County, IL, Fountain, Tippecanoe, Warren Counties, IN	244,839	8.2%	14.2%	NA	
Lafayette, IN - Tilton, IL (N-045)	1,664	27.0%	27.7%	Yes	Yes
Allen County	300,836	13.2%	7.9%	NA	
Adams - Ft Wayne (C-020)	963	69.9%	31.3%	Yes	Yes
Lake County	475,594	34.3%	13.8%	NA	
Tolleston - Clark Jct. (C-024)	1,234	98.7%	20.4%	Yes	No
Kosciusko, Lake, LaPorte, Marshall, Porter, Starke Counties	841,815	21.9%	11.3%	NA	
Warsaw - Tolleston (C-026)	6,587	34.7%	20.8%	Yes	No
Lake, Porter Counties	604,526	28.0%	12.2%	NA	
Willow Creek - Pine Jct. (C-027)	6,683	70.1%	35.3%	Yes	Yes

5-IN.18 Summary of Potential Effects and Preliminary Recommended Mitigation

The following table summarizes the sites and rail line segments that met either or both the minority or low-income population thresholds, and for which, based on currently available information and after reviewing the findings of each of the resource analyses (noise, air quality, transportation, etc.), SEA identified the following significant environmental effects. Sites and rail line segments that did not meet both of these criteria, such as rail line segment CP 501 to Indiana Harbor, are not discussed further in this section. Public Outreach efforts are described

below for those sites or rail line segments for which significance thresholds have been exceeded. Mitigation strategies for Indiana are described at the end of this section.

Table 5-IN-40
Indiana Environmental Justice Impacts Summary

Location (Area of Potential Effect)	Resource Impacts							
	Noise	Air Quality	Hazardous Materials Transport	Hazardous Materials	Natural Resources	Transportation / Safety	Land Use	Cultural Resources
Rail Line Segments								
Alexandria - Muncie (N-040)	Y[a]	NA	N	N	NA	N	NA	NA
Butler - Fort Wayne (N-041)	Y[a]	NA	Y	N	NA	Y	NA	NA
Adams - Ft. Wayne (C-020)	Y[a]	NA	N	N	NA	N	NA	NA
Tolleston - Clark Jct. (C-024)	Y[a]	NA	N	N	NA	N	NA	NA
Warsaw - Tolleston (C-026)	Y[a]	NA	N	N	NA	N	NA	NA
Willow Cr. - Pine Jct. (C-027)	Y[a]	NA	Y	N	NA	Y	NA	NA
Lafayette, IN - Tilton, IL (N-045)	Y[a]	NA	Y	N	NA	Y	NA	NA

Y[a] = Impact that does not meet Board thresholds for Significance
Y = Impact that meets Board thresholds for Significance
N = No impact
NA = Not Applicable/no environmental analysis according to scope

Impact Analysis - Rail Line Segments

Alexandria - Muncie. Based on currently available information, SEA has identified noise effects along this rail line segment, that begins at a junction west of Muncie's City Center and continues west/northwest to a construction in Alexandria. Up to 87 noise receptors could be affected by the proposed increase in train traffic, from 2.6 to 11.8 trains per day on this rail line

segment.

Populations along this rail line segment that exceed the environmental justice thresholds are located within Delaware County. The low-income percentage of the potentially affected population is more than 10 percent higher than the low-income population percentage in the County. The affected communities are a mix of residential, commercial and industrial uses. Schools and churches are also located within these areas. Based on the environmental effects identified and the characteristics of the population affected, the increase in activity along this rail line segment may result in potential environmental justice effects. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional reviews to determine if environmental justice populations, are impacted by noise.

Tolleston - Clark Junction. Based on currently available information, SEA has identified noise effects along this rail line segment which starts at the junction in Tolleston and runs northwest to Clark Junction in northern Gary, near Lake Michigan. Up to 158 noise receptors could be affected by the proposed increase in train traffic, from 0 to 5 trains per day on this rail line segment.

Populations along this rail line segment that exceed the environmental justice thresholds are located in Lake County, Indiana. The minority population in the potential area of effect is 98.7 percent. The low income percentage of the potentially affected population is more than 10 percent higher than the low-income population percentage in the County. Based on the environmental effects identified and the characteristics of the population affected, the increase in activity along this rail line segment may result in potential environmental justice effects. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional public outreach in Lake County.

Butler - Fort Wayne. Based on currently available information, SEA has identified the following effects along this NS rail line segment: A grade crossing safety impact at Estella Road and Anthony Boulevard in Fort Wayne near Sunnymeade Woods, and noise effects along this rail line segment, which begins at the junction with Conrail's east/west mainline in Butler and continues south to NS's East Wayne Yard in Fort Wayne. Up to 268 noise receptors could be potentially affected by the proposed increase in train traffic, from 13.6 to 27.3 trains per day on this rail line segment.

SEA has identified this NS rail line segment as resulting in a significant hazardous materials transportation effect because the increase in hazardous materials carried over this rail line segment would double and increase to over 20,000 car loads per year. The increase, from 5,000 to 28,000 car loads yearly, would require this NS rail line segment to be designated as a hazardous materials "major key route"", thus further requiring special safety and mitigation measures, including assistance from NS to communities in formulating emergency response plans. See discussion on hazardous materials transport mitigation in the Transportation section of this Draft EIS.

Populations along this rail line segment that exceed the environmental justice thresholds are located primarily within the City of Fort Wayne. Approximately 38 percent of the population within the area of potential affect would be minority, mostly African-American and Hispanic. The proposed action would also affect low-income populations. The low-income percentage of the affected population is more than 10 percent higher than the low-income population percentage in the County. This rail line segment traverses a generally rural area with the exception of the Fort Wayne area, which consists of a mix of residential, commercial and industrial uses. The area of potential effect also includes some churches and schools. Based on the environmental affects identified and the characteristics of the population affected, increase in activity along this rail line segment may result in a potential environmental justice affect. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional reviews to determine if environmental justice populations are impacted by noise.

Public Outreach

Given the number and types of potential environmental justice impacts, SEA is implementing an extensive outreach plan to reach minority and/or low income populations within the City of Fort Wayne, along the Butler to Fort Wayne (N-041) rail line segment. SEA will provide a Draft EIS to library branches in areas with potential environmental justice effects for placement in their reference section or other appropriate section. SEA will also translate the summary of the Draft EIS and the fact sheet into Spanish to meet the needs of Fort Wayne's Hispanic population.

SEA identified weekly and daily newspapers and will submit legal notices of Draft EIS availability. SEA identified ten radio stations in Fort Wayne and considered each station's target audience in identifying appropriate broadcast outlets. SEA identified stations with a variety of programming, including talk, news, sports, adult contemporary music, contemporary country music, rock music and religious. SEA will submit public service announcements to all identified stations. SEA contacted the local public access television station, and Draft EIS availability will be included on the station's Community Calendar.

The Allen County Public Library provided a publication that included a comprehensive listing of community and business associations, social service groups, and environmental and ethnic-specific organizations within Fort Wayne. SEA will issue a fact sheet and notification of Draft EIS availability to all identified organizations. SEA will also submit a fact sheet and notification of Draft EIS availability to the Mayor of Fort Wayne and all members of the Fort Wayne City Council.

Adams - Ft. Wayne. Based on currently available information, SEA has identified noise effects along this CSX rail line segment, that starts in the vicinity of Adams, about five miles to the southeast of Fort Wayne and runs northwest towards the city. Up to 11 noise receptors could be affected by the proposed increase from 5.9 to 13.9 trains per day on this rail line segment.

Populations along this rail line segment that exceed the environmental justice thresholds are

located within the City of Fort Wayne. The affected population exceeds both the minority and low-income thresholds. The affected population would be predominately African-Americanand consists of a mix of residential, commercial and industrial uses. Based on the environmental effects identified and the characteristics of the population affected, the increase in activity along this rail line segment may result in a potential environmental justice effect. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted by noise.

Warsaw - Tolleston. Based on currently available information, SEA has identified noise effects along this CSX rail line segment, that starts at the junction in Warsaw, IN and runs west to Tolleston Junction in Gary, IN. Up to 660 noise receptors could be affected by the proposed increase in train traffic, from 1 to 5 trains per day.

Populations along this rail line segment that exceed the environmental justice thresholds are located within the City of Gary. The population affected by the proposed action would be predominately African-Americanand low-income. Based on the environmental effects identified and the characteristics of the population affected, the increase in activity along this rail line segment may result in a potential environmental justice effect. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted by noise.

Willow Creek - Pine Junction. Based on currently available information, SEA has identified potential impacts along this CSX rail line segment, that begins at Willow Creek Junction in Portage and runs west to Pine Junction, in northwest Gary, Indiana. Potential grade crossing safety potential impacts at County Line Road, Hobart Road, Lake Street and Clark Road. Up to 169 noise receptors are potentially affected by the proposed increase in train traffic, from 22.1 to 38.6 trains per day on this rail line segment.

SEA has identified this CSX rail line segment as resulting in a significant hazardous materials transportation effect because the increase in hazardous materials carried over this rail line segment would double and increase to over 20,000 car loads per year. The increase, from 17,000 to 40,000 car loads yearly, would require this CSX rail line segment to be designated as a hazardous materials "major key route", thus further requiring special safety and mitigation measures, including assistance to communities from CSX in formulating emergency response plans. See discussion on hazardous materials transport mitigation in the Transportation section of this Draft EIS.

Populations along this rail line segment that exceed the environmental justice thresholds are located within the City of Gary. The population affected by the proposed action would be predominately African-Americanand low-income. Based on the environmental effects identified and the characteristics of the population affected, the increase in activity along this rail line segment would result in an environmental justice effect. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the

environmental justice populations are impacted by noise.

Public Outreach

SEA identified Gary, Indiana, along the Willow Creek to Pine Junction (C-27) rail line segment, as having minority and low income populations potentially affected by the proposed Acquisition. Given the number and types of potential environmental justice impacts, SEA is conducting substantial public outreach activities to reach potentially impacted neighborhoods and to provide an opportunity for their participation in the decision making process.

SEA will provide a copy of the Draft EIS to all five branches of the library for placement in their reference section or other appropriate section. SEA will submit legal notices to weekly and daily newspapers publicizing Draft EIS availability and locations. SEA will also submit public service announcements to the two radio stations in Gary publicizing Draft EIS availability and locations.

SEA contacted the City of Gary Planning Department for information on area organizations. The Planning Department provided current lists of organizations, including business associations, social service agencies, and community development groups. SEA will provide a fact sheet and notification of Draft EIS availability to all identified organizations. SEA will also provide a fact sheet and notification of Draft EIS availability the Mayor and all members of the Gary Common Council to provide opportunity for comment.

Lafayette, IN - Tilton, IL. Based on currently available information, SEA has identified potential impacts along this NS rail line segment, that begins in Lafayette's City Center and continues southwest through Danville, Illinois to NS's Tilton Yard located southwest of Danville. There are approximately 200 noise receptors potentially affected by the proposed increase in train traffic, from 23.6 to 41 trains per day on this rail line segment.

SEA has identified this NS rail line segment as resulting in a significant hazardous materials transportation effect because the increase in hazardous materials carried over this rail line segment would double and increase to over 20,000 car loads per year. The increase, from 10,000 to 46,000 car loads yearly, would require this NS rail line segment to be designated as a hazardous materials "major key route", thus further requiring special safety and mitigation measures, including assistance from NS to communities in formulating emergency response plans. See discussion on hazardous materials transport mitigation in the Transportation section of this Draft EIS.

Grade crossing safety potential impacts exist at 7th Street, Romig Street, 4th Street (US 231), Smith Street near Lafayette, Indiana. In addition, grade crossing delay potential exist at Ferry Street, Main Street, Columbia Street, South Street (State Route 26), 9th Street, and 4th Street (US 231) near Lafayette, Indiana. The potentially affected populations along this rail line segment are located approximately 2 miles north of the grade crossing safety and potential grade crossing delay in Lafayette, Indiana. In addition, the majority of the environmental justice populations

are located in Vermilion County, Illinois. Because of the large distance between potential grade crossing safety and delay impacts and the environmental justice populations, it is SEA's preliminary determination that there are no grade crossing delay impacts and grade crossing safety impacts with disproportionate impacts on minority and low-income populations in Indiana.

In addition, Lafayette will soon enter the final phase of the Lafayette Railroad Relocation Project, a unique transportation infrastructure project that began in the 1970s. The Relocation Project will consolidate 2.6 miles of CSX single track, 4.2 miles of NS double track, and 1.26 miles of NS single track into a new, conflict-free corridor, eliminating 42 at-grade roadway crossings in the city. Eighteen crossings have been removed to date. Funding is being provided by Federal, State, and local government services. The entire project will cost an estimated $186 million.

Populations along this rail line segment that exceed the environmental justice thresholds are located predominately within the City of Danville, IL and the area of Tilton, IL in Vermilion County. The affected population exceeds both the minority and low-income thresholds because the population is ten percent greater than the County average. The affected communities are a mix of residential, commercial and industrial uses. Schools and churches are also located within these areas.

Based on the environmental effects identified and the characteristics of the population affected, the increase in activity along this rail line segment may still result in a potential environmental justice effect with respect to potential noise impacts, and hazardous materials transport impacts. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted by noise.

Public Outreach

SEA identified Lafayette, IN, along the Lafayette to Tilton (N-045) rail line segment, as having minority and/or low income populations that may be affected by the proposed Acquisition (also see the public outreach strategy for the portion of this rail line segment in Illinois).

Given the number and types of potential environmental justice impacts, SEA will send copies of the Draft EIS to the two libraries in the Lafayette area, for placement in the reference section or other appropriate section, to ensure access to the Draft EIS for members of the community. SEA identified one daily and two weekly newspapers in Lafayette. SEA will submit legal notices announcing the availability and location of the Draft EIS to these papers for publication. SEA will also send public service announcements, announcing the availability and location of the Draft EIS, to four major radio stations in Lafayette.

SEA identified community and business organizations and provided fact sheets and notified them of the Draft EIS availability. SEA will also send fact sheets and notification of Draft EIS

availability to the Mayor and members of the Lafayette Common Council to facilitate comment.

Mitigation

SEA is currently developing additional mitigation strategies in coordination with the local communities in Indiana surrounding the sites and rail line segments and will report on these strategies in the Final EIS. As SEA continues to perform public outreach and additional site-specific noise analysis, SEA will determine the extent and nature of the potential environmental justice impacts. If an environmental justice impact exists, SEA will determine if mitigation would be practicable. This coordination with the local communities as part of the on-going public outreach process will be reported in the Final EIS.

5-IN.19 INDIANA CUMULATIVE EFFECTS

Within the State of Indiana, the Applicants propose the following activities that meet or exceed the Board's thresholds for environmental analysis: increased traffic along 18 rail line segments and at 2 rail yards, 1 abandonment, and 2 proposed rail line construction projects. Two additional rail line construction projects related to the Seven Constructions were approved separately by the Board on November 26, 1997.

The following table addresses other potential actions brought to SEA's attention that, when combined with the proposed Acquisition, could contribute to a cumulative impact. SEA was made aware of these activities through site visits and public comment. Local agencies provided the information below to SEA within the schedule specified in the scope for review and analysis.

Table 5-IN.41
Information Provided to SEA About Other Activities or Projects

Action-Type	Site	Information from Site Visit or Public Comment	Relationship to Proposed Acquisition
Abandonment	South Bend to Dillon (IN)	Abandonment shown as trail/bike/pedestrian path in local plans.	Related. Abandonment would potentially allow for use as a trail.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of Indiana.

Cumulative Effects Mitigation Measures

Due to a lack of cumulative effects, no mitigation measures are necessary.

5-IN.20 INDIANA AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. The following table provides a list of agencies and local governments that have submitted environmental comments for the State of Indiana. A complete list of entities that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-IN-42
Agencies in Indiana Submitting Environmental Comments

Entity	Nature of Comment(s)
Alexandria, City of	At-grade crossing safety
Area Planning Commission of Tippecanoe County	Air quality, noise, and at-grade crossing safety
Department of Natural Resources	Biological resources and water resources
Four Cities Consortium: Gary, Hammond, Whiting and East Chicago	At-grade crossing safety, traffic congestion, emergency response, air, and noise
Indianapolis Power & Light Company	Air
Michiana Area Council of Governments	Land use, abandonment, and biological resources
Ohio-Kentucky-Indiana Regional Council of Governments	Rail operations, abandonment, commuter operations, and traffic congestion
U.S. Senate; R. Lugar, D. Coats, P. Visclosky	At-grade crossing safety

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.

SEA recognizes special concerns raised in the Four City area of Lake County and the cities of Lafayette and Muncie. These areas are addressed below.

5-IN.20.1 Four City Consortium

Introduction

The Four City Consortium is an association of the northwestern Indiana cities of East Chicago, Hammond, Gary, and Whiting. The Four City Consortium's purpose, as stated in its Responsive Application filed on October 21, 1997, is to analyze the regional effects of the proposed Conrail Acquisition and recommend solutions for potential adverse impacts.

Description of Existing Environment

The four cities are located in Lake County in northwestern Indiana. Approximately 480,000 people live in Lake County, with about 200,000 residing in the Four City metropolitan area. East-west railroad traffic passes through the area on routes between Chicago and cities such as Detroit, Indianapolis, Cleveland, Pittsburgh, and locations on the East Coast. The Four City Consortium expressed concern in its comments about the impact of the proposed Acquisition on area highway/rail at-grade crossing safety and delay, emergency response, air quality, and noise.

There are nine rail line segments on three principal routes through the Four City area. These segments, and the changes in traffic that would occur as a result of the proposed Acquisition, are detailed in Table 5-IN-43.

Table 5-IN-43
Traffic Changes on Rail Line Segments Through the Four City Area

SITE ID	SEGMENT DESCRIPTION					PASSENGER & FREIGHT TRAIN DATA						
						1995 BASE			POST ACQUISITION			
	BETWEEN		AND		SEGMENT LENGTH (miles)	PASSENGER TRAINS	FREIGHT TRAINS	TOTAL	PASSENGER TRAINS	FREIGHT TRAINS	TOTAL	CHANGE
CSX												
C-023	Pine Jct	IN	Barr Yd	IL	11	0.0	27.6	27.6	0.0	33.3	33.3	5.7
C-024	Tolleston	IN	Clark Jct	IN	4	0.0	0.0	0.0	0.0	5.0	5.0	5.0
C-026	Warsaw	IN	Tolleston	IN	83	0.0	1.0	1.0	0.0	5.0	5.0	4.0
C-027	Willow Creek	IN	Pine Jct	IN	12	2.0	20.1	22.1	2.0	36.6	38.6	16.5
C-693	Willow Creek	IN	Ivanhoe	IN	13	0.0	9.6	9.6	0.0	11.4	11.4	1.8
NS												
N-042	Control Pt 501	IN	Indiana Harbor	IN	1	14.0	43.4	57.4	14.0	60.3	74.3	16.9
N-308	Porter	IN	Control Pt 501	IN	20	14.0	69.4	83.4	14.0	69.5	83.5	0.1
N-311	Indiana Harbor	IN	Kankakee	IL	57	0.0	6.6	6.6	0.0	4.0	4.0	-2.6
N-469	Hobart	IN	Hammond	IN	17	0.0	26.3	26.3	0.0	11.2	11.2	-15.1

Highway/Rail At-Grade Crossing Safety - SEA's safety analysis indicates that post-Acquisition activities would have significant impacts on four highway/rail at-grade crossings in the Four City Area. These crossings, and SEA's preliminary mitigation, are shown in Table 5-IN-44. Flashing lights are currently in place at Countyline Road, Hobart Road, and Clark Road, while Lake Street has a gate. SEA recommends upgrading the existing warning devices to mitigate adverse effects on at-grade highway/rail crossing safety.

Table 5-IN-44
Proposed Mitigation to Improve Safety at Crossings in Four City Area, Indiana

County	Railroad Segment	FRA ID	Highway/Rail At-Grade Crossing	Existing Warning Devices	SEA's Proposed Mitigation
Lake	CSX	155632M	Countyline Road	Flashing Lights	Gates
Lake	CSX	155633U	Hobart Road	Flashing Lights	Gates
Lake	CSX	155637W	Lake Street	Gate	Four Quadrant Gates
Lake	CSX	155645N	Clark Road	Flashing Lights	Gates

Highway/Rail At-Grade Crossing Delay/Emergency Response - SEA analyzed 15 at-grade crossings in the Four City area for vehicular delay. This information is described in [Section 5-IN.8]. The level of service under pre-Acquisition conditions range from A to D, with nine crossings currently at a level of service D. All fifteen crossings show a small increase in delay under the post-Acquisition conditions, although none of the changes are large enough to result in a deterioration in level of service. For example, the nine crossings with a pre-Acquisition level of service D would remain at that level. Because these levels of service remain unchanged as a result of the proposed Acquisition, SEA has not proposed any mitigation related to highway/rail at-grade crossing delay.

SEA acknowledges the concern identified by the Four City Consortium regarding the proposed Acquisition's potential impact on emergency vehicle response times. No national standards exist for measuring levels of significance of delay specifically for emergency vehicles. Obviously, time is critical for these vehicles to reach the scene of an accident, fire, or other emergency. A train could be moving through an highway/rail at-grade crossing, causing the crossing to be closed to emergency response vehicles.

Because of the uncertainty of events requiring emergency response, SEA evaluated potential delay due to trains blocking roadways. SEA measured the delay per stopped vehicle as well as the total daily blocked crossing time. Table 5-IN-45 shows the results of SEA's analysis of delay. The Board's jurisdiction to impose mitigation requirements on Applicants does not apply to pre-existing conditions. Nevertheless, SEA's analysis of pre- and post-Acquisition conditions for at-grade crossings in each of these communities allows the respective communities to assess the relative potential impacts.

Table 5-IN-45
Estimated Maximum Delay (in Minutes) for
Highway/Rail At-Grade Crossings in the Four City Area

Roadway	Average Daily Traffic	Crossing Delay Per Stopped Vehicle			Total Blocked Time Per Day		
		Pre-Acquisition	Post-Acquisition	Increase	Pre-Acquisition	Post-Acquisition	Increase
Hohmana Ave.	10,500	3.83	3.94	0.11	89.07	110.50	21.43
Calumet Ave.	17,600	4.02	4.14	0.11	89.07	110.50	21.43
Columbia Ave.	15,000	3.88	3.99	0.11	89.07	110.50	21.43
Indianapolis & SR 20	13,650	3.81	3.92	0.11	89.07	110.50	21.43
Railroad Ave.	7,500	3.52	3.62	0.11	89.07	110.50	21.43
Kennedy	7,325	3.52	3.62	0.11	89.07	110.50	21.43
Euclid Ave.	7,500	3.52	3.62	0.11	89.07	110.50	21.43
State Route 12	14,820	3.87	3.98	0.11	89.07	110.50	21.43

SEA has performed the analysis of highway/rail at-grade crossing delay and emergency vehicle delay using the pre- and post-Acquisition data provided by the Applicants. SEA is aware, however, of negotiations pending between CSX and Canadian Pacific Railroad for trackage rights that would result in additional trains running between Detroit, Michigan and Chicago, Illinois to pass through Lake County. When this Draft EIS went to print, such rights had not been assigned. If these routing decisions are made and are included in the proposed Acquisition, SEA would make appropriate revisions to its analysis, review the potential impacts, and consider new recommendations for mitigation.

SEA recognizes the concerns of the Four City Consortium regarding the pre-existing conditions and acknowledges that even a small increase in delays could exacerbate the problems faced by an urban area with several at-grade crossings. It is SEA's preliminary recommendation that CSX and NS shall consult with representatives of the Four City Consortium, the Indiana Department of Transportation, and other appropriate parties to address potential traffic delay and safety concerns at the nine highway/rail at-grade crossings in these communities. Specifically, CSX and NS would meet with these parties to negotiate a mutually-acceptable binding agreement on the implementation and funding allocation for measures to address traffic delay and safety concerns at these crossings.

Air Quality - Lake County is designated as a severe nonattainment area for ozone (O_3), which can be affected by emissions of NO_x. Parts of the county are also designated as nonattainment for SO_2, CO, and particulate matter.

SEA analyzed the NO_x emissions in Lake County and determined that they are well under one percent of the existing (1995) county-wide NO_x emissions. Lake County has also obtained a NO_x waiver from the U.S. Environmental Protection Agency. It is SEA's preliminary determination that Lake County would not be adversely affected due to the small emissions increase resulting from activities associated with the proposed Acquisition.

Noise - SEA evaluated rail line segments, rail yards and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis of noise as a result of the proposed Acquisition. Where the proposed rail activity would exceed these thresholds, SEA calculated the 65 dBA L_{dn} noise contours for the pre- and post-Acquisitionconditions. (See Table 5-IN-46.)

Table 5-IN-46
Four City Area Rail Line Segments Meeting the Board's Thresholds for Noise Analysis

Site ID	Segment		Trains Per Day		
	From	To	Pre-Acquisition	Post-Acquisition	Increase
C-024	Tolleston	Clark Junction	0	5.0	5.0
C-026	Warsaw	Tolleston	1.0	5.0	4.0
C-027	Willow Creek	Pine Junction	22.1	38.6	16.5
N-042	Control Pt. 501	Indiana Harbor	43.4	60.3	16.9

It is SEA's preliminary determination that none of these four rail line segments would require noise mitigation in accordance with the project noise mitigation criteria. (See Appendix F.)

Environmental Justice - Activities associated with the proposed Acquisition may affect minority and low-income populations along certain rail line segments in Lake County. SEA is conducting substantial public outreach activities to reach potentially affected neighborhoods and to provide the opportunity for their participation in this proceeding. In the city of Gary, for example, SEA will provide a copy of this Draft EIS to local public libraries and submit notices to weekly and daily newspapers publicizing its availability. SEA will also submit public service announcements to the two radio stations in Gary announcing the availability of the Draft EIS. SEA will provide a fact sheet and notification of Draft EIS availability to the Mayor and all members of the Gary Common Council to facilitate comment, as well as to all organizations, including business associations, social service agencies, and community development groups identified by the City of Gary Planning Department.

In accordance with the requirements of the Executive Order on Environmental Justice, SEA is conducting additional studies of Lake County to determine if other minority and low-income populations would be adversely affected by the proposed Acquisition.

Preliminary Recommended Mitigation

Alternative Plan Proposed by the Four City Consortium - This plan would implement two changes to CSX's current proposed routing of train traffic:

Change No. 1: Westbound traffic would continue to move primarily via Willow Creek and Pine Junction, and then via either the CSX lakefront line or the CSX/Baltimore & Ohio Chicago Terminal (BOCT) line. Eastbound traffic, however, would be routed away from the CSX/BOCT line and onto the grade-separated Indiana Harbor Belt (IHB) line for movement east from Calumet Park. The IHB line east of Calumet Park has plenty of capacity to accommodate the approximate 16.6 additional eastbound CSX trains that would use this rail line each day. Traffic on the CSX/BOCT line would be reduced from 33.3 trains to 16.7 trains per day. This represents a substantial reduction from the present 27.6 trains per day.

Under this plan, CSX trains would operate eastward over the IHB line to approximately Virginia Avenue, where they would transfer to Conrail's Porter Branch line. These trains would then operate over the Porter Branch line back to Willow Creek, where they would use the new connection proposed by CSX to return to the main line for movement to eastern points.

East of Ivanhoe, the IHB line is used only to serve local industries. This line is presently out of service east of Chase Street in Gary. The Four City Consortium plan calls for 2.1 miles of track to be rebuilt on this right-of-way between Chase Street and Virginia Avenue. At that point, a new connection would be built between the IHB right-of-way and the parallel Conrail Porter Branch line. This line is also grade-separated.

Change #2: This alternative involves the Pennsylvania Railroad (PRR) line between Hobart and Clarke Junction via Tolleston. Under the plan, this line would not be used northwest of Hobart. Instead, CSX traffic from Fort Wayne and points east would operate, via trackage rights, over the NS Nickel Plate line west to Van Loon, and then north over an Elgin, Joliet & Eastern (EJE) line to Gary via Ivanhoe. This alternative requires the construction of a connection between the NS Nickel Plate line and the EJE line at Van Loon. This proposal is far less expensive than rebuilding nearly 12 miles of the PRR line between Hobart and Clarke Junction.

SEA Recommendations - As stated under "Highway/Rail At-Grade Crossing Delay/Emergency Response," to mitigate vehicle delay impacts, it is SEA's preliminary recommendation that CSX and NS consult with representatives of the Four City Consortium, the Indiana Department of Transportation, and other appropriate parties to address potential traffic delay and safety concerns. SEA invites public comments on appropriate mitigation that the Board could require in the event that a mutually-acceptable binding agreement cannot be reached prior to the release of the Final EIS.

5-IN.20.2 Lafayette, Indiana

Introduction

The City of Lafayette is located in Tippecanoe County in west-central Indiana, approximately 65 miles northwest of Indianapolis. Lafayette has a population of approximately 44,000.

Description of Existing Environment/Rail Operations

Three rail lines traverse Lafayette: the NS Fort Wayne-Decatur, Illinois line, which includes the rail line segments Peru-Lafayette Junction and Lafayette Junction-Tilton, Illinois; the NS Frankfort Branch, which includes the rail line segment Lafayette Junction-Alexandria; and the CSX Monon - Crawfordsville line, which includes the rail line segments Monon-Lafayette and Lafayette-Crawfordsville. Both CSX and NS also maintain rail yards in Lafayette.

Lafayette will soon enter the final phase of the Lafayette Railroad Relocation Project, a unique transportation infrastructure project that began in the 1970s. The Relocation Project will consolidate 2.6 miles of CSX single track, 4.2 miles of NS double track, and 1.26 miles of NS single track into a new, conflict-free corridor, eliminating 42 at-grade roadway crossings in the city. Eighteen crossings have been removed to date.

The current phase of this project involves construction of an overpass on State Route 25. After construction of that bridge and another bridge over Sagamore Parkway have been completed, new tracks will be laid for NS trains, eliminating the remaining 24 at-grade roadway crossings in Lafayette. Pending final funding, the City hopes to complete the project by 2001.

Post-Acquisition Changes

If the Board approves the proposed Acquisition, NS intends to increase traffic on two rail line segments: Peru-Lafayette Junction (18.4 to 40.2 trains per day) and Lafayette-Tilton, Illinois (23.6 to 41.0 trains per day). Meanwhile, NS plans to decrease traffic on the Lafayette-Alexandria rail line segment (3.4 to 1.7 trains per day). CSX would maintain current levels of traffic: 3.0 trains per day on the Monon-Lafayette rail line segment and 1.4 trains per day on the Lafayette-Crawfordsville rail line segment.

Summary of Potential Effects

Air Quality - Tippecanoe County is designated as attainment for all pollutants and has no maintenance areas for any pollutant. SEA evaluated the increased train traffic in the county and determined that Acquisition-related NO_x emissions would not affect air quality adversely.

Noise - As a result of the proposed Acquisition, both NS rail line segments would meet or exceed the Board's environmental thresholds for noise. On the Peru-Lafayette Junction segment, the

number of sensitive noise receptors exceeding 65 dBA L_{dn} would increase from 689 to 1554, while the Lafayette-Tilton, Illinois segment would experience an increase from 531 to 742.

Transportation - Safety - SEA determined that the predicted increase in train traffic resulting from the proposed Acquisition would affect safety significantly at eight at-grade roadway crossings in Lafayette. The affected crossings include: 7th Street, Romig Street, 4th Street/US 231, Smith Street, Greenbush Street, 18th Street, 17th and Salem Streets, and Union Street. It is SEA's preliminary recommendation that the Applicants seek mitigation strategies involving upgrading at-grade crossing warning devices.

Transportation - Delay - SEA concluded that the ten crossings analyzed in Tippecanoe County would have a minimal increase in crossing delay per stopped vehicle as a result of the proposed Acquisition. The largest increase in maximum queue would be one vehicle. However, the overall average delay for all vehicles over an entire day would result in level of service D at all crossings.

Preliminary Recommended Mitigation

The final phase (1998-2001) of the Lafayette Railroad Relocation Project involves the relocation of the NS rail line and the removal of the existing NS tracks through Lafayette. Although this project was not developed as a specific mitigation for the proposed Acquisition, the completed Lafayette Railroad Relocation Project would mitigate the transportation, noise, and air quality impacts of the proposed Acquisition because the new rail corridor will be depressed and have berms.

It is SEA's preliminary recommendation that NS shall meet with the City of Lafayette, the Indiana Department of Transportation, and other appropriate parties to develop an interim agreement on a mitigation plan to address potential vehicle delay at the ten highway/rail at-grade crossings until the relocation project can be completed or implemented. SEA invites public comments on acceptable interim mitigation measures.

5-IN.20.3 Muncie, Indiana

Introduction

Muncie is located in east-central Indiana, approximately 65 miles northeast of Indianapolis. Muncie has a population of approximately 71,000, and Ball State University is located on the west side of the city.

Description of Existing Environment/Rail Operations

NS operates two rail lines that pass through Muncie: the north-south New Castle District line that passes between Fort Wayne and Ivorydale, Ohio, and the east-west Frankfort District line

between Alexandria and Muncie. NS also maintains a yard (East Yard) located east of town on the Frankfort District line. Conrail's east-west Indianapolis Line also runs through Muncie toward Berea, Ohio.

All three rail lines share a common corridor through downtown Muncie for a distance of about two miles. There are 11 highway/rail at-grade roadway crossings through this corridor. The NS New Castle District line crosses the Conrail Indianapolis Line via an at-grade interlocking railroad crossing along this corridor.

West of the downtown area, the NS Frankfort District line crosses the White River. One of the crossings on this line, at Tillotson Avenue, is the main north-south route through the Ball State University campus. Farther west, this NS line passes through several existing and developing residential areas.

Six of the at-grade crossings in Muncie already have flashing lights and gates. Five other crossings (Kilgore, Nichols, Goodman, Hutchison, and Jackson Streets) have only flashing lights, while the remaining two (Celia and Manning Streets) have crossbucks only.

Post-Acquisition Changes

If the Board approves the proposed Acquisition, NS would retain ownership of its two lines and the East Yard. CSX would take control of Conrail's Indianapolis Line and would also control movements through the railroad interlocking crossing. Post-Acquisition train traffic would decrease on all lines through Muncie except for the NS Frankfort District line. This line would experience an increase of about nine trains per day as it becomes part of a new NS route from Chicago to Cincinnati. The line was recently upgraded to support the increase in rail traffic.

Summary of Potential Effects and Preliminary Recommended Mitigation

Residents of Muncie are concerned that increased train traffic on the Alexandria to Muncie line may cause highway traffic and emergency response delays on the west side of the city. For instance, an eastbound NS train on the line might stop, blocking at-grade roadway crossings on the west side, if it encounters delays at the CSX-controlled interlocking crossing. Additional train traffic traveling at 20 miles per hour through the west side of Muncie could cause other traffic delays. This additional train traffic on the NS line would cross to the south at the CSX-controlled interlocking crossing, creating the potential for backups at this junction.

NS recently provided SEA with a proposed plan to mitigate the potential environmental impacts that includes a plan to upgrade at-grade crossing warning devices and to use current train traffic holding practices to avoid blocking highway/rail at-grade crossings. It is SEA's preliminary conclusion that NS shall consult with the City of Muncie, the Indiana Department of Transportation, and other appropriate parties to address potential safety and traffic concerns at seven highway/rail at-grade crossings on the Alexandria to Muncie rail line segment (Kilgore,

Nichols, Goodman, Hutchinson, Jackson, Celia and Manning). Specifically, NS shall meet with these parties to negotiate a mutually-acceptable binding agreement on the implementation of and funding allocation for measures to address safety and traffic concerns at these highway/rail at-grade crossings. SEA invites public comments on appropriate mitigation that the Board could require in the event a mutually-acceptable binding agreement cannot be reached prior to the release of the Final EIS.

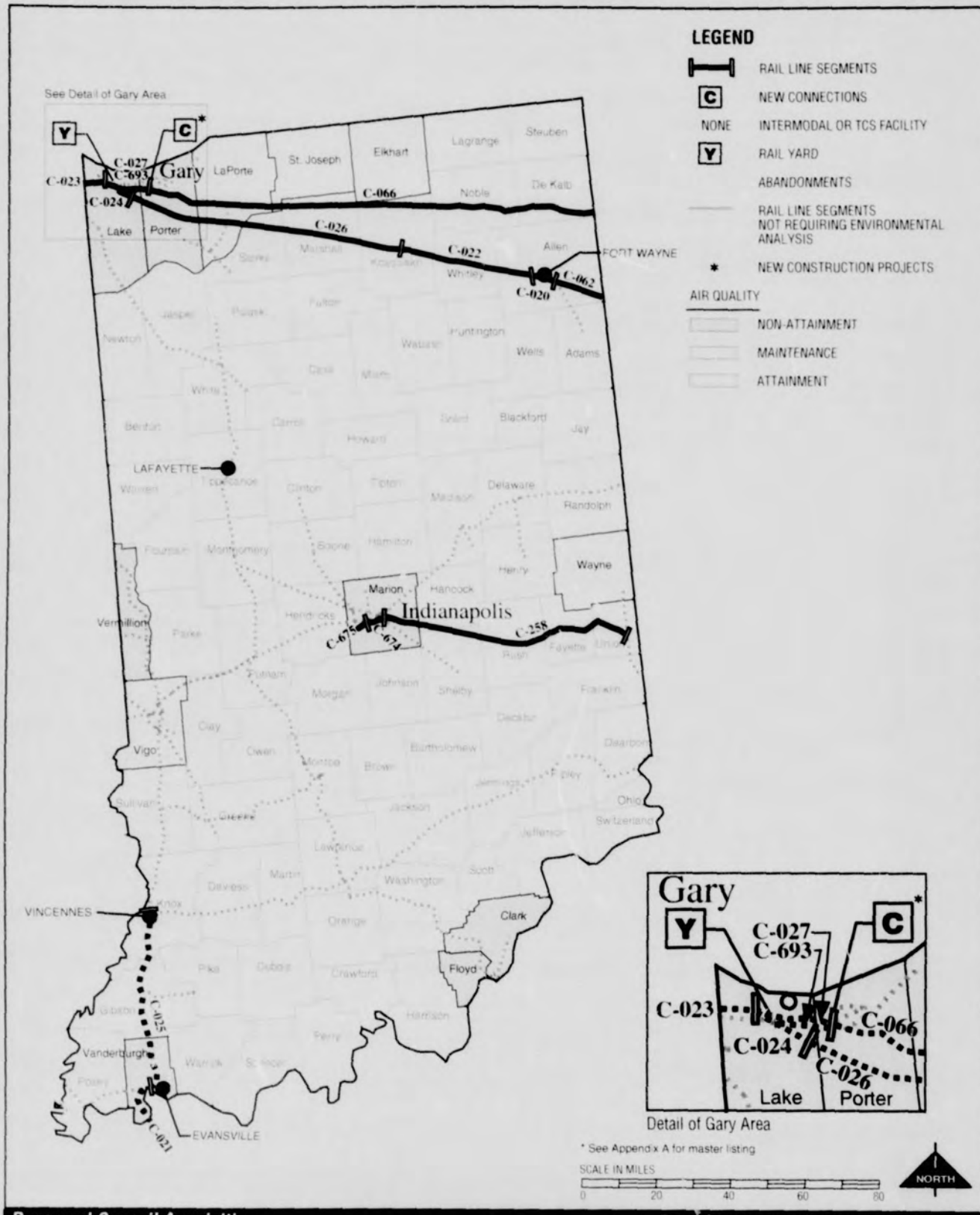

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FIGURE 5-IN-1a

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

INDIANA - CSX

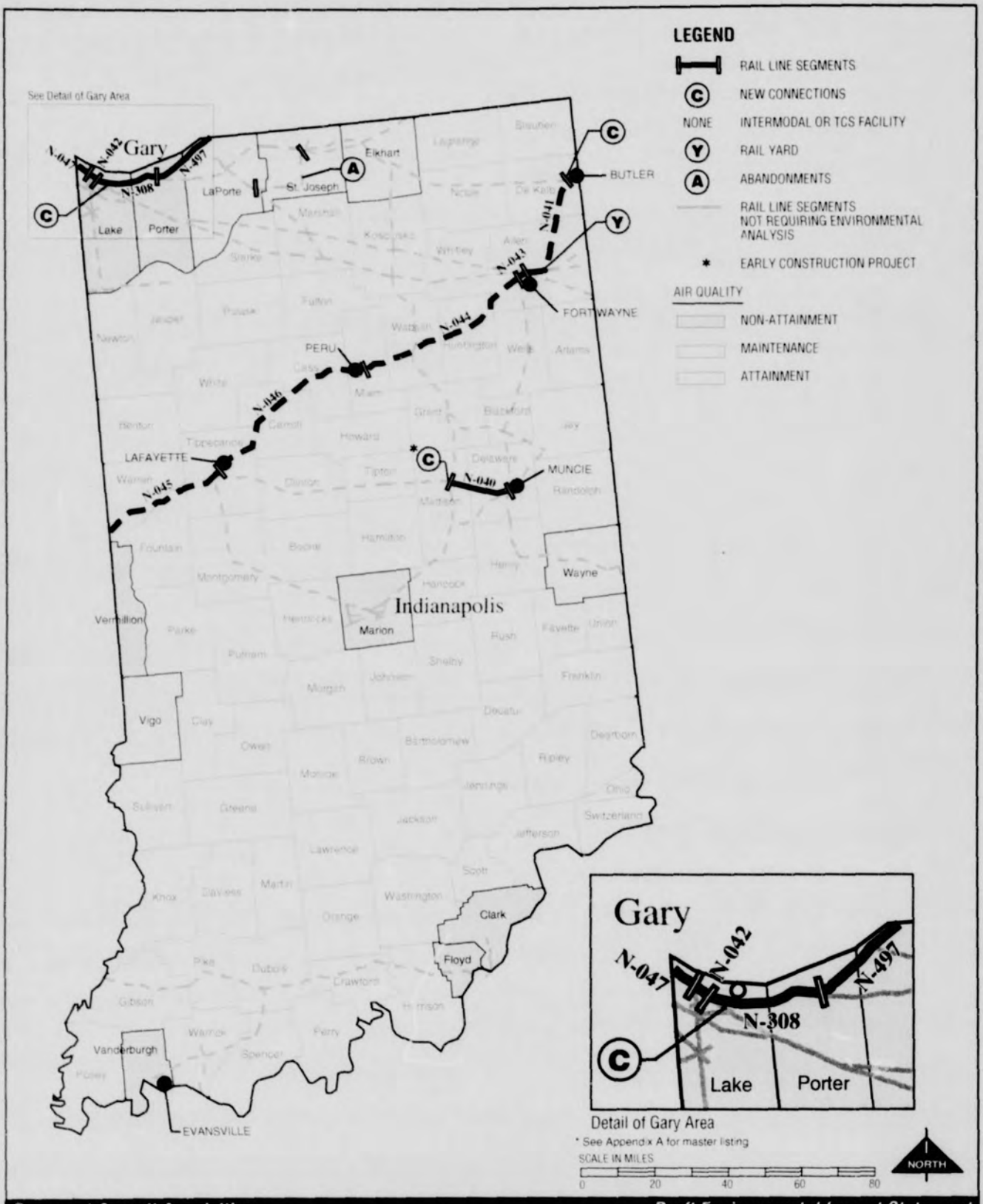

FIGURE 5-IN-1b

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

INDIANA - NORFOLK SOUTHERN

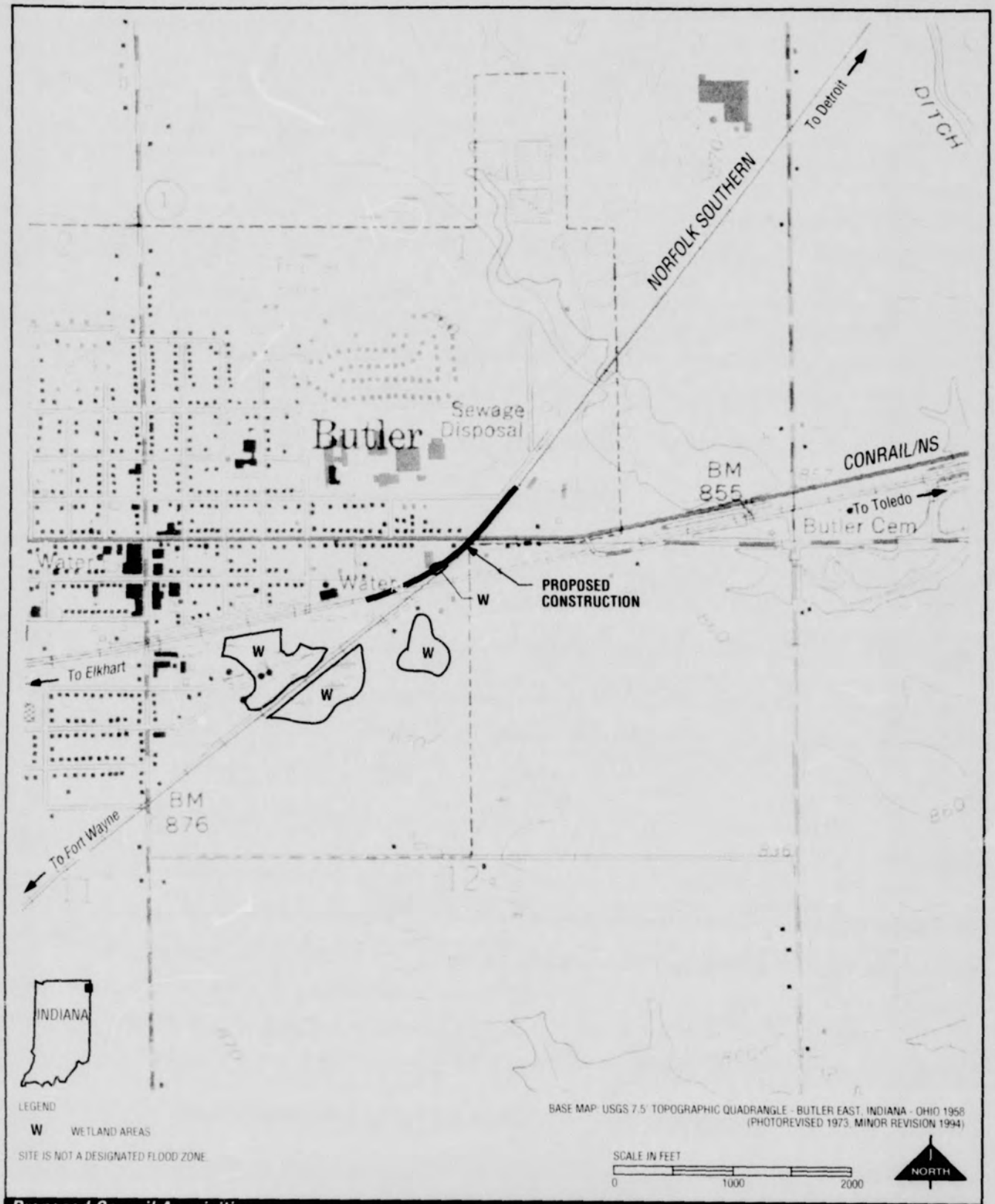

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FIGURE 5-IN-2

BUTLER, DE KALB COUNTY, INDIANA
NORFOLK SOUTHERN

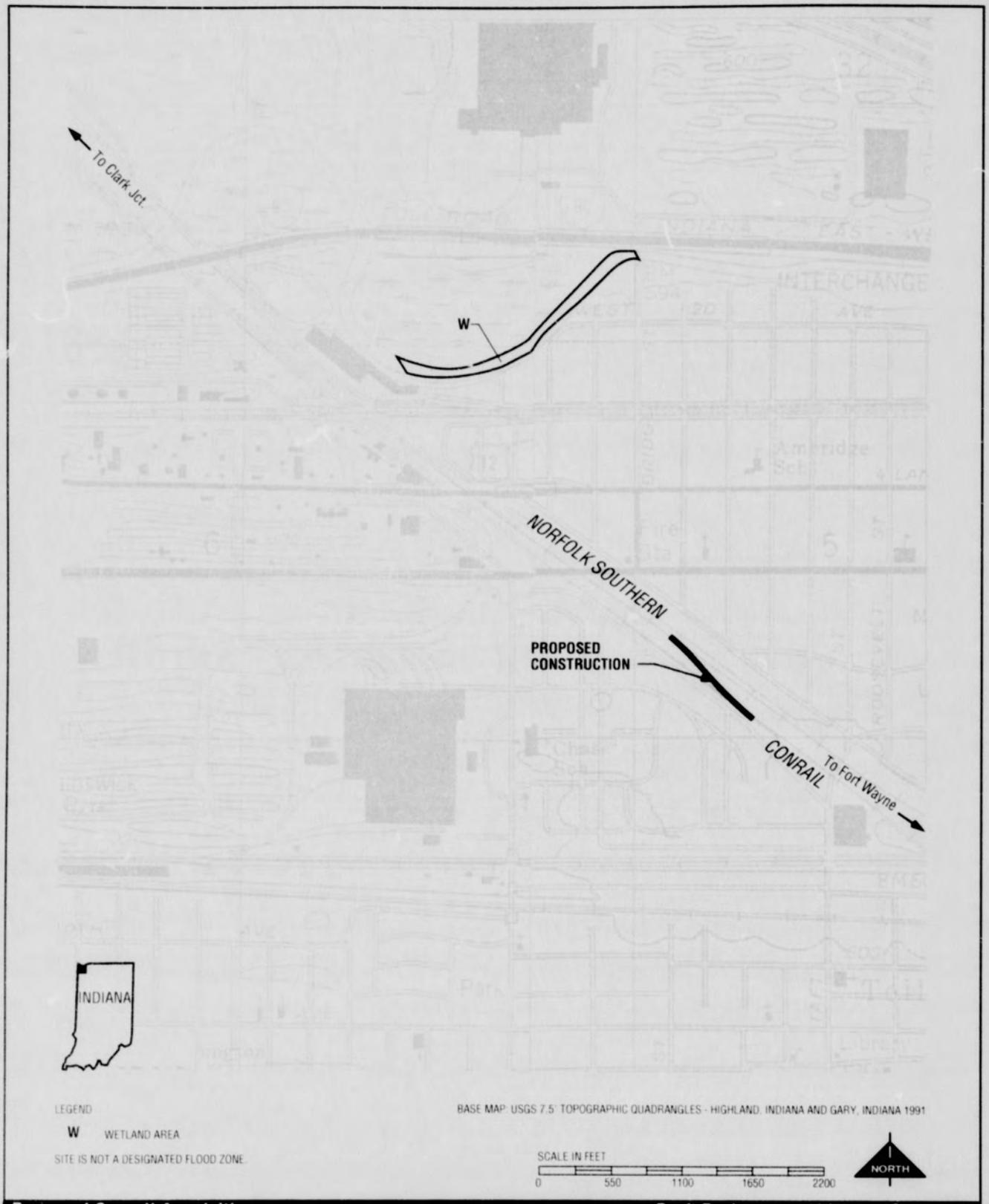


FIGURE 5-IN-3

TOLLESTON, LAKE COUNTY, INDIANA
NORFOLK SOUTHERN

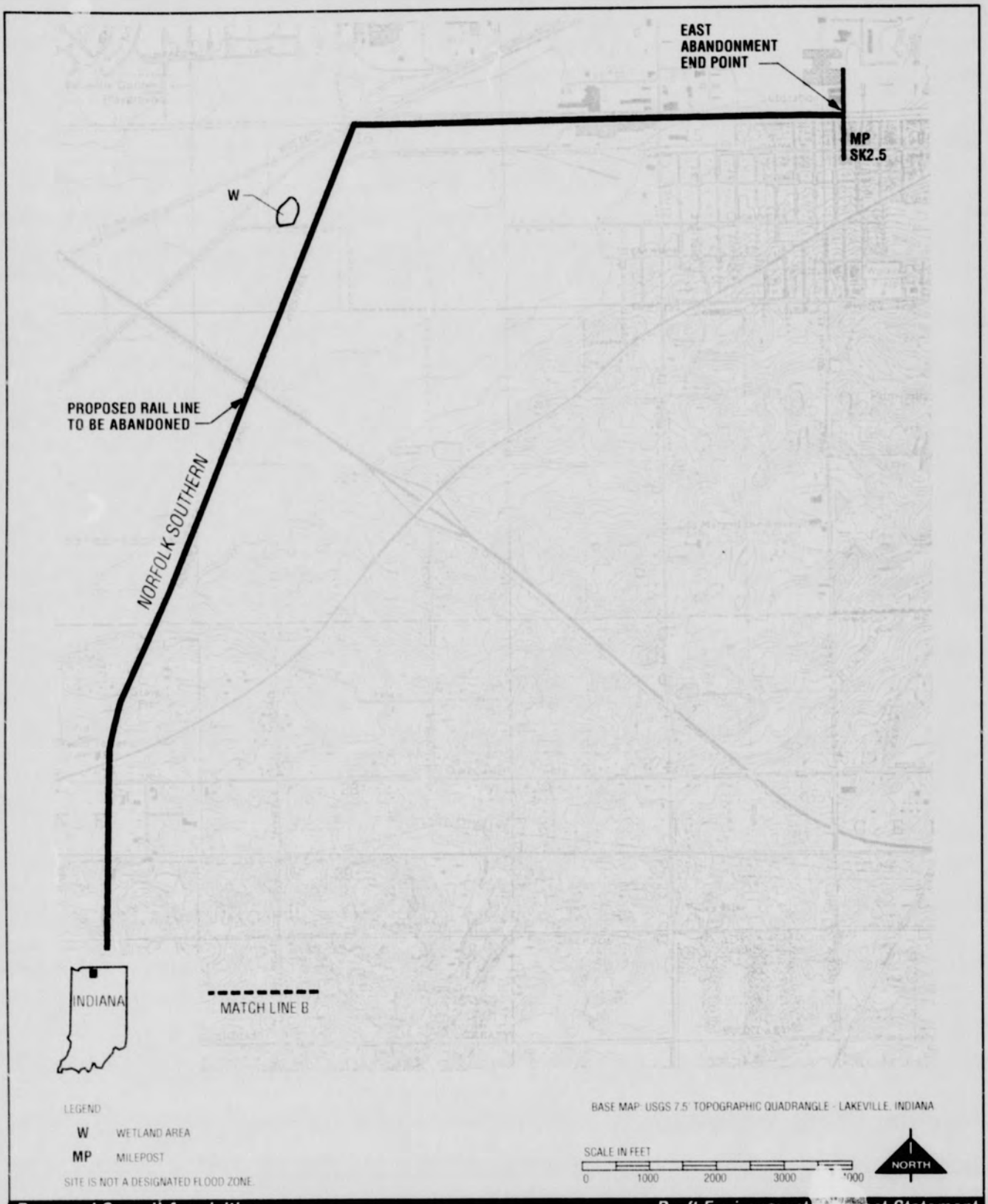
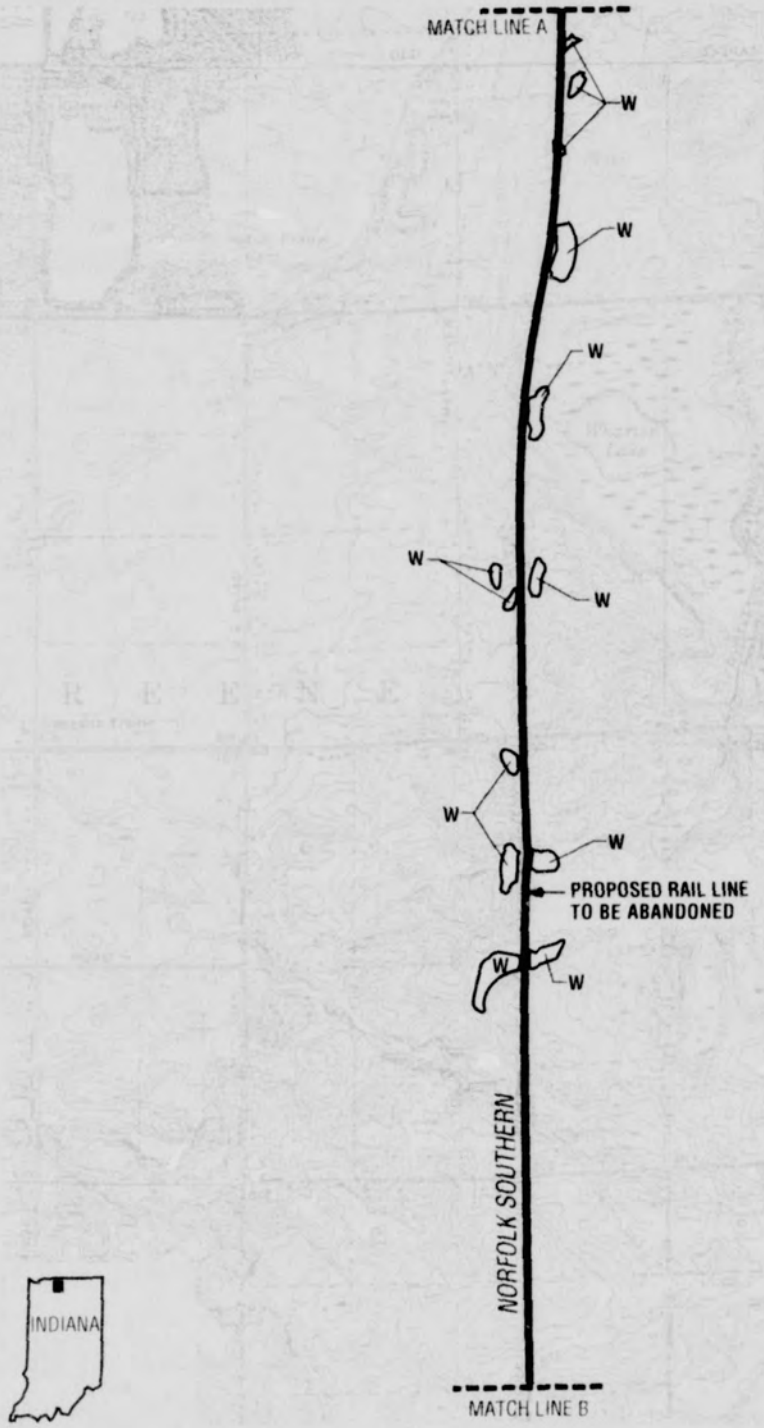


FIGURE 5-IN-4a

SOUTH BEND TO DILLON JUNCTION ABANDONMENT, LA PORTE AND ST. JOSEPH COUNTIES, INDIANA
NORFOLK SOUTHERN



LEGEND

W WETLAND AREAS

SITE IS NOT A DESIGNATED FLOOD ZONE

BASE MAP: USGS 7.5' TOPOGRAPHIC QUADRANGLE - LAKEVILLE, INDIANA

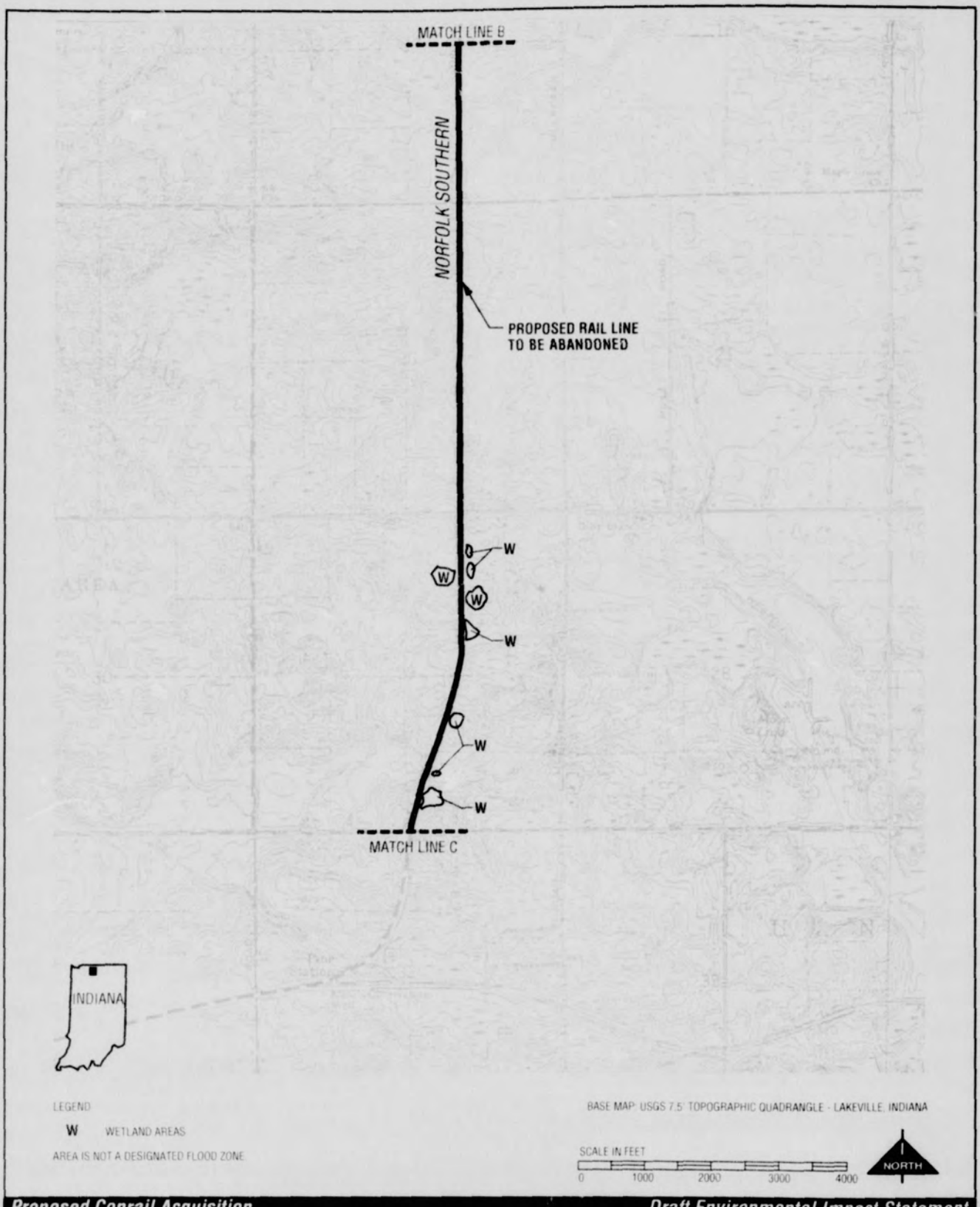
SCALE IN FEET

0 1000 2000 3000 4000

NORTH

FIGURE 5-IN-4b

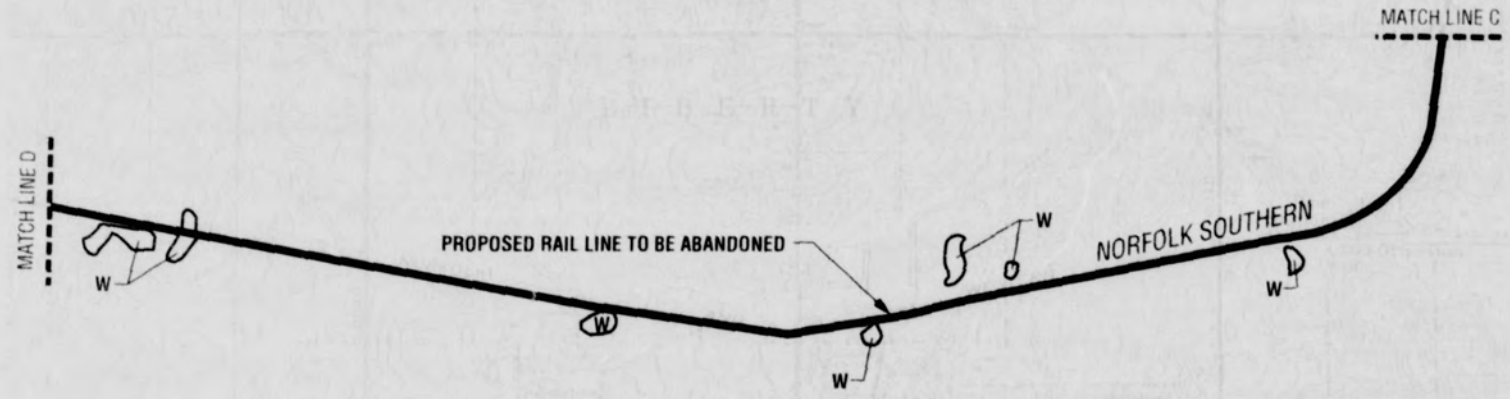
SOUTH BEND TO DILLON JUNCTION ABANDONMENT, LA PORTE AND ST. JOSEPH COUNTIES, INDIANA
NORFOLK SOUTHERN



Proposed Conrail Acquisition **Draft Environmental Impact Statement**

FIGURE 5-IN-4c

SOUTH BEND TO DILLON JUNCTION ABANDONMENT, LA PORTE AND ST. JOSEPH COUNTIES, INDIANA
NORFOLK SOUTHERN



LEGEND

W WETLAND AREAS

SITE IS NOT A DESIGNATED FLOOD ZONE.

BASE MAP: USGS 7.5' TOPOGRAPHIC QUADRANGLE - LAKEVILLE, INDIANA

SCALE IN FEET

0 1000 2000 3000 4000

NORTH

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FIGURE 5-IN-4d

SOUTH BEND TO DILLON JUNCTION ABANDONMENT, LA PORTE AND ST. JOSEPH COUNTIES, INDIANA
NORFOLK SOUTHERN

FIGURE 5-IN-4e

SOUTH BEND TO DILLON JUNCTION ABANDONMENT, LA PORTE AND ST. JOSEPH COUNTIES, INDIANA
NORFOLK SOUTHERN

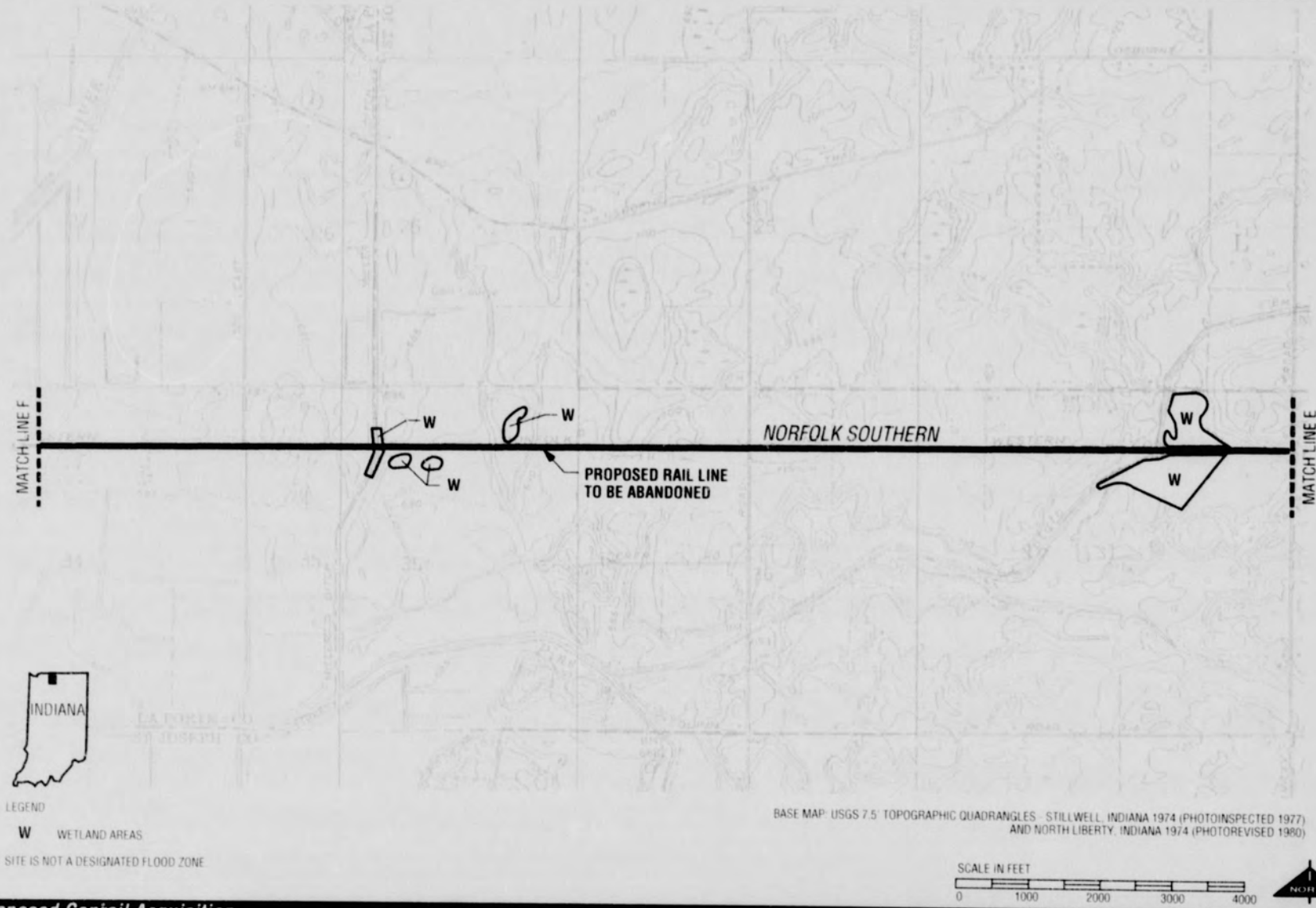

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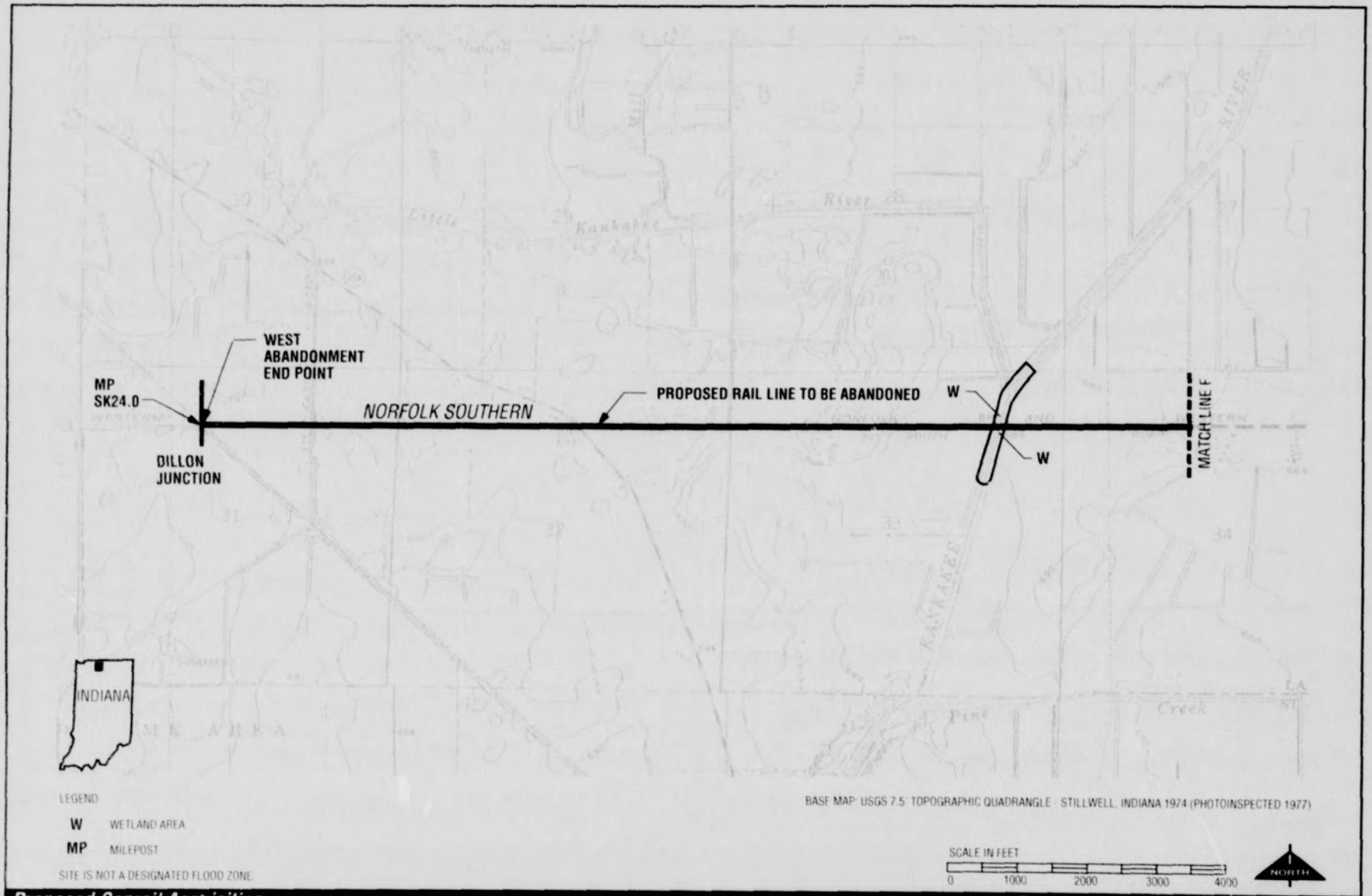
FIGURE 5-IN-4f

SOUTH BEND TO DILLON JUNCTION ABANDONMENT, LA PORTE AND ST. JOSEPH COUNTIES, INDIANA
NORFOLK SOUTHERN



Proposed Conrail Acquisition *Draft Environmental Impact Statement*

FIGURE 5-IN-4g

SOUTH BEND TO DILLON JUNCTION ABANDONMENT, LA PORTE AND ST. JOSEPH COUNTIES, INDIANA
NORFOLK SOUTHERN

Table 5-IN-8
Indiana
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
ALLEN	C-020	532833T	ADAMS CENTER RD	Gate	4,000	2	60	1	5.9	13.9	0.0656	0.0804	0.0148	
ALLEN	C-020	532834A	LINKER CR-MEYR RD	Gate	3,300	2	60	0	5.9	13.9	0.0205	0.0285	0.0079	
ALLEN	C-022	532855T	THOMAS ROAD	Gate	5,500	2	60	0	2.4	6.4	0.0141	0.0209	0.0068	
ALLEN	C-062	532805P	STATE LINE RD	Flasher	750	2	60	0	5.9	13.9	0.0193	0.0280	0.0086	
ALLEN	C-062	532806W	MORGAN RD	Passive	250	1	60	0	5.9	13.9	0.0159	0.0239	0.0080	
ALLEN	C-062	532809S	LORTIE RD	Passive	250	1	60	0	5.9	13.9	0.0268	0.0388	0.0121	
ALLEN	C-062	532810L	OHIO ST	Gate	300	2	60	0	5.9	13.9	0.0091	0.0132	0.0040	
ALLEN	C-062	532811T	MAIN ST SR 101	Gate	2,600	2	60	0	5.9	13.9	0.0163	0.0229	0.0066	
ALLEN	C-062	532812A	WASHINGTON ST	Flasher	1,350	2	60	0	5.9	13.9	0.0237	0.0337	0.0100	
ALLEN	C-062	532813G	SNYDER RD	Passive	250	1	60	0	5.9	13.9	0.0159	0.0239	0.0080	
ALLEN	C-062	532814N	HOFFMAN RD	Passive	250	1	60	0	5.9	13.9	0.0159	0.0239	0.0080	
ALLEN	C-062	532815V	GROTRIAN RD	Passive	250	1	60	0	5.9	13.9	0.0159	0.0239	0.0080	
ALLEN	C-062	532816C	WILSON RD	Passive	250	1	60	0	5.9	13.9	0.0159	0.0239	0.0080	
ALLEN	C-062	532817J	FACKLER RD	Passive	250	1	60	0	5.9	13.9	0.0159	0.0239	0.0080	
ALLEN	C-062	532818R	GARADOT RD	Passive	250	1	60	0	5.9	13.9	0.0159	0.0239	0.0080	
ALLEN	C-062	532819X	HOUK RD	Passive	250	1	60	0	5.9	13.9	0.0159	0.0239	0.0080	
ALLEN	C-062	532820S	WASHINGTON ST	Passive	250	1	60	0	5.9	13.9	0.0159	0.0239	0.0080	
ALLEN	C-062	532821Y	FRANKE RD	Gate	750	2	60	0	5.9	13.9	0.0117	0.0167	0.0050	
ALLEN	C-062	532824U	TILLMAN RD	Gate	750	2	60	0	5.9	13.9	0.0117	0.0167	0.0050	
ALLEN	C-062	532825B	MINNICH RD	Gate	2,000	2	60	0	5.9	13.9	0.0152	0.0214	0.0062	
ALLEN	C-062	532829D	PAULDING RD	Passive	300	2	60	0	5.9	13.9	0.0307	0.0439	0.0132	
ALLEN	C-062	532830X	HARTZELL RD	Gate	2,250	2	60	0	5.9	13.9	0.0157	0.0221	0.0064	
ALLEN	N-041	478176H	LEO RD	Gate	2,900	2	60	0	13.6	27.3	0.0223	0.0291	0.0067	
ALLEN	N-041	478180X	HURSHTOWN RD	Flasher	250	2	60	0	13.6	27.3	0.0185	0.0251	0.0066	
ALLEN	N-041	478182L	SPRINGFIELDCENTER	Passive	250	2	60	1	13.6	27.3	0.1048	0.1273	0.0225	
ALLEN	N-041	478183T	ROTH RD	Gate	1,700	2	60	1	13.6	27.3	0.0621	0.0730	0.0110	
ALLEN	N-041	478185G	STATE ST	Gate	4,400	2	60	0	13.6	27.3	0.0247	0.0320	0.0072	
ALLEN	N-041	478186N	ANTWERP RD	Passive	250	2	60	1	13.6	27.3	0.1048	0.1273	0.0225	
ALLEN	N-041	478188C	NOTESTINE RD	Passive	800	2	60	2	13.6	27.3	0.2679	0.3083	0.0404	0.0366
ALLEN	N-041	478192S	RICKER RD	Passive	250	2	60	0	13.6	27.3	0.0399	0.0524	0.0125	
ALLEN	N-041	478196U	MAYSVILLE RD	Gate	5,100	2	60	0	13.6	27.3	0.0256	0.0330	0.0074	
ALLEN	N-041	478197B	DOTY RD	Flasher	500	2	60	0	13.6	27.3	0.0236	0.0315	0.0080	
ALLEN	N-041	478200G	IRVING RD	Passive	250	2	60	0	13.6	27.3	0.0399	0.0524	0.0125	
ALLEN	N-041	478202V	STELLHORN ROAD	Gate	2,800	2	60	0	13.6	27.3	0.0221	0.0288	0.0067	
ALLEN	N-041	478203C	SCHWARTZ ROAD	Passive	250	2	60	0	13.6	27.3	0.0605	0.0756	0.0151	
ALLEN	N-041	478205R	PARENT ROAD	Passive	250	2	60	0	13.6	27.3	0.0605	0.0756	0.0151	
ALLEN	N-041	478208L	NORTH RIVER ROAD	Passive	300	2	60	0	13.6	27.3	0.0631	0.0783	0.0152	
ALLEN	N-041	478210M	LANDIN ROAD	Flasher	12,950	4	60	0	13.6	27.3	0.0734	0.0856	0.0123	

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Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
ALLEN	N-041	478211U	PARROT RD /ROSE AVE	Flasher	3,745	2	60	0	13.6	27.3	0.0442	0.0558	0.0116	
ALLEN	N-041	478212B	WEST STREET	Passive	360	2	50	0	13.6	27.3	0.0627	0.0779	0.0152	
ALLEN	N-041	478213H	CLEMENT ST MAIN	Passive	575	2	50	0	13.6	27.3	0.0696	0.0851	0.0155	
ALLEN	N-041	478214P	HARTZELL ROAD	Flasher	4,710	2	50	1	13.6	27.3	0.1125	0.1339	0.0213	
ALLEN	N-041	478216D	ESTELLA AVE	Flasher	2,600	2	50	2	13.6	27.3	0.1738	0.2042	0.0304	0.0342
ALLEN	N-041	478218S	MEYER ROAD	Gate	3,000	2	60	1	13.6	27.3	0.0746	0.0884	0.0138	
ALLEN	N-041	478223N	LUMBARD ST	Gate	2,080	2	30	0	13.6	27.3	0.0243	0.0315	0.0072	
ALLEN	N-041	478224V	WABASH AVE	Flasher	700	2	30	0	13.6	27.3	0.0315	0.0412	0.0097	
ALLEN	N-041	478225C	FLETCHER AVE	Gate	760	2	30	0	13.6	27.3	0.0190	0.0249	0.0060	
ALLEN	N-041	478226J	ANTHONY BLVD	Gate	16,330	3	30	2	13.6	27.3	0.1649	0.1910	0.0261	a
ALLEN	N-041	478227R	WINTER ST	Gate	710	2	30	0	13.6	27.3	0.0186	0.0245	0.0059	
ALLEN	N-044	478237W	BROOKLYN AVE	Gate	12,200	2	30	1	19.0	34.9	0.1001	0.1155	0.0153	
ALLEN	N-044	478238D	NUTTMAN AVE	Gate	5,070	2	30	0	19.0	34.9	0.0338	0.0415	0.0077	
ALLEN	N-044	478240E	ENGLE ROAD	Flasher	11,000	2	30	1	19.0	34.9	0.1457	0.1654	0.0198	0.0577
ALLEN	N-044	478241L	ARDMORE AVE	Gate	10,290	2	30	0	19.0	34.9	0.0352	0.0431	0.0079	
ALLEN	N-044	478243A	SMITH ROAD	Flasher	3,500	2	60	1	19.0	34.9	0.1173	0.1362	0.0189	
ALLEN	N-044	478248J	ELLISON RD	Gate	2,200	2	60	0	19.0	34.9	0.0248	0.0310	0.0063	
ALLEN	N-044	478249R	HOMESTEAD ROAD	Gate	750	2	60	0	19.0	34.9	0.0190	0.0241	0.0051	
ALLEN	N-044	478250K	AMBER ROAD	Passive	250	2	60	0	19.0	34.9	0.0473	0.0592	0.0119	
ALLEN	N-044	478251S	ABOITE ROAD	Gate	500	2	60	0	19.0	34.9	0.0171	0.0219	0.0047	
CARROLL	N-046	342069P	MARKET ST	Gate	200	2	25	1	18.4	40.2	0.0508	0.0600	0.0092	
CARROLL	N-046	342072X	WASHINGTON STREET	Gate	500	2	25	0	18.4	40.2	0.0169	0.0231	0.0062	
CARROLL	N-046	342074L	UNION ST	Gate	100	2	25	0	18.4	40.2	0.0111	0.0154	0.0043	
CARROLL	N-046	342077G	INDIANA STREET	Gate	100	2	25	0	18.4	40.2	0.0111	0.0154	0.0043	
CARROLL	N-046	342080P	WILSON STREET	Gate	650	2	25	1	18.4	40.2	0.0594	0.0712	0.0118	
CARROLL	N-046	484245C	CR 150E	Passive	250	2	60	0	18.4	40.2	0.0673	0.0847	0.0174	
CARROLL	N-046	484246J	WASHINGTON ST/ CR 100E	Passive	100	2	60	1	18.4	40.2	0.1308	0.1604	0.0296	0.0216
CARROLL	N-046	484247R	MADISON	Flasher	100	2	60	1	18.4	40.2	0.0554	0.0671	0.0117	
CARROLL	N-046	484248X	MERIDIAN LINE 000	Passive	100	2	60	1	18.4	40.2	0.1308	0.1604	0.0296	0.0216
CARROLL	N-046	484249E	CR 100W	Passive	100	2	60	0	18.4	40.2	0.0544	0.0708	0.0165	
CARROLL	N-046	484250Y	OAK ST	Passive	100	2	60	0	18.4	40.2	0.0544	0.0708	0.0165	
CARROLL	N-046	484251F	WALNUT ST	Passive	100	2	60	0	18.4	40.2	0.0544	0.0708	0.0165	
CARROLL	N-046	484252M	CR 600 N	Passive	250	1	60	0	18.4	40.2	0.0423	0.0570	0.0147	
CARROLL	N-046	484253U	CR 400 W	Passive	250	1	60	0	18.4	40.2	0.0263	0.0372	0.0108	
CARROLL	N-046	484254B	CR 500 N	Passive	250	1	60	0	18.4	40.2	0.0423	0.0570	0.0147	
CARROLL	N-046	484256P	CR 550 W	Passive	100	1	60	0	18.4	40.2	0.0326	0.0451	0.0125	

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County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
CARROLL	N-046	484258D	SR 218	Gate	1,760	2	60	0	18.4	40.2	0.0224	0.0301	0.0077	
CARROLL	N-046	484263A	MONROE & WABASH	Gate	350	2	35	0	18.4	40.2	0.0149	0.0205	0.0056	
CARROLL	N-046	484264G	FRANKLIN ST	Gate	500	2	35	1	18.4	40.2	0.0563	0.0671	0.0108	
CARROLL	N-046	484265N	MAIN ST	Gate	5,780	2	35	0	18.4	40.2	0.0297	0.0391	0.0093	
CARROLL	N-046	484266V	FALLEN SPRINGS	Passive	250	2	60	0	18.4	40.2	0.0454	0.0607	0.0152	
CASS	N-046	484215K	CR 1100E	Passive	74	2	60	0	18.4	40.2	0.0504	0.0664	0.0160	
CASS	N-046	484216S	CEDAR ST	Passive	351	2	60	1	18.4	40.2	0.1633	0.1947	0.0314	0.0338
CASS	N-046	484217Y	CR 950E	Passive	62	2	60	0	18.4	40.2	0.0481	0.0638	0.0157	
CASS	N-046	484219M	CR 800E	Passive	18	1	60	0	18.4	40.2	0.0190	0.0274	0.0084	
CASS	N-046	484223C	CR 600E	Gate	1,445	2	60	0	18.4	40.2	0.0214	0.0288	0.0074	
CASS	N-046	484227E	POTTAWATOMIE RD	Gate	164	2	60	0	18.4	40.2	0.0122	0.0169	0.0047	
CASS	N-046	484229T	18TH ST	Flasher	3,000	2	60	2	18.4	40.2	0.1763	0.2109	0.0346	0.0367
CASS	N-046	484237K	CR 175 WEST	Passive	68	2	60	0	18.4	40.2	0.0493	0.0651	0.0158	
CASS	N-046	484238S	CR 300S	Passive	58	2	60	0	18.4	40.2	0.0299	0.0417	0.0118	
CASS	N-046	484239Y	CR 325W	Passive	24	2	60	0	18.4	40.2	0.0227	0.0324	0.0097	
CASS	N-046	484241A	CLYMERSMAINST400W	Passive	35	2	60	0	18.4	40.2	0.0413	0.0557	0.0145	
CASS	N-046	484242G	CR 400S	Passive	22	2	60	0	18.4	40.2	0.0362	0.0496	0.0134	
CASS	N-046	484243N	CR 500W	Passive	11	1	60	0	18.4	40.2	0.0145	0.0212	0.0067	
CASS	N-046	484244V	CR 500S/CR 1000N	Passive	10	2	60	0	18.4	40.2	0.0286	0.0401	0.0115	
CASS	N-046	534061S	KING ST	Passive	10	2	10	0	18.4	40.2	0.0213	0.0306	0.0092	
DE KALB	C-066	155285T	STATE LINE ROAD	Flasher	192	2	60	0	21.4	47.7	0.0212	0.0299	0.0087	
DE KALB	C-066	155288N	CR 75	Passive	93	2	60	0	21.4	47.7	0.0378	0.0520	0.0142	
DE KALB	C-066	155289V	CENTER RD - CR 60	Passive	97	2	60	1	21.4	47.7	0.1019	0.1276	0.0257	
DE KALB	C-066	155290P	SR 101	Gate	450	2	60	0	21.4	47.7	0.0199	0.0272	0.0073	
DE KALB	C-066	155292D	CR 218	Passive	18	2	60	0	21.4	47.7	0.0375	0.0516	0.0141	
DE KALB	C-066	155295Y	CR 63	Gate	297	2	60	0	21.4	47.7	0.0157	0.0217	0.0060	
DE KALB	C-066	155297M	FIRST ST	Gate	1,068	2	60	0	21.4	47.7	0.0217	0.0295	0.0078	
DE KALB	C-066	155298U	THIRD ST	Passive	250	2	60	0	21.4	47.7	0.0722	0.0902	0.0179	
DE KALB	C-066	155299B	SPENCERVILLE ROAD	Flasher	300	2	60	0	21.4	47.7	0.0247	0.0344	0.0097	
DE KALB	C-066	155301A	C R 58	Passive	73	1	60	0	21.4	47.7	0.0198	0.0287	0.0090	
DE KALB	C-066	155302G	CR 55	Passive	89	2	60	0	21.4	47.7	0.0374	0.0515	0.0141	
DE KALB	C-066	155304V	LANCASTER RD	Flasher	135	2	60	0	21.4	47.7	0.0188	0.0266	0.0079	
DE KALB	C-066	155305C	CR 179	Passive	40	2	60	0	21.4	47.7	0.0295	0.0416	0.0121	
DE KALB	C-066	155306J	CR 49	Passive	81	2	60	1	21.4	47.7	0.0984	0.1234	0.0250	
DE KALB	C-066	155311F	PROSSER RD	Passive	74	2	60	0	21.4	47.7	0.0354	0.0491	0.0136	
DE KALB	C-066	155314B	CR 149	Passive	47	2	60	0	21.4	47.7	0.0310	0.0435	0.0125	
DE KALB	C-066	155315H	HOOK ROAD	Gate	650	2	60	0	21.4	47.7	0.0192	0.0263	0.0071	
DE KALB	C-066	155318D	MAGGINS ROAD	Gate	182	2	60	0	21.4	47.7	0.0138	0.0192	0.0054	

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DE KALB	C-066	155319K	(CEMETERYRD)CR29	Flasher	230	2	60	0	21.4	47.7	0.0226	0.0317	0.0091	
DE KALB	C-066	155320E	SOUTH WAYNE	Gate	6,000	2	60	1	21.4	47.7	0.0856	0.1039	0.0183	
DE KALB	C-066	155322T	AUBURN DR	Flasher	1,721	2	50	1	21.4	47.7	0.1046	0.1284	0.0238	
DE KALB	C-066	155323A	WEST ST	Passive	50	2	50	1	21.4	47.7	0.1174	0.1461	0.0287	
DE KALB	C-066	155326V	CR 19	Gate	370	2	60	0	21.4	47.7	0.0190	0.0260	0.0070	
DE KALB	C-066	155329R	TAYLOR ROAD	Flasher	2,500	2	60	0	21.4	47.7	0.0535	0.0677	0.0142	
DE KALB	C-066	155330K	RANDOLPH ST	Gate	5,023	2	20	0	21.4	47.7	0.0358	0.0465	0.0107	
DE KALB	N-041	478149L	BROADWAY	Gate	1,782	2	60	0	13.6	27.3	0.0198	0.0259	0.0061	
DE KALB	N-041	478150F	CR221	Passive	64	2	60	1	13.6	27.3	0.0809	0.0982	0.0172	
DE KALB	N-041	478152U	CR 46	Passive	89	2	60	0	13.6	27.3	0.0295	0.0398	0.0103	
DE KALB	N-041	478153B	C R. 36	Passive	52	2	60	0	13.6	27.3	0.0250	0.0341	0.0091	
DE KALB	N-041	478154H	C R. 63	Gate	176	2	60	0	13.6	27.3	0.0108	0.0145	0.0037	
DE KALB	N-041	478157D	CR 40	Gate	520	2	60	0	13.6	27.3	0.0144	0.0192	0.0048	
DE KALB	N-041	478159S	CR 36	Passive	164	2	60	0	13.6	27.3	0.0354	0.0470	0.0116	
DE KALB	N-041	478160L	ST HWY8	Gate	501	2	60	0	13.6	27.3	0.0143	0.0190	0.0047	
DE KALB	N-041	478161T	CR59	Gate	340	2	60	0	13.6	27.3	0.0129	0.0172	0.0043	
DE KALB	N-041	478164N	CR 32	Passive	126	2	60	0	13.6	27.3	0.0327	0.0438	0.0111	
DE KALB	N-041	478170S	CR 98	Passive	64	2	60	0	13.6	27.3	0.0267	0.0362	0.0096	
DE KALB	N-041	478171Y	CR 60	Gate	320	2	60	0	13.6	27.3	0.0127	0.0169	0.0043	
DE KALB	N-041	478173M	CR 10	Passive	84	2	60	0	13.6	27.3	0.0290	0.0391	0.0102	
DE KALB	N-041	478174U	AUBURN ST	Gate	630	2	60	0	13.6	27.3	0.0152	0.0201	0.0050	
DE KALB	N-041	478175B	COUNTYLINEROAD	Gate	148	2	60	0	13.6	27.3	0.0103	0.0139	0.0036	
DELAWARE	N-040	474547C	COUNCIL ST	Gate	550	2	20	0	2.6	11.8	0.0076	0.0144	0.0068	
DELAWARE	N-040	474549R	ELLIOTT ST	Gate	3,064	2	20	0	2.6	11.8	0.0115	0.0172	0.0056	
DELAWARE	N-040	474550K	KILGORE	Flasher	10,481	2	20	1	2.6	11.8	0.0777	0.1070	0.0293	
DELAWARE	N-040	474552Y	WHITERIVER BLVD	Gate	6,870	4	30	0	2.6	11.8	0.0193	0.0338	0.0145	
DELAWARE	N-040	474553F	NICKOLS	Flasher	6,733	2	30	0	2.6	11.8	0.0288	0.0504	0.0216	
DELAWARE	N-040	474561X	GODMAN AVE	Flasher	550	2	30	0	2.6	11.8	0.0119	0.0235	0.0116	
DELAWARE	N-040	474562E	HUTCHINSON ST	Flasher	550	2	30	0	2.6	11.8	0.0119	0.0235	0.0116	
DELAWARE	N-040	474563L	CELIA AVE	Passive	550	2	30	0	2.6	11.8	0.0347	0.0618	0.0271	
DELAWARE	N-040	474564T	MANNING AVE	Passive	550	2	30	1	2.6	11.8	0.0955	0.1442	0.0487	
DELAWARE	N-040	474565A	TILLOTSON	Gate	19,025	4	30	0	2.6	11.8	0.0248	0.0419	0.0171	
DELAWARE	N-040	474566G	JACKSON ST	Gate	5,007	2	30	0	2.6	11.8	0.0138	0.0251	0.0113	
DELAWARE	N-040	474567N	JACKSON ST	Flasher	2,492	2	30	0	2.6	11.8	0.0206	0.0382	0.0176	
DELAWARE	N-040	474568V	CR300W MORRISON	Gate	4,800	2	30	0	2.6	11.8	0.0137	0.0249	0.0112	
DELAWARE	N-040	474569C	SHERWOOD DR	Passive	105	2	30	1	2.6	11.8	0.0705	0.1057	0.0353	
DELAWARE	N-040	474572K	CR 500 W	Gate	2,077	2	60	0	2.6	11.8	0.0109	0.0203	0.0093	
DELAWARE	N-040	474573S	JACKSON PIKE	Gate	1,030	2	60	0	2.6	11.8	0.0090	0.0170	0.0079	

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DELAWARE	N-040	474575F	WEST ST	Passive	80	2	60	0	2.6	11.8	0.0233	0.0445	0.0212	
DELAWARE	N-040	474576M	CR 600 W	Gate	1,617	2	60	0	2.6	11.8	0.0102	0.0190	0.0088	
DELAWARE	N-040	474577U	CR 150 N	Flasher	250	2	60	0	2.6	11.8	0.0088	0.0178	0.0091	
DELAWARE	N-040	474578B	CR 700 W	Passive	121	2	60	0	2.6	11.8	0.0266	0.0497	0.0231	
DELAWARE	N-040	474580C	CR 800 W	Passive	47	2	60	1	2.6	11.8	0.0683	0.1021	0.0338	
DELAWARE	N-040	474581J	CR 850 W	Passive	196	2	60	0	2.6	11.8	0.0308	0.0561	0.0253	
DELAWARE	N-040	474584E	CR 925 W	Passive	56	2	60	0	2.6	11.8	0.0208	0.0404	0.0196	
DELAWARE	N-040	474585L	CR 950 W	Passive	63	2	49	0	2.6	11.8	0.0201	0.0391	0.0191	
ELKHART	C-066	155417B	C R 11	Passive	259	2	60	0	21.4	47.7	0.0727	0.0907	0.0179	
ELKHART	C-066	155419P	CR 9	Passive	431	2	60	1	21.4	47.7	0.1778	0.2099	0.0321	0.0413
ELKHART	C-066	155420J	CR 7	Flasher	5,314	2	60	0	21.4	47.7	0.0574	0.0718	0.0144	
ELKHART	C-066	155421R	JACKSON ST	Flasher	1,750	2	60	0	21.4	47.7	0.0429	0.0562	0.0133	
ELKHART	C-066	155424L	MADISON	Gate	804	2	60	0	21.4	47.7	0.0203	0.0276	0.0074	
ELKHART	C-066	155426A	NAPPANEE ST	Flasher	1,305	2	60	0	21.4	47.7	0.0394	0.0522	0.0128	
ELKHART	C-066	155427G	WILLIAMS ST	Gate	207	2	60	0	21.4	47.7	0.0143	0.0199	0.0056	
ELKHART	C-066	155431W	TOMAHAWK	Passive	661	2	60	0	21.4	47.7	0.0870	0.1044	0.0175	
FOUNTAIN	N-045	484327J	CR 900 E	Passive	65	1	60	1	23.6	41.0	0.0676	0.0780	0.0103	
FOUNTAIN	N-045	484328R	CR 1500 N	Gate	25	2	60	0	23.6	41.0	0.0081	0.0104	0.0022	
FOUNTAIN	N-045	484332F	650 E	Flasher	25	2	60	0	23.6	41.0	0.0103	0.0134	0.0031	
FOUNTAIN	N-045	484334U	CR 1400 N	Gate	300	2	60	0	23.6	41.0	0.0159	0.0199	0.0040	
FOUNTAIN	N-045	484337P	MARKET ST 500 E	Gate	230	2	60	0	23.6	41.0	0.0148	0.0186	0.0038	
FOUNTAIN	N-045	484341E	CR 375 E	Passive	12	1	60	0	23.6	41.0	0.0109	0.0144	0.0035	
FOUNTAIN	N-045	484342L	CR 325 E	Passive	15	2	60	0	23.6	41.0	0.0220	0.0284	0.0064	
FOUNTAIN	N-045	484344A	250 E	Passive	25	2	60	0	23.6	41.0	0.0258	0.0331	0.0073	
FOUNTAIN	N-045	484346N	PERRY ST	Gate	620	2	35	0	23.6	41.0	0.0191	0.0237	0.0047	
GIBSON	C-025	342447H	FIRST	Flasher	1,047	2	40	0	22.3	30.8	0.0369	0.0417	0.0047	
GIBSON	C-025	342448P	MAIN	Flasher	250	2	40	0	22.3	30.8	0.0233	0.0267	0.0034	
GIBSON	C-025	342449W	MILL ST	Flasher	250	2	40	0	22.3	30.8	0.0233	0.0267	0.0034	
GIBSON	C-025	342454T	870 N	Passive	10	2	60	0	22.3	30.8	0.0314	0.0361	0.0047	
GIBSON	C-025	342456G	STEELMAN CHAPEL R	Passive	80	2	60	0	22.3	30.8	0.0554	0.0621	0.0066	
GIBSON	C-025	342458V	CR377	Passive	50	1	60	0	22.3	30.8	0.0173	0.0202	0.0029	
GIBSON	C-025	342459C	CR174	Passive	50	2	45	1	22.3	30.8	0.0842	0.0921	0.0079	
GIBSON	C-025	342461D	CROSS ST	Flasher	548	2	45	0	22.3	30.8	0.0302	0.0344	0.0042	
GIBSON	C-025	342462K	VINE ST	Flasher	250	2	40	0	22.3	30.8	0.0233	0.0267	0.0034	
GIBSON	C-025	342465F	GRAVE ST	Flasher	250	2	45	0	22.3	30.8	0.0233	0.0267	0.0034	
GIBSON	C-025	342468B	225N	Passive	50	2	55	0	22.3	30.8	0.0304	0.0349	0.0046	
GIBSON	C-025	342469H	150N	Passive	5	1	55	0	22.3	30.8	0.0076	0.0090	0.0014	
GIBSON	C-025	342470C	CR 100N	Passive	200	2	40	3	22.3	30.8	0.3111	0.3348	0.0236	0.0209

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Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
GIBSON	C-025	342473X	SPRING ST	Passive	506	2	40	1	22.3	30.8	0.1724	0.1855	0.0130	0.0300
GIBSON	C-025	342475L	BROADWAY	Gate	7,929	2	40	0	22.3	30.8	0.0352	0.0393	0.0041	
GIBSON	C-025	342477A	HALL ST	Flasher	509	2	40	0	22.3	30.8	0.0300	0.0341	0.0041	
GIBSON	C-025	342478G	CLARK ST	Passive	142	2	40	0	22.3	30.8	0.0588	0.0656	0.0068	
GIBSON	C-025	342479N	MONROE ST	Passive	142	2	40	0	22.3	30.8	0.0588	0.0656	0.0068	
GIBSON	C-025	342480H	PINKNEY ST	Passive	148	2	40	0	22.3	30.8	0.0594	0.0662	0.0068	
GIBSON	C-025	342481P	MULBERRY ST	Passive	1,511	2	40	2	22.3	30.8	0.3105	0.3287	0.0182	0.0442
GIBSON	C-025	342482W	HART ST	Passive	260	2	40	0	22.3	30.8	0.0675	0.0746	0.0071	
GIBSON	C-025	342483D	MAKEMSON AVE	Passive	532	2	40	0	22.3	30.8	0.0783	0.0855	0.0072	
GIBSON	C-025	342484K	GARFIELD AVE	Flasher	448	2	40	0	22.3	30.8	0.0290	0.0330	0.0041	
GIBSON	C-025	342486Y	CR66	Flasher	200	2	60	0	22.3	30.8	0.0221	0.0254	0.0033	
GIBSON	C-025	342487F	CR64	Flasher	160	2	60	0	22.3	30.8	0.0205	0.0236	0.0031	
GIBSON	C-025	342488M	CR 52	Passive	5	1	60	0	22.3	30.8	0.0079	0.0093	0.0014	
GIBSON	C-025	342489U	CR54	Passive	50	2	60	0	22.3	30.8	0.0511	0.0575	0.0064	
GIBSON	C-025	342490N	CR252	Passive	100	2	60	0	22.3	30.8	0.0399	0.0455	0.0056	
GIBSON	C-025	342491V	650S	Passive	30	2	60	0	22.3	30.8	0.0447	0.0506	0.0060	
GIBSON	C-025	342492C	PARK ST	Flasher	2,241	2	60	0	22.3	30.8	0.0470	0.0524	0.0054	
GIBSON	C-025	342493J	W JOHN	Passive	662	2	40	1	22.3	30.8	0.1813	0.1944	0.0130	0.0337
GIBSON	C-025	342494R	WILLIAMS ST	Flasher	306	2	40	0	22.3	30.8	0.0256	0.0293	0.0037	
GIBSON	C-025	342495X	VINE ST	Flasher	967	2	40	0	22.3	30.8	0.0370	0.0417	0.0047	
GIBSON	C-025	342497L	LOCUST ST	Flasher	3,077	2	40	1	22.3	30.8	0.1198	0.1298	0.0100	
GIBSON	C-025	342498T	WALNUT ST	Flasher	238	2	40	0	22.3	30.8	0.0235	0.0270	0.0035	
GIBSON	C-025	342499A	STRAIN ST	Flasher	1,659	2	40	0	22.3	30.8	0.0433	0.0484	0.0052	
GIBSON	C-025	342500S	COAL MINE RD	Flasher	2,931	2	60	0	22.3	30.8	0.0505	0.0560	0.0055	
GIBSON	C-025	342505B	MAPLE ST	Flasher	1,120	2	40	0	22.3	30.8	0.0386	0.0435	0.0049	
GIBSON	C-025	342506H	CHURCH ST	Passive	300	2	40	0	22.3	30.8	0.0705	0.0776	0.0072	
GIBSON	C-025	342508W	GIBSON	Flasher	1,000	2	40	0	22.3	30.8	0.0373	0.0421	0.0048	
GIBSON	C-025	342513T	ELM	Passive	400	2	40	0	22.3	30.8	0.0748	0.0820	0.0072	
GIBSON	C-025	342514A	PLUM ST	Gate	1,285	2	40	0	22.3	30.8	0.0235	0.0266	0.0031	
GIBSON	C-025	342515G	CR 136	Passive	100	2	40	1	22.3	30.8	0.1315	0.1434	0.0119	
GIBSON	C-025	342516N	1200S	Passive	150	2	60	0	22.3	30.8	0.0664	0.0734	0.0071	
GIBSON	C-025	342517V	CR4	Passive	75	2	50	0	22.3	30.8	0.0537	0.0602	0.0066	
HUNTINGTON	N-044	478252Y	CR 1100 N	Passive	95	2	60	0	19.0	34.9	0.0557	0.0685	0.0128	
HUNTINGTON	N-044	478256B	LAFAYETTE CENTER	Gate	1,250	2	60	0	19.0	34.9	0.0216	0.0273	0.0057	
HUNTINGTON	N-044	478257H	STATION RD	Gate	448	2	60	0	19.0	34.9	0.0166	0.0213	0.0046	
HUNTINGTON	N-044	478259W	N MAYHON RD/ CR 158	Gate	337	2	60	0	19.0	34.9	0.0155	0.0198	0.0044	
HUNTINGTON	N-044	478262E	CR 66	Passive	250	1	60	0	19.0	34.9	0.0276	0.0361	0.0085	
HUNTINGTON	N-044	478263L	SIMPSON ROAD	Flasher	452	2	60	0	19.0	34.9	0.0270	0.0345	0.0076	

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County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
HUNTINGTON	N-044	478264T	OLD FT. WAYNE RD	Passive	30	2	60	0	19.0	34.9	0.0412	0.0523	0.0111	
HUNTINGTON	N-044	478265A	MERIDIAN ROAD	Gate	550	2	60	0	19.0	34.9	0.0175	0.0224	0.0048	
HUNTINGTON	N-044	478266G	BROADWAY	Gate	2,000	2	60	1	19.0	34.9	0.0704	0.0815	0.0111	
HUNTINGTON	N-044	478267N	GRAYSTONE AVE	Gate	1,375	2	60	0	19.0	34.9	0.0221	0.0279	0.0058	
HUNTINGTON	N-044	478269C	CONDIT ST	Gate	2,150	2	60	0	19.0	34.9	0.0246	0.0309	0.0063	
HUNTINGTON	N-044	478270W	BRIANT ST	Flasher	5,500	2	60	2	19.0	34.9	0.1851	0.2120	0.0269	0.0372
HUNTINGTON	N-044	478271D	BYRON ST	Flasher	2,300	2	60	1	19.0	34.9	0.1077	0.1258	0.0181	
HUNTINGTON	N-044	478272K	WARREN ST	Gate	2,225	2	60	0	19.0	34.9	0.0248	0.0311	0.0063	
HUNTINGTON	N-044	478273S	JEFFERSON ST	Gate	19,900	3	60	0	19.0	34.9	0.0446	0.0535	0.0089	
HUNTINGTON	N-044	478274Y	LAFONTAIN ST	Flasher	8,600	2	60	0	19.0	34.9	0.0620	0.0730	0.0110	
HUNTINGTON	N-044	478275F	HITZFIELD ST	Passive	75	2	60	0	19.0	34.9	0.0338	0.0436	0.0098	
HUNTINGTON	N-044	478278B	RANGELWE RD (CR 17)	Passive	156	2	60	0	19.0	34.9	0.0627	0.0760	0.0133	
HUNTINGTON	N-044	478280C	C R 700W	Passive	95	2	60	0	19.0	34.9	0.0557	0.0685	0.0128	
HUNTINGTON	N-044	478281J	MARKET ST	Flasher	750	2	60	0	19.0	34.9	0.0318	0.0402	0.0084	
HUNTINGTON	N-044	478282R	MAIN ST	Gate	1,551	2	60	0	19.0	34.9	0.0227	0.0287	0.0059	
HUNTINGTON	N-044	478283X	SNOWDEN ST	Flasher	250	2	60	0	19.0	34.9	0.0221	0.0286	0.0065	
KNOX	C-025	342405W	COLLEGE STREET	Flasher	1,500	2	25	0	22.3	30.8	0.0417	0.0467	0.0051	
KNOX	C-025	342407K	TENTH STREET	Flasher	250	2	25	0	22.3	30.8	0.0237	0.0272	0.0035	
KNOX	C-025	342410T	N. 11TH ST	Flasher	250	2	25	0	22.3	30.8	0.0237	0.0272	0.0035	
KNOX	C-025	342411A	SCOTT STREET	Flasher	250	2	25	0	22.3	30.8	0.0237	0.0272	0.0035	
KNOX	C-025	342413N	HART STREET	Flasher	2,500	2	25	3	22.3	30.8	0.2465	0.2649	0.0184	0.0307
KNOX	C-025	342414V	SEMINARY STREET	Passive	250	2	25	0	22.3	30.8	0.0624	0.0693	0.0070	
KNOX	C-025	342416J	PERRY STREET	Passive	250	2	25	1	22.3	30.8	0.1453	0.1578	0.0125	0.0208
KNOX	C-025	342417R	BUNTIN STREET	Passive	250	2	25	1	22.3	30.8	0.1453	0.1578	0.0125	0.0208
KNOX	C-025	342421F	BUSSERON ST	Flasher	250	2	25	0	22.3	30.8	0.0237	0.0272	0.0035	
KNOX	C-025	342422M	MAIN STREET	Flasher	250	2	25	0	22.3	30.8	0.0237	0.0272	0.0035	
KNOX	C-025	342423U	S. 13TH ST	Flasher	500	2	25	0	22.3	30.8	0.0298	0.0339	0.0041	
KNOX	C-025	342424B	S. 14TH ST	Flasher	250	2	25	0	22.3	30.8	0.0237	0.0272	0.0035	
KNOX	C-025	342425H	S. 15H ST	Flasher	1,000	2	25	6	22.3	30.8	0.3809	0.4085	0.0275	0.0213
KNOX	C-025	342427W	RAMSEY RD	Gate	400	2	60	1	22.3	30.8	0.0579	0.0623	0.0043	
KNOX	C-025	342428D	BROKHAGE	Flasher	350	2	60	1	22.3	30.8	0.0747	0.0814	0.0068	
KNOX	C-025	342429K	DECKER ROAD	Gate	250	2	60	1	22.3	30.8	0.0544	0.0583	0.0039	
KNOX	C-025	342432T	CR 110	Gate	750	2	60	0	22.3	30.8	0.0202	0.0230	0.0027	
KNOX	C-025	342435N	CR 208	Passive	250	2	60	0	22.3	30.8	0.0731	0.0803	0.0072	
KNOX	C-025	342436V	CR 96	Passive	175	2	60	0	22.3	30.8	0.0678	0.0749	0.0071	
KNOX	C-025	342439R	CR 92	Passive	75	2	60	0	22.3	30.8	0.0557	0.0624	0.0067	
KNOX	C-025	342442Y	1350S	Gate	100	2	40	0	22.3	30.8	0.0120	0.0138	0.0018	
KNOX	C-025	342443F	MAIN	Flasher	620	2	60	1	22.3	30.8	0.0852	0.0930	0.0078	

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									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
KOSCIUSKO	C-066	155385X	CR 1000	Gate	789	2	60	0	21.4	47.7	0.0202	0.0275	0.0073	
KOSCIUSKO	C-066	155387L	CR 900E	Gate	346	2	60	2	21.4	47.7	0.0962	0.1124	0.0162	
KOSCIUSKO	C-066	155388T	775 E	Passive	1,010	2	60	0	21.4	47.7	0.0934	0.1103	0.0169	
KOSCIUSKO	C-066	155389A	WARNER ROAD	Flasher	250	2	60	0	21.4	47.7	0.0272	0.0375	0.0103	
KOSCIUSKO	C-066	155390U	EAST SHORE DRIVE	Gate	873	2	60	0	21.4	47.7	0.0235	0.0317	0.0082	
KOSCIUSKO	C-066	155391B	SEVENTH ST-FRONT	Flasher	250	2	60	2	21.4	47.7	0.1262	0.1530	0.0268	0.0185
KOSCIUSKO	C-066	155392H	HUNTINGTON STREET	Gate	2,763	2	60	2	21.4	47.7	0.1337	0.1592	0.0255	a
KOSCIUSKO	C-066	155394W	MAIN\SYR-WEB	Flasher	2,215	2	60	2	21.4	47.7	0.1904	0.2271	0.0367	0.0436
KOSCIUSKO	C-066	155395D	OAK ST	Passive	250	2	60	1	21.4	47.7	0.1629	0.1952	0.0323	0.0341
KOSCIUSKO	C-066	155400X	300E	Passive	20	2	60	1	21.4	47.7	0.0758	0.0944	0.0186	
KOSCIUSKO	C-066	155404A	150 E	Passive	8	2	60	0	21.4	47.7	0.0177	0.0259	0.0082	
KOSCIUSKO	C-066	155406N	OLD SR 15	Gate	1,156	2	60	1	21.4	47.7	0.0721	0.0875	0.0155	
KOSCIUSKO	C-066	155408C	50W	Passive	50	2	60	0	21.4	47.7	0.0496	0.0659	0.0163	
KOSCIUSKO	C-066	155410D	75W	Passive	37	2	60	0	21.4	47.7	0.0288	0.0407	0.0119	
KOSCIUSKO	C-066	155411K	200 W	Passive	150	2	60	0	21.4	47.7	0.0432	0.0585	0.0153	
KOSCIUSKO	C-066	155414F	300 W	Passive	82	2	60	0	21.4	47.7	0.0561	0.0732	0.0171	
KOSCIUSKO	C-066	155415M	GRAVELTON	Passive	285	2	60	0	21.4	47.7	0.0512	0.0678	0.0165	
KOSCIUSKO	C-066	155416U	CR 400W	Flasher	143	2	60	0	21.4	47.7	0.0191	0.0271	0.0080	
LA PORTE	C-066	155484V	CR 875 E	Passive	137	2	60	1	21.4	47.7	0.1443	0.1759	0.0316	0.0265
LA PORTE	C-066	155485C	750 E	Passive	19	1	60	0	21.4	47.7	0.0122	0.0181	0.0059	
LA PORTE	C-066	155487R	KANKAKEE	Passive	174	2	60	0	21.4	47.7	0.0653	0.0830	0.0177	
LA PORTE	C-066	155490Y	RANGE RD	Flasher	300	2	60	1	21.4	47.7	0.0787	0.0978	0.0190	
LA PORTE	C-066	155492M	SR 39	Gate	1,770	2	60	0	21.4	47.7	0.0269	0.0359	0.0090	
LA PORTE	C-066	155494B	LONG LANE	Flasher	533	2	60	0	21.4	47.7	0.0340	0.0458	0.0118	
LA PORTE	C-066	155495H	WATER ST	Gate	606	2	60	0	21.4	47.7	0.0206	0.0280	0.0074	
LA PORTE	C-066	155496P	500W	Passive	152	2	60	1	21.4	47.7	0.1462	0.1779	0.0317	0.0272
LA PORTE	C-066	155497W	600 W	Gate	593	2	60	0	21.4	47.7	0.0205	0.0279	0.0074	
LA PORTE	C-066	155498D	700 W	Passive	121	2	60	0	21.4	47.7	0.0596	0.0770	0.0174	
LA PORTE	C-066	155499K	800W	Passive	118	2	60	0	21.4	47.7	0.0593	0.0767	0.0174	
LA PORTE	C-066	155600G	900 W	Passive	133	2	60	0	21.4	47.7	0.0610	0.0785	0.0175	
LA PORTE	C-066	155601N	US 421	Gate	4,470	2	60	0	21.4	47.7	0.0294	0.0389	0.0095	
LA PORTE	C-066	155603C	CR 1100W	Passive	292	2	60	0	21.4	47.7	0.0725	0.0904	0.0179	
LAKE	C-027	155632M	COUNTYLINE RD	Flasher	7,500	2	60	1	20.1	36.6	0.1358	0.1552	0.0194	0.0496
LAKE	C-027	155633U	HOBART RD	Flasher	3,000	2	60	4	20.1	36.6	0.3112	0.3540	0.0428	0.0348
LAKE	C-027	155636P	HOWARD ST	Flasher	750	2	60	1	20.1	36.6	0.0848	0.0997	0.0149	
LAKE	C-027	155637W	LAKE STREET	Gate	1,184	4	60	4	20.1	36.6	0.2182	0.2453	0.0271	a
LAKE	C-027	155645N	CLARK RD	Flasher	7,250	2	60	1	20.1	36.6	0.1489	0.1684	0.0194	0.0603
LAKE	N-042	522929F	CALUMET AVE	Gate	7,500	2	55	0	43.4	60.3	0.0570	0.0621	0.0051	

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County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
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MADISON	N-040	474586T	CO LINE RD 1000	Passive	271	2	49	0	2.6	11.8	0.0317	0.0574	0.0257	
MADISON	N-040	474587A	CR 900 N	Passive	86	2	49	0	2.6	11.8	0.0222	0.0427	0.0205	
MADISON	N-040	474588G	MAIN ST	Passive	82	2	49	0	2.6	11.8	0.0219	0.0421	0.0203	
MADISON	N-040	474592W	CO RD 400 E	Passive	124	2	49	0	2.6	11.8	0.0249	0.0471	0.0222	
MADISON	N-040	474594K	CR 300 E	Passive	107	2	49	0	2.6	11.8	0.0238	0.0453	0.0215	
MADISON	N-040	474596Y	CR 1000 N	Gate	461	2	60	0	2.6	11.8	0.0072	0.0138	0.0065	
MADISON	N-040	474597F	CR 200E	Flasher	417	2	60	0	2.6	11.8	0.0107	0.0214	0.0107	
MADISON	N-040	474598M	CR 100 E	Passive	619	2	60	1	2.6	11.8	0.1101	0.1638	0.0537	0.0226
MADISON	N-040	474599U	CLARK AVE	Gate	921	2	49	0	2.6	11.8	0.0088	0.0165	0.0077	
MADISON	N-040	474600L	S R 9	Gate	14,351	2	49	0	2.6	11.8	0.0182	0.0321	0.0139	
MADISON	N-040	474601T	HARRISON ST	Flasher	5,899	2	49	0	2.6	11.8	0.0276	0.0487	0.0211	
MARSHALL	C-066	155435Y	BEECH ST	Passive	245	2	60	0	21.4	47.7	0.0703	0.0882	0.0179	
MARSHALL	C-066	155440V	DOGWOOD RD	Gate	605	2	60	2	21.4	47.7	0.1077	0.1272	0.0195	
MARSHALL	C-066	155443R	CENTER ST	Flasher	250	2	60	0	21.4	47.7	0.0267	0.0368	0.0102	
MARSHALL	C-066	155446L	BOWEN ST	Gate	2,580	2	60	0	21.4	47.7	0.0294	0.0389	0.0095	
MARSHALL	C-066	155449G	MIAMI ROAD	Gate	400	2	60	0	21.4	47.7	0.0164	0.0226	0.0062	
MARSHALL	C-066	155454D	JARRAH RD	Passive	30	2	60	0	21.4	47.7	0.0261	0.0372	0.0111	
MARSHALL	C-066	155455K	KING RD	Passive	250	2	60	0	21.4	47.7	0.0706	0.0885	0.0179	
MARSHALL	C-066	155456S	LINDEN RD	Passive	200	2	60	0	21.4	47.7	0.0454	0.0611	0.0157	
MARSHALL	C-066	155458F	MAPLE RD	Passive	100	1	60	0	21.4	47.7	0.0211	0.0306	0.0094	
MARSHALL	C-066	155464J	PINE RD	Passive	200	2	60	0	21.4	47.7	0.0673	0.0852	0.0178	
MARSHALL	C-066	155465R	FIRST RD SMITH	Passive	300	2	60	1	21.4	47.7	0.1650	0.1973	0.0323	0.0350
MARSHALL	C-066	155466X	QUINCE RD	Passive	200	2	60	0	21.4	47.7	0.0454	0.0611	0.0157	
MARSHALL	C-066	155471U	REDWOOD RD	Passive	200	2	60	1	21.4	47.7	0.1147	0.1429	0.0282	
MARSHALL	C-066	155473H	SYCAMORE RD	Passive	250	2	60	0	21.4	47.7	0.0706	0.0885	0.0179	
MARSHALL	C-066	155476D	THORN RD	Passive	200	2	60	1	21.4	47.7	0.1541	0.1862	0.0321	0.0303
MARSHALL	C-066	155477K	ULE RD	Passive	200	2	60	0	21.4	47.7	0.0673	0.0852	0.0178	
MIAMI	N-044	478323T	CR 75	Passive	1	2	60	0	19.0	34.9	0.0143	0.0193	0.0049	
MIAMI	N-044	478325G	CR 203	Passive	70	2	60	0	19.0	34.9	0.0517	0.0641	0.0124	
MIAMI	N-044	478327V	PAW PAW PIKE	Passive	860	2	60	0	19.0	34.9	0.0883	0.1016	0.0133	
MIAMI	N-044	478329J	COUNTRY CLUB RD	Passive	150	2	60	0	19.0	34.9	0.0621	0.0754	0.0133	
MIAMI	N-044	478330D	CR 240 E	Passive	420	2	60	0	19.0	34.9	0.0774	0.0910	0.0136	
MIAMI	N-044	478334F	CHILI ST	Gate	4,342	2	60	0	19.0	34.9	0.0331	0.0407	0.0076	
MIAMI	N-044	478335M	WATER ST	Gate	3,000	2	60	0	19.0	34.9	0.0300	0.0372	0.0072	
MIAMI	N-044	478336U	TIPPECANOE ST	Passive	3,000	2	60	0	19.0	34.9	0.1066	0.1184	0.0118	
MIAMI	N-046	484209G	CR 250W	Passive	165	2	60	1	18.4	40.2	0.1423	0.1730	0.0306	0.0250
NOBLE	C-066	155341X	C R 1100E	Passive	155	2	60	0	21.4	47.7	0.0436	0.0590	0.0154	
NOBLE	C-066	155345A	900 E	Passive	250	2	60	0	21.4	47.7	0.0722	0.0902	0.0179	

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NOBLE	C-066	155349C	700E	Passive	125	2	60	0	21.4	47.7	0.0620	0.0796	0.0176	
NOBLE	C-066	155350W	100N	Flasher	333	2	60	0	21.4	47.7	0.0256	0.0355	0.0099	
NOBLE	C-066	155353S	600 E	Passive	75	2	60	0	21.4	47.7	0.0549	0.0719	0.0170	
NOBLE	C-066	155355F	500E	Flasher	442	2	60	0	21.4	47.7	0.0281	0.0387	0.0105	
NOBLE	C-066	155362R	75 E & SEVENTH ST	Gate	670	2	60	0	21.4	47.7	0.0220	0.0298	0.0078	
NOBLE	C-066	155363X	ORANGE ST	Gate	2,066	2	60	1	21.4	47.7	0.0787	0.0956	0.0170	
NOBLE	C-066	155365L	YORK ST	Passive	200	2	60	0	21.4	47.7	0.0689	0.0868	0.0179	
NOBLE	C-066	155371P	450 W	Passive	42	2	60	0	21.4	47.7	0.0474	0.0633	0.0160	
NOBLE	C-066	155372W	CR 500W	Passive	98	2	60	1	21.4	47.7	0.1384	0.1696	0.0312	0.0244
NOBLE	C-066	155374K	600 W & 300N	Passive	437	2	60	0	21.4	47.7	0.0807	0.0985	0.0178	
NOBLE	C-066	155375S	CLARK	Flasher	353	2	60	0	21.4	47.7	0.0261	0.0362	0.0100	
NOBLE	C-066	155378M	SPARTA LAKE RD	Passive	117	2	60	0	21.4	47.7	0.0611	0.0786	0.0175	
NOBLE	C-066	155380N	900 W	Passive	523	2	60	1	21.4	47.7	0.1831	0.2149	0.0318	0.0442
NOBLE	C-066	155381V	MAIN ST-JEFFERSON	Gate	1,654	2	60	0	21.4	47.7	0.0242	0.0326	0.0084	
NOBLE	C-066	155383J	1025 W	Passive	222	2	60	0	21.4	47.7	0.0727	0.0907	0.0180	
NOBLE	C-066	155384R	1075 W	Passive	25	2	60	0	21.4	47.7	0.0255	0.0364	0.0109	
PORTER	C-066	155605R	600 EAST	Flasher	69	2	60	0	21.4	47.7	0.0143	0.0206	0.0063	
PORTER	C-066	155608L	400 E	Gate	560	2	60	1	21.4	47.7	0.0587	0.0707	0.0119	
PORTER	C-066	155609T	700 NORTH	Passive	23	1	60	0	21.4	47.7	0.0128	0.0191	0.0062	
PORTER	C-066	155610M	SUMAN RD	Passive	355	2	60	0	21.4	47.7	0.0755	0.0934	0.0179	
PORTER	C-066	155612B	MANDER RD	Gate	226	2	60	0	21.4	47.7	0.0160	0.0221	0.0061	
PORTER	C-066	155613H	TRATEBAS RD	Passive	254	2	60	0	21.4	47.7	0.0704	0.0883	0.0179	
PORTER	C-066	155615W	900 N	Gate	480	2	60	3	21.4	47.7	0.1465	0.1707	0.0242	a
PORTER	C-066	155617K	MERIDAN RD	Gate	3,600	2	60	0	21.4	47.7	0.0314	0.0414	0.0099	
PORTER	C-066	155619Y	100W	Passive	266	2	60	0	21.4	47.7	0.0711	0.0890	0.0179	
PORTER	C-066	155620T	150 W	Gate	513	2	60	0	21.4	47.7	0.0197	0.0269	0.0072	
PORTER	C-066	155621A	200 W	Gate	1,626	2	60	0	21.4	47.7	0.0262	0.0350	0.0088	
PORTER	C-066	155623N	CROCKER	Gate	6,800	2	60	0	21.4	47.7	0.0362	0.0469	0.0107	
PORTER	C-066	155624V	MCCOOL RD	Gate	2,000	2	60	0	21.4	47.7	0.0275	0.0366	0.0091	
PORTER	C-066	155626J	HAMSTROM	Flasher	750	2	60	0	21.4	47.7	0.0325	0.0440	0.0115	
PORTER	C-066	155627R	PORTAGE AVE	Flasher	3,000	2	60	1	21.4	47.7	0.1154	0.1404	0.0250	
PORTER	C-066	155628X	WILLOW CREEK RD	Gate	6,477	2	60	1	21.4	47.7	0.0844	0.1024	0.0181	
ST JOSEPH	C-066	155478S	LIBERTY-MICHIGAN	Gate	5,942	2	60	0	21.4	47.7	0.0354	0.0460	0.0106	
ST JOSEPH	C-066	155479Y	ADAMS ST	Gate	963	2	60	0	21.4	47.7	0.0205	0.0279	0.0074	
ST JOSEPH	C-066	155481A	SR 104	Gate	1,330	2	60	0	21.4	47.7	0.0222	0.0301	0.0079	
ST JOSEPH	C-066	155483N	POPLAR RD	Passive	25	2	60	0	21.4	47.7	0.0247	0.0353	0.0106	
TIPPECANOE	N-045	484295F	FERRY ST	Gate	6,121	2	25	0	23.6	41.0	0.0368	0.0442	0.0073	
TIPPECANOE	N-045	484296M	MAIN ST	Gate	7,654	2	25	0	23.6	41.0	0.0386	0.0461	0.0075	

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TIPPECANOE	N-045	484297U	11TH ST	Flasher	730	2	25	1	23.6	41.0	0.0976	0.1130	0.0154	
TIPPECANOE	N-045	484298B	COLUMBIA ST	Gate	8,546	2	25	0	23.6	41.0	0.0395	0.0471	0.0076	
TIPPECANOE	N-045	484299H	10TH ST	Flasher	2,622	2	25	1	23.6	41.0	0.1268	0.1444	0.0176	
TIPPECANOE	N-045	484300A	SOUTH ST S.R. 26	Gate	7,890	2	25	0	23.6	41.0	0.0406	0.0483	0.0077	
TIPPECANOE	N-045	484301G	9TH ST	Gate	8,565	3	25	1	23.6	41.0	0.1054	0.1197	0.0143	
TIPPECANOE	N-045	484302N	8TH ST	Passive	289	2	25	3	23.6	41.0	0.3170	0.3582	0.0412	0.0246
TIPPECANOE	N-045	484303V	7TH ST.	Flasher	1,375	2	25	3	23.6	41.0	0.2413	0.2729	0.0316	0.0328
TIPPECANOE	N-045	484304C	NEW YORK ST	Flasher	252	2	25	0	23.6	41.0	0.0279	0.0348	0.0070	
TIPPECANOE	N-045	484306R	ROMIG ST	Flasher	982	2	25	3	23.6	41.0	0.2271	0.2575	0.0303	0.0287
TIPPECANOE	N-045	484307X	LINGLE AVE	Flasher	1,471	2	25	1	23.6	41.0	0.1130	0.1298	0.0168	
TIPPECANOE	N-045	484308E	5TH ST	Passive	209	1	25	2	23.6	41.0	0.1604	0.1844	0.0240	0.0219
TIPPECANOE	N-045	484309L	4TH ST U.S. 231	Gate	12,060	2	25	2	23.6	41.0	0.1640	0.1844	0.0204	a
TIPPECANOE	N-045	484310F	3RD ST	Flasher	3,823	2	25	0	23.6	41.0	0.0602	0.0702	0.0099	
TIPPECANOE	N-045	484311M	SMITH ST	Flasher	966	2	25	2	23.6	41.0	0.1650	0.1881	0.0231	0.0286
TIPPECANOE	N-045	484318K	CR 500 W	Passive	108	1	60	0	23.6	41.0	0.0227	0.0293	0.0066	
TIPPECANOE	N-045	484319S	CR 400 S	Passive	264	1	60	1	23.6	41.0	0.1183	0.1377	0.0194	
TIPPECANOE	N-045	484320L	CR 575 W	Passive	97	2	60	0	23.6	41.0	0.0590	0.0708	0.0118	
TIPPECANOE	N-045	484322A	CR 700 W (MAIN ST.)	Gate	1,433	2	60	0	23.6	41.0	0.0235	0.0290	0.0055	
TIPPECANOE	N-045	484323G	CO 172	Passive	127	2	60	2	23.6	41.0	0.2332	0.2647	0.0315	0.0247
TIPPECANOE	N-045	484324N	CR 900W	Passive	25	1	60	1	23.6	41.0	0.0582	0.0661	0.0079	
TIPPECANOE	N-046	484267C	CR 900 N	Passive	1,188	2	60	2	18.4	40.2	0.3023	0.3458	0.0435	0.0519
TIPPECANOE	N-046	484268J	CR 800 N	Passive	42	1	60	0	18.4	40.2	0.0148	0.0216	0.0068	
TIPPECANOE	N-046	484269R	CR 700 N	Passive	237	2	60	1	18.4	40.2	0.1528	0.1840	0.0312	0.0294
TIPPECANOE	N-046	484270K	CR 1000 E	Passive	52	1	60	0	18.4	40.2	0.0159	0.0231	0.0072	
TIPPECANOE	N-046	484271S	CR 600 N	Passive	61	1	60	1	18.4	40.2	0.0631	0.0767	0.0136	
TIPPECANOE	N-046	484272Y	CR 900 E	Flasher	486	2	60	0	18.4	40.2	0.0267	0.0366	0.0099	
TIPPECANOE	N-046	484275U	MAIN ST CR 750 E	Flasher	523	2	60	0	18.4	40.2	0.0274	0.0374	0.0101	
TIPPECANOE	N-046	484278P	CR 625 E	Passive	72	2	60	0	18.4	40.2	0.0319	0.0443	0.0124	
TIPPECANOE	N-046	484279W	CR 400 N	Passive	80	2	60	0	18.4	40.2	0.0329	0.0456	0.0126	
TIPPECANOE	N-046	484282E	CR 500 E	Passive	427	2	60	1	18.4	40.2	0.1686	0.2000	0.0314	0.0363
TIPPECANOE	N-046	484284T	HEATH RD CR 300N	Flasher	2,463	2	60	0	18.4	40.2	0.0440	0.0570	0.0130	
TIPPECANOE	N-046	484285A	CR 400 E	Gate	1,939	2	60	0	18.4	40.2	0.0230	0.0308	0.0078	
TIPPECANOE	N-046	484290W	UNDERWOOD ST	Flasher	5,557	2	25	0	18.4	40.2	0.0610	0.0751	0.0141	
TIPPECANOE	N-046	484291D	GREENBUSH ST	Flasher	2,000	2	25	4	18.4	40.2	0.3094	0.3656	0.0562	0.0376
TIPPECANOE	N-046	484292K	18TH	Flasher	5,430	2	25	8	18.4	40.2	0.6712	0.7754	0.1042	0.0551
TIPPECANOE	N-046	484293S	17TH & SALEM ST	Flasher	6,323	4	25	6	18.4	40.2	0.6043	0.6831	0.0788	0.0811
TIPPECANOE	N-046	484294Y	UNION ST	Gate	9,955	2	25	3	18.4	40.2	0.2083	0.2445	0.0362	a
VANDERBURGH	C-025	342829D	STACER RD	Passive	250	2	60	1	22.3	30.8	0.1646	0.1776	0.0130	0.0271

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VANDERBURGH	C-025	342830X	BASELINE RD	Gate	508	2	60	0	22.3	30.8	0.0184	0.0209	0.0025	
VANDERBURGH	C-025	342832L	BOONVIL-N HARMONY	Gate	2,606	2	60	0	22.3	30.8	0.0274	0.0308	0.0035	
VANDERBURGH	C-025	342834A	OLD STATE RD.	Flasher	1,614	2	60	0	22.3	30.8	0.0425	0.0477	0.0051	
VANDERBURGH	C-025	342835G	HILLSDALE	Passive	236	2	60	0	22.3	30.8	0.0723	0.0795	0.0072	
VANDERBURGH	C-025	342843Y	WEST MILL RD	Flasher	4,935	2	60	1	22.3	30.8	0.1306	0.1409	0.0103	
VANDERBURGH	C-025	342844F	ALLEN LANE	Gate	4,253	2	60	2	22.3	30.8	0.1334	0.1431	0.0097	
VANDERBURGH	C-025	342846U	W. MARYLAND ST	Flasher	5,720	2	25	1	22.3	30.8	0.1342	0.1446	0.0104	
VANDERBURGH	C-025	342848H	W. FRANKLIN ST	Gate	15,328	4	25	0	22.3	30.8	0.0489	0.0537	0.0048	
VANDERBURGH	C-025	342850J	OHIO ST	Flasher	8,180	2	25	1	22.3	30.8	0.1433	0.1538	0.0105	0.0486
WABASH	N-044	478286T	CR 250	Passive	200	2	60	0	19.0	34.9	0.0663	0.0797	0.0134	
WABASH	N-044	478288G	CR 167	Passive	200	2	60	0	19.0	34.9	0.0446	0.0561	0.0116	
WABASH	N-044	478289N	CR 500 E	Passive	200	2	60	0	19.0	34.9	0.0663	0.0797	0.0134	
WABASH	N-044	478292W	DAVIS ST	Gate	5,569	2	60	0	19.0	34.9	0.0307	0.0380	0.0073	
WABASH	N-044	478301T	EAST ST	Gate	750	2	40	0	19.0	34.9	0.0190	0.0241	0.0051	
WABASH	N-044	478302A	SPRING ST	Gate	750	2	40	0	19.0	34.9	0.0190	0.0241	0.0051	
WABASH	N-044	478303G	ALLEN ST	Gate	1,000	2	40	0	19.0	34.9	0.0204	0.0259	0.0054	
WABASH	N-044	478304N	HUNTINGTON ST	Gate	750	2	40	0	19.0	34.9	0.0190	0.0241	0.0051	
WABASH	N-044	478305V	WABASH ST	Gate	9,840	2	40	0	19.0	34.9	0.0349	0.0428	0.0079	
WABASH	N-044	478306C	MIAMI ST	Flasher	1,000	2	40	0	19.0	34.9	0.0348	0.0437	0.0089	
WABASH	N-044	478307J	CASS ST	Gate	4,459	2	40	0	19.0	34.9	0.0292	0.0363	0.0070	
WABASH	N-044	478308R	CARROLL ST	Gate	750	2	40	0	19.0	34.9	0.0190	0.0241	0.0051	
WABASH	N-044	478309X	FISHER ST	Flasher	750	2	40	0	19.0	34.9	0.0318	0.0402	0.0084	
WABASH	N-044	478310S	COMSTOCK ST	Flasher	750	2	40	0	19.0	34.9	0.0318	0.0402	0.0084	
WABASH	N-044	478311Y	THORNE ST	Flasher	750	2	40	0	19.0	34.9	0.0318	0.0402	0.0084	
WABASH	N-044	478312F	BOND ST	Flasher	750	2	40	1	19.0	34.9	0.0849	0.1001	0.0152	
WABASH	N-044	478313M	OLIVE ST	Passive	250	2	60	2	19.0	34.9	0.2469	0.2821	0.0352	0.0289
WABASH	N-044	478314U	WOLF ROAD	Flasher	1,800	2	60	4	19.0	34.9	0.2849	0.3259	0.0410	0.0287
WABASH	N-044	478316H	CR 500W	Passive	500	2	60	0	19.0	34.9	0.0564	0.0693	0.0129	
WABASH	N-044	478319D	BRIDGE ST	Flasher	454	2	60	0	19.0	34.9	0.0270	0.0346	0.0076	
WARREN	N-045	484347V	RIVER RD (CR 165)	Passive	10	1	40	0	23.6	41.0	0.0154	0.0202	0.0047	
WARREN	N-045	484351K	FOURTH ST EX. (CR 88)	Flasher	553	2	60	0	23.6	41.0	0.0309	0.0383	0.0075	
WARREN	N-045	484352S	MONROE ST.	Gate	3,780	2	35	0	23.6	41.0	0.0305	0.0370	0.0065	
WARREN	N-045	484355M	CR 100 W	Passive	345	1	60	0	23.6	41.0	0.0325	0.0410	0.0086	
WARREN	N-045	484356U	CR 175 W	Passive	109	1	60	1	23.6	41.0	0.0739	0.0858	0.0118	
WARREN	N-045	484357B	TOWER RD (CR 84)	Passive	120	1	60	0	23.6	41.0	0.0235	0.0302	0.0067	
WARREN	N-045	484358H	HIGH ST IND 263	Gate	4,699	2	60	0	23.6	41.0	0.0311	0.0377	0.0066	
WARREN	N-045	484362X	CR 450 S	Flasher	413	2	60	0	23.6	41.0	0.0281	0.0351	0.0070	

Table 5-IN-8
Indiana
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
WARREN	N-045	484363E	CR 775 W	Passive	112	2	60	1	23.6	41.0	0.1055	0.1232	0.0177	
WARREN	N-045	484364L	CR 600 S	Passive	128	2	60	0	23.6	41.0	0.0418	0.0519	0.0101	
WARREN	N-045	484365T	CR 875 W (JACKSONVILLE RD)	Gate	291	2	60	0	23.6	41.0	0.0157	0.0197	0.0040	
WARREN	N-045	484367G	CR 1000 W	Passive	79	1	60	1	23.6	41.0	0.0699	0.0808	0.0109	
WARREN	N-045	484420R	WASHINGTON ST	Flasher	866	2	60	1	23.6	41.0	0.0917	0.1063	0.0146	

a Improvements in accident rate with four-quadrant gates or roadway median not quantifiable.

Table 5-IN-9
Indiana
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

						Pre Acquisition								*Post Acquisition*								
County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Allen	C-022	532855T	THOMAS RD	2	5,500	2.4	50	4,869	15	9	1.83	0.59	A	6.4	50	6,200	47	11	2.18	2.22	A	
Allen	N-041	478196U	MAYSVILLE RD	2	5,100	13.6	50	4,869	77	8	1.81	3.30	A	27.3	50	5,000	158	8	1.85	6.88	B	
Allen	N-041	478226J	ANTHONY BLVD	3	16,330	13.6	30	4,869	362	26	3.11	8.25	B	27.3	30	5,000	741	26	3.17	17.26	C	
Allen	N-043	478013Y	ANTHONY BLVD	2	15,120	6.6	35	4,869	144	31	3.15	3.61	A	9.6	35	5,000	214	32	3.22	5.47	B	
Allen	N-044	478240E	ENGLE RD	2	11,000	19.0	30	4,869	340	26	3.12	11.56	B	34.9	30	5,000	638	26	3.18	22.15	C	
Allen	N-044	478241L	ARDMORE AVE	2	10,290	19.0	30	4,869	318	24	3.05	11.32	B	34.9	30	5,000	597	25	3.12	21.68	C	
Allen	N-044	478210M	LANDIN	4	12,950	19.0	50	4,869	275	10	1.88	4.78	A	34.9	50	5,000	514	11	1.92	9.11	B	
Allen	N-044	478237W	BROOKLYN AVE	2	12,200	19.0	30	4,869	377	29	3.23	11.99	B	34.9	30	5,000	708	29	3.30	22.97	C	
Allen	N-044	478238D	NUTMAN AVE	2	5,070	19.0	30	4,869	157	12	2.65	9.82	B	34.9	30	5,000	294	12	2.70	18.81	C	
Carroll	N-046	484265N	MAIN ST	2	5,780	18.4	35	4,869	154	12	2.39	7.63	B	40.2	35	5,000	343	12	2.44	17.36	C	
De Kalb	C-066	155320E	SOUTH WAYNE	2	6,000	21.4	50	6,000	166	11	2.15	7.16	B	47.7	50	6,200	379	11	2.21	16.74	C	
De Kalb	C-066	155330K	RANDOLPH ST	2	5,023	21.4	15	6,000	377	25	5.69	51.17	E	47.7	15	6,200	865	26	5.86	121.00	F	F (a)
Delaware	N-040	474550K	KILGORE	2	10,481	2.6	20	4,869	62	34	4.28	3.02	A	11.8	20	5,000	287	35	4.37	14.36	B	
Delaware	N-040	474552Y	WHITERIVER BLVD	4	6,870	2.6	30	4,869	29	8	2.54	1.29	A	11.8	30	5,000	135	8	2.59	6.11	B	
Delaware	N-040	474553F	NICKOLS	2	6,733	2.6	30	4,869	28	16	2.76	1.40	A	11.8	30	5,000	132	16	2.82	6.64	B	
Delaware	N-040	474565A	TILLOTSON	4	19,025	2.6	30	4,869	81	22	2.98	1.51	A	11.8	30	5,000	373	23	3.05	7.17	B	
Delaware	N-040	474566G	JACKSON ST	2	5,007	2.6	30	4,869	21	12	2.64	1.34	A	11.8	30	5,000	98	12	2.70	6.35	B	
Elkhart	C-066	155420J	CR 7	2	5,314	21.4	50	6,000	147	10	2.12	7.03	B	47.7	50	6,200	336	10	2.17	16.45	C	
Gibson	C-025	342475L	BROADWAY	2	7,929	22.3	35	6,000	301	19	2.98	13.55	B	30.8	35	6,200	426	20	3.06	19.72	C	
Huntington	N-044	478270W	BRIANT ST	2	5,500	19.0	50	4,869	117	9	1.83	4.66	A	34.9	50	5,000	218	9	1.87	8.88	B	
Huntington	N-044	478273S	JEFFERSON ST	3	19,900	19.0	50	4,869	422	21	2.29	5.82	B	34.9	50	5,000	789	22	2.33	11.10	B	
Huntington	N-044	478274Y	LAFONTAIN ST	2	8,600	19.0	50	4,869	182	14	1.99	5.07	B	34.9	50	5,000	341	14	2.03	9.65	B	
Lake	C-023	163620N	SHEFFIELD AVE	2	8,030	27.6	25	6,000	497	26	3.94	29.23	D	33.3	25	6,200	616	27	4.05	37.28	D	
Lake	C-023	163621V	HOHMANA AVE.	3	10,500	27.6	25	6,000	649	23	3.83	28.43	D	33.3	25	6,200	806	23	3.94	36.26	D	
Lake	C-023	163627L	CALUMET AVE	4	17,600	27.6	25	6,000	1089	28	4.02	29.86	D	33.3	25	6,200	1351	29	4.14	38.09	D	
Lake	C-023	163632H	COLUMBIA AVE	4	15,000	27.6	25	6,000	928	24	3.88	28.81	D	33.3	25	6,200	1151	25	3.99	36.75	D	
Lake	C-023	163635D	INDIANAPOLIS&SR20	4	13,650	27.6	25	6,000	844	22	3.81	28.29	D	33.3	25	6,200	1047	23	3.92	36.09	D	
Lake	C-023	163637S	RAILROAD AVE	4	7,500	27.6	25	6,000	464	12	3.52	26.15	D	33.3	25	6,200	575	12	3.62	33.36	D	
Lake	C-023	163638Y	KENNEDY	4	7,325	27.6	25	6,000	453	12	3.52	26.10	D	33.3	25	6,200	562	12	3.62	33.29	D	
Lake	C-023	163639F	EUCLID AVE	4	7,500	27.6	25	6,000	464	12	3.52	26.15	D	33.3	25	6,200	575	12	3.62	33.36	D	
Lake	C-023	163643V	STATE ROUTE12	4	14,820	27.6	25	6,000	917	24	3.87	28.74	D	33.3	25	6,200	1137	25	3.98	36.66	D	
Lake	C-024	522912C	5TH AVE	4	13,220	0.0	30	6,000	0	18	3.26	0.00	A	5.0	30	6,200	131	19	3.35	3.97	A	
Lake	C-024	522915X	CLARKE RD	2	7,500	0.0	50	5,600	0	13	2.13	0.00	A	5.0	50	6,200	50	14	2.30	1.83	A	
Lake	C-026	522883U	ILLINOIS ST	2	7,880	1.0	35	6,000	13	19	2.98	0.61	A	5.0	35	6,200	69	20	3.05	3.20	A	
Lake	C-027	155632M	COUNTY LINE RD	2	7,500	22.1	50	6,000	215	14	2.24	7.69	B	38.6	50	6,200	384	14	2.30	14.10	B	
Lake	C-027	155645N	CLARK RD.	2	7,250	22.1	50	6,000	207	14	2.23	7.64	B	38.6	50	6,200	371	14	2.28	14.00	B	
Lake	N-042	522929F	CALUMET AVE	2	7,500	43.4	45	5,600	433	14	2.30	15.94	C	60.3	45	5,000	554	13	2.12	18.78	C	
Madison	N-040	474600L	S. R. 9	2	14,351	2.6	40	4,869	49	27	2.78	1.13	A	11.8	20	5,000	393	48	4.94	16.21	C	* (b)
Madison	N-040	474601T	HARRISON ST	2	5,899	2.6	40	4,869	20	11	2.17	0.89	A	11.8	20	5,000	161	20	3.85	12.65	B	* (b)
Porter	C-026	522867K	WASHINGTON ST	2	13,690	1.0	35	6,000	23	34	3.54	0.72	A	5.0	35	6,200	119	34	3.63	3.80	A	
Porter	C-026	522869Y	NAPOLEON ST	2	5,296	1.0	35	6,000	9	13	2.78	0.57	A	5.0	35	6,200	46	13	2.85	2.99	A	
Porter	C-066	155623N	CROCKER	2	6,800	21.4	50	6,000	188	13	2.20	7.31	B	47.7	50	6,200	430	13	2.25	17.10	C	

Table 5-IN-9
Indiana
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

						Pre Acquisition								*Post Acquisition*								
County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Porter	C-066	155628X	WILLOW CREEK RD	2	6,477	21.4	45	6,000	194	13	2.36	8.47	B	47.7	45	6,200	443	13	2.42	19.85	C	
St. Joseph	C-066	155478S	LIBERTY-MICHIGAN	2	5,942	21.4	50	6,000	165	11	2.15	7.15	B	47.7	50	6,200	376	11	2.20	16.72	C	
Tippecanoe	N-045	484295F	FERRY ST	2	6,121	23.6	25	4,869	272	17	3.15	16.78	C	41.0	25	5,000	483	17	3.22	30.45	D	D (c)
Tippecanoe	N-045	484296M	MAIN ST	2	7,654	23.6	25	4,869	340	21	3.28	17.48	C	41.0	25	5,000	604	21	3.35	31.72	D	D (c)
Tippecanoe	N-045	484298B	COLUMBIA ST	2	8,546	23.6	25	4,869	380	23	3.36	17.92	C	41.0	25	5,000	675	24	3.43	32.51	D	D (c)
Tippecanoe	N-045	484300A	SOUTH ST S.R. 26	2	7,890	23.6	25	4,869	351	21	3.30	17.60	C	41.0	25	5,000	623	22	3.37	31.93	D	D (c)
Tippecanoe	N-045	484301G	9TH ST	3	8,565	23.6	25	4,869	381	15	3.11	16.61	C	41.0	25	5,000	676	16	3.18	30.13	D	D (c)
Tippecanoe	N-045	484309L	4TH ST U.S. 231	2	12,060	23.6	25	4,869	536	33	3.72	19.87	C	41.0	25	5,000	952	33	3.81	36.04	D	D (c)
Tippecanoe	N-046	484290W	UNDERWOOD ST	2	5,557	18.4	25	4,869	193	15	3.10	12.90	B	40.2	25	5,000	430	15	3.17	29.43	D	D (c)
Tippecanoe	N-046	484292K	18TH	2	5,430	18.4	25	4,869	188	15	3.09	12.85	B	40.2	25	5,000	420	15	3.16	29.33	D	D (c)
Tippecanoe	N-046	484293S	17TH & SALEM ST.	4	6,323	18.4	25	4,869	219	9	2.92	12.15	B	40.2	25	5,000	489	9	2.99	27.72	D	D (c)
Tippecanoe	N-046	484294Y	UNION ST	2	9,955	18.4	25	4,869	345	27	3.50	14.54	B	40.2	25	5,000	771	28	3.57	33.18	D	D (c)
Vanderburgh	C-025	342846U	W. MARYLAND ST	2	5,720	22.3	25	6,000	286	18	3.70	22.21	C	30.8	25	6,200	406	19	3.81	32.42	D	C (d)
Vanderburgh	C-025	342848H	W. FRANKLIN ST	4	15,328	22.3	25	6,000	766	25	3.90	23.38	C	30.8	25	6,200	1088	25	4.01	34.14	D	D (b)
Vanderburgh	C-025	342850J	OHIO ST	2	8,180	22.3	25	6,000	409	26	3.96	23.71	C	30.8	25	6,200	581	27	4.07	34.63	D	D (b)
Wabash	N-044	478292W	DAVIS ST	2	5,569	19.0	50	4,869	118	9	1.84	4.67	A	34.9	50	5,000	221	9	1.87	8.90	B	
Wabash	N-044	478305V	WABASH ST	2	9,840	19.0	35	4,869	270	20	2.67	8.80	B	34.9	35	5,000	506	21	2.73	16.84	C	

• Indicates significant effect on crossing delay per stopped vehicle; Level of service not applicable

(a) Recommend separated grade crossing.

(b) Recommend consultation between railroad and community.

(c) Recommend consultation between railroad and community regarding completion of Lafayette Railroad Relocation Project.

(d) Indicates an increase in speed of 5 mph.

Table 5-IN-11
Indiana
Elimination of Highway/Rail At-Grade Crossing Accidents
Abandonments
Rail Segment : South Bend to Dillion Junction

County	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year	
								Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition
LA PORTE	482845X	1000 EAST	Passive	119	2	40	0	2	0	0.0226	0.0000
LA PORTE	482851B	800 E	Passive	134	2	40	0	2	0	0.0235	0.0000
LA PORTE	482852H	SR 104	Gate	930	2	40	1	2	0	0.0426	0.0000
LA PORTE	482853P	N/A	Passive	176	2	40	0	2	0	0.0256	0.0000
ST JOSEPH	482831P	OAK ROAD	Passive	805	2	40	0	2	0	0.0402	0.0000
ST JOSEPH	482832W	PINE ROAD	Passive	231	2	40	0	2	0	0.0278	0.0000
ST JOSEPH	482833D	PRIMROSE ROAD	Passive	65	2	40	0	2	0	0.0186	0.0000
ST JOSEPH	482835S	REDWOOD ROAD	Passive	254	2	40	0	2	0	0.0287	0.0000
ST JOSEPH	482837F	SYCAMORE ROAD	Passive	83	2	40	0	2	0	0.0201	0.0000
ST JOSEPH	482839U	MAIN ST	Flasher	688	2	20	0	2	0	0.0122	0.0000
ST JOSEPH	482840N	STATE ST SR 23	Gate	4355	2	20	1	2	0	0.0507	0.0000
ST JOSEPH	482841V	SMILAX ROAD	Passive	167	2	40	0	2	0	0.0252	0.0000
ST JOSEPH	482844R	WALNUT ROAD	Passive	451	2	40	0	2	0	0.0340	0.0000
ST JOSEPH	855478A	LIBERTY HWY	Flasher	4739	2	10	0	2	0	0.0243	0.0000
ST JOSEPH	855479G	IRELAND RD	Flasher	3211	2	10	0	2	0	0.0213	0.0000
ST JOSEPH	855481H	KERN RD	Flasher	1166	2	10	0	2	0	0.0148	0.0000
ST JOSEPH	855484D	ROOSEVELT RD	Passive	340	2	10	0	2	0	0.0259	0.0000
ST JOSEPH	855485K	MADISON RD	Passive	122	2	10	0	2	0	0.0186	0.0000
ST JOSEPH	873077X	NEW ROAD	Flasher	390	2	10	0	2	0	0.0098	0.0000
ST JOSEPH	873081M	N/A	Flasher	2231	2	10	0	2	0	0.0187	0.0000

Table 5-IN-12
Indiana
Elimination of Highway/Rail At-Grade Crossing Vehicle Delay and Queues Resulting From Proposed Abandonments

County	Segment Limit		Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	Trains per day	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Veh. (sec/veh)	Level of Service
	From	To										
LA PORTE	South Bend	Dillion Jct.	482845X	1000 EAST	4	119	2	0	0	2.08	0.72	A
LA PORTE	South Bend	Dillion Jct.	482851B	800 E	4	134	2	0	0	2.08	0.72	A
LA PORTE	South Bend	Dillion Jct.	482852H	SR 104	4	930	2	3	1	2.10	0.73	A
LA PORTE	South Bend	Dillion Jct.	482853P		4	176	2	1	0	2.08	0.72	A
ST JOSEPH	South Bend	Dillion Jct.	482831P	OAK ROAD	4	805	2	2	1	2.10	0.73	A
ST JOSEPH	South Bend	Dillion Jct.	482832W	PINE ROAD	4	231	2	1	0	2.09	0.72	A
ST JOSEPH	South Bend	Dillion Jct.	482833D	PRIMROSE ROAD	4	65	2	0	0	2.08	0.72	A
ST JOSEPH	South Bend	Dillion Jct.	482835S	REDWOOD ROAD	4	254	2	1	0	2.09	0.72	A
ST JOSEPH	South Bend	Dillion Jct.	482837F	SYCAMORE ROAD	4	83	2	0	0	2.08	0.72	A
ST JOSEPH	South Bend	Dillion Jct.	482839U	MAIN ST	4	688	2	3	1	3.29	1.79	A
ST JOSEPH	South Bend	Dillion Jct.	482840N	STATE ST SR 23	4	4355	2	20	7	3.43	1.87	A
ST JOSEPH	South Bend	Dillion Jct.	482841V	SMILAX ROAD	4	167	2	0	0	2.08	0.72	A
ST JOSEPH	South Bend	Dillion Jct.	482844R	WALNUT ROAD	4	451	2	1	0	2.09	0.73	A
ST JOSEPH	South Bend	Dillion Jct.	855478A	LIBERTY HWY	4	4739	2	40	14	6.37	6.41	B
ST JOSEPH	South Bend	Dillion Jct.	855479G	IRELAND RD	4	3211	2	27	10	6.26	6.29	B
ST JOSEPH	South Bend	Dillion Jct.	855481H	KERN RD	4	1166	2	10	4	6.11	6.14	B
ST JOSEPH	South Bend	Dillion Jct.	855484D	ROOSEVELT RD	4	340	2	3	1	6.06	6.09	B
ST JOSEPH	South Bend	Dillion Jct.	855485K	MADISON RD	4	122	2	1	0	6.04	6.07	B
ST JOSEPH	South Bend	Dillion Jct.	873077X	NEW ROAD	4	390	2	3	1	6.06	6.09	B
ST JOSEPH	South Bend	Dillion Jct.	873081M		4	2231	2	19	7	6.19	6.22	B

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5-KY
KENTUCKY

This section provides background information for resources in Kentucky. Tables list the proposed Conrail Acquisition-related activities in Kentucky that meet or exceed the Board's thresholds for environmental analysis. This section also presents the various technical analyses conducted for these activities in Kentucky. The analyses highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-KY.1 KENTUCKY SETTING

Kentucky is a south central state located east of the Mississippi River. Principal products of Kentucky are tobacco, beef cattle, milk, corn, hogs, chickens, grain, whiskey, chemicals, farm equipment, plumbing and electrical goods, coal, oil, natural gas, clay, sand, gravel, stone, and zinc. The railroad network throughout the state provides a means of transporting and distributing many of these goods and for other products imported into the state.

Transportation Facilities

Major interstate highways serving Kentucky are I-64, an east/west facility; I-75, a north/south facility; and I-65, a north/south facility. These interstates serve the major cities of Bowling Green, Lexington, and Louisville.

Railroad Facilities

Eighteen railroads operate in Kentucky, covering a total of 2,892 route miles. Of the 2,892 total rail miles in Kentucky:

- CSX operates on 1,861 route miles in Kentucky, which is 64 percent of the state's total rail miles.
- NS operates on 447 route miles in Kentucky, which is 15 percent of the state's total rail miles.

Major cities in Kentucky served by CSX and NS are Louisville, Lexington, and Bowling Green. CSX and NS are two of the three Class I Railroads operating in the state. Illinois Central Railroad Company is the other Class I Railroad in the state.

NS operates a major rail classification yard, an intermodal facility, and other rail related facilities in Louisville. CSX operates a major classification yard in Russell. Other CSX operated railroad facilities are located in Atkinson (Madisonville), Corbin, Louisville, Ravenna, Shelby, Bowling Green, Raceland, Lexington, and O'Bannon. Rail-to-barge coal transfer terminals are located in Louisville (Riverport) and Maysville (TTI).

Intercity Passenger and Commuter Rail Services

Passenger train service is provided by Amtrak to the Ashland and Covington stations three days a week. There is no commuter rail service in Kentucky.

5-KY.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN KENTUCKY

In the Operating Plans submitted to the Board, the Applicants, indicate that as a result of the proposed Conrail Acquisition, Kentucky coal, steel and auto producers would gain single-line access to points in the northeast and the Great Lakes states, and that Louisville would remain an important rail transportation hub. Kentucky shippers would be served by five CSX route combinations following the proposed Conrail Acquisition, including the Memphis Gateway Service Route linking Memphis and New York via Louisville, and the Heartland Service Route linking Nashville, Cleveland and the Northeast via Hopkinsville and Henderson. Louisville's Osborn Yard would remain an important freight car switching hub for traffic from the South and Southeast. Most traffic for the St. Louis gateway, however, would be rerouted via Indianapolis. NS would continue to offer service between Cincinnati and Louisville via Danville, Kentucky to Chattanooga, Tennessee.

The only proposed Conrail Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis in Kentucky include increased train operations on one rail line segment and an increase in intermodal truck activity at the NS Buechel Intermodal Facility in Louisville.

Figure 5-KY-1 presented at the end of the state discussion shows the activities in Kentucky related to the proposed Conrail Acquisition. The figure also shows additional rail line segments which SEA analyzed. Tables 5-KY-1 and 5-KY-2 show the rail segment and intermodal facilities in Kentucky that required environmental analysis. Following this table are brief descriptions of the activities, where appropriate.

Table 5-KY-1
Kentucky Rail Line Segments which Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles	County	Setting
C-021	Evansville, IN	Amqui, TN	CSX Evansville to Nashville	28	Christian	Rural
				13	Henderson	Rural
				23	Hopkins	Rural
				10	Todd	Rural
				11	Webster	Rural

C = CSX

Table 5-KY-2
Kentucky Intermodal Facilities which Meet or Exceed Board Environmental Thresholds

Site ID	Location	County	Facility	Description	Setting
NM-04	Louisville	Jefferson	Buechel	Increase of 53 trucks/day	Urban

Intermodal Facilities

Buechel Intermodal Facility (Jefferson, KY) (NS). The NS Louisville intermodal facility is located in an industrial area southeast of Interstate 264 in the town of Buechel. This town is southeast of the city of Louisville. The main gate for truck entry and exit movements is located on Jennings Lane. The routes used by trucks to and from Interstate 264 include Newburg Road and Bishop Lane to Jennings Lane. (See Figure 5-KY-2 at the end of the state discussion.)

The Louisville intermodal facility currently handles approximately 119 trucks per day. The proposed Conrail Acquisition would increase this figure to 173 trucks per day. This increase of 53 trucks per day corresponds to 108 additional truck trips per day.

5-KY.3 KENTUCKY SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-related activities in Kentucky that meet the Board's thresholds for environmental analysis and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Transportation (Passenger Rail Service; Navigation).
- Energy.
- Cultural Resources.
- Hazardous Materials and Waste Sites.
- Natural Resources.
- Land Use/Socioeconomics.

Details of the environmental analysis and results for Kentucky follow.

5-KY.4 KENTUCKY SAFETY: FREIGHT RAIL OPERATIONS

SEA conducted a statistical analysis to evaluate the potential change in safety on all rail line segments where the proposed Conrail Acquisition would result in eight or more additional freight trains per day. SEA identified one rail line segment within Kentucky that would experience this level of increased activity. While increased freight train activity would increase the probability of a freight train accident, SEA did not consider an increase significant unless the predicted accident rate shortened the duration between accidents to one every 100 years or less per mile. Table 5-KY-3 presents results of the analysis, showing the approximate mileage of the rail line segment within the state.

Table 5-KY-3
Estimated Change in Years Between Accidents - Freight Rail Operations

Site ID	Between	And	Miles in State	Increase in Trains per Day	Pre-Acquisition Accident Interval [a]	Post-Acquisition Accident Interval [a]
C-021	Evansville, IN	Amqui, TN	85	9.3	193	135

[a] Accident Interval figures show the years/mile.

The Federal Railroad Administration (FRA) requires all railroads to submit reports for all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). Train accidents meeting this reporting requirement are relatively

infrequent. The FRA reported about 2,600 accidents (3.69 accidents per million train miles[1]) nationally in 1996. Most of these accidents were relatively minor; almost 90 percent of these accidents caused less than $100,000 in damage. In addition, most of the train accidents did not affect people or non-railroad property.

Accident risk predictions are best expressed by describing the elapsed time expected between any two consecutive events. The current national average is that a main line freight train accident occurs once every 117 years on each mile of route. FRA records, as described in Chapter 4, "System-Wide and Regional Setting Impacts," show a substantial decrease, both in total number of accidents and in accidents per million train miles, a standard industry measure. Because there are few accidents, and most of these accidents are relatively minor, it is not possible for SEA to accurately predict either the frequency or severity of actual events.

SEA estimated the change in the risk of an accident resulting from the increased activity on rail line segments as a result of the proposed Conrail Acquisition. Because SEA analyzed rail line segments that vary in length from one mile to more than 100 miles, and because freight train accidents typically have little impact on surrounding areas, SEA expressed all predicted risks of accidents on a route-mile basis. Section 3.2 "Safety: Freight Rail Operations," discusses the analysis process in greater detail.

5-KY.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

In Kentucky, SEA found that no rail line segments met its criteria of significance (one accident expected every 100 years or less per mile of route). Therefore, SEA does not recommend mitigation.

5-KY.5 KENTUCKY SAFETY: PASSENGER RAIL OPERATIONS

In Kentucky, passenger trains share certain tracks with freight trains. SEA evaluated the potential for increased accidents between freight trains and passenger trains, for both intercity and commuter trains. Because changes in the frequency of rail accidents are directly related to changes in overall train activity, SEA's analysis concentrated on rail line segments carrying both passenger and freight trains that would experience an increase in freight train traffic of one or more trains per day.

In Chapter 4, "System-Wide and Regional Setting, Impacts and Proposed Mitigation," SEA addresses the issue of potential increased risk to passenger train operations associated with the proposed Conrail Acquisition. System-wide, SEA identified 197 freight rail line segments that

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[1] "Train miles" are calculated by multiplying the number of trains by the distance traveled. For example, on a typical 100 mile rail line, one million annual train miles results from operating 28 trains per day every day for 365 days.

also carry passenger trains. Of these, SEA analyzed 93 rail line segments that would experience an increase of one or more freight trains per day resulting from the proposed Acquisition. One of these rail line segments is located in Kentucky; this rail line segment is part of Amtrak's Cardinal passenger train routes.

The Federal Railroad Administration (FRA) requires reports from railroads concerning all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). FRA requires the same reporting for passenger train accidents. A nationwide average of fewer than 200 passenger train accidents per year (for both Amtrak intercity and urban area commuter trains) has occurred over the last three years. Most of these accidents were relatively minor and rarely involved any fatalities, but because the safety of passengers as well as property is frequently involved, their occurrence is of serious concern.

Given the limited number of passenger rail accidents, SEA was unable to accurately predict the severity, location, or timing of actual accidents. SEA therefore focused on estimating the potential risks of an accident. In this safety analysis, SEA used increased freight activity on rail line rail line segments to estimate the changes in passenger train accident risks. To assess significance, SEA first determined whether the proposed Acquisition-related change in the projected accident rate was greater than an annual increase of 25 percent. SEA then determined if the predicted accident frequency was less than one accident in 150 years. Thus, SEA determined a potential impact to be significant if the projected annual increase in accidents was greater than 25 percent and the frequency was less than one accident in 150 years.

5-KY.5.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The pre-Acquisition accident interval for the rail line segment is shown in Table 5-KY-4. Accidents pose potential threats to passengers on the train; therefore, for each rail line segment, risk is expressed as the expected interval between events over the length of the rail line segment. Table 5-KY-4 shows the expected change in years between accidents for the individual rail line segments.

Table 5-KY-4
Estimated Change in Years Between Accidents for Passenger Rail Operations

Site ID	From	To	Miles in State	Pre-Acquisition Accident Interval [a]	Post-Acquisition Accident Interval [a]
C-242	N J Cabin	Covington	121	998	870

[a] Accident Intervals shows years between accidents.

Based on information provided by the railroads and SEA's independent analysis, SEA determined that the increased risk for this rail line segment did not exceed SEA's criteria for significance. As a result, SEA does not propose mitigation.

5-KY.6 KENTUCKY SAFETY: HIGHWAY/RAIL AT-GRADE CROSSINGS

Increased train activity could affect the safety of roadway users at highway/rail at-grade crossings. To address potential changes in accident frequency, SEA compared existing accident frequency rates with accident frequency rates at all highway/rail at-grade crossings that would experience a Conrail Acquisition-related increase of eight or more trains per day. At these locations, SEA looked at the most recent five years of accident history available, and calculated the potential change in the number of years between accidents. SEA's analysis procedure considered the type of existing warning devices at the highway/rail at-grade crossings, including passive devices (signs or crossbucks), flashing lights, or gates.

To evaluate the significance of potential changes in accident frequency in Kentucky, SEA categorized highway/rail at-grade crossings into two categories:

- Category A consisted of highway/rail at-grade crossings with a history of relatively frequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Kentucky with accident frequency rates at or above the state's 50th highest accident frequency rate of one accident every eight years (0.1212 accident frequency rate) to be Category A highway/rail at-grade crossings. For all Category A highway/rail at-grade crossings, SEA considered the relatively small accident frequency rate increase of one accident every 100 years (a 0.01 accident frequency rate increase) to be significant.

- Category B consisted of highway/rail at-grade crossings with a history of relatively infrequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Kentucky with accident frequency rates less than one accident eight years (less than 0.1212 accident frequency rate) to be Category B highway/rail at-grade crossings. For these crossings, SEA considered an accident frequency rate increase of one accident every 20 years (a 0.05 accident frequency rate increase) to be significant.

Table 5-KY-5 presents the results of SEA's analysis at the end of this state's section. A county by county summary of results follows.

5-KY.6.1 County Analysis

Christian County

SEA's safety analysis showed that for the 28 highway/rail at-grade crossings studied in Christian County, the predicted increases in accident frequency would range from 0.0021 to 0.0194. This

translates into a range of increases from one accident every 476 years to one accident every 52 years. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at two highway/rail at-grade crossings: Duffey Street and E 6th Street. SEA found the predicted increases at the other locations to be below the criteria for significance.

Henderson County

SEA's safety analysis showed that for the 13 highway/rail at-grade crossings studied in Henderson County, the predicted increases in accident frequency would range from 0.0023 to 0.0066. This translates into a range of increases from one accident every 435 years to one accident every 152 years. SEA found these predicted increases to be below the criteria for significance.

Hopkins County

SEA's safety analysis showed that for the 21 highway/rail at-grade crossings studied in Hopkins County, the predicted increases in accident frequency would range from 0.0028 to 0.0240. This translates into a range of increases from one accident every 357 years to one accident every 42 years. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at West Moss Avenue, West Center Street, and West Noel Avenue. These highway/rail at-grade crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

Todd County

SEA's safety analysis showed that for the six highway/rail at-grade crossings studied in Todd County, the predicted increases in accident frequency would range from 0.0026 to 0.0074. This translates into a range of increases from one accident every 385 years to one accident every 135 years. SEA found these predicted increases to be below the criteria for significance.

Webster County

SEA's safety analysis showed that for the nine highway/rail at-grade crossings studied in Webster County, the predicted increases in accident frequency would range from 0.0025 to 0.0100. This translates into a range of increases from one accident every 400 years to one accident every 100 years. SEA determined that the predicted increase resulting from the proposed Conrail Acquisition was significant at West Dixon Street. This highway/rail at-grade crossing is classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

5-KY.6.2 Summary of Potential Effects and Preliminary Recommended Mitigation

SEA determined that the proposed Conrail Acquisition would significantly increase the predicted accident risk at six highway/rail at-grade crossings in Kentucky. Table 5-KY-6 shows SEA's recommended mitigation to reduce these risks.

SEA analyzed the accident frequencies with and without these upgraded warning devices in place, as shown in Table 5-KY-5 at the end of this state's section. With the mitigation measures, the accident frequencies at these locations would decrease to well below the pre-Acquisition levels. SEA recommends that CSX upgrade the existing warning devices, as shown in Table 5-KY-6. These recommendations would eliminate the adverse effects on highway/rail at-grade crossing safety resulting from the proposed Conrail Acquisition in Kentucky.

Table 5-KY-6
Recommended Mitigation to Improve Safety at Highway/Rail At-Grade Crossings in Kentucky

County	Railroad Segment	FRA ID	Highway/Rail At-Grade Crossings	Existing Warning Devices	SEA's Proposed Mitigation
Christian	C-021	345246C	Duffey Street	Passive	Flashing Lights
Christian	C-021	345269J	East 6th Street	Passive	Flashing Lights
Hopkins	C-021	345318D	West Moss Avenue	Passive	Flashing Lights
Hopkins	C-021	345329R	West Center Street	Flashing Lights	Gates
Hopkins	C-021	345331S	West Noel Avenue	Flashing Lights	Gates[a]
Webster	C-021	345362R	West Dixon Street	Flashing Lights	Gates

[a] Also mitigated by recommended grade separation from roadway crossing delay analysis.

5-KY.7 KENTUCKY SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary concern with the rail transportation of hazardous materials is a spill or accidental release resulting from a train accident. SEA analyzed all rail line segments where the number of car loads containing hazardous materials would increase as a result of the proposed Acquisition. This resulted in SEA evaluating rail line segments that were below the Board's thresholds for environmental analysis.

The Association of American Railroads (AAR), in conjunction with the Chemical Manufacturer's Association (CMA), developed standards and practices to manage the risk of a hazardous material spill that the railroads have adopted. The practices include identifying "key

routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

5-KY.7.1 Rail Line Segment Analysis

As a result of the proposed Conrail Acquisition, the railroads would change the routing of many car loads of hazardous material. The designation of key routes would change as the railroads shift hazardous material traffic from one rail line to another. In addition, certain rail line segments that are currently key routes would carry increased volumes of cars containing hazardous material.

SEA applied two different criteria to determine if the effects of rerouting hazardous material car loads are potentially significant:

1. The volume of hazardous materials transported on a rail line would be 10,000 or more car loads per year. The Acquisition-related change in volume of hazardous material car loads would upgrade a rail line segment to a key route designation.

2. The volume of hazardous material car loads doubles, and exceeds 20,000 or more car loads per year. SEA has termed rail line segments which meet these criteria a "major key route."

Rail line segments that would meet the first criteria are considered "key routes" and warrant the base level mitigation. Rail line segments that meet the second criteria are considered "major key routes" and warrant expanded mitigation. Depending on the individual circumstances, a rail line segment could meet both criteria and therefore warrant both the base level and the expanded mitigation.

5-KY.7.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Potential Effects. Based on the information provided by the Applicants and SEA's independent analysis, SEA determined that nine rail line segments in Kentucky carrying increased amounts of hazardous material are of potential concern. Table 5-KY-7 shows these rail line segments, indicates the estimated annual car loads of hazardous material for both pre- and post-Acquisition, and identifies the key route status of each. SEA determined that five rail line segments currently carry less than 10,000 car loads of hazardous material per year but would increase to at least 10,000 car loads per year due to the proposed Acquisition. A total of four routes would at least

double the volume of hazardous material transported, resulting in 20,000 or more car loads per year.

Table 5-KY-7
Rail Line Segments with Significant Increases in Annual Hazardous Material Car Loads

Site ID	Between	And	Miles in State	Estimated Annual Car Loads		Significance Thresholds	
				Pre-Acquisition	Post-Acquisition	New Key Route	Major Key Route
C-287	Latonia, KY	Anchorage, KY	88	11,000	24,000		X
C-288	Anchorage, KY	Louisville, KY	13	12,000	26,000		X
C-289	Louisville, KY	Amqui, TN	137	11,000	25,000		X
C-291	Covington, KY	Latonia, KY	1	18,000	37,000		X
C-292	Latonia, KY	Winchester, KY	93	8,000	13,000	X	
C-293	Winchester, KY	Sinks, KY	56	5,000	12,000	X	
C-294	Sinks, KY	Corbin, KY	35	5,000	12,000	X	
C-295	Corbin, KY	Cartersville, GA	31	6,000	12,000	X	
C-617	N. Hazard, KY	Duane, KY	4	5,000	10,000	X	

Preliminary Mitigation Recommendation. SEA recommends requiring CSX to bring the rail line segments into compliance with AAR key route standards and practices for those segments that would become a new key route.

For the four segments in Table 5-KY-7 identified as major key routes, where the volume of hazardous material car loads would at least double and exceed 20,000 car loads, SEA recommends that CSX develop a Hazardous Materials Emergency Response Plan to contain and minimize the potential effects of any accidents or incidents. SEA will further recommend that CSX conduct hazardous materials accident simulations with the voluntary participation of emergency service providers along the rail line segments at least once every two years. Participants in these plans include county and municipal government, local fire departments, and medical and other emergency response teams.

5-KY.8 KENTUCKY TRANSPORTATION: PASSENGER RAIL SERVICE

In Kentucky, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-related effects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Amtrak currently provides service to Maysville, South Portsmouth, and South Shore on CSX lines. Section 4.7.1, "Intercity Passenger Rail Service," discusses intercity passenger rail service effects.

Commuter Rail

No commuter rail service currently exists in Kentucky.

5-KY.8.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Because there is no commuter rail service in Kentucky, SEA has determined there will be no adverse effects and no mitigation is required.

5-KY.9 KENTUCKY TRANSPORTATION: ROADWAY CROSSING DELAY

In order to analyze the effects of the proposed Conrail Acquisition on the roadway system at existing highway/rail at-grade crossings, SEA identified the crossings on rail line segments that would exceed the Board's environmental analysis thresholds for air quality. SEA then calculated potential changes in vehicle delay at these crossings where average daily traffic (ADT) volumes are 5,000 or greater. SEA concluded that the potential effect of increased train traffic for highways with ADT volumes below 5,000 would be experienced by very few drivers and the additional vehicular delay would be minimal. The description of levels of service and criteria of significance have been addressed in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," and Appendix C, "Traffic and Transportation."

For crossings that would experience significant effects from the proposed Acquisition on vehicular delay, SEA tested mitigation strategies which involved increasing train speeds by increments of five miles per hour. SEA examined train operation guidelines and made preliminary recommendations to increase specific train speeds where it was easy to implement. At some locations where the post-Acquisition crossing delays were most severe and the Acquisition related increase in train traffic was great, SEA recommended separated grade crossings. At other locations, SEA recommended that the Applicants consult with the local

community and with the local highway/transportation department and the Kentucky Department of Transportation to agree on mitigating measures.

5-KY.9.1 County Analysis

Three counties in Kentucky have highway/rail at-grade crossings for which SEA performed vehicle delay calculations. Table 5-KY-8 at the end of this state's section contains a summary of these results.

Christian County

Two crossings analyzed in Christian County would have a minimal increase in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be C and E. The largest increase in maximum queue would be one vehicle. The East 9th Street crossing involves degrading a pre-Acquisition level of service D condition to a level of service E. It is SEA's preliminary recommendation that a separated grade crossing be constructed at the East 9th Street at-grade crossing.

Henderson County

The single crossing analyzed in Henderson County would have a minimal increase in crossing delay per stopped vehicle. The level of service under post-Acquisition conditions would be C while the maximum queue of vehicles would remain the same.

Hopkins County

The single crossing analyzed in Hopkins County would have a minimal increase in crossing delay per stopped vehicle. The level of service under post-Acquisition conditions would be E. The crossing, W. Noel Avenue, also involves exacerbating a pre-Acquisition level of service D condition with a significant increase in train traffic. It is SEA's preliminary recommendation that a separated grade crossing be constructed at the W. Noel Avenue at-grade crossing.

5-KY.9.2 Summary of Potential Effects and Preliminary Recommended Mitigation

With two exceptions in Christian and Hopkins Counties, the proposed Conrail Acquisition would have no significant effect on vehicle delay for at-grade crossings in Kentucky. It is SEA's preliminary recommendation that separated grade crossings be constructed at these two locations.

5-KY.10 KENTUCKY TRANSPORTATION: ROADWAY EFFECTS FROM RAIL FACILITY MODIFICATION

5-KY.10.1 Intermodal Facilities

One intermodal facility in Louisville would experience an increase in truck activity as a result of the proposed Acquisition. Others would experience decreases in truck activity. The following is a summary of the NS intermodal operations in Louisville.

Intermodal Facility: Louisville - Buechel (Jefferson County) (NS)

The NS Louisville intermodal facility is located in an industrial area southeast of Interstate 264 in the town of Buechel. This town is southeast of the city of Louisville. The main gate for truck entry and exit movements is located on Jennings Lane. The routes used by trucks to and from Interstate 264 include Newburg Road and Bishop Lane to Jennings Lane.

The Louisville intermodal facility currently handles approximately 119 trucks per day. The proposed Acquisition would increase this figure to 173. This increase of 54 trucks per day corresponds to 108 additional truck trips per day. SEA assumed that all of the additional truck trips would use the four roadways identified above. Table 5-KY-9 summarizes the analysis of traffic volumes to determine the effects of these additional truck trips on the roadways approaching the facility.

Table 5-KY-9
Traffic Analysis Summary for Louisville - Buechel Intermodal Facility

Roadway Name	Roadway ADT	Increased Daily Truck Trips Using Roadway	Roadway ADT Percent Increase
Interstate 264	149,700 [a]	108	0.07%
Newburg Rd.	24,500 [a]	108	0.44%
Bishop Lane	3,900 [a]	108	2.77%
Jennings Lane	9,300 [b]	108	1.16%

[a] From Kentucky Transportation Cabinet.
[b] From Federal Railroad Administration Grade Crossing Database.

5-KY.10.2 Summary of Potential Effects and Preliminary Recommended Mitigation

The analysis results show that the total daily increase in truck traffic would be less than three percent of the average daily traffic (ADT) for the study area roadways. Therefore, based on its analysis, it is SEA's preliminary determination that the predicted increases in truck traffic would have insignificant effects on the area roadways.

5-KY.11 KENTUCKY AIR QUALITY

This section summarizes the change in air pollutant emissions that would result from the proposed Acquisition-related operational changes in the state of Kentucky. The primary air pollutant emission sources from trains and related activities include locomotive emissions on rail line segments, at rail yards, and at intermodal facilities. In addition to locomotive emissions, SEA evaluated emissions from other sources at intermodal facilities (idling trucks, lift cranes, etc.), motor vehicles idling near at-grade crossings, and decreases in truck emissions due to truck-to-rail freight diversions.

To analyze the air quality effects of the proposed Acquisition, SEA evaluated rail line segments, rail yards, and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis defined in Chapter 2, "Proposed Action and Alternatives." See Chapter 3, "Analysis Methods and Potential Mitigation Strategies," for additional information and a summary of the air quality analysis methodology. Appendix E, "Air Quality," contains a detailed description of methodology and detailed tables of results.

SEA addressed air pollutant emissions for sulfur dioxide (SO_2), volatile organic compounds (VOCs), particulate matter (PM), lead (Pb), nitrogen oxides (NO_x) and carbon monoxide (CO). SEA determined that emissions for SO_2, VOCs, PM and Pb would not exceed the emission screening thresholds for environmental analysis in any county. However, SEA found that these thresholds would be exceeded for NO_x in various counties in 17 states, and CO in three counties in two states (IL and OH). NO_x air pollutant emissions may affect a region's ability to attain the National Ambient Air Quality Standards for ozone. CO emissions may affect a local area's ability to attain the National Ambient Air Quality Standards for CO.

One CSX rail line segment exceeded the Board's threshold for air quality analysis in Kentucky. Table 5-KY-10 shows the air quality evaluation process that was followed. SEA identified five counties in Kentucky which include any part of this rail line segment. For these counties, SEA summed air emissions increases from changes on rail line segments and other activities and compared them to the air emission screening level that would require a permit if the source were a stationary source (rather than a mobile source, such as trains, trucks, and other vehicles). If the calculated air emissions exceeded this screening level, SEA conducted a detailed air emissions analysis known as a "netting analysis" in these counties. The netting analysis considered all emissions increases and decreases from Acquisition-related activity changes. SEA compared the netting analysis results to the air emission screening level and additional analyses were performed for counties where netting analysis results exceeded the air emission screening level. For these counties, SEA inventoried all county air pollutant emissions sources to evaluate if proposed Acquisition-relatedair emissions represented more than one percent of all air emissions sources in the county.

Table 5-KY-10
Kentucky Counties Evaluated in Air Quality Analysis

Counties Exceeding the Board's Activity Thresholds	O_3 Status [a]	Exceeds Emissions Screening Level Before Netting	Exceeds Emissions Screening Level After Netting	Exceeds 1 Percent of County Emissions
Christian	A	Yes	Yes	Yes
Henderson	A	Yes	Yes	No
Hopkins	A	Yes	Yes	Yes
Todd	A	Yes	Yes	Yes
Webster	A	Yes	Yes	Yes

[a] A= Attainment Area, as defined in the Clean Air Act.

The emissions estimates presented in Appendix E, "Air Quality," show that the increased county-wide air pollutant emissions from the rail line segment described above exceed the threshold for five counties in Kentucky. SEA's analysis results for these counties are presented below.

5-KY.11.1 County Analysis

Based on the information developed to date, SEA determined that the detailed NO_x emissions netting analysis indicates that other rail line segments, intermodals, rail yards, projected truck diversions, and highway/rail at-grade crossings will have zero or negligible changes in activity levels. Table 5-KY-11 summarizes the NO_x emissions changes from the single CSX rail line segment passing through the five counties.

Table 5-KY-11
NO_x Emissions Summary for Affected Kentucky Counties

County	Annual NO_x Emissions (tons/year)			Percent of County Total Emissions
	Rail Line Segment	Screening Level	Existing (1995)	
Christian	332.30	100	4586.91	7.24
Henderson	151.96	100	17380.63	0.87
Hopkins	283.67	100	3215.75	8.82
Todd	115.70	100	864.74	13.38
Webster	125.62	100	8005.96	1.57
Five Counties	1,009.25	n/a	34,053.99	2.96

EPA has designated all five counties as attainment areas. The percentage increase in NO_x emissions is over one percent for the counties with relatively low existing emissions.

5-KY.11.2 Summary of Potential Effects and Preliminary Recommended Mitigation

While there are localized increases in emissions in some counties, the increases are not likely to affect compliance with air quality standards. Therefore, SEA has determined that air quality will not be significantly affected and no mitigation is necessary. See system-wide and regional discussion in Section 4.12 "Air Quality."

5-KY.12 KENTUCKY NOISE ANALYSIS

To analyze the potential noise impacts of the proposed Acquisition, SEA evaluated rail line segments, rail yards and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis of noise. Although new construction projects and rail line abandonments can result in noise increases, the noise effects would be temporary and therefore, SEA did not evaluate them.

5-KY.12.1 Proposed Activities

Train noise sources include diesel locomotive engine and wheel/rail interaction noise (or wayside noise) and horn noise. Wayside noise affects all locations in the vicinity of the rail facility, and generally diminishes with distance from the source. Horn noise is an additional noise source at grade crossings, and also generally diminishes with distance. SEA performed an analysis to identify rail line segments, rail yards and intermodal facilities where the proposed changes in operations meet or exceed the Board's environmental analysis thresholds at 49 CFR 1105.7(e)(6). Where the proposed rail activity would exceed these thresholds, SEA calculated the 65 dBA L_{dn} noise contours for the pre- and post-Acquisition conditions. SEA based the noise level impact assessment on the projected activity level data provided by the railroads. SEA counted sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) within the noise contours for both pre-Acquisition and post-Acquisition operating conditions.

The CSX rail line segment and NS intermodal facility that would experience increases in traffic or activity meeting the Board's environmental analysis thresholds for Kentucky are listed in Tables 5-KY-12 and 5-KY-13.

Table 5-KY-12
Rail Line Segments in Kentucky That Meet or Exceed Board Thresholds for Noise Analysis

Site ID	Segment		Trains Per Day			Percent Change in Gross Ton Miles
	From	To	Pre-Acquisition	Post-Acquisition	Increase	
C-021 [a]	Evansville, IN	Amqui, TN	23.4	32.7	9.3	54

[a] SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

Table 5-KY-13
Intermodal Facilities That Meet or Exceed The Board's Thresholds for Noise Analysis

Site ID	Intermodal Facility Location	Trucks Per Day		Change in ADT on local roads (percent)	Change in dBA	Approx. distance (feet) to 65 dBA L_{dn} contour
		Pre-Acquisition	Post-Acquisition			
NM-04	Louisville (Buechel)	119	173	0.4 - 1.1	< 2	---

The increase in noise levels at this facility was small (less than 2 dBA) and did not result in noise levels above 65 dBA offsite.

5-KY.12.2 Summary of Potential Effects and Preliminary Recommended Noise Mitigation

There are different noise mitigation techniques used to reduce horn noise and wayside noise. These different types of noise and mitigation techniques are as follows:

Grade Crossing Noise Effects. The Federal Railroad Administration (FRA) has indicated that it will propose new rules on train horn blowing procedures in 1998. These new rules may allow communities to apply for an exception to horn blowing at certain grade crossings that meet explicit criteria. These criteria relate to so-called "quiet zones" where FRA would no longer require train engineers to sound the train horn at grade crossings with special upgraded safety features. Examples of such safety features include four-quadrant gates and median barriers that preclude motorists from entering the crossings while the crossing arm is down. Until FRA develops and implements these regulations, these measures are not feasible for SEA to require as mitigation. However, communities will have the opportunity to qualify for "quiet zones" once the FRA regulations are in place.

Wayside Noise Effect. Wayside noise is the sound of a train as it passes by. Wayside noise is comprised of steel wheel/ rail interaction noise, and locomotive diesel engine noise. This type of noise can be reduced by constructing barriers between the railway noise source and adjoining land uses, and by installing building sound insulation. Noise barriers include earth berms and walls that block the sound. Rail lubrication can be used to reduce "wheel squeal" noise on curved track. Building sound insulation consists of special windows and other building treatments that reduce interior noise. Noise barriers are the preferred type of noise mitigation for this project since barriers can be built on railroad property. Additional discussion of noise mitigation measures is included in Appendix F, "Noise Methods."

As noted above, for receptors near grade crossings that would experience increases in noise resulting from horn sounding, mitigation is not currently feasible. For areas affected by wayside noise, SEA considered rail line segments eligible for noise mitigation for noise sensitive receptors exposed to at least 70 dBA L_{dn} and an increase of at least 5 dBA L_{dn} due to increased rail activity.

It is SEA's preliminary determination that no rail line segments or intermodal facilities in the state of Kentucky affect additional noise sensitive receptors above 65 dBA L_{dn}.

5-KY.13 KENTUCKY ENVIRONMENTAL JUSTICE

As part of its analysis, SEA examined activities associated with the proposed Conrail Acquisition for environmental justice impacts (disproportionately high and adverse impacts to minority and low-income populations) in accordance with Executive Order 12898. As described in the Environmental Justice Methodology in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," SEA first categorized the nature of the populations in areas where Acquisition-related activities are proposed. SEA determined whether the population in such areas met the following environmental justice thresholds: (1) greater than 50 percent of the population is minority or low-income, or (2) the minority or low-income population percentage is 10 percent greater than the minority or low-income population percentage in the county.

Next, SEA ascertained whether this population fell within an area of potential effect. SEA defined a typical zone on either side of a rail line segment or proposed construction site, or bordering a railroad intermodal facility or rail yard, as an area of potential effect. In general, the extent of an area of potential effect may vary depending on the nature of the changes in rail activity associated with it, but such areas typically extend 400 to 1500 feet out from the rail line segment or facility being analyzed.

SEA then evaluated these areas of potential effect for proposed Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis. In this analysis, SEA evaluated potential impacts on safety, transportation, air quality, noise, cultural resources, hazardous waste sites, hazardous materials transport, natural resources, and land

use/socioeconomic effects. SEA also visited the sites of proposed construction for new rail line connections, rail line segments, intermodal facilities, and rail yards.

SEA developed and executed expanded public outreach efforts for those jurisdictions that met both SEA's thresholds for environmental justice and the Board's thresholds for environmental significance. SEA designed the public outreach process to seek widespread notice and dissemination of SEA s environmental impact analysis; provide additional opportunities for community input to the NEPA process; solicit information about cumulative effects in minority and low-income communities; and allow minority and low-income communities to assist in fashioning appropriate alternatives and mitigation measures. SEA is placing additional copies of the Draft EIS in jurisdictions with high proportions of minority and low-income populations that do not have significant environmental impacts which could result from the proposed Acquisition.

This section presents the results of those evaluations and analysis. A complete list of all the sites analyzed for environmental justice impacts is presented in Appendix K.

5-KY.13.1 Kentucky Environmental Justice Setting

There are no new constructions, rail line abandonments, or changes in activities at rail yards or on rail line segments proposed in the state of Kentucky as part of the proposed Conrail Acquisition. Although CSX rail line segment C-021, Evansville, Indiana to Amqui, Tennessee, passes through Kentucky, the population in the area of potential effect does not meet the threshold for environmental justice analysis and therefore SEA did not analyze it.

Intermodal Facilities

There is one intermodal facility with proposed increases in truck traffic that exceed the Board's thresholds for environmental analysis in Jefferson County, Kentucky. The following table presents the existing minority and low-income composition of the area of potential effect surrounding the Buechel intermodal facility located on Jennings Lane in the city of Louisville. The facility is accessed by Newburg Road, Bishop Lane, and Jennings Lane.

Table 5-KY-14
Kentucky Site Summary for Intermodal Facilities and Truck Routes

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Jefferson County	664,937	18.6%	13.7%	NA	
Buechel (Louisville) (NM-04)	1,540	43.8%	16.9%	Yes	No
Buechel (Louisville) Truck Routes (NM-04)	5,540	17.4%	7.0%	No	No

5-KY.13.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Based on currently available information and after reviewing the findings of each of the resource analyses (noise, air quality, transportation, etc.), SEA identified no significant environmental impacts at the Buechel intermodal facility (NM-04) that exceed the population threshold for Environment Justice analysis. Therefore, it is SEA's preliminary determination that no environmental justice effects would occur in Kentucky as a result of the proposed Conrail Acquisition and no mitigation would be necessary.

5-KY.14 KENTUCKY CUMULATIVE EFFECTS

Within the State of Kentucky, the Applicants propose to increase rail traffic on one rail line segment and increase activities at one intermodal facility to levels that meet or exceed the Board's thresholds for environmental analysis.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any other activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of Kentucky.

Cumulative Effects Mitigation Measures

Due to a lack of cumulative effects, no mitigation measures are necessary.

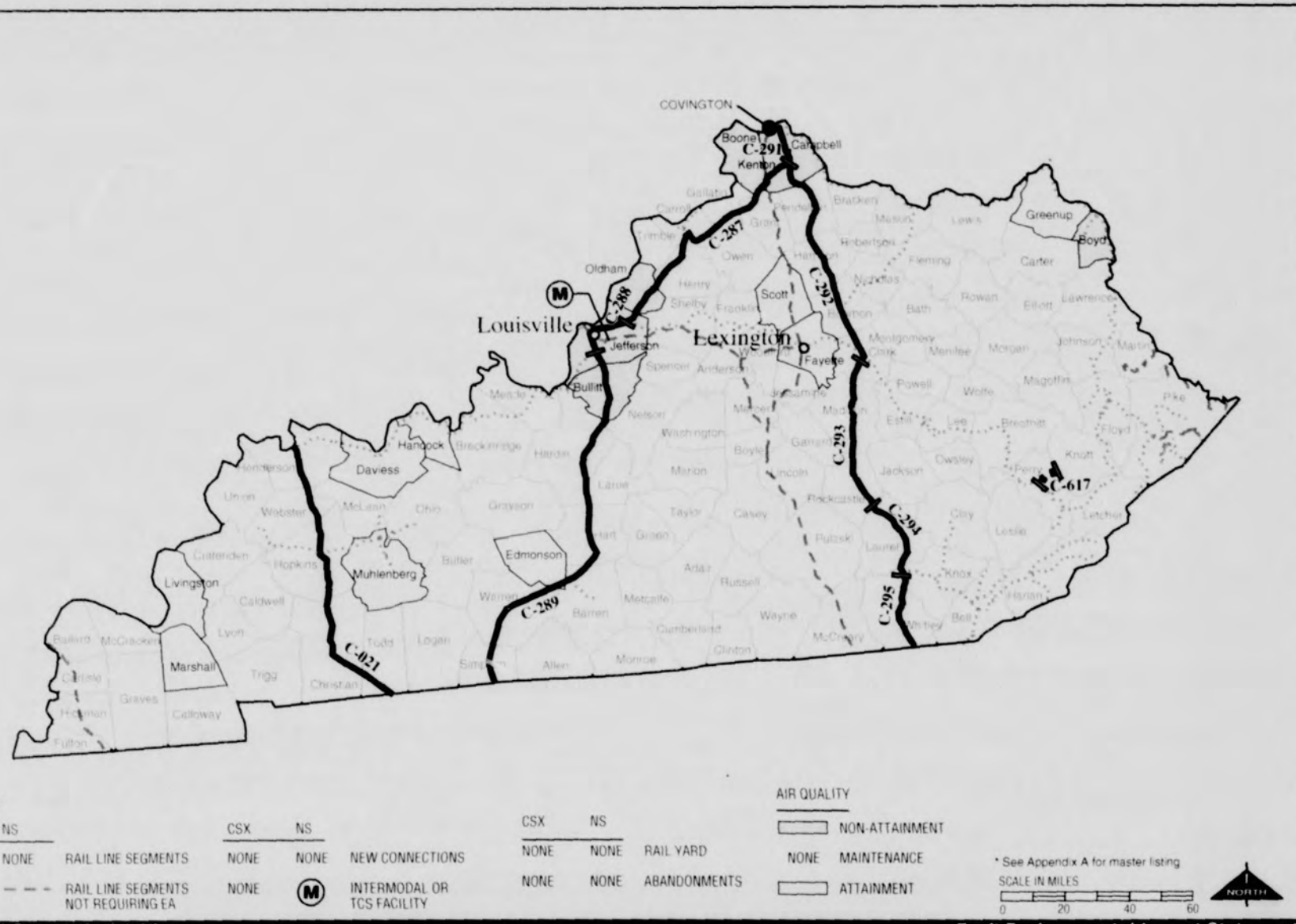
5-KY.15 KENTUCKY AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. The following table provides a list of agencies and local governments that have submitted environmental comments for the state of Kentucky. A complete list of entities that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-KY-15
Agencies in Kentucky Submitting Environmental Comments

Entity	Nature of Comment(s)
Evansville Urban Transportation Study	Air
Ohio-Kentucky-Indiana Regional Council of Governments	Rail operations, abandonment, commuter operations, and general traffic congestion

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.



LEGEND

CSX	NS		CSX	NS	
	NONE	RAIL LINE SEGMENTS	NONE	NONE	NEW CONNECTIONS
		RAIL LINE SEGMENTS NOT REQUIRING EA	NONE	(M)	INTERMODAL OR TCS FACILITY

CSX	NS	
NONE	NONE	RAIL YARD
NONE	NONE	ABANDONMENTS

AIR QUALITY

- NON-ATTAINMENT
- NONE MAINTENANCE
- ATTAINMENT

* See Appendix A for master listing

SCALE IN MILES 0 20 40 60

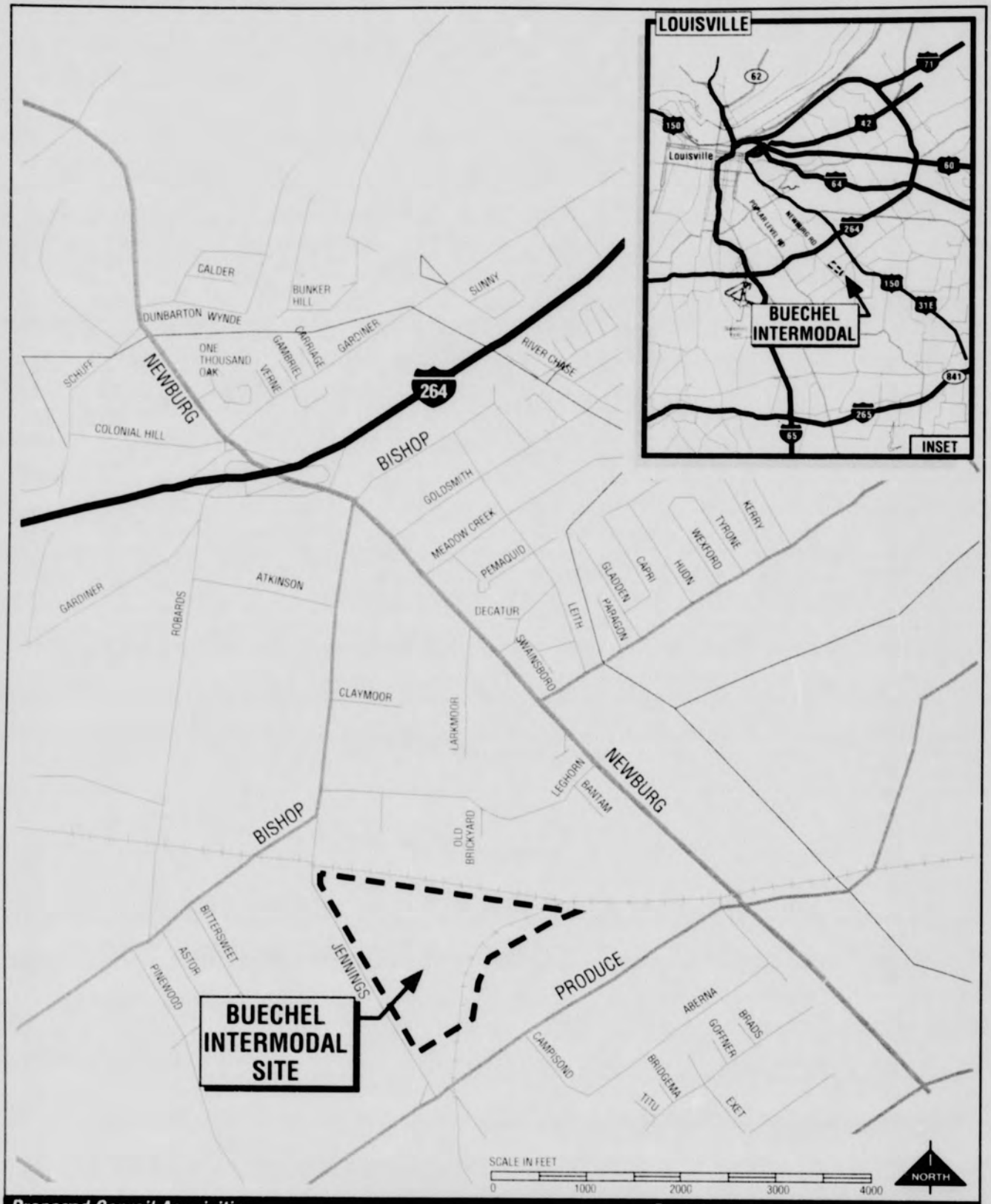
NORTH

Proposed Conrail Acquisition ***Draft Environmental Impact Statement***

FIGURE 5-KY-1

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

KENTUCKY - CSX AND NORFOLK SOUTHERN



Proposed Conrail Acquisition — *Draft Environmental Impact Statement*

FIGURE 5-KY-2

BUECHEL INTERMODAL SITE, LOUISVILLE, KENTUCKY

NORFOLK SOUTHERN

Table 5-KY-5
Kentucky
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
CHRISTIAN	C-021	345246C	DUFFEY STREET	Passive	148	2	50	1	23.4	32.7	0.1470	0.1600	0.0131	0.0215
CHRISTIAN	C-021	345247J	JACKSON STREET	Passive	148	2	50	0	23.4	32.7	0.0634	0.0706	0.0073	
CHRISTIAN	C-021	345248R	MAIN STREET	Gate	1,100	2	50	0	23.4	32.7	0.0227	0.0258	0.0031	
CHRISTIAN	C-021	345249X	JOHN RIVERS ROAD	Flasher	159	2	50	1	23.4	32.7	0.0650	0.0708	0.0059	
CHRISTIAN	C-021	345250S	CASKY LANE	Gate	380	2	50	0	23.4	32.7	0.0174	0.0199	0.0025	
CHRISTIAN	C-021	345251Y	SR109	Flasher	1,100	2	50	0	23.4	32.7	0.0387	0.0438	0.0051	
CHRISTIAN	C-021	345254U	SKYLINE DRIVE	Gate	7,000	2	50	0	23.4	32.7	0.0348	0.0390	0.0042	
CHRISTIAN	C-021	345262L	E 14TH STREET	Flasher	3,000	2	20	0	23.4	32.7	0.0512	0.0570	0.0058	
CHRISTIAN	C-021	345263T	E 13TH STREET	Flasher	986	2	20	0	23.4	32.7	0.0375	0.0425	0.0050	
CHRISTIAN	C-021	345264A	E 12TH STREET	Flasher	350	2	20	0	23.4	32.7	0.0270	0.0311	0.0040	
CHRISTIAN	C-021	345265G	E 11TH STREET	Flasher	1,050	2	20	0	23.4	32.7	0.0382	0.0432	0.0050	
CHRISTIAN	C-021	345266N	E 10TH STREET	Flasher	970	2	20	0	23.4	32.7	0.0373	0.0423	0.0050	
CHRISTIAN	C-021	345267V	E 9TH STREET	Gate	16,000	2	20	0	23.4	32.7	0.0415	0.0461	0.0046	
CHRISTIAN	C-021	345268C	E 7TH STREET	Flasher	2,500	2	25	0	23.4	32.7	0.0488	0.0545	0.0057	
CHRISTIAN	C-021	345269J	E 6TH STREET	Passive	500	2	20	2	23.4	32.7	0.2534	0.2728	0.0194	0.0266
CHRISTIAN	C-021	345270D	E 5TH STREET	Flasher	3,000	2	20	0	23.4	32.7	0.0512	0.0570	0.0058	
CHRISTIAN	C-021	345271K	4 STREET	Flasher	1,600	2	25	1	23.4	32.7	0.1055	0.1151	0.0096	
CHRISTIAN	C-021	345273Y	E 2ND STREET	Flasher	1,500	2	20	1	23.4	32.7	0.1041	0.1136	0.0096	
CHRISTIAN	C-021	345274F	E 1ST STREET	Flasher	3,700	2	25	0	23.4	32.7	0.0540	0.0599	0.0059	
CHRISTIAN	C-021	345276U	METCALF LANE	Passive	65	2	20	0	23.4	32.7	0.0276	0.0321	0.0045	
CHRISTIAN	C-021	345278H	CONCORD CHURCH LA	Flasher	170	2	40	0	23.4	32.7	0.0212	0.0245	0.0033	
CHRISTIAN	C-021	345284L	Old Madison Rd	Gate	290	2	50	0	23.4	32.7	0.0162	0.0186	0.0024	
CHRISTIAN	C-021	345285T	OLD MADISONV ROAD	Passive	200	2	50	0	23.4	32.7	0.0678	0.0751	0.0074	
CHRISTIAN	C-021	345288N	J. KNIGHT RD	Passive	30	1	50	0	23.4	32.7	0.0143	0.0169	0.0026	
CHRISTIAN	C-021	345291W	OLD MADISONV ROAD	Flasher	225	2	50	0	23.4	32.7	0.0233	0.0269	0.0036	
CHRISTIAN	C-021	345292D	BROWN STREET	Gate	150	2	60	0	23.4	32.7	0.0136	0.0157	0.0021	
CHRISTIAN	C-021	345293K	E MILL ST	Gate	223	2	60	2	23.4	32.7	0.0931	0.0989	0.0058	
CHRISTIAN	C-021	345294S	PRINCETON STREET	Flasher	1,200	2	50	1	23.4	32.7	0.0993	0.1085	0.0092	
HENDERSON	C-021	345369N	PEDDLER MCDONALD	Flasher	50	2	50	0	23.4	32.7	0.0136	0.0159	0.0023	
HENDERSON	C-021	345382C	KNOB LICK ROAD	Flasher	95	2	50	0	23.4	32.7	0.0175	0.0204	0.0029	
HENDERSON	C-021	345383J	FIRST ST	Gate	700	2	50	0	23.4	32.7	0.0208	0.0238	0.0029	
HENDERSON	C-021	345384R	SR283	Flasher	465	2	50	0	23.4	32.7	0.0302	0.0345	0.0043	
HENDERSON	C-021	345385X	ED OTLEY RD	Passive	100	1	50	0	23.4	32.7	0.0341	0.0393	0.0052	
HENDERSON	C-021	345388T	CHERRY HILL RD	Passive	50	2	50	0	23.4	32.7	0.0497	0.0562	0.0066	
HENDERSON	C-021	345389A	BUSBY STATION RD	Flasher	150	2	50	0	23.4	32.7	0.0206	0.0239	0.0033	
HENDERSON	C-021	345390U	ANTOSTON RD	Passive	50	2	50	0	23.4	32.7	0.0497	0.0562	0.0066	
HENDERSON	C-021	345393P	SCHUETTE LN	Flasher	200	1	50	0	23.4	32.7	0.0195	0.0226	0.0031	
HENDERSON	C-021	345396K	MADSION	Flasher	2,610	2	50	0	23.4	32.7	0.0500	0.0557	0.0057	
HENDERSON	C-021	345398Y	CLAY	Gate	4,000	2	50	0	23.4	32.7	0.0315	0.0355	0.0040	

Table 5-KY-5
Kentucky
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
HENDERSON	C-021	345399F	POWELL	Gate	400	2	25	1	23.4	32.7	0.0594	0.0641	0.0047	
HENDERSON	C-021	345400X	WASHINGTON ST	Gate	6,665	2	50	0	23.4	32.7	0.0353	0.0395	0.0042	
HOPKINS	C-021	345301A	NEW SALEM CIRCLE	Flasher	340	1	40	0	23.4	32.7	0.0231	0.0266	0.0036	
HOPKINS	C-021	345304V	PINE STREET	Flasher	300	2	25	0	23.4	32.7	0.0257	0.0296	0.0039	
HOPKINS	C-021	345307R	OAK HL ST CHAS RD	Passive	820	2	40	0	23.4	32.7	0.0859	0.0934	0.0075	
HOPKINS	C-021	345312M	CROSS ST/SR 813	Gate	2,940	2	40	0	23.4	32.7	0.0287	0.0324	0.0037	
HOPKINS	C-021	345313U	WALNUT ST	Passive	75	1	40	0	23.4	32.7	0.0303	0.0350	0.0048	
HOPKINS	C-021	345314B	ED BRACKETT LANE	Flasher	119	2	40	0	23.4	32.7	0.0187	0.0217	0.0030	
HOPKINS	C-021	345316P	BELL CROSSING RD	Flasher	110	2	40	0	23.4	32.7	0.0182	0.0211	0.0029	
HOPKINS	C-021	345317W	WILSON AVE	Passive	100	2	40	0	23.4	32.7	0.0549	0.0618	0.0069	
HOPKINS	C-021	345318D	W MOSS AVE	Passive	175	2	25	3	23.4	32.7	0.2973	0.3212	0.0240	0.0189
HOPKINS	C-021	345323A	VICTORIA HILL	Passive	200	2	25	0	23.4	32.7	0.0602	0.0674	0.0071	
HOPKINS	C-021	345325N	W. JAGOE ST	Flasher	660	2	20	0	23.4	32.7	0.0332	0.0378	0.0046	
HOPKINS	C-021	345326V	W LAKE STREET	Flasher	1,040	2	10	0	23.4	32.7	0.0381	0.0431	0.0050	
HOPKINS	C-021	345327C	W BROADWAY STREET	Flasher	3,685	2	10	0	23.4	32.7	0.0540	0.0598	0.0059	
HOPKINS	C-021	345328J	SUGG STREET	Flasher	930	2	10	0	23.4	32.7	0.0455	0.0510	0.0055	
HOPKINS	C-021	345329R	W CENTER STREET	Flasher	4,345	2	10	1	23.4	32.7	0.1289	0.1396	0.0107	0.0392
HOPKINS	C-021	345331S	W. NOEL AVE	Flasher	6,098	2	15	1	23.4	32.7	0.1374	0.1482	0.0108	0.0447
HOPKINS	C-021	345332Y	W. NORTH STREET	Flasher	1,400	2	15	0	23.4	32.7	0.0416	0.0468	0.0053	
HOPKINS	C-021	345341X	SUNSET ROAD	Gate	600	2	45	0	23.4	32.7	0.0195	0.0223	0.0028	
HOPKINS	C-021	345344T	JOE TIPPETT	Passive	190	2	50	0	23.4	32.7	0.0670	0.0744	0.0074	
HOPKINS	C-021	345346G	JONES ROAD	Passive	100	2	50	0	23.4	32.7	0.0578	0.0648	0.0070	
HOPKINS	C-021	354241S	HOSPITAL DR	Gate	3,585	2	15	0	23.4	32.7	0.0300	0.0338	0.0038	
TODD	C-021	345229L	PARK AVE	Gate	2,000	2	50	0	23.4	32.7	0.0295	0.0333	0.0038	
TODD	C-021	345234H	ELKTN-GREENFLD RD	Flasher	1,600	2	50	0	23.4	32.7	0.0432	0.0485	0.0054	
TODD	C-021	345236W	ROSENWALD ST	Passive	60	2	60	0	23.4	32.7	0.0537	0.0605	0.0068	
TODD	C-021	345237D	SR848	Gate	450	2	60	0	23.4	32.7	0.0181	0.0208	0.0026	
TODD	C-021	345238K	SR104	Gate	650	2	45	0	23.4	32.7	0.0199	0.0227	0.0028	
TODD	C-021	345239S	CR475	Passive	215	2	50	0	23.4	32.7	0.0688	0.0762	0.0074	
WEBSTER	C-021	345348V	SR 138	Gate	1,500	2	50	0	23.4	32.7	0.0245	0.0278	0.0033	
WEBSTER	C-021	345350W	CR 1109	Passive	47	1	50	0	23.4	32.7	0.0167	0.0196	0.0029	
WEBSTER	C-021	345353S	BRETON ROAD	Flasher	440	2	50	0	23.4	32.7	0.0292	0.0334	0.0042	
WEBSTER	C-021	345356M	MARTIN BROWN ROAD	Flasher	50	2	50	1	23.4	32.7	0.0523	0.0564	0.0041	
WEBSTER	C-021	345359H	SEBREE SPRINGS	Passive	150	1	50	0	23.4	32.7	0.0394	0.0451	0.0057	
WEBSTER	C-021	345360C	W. MILL STREET	Flasher	220	2	25	0	23.4	32.7	0.0231	0.0267	0.0036	
WEBSTER	C-021	345362R	W. DIXON STREET	Flasher	300	2	25	2	23.4	32.7	0.1223	0.1323	0.0100	0.0136
WEBSTER	C-021	345366T	E. WEBSTER STREET	Gate	375	2	25	0	23.4	32.7	0.0173	0.0198	0.0025	
WEBSTER	C-021	345367A	E. JEFFERSON	Gate	350	2	25	0	23.4	32.7	0.0170	0.0195	0.0025	

Table 5-KY-8
Kentucky
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	*Pre Acquisition*								*Post Acquisition*								
						Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Christian	C-021	345254U	SKYLINE DRIVE	2	7,000	23.4	40	6,000	251	15	2.62	11.25	B	32.7	40	6,200	359	16	2.68	16.54	C	
Christian	C-021	345267V	E 9TH ST.	2	16,000	23.4	25	6,000	839	52	5.04	31.73	D	32.7	25	6,200	1206	53	5.19	46.88	E	E (a)
Henderson	C-021	345400X	WASHINGTON ST	2	6,665	23.4	40	6,000	239	15	2.59	11.15	B	32.7	40	6,200	342	15	2.66	16.39	C	
Hopkins	C-021	345331S	W. NOEL AVE	2	6,098	23.4	20	6,000	387	24	4.53	34.53	D	32.7	20	6,200	557	25	4.66	51.09	E	E (a)

(a) Recommend separated grade crossing.

Table 5-KY-8
Kentucky
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

						Pre Acquisition								*Post Acquisition*								
County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Christian	C-021	345254U	SKYLINE DRIVE	2	7,000	23.4	40	6,000	251	15	2.62	11.25	B	32.7	40	6,200	359	16	2.68	16.54	C	
Christian	C-021	345267V	E 9TH ST	2	16,000	23.4	25	6,000	839	52	5.04	31.73	D	32.7	25	6,200	1206	53	5.19	46.88	E	E (a)
Henderson	C-021	345400X	WASHINGTON ST	2	6,665	23.4	40	6,000	239	15	2.59	11.15	B	32.7	40	6,200	342	15	2.66	16.39	C	
Hopkins	C-021	345331S	W. NOEL AVE	2	6,098	23.4	20	6,000	387	24	4.53	34.53	D	32.7	20	6,200	557	25	4.66	51.09	E	E (a)

(a) Recommend separated grade crossing.

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5-LA
LOUISIANA

This section provides background information for resources in Louisiana. Tables list the proposed Conrail Acquisition-related activities in Louisiana that meet or exceed the Board's thresholds for environmental analysis. This section also presents the various technical analyses conducted for these activities in Louisiana. The analyses highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-LA.1 LOUISIANA SETTING

Louisiana is located in the south central United States. Principal products of Louisiana include chemicals, food products, petroleum and coal products, paper products, rice, cattle, soybeans, sugarcane, natural gas, sulfur, and salt. The railroad network throughout the state provides a means of transporting and distributing many of these goods and for other products imported into the state.

Transportation Facilities

Major interstate highways in Louisiana are I-20, an east/west facility; I-49, a north/south facility; and I-10, an east/west facility. These interstates serve cities such as Monroe, Shreveport, Alexandria, Lafayette, Baton Rouge, and New Orleans. Louisiana has major waterway commerce due to the Gulf of Mexico and the Mississippi River. Primary ports serving the state include Lake Charles Harbor and Port of New Orleans.

Railroad Facilities

Sixteen railroads operate in the state of Louisiana and cover a total of 2,786 route miles. Six Class I Railroads service Louisiana, two of which are CSX and NS. Burlington Northern Santa Fe Railway Company, Illinois Central Railroad Company, Kansas City Southern Railway Company, and Union Pacific Railroad Company are the other four Class I railroads in Louisiana. Of 2,786 route miles:

- CSX operates 33 route miles in Louisiana, which is 2 percent of the state's total rail miles.

- NS operates 82 route miles in Louisiana, which is 3 percent of the state's total rail miles. CSX and NS serve the Port of New Orleans. NS also operates several other rail-related facilities in New Orleans.

Intercity Passenger and Commuter Rail Services

Amtrak provides passenger service to New Orleans. There is no commuter rail service in Louisiana.

5-LA.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN LOUISIANA

In the Operating Plans submitted to the Board, the Applicants indicate that the new systems would be of benefit to Louisiana's printing paper industry, which may gain improved access to the northeastern U.S. consumer market. Processors of scrap paper would be able to tap additional sources in that region. The state's grain processor would have access to competitively priced grain from Ohio Valley points now served exclusively by Conrail.

The Applicants also indicate that through the proposed Conrail Acquisition, Louisiana shippers would extend their single-line market reach via CSX and NS into the northeast and midwest. One of the post-Acquisition service routes that CSX would utilize is the New Orleans Gateway Service Route that would extend from Louisiana to New York, via Montgomery, Alabama; Atlanta, Georgia; and Philadelphia, Pennsylvania. New Orleans would continue to be a major western gateway for the NS system with shipments moving throughout the expanded NS system, via Birmingham, Atlanta, and the Shenandoah corridor. The Applicants maintain that the New Orleans Gateway would be competitive with other rail routings from cities on the Mississippi River for freight that moves in containers and trailers, in addition to chemical shipments. Service improvements on this route, the Applicants predict, would help alleviate highway congestion in the southeastern U.S. by diverting freight traffic from truck to rail.

In Louisiana, there are no rail line segments and rail yards that meet or exceed the Board's thresholds for environmental analysis and there are no new connections or proposed abandonments . The only proposed Conrail Acquisition-related activity that would meet or exceed the Board's thresholds for environmental analysis in Louisiana is increased truck activity at NS' Oliver Intermodal Facility in New Orleans. Figure 5-LA-1 at the end of this state discussion shows the general location of the facility. Figure 5-LA-1 also shows the locations of other segments SEA analyzed.

Table 5-LA-1 shows the intermodal facility in Louisiana that required environmental analysis. Following is a brief description of the intermodal facility.

Table 5-LA-1
Louisiana Intermodal Facilities which Meet or Exceed Board Environmental Thresholds

Site ID	Location	Parish	Facility	Description	Setting
NM-05	New Orleans	Orleans	Oliver	Increase of 63 trucks per day	Urban

Intermodal Facilities

Oliver Intermodal Facility (Orleans Parish, LA) (NS). The Oliver NS intermodal facility, in Orleans Parish, Louisiana, is located in the northeastern quadrant on Florida Avenue. (See Figure 5-LA-2 at the end of this state discussion.) Trucks access the facility from I-10 via state Route 39, and/or Louisa Road and Almonaster Avenue to Florida Avenue. Trucks access the facility from I-610 via Elysian Field Avenue to Florida Avenue. According to the Applicants submittal, NS expects to increase the volume of trucks per day from 64 (pre-Acquisition)to 127 (post-Acquisition) at the Oliver Facility.

5-LA.3 LOUISIANA SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-relatedactivities in Louisiana that meet the Board's environmental analysis threshold and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Transportation (Roadway Crossing Delay; Navigation).
- Energy.
- Cultural Resources.
- Hazardous Materials and Waste Sites.
- Natural Resources.
- Land Use/Socioeconomics.

Details of the environmental analysis for Louisiana follow.

5-LA.4 LOUISIANA SAFETY: PASSENGER RAIL OPERATIONS

In Louisiana, passenger trains share certain tracks with freight trains. SEA evaluated the potential for increased accidents between freight trains and passenger trains, for both intercity and commuter trains. Because changes in the frequency of rail accidents are directly related to changes in overall train activity, SEA's analysis concentrated on rail line segments carrying both passenger and freight trains that would experience an increase in freight train traffic of one or more trains per day.

In Chapter 4, "System-Wide and Regional Setting, Impacts and Proposed Mitigation," SEA addresses the issue of potential increased risk to passenger train operations associated with the proposed Conrail Acquisition. System-wide, SEA identified 197 freight rail line segments that also carry passenger trains. Of these, SEA analyzed 93 rail line segments that would experience an increase of one or more freight trains per day resulting from the proposed Acquisition. Two of these rail line segments are located in Louisiana; these rail line segments are part of Amtrak's Crescent and Sunset Limited passenger train routes.

The Federal Railroad Administration (FRA) requires reports from railroads concerning all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). FRA requires the same reporting for passenger train accidents. A nationwide average of fewer than 200 passenger train accidents per year (for both Amtrak intercity and urban area commuter trains) has occurred over the last three years. Most of these accidents were relatively minor and rarely involved any fatalities, but because the safety of passengers as well as property is frequently involved, their occurrence is of serious concern.

Given the limited number of passenger rail accidents, SEA was unable to accurately predict the severity, location, or timing of actual accidents. SEA therefore focused on estimating the potential risks of an accident. In this safety analysis, SEA used increased freight activity on rail line segments to estimate the changes in passenger train accident risks. To assess significance, SEA first determined whether the proposed Acquisition-related change in the projected accident rate was greater than an annual increase of 25 percent. SEA then determined if the predicted accident frequency was less than one accident in 150 years. Thus, SEA determined a potential impact to be significant if the projected annual increase in accidents was greater than 25 percent and the frequency was less than one accident in 150 years.

5-LA.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The pre-Acquisition accident interval for each rail line segment is shown in Table 5-LA-2. Accidents pose potential threats to passengers on the train; therefore, for each rail line segment, risk is expressed as the expected interval between events over the length of the rail line segment. Table 5-LA-2 also shows the expected change in years between accidents for the individual rail line segments.

Based on information provided by the railroads and SEA's independent analysis, SEA determined that the increased risk on these two rail line segments did not exceed SEA's criteria for significance. As a result, SEA does not propose mitigation.

Table 5-LA-2
Estimated Change in Years Between Accidents for Passenger Rail Operations

Site ID	From	To	Miles in State	Pre- Acquisition Accident Interval [a]	Post-Acquisition Accident Interval [a]
N-344	Meridian, MS	Oliver Jct.	49	243	164
C-387	Mobile, AL	New Orleans, LA	33	307	279

[a] Accident Intervals shows years between accidents.

5-LA.5 LOUISIANA SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary concern with the rail transportation of hazardous materials is a spill or accidental release resulting from a train accident. SEA analyzed all rail line segments where the number of car loads containing hazardous materials would increase as a result of the proposed Acquisition. This resulted in SEA evaluating rail line segments that were below the Board's thresholds for environmental analysis.

The Association of American Railroads (AAR), in conjunction with the Chemical Manufacturer's Association (CMA), developed standards and practices to manage the risk of a hazardous material spill that the railroads have adopted. The practices include identifying "key routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

5-LA.5.1 Rail Line Segment Analysis

As a result of the proposed Conrail Acquisition, the railroads would change the routing of many car loads of hazardous material. The designation of key routes would change as the railroads shift hazardous material traffic from one rail line to another. In addition, certain rail line segments that are currently key routes would carry increased volumes of cars containing hazardous material.

SEA applied two different criteria to determine if the effects of rerouting hazardous material car loads are Potentially Significant:

1. The volume of hazardous materials transported on a rail line would be 10,000 or more car loads per year. The Acquisition-related change in volume of hazardous material car loads would upgrade a rail line segment to a key route designation.

2. The volume of hazardous material car loads doubles, and exceeds 20,000 or more car loads per year. SEA has termed rail line segments which meet these criteria a "major key route."

Rail line segments that would meet the first criteria are considered "key routes" and warrant the base level mitigation. Rail line segments that meet the second criteria are considered "major key routes" and warrant expanded mitigation. Depending on the individual circumstances, a rail line segment could meet both criteria and therefore warrant both the base level and the expanded mitigation.

5-LA.5.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Potential Effects. Based on the information provided by the Applicants and SEA's independent analysis, SEA determined that one rail line segment in Louisiana carrying an increased amount of hazardous material is of potential concern. Table 5-LA-3 shows this rail line segment, indicates the estimated annual car loads of hazardous material for both pre- and post-Acquisition, and identifies the rail line segment's key route status. This route would at least double the volume of hazardous material transported, resulting in 20,000 or more car loads per year.

Table 5-LA-3
Rail Line Segments with Significant Increases in Annual Hazardous Material Car Loads

Site ID	Between	And	Miles in State	Estimated Annual Car Loads		Significance Thresholds	
				Pre-Acquisition	Post-Acquisition	New Key Route	Major Key Route
C-387	Mobile, AL	New Orleans, LA	33	44,000	88,000		X

Preliminary Mitigation Recommendation. For the segment in Table 5-LA-3 identified as a major key route, where the volume of hazardous material car loads would more than double and exceed 20,000 car loads, SEA recommends that CSX develop a Hazardous Materials Emergency Response Plan to contain and minimize the potential effects of any accidents or incidents. SEA will further recommend that CSX conduct hazardous materials accident simulations with the voluntary participation of emergency service providers along the rail line segments at least once

every two years. Participants in these plans include county and municipal government, local fire departments, and medical and other emergency response teams.

5-LA.6 LOUISIANA TRANSPORTATION: PASSENGER RAIL SERVICE

In Louisiana, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-related effects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

SEA's evaluation included an assessment of the projected level of train traffic and the capacity of the railroad facilities including the number of main tracks, maximum authorized speed for freight and passenger trains, and the type of train control, signaling and train dispatching system utilized. SEA also examined the frequency of interlockings, which permit faster trains to move around slower trains. SEA utilized experienced railroad operating personnel to assess each line segment using timetables, track charts, existing and proposed train levels, professional experience and personal familiarity with the rail facilities.

Amtrak

New Orleans is the hub of four Amtrak passenger service routes in Louisiana. The east-west tri-weekly Sunset Limited operates east of New Orleans on CSX rail lines serving other Gulf Coast states. Amtrak's Southern Crescent route utilizes NS lines through Slidell en route to Atlanta, Georgia. The Amtrak City of New Orleans operates on the Illinois Central Railroad through Hammond to Memphis, Tennessee and Chicago, Illinois. The fourth route is the Sunset Limited that operates tri-weekly on the Union Pacific Southern Pacific route through Lake Charles, Lafayette and New Iberia to Houston, Texas.

Based on the evaluation of railroad capacity issues and the existing and projected train traffic, SEA concluded that the existing capacity of the passenger rail line segments evaluated could accommodate the proposed increase in freight train levels without adverse effects on passenger train service in Louisiana. Chapter 4, Section 4.7.1, "Intercity Passenger Rail Service" presents additional information regarding intercity passenger rail service effects.

Commuter Rail

No commuter rail operations exists in Louisiana.

Future Services Under Study

However, the Southern Rail Rapid Transit Commission advocates service along the Gulf Coast between Mobile, Alabama and New Orleans, Louisiana. The Conrail transaction would not affect existing Amtrak service along the Gulf Coast, or elsewhere in Louisiana. There are no funded capital operating plans or operating agreements for the expansion of service along the Gulf coast between New Orleans and Mobile. A feasibility study for the Gulf Coast line is planned. Existing passenger service on this route is discussed in Section 4.7.1, "Transportation: Passenger Rail Service."

5-LA.6.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Because there is no commuter rail service in Louisiana, SEA has determined there will be no adverse effects and no mitigation is required.

5-LA.7 LOUISIANA TRANSPORTATION: ROADWAY EFFECTS FROM RAIL FACILITY MODIFICATIONS

5-LA.7.1 Intermodal Facilities

One intermodal facility in New Orleans would experience an increase in truck activity as a result of the proposed Acquisition. Others would experience decreases in truck activity. The following is a summary of NS intermodal operations in New Orleans.

5-LA.7.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Intermodal Facility: New Orleans - Oliver (Orleans Parish) (NS)

The NS intermodal facility at Oliver Yard is located on the south side of Florida Avenue in northeastern New Orleans. The main gate for truck entry and exit movements is located on Florida Avenue. Interstate highways 10 and 610 serve this facility. The primary route used by trucks to and from Interstate 10 includes Louisa Road and Almonaster Avenue to Florida Avenue. The primary route used by trucks to and from Interstate 610 includes Elysian Fields Avenue to Florida Avenue.

The New Orleans facility currently handles approximately 64 trucks per day. The proposed Acquisition would increase this figure to 127. This increase of 63 trucks per day corresponds to 126 additional truck trips per day. SEA assumed that 90 percent of the additional truck trips would use Interstate 10, Louisa Road and Almonaster Road. The other ten percent of the additional truck trips would use Interstate 610 and Elysian Avenue. All of the additional truck trips would use Florida Avenue. Table 5-LA-4 summarizes the analysis of traffic volumes to determine the effects of these additional truck trips on the roadways approaching the facility.

The analysis results show that the total daily increase in truck traffic would be less than three percent of the average daily traffic (ADT) for all the study area roadways. Based on its analysis, it is SEA's preliminary determination that the predicted increases in truck traffic would have insignificant effects on the area roadways.

Table 5-LA-4
Traffic Analysis Summary for New Orleans - Oliver Intermodal Facility

Roadway Name	Roadway ADT[a]	Increased Daily Truck Trips Using Roadway	Roadway ADT Percent Increase
Interstate 10	136,700	113	0.08%
Louisa Rd.	11,100	113	1.02%
Almonaster Ave.	7,000	113	1.61%
Interstate 610	88,500	13	0.01%
Elysian Fields Ave.	31,600	13	0.04%
Florida Ave.	6,100	126	2.07%

[a] Louisiana Department of Transportation

5-LA.8 LOUISIANA AIR QUALITY

This section summarizes the change in air pollutant emissions that would result from the proposed Acquisition-related operational changes in the state of Louisiana. The primary air pollutant emission sources from trains and related activities include locomotive emissions on rail line segments, at rail yards, and at intermodal facilities. In addition to locomotive emissions, SEA evaluated emissions from other sources at intermodal facilities (idling trucks, lift cranes, etc.), motor vehicles idling near at-grade crossings, and decreases in truck emissions due to truck-to-rail freight diversions.

To analyze the air quality effects of the proposed Acquisition, SEA evaluated rail line segments, rail yards, and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis defined in Chapter 2, "Proposed Action and Alternatives." See Chapter 3, "Analysis Methods and Potential Mitigation Strategies," for additional information and a summary of the air quality analysis methodology. Appendix E, "Air Quality," contains a detailed description of methodology and detailed tables of results.

SEA addressed air pollutant emissions for sulfur dioxide (SO_2), volatile organic compounds (VOCs), particulate matter (PM), lead (Pb), nitrogen oxides (NO_x) and carbon monoxide (CO). SEA determined that emissions for SO_2, VOCs, PM and Pb would not exceed the emission screening thresholds for environmental analysis in any county. However, SEA found that these thresholds would be exceeded for NO_x in various counties in 17 states, and CO in three counties

in two states (IL and OH). NO_x air pollutant emissions may affect a region's ability to attain the National Ambient Air Quality Standards for ozone. CO emissions may affect a local area's ability to attain the National Ambient Air Quality Standards for CO.

NS's Oliver intermodal facility exceeded the Board's threshold for air quality analysis in Louisiana. Table 5-LA-5 shows the air quality evaluation process that was followed. SEA identified one parish in Louisiana which includes this intermodal facility. Air pollutant emissions did not exceed the screening level for Orleans Parish. Therefore, SEA did not perform a netting analysis.

Table 5-LA-5
Louisiana Parishes Evaluated in Air Quality Analysis

Parishes Exceeding the Board's Activity Thresholds	O_3 Status [a]	Exceeds Emissions Screening Level Before Netting	Exceeds Emissions Screening Level After Netting	Exceeds 1 Percent of Parish Emissions
Orleans	M	No	-	-

[a] M= Maintenance Area, as defined in the Clean Air Act.

5-LA.8.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Based on SEA's analysis of activity changes at the Oliver intermodal facility, a site visit and independent analysis, SEA determined that no potential adverse air quality impacts would result from the proposed Acquisition. See system-wide and regional discussion in Section 4.12 "Air Quality."

5-LA.9 LOUISIANA NOISE

To analyze the potential noise impacts of the proposed Acquisition, SEA evaluated the intermodal facility that would meet or exceed the Board's thresholds for environmental analysis of noise.

5-LA.9.1 Proposed Activities

Train noise sources include diesel locomotive engine and wheel/rail interaction noise (or wayside noise) and horn noise. Wayside noise affects all locations in the vicinity of the rail facility, and generally diminishes with distance from the source. Horn noise is an additional noise source at grade crossings, and also generally diminishes with distance. SEA performed an analysis to identify rail line segments, rail yards and intermodal facilities where the proposed changes in operations meet or exceed the Board's environmental analysis thresholds at 49 CFR 1105.7(e)(6). Where the proposed rail activity would exceed these thresholds, SEA calculated

the 65 dBA L_{dn} noise contours for the pre- and post-Acquisitionconditions. SEA based the noise level impact assessment on the projected activity level data provided by the railroads. SEA counted sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) within the noise contours for both pre-Acquisition and post-Acquisition operating conditions.

The NS intermodal facility in Louisiana that would experience increases in traffic or activity meeting the Board's environmental analysis thresholds is listed in Table 5-LA-6.

Table 5-LA-6
Intermodal Facilities That Exceed Board Thresholds for Noise Analysis

Intermodal Number	Intermodal Facility Location	Trucks Per Day		Change in ADT on local roads (%)	Change in dBA	Approximate distance (feet) to 65 dBA Ldn contour
		Pre-Acquisition	Post Acquisition			
NM-05	New Orleans	64	127	0.3-3.7	3	40

5-LA.9.2 Summary of Potential Effects and Preliminary Recommended Noise Mitigation

There are different noise mitigation techniques used to reduce horn noise and wayside noise. These different types of noise and mitigation techniques are as follows:

Grade Crossing Noise Effects. The Federal Railroad Administration (FRA) has indicated that it will propose new rules on train horn blowing procedures in 1998. These new rules may allow communities to apply for an exception to horn blowing at certain grade crossings that meet explicit criteria. These criteria relate to so-called "quiet zones" where FRA would no longer require train engineers to sound the train horn at grade crossings with special upgraded safety features. Examples of such safety features include four-quadrant gates and median barriers that preclude motorists from entering the crossings while the crossing arm is down. Until FRA develops and implements these regulations, these measures are not feasible for SEA to require as mitigation. However, communities will have the opportunity to qualify for "quiet zones" once the FRA regulations are in place.

Wayside Noise Effect. Wayside noise is the sound of a train as it passes by. Wayside noise is comprised of steel wheel/ rail interaction noise, and locomotive diesel engine noise. This type of noise can be reduced by constructing barriers between the railway noise source and adjoining land uses, and by installing building sound insulation. Noise barriers include earth berms and walls that block the sound. Rail lubrication can be used to reduce "wheel squeal" noise on curved track. Building sound insulation consists of special windows and other building treatments that reduce interior noise. Noise barriers are the preferred type of noise mitigation

for this project since barriers can be built on railroad property. Additional discussion of noise mitigation measures is included in Appendix F, "Noise Methods."

As noted above, for receptors near grade crossings that would experience increases in noise resulting from horn sounding, mitigation is not currently feasible. For areas affected by wayside noise, SEA considered rail line segments eligible for noise mitigation for noise sensitive receptors exposed to at least 70 dBA L_{dn} and an increase of at least 5 dBA L_{dn} due to increased rail activity.

Based on the information provided by the Applicants, site visits and SEA's independent analysis, it is SEA's preliminary determination that no off-site sensitive receptors would be affected above 65 dBA L_{dn}.

5-LA.10 LOUISIANA ENVIRONMENTAL JUSTICE

As part of its analysis, SEA examined activities associated with the proposed Conrail Acquisition for environmental justice impacts (disproportionately high and adverse impacts to minority and low-income populations) in accordance with Executive Order 12898. As described in the Environmental Justice Methodology in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," SEA first categorized the nature of the populations in areas where Acquisition-related activities are proposed. SEA determined whether the population in such areas met the following environmental justice thresholds: (1) greater than 50 percent of the population is minority or low-income, or (2) the minority or low-income population percentage is 10 percent greater than the minority or low-income population percentage in the county.

Next, SEA ascertained whether this population fell within an area of potential effect. SEA defined a typical zone on either side of a rail line segment or proposed construction site, or bordering a railroad intermodal facility or rail yard, as an area of potential effect. In general, the extent of an area of potential effect may vary depending on the nature of the changes in rail activity associated with it, but such areas typically extend 400 to 1500 feet out from the rail line segment or facility being analyzed.

SEA then evaluated these areas of potential effect for proposed Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis. In this analysis, SEA evaluated potential impacts on safety, transportation, air quality, noise, cultural resources, hazardous waste sites, hazardous materials transport, natural resources, and land use/socioeconomic effects. SEA also visited the sites of proposed construction for new rail line connections, rail line segments, intermodal facilities, and rail yards.

SEA developed and executed expanded public outreach efforts for those jurisdictions that met both SEA's thresholds for environmental justice and the Board's thresholds for environmental significance. SEA designed the public outreach process to seek widespread notice and dissemination of SEA's environmental impact analysis; provide additional opportunities for

community input to the NEPA process; solicit information about cumulative effects in minority and low-income communities; and allow minority and low-income communities to assist in fashioning appropriate alternatives and mitigation measures. SEA is placing additional copies of the Draft EIS in jurisdictions with high proportions of minority and low-income populations that do not have significant environmental impacts which could result from the proposed Acquisition.

This section presents the results of those evaluations and analysis. A complete list of all the sites analyzed for environmental justice impacts is presented in Appendix K.

5-LA.10.1 Louisiana Environmental Justice Settings

There are no new constructions or changes to rail yards or rail line segments in the state of Louisiana as part of the proposed Conrail Acquisition.

Intermodal Facilities

There is one intermodal facility with proposed changes located in New Orleans, Orleans Parish, Louisiana. The Oliver facility is located on Florida Avenue. The site is accessed by Louisa Road, Elysian Fields Avenue, Florida Avenue, and Alamonaster Avenue. Table 5-LA-7 presents the minority and low-income composition of the area of potential effect surrounding the Oliver intermodal facility and associated truck routes.

Table 5-LA-7
Louisiana Environmental Justice Site Summary for Intermodal Facilities and Truck Routes

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Orleans Parish	496,938	66.9%	31.6%	NA	
Oliver (NM-05)	3,301	93.0%	44.0%	Yes	Yes
Oliver Truck Routes (NM-05)	10,156	94.2%	40.7%	Yes	No

5-LA.10.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Based on currently available information and after reviewing the findings of each of the resource analyses (noise, air quality, transportation, etc.), SEA identified no significant environmental effects at the Oliver intermodal (NM-05) facility nor its associated truck routes. Therefore,

SEA's preliminary determination is that no environmental justice effects would occur in Louisiana as a result of the proposed Conrail Acquisition, and no mitigation would be necessary.

5-LA.11 LOUISIANA CUMULATIVE EFFECTS

Within the State of Louisiana, the Applicants propose to increase activities at one intermodal facility to a level that meets or exceeds the Board's thresholds for environmental analysis. Table 5-LA-8 addresses other potential actions brought to SEA's attention that, when combined with the proposed Acquisition, could contribute to a cumulative impact. SEA was made aware of these activities through site inspections and public comment. Local agencies provided the information below to SEA within the schedule specified in the scope for review and analysis.

Table 5-LA-8
Information Provided to SEA About Other Activities or Projects

Action-Type	Site	Information from Site Visit or Public Comment	Relationship to Proposed Acquisition
Rail Line Segment	New Orleans (LA)	Southern Rapid Rail Transit Commission concerned about impacts on passenger rail services along the Gulf Coast CSX corridor between Mobile and New Orleans.	Related. The proposed Acquisition would result in a minor increase in freight rail traffic along this segment but would otherwise not preclude additional passenger service.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of Louisiana.

Cumulative Effects Mitigation Measures

Due to a lack of cumulative effects, no mitigation measures are necessary.

5-LA.12 LOUISIANA AREAS OF CONCERN

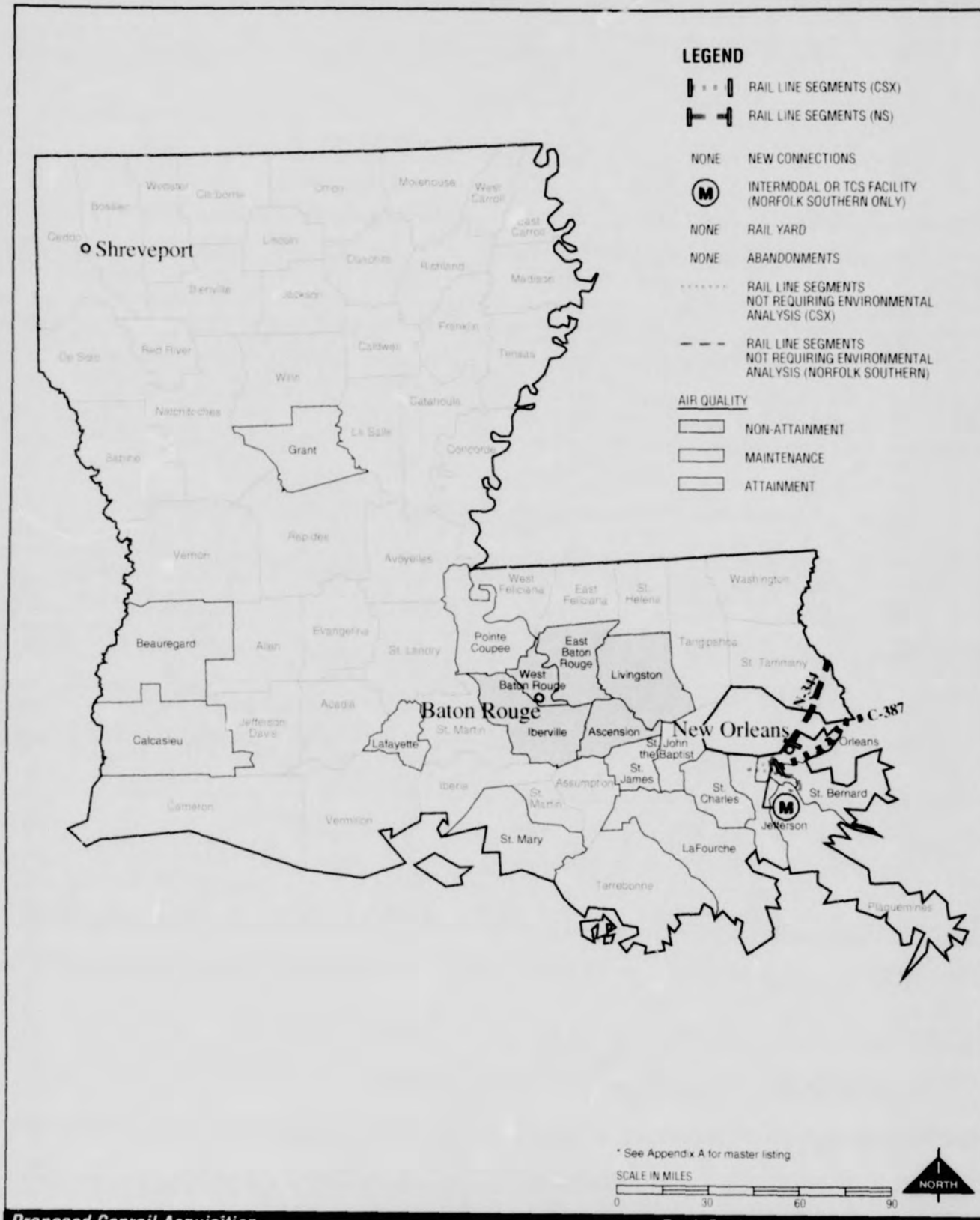
This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. The following table provides a list of agencies and local governments that have submitted environmental comments for the State of Louisiana. A complete list of entities that

have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-LA-9
Agencies in Louisiana Submitting Environmental Comments

Entity	Nature of Comment(s)
Louisiana Department of Natural Resources	Biological resources and hazardous materials
Office of Cultural Development	Abandonment and cultural resources
Southern Rapid Rail Transit Commission	Traffic congestion, economic concerns, energy, air, and land use

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.

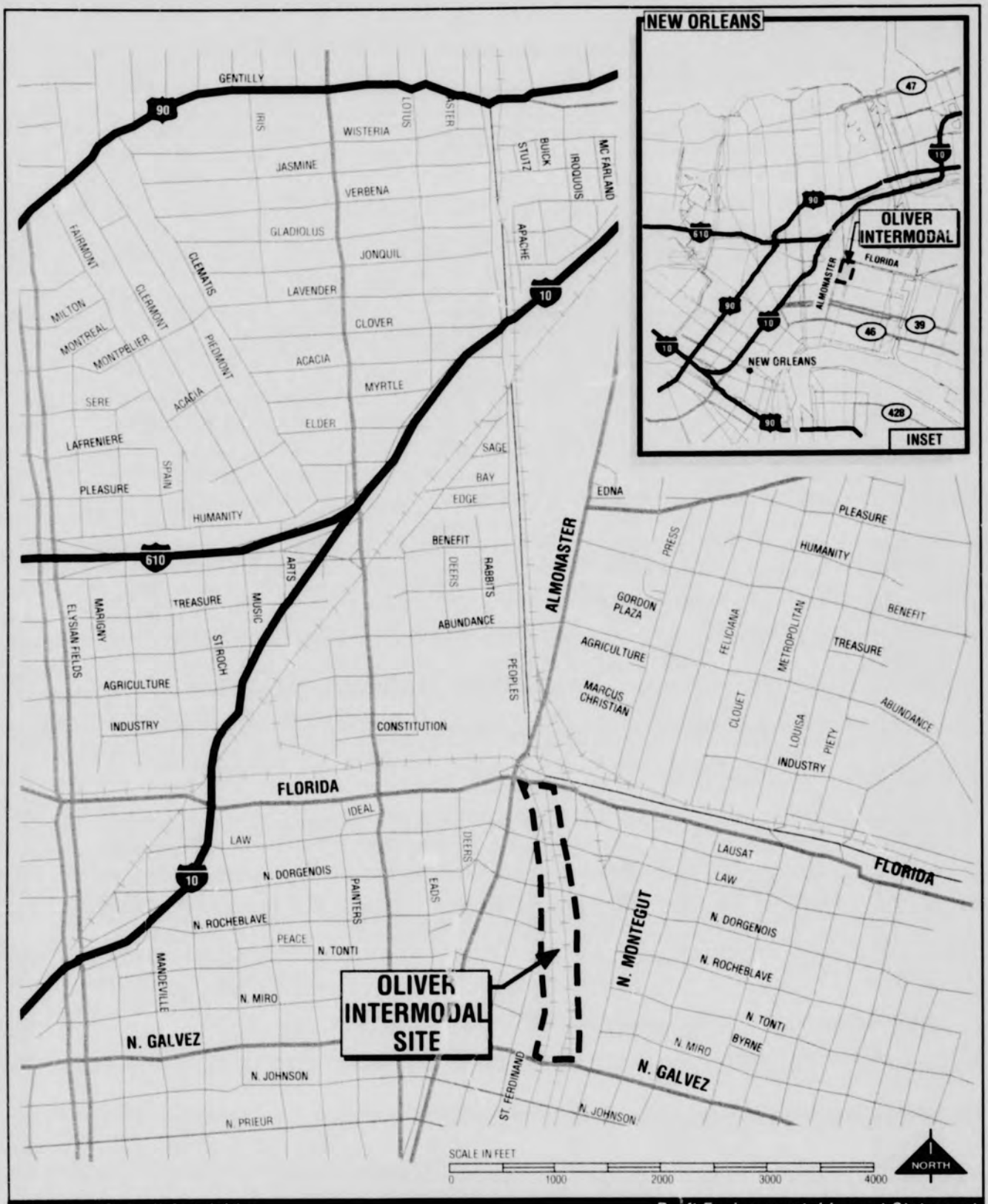


Proposed Conrail Acquisition — **Draft Environmental Impact Statement**

FIGURE 5-LA-1

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

LOUISIANA - CSX AND NORFOLK SOUTHERN



Proposed Conrail Acquisition *Draft Environmental Impact Statement*

FIGURE 5-LA-2

OLIVER INTERMODAL SITE NEW ORLEANS, LOUISIANA

NORFOLK SOUTHERN

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5-MD
MARYLAND

This section provides background information for resources in Maryland. Tables list the proposed Conrail Acquisition-related activities in Maryland that meet or exceed the Board's thresholds for environmental analysis. This section also presents the various technical analyses conducted for these activities in Maryland. The analyses highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-MD.1 MARYLAND SETTING

Maryland is a mid-Atlantic state. Principal products of Maryland include food products, primary metals, transportation equipment, electrical equipment, chemicals, fabricated metals, poultry, dairy products, cattle, eggs, hogs, corn, tobacco, soybeans, and vegetables. The railroad network throughout the state provides a means of transporting and distributing many of these goods and other products imported into the state.

Transportation Facilities

Major interstate highways serving Maryland include I-95, a major north/south route for the eastern United States; I-70, an east/west route; I-68 an east/west route on the western part of the state; and I-83, a north/south facility. The facilities serve the major cities of Annapolis, Baltimore, Frederick, Cumberland, and Hagerstown. The Port of Baltimore is the major port in the state with access to the Atlantic Ocean via the Chesapeake Bay.

Railroad Facilities

Eleven railroads operate within Maryland, covering a total of 866 route miles. Conrail, CSX, and NS are the three Class I Railroads that operate in the state. Of the total 866 route miles:

- Conrail operates 315 route miles in Maryland, which is 36 percent of the state's total rail miles, including freight service on Amtrak Northeast Corridor (NEC).

- CSX operates 432 route miles in Maryland, which is 50 percent of the state's total rail miles.

- NS operates 16 route miles in Maryland, which is 2 percent of the state's total rail miles.

Major cities in Maryland served by these railroads include Hagerstown and Baltimore.

Conrail operates an intermodal facility in Baltimore. CSX operates a hump classification yard in Cumberland and other facilities in Baltimore and Brunswick. CSX and Conrail also service coal and ore piers and merchandise piers at Baltimore. NS operates a rail yard in Hagerstown.

Intercity Passenger and Commuter Rail Services

Amtrak provides intercity passenger service in Maryland on a portion of the NEC. Additionally, Amtrak operates over CSX lines to Brunswick, Maryland and Harpers Ferry, West Virginia. Amtrak provides daily service to Perryville, Baltimore, Rockville, Cumberland, and Aberdeen.

Maryland provides commuter train service on its MARC system in Maryland. On weekdays, MARC operates an average of 18 commuter trains between Washington D.C. and Brunswick, Maryland. Five of the trains extend services to Martinsburg, West Virginia. MARC also operates trains on weekdays between Washington D.C. and the City of Baltimore on two lines: 22 on the CSX Camden Line and 44 on the NEC. MARC also operates three trains per weekday between Baltimore and Perryville over Amtrak's NEC.

5-MD.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN MARYLAND

In the Operating Plans submitted to the Board, the Applicants indicate that Maryland would be served by five CSX service routes, including the Atlantic Coast Service Route linking Baltimore to Boston and Miami (parallel to I-95), and the New Orleans Gateway Service Route, linking New Orleans to New York via Baltimore. CSX would continue to use its Cumberland, Maryland locomotive shop. CSX indicates that significant potential exists for truck-to-rail diversions along the entire East Coast.

NS would retain the current Conrail trackage rights over Amtrak's Northeast Corridor (NEC) between northern New Jersey, Philadelphia, Baltimore and Washington, and would also operate the major Conrail lines between Hagerstown, Maryland, and Harrisburg, Pennsylvania. NS would connect the Baltimore market with midwest points by using the Port Road line between Perryville, Maryland, and Harrisburg, Pennsylvania.

The primary NS corridor for southeast states and mid-Atlantic states markets would be through Hagerstown. NS has indicated it plans to expand its north-south merchandise and intermodal operations over the Hagerstown route. Service-sensitive traffic that moves in RoadRailer® service (Triple Crown Service (TCS)) would take the more direct route on the NEC between Washington, D.C., and Philadelphia, and move across Maryland in the off-peak night hours. NS proposes to expand the existing Conrail conventional intermodal facility in Baltimore and to

build a new TCS facility on currently railroad-owned property in Baltimore. NS predicts that this would divert trucks off I-81 in Maryland to its new intermodal service via Hagerstown and, to a lesser degree, via the NEC.

Both CSX and NS plan to undertake extensive activities in Maryland as part of the proposed Conrail Acquisition. The proposed Conrail Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis in Maryland include increased train operations on a total of 13 rail line segments, and construction of one rail line connection, and construction of one intermodal facility in Baltimore. Figures 5-MD-1a, 1b, and 1c, presented at the end of this state discussion, show the general locations of these facilities.

In Maryland, there are no rail yards or proposed abandonments that would or meet exceed the Board's thresholds for environmental analysis.

Tables 5-MD-1, 5-MD-2, and 5-MD-3 show rail segments, intermodal facilities, and new constructions in Maryland. Following these tables are brief descriptions of the activities, where appropriate. The Applicants propose to share the use of the trackage rights on NEC.

Table 5-MD-1
Maryland Rail Line Segments Which
Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles	County	Setting
C-003	Washington D.C.	Point of Rocks, MD	Washington D.C. to Harpers Ferry	7	Frederick	Rural/Suburban
				31	Montgomery	Suburban/Urban
C-030	Alexandria Jct, MD	Benning, D.C.	CSX Alexandria Extension	3	Prince Georges	Suburban/Urban
C-031	Alexandria Jct, MD	Washington D.C.	CSX Washington, D.C. to Baltimore	3	Prince Georges	Residential/ Commercial/Urban
C-032	Baltimore MD	Relay, MD	CSX Washington, D.C. to Baltimore	3	Baltimore	Urban
				4	Baltimore City	Urban
C-033	Cumberland MD	Sinns, PA	CSX Washington D.C. to Pittsburgh	6	Allegany	Residential/ Commercial

Table 5-MD-1
Maryland Rail Line Segments Which Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles	County	Setting
C-034	Jessup, MD	Alexandria Jct, MD	CSX Washington D.C. to Baltimore	5	Anne Arundel	Residential/ Commercial
				12	Prince Georges	Residential/ Commercial
C-035	Landover, MD	Anacostia, D.C.	Amtrak Northeast Corridor	2	Prince Georges	Urban
C-036	Pt of Rocks, MD	Harpers Ferry, WV	CSX Baltimore and Washington D.C. to Pittsburgh	10	Frederick	Rural/Residential
				2	Washington	Residential/Rural
C-037	Relay, MD	Jessup, MD	CSX Washington D.C. to Baltimore	2	Anne Arundel	Residential/Rural
				1	Baltimore	Urban
				4	Howard	Residential/Rural
N-091	Harrisburg, PA	Riverton Jct., VA	Conrail/NS Harrisburg to Roanoke	22	Washington	Rural
S-001	Davis, DE	Perryville, MD	Amtrak Northeast Corridor	18	Cecil	Residential/ Commercial
S-010	Baltimore, MD	Bowie, MD	Amtrak Northeast Corridor	13	Anne Arundel	Residential/ Commercial
				5	Baltimore	Urban
				8	Baltimore City	Urban
				3	Prince Georges	Residential/ Commercial
S-011	Bowie, MD	Landover, MD	Amtrak Northeast Corridor	8	Prince Georges	Residential/ Commercial

C = CSX
N = NS
S = Shared with Amtrak's Northeast Corridor (not Shared Asset Areas as described in the Application).

Table 5-MD-2
Maryland Intermodal Facilities Which Meet or Exceed Board Environmental Thresholds

Site ID	Location	County	Facility	Description	Setting
NM-06	Baltimore	Baltimore City	E. Lombard Street	• New facility • Increase of 92 trucks/day	Urban/Industrial

Table 5-MD-3
New Constructions

Site ID	Location	County	Length in feet	Description	Setting
NC-007	Hagerstown	Washington	800	Connects Conrail and NS tracks to create a straight-line continuous double-tracking route through Hagerstown.	Residential/Former Industrial/Recreational

Intermodal Facilities

E. Lombard Street Intermodal Facility (Baltimore City, MD) (NS). The existing Conrail intermodal facility located on East Lombard Street in Baltimore City, Maryland would become a NS intermodal facility. (See Figure 5-MD-2, presented at the end of this state discussion) NS plans to build a new TCS facility nearby at Bayview Yard on existing rail road property. Trucks would access the facilities via I-895, Ponca Street, and Lombard Street. According to the Applicants' submittal, NS expects to increase the volume of trucks using this facility by 92 trucks per day.

Constructions

Construction: Hagerstown Connection (Washington County, MD) (NS). The proposed connection would be located in Hagerstown, approximately 60 miles west of Baltimore, in Washington County, Maryland and would connect Conrail and NS tracks to create a straight-line continuous double-tracking route through Hagerstown for efficient train movement between Front Royal, Virginia and Harrisburg, Pennsylvania. NS would acquire the tracks as a result of the proposed Conrail Acquisition. This new connection would be constructed between the northeast/southwest Conrail and north/south NS tracks. The connection would be located southeast of the intersection of the Conrail and NS lines and would be constructed entirely on railroad right-of-way. The design includes approximately 800 feet of new rail line construction and realignment of the existing lines. (See Figure 5-MD-3 at the end of this state discussion.)

NS did not identify other build alternatives because the proposed alternative meets the purpose and need of the proposed project while minimizing potential environmental impacts. The no-action alternative would not meet the purpose or need of the proposed action and is not considered to be a reasonable alternative; SEA concurs.

5-MD.3 MARYLAND SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-related activities in Maryland that meet the Board's thresholds for environmental analysis and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Transportation (Navigation).
- Energy.

Details of the environmental analysis for Maryland follow.

5-MD.4 MARYLAND SAFETY: FREIGHT RAIL OPERATIONS

SEA conducted a statistical analysis to evaluate the potential change in safety on all rail line segments where the proposed Conrail Acquisition would result in eight or more additional freight trains per day. SEA identified two rail line segments within Maryland that would experience this level of increased activity. While increased freight train activity would increase the probability of a freight train accident, SEA did not consider an increase significant unless the predicted accident rate shortened the duration between accidents to one every 100 years or less per mile. Table 5-MD-4 presents results of the analysis, showing the approximate mileage of each rail line segment within the state.

Table 5-MD-4
Estimated Change in Years Between Accidents - Freight Rail Operations

Site ID	Between	And	Miles in State	Increase in Trains per Day	Pre-Acquisition Accident Interval [a]	Post-Acquisition Accident Interval [a]
C-036	Pt. of Rocks, MD	Harpers Ferry, WV	12	8.3	155	122
N-091	Harrisburg, PA	Riverton Jct., VA	22	8.5	417	231

[a] Accident Interval figures show the years/mile.

The Federal Railroad Administration (FRA) requires all railroads to submit reports for all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). Train accidents meeting this reporting requirement are relatively infrequent. The FRA reported about 2,600 accidents (3.69 accidents per million train miles[1]) nationally in 1996. Most of these accidents were relatively minor; almost 90 percent of these accidents caused less than $100,000 in damage. In addition, most of the train accidents did not affect on people or non-railroad property.

Accident risk predictions are best expressed by describing the elapsed time expected between any two consecutive events. The current national average is that a main line freight train accident occurs once every 117 years on each mile of route. FRA records, as described in Chapter 4, "System-Wide and Regional Setting Impacts," show a substantial decrease, both in total number of accidents and in accidents per million train miles, a standard industry measure. Because there are few accidents, and most of these accidents are relatively minor, it is not possible for SEA to accurately predict either the frequency or severity of actual accidents.

SEA estimated the change in the risk of an accident resulting from the increased activity on rail line segments as a result of the proposed Conrail Acquisition. Because SEA analyzed rail line segments that vary in length from one mile to more than 100 miles, and because freight train accidents typically have little impact on surrounding areas, SEA expressed all predicted risks of accidents on a route-mile basis. Section 3.2 "Safety: Freight Rail Operations," discusses the analysis process in greater detail.

5-MD.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

In Maryland, SEA found that no rail line segments met its criteria of significance (one accident expected every 100 years or less per mile of route). Therefore, SEA does not recommend mitigation.

5-MD.5 MARYLAND SAFETY: PASSENGER RAIL OPERATIONS

In Maryland, passenger trains share certain tracks with freight trains. SEA evaluated the potential for increased accidents between freight trains and passenger trains, for both intercity and commuter trains. Because changes in the frequency of rail accidents are directly related to changes in overall train activity, SEA's analysis concentrated on rail line segments carrying both passenger and freight trains that would experience an increase in freight train traffic of one or more trains per day.

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[1] "Train miles" are calculated by multiplying the number of trains by the distance traveled. For example, on a typical 100 mile rail line, one million annual train miles results from operating 28 trains per day every day for 365 days.

In Chapter 4, "System-Wide and Regional Setting, Impacts and Proposed Mitigation," SEA addresses the issue of potential increased risk to passenger train operations associated with the proposed Conrail Acquisition. System-wide, SEA identified 197 freight rail line segments that also carry passenger trains. Of these, SEA analyzed 93 rail line segments that would experience an increase of one or more freight trains per day resulting from the proposed Acquisition. Twelve of these rail line segments are located in Maryland; these rail line segments are part of Amtrak's Limited and NEC passenger train routes as well as MARC's Camden/Brunswick commuter service.

The Federal Railroad Administration (FRA) requires reports from railroads concerning all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). FRA requires the same reporting for passenger train accidents. A nationwide average of fewer than 200 passenger train accidents per year (for both Amtrak intercity and urban area commuter trains) has occurred over the last three years. Most of these accidents were relatively minor and rarely involved any fatalities, but because the safety of passengers as well as property is frequently involved, their occurrence is of serious concern.

Given the limited number of passenger rail accidents, SEA was unable to accurately predict the severity, location, or timing of actual accidents. SEA therefore focused on estimating the potential risks of an accident. In this safety analysis, SEA used increased freight activity on rail line segments to estimate the changes in passenger train accident risks. To assess significance, SEA first determined whether the proposed Acquisition-related change in the projected accident rate was greater that an annual increase of 25 percent. SEA then determined if the predicted accident frequency was less than one accident in 150 years. Thus, SEA determined a potential impact to be significant if the projected annual increase in accidents was greater than 25 percent and the frequency was less than one accident in 150 years.

5.MD.5.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The pre-Acquisition accident interval for each rail line segment is shown in Table 5-MD-5. Accidents pose potential threats to passengers on the train; therefore, for each rail line segment, risk is expressed as the expected interval between events over the length of the rail line segment. Table 5-MD-5 shows the expected change in years between accidents for the individual rail line segments.

Table 5-MD-5
Estimated Change in Years Between Accidents for Passenger Rail Operations

Site ID	From	To	Miles in State	Pre-Acquisition Accident Interval [a]	Post-Acquisition Accident Interval [a]
C-031	Alexandria Jct.	Washington, DC	3	695	540
C-032	Baltimore	Relay	7	300	278
S-010	Baltimore	Bowie	29	816	254
S-011	Bowie	Landover	8	2,110	726
C-033	Cumberland	Sinns	6	545	460
C-034	Jessup	Alexandria Jct.	17	146	132[b]
C-036	Pt. of Rocks	Harper's Ferry, WV	12	188	151
C-037	Relay	Jessup	7	359	321
S-001	Davis, DE	Perryville	18	3,037	1,102
C-003	Washington, DC	Pt. of Rocks	38	90	70
C-203	Cherry Run, WV	Cumberland	1	1,054	986
S-238	Perryville	Baltimore	32	271	248

[a] Accident intervals show years between accidents.
[b] Did not exceed accident rate percentage threshold.

SEA determined that the increase in risk for passenger train accidents for one rail line segment, Washington, D.C. to Point of Rocks, exceeded SEA's criteria for significance. For this rail line segment, SEA believes that potential conflicts can be minimized by reinforcing passenger trains' priority over freight trains. It is SEA's preliminary recommendation that all freight trains, both opposing and moving in the same direction as passenger trains, be clear of the main track at least 15 minutes prior to the estimated arrival of the passenger train. In doing so, the passenger train can pass safely and without delay.

5-MD.6 MARYLAND SAFETY: HIGHWAY/RAIL AT-GRADE CROSSINGS

Increased train activity could affect the safety of roadway users at highway/rail at-grade crossings. To address potential changes in accident frequency, SEA compared existing accident frequency rates with accident frequency rates at all highway/rail at-grade crossings that would experience a Conrail Acquisition-related increase of eight or more trains per day. At these locations, SEA looked at the most recent five years of accident history available, and calculated the potential change in the number of years between accidents. SEA's analysis procedure

considered the type of existing warning devices at the highway/rail at-grade crossings, including passive devices (signs or crossbucks), flashing lights, or gates.

To evaluate the significance of potential changes in accident frequency in Maryland, SEA categorized highway/rail at-grade crossings into two categories:

- Category A consisted of highway/rail at-grade crossings with a history of relatively frequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Maryland with accident frequency rates at or above the state's 50th highest accident frequency rate of one accident every 19 years (0.0521 accident frequency rate) to be Category A highway/rail at-grade crossings. For all Category A highway/rail at-grade crossings, SEA considered the relatively small accident frequency rate increase of one accident every 100 years (a 0.01 accident frequency rate increase) to be significant.

- Category B consisted of highway/rail at-grade crossings with a history of relatively infrequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Maryland with accident frequency rates less than one accident every 19 years (less than 0.0521 accident frequency rate) to be Category B highway/rail at-grade crossings. For these crossings, SEA considered an accident frequency rate increase of one accident every 20 years (a 0.05 accident frequency rate increase) to be significant.

Table 5-MD-6, presented at the end of this state discussion, presents the results of SEA's analysis. A county by county summary of results follows.

5-MD.6.1 County Analysis

Frederick County

SEA's safety analysis showed that for the one highway/rail at-grade crossing studied in Frederick County, the predicted increase in accident frequency is 0.0023, which represents one accident every 435 years. SEA found this predicted increase to be below the criteria for significance.

Washington County

SEA's safety analysis showed that for the 12 highway/rail at-grade crossings studied in Washington County, the predicted increases in accident frequency would range from 0.0035 to 0.0304. This translates into a range of increases from one accident every 286 years to one accident every 33 years. SEA determined that the predicted increases resulting from the proposed Conrail Acquisition were significant at Lappans Road, Reiff Church Road, and Shawley Drive. These highway/rail at-grade crossings are classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

5-MD.6.2 Summary of Potential Effects and Preliminary Recommended Mitigation

SEA determined that the proposed Conrail Acquisition would significantly increase the predicted accident risk at three highway/rail at-grade crossings in Maryland. Table 5-MD-7 shows SEA's recommended mitigation to reduce these risks.

SEA analyzed the accident frequencies with and without these upgraded warning devices in place, as shown in Table 5-MD-6 presented at the end of this state discussion. With the mitigation measures, the accident frequencies at these locations would decrease to well below the pre-Acquisition levels. SEA recommends that NS upgrade the existing warning devices, as shown in Table 5-MD-7. These recommendations would eliminate the adverse effects on highway/rail at-grade crossing safety resulting from the proposed Conrail Acquisition in Maryland.

Table 5-MD-7
Recommended Mitigation to Improve Safety at Highway/Rail At-Grade Crossings in Maryland

County	Railroad Segment	FRA ID	Highway/Rail At-Grade Crossing	Existing Warning Devices	SEA's Proposed Mitigation
Washington	N-091	469321F	Lappans Road	Flashing Lights	Gates
Washington	N-091	534883D	Reiff Church Road	Passive	Flashing Lights
Washington	N-091	534887F	Shawley Drive	Passive	Flashing Lights

5-MD.7 MARYLAND SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary concern with the rail transportation of hazardous materials is a spill or accidental release resulting from a train accident. SEA analyzed all rail line segments where the number of car loads containing hazardous materials would increase as a result of the proposed Acquisition. This resulted in SEA evaluating rail line segments that were below the Board's thresholds for environmental analysis.

The Association of American Railroads (AAR), in conjunction with the Chemical Manufacturer's Association (CMA), developed standards and practices to manage the risk of a hazardous material spill that the railroads have adopted. The practices include identifying "key routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key

routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

5-MD.7.1 Rail Line Segment Analysis

As a result of the proposed Conrail Acquisition, the railroads would change the routing of many car loads of hazardous material. The designation of key routes would change as the railroads shift hazardous material traffic from one rail line to another. In addition, certain rail line segments that are currently key routes would carry increased volumes of cars containing hazardous material.

SEA applied two different criteria to determine if the effects of rerouting hazardous material car loads are potentially significant:

1. The volume of hazardous materials transported on a rail line would be 10,000 or more car loads per year. The Acquisition-related change in volume of hazardous material car loads would upgrade a rail line segment to a key route designation.

2. The volume of hazardous material car loads doubles, and exceeds 20,000 or more car loads per year. SEA has termed rail line segments which meet these criteria a "major key route."

Rail line segments that would meet the first criteria are considered "key routes" and warrant the base level mitigation. Rail line segments that meet the second criteria are considered "major key routes" and warrant expanded mitigation. Depending on the individual circumstances, a rail line segment could meet both criteria and therefore warrant both the base level and the expanded mitigation.

5-MD.7.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Potential Effects. Based on the information provided by the Applicants and SEA's independent analysis, SEA determined that three rail line segments in Maryland carrying increased amounts of hazardous material are of potential concern. Table 5-MD-8 shows the rail line segments, indicates the estimated annual car loads of hazardous material for both pre- and post-Acquisition, and identifies the key route status of each. SEA determined that one rail line segment currently carries less than 10,000 car loads of hazardous material per year but would increase to at least 10,000 car loads per year due to the proposed Acquisition. Two routes would double the volume of hazardous material transported, resulting in 20,000 or more car loads per year.

Table 5-MD-8
Rail Line Segments with Significant Increases in Annual Hazardous Material Car Loads

Site ID	Between	And	Miles in State	Estimated Annual Car Loads		Significance Thresholds	
				Pre-Acquisition	Post-Acquisition	New Key Route	Major Key Route
C-031	Alexandria Jct., MD	Washington DC	3	3,000	17,000	X	
C-034	Jessup, MD	Alexandria Jct., MD	17	10,000	24,000		X
C-037	Relay, MD	Jessup, MD	7	10,000	21,000		X

Preliminary Mitigation Recommendation. SEA recommends requiring CSX to bring the rail line segments into compliance with AAR key route standards and practices for those segments that would become a new key route.

For the two segments in Table 5-MD-8 identified as major key routes, where the volume of hazardous material car loads would at least double and exceed 20,000 car loads, SEA recommends that CSX develop a Hazardous Materials Emergency Response Plan to contain and minimize the potential effects of any accidents or incidents. SEA will further recommend that CSX conduct hazardous material accident simulations with the voluntary participation of emergency service providers along the rail line segments at least once every two years. Participants in these plans include county and municipal government, local fire departments, and medical and other emergency response teams.

5-MD.8 MARYLAND TRANSPORTATION: PASSENGER RAIL SERVICE

In Maryland, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-related effects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Amtrak's Capitol Limited currently provides service to the Rockville and Cumberland areas on CSX lines and on Amtrak's Northeast Corridor to Baltimore and Aberdeen. Section 4.7.1, "Intercity Passenger Rail Service," discusses intercity passenger rail service effects.

Commuter Rail

SEA's evaluation included an assessment of the projected level of train traffic and the capacity of the railroad facilities including the number of main tracks, maximum authorized speed for freight and passenger trains, and the type of train control, signaling and train dispatching system utilized. SEA also examined the frequency of interlockings, which permit faster trains to move around slower trains. SEA utilized experienced railroad operating personnel to assess each line segment using timetables, track charts, existing and proposed train levels, professional experience and personal familiarity with the rail facilities.

Maryland Rail Commuter Service (MARC) an agency of the Maryland Mass Transit Administration, provides service on three lines to Union Station in Washington, D.C., from Maryland. MARC carries five million passengers annually. MARC neither owns nor dispatches any route miles. MARC provides service to Baltimore from Washington, D.C. on two separate lines. The Penn Line operates on 76 miles of Amtrak's Northeast Corridor to Penn Station in Baltimore, continuing to Perryville. The Camden Line operates on the CSX line from Washington to Camden Station in Baltimore. MARC also provides service to Brunswick and Martinsburg, West Virginia from Washington, D.C. on 73 miles of CSX line. MARC markets the service and provides equipment, and contracts with CSX and Amtrak to supply train crews and maintenance.

In 1999 MARC plans to begin service to Frederick using an existing CSX freight-only route. MARC conducts operations on the Penn Line in accordance with Northeast Operating Rules Advisory Committee (NORAC) operating rules of Amtrak. MARC follows CSX Operating Rules on the Camden and Brunswick Lines.

The Camden and Brunswick Lines are among the most dense freight train routes with commuter service in the eastern United States. This level of freight density has precluded expansion of off-peak MARC service on CSX in the past. CSX proposes Post-Acquisition freight train increases on these CSX segments, with increases of approximately four and seven trains, respectively, on the Camden and Brunswick routes of MARC service.

CSX and NS propose to increase freight service by up to 6.1 freight trains per day on the Northeast Corridor, where the MARC Penn Line service is operated. However, freight trains are largely restricted to a night time operation, which reduces the potential for conflicts with commuter service. CSX and MARC recently concluded negotiations on a new operating agreement which expires on December 31, 1999. SEA has reviewed the Operating Agreement between CSX and the State of Maryland and determined that their commuter service would not be impacted. MARC's Operating Agreement with Amtrak for Penn Line service does not have an expiration date, but can be terminated on ninety days notice by either party.

Future Services Under Study

MARC plans an expansion of commuter service between Frederick, Maryland and Washington, D.C. in 1999 in accordance with their Operating Agreement with CSX. CSX's Old Main Line Subdivision would be used and is currently only used for freight rail operations. This planned expansion is discussed in Section 4.7.1, "Intercity Passenger Rail Service."

5-MD.8.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Based on review of the information the railroads provided, analysis of freight service, MARC and Amtrak schedules, review of the operating agreements, and evaluation of railroad capacity issues and the existing and projected train traffic, SEA analyzed the potential effect of the proposed Conrail Acquisition and determined that there would be no effect on MARC service attributable to the proposed Conrail Acquisition. Therefore SEA does not anticipate that mitigation would be required. Additional details regarding the potential effects of freight operations on passenger rail service in Maryland are presented in Section 4.7.1, "Intercity Passenger Rail Service."

5-MD.9 MARYLAND TRANSPORTATION: ROADWAY CROSSING DELAY

In order to analyze the effects of the proposed Conrail Acquisition on the roadway system at existing highway/rail at-grade crossings, SEA identified the crossings on rail line segments that would exceed the Board's environmental analysis thresholds for air quality. SEA then calculated potential changes in vehicle delay at these crossings where average daily traffic (ADT) volumes are 5,000 or greater. SEA concluded that the potential effect of increased train traffic for highways with ADT volumes below 5,000 would be experienced by very few drivers and the additional vehicular delay would be minimal. The description of levels of service and criteria of significance have been addressed in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," and Appendix C, "Traffic and Transportation."

For crossings that would experience significant effects from the proposed Acquisition on vehicular delay, SEA tested mitigation strategies which involved increasing train speeds by increments of five miles per hour. SEA examined train operation guidelines and made preliminary recommendations to increase specific train speeds where it was easy to implement.

5-MD.9.1 County Analysis

Two counties and one city in Maryland have highway/rail at-grade crossings for which SEA performed vehicle delay calculations. Table 5-MD-9, presented at the end of this state discussion, contains a summary of these results.

Baltimore City

The two crossings analyzed in Baltimore City would have a minimal increase in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be C and D. The Hollins Ferry Road crossing, which would have the post-Acquisition level of service D, shows a reduction from pre-Acquisition level of service C. The largest increase in maximum queue would be one vehicle. It is SEA's preliminary recommendation that the train speed be increased by five miles per hour at the Hollins Ferry Road crossing. The speed increase would result in level of service C.

Montgomery County

The four crossings analyzed in Montgomery County would have a minimal increase in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be B and C. The largest increase in maximum queue would be one vehicle.

Prince George's County

The five crossings analyzed in Prince George's County would have a minimal increase in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be in the range of B to D. The three crossings that would have a post-Acquisition level of service D, Decatur Street, Upshur Street, and Annapolis Road, show a reduction from pre-Acquisition level of service C. The largest increase in maximum queue would be one vehicle. It is SEA's preliminary recommendation that the train speed be increased by five miles per hour at the Decatur Street, Upshur Street, and Annapolis Road crossings. The increase in train speeds would result in levels of service C at all three locations. It may be necessary to reduce the curvature on the rail line to achieve the recommended speed increase.

5-MD.9.2 Summary of Potential Effects and Preliminary Recommended Mitigation

The proposed Acquisition would have a significant effect on vehicle delay at four highway/rail at-grade crossings in Baltimore City and Prince George's County. It is SEA's preliminary recommendation that the Applicants increase train speed at these four crossings in order to mitigate the effects. At the other seven crossings in Maryland, the proposed Acquisition would result in no significant effect on vehicle delay.

5-MD.10 MARYLAND TRANSPORTATION: ROADWAY EFFECTS FROM RAIL FACILITY MODIFICATIONS

SEA evaluated the impact on highway/rail at-grade crossing delay resulting from the construction of new rail line connection at Hagerstown, MD. SEA also evaluated the impact of

additional truck traffic on the roadway system resulting from increased railroad activity at the existing Baltimore intermodal facility.

5-MD.10.1 Constructions

SEA analyzed the transportation effects of proposed new construction projects in Maryland resulting from the proposed Conrail Acquisition. For the new rail constructions, the transportation effects are related to highway/rail at-grade crossings. Therefore, SEA used the same analysis methods as described for highway/rail at-grade crossing delay and safety.

5-MD.10.2 Summary of Potential Effects and Preliminary Recommended Mitigation

There is one rail construction proposed by NS in Maryland that requires environmental analysis. A description of the transportation analysis for the proposed Acquisition is provided below.

Construction: Hagerstown Connection (Washington County) (NS)

NS proposes to build a rail connection between the existing two north-south NS tracks and the two east-west Conrail tracks in the southwestern portion of the City of Hagerstown. The rail connection would be in the southeast quadrant of the intersecting rail lines and would be approximately 800 feet long. It would handle 19 trains per day. Figure 5-MD-3 shows the area of the proposed rail line construction.

There are no highway/rail at-grade crossings within the limits of construction; thus, SEA concluded that there would be no effect on roadway traffic from this proposed rail line connection. During construction there would be no short term vehicular delays and detours during construction of this rail connection. The construction would be performed in accordance with applicable Federal, state, and local regulations for construction projects. Construction traffic would use Burhans Boulevard or Prospect Street to travel to and from the construction.

5-MD.10.3 Intermodal Facilities

One intermodal facility in Baltimore would experience an increase in truck activity as a result of the proposed Acquisition. The following is a summary of the NS intermodal operations in Baltimore.

5-MD.10.4 Summary of Potential Effects and Preliminary Recommended Mitigation

Intermodal Facility: Baltimore - E. Lombard St. (Baltimore City) (NS)

NS would operate the existing Conrail intermodal facility located at the intersection of Lombard Street and Ponca Street in eastern Baltimore after the proposed Acquisition. The main gate for

truck entry and exit movements is located on Lombard Street just west of Interstate 895. The analysis includes the proposed construction of a new NS Triple Crown Service facility on existing Conrail property in proximity to the existing facility. The main entrance to the new Triple Crown Service facility is proposed to be on Lombard Street east of Interstate 895. The primary route trucks use between the existing facility and Interstate 895 includes Lombard Street and Ponca Street. The primary route between Interstate 895 and the proposed facility is Lombard Street.

The Conrail facility currently handles approximately 108 trucks per day. The proposed Acquisition would increase this figure to 200 trucks per day for the combined facilities. This increase of 92 trucks per day corresponds to 184 additional truck trips per day. Since NS has not finalized the exact location of the entrance to the new Triple Crown Service facility, SEA assumed that all of the additional truck trips would use the three roadways identified above as a worst case scenario. Table 5-MD-10 summarizes the analysis of traffic volumes to determine the effects of these additional truck trips on the roadways approaching the facility.

The analysis results show that the total daily increase in truck traffic with the proposed Acquisition would be less than four percent of the average daily traffic (ADT) for the study area roadways listed. Therefore, based on its analysis, SEA determined that the predicted increases in truck traffic would have insignificant effects on the area roadways.

Table 5-MD-10
Traffic Analysis Summary for Baltimore Intermodal Facility

Roadway Name	Roadway ADT	Increased Daily Truck Trips Using Roadway	Roadway ADT Percent Increase
Interstate 895	36,400 [a]	184	0.51%
Ponca St.	5,800 [b]	184	3.17%
Lombard St.	12,200 [b]	184	1.51%

[a] From Maryland Transportation Authority.
[b] From City of Baltimore Department of Traffic and Planning

5-MD.11 MARYLAND AIR QUALITY

This section summarizes the change in air pollutant emissions that would result from the proposed Acquisition-related operational changes in the state of Maryland. The primary air pollutant emission sources from trains and related activities include locomotive emissions on rail line segments, at rail yards, and at intermodal facilities. In addition to locomotive emissions, SEA evaluated emissions from other sources at intermodal facilities (idling trucks, lift cranes,

etc.), motor vehicles idling near at-grade crossings, and decreases in truck emissions due to truck-to-rail freight diversions.

To analyze the air quality effects of the proposed Acquisition, SEA evaluated rail line segments, rail yards, and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis defined in Chapter 2, "Proposed Action and Alternatives." See Chapter 3, "Analysis Methods and Potential Mitigation Strategies" for additional information and a summary of the air quality analysis methodology. Appendix E, "Air Quality," contains a detailed description of methodology and detailed tables of results.

SEA addressed air pollutant emissions for sulfur dioxide (SO_2), volatile organic compounds (VOCs), particulate matter (PM), lead (Pb), nitrogen oxides (NO_x) and carbon monoxide (CO). SEA determined that emissions for SO_2, VOCs, PM and Pb would not exceed the emission screening thresholds for environmental analysis in any county. However, SEA found that these thresholds would be exceeded for NO_x in various counties in 17 states, and CO in three counties in two states (IL and OH). NO_x air pollutant emissions may affect a region's ability to attain the National Ambient Air Quality Standards for ozone. CO emissions may affect a local area's ability to attain the National Ambient Air Quality Standards for CO.

Nine CSX, one NS and three Shared Area rail line segments, and one NS intermodal facility exceeded the Board's threshold for air quality analysis in Maryland. Table 5-MD-11 shows the air quality evaluation process that was followed. SEA identified eight counties and one city in Maryland which include any part of these rail facilities. For these counties, SEA summed emissions increases from changes on rail line segments and other activities and compared them to the air emission screening level that would require a permit if the source were a stationary source (rather than a mobile source, such as trains, trucks, and other vehicles). If the calculated emissions exceeded this screening level, SEA conducted a detailed emissions analysis known as a "netting analysis" in these counties. The netting analysis considered all emissions increases and decreases from proposed Acquisition-related activity changes. SEA compared the netting analysis results to the air emission screening level and additional analyses were performed for counties where netting analysis results exceeded this threshold. For these counties, SEA inventoried all county air pollutant emissions sources to evaluate if proposed Acquisition-related emissions represented more than one percent of all emissions sources in the county.

Chapter 4, "System-wide and Regional Setting, Impacts and Proposed Mitigation," contains a discussion of NO_x emissions, on a regional basis, relative to its potential contribution to O_3 formation in the Ozone Transport Region (OTR). Maryland is in the OTR.

Table 5-MD-11
Maryland Counties Evaluated in Air Quality Analysis

Counties Exceeding the Board's Activity Thresholds	O_3 Status[a]	Exceeds Emissions Screening Level Before Netting	Exceeds Emissions Screening Level After Netting	Exceeds 1% of County Emissions
Anne Arundel	N (Severe)	Yes	Yes	No
Baltimore	N (Severe)	Yes	No	-
Baltimore City	N (Severe)	Yes	No	No
Cecil	N (Severe)	Yes	Yes	Yes
Frederick	N (Serious)	Yes	Yes	Yes
Howard	N (Severe)	Yes	No	-
Montgomery	N (Serious)	Yes	Yes	No
Prince Georges	N (Serious)	Yes	Yes	No
Washington	A	Yes	No	-

[a] A= Attainment Area, M= Maintenance Area, N= Nonattainment Area, as defined in the Clean Air Act.

The emissions estimates presented in Appendix E, "Air Quality," show that the increased county-wide air pollutant emissions from the facilities described above exceed the threshold for eight counties and one city in Maryland. SEA's analysis results for these counties are presented below:

5-MD.11.1 County Analysis

Anne Arundel County

EPA has designated Anne Arundel County as a severe nonattainment area for O_3. Table 5-MD-12 shows that the net NO_x emissions increase in Anne Arundel County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 25 tons/year used to determine if emissions changes are potentially significant. However, the increased NO_x emissions are less than one percent of the existing county-wide NO_x emissions. Therefore, SEA does not consider the net emissions increase to be significant.

Table 5-MD-12
Anne Arundel County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Jessup, MD to Alexandria Jct., MD	46.29
Rail Segment (CSX)	Relay, MD to Jessup, MD	12.62
Rail Segment (SA)	Baltimore, MD to Bowie, MD	65.21
Truck Diversion (both)	County-wide	- .07
Total Acquisition-Related Net NO_x Emissions Increase		124.05
NO_x Emissions Screening Level		25.00
Existing (1995) County Total NO_x Emissions		52,832.10
Percent Increase in County NO_x Emissions		0.23%

Baltimore County

EPA has designated Baltimore County as a severe nonattainment area for O_3. Table 5-MD-13 shows that the net NO_x emissions increase in Baltimore County, considering all proposed Acquisition-related emissions changes, is below the emissions screening threshold of 25 tons/year used to determine if emissions changes are potentially significant. Therefore, SEA determined that the net emissions increase is not significant.

Table 5-MD-13
Baltimore County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Baltimore, MD to Relay, MD	6.78
Rail Segment (CSX)	Relay, MD to Jessup, MD	4.21
Rail Segment (CSX)	Wilsmere, DE to Baltimore, MD	28.06
Rail Segment (CSX)	Baltimore, MD to Hanover, PA	7.48
Rail Segment (CSX)	Relay, MD to Pt. of Rocks, MD	4.05
Rail Segment (SA)	Perryville, MD to Baltimore, MD	14.18
Rail Segment (SA)	Baltimore, MD to Bowie, MD	18.90
Rail Yard (CSX)	Bayview	-0.47
Rail Yard (CSX)	Curtis Bay	-16.23
Rail Yard (CSX)	Greys	-3.37

Table 5-MD-13
Baltimore County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Yard (CSX)	Locust Point	3.17
Rail Yard (CSX)	Penn Mary	-5.77
Intermodal Facility (CSX)	Seagirt	5.91
Intermodal Facility (NS)	Baltimore	10.81
Intermodal Facility (NS)	New Facility in Baltimore	3.05
At-Grade Crossings (both)	Affected Crossings >5000 Vehicles/Day[a]	0.12
Truck Diversions (both)	County-wide	-57.86
Total Acquisition-Related Net NO_x Emissions Increase		23.02
NO_x Emissions Screening Level		25.00

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Baltimore City

EPA has designated Baltimore City as a severe nonattainment area for O_3. Table 5-MD-14 shows that the net NO_x emissions increase in Baltimore City, considering all proposed Acquisition-related emissions changes, is below the emissions screening threshold of 25 tons/year used to determine if emissions changes are potentially significant. Therefore, SEA did not conduct further emissions analysis in Baltimore City and does not consider the increase to be significant.

Table 5-MD-14
Baltimore City Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Baltimore, MD to Relay, MD	7.01
Rail Segment (CSX)	Wilsmere, DE to Baltimore, MD	18.94
Rail Segment (CSX)	Baltimore, MD to Hanover, PA	3.74
Rail Segment (SA)	Perryville, MD to Baltimore, MD	6.14
Rail Segment (SA)	Baltimore, MD to Bowie, MD	22.21
Truck Diversions (both)	County-wide	-33.13
At-Grade Crossings (both)	Affected Crossings >5000 Vehicles/Day[a]	0.01

Table 5-MD-14
Baltimore City Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Total Acquisition-Related Net NO_x Emissions Increase		24.92
NO_x Emissions Screening Level		25.00
Existing (1995) City Total NO_x Emissions		43,541.74

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Cecil County

EPA has designated Cecil County as a severe nonattainment area for O_3. Table 5-MD-15 shows that the net NO_x emissions increase in Cecil County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 25 tons/year used to determine if emissions changes are potentially significant. The increased NO_x emissions would be more than one percent of the existing county-wide NO_x emissions. Therefore, SEA found the net emissions increase to be potentially significant. Because these emissions could contribute to O_3 formation on a regional level, refer to Section 4.12 "Air Quality" for discussion of NO_x emissions on a regional level relative to ozone formation in the Ozone Transport Region (OTR). Maryland is in the OTR.

Table 5-MD-15
Cecil County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Wilsmere, DE to Baltimore, MD	43.95
Rail Segment (SA)	Davis, DE to Perryville, MD	139.16
Rail Segment (SA)	Perryville, MD to Baltimore, MD	0.71
Rail Segment (NS)	Wago York Haven, PA to Perryville, MD	-50.35
Rail Yard (NS)	Bay View	0.88
Truck Diversion (both)	County-wide	-41.39
Total Acquisition-Related Net NO_x Emissions Increase		92.96
NO_x Emissions Screening Level		25.00
Existing (1995) County Total NO_x Emissions		4,797.24
Percent Increase in County NO_x Emissions		1.94%

Frederick County

EPA has designated Frederick County as a serious nonattainment area for O_3. Table 5-MD-16 shows that the net NO_x emissions increase in Frederick County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 50 tons/year used to determine if emissions changes are potentially significant. The increased NO_x emissions would be more than one percent of the existing county-wide NO_x emissions. Therefore, SEA found that the net emissions increase is potentially significant. Because these emissions could contribute to O_3 formation on a regional level, refer to Section 4.12 "Air Quality" for discussion of NO_x emissions on a regional level relative to ozone formation in the Ozone Transport Region (OTR). Maryland is in the OTR.

Table 5-MD-16
Frederick County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Point of Rocks, MD to Harpers Ferry, WV	67.33
Rail Segment (CSX)	Relay, MD to Point of Rocks, MD	19.37
Rail Segment (CSX)	Point of Rocks, MD to Washington, D.C.	42.08
Rail Yard (CSX)	Brunswick Yard in City of Brunswick	2.52
Truck Diversion (both)	County-Wide	-18.22
Total Acquisition-Related Net NO_x Emissions Increase		113.08
NO_x Emissions Screening Level		50.00
Existing (1995) County Total NO_x Emissions		8,772.71
Percent Increase in County NO_x Emissions		1.29%

Howard County

EPA has designated Howard County as a severe nonattainment area for ozone. Table 5-MD-17 shows that the net NO_x emissions change in Howard County, considering all proposed Acquisition-related emissions changes, is below the emissions screening threshold of 25 tons/year used to determine if emissions changes are potentially significant. Therefore, SEA considers the predicted net emissions change would not be significant.

Table 5-MD-17
Howard County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Relay, MD to Jessup, MD	20.57
Rail Segment (CSX)	Relay, MD to Point of Rocks, MD	10.91
Truck Diversion (both)	County-wide	-47.08
Total Acquisition-Related Net NO_x Emissions Change		-15.60
NO_x Emissions Screening Level		25.00

Montgomery County

EPA has designated Montgomery County as a serious nonattainment area for O_3. Table 5-MD-18 shows that the net NO_x emissions increase in Montgomery County, considering all proposed Acquisition-related emissions changes, is above the emissions screening threshold of 50 tons/year used to determine if emissions changes are potentially significant. However, the increased NO_x emissions are less than one percent of the existing county-wide NO_x emissions. Therefore, SEA considers that the predicted net emissions increase is not significant.

Table 5-MD-18
Montgomery County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Washington, D.C. to Point of Rocks, MD	213.22
Truck Diversion (both)	County-Wide	-39.9
At-Grade Crossings (both)	Affected Crossings >5000 Vehicles/Day [a]	0.18
Total Acquisition-Related Net NO_x Emissions Increase		173.50
NO_x Emissions Screening Level		50.00
Existing (1995) County Total NO_x Emissions		38,880.10
Percent Increase in County NO_x Emissions		0.45%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Prince George's County

EPA has designated Prince George's County as a serious nonattainment area for O_3. Table 5-MD-19 shows that the net NO_x emissions increase in Prince George's County, considering all

proposed Acquisition-relatedemissions changes, is above the emissions screening threshold of 50 tons/year used to determine if emissions changes are potentially significant. However, the increased NO_x emissions are less than one percent of the existing county-wide NO_x emissions. Therefore, SEA considers that the predicted net emissions increase would not be significant.

Table 5-MD-19
Prince George's County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Jessup, MD to Alexandria Jct., MD	99.44
Rail Segment (CSX)	Alexandria Jct., MD to Washington, D.C.	15.55
Rail Segment (CSX)	Alexandria Jct., MD to Benning, D.C.	14.57
Rail Segment (CSX)	Landover, MD to Anacostia, D.C.	6.08
Rail Segment (SA)	Baltimore, MD to Bowie, MD	14.74
Rail Segment (SA)	Bowie, MD to Landover, MD	45.76
Truck Diversion (both)	County-Wide	-19.68
At-Grade Crossings (both)	Affected Crossings >5000 Vehicles/Day [a]	0.36
Total Acquisition-Related Net NO_x Emissions Increase		176.82
NO_x Emissions Screening Level		50.00
Existing (1995) County Total NO_x Emissions		41,133.71
Percent Increase in County NO_x Emissions		0.43%

[a] "Affected Crossings" are those with an increase in rail segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Washington County

EPA has designated Washington County as an attainment area for O_3. Table 5-MD-20 shows that the net NO_x emissions increase in Washington County, considering all proposed Acquisition-related emissions changes, is below the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant. Therefore, SEA did not conduct further analysis in Washington County.

Table 5-MD-20
Washington County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Point of Rocks, MD to Harpers Ferry, WV	22.44
Rail Segment (CSX)	Hagerstown, MD to Cherry Run, WV	-29.61
Rail Segment (CSX)	Hagerstown, MD to Lurgan, PA	-4.83
Rail Segment (NS)	Harrisburg, PA to Riverton Jct., VA	140.12
Rail Yard (CSX)	Hagerstown Yard in City of Hagerstown	-0.13
Rail Yard (NS)	In City of Hagerstown	4.32
Truck Diversion (both)	County-Wide	-80.77
Total Acquisition-Related Net NO_x Emissions Increase		51.54
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		8,520.05
Percent Increase in County NO_x Emissions		0.60%

[a] "Affected Crossings" are those with an increase in rail line segment activity over the Board's air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

5-MD.11.2 Potential Effects and Preliminary Recommended Mitigation

While there are localized increases in emissions in some counties, the increases are not likely to affect compliance with air quality standards. Therefore, SEA has determined that air quality will not be significantly affected and no mitigation is necessary. See system-wide and regional discussion in Section 4.12 "Air Quality."

5-MD.12 MARYLAND NOISE

To analyze the potential noise impacts of the proposed Acquisition, SEA evaluated rail line segments, rail yards and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis of noise. Although new construction projects and rail line abandonments can result in noise increases, the noise effects would be temporary and therefore, SEA did not evaluate them.

5-MD.12.1 Proposed Activities

Train noise sources include diesel locomotive engine and wheel/rail interaction noise (or wayside noise) and horn noise. Wayside noise affects all locations in the vicinity of the rail facility, and generally diminishes with distance from the source. Horn noise is an additional noise source at

grade crossings, and also generally diminishes with distance. SEA performed an analysis to identify rail line segments, rail yards and intermodal facilities where the proposed changes in operations meet or exceed the Board's environmental analysis thresholds at 49 CFR 1105.7(e)(6). Where the proposed rail activity would exceed these thresholds, SEA calculated the 65 dBA L_{dn} noise contours for the pre- and post-Acquisition conditions. SEA based the noise level impact assessment on the projected activity level data provided by the railroads. SEA counted sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) within the noise contours for both pre-Acquisition and post-Acquisition operating conditions.

The CSX and NS rail line segments and intermodal facilities that would experience increases in traffic or activity meeting the Board's environmental analysis thresholds for Maryland are listed in Table 5.MD-21 and 5.MD-22. Table 5-MD-23 shows the facilities with noise sensitive receptors exceeding 65 dBA L_{dn}.

The counties where these facilities are located are listed in Section 5-MD.2, "Proposed Conrail Acquisition Activities in Maryland."

Table 5-MD-21
Rail Line Segments in Maryland That Exceed Board Thresholds for Noise Analysis

Site ID	Segment		Trains Per Day			Percent Change in Gross Ton Miles
	From	To	Pre-Acquisition	Post-Acquisition	Increase	
C-035	Landover	Anacostia, D.C.	3.4	9.1	5.7	120
C-036[a]	Pt. of Rocks	Harpers Ferry, WV	33.3	41.6	8.3	31
N-091	Harrisburg, PA	Riverton Jct., VA	11.1	19.6	8.5	82

[a] SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

Table 5-MD-22
Intermodal Facilities in Maryland that Exceed Board Thresholds for Noise Analysis

Site ID	Facility Location	Trucks Per Day		Percent Change in ADT on local roads	Change in dBA	Approx. distance to 65 dBA Ldn contour
		Pre-Acquisition	Post-Acquisition			
NM-06 [a]	Baltimore (E. Lombard St.)	108	200	0.5-3.2	2.7	83 feet

[a] SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

Table 5-23
Noise Sensitive Receptors In Maryland Exceeding 65 dBA L_{dn}

Site ID	Name	Pre-Acquisition	Post-Acquisition	Increase
Rail Line Segments				
C-035	Landover-Anacostia, DC	4	31	27
N-091	Harrisburg, PA-Riverton Jct., VA	611	1000	389

5-MD.12.2 Summary of Potential Effects and Preliminary Recommended Mitigation

There are different noise mitigation techniques used to reduce horn noise and wayside noise. These different types of noise and mitigation techniques are as follows:

Grade Crossing Noise Effects. The Federal Railroad Administration (FRA) has indicated that it will propose new rules on train horn blowing procedures in 1998. These new rules may allow communities to apply for an exception to horn blowing at certain grade crossings that meet explicit criteria. These criteria relate to so-called "quiet zones" where FRA would no longer require train engineers to sound the train horn at grade crossings with special upgraded safety features. Examples of such safety features include four-quadrant gates and median barriers that preclude motorists from entering the crossings while the crossing arm is down. Until FRA develops and implements these regulations, these measures are not feasible for SEA to require as mitigation. However, communities will have the opportunity to qualify for "quiet zones" once the FRA regulations are in place.

Wayside Noise Effect. Wayside noise is the sound of a train as it passes by. Wayside noise is comprised of steel wheel/rail interaction noise, and locomotive diesel engine noise. This type of noise can be reduced by constructing barriers between the railway noise source and adjoining land uses, and by installing building sound insulation. Noise barriers include earth berms and walls that block the sound. Rail lubrication can be used to reduce "wheel squeal" noise on curved

track. Building sound insulation consists of special windows and other building treatments that reduce interior noise. Noise barriers are the preferred type of noise mitigation for this project since barriers can be built on railroad property. Additional discussion of noise mitigation measures is included in Appendix F, "Noise Methods."

As noted above, for receptors near grade crossings that would experience increases in noise resulting from horn sounding, mitigation is not currently feasible. For areas affected by wayside noise, SEA considered rail line segments eligible for noise mitigation for noise sensitive receptors exposed to at least 70 dBA L_{dn} and an increase of at least 5 dBA L_{dn} due to increased rail activity.

It is SEA's preliminary conclusion that no rail line segments or intermodal facilities in the state of Maryland warrant noise mitigation according to the project mitigation criteria.

5-MD.13 MARYLAND CULTURAL RESOURCES

Cultural resources include historic and archaeological features. SEA determined that potential effects to cultural resources would most likely occur during new construction activities.

Based on site visits and evaluation of railroad documents, SEA identified cultural resources that may be affected by Acquisition-related construction. SEA included qualified professionals in the fields of architectural history and archaeology specific to the State of Maryland. In a letter dated February 14, 1997, the Maryland State Historic Preservation Office (SHPO) requested a description of the undertaking in Maryland, including changes in traffic.

5-MD.13.1 Construction

SEA identified one construction site in Hagerstown that could be potentially affected.

Construction: Hagerstown Connection (Washington County, MD) (NS)

Historical Background. Hagerstown has been an important rail town and interchange point since the nineteenth century. The Western Maryland Railway interchanged with the Pennsylvania Railroad at the Shomo Yard. Hagerstown was also the terminal point of the Norfolk & Western's Shenandoah Valley Route. In 1913, the Western Maryland constructed a large and elegant Division Point station at Hagerstown and in 1915 moved its car and engine shops to this location. The site remains an active interchange and is currently the hub of the NS-Conrail inland interchange route.

Resources Identified. The National Register of Historic Places (NRHP) listed City Park Historic District, bound by West Howard Street, Guilford Avenue, Memorial Street, Walnut Street, and the former Norfolk & Western Railroad tracks on the west. This western boundary

is the present NS rail line proposed for construction. The Western Maryland Railway Steam Locomotive No. 202 is also listed in the National Register of Historic Places and is located within the boundaries of the City Park Historic District.

Potential Effects. SEA's review of the proposed construction project indicates that there would be no adverse effect on the City Park Historic District and the Western Maryland Railway Steam Locomotive No. 202. SEA sent a letter to the Maryland SHPO requesting concurrence that this undertaking would have no effect on historic properties. Refer to Appendix M for agency correspondence.

Mitigation. Since SEA found that there would be no adverse effect on cultural resources, SEA did not recommend any mitigation.

5-MD.14 MARYLAND HAZARDOUS MATERIALS AND WASTE SITES

In analyzing the effects on hazardous waste sites for the proposed Conrail Acquisition, the primary issue addressed was whether proposed construction and abandonment activities would disturb contaminated areas. SEA identified potential impacts on hazardous waste sites and related environmental concerns for each location where proposed Acquisition-related construction or abandonment activities would take place.

SEA investigated the following sites in Maryland for potential hazardous materials or waste impacts:

- Hagerstown Connection.

5-MD.14.1 Construction: Hagerstown Connection (Washington County, MD) (NS)

Existing Environment. The Environment Data Report (EDR) (1997) identified no hazardous waste sites or related environmental concerns within 500 feet of the proposed connection. However, the EDR report identified 14 sites that could not be mapped due to inadequate address information. SEA could not locate these sites. SEA supplemented this information through contact with local and state officials (Acting Fire Marshal Brown, Deputy Fire Chief Kipe, Maryland Department of the Environment Regional Manager Richmond) and a site visit on July 11, 1997. SEA determined that there are no known hazardous waste sites or related environmental concerns within 500 feet of the proposed construction site.

Potential Effects and Preliminary Recommended Mitigation. SEA identified no hazardous waste sites within 500 feet of the proposed connection. However, the locations of the 14 sites that could not be mapped are unknown. SEA does not anticipate that the proposed connection would disturb known hazardous materials. If hazardous materials are encountered during construction activities, NS would follow appropriate regulations and procedures described in

Chapter 3, "Analysis Methods and Potential Mitigation Strategies," and Appendix H. Because existing regulatory requirements of other agencies and standard construction practices of the railroad adequately address potential disturbance of contaminated areas, it is SEA's preliminary determination that no additional mitigation is necessary.

5-MD.15 MARYLAND NATURAL RESOURCES

SEA focused the natural resources analysis on any proposed physical alteration affecting water resources, wetlands, biological resources, and wildlife habitats. SEA determined that the potential for impacts to natural resources would most likely be associated with site-specific projects related to the proposed abandonment of rail lines and construction of new connector lines, rail yards, and intermodal facilities.

SEA evaluated one proposed construction site in the state of Maryland. SEA contacted appropriate Federal and state regulatory and review agencies for natural resources regarding the proposed projects that occur within their jurisdictions. Specifically, for the state of Maryland, SEA coordinated with:

- U.S. Department of Agriculture Forest Service.
- U.S. Department of Agriculture Natural Resources Conservation Service.
- U.S. Department of the Army Corps of Engineers.
- U.S. Department of the Interior Fish and Wildlife Service (USFWS).
- U.S. Department of the Interior National Park Service.
- U.S. Environmental Protection Agency.
- Maryland Department of Natural Resources.

SEA determined that potential impacts to natural resources could occur at the Hagerstown site.

Table 5-MD-24 and 5-MD-25 present the Federally protected animal and plant species that occur in Maryland, as identified by the USFWS Division of Endangered Species (August 1997). Based on information from the USFWS local field office in Annapolis, Maryland, SEA identified species known to occur in Washington County, the only Maryland county affected by proposed Acquisition-related activities. "Threatened" describes a species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range; "Endangered" describes a species that is in danger of extinction within

the foreseeable future throughout all or a significant portion of its range. Appendix I, "Natural Resources," includes brief descriptions of habitat requirements for these threatened and endangered species.

Table 5-MD-24
Federally Protected Animal Species Listed for Maryland

Group	Common Name	Scientific Name	Status	Washington County
Vertebrates				
Mammal	Indiana Bat	*Myotis sodalis*	Endangered	X
Mammal	Delmarva Peninsula Fox Squirrel	*Sciurus niger cinereus*	Threatened	
Fish	Maryland Darter	*Etheostoma sellare*	Endangered	
Bird	Bald Eagle	*Haliaeetus leucocephalus*	Threatened	
Bird	American Peregrine Falcon	*Falco peregrinus anatum*	Endangered	
Bird	Piping Plover	*Charadrius melodus*	Threatened	
Reptile	Kemp's Turtle	*Lepidochelys kempii*	Endangered	
Reptile	Green Sea Turtle	*Chelonia mydas*	Threatened	
Reptile	Hawksbill Sea Turtle	*Eretmochelys imbricata*	Endangered	
Reptile	Leatherback Sea Turtle	*Dermochelys coriacea*	Endangered	
Reptile	Loggerhead Sea Turtle	*Caretta caretta*	Threatened	
Invertebrates				
Insect	Puritan Tiger Beetle	*Cicindela puritana*	Threatened	
Insect	Northeastern Beach Tiger Beetle	*Cicindela dorsalis dorsalis*	Threatened	
Mussel	Dwarf Wedge Mussel	*Alasmidonta heterodon*	Endangered	

Source: USFWS - Annapolis Field Office

Table 5-MD-25
Federally Protected Plant Species Listed for Maryland

Family	Common Name	Scientific Name	Status	Washington County
Fabaceae	Sensitive Joint-Vetch	*Aeschynomene virginica*	Threatened	
Scrophulariaceae	Sandplain Gerardia	*Agalinis acuta*	Endangered	
Liliaceae	Swamp Pink	*Helonias bullata*	Threatened	
Apiaceae	Canby's Dropwort	*Oxypolis canbyi*	Endangered	
Apiaceae	Harperella	*Ptilimnium nodosum* (fluviatile)	Endangered	X
Cyperaceae	Northeastern Bulrush	*Scirpus ancistrochaetus*	Endangered	X

Source: USFWS - Annapolis Field Office

5-MD.15.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Construction: Hagerstown Connection (Washington County, MD) (NS)

The proposed action involves construction and operation of approximately 800 feet of new connection and realignment of existing line. Figure 5-MD-3, at the end of this state discussion, depicts the site and the surrounding conditions.

Water Resources

Existing Conditions - Water Resources. Based on review of U.S. Geological Survey topographic maps, National Wetlands Inventory maps, and observations made during the site visit, SEA determined that the proposed Hagerstown construction segment does not cross any water resources or wetlands.

Based on review of Federal Emergency Management Agency Flood Insurance Rate Maps, SEA determined that the Hagerstown site is not located within the 100-year floodplain.

Potential Effects - Water Resources. SEA concluded that the proposed Hagerstown construction would cause no impacts to wetlands or surface waters because there are no wetlands or water bodies in the construction area. Therefore, the proposed action may not require authorization under Section 404 of the Clean Water Act. A National Pollutant Discharge Elimination System stormwater permit may not be required pursuant to Section 402 of the Clean Water Act because the total land area to be disturbed during construction activities is estimated to be less than five acres.

SEA determined that, because the construction project area is not located within the 100-year floodplain, there would be no impacts to floodplains at the Hagerstown site.

Biological Resources

During the site visit, SEA observed that the land adjacent to the Hagerstown project area is comprised of residential and industrial facilities.

Existing Conditions - Vegetation. The proposed Hagerstown construction site encompasses approximately 3.7 acres. During the site visit, SEA determined that gravel covers the entire construction site, with small areas of mixed vegetation existing along the east and west boundary of the NS track and in an area north of the Conrail track. SEA identified the mixed vegetation as a combination of small trees, shrubs, and weedy species. The vegetation currently existing within and outside the project area at Hagerstown is not unique or limited to the proposed construction site.

Potential Effects - Vegetation. The proposed construction site at Hagerstown is located within an existing railroad right-of-way, which contains sparse vegetation consistent with such disturbed areas. Therefore, SEA concluded that the proposed Hagerstown construction activity would only affect commonly occurring vegetation. SEA also concluded that these plant species would revegetate the new railroad right-of-way once NS completes construction.

Existing Conditions - Wildlife. During the site visit, SEA observed that the entire Hagerstown project site and its surrounding area is disturbed and concluded that wildlife habitat on the site is limited to vegetation typical of disturbed areas. Based on this determination, SEA concluded that wildlife species located on the site are typical of animals adapted to disturbed areas, such as song birds and small mammals.

Potential Effects - Wildlife. Because of the existing limited habitat, SEA concluded that the proposed Hagerstown construction would not cause significant impacts to wildlife. SEA further concluded that the proposed Hagerstown construction would not adversely affect the movement or migration of wildlife.

Existing Conditions - Threatened and Endangered Species. Based on information provided by the USFWS Annapolis field office, SEA determined that there are one animal species and two plant species listed as Federally endangered or threatened in Washington County. Tables 5-MD-24 and 5-MD-25 identify these species. During the site visit, SEA evaluated the Hagerstown construction area for its potential to support these species. SEA did not observe any of the listed species or their habitat. Based on these findings, SEA concluded that there is minimal potential for the presence of Federally listed endangered or threatened species on the site.

Potential Effects - Threatened and Endangered Species. Since there are no Federally listed threatened or endangered species, or the habitat to support them, in or near the proposed Hagerstown construction site, SEA concluded that there would be no adverse impacts to any of these Federally protected species. Additionally, SEA concluded that these findings indicate that the proposed action would not adversely affect critical habitat for any Federally listed species.

Existing Conditions - Parks, Forests, Preserves, Refuges, and Sanctuaries. SEA contacted representatives of the USFWS, the National Park Service, and the U.S. Forest Service to identify land within the jurisdiction of these Federal agencies. Based on this coordination, SEA determined that there are no Federal or state parks, forests, preserves, refuges or sanctuaries in or adjacent to the proposed Hagerstown construction site.

Potential Effects - Parks, Forests, Preserves, Refuges and Sanctuaries. Since there are no Federal or state parks, forests, preserves, refuges, or sanctuaries located within or adjacent to the Hagerstown site, SEA concluded that proposed construction activities would have no adverse effects on these types of resources.

Preliminary Recommended Mitigation: Hagerstown

Due to Best Management Practices used in the railroad's construction specifications and regulatory programs governing effects on wetlands, water resources and protected species, it is SEA's determination that no mitigation is necessary. However, as a condition of approval, SEA would require NS to conform to its standard specifications during construction. These standard specifications are presented in Chapter 3, Section 3.15 "Natural Resources."

5-MD.16 MARYLAND LAND USE/SOCIOECONOMICS

For the land use/socioeconomics analysis, SEA evaluated potential changes in the physical environment related to the proposed Conrail Acquisition. The issues included consistency with current land use plans and existing Coastal Zone Management plans, potential effects on prime farmland, and suitability of abandoned rights-of-way for alternative public uses.

5-MD.16.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Construction: Hagerstown (Washington County, MD) (NS)

The proposed action at the Hagerstown site is the construction and operation of a new rail line connection between the existing NS and Conrail tracks.

Existing Land Use. The proposed Hagerstown construction site includes rail and utility land uses. The existing rights-of-way formerly contained up to seven rail lines. Currently, the rights-of-way contain only one main line and one siding.

The land uses surrounding the proposed site include residential and industrial properties along the east/west Conrail track. A recreational park is located to the east of the north/south NS track and the baseball diamonds are located adjacent to the rail right-of-way. An abandoned roundhouse and other abandoned industrial buildings are located 300 feet to the northwest, on the north side of the east/west-trending Conrail tracks. An apartment building, converted from a former warehouse, is directly northeast of the site, south of the east/west Conrail line. This building is located in an area zoned as a conversion district, a special zoning designation to provide for the revitalization of industrial areas. The proposed activity would not require additional land outside the existing railroad rights-of-way and the land use would continue as rail transportation.

Existing Land Use Plan/Zoning. The proposed construction site is zoned for general industry. The specific area of the proposed construction is classified in the 1997 Comprehensive Plan as railroad right-of-way. Contiguous to the east of the area is open space recreational land use and includes the city park. Immediately to the west is the CSX roundhouse site, classified as "to be determined." The rail use would be compatible with the existing industrial zoning.

Consistency with Local Land Use Plan. According to the City of Hagerstown Department of Planning, the proposed construction is consistent with the Comprehensive Plan. However, the city believes the construction would have a detrimental effect on one adjacent apartment building in the area zoned as a conversion district.

Prime Farmland. NRCS has not classified any of the soils at the site as prime farmland.

Coastal Zone. The area of the proposed construction is not within a designated coastal zone.

Indian Reservations. According to the Bureau of Indian Affairs, no Federally recognized Indian tribes or Indian reservations exist in Maryland.

Based on site inspections, discussions with local officials, and the findings described above, it is SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed activity at the Hagerstown site. Because there are no significant impacts, SEA does not recommend mitigation.

5-MD.17 MARYLAND ENVIRONMENTAL JUSTICE

As part of its analysis, SEA examined activities associated with the proposed Conrail Acquisition for environmental justice impacts (disproportionately high and adverse impacts to minority and low-income populations) in accordance with Executive Order 12898. As described in the Environmental Justice Methodology in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," SEA first categorized the nature of the populations in areas where Acquisition-related activities are proposed. SEA determined whether the population in such

areas met the following environmental justice thresholds: (1) greater than 50 percent of the population is minority or low-income, or (2) the minority or low-income population percentage is 10 percent greater than the minority or low-income population percentage in the county.

Next, SEA ascertained whether this population fell within an area of potential effect. SEA defined a typical zone on either side of a rail line segment or proposed construction site, or bordering a railroad intermodal facility or rail yard, as an area of potential effect. In general, the extent of an area of potential effect may vary depending on the nature of the changes in rail activity associated with it, but such areas typically extend 400 to 1500 feet out from the rail line segment or facility being analyzed.

SEA then evaluated these areas of potential effect for proposed Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis. In this analysis, SEA evaluated potential impacts on safety, transportation, air quality, noise, cultural resources, hazardous waste sites, hazardous materials transport, natural resources, and land use/socioeconomic effects. SEA also visited the sites of proposed construction for new rail line connections, rail line segments, intermodal facilities, and rail yards.

SEA developed and executed expanded public outreach efforts for those jurisdictions that met both SEA's thresholds for environmental justice and the Board's thresholds for environmental significance. SEA designed the public outreach process to seek widespread notice and dissemination of SEA's environmental impact analysis; provide additional opportunities for community input to the NEPA process; solicit information about cumulative effects in minority and low-income communities; and allow minority and low-income communities to assist in fashioning appropriate alternatives and mitigation measures. SEA is placing additional copies of the Draft EIS in jurisdictions with high proportions of minority and low-income populations that do not have significant environmental impacts which could result from the proposed Acquisition.

This section presents the results of those evaluations and analysis. A complete list of all the sites analyzed for environmental justice impacts is presented in Appendix K.

5-MD.17.1 Maryland Environmental Justice Setting

There are no changes in rail cars handled at rail yards in the state of Maryland as part of the proposed Conrail Acquisition. New proposed constructions in Maryland did not meet either the minority or low-income population thresholds for further environmental justice analysis.

Intermodal Facilities

There is one intermodal facility with proposed changes in truck traffic that meet or exceed the Board's thresholds for environmental analysis. Table 5-MD-26 presents the existing minority

and low-income composition of the area of potential effect surrounding the intermodal facility and associated truck routes at the East Lombard Street in Baltimore, to be built by NS on railroad property.

Table 5-MD-26
Maryland Environmental Justice Site Summary for Intermodal Facilities

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Baltimore City	736,014	61.4%	5.5%	NA	
Baltimore (NM-06)	2,418	6.2%	15.9%	No	Yes
Baltimore Truck Routes (NM-06)	2,892	10.9%	16.5%	No	Yes

Rail Line Segments

Table 5-MD-27 presents the existing minority and low-income composition of the area of potential effect surrounding the seven rail line segments that meet the environmental justice population thresholds in Maryland.

5-MD.17.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Table 5-MD-28 summarizes the sites and rail line segments that met either the minority or low-income population thresholds, and for which SEA has identified a significant environmental effect. Sites and rail line segments that did not meet both of these criteria are not discussed further in this section. Public Outreach efforts are described below for those sites or rail line segments for which significance thresholds have been exceeded. Mitigation strategies for Maryland are described at the end of this section.

Table 5-MD-27
Maryland Environmental Justice Summary for Rail Line Segments

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low Income Population
Anne Arundel, Baltimore, Prince Georges Counties, Baltimore City	2,584,655	40.8%	10.1%	NA	
Baltimore - Bowie (S-010)	13,013	69.5%	25.0%	Yes	Yes
Prince Georges	729,268	58.4%	5.8%	NA	
Bowie - Landover (S-011)	4,582	57.3%	4.6%	Yes	No
District of Columbia, Prince Georges County	2,672,336	64.9%	10.7%	NA	
Alexandria Jct., MD-Benning, D.C. (C-030)	3,462	91.2%	18.5%	Yes	No
Alexandria Jct., MD - Washington, D.C. (C-031)	2,462	74.2%	9.3%	Yes	No
Landover, MD - Anacostia, D.C.. (C-035)	2,751	92.2%	16.6%	Yes	No
Baltimore County, Baltimore City	1,428,148	39.3%	13.9%	NA	
Baltimore - Relay (C-032)	5,730	64.7%	17.3%	Yes	No
Allegany County, MD, Allegheny, Bedford, Fayette, Somerset, Westmoreland Counties, PA	2,053,204	9.4%	12.4%	NA	
Cumberland, MD - Sinns, PA (C-033)	9,358	7.7%	25.2%	No	Yes

Table 5-MD-28
Maryland Environmental Justice Impacts Summary

Location (Area of Potential Effect)	Resource Impacts							
	Noise	Air Quality	Hazardous Materials Transport	Hazardous Materials	Natural Resources	Transportation/ Safety	Land Use	Cultural Resources
Rail Line Segments								
Alexandria Jct., MD - Benning, D.C. (C-030)	N	NA	N	N	NA	Y	NA	NA
Alexandria Jct., MD - Washington, D.C. (C-031)	N	NA	Y	N	NA	N	NA	NA
Baltimore - Relay (C-032)	N	NA	N	N	NA	Y	NA	NA
Cumberland, MD - Sinns, PA (C-033)	N	NA	N	N	NA	Y	NA	NA
Landover, MD - Anacostia, D.C. (C-035)	Y^a	NA	N	N	NA	N	NA	NA

Y^a = Impact that does not meet Board thresholds for Significance
Y = Impact that meets Board thresholds for Significance
N = No impact
NA = Not Applicable/No Environmental Analysis according to Scope

Impact Analysis - Rail Line Segments

Alexandria Jct., MD - Benning, D.C.. Based on currently available information, SEA has identified potentially significant grade crossing delays at Decatur Street, Upshur Street, and Annapolis Road in suburban Washington, D.C. and Prince George's County, Maryland. Substantial traffic delays could result from the proposed increase in train traffic, from 18.7 to 24.3 trains per day on this CSX rail line segment. This rail line segment begins from a junction in Hyattsville, Maryland, and runs south through Bladensburg to junction with Conrail at Benning, D.C. near the Anacostia River crossing.

The population affected by the project is predominately African-American. Based on the environmental effects identified and the characteristics of the community affected, SEA has found that the increase in activity along this rail line segment may result in a potential environmental justice effect. In accordance with the Executive Order on Environmental Justice,

SEA is considering additional public outreach in the District of Columbia and Prince George's County.

Public Outreach

Minority populations throughout the Town of Cheverly and the surrounding communities in Prince George's County, and in the District of Columbia are the focus of substantial public outreach. SEA is conducting activities to reach potentially affected neighborhoods and provide for their participation in the decision making process. For details on the outreach efforts in the District of Columbia, see the Public Outreach discussion for Alexandria Junction, MD to Washington, D.C. in the environmental justice section for the District of Columbia in this Draft EIS.

In an effort to effectively inform populations of the proposed transaction, potential environmental impacts, possible mitigation and procedures for submitting comments, SEA is contacting a broad cross section of local level organizations and media.

SEA identified five branches of the local libraries in close proximity to Cheverly within Prince George's County, and SEA will send a copy of the Draft EIS to each for placement in the library reference section.

SEA will submit legal notices publicizing Draft EIS availability and locations to weekly and daily newspapers. In addition, SEA will submit Public Service Announcements (PSA's) publicizing Draft EIS availability and locations to local radio stations which target the affected populations.

SEA is issuing a fact sheet and notification of Draft EIS availability to identified community and neighborhood organizations. SEA is contacting the Mayor's Office for the Town of Cheverly and the County Executive and Council Offices from Prince George's County to identify area public officials. SEA will issue a fact sheet and notification of Draft EIS availability to all identified officials to provide opportunity for comment, and assist these officials in disseminating information to their constituents.

Alexandria Jct., MD -Washington, D.C. Based on currently available information, SEA's preliminary determination is that this rail line segment would result in a significant hazardous materials transportation effect because the increase in hazardous materials carried over this rail line segment would increase to over 10,000 car loads per year. The increase, from 3,000 to 17,000 car loads yearly, would require this rail line segment to be designated as a hazardous materials key route. An increase in train traffic from 23.9 to 30.8 trains per day is proposed on this CSX rail line segment. This rail line segment begins at the junction in Hyattsville, Maryland and runs southwest to Union Station and parallels Amtrak's Northeast Corridor.

The majority of the population exceeding the environmental justice thresholds is located in Washington, D.C. The potentially affected population is predominately African-American and Hispanic. Based on the environmental effects identified and the characteristics of the population affected, the increase in activity along this rail line segment may result in a potential environmental justice effect. In accordance with the Executive Order on Environmental Justice, SEA is considering additional public outreach in the District of Columbia and Prince George's County.

Public Outreach

SEA identified potentially affected populations in Maryland along the Alexandria Jct. to Benning, and the Alexandria Junction to Washington D.C. rail line segments where additional public outreach efforts will occur. See the Public Outreach description for Alexandria to Benning, above. Also see the Public Outreach discussion for Alexandria Junction, MD to Washington, D.C. in the environmental justice section for the District of Columbia in this Draft EIS.

Baltimore - Relay. Based on currently available information, SEA has identified potentially significant grade crossing delays in Baltimore, at Hollins Ferry Road and Bush ST where substantial traffic delays could result from the proposed increase in train traffic from 39.6 trains to 42.7 trains per day. This rail line segment runs from downtown Baltimore to the junction with Old Maine Line near Elkridge, southwest of Baltimore city.

Populations along this rail line segment that meet the environmental justice criteria are located within Baltimore City and are predominately African-American. Based on the environmental effects identified and the characteristics of the community affected, the increase in activity along this rail line segment may result in a potential environmental justice effect. Additional analysis and outreach in the Baltimore is being conducted. In accordance with the Executive Order on Environmental Justice, SEA is considering additional public outreach in Baltimore.

Public Outreach

Minority populations in southern Baltimore are the focus of substantial public outreach. In an effort to effectively inform populations of the proposed transaction, potential environmental impacts, possible mitigation and procedures for submitting comments, SEA is contacting a broad cross section of local level organizations and media.

SEA identified two local library branches in close proximity to the southern area of Baltimore. SEA will send the Draft EIS to these two branches as well as the main administrative branch, for placement in the reference section.

SEA will submit legal notices publicizing Draft EIS availability and locations to weekly and daily newspapers. In addition, SEA is submitting Public Service Announcements (PSA's) publicizing Draft EIS availability and location to local radio stations that target the potentially affected populations.

SEA will issue a fact sheet and notification of Draft EIS availability to identified area communities and neighborhood organizations. SEA will issue a fact sheet and notification of Draft EIS availability to the Baltimore Mayor's Office, appropriate Council Members and the City Planner, and State Legislators from the Baltimore, to provide opportunity for comment, and to so they may disseminate this information to their constituents.

Cumberland, MD - Sinns, PA. Based on currently available information, SEA has identified one potentially significant grade crossing delay at Main Street in West Newton, PA where substantial traffic delays could result from the proposed increase in train traffic, from 27.7 to 32.8 trains per day along this CSX rail line segment. This rail line segment begins at Cumberland, Maryland and runs northwest towards Pittsburgh, Pennsylvania, ending at McKeeseport. However, the potential impact is located approximately ten miles south of the identified environmental justice population located predominately in McKeeseport.

SEA has concluded that, given the distance between the potentially at-risk population and the impact site, there would be no environmental justice impacts on the Cumberland, MD to Sinns, PA rail line segment.

Landover, MD - Anacostia, D.C. Based on currently available information, SEA has identified potential noise effects along this CSX rail line segment, that begins just north of Landover Road in Landover, Maryland and runs south to the junction with CSX near Benning at the Anacostia River in the District of Columbia. Up to 27 noise receptors could be affected by the proposed increase in train traffic, from 3.4 to 9.1 trains per day on this rail line segment.

Populations along this rail line segment that exceed the environmental justice thresholds are located within the Cheverly area of Prince George's County and the District of Columbia. The population affected by the proposed action would be predominately African-American (approximately 92 percent) , but does not exceed the low-income thresholds. Based on the environmental effects identified and the characteristics of the population affected, the increase in activity along this rail line segment may result in a potential environmental justice effect. In accordance with the Executive Order on Environmental Justice, SEA is conducting additional studies to determine if the environmental justice populations are impacted by noise.

Mitigation

SEA is currently developing additional mitigation strategies in coordination with the local communities in Maryland surrounding the sites and rail line segments and will report on these

strategies in the Final EIS. As SEA continues to perform public outreach and additional site-specific noise analysis, SEA will determine the extent and nature of the potential environmental justice impacts. If an environmental justice impact exists, SEA will determine if mitigation would be practicable. This coordination with the local communities as part of the on-going public outreach process will be reported in the Final EIS.

5-MD.18 MARYLAND CUMULATIVE EFFECTS

Within the State of Maryland, the Applicants propose the following activities that meet or exceed the Board's thresholds for environmental analysis: increased traffic along 13 rail line segments, increased activities at 1 intermodal facility, and 1 proposed construction of a connection. Table 5-MD-29 addresses other potential actions brought to SEA's attention that, when combined with the proposed Acquisition, could contribute to a cumulative impact. SEA was made aware of these activities through site visits and public comment. Local agencies provided the information below to SEA within the schedule specified in the scope for review and analysis.

Table 5-MD-29
Information Provided to SEA About Other Activities or Projects

Action-Type	Site	Information from Site Visit or Public Comment	Relationship to Proposed Acquisition
Construction of Connection	Hagerstown (MD)	City is redeveloping former CSX rail yards for new road corridor and industrial sites, and intends to create direct access between downtown and highway.	Not related. CSX has no activities in the proposed Acquisition regarding Hagerstown.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of Maryland.

Cumulative Effects Mitigation Measures

Due to a lack of cumulative effects, no mitigation measures are necessary.

5-MD.19 MARYLAND AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. Table 5-MD-30 provides a list of agencies and local governments that have submitted environmental comments for the State of Maryland. A complete list of entities that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-MD-30
Agencies in Maryland Submitting Environmental Comments

Entity	Nature of Comment(s)
Baltimore Metropolitan Council	Rail operations, commuter operations, air, and hazardous materials
Baltimore Area Transit Association	Commuter operations
Bowie, City of	At-grade crossing safety
Brunswick, City of - Mayor and Council	Hazardous materials
Citizens Advisory Committee	Commuter operations
Department of Environmental Protection - Montgomery County	Air
Hagerstown, City of	Land use and abandonment
Harford County Government	Water resources, noise, traffic congestion, and hazardous materials
Laurel, City of	Commuter operations
Maryland Office of Planning	Environmental Justice
Maryland Department of Transportation	Commuter operations
Montgomery County	Commuter operations, air, and at-grade crossing delay
Prince George's County Government	Land use, commuter operations, noise, and air

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.

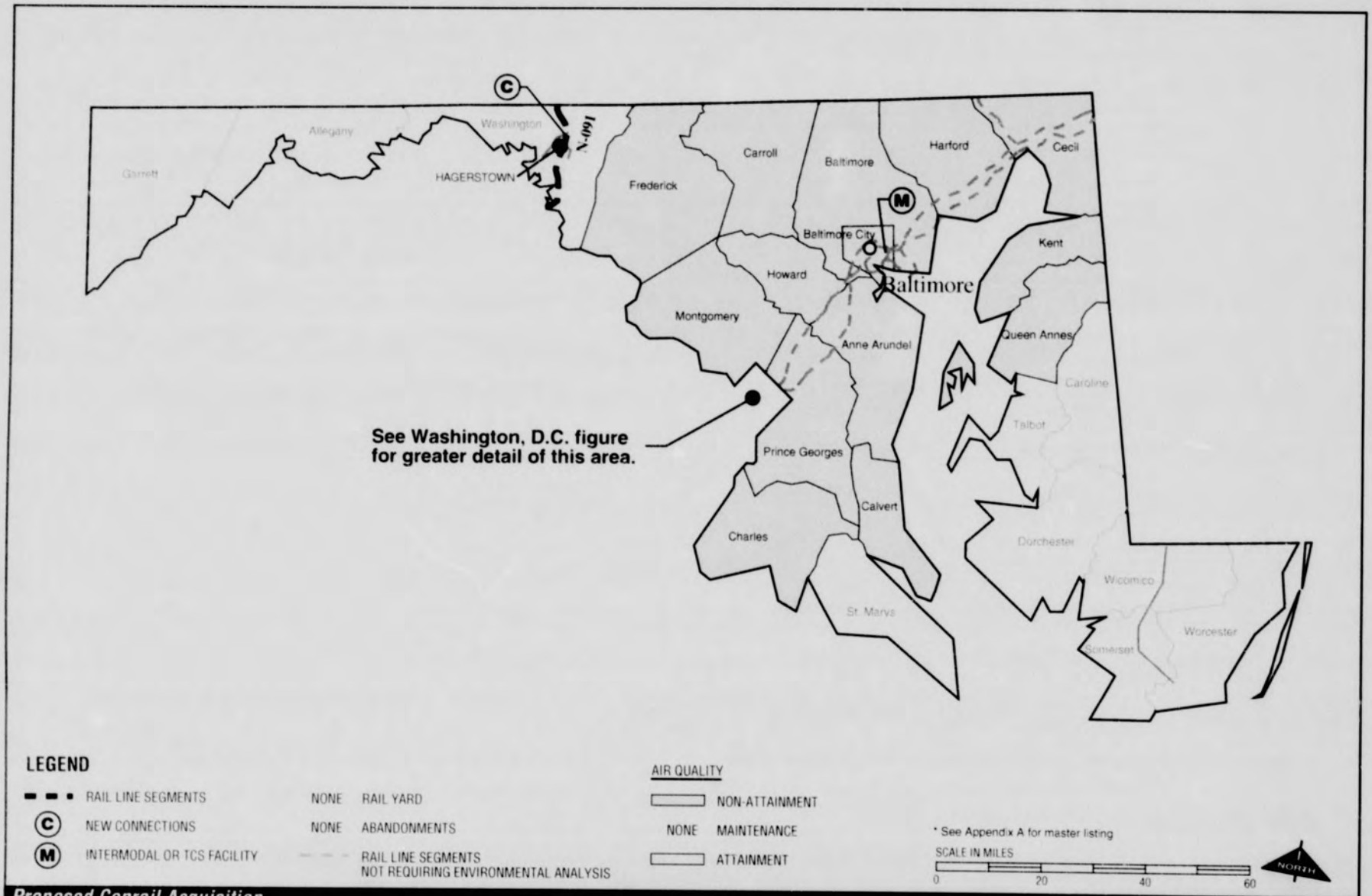

FIGURE 5-MD-1b

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

MARYLAND - NORFOLK SOUTHERN

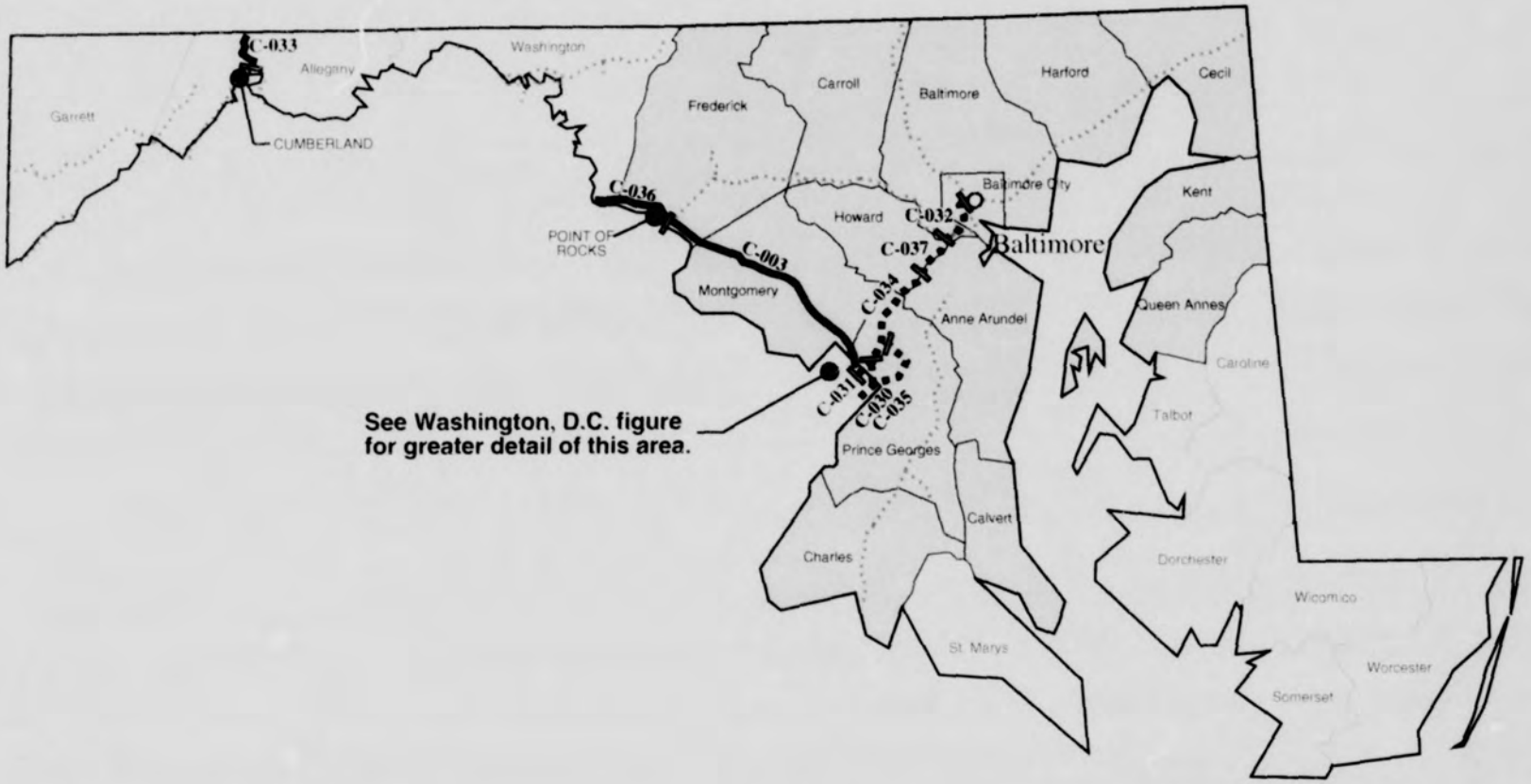

FIGURE 5-MD-1a

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

MARYLAND - CSX

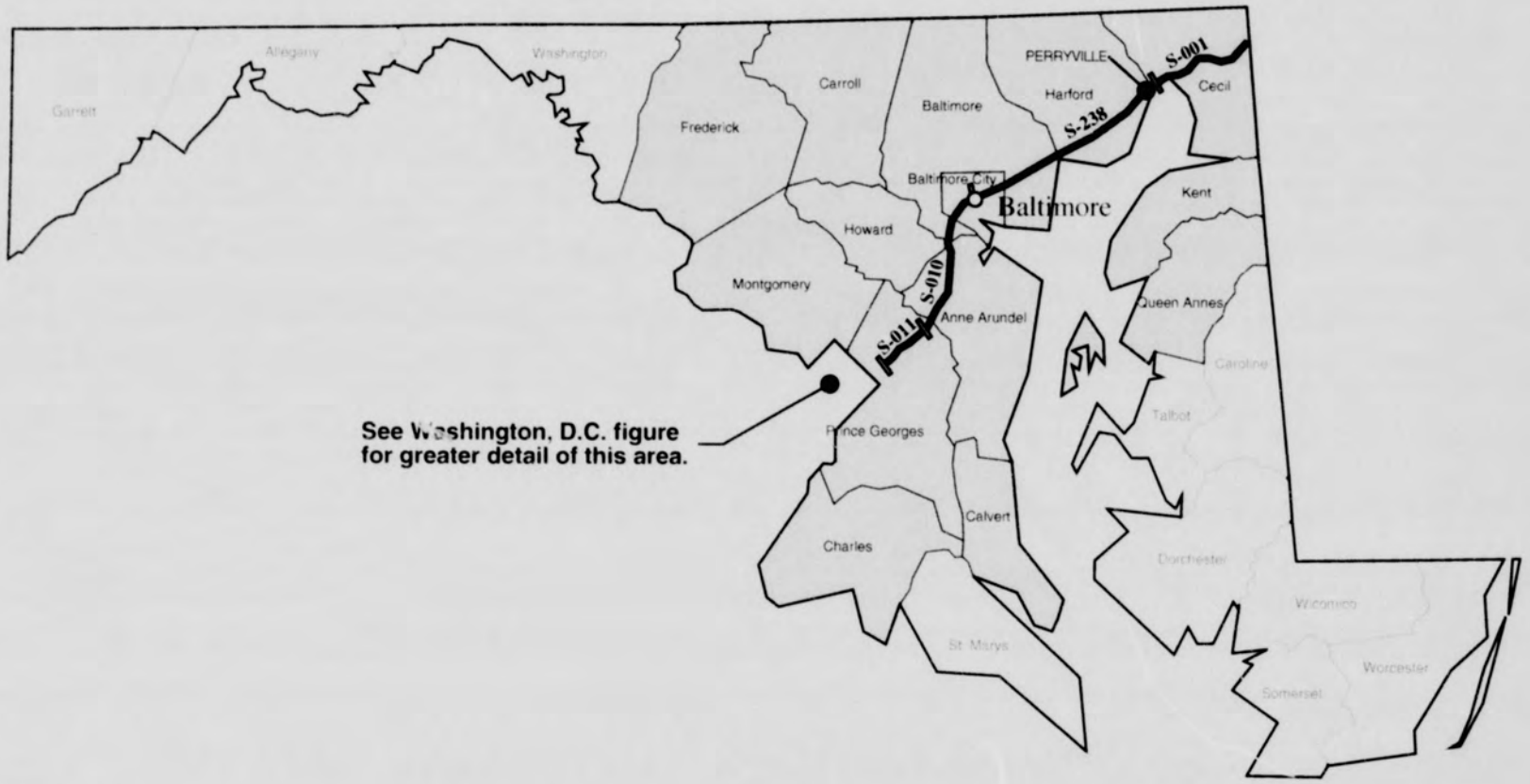

FIGURE 5-MD-1c

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

MARYLAND - SHARED

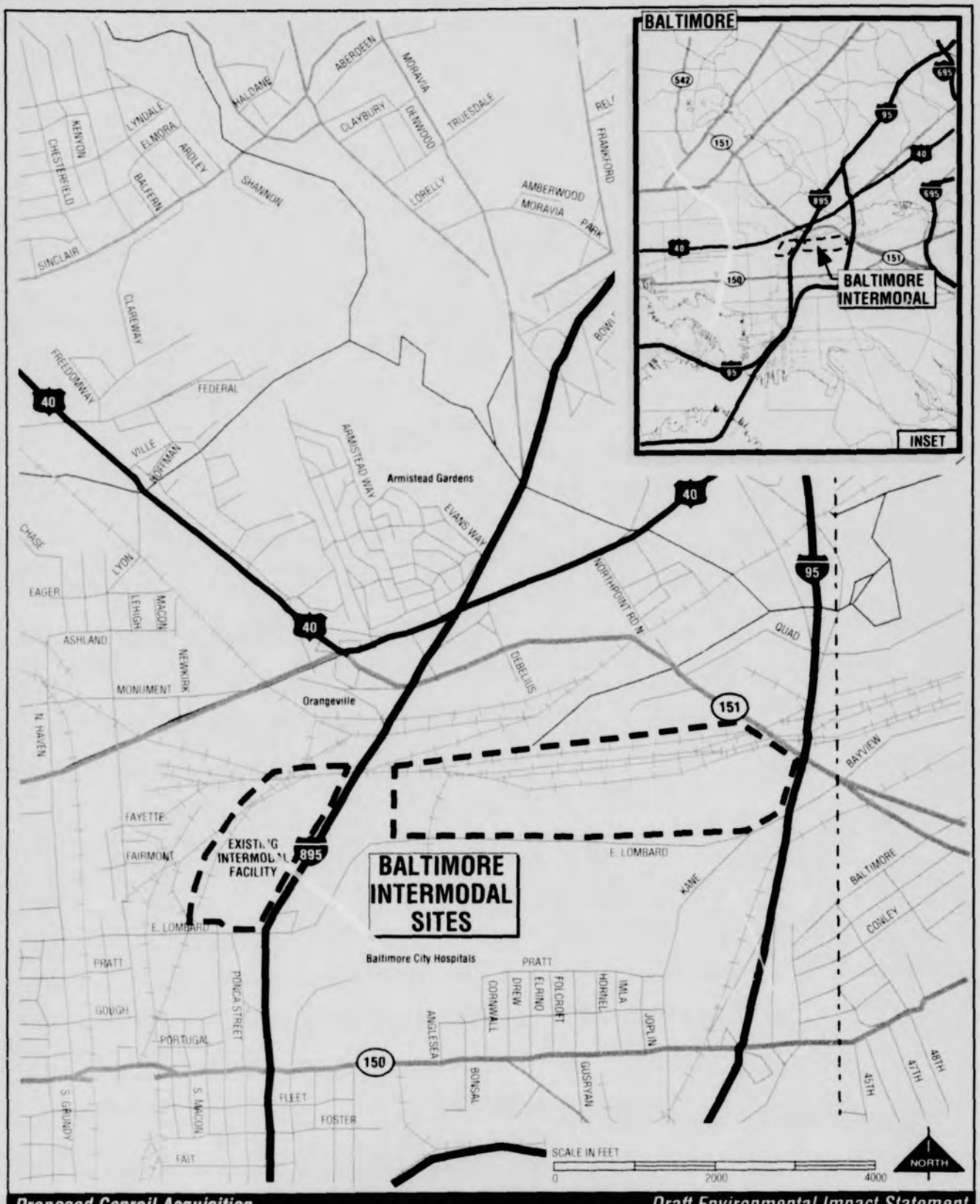

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FIGURE 5-MD-2

BALTIMORE INTERMODAL SITE, BALTIMORE, MARYLAND

NORFOLK SOUTHERN

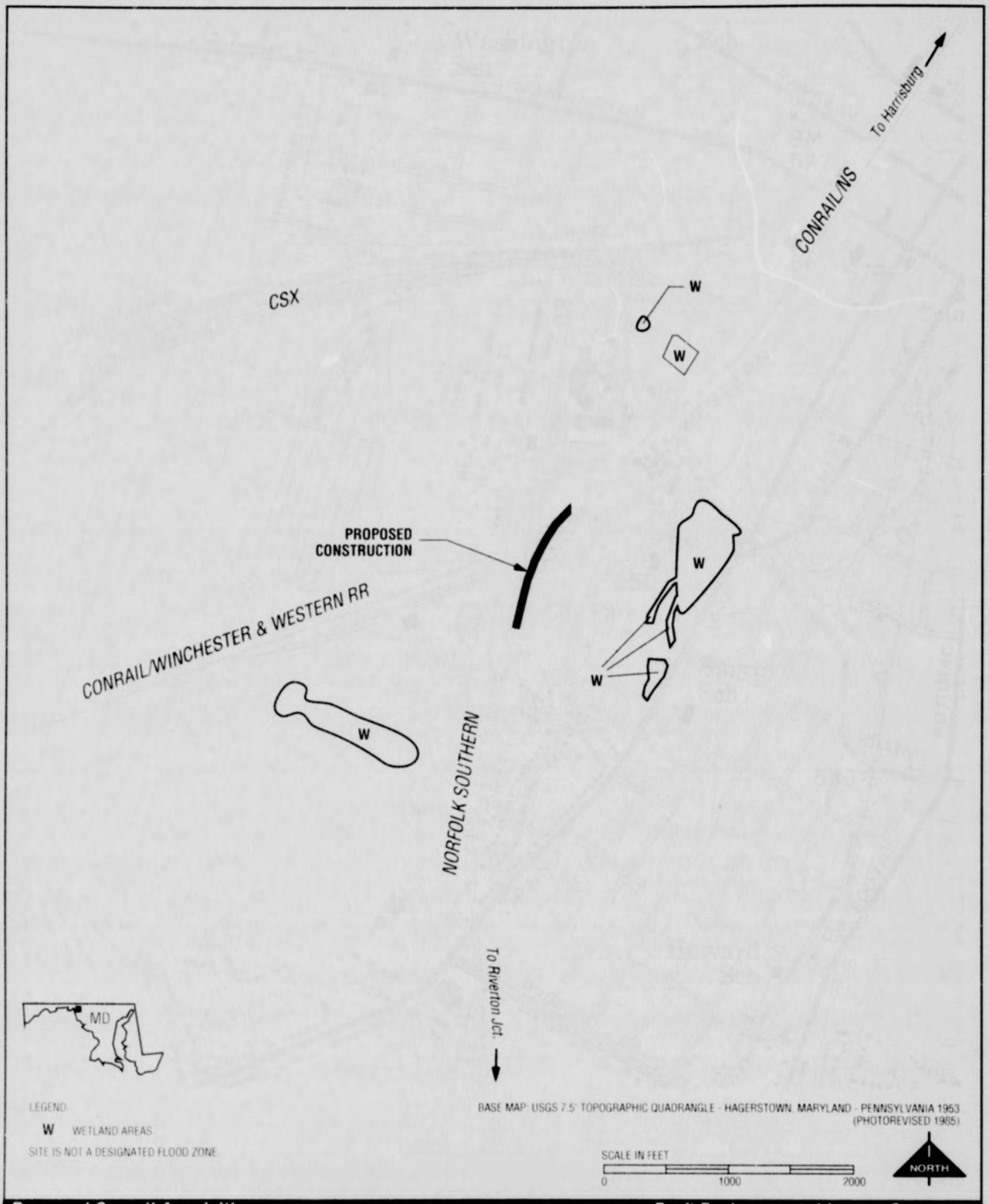

FIGURE 5-MD-3

HAGERSTOWN, WASHINGTON COUNTY, MARYLAND
NORFOLK SOUTHERN

Table 5-MD-6
Maryland
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
FREDERICK	C-036	140608S	MAPLE AVE	Gate	900	2	60	0	33.3	41.6	0.0273	0.0296	0.0023	
WASHINGTON	N-091	469316J	RENCH RD	Flasher	675	2	50	0	11.1	19.6	0.0249	0.0315	0.0066	
WASHINGTON	N-091	469320Y	COLLEGE RD	Flasher	475	2	50	0	11.1	19.6	0.0220	0.0281	0.0061	
WASHINGTON	N-091	469321F	LAPPANS RD	Flasher	3,375	2	50	1	11.1	19.6	0.1012	0.1174	0.0162	0.0275
WASHINGTON	N-091	469323U	JORDAN RD	Flasher	400	2	50	0	11.1	19.6	0.0208	0.0266	0.0058	
WASHINGTON	N-091	469324B	SPIELMAN RD	Flasher	575	2	45	0	11.1	19.6	0.0233	0.0296	0.0063	
WASHINGTON	N-091	469327W	TOMMY TOWN RD	Flasher	75	2	35	0	11.1	19.6	0.0113	0.0148	0.0035	
WASHINGTON	N-091	469329K	TAYLORS LANDING	Flasher	175	2	45	0	11.1	19.6	0.0155	0.0200	0.0046	
WASHINGTON	N-091	469332T	MONDEL RD	Flasher	125	2	45	0	11.1	19.6	0.0135	0.0175	0.0041	
WASHINGTON	N-091	534883D	REIFF CHURCH RD	Passive	325	2	30	2	11.1	19.6	0.2044	0.2348	0.0304	0.0187
WASHINGTON	N-091	534884K	NORTH ST	Gate	850	2	30	0	11.1	19.6	0.0162	0.0204	0.0042	
WASHINGTON	N-091	534886Y	MAIN ST	Gate	1,143	2	30	0	11.1	19.6	0.0175	0.0219	0.0045	
WASHINGTON	N-091	534887F	SHAWLEY DR	Passive	200	2	30	0	11.1	19.6	0.0470	0.0580	0.0110	0.0447

Table 5-MD-9
Maryland
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	*Pre Acquisition*								*Post Acquisition*								
						Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Baltimore City	C-032	140239X	HOLLINS FERRY RD	2	6,969	39.6	35	6,000	469	17	2.90	23.45	C	42.7	35	6,200	519	18	2.98	26.64	D	C (d)
Baltimore City	C-032	140867D	BUSH ST.	2	6,900	39.6	40	6,000	418	15	2.61	18.98	C	42.7	40	6,200	463	16	2.68	21.53	C	
Montgomery	C-003	140488D	FOREST GLEN RD	2	11,400	23.8	45	6,000	380	23	2.71	10.83	B	30.8	45	6,200	504	24	2.78	14.73	B	
Montgomery	C-003	140507F	S SUMMIT AVE	3	11,300	23.8	50	6,000	348	14	2.24	8.29	B	30.8	50	6,200	461	14	2.30	11.26	B	
Montgomery	C-003	140509U	CHESTNUT ST.	2	10,500	23.8	55	6,000	302	18	2.28	7.86	B	30.8	55	6,200	400	19	2.33	10.66	B	
Montgomery	C-003	140494G	RANDOLPH	4	41,000	23.8	50	6,000	1263	38	3.46	12.79	B	30.8	50	6,200	1674	39	3.55	17.37	C	
Prince George's	C-030	140253T	DECATUR ST	2	8,000	18.7	25	6,000	335	26	3.94	19.79	C	24.3	25	6,200	448	27	4.05	27.18	D	C (e)
Prince George's	C-030	140257V	UPSHUR ST	2	5,900	18.7	25	6,000	247	19	3.72	18.71	C	24.3	25	6,200	330	20	3.83	25.70	D	C (e)
Prince George's	C-030	140258C	ANNAPOLIS RD	5	29,250	18.7	25	6,000	1226	38	4.38	22.03	C	24.3	25	6,200	1638	39	4.50	30.26	D	C (e)
Prince George's	C-034	140899J	SUNNYSIDE AVE	2	5,070	33.4	50	6,000	219	9	2.10	10.91	B	37.1	50	6,200	249	10	2.16	12.71	B	
Prince George's	C-034	140905K	QUEENSBURY RD	2	6,000	33.4	50	6,000	259	11	2.15	11.17	B	37.1	50	6,200	295	11	2.21	13.02	B	

(d) Indicates an increase in speed of 5 mph.

(e) Indicates track improvement to permit increase in speed of 5 mph.

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5-MA
MASSACHUSETTS

This section provides background information for resources in Massachusetts. Tables list the proposed Conrail Acquisition-related activities in Massachusetts that meet or exceed the Board's thresholds for environmental analysis. This section also presents the various technical analyses conducted for these activities in Massachusetts. The analyses highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-MA.1 MASSACHUSETTS SETTING

Massachusetts is located in central New England. Principal products of Massachusetts include electrical equipment and supplies, nonelectrical machinery, instruments and related products, printing and publishing, fabricated metal products, food and kindred products, milk and eggs, sand, gravel, stone, lime, and clay. The railroad network throughout the state provides a means of transporting and distributing many of these goods and for other products imported into the state.

Transportation Facilities

Major interstate highways in Massachusetts include I-95 and I-93, a major north/south routes in the eastern United States; I-91, a north/south facility; and I-90, an east/west facility. These interstates serve the major cities of Boston, Springfield, and Worcester. Ports serving the state include the Port of Boston, the Port of Fall River, and Port of New Bedford.

Railroad Facilities

Twelve railroads operate in Massachusetts, covering a total of 912 route miles. Conrail is the only Class I Railroad operating in the state.

- Conrail operates 430 route miles in Massachusetts, which is 47 percent of the state's total rail miles.

- Cities served by Conrail include Boston, Springfield, and Worcester.

- Conrail operates intermodal terminals for rail-truck transfer in Boston (Allston), Springfield, and Worcester. Other rail-related facilities are located in many other cities and towns.

Intercity Passenger and Commuter Rail Services

Amtrak provides service to Boston and Springfield. The Massachusetts Bay Transportation Authority (MBTA) provides commuter rail service. Amtrak operates all of MBTA's services under contract. Between Boston and Framingham, MBTA service includes 38 trains per weekday and fewer on weekends. Between Framingham and Worcester, MBTA service includes ten commuter trains per weekday and fewer on weekends.

5-MA.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN MASSACHUSETTS

In the Operating Plans submitted to the Board, the Applicants indicate that no CSX or NS rail line segments, rail yards or intermodal facilities in Massachusetts would experience increased traffic or activity that would meet the Board's thresholds for environmental analysis. Also, there are no proposed new constructions or abandonments. CSX will operate all Conrail lines and facilities post-Acquisition. CSX and NS anticipate that due to predicted truck to rail diversions, Massachusetts would experience a benefit in the areas of emissions, noise, and safety. Figure 5-MA-1 shows the Applicants' facilities.

5-MA.3 MASSACHUSETTS SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-related activities in Massachusetts that meet the Board's thresholds for environmental analysis and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Transportation (Highway/Rail At-Grade Crossing Delays, Highway/Rail At-Grade Effects from Rail Facility Modifications; Navigation).
- Energy.
- Air Quality.
- Noise.
- Cultural Resources.
- Hazardous Materials and Waste Sites.
- Natural Resources.

- Land Use/Socioeconomics.

Details of the environmental analysis for Massachusetts follow.

5-MA.4 MASSACHUSETTS TRANSPORTATION: PASSENGER RAIL SERVICE

In Massachusetts, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-relatedeffects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Amtrak currently provides service to Boston, Framingham, Worcester, Springfield and Pittsfield on Conrail's Boston Line, as well as on Amtrak's Northeast Corridor to Providence, Rhode Island and New York City, New York. Section 4.7.1, "Intercity Passenger Rail Service," discusses intercity passenger rail service effects.

Commuter Rail

SEA's evaluation included an assessment of the projected level of train traffic and the capacity of the railroad facilities including the number of main tracks, maximum authorized speed for freight and passenger trains, and the type of train control, signaling and train dispatching system utilized. SEA also examined the frequency of interlockings, which permit faster trains to move around slower trains. SEA utilized experienced railroad operating personnel to assess each line segment using timetables, track charts, existing and proposed train levels, professional experience and personal familiarity with the rail facilities.

Massachusetts Bay Transportation Authority (MBTA) provides commuter rail service as part of a coordinated network of regional transit services. Trains operate over 293 route miles serving 102 stations on 11 radial routes from North Station and South Station in Boston.

The Northeast Corridor route between the Rhode Island/Massachusetts state line and South Station is owned by the State of Massachusetts, with Amtrak maintaining and dispatching it. Conrail owns the main line from Boston to Worcester, with the exception of an 11 mile rail line segment between Riverside and Framingham, and operates local freight services on many of the other MBTA lines, including the Amtrak Northeast Corridor within Massachusetts. The proposed Conrail Acquisition would not affect routes that operate out of North Station in Boston. Conrail, Amtrak and the MBTA conduct operations in accordance with Northeast Rail Operations Advisory Committee rules.

Amtrak operates MBTA trains. MBTA reported ridership to be 23 million trips and 419 million passenger miles in 1995. Only between Boston and Worcester, 44 miles, does the MBTA operate on Conrail-owned routes. This route, which would be assigned to CSX, would have a post-Acquisition decrease of approximately one freight train per day. The Trackage Rights Agreement between MBTA and Conrail expires on December 31, 2015, for commuter service between Boston and Framingham. In 1994, service was extended to Worcester by a separate agreement which expires in September 1999, with a five-year extension at the MBTA's option. Conrail dispatches MBTA Worcester route trains from its Albany division headquarters at Selkirk, New York.

Future Services Under Study

In addition to the existing commuter rail operations in Massachusetts, the Berkshire Regional Planning Commission (BRPC) advocates that the Berkshire Scenic Railway Museum (BSRM) excursion train in Lenox, MA be granted trackage rights to the proposed intermodal transportation center in Pittsfield, Massachusetts. The BSRM presently does not have sufficient operating rights on the Housatonic Railroad Company to reach the connection to Conrail in Pittsfield. The Boston Line of Conrail is assigned to CSX.

Summary of Potential Effects and Preliminary Recommended Mitigation

Because of the proposed decrease in freight rail traffic on the commuter rail line to be assigned to CSX, SEA concluded that the proposed Acquisition will not have an adverse effect on passenger train service in Massachusetts. Therefore, mitigation would not be required.

5-MA-5 MASSACHUSETTS CUMULATIVE EFFECTS

Within the State of Massachusetts, the Applicants do not propose any activities that meet or exceed the Board's thresholds for environmental analysis. The following table addresses other potential actions brought to SEA's attention that, when combined with the proposed Acquisition, could contribute to a cumulative impact. SEA was made aware of these activities through site visits and public comment. Local agencies provided the information below to SEA within the schedule specified in the scope for review and analysis.

Table 5-MA-1
Information Provided to SEA About Other Activities or Projects

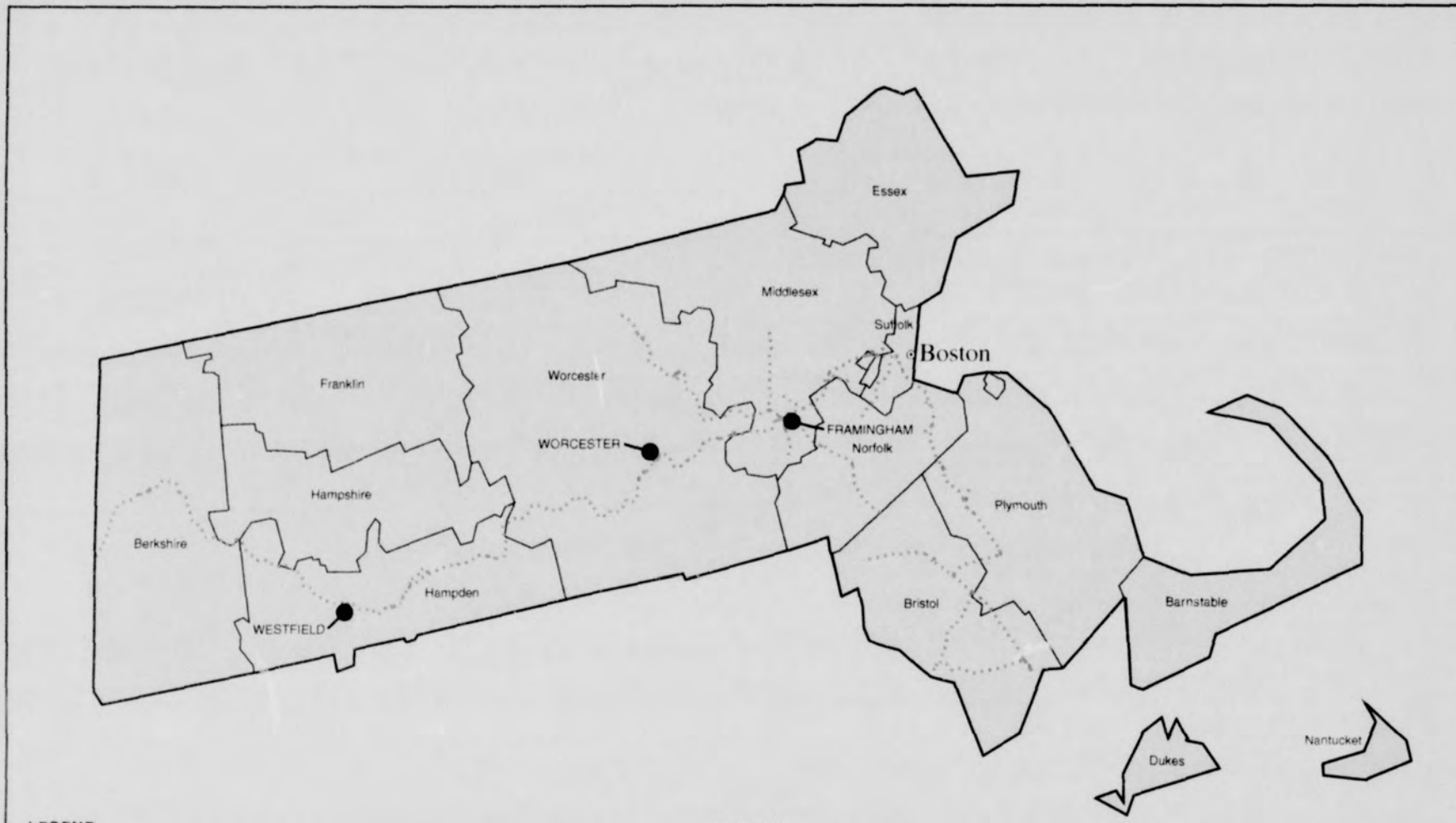
Action-Type	Site	Information from Site Visit or Public Comment	Relationship to Proposed Acquisition
Rail yard	New Bedford (MA)	Rail yard considered possible commuter rail terminal site for MBTA extension.	Not related. Rail yard ownership will transfer to CSX. Minor change in rail traffic.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of Massachusetts.

Cumulative Effects Mitigation Measures

Due to a lack of cumulative effects, no mitigation measures are necessary.



Proposed Conrail Acquisition *Draft Environmental Impact Statement*

FIGURE 5-MA-1

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

MASSACHUSETTS - CSX

5-MI
MICHIGAN

This section provides background information for resources in Michigan. Tables list the proposed Conrail Acquisition-related activities in Michigan that meet or exceed the Board's thresholds for environmental analysis. This section also presents the various technical analyses conducted for these activities in Michigan. The analyses highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-MI.1 MICHIGAN SETTING

Michigan is in the Great Lakes region of the midwestern United States. Principal products of Michigan include motor vehicles and equipment, fabricated metal products, metalworking machinery, iron and steel, food, chemicals, electrical equipment and supplies, dairy products, cattle, corn, beans, vegetables, hogs, wheat, soybeans, iron ore, cement, petroleum, and natural salines. The railroad network throughout the state provides a means of transporting and distributing many of these goods and for other products imported into the state.

Transportation Facilities

The major interstate highways that serve Michigan include I-75, a north/south route; I-94, an east/west facility; I-96, an east/west facility; and I-69, an north/south facility. These routes serve the major cities of Detroit, Saginaw, Grand Rapids, Lansing, Flint, Kalamazoo, and Port Huron. Ports located in the state include the Ports of Detroit, Monroe, St. Joseph, and Sault Ste. Marie.

Railroad Facilities

Twenty-three railroads operate in Michigan, covering a total of 3,820 rail miles, of which:

- Conrail operates 520 miles in Michigan, which is 14 percent of the state's total rail miles.
- CSX operates 809 miles in Michigan, which is 21 percent of the state's total rail miles.
- NS operates 126 miles in Michigan, which is 3 percent of the state's total rail miles.

Cities served by these three railroads include Detroit, Flint, Grand Rapids, Lansing, Battle Creek, Kalamazoo, Port Huron, and Saginaw. Six Class I railroads operate in Michigan, three of which are Conrail, CSX, and NS. Grand Trunk Western Railroad Company, Soo Line Railroad Company, and Union Pacific Railroad Company are the other Class I railroads that operate in the state.

Conrail yards in Detroit, Lansing, Kalamazoo, Battle Creek, Grand Rapids, and Jackson provide service for the rest of the state. CSX has an intermodal facility in Detroit as well as other rail-related services in Flint, Grand Rapids, Plymouth, Port Huron, Saginaw, Midland, Wayne, and Wixom. NS operates a major classification yard, intermodal facility, and other rail-related services in Detroit.

Intercity Passenger and Commuter Rail Services

Amtrak provides passenger rail service through Michigan. Service is available daily to Detroit, Jackson, Kalamazoo, Grand Rapids, and Battle Creek. There is no commuter rail service in Michigan.

5-MI.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN MICHIGAN

In the Operating Plans submitted to the Board, the Applicants indicate that they would compete directly at Detroit area points now served by Conrail. Automobile manufacturers in Michigan would be served by coordinated access provided in Detroit by the Shared Assets Area operation. Chapter 2, "Description of the Proposed Actions and Alternatives," includes a discussion of the Shared Assets Area operation.

Michigan would be served by several new CSX route combinations that include the Heartland Service Route, linking Detroit to Indianapolis and Nashville; the Central Service Route between Detroit, St. Louis, and the southwest; and the Michigan-Chicago Gateway Service Route linking Saginaw, Detroit and Grand Rapids with Toledo and Chicago.

With the exception of the Shared Assets Areas, NS would operate most Conrail lines in Michigan, including the Michigan Line between Detroit and Kalamazoo, the line between Grand Rapids, Kalamazoo and Elkhart, Indiana, and the mainline between Detroit and Toledo. In addition, NS would retain current Conrail trackage rights over Amtrak's line between Kalamazoo and Michigan City, Indiana. NS also would serve Detroit from its existing Fort Wayne line, with improved access to Chicago and Kansas City markets via the new Butler, Indiana connection.

Both CSX and NS would serve Detroit shippers in the Shared Assets Area. Trackage would include routes from Trenton to Utica to the west, to Mack Yard, to the west end of Livernois, and to the west end of the Lincoln Secondary.

Intermodal freight service between the Southeast and Michigan would be offered by both CSX and NS. CSX would offer dedicated hubs at Chicago, Cleveland and Cincinnati for the handling and flow of finished vehicles. NS would offer automotive traffic movements with facilities at Bellevue and Fostoria.

Both CSX and NS plan to undertake extensive activities in Michigan as part of the proposed Conrail Acquisition. The proposed Conrail Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis in Michigan include increased train operations on a total of six rail line segments, construction of one rail line connection, increased activity at one intermodal facility in Detroit, and increased number of rail cars handled at one rail yard in Detroit.

In Michigan, there are no proposed abandonments.

Tables 5-MI-1 through 5-MI-4 show rail line segments, intermodal facilities, rail yards, or new constructions in Michigan. Following these tables are brief descriptions of the activities, where appropriate. Figure 5-MI-1 at the end of this state's section shows the general location of these facilities. (All figures appear at the end.)

Table 5-MI-1
Michigan Rail Line Segments Which Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles	County	Setting
C-040	Carleton, MI	Toledo, OH	CSX Toledo to Saginaw	24	Monroe	Urban/Suburban
S-020	Carleton, MI	Ecorse, MI	Conrail Toledo to Detroit	4	Monroe	Urban/Commercial
				16	Wayne	Urban/Commercial
S-021	W. Detroit, MI	North Yard, MI	Conrail Detroit Metro	7	Wayne	Urban/Industrial
S-022	W. Detroit, MI	Delray, MI	Conrail Detroit Metro	2	Wayne	Urban/Industrial
N-120	Jackson, MI	Kalamazoo, MI	Conrail Detroit to Kalamazoo	33	Calhoun	Urban/Residential/ Industrial
				18	Jackson	Urban/Residential/ Industrial
				16	Kalamazoo	Urban/Residential/ Industrial

Table 5-MI-1
Michigan Rail Line Segments Which Meet or Exceed Board Environmental Thresholds

Site ID	From	To	Description	Length in miles	County	Setting
N-121	West Detroit, MI	Jackson, MI	Conrail Detroit to Kalamazoo	15	Jackson	Urban/Residential/ Industrial
				35	Washtenaw	Urban/Residential/ Industrial
				24	Wayne	Urban/Residential/ Industrial

C = CSX
N = NS
S = Shared Asset Areas

Intermodal Facilities

Melvindale Intermodal Facility (Wayne County, MI) (NS). The NS intermodal facilities are located at Oakwood Yard in the City of Melvindale southeast of downtown Detroit. (See Figure 5-MI.2.) The conventional intermodal facility and the Triple Crown Service (TCS) facility are located on the same site, but there is a separate entrance for each and the facilities are operated independently. The main gate for truck entry and exit movements for the conventional intermodal facility is located on South Dix Avenue. The main gate for truck entry and exit movements to the TCS facility is located on Wabash Street. The primary route trucks use between the conventional intermodal facility and Interstate 94 includes Schaefer Highway to South Dix Avenue. The primary route trucks use between the TCS facility and Interstate 75 includes Dix-Toledo Highway to Wabash Street. Following the proposed Conrail Acquisition, these facilities are expected to realize an increase of 58 trucks per day.

Table 5-MI-2
Michigan Intermodal Facilities Which Meet or Exceed Board Environmental Thresholds

Site ID	Location	County	Facility	Description	Setting
NM-07	Detroit	Wayne	Melvindale	Increase of 58 trucks/ day	Residential

Rail Yards

River Rouge facility. Currently CSX handles 335 rail cars per day and anticipates this number will increase to 585 following the proposed Conrail Acquisition.

Table 5-MI-3
Rail Yards with Threshold Changes

Site ID	Location	County	Facility	Description	Setting
CY-03	Detroit	Wayne	Rougemere	Increase of 250 railcars/day	Urban

Construction

Construction: Ecorse Junction Connection (Wayne County, MI) (NS). The proposed upgrade and new construction at Ecorse Junction would be located in south Detroit, Wayne County, Michigan, and would connect the existing Conrail track from NS's Oakwood Yard to Conrail's River Rouge Yard via the Junction Yard Secondary. The construction of a second track at an existing connection that would permit efficient movements from Conrail trackage to existing NS track. An existing Conrail track from Oakwood Yard to River Rouge Yard would be upgraded and a crossover in the Oakwood Yard would be constructed. The design includes approximately 6,000 linear feet in upgrades to an existing rail line and approximately 400 linear feet of new rail line constructions. (See Figure 5-MI-3.) The project would be constructed entirely on railroad right-of-way. NS anticipates operating seven trains per day over the new connection and upgrade trackage.

NS did not identify any other build alternatives because the location is fixed by the existing set of tracks. Any alternative locations would not provide more effective connections. Under the no-action alternative, NS would continue to operate all its trains on the existing single line connection.

Table 5-MI-4
Michigan New Construction

Site ID	Location	County	Length in feet	Description	Setting
NC-08	Ecorse Junction, Detroit	Wayne	400	Upgrade existing Conrail track, lower track under Fort Street and construct crossover to permit efficient movements	Urban/Industrial

5-MI.3 MICHIGAN SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-related activities in Michigan that meet the Board's thresholds for environmental analysis and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Transportation (Passenger Rail Services; Navigation).
- Energy.

Details of the environmental analysis for Michigan follow.

5-MI.4 MICHIGAN SAFETY: FREIGHT RAIL OPERATIONS

SEA conducted a statistical analysis to evaluate the potential change in safety on all rail line segments where the proposed Conrail Acquisition would result in eight or more additional freight trains per day. SEA identified three rail line segments within Michigan that would experience this level of increased activity. While increased freight train activity would increase the probability of a freight train accident, SEA did not consider an increase significant unless the predicted accident rate shortened the duration between accidents to one every 100 years or less per mile. Table 5-MI-5 presents results of the analysis, showing the approximate mileage of each rail line segment within the state.

Table 5-MI-5
Estimated Change in Years Between Accidents - Freight Rail Operations

Site ID	Between	And	Miles in State	Increase in Trains per Day	Pre-Acquisition Accident Interval [a]	Post-Acquisition Accident Interval [a]
C-040	Carleton	Toledo, OH	24	11.2	207	133
N-121	W. Detroit	Jackson	74	9.2	1522	369
S-020	Carleton	Ecorse	20	9.2	1703	308

[a] Accident Interval figures show the years/mile.

The Federal Railroad Administration (FRA) requires all railroads to submit reports for all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). Train accidents meeting this reporting requirement are relatively

infrequent. The FRA reported about 2,600 accidents (3.69 accidents per million train miles[1]) nationally in 1996. Most of these accidents were relatively minor; almost 90 percent of these accidents caused less than $100,000 in damage. In addition, most of the train accidents did not affect people or non-railroad property.

Accident risk predictions are best expressed by describing the elapsed time expected between any two consecutive events. The current national average is that a main line freight train accident occurs once every 117 years on each mile of route. FRA records, as described in Chapter 4, "System-Wide and Regional Setting Impacts," show a substantial decrease, both in total number of accidents and in accidents per million train miles, a standard industry measure. Because there are few accidents, and most of these accidents are relatively minor, it is not possible for SEA to accurately predict either the frequency or severity of actual accidents.

SEA estimated the change in the risk of an accident resulting from the increased activity on rail line segments as a result of the proposed Conrail Acquisition. Because SEA analyzed rail line segments that vary in length from one mile to more than 100 miles, and because freight train accidents typically have little impact on surrounding areas, SEA expressed all predicted risks of accidents on a route-mile basis. Chapter 3, Section 3.2 "Safety: Freight Rail Operations," discusses the analysis process in greater detail.

5-MI.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

In Michigan, SEA found that no rail line segments met its criteria of significance (one accident expected every 100 years or less per mile of route). Therefore, SEA does not recommend mitigation.

5-MI.5 MICHIGAN SAFETY: PASSENGER RAIL OPERATIONS

In Michigan, passenger trains share certain tracks with freight trains. SEA evaluated the potential for increased accidents between freight trains and passenger trains, for both intercity and commuter trains. Since changes in the risks of passenger rail operations are directly related to changes in overall train activity, the safety analysis concentrated on rail line segments carrying both passenger and freight trains and would experience an increase in freight train traffic of one or more trains per day.

In Chapter 4, "System-Wide and Regional Setting, Impacts and Proposed Mitigation, SEA addressed the issue of potential increased risk to passenger train operations associated with the proposed Conrail Acquisition. System-wide, SEA identified 197 freight rail line segments that

[1] "Train miles" are calculated by multiplying the number of trains by the distance traveled. For example, on a typical 100 mile rail line, one million annual train miles results from operating 28 trains per day every day for 365 days.

also carry passenger trains. Of these, SEA analyzed 93 rail line segments due to an increase of one or more freight trains per day resulting from the proposed Acquisition. Four of these rail line segments occur in Michigan.

The Federal Railroad Administration (FRA) requires reports from railroads concerning all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). FRA requires the same reporting requirements for passenger train accidents. An average of fewer than 200 passenger train accidents per year (both Amtrak intercity and urban-area commuter trains) have occurred over the last three years. Most of these accidents were relatively minor and rarely involved any fatalities, but since the safety of passengers as well as property is frequently involved, their occurrence is of serious concern.

Given the limited number of passenger rail accidents, SEA was unable to accurately predict either the severity, location or timing of actual accidents. SEA therefore focused on estimating the potential risks of an accident. In this safety analysis, SEA used increased freight activity on rail line segments to estimate the changes in passenger train accident risks. To assess significance, SEA first determined whether the proposed Acquisition-related change in the projected accident rate was greater than an annual increase of 25 percent. SEA then determined if the predicted accident frequency was less than one accident in 150 years. Thus, SEA determined a potential impact to be significant if the projected annual increase in accidents was greater than 25 percent and the frequency was less than one accident in 150 years.

5-MI.5.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The pre-Acquisition accident interval for each rail line segment is shown in Table 5-MI-6. Accidents pose potential threats to passengers on the train; therefore, for each rail line segment, risk is expressed as the expected interval between events over the length of the rail line segment. Table 5-MI-6 shows the expected change in years between accidents for the individual rail line segments.

Table 5-MI-6
Estimated Change in Years Between Accidents

Site ID	From	To	Miles in State	Pre-Acquisition Accident Interval *	Post-Acquisition Accident Interval *
N-120	Jackson	Kalamazoo	67	250	113
N-121	West Detroit	Jackson	74	571	137
N-497	Kalamazoo	Porter, IN	79	1,334	133
S-210	W. Detroit	Dearborn	5	11,342	5,337

* Accident Intervals show years between accidents.

Based on information the railroads provided and SEA's independent analysis, SEA determined that the increased risk for passenger train accidents for three of the four rail line segments exceeded SEA's criteria for significance. SEA notes that one of the rail line segments, Kalamazoo to Porter, Indiana is owned and dispatched by Amtrak. SEA encourages Amtrak to implement any necessary modifications through its management of this rail line segment's operations. For the remaining two rail line segments, SEA anticipates that potential conflicts can be minimized by reinforcing passenger trains' priority over freight trains. It is SEA's preliminary recommendation that all freight trains, both opposing and moving in the same direction as passenger trains, be clear of the main track at least 15 minutes prior to the estimated arrival of the passenger train. This condition would permit the passenger train to pass safely and without delay.

5-MI.6 MICHIGAN SAFETY: HIGHWAY/RAIL AT-GRADE CROSSINGS

Increased train activity could affect the safety of roadway users at highway/rail at-grade crossings. To address potential changes in accident frequency, SEA compared existing accident frequency rates with accident frequency rates at all highway/rail at-grade crossings that would experience a Conrail Acquisition-related increase of eight or more trains per day. At these locations, SEA looked at the most recent five years of accident history available, and calculated the potential change in the number of years between accidents. SEA's analysis procedure considered the type of existing warning devices at the highway/rail at-grade crossings, including passive devices (signs or crossbucks), flashing lights, or gates.

To evaluate the significance of potential changes in accident frequency in Michigan, SEA categorized highway/rail at-grade crossings into two categories:

- Category A consisted of highway/rail at-grade crossings with a history of relatively frequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Michigan with accident frequency rates at or above the state's 50th highest accident frequency rate of one accident every five years (0.1882 accident frequency rate) to be Category A highway/rail at-grade crossings. To be conservative in the analysis process, SEA also considered highway/rail at-grade crossings with accident frequency rates at or above one accident every seven years (0.15 accident frequency rate) as Category A highway/rail at-grade crossings. For all Category A highway/rail at-grade crossings, SEA considered the relatively small accident frequency rate increase of one accident every 100 years (a 0.01 accident frequency rate increase) to be significant.

- Category B consisted of highway/rail at-grade crossings with a history of relatively infrequent train-vehicle accidents. SEA considered highway/rail at-grade crossings in Michigan with accident frequency rates less than one accident every seven years (less than 0.15 accident frequency rate) to be Category B highway/rail at-grade crossings. For these

crossings, SEA considered an accident frequency rate increase of one accident every 20 years (a 0.05 accident frequency rate increase) to be significant.

Table 5.MI-7 presents the results of SEA's analysis and appears at the end of this state discussion. A county by county summary of results follows.

5-MI.6.1 County Analysis

Jackson County

SEA's safety analysis showed that for the 17 highway/rail at-grade crossings studied in Jackson County, the predicted increases in accident frequency would range from 0.0033 to 0.0279. This translates into a range of increases from one accident every 303 years to one accident every 36 years. Based on its review of these highway/rail at-grade crossings, SEA found these predicted increases to be below the criteria for significance.

Monroe County

SEA's safety analysis showed that for the 28 highway/rail at-grade crossings studied in Monroe County, the predicted increases in accident frequency would range from 0.0026 to 0.0245. This translates into a range of increases from one accident every 385 years to one accident every 41 years. Based on its review of these highway/rail at-grade crossings, SEA found these predicted increases to be below the criteria for significance.

Washtenaw County

SEA's safety analysis showed that for the 30 highway/rail at-grade crossings studied in Washtenaw County, the predicted increases in accident frequency would range from 0.0033 to 0.0431. This translates into a range of increases from one accident every 303 years to one accident every 23 years. Based on its review of these highway/rail at-grade crossings, SEA found these predicted increases to be below the criteria for significance.

Wayne County

SEA's safety analysis showed that for the 39 highway/rail at-grade crossings studied in Wayne County, the predicted increases in accident frequency would range from 0.0066 to 0.0665. This translates into a range of increases from one accident every 152 years to one accident every 15 years. SEA determined that the predicted increase resulting from the proposed Conrail Acquisition was significant at Pennsylvania Road. This highway/rail at-grade crossing is classified as Category A. SEA found the predicted increases at the other locations to be below the criteria for significance.

5-MI.6.2 Summary of Potential Effects and Preliminary Recommended Mitigation

SEA determined that the proposed Conrail Acquisition would significantly increase the predicted accident risk at one highway/rail at-grade crossing in Michigan. Table 5-MI-8 shows SEA's recommended mitigation to reduce these risks.

SEA analyzed the accident frequency with and without the upgraded warning device in place, as shown in Table 5-MI-7 (presented at the end of the state discussion). With the mitigation measure, the accident frequency at this location would decrease to well below the pre-Acquisition level. SEA recommends that the railroads upgrade the existing warning device, as shown in Table 5-MI-8. This recommendation would eliminate the adverse effects on highway/rail at-grade crossing safety resulting from the proposed Conrail Acquisition in Michigan.

Table 5-MI-8
Recommended Mitigation to Improve Safety at Highway/Rail At-Grade Crossing in Michigan

County	Railroad Segment	FRA ID	Highway/Rail At-Grade Crossing	Existing Warning Devices	SEA's Proposed Mitigation
Wayne	S-020	511027V	Pennsylvania Road	Flashing Lights	Gates

5-MI.7 MICHIGAN SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary concern with the rail transportation of hazardous materials is a spill or accidental release resulting from a train accident. SEA analyzed all rail line segments where the number of car loads containing hazardous materials would increase as a result of the proposed Acquisition. This resulted in SEA evaluating rail line segments that were below the Board's thresholds for environmental analysis.

The Association of American Railroads (AAR), in conjunction with the Chemical Manufacturer's Association (CMA), developed standards and practices to manage the risk of a hazardous material spill that the railroads have adopted. The practices include identifying "key routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

5-MI.7.1 Rail Line Segment Analysis

As a result of the proposed Conrail Acquisition, the railroads would change the routing of many car loads of hazardous material. The designation of key routes would change as the railroads shift hazardous material traffic from one rail line to another. In addition, certain rail line segments that are currently key routes would carry increased volumes of cars containing hazardous material.

SEA applied two different criteria to determine if the effects of rerouting hazardous material car loads are potentially significant:

1. The volume of hazardous materials transported on a rail line would be 10,000 or more car loads per year. The Acquisition-related change in volume of hazardous material car loads would upgrade a rail line segment to a key route designation.

2. The volume of hazardous material car loads doubles, and exceeds 20,000 or more car loads per year. SEA has termed rail line segments which meet these criteria a "major key route."

Rail line segments that would meet the first criteria are considered "key routes" and warrant the base level mitigation. Rail line segments that meet the second criteria are considered "major key routes" and warrant expanded mitigation. Depending on the individual circumstances, a rail line segment could meet both criteria and therefore warrant both the base level and the expanded mitigation.

5-MI.7.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Potential Effects. Based on the information provided by the Applicants and SEA's independent analysis, SEA determined that two rail line segments in Michigan carrying increased amounts of hazardous material are of potential concern. Table 5-MI-9 shows these rail line segments, indicates the estimated annual car loads of hazardous material for both pre- and post-Acquisition, and identifies the key route status of each. SEA determined that one rail line segment currently carries less than 10,000 car loads of hazardous material per year but would increase to at least 10,000 car loads per year due to the proposed Acquisition. One route would at least double the volume of hazardous material transported, resulting in 20,000 or more car loads per year.

Table 5-MI-9
Rail Line Segments with Significant Increases in Annual Hazardous Material Car Loads

Site ID	Between	And	Miles in State	Estimated Annual Car Loads		Significance Thresholds	
				Pre-Acquisition	Post-Acquisition	New Key Route	Major Key Route
C-040	Carleton, MI	Toledo, OH	24	14,000	31,000		X
C-214	Detroit, MI	Plymouth, MI	25	8,000	13,000	X	

Preliminary Mitigation Recommendation. SEA recommends requiring CSX to bring the rail line segment between Detroit and Plymouth into compliance with AAR key route standards and practices.

For the segment in Table 5-MI-9 identified as a major key route, where the volume of hazardous material car loads would at least double and exceed 20,000 car loads, SEA recommends that CSX develop a Hazardous Materials Emergency Response Plan to contain and minimize the potential effects of any accidents or incidents. SEA will further recommend that CSX conduct hazardous materials accident simulations with the voluntary participation of emergency service providers along the rail line segment at least once every two years. Participants in these plans include county and municipal government, local fire departments, and medical and other emergency response teams.

5-MI.8 MICHIGAN TRANSPORTATION: PASSENGER RAIL SERVICE

In Michigan, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-related effects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Amtrak's Michigan Line currently provides service between Pontiac, Detroit and Chicago, Illinois utilizing Conrail rail lines between West Detroit and Kalamazoo. NS will acquire this rail line. Amtrak owns the rail line west of Kalamazoo to Porter, Indiana. Amtrak trains also utilize Conrail's Chicago Line at Porter, Indiana, and Amtrak also provides service in Michigan between Grand Rapids and Chicago, Illinois using the CSX line to Porter, Indiana. Intercity passenger rail service effects are also discussed in the system-wide analysis in Section 4.7.1, "Intercity Passenger Rail Service."

Commuter Rail

No commuter rail service exists in Michigan.

5-MI.8.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Because there is no existing commuter rail service in Michigan, SEA has determined there will be no adverse effects and no mitigation is required.

5-MI.9 MICHIGAN TRANSPORTATION: HIGHWAY/RAIL CROSSING DELAY

In order to analyze the effects of the proposed Conrail Acquisition on the roadway system at existing highway/rail at-grade crossings, SEA identified the crossings on rail line segments that would exceed the Board's environmental analysis thresholds for air quality. SEA then calculated potential changes in vehicle delay at these crossings where average daily traffic (ADT) volumes are 5,000 or greater. SEA concluded that the potential effect of increased train traffic for highways with ADT volumes below 5,000 would be experienced by very few drivers and the additional vehicular delay would be minimal. The description of levels of service and criteria of significance have been addressed in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," and Appendix C, "Traffic and Transportation."

5-MI.9.1 County Analysis

Six counties in Michigan have highway/rail at-grade crossings for which SEA performed vehicle delay calculations. Table 5-MI-10, presented at the end of the state discussion, contains a summary of these results.

Calhoun County

Three crossings analyzed in Calhoun County would have a decrease in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be A and B. Under the post-Acquisition conditions the queues would decrease by one and two vehicles.

Jackson County

Ten crossings analyzed in Jackson County would have a decrease in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be A and B. Under the post-Acquisition conditions the queues would decrease by up to two vehicles.

Kalamazoo County

Seven crossings analyzed in Kalamazoo County would have a decrease in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be A and B. Under the post-Acquisition conditions the queues would decrease by up to four vehicles.

Monroe County

The five crossings analyzed in Monroe County would have a minimal increase in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be C. The largest increase in maximum queue would be one vehicle.

Washtenaw County

Six crossings analyzed in Washtenaw County would have a decrease in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be A and B. Under the post-Acquisition conditions the queues would decrease by up to three vehicles.

Wayne County

The 18 crossings analyzed in Wayne County would have a decrease in crossing delay per stopped vehicle. The levels of service under post-Acquisition conditions would be in the range of A to C. Under the post-Acquisition conditions the queues would decrease by up to four vehicles.

5-MI.9.2 Summary of Potential Effects and Preliminary Recommended Mitigation

The proposed Conrail Acquisition would have no significant effect on vehicle delay at highway/rail at-grade crossings in Michigan. Therefore, SEA does not propose mitigation.

5-MI.10 MICHIGAN TRANSPORTATION: ROADWAY EFFECTS FROM RAIL FACILITY MODIFICATIONS

SEA evaluated the impact on highway/rail at-grade crossing delay resulting from the construction of a new rail line connection in Detroit. SEA also evaluated the impact of additional truck traffic on the roadway system resulting from increased railroad activity at the existing Melvindale intermodal facility.

5-MI.10.1 Constructions

SEA analyzed the transportation effects of proposed new construction projects in Michigan resulting from the proposed Conrail Acquisition. For the new rail constructions, the transportation effects are related to highway/rail at-grade crossings. Therefore, SEA used the same analysis methods as described for highway/rail at-grade crossing delay and safety.

One rail construction proposed by NS in Michigan requires environmental analysis. A description of the transportation analysis is provided below.

Construction: Ecorse Junction Connection (Wayne County) (NS)

NS proposes to build a rail connection between the existing NS and east-west and north-south Conrail lines in the south portion of Detroit. It would be approximately 400 feet long. This project also includes approximately 6,000 feet of rail and track upgrade on the existing Conrail line. This connection would handle seven trains per day. Figure 5-MI-3 presented at the end of the state discussion shows the area of the proposed rail line connection.

5-MI.10.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Because there are no highway/rail at-grade crossings within the limits of construction, it is SEA's preliminary conclusion that there would be no effect on highway traffic from this proposed rail line connection.

5-MI.10.3 Intermodal Facilities

One intermodal facility in Melvindale would experience an increase in truck activity as a result of the proposed Acquisition. Others would experience decreases in truck activity. The following is a summary of NS intermodal operations in Melvindale. Figure 5-MI-2 shows its location.

Intermodal Facility: Detroit - Melvindale (Wayne County) (NS)

NS has two adjacent intermodal facilities located at Oakwood Yard in the City of Melvindale southeast of downtown Detroit. One is a conventional intermodal facility and the other is a Triple Crown Service facility. They have separate truck gates and they are operated independently. Based on site visits, SEA determined it would be appropriate to study them as one facility because they are adjacent to each other. The main gate for truck entry and exit movements for the conventional intermodal facility is located on South Dix Avenue. The main gate for truck entry and exit movements to the Triple Crown Service facility is located on Wabash Street. Interstate highways 75 and 94 serve the combined facilities. Interstate 75 is located approximately one-half mile to the east and Interstate 94 is located approximately one mile to the west of the combined facilities. The primary route trucks use between the conventional intermodal facility and Interstate 94 is Schaefer Highway to South Dix Avenue. The primary route trucks use between the Triple Crown Service facility and Interstate 75 includes Dix-Toledo Highway to Wabash Street.

Table 5-MI-11 summarizes the traffic volumes of these additional truck traffic on the roadways approaching the combined conventional and Triple Crown Service facilities.

Table 5-MI-11
Traffic Analysis Summary for Detroit-Melvindale Intermodal Facility

Roadway Name	Roadway ADT	Increased Daily Truck Trips Using Roadway	Roadway ADT Percent Increase
Interstate 94	155,500 [a]	84	0.05%
Schaefer Hwy.	26,500 [b]	84	0.32%
South Dix Ave.	13,500 [b]	84	0.62%
Interstate 75	148,300 [a]	32	0.02%
Dix-Toledo Rd.	19,300 [b]	32	0.17%
Wabash St.	2,900 [c]	32	1.10%

[a] From Michigan Department of Transportation.
[b] From Southeast Michigan Council of Governments.
[c] From Traffic Counts Conducted by SEA.

The conventional intermodal facility currently handles approximately 61 trucks per day. The proposed Acquisition would increase this figure to a total of 103 trucks per day. The Triple Crown Service facility currently handles approximately 196 trucks per day. The proposed Acquisition would increase this figure to a total of 212 trucks per day. This increase of 58 trucks per day combined for both facilities corresponds to 116 additional truck trips per day. The breakdown for each facility would be 84 additional truck trips per day for the conventional intermodal facility and 32 additional truck trips per day for the Triple Crown Service facility.

SEA assumed that the 84 additional daily truck trips generated by the conventional facility would use Interstate 94, Schaefer Highway and South Dix Avenue. SEA also assumed that all the 32 additional daily truck trips generated by the Triple Crown Service facility would use Interstate 75, Dix-Toledo Highway, and Wabash Street.

5-MI.10.4 Summary of Potential Effects and Preliminary Recommended Mitigation

The analysis results show that the total daily increase in truck traffic will be less than two percent of the average daily traffic (ADT) for all the study area roadways. Therefore, it is SEA's preliminary conclusion that these increases in truck traffic would have insignificant effects on the area roadways.

5-MI.11 MICHIGAN AIR QUALITY

This section summarizes the change in air pollutant emissions that would result from the proposed Acquisition-related operational changes in the State of Michigan. The primary air pollutant emission sources from trains and related activities include locomotive emissions on rail line segments, at rail yards, and at intermodal facilities. In addition to locomotive emissions, SEA evaluated emissions from other sources at intermodal facilities (idling trucks, lift cranes, etc.), motor vehicles idling near at-grade crossings, and decreases in truck emissions due to truck-to-rail freight diversions.

To analyze the air quality effects of the proposed Acquisition, SEA evaluated rail line segments, rail yards, and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis defined in Chapter 2, "Proposed Action and Alternatives." See Chapter 3, "Analysis Methods and Potential Mitigation Strategies," for additional information and a summary of the air quality analysis methodology. Appendix E, "Air Quality," contains a detailed description of methodology and detailed tables of results.

SEA addressed air pollutant emissions for sulfur dioxide (SO_2), volatile organic compounds (VOCs), particulate matter (PM), lead (Pb), nitrogen oxides (NO_x) and carbon monoxide (CO). SEA determined that emissions for SO_2, VOCs, PM and Pb would not exceed the emission screening thresholds for environmental analysis in any county. However, SEA found that these thresholds would be exceeded for NO_x in various counties in 17 states, and CO in three counties in two states (IL and OH). NO_x air pollutant emissions may affect a region's ability to attain the National Ambient Air Quality Standards for ozone. CO emissions may affect a local area's ability to attain the National Ambient Air Quality Standards for CO.

Two NS, one CSX, and three Shared Area (SA) rail line segments, one NS intermodal facility, and one CSX rail yard in Michigan exceeded the Board's threshold for air quality analysis. Table 5-MI-12 shows the air quality evaluation process that was followed. SEA identified six counties in Michigan which include these rail facilities. For these counties, SEA summed

emissions increases from changes on rail line segments and other activities and compared them to the air emission screening level that would require a permit if the source were a stationary source (rather than a mobile source, such as trains, trucks, and other vehicles). If the calculated emissions exceeded this screening level, SEA conducted a detailed emissions analysis known as a "netting analysis" in these counties. The netting analysis considered all emissions increases and decreases from proposed Acquisition-related activity changes. SEA compared the netting analysis results to the air emission screening level and additional analyses were performed for counties where netting analysis results exceeded the air emission screening level. For these counties, SEA inventoried all county air pollutant emissions sources to evaluate if proposed Acquisition-related emissions represented more than one percent of all emissions sources in the county.

Table 5-MI-12
Michigan Counties Evaluated in Air Quality Analysis

Counties Exceeding the Board's Activity Thresholds	O_3 Status [a]	Exceeds Emissions Screening Level Before Netting	Exceeds Emissions Screening Level After Netting	Exceeds 1 Percent of County Emissions
Calhoun	A	No	-	-
Jackson	A	No	-	-
Kalamazoo	A	No	-	-
Monroe	M	Yes	Yes	No
Wayne	M	Yes	Yes	No
Washtenaw	M	No	-	-

[a] A= Attainment Area, M= Maintenance Area, N= Nonattainment Area, as defined in the Clean Air Act.

The emissions estimates presented in Appendix E, "Air Quality," show that the increased county-wide air pollutant emissions from the facilities described above exceed the threshold for two counties in Michigan. SEA's analysis results for these counties are presented below.

5-MI.11.1 County Analysis

Monroe County

EPA has designated Monroe County as an attainment area for all pollutants. However, EPA has designated Monroe County as a maintenance area for O_3. Table 5-MI-13 shows that the net NO_x emissions increase in Monroe County, considering all calculated Acquisition-related emissions

changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant.

The increased NO_x emissions in Monroe County are well under one percent of the existing (1995) county-wide NO_x emissions. Therefore, SEA expects no potential adverse impact in Monroe County due to this small emissions increase.

Table 5-MI-13
Monroe County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (NS)	Milan, MI to Homestead, OH	-63.20
Rail Segment (NS)	Oakwood, MI to Butler, IN	10.83
Rail Segment (NS)	Airline, OH to River Rouge, MI	20.71
Rail Segment (CSX)	Wayne, MI to Carleton, MI	12.16
Rail Segment (CSX)	Carleton MI to Toledo, OH	230.05
Rail Segment (SA)	Carleton, MI to Ecorse, MI	15.99
Rail Yard (NS)	Milan	0.01
Truck Diversions (both)	County-wide	-50.70
At-Grade Crossings	Affected Crossings >5000 Vehicles/Day [a]	0.28
Total Acquisition-Related Net NO_x Emissions Increase		176.13
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		85,286.56
Percent Increase in County NO_x Emissions		0.21%

[a] "Affected Crossings" are those with an increase in rail segment activity over Board air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

Wayne County

EPA has designated part of Wayne County as a nonattainment area for CO, and the entire county as a maintenance area for O_3.

Table 5-MI-14 shows that the net NO_x emissions in Wayne County, considering all calculated Acquisition-related emissions changes, is above the emissions screening threshold of 100 tons/year used to determine if emissions changes are potentially significant. The increased NO_x

emissions in Wayne County are less than one percent of the existing (1995) county-wide NO_x emissions. Therefore, SEA determined there would be no potential adverse impact in Wayne County as a result of this small emissions increase.

Table 5-MI-14
Wayne County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Segment (CSX)	Detroit, MI to Plymouth, MI	-16.03
Rail Segment (CSX)	Plymouth, MI to Grand Rapids, MI	-5.74
Rail Segment (CSX)	Wixom, MI to Plymouth, MI	4.47
Rail Segment (CSX)	Plymouth, MI to Wayne, MI	6.46
Rail Segment (CSX)	Wayne, MI to Carleton, MI	62.96
Rail Segment (NS)	W Detroit, MI to Jackson, MI	147.46
Rail Segment (NS)	Airline, OH to River Rouge, MI	12.40
Rail Segment (NS)	Oakwood, MI to Butler, IN	36.04
Rail Segment (NS)	St Thomas, ON to W Detroit, MI	1.02
Rail Segment (SA)	Carleton, MI to Ecorse, MI	88.76
Rail Segment (SA)	W Detroit, MI to North Yard, MI	21.11
Rail Segment (SA)	W Detroit, MI to Delray, MI	8.98
Rail Segment (SA)	Delray, MI to Trenton, MI	-16.07
Rail Yard (CSX)	Detroit - Lincoln Park	-0.21
Rail Yard (CSX)	Detroit - Livermois	-4.68
Rail Yard (CSX)	Detroit - Mound Road	0.01
Rail Yard (CSX)	Detroit - North Yard	-5.14
Rail Yard (CSX)	Detroit - River Rogue	-9.22
Rail Yard (CSX)	Detroit - Warren/Sterl	1.21
Rail Yard (CSX)	Detroit - Middlebelt	-2.81
Rail Yard (CSX)	Detroit - Plymouth	1.03
Rail Yard (CSX)	Detroit - Rougemere	14.03
Rail Yard (CSX)	Detroit - Wayne	2.17

Table 5-MI-14
Wayne County Annual NO_x Emissions Summary

Activity Type (RR)	Identification	NO_x Emissions (tons/year)
Rail Yard (NS)	Detroit - Livermois	-2.76
Rail Yard (NS)	Detroit - North Yard	-2.54
Rail Yard (NS)	Detroit - River Rouge	-6.13
Intermodal Facility (CSX)	Detroit - Livernois	5.10
Intermodal Facility (NS)	Detroit - Livernois	-2.44
Intermodal Facility (NS)	Detroit - Delray	6.55
Intermodal Facility (NS)	Detroit - Oakwood/Melvindale	7.65
Truck Diversions (both)	County-wide	-53.73
At-Grade Crossings (both)	Affected Crossings >5000 Vehicles/Day[a]	0.27
Total Acquisition-Related Net NO_x Emissions Increase		300.18
NO_x Emissions Screening Level		100.00
Existing (1995) County Total NO_x Emissions		124,884.14
Percent Increase in County NO_x Emissions		0.24%

[a] "Affected Crossings" are those with an increase in rail segment activity over Board air quality analysis thresholds, and which have vehicle traffic levels over 5000 vehicles/day.

5-MI.11.2 Summary of Potential Effects and Preliminary Recommended Mitigation

While there are localized increases in emissions in some counties, the increases are not likely to affect compliance with air quality standards. Therefore, SEA has determined that air quality will not be significantly affected and no mitigation is necessary. See system-wide and regional discussion in Section 4.12 "Air Quality."

5-MI.12 MICHIGAN NOISE

To analyze the potential noise impacts of the proposed Acquisition, SEA evaluated rail line segments, rail yards and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis of noise. Although new construction projects and rail line abandonments can result in noise increases, the noise effects would be temporary and therefore, SEA did not evaluate them.

5-MI.12.1 Proposed Activities

Train noise sources include diesel locomotive engine and wheel/rail interaction noise (or wayside noise) and horn noise. Wayside noise affects all locations in the vicinity of the rail facility, and generally diminishes with distance from the source. Horn noise is an additional noise source at grade crossings, and also generally diminishes with distance. SEA performed an analysis to identify rail line segments, rail yards and intermodal facilities where the proposed changes in operations meet or exceed the Board's environmental analysis thresholds at 49 CFR 1105.7(e)(6). Where the proposed rail activity would exceed these thresholds, SEA calculated the 65 dBA L_{dn} noise contours for the pre- and post-Acquisition conditions. SEA based the noise level impact assessment on the projected activity level data provided by the railroads. SEA counted sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) within the noise contours for both pre-Acquisition and post-Acquisition operating conditions.

The CSX, NS and Shared Assets rail line segments, intermodal facilities and rail yards that would experience increases in traffic or activity meeting the Board's environmental analysis thresholds for Michigan are listed in Tables 5-MI-11-15 and 5-MI-11-16. Table 5-MI-11-17 shows the facilities with noise sensitive receptors exceeding 65 dBA L_{dn}.

For the Carelton to Toledo, OH and the Jackson to Kalamazoo rail segments, SEA calculated an increase of less than two dBA due to increased rail activity. In accordance with the methodology in Appendix F, this increase is insignificant and receptor counts were not made.

The counties where these facilities are located are listed in Section 5-MI.2 on proposed Conrail Acquisition activities in Michigan.

Table 5-MI-15
Rail Line Segments in Michigan that Meet or Exceed Board Thresholds for Noise Analysis

Site ID	Segment		Trains Per Day			Percent Change in Gross Ton Miles
	From	To	Pre-Acquisition	Post-Acquisition	Increase	
C-040[a]	Carelton	Toledo, OH	21.9	33.1	11.2	61
N-120[a]	Jackson	Kalamazoo	5.4	12.0	6.6	163
N-121	W. Detroit	Jackson	2.9	12.1	9.2	315
S-020	Carleton	Ecorse	2.0	11.2	9.2	1000
S-021	W. Detroit	North Yard	7.9	13.2	5.3	119

[a] SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

Table 5-MI-11-16
Intermodal Facilities That Exceed Board Thresholds for Noise Analysis

Intermodal Number	Intermodal Facility Location	Trucks Per Day		Change in ADT on local roads (%)	Change in dBA	Approx. distance (feet) to 65 dBA Ldn contour
		Pre-Acquisition	Post Acquisition			
NM-07[a]	Detroit, M.	257	314	0.1-1.1	<2	---

[a] SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

Table 5-MI-11-17
Noise Sensitive Receptors Exceeding 65 dBA L_{dn}

Site ID	Name	Pre-Acquisition	Post-Acquisition	Increase
Rail line Segments				
N-121	W. Detroit-Jackson	408	744	336
S-020	Carelton-Ecorse	54	446	392
S-021	W. Detroit-North Yard	53	83	30

5-MI.12.2 Summary of Potential Effects and Preliminary Recommended Noise Mitigation

There are different noise mitigation techniques used to reduce horn noise and wayside noise. These different types of noise and mitigation techniques are as follows:

Grade Crossing Noise Effects. The Federal Railroad Administration (FRA) has indicated that it will propose new rules on train horn blowing procedures in 1998. These new rules may allow communities to apply for an exception to horn blowing at certain grade crossings that meet explicit criteria. These criteria relate to so-called "quiet zones" where FRA would no longer require train engineers to sound the train horn at grade crossings with special upgraded safety features. Examples of such safety features include four-quadrant gates and median barriers that preclude motorists from entering the crossings while the crossing arm is down. Until FRA develops and implements these regulations, these measures are not feasible for SEA to require as mitigation. However, communities will have the opportunity to qualify for "quiet zones" once the FRA regulations are in place.

Wayside Noise Effect. Wayside noise is the sound of a train as it passes by. Wayside noise is comprised of steel wheel/rail interaction noise, and locomotive diesel engine noise. This type of noise can be reduced by constructing barriers between the railway noise source and adjoining land uses, and by installing building sound insulation. Noise barriers include earth berms and

walls that block the sound. Rail lubrication can be used to reduce "wheel squeal" noise on curved track. Building sound insulation consists of special windows and other building treatments that reduce interior noise. Noise barriers are the preferred type of noise mitigation for this project since barriers can be built on railroad property. Additional discussion of noise mitigation measures is included in Appendix F, "Noise Methods."

As noted above, for receptors near grade crossings that would experience increases in noise resulting from horn sounding, mitigation is not currently feasible. For areas affected by wayside noise, SEA considered rail line segments eligible for noise mitigation for noise sensitive receptors exposed to at least 70 dBA L_{dn} and an increase of at least 5 dBA L_{dn} due to increased rail activity.

SEA identified the rail line segment from Carleton to Ecorse (S-020) in the state of Michigan that potentially warrants noise mitigation according to the project mitigation criteria. Receptors exposed to 70 dBA L_{dn} and a 5 dBA L_{dn} (from wayside noise) would be a subset of all receptors along this rail line segment.

SEA's preliminary recommendation is that CSX and NS shall meet with the communities along the Carleton to Ecorse rail line segment to negotiate a mutually-acceptable binding agreement to implement measures to reduce the effects of engine and wheel noise for sensitive receptors experiencing noise levels above 70 decibels (dBA L_{dn}) and with an increase of 5 dBA or more. Appropriate measures could include noise barriers, sound insulation for buildings, or rail lubrication. If a mutually-acceptable binding agreement has not been reached prior to the release of the Final EIS, SEA may recommend that the Board, as a condition of the approval of the Application, direct CSX and NS to implement noise control measures on these rail line segments.

SEA recognizes the complexity of noise abatement along rail line segments and invites public comment on the appropriateness, nature and location of such measures. The Final Environmental Impact Statement will include more detailed information for areas along these rail line segments that potentially warrant noise mitigation. For example, this information will include areas where noise barriers may be effective in reducing wayside noise.

5-MI.13 MICHIGAN CULTURAL RESOURCES

Cultural resources include historic and archaeological features. SEA determined that potential effects to cultural resources would most likely occur during new construction activities.

Based on site visits and evaluation of railroad documents, SEA identified cultural resources that may be affected by Acquisition-related construction. SEA included qualified professionals in the fields of architectural history and archaeology specific to the State of Michigan.

5-MI.13.1 Construction

Acquisition-related construction in Michigan will take place in Detroit at the Ecorse Junction, between Fort Street and the Rouge River.

Construction: Ecorse Junction Connection (Wayne County, MI) (NS)

SEA conducted a site visit, and based on its findings, determined that there are no cultural resources at the Ecorse Junction Construction Site. Therefore, SEA determined no adverse effects would occur due to the proposed Acquisition. Letters from the SHPO on January 22, 1997, February 3, 1997, February 4, 1997, and February 14, 1997, corroborate that no cultural resources exist at the construction site. Refer to Appendix M for agency correspondence.

Since SEA determined there would be no adverse impacts to cultural resources, SEA did not recommend mitigation.

5-MI.14 MICHIGAN HAZARDOUS MATERIALS AND WASTE SITES

In analyzing the effects on hazardous waste sites for the proposed Conrail Acquisition, the primary issue addressed was whether proposed construction and abandonment activities would disturb contaminated areas. SEA identified potential impacts on hazardous waste sites and related environmental concerns for each location where proposed Acquisition-related construction or abandonment activities would take place.

SEA investigated the following site in Michigan for potential hazardous materials or waste impacts:

- Ecorse Junction Connection.

5-MI.14.1 Construction: Ecorse Junction Connection (Wayne County, MI) (NS)

Existing Environment. The Environmental Data Resources, Inc. (EDR, 1997) report identified no hazardous waste sites or related environmental concerns within 500 feet of the proposed connection. However, the EDR report identified four sites that could not be mapped due to inadequate address information. SEA could not locate these sites. SEA supplemented this information through contact with local and state officials (Fire Inspector Rainero and Michigan Department of Environmental Quality Inspector Zimmerman) and a site visit on July 22, 1997. SEA determined that there are three known hazardous waste sites or related environmental concerns within 500 feet of the construction site. Key site information is summarized below:

- During the site visit, SEA identified the Precision Diversified Products site, which has a 1- to 2-acre refuse pile (as much as 10-15 feet high) on the west-southwest corner of the

property. It is approximately 30 to 50 feet north of the construction area. Refuse included scrap metal, household debris, and general trash. The area is relatively flat; the railroad is slightly lower in elevation. Therefore, the railroad may receive some surface runoff from the refuse area.

- During the site visit, SEA observed that a portion of a hot oil pipe was exposed and buckled (the pipe was rusty and uninsulated). It is approximately 300 feet northeast of the proposed construction area.

- Fire Inspector Rainero reported one train derailment on March 26, 1987. The incident report stated that three liquid petroleum gas tank cars had derailed and one car had fallen on its side. The incident report also stated that no spills were reported or clean-up measures required.

Potential Effects and Preliminary Recommended Mitigation. SEA identified three hazardous waste sites or other related concerns within 500 feet of the proposed connection. In addition, the locations of the four sites that could not be mapped are unknown. The proposed connection could disturb known hazardous materials. NS would conduct appropriate surveys to more precisely locate these sites and either avoid them during construction or assess/remediate them as required. If hazardous materials are encountered during construction, NS would follow appropriate regulations and procedures described in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," and Appendix H. Because existing regulatory requirements of other agencies and standard construction practices of the railroad adequately address potential disturbance of contaminated areas, it is SEA's preliminary determination that no additional mitigation is necessary.

5-MI.15 MICHIGAN NATURAL RESOURCES

SEA focused the natural resources analysis on any proposed physical alteration affecting water resources, wetlands, biological resources, and wildlife habitats. SEA determined that the potential for impacts to natural resources would most likely be associated with site-specific projects related to the proposed abandonment of rail lines and construction of new connector lines, rail yards, and intermodal facilities.

SEA evaluated one proposed construction site in Michigan. SEA contacted the appropriate Federal and state regulatory and review agencies for natural resources regarding the proposed project that would occur within their jurisdictions. Specifically, for the state of Michigan, SEA coordinated with:

- U.S. Department of Agriculture Forest Service.
- U.S. Department of Agriculture Natural Resource Conservation Service.
- U.S. Department of the Army Corps of Engineers.
- U.S. Department of the Interior Fish and Wildlife Service.

- U.S. Department of the Interior National Park Service.
- U.S. Environmental Protection Agency.
- Michigan Department of Natural Resources.

SEA determined that potential impacts to natural resources could occur at Ecorse Junction.

The following tables present the Federally listed threatened and endangered animal and plant species that occur in Michigan, as identified by the United States Fish and Wildlife Service (USFWS) Division of Endangered Species (August 1997). Based on information from the USFWS local field office, SEA identified the species known to occur in the county affected by proposed Acquisition-related activities. Appendix I provides a description of critical habitats of these threatened and endangered species. "Threatened" describes a species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. "Endangered" describes a species that is in danger of extinction within the foreseeable future throughout all or a significant portion of its range. The USFWS lists the piping plover as endangered within the Great Lakes watershed in the state of Michigan; elsewhere, it is listed as threatened.

Table 5-MI-18
Federally Protected Animal Species Listed for Michigan

Group	Common Name	Scientific Name	Status	Wayne County
Vertebrates				
Mammal	Indiana Bat	*Myotis sodalis*	Endangered	
Mammal	Gray Wolf	*Canis lupus*	Endangered	
Bird	Bald Eagle	*Haliaeetus leucocephalus*	Threatened	X
Bird	American Peregrine Falcon	*Falco peregrinus anatum*	Endangered	X
Bird	Piping Plover	*Charadrius melodus*	Endangered	
Bird	Kirtland's Warbler	*Dendroica kirtlandii*	Endangered	
Reptile	Northern Copperbelly Water Snake	*Nerodia erythrogaster neglects*	Threatened	
Invertebrates				
Clam	Clubshell	*Pleurobema clava*	Endangered	
Clam	Northern Riffleshell	*Epioblasma torulosa rangiana*	Endangered	X

Insect	Hungerford's Crawling Water Beetle	*Brychius hungerfordi*	Endangered	
Insect	American Burying Beetle (= giant carrion)	*Nicrophorus americanus*	Endangered	
Insect	Karner Blue Butterfly	*Lycaeides melissa samuelis*	Endangered	
Insect	Mitchell's Satyr Butterfly	*Neonympha mitchellii mitchellii*	Endangered	

Source: USFWS - Region 3, Fort Snelling, MN

Table 5-MI-19
Federally Protected Plant Species Listed for Michigan

Family Name	Common Name	Scientific Name	Status	Wayne County
Asteraceae	Pitcher's Thistle	*Cirsium pitcheri*	Threatened	
Iridaceae	Dwarf Lake Iris	*Iris lacustris*	Threatened	
Orchidaceae	Small Whorled Pogonia	*Isotria medeoloides*	Threatened	
Scrophulariaceae	Michigan Monkey-Flower	*Mimulus glabratus* var. *michiganensis*	Endangered	
Orchidaceae	Eastern Prairie Fringed Orchid	*Platanthera leucophaea*	Threatened	X
Asteraceae	Houghton's Goldenrod	*Solidago houghtonii*	Threatened	
Polypodiaceae	American Hart's-Tongue Fern	*Asplenium scolopendrium var. americana (=Phyllitis japonica)*	Threatened	

Source: USFWS - Region 3, Fort Snelling, MN

5-MI.15.1 Summary of Potential Effects and Preliminary Recommended Mitigation for New Constructions

Construction: Ecorse Junction Connection (Wayne County, MI) (NS)

The proposed action involves upgrading and construction of approximately 400 feet of existing track. Figure 5-MI-3 depicts the site and the surrounding conditions.

Water Resources

Existing Conditions-Water Resources. Based on review of U.S. Geological Survey topographic maps and National Wetland Inventory maps, and on observations made during site visits, SEA determined that several water resources are located near the Ecorse Junction construction area. The Rouge River is located 500 feet northeast of the existing Conrail main line, approximately 1,000 feet east of Ecorse Junction. SEA noted a small (approximately 20 feet by 50 feet) intermittent pool of water, a potential wetland area, located just north of the point where the existing Conrail and Grand Trunk Western (GTW) lines cross. Upon field review, SEA determined that this area is not a wetland because it lacks hydric soils and strong indicators of wetland hydrology. SEA observed no other wetlands or water bodies within 500 feet of the proposed construction area or in the immediate vicinity of the Ecorse Junction site.

Based on the review of Federal Emergency Management Agency Flood Insurance Rate Maps, SEA determined that the Ecorse Junction site is not located within the 100-year floodplain.

Potential Effects-Water Resources. SEA determined that the proposed upgrade and construction at Ecorse Junction would not adversely affect any surface waters or wetlands. The proposed new connection would use an existing Conrail bridge to cross one drainage ditch, which does not meet the criteria for consideration as a wetland area. Therefore, NS may not require authorization under Section 404 of the Clean Water Act. Additionally, a National Pollutant Discharge Elimination System stormwater discharge permit may not be required under Section 402 of the Clean Water Act because the total estimated area of land disturbance is estimated to be less than five acres.

SEA also evaluated potential impacts of soil erosion resulting from cleared vegetation and exposed soil, and concluded that the proposed construction at Ecorse Junction would not cause adverse impacts. Since state and local authority require the implementation of Best Management Practices to control runoff and to stabilize the soil. In addition to implementing these Best Management Practices, NS would restore disturbed soil areas located outside the existing railroad bed through re-seeding of grass. The Best Management Practices measures would also prevent or minimize any potential impacts to the Rouge River, located approximately 500 feet northeast of the existing Conrail main line. In addition, SEA determined that the proposed project at Ecorse Junction would not alter any storm water drainage patterns at the site.

Since the proposed construction at Ecorse Junction is not located within the 100-year floodplain, SEA determined that there would be no adverse impacts to floodplains.

Biological Resources

During the site visit, SEA determined that the existing Ecorse Junction site is located in an industrial area where much of the surrounding land has previously been developed for rail activity and urban industry.

Existing Conditions - Vegetation. During the site visit, SEA observed that gravel covers most of the proposed Ecorse Junction construction site, with occasional patches of field grasses and weedy annuals interspersed with scrub-shrub communities that are characteristic of disturbed areas. In addition, sparse vegetation composed of grasses and weeds covers the area between the track lines.

Potential Effects-Vegetation. SEA determined that the proposed construction at Ecorse Junction would affect narrow strips of vegetation, comprised of grasses and scrub-shrub communities which border both sides of the existing Conrail and NS right-of-ways, by removing the vegetation and replacing it with a rail facility. This vegetation is characteristic of disturbed areas, and SEA concluded that these species would naturally revegetate any disturbed areas not required for railroad facilities, following construction at the Ecorse Junction site.

Existing Conditions - Wildlife. SEA determined that the site does not provide suitable habitat for most wildlife species, except for those species adapted to disturbed areas. These wildlife species include amphibians, reptiles, and occasional songbirds, as well as small mammals such as field mice, voles, and moles.

Potential Effects - Wildlife. Since the Ecorse Junction construction area has limited value as wildlife habitat, SEA concluded that the proposed action would not cause significant impacts to wildlife. SEA further concluded that the proposed project would not adversely affect the movement or migration of wildlife at the Ecorse Junction site.

Existing Conditions - Threatened and Endangered Species. Based on coordination with representatives of the USFWS in the East Lansing field office, SEA determined that three animal and one plant species Federally listed as threatened or endangered are known to occur in Wayne County. These are shown in Table 5-MI-18 and 5-MI-19. Representatives of the USFWS noted that the threatened bald eagle does not nest in this county, but that they have reports of this species foraging in the county and further stated that the bald eagle could occur in the Ecorse Junction area. The USFWS representatives stated that the endangered American peregrine falcon does nest in the Detroit area and actively uses the area for flyways. SEA determined that the proposed construction at Ecorse will not affect the peregrine falcon's use of the area. The USFWS representatives also stated that, because the non-native zebra mussel has affected the

distribution of the endangered northern riffleshell, they would require a survey for this protected species if any in-water work is proposed. Because no in-water work is proposed for the Ecorse Junction construction area, SEA concluded that there will be no impact to the northern riffleshell by the proposed construction.

During the site visit to the proposed Ecorse Junction construction area, SEA did not observe any of these Federally listed threatened or endangered species. Also during the site visit, SEA evaluated the habitat present at the site for its potential to support these protected species and found that the area does not support the habitat requirements of these listed species. Based on these findings, SEA determined that there is minimal potential for the presence of the Federally listed threatened or endangered species at the Ecorse Junction site.

Potential Effects-Threatened and Endangered Species. Since SEA determined that there are no Federally listed threatened or endangered species, or the habitat to support them, in or near the proposed Ecorse Junction construction site, SEA concluded that there would be no adverse impacts to any of these Federally protected species or their habitat. SEA also concluded that the proposed action would not adversely affect critical habitat of any listed species.

Existing Condition-Parks, Forests, Preserves, Refuges, and Sanctuaries. SEA contacted representatives of the USFWS, the National Park Service and the U.S. Forest Service to identify land within the jurisdiction of these Federal agencies. Based on this coordination, SEA determined that there are no Federal or state parks, forests, preserves, refuges, or sanctuaries located within or adjacent to the proposed construction site at Ecorse Junction.

Potential Effects-Parks, Forests, Preserves, Refuges, and Sanctuaries-Ecorse Junction (NS Construction). Because there are no Federal or state parks, forests, preserves, refuges, or sanctuaries located within one mile of the proposed construction area at Ecorse Junction, SEA concluded that the proposed construction activities would not adversely affect these types of resources.

Preliminary Recommended Mitigation: Ecorse Junction

Due to Best Management Practices used in the railroad's construction specifications and regulatory programs governing effects on wetlands, water resources, and protected species, it is SEA's preliminary determination that no mitigation is necessary. However, as a condition of approval, SEA would require NS to conform to its standard specifications during construction. These standard specifications are presented in Chapter 3, Section 3.15 "Natural Resources."

5-MI.16 MICHIGAN LAND USE/SOCIOECONOMICS

For the land use/socioeconomics analysis, SEA evaluated potential changes in the physical environment related to the proposed Conrail Acquisition. The issues included consistency with

current land use plans and existing Coastal Zone Management plans, potential effects on prime farmland, and suitability of abandoned rights-of-way for alternative public uses.

5-MI.16.1 Summary of Potential Effects and Preliminary Recommended Mitigation for New Constructions

Construction: Ecorse Junction (Detroit) (Wayne County, Michigan) (NS)

The proposed action at the Ecorse Junction site is the upgrading of an existing Conrail track by NS from Oakwood Yard to River Rouge Yard and the construction and operation of a new turn out crossover.

Existing Land Use. Industrial land uses, rail and utilities dominate the area around the proposed Ecorse Junction construction site. The site is within both the incorporated jurisdictions of Detroit and River Rouge. Interstate 75 overpasses the site. The proposed construction would occur within existing railroad rights-of-way.

Existing Land Use Plan/Zoning. The proposed construction site is zoned for industrial uses in both Detroit and River Rouge.

Consistency with Local Land Use Plan. The proposed construction is consistent with the future land use plan and map of the City of River Rouge and with the future land use plan and zoning of the City of Detroit.

Prime Farmland. NRCS has not classified the soils at the site as prime farmland.

Coastal Zone. The site is not within a designated coastal zone.

Indian Reservations. According to the Bureau of Indian Affairs Eastern Area Office, no Federally recognized Indian tribes or Indian reservations exist or in close proximity to the Ecorse Junction site. SEA is consulting with the Minneapolis Area Office and will include this response in the Final EIS.

Based on the findings described above, it is SEA's preliminary determination that there would be no significant impacts to land use associated with the proposed Acquisition at the Ecorse Junction site. Because there are no significant impacts, SEA does not recommend mitigation.

5-MI.17 MICHIGAN ENVIRONMENTAL JUSTICE

As part of its analysis, SEA examined activities associated with the proposed Conrail Acquisition for environmental justice impacts (disproportionately high and adverse impacts to minority and low-income populations) in accordance with Executive Order 12898. As described

in the Environmental Justice Methodology in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," SEA first categorized the nature of the populations in areas where Acquisition-related activities are proposed. SEA determined whether the population in such areas met the following environmental justice thresholds: (1) greater than 50 percent of the population is minority or low-income, or (2) the minority or low-income population percentage is 10 percent greater than the minority or low-income population percentage in the county.

Next, SEA ascertained whether this population fell within an area of potential effect. SEA defined a typical zone on either side of a rail line segment or proposed construction site, or bordering a railroad intermodal facility or rail yard, as an area of potential effect. In general, the extent of an area of potential effect may vary depending on the nature of the changes in rail activity associated with it, but such areas typically extend 400 to 1500 feet out from the rail line segment or facility being analyzed.

SEA then evaluated these areas of potential effect for proposed Acquisition-relatedactivities that would meet or exceed the Board's thresholds for environmental analysis. In this analysis, SEA evaluated potential impacts on safety, transportation, air quality, noise, cultural resources, hazardous waste sites, hazardous materials transport, natural resources, and land use/socioeconomic effects. SEA also visited the sites of proposed construction for new rail line connections, rail line segments, intermodal facilities, and rail yards.

SEA developed and executed expanded public outreach efforts for those jurisdictions that met both SEA's thresholds for environmental justice and the Board's thresholds for environmental significance. SEA designed the public outreach process to seek widespread notice and dissemination of SEA's environmental impact analysis; provide additional opportunities for community input to the NEPA process; solicit information about cumulative effects in minority and low-income communities; and allow minority and low-income communities to assist in fashioning appropriate alternatives and mitigation measures. SEA is placing additional copies of the DEIS in jurisdictions with high proportions of minority and low-income populations that do not have significant environmental impacts which could result from the proposed Acquisition.

This section presents the results of those evaluations and analysis. A complete list of all the sites analyzed for environmental justice impacts is presented in Appendix K.

5-MI.17.1 Michigan Environmental Justice Setting

In Michigan, intermodal facilities and associated truck routes with proposed changes in activity levels did not meet either the minority or low-income population thresholds for further environmental justice analysis

New Constructions

The new construction proposed in Detroit, Wayne County, Michigan at Ecorse Junction would involve upgrading an existing Conrail track from Oakwood Yard to River Rouge Yard. The design includes approximately 6,000 linear feet (1.1 miles) in upgrades to existing rail line and approximately 400 linear feet of new rail line constructions. Table 5-MI-20 presents the existing minority and low-income composition of the area of potential effect surrounding the proposed Ecorse Junction construction.

Table 5-MI-20
Michigan Environmental Justice Site Summary for New Constructions

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Wayne County	2,111,687	43.86%	20.07%	NA	
Ecorse Jct. (NX-08)	2,541	52.89%	38.79%	Yes	Yes

Rail Yards

There is one rail yard at Rougemere with proposed changes in the number of rail cars handled that meets or exceeds the Board's thresholds for environmental analysis. This rail yard is located at the end of the Carleton to Ecorse rail line segment. The following table presents the existing minority and low-income composition of the area of potential effect surrounding the rail yard.

Table 5-MI-21
Michigan Environmental Justice Site Summary for Rail Yards

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Wayne County	2,111,687	43.9%	20.1%	NA	
Rougemere (CY-03)	4,224	6.6%	46.8%	No	Yes

Rail Line Segments

Two rail line segments in Michigan with proposed traffic increases, meet the environmental justice population thresholds. The following table presents the existing minority and low-income

composition of the area of potential effect surrounding the two rail line segments in Michigan that meet the environmental justice population thresholds.

Table 5-MI-22
Michigan Environmental Justice Summary for Rail Line Segments

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low Income Population
Wayne County	237,813	43.9%	20.1%	NA	
W. Detroit - North Yard (S-021)	2,678	73.2%	45.1%	Yes	Yes
W. Detroit - Delray (S-022)	3,522	30.0%	43.9%	No	Yes

5-MI.17.2 Summary of Potential Effects and Preliminary Recommended Mitigation

The following table summarizes the rail line segments that met either the minority or low-income population thresholds, and for which SEA has identified a potential environmental impact. Sites and rail line segments that did not meet either of these criteria, that is, did not have an environmental justice population or were not affected, are not discussed further in this section.

Table 5-MI-22
Michigan Environmental Justice Impacts Summary

Location (Area of Potential Effect)	Resource Impacts							
	Noise	Air Quality	Hazardous Materials Transport	Hazardous Materials	Natural Resources	Transportation or Safety	Land Use	Cultural Resources
Rail Line Segments								
Detroit - N. Yard (S-021)	Y[a]	NA	N	N	NA	N	NA	NA

Y[a]= Impact that does not meet Board thresholds for Significance
Y = Impact that does meet Board thresholds for Significance
N = No impact
NA= Not applicable/No Environmental Analysis according to Scope

Impact Analysis - Rail Line Segments

Detroit - N. Yard. Based on currently available information, SEA has identified potential noise effects along this shared rail line segment, that begins at West Detroit Yard in southwest Detroit and runs northeast to the North Yard located near the junction of Interstates 75 and 94 and continues northeast through Detroit. Up to 30 noise receptors could be affected by the proposed increase in train traffic, from 7.9 to 13.2 trains per day on this rail line segment.

Populations along this rail line segment that exceed the environmental justice thresholds are located within the City of Detroit. The population affected by the proposed action would be predominately African American (approximately 69 percent) and low-income (approximately 45 percent). Based on the potential environmental effects identified and the characteristics of the population affected, the proposed increase in activity along this rail line segment may result in a potential environmental justice effect.

In accordance with the Executive Order on Environmental Justice, SEA is conducting additional public outreach in the City of Detroit as part of its analysis of environmental effects of the proposed Conrail Acquisition.

Mitigation

SEA is currently developing additional mitigation strategies in coordination with the local community and will report on these strategies in the Final EIS. As SEA continues to perform outreach to the community and additional site-specific noise analysis, SEA will determine the extent and nature of potential environmental justice impacts. If an environmental justice effect exists, SEA will determine if mitigation would be practicable. This coordination with the local community as part of the on-going community outreach process will be reported in the Final EIS.

5-MI.18 MICHIGAN CUMULATIVE EFFECTS

Within the State of Michigan, the Applicants propose the following activities that meet or exceed the Board's thresholds for environmental analysis: increased traffic along six rail line segments; increased traffic at one existing intermodal facility and one new rail yard; and one proposed construction project. Table 5-MI-24 addresses other potential actions brought to SEA's attention that, when combined with the proposed Acquisition, could contribute to a cumulative impact. SEA was made aware of these activities through site visits and public comment. Local agencies provided the information below to SEA within the schedule specified in the scope for review and analysis.

Table 5-MI-23
Information Provided to SEA About Other Activities or Projects

Action-Type	Site	Information from Site Visit or Public Comment	Relationship to Proposed Acquisition
Construction of Connection	Ecorse Junction (MI)	Automakers, MDOT, municipalities planning project underway to build joint intermodal at Livernois site. Potential $150 million infrastructure.	Related.

Cumulative Effects Findings

The presence of the Livernois planning project may indicate local policy to encourage consolidation of intermodal facilities to reduce traffic impacts on roadways from dispersed intermodal sites.

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any other activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of Michigan.

Cumulative Effects Mitigation Measures

SEA encourages Norfolk Southern to meet with the agency responsible for the Livernois intermodal project to determine if this is a funded activity and if it would be adversely affected by the proposed Ecorse Junction construction. Elsewhere, no mitigation measures are necessary, due to a lack of cumulative effects.

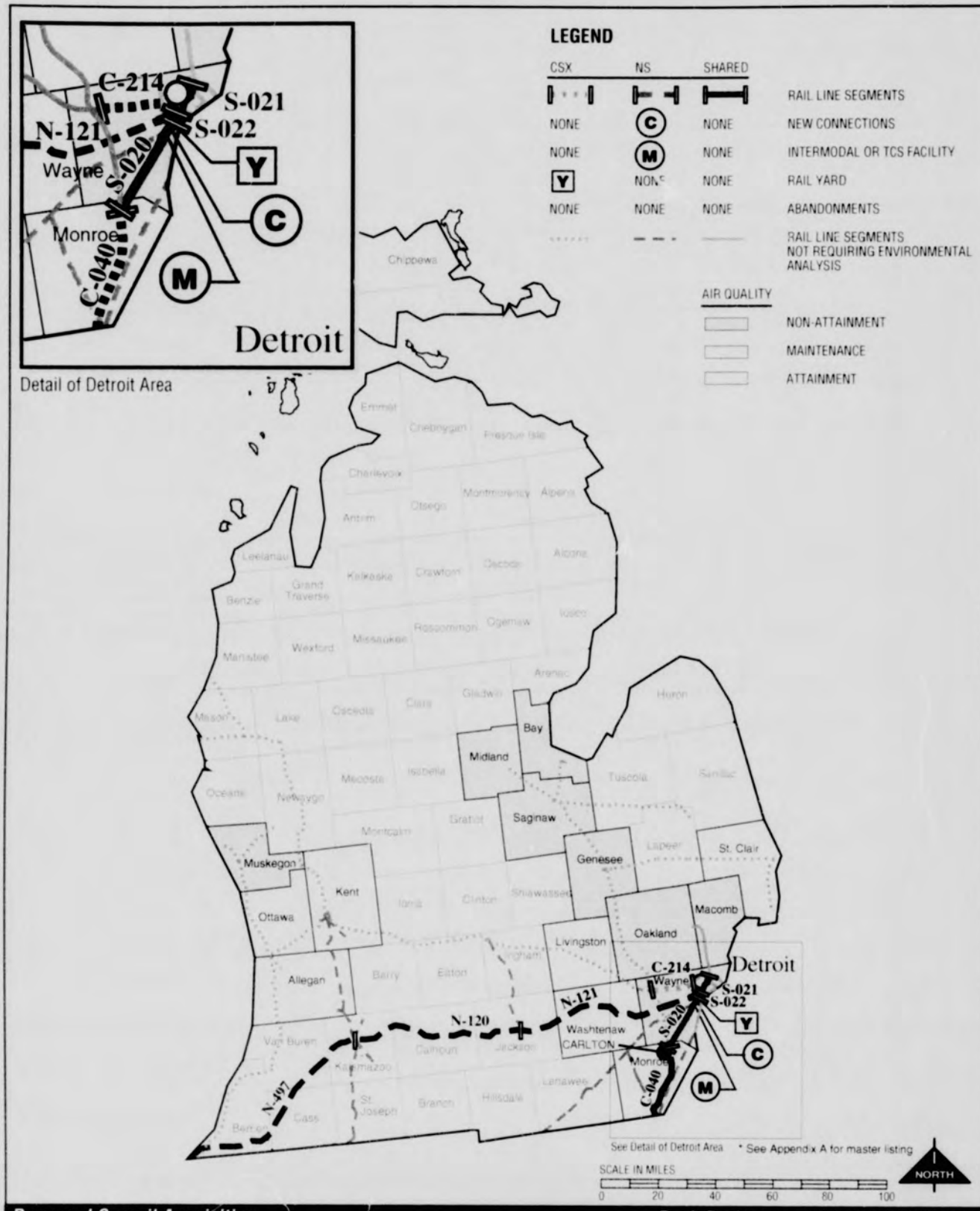
5-MI.19 MICHIGAN AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. The following table provides a list of agencies and local governments that have submitted environmental comments for the State of Michigan. A complete list of entities that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-MI-25
Agencies in Michigan Submitting Environmental Comments

Entity	Nature of Comment(s)
Dearborn, City of	Noise
Detroit, City of	Land use
Gibraltar, City of	At-grade crossing safety and emergency response
Melvindale, City of	Land use, noise, water resources, and abandonment
Michigan Department of Environmental Quality	Land use
River Rouge, City of	At-grade crossing safety and delay
Wayne County	Traffic congestion, emergency response, at-grade crossing safety, hazardous materials, and water resources

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.



Proposed Conrail Acquisition — **Draft Environmental Impact Statement**

FIGURE 5-MI-1

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

MICHIGAN - CSX, NORFOLK SOUTHERN, SHARED

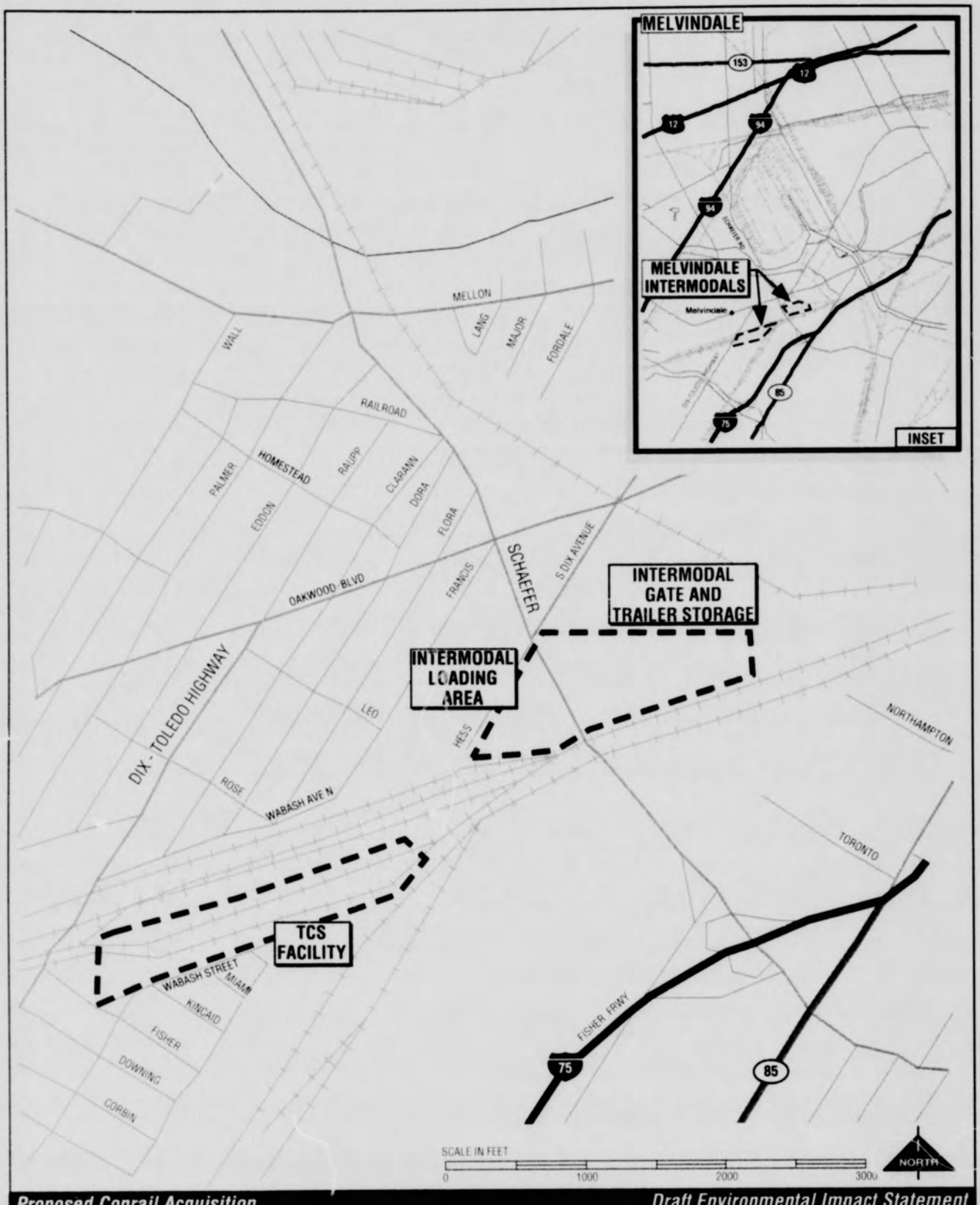


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FIGURE 5-MI-2

MELVINDALE INTERMODAL SITE, DETROIT, MICHIGAN

NORFOLK SOUTHERN

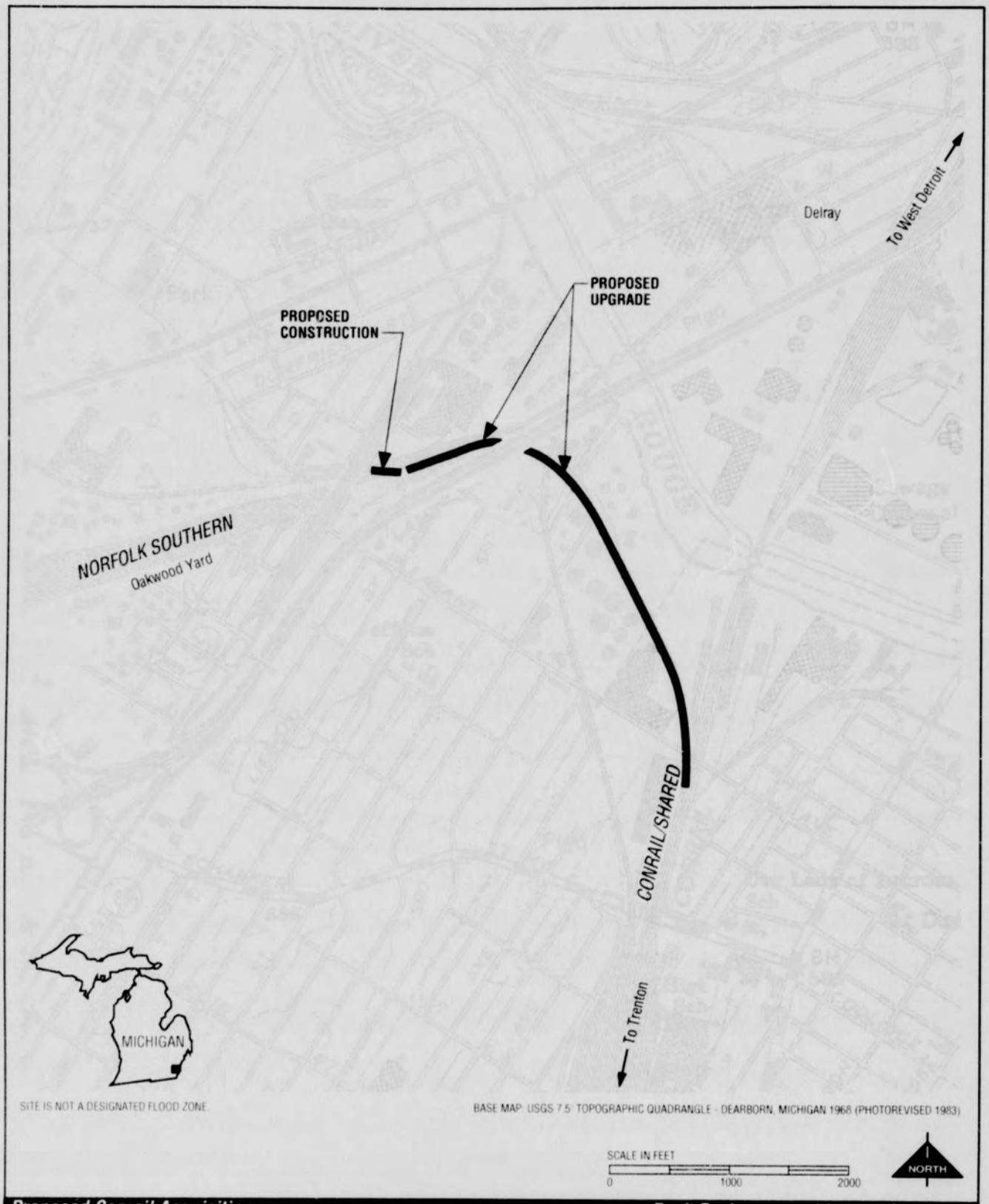

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FIGURE 5-MI-3

ECORSE JUNCTION, DETROIT, WAYNE COUNTY, MICHIGAN
NORFOLK SOUTHERN

Table 5-MI-7
Michigan
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
JACKSON	N-121	545254W	FRANCISCO RD	Gate	200	2	60	0	2.9	12.1	0.0069	0.0128	0.0058	
JACKSON	N-121	545256K	KALMBACH RD	Gate	35	2	60	0	2.9	12.1	0.0037	0.0070	0.0033	
JACKSON	N-121	545257S	MAUTE RD	Gate	110	2	60	0	2.9	12.1	0.0051	0.0095	0.0044	
JACKSON	N-121	545259F	SAROSSY LAKE RD	Gate	180	2	60	0	2.9	12.1	0.0058	0.0108	0.0050	
JACKSON	N-121	545261G	MT HOPE ST	Gate	1,829	2	60	0	2.9	12.1	0.0127	0.0225	0.0098	
JACKSON	N-121	545262N	BROWN ST	Gate	90	2	60	0	2.9	12.1	0.0048	0.0090	0.0042	
JACKSON	N-121	545263V	LAKE ST	Gate	1,269	2	60	0	2.9	12.1	0.0115	0.0206	0.0091	
JACKSON	N-121	545264C	WILLIS RD	Gate	575	2	60	0	2.9	12.1	0.0093	0.0168	0.0076	
JACKSON	N-121	545265J	CRAFT RD	Gate	50	2	60	0	2.9	12.1	0.0041	0.0076	0.0036	
JACKSON	N-121	545271M	PORTAGE RD	Gate	970	2	60	0	2.9	12.1	0.0107	0.0192	0.0085	
JACKSON	N-121	545274H	PAGE AVE	Gate	2,021	2	60	0	2.9	12.1	0.0130	0.0231	0.0100	
JACKSON	N-121	545275P	SIXTH ST	Gate	1,750	2	60	0	2.9	12.1	0.0109	0.0196	0.0087	
JACKSON	N-121	545276W	FIFTH ST	Gate	9,200	4	60	0	2.9	12.1	0.0216	0.0363	0.0147	
JACKSON	N-121	545278K	FELTERS RD	Gate	150	2	60	0	2.9	12.1	0.0055	0.0103	0.0048	
JACKSON	N-121	545279S	FALAHEE RD	Gate	3,815	4	60	0	2.9	12.1	0.0197	0.0335	0.0138	
JACKSON	N-121	545281T	S. ELM AVE	Gate	7,637	4	40	1	2.9	12.1	0.0690	0.0969	0.0279	
JACKSON	N-121	545282A	ELLIOTT ST	Gate	1,500	2	40	0	2.9	12.1	0.0120	0.0215	0.0094	
MONROE	C-040	232123C	LAVOY	Flasher	1,446	2	45	0	21.9	33.1	0.0476	0.0546	0.0070	
MONROE	C-040	232124J	STERNS RD	Gate	2,047	2	45	0	21.9	33.1	0.0301	0.0348	0.0048	
MONROE	C-040	232126X	WASHINGTON-ERIE	Gate	2,130	2	45	0	21.9	33.1	0.0303	0.0351	0.0048	
MONROE	C-040	232129T	LAKEWOOD-DUNAPIER	Gate	8,761	2	45	0	21.9	33.1	0.0412	0.0469	0.0057	
MONROE	C-040	232131U	RAUCH RD	Gate	480	2	45	0	21.9	33.1	0.0213	0.0250	0.0037	
MONROE	C-040	232132B	WOOD RD	Passive	96	2	45	0	21.9	33.1	0.0366	0.0434	0.0068	
MONROE	C-040	232133H	STEIN RD	Gate	141	2	45	0	21.9	33.1	0.0156	0.0185	0.0029	
MONROE	C-040	232134P	SWARTZ	Gate	700	2	45	0	21.9	33.1	0.0233	0.0273	0.0040	
MONROE	C-040	232135W	S OTTER CREEK RD	Gate	3,600	2	45	0	21.9	33.1	0.0341	0.0393	0.0052	
MONROE	C-040	232136D	N OTTER CREEK RD	Gate	524	2	45	0	21.9	33.1	0.0217	0.0255	0.0038	
MONROE	C-040	232139Y	ALBAIN RD	Gate	3,168	2	45	0	21.9	33.1	0.0332	0.0382	0.0051	
MONROE	C-040	232140T	DUNBAR RD	Gate	8,510	2	45	1	21.9	33.1	0.1005	0.1108	0.0103	
MONROE	C-040	232142G	SEVENTH ST	Gate	3,950	2	45	1	21.9	33.1	0.0895	0.0989	0.0094	
MONROE	C-040	232146J	FRONT ST	Gate	16,237	3	25	0	21.9	33.1	0.0509	0.0572	0.0063	
MONROE	C-040	232147R	ELM	Gate	9,660	2	45	0	21.9	33.1	0.0420	0.0478	0.0058	
MONROE	C-040	232148X	STEWART RD	Gate	12,330	4	45	0	21.9	33.1	0.0529	0.0592	0.0063	
MONROE	C-040	232151F	HURD RD	Passive	132	2	45	0	21.9	33.1	0.0386	0.0457	0.0071	
MONROE	C-040	232152M	HEISS RD	Gate	631	2	45	0	21.9	33.1	0.0227	0.0267	0.0039	
MONROE	C-040	232153U	STOMPMIER RD	Passive	477	2	45	0	21.9	33.1	0.0797	0.0890	0.0093	
MONROE	C-040	232154B	STEINER RD	Passive	246	2	45	0	21.9	33.1	0.0697	0.0789	0.0092	
MONROE	C-040	232155H	S STONEY CREEK RD	Gate	1,561	2	45	0	21.9	33.1	0.0282	0.0328	0.0046	
MONROE	C-040	232156P	N STONEY CREEK RD	Passive	256	2	45	0	21.9	33.1	0.0479	0.0559	0.0080	

Table 5-MI-7
Michigan
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
MONROE	C-040	232157W	LABO RD	Gate	942	2	45	0	21.9	33.1	0.0251	0.0293	0.0042	
MONROE	C-040	232158D	SIGLER RD	Gate	380	2	45	0	21.9	33.1	0.0201	0.0236	0.0035	
MONROE	C-040	232161L	ASH ST	Gate	90	2	45	0	21.9	33.1	0.0139	0.0165	0.0026	
MONROE	S-020	511813Y	MATLIN	Passive	30	1	25	0	2.0	11.2	0.0034	0.0082	0.0048	
MONROE	S-020	511814F	GRAFTON	Flasher	2,047	2	25	0	2.0	11.2	0.0171	0.0353	0.0182	
MONROE	S-020	511815M	NEWBURG	Passive	226	2	25	0	2.0	11.2	0.0229	0.0474	0.0245	
WASHTENAW	N-121	545203L	GROVE ST	Flasher	1,500	2	50	0	2.9	12.1	0.0213	0.0381	0.0168	
WASHTENAW	N-121	545204T	PARK ST	Gate	1,080	2	50	0	2.9	12.1	0.0110	0.0198	0.0087	
WASHTENAW	N-121	545205A	RIVER ST	Flasher	3,020	3	50	1	2.9	12.1	0.0759	0.1109	0.0350	
WASHTENAW	N-121	545206G	CROSS ST	Flasher	8,000	3	50	1	2.9	12.1	0.1031	0.1462	0.0431	
WASHTENAW	N-121	545207N	FORREST ST	Gate	10,000	4	50	1	2.9	12.1	0.0719	0.1009	0.0290	
WASHTENAW	N-121	545209C	LEFORGE ST	Flasher	10,790	3	50	0	2.9	12.1	0.0399	0.0634	0.0236	
WASHTENAW	N-121	545211D	SUPERIOR ST	Flasher	2,561	2	50	0	2.9	12.1	0.0257	0.0447	0.0190	
WASHTENAW	N-121	545212K	DIXBORO RD	Gate	5,869	2	50	0	2.9	12.1	0.0172	0.0297	0.0125	
WASHTENAW	N-121	545215F	GEDDES RD	Flasher	8,880	2	50	0	2.9	12.1	0.0381	0.0613	0.0232	
WASHTENAW	N-121	545220C	MAPLE RD	Gate	1,358	2	60	0	2.9	12.1	0.0101	0.0181	0.0081	
WASHTENAW	N-121	545221J	HURON RIVER DR	Gate	2,470	2	50	0	2.9	12.1	0.0120	0.0214	0.0094	
WASHTENAW	N-121	545224E	DELHI RD	Gate	619	2	50	0	2.9	12.1	0.0095	0.0172	0.0077	
WASHTENAW	N-121	545225L	SCIO (ZEEB RD)	Flasher	4,076	2	60	0	2.9	12.1	0.0297	0.0504	0.0206	
WASHTENAW	N-121	545226T	C ST (CENTRAL ST)	Gate	3,750	2	50	0	2.9	12.1	0.0153	0.0268	0.0114	
WASHTENAW	N-121	545227A	BROAD ST	Gate	1,052	2	50	0	2.9	12.1	0.0109	0.0196	0.0087	
WASHTENAW	N-121	545229N	WYLIE RD	Gate	40	2	50	0	2.9	12.1	0.0044	0.0083	0.0038	
WASHTENAW	N-121	545230H	DANCER RD	Gate	80	2	50	0	2.9	12.1	0.0054	0.0100	0.0046	
WASHTENAW	N-121	545232W	LIMA CENTER RD	Gate	150	2	50	0	2.9	12.1	0.0064	0.0118	0.0054	
WASHTENAW	N-121	545233D	DEXTER CHELSEA RD	Flasher	260	2	50	0	2.9	12.1	0.0112	0.0216	0.0103	
WASHTENAW	N-121	545235S	FLETCHER RD	Gate	210	2	60	0	2.9	12.1	0.0070	0.0129	0.0059	
WASHTENAW	N-121	545239U	MCKINLEY ST	Gate	850	2	50	0	2.9	12.1	0.0103	0.0186	0.0083	
WASHTENAW	N-121	545240N	EAST ST	Flasher	850	2	50	0	2.9	12.1	0.0174	0.0320	0.0146	
WASHTENAW	N-121	545241V	M-52	Gate	13,746	2	50	0	2.9	12.1	0.0214	0.0359	0.0145	
WASHTENAW	N-121	545242C	HAYES ST	Gate	885	2	50	0	2.9	12.1	0.0091	0.0165	0.0074	
WASHTENAW	N-121	545243J	CAVANAUGH ST	Gate	1,853	2	50	0	2.9	12.1	0.0127	0.0226	0.0099	
WASHTENAW	N-121	545245X	GARVEY RD	Gate	150	1	50	0	2.9	12.1	0.0048	0.0090	0.0042	
WASHTENAW	N-121	545246E	PIERCE RD	Gate	420	2	60	1	2.9	12.1	0.0404	0.0517	0.0113	
WASHTENAW	N-121	545250U	FAHRNER RD	Gate	150	2	50	0	2.9	12.1	0.0055	0.0103	0.0048	
WASHTENAW	N-121	545252H	HOPPE RD	Gate	150	1	50	0	2.9	12.1	0.0048	0.0090	0.0042	
WASHTENAW	N-121	545253P	NOTTEN RD	Gate	40	2	50	0	2.9	12.1	0.0038	0.0072	0.0033	
WAYNE	N-121	511945J	CENTRAL	Gate	11,300	4	15	0	2.9	12.1	0.0257	0.0422	0.0164	
WAYNE	N-121	511951M	LONYO	Gate	11,370	4	15	0	2.9	12.1	0.0267	0.0437	0.0169	
WAYNE	N-121	545169G	MONROE ST	Flasher	5,000	2	60	0	2.9	12.1	0.0321	0.0536	0.0215	

Table 5-MI-7
Michigan
Highway/Rail At-Grade Crossing Accident Frequency

County	Railroad Segment	FRA ID	Street Name	Present Safety Device	ADT	Number of Roadway Lanes	Maximum Speed	Total Accidents 1991-1995	Freight Trains		Accidents Per Year			
									Pre-Acquisition	Post Acquisition	Pre-Acquisition	Post Acquisition	Change	Post Acquisition With Mitigation
WAYNE	N-121	545170B	MASON ST	Gate	3,000	2	60	0	2.9	12.1	0.0145	0.0254	0.0109	
WAYNE	N-121	545176S	GULLEY RD	Gate	8,917	2	60	0	2.9	12.1	0.0168	0.0291	0.0123	
WAYNE	N-121	545177Y	BEECH DALY RD	Gate	1,000	4	60	2	2.9	12.1	0.0901	0.1177	0.0276	
WAYNE	N-121	545178F	JOHN DALY RD	Flasher	10,000	3	60	0	2.9	12.1	0.0448	0.0693	0.0245	
WAYNE	N-121	545180G	HARRISON RD	Gate	1,000	3	60	1	2.9	12.1	0.0490	0.0662	0.0172	
WAYNE	N-121	545182V	HENRY RUFF RD	Gate	10,000	2	60	0	2.9	12.1	0.0197	0.0335	0.0138	
WAYNE	N-121	545184J	MERRIMAN RD	Gate	15,454	5	60	0	2.9	12.1	0.0278	0.0450	0.0172	
WAYNE	N-121	545185R	WINIFRED AVE	Flasher	1,200	2	60	0	2.9	12.1	0.0197	0.0356	0.0159	
WAYNE	N-121	545186X	VENOY AVE	Flasher	7,325	4	60	0	2.9	12.1	0.0465	0.0712	0.0247	
WAYNE	N-121	545187E	HOWE AVE	Gate	6,762	4	60	0	2.9	12.1	0.0227	0.0379	0.0152	
WAYNE	N-121	545191U	HANNAN RD	Flasher	5,560	2	60	0	2.9	12.1	0.0328	0.0545	0.0217	
WAYNE	N-121	545192B	LOTZ RD	Gate	301	2	60	0	2.9	12.1	0.0079	0.0144	0.0066	
WAYNE	N-121	545193H	HAGGERTY RD	Gate	5,830	2	60	0	2.9	12.1	0.0174	0.0300	0.0126	
WAYNE	N-121	545195W	SHELDON RD	Flasher	500	2	60	0	2.9	12.1	0.0143	0.0269	0.0126	
WAYNE	N-121	545197K	BECK RD	Flasher	160	2	60	0	2.9	12.1	0.0093	0.0182	0.0088	
WAYNE	N-121	545198S	DENTON ROAD	Gate	1,609	2	60	0	2.9	12.1	0.0123	0.0218	0.0096	
WAYNE	S-020	511011Y	PARK ST	Flasher	500	2	25	0	2.0	11.2	0.0101	0.0223	0.0121	
WAYNE	S-020	511013M	N HURON RIVER DR	Flasher	4,119	2	25	0	2.0	11.2	0.0219	0.0433	0.0214	
WAYNE	S-020	511015B	VAN HORN RD	Flasher	690	2	25	0	2.0	11.2	0.0114	0.0248	0.0134	
WAYNE	S-020	511016H	MIDDLEBELT RD	Flasher	2,926	2	25	0	2.0	11.2	0.0194	0.0393	0.0198	
WAYNE	S-020	511017P	GRIX RD	Passive	200	2	25	0	2.0	11.2	0.0129	0.0289	0.0160	
WAYNE	S-020	511018W	WEST RD	Flasher	827	2	25	0	2.0	11.2	0.0123	0.0264	0.0141	
WAYNE	S-020	511020X	INKSTER RD	Flasher	5,742	2	25	0	2.0	11.2	0.0245	0.0475	0.0230	
WAYNE	S-020	511021E		Passive	2,500	1	25	0	2.0	11.2	0.0161	0.0351	0.0190	
WAYNE	S-020	511022L	KING RD	Flasher	837	2	25	0	2.0	11.2	0.0123	0.0265	0.0142	
WAYNE	S-020	511024A	SIBLEY	Flasher	961	2	25	0	2.0	11.2	0.0130	0.0277	0.0148	
WAYNE	S-020	511026N	BAILEY RD	Passive	20	2	25	0	2.0	11.2	0.0058	0.0137	0.0079	
WAYNE	S-020	511027V	PENNSYLVANIA RD	Flasher	10,568	2	25	2	2.0	11.2	0.1334	0.2000	0.0665	0.0326
WAYNE	S-020	511029J	RACHO RD	Flasher	4,000	2	25	0	2.0	11.2	0.0217	0.0430	0.0213	
WAYNE	S-020	511031K	SUPERIOR RD	Passive	650	2	25	0	2.0	11.2	0.0191	0.0408	0.0216	
WAYNE	S-020	511032S	NORTHLINE RD	Flasher	23,050	5	25	0	2.0	11.2	0.0550	0.0852	0.0302	
WAYNE	S-020	511033Y	ALLEN RD	Flasher	32,236	4	25	0	2.0	11.2	0.0535	0.0837	0.0302	
WAYNE	S-020	511035M	REECK RD	Passive	1,000	2	25	0	2.0	11.2	0.0360	0.0678	0.0318	
WAYNE	S-020	511037B	LONDON RD	Flasher	7,240	2	25	0	2.0	11.2	0.0265	0.0505	0.0240	
WAYNE	S-020	511039P	CHAMPAIGNE	Flasher	7,676	4	25	1	2.0	11.2	0.0923	0.1421	0.0498	
WAYNE	S-020	511816U	WILL CARLETON RD	Flasher	5,789	2	25	0	2.0	11.2	0.0246	0.0476	0.0230	

Table 5-MI-10
Michigan
Highway/Rail At-Grade Crossing Vehicle Delay and Queues

County	Seg. No.	Crossing FRA ID	Roadway Name	Number of Roadway Lanes	ADT	*Pre Acquisition*								*Post Acquisition*								
						Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Trains per day	Train Speed (mph)	Train Length (feet)	No. of Veh. Delayed per day	Max. No. of Veh. in Queue per lane	Crossing Delay per stopped veh (min./veh)	Avg. Delay per Vehicle (All vehicles) (sec/veh)	Level of Service	Level of Service with Mitigation
Wayne	S-020	511032S	NORTHLINE RD	4	23,550	2.0	25	5,600	97	35	4.11	2.09	A	11.2	25	5,000	497	32	3.74	9.69	B	
Wayne	S-020	511033Y	ALLEN RD	4	32,236	2.0	25	5,600	136	49	4.78	2.43	A	11.2	25	5,000	695	45	4.35	11.26	B	
Wayne	S-020	511037B	LONDON RD	2	7,240	2.0	25	5,600	31	22	3.64	1.85	A	11.2	25	5,000	156	20	3.31	8.57	B	
Wayne	S-020	511039P	CHAMPAIGNE	2	7,676	2.0	25	5,600	32	23	3.68	1.87	A	11.2	25	5,000	166	21	3.35	8.67	B	
Wayne	S-020	511816U	WILL CARLETON DRIVE	2	5,789	2.0	35	5,600	19	13	2.67	1.03	A	11.2	35	5,000	96	12	2.44	4.84	A	

5-MS
MISSISSIPPI

This section provides background information for resources in Mississippi. Tables list the proposed Conrail Acquisition-related activities in Mississippi that meet or exceed the Board's thresholds for environmental analyses. This section also presents the various technical analyses conducted for these activities in Mississippi. The analysis highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-MS.1 MISSISSIPPI SETTING

Mississippi is a south central state located east of the Mississippi River. Principal products of Mississippi include clothing, lumber and wood products, food, chemicals, electrical equipment and supplies, transportation equipment, cotton, soybeans, cattle, chickens, petroleum, natural gas, sand, gravel, and clays. The railroad network throughout the state provides a means of transporting and distributing many of these goods and for other products imported into the state.

Transportation Facilities

Major interstate highways in Mississippi are I-55, a north/south facility; I-20, an east/west facility; I-59 a north/south facility; and I-10, an east/west facility. These routes serve cities such as Jackson, Vicksburg, Meridian, and Biloxi. Ports include Pascagoula and Gulfport.

Railroad Facilities

Eighteen railroads operate in Mississippi, covering a total of 2,651 route miles.

- CSX operates 74 route miles in Mississippi, which is 3 percent of the state's total rail miles.
- NS operates 223 route miles in Mississippi, which is 8 percent of the state's total rail miles.

NS operates rail facilities in Meridian. There are five Class I Railroads operating in the state, two of which are CSX and NS. Burlington Northern & Santa Fe Railway Company, Illinois Central Railroad Company, and Kansas City Southern Railway Company are the other Class I Railroads serving the state.

Intercity Passenger and Commuter Rail Service

Amtrak has two routes in Mississippi. Amtrak operates daily passenger service to Meridian, Hattiesburg, Laurel, and Picayune in Mississippi on the Crescent Line (NS). Amtrak operates service to the Gulf Port, Biloxi, and Pascagoula on the Sunset Limited Line (CSX). There is no commuter rail service in Mississippi.

5-MS.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN MISSISSIPPI

In the Operating Plans submitted to the Board, the Applicants indicate that no CSX or NS rail line segments, rail yards or intermodal facilities in Mississippi would experience increased traffic or activity and that there are no new connections or proposed abandonments that would meet or exceed the Board's thresholds for environmental analysis. However, Figure 5-MS-1 at the end of this section shows the general location of segments studied for additional kinds of analysis. CSX and NS anticipate that due to predicted truck-to-rail diversions, Mississippi could experience a benefit in the areas of emissions, noise and safety.

5-MS.3 MISSISSIPPI SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-related activities in Mississippi that meet the Board's thresholds for environmental criteria and the scope for the Draft EIS, SEA determined that a site-specific analysis was not appropriate for the following technical disciplines:

- Transportation (Highway/Rail At-Grade Crossing Delay; Roadway Effects from Rail Facility Modifications; Navigation).
- Energy.
- Air Quality.
- Noise.
- Cultural Resources.
- Hazardous Materials and Waste Sites.
- Natural Resources.
- Land Use/Socioeconomics.
- Environmental Justice.

Details of the environmental analysis for Mississippi follow.

5-MS.4 MISSISSIPPI SAFETY: PASSENGER RAIL OPERATIONS

In Mississippi, passenger trains share certain tracks with freight trains. SEA evaluated the potential for increased accidents between freight trains and passenger trains, for both intercity and commuter trains. Because changes in the frequency of rail accidents are directly related to changes in overall train activity, SEA's analysis concentrated on rail line segments carrying both passenger and freight trains that would experience an increase in freight train traffic of one or more trains per day.

In Chapter 4, "System-Wide and Regional Setting, Impacts and Proposed Mitigation," SEA addresses the issue of potential increased risk to passenger train operations associated with the proposed Conrail Acquisition. System-wide, SEA identified 197 freight rail line segments that also carry passenger trains. Of these, SEA analyzed 93 rail line segments that would experience an increase of one or more freight trains per day resulting from the proposed Acquisition. Two of these rail line segments are located in Mississippi; these rail line segments are part of Amtrak's Crescent passenger train route.

The Federal Railroad Administration (FRA) requires reports from railroads concerning all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). FRA requires the same reporting for passenger train accidents. A nationwide average of fewer than 200 passenger train accidents per year (for both Amtrak intercity and urban area commuter trains) has occurred over the last three years. Most of these accidents were relatively minor and rarely involved any fatalities, but because the safety of passengers as well as property is frequently involved, their occurrence is of serious concern.

Given the limited number of passenger rail accidents, SEA was unable to accurately predict the severity, location, or timing of actual accidents. SEA therefore focused on estimating the potential risks of an accident. In this safety analysis, SEA used increased freight activity on rail line segments to estimate the changes in passenger train accident risks. To assess significance, SEA first determined whether the proposed Acquisition-related change in the projected accident rate was greater than an annual increase of 25 percent. SEA then determined if the predicted accident frequency was less than one accident in 150 years. Thus, SEA determined a potential impact to be significant if the projected annual increase in accidents was greater than 25 percent and the frequency was less than one accident in 150 years.

5-MS.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The pre-Acquisition accident interval for each rail line segment is shown in Table 5-MS-1. Accidents pose potential threats to passengers on the train; therefore, for each rail line segment, risk is expressed as the expected interval between events over the length of the rail line segment. Table 5-MS-1 also shows the expected change in years between accidents for the individual rail line segments.

Table 5-MS-1
Estimated Change in Years Between Accidents for Passenger Rail Operations

Site ID	From	To	Miles in State	Pre-Acquisition Accident Interval *	Post-Acquisition Accident Interval *
C-387	Mobile, AL	New Orleans, LA	80	307	279
N-344	Meridian	Oliver Jct., LA	145	243	164

* Accident Intervals shows years between accidents.

Based on information provided by the railroads and SEA's independent analysis, SEA determined that the increased risk for these rail line segments did not exceed SEA's criteria for significance. As a result, SEA does not propose mitigation.

5-MS.5 MISSISSIPPI SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary concern with the rail transportation of hazardous materials is a spill or accidental release resulting from a train accident. SEA analyzed all rail line segments where the number of car loads containing hazardous materials would increase as a result of the proposed Acquisition. This resulted in SEA evaluating rail line segments that were below the Board's thresholds for environmental analysis.

The Association of American Railroads (AAR), in conjunction with the Chemical Manufacturer's Association (CMA), developed standards and practices to manage the risk of a hazardous material spill that the railroads have adopted. The practices include identifying "key routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

5-MS.5.1 Rail Line Segment Analysis

As a result of the proposed Conrail Acquisition, the railroads would change the routing of many car loads of hazardous material. The designation of key routes would change as the railroads shift hazardous material traffic from one rail line to another. In addition, certain rail line segments that are currently key routes would carry increased volumes of cars containing hazardous material.

SEA applied two different criteria to determine if the effects of rerouting hazardous material car loads are potentially significant:

1. The volume of hazardous materials transported on a rail line would be 10,000 or more car loads per year. The Acquisition-related change in volume of hazardous material car loads would upgrade a rail line segment to a key route designation.

2. The volume of hazardous material car loads doubles, and exceeds 20,000 or more car loads per year. SEA has termed rail line segments which meet these criteria a "major key route."

Rail line segments that would meet the first criteria are considered "key routes" and warrant the base level mitigation. Rail line segments that meet the second criteria are considered "major key routes" and warrant expanded mitigation. Depending on the individual circumstances, a rail line segment could meet both criteria and therefore warrant both the base level and the expanded mitigation.

5-MS.5.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Potential Effects. Based on the information provided by the Applicants and SEA's independent analysis, SEA determined that one rail line segment in Mississippi carrying an increased amount of hazardous material is of potential concern. Table 5-MS-2 shows this rail line segment, indicates the estimated annual car loads of hazardous material for both pre- and post-Acquisition, and identifies the rail line segment's key route status. This route would at least double the volume of hazardous material transported, resulting in 20,000 or more car loads per year.

Preliminary Mitigation Recommendation. For the segment in Table 5-MS-2 identified as a major key route, where the volume of hazardous material car loads would more than double and exceed 20,000 car loads, SEA recommends that CSX develop a Hazardous Materials Emergency Response Plan to contain and minimize the potential effects of any accidents or incidents. SEA will further recommend that CSX conduct hazardous materials accident simulations with the voluntary participation of emergency service providers along the rail line segment at least once every two years. Participants in these plans include county and municipal government, local fire departments, and medical and other emergency response teams.

Table 5-MS-2
Rail Line Segments with Significant Increases in Annual Hazardous Material Car Loads

Site ID	Between	And	Miles in State	Estimated Annual Car Loads		Significance Thresholds	
				Pre-Acquisition	Post-Acquisition	New Key Route	Major Key Route
C-387	Mobile, AL	New Orleans, LA	80	44,000	88,000		X

5-MS.6 MISSISSIPPI TRANSPORTATION: PASSENGER RAIL SERVICE

In Mississippi, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-related effects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Amtrak's Southern Crescent operates daily on a 125-mile segment of NS rail line in Mississippi through Meridian, Laurel, Hattiesburg and Picayune. The Amtrak City of New Orleans provides service between Jackson and New Orleans, Louisiana. The Amtrak Sunset Limited operates on a tri-weekly basis along a 50-mile segment of CSX rail line on the Mississippi Gulf Coast. The Sunset Limited serves Bay St. Louis, Gulfport, Biloxi, and Pascagoula. Chapter 4, Section 4.7.1, "Intercity Passenger Rail Service," discusses passenger rail service effects.

Commuter Rail

No commuter rail service exists in Mississippi.

Future Services Under Study

The Southern Rapid Rail Transit Commission advocates service along the Gulf Coast between Mobile, Alabama and New Orleans, Louisiana via Gulfport, Biloxi and Pascagoula. The proposed Conrail Acquisition would not affect existing Amtrak service on the route. Presently only feasibility studies are under way. There are no funded capital operating plans or operating agreements with CSX for the expansion of service along the Gulf Coast.

5-MS.6.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Based on the evaluation of railroad capacity issues and the existing and projected train traffic, SEA concluded that the existing capacity of the passenger rail line segments evaluated could accommodate the proposed increase in freight train levels without adverse effects on passenger train service in Mississippi. Therefore, SEA does not anticipate that mitigation would be required.

5-MS.7 MISSISSIPPI CUMULATIVE EFFECTS

Within the State of Mississippi, the Applicants do not propose any activities that meet or exceed the Board's thresholds for environmental analysis.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of Mississippi.

Cumulative Effects Mitigation Measures

Due to a lack of cumulative effects, no mitigation measures are necessary.

5-MS.8 MISSISSIPPI AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. A complete list of entities in the State of Mississippi that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.

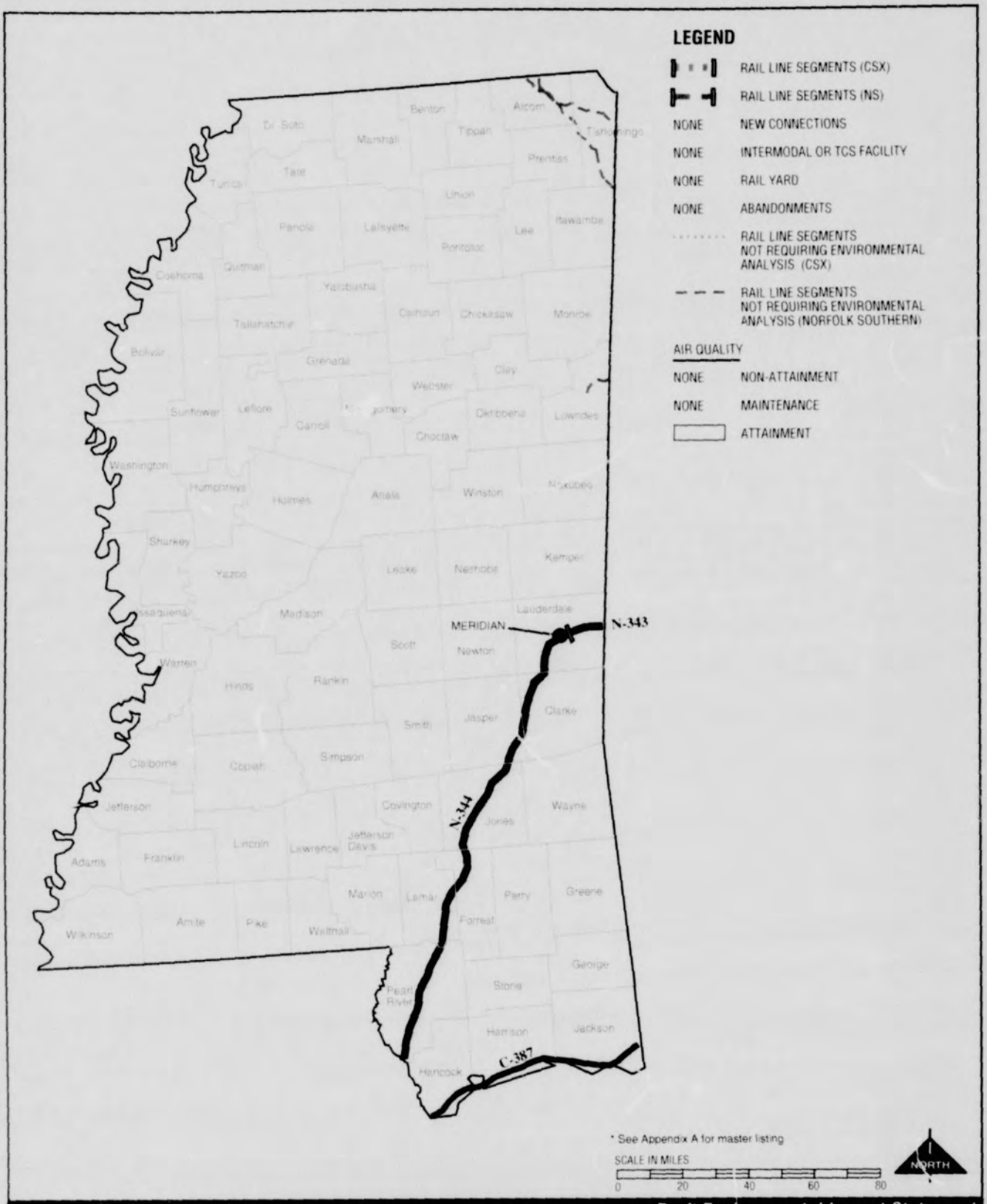

FIGURE 5-MS-1

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

MISSISSIPPI - CSX AND NORFOLK SOUTHERN

5-MO
MISSOURI

This section provides background information for resources in Missouri. Tables list the proposed Conrail Acquisition-related activities in Missouri that meet or exceed the Board's thresholds for environmental analyses. This section also presents the various technical analyses conducted for these activities in Missouri. The analyses highlight the potential environmental impacts and proposed mitigation actions that SEA recommends as part of the Draft EIS study.

5-MO.1 MISSOURI SETTING

Missouri is located in the central United States. Principal products of Missouri include transportation equipment, processed foods, chemicals, soybeans, cattle, hogs, corn, lead, cement, stone, and iron ore. The railroad network throughout the state provides a means of transporting and distributing many of these goods and for other products to be imported into the state.

Transportation Facilities

Major interstate highways in Missouri are I-70, an east/west facility; I-44, an east/west facility; I-55 a north/south facility; I-35, a north/south facility; and I-29, a north/south facility. These facilities serve cities such as St. Louis, Kansas City, and Springfield. The Mississippi River also provides an important transportation corridor for commerce.

Railroad Facilities

Twenty-two railroads operate in the state, covering a total of 4,152 route miles. Four railroads are Class I Railroads. These are NS, Burlington Northern Santa Fe Railway Company (BNSF), Kansas City Southern Railway Company, and Union Pacific Railroad Company (UP). Of the total 4,152 route miles:

- NS operates 343 route miles in Missouri, which is 9 percent of the state's total rail miles.

Major cities served by these railroads include Kansas City and St. Louis. NS operates major classification yards, intermodal facilities, and other rail related services in Kansas City and St. Louis.

Intercity Passenger and Commuter Rail Services

Amtrak provides service to Kansas City, St. Louis, and Poplar Bluff, primarily using the UP line. Amtrak uses the BNSF line between Kansas City and Chicago, Illinois with service to La Plata with two trains per day. There is no commuter rail service in Missouri.

5-MO.2 PROPOSED CONRAIL ACQUISITION ACTIVITIES IN MISSOURI

In the Operating Plans submitted to the Board, the Applicants indicate that they would reroute movements and would provide additional access to shippers at the eastern Missouri/St. Louis gateway. CSX would operate Conrail east of St. Louis in Illinois to Indianapolis, Indiana route, and NS would increase its service over its current St. Louis-Decatur, Illinois route. NS would serve the western Missouri/Kansas City gateway.

NS plans to undertake facility improvements in Missouri as part of the proposed Conrail Acquisition. The proposed Conrail Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis in Missouri include increased activity at two intermodal facilities located in Kansas City and St. Louis, and increased number of rail cars handled at one rail yard in St. Louis. Figure 5-MO-1 shows the general location of these facilities. (All figures are presented at the end of this section.) In Missouri, there are no rail line segments that would meet or exceed the Board's thresholds for environmental analysis and no new connections or proposed abandonments.

Tables 5-MO-1 and 5-MO-2 show intermodal facilities or rail yards in Missouri that required environmental analysis. Following these tables are brief descriptions of the activities, where appropriate.

Intermodal Facilities

Voltz Intermodal Facility (Clay County, MO) (NS). The NS intermodal facility is located on North Kimball Drive in the northern portion of Kansas City, Clay County, Missouri (See Figure 5-MO-2.) Another NS intermodal facility, a Triple Crown Services (TCS) facility, is located on the same property. Trucks access both facilities via I-435 and State Route 210 to Kimball Drive. NS anticipates that 349 trucks would utilize the Voltz intermodal and TCS facilities daily, an increase of 120 trucks over current daily volumes.

Table 5-MO-1
Missouri Intermodal Facilities Which Meet or Exceed Board Environmental Thresholds

Site ID	Location	County	Facility	Description	Setting
NM-08	Kansas City	Clay	Voltz	Increase of 120 trucks per day	Urban
NM-09	St. Louis	St. Louis City	Luther	Increase of 194 trucks per day	Urban/Industrial

Table 5-MO-2
Missouri Rail Yards Which Meet Board Environmental Thresholds

Site ID	Location	County	Facility	Description	Setting
NY-04	St. Louis	St. Louis City	Luther	Increase of 88 rail cars per day	Urban/Industrial

Luther Intermodal Facility (St. Louis City, MO) (NS). This NS intermodal facility is located on Hall Street in the northern portion of St. Louis City, St. Louis County, Missouri. (See Figure 5-MO-3.) Another NS intermodal facility, a TCS facility, is located on the same property. Trucks access the facilities via Adelaide Boulevard and Hall Street from I-70 and via Hall Street/Riverside Drive from I-270. Trucks use Carrie Avenue to access the TCS facility. NS anticipates that an additional 194 trucks per day would use the Luther Intermodal and TCS facility.

Rail Yards

Luther Rail Yard (St. Louis City) (NS). This existing NS yard is located in St. Louis City, St. Louis County, Missouri near East Carrie and Hall Street. NS anticipates that rail traffic would increase from 239 rail cars per day to 327, an increase of 88 rail cars per day.

5-MO.3 MISSOURI SUMMARY OF ANALYSIS

Based on the nature of the proposed Conrail Acquisition-relatedactivities in Missouri that meet the Board's thresholds for environmental analysis and the scope for the Draft EIS, SEA determined that a site-specific analysis did not apply for the following technical areas:

- Transportation (Passenger Rail Service; Highway/Rail At-Grade Crossing Delay; Navigation).
- Energy.

- Cultural Resources.
- Hazardous Materials and Waste Sites.
- Natural Resources.
- Land Use/Socioeconomics.

Details of the environmental analysis for Missouri follow.

5-MO.4 MISSOURI SAFETY: PASSENGER RAIL OPERATIONS

In Missouri, passenger trains share certain tracks with freight trains. SEA evaluated the potential for increased accidents between freight trains and passenger trains, for both intercity and commuter trains. Because changes in the frequency of rail accidents are directly related to changes in overall train activity, SEA's analysis concentrated on rail line segments carrying both passenger and freight trains that would experience an increase in freight train traffic of one or more trains per day.

In Chapter 4, "System-Wide and Regional Setting, Impacts and Proposed Mitigation," SEA addresses the issue of potential increased risk to passenger train operations associated with the proposed Conrail Acquisition. System-wide, SEA identified 197 freight rail line segments that also carry passenger trains. Of these, SEA analyzed 93 rail line segments that would experience an increase of one or more freight trains per day resulting from the proposed Acquisition. One of these rail line segments is located in Missouri.

The Federal Railroad Administration (FRA) requires reports from railroads concerning all train accidents resulting in personal injury or causing property damage greater than $6,300 (1996 FRA reporting threshold). FRA requires the same reporting for passenger train accidents. A nationwide average of fewer than 200 passenger train accidents per year (for both Amtrak intercity and urban area commuter trains) has occurred over the last three years. Most of these accidents were relatively minor and rarely involved any fatalities, but because the safety of passengers as well as property is frequently involved, their occurrence is of serious concern.

Given the limited number of passenger rail accidents, SEA was unable to accurately predict the severity, location, or timing of actual accidents. SEA therefore focused on estimating the potential risks of an accident. In this safety analysis, SEA used increased freight activity on rail line segments to estimate the changes in passenger train accident risks. To assess significance, SEA first determined whether the proposed Acquisition-related change in the projected accident rate was greater than an annual increase of 25 percent. SEA then determined if the predicted accident frequency was less than one accident in 150 years. Thus, SEA determined a potential

impact to be significant if the projected annual increase in accidents was greater than 25 percent and the frequency was less than one accident in 150 years.

5-MO.4.1 Summary of Potential Effects and Preliminary Recommended Mitigation

The pre-Acquisition accident interval for each rail line segment is shown in Table 5-MO-3. Accidents pose potential threats to passengers on the train; therefore, for each rail line segment, risk is expressed as the expected interval between events over the length of the rail line segment. Table 5-MO-3 also shows the expected change in years between accidents for the individual rail line segments.

Based on information provided by the railroads and SEA's independent analysis, SEA determined that the increased risk for passenger train accidents for this rail line segment did not exceed SEA's criteria for significance. As a result, SEA does not propose mitigation.

Table 5-MO-3
Estimated Change in Years Between Accidents for Passenger Rail Operations

Site ID	From	To	Miles in State	Pre-Acquisition Accident Interval [a]	Post-Acquisition Accident Interval [a]
N-478	Moberly	Ca Jct.	94	1,136	816

[a] Accident Intervals shows years between accidents.

5-MO.5 MISSOURI SAFETY: RAIL TRANSPORT OF HAZARDOUS MATERIALS

The primary concern with the rail transportation of hazardous materials is a spill or accidental release resulting from a train accident. SEA analyzed all rail line segments where the number of car loads containing hazardous materials would increase as a result of the proposed Acquisition. This resulted in SEA evaluating rail line segments that were below the Board's thresholds for environmental analysis.

The Association of American Railroads (AAR), in conjunction with the Chemical Manufacturer's Association (CMA), developed standards and practices to manage the risk of a hazardous material spill that the railroads have adopted. The practices include identifying "key routes" as those rail lines that handle in excess of 10,000 car loads of hazardous material each year. Key trains are trains with at least five car loads of poison inhalation hazard (PIH) material, or 20 car loads of other hazardous material. Key trains are restricted to 50 miles per hour maximum authorized speed and normally operate on Class 2 track or better. The AAR key route practices include special train handling procedures and extra inspection and special actions whenever wayside detectors indicate potential concerns. The standards and practices for key

routes are shown in AAR Circular No. OT-55-B. A copy of this Circular is included in Attachment 10 of Appendix B, "Safety."

5-MO.5.1 Rail Line Segment Analysis

As a result of the proposed Conrail Acquisition, the railroads would change the routing of many car loads of hazardous material. The designation of key routes would change as the railroads shift hazardous material traffic from one rail line to another. In addition, certain rail line segments that are currently key routes would carry increased volumes of cars containing hazardous material.

SEA applied two different criteria to determine if the effects of rerouting hazardous material car loads are potentially significant:

1. The volume of hazardous materials transported on a rail line would be 10,000 or more car loads per year. The Acquisition-related change in volume of hazardous material car loads would upgrade a rail line segment to a key route designation.

2. The volume of hazardous material car loads doubles, and exceeds 20,000 or more car loads per year. SEA has termed rail line segments which meet these criteria a "major key route."

Rail line segments that would meet the first criteria are considered "key routes" and warrant the base level mitigation. Rail line segments that meet the second criteria are considered "major key routes" and warrant expanded mitigation. Depending on the individual circumstances, a rail line segment could meet both criteria and therefore warrant both the base level and the expanded mitigation.

5-MO.5.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Potential Effects. Based on the information provided by the Applicants and SEA's independent analysis, SEA determined that one rail line segment in Missouri carrying an increased amount of hazardous material is of potential concern. Table 5-MO-4 shows this rail line segment, indicates the estimated annual car loads of hazardous material for both pre- and post-Acquisition, and identifies the rail line segment's key route status. SEA determined that this rail line segment currently carries less than 10,000 car loads of hazardous material per year but would increase to at least 10,000 car loads per year due to the proposed Acquisition.

Table 5-MO-4
Rail Line Segments with Significant Increases in Annual Hazardous Material Car Loads

Site ID	Between	And	Miles in State	Estimated Annual Car Loads		Significance Thresholds	
				Pre-Acquisition	Post-Acquisition	New Key Route	Major Key Route
N-478	Moberly, MO	CA Jct., MO	94	6,000	10,000	X	

Preliminary Mitigation Recommendation. SEA recommends requiring NS to bring the rail line segment into compliance with AAR key route standards and practices.

5-MO.6 MISSOURI TRANSPORTATION: PASSENGER RAIL SERVICE

In Missouri, passenger trains share certain tracks with freight trains. SEA evaluated potential Acquisition-related effects on the ability of rail line segments to accommodate existing passenger rail service, both intercity and commuter rail, and reasonably foreseeable new or expanded passenger service. SEA identified those rail line segments that carry both freight and passenger trains and would experience an increase of one or more freight trains per day.

Amtrak

Within Missouri, Amtrak operates the Southwest Limited from Chicago, Illinois, through Missouri to Kansas City, primarily on a Burlington Northern Santa Fe rail line. However, Amtrak utilizes a 29-mile joint track segment of NS and Burlington Northern Santa Fe between WB Junction (Carrollton) and Camden. Amtrak currently provides service to the St. Louis, Kansas City, and Poplar Bluff areas, however, except as noted above, Amtrak does not use rail lines that are owned or operated by the Applicants. Section 4.7.1, "Intercity Passenger Rail Service," discusses intercity passenger rail service effects.

Commuter Rail

No commuter rail service exists in Missouri.

5-MO.6.1 Summary of Potential Effects and Preliminary Recommended Mitigation

Because there is no existing commuter rail service in Missouri, SEA has determined there will be no adverse effects and no mitigation is required.

5-MO.7 MISSOURI TRANSPORTATION: ROADWAY EFFECTS FROM RAIL FACILITY MODIFICATIONS

5-MO.7.1 Intermodal Facilities

Two intermodal facilities in Missouri would experience increases in truck activity as a result of the proposed Conrail Acquisition. Others would experience decreases in truck activity. The following is a summary of NS intermodal operations in Missouri.

5-MO.7.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Intermodal Facility: Kansas City - Voltz (Clay County) (NS). NS has two intermodal facilities located northeast of downtown Kansas City east of Interstate 435. One is a conventional intermodal facility and the other is a Triple Crown Service facility. Although they have separate truck gates and NS operates them independently, SEA treated them as one facility for the purpose of analysis because they are adjacent to each other. The main gates for truck entry and exit movements for both facilities are located on Kimball Drive. This roadway serves several industries as well as the existing intermodal facilities and carries primarily commercial vehicular traffic. The facility is served by Interstate 435. For both facilities, the primary truck route to Interstate 435 is State Route 210 to Kimball Drive.

The conventional intermodal facility currently handles approximately 105 trucks per day. The proposed Conrail Acquisition would increase this figure to a total of 135 trucks per day. The Triple Crown Service facility currently handles approximately 124 trucks per day. The proposed Acquisition would increase this figure to a total of 214 trucks per day. The combined increase of 120 trucks per day for both facilities corresponds to 240 additional truck trips per day. The breakdown for each facility would be 60 additional truck trips per day for the conventional intermodal facility and 180 additional truck trips per day for the Triple Crown Service facility. SEA assumed that all the additional truck trips would use the three roadways identified above. Table 5-MO-5 summarizes the analysis of traffic volumes to determine the effects of these additional truck trips on the roadways approaching the combined conventional and Triple Crown Service facilities.

Table 5-MO-5
Traffic Analysis Summary for Kansas City - Voltz Intermodal Facility

Roadway Name	Roadway ADT	Increased Daily Truck Trips Using Roadway	Roadway ADT Percent Increase
Interstate 435	48,620 [a]	240	0.49%
State Route 210	11,740 [a]	240	2.04%
Kimball Drive	1,700 [b]	240	14.12%

[a] From Missouri Department of Transportation.
[b] From Traffic Counts Conducted by SEA.

SEA's analysis shows that the total increase in truck traffic would be less than three percent of the average daily traffic for Interstate 435 and State Route 210. The total daily truck traffic along Kimball Drive would increase approximately 14 percent. Based on site visits, independent investigations, and the analysis of local traffic conditions on Kimball Drive, it is SEA's preliminary conclusion that the increase in truck traffic will have an insignificant effect on the predominantly commercial vehicular traffic that uses Kimball Drive and area roadways.

Intermodal Facility: St. Louis - Luther (St. Louis City) (NS). NS has two intermodal facilities located at Luther Yard northwest of downtown St. Louis east of Interstate 70. One is a conventional intermodal facility and the other is a Triple Crown Service facility. They have separate truck gates and NS operates them independently. SEA treated them as one facility because they are located adjacent to each other. The main gate for truck entry and exit movements for the conventional intermodal facility is located on Hall Street. The main gate for truck entry and exit movements for the Triple Crown Service facility is located on Carrie Avenue. The facilities are served by Interstate 70 and Interstate 270. The primary route used by trucks between both facilities and Interstate 70 is Adelaide Boulevard to Hall Street. The primary route used by trucks between both facilities and Interstate 270 is Riverview Drive to Hall Street. Trucks bound for the Triple Crown Service facility turn off Hall Street onto Carrie Avenue to the gate.

The conventional intermodal facility currently handles approximately 82 trucks per day. The proposed Acquisition would increase this figure to a total of 251. The Triple Crown Service facility currently handles approximately 106 trucks per day. The proposed Acquisition would increase this figure to a total of 131. This combined increase of 194 trucks per day for both facilities corresponds to 388 additional truck trips per day. The breakdown for each facility would be 338 additional truck trips per day for the conventional intermodal facility and 50 additional truck trips per day for the Triple Crown Service facility. SEA assumed that half of the additional truck trips would use Interstate 70 and Adelaide Boulevard, and the other half of the additional truck trips would use Interstate 270. All additional truck trips would use Riverview Drive/Hall Street. Only trucks bound for the Triple Crown Service facility would use Carrie Avenue. Table 5-MO-6 summarizes the analysis of traffic volumes to determine the

effects of these additional truck trips on the roadways approaching the combined conventional and Triple Crown Service facilities..

SEA's analysis shows that the total increase in truck traffic will be less than five percent of the average daily traffic for all the study area roadways. Based on site visits, the limited increase in traffic and the industrial characteristics of the area, it is SEA's preliminary determination that these increases in truck traffic would have insignificant effects on the area roadways.

Table 5-MO-6
Traffic Analysis Summary for St. Louis - Luther Intermodal Facility

Roadway Name	Roadway ADT	Increased Daily Truck Trips Using Roadway	Roadway ADT Percent Increase
Interstate 70	157,600 [a]	194	0.12%
Adelaide Blvd.	20,400 [a]	194	0.95%
Interstate 270	170,300 [a]	194	0.11%
Hall St. / Riverview Dr.	12,500 [a]	388	3.10%
Carrie Ave.	1,090 [b]	50	4.59%

[a] From Missouri Department of Transportation.

[b] From Federal Railroad Administration Grade Crossing Database.

5-MO.8 MISSOURI AIR QUALITY

This section summarizes the change in air pollutant emissions that would result from the proposed Acquisition-related operational changes in the state of Missouri. The primary air pollutant emission sources from trains and related activities include locomotive emissions on rail line segments, at rail yards, and at intermodal facilities. In addition to locomotive emissions, SEA evaluated emissions from other sources at intermodal facilities (idling trucks, lift cranes, etc.), motor vehicles idling near at-grade crossings, and decreases in truck emissions due to truck-to-rail freight diversions.

To analyze the air quality effects of the proposed Acquisition, SEA evaluated rail line segments, rail yards, and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis defined in Chapter 2, "Proposed Action and Alternatives." See Chapter 3, "Analysis Methods and Potential Mitigation Strategies" for additional information and a summary of the air quality analysis methodology. Appendix E, "Air Quality" contains a detailed description of methodology and detailed tables of results.

SEA addressed air pollutant emissions for sulfur dioxide (SO_2), volatile organic compounds (VOCs), particulate matter (PM), lead (Pb), nitrogen oxides (NO_x) and carbon monoxide (CO). SEA determined that emissions for SO_2, VOCs, PM and Pb would not exceed the emission screening thresholds for environmental analysis in any county. However, SEA found that these

thresholds would be exceeded for NO_x in various counties in 17 states, and CO in three counties in two states (IL and OH). NO_x air pollutant emissions may affect a region's ability to attain the National Ambient Air Quality Standards for ozone. CO emissions may affect a local area's ability to attain the National Ambient Air Quality Standards for CO.

One NS rail yard and two NS intermodal facilities in Missouri exceed the Board's air quality analysis thresholds. Table 5-MO-7 shows the air quality evaluation process that was followed. SEA identified one county and the City of St. Louis in Missouri which include these rail facilities. For these locations, SEA summed emissions increases from proposed Acquisition-related activities and compared them to the air emission screening level that would require a permit if the source were a stationary source (rather than a mobile source, such as trains, trucks and other vehicles). The calculated emissions did not exceeded this screening level.

Table 5-MO-7
Missouri Counties Evaluated in Air Quality Analysis

Counties Exceeding the Board's Activity Thresholds	O_3 Status [a]	Exceeds Emissions Screening Level Before Netting	Exceeds Emissions Screening Level After Netting	Exceeds 1 % of County Emissions
Clay	M	No	-	-
St. Louis	N (Moderate)	No	-	-

[a] M= Maintenance Area, N= Nonattainment Area, as defined in the Clean Air Act.

The emissions estimates presented in Appendix E, "Air Quality," show that the increased county-wide air pollutant emissions from the facilities described above are below the emissions screening levels used to trigger a more detailed emissions netting analysis.

5-MO.8.1 Summary of Potential Effects and Preliminary Recommended Mitigation

SEA did not estimate localized increases in emissions above emissions screening levels. Therefore, SEA has determined that air quality will not be significantly affected and no mitigation is necessary. See system-wide and regional discussion in Section 4.12 "Air Quality."

5-MO.9 MISSOURI NOISE

To analyze the potential noise impacts of the proposed Acquisition, SEA evaluated rail line segments, rail yards and intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis of noise. Although new construction projects and rail line abandonments can result in noise increases, the noise effects would be temporary and therefore, SEA did not evaluate them.

5-MO.9.1 Proposed Activities

Train noise sources include diesel locomotive engine and wheel/rail interaction noise (or wayside noise) and horn noise. Wayside noise affects all locations in the vicinity of the rail facility, and generally diminishes with distance from the source. Horn noise is an additional noise source at grade crossings, and also generally diminishes with distance. SEA performed an analysis to identify rail line segments, rail yards and intermodal facilities where the proposed changes in operations meet or exceed the Board's environmental analysis thresholds at 49 CFR 1105.7(e)(6). Where the proposed rail activity would exceed these thresholds, SEA calculated the 65 dBA L_{dn} noise contours for the pre- and post-Acquisition conditions. SEA based the noise level impact assessment on the projected activity level data provided by the railroads. SEA counted sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) within the noise contours for both pre-Acquisition and post-Acquisition operating conditions.

The NS intermodal facilities that would experience increases in traffic or activity meeting the Board's environmental analysis thresholds for Missouri are listed in Table 5-MO-8.

Table 5-MO-8
Intermodal Facilities In Missouri That Meet or Exceed Board Thresholds for Noise Analysis

Site ID	Facility Location	Trucks Per Day		Percent Change in ADT on local roads	Change in dBA	Approximate distance (feet) to 65 dBA L_{dn} contour
		Pre-Acquisition	Post-Acquisition			
NM-08[a]	Kansas City (Voltz)	229	349	0.6-4.6	<2	---
NM-09	St. Louis (Luther)	188	382	0.6-31.9	3.1	83

[a] SEA determined that the increase in noise due to increased rail activity was insignificant and receptor counts were unnecessary. Refer to the screening methodology in Appendix F for additional detail.

The counties where these facilities are located are listed in Section 5-MO.2, "Proposed Conrail Acquisition Activities in Missouri."

5-MO.9.2 Summary of Potential Effects and Preliminary Recommended Mitigation

There are different noise mitigation techniques used to reduce horn noise and wayside noise. These different types of noise and mitigation techniques are as follows:

Grade Crossing Noise Effects. The Federal Railroad Administration (FRA) has indicated that it will propose new rules on train horn blowing procedures in 1998. These new rules may allow

communities to apply for an exception to horn blowing at certain grade crossings that meet explicit criteria. These criteria relate to so-called "quiet zones" where FRA would no longer require train engineers to sound the train horn at grade crossings with special upgraded safety features. Examples of such safety features include four-quadrant gates and median barriers that preclude motorists from entering the crossings while the crossing arm is down. Until FRA develops and implements these regulations, these measures are not feasible for SEA to require as mitigation. However, communities will have the opportunity to qualify for "quiet zones" once the FRA regulations are in place.

Wayside Noise Effect. Wayside noise is the sound of a train as it passes by. Wayside noise is comprised of steel wheel/ rail interaction noise, and locomotive diesel engine noise. This type of noise can be reduced by constructing barriers between the railway noise source and adjoining land uses, and by installing building sound insulation. Noise barriers include earth berms and walls that block the sound. Rail lubrication can be used to reduce "wheel squeal" noise on curved track. Building sound insulation consists of special windows and other building treatments that reduce interior noise. Noise barriers are the preferred type of noise mitigation for this project since barriers can be built on railroad property. Additional discussion of noise mitigation measures is included in Appendix F, "Noise Methods."

As noted above, for receptors near grade crossings that would experience increases in noise resulting from horn sounding, mitigation is not currently feasible. For areas affected by wayside noise, SEA considered rail line segments eligible for noise mitigation for noise sensitive receptors exposed to at least 70 dBA L_{dn} and an increase of at least 5 dBA L_{dn} due to increased rail activity.

It is SEA's preliminary conclusion that no rail line segments, rail yards, or intermodal facilities in Missouri warrant noise mitigation according to the project mitigation criteria.

5-MO.10 MISSOURI ENVIRONMENTAL JUSTICE

As part of its analysis, SEA examined activities associated with the proposed Conrail Acquisition for environmental justice impacts (disproportionately high and adverse impacts to minority and low-income populations) in accordance with Executive Order 12898. As described in the Environmental Justice Methodology in Chapter 3, "Analysis Methods and Potential Mitigation Strategies," SEA first categorized the nature of the populations in areas where Acquisition-related activities are proposed. SEA determined whether the population in such areas met the following environmental justice thresholds: (1) greater than 50 percent of the population is minority or low-income, or (2) the minority or low-income population percentage is 10 percent greater than the minority or low-income population percentage in the county.

Next, SEA ascertained whether this population fell within an area of potential effect. SEA defined a typical zone on either side of a rail line segment or proposed construction site, or bordering a railroad intermodal facility or rail yard, as an area of potential effect. In general, the

extent of an area of potential effect may vary depending on the nature of the changes in rail activity associated with it, but such areas typically extend 400 to 1500 feet out from the rail line segment or facility being analyzed.

SEA then evaluated these areas of potential effect for proposed Acquisition-related activities that would meet or exceed the Board's thresholds for environmental analysis. In this analysis, SEA evaluated potential impacts on safety, transportation, air quality, noise, cultural resources, hazardous waste sites, hazardous materials transport, natural resources, and land use/socioeconomic effects. SEA also visited the sites of proposed construction for new rail line connections, rail line segments, intermodal facilities, and rail yards.

SEA developed and executed expanded public outreach efforts for those jurisdictions that met both SEA's thresholds for environmental justice and the Board's thresholds for environmental significance. SEA designed the public outreach process to seek widespread notice and dissemination of SEA's environmental impact analysis; provide additional opportunities for community input to the NEPA process; solicit information about cumulative effects in minority and low-income communities; and allow minority and low-income communities to assist in fashioning appropriate alternatives and mitigation measures. SEA is placing additional copies of the Draft EIS in jurisdictions with high proportions of minority and low-income populations that do not have significant environmental impacts which could result from the proposed Acquisition.

This section presents the results of those evaluations and analysis. A complete list of all the sites analyzed for environmental justice impacts is presented in Appendix K.

5-MO.10.1 Missouri Environmental Justice Setting

There are no new constructions or changes to rail line segments proposed in the state of Missouri as part of the proposed Conrail Acquisition.

Rail Yards

There is one rail yard, Luther Yard, with proposed changes in the number of rail cars handled that meets the Board's threshold for environmental analysis. This rail yard is located in the city of St. Louis, Missouri. Table 5-MO-9 presents the existing minority and low-income composition of the area of potential effect surrounding the rail yard.

Table 5-MO-9
Missouri Site Summary for Rail Yards

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
St. Louis City	993,529	16.6%	5.6%	NA	
Luther (NY-04)	537	80.6%	0.0%	Yes	No

Intermodal Facilities

There are two intermodal facilities with proposed changes in operational and truck traffic levels in Missouri that meet the Board's thresholds for environmental analysis. The Voltz intermodal facility is located in Kansas City (Clay County) with truck access from Kimball Street. The Luther intermodal facility is located on Hall Street in North St Louis, with truck access from Adelaide Boulevard, Hall Street, Riverview Drive, and East Carrie Avenue. Table 5-MO-10 presents the existing minority and low-income composition of the areas of potential effect surrounding the intermodal facilities and associated truck routes that meet the environmental justice population thresholds.

Table 5-MO-10
Missouri Site Summary for Intermodal Facilities

Area of Potential Effect	Total Population	Total Minority Percentage	Total Low-Income Percentage	Population of Concern	
				Minority Population	Low-Income Population
Clay County	153,411	5.3%	5.9%	NA	
Voltz (NM-08)	419	1.9%	21.9%	No	Yes
Voltz Truck Routes (NM-08)	2,929	10.9%	13.6%	No	No
St. Louis City	993,529	16.6%	5.6%	NA	
Luther (NM-09)	537	79.5%	0.0%	Yes	No
Luther Truck Routes (NM-09)	12,451	17.0%	9.4%	No	No

5-MO.10.2 Summary of Potential Effects and Preliminary Recommended Mitigation

Based on currently available information and after reviewing the findings of each of the resource analyses (noise, air quality, transportation, etc.), SEA identified no significant potential environmental effects at the Luther rail yard (NY-04) or at the Voltz (NM-08) or Luther (NM-

09) intermodal facilities. Therefore, SEA's preliminary determination is that no environmental justice effects would occur in Missouri as a result of the proposed Conrail Acquisition, and no mitigation would be necessary.

5-MO.11 MISSOURI CUMULATIVE EFFECTS

Within the State of Missouri, the Applicants propose to increase rail car handling at one existing CSX rail yard to levels that meet or exceed the Board's thresholds for environmental analysis.

Cumulative Effects Findings

As discussed in Chapter 6, "Agency Coordination and Public Outreach," SEA conducted extensive scoping and data collection for this Draft EIS. At this point in its investigation, SEA is unaware of any activities that would require a cumulative effects analysis. Therefore, based on its independent analysis and all information available to date, SEA has made a preliminary conclusion that there would be no significant cumulative effects associated with the proposed Acquisition in the State of Missouri.

Cumulative Effects Mitigation Measures

Due to a lack of cumulative effects, no mitigation measures are necessary.

5-MO.12 MISSOURI AREAS OF CONCERN

This Draft EIS examines system-wide and site-specific issues. An important part of SEA's analysis of the proposed Acquisition is the evaluation and consideration of environmental comments. The following table provides a list of agencies and local governments that have submitted environmental comments for the State of Missouri. A complete list of entities that have submitted environmental comments to SEA on or before October 31, 1997 is provided in Appendix O of this document.

Table 5-MO-11
Agencies in Missouri Submitting Environmental Comments

Entity	Nature of Comment(s)
Department of Natural Resources	Air and hazardous materials

SEA appreciates these comments and considers all comments in its environmental analysis and the development of potential system-wide and/or site-specific mitigation. For issue areas that do not meet the Board's environmental analysis thresholds or are not Acquisition-related, SEA has not conducted detailed analysis. SEA encourages parties to submit site-specific, Acquisition-related comments. SEA will review all comments submitted during the 45-day comment period on this Draft EIS in the preparation of the Final EIS.

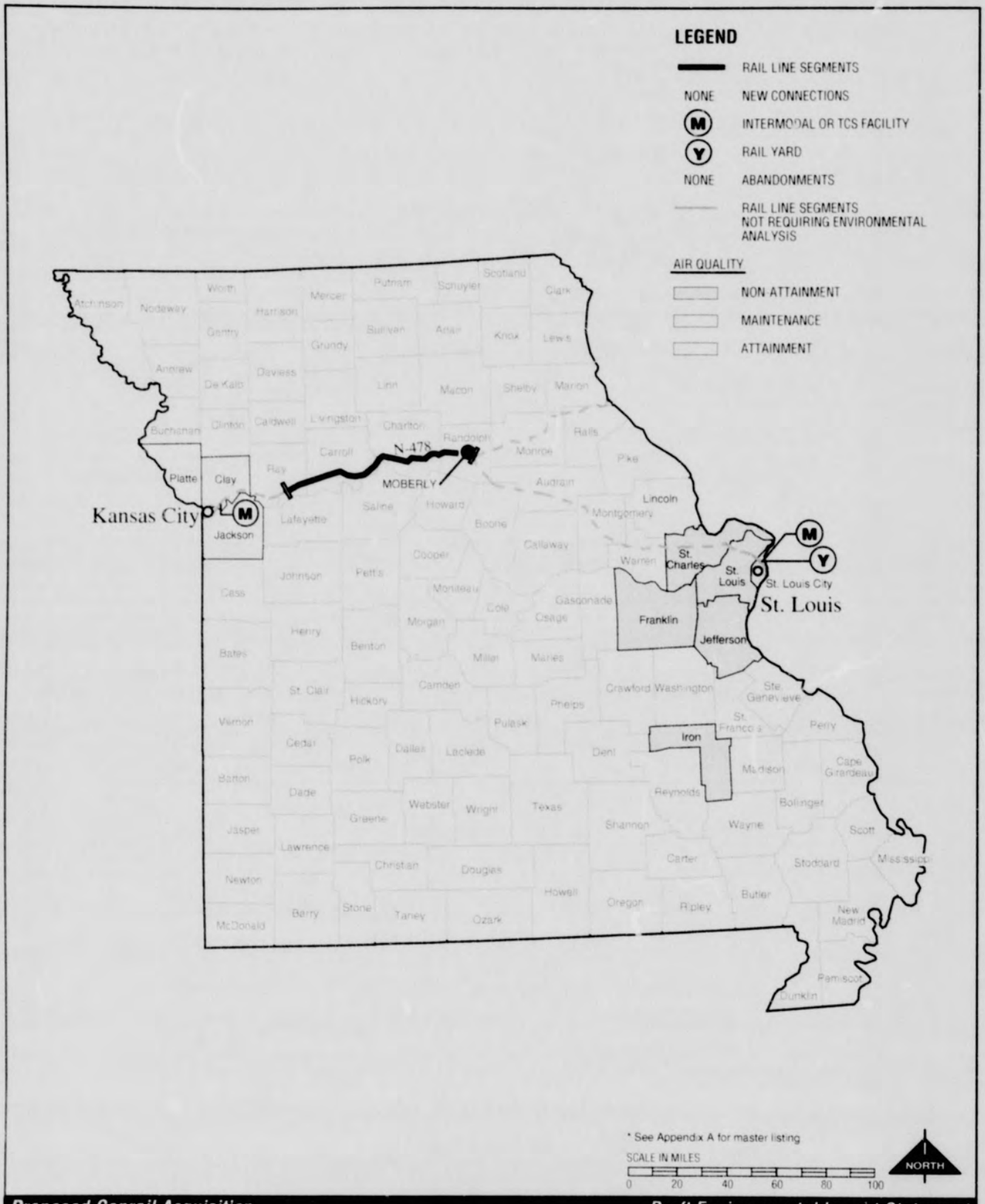

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FIGURE 5-MO-1

RAIL LINE SEGMENTS, NEW CONNECTIONS, INTERMODAL FACILITIES, RAIL YARDS AND ABANDONMENTS REQUIRING ENVIRONMENTAL ANALYSIS

MISSOURI - NORFOLK SOUTHERN

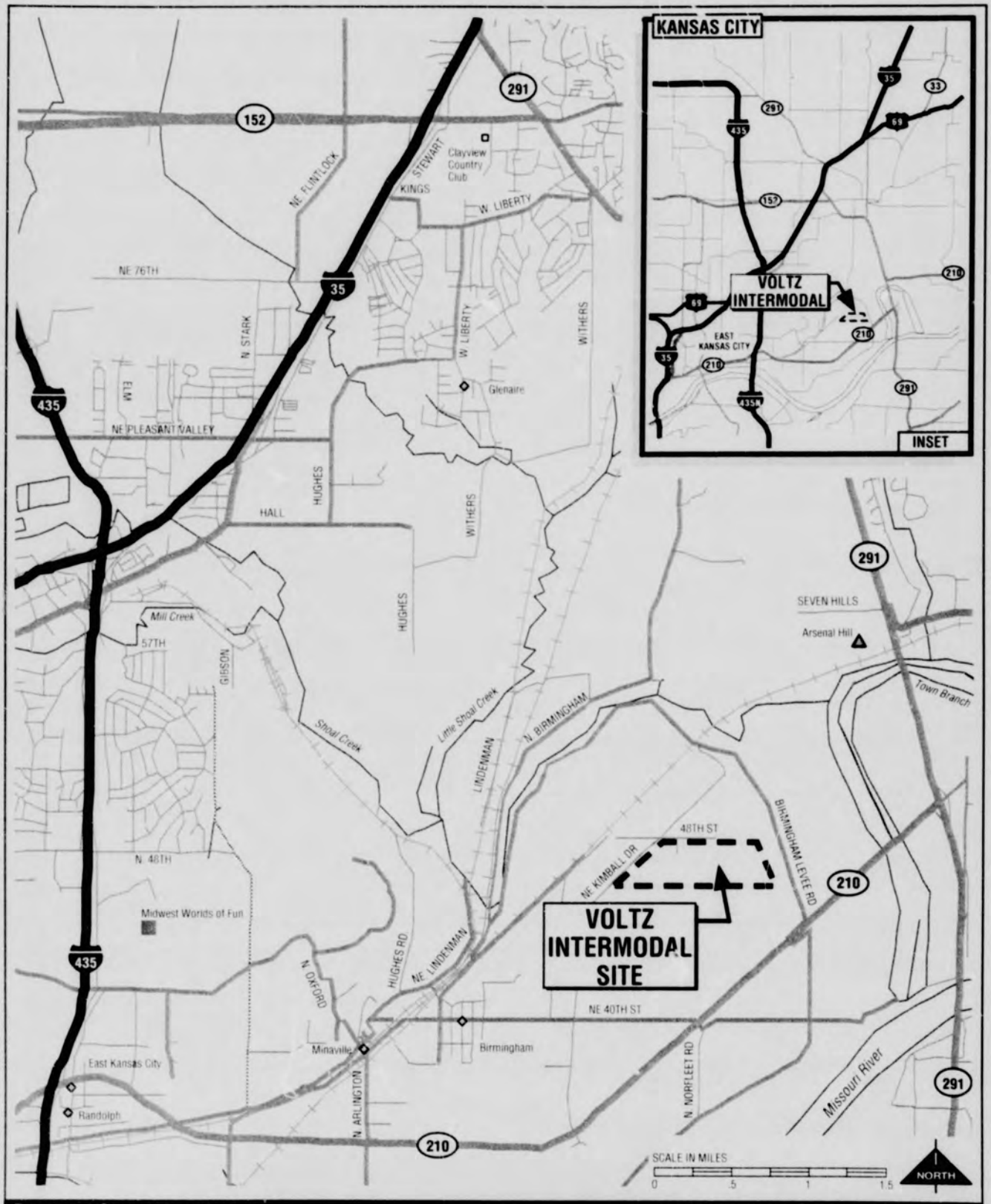

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FIGURE 5-MO-2

VOLTZ INTERMODAL SITE, KANSAS CITY, MISSOURI

NORFOLK SOUTHERN

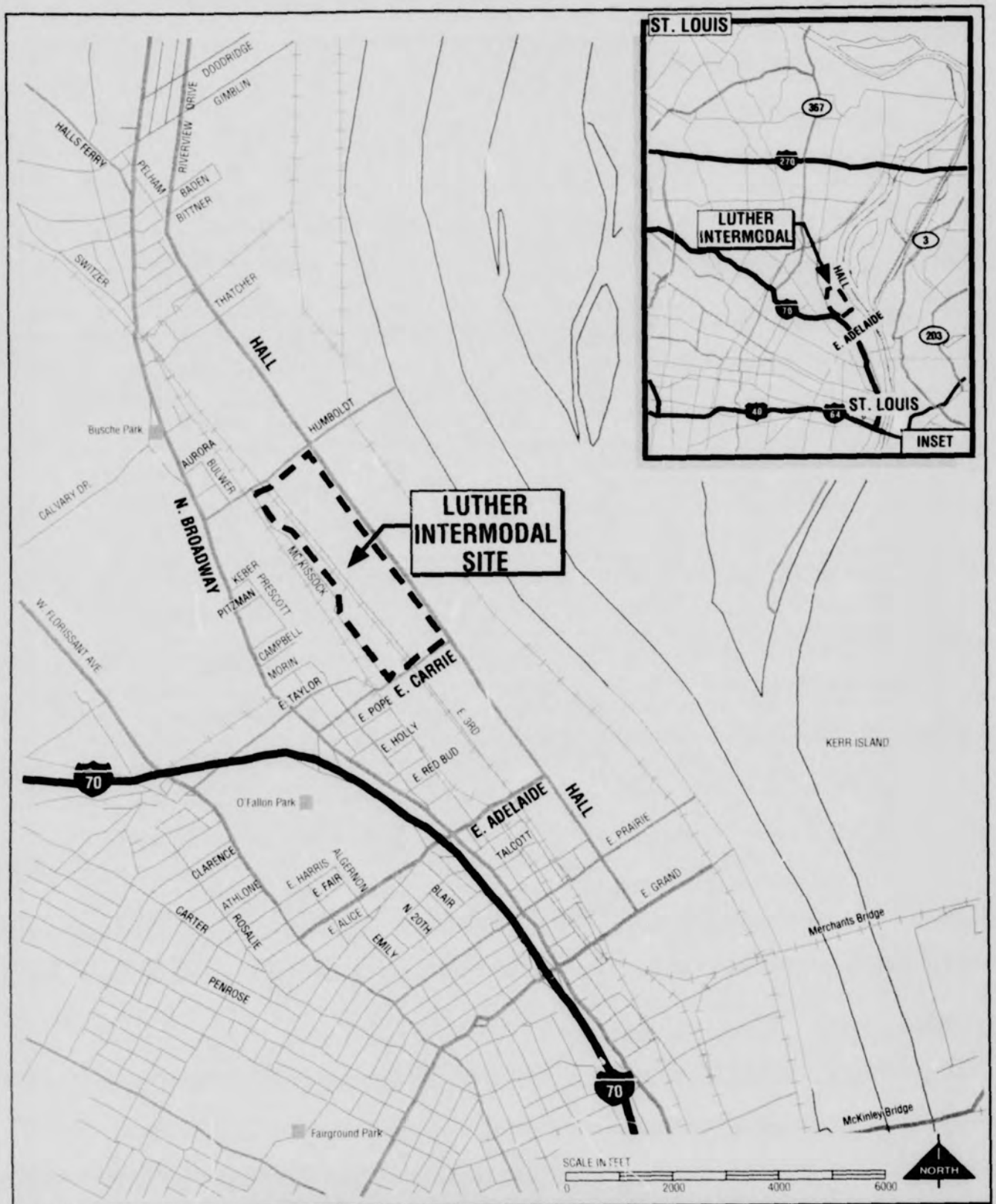

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FIGURE 5-MO-3

LUTHER INTERMODAL SITE, ST. LOUIS, MISSOURI

NORFOLK SOUTHERN

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