Environmental Assessment and Section 4(f) Evaluation

NICTD Double Track NWI (DT-NWI)
Milepost (MP) 58.8 to MP 32.2

Gary to Michigan City, IN

September 18, 2017
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Environmental Assessment and Section 4(f) Evaluation

for the
Double Track NWI Project
Gary to Michigan City, Indiana

prepared by the
U.S. Department of Transportation
Federal Transit Administration

and the
Northern Indiana Commuter Transportation District

pursuant to:

National Environmental Policy Act of 1969 (42 USC § 4332) and
Section 4(f) of the United States Department of Transportation Act of 1966
(49 USC § 303)

09/18/2017
Date of Approval

Marisol Simón
Regional Administrator
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Federal Transit Administration

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ENVIRONMENTAL ASSESSMENT
AND SECTION 4(F) EVALUATION

Northern Indiana Commuter Transportation District (NICTD)

Double Track NWI Project
(DT-NWI)

Lake, Porter, and LaPorte Counties, Indiana

Prepared for:

FTA  NICTD

Prepared by:

HDR

September 18, 2017
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Table of Contents

Acronyms .................................................................................................................................................... ix

Executive Summary .................................................................................................................................. 1

ES.1 Background ....................................................................................................................................... 1
ES.2 Project Description ............................................................................................................................ 1
ES.3 Alternatives Considered .................................................................................................................. 1
ES.4 Environmental Impacts and Measures to Avoid or Minimize Harm .............................................. 3
ES.5 Public Input Requested ................................................................................................................... 9

1.0 Project Purpose and Need .................................................................................................................. 1-1

1.1 Introduction ......................................................................................................................................... 1-1
1.2 Proposed Project Background ......................................................................................................... 1-1
1.2.1 Related Studies ............................................................................................................................ 1-3
1.3 Proposed Project Description ......................................................................................................... 1-3
1.4 Purpose of the Proposed Project ..................................................................................................... 1-6
1.5 Needs to Be Addressed ..................................................................................................................... 1-6
1.5.1 Need: Increase Operating Flexibility to Reduce Delays ............................................................... 1-8
1.5.2 Need: Meet Existing and Future Travel Demand ........................................................................ 1-9
1.5.3 Need: Reduce Travel Time .......................................................................................................... 1-12
1.5.4 Need: Enhance Safety ............................................................................................................... 1-13
1.6 Organization of the Document ........................................................................................................ 1-15

2.0 Alternatives Considered .................................................................................................................... 2-1

2.1 Alternatives Development and Evaluation Process ........................................................................... 2-1
2.2 No Build Alternative .......................................................................................................................... 2-1
2.3 Build Alternative and Evaluation of Design Options ....................................................................... 2-2
2.3.1 Build Alternative and Design Options – Track and Structures ............................................... 2-5
2.4 Build Alternative and Evaluation of Station Design Options .......................................................... 2-26
2.4.1 Gary/Miller Station ...................................................................................................................... 2-26
2.4.2 Portage/Ogden Dunes Station .................................................................................................... 2-27
2.4.3 Dune Park Station ....................................................................................................................... 2-27
2.4.4 Beverly Shores Station .............................................................................................................. 2-27
2.4.5 11th Street (Michigan City) Station .......................................................................................... 2-27
2.5 Preferred Alternative ......................................................................................................................... 2-30

3.0 Transportation Impacts and Mitigation Measures ............................................................................. 3-1

3.1 Introduction ......................................................................................................................................... 3-1
3.1.1 Legal/Regulatory Context and Methodology ............................................................................ 3-1
3.2 Trails .................................................................................................................................................... 3-2
3.2.1 Existing ......................................................................................................................................... 3-2
3.2.2 Proposed ....................................................................................................................................... 3-2
3.2.3 Impacts ......................................................................................................................................... 3-3
3.2.4 Mitigation ...................................................................................................................................... 3-3
3.3 Bus Transit ......................................................................................................................................... 3-3
3.3.1 Existing ......................................................................................................................................... 3-3

Environmental Assessment and Section 4(f) Evaluation

NICTD DT-NWI MP 58.8 to MP 32.2
Environmental Resources, Impacts, and Mitigation Measures ............................................... 4-1

4.0 Environmental Resources, Impacts, and Mitigation Measures ........................................ 4-1

4.1 Land Acquisitions, Displacements, and Relocations ......................................................... 4-1
  4.1.1 Legal/Regulatory Context and Methodology .............................................................. 4-1
  4.1.2 Existing Conditions ................................................................................................... 4-1
  4.1.3 Environmental Impacts ............................................................................................ 4-1
  4.1.4 Measures to Avoid or Minimize Harm ..................................................................... 4-3

4.2 Land Use and Economic Development ............................................................................ 4-4
  4.2.1 Legal/Regulatory Context and Methodology .............................................................. 4-4
  4.2.2 Existing Conditions ................................................................................................... 4-5
  4.2.3 Station Area and Land Use ....................................................................................... 4-7
  4.2.4 Regional Land Use and Economic Development Plans and Policy ......................... 4-9
  4.2.5 Environmental Impacts ............................................................................................ 4-10
  4.2.6 Measures to Avoid or Minimize Harm ..................................................................... 4-11

4.3 Neighborhoods, Communities, and Businesses ............................................................... 4-11
  4.3.1 Legal/Regulatory Context and Methodology .............................................................. 4-11
  4.3.2 Existing Conditions ................................................................................................... 4-12
  4.3.3 Environmental Impacts ............................................................................................ 4-20
  4.3.4 Measures to Avoid or Minimize Harm ..................................................................... 4-24

4.4 Historic, Archaeological, and Cultural Resources (Section 106) ........................................ 4-24
  4.4.1 Legal/Regulatory Context and Methodology .............................................................. 4-25
  4.4.2 Existing Conditions ................................................................................................... 4-26
  4.4.3 Environmental Effects ............................................................................................... 4-30
  4.4.4 Measures to Avoid or Minimize Harm ..................................................................... 4-37

4.5 Visual and Aesthetic Conditions ....................................................................................... 4-38
  4.5.1 Legal/Regulatory Context and Methodology .............................................................. 4-38
4.5.2 Existing Conditions ........................................................................................................ 4-39
4.5.3 Environmental Impacts ............................................................................................... 4-40
4.5.4 Measures to Avoid or Minimize Harm ....................................................................... 4-44
4.6 Noise .................................................................................................................................. 4-45
  4.6.1 Legal/Regulatory Context and Methodology ............................................................... 4-45
  4.6.2 Existing Conditions ...................................................................................................... 4-48
  4.6.3 Environmental Impacts ............................................................................................... 4-51
  4.6.4 Measures to Avoid or Minimize Harm ....................................................................... 4-53
4.7 Vibration ............................................................................................................................ 4-53
  4.7.1 Vibration Assessment Methodology ............................................................................ 4-54
  4.7.2 Existing Conditions ...................................................................................................... 4-56
  4.7.3 Environmental Impacts ............................................................................................... 4-57
  4.7.4 Measures to Avoid or Minimize Harm ....................................................................... 4-58
4.8 Hazardous/Regulated Materials .................................................................................... 4-59
  4.8.1 Legal/Regulatory Context and Methodology ............................................................... 4-60
  4.8.2 Existing Conditions ...................................................................................................... 4-61
  4.8.3 Environmental Impacts ............................................................................................... 4-69
  4.8.4 Measures to Avoid or Minimize Harm ....................................................................... 4-70
4.9 Biological Resources ........................................................................................................ 4-71
  4.9.1 Legal/Regulatory Context and Methodology ............................................................... 4-72
  4.9.2 Existing Conditions ...................................................................................................... 4-75
  4.9.3 Environmental Impacts ............................................................................................... 4-81
  4.9.4 Measures to Avoid or Minimize Harm ....................................................................... 4-70
4.10 Water Resources ............................................................................................................ 4-83
  4.10.1 Legal/Regulatory Context and Methodology ............................................................... 4-83
  4.10.2 Existing Conditions ...................................................................................................... 4-86
  4.10.3 Environmental Impacts ............................................................................................... 4-96
  4.10.4 Measures to Avoid or Minimize Harm ....................................................................... 4-98
  4.10.5 No Practical Alternative Finding – Wetlands ................................................................. 4-99
  4.10.6 No Practical Alternative – Floodplains ..................................................................... 4-100
4.11 Section 6(f) Resources ................................................................................................... 4-101
  4.11.1 Legal/Regulatory Context and Methodology ............................................................... 4-101
  4.11.2 Identification of Section 6(f) Resources .................................................................... 4-101
  4.11.3 Assessment of Conversion of Section 6(f) Resources ................................................ 4-101
  4.11.4 Consultation and Coordination (if required) ................................................................. 4-102
  4.11.5 Section 6(f) Determination Conclusions ................................................................. 4-102
4.12 Environmental Justice .................................................................................................... 4-102
  4.12.1 Legal/Regulatory Context and Methodology ............................................................... 4-102
  4.12.2 Existing Conditions ...................................................................................................... 4-104
  4.12.3 Impacts ........................................................................................................................ 4-107
4.13 Safety and Security ........................................................................................................ 4-114
  4.13.1 Legal/Regulatory Context and Methodology ............................................................... 4-114
  4.13.2 Existing Conditions ...................................................................................................... 4-116
NICTD DT-NWI MP 58.8 to MP 32.2
Environmental Assessment and Section 4(f) Evaluation

4.13.3 Environmental Impacts ................................................................. 4-117
4.13.4 Measures to Minimize Harm ....................................................... 4-119

4.14 Indirect and Cumulative Impacts ...................................................... 4-119
4.14.1 Legal/Regulatory Context and Methodology ................................. 4-119
4.14.2 Cumulative Impacts ..................................................................... 4-120
4.14.3 Environmental Impacts ............................................................... 4-123

4.15 Resources with Limited or No Impacts ........................................... 4-127
4.15.1 Air Quality ................................................................................. 4-127
4.15.2 Farmland .................................................................................. 4-130
4.15.3 Energy ....................................................................................... 4-130
4.15.4 Navigable Waters ..................................................................... 4-131
4.15.5 Coastal Zone Management ......................................................... 4-131
4.15.6 Geology, Soils, and Karst ............................................................ 4-134

5.0 Section 4(f) Evaluation .................................................................... 5-1

5.1 Supporting Information for this Section 4(f) Evaluation ..................... 5-1
5.2 Regulatory Framework .................................................................... 5-1
5.3 Organization of this Section 4(f) Evaluation ..................................... 5-2
5.4 Identification of Section 4(f) Resources .......................................... 5-3
5.4.1 Recreational Areas ..................................................................... 5-3
5.4.2 Historic Resources Subject to Section 4(f) Evaluation ................. 5-7

5.5 Assessment of Use of Section 4(f) Resources .................................. 5-29
5.5.1 Recreational Areas ..................................................................... 5-29
5.5.2 Historic Resources ..................................................................... 5-32

5.6 Avoidance Analysis ........................................................................ 5-37
5.6.1 Alternatives Evaluated ................................................................. 5-37
5.6.2 Avoidance Alternative Feasibility and Prudence Standards .......... 5-44

5.7 Least Overall Harm Analysis ......................................................... 5-48
5.7.1 Least Overall Harm Analysis ...................................................... 5-49

5.8 All Possible Planning to Minimize Harm ........................................ 5-59
5.9 Consultation and Coordination ....................................................... 5-63
5.10 Section 4(f) Determination Conclusions ....................................... 5-64

6.0 Public and Agency Coordination ...................................................... 6-1

6.1 Public Outreach .............................................................................. 6-1
6.1.1 Public Workshops ....................................................................... 6-1
6.1.2 Project Website .......................................................................... 6-2
6.1.3 Elected Official Briefings ............................................................ 6-2
6.1.4 Community Group Meetings ...................................................... 6-2
6.1.5 Property Displacement Outreach .............................................. 6-3
6.1.6 Other Public Outreach Activities .............................................. 6-3

6.2 Agency Coordination ..................................................................... 6-4
6.2.1 Federal, State, and Local Agency Coordination ......................... 6-4
6.2.2 Section 106 Coordination .......................................................... 6-4
6.2.3 Tribal Consultation .................................................................... 6-5
Tables

Table 5-2. Surveyed Historic Properties and Non-Surveyed Contributing Resources in the APE .............................. 5-9
Table 5-1. Section 4(f) Assessment of Recreational Areas’ Use with the Build Alternative .............................. 5-3
Table 4-27. Cumulative Impacts Summary .................................................................................................... 4-125
Table 4-26. Present and Reasonably Foreseeable Future Actions ................................................................. 4-121
Table 4-25. Wetland Impact Changes ........................................................................................................... 4-100
Table 4-24. 100-Year Floodplain Impacts .................................................................................................... 4-97
Table 4-23. Wetland and Stream Impacts Anticipated within the Construction Footprint ......................... 4-96
Table 4-22. 303(d)-listed Water Resources within the Project Area .............................................................. 4-94
Table 4-21. Federal and State Threatened or Endangered Species ............................................................. 4-72
Table 4-20. Summary of Site Locations ......................................................................................................... 4-69
Table 4-19. RECs Identified for the AOCs in the Project Area ...................................................................... 4-63
Table 4-18. Operational Vibration Impact Summary ....................................................................................... 4-57
Table 4-17. Land Use Categories for Transit Vibration Impact Criteria ....................................................... 4-55
Table 4-16. Adverse Effects on Historic Properties ......................................................................................... 4-31
Table 4-15. Community Profile for Lake County and Project Area within Lake County ....................... 4-15
Table 4-14. Population 2010 ......................................................................................................................... 4-20
Table 4-13. Neighborhood Livable Centers Near Project Area ................................................................. 4-9
Table 4-12. Wayside Noise Contour Screening Distances (feet) .................................................................... 4-48
Table 4-11. Land Use Categories .................................................................................................................. 4-46
Table 4-10. Surveyed Historic Properties in the APE .................................................................................. 4-27
Table 4-9. Proposed Open North-South Cross Streets Intersecting at 11th Street .................................... 4-23
Table 4-8. Intersection Future LOS with Rerouted Traffic, with Mitigation .............................................. 4-30
Table 4-7. Existing Noise Level Measurements in Project Area .................................................................. 4-49
Table 4-6. Community Profile for Porter County and Project Area within Porter County ..................... 4-17
Table 4-5. Community Profile for Lake County and Project Area within Lake County ........................ 4-15
Table 4-4. Community Profile for LaPorte County and Project Area within LaPorte County ............ 4-19
Table 4-3. Future Condition of Cross Roadways in Michigan City (Sheridan Avenue to Carroll Avenue) .......................... 3-7
Table 4-2. At-grade Crossings in the Project Area ....................................................................................... 3-7
Table 4-1. Proposed Project Average Travel Time Savings ....................................................................... 3-6
Table 3-5. Oak Street Future LOS with Rerouted Traffic ........................................................................... 3-30
Table 3-4. Intersection Future LOS with Rerouted Traffic, with Mitigation .............................................. 3-30
Table 3-3. Future Condition of Cross Roadways in Michigan City (Sheridan Avenue to Carroll Avenue) .......................... 3-12
Table 3-2. At-grade Crossings in the Project Area ....................................................................................... 3-7
Table 3-1. Proposed Project Average Travel Time Savings ....................................................................... 3-6
Table 2-4. 11th Street (Michigan City) Station Objectives ............................................................................ 2-28
Table 2-3. Bailly Design Option 4 Evaluation .............................................................................................. 2-14
Table 2-2. Bailly Design Option 2 Evaluation .............................................................................................. 2-12
Table 2-1. Build Alternative Track, Structure, and Related Elements ....................................................... 2-5
Table 1-5. EA Document Organization ....................................................................................................... 1-15
Table 1-4. Existing and Future No Build Alternative Weekday Ridership, by Station .............................. 1-12
Table 1-3. Northwest Indiana Residence-Work Location, 2000 and 2006–2010 ....................................... 1-11
Table 1-2. 2015 and 2040 Population and Employment ............................................................................ 1-11
Table 1-1. Problems, Needs, and Solutions ............................................................................................... 1-7
Table 1-5. Table of Contents.......................................................................................................................... 1

Tables

Table 1-5. EA Document Organization ....................................................................................................... 1-15
Table 1-4. Existing and Future No Build Alternative Weekday Ridership, by Station .............................. 1-12
Table 1-3. Northwest Indiana Residence-Work Location, 2000 and 2006–2010 ....................................... 1-11
Table 1-2. 2015 and 2040 Population and Employment ............................................................................ 1-11
Table 1-1. Problems, Needs, and Solutions ............................................................................................... 1-7

Table 3-5. Oak Street Future LOS with Rerouted Traffic ........................................................................... 3-30
Table 3-4. Intersection Future LOS with Rerouted Traffic, with Mitigation .............................................. 3-30
Table 3-3. Future Condition of Cross Roadways in Michigan City (Sheridan Avenue to Carroll Avenue) .......................... 3-12
Table 3-2. At-grade Crossings in the Project Area ....................................................................................... 3-7
Table 3-1. Proposed Project Average Travel Time Savings ....................................................................... 3-6
Table 2-4. 11th Street (Michigan City) Station Objectives ............................................................................ 2-28
Table 2-3. Bailly Design Option 4 Evaluation .............................................................................................. 2-14
Table 2-2. Bailly Design Option 2 Evaluation .............................................................................................. 2-12
Table 2-1. Build Alternative Track, Structure, and Related Elements ....................................................... 2-5

Table 1-5. EA Document Organization ....................................................................................................... 1-15
Table 1-4. Existing and Future No Build Alternative Weekday Ridership, by Station .............................. 1-12
Table 1-3. Northwest Indiana Residence-Work Location, 2000 and 2006–2010 ....................................... 1-11
Table 1-2. 2015 and 2040 Population and Employment ............................................................................ 1-11
Table 1-1. Problems, Needs, and Solutions ............................................................................................... 1-7

Table 3-5. Oak Street Future LOS with Rerouted Traffic ........................................................................... 3-30
Table 3-4. Intersection Future LOS with Rerouted Traffic, with Mitigation .............................................. 3-30
Table 3-3. Future Condition of Cross Roadways in Michigan City (Sheridan Avenue to Carroll Avenue) .......................... 3-12
Table 3-2. At-grade Crossings in the Project Area ....................................................................................... 3-7
Table 3-1. Proposed Project Average Travel Time Savings ....................................................................... 3-6
Table 2-4. 11th Street (Michigan City) Station Objectives ............................................................................ 2-28
Table 2-3. Bailly Design Option 4 Evaluation .............................................................................................. 2-14
Table 2-2. Bailly Design Option 2 Evaluation .............................................................................................. 2-12
Table 2-1. Build Alternative Track, Structure, and Related Elements ....................................................... 2-5

Table 1-5. EA Document Organization ....................................................................................................... 1-15
Table 1-4. Existing and Future No Build Alternative Weekday Ridership, by Station .............................. 1-12
Table 1-3. Northwest Indiana Residence-Work Location, 2000 and 2006–2010 ....................................... 1-11
Table 1-2. 2015 and 2040 Population and Employment ............................................................................ 1-11
Table 1-1. Problems, Needs, and Solutions ............................................................................................... 1-7
Table 5-3. Order of Magnitude Cost Comparison (in millions of dollars) ................................................. 5-56
Table 5-4. Least Overall Harm Comparison to the NEPA Preferred Alternative ................................. 5-57
Table 5-5. 11th Street (Michigan City) Station Objectives ........................................................................ 5-59

Figures

Figure 1-1. SSL Commuter Service along 11th Street, Michigan City ..................................................... 1-2
Figure 1-2. Weekday Peak-Hour Service .................................................................................................. 1-2
Figure 1-3. Proposed Project Area .......................................................................................................... 1-4
Figure 1-4. Proposed Improvements ....................................................................................................... 1-5
Figure 1-5. Train Interference .................................................................................................................. 1-9
Figure 1-6. Counties in Ridership Model .................................................................................................. 1-10
Figure 1-7. Collisions at Michigan City Crossings .................................................................................... 1-14
Figure 2-1. Build Alternative and Design Options .................................................................................. 2-4
Figure 2-2. Proposed Standard Double-Track Section (between Gary and Michigan City) ................. 2-6
Figure 2-3. Existing and Proposed Typical Section at Goff ................................................................... 2-7
Figure 2-4. Goff Design Option 1, MP 58 to MP 56 .................................................................................. 2-8
Figure 2-5. Goff Design Option 2, MP 58 to MP 56 (PREFERRED) ............................................................ 2-9
Figure 2-6. Existing and Proposed Typical Section through Bailly .......................................................... 2-10
Figure 2-7. Bailly Design Option 2, MP 47 to MP 44 ................................................................................ 2-13
Figure 2-8. Bailly Design Option 4, MP 46.5 to MP 44 (PREFERRED) ...................................................... 2-15
Figure 2-9. Bailly Design Option 4, Wilson Freight Siding, MP 49.7 to MP 48.3 (PREFERRED) ............. 2-16
Figure 2-10. Michigan City Alignments Evaluated in 2013 ................................................................... 2-18
Figure 2-11. 2017 Preferred Alternative Alignment – 11th Street ............................................................. 2-21
Figure 2-12. 2017 Preferred Alternative Alignment – 11th Street, Chicago Street to Washington Street .......................................................................................................................... 2-22
Figure 2-13. 2017 Preferred Alternative Alignment – 11th Street, Washington Street to E Michigan Boulevard .......................................................................................................................... 2-22
Figure 2-14. 10th Street Typical Section (Looking West) ........................................................................ 2-23
Figure 2-15. Artist’s Conceptual Rendering of 10th Street (Looking West) .............................................. 2-23
Figure 2-16. 11th Street Typical Section without Parking (Looking West) .............................................. 2-24
Figure 2-17. 11th Street Typical Section with Parking (Looking West) ..................................................... 2-25
Figure 2-18. Artist’s Conceptual Rendering of 11th Street (Michigan City) Station (Looking East) ....... 2-25
Figure 2-19. U.S. 12 and U.S. 20 Realignment (by INDOT), with Gary/Miller Station ......................... 2-26
Figure 2-20. 11th Street (Michigan City) Station Typical Section (Looking West) ................................ 2-29
Figure 3-1. Proposed Road/Rail Crossing Removals in Michigan City ................................................... 3-11
Figure 3-2. Artist’s Rendering of Proposed Typical Cul-De-Sac (Looking South) .................................. 3-13
Figure 3-3. Gary/Miller Station Park-and-Ride Parking – Existing ............................................................... 3-16
Figure 3-4. U.S. 12/U.S. 20 Realignment (by INDOT) with Gary/Miller Station ....................................... 3-18
Figure 3-5. Gary/Miller Station Park-and-Ride Parking – Proposed ........................................................... 3-19
Figure 3-6. Portage/Ogden Dunes Station Park-and-Ride Parking – Existing ....................................... 3-21
Figure 3-7. Portage/Ogden Dunes Station Park-and-Ride Parking – Existing, Opening Year (2020), and 2040 .................................................................................................................................. 3-22
Figure 3-8. Dune Park Station Park-and-Ride Parking – Existing .............................................................. 3-24
Figure 3-9. Dune Park Station Park-and-Ride Parking – Existing, Opening Year (2020), and 2040 .... 3-25
Figure 3-10. 11th Street (Michigan City) Station Park-and-Ride Parking – Existing ............................ 3-27
Figure 3-11. 11th Street (Michigan City) Station Park-and-Ride Parking – Proposed ......................... 3-28
Figure 4-1. Existing Land Uses in the Project Area .................................................................................... 4-6
Figure 4-2. Community Resources within a 0.5-Mile Radius of the Project Area ...................................... 4-14
Figure 4-3. Artist’s Conceptual Rendering of Gary/Miller Station (Facing West) .................. 4-21
Figure 4-4. Locations of Adverse Effects on Historic Properties ........................................ 4-36
Figure 4-5. Profile of Storage Tracks Elevation ........................................................................ 4-41
Figure 4-6. Existing 10th Street (Looking East) ..................................................................... 4-42
Figure 4-7. Conceptual Rendering of 10th Street with Proposed Project (Looking East)(For Illustrative Purposes Only) .............................................................. 4-42
Figure 4-8. Existing 11th Street (Michigan City) Station (Looking Northeast) .................... 4-43
Figure 4-9. Conceptual Rendering of 11th Street (Michigan City) Station with Proposed Project (Looking East)(For Illustrative Purposes Only) ........................................ 4-44
Figure 4-10. Typical Noise Levels .............................................................................................. 4-46
Figure 4-11. Noise Measurement Locations in the Project Area ............................................. 4-50
Figure 4-12. Typical Vibration Levels and Responses ............................................................... 4-54
Figure 4-13. Crosstie Pads ......................................................................................................... 4-59
Figure 4-14. Ballast Mat ............................................................................................................. 4-59
Figure 4-15. Locations of AOCs ............................................................................................... 4-62
Figure 4-16. Wetlands and Watershed Boundaries Overview Map ........................................ 4-87
Figure 4-17. Wetlands and Watershed Boundaries – Gary ...................................................... 4-88
Figure 4-18. Wetlands and Watershed Boundaries – Portage and Burns Harbor .................. 4-89
Figure 4-19. Wetlands and Watershed Boundaries – Dune Acres and Porter ......................... 4-90
Figure 4-20. Wetlands and Watershed Boundaries – Beverly Shores and Town of Pines .... 4-91
Figure 4-21. Wetlands and Watershed Boundaries – Town of Pines and Michigan City ...... 4-92
Figure 4-22. Minority Populations in the Project Area ............................................................. 4-105
Figure 4-23. Low-Income Populations in the Project Area ...................................................... 4-106
Figure 4-24. Coastal Zone Management Area .......................................................................... 4-133
Figure 5-1. Section 4(f) Parkland and Trail Resources ............................................................ 5-4
Figure 5-2. Calumet Trail Access at Dune Park Station ............................................................. 5-6
Figure 5-3. Calumet Trail under SR 49, Looking West .............................................................. 5-6
Figure 5-4. Historic Resources in Lake County ....................................................................... 5-22
Figure 5-5. Historic Resources in Porter County ..................................................................... 5-23
Figure 5-6. Historic Resources in LaPorte County ................................................................. 5-25
Figure 5-7. 1002 Cedar Street ................................................................................................. 5-26
Figure 5-8. South Shore Station, View North across Current Tracks and Catenary towards Building Façade ......................................................................................................... 5-26
Figure 5-9. Elston Grove Historic District, View Northwest from Cedar Street .................... 5-33
Figure 5-10. Proposed Typical Cul-De-Sac, View South ......................................................... 5-34
Figure 5-11. Franklin Street Commercial Historic District, View East along 11th Street from Pine Street .................................................................................................................. 5-35
Figure 5-12. South Shore Station, Michigan City ................................................................. 5-36
Figure 5-13. Alternative A – NS/Amtrak/NIPSCO ................................................................. 5-38
Figure 5-14. Section 4(f) Alternatives within Michigan City ................................................... 5-39
Figure 5-15. 11th Street (Michigan City) Station Alignment Shift - South .............................. 5-43
Figure 5-16. 2007 North End Plan ............................................................................................ 5-53
Figure 5-17. Michigan City Zoning Map (excerpt) ................................................................. 5-55
Figure 5-18. Typical Section of 11th Street at the South Shore Station ................................ 5-60
Figure 5-19. Artist’s Conceptual Rendering of Proposed 11th Street (Michigan City) Station 5-63
Appendices

Appendix I – References Cited
Appendix II – Affected Environment Mapbook
Appendix III – Environmental Assessment Technical Memoranda
  • 10th and 11th Street Corridor Traffic Impact Analysis
  • Parking and Traffic Technical Memorandum
  • Land Acquisitions, Displacements, and Relocations Technical Memorandum
  • Visual and Aesthetic Conditions Technical Memorandum
  • Noise and Vibration Technical Memorandum
  • Hazardous and Regulated Materials Technical Memorandum
  • Phase II Environmental Site Assessment
  • Floristic Quality Assessment, Threatened and Endangered Species Plant Survey, and Woodland Characterization Investigation
  • Habitat Surveys for the Eastern Massasauga, Kirtland’s Snake, Spotted Turtle, and Northern Leopard Frog
  • Indiana Bat and Northern Long-Eared Bat Habitat Assessment
  • Waters of the U.S. Delineation Report
  • Environmental Justice Technical Memorandum
  • Air Quality Technical Memorandum

Appendix IV – Agency Coordination

Appendix V – Public Outreach

Appendix VI – Preliminary Engineering Plans

Appendix VII – Historic, Archaeological, and Cultural Resources (Section 106)
  • Assessment of Effects Report, including Section 106 Consultation Correspondence
  • Historic Property Report for the NICTD Double Track NWI Project, Segment 1 of 3, LaPorte County
  • Historic Property Report for the NICTD Double Track NWI Project, Segment 2 of 3, Porter County
  • Historic Property Report for the NICTD Double Track NWI Project, Segment 3 of 3, Lake County
  • Summary of Phase I Archaeological Survey for the NICTD Double Track NWI Project
## Acronyms

<table>
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<th>Acronym</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>ACHP</td>
<td>Advisory Council on Historic Preservation</td>
</tr>
<tr>
<td>ADA</td>
<td>Americans with Disabilities Act</td>
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<tr>
<td>AOC</td>
<td>Area of Concern</td>
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<tr>
<td>APE</td>
<td>area of potential effects</td>
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<tr>
<td>AM</td>
<td>morning</td>
</tr>
<tr>
<td>ASTM</td>
<td>American Society for Testing and Materials</td>
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<tr>
<td>AUL</td>
<td>activity and use limitations</td>
</tr>
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<td>AWD</td>
<td>automatic warning device</td>
</tr>
<tr>
<td>Bgs</td>
<td>below ground surface</td>
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<tr>
<td>BMP</td>
<td>best management practice</td>
</tr>
<tr>
<td>C value</td>
<td>coefficient of conservatism</td>
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<td>CAA</td>
<td>Clean Air Act</td>
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<td>CBD</td>
<td>Central Business District</td>
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<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
</tr>
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<td>CERCLIS</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Information System</td>
</tr>
<tr>
<td>CEQ</td>
<td>Council on Environmental Quality</td>
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<td>CFR</td>
<td>Code of Federal Regulations</td>
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<tr>
<td>CN</td>
<td>Canadian National Railway</td>
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<tr>
<td>CO</td>
<td>carbon monoxide</td>
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<td>COC</td>
<td>contaminant of concern</td>
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<td>CORRACTS</td>
<td>RCRA Corrective Action Sites</td>
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<td>CP</td>
<td>control point</td>
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<td>Controlled Recognized Environmental Condition</td>
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<td>CZMA</td>
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<td>dB</td>
<td>decibels</td>
</tr>
<tr>
<td>dBA</td>
<td>A-weighted decibels</td>
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<tr>
<td>DHPA</td>
<td>Division of Historic Preservation and Archaeology</td>
</tr>
<tr>
<td>DNL or $L_{dn}$</td>
<td>day-night average sound level</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>DT-NWI</td>
<td>Double Track Northwest Indiana</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>EJ</td>
<td>Environmental Justice</td>
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<td>Executive Order</td>
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<td>FONSI</td>
<td>Finding of No Significant Impact</td>
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<tr>
<td>GBN</td>
<td>ground-borne noise</td>
</tr>
<tr>
<td>GBV</td>
<td>ground-borne vibration</td>
</tr>
<tr>
<td>GHG</td>
<td>greenhouse gas</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td>GPTC</td>
<td>Gary Public Transportation Corporation</td>
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<tr>
<td>HABS</td>
<td>Historic American Building Survey</td>
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<tr>
<td>HQAR</td>
<td>high-quality aquatic resource</td>
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<td>HREC</td>
<td>Historical Recognized Environmental Condition</td>
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<td>HUC</td>
<td>Hydrologic Unit Code</td>
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<td>Hz</td>
<td>Hertz</td>
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<td>IAC</td>
<td>Indiana Administrative Code</td>
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<td>Indiana Code</td>
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<td>IDEM</td>
<td>Indiana Department of Environmental Management</td>
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<td>Indiana Department of Natural Resources</td>
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<td>IGS</td>
<td>Indiana Geological Survey</td>
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<td>IHSSI</td>
<td>Indiana Historic Sites and Structures Inventory</td>
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<td>Indiana Department of Transportation</td>
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<td>LMCP</td>
<td>Lake Michigan Coastal Program</td>
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<tr>
<td>LOS</td>
<td>level of service</td>
</tr>
<tr>
<td>$L_{eq}$</td>
<td>equivalent average sound level</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>$L_v$</td>
<td>vibration (velocity)</td>
</tr>
<tr>
<td>LUST</td>
<td>leaking underground storage tank</td>
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<tr>
<td>LWCF</td>
<td>Land and Water Conservation Fund Act</td>
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<td>MAP-21</td>
<td>Moving Ahead for Progress in the 21st Century Act</td>
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<td>Memorandum of Agreement</td>
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<td>MOT</td>
<td>maintenance of traffic</td>
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<td>MOW</td>
<td>maintenance-of-way</td>
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<td>MP</td>
<td>milepost</td>
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<td>MPDF</td>
<td>Multiple Property Documentation Form</td>
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<td>mph</td>
<td>miles per hour</td>
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<td>MPO</td>
<td>Metropolitan Planning Organization</td>
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<td>MSAT</td>
<td>mobile source air toxic</td>
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<td>NAAQS</td>
<td>National Ambient Air Quality Standards</td>
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<td>National Cooperative Highway Research Program</td>
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<td>National Environmental Policy Act of 1969</td>
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<td>NHD</td>
<td>National Hydrography Dataset</td>
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<td>NFRAP</td>
<td>No Further Remedial Action Planned</td>
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<td>National Historic Preservation Act</td>
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<td>Northern Indiana Commuter Transportation District</td>
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<td>NIPSCO</td>
<td>Northern Indiana Public Service Company</td>
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<td>Northwestern Indiana Regional Planning Commission</td>
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<td>NO$_2$</td>
<td>nitrogen dioxide</td>
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<td>NPDES</td>
<td>National Pollution Discharge Elimination System</td>
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<td>U.S. National Park Service</td>
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<td>NRCS</td>
<td>Natural Resources Conservation Service</td>
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<td>NRHP</td>
<td>National Register of Historic Places</td>
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<td>NS</td>
<td>Norfolk Southern Railway</td>
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<tr>
<td>O$_3$</td>
<td>ozone</td>
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<td>OCS</td>
<td>overhead contact system</td>
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<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Act</td>
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<td>OWJ</td>
<td>Official(s) with Jurisdiction</td>
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<tr>
<td>Pb</td>
<td>lead</td>
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<tr>
<td>PEL</td>
<td>Planning-Environmental Linkage</td>
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<tr>
<td>PM</td>
<td>afternoon or evening</td>
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xi
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>PM$_{2.5}$</td>
<td>particulate matter with diameter of 2.5 microns or less</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>particulate matter with diameter of 10 microns or less</td>
</tr>
<tr>
<td>PMP</td>
<td>Project Management Plan</td>
</tr>
<tr>
<td>Project</td>
<td>Double Track Northwest Indiana Project</td>
</tr>
<tr>
<td>PTC</td>
<td>Positive Train Control</td>
</tr>
<tr>
<td>RCG</td>
<td>remediation closure guide</td>
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<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
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<tr>
<td>RDA</td>
<td>Northwest Indiana Regional Development Authority</td>
</tr>
<tr>
<td>REC</td>
<td>Recognized Environmental Condition</td>
</tr>
<tr>
<td>ROW</td>
<td>right-of-way</td>
</tr>
<tr>
<td>RV</td>
<td>recreational vehicle</td>
</tr>
<tr>
<td>SEMS</td>
<td>Superfund Enterprise Management System</td>
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<td>SEPP</td>
<td>Safety and Emergency Preparedness Plan</td>
</tr>
<tr>
<td>SHAARD</td>
<td>State Historic Architectural and Archaeological Research Database</td>
</tr>
<tr>
<td>SHPO</td>
<td>State Historic Preservation Office</td>
</tr>
<tr>
<td>SIP</td>
<td>State Implementation Plan</td>
</tr>
<tr>
<td>SO$_2$</td>
<td>sulfur dioxide</td>
</tr>
<tr>
<td>SSL</td>
<td>South Shore Line</td>
</tr>
<tr>
<td>SSPP</td>
<td>System Safety Program Plan</td>
</tr>
<tr>
<td>SSMP</td>
<td>Safety and Security Management Plan</td>
</tr>
<tr>
<td>STP</td>
<td>shovel test pits</td>
</tr>
<tr>
<td>SVOC</td>
<td>semi-volatile organic compounds</td>
</tr>
<tr>
<td>TCU</td>
<td>transportation, communication, utilities</td>
</tr>
<tr>
<td>TDD</td>
<td>Transit Development Districts</td>
</tr>
<tr>
<td>TIF</td>
<td>Tax Increment Finance</td>
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<tr>
<td>TIP</td>
<td>Transportation Improvement Program</td>
</tr>
<tr>
<td>TIGER</td>
<td>Transportation Investment Generating Economic Recovery</td>
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<tr>
<td>TNWs</td>
<td>Traditional Navigable Waters</td>
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<tr>
<td>TOD</td>
<td>transit-oriented development</td>
</tr>
<tr>
<td>TPH</td>
<td>total petroleum hydrocarbons</td>
</tr>
<tr>
<td>Uniform Act</td>
<td>Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970</td>
</tr>
<tr>
<td>USACE</td>
<td>U.S. Army Corps of Engineers</td>
</tr>
<tr>
<td>USC</td>
<td>United States Code</td>
</tr>
<tr>
<td>USDA</td>
<td>U.S. Department of Agriculture</td>
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### Acronym and Definition

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>USDOT</td>
<td>U.S. Department of Transportation</td>
</tr>
<tr>
<td>USEPA</td>
<td>U.S. Environmental Protection Agency</td>
</tr>
<tr>
<td>USFWS</td>
<td>U.S. Fish and Wildlife Service</td>
</tr>
<tr>
<td>USGS</td>
<td>U.S. Geological Survey</td>
</tr>
<tr>
<td>UST</td>
<td>underground storage tank</td>
</tr>
<tr>
<td>VdB</td>
<td>vibration (in decibels)</td>
</tr>
<tr>
<td>VMT</td>
<td>vehicle miles traveled</td>
</tr>
<tr>
<td>VOC</td>
<td>volatile organic compound</td>
</tr>
<tr>
<td>WQC</td>
<td>Water Quality Certification</td>
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EXECUTIVE SUMMARY

ES.1 BACKGROUND

The South Shore Line (SSL) is a 90-mile electrically powered commuter rail line that operates from South Bend International Airport in South Bend, Indiana, to Millennium Station in downtown Chicago, Illinois. Currently, the SSL commuter line operates for 17 miles on a double-track right-of-way (ROW) from 115th Street in Chicago to Gary, Indiana. From Gary to South Bend (approximately 59 miles), the railroad is mostly single track, except for one 6.5-mile section of double track and three separate passing sidings that total 2.2 miles. Most of the SSL commuter line shares track with the Chicago South Shore and South Bend Railroad (CSS) freight service. The SSL commuter line borders and provides train service adjacent to the Indiana Dunes State Park and the Indiana Dunes National Lakeshore. For approximately 2 miles in Michigan City, Indiana, the railroad track is embedded within 10th Street and 11th Street, and trains operate within roadway ROW alongside automobiles.

Present SSL weekday commuter service includes 19 inbound trains and 20 outbound trains that serve Chicago. The SSL links northwest Indiana to centers of commerce such as the Chicago Central Business District (CBD). Currently, nearly 70 percent of daily SSL commuter trips are work related (NICTD 2013). SSL commuters frequently experience delays and long travel times because of the limited capacity of the single track for the majority of the corridor. Existing capacity is already constrained, with future increases in ridership expected to compound problems.

The current track configuration within the roadways in Michigan City, coupled with a stretch of 39 at-grade crossing conflicts within 3 miles, present safety issues for commuters, motorists, pedestrians, and cyclists.

The Federal Transit Administration (FTA) is the lead federal agency and the Northern Indiana Commuter Transportation District (NICTD) is the project sponsor for the proposed Double Track Northwest Indiana (DT-NWI) Project (Project). This Environmental Assessment (EA) analyzes proposed improvements to the SSL from Gary to Michigan City.

ES.2 PROJECT DESCRIPTION

FTA and NICTD propose to expand a portion of the SSL service between milepost (MP) 58.8 in Gary and MP 32.2 in Michigan City, a distance of 26.6 miles (Project Area). The proposed Project includes construction of a second track with related signal, power, communications, bridge, and track infrastructure, and station improvements. Between Gary and Burns Harbor, Indiana, a second mainline already exists. In Michigan City from MP 35.3 to MP 33.3, the track is embedded within and runs parallel to the roadway. Proposed Project plans in this area would remove the current in-street track, add a second track, and physically separate the track from the roadway.

With an anticipated opening in 2020, the proposed Project would increase capacity to meet current and future ridership demands and would improve travel times and safety for the only existing commuter rail line that connects northwest Indiana with the Chicago region. The increased access to employment centers and destinations would economically benefit northwest Indiana.

Supporting information on the purpose and need for this proposed Project is provided in Chapter 1.

ES.3 ALTERNATIVES CONSIDERED

The development of the proposed Project and alternatives evaluated in this EA is described in detail in Section 2.1. This EA considers and compares the No Build Alternative and the Build Alternative for the
Environmental Assessment and Section 4(f) Evaluation

The proposed Project. Consideration of the No Build Alternative is required as part of the National Environmental Policy Act of 1969 (NEPA) environmental analysis; it is used for comparison purposes to assess the relative benefits and impacts of implementing the proposed Project. It represents future conditions that would likely result if the proposed Project were not implemented.

The Build Alternative consists of the following track and structure elements: addition of a second, adjacent track at locations where only single track exists today; installation of signal and overhead contact system (OCS) infrastructure; construction of four new railroad bridges over two roadways and two freight railroads; and replacement of in-street trackage with two tracks separated from the roadway in Michigan City. NICTD developed and evaluated more than one design option for three segments of the Build Alternative to determine the Preferred Alternative: Goff/Canadian National Railway (CN) interchange in Gary, Bailly (Porter), and in Michigan City. The Build Alternative design options are further detailed in Section 2.3.

- **Goff/CN Interchange (Gary)** – Two design options were developed and evaluated, with Option 2 being selected as the Preferred Alternative. The Preferred Alternative would place the second mainline track on the south side of the existing mainline track. This option would allow for the fewest impacts to CSS freight operations and natural resources and would allow construction to be conducted within NICTD- and CSS-owned property.

- **Bailly (Porter)** – NICTD considered seven design options, five of which were dismissed because of CSS operational concerns, not meeting purpose and need, or a high number of environmental impacts. The remaining options, Options 2 and 4, would include a second mainline track and assume that trains would operate at planned speeds. The difference between the two options is that the permanent conversion of land from the Indiana Dunes National Lakeshore, a property of the U.S. National Park Service (NPS), would be needed for Option 2. Option 4 is preferred because it would provide the best balance between meeting NICTD’s need for a second track and operational flexibility and meeting CSS’s needs for operational flexibility, railcar storage, and future service needs. It also would minimize impacts to wetlands and would have no impacts to NPS parkland.

- **Michigan City** – NICTD and the City of Michigan City have studied the development of the Build Alternative for several years. In 2013, the Michigan City/NICTD Rail Realignment Study examined three primary corridors, ultimately selecting the corridor that uses 10th and 11th Streets. NICTD developed this corridor further during preliminary design, and it is included in the Build Alternative. The proposed Project would remove existing in-street track in 10th and 11th Streets from Sheridan Avenue (MP 35.3) to Michigan Boulevard (MP 33.3), would add a second track, and would physically separate the track from the roadway. OCS and signal improvements are included, which would extend to MP 32.2 near Carroll Avenue.

Major elements of the Build Alternative for station design options are further detailed in Section 2.4. The five stations in the Project Area [Gary/Miller, Portage/Ogden Dunes, Dune Park, Beverly Shores, and 11th Street (Michigan City)] would be improved to support the additional ridership, service frequency, and operational flexibility of the proposed Project. All stations would need to accommodate the continued operation of CSS freight trains. For those stations with high-level platforms [Gary/Miller, Portage/Ogden Dunes, and 11th Street (Michigan City)], additional tracks (called gauntlet tracks) would be required to provide enough clearance for a freight train to pass the station without damaging the platform.
ES.4 ENVIRONMENTAL IMPACTS AND MEASURES TO AVOID OR MINIMIZE HARM

Potential adverse environmental impacts and measures to avoid or minimize harm under the Build Alternative are detailed in Chapter 3 and are summarized in Table ES-1.

Table ES-1. Summary of Impacts Potentially Occurring under the Build Alternative

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Measures to Avoid or Minimize Harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation (Chapter 3)</td>
<td>Three streets that currently intersect with 10th Street would be closed south of the realigned tracks.</td>
<td>• The City of Michigan City would construct connections for these roads south of 10th Street to maintain traffic circulation.</td>
</tr>
<tr>
<td></td>
<td>Eleven streets that currently intersect with 11th Street would have a cul-de-sac north of the realigned NICTD/CSS railroad tracks.</td>
<td>• NICTD would work with the City of Michigan City to develop an outreach plan to inform residents, businesses, and visitors of the minor change in travel patterns.</td>
</tr>
<tr>
<td></td>
<td>Traffic on 11th Street would change from two-way traffic to one-way eastbound traffic.</td>
<td>• Westbound traffic on 11th Street in Michigan City would be rerouted to other roadways. The roadways that would experience the additional traffic would continue to operate at acceptable levels.</td>
</tr>
<tr>
<td></td>
<td>Michigan City Transit Route 2 would no longer travel south on Pine Street.</td>
<td>• NICTD would work with Michigan City Transit regarding the permanent changes to Route 2 because of closing Pine Street. NICTD would ensure that Route 2 would continue to serve the 11th Street (Michigan City) Station, both during construction and permanently.</td>
</tr>
<tr>
<td></td>
<td>Temporary impacts to bus routes during construction.</td>
<td>• NICTD would coordinate with the City of Gary and the Gary Public Transportation Corporation (GPTC) to develop an outreach plan regarding the temporary impacts to Route 13 during construction. • NICTD would coordinate with the City of Michigan City and Michigan City Transit to develop an outreach plan regarding the temporary impacts to Routes 1, 3, and 4 during construction. This would include developing a maintenance of traffic (MOT) plan that accommodates buses.</td>
</tr>
<tr>
<td></td>
<td>Temporary impacts to railroads during construction.</td>
<td>• NICTD would coordinate with CN, Norfolk Southern Railway (NS), CSX Transportation (CSX), Amtrak, and CSS to develop phasing plans that would minimize the temporary impacts during construction.</td>
</tr>
<tr>
<td></td>
<td>Temporary impacts to trail access during construction.</td>
<td>• NICTD would coordinate with Porter County, Northern Indiana Public Service Company (NIPSCO), the Town of Porter, and the Indiana Dunes National Lakeshore regarding the temporary impacts to access the Calumet Trail and the Dunes Kankakee Trail during construction.</td>
</tr>
<tr>
<td>Resource</td>
<td>Impacts</td>
<td>Measures to Avoid or Minimize Harm</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
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</tbody>
</table>
| Land Acquisitions, Displacements, and Relocations (Section 4.1)         | • Temporary construction easements would be required.  
• Permanent acquisition of 158 individual properties would occur, including 81 residences (one parcel has two residences), 62 commercial properties, 9 transportation, communication, or utility properties, and 7 municipal properties. | • Acquisitions and relocations would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. |
| Land Use and Economic Development (Section 4.2)                         | • No adverse impacts.  
• NICTD has consulted with local communities and reviewed their development plans. The proposed Project is consistent with and supportive of these plans.  
• NICTD would continue to work with local municipalities if any changes in zoning are necessary to accommodate station or parking improvements. No adverse economic impacts are anticipated. | • No mitigation proposed.                                                                                                                                |
| Neighborhoods, Communities, and Businesses (Section 4.3)                | Construction activities associated with the proposed Project are expected to result in temporary increases in noise and vibration, erosion, and airborne dust.  
Construction activities associated with the proposed Project are expected to result in temporary increases in traffic, access to businesses and detours. | • NICTD would require the construction contractor to implement best management practices (BMPs) to minimize these effects.  
• NICTD would require contractors to follow elements of US Environmental Protection Agency’s (EPA) Construction Emission Control Checklist.  
• NICTD would develop a maintenance of traffic plan with each community to minimize traffic-related impacts during construction.  
The proposed Project would introduce new station elements and designs into the community.  
• Station designs would include aesthetic features and landscaping that would enhance the station area. Within historic districts or for changes to historic structures, NICTD would coordinate with the State Historic Preservation Office (SHPO), Section 106 consulting parties (as appropriate), and local historic preservation commissions, as applicable. |
<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Measures to Avoid or Minimize Harm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Historic, Archaeological, and Cultural Resources</strong> (Section 4.4)</td>
<td>Adverse effects on 27 historic resources eligible for listing on the National Register of Historic Properties (NRHP).</td>
<td>• FTA and NICTD, in consultation with the SHPO, would develop and execute a Memorandum of Agreement (MOA) to resolve the adverse effects on historic resources. A draft of this MOA is included in Appendix VII of this EA.</td>
</tr>
</tbody>
</table>
| **Visual and Aesthetic Conditions** (Section 4.5)                       | • Temporary construction impacts may result in minor visual effects in all areas where construction would occur.  
• Permanent track realignment and impacts to 27 historic resources from Sheridan Avenue to E. Michigan Boulevard in Michigan City would alter the visual environment. | • NICTD would work with local communities on the design of the stations to mitigate adverse visual impacts. Mitigation measures may include landscaping; reusing a building façade and/or using building construction materials, colors, and architectural styles consistent with station sites’ surroundings.  
• FTA and NICTD, in coordination with SHPO, would develop and execute an MOA to resolve the adverse effects on historic resources. |
| Clearing of up to 20.56 acres of trees throughout the proposed Project Area. |                                                                                     | • NICTD would continue to coordinate with the Indiana Department of Natural Resources (IDNR) and NPS regarding the appropriate ratio and species to provide mitigation for tree replacement. Mitigation would be coordinated with the wetland mitigation plan, as appropriate. |
| Filling of 5.73 acres of wetlands throughout the proposed Project Area.  |                                                                                     | • NICTD and NPS would develop a wetland mitigation strategy to create, restore, and enhance wetland and hydrology within the Indiana Dunes National Lakeshore. The mitigation plan would be developed as part of the Section 404 permit from the U.S. Army Corps of Engineers (USACE), and would be approved by the Indiana Department of Environmental Management (IDEM). The plan would be developed to meet the needs of NICTD and NPS, including the goal to enhance areas that are visible to the general public. |
| **Noise** (Section 4.6)                                                | Train horn sounding at grade crossings would cause moderate noise impacts at one residence in Gary and two residences in Beverly Shores. | • NICTD would mitigate these impacts by lowering the decibel level on the train horn.  
• NICTD would work with Michigan City to implement a quiet zone between Sheridan Avenue and Carroll Avenue. |
### Table ES-1. Summary of Impacts Potentially Occurring under the Build Alternative (cont.)

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Measures to Avoid or Minimize Harm</th>
</tr>
</thead>
</table>
| **Vibration** (Section 4.7) | Vibration impacts would be perceived at eight locations within the corridor: one in the Town of Pines, two in Beverly Shores, and five in Michigan City. | • NICTD would install crosstie pads (elastic pads places at the base of a tie), ballast mats (rubber or rubber-like material placed between base and ballast, ties, and rail), resilient fasteners (rubber ties in base of concrete tie), or other track support system modifications to mitigate vibration.  
  • These materials would be evaluated for effectiveness at impacted receptors and for durability in a shared freight corridor during the final design phase of the project. |
| **Hazardous/Regulated Materials** (Section 4.8) | Potential to disturb high- and moderate-risk Recognized Environmental Conditions (RECs) during construction. | • All construction contractors would be instructed to stop all subsurface activities in the event that odors, vents, disturbed, or significantly stained soil are discovered during construction. Contractors would be instructed to follow all applicable regulations regarding discovery and response for hazardous materials encountered during the construction process.  
  • Asbestos, lead-based paint, and hazardous material surveys of buildings or structures would be required before reconstruction or demolition of any property, including NICTD-owned properties or structures. Any hazardous materials identified would be abated and disposed of in accordance with federal, state, and local regulations.  
  • Contract plans would include a Contaminated Material Management Plan, Spill Control and Prevention Plan, Stormwater Pollution Prevention Plan, and Health and Safety Plans. Plans would be approved by NICTD and other agencies as appropriate prior to the start of construction. |
| **Biological Resources** (Section 4.9) | **Threatened/Endangered Species**  
  **Amphibians and Reptiles**  
  • 29.3 acres of suitable habitat (high and moderate quality) for the eastern massasauga snake (*Sistrurus catenatus catenatus*) and the Kirtland’s snake (*Clonophis kirtlandii*) would be cleared.  
  • 4.0 acres of suitable habitat for the spotted turtle (*Clemmys guttata*) would be cleared.  
  • 4.7 acres of suitable habitat for the northern leopard frog (*Lithobates pipiens*) would be cleared.  
  • To the extent practicable, NICTD would install drift fences in known habitat areas within active work areas and conduct daily inspections before work begins. To the extent practicable, a qualified herpetologist would relocate individual amphibians and/or reptiles from any of the four target species found in construction areas. |
### Table ES-1. Summary of Impacts Potentially Occurring under the Build Alternative (cont.)

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Measures to Avoid or Minimize Harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana Bat and Northern Long-eared Bat</td>
<td>• 7.68 acres of potentially suitable (moderate quality) habitat would be cleared.</td>
<td>NICTD would restrict tree clearing to occur only during the winter season to minimize the potential for affecting this species.</td>
</tr>
<tr>
<td><strong>State-listed Plant Species</strong></td>
<td>The following seven species may be found and removed by construction:</td>
<td><strong>State-listed Plant Species</strong> To the extent practicable, NICTD would coordinate with the IDNR and NPS to mitigate impacts to listed plant species, either through relocation prior to disturbance or planting new vegetation. NICTD would coordinate this mitigation with the overall wetland and natural resource mitigation plan that would be prepared as part of the Section 404 permit. This plan would be developed with the NPS and IDNR and would provide mitigation on land within the Indiana National Lakeshore.</td>
</tr>
<tr>
<td>• Skinner’s false foxglove (<em>Agalinis skinneriana</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Speckled alder (<em>Alnus incana</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bebb’s sedge (<em>Carex bebbii</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Northern long sedge (<em>Carex folliculate</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Hairy golden aster (<em>Chrysopsis villosa</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Russet buffalo-berry (<em>Shepherdia Canadensis</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Forked bluecurls (<em>Trichostema dichotomum</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Woodland Habitat</strong></td>
<td>20.56 acres of woodland would be cleared.</td>
<td>NICTD would continue to coordinate with the IDNR and NPS regarding the appropriate mitigation for tree replacement.</td>
</tr>
<tr>
<td><strong>Water Quality</strong></td>
<td>Potential in-stream work in three impaired waterways (Dunes Creek, Brown Ditch, and Kintzele Ditch) because of construction.</td>
<td>NICTD would require that contractors institute BMPs to protect water quality during construction. NICTD would apply for a Section 401 Water Quality Certification (WQC) from IDEM and abide by its conditions.</td>
</tr>
<tr>
<td><strong>Wetlands and Streams</strong></td>
<td>• Filling of 5.73 acres of wetlands:</td>
<td>NICTD would mitigate wetland impacts according to ratios determined by USACE. NICTD would obtain a Section 404 Individual Permit and adhere to any conditions of the permit. NICTD and NPS would develop a wetland mitigation strategy to create, restore, and enhance wetland and hydrology within the Indiana Dunes National Lakeshore. The mitigation plan would be developed as part of the Section 404 permit from USACE, and would be approved by IDEM.</td>
</tr>
<tr>
<td>• 4.75 acres are permanently filled;</td>
<td>• Of the 5.73 acres, 4.9 acres are high quality.</td>
<td></td>
</tr>
<tr>
<td>• 0.98 acre is temporarily impacted.</td>
<td>• All wetlands are preliminarily determined to be jurisdictional by USACE.</td>
<td></td>
</tr>
<tr>
<td>• 1,117 linear feet of in-stream work.</td>
<td>• 1,117 linear feet of in-stream work.</td>
<td></td>
</tr>
</tbody>
</table>
Table ES-1. Summary of Impacts Potentially Occurring under the Build Alternative (cont.)

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts</th>
<th>Measures to Avoid or Minimize Harm</th>
</tr>
</thead>
</table>
| **Floodplains**           | There would be permanent fill of up to 2.02 acres of the 100-year floodplain. | • NICTD would design all drainage structures in accordance with the IDEM and IDNR permit requirements.  
                                • NICTD would obtain permits from local and state authorities and specified conditions would be followed. Erosion control plans would be developed as part of the construction documents. |
| **Environmental Justice** | No disproportionately high and adverse impacts to environmental justice populations. | • NICTD would implement the required mitigation measures for each resource and continue to engage EJ populations as the proposed Project advances. |
| **Safety and Security**   | Construction-related safety impacts to commuters during construction of station improvements and construction-related safety impacts to trail users during construction of the trail modifications. | • NICTD would prepare and implement a Safety and Emergency Preparedness Plan (SEPP) for the Project.  
                                • Temporary fencing would be used in construction areas for the safety of commuters, pedestrians, workers, and trail users.  
                                • Fencing is proposed at the Gary/Miller Station and in Michigan City to discourage access to the railroad ROW. |
| **Indirect and Cumulative Impacts** | • No adverse impacts to the human environment or the natural environment.  
                                • The reasonably foreseeable future actions are expected to prove to be beneficial and provide more efficient access to jobs, businesses, and other places of interest. | • No mitigation is proposed. |
| **Section 4(f) Evaluation** | *De minimis* impact for the Calumet Trail relocation under State Route 49 bridge.* | • Section 4(f) *de minimis* finding by FTA, with concurrence from Porter County (the agency with jurisdiction). No additional mitigation is required. |
|                           | *De minimis* impact for the Dunes Kankakee Trail relocation near Mineral Springs Road.* | • Section 4(f) *de minimis* finding by FTA, with concurrence from the Town of Porter and NPS (the agency with jurisdiction). No additional mitigation is required. |
|                           | No feasible and prudent avoidance alternative to the permanent incorporation of 27 historic properties afforded protection under Section 4(f). | • FTA and NICTD, in consultation with SHPO, will enter into an MOA and abide by its stipulations. |

*Section 4(f) *de minimis* findings are preliminary pending public hearing and final concurrence from officials with jurisdiction over the identified Section 4(f) properties.
ES.5  PUBLIC INPUT REQUESTED

A 30-day comment period has been established to address formal comments on this EA. A digital copy of the EA is available at [www.doubletrack-nwi.com/docs](http://www.doubletrack-nwi.com/docs) in PDF format. Hard copies will be available during the public review period at the following locations:

- Gary Public Library – Woodson Branch, 501 S. Lake St, Gary, IN 46403
- Gary Public Library – Main Branch, 220 West 5th Avenue, Gary, IN 46402
- Portage Public Library, 2665 Irving St, Portage, IN 46368
- NICTD, 33 E. U.S. 12, Chesterton, IN 46304 (adjacent to Dune Park Station)
- Michigan City Public Library, 100 E. 4th Street, Michigan City, IN 46360
- Westchester Public Library, 200 West Indiana Ave., Chesterton, IN, 46304
- Federal Transit Administration Region 5 – 200 West Adams Street, Suite 320, Chicago, IL 60606

Two public hearings are scheduled for October 11 and 12 to solicit comments from the community about findings presented in the EA. The public hearing locations are compliant with the Americans with Disabilities Act (ADA). Comments received during the public hearing will be submitted to FTA and will be entered into the public record. Written comments will also be accepted at any time during the public comment period at the project website, [www.doubletrack-nwi.com](http://www.doubletrack-nwi.com), by email to doubletracknwi@nictd.com, and by U.S. mail to NICTD, 33 E. U.S. 12, Chesterton, IN 46304.
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1.0 PROJECT PURPOSE AND NEED

1.1 INTRODUCTION

The Northern Indiana Commuter Transportation District (NICTD), in cooperation with the Federal Transit Administration (FTA), proposes improvements and expansion of a 26.6-mile segment of the South Shore Line (SSL) between Gary and Michigan City, Indiana. Known as Double Track Northwest Indiana, or DT-NWI (Project), the proposed Project would expand capacity, increase service, modernize infrastructure, reduce passenger travel times, and improve system reliability, mobility, and safety. NICTD proposes to partially fund the proposed Project by applying for Core Capacity federal funds administered by FTA. FTA is the lead federal agency and NICTD is the Project sponsor.

The National Environmental Policy Act (NEPA) mandates the consideration of environmental impacts before approval of any federally funded project that may have significant impacts on the environment or where impacts have not yet been determined. FTA and NICTD prepared this DT-NWI Environmental Assessment (EA) in accordance with NEPA and other applicable regulations, including Section 106 of the National Historic Preservation Act (NHPA) and Section 4(f) of the U.S. Department of Transportation Act of 1966. The EA preparers followed joint guidance and regulations from FTA and the Federal Highway Administration (FHWA) and other agency regulations and guidelines. A description of the regulatory framework for each resource category is included in each section of this EA.

The EA analyzes the impacts of implementing the proposed Project on the physical, human, and natural environments in the proposed Project Area. The proposed Project Area is defined by mileposts (MP), which correspond with signal control points for the NICTD/Chicago South Shore and South Bend (CSS) railroad tracks. From west to east, the proposed Project begins in Gary at MP 58.8, west of Virginia Street, and ends at MP 32.2, near Carroll Avenue in Michigan City, a distance of 26.6 miles. FTA will issue a finding on the proposed Project based on the significance of impacts identified during the NEPA process, which will guide future planning and implementation.

1.2 PROPOSED PROJECT BACKGROUND

The Northwestern Indiana Regional Planning Commission (NIRPC), which is the Metropolitan Planning Organization (MPO) for the region, adopted the 2040 Comprehensive Regional Plan (CRP) in June 2011. The CRP provides guiding principles to support public transportation investments. Expanding both the geographic reach and service level of the public transportation system in northwest Indiana, including the SSL, is a vital component of achieving the CRP vision. Alleviating congestion, improving access and mobility in the core communities, and supporting livable centers are all goals of the transit framework presented in the CRP.

The SSL is a 90-mile electrically powered commuter rail line that operates from Millennium Station in downtown Chicago, Illinois, to South Bend International Airport in South Bend, Indiana. Currently, the SSL service operates for 14.4 miles on the Metra Electric District from Millennium Station to 115th Street on a predominantly 4-track main line; and for 17 miles on a double-track right-of-way (ROW) from 115th Street in Chicago to Gary, Indiana. From Gary to South Bend (approximately 59 miles), the railroad is mostly single track, except for one 6.5-mile section of double track and three separate passing sidings that total 2.2 miles. Most of NICTD’s SSL shares track with the CSS freight service. The NICTD/CSS track borders and travels through the Indiana Dunes State Park and the Indiana Dunes National Lakeshore. For 1.9 miles in Michigan City, the railroad track is embedded within 10th and 11th Streets, and trains operate within roadway ROW alongside automobiles, as shown in Figure 1-1.
The SSL service is a vital link between communities in northwest Indiana and the large employment center of the Chicago Central Business District (CBD). The SSL service provides access to a job base in Chicago that is double the job base in the two Indiana urban counties of Lake and Porter, whose residents are the largest users of the commuter line (NICTD 2016a). Overall, approximately 70 percent of the more than 12,000 daily SSL commuter rail trips are work-related (NICTD 2013).

Today's SSL service serves Chicago daily with 19 weekday inbound (westbound) trains and 20 weekday outbound (eastbound) trains. NICTD operates nine peak-hour weekday westbound SSL trains in the morning peak hours (5:45 AM to 9 AM) and eight weekday peak-hour eastbound trains in the afternoon peak hours (3:45 PM to 6 PM) (Figure 1-2).

Figure 1-1. SSL Commuter Service along 11th Street, Michigan City

Figure 1-2. Weekday Peak-Hour Service
In May 2014, NICTD adopted a 20-year *Strategic Business Plan* that identifies several improvements to the SSL, including the proposed Project. The location of the proposed Project is shown in Figure 1-3. Proposed improvements are located in Lake, Porter, and LaPorte Counties, Indiana, as shown in Figure 1-4.

### 1.2.1 RELATED STUDIES

Elements of the proposed Project have been studied in other federally funded planning efforts. In 2013, NICTD completed a joint project with the City of Michigan City on a TIGER-funded study to realign the existing NICTD/CSS railroad tracks through Michigan City. The study included extensive public involvement and resulted in a preferred alternative along 10th and 11th Streets with the track separated from the roadway.

With grants from the U.S. Environmental Protection Agency (USEPA), the U.S. Department of Housing and Urban Development, the U.S. Department of Transportation (USDOT), and the Legacy Foundation, the City of Gary has undertaken planning and brownfield clean-up efforts to redevelop the Gary/Miller area. The Gary North Side Development Project and Gary Redevelopment Commission’s Economic Development Plan each promote the City of Gary’s vision for community revitalization around the Gary/Miller Station. Efforts are focused on promoting pedestrian, bicycle, and transit-oriented development (TOD) as part of an economic development plan aimed at assisting a distressed urban neighborhood. The proposed Project is an integral part of these plans, increasing rail service to and from Gary/Miller Station to stimulate economic redevelopment in the greater Gary/Miller neighborhood.

NICTD’s current planning efforts, coupled with these community initiatives, are the building blocks to develop a long-term, sustainable solution for competitive, reliable commuter rail service in northwest Indiana.

### 1.3 PROPOSED PROJECT DESCRIPTION

The proposed Project begins in Gary at MP 58.8, west of Virginia Street, and ends at MP 32.2, near Carroll Avenue in Michigan City. The total distance is 26.6 miles. Nearly 6.5 miles of double-track mainline already exists within the proposed Project limits, generally between the east end of Gary (MP 54.0) and Burns Harbor (MP 47.5). There are also three separate passing sidings totaling 2.2 miles. Therefore, the total distance of existing double track is 8.7 miles.

Within the 26.6-mile Project Area, the proposed Project would include 1.8 miles of signal work at the far west and east ends of the Project, generally between MP 58.8 and 58.1 and MP 33.3 and 32.2, and the construction of 16.1 miles of new second mainline track and new overhead contact system (OCS or catenary) between MP 58.1 in Gary and MP 33.3 in Michigan City. These MPs roughly correspond with Tennessee Street in Gary and Michigan Boulevard in Michigan City.
Figure 1-3. Proposed Project Area
Figure 1-4. Proposed Improvements
At the east end of the Project Area, between MP 35.3 (Sheridan Avenue) and MP 33.3 (Michigan Boulevard) in Michigan City, the proposed Project would replace 1.9 miles of embedded, in-street track in 10th and 11th Streets with a segregated, double-track rail corridor. Along 10th Street, the proposed Project would remove three road and rail crossings. Eight additional at-grade crossings would be removed along 10th Street because of the realignment of the NICTD/CSS track out of the roadway. Ten streets that intersect with 11th Street would have a cul-de-sac north of the newly aligned NICTD/CSS railroad tracks, thereby removing the road and rail crossings. The remaining open crossings would be upgraded with automatic warning devices (AWDs) consisting of flashers, gates, and bells. Road closures and rail crossing removals are discussed in detail in Section 3.5 and shown in Figure 3-1.

The proposed Project would include four new bridges: over the CSX railroad track (MP 54.65) and Hobart Road (MP 54.62) in Gary; and over the NS railroad track (MP 47.41) and the main entrance road to ArcelorMittal (MP 47.32) in Burns Harbor to support the second mainline. See Figure 1-4.

A new 1.4-mile freight siding track would be constructed at Wilson East in Burns Harbor (MP 49.7 to MP 48.3) to provide storage capacity for CSS freight trains.

Two storage tracks for additional rush-hour trains, two high-level platforms, and additional parking would be constructed at the Gary/Miller Station. As a separate project, the Indiana Department of Transportation (INDOT) is consolidating U.S. 12 and U.S. 20 near the station in 2019. As a result, U.S. 12 south of the existing station would be relinquished, and all traffic on U.S. 12 would be routed to U.S. 20. The vacated U.S. 12 ROW would be used for Gary/Miller Station area improvements. The City of Gary is planning an improved station building and TOD.

Two high-level platforms and additional parking would be constructed at the Portage/Ogden Dunes Station. One new low-level platform would be constructed at the Dune Park and Beverly Shores Stations. Additional parking would be constructed at Dune Park Station.

The 11th Street (Michigan City) Station, located between Pine and Franklin Streets, would be improved and expanded with two high-level platforms and a new station building that includes a multi-level parking structure. NICTD has and continues to collaborate extensively with the City of Michigan City regarding the station and surrounding improvements. See Section 2.4.5 and Appendix IV for more information.

1.4 PURPOSE OF THE PROPOSED PROJECT

The purpose of the proposed Project is to expand the existing SSL capacity to meet current and future ridership demand. Increasing capacity would improve operating flexibility; reduce delay; reduce travel time; improve system reliability, mobility, and safety; and increase access to employment centers.

1.5 NEEDS TO BE ADDRESSED

SSL commuters currently endure less than optimum on-time performance, limited schedules, and trains without enough seating capacity. The lack of a second track constrains capacity and results in inflexible schedules, reliability issues, and long running times, making it less competitive with automobile travel times. The embedded, street-running rail in Michigan City, along with 39 at-grade crossings in 3 miles, contributes to some of the highest roadway and rail accident rates in Indiana.

The problems, needs, and solutions that the proposed Project would address are discussed briefly in Table 1-1, and in detail in Sections 1.5.1 through 1.5.4.
Table 1-1. Problems, Needs, and Solutions

<table>
<thead>
<tr>
<th>Problems</th>
<th>Needs</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited Ability to Bypass Known and Unforeseen Delays on the Route</td>
<td>Increase operating flexibility to reduce delays.</td>
<td>• Add second mainline track with crossovers and signal improvements to bypass delays.</td>
</tr>
<tr>
<td>• Conflicts with freight trains occur</td>
<td></td>
<td>• Add gauntlet tracks at stations to provide enough clearance for freight trains to safely travel past high-level platforms.</td>
</tr>
<tr>
<td>• Scheduled meets (the practice of holding one train with a red signal until the other passes) are required</td>
<td></td>
<td>• Separate freight and commuter traffic.</td>
</tr>
<tr>
<td>• Cascading delays occur</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Track or equipment defects, repairs, and maintenance cause delays</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Poor on-time performance occurs (81.9 percent overall, compared to 90 percent acceptable standard)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trains are Over Capacity and Travel Demand is Increasing</td>
<td>Meet existing and future travel demand.</td>
<td>• Add second track to run more frequent service and to accommodate more riders.</td>
</tr>
<tr>
<td>• Demand exceeds capacity threshold (98 percent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Forecasts predict 28 percent growth in ridership by 2040 with no improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Population in Lake, Porter, and LaPorte Counties is projected to increase 22 percent by 2040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Chicago CBD is expected to continue to be main employment area and is projected to increase employment by 15 percent by 2040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long Travel Time Not Competitive with Automobiles</td>
<td>Reduce travel time.</td>
<td>• Add second track to reduce conflicts with freight and passenger trains, thereby increasing speed.</td>
</tr>
<tr>
<td>• Train takes 50 percent longer than automobile travel time between Michigan City and Chicago</td>
<td></td>
<td>• Add gauntlet tracks at stations for freight trains to safely travel past high-level platforms, where feasible.</td>
</tr>
<tr>
<td>• Slow operating speeds required in Michigan City</td>
<td></td>
<td>• Change to #20 turnouts, which have smaller crossing angles to allow for faster speed.</td>
</tr>
<tr>
<td>• Low-level boarding platforms require more time to board</td>
<td></td>
<td>• Remove street-running tracks in Michigan City to increase speed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Install high-level boarding platforms at stations, where feasible.</td>
</tr>
</tbody>
</table>
Table 1-1. Problems, Needs, and Solutions (cont.)

<table>
<thead>
<tr>
<th>Problems</th>
<th>Needs</th>
<th>Solutions</th>
</tr>
</thead>
</table>
| **Safety Concerns in Michigan City**<sup>a</sup> | Enhance safety. | • Separate rails from streets and sidewalks.  
• Close some at-grade road and rail crossings.  
• Improve 11<sup>th</sup> Street (Michigan City) Station with high-level platforms and better access.  
• Enhance remaining open crossings with AWDs. |
| • Train travels in roadway alongside automobiles and pedestrians causes safety issues | | |
| • Few at-grade crossings exist with AWDs | | |
| • 11<sup>th</sup> Street (Michigan City) Station passengers board train directly from street | | |
| • High number of at-grade crossing accidents occurs | | |

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**Notes:**

<sup>a</sup> “Scheduled meet” is the practice of holding one train with a red signal until the other passes.  
<sup>b</sup> NICTD 2016b  
<sup>c</sup> NICTD follows the industry standard that defines on-time performance as arriving within 5 minutes, 59 seconds of scheduled arrival.  
<sup>d</sup> A track configuration where the four rails are interlaced without separate tracks. Would be used on this proposed Project to create additional separation between freight trains and high-level platforms.  
<sup>e</sup> NICTD 2016d  
<sup>f</sup> NICTD 2017  
<sup>g</sup> Census Transportation Planning Products 2006–2010  
<sup>h</sup> I NICTD 2016c; NICTD 2017; Travelmath 2016  
<sup>i</sup> Based on NICTD’s observations, converting from low-level platform to high-level platform reduces overall loading time from approximately 3 minutes to 30 seconds.  
<sup>j</sup> Platforms of a height that is equal or similar to the height of the train floor, which allows level boarding. High-level platforms allow for step-free access to train cars.  
<sup>l</sup> Federal Railroad Administration (FRA) 2016

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### 1.5.1 NEED: INCREASE OPERATING FLEXIBILITY TO REDUCE DELAYS

In addition to the 19 westbound and 20 eastbound weekday SSL commuter trains, CSS operates between 14 and 18 freight trains daily on this same mainline. For a 2.7-mile section between ArcelorMittal Entrance Road and Waverly Road, a track segment known as Bailly (see Figure 2-1 in Section 2.1), the NICTD/CSS railroad track is located between CSS freight storage tracks, resulting in switching conflicts, slower speeds, and safety concerns.

Many of the freight trains serve power plants and steel plants along the lakeshore, as well as other customers east of Michigan City. In addition, CSS switches freight cars from Canadian National Railway (CN), NS, and CSX to deliver goods to their final northwest Indiana destinations. Historical national statistics indicate that, in general, freight rail traffic grows at an annual rate of 2 percent per year, which could add approximately 10 more freight trains per day by 2040 (USDOT 2017).

CSS transfers many long coal unit trains, a complex process that requires that the train switch off the mainline for temporary storage. These switching moves are done at low speeds and temporarily block the mainline. This can delay SSL commuter trains because they cannot pass the blockage due to the single-track configuration.
SSL commuter trains heading in opposite directions must rely on scheduled meets—the practice of holding one train with a red signal until the other passes. With less than 9 total miles of double-track territory (existing 6.5 miles of double track and three separate passing sidings that total 2.2 miles), limited locations exist where all trains can operate efficiently.

Freight and commuter train interference occurs frequently, especially where the line transitions from two tracks back to one track. This is illustrated in Figure 1-5. In 2015, train interference accounted for more than 20 percent of SSL service delays (NICTD 2016b). If the delay is longer than expected and the scheduled meet is missed, the trains are delayed further. Blockages can occur when there is a track or equipment defect within single-track territory, if repairs or maintenance are necessary, or if signals or power are affected by severe weather or over-salting of roadways where tracks are located.

Frequently, one delay can cause a cascading effect to the rest of the scheduled trains. NICTD’s on-time performance reports show that in 2016, overall on-time performance was 81.9 percent, compared to the acceptable industry standard of 90 percent. By comparison, Metra’s on-time performance was 96 percent. Delays caused by the inability to bypass these types of blockages contribute to this lower on-time performance. By adding a continuous second mainline with crossover locations, the proposed Project would reduce delays and improve reliability and on-time performance.

1.5.2 NEED: MEET EXISTING AND FUTURE TRAVEL DEMAND

NICTD’s peak trains currently operate at 98 percent seating capacity (NICTD 2017), surpassing the 95 percent capacity threshold that FTA has established for Core Capacity federal funding. Between 4:28 PM and 5:10 PM on any given weekday, there are 2,334 riders on three eastbound trains (#113, #115, and #15), with only 2,390 seats available. Train #115, which leaves downtown Chicago at 4:57 PM, is the most crowded, operating at 110 percent capacity with more than 800 passengers. Rush hour trains are already over capacity with little room to accommodate additional passengers. By adding more peak-hour service, the proposed Project would add 27 percent more seats.

NICTD prepared ridership forecasts in 2017, using base data from 2015 and forecast year 2040. The model used to predict future travel demand included 2040 population and employment growth forecasts from portions of northeastern Illinois and northwest Indiana (NICTD 2017). In addition to the full counties of Lake, Porter, LaPorte, and St. Joseph in Indiana, the model also included portions of Cook, Kankakee, and Will Counties in Illinois; and portions of Newton, Jasper, Starke, Marshall, Kosciusko, and Elkhart Counties in Indiana (Figure 1-6).
Figure 1-6. Counties in Ridership Model
Table 1-2 shows the increases in both population and employment in the modeled region.

<table>
<thead>
<tr>
<th>Area</th>
<th>Socio-Economic Data</th>
<th>Base Year: 2015</th>
<th>Forecast Year: 2040</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entire Modeled Region</strong></td>
<td>Population</td>
<td>11,169,430</td>
<td>13,388,648</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Employment</td>
<td>5,202,007</td>
<td>6,451,251</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Chicago Downtown</strong></td>
<td>Population</td>
<td>84,232</td>
<td>99,524</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>Employment</td>
<td>510,909</td>
<td>589,519</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: NICTD 2017

Within the counties of Lake, Porter, and LaPorte NIRPC’s 2040 CRP forecasts a 22 percent increase in population, consistent with population growth for the entire modeled region (NIRPC 2011). At the same time, statistics indicate that Indiana residents desire access to the higher-paying jobs in Chicago and Cook County (Policy Analytics, LLC 2014).

To illustrate this, Table 1-3 compares the number of residents of Lake, Porter, and LaPorte Counties who are employed in the same county in which they reside. This number remained roughly the same between 2000 and 2010, but the number of residents in these three counties who worked in northeast Illinois grew from 52,318 in 2000 to 59,614 in 2010 (an increase of 14 percent).

Table 1-3. Northwest Indiana Residence-Work Location, 2000 and 2006–2010

<table>
<thead>
<tr>
<th>Residence</th>
<th>Work in Same County</th>
<th>Work in Northeast Illinois</th>
<th>Workers vs. Jobs in County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake County</td>
<td>146,406</td>
<td>146,421</td>
<td>45,095</td>
</tr>
<tr>
<td>Porter County</td>
<td>38,893</td>
<td>41,267</td>
<td>5,906</td>
</tr>
<tr>
<td>LaPorte County</td>
<td>35,776</td>
<td>34,713</td>
<td>1,137</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>221,075</strong></td>
<td><strong>222,401</strong></td>
<td><strong>52,138</strong></td>
</tr>
</tbody>
</table>

Source: Census Transportation Planning Products 2000; Census Transportation Planning Products 2006–2010

The last column in Table 1-3 shows that there are nearly 40,000 more workers than jobs available in Lake, Porter, and LaPorte Counties. Additionally, average wages in Chicago and Cook County are 37 percent higher than in northwest Indiana (RDA 2016). The availability of jobs and higher wages in Chicago and Cook County, coupled with a 20 to 40 percent lower cost of living in northwest Indiana (RDA 2016), make commuting from northwest Indiana to work in Chicago a desirable option. This is evidenced by the fact that the majority of current SSL riders travel to downtown Chicago, and more than 70 percent of trips are work-related (NICTD 2013).

As the population of northwest Indiana continues to grow and export workers to jobs in Chicago, demand for transit will increase. Table 1-4 shows that in 2015, there were 12,046 weekday daily riders. In the 2040 No Build Alternative, ridership would increase by 28 percent. The increase in demand is based on population and employment growth that the regional agencies are predicting. Without implementation of the proposed Project, NICTD would not be able to meet current travel demand or projected future travel demand generated by natural growth in the modeled region.
Table 1-4. Existing and Future No Build Alternative Weekday Ridership, by Station

<table>
<thead>
<tr>
<th>Station</th>
<th>2015</th>
<th>2020 No Build</th>
<th>2040 No Build</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millennium Station (Chicago)</td>
<td>2,885</td>
<td>3,063</td>
<td>3,657</td>
</tr>
<tr>
<td>Van Buren (Chicago)</td>
<td>1,935</td>
<td>2,101</td>
<td>2,497</td>
</tr>
<tr>
<td>Museum Campus/11th Street (Chicago)</td>
<td>503</td>
<td>507</td>
<td>640</td>
</tr>
<tr>
<td>55th-56th-57th Street (Chicago)</td>
<td>214</td>
<td>225</td>
<td>277</td>
</tr>
<tr>
<td>63rd Street (Chicago)</td>
<td>10</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Hegewisch (Chicago)</td>
<td>1,085</td>
<td>1,160</td>
<td>1,332</td>
</tr>
<tr>
<td>Hammond</td>
<td>1,190</td>
<td>1,277</td>
<td>1,591</td>
</tr>
<tr>
<td>East Chicago</td>
<td>1,818</td>
<td>1,949</td>
<td>2,311</td>
</tr>
<tr>
<td>Gary/Chicago Airport (aka Clark Road)</td>
<td>147</td>
<td>159</td>
<td>213</td>
</tr>
<tr>
<td>Gary Metro Center</td>
<td>569</td>
<td>602</td>
<td>676</td>
</tr>
<tr>
<td>Gary/Miller</td>
<td>373</td>
<td>396</td>
<td>461</td>
</tr>
<tr>
<td>Portage/Ogden Dunes</td>
<td>276</td>
<td>276</td>
<td>283</td>
</tr>
<tr>
<td>Dune Park</td>
<td>461</td>
<td>511</td>
<td>680</td>
</tr>
<tr>
<td>Beverly Shores</td>
<td>43</td>
<td>46</td>
<td>56</td>
</tr>
<tr>
<td>11th Street (Michigan City)</td>
<td>113</td>
<td>120</td>
<td>138</td>
</tr>
<tr>
<td>Carroll Avenue (Michigan City)</td>
<td>226</td>
<td>243</td>
<td>310</td>
</tr>
<tr>
<td>Hudson Lake</td>
<td>4</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>South Bend Airport</td>
<td>194</td>
<td>203</td>
<td>234</td>
</tr>
<tr>
<td>Total</td>
<td>12,046</td>
<td>12,853</td>
<td>15,376</td>
</tr>
</tbody>
</table>

Source: NICTD 2017

1.5.3 NEED: REDUCE TRAVEL TIME

The average SSL trip time during the AM and PM rush hour is 50 percent longer than by automobile. Between Chicago and Michigan City, the train takes 1 hour, 46 minutes, compared to 1 hour, 10 minutes by automobile (Travelmath 2016). Freight and passenger train interference, speed restrictions, and passenger boarding delays contribute to longer travel time. The proposed Project would reduce travel time by improving these conditions.

Interference with freight and other SSL trains because of blockages or malfunctions causes delay and therefore increases travel time, as described previously. The proposed Project would improve this condition by adding track capacity and flexibility. Train speeds in Michigan City are restricted to 25 miles per hour (mph) because of the street-running track, multiple crossings without AWDs, and sharp curves; however, trains typically operate at no more than 10 mph in this section, adding more time to the trip. The proposed Project would relocate the train operations out of 10th and 11th Streets; reduce the number of crossings in Michigan City; and smooth the curves, thereby allowing trains to travel at faster speeds.

Passenger boarding delays occur when the platforms lack sufficient room for all train doors to open, when passengers must use narrow end-door stairwells at low-level platforms, or when the portable lift is used to load or unload persons with disabilities. The proposed Project would improve this condition by expanding
or installing new eight-car, high-level boarding platforms that are compliant with the Americans with Disabilities Act (ADA) at the Gary/Miller, Portage/Ogden Dunes, and 11th Street (Michigan City) Stations. Use of high-level platforms that accommodate eight-car train lengths would reduce the time for passengers to board and alight the train, also referred to as the dwell time. Reducing train station dwell times would reduce overall trip travel times.

1.5.4 NEED: ENHANCE SAFETY

There are 39 at-grade crossings between Sheridan Avenue and Carroll Avenue in Michigan City. Only seven of these crossings have AWDs (gates, bells, and flashing lights). The Federal Railroad Administration’s (FRA) Office of Safety Web Accident Prediction System listed eight NICTD crossings in Michigan City in the top 100 for predicted accidents in Indiana in 2016 because of high traffic volume, frequency of crossing, and lack of crossing AWDs. Of the 53 NICTD grade crossing accidents over the last 10 years, 24 have occurred between Sheridan Avenue and E. Michigan Boulevard in Michigan City, as depicted in Figure 1-7 (FRA 2016). These statistics do not account for the inherent danger of trains traveling down the middle of residential and commercial streets with automobiles, pedestrians, and bicyclists sharing the same ROW. Additionally, the current 11th Street (Michigan City) Station layout requires passengers to board and alight the train in the middle of the street.

The proposed Project would improve safety in Michigan City by removing at-grade crossings and upgrading remaining open crossings with flashers, gates, and bells. The crossing removals would be accomplished by separating the NICTD/CSS track from the roadway and modifying intersections that currently cross the NICTD/CSS track. Along 10th Street, the proposed Project would close three streets to eliminate at-grade crossings of the realigned tracks. Ten streets that currently intersect with 11th Street would have a cul-de-sac north of the newly aligned NICTD/CSS railroad tracks to eliminate at-grade crossings of the new tracks. All existing streets that connect into 11th Street from the south would remain open to travel eastbound on 11th Street. In all, the proposed Project would remove 21 at-grade crossings by removing conflicts between automobiles and trains. Section 3.5 provides additional information.

---

1 Low-level boarding platforms would be used at the Beverly Shores Station because of low ridership. Dune Park Station currently has one high-level platform, and a new low-level platform is proposed because of ROW and utility constraints.
Figure 1-7. Collisions at Michigan City Crossings

TEN-YEAR COLLISION HISTORY AT PUBLIC AT-GRADE CROSSINGS ON THE ACCIDENT PREVENTION LIST

SOURCES:
1.6 ORGANIZATION OF THE DOCUMENT

The EA is organized into chapters in accordance with the NEPA guidelines. Table 1-5 summarizes the EA chapters.

Table 1-5. EA Document Organization

<table>
<thead>
<tr>
<th>Section Title</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>The executive summary provides an overall, brief description of the proposed Project; the alternatives considered; the expected environmental impacts; the measures to avoid, minimize, or mitigate harmful impacts; and the mechanism to gather public input on the EA (public hearing).</td>
</tr>
<tr>
<td>Chapter 1 – Project Purpose and Need</td>
<td>This chapter introduces the proposed Project and provides background information on why the proposed Project is needed.</td>
</tr>
<tr>
<td>Chapter 2 – Alternatives Considered</td>
<td>This chapter reviews the planning process and alternatives considered in developing the proposed Project and describes the alternatives under consideration in this EA.</td>
</tr>
<tr>
<td>Chapter 3 – Transportation Impacts and Mitigation Measures</td>
<td>This chapter presents the potential for impacts on the transportation network and discusses measures to avoid, minimize, or mitigate harm to those resources.</td>
</tr>
<tr>
<td>Chapter 4 – Environmental Resources, Impacts, and Mitigation Measures</td>
<td>This chapter presents the potential for impacts on the social, economic, and environmental resources that could be affected by the construction and implementation of the proposed Project. This chapter discusses measures to avoid, minimize, or mitigate harm to those resources.</td>
</tr>
<tr>
<td>Chapter 5 – Section 4(f) Evaluation</td>
<td>This chapter focuses on how the Project would meet the federal requirements of Section 4(f) of the U.S. Department of Transportation Act of 1966, which protects significant historic sites, publicly owned parks, recreation areas, wildlife refuges, and waterfowl refuges that could be used by a federally funded project.</td>
</tr>
<tr>
<td>Chapter 6 – Public and Agency Coordination</td>
<td>This chapter discusses the processes for public involvement and agency coordination.</td>
</tr>
<tr>
<td>Appendix I – References Cited</td>
<td>This appendix includes a reference list for all cited information.</td>
</tr>
<tr>
<td>Appendix II – Affected Environment Mapbook</td>
<td>This appendix includes a mapbook of the Project Area for socioeconomics, cultural, and natural resources.</td>
</tr>
<tr>
<td>Appendix III – Environmental Assessment Technical Memoranda</td>
<td>This appendix includes separate technical memoranda for some resource categories to provide more in-depth information.</td>
</tr>
<tr>
<td>Appendix IV – Agency Coordination</td>
<td>This appendix includes agency coordination documentation.</td>
</tr>
<tr>
<td>Appendix V – Public Outreach</td>
<td>This appendix includes public involvement materials.</td>
</tr>
<tr>
<td>Appendix VI – Preliminary Engineering Plans</td>
<td>This appendix includes conceptual plans for the track and other proposed infrastructure improvements.</td>
</tr>
<tr>
<td>Appendix VII – Historic, Archaeological, and Cultural Resources (Section 106)</td>
<td>This appendix includes information regarding the historic property and cultural resources investigations, assessment of effects, correspondence with SHPO and Consulting Parties, and the Draft MOA.</td>
</tr>
</tbody>
</table>
2.0 ALTERNATIVES CONSIDERED

2.1 ALTERNATIVES DEVELOPMENT AND EVALUATION PROCESS

The NIRPC 2040 CRP adopted in June 2011 provides guiding principles to support public transportation investments. Expanding both the geographic reach and service level of the public transportation system in northwest Indiana is a vital component of achieving the CRP vision. Alleviating congestion, improving access and mobility in core communities, and supporting livable centers are all goals of the transit framework presented in the CRP.

In 2014, the joint NICTD/RDA 20-Year Strategic Business Plan outlined improvements to NICTD’s SSL that would address the NIRPC 2040 CRP goals. It identified a transit investment program that includes the following distinct projects:

- Expansion of the NICTD/CSS railroad track between Gary and Michigan City (second mainline)
- Portage/Ogden Dunes high-level boarding platform
- Michigan City realignment/station improvements
- Gary area station improvements

The 20-Year Strategic Business Plan discussed how these improvements would spur economic growth by encouraging TOD. It further described the need for local communities and regional entities to have transit-supportive land use policies in place to support the transit rider market and to realize the potential economic and fiscal benefits that improved transportation service can provide.

The alternatives that were developed to address the purpose and need are based on the premise that enhancing the NICTD/CSS railroad track within the existing NICTD ROW for the majority of the corridor, is the most prudent and feasible means to achieving the goals of the CRP and the 20-Year Strategic Business Plan. For this reason, a single Build Alternative was developed that focused on adding a second mainline adjacent to the existing track. In certain areas, design options were developed and evaluated to minimize environmental impacts, mitigate freight interference, or provide optimal development opportunities around stations. In accordance with the NEPA process, the alternatives considered in this EA include a No Build Alternative and a Track Expansion Alternative (Build Alternative).

2.2 NO BUILD ALTERNATIVE

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of implementing the proposed Project. The No Build Alternative would maintain the status quo and would not expand system capacity.
The No Build Alternative represents future conditions if the proposed Project were not implemented. The No Build Alternative would not include any major transit system or station investments or construction. The No Build Alternative would include maintenance and typical repairs to the NICTD/CSS railroad track and associated infrastructure based on historic funding levels needed to keep the line functional. Typical repairs include routine bridge replacement, upgrades to switches, OCS or catenary renewal, upgrades to maintenance facilities, expanded parking facilities, and upgrades to some existing stations. These projects are included in NIRPC’s 5-year Transportation Improvement Program (TIP).

Functional improvements under the No Build Alternative would be insufficient to respond to ridership demand and would not enhance capacity. Some expenditures would be made to keep the SSL service operating; however, service quality and effective capacity would decline over time, and maintenance costs would rise. Interference with freight train operations would continue and worsen because of the anticipated growth in freight traffic, and the corridor would suffer from the single point of failure that exists with single-track operations. Travel times would likely continue to increase and service reliability would continue to degrade as train operators would continue to safely operate both freight and passenger trains on a single track with limited capacity.

The No Build Alternative would address neither the stated needs as identified in Chapter 1, nor the goals identified by NICTD in the 20-Year Strategic Business Plan.

It is worth noting that NICTD is implementing Positive Train Control (PTC) for the entire SSL service route. This is a federally mandated safety initiative, unrelated to this proposed Project, to prevent train-to-train collisions, eliminate work zone incursions, and automatically enforce all speed restrictions. NICTD plans to complete the implementation of PTC by the end of 2018.

2.3 BUILD ALTERNATIVE AND EVALUATION OF DESIGN OPTIONS

The proposed Project limits are defined by MPs, which correspond with signal control points for the SSL/CSS railroad tracks. From west to east, the proposed Project begins in Gary at MP 58.8, west of Virginia Street, and ends at MP 32.2, near Carroll Avenue in Michigan City. The total distance is 26.6 miles. The Build Alternative improvements are shown in Figure 1-4.

Nearly 6.5 miles of double-track mainline already exists within the proposed Project limits, generally between the east end of Gary (MP 54.0) and Burns Harbor (MP 47.5). There are also three separate passing sidings totaling 2.2 miles. The total distance of existing double track is 8.7 miles.

Within the 26.6-mile Project Area, the proposed Project would include 1.8 miles of signal work at the far west and east ends of the Project, generally between MP 58.8 and 58.1 and MP 33.3 and 32.2, and the construction of 16.1 miles of new second mainline track and new overhead contact system (OCS or catenary) between MP 58.1 in Gary and MP 33.3 in Michigan City. These MPs roughly correspond with Tennessee Street in Gary and Michigan Boulevard in Michigan City.
At the east end of the proposed Project, between MP 35.3 (Sheridan Avenue) and MP 33.3 (Michigan Boulevard) in Michigan City, the proposed Project would replace 1.9 miles of embedded, in-street trackage in 10th and 11th Streets with a segregated, double-track rail corridor. Along 10th Street, the proposed Project would close three streets. Ten streets that intersect with 11th Street would have a cul-de-sac north of the newly aligned NICTD/CSS railroad tracks, thereby removing the road and rail crossings. The remaining open crossings would be upgraded with AWDs consisting of flashers, gates, and bells. The proposed Project would include interfaces with the PTC system and PTC system modifications for the new track.

The Build Alternative improvements would decrease travel times, address current and future ridership demands, raise overall system reliability and safety, and support future growth and development in northwest Indiana. The Build Alternative would allow for five additional westbound and seven additional eastbound commuter trains per day, primarily during rush hour. This represents a 25 percent increase in peak-period capacity.

NICTD developed and evaluated more than one design option in three specific segments of the Build Alternative to determine the Preferred Alternative. The three segments are shown in Figure 2-1 and include the following:

- Goff/CN Interchange (Gary)
- Bailly (Porter)
- Michigan City

The design options at the Goff/CN Interchange and Bailly were necessary to minimize negative impacts to CSS freight operations. Minimizing adverse impacts to the extent practicable is not only required under NEPA (40 Code of Federal Regulations [CFR] 1500.2(f)), but also a requirement of a long-standing franchise agreement between NICTD and CSS. This agreement grants CSS exclusive and perpetual rights to use NICTD railroad tracks. NICTD and CSS enjoy this franchise consistent with their common carrier obligations, and the franchise is subject to numerous contract provisions between the two parties.

An overview of the Build Alternative design options are shown in Figure 2-1. Track charts and Preliminary Engineering Plans are provided in Appendix VI.
Figure 2-1. Build Alternative and Design Options
2.3.1 BUILD ALTERNATIVE AND DESIGN OPTIONS – TRACK AND STRUCTURES

The Build Alternative track, structure, and related elements are described in Table 2-1. More information can be found in the track charts and preliminary engineering plans in Appendix VI. The standard double-track section between Gary and Michigan City is depicted in Figure 2-2.

Table 2-1. Build Alternative Track, Structure, and Related Elements

<table>
<thead>
<tr>
<th>Track, Structure, and Related Elements</th>
<th>Location</th>
<th>Length (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add second mainline in locations where only single track exists today, mostly within existing ROW</td>
<td>• Tennessee Street (Gary) to Sheridan Avenue (Michigan City)</td>
<td>14.2</td>
</tr>
<tr>
<td>Remove embedded in-street trackage and replace with two tracks separated from roadway</td>
<td>• In Michigan City, Sheridan Avenue to Michigan Boulevard</td>
<td>1.9</td>
</tr>
<tr>
<td>Install signal and overhead contact system infrastructure</td>
<td>• Entire proposed Project length</td>
<td>26.6</td>
</tr>
<tr>
<td>Construct four new NICTD bridges</td>
<td>• CSX Transportation (Gary)</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>• Hobart Road (Gary)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Norfolk Southern Railway (Burns Harbor)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ArcelorMittal (Burns Harbor)</td>
<td></td>
</tr>
<tr>
<td>Construct five high-speed crossovers</td>
<td>• MP 55.7 (Clay Street)</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>• MP 46.7 (Bailly West)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MP 44.0 (Bailly East)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MP 43.0 (Tremont East)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MP 37.8 (Tamarack East)</td>
<td></td>
</tr>
<tr>
<td>Construct two new crossing diamonds</td>
<td>• MP 57.6 (CN, Gary)</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>• MP 34.5 (Amtrak, Michigan City)</td>
<td></td>
</tr>
</tbody>
</table>

Crossing Diamonds
allow one track to cross another track at grade.

Crossovers
allow trains to move from one parallel track to another.
GOFF/CN INTERCHANGE DESIGN OPTIONS

The Goff/CN Interchange (Goff) is located at the far west end of the proposed Project, roughly between MP 56.4 at the 7th Avenue crossing and the abandoned CSX bridge at MP 57.6, in Gary (see Figure 2-1). Design options in the Goff area are constrained due to the number of tracks and connections that occur within this stretch and the freight operations that take place. This area is further constrained by U.S. 12 to the south, the Interstate 90 (I-90) overpass, and numerous wetlands on both sides of the tracks. NPS parkland (Miller Woods) is also located to the north.

The tracks in this area include a CSS transload area, a NICTD maintenance-of-way (MOW) facility, the CSS Flour Track and CSS Goff Siding, and the CN lead to the north (see Figure 2-3 and Figure 2-4). The west side of the Goff Siding is used as an interchange for CN locomotives to pick up and deliver railcars to and from the CSS. Connections from CSS railroad tracks to the CN railroad tracks exist at MP 56.70 and MP 57.03. CN also owns and operates an industrial track that crosses NICTD’s mainline track at grade, connecting CN railroad tracks to the Boat House Track at MP 57.55, serving a local business.

During early coordination, CSS indicated concern about the proposed Project’s potential adverse impacts to its railcar storage capacities, switching capabilities, and maintenance of the CN railroad track connections at Goff. CSS was also concerned about the operational impacts to its freight service caused...
by additional NICTD trains. To address NICTD’s need to add the second mainline and consider the operational, engineering, and environmental concerns at Goff, NICTD developed and evaluated two design options.

**Figure 2-3. Existing and Proposed Typical Section at Goff**

**GOFF DESIGN OPTION 1**

The first option, Goff Design Option 1, would be to construct the second mainline on the north side of the existing mainline (see Figure 2-4). This option would require relocating two siding tracks owned by CSS, shifting three track connections with CN, and removing the abandoned CSX bridge at MP 57.6. NICTD determined the operational impacts and freight track reconfigurations would be too extensive for CN and CSS and Option 1 was not progressed further. This option would also have approximately 4.29 acres of impacts to wetlands to the north.

**GOFF DESIGN OPTION 2**

The second option, Goff Design Option 2, would be to construct the second mainline on the south side of the existing mainline (see Figure 2-5). This option would require some shifting of the existing Goff siding owned by CSS and shifting of one connection track with CN; however, all work would be contained within property owned by NICTD and CSS. While this option would have impacts on approximately 1.4 acres of wetlands to the north and south, the impacts are approximately 2.89 acres less than the impacts of Goff Design Option 1. There are no impacts to Miller Woods. It would require a temporary construction easement from INDOT given the proximity to U.S. 12. Preliminary discussions with INDOT indicate that NICTD could obtain the easement.
Figure 2-4. Goff Design Option 1, MP 58 to MP 56
Figure 2-5. Goff Design Option 2, MP 58 to MP 56 (PREFERRED)
Goff Design Option 2 would result in fewer impacts on operations and environmental resources than Goff Design Option 1. CSS had no objections with the proposed work on its property under Goff Design Option 2. As a result, Goff Design Option 2 was selected as the preferred option and is part of the Build Alternative. Goff is shown in the conceptual plans on sheet 1, found in Appendix VI. The existing and proposed typical section at Goff is shown in Figure 2-3.

BAILLY DESIGN OPTIONS

The Bailly area is a section of track located roughly between MP 44.5 and MP 46.5. The name “Bailly” is associated with the nearby Bailly Generating Station, a coal-fired electric generating plant in Burns Harbor owned by Northern Indiana Public Service Company (NIPSCO). CSS’s primary freight movements within the Project Area are coal trains to and from the NIPSCO Michigan City and Bailly generating stations, and coal trains and steel products to and from the ArcelorMittal steel mill at Bailly. A wye track is located to the north serving the NIPSCO Bailly Generating Station. CSS frequently uses this wye track to store railcars.

Currently, four tracks exist in the Bailly area. One CSS track is located to the north, followed by one electrified NICTD mainline track (used by both NICTD and CSS) and two CSS freight tracks to the south of the NICTD mainline track. The NICTD mainline track is located between two CSS freight tracks. Figure 2-6 illustrates the existing typical section and Bailly Design Option 4, discussed in detail below.

Figure 2-6. Existing and Proposed Typical Section through Bailly
NIPSCO owns a linear swath of property to the north of the tracks, where various overhead and underground utilities are located. The Indiana Dunes National Lakeshore property is located south of the tracks and is under the jurisdiction of the NPS. There are sensitive resources to the south of the tracks, including high-quality wetlands and critical habitats.

The current configuration of freight tracks on both sides of the NICTD/CSS track is not conducive to operations for either NICTD or CSS because it requires commuter and freight trains to coordinate moves, resulting in less scheduling flexibility for both railroads. The problem becomes worse if a train blocks a switch, or if a train experiences a mechanical failure. Because only one track has the necessary OCS to operate the SSL trains, SSL trains must wait until the blockage is cleared.

During early coordination, CSS expressed concern about the proposed Project's adverse impacts to its railcar storage capacities and switching capabilities at Bailly. CSS is concerned about the operational impacts to its freight service caused by the proposed Project's additional SSL trains. CSS indicated that 250 railcars frequently occupy its freight tracks at Bailly, so matching capacity in both length and width (that is, more than two tracks) is very important to maintain CSS operations, sustainability, and potential growth opportunities.

To address the need to add the second mainline and the operational, engineering, and environmental concerns in the Bailly area, NICTD considered seven design options. Five options were dismissed based on the inability to meet purpose and need, operational concerns that were deemed impractical by CSS or because of a higher number of environmental impacts.

The remaining two design options assume that a second NICTD mainline track would be added, and that NICTD trains would be able to operate at planned speeds. The main difference between the options is permanent conversion of land from the Indiana Dunes National Lakeshore, an NPS property. Bailly Option 2 would require the permanent conversion of NPS land; Option 4 would not have an NPS impact.

**BAILLY DESIGN OPTION 0**

Bailly Design Option 0 was developed to avoid impacts to the CSS tracks entirely. It includes leaving in place approximately 1.1 miles of single NICTD track with OCS between MP 45.1 and MP 46.2. East of MP 45.1, a new NICTD mainline would be constructed north of the existing NICTD mainline. West of MP 46.2, a new NICTD mainline would be constructed south of the existing NICTD mainline.

This option is not conducive to NICTD operations, as it allows NICTD use of only one track in the busiest section of the line, subjecting the SSL service to delays caused by interference from CSS freight train operations, blockages, or other impediments that may occur. It does not fully meet the purpose and need of the proposed Project and was eliminated from further consideration.

**BAILLY DESIGN OPTIONS 1, 3, AND 5**

Bailly Design Options 1, 3, and 5 were developed in an attempt to avoid permanent impacts to NPS property. The three design options are similar, but have different switch points (where one track switches to another) and varying amounts and locations for additional storage sidings within the NICTD ROW. None of these three design options would meet the storage capacity or operational needs of the CSS and, therefore, were eliminated from further consideration.

Generally, the options consisted of the following:

- CSS and NICTD track and operations would be separated.
• CSS would operate on the two freight tracks to the north. The existing NICTD mainline would become a CSS freight track.

• SSL would operate on the two mainline tracks to the south. The two existing CSS freight tracks to the south would be rebuilt as NICTD mainline tracks.

• A new right-hand crossover at MP 46 would enable CSS to push a coal train west into the ArcelorMittal steel plant off the new NICTD second mainline and keep portions of the other CSS tracks available for railcar storage.

• Options 3 and 5 would add nearly 1.5 miles of additional siding between Tremont and State Park Boundary Roads. After discussion with CSS, it was determined that this would not meet CSS’s operational needs.

BAILLY DESIGN OPTION 2

Bailly Design Option 2 proposes two NICTD mainlines and three CSS tracks, for a total of five tracks (Figure 2-7). Tracks would be configured as described below:

• Construct one new NICTD mainline track and rebuild one CSS freight track as the second NICTD mainline track.

• CSS would operate on the three freight tracks to the north. The existing NICTD mainline would become a CSS freight track. A NICTD MOW track would be built on the south side that could be used by NICTD for storing equipment and by CSS for storing freight cars.

• Two right-hand crossovers at MP 46 would allow CSS to push a coal train west into ArcelorMittal off the new NICTD mainline and keep portions of the other CSS tracks available for storage.

Table 2-2 provides the benefits and impacts associated with the Bailly Design Option 2.

Table 2-2. Bailly Design Option 2 Evaluation

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed track storage capacities would allow CSS current and future operations to continue.</td>
<td>• 3.9 acres of permanent conversion of NPS Indiana Dunes National Lakeshore property.</td>
</tr>
<tr>
<td></td>
<td>• Would result in an impact on property purchased with funds from the Land and Water Conservation Act [Section 6(f) impact], which would require NICTD to acquire additional property and transfer of property to NPS.</td>
</tr>
<tr>
<td></td>
<td>• Temporary construction easement of 2.4 acres of NPS property would be needed for one-time tree clearing to eliminate tree-limb interference with OCS wires. This property would still remain in park use. Agreement would be needed with NPS for continued maintenance of remaining tree limbs.</td>
</tr>
<tr>
<td>Locating all tracks in the same general vicinity would reduce the need for CSS to travel up or down the tracks to access storage tracks located farther away.</td>
<td>1.72 acres of wetland impact.</td>
</tr>
<tr>
<td>No property would be needed from utility (NIPSCO).</td>
<td>Track would be closer to Oscar and Irene Nelson Site, which is eligible for the National Register of Historic Places.</td>
</tr>
</tbody>
</table>
Figure 2-7. Bailly Design Option 2, MP 47 to MP 44
BAILLY DESIGN OPTION 2A

Bailly Design Option 2A is similar to Bailly Design Option 2, but would have four tracks for CSS (rather than three) and two NICTD mainline tracks. CSS would be able to operate on all six tracks, providing substantially more track storage capacity for CSS. The two NICTD tracks would be located on NPS property, permanently impacting up to 10 acres of parkland property with no additional benefit to transit. For this reason, Bailly Design Option 2A was eliminated from further consideration.

BAILLY DESIGN OPTION 4

Bailly Design Option 4 would include four tracks in the Bailly area between MP 44 and 46.5, would separate the commuter and freight operations, and would add a 7,000-foot siding within NICTD ROW farther west between MP 48.3 and MP 49.7. This would allow CSS to store railcars just outside of the immediate Bailly area, and stage freight cars on the siding. CSS could pull onto the siding in the event that both mainline tracks are occupied (see Figure 2-8 and Figure 2-9, and track charts in Appendix VI). Tracks would be configured as described below:

- SSL would operate on the two NICTD tracks to the south.
- Two CSS siding tracks would be located to the north.
- CSS would have the ability to operate on NICTD tracks.
- A new right-hand crossover would be built at MP 46. This would enable CSS to push a coal train west into the ArcelorMittal steel mill off the newly named NICTD second mainline and keep the other CSS track available for railcar storage.
- A new 7,000-foot “Wilson” freight siding would be constructed on the south side of the track slightly west of Bailly (MP 48.3 to 49.7) (see Figure 2-9).

Table 2-3 provides the benefits and impacts associated with the Bailly Design Option 4.

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed track storage capacities would allow CSS current and future operations to continue.</td>
<td>2.31 acres of wetland impact.</td>
</tr>
<tr>
<td>No property acquisition from the NPS Indiana Dunes National Lakeshore would occur.</td>
<td>Two private crossings—Wilson Road and McCool Road—would have an additional track due to the Wilson Siding.</td>
</tr>
<tr>
<td>NICTD assets (track and OCS) would remain on railroad property.</td>
<td></td>
</tr>
<tr>
<td>No property would be needed from utility (NIPSCO).</td>
<td></td>
</tr>
</tbody>
</table>

In comparing the Bailly Design Option 2 with Option 4, Bailly Design Option 4 is preferred. Bailly Design Option 4 would provide the best balance between meeting NICTD’s need for a second mainline and operational flexibility; addressing CSS’s needs for operational flexibility, railcar storage, and expansion of service; and causing no impacts on NPS parkland in the Indiana Dunes National Lakeshore.
Figure 2-8. Bailly Design Option 4, MP 46.5 to MP 44 (PREFERRED)
Figure 2-9. Bailly Design Option 4, Wilson Freight Siding, MP 49.7 to MP 48.3 (PREFERRED)
MICHIGAN CITY

The Build Alternative track improvements would remove the existing embedded, street-running track from 10th Street and 11th Street in Michigan City from Sheridan Avenue (MP 35.3) to Michigan Boulevard (MP 33.3), would add a second mainline, OCS and signals, and would physically separate the track from the roadway.

MICHIGAN CITY/NICTD RAIL REALIGNMENT STUDY

Between 2011 and 2013, NICTD partnered with the City of Michigan City using federal TIGER funds and prepared the Michigan City/NICTD Rail Realignment Study. The goals of the study were to develop a SSL project to increase economic development opportunities, improve quality of life, maintain vehicular access through town, increase SSL travel speed, decrease maintenance costs, and increase SSL service reliability. The process and outcomes of the Michigan City/NICTD Rail Realignment Study provided the basis for the alignment development in this EA.

An extensive public engagement process was employed during the Michigan City/NICTD Rail Realignment Study. Communication with stakeholders and the general public began early in the study, and continued until its conclusion in October 2013. Four public meetings and workshops were held and a website was in place for the duration of the study (NICTD and Michigan City 2013).

The 2013 Michigan City/NICTD Rail Realignment Study developed evaluation criteria and several alternatives for review and input by the public. FTA and NICTD are incorporating the 2013 study by reference in this NEPA analysis. This approach is consistent with the “Planning-Environmental Linkage” (PEL) authority as described by USDOT to streamline the planning and NEPA processes. Congress enacted a new authority for PEL in 2012 in the Moving Ahead for Progress in the 21st Century Act (MAP-21) and amended it in 2015 through the Fixing America’s Surface Transportation (FAST) Act. That authority, 23 United States Code (USC) § 168 (Section 168), provides a process by which FTA may adopt or incorporate by reference a planning product to use during the environmental review process, to the maximum extent practicable and appropriate.

Three primary corridors (Central, Northern, and Southern) with station locations were evaluated in the 2013 study, with varying options within each corridor. Figure 2-10 illustrates alignments evaluated in the 2013 study.

Central Corridor

The existing, embedded street-running tracks would be removed from 10th and 11th Streets and replaced with two tracks raised out of the street between Sheridan Avenue and E. Michigan Boulevard. The Central Corridor included two alignment options. Alignment Option 1 would relocate the tracks to the south of 10th and 11th Streets, entirely outside of the street ROW. Alignment Option 1A would construct two new tracks to the south of the 10th Street ROW and construct two new tracks along the north side of 11th Street within the street ROW. Alignment Option 1A was developed to lessen the number of property impacts and road closures along this corridor. Additionally, by positioning the track on the north side of 11th Street, the transition from the south side of 10th Street is less complicated. Possible station locations included on 10th Street near the Indiana State Prison, between Franklin and Spring Streets on 11th Street, and near Carroll Avenue Yard.
Figure 2-10. Michigan City Alignments Evaluated in 2013
Southern Corridor
The Southern Corridor included a single Alignment Option 2. A new track connection would be constructed from the existing NICTD tracks near the former Illiana Block and Brick Company property west of Michigan City. The new route would extend eastward following the southern border of the Indiana Dunes National Lakeshore to connect to the existing CSX ROW. The alignment would stay on the north side of the CSX ROW to Karwick Park then go under the CSX ROW and rejoin the existing NICTD track toward South Bend. A station location near Franklin Street on the former Al's Supermarket property was included.

Northern Corridor
The Northern Corridor would establish a new NICTD track route that would follow the existing CSS freight tracks from U.S. 12 northward, through the east edge of NIPSCO’s Lincoln Yard, then eastward along the Amtrak ROW. The route would cross Trail Creek and then use the former Nickel Plate Railroad ROW south to rejoin the NICTD ROW near Carroll Yard. Seven different variations of the route were studied for the Northern Corridor:

- Alignment Options 3 and 3A: North and west of Trail Creek with a station at Marina and Blocksom property
- Alignment Option 4: North and east of Trail Creek with a station north of U.S. 12 near Blue Chip Casino
- Alignment Option 5: North on an elevated structure with a station over City Hall
- Alignment Options 6 and 6A: North within U.S. 12 ROW and north/south of U.S. 12 with a station at City Hall
- Alignment Option 7: North Lakeshore Drive with relocation of Amtrak and a station at City Hall

The three corridors were evaluated in 2013 based on the study’s design and evaluation criteria, which were developed as part of an extensive public involvement process. Criteria included:

- Potential for economic development
- Nearby attractions
- Number of residential acquisitions
- Number of business acquisitions
- Environmental impacts
- Historic/cultural impacts
- Noise
- At-grade crossing closures
- Effects on local streets
- Track speed restrictions
- Horizontal restrictions
- Cost
2013 PREFERRED ALTERNATIVE

Based on these evaluation criteria and extensive analysis, the Central Alignment Option 1A was selected as the Preferred Alternative in 2013 for the following reasons:

- Maintains commuter rail service to the central business district of Michigan City and its retail shops, restaurants, and businesses.
- Allows for the development of a new, modern rail station at the current 11th Street location with high-level, eight-car platforms, and a parking structure that would serve as a catalyst for economic development and growth.
- Enhances the overall safety of the community by eliminating the existing embedded street-running track, eliminating several at-grade railroad crossing conflicts, and establishing AWDs for remaining highway grade crossings.
- Has fewer property impacts and fewer street closures than the Northern Corridor options that was considered.
- Maintains two-way traffic on 10th Street and one-way traffic on 11th Street.
- Is the least costly of the three options (Central, Northern, and Southern Corridors) to construct.
- Provides the shortest route with the best running times and overall trip timesavings for NICTD and its riders.

2013 Station Site Evaluation

Once the corridor was selected, the location of the station was evaluated using NICTD’s standard design criteria, as well as goals of the community. The station site needed to accommodate a modern station design with eight-car, high-level boarding platforms; an additional 1,000 feet of gauntlet tracks to allow freight trains to pass the station without damaging the platforms; pedestrian access and safety accommodations; compliance with ADA guidelines; parking to support the anticipated demand (500 – 800 spaces); and sufficient space for station amenities. The selected site also needed to provide economic development opportunities, yet minimize property impacts. Based on these criteria, NICTD and Michigan City selected the location between Franklin and Spring Streets as the Preferred 11th Street (Michigan City) Station location.

2017 PREFERRED ALTERNATIVE

Starting in 2016, NICTD began to further develop the 2013 Preferred Alternative (Option 1A) during preliminary engineering, using the design criteria established for the proposed Project, as well as several objectives developed through more recent discussions with Michigan City. See Figure 2-11, Figure 2-12, and Figure 2-13. Of paramount importance to Michigan City was to minimize residential and commercial property acquisitions and street closures. The next sections discuss the refinements made to the 2013 Preferred Alternative for the 10th Street alignment, the 11th Street alignment, and the 11th Street (Michigan City) Station. These refinements took into consideration more survey, engineering, and real estate data gathered by NICTD as part of this study.
Figure 2-11. 2017 Preferred Alternative Alignment – 10th Street
Figure 2-12. 2017 Preferred Alternative Alignment – 11th Street, Chicago Street to Washington Street

Figure 2-13. 2017 Preferred Alternative Alignment – 11th Street, Washington Street to E Michigan Boulevard
MICHIGAN CITY – 10TH STREET

For the 10th Street Build Alternative, NICTD would construct a separated, ballasted track bed south of the existing sidewalk on 10th Street between Sheridan Avenue and the Amtrak crossing. Two tracks would be constructed, along with OCS and a fence to separate the tracks from the sidewalk. The existing embedded street-running track would be removed and the roadway surface would be repaved. The typical section for the roadway would remain 33 feet wide and consist of two 12-foot-wide travel lanes, one in each direction, with a 9-foot-wide parking lane on the westbound side of the roadway. Curbs would remain at the edge of pavement on each side of the roadway. Figure 2-14 depicts the proposed typical section along 10th Street, and Figure 2-15 is an artist’s conceptual rendering of 10th Street from the 2013 Michigan City/NICTD Rail Realignment Study.

Figure 2-14. 10th Street Typical Section (Looking West)

Figure 2-15. Artist’s Conceptual Rendering of 10th Street (Looking West)

Source: Transystems 2013

MICHIGAN CITY – 11TH STREET

The existing conditions along 11th Street between the Amtrak crossing and Michigan Boulevard would pose some challenges to development of the Build Alternative. As is typical for most urban roadways, the existing ROW is 66 feet, and the street is lined on both sides with residences, businesses, and other
developed parcels. There are also substantial grade changes where 11th Street curves near Cedar and Lafayette Streets.

The 11th Street Build Alternative would accommodate the required design components within the existing ROW in most locations, thereby minimizing the number of property acquisitions along 11th Street. **Figure 2-16** and **Figure 2-17** show the typical section along 11th Street with and without on-street parking. **Figure 2-18** is an artist’s conceptual rendering of the 11th Street (Michigan City) Station. The Build Alternative on 11th Street would include the following:

- Two mainline tracks, separated with 14-foot-wide track centers, located in the northern half of the street
- Two catenary pole lines, with barriers and/or fencing
- One 5-foot-wide sidewalk on the north side and either 3-foot-wide or 5-foot-wide sidewalk on the south side
- One 5-foot-wide landscaped parkway between the sidewalk and the curb
- One 13-foot-wide eastbound vehicular travel lane with curb and gutter
- On-street parking, where feasible
- Elimination of 11 of 19 at-grade crossing conflicts between Chicago Street and E. Michigan Boulevard
- Safety enhancements at eight remaining crossings (Chicago Street, Ohio Street, Wabash Street, Washington Street, Franklin Street, Lafayette Street, Oak Street, and E. Michigan Boulevard)

The 11th Street (Michigan City) Station discussion is included in **Section 2.4.5**.

**Figure 2-16. 11th Street Typical Section without Parking (Looking West)**
Figure 2-17. 11th Street Typical Section with Parking (Looking West)

Figure 2-18. Artist’s Conceptual Rendering of 11th Street (Michigan City) Station (Looking East)
2.4 BUILD ALTERNATIVE AND EVALUATION OF STATION DESIGN OPTIONS

The five stations in the Project Area (Gary/Miller, Portage/Ogden Dunes, Dune Park, Beverly Shores, and 11th Street (Michigan City)) would be improved to support the additional ridership, service frequency, and operational flexibility of the proposed Project. All stations would need to accommodate the continued operation of CSS freight trains. For those stations with high-level platforms, additional tracks (called gauntlet tracks) would be required to provide enough clearance for a freight train to pass the station without damaging the platform. The five stations are described below, from west to east. More information about the parking required at each station is included in Section 3.6.

2.4.1 GARY/MILLER STATION

The Gary/Miller Station is located between U.S. 20 and 7th Avenue near Lake Street and MP 55. The existing station has a low-level boarding platform and a single warming shelter. It would be improved with two realigned tracks, two high-level platforms, gauntlet tracks for passing freight trains, two storage tracks, and additional parking. Currently, NICTD starts and ends some trains at Gary Metro Center and stores these train sets at that station. The proposed Project would extend such service eastward to Gary/Miller to better serve all Gary residents with more frequent service. This would require the construction of two storage tracks for these train sets at Gary/Miller because they would no longer be stored at Gary Metro Center.

The station currently has 248 parking spaces in two lots, one south and parallel to the station and one south of U.S. 12. Parking would be expanded to accommodate the 2020 Opening Year demand of 596 spaces. The City of Gary has been working with NICTD to plan for TOD and expand parking further for future phases in a separate undertaking. The improvement of this station has been coordinated with INDOT’s plans to realign U.S. 12 and merge it with U.S. 20 between Clay and Lake Streets. This would result in vacated public ROW, which could be used for the double-track realignment at the station, as shown in Figure 2-19.

Figure 2-19. U.S. 12 and U.S. 20 Realignment (by INDOT), with Gary/Miller Station

Source: HUD 2017
2.4.2 PORTAGE/OGDEN DUNES STATION

The Portage/Ogden Dunes Station currently has two tracks, one low-level platform with three warming shelters, and a mini high-level platform for ADA accessibility. It currently has 230 parking spaces. Two new high-level boarding platforms and additional parking would be constructed to meet future demand of 497 in Opening Year 2020. The existing tracks would remain in place and would be used by NICTD and CSS freight trains to pass the station. New mainline tracks would be constructed north and south of the existing tracks and adjacent to the new platforms. Parking would be constructed in NICTD’s ROW west of Hillcrest Road and at two large parcels south of the station and southwest of the intersection of U.S. 12 and Stagecoach Road.

2.4.3 DUNE PARK STATION

The Dune Park Station currently has one high-level boarding platform with 2 warming shelters and 507 parking spaces. A second low-level platform to the north would be constructed. To support the growing ridership demand for Opening Year in 2020, 72 additional parking spaces would be added, and then further increasing to 886 spaces by 2040. The new parking lot would be constructed to the east of the existing parking lot, on land owned by Porter County but designated for NICTD and transit-related uses through an agreement between Porter County and NPS. The identified parcel has sufficient space to accommodate the anticipated 2040 parking demand.

2.4.4 BEVERLY SHORES STATION

The Beverly Shores Station currently has one low-level boarding platform and a historic depot building. Given the low ridership at this small station, NICTD treats this as a flag stop, which means that the train only picks up or drops off passengers when notified. NICTD plans to construct two new low-level boarding platforms. Gauntlet tracks are not required with low-level platforms. The second mainline would be located to the north of the existing mainline. No changes to the depot building are planned.

2.4.5 11TH STREET (MICHIGAN CITY) STATION

The current 11th Street (Michigan City) Station at Pine Street consists of a shelter and 37 parking spaces. It has no boarding platforms, which requires commuters to board the train from street level. In keeping with the objectives established by NICTD and the City of Michigan City in 2013 and the 2016 Operating Agreement for the proposed Project between NICTD and the City of Michigan City, the station would be improved and expanded with a larger, fully accessible station located between Spring Street and Franklin Street, a multilevel parking structure, two high-level boarding platforms, a station waiting area, and gauntlet tracks.

The station design needed to address the environmental and historic considerations of the former South Shore Station building; three historic districts with several contributing buildings; potentially contaminated soils from nearby properties; important community resources, including schools and churches located along 11th Street near the station; and residential and business parking areas. Consistent with the 2013 station objectives, Michigan City is planning for TOD uses in the station area, including mixed use and residential.

During the development of the preliminary engineering plans for the station, NICTD consulted with Michigan City to take into consideration the design constraints in the station area, and refine the Build Alternative. Results of the consultation were documented and approved by Michigan City in the 2016 Operating Agreement for the proposed Project, which was approved by the Michigan City Common Council on October 27, 2016.
Table 2-4 lists the objectives identified by NICTD and the City of Michigan City.

### Table 2-4. 11th Street (Michigan City) Station Objectives

<table>
<thead>
<tr>
<th>Engineering and Operational Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would maintain speeds up to 45 mph for commuter trains</td>
</tr>
<tr>
<td>Would allow freight trains to pass the proposed station with gauntlets</td>
</tr>
<tr>
<td>Would provide 5-foot-wide, ADA-compliant sidewalks on both sides of corridor</td>
</tr>
<tr>
<td>Would provide two high-level boarding platforms that are ADA compliant</td>
</tr>
<tr>
<td>Would accommodate usual(^a) boarding and alighting on north platform</td>
</tr>
<tr>
<td>Would provide safe and convenient pedestrian access to station</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental and Cultural Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would avoid or minimize impacts on cultural (historic) resources</td>
</tr>
<tr>
<td>Would minimize impacts on special waste sites</td>
</tr>
<tr>
<td>Would minimize impacts on community resources (for example, churches and schools)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Community Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would minimize residential property acquisition on south side of 11th Street</td>
</tr>
<tr>
<td>Would avoid acquisition of properties north of 11th Street between Wabash and Washington Streets, near a high school</td>
</tr>
<tr>
<td>Would maintain one-way, eastbound traffic on 11th Street after completion</td>
</tr>
<tr>
<td>Would allow for potential reuse of the former South Shore Station building façade</td>
</tr>
<tr>
<td>Would provide a parkway area on south side of 11th Street for residents</td>
</tr>
<tr>
<td>Would provide opportunity for additional shared commuter and community parking</td>
</tr>
<tr>
<td>Would be consistent with local planning efforts</td>
</tr>
</tbody>
</table>

\(^a\) Usual means that boarding would take place on the north platform, except if, for some reason, the north platform were unavailable (i.e., freight train blockage or maintenance).

As mentioned previously, the width of the 11th Street ROW is 66 feet. It is typical for a two-way roadway, but does not provide enough room to accommodate all of the needs identified in Table 2-4. An additional 27.6 feet is needed in the station area to meet both NICTD’s and the community’s objectives. This is illustrated in Figure 2-20.

Michigan City has jurisdiction over 11th Street. NICTD owns the 11th Street (Michigan City) Station and small parking lot to the north. The vacant, historic South Shore Station building is owned by the Michigan City Redevelopment Commission. Any private property needed for the station would be acquired by the City of Michigan City. Minimizing land acquisition was a key consideration. To address these challenges, NICTD developed two design options for the station and presented them to the City of Michigan City.

**Michigan City Station Design Option 1** was to leave the historic station building in its current location, north of 11th Street. However, this option proved to be infeasible. It is too close to the existing curb (approximately 5 feet) to make it possible to include all of the necessary station elements without shifting the entire station and track to the south. This would result in 38 residential acquisitions on the south side of 11th Street between Wabash and York Streets, which Michigan City wanted to avoid. It was also inconsistent with Michigan City’s longstanding TOD plans for the station area, because the north side would better integrate with the downtown area. The track configuration would require the realignment of
seven blocks of 11th Street, causing more impacts on existing businesses and residents during construction.

Figure 2-20. 11th Street (Michigan City) Station Typical Section (Looking West)

Michigan City Station Design Option 2 was to build the station on the north side of 11th Street. Although this option would directly affect the station building, it would have less property impacts than Michigan City Station Design Option 1. This alignment would affect 32 properties between Wabash and York Streets, mostly on the north side, and is consistent with Michigan City’s plans for redevelopment. It would also require the realignment of only two blocks of 11th Street. Recognizing the potential adverse effect on a historic resource, NICTD studied the feasibility of removing the façade of the station and reusing it as part of a new station building, but shifted to the north. NICTD anticipates that this would be possible. NICTD has had ongoing coordination with the State Historic Preservation Office (SHPO), Michigan City, and other Section 106 consulting parties regarding the reuse of the station façade. See Section 4.4, Chapters 5 and 6, and Appendix VII for additional information.

NICTD and Michigan City agreed on a preliminary track design and station concept through the 11th Street (Michigan City) Station area reflecting Michigan City Station Design Option 2, as shown in Figure 2-20. A conceptual plan was presented to the public at meetings on October 4, 5, and 6, 2016, as well as at the City Council meeting in November 2016. NICTD entered into an operating agreement with Michigan City on November 1, 2016, and the City of Michigan City passed Resolution #4661 on that same date. Both the agreement and resolution were the result of the coordination that took place between 2011 and 2016, as described in this chapter.

The typical section for Michigan City Station Design Option 2 is shown in Figure 2-20. The station would include the following:

- Two high-level boarding platforms
- Two mainline tracks and two gauntlet tracks
- Two catenary pole lines
- One 11-foot-wide vehicular travel lane with a 3-foot barrier wall between the tracks and travel lane
- Curb and gutter
- 5-foot-wide parkway on the south side of 11th Street
- 5-foot-wide ADA-compliant sidewalks on both the north and south side
- ADA-compliant ramps
- Station with enclosed waiting area; heating, ventilation, and air conditioning; restrooms; and ticket vending machines
- A multilevel parking structure that, along with parcels on the north side of 11th Street between Washington and Franklin Streets and between Pine and Cedar Streets, would provide up to 400 commuter parking spaces in Opening Year. The parking structure would be built to accommodate possible expansion by Michigan City to provide up to 889 spaces in the future.

NICTD anticipates that the new station building design could reuse the façade of the former South Shore Station building and incorporate it into the new station; however, more engineering studies would be performed to confirm that this is feasible. The conceptual rendering shown in Figure 2-18 is for illustrative purposes only.

2.5 PREFERRED ALTERNATIVE

The Preferred Alternative consists of the construction of a second mainline, signal and OCS infrastructure, and bridge and station improvements between MP 58.8 in Gary and MP 35.3 in Michigan City; and the realignment, double-tracking, and related infrastructure along 10th and 11th Streets between MP 35.3 and MP 32.2 in Michigan City. The total distance of the Preferred Alternative is 26.6 miles.

The Preferred Alternative includes Goff Design Option 2; Bailly Design Option 4; and Michigan City Station Design Option 2; and station improvements as described in the Build Alternative at the Gary/Miller Station, Portage/Ogden Dunes Station, Dune Park Station, Beverly Shores Station, and the 11th Street (Michigan City) Station. The Preferred Alternative would have no impacts on NPS property.
3.0 TRANSPORTATION IMPACTS AND MITIGATION MEASURES

3.1 INTRODUCTION

This section documents the existing transportation system, how the transportation system may be affected, and what the future parking and access needs are for the proposed Project.

3.1.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

NICTD conducted a transportation analysis in compliance with current FTA guidelines, NEPA regulations, and the FAST Act. NICTD also studied local resources to understand the existing transportation network and other planned or programmed projects in the Project Area. These resources included the following:

- NIRPC 2040 CRP
- 2016 RDA Comprehensive Strategic Plan
- 2014 NICTD/RDA Strategic Business Plan
- 2013 Michigan City/NICTD Rail Realignment Study
- 2013 USEPA/Housing and Urban Development/City of Gary's Northside Redevelopment Project
- Gary Redevelopment Commission’s Economic Development Plan for the East Lake Economic Development Area (In progress)
- County and community comprehensive and land use plans (see Section 4.2.4)
- NIRPC’s 2016–2019 Transportation Improvement Program

NICTD assessed potential impacts on travel and the transportation system related to the duration of construction based on construction planning at the time of analysis. The analysis took into account potential impacts on the local transportation system, including construction and permanent impacts to freight railroad operations, NICTD facilities and service, traffic patterns, parking zones, public transportation, and pedestrian and bicycle accessibility. In the event of an adverse change, NICTD identified mitigation measures to minimize impacts and reduce them to meet the guidelines of the jurisdictional agencies’ policies, which generally follow the INDOT 2013 Design Manual and the American Association of State Highway and Transportation Officials Policy on Geometric Design of Highways and Streets (2011).

For the traffic and parking analysis, NICTD followed INDOT’s 2013 Design Manual, Chapters 41 and 53, as a reference for proposed mitigation measures. NICTD followed Highway Capacity Manual 2010 methodologies for all impact and capacity analyses completed (Transportation Research Board 2010).

For each station, roadways that could be affected by commuter traffic or changes due to road closures were identified. These locations include the access driveways to the station parking lots from the major roadway and other adjacent intersections based on their proximity to the driveways. Existing, 2022 No Build, 2022 Build, and 2040 Build traffic conditions were entered in microsimulation software Synchro, Version 8, to identify any impacts.

NICTD identified impacts by the level of service (LOS) of the intersections. LOS A is the most favorable (best traffic flow and least delay), LOS E represents saturated or at-capacity conditions, and

<table>
<thead>
<tr>
<th>Level of Service, or LOS, is expressed on a scale of A to F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS A and B: no delay</td>
</tr>
<tr>
<td>LOS C and D: minimal delay</td>
</tr>
<tr>
<td>LOS E: significant delay</td>
</tr>
<tr>
<td>LOS F: considerable delay</td>
</tr>
</tbody>
</table>
LOS F is the worst (oversaturated conditions). LOS C is the minimum acceptable LOS for most roadways in Indiana. An impact would occur if traffic generated by the additional parking or traffic rerouting from road closures causes the LOS of the intersection to fall below LOS C (i.e., LOS D, E, or F) for more than a short duration. If impacts were identified, recommendations to mitigate the impacts were provided. Recommendations for the location of the new parking areas and flow of traffic of the parking lots (i.e., new driveways) were also provided.

3.2 TRAILS

3.2.1 EXISTING

Several major trails are near the SSL ROW:

- Cowles Bog Trail is in Dune Acres and Porter, west of MP 45.
- Calumet Trail starts west of MP 45 in Porter and runs north of the ROW to Michigan City.
- Dunes Kankakee Trail and the Porter Brickyard Segment is located south of the ROW, also west of MP 45.
- Indiana Dunes State Park South Trail crosses the Calumet Trail west of the Dune Park Station on the State Route 49 overpass. It connects to the Calumet Trail via the South Shore Connector Trail.

In addition, the NPS has a parking lot off Mineral Springs Road, north of the ROW. This parking lot serves the Cowles Bog Trail, the Calumet Trail, and the Dunes Kankakee Trail.

CALUMET TRAIL

The Calumet Trail is an east-west bicycle and multi-use recreational trail running roughly parallel to U.S. 12 and the SSL ROW, within NIPSCO property.

The trail is about 9.1 miles long from Mineral Springs Road in Dune Acres near Cowles Bog to a point near the Porter and LaPorte County line. The Calumet Trail connects with other bicycle/multi-use trails in northwest Indiana from near the Illinois state line to near the Michigan state line. The Calumet Trail is managed by the Porter County Parks Department and is unpaved.

DUNES KANKAKEE TRAIL

The Dunes Kankakee Trail is 10.1 miles long. Within the Project Area, the Porter Brickyard Trail Segment of the Dunes Kankakee Trail is about 1.8 miles and stretches from the Indiana Dunes State Park entrance gates to the Indiana Dunes National Lakeshore/Porter County Tourism Visitor Center. One access point for the Dunes Kankakee Trail is just south of the ROW, west of Mineral Springs Road. The trail is located on NPS land and is managed by the Town of Porter.

3.2.2 PROPOSED

The proposed Project would require the Calumet Trail to be slightly realigned under the State Route (SR) 49 bridge to accommodate the second track. The crossing of the trail at the Dune Park Station would be shifted slightly east and modified to cross two tracks instead of one.
The Porter Brickyard Trail Segment of the Dunes Kankakee Trail intersection with Mineral Springs Road would be shifted slightly to the south to accommodate the second track.

3.2.3 IMPACTS

The new alignment of the Calumet Trail under the SR 49 bridge would be constructed prior to installing new tracks to ensure the Calumet Trail remains open and accessible. The Porter Brickyard Trail Segment of the Dunes Kankakee Trail would remain open during construction; however, the Mineral Springs Road access point to the trail and the NPS parking area may have temporary access interruptions when the crossing is modified. Traffic may be rerouted and motorists may experience intermittent delays crossing the construction zone.

3.2.4 MITIGATION

NICTD has coordinated with the Town of Porter, Porter County, the Indiana Dunes National Lakeshore, INDOT, and NIPSCO regarding the temporary impacts and minor changes to the Calumet Trail and Porter Brickyard Trail Segment of the Dunes Kankakee Trail, in accordance with the Section 4(f) process. See Chapter 4 for more information. All entities agree that impacts are minor and no mitigation is required.

3.3 BUS TRANSIT

3.3.1 EXISTING

Gary Public Transportation Corporation (GPTC) bus Route 13 (Oak and County Line Road) serves the SSL Gary/Miller Station in Gary. Free shuttle buses provided by the NPS operate on summer weekends from the Gary/Miller Station to the NPS Douglas Center for Environmental Education, Lake Street Beach, and Marquette Park. The NPS Douglas Center for Environmental Education serves as a visitor center for the western section of the Indiana Dunes National Lakeshore.

Routes 1, 2, 3, and 4 of Michigan City Transit are within the Project Area. Routes 1, 2, and 3 generally run north-south in the 11th Street (Michigan City) Station area along Wabash, Washington, Franklin, and Pine Streets. All serve the 11th Street (Michigan City) Station and all cross 11th Street. Route 4 travels on 10th Street from Sheridan Avenue to Willard Avenue, where it turns south, then back north onto Chicago Street where it crosses 11th Street and the NICTD/CSS railroad track.

The Orange Line, part of the V-Line (a deviated fixed-route bus service in Valparaiso), operates express service between Valparaiso University’s student center and the Dune Park Station Fridays through Sundays when Valparaiso University is in session, and on Fridays and Saturdays during the summer break.

3.3.2 PROPOSED

The Gary/Miller Station would be designed with a bus stop off Lake Street for Route 13, similar to its current location. At the 11th Street (Michigan City) Station, Pine Street would be closed, requiring coordination with Michigan City Transit to maintain service on Route 2. No other alterations to bus facilities are proposed. The Orange Line would not be impacted.

3.3.3 IMPACTS

GPTC Route 13 would be temporarily rerouted in the Gary/Miller Station area, and the Lake Street bus stop would be temporarily relocated during construction of the track realignment and Gary/Miller Station
improvements. Bus riders would be temporarily redirected to an alternate bus stop at the Gary/Miller Station.

Increases in travel time on Michigan City Transit Routes 1 and 3 are anticipated to be only temporary during construction, because the routes use Wabash, Washington, and Franklin Streets. All of these would remain open under the Build Alternative.

Michigan City Transit Route 2 would need to be rerouted to an alternate north-south roadway because of the permanent closure at Pine Street and 11th Street.

Michigan City Transit Route 4, which uses 10th Street, Willard Avenue, and Chicago Street, would have temporary increases in travel time during track removal from 10th Street, while the street is repaved, and when track realignment at Chicago Street takes place.

### 3.3.4 MITIGATION

NICTD would coordinate with the City of Gary and the GPTC regarding the temporary impacts to Route 13 and the Lake Street bus stop at the improved station. This would include developing a maintenance of traffic plan that accommodates buses. As part of the construction public outreach plan, NICTD would communicate changes to commuters in coordination with the GPTC.

NICTD would coordinate with Michigan City and Michigan City Transit regarding the temporary impacts to Routes 1, 3, and 4 during construction. This would include developing a MOT plan that accommodates buses. As part of the construction public outreach plan, NICTD would communicate changes to commuters in coordination with Michigan City Transit.

NICTD would work with Michigan City Transit regarding the permanent changes to Route 2 as a result of closing Pine Street. There would be multiple alternative roadways available for north-south travel in this area, including Franklin Street, which is approximately 400 feet west of Pine Street. NICTD would ensure that Route 2 would continue to serve the 11th Street (Michigan City) Station, both during construction and after.

### 3.4 RAILROAD

#### 3.4.1 FREIGHT

**EXISTING**

CSS operates between 14 and 18 freight trains daily on the NICTD/CSS track. The NICTD/CSS track crosses CN tracks at an at-grade diamond crossing near MP 57.6 and an interchange near MP 57 in Gary. The NICTD/CSS track also crosses the CSX and NS railroad tracks on grade-separated structures in Gary and Burns Harbor, respectively.

**PROPOSED**

To cross the CN railroad tracks, a new diamond crossing would be installed on the proposed second mainline that would be constructed south of the existing mainline near MP 57.6 in Gary. NICTD also
proposes a new bridge in Gary to span the CSX railroad tracks (MP 54.7) with new abutments outside the CSX ROW. A second new bridge is proposed over the NS railroad tracks in Burns Harbor (MP 47.4), which would require new piers located within the NS ROW.

**IMPACTS**

During construction of the proposed Project, four railroads would experience temporary impacts to their operations: CN, CSS, CSX, and NS.

NICTD would take CN’s track out of service for approximately 12 hours to install the new diamond crossing near MP 57.6. This outage would be coordinated with CN. At the interchange near MP 57, the CSS siding would be shifted to accommodate new catenary poles. Since the shifted track is connected to CN tracks, CSS would experience temporary impacts while the track is shifted. Since this corridor is mixed use and CSS has trackage rights on NICTD’s track, CSS would experience the same temporary impacts to its operations as NICTD would. Temporary mainline service disruptions would occur during track shifts and cutovers at locations such as Miller, Bailly, and Michigan City.

The proposed new bridge over the NS railroad tracks would require constructing new piers within the NS ROW. Lifting the structural steel into place would be performed during working windows of less than 8 hours. The temporary outages would be coordinated with NS and CSX. NICTD does not anticipate permanently decreasing the horizontal or vertical clearances of any railroad bridges. Temporary vertical clearances over CSX and NS railroad tracks would need to be coordinated with both railroads to allow assembly of the bridge spans in place. Construction of the bridge spans over CSX railroad tracks in Gary and NS railroad tracks in Burns Harbor would not affect railroad operations for any freight carriers except for the potential minor outages noted above.

**MITIGATION**

NICTD has been coordinating with the NS, CSX, and CSS freight railroads about the DT-NWI Project for over a year. This has taken the form of meetings and conferences with local and national level company representatives discussing alternatives, construction phasing, work windows and reviewing preliminary design plans to minimize impacts. Correspondence with the railroad companies is provided in Appendix IV. NICTD would continue coordinating with these railroads and would enter into third-party agreements as required, during final design.

3.4.2 COMMUTER RAIL

**EXISTING**

Today’s SSL commuter service between Chicago and South Bend includes 19 inbound (westbound) trains and 20 outbound (eastbound) trains. One train in each direction is express with limited stops between Chicago and South Bend. Two trains in each direction are express with limited stops between Chicago and Michigan City. NICTD operates nine inbound SSL trains in the AM peak hours (5:45 AM to 9 AM) and eight outbound trains in the PM peak hours (3:45 PM to 6 PM). Between 4:28 PM and 5:10 PM on any given weekday, there are 2,334 riders on three eastbound trains (#113, #115, and #15), with only 2,390 seats available. Train #115, which leaves downtown Chicago at 4:57 PM, is the most crowded with over 800 passengers—operating at 110 percent capacity. There were 12,046 total riders per day estimated on the SSL for base year 2015.
PROPOSED

With the proposed Project, NICTD would add an additional five westbound and seven eastbound trips to its weekday service and would decrease travel time. The proposed Project provides the ability to provide more express service and does not degrade service at any of the stations. Average weekday peak hour travel time reductions between SSL stations and Millennium Station in Chicago are shown in Table 3-1.

Table 3-1. Proposed Project Average Travel Time Savings

<table>
<thead>
<tr>
<th>Station</th>
<th>Existing Average Peak Hour Travel Time to Millennium Station</th>
<th>Anticipated Average Peak Hour Travel Time to Millennium Station</th>
<th>Average Time Savings (%)</th>
<th>Anticipated Express Train Travel Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gary/Miller</td>
<td>1 hour 9 minutes</td>
<td>50 minutes</td>
<td>28%</td>
<td>46 minutes</td>
</tr>
<tr>
<td>Portage/Ogden Dunes</td>
<td>1 hour 16 minutes</td>
<td>55 minutes</td>
<td>28%</td>
<td>51 minutes</td>
</tr>
<tr>
<td>Dune Park</td>
<td>1 hour 21 minutes</td>
<td>1 hour 1 minute</td>
<td>25%</td>
<td>54 minutes</td>
</tr>
<tr>
<td>Michigan City (11th Street)</td>
<td>1 hour 41 minutes</td>
<td>1 hour 12 minutes</td>
<td>29%</td>
<td>1 hour 4 minutes</td>
</tr>
</tbody>
</table>

IMPACTS

NICTD does not anticipate any major service disruptions to the SSL during the proposed Project. Most of the new mainline would be built without affecting train service and would be put into service using phasing plans to minimize outage durations. Minimal service disruptions that would result in some slow-speed zones may occur, but are expected to be temporary in nature and would be scheduled outside of peak operating hours to the extent feasible.

MITIGATION

No mitigation is necessary for temporary service disruptions.

3.4.3 PASSENGER RAIL

EXISTING

In Michigan City, the existing mainline intersects with Amtrak at a diamond crossing near MP 34.5.

PROPOSED

NICTD would construct two new mainlines south of the existing diamond crossing. New diamond crossings would be installed and the existing diamond crossing would be removed.

IMPACTS

Amtrak would experience temporary outages on its tracks during the construction of these diamond crossings.

MITIGATION

NICTD has and would coordinate with Amtrak to develop phasing plans and working windows that would minimize temporary impacts during construction. Correspondence with Amtrak is included in Appendix IV.
3.5 TRAFFIC AND ROADWAY

3.5.1 EXISTING

There are 61 at-grade crossings in the Project Area, including 8 in Gary, 4 in Portage, 4 in Porter, 6 in Beverly Shores, and 39 in Michigan City between Sheridan and Carroll Avenues (see Table 3-2). The FRA categorizes the cross street intersections on 10th and 11th Streets as at-grade crossings because of the embedded, street-running track in the center of the roadway. Thirty-two of the at-grade crossings in Michigan City are located between Sheridan Avenue and E. Michigan Boulevard, where the track improvements are proposed.

Table 3-2. At-grade Crossings in the Project Area

<table>
<thead>
<tr>
<th>Community</th>
<th>FRA Crossing Inventory Number</th>
<th>Milepost</th>
<th>Street</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gary</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>870886X</td>
<td>58.44</td>
<td>Virginia Street</td>
</tr>
<tr>
<td>2</td>
<td>870885R</td>
<td>58.03</td>
<td>Tennessee Street (begin track improvements)</td>
</tr>
<tr>
<td>3</td>
<td>870884J</td>
<td>57.97</td>
<td>Ohio Street</td>
</tr>
<tr>
<td>4</td>
<td>870882V</td>
<td>57.21</td>
<td>Taylor Road</td>
</tr>
<tr>
<td>5</td>
<td>870880G</td>
<td>56.39</td>
<td>7th Avenue</td>
</tr>
<tr>
<td>6</td>
<td>870879M</td>
<td>55.71</td>
<td>Clay Street</td>
</tr>
<tr>
<td>7</td>
<td>870878F</td>
<td>55.04</td>
<td>Lake Street</td>
</tr>
<tr>
<td>8</td>
<td>870876S</td>
<td>52.58</td>
<td>County Line Road</td>
</tr>
<tr>
<td><strong>Portage</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>870724V</td>
<td>50.58</td>
<td>Hillcrest Road</td>
</tr>
<tr>
<td>2</td>
<td>870723N</td>
<td>50.51</td>
<td>Burns Waterway</td>
</tr>
<tr>
<td>3</td>
<td>870721A</td>
<td>49.18</td>
<td>Wilson Road</td>
</tr>
<tr>
<td>4</td>
<td>870719Y</td>
<td>48.37</td>
<td>McCool Road</td>
</tr>
<tr>
<td><strong>Porter</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>870717K</td>
<td>46.06</td>
<td>NIPSCO-ArcelorMittal access</td>
</tr>
<tr>
<td>2</td>
<td>870716D</td>
<td>45.13</td>
<td>Mineral Springs Road</td>
</tr>
<tr>
<td>3</td>
<td>870714P</td>
<td>44.04</td>
<td>Waverly Road</td>
</tr>
<tr>
<td>4</td>
<td>870711U</td>
<td>41.84</td>
<td>Furnessville</td>
</tr>
<tr>
<td><strong>Beverly Shores</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>870710M</td>
<td>40.72</td>
<td>State Park Road (Kemil Road)</td>
</tr>
<tr>
<td>2</td>
<td>870708L</td>
<td>39.33</td>
<td>Broadway Avenue</td>
</tr>
</tbody>
</table>
Table 3-2. (cont.)

<table>
<thead>
<tr>
<th>Community Count</th>
<th>FRA Crossing Inventory Number</th>
<th>Milepost</th>
<th>Street</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beverly Shores</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>870707E</td>
<td>38.44</td>
<td>Lakeshore County Road</td>
</tr>
<tr>
<td>4</td>
<td>870706X</td>
<td>37.80</td>
<td>Private Crossing</td>
</tr>
<tr>
<td>5</td>
<td>870472W</td>
<td>36.66</td>
<td>Central Avenue</td>
</tr>
<tr>
<td>6</td>
<td>870701N</td>
<td>36.02</td>
<td>County Line Road/U.S. 12</td>
</tr>
<tr>
<td><strong>Michigan City</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>870700G</td>
<td>35.22</td>
<td>Sheridan Avenue</td>
</tr>
<tr>
<td>2</td>
<td>870699P</td>
<td>35.15</td>
<td>Hayes Avenue</td>
</tr>
<tr>
<td>3</td>
<td>870698H</td>
<td>35.08</td>
<td>Greeley Avenue</td>
</tr>
<tr>
<td>4</td>
<td>870697B</td>
<td>35.01</td>
<td>Hancock Avenue</td>
</tr>
<tr>
<td>5</td>
<td>870696U</td>
<td>34.94</td>
<td>Seymour Avenue</td>
</tr>
<tr>
<td>6</td>
<td>870695M</td>
<td>34.89</td>
<td>Douglas Avenue</td>
</tr>
<tr>
<td>7</td>
<td>870694F</td>
<td>34.87</td>
<td>Carlon Court</td>
</tr>
<tr>
<td>8</td>
<td>870693Y</td>
<td>34.86</td>
<td>Grant Avenue</td>
</tr>
<tr>
<td>9</td>
<td>870692S</td>
<td>34.83</td>
<td>Donnelly Street</td>
</tr>
<tr>
<td>10</td>
<td>870691K</td>
<td>34.76</td>
<td>Willard Avenue</td>
</tr>
<tr>
<td>11</td>
<td>870690D</td>
<td>34.64</td>
<td>Claire Street</td>
</tr>
<tr>
<td>12</td>
<td>870689J</td>
<td>34.54</td>
<td>W. 10th Street</td>
</tr>
<tr>
<td>13</td>
<td>870687V</td>
<td>34.49</td>
<td>Chicago Street</td>
</tr>
<tr>
<td>14</td>
<td>870686N</td>
<td>34.47</td>
<td>Kentucky Street</td>
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<td>870685G</td>
<td>34.44</td>
<td>W. 11th Street</td>
</tr>
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<td>16</td>
<td>870684A</td>
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<td>Tennessee Street</td>
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<td>870683T</td>
<td>34.37</td>
<td>Ohio Street</td>
</tr>
<tr>
<td>18</td>
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<td>Elston Street</td>
</tr>
<tr>
<td>19</td>
<td>870681E</td>
<td>34.26</td>
<td>Manhattan Street</td>
</tr>
<tr>
<td>20</td>
<td>870680X</td>
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<tr>
<td>21</td>
<td>870679D</td>
<td>34.14</td>
<td>Wabash Street</td>
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<tr>
<td>22</td>
<td>870678W</td>
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<td>Washington Street</td>
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<tr>
<td>23</td>
<td>870677P</td>
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<td>Franklin Street</td>
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<td>24</td>
<td>870676H</td>
<td>33.90</td>
<td>Pine Street</td>
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<td>33.82</td>
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</tr>
<tr>
<td>26</td>
<td>870458B</td>
<td>33.75</td>
<td>Cedar Street</td>
</tr>
</tbody>
</table>
Table 3-2. (cont.)

<table>
<thead>
<tr>
<th>Community Count</th>
<th>FRA Crossing Inventory Number</th>
<th>Milepost</th>
<th>Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>870457U</td>
<td>33.69</td>
<td>Lafayette Street</td>
</tr>
<tr>
<td>28</td>
<td>870456M</td>
<td>33.61</td>
<td>York Street</td>
</tr>
<tr>
<td>29</td>
<td>870455F</td>
<td>33.53</td>
<td>Oak Street</td>
</tr>
<tr>
<td>30</td>
<td>870454Y</td>
<td>33.47</td>
<td>Maple Street</td>
</tr>
<tr>
<td>31</td>
<td>870453S</td>
<td>33.39</td>
<td>Phillips Avenue</td>
</tr>
<tr>
<td>32</td>
<td>870452K</td>
<td>33.31</td>
<td>E. Michigan Boulevard (end of track improvements)</td>
</tr>
<tr>
<td>33</td>
<td>870451D</td>
<td>33.32</td>
<td>Poplar/Vail Street</td>
</tr>
<tr>
<td>34</td>
<td>870450W</td>
<td>33.07</td>
<td>School Street</td>
</tr>
<tr>
<td>35</td>
<td>870449C</td>
<td>32.85</td>
<td>Grace Street</td>
</tr>
<tr>
<td>36</td>
<td>870446G</td>
<td>32.70</td>
<td>Woodland Avenue</td>
</tr>
<tr>
<td>37</td>
<td>870445A</td>
<td>32.65</td>
<td>Pleasant Avenue</td>
</tr>
<tr>
<td>38</td>
<td>870443L</td>
<td>32.55</td>
<td>Calumet Avenue</td>
</tr>
<tr>
<td>39</td>
<td>870442E</td>
<td>32.34</td>
<td>Carroll Avenue</td>
</tr>
</tbody>
</table>

Source: FRA 2017

3.5.2 PROPOSED

The proposed Project would increase safety by removing 21 of 39 at-grade crossings in Michigan City, as discussed below. Where at-grade crossings would be maintained, crossing gates, flashing lights, and bells would be installed to deter vehicles from crossing the rail when trains are present. Overall, these improvements would improve safety in Michigan City.

10TH STREET – MICHIGAN CITY

The proposed Project would realign the existing NICTD/CSS track and related infrastructure to the south of 10th Street. By virtue of moving the embedded, street-running track out of the center of 10th Street, seven at-grade crossings would be removed. An additional three at-grade crossings would be removed by closing and creating cul-de-sacs at Carlon Court, Donnelly Street, and Claire Street south of the realigned tracks. After completion of the proposed Project, 10th Street would continue to operate with two-way traffic. Figure 3-1 shows the proposed at-grade crossing removals and new cul-de-sacs, and Table 3-3 provides a list of each.

At-grade crossings would be removed by realigning the tracks outside of the roadway, shown in red diamonds in Figure 3-1, and/or by closing side streets to prohibit vehicles from crossing the railroad tracks, shown in blue and orange circles in Figure 3-1.
As a separate project, the City of Michigan City would maintain traffic circulation (particularly for municipal services) by constructing new local connections between Carlon Court and the existing alleyway to the east of Carlon Court, and between Donnelly Street and the existing alleyway to the east of Donnelly Street. Motorists would use Willard Avenue to access 10th Street. Similarly, Claire Street would be closed south of 10th Street, and the City of Michigan City would construct a cul-de-sac.
Figure 3-1. Proposed Road/Rail Crossing Removals in Michigan City
### Table 3-3. Future Condition of Cross Roadways in Michigan City (Sheridan Avenue to Carroll Avenue)

<table>
<thead>
<tr>
<th>Cross Street</th>
<th>Would Vehicles Be Able to Access 10&lt;sup&gt;th&lt;/sup&gt;/11&lt;sup&gt;th&lt;/sup&gt; Streets from Side Streets?</th>
<th>Would Vehicles Cross the Railroad Tracks?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheridan Avenue</td>
<td>Open to 10&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>Yes</td>
</tr>
<tr>
<td>Hayes Avenue</td>
<td>Open to 10&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>No</td>
</tr>
<tr>
<td>Greeley Avenue</td>
<td>Open to 10&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>No</td>
</tr>
<tr>
<td>Hancock Avenue</td>
<td>Open to 10&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>No</td>
</tr>
<tr>
<td>Seymour Avenue</td>
<td>Open to 10&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>No</td>
</tr>
<tr>
<td>Douglas Avenue</td>
<td>Open to 10&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>No</td>
</tr>
<tr>
<td>Carlon Court</td>
<td>Closed to 10&lt;sup&gt;th&lt;/sup&gt; Street from the south</td>
<td>No</td>
</tr>
<tr>
<td>Grant Avenue</td>
<td>Open to 10&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>No</td>
</tr>
<tr>
<td>Donnelly Street</td>
<td>Closed to 10&lt;sup&gt;th&lt;/sup&gt; Street from the south</td>
<td>No</td>
</tr>
<tr>
<td>Willard Avenue</td>
<td>Open to 10&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>Yes</td>
</tr>
<tr>
<td>Claire Street</td>
<td>Closed to 10&lt;sup&gt;th&lt;/sup&gt; Street from the south</td>
<td>No</td>
</tr>
<tr>
<td>10&lt;sup&gt;th&lt;/sup&gt; Street / Huron Avenue</td>
<td>Open to 10&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>No</td>
</tr>
<tr>
<td>Chicago Street</td>
<td>Open to 10&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>Yes</td>
</tr>
<tr>
<td>Kentucky Street</td>
<td>Closed to 11&lt;sup&gt;th&lt;/sup&gt; Street from the north</td>
<td>No</td>
</tr>
<tr>
<td>Tennessee Street</td>
<td>Closed to 11&lt;sup&gt;th&lt;/sup&gt; Street from the north</td>
<td>No</td>
</tr>
<tr>
<td>Ohio Street</td>
<td>Open to 11&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>Yes</td>
</tr>
<tr>
<td>Elston Street</td>
<td>Closed to 11&lt;sup&gt;th&lt;/sup&gt; Street from the north</td>
<td>No</td>
</tr>
<tr>
<td>Manhattan Street</td>
<td>Closed to 11&lt;sup&gt;th&lt;/sup&gt; Street from the north</td>
<td>No</td>
</tr>
<tr>
<td>Buffalo Street</td>
<td>Closed to 11&lt;sup&gt;th&lt;/sup&gt; Street from the north</td>
<td>No</td>
</tr>
<tr>
<td>Wabash Street</td>
<td>Open to 11&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>Yes</td>
</tr>
<tr>
<td>Washington Street</td>
<td>Open to 11&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>Yes</td>
</tr>
<tr>
<td>Franklin Street</td>
<td>Open to 11&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>Yes</td>
</tr>
<tr>
<td>Pine Street</td>
<td>Closed to 11&lt;sup&gt;th&lt;/sup&gt; Street from the north</td>
<td>No</td>
</tr>
<tr>
<td>Spring Street</td>
<td>Closed to 11&lt;sup&gt;th&lt;/sup&gt; Street from the north</td>
<td>No</td>
</tr>
<tr>
<td>Cedar Street</td>
<td>Closed to 11&lt;sup&gt;th&lt;/sup&gt; Street from the north</td>
<td>No</td>
</tr>
<tr>
<td>Lafayette Street</td>
<td>Open to 11&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>Yes</td>
</tr>
<tr>
<td>York Street</td>
<td>Closed to 11&lt;sup&gt;th&lt;/sup&gt; Street from the north</td>
<td>No</td>
</tr>
<tr>
<td>Oak Street</td>
<td>Open to 11&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>Yes</td>
</tr>
<tr>
<td>Maple Street</td>
<td>Closed to 11&lt;sup&gt;th&lt;/sup&gt; Street from the north</td>
<td>No</td>
</tr>
<tr>
<td>Phillips Avenue</td>
<td>Open to 11&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>No</td>
</tr>
</tbody>
</table>
Table 3-3. (cont.)

<table>
<thead>
<tr>
<th>Cross Street</th>
<th>Would Vehicles Be Able to Access 10th/11th Streets from Side Streets?</th>
<th>Would Vehicles Cross the Railroad Tracks?</th>
</tr>
</thead>
<tbody>
<tr>
<td>E Michigan Boulevard</td>
<td>Open to 11th Street</td>
<td>Yes</td>
</tr>
<tr>
<td>(end of track improvements)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poplar/Vail Street</td>
<td>n/a</td>
<td>Yes</td>
</tr>
<tr>
<td>School Street</td>
<td>n/a</td>
<td>Yes</td>
</tr>
<tr>
<td>Grace Street</td>
<td>n/a</td>
<td>Yes</td>
</tr>
<tr>
<td>Woodland Avenue</td>
<td>n/a</td>
<td>Yes</td>
</tr>
<tr>
<td>Pleasant Avenue</td>
<td>n/a</td>
<td>Yes</td>
</tr>
<tr>
<td>Calumet Avenue</td>
<td>n/a</td>
<td>Yes</td>
</tr>
<tr>
<td>Carroll Avenue</td>
<td>n/a</td>
<td>Yes</td>
</tr>
</tbody>
</table>

11TH STREET – MICHIGAN CITY

The proposed Project would realign the existing NICTD/CSS railroad track to the north side of 11th Street. Eleven at-grade crossings would be removed through a combination of the rail realignment and by closing streets and creating cul-de-sacs to the north of 11th Street (Figure 3-1). An artist’s rendering of a proposed typical cul-de-sac north of 11th Street is shown in Figure 3-2. Table 3-3 lists the existing cross streets and which roads would be closed to the north. All existing streets that connect to 11th Street from the south would remain open to travel one-way eastbound on 11th Street. Detailed roadway design plans are provided in the 10th and 11th Street Corridor Traffic Impact Analysis (Appendix III).

Figure 3-2. Artist’s Rendering of Proposed Typical Cul-De-Sac (Looking South)
After the proposed Project, 11th Street would operate with one-way, eastbound traffic, separated from the realigned tracks by a short (less than three feet) protection barrier. Fences would separate platforms and station area from the travel lane.

3.5.3 IMPACTS

PERMANENT IMPACTS

Traffic analysis was conducted to evaluate the effects of the changes to 10th and 11th Streets and the at-grade removals in Michigan City. The detailed report, 10th and 11th Street Corridor Traffic Impact Analysis, is in Appendix III. Rerouted traffic would be directed to the next nearest crossing, generally two to three blocks away. The operational analysis is detailed in the Parking and Traffic Technical Memorandum in Appendix III.

Safety would be improved on 10th Street with the relocation of the track and removal of the at-grade crossings. Traffic would no longer have to cross any tracks to access side streets or personal driveways. Traffic flow would improve by not having to share the road with rail or wait for passing trains to perform turning maneuvers and would benefit from improved horizontal clearances.

The residents of Carlon Court and Donnelly Street would travel an additional three tenths of a mile because of road closures at 10th Street. The traffic generated by the residential use of Carlon Court and Donnelly Street is less than 50 cars per peak hour, or less than 1 car per minute. Engineering practice deems this rerouted volume a negligible impact to the adjacent street network, and LOS analysis is not required.

The residents of Claire Street would travel an additional two tenths of a mile because of the road closure at 10th Street. The traffic generated by the residential use of Claire Street is less than 50 cars per peak hour, or less than 1 car per minute. Engineering practice deems this rerouted volume a negligible impact to the adjacent street network, and LOS analysis is not required.

The analysis and associated impacts of the 11th Street conversion from two-way to one-way traffic and the road closures adjacent to the station are discussed in Section 3.6, Station Parking and Access.

TEMPORARY IMPACTS

The Gary/Miller Station project would be constructed at the same time (or near the same time) as the construction of the INDOT U.S. 12/U.S. 20 realignment. The roadway realignment project would create some temporary roadway closures in the Project Area.

Bridge construction over Hobart Road would be expected to require a temporary detour for erecting the span over the roadway. An appropriate detour route would be determined during final design and detailed plan preparation.

During construction, roadways would be closed when track is placed across at-grade roadway crossings and traffic would be temporarily detoured. The detour duration would vary, depending on the complexity of the roadway and crossing improvements. Crossroads may be re-profiled at some locations to provide a smooth crossing of the NICTD/CSS railroad tracks.

Bridge construction over the ArcelorMittal access road would likely require short-term closures for placement of bridge girders over the roadway. While the likelihood of foot traffic is low, pedestrian access between the facility gate and the plant would be limited because of construction activities between the
existing abutments and the edge of pavement. Periodic lane closures on the ArcelorMittal access road would also be needed for construction of the new abutments.

### 3.5.4 MITIGATION

Traffic circulation would be maintained for the road closures on 10<sup>th</sup> Street (particularly for municipal services) by constructing, through a separate project by the City of Michigan City, new local connections south of 10<sup>th</sup> Street between Carlon Court and the existing alleyway located approximately 130 feet to the east of Carlon Court, and between Donnelly Street and the existing alleyway located approximately 140 feet east of Donnelly Street. Motorists would use Willard Avenue to access 10<sup>th</sup> Street. Similarly, Claire Street would be closed south of 10<sup>th</sup> Street and the City of Michigan City would construct a cul-de-sac. Access to Claire Street would be via Green Street.

Motorists would need to adjust their behavior to reach their destinations. To assist motorists, NICTD would work with the City of Michigan City to develop an outreach plan to inform residents, businesses, and visitors of the change in travel pattern. No roadway or traffic control improvements would be needed to offset the rerouted traffic of 10<sup>th</sup> Street.

The mitigation of the 11<sup>th</sup> Street conversion from two-way to one-way traffic and the road closures adjacent to the station are discussed in Section 3.6, Station Parking and Access.

### 3.6 STATION PARKING AND ACCESS

The station and parking improvements would result in defined locations for parking and provide sufficient parking supply in Opening Year in 2020.<sup>2</sup> At each station the existing parking would remain functional as new parking is constructed on adjacent or nearby properties.

#### 3.6.1 GARY/MILLER STATION

**EXISTING**

This station is located between U.S. 20 and 7<sup>th</sup> Avenue near Lake Street. Two surface parking lots are currently provided for the Gary/Miller Station. Lot 1 is a one-way westbound diagonal parking lot north of U.S. 12 adjacent to the station. Lot 2 provides the majority of the parking and is located between U.S. 12 and U.S. 20. The Gary/Miller Station and its lots are shown in Figure 3-3. In total, 248 parking spaces are provided. Lot 2 has two-way access provided from both U.S. 12 and U.S. 20. A pedestrian crosswalk with overhead flashing yellow lights is provided across U.S. 12 between Lot 2 and the station. A Kiss-and-Ride drive aisle is provided east of Lot 1.

---

<sup>2</sup> Although the Project would be completed and operational in 2020, design year 2022 was used during the modeling process to account for the incremental increase in ridership that would occur after Opening Year.
Figure 3-3. Gary/Miller Station Park-and-Ride Parking – Existing

<table>
<thead>
<tr>
<th>Lot</th>
<th>Existing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot 1</td>
<td>50</td>
</tr>
<tr>
<td>Lot 2</td>
<td>198</td>
</tr>
<tr>
<td>Total</td>
<td>248</td>
</tr>
</tbody>
</table>
PROPOSED

As a separate project, INDOT is consolidating U.S. 12 and U.S. 20 near the station. As a result, U.S. 12 south of the existing station will be relinquished and all traffic on U.S. 12 will be routed to U.S. 20. INDOT is also improving pedestrian access along U.S. 12/U.S. 20 in the station area. INDOT has been coordinating with NICTD and the City of Gary regarding these improvements (see Appendix IV). Figure 3-4 depicts the U.S. 12/U.S. 20 realignment.

As shown in Figure 3-5, parking would be expanded at the Gary/Miller Station to accommodate the Opening Year (2020) demand of 596 vehicles and the 2040 demand of 786 vehicles, plus Kiss-and-Ride access. Although only 596 parking spaces would be needed for Opening Year, NICTD determined that the configuration of the existing NICTD-owned parcels and those required for the proposed Project could accommodate 743 spaces.

As a separate project, the City of Gary plans to expand TOD surrounding the Gary/Miller Station. A component of the TOD is a parking garage(s) that would serve both residents and customers of the TOD and commuters at the Gary/Miller Station. The exact location of a parking garage(s) within the TOD has not yet been determined. The intent is to convert the surface parking lots as proposed by NICTD to TOD uses and incorporate a parking garage(s) to serve all users. It is also intended that the future TOD parking garage(s) would accommodate the NICTD future 2040 parking demand.

IMPACTS

Forecasting and analyses were performed and detailed in the Parking and Traffic Technical Memorandum (Appendix III) to determine the impacts on the adjacent roadways attributable to the proposed parking. The analysis contained in the Parking and Traffic Technical Memorandum determined that all driveways of the Gary/Miller Station proposed parking areas would operate at acceptable LOS for the AM peak hour. In the PM peak hour, one parking lot exit is projected to operate at a slightly less than desirable LOS (E); however, it is expected and acceptable given the nature of the land use and short influx of traffic. U.S. 20 and Lake Street through traffic at the access drives would continue to be free flow.

As discussed under the proposed improvement, the City of Gary is proposing a parking garage(s) that would replace the surface lots proposed as part of a future TOD program. Gary would complete traffic impact analyses once the location and design of the new parking garage(s) have been determined. NICTD has coordinated with the City of Gary, and the future parking garage(s) would accommodate the 2040 demand for transit and the demand generated by the TOD development. Staging of parking is anticipated for the parking garage construction. With the relocation of U.S. 12 to U.S. 20, the U.S. 12 ROW and the existing Lot 1 area would be available, as well as additional area in Lot 5. These sites would allow for the staging of parking during initial and future construction. For more detailed information, see the Parking and Traffic Technical Memorandum (Appendix III).

MITIGATION

No mitigation for traffic increases is required as there is no long-term change in LOS. NICTD would continue to coordinate with the City of Gary to determine appropriate staging for construction of parking as needed for future conditions.
Figure 3-4. U.S. 12/U.S. 20 Realignment (by INDOT) with Gary/Miller Station
Figure 3-5. Gary/Miller Station Park-and-Ride Parking – Proposed

<table>
<thead>
<tr>
<th>Lot</th>
<th>Existing</th>
<th>Opening Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot 1</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td>Lot 2</td>
<td>198</td>
<td>167</td>
</tr>
<tr>
<td>Lot 3</td>
<td>-</td>
<td>250</td>
</tr>
<tr>
<td>Lot 4</td>
<td>-</td>
<td>89</td>
</tr>
<tr>
<td>Lot 5</td>
<td>-</td>
<td>237</td>
</tr>
<tr>
<td>Total</td>
<td>248</td>
<td>743</td>
</tr>
</tbody>
</table>
3.6.2 PORTAGE/OGDEN DUNES STATION

EXISTING

The Portage/Ogden Dunes Station is located just west of Burns Waterway, at Hillcrest Road in Portage. It has one surface parking lot adjacent to the north platform. The lot is a one-way eastbound diagonal parking lot providing 230 parking spaces. The Portage/Ogden Dunes Station and its lot are shown in Figure 3-6. The entrance to the lot is from Hillcrest Road, approximately 100 feet north of the signalized intersection with U.S. 12. The exit is approximately 1,500 feet east of Hillcrest Road at the Dune Harbor Drive and U.S. 12 side street stop-controlled intersection.

PROPOSED

Parking would be expanded to the west and south of U.S. 12, as shown in Figure 3-7, at the Portage/Ogden Dunes Station to accommodate the Opening Year demand of 497 vehicles and 2040 demand of 421 vehicles plus Kiss-and-Ride. The future 2040 Park-and-Ride demand is expected to decrease for the following reasons:

1) The City of Portage plans TOD surrounding the station area. Driving ridership would convert to walking ridership.

2) The future implementation of the West Lake corridor would draw southwest ridership of the Portage/Ogden Dunes Station west to the Hammond Gateway Station.

Proposed platform improvements would result in the removal of parking spaces from the existing 230-space Lot 1. Additionally, the expansion of parking would require more ADA parking spaces to be added in Lot 1 since it is closest to the station. This would result in a net 202 Park-and-Ride parking spaces in the existing lot. To meet future parking needs, a new lot would be built south of U.S. 12 with a pedestrian route that complies with INDOT policy. A third lot would be constructed north of the tracks west of Hillcrest Road. Opening Year and 2040 parking demand would be accommodated by the reconfiguration of the existing Lot 1 and the addition of Lots 2 and 3, with a total supply of 556 parking spaces.

IMPACTS

Forecasting and analyses were performed and detailed in the Parking and Traffic Technical Memorandum (Appendix III) to determine the impacts on the existing and proposed driveways attributable to the proposed parking expansion. In addition, two adjacent intersections, U.S. 12 at Hillcrest Road and U.S. 12 at Stagecoach Road, were analyzed because of their proximity to the station. The intersections were analyzed to determine whether any impacts associated with the commuter traffic would occur. Two scenarios were analyzed during the AM and PM peak hours: Opening Year (2020) and Year 2040.

The analysis contained in the Parking and Traffic Technical Memorandum determined that all intersections and driveways to the Portage/Ogden Dunes Station would operate at an acceptable LOS for both the AM and PM peak hours for Opening Year (2020). U.S. 12, Hillcrest Road, and Stagecoach Road through traffic at the access drives would continue to flow freely.
Figure 3-6. Portage/Ogden Dunes Station Park-and-Ride Parking – Existing

<table>
<thead>
<tr>
<th>Lot</th>
<th>Existing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot 1</td>
<td>230</td>
</tr>
<tr>
<td>Total</td>
<td>230</td>
</tr>
</tbody>
</table>
Figure 3-7. Portage/Ogden Dunes Station Park-and-Ride Parking – Existing, Opening Year (2020), and 2040

<table>
<thead>
<tr>
<th>Lot</th>
<th>Existing</th>
<th>Opening Year</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot 1</td>
<td>230</td>
<td>202*</td>
<td></td>
</tr>
<tr>
<td>Lot 2</td>
<td>-</td>
<td>265</td>
<td></td>
</tr>
<tr>
<td>Lot 3</td>
<td>-</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>230</td>
<td>556</td>
<td></td>
</tr>
</tbody>
</table>

* Reduction due to station and platform improvements.
The Year 2040 modeled scenario with the proposed Project forecasted that intersections and driveways would continue to operate at an acceptable LOS for both the AM and PM peak hours. Exit B/Dune Harbor Drive at U.S. 12 is projected to operate at a slightly less than desirable LOS (D); however, this is not uncommon and is acceptable given the nature of the land use and short influx of traffic as vehicles leave in the evening. U.S. 12, Hillcrest Road, and Stagecoach Road through traffic at the access drives would continue to flow freely.

MITIGATION

No mitigation would be needed in Opening Year (2020) or for 2040 demand. NICTD would coordinate with INDOT regarding pedestrian improvements along and across U.S. 12.

3.6.3 DUNE PARK STATION

EXISTING

In addition to the commuter station, Dune Park is the location of NICTD’s administrative offices. It is located on U.S. 12 at State Route 49 in Chesterton. Two lots, separated by an access drive, serve commuters and NICTD employees. Lot 1 provides 193 parking spaces and 17 Kiss-and-Ride spaces. Lot 2 provides 314 spaces, for a total of 507 Park-and-Ride spaces. Two access drives, to the west and east approximately 600 feet apart, provide two-way access to both lots. Both driveways have stop signs to access U.S. 12. The Dune Park Station and its lots are shown in Figure 3-8.

PROPOSED

Parking at Dune Park Station would be expanded to 579 spaces for Opening Year and 886 spaces for 2040 including the existing the Kiss-and-Ride function, as shown in Figure 3-9. Expansion of parking would occur east of the existing parking lot, with 72 spaces and a third access point provided for Opening Year, and eventually an additional 307 spaces to meet 2040 demand.

IMPACTS

Forecasting and analyses were performed and detailed in the Parking and Traffic Technical Memorandum (Appendix III) to determine the impacts on the existing and proposed driveways attributable to the proposed parking expansion. The analysis contained in the Parking and Traffic Technical Memorandum determined that all driveways to the Dune Park Station would operate at an acceptable LOS for both the AM and PM peak hours in Opening Year. The U.S. 12 through traffic at the access drives would continue to flow freely.

The 2040 scenario with the proposed Project indicates that all driveways to the Dune Park Station would continue to operate at acceptable LOS for both the AM and PM peak hours. The U.S. 12 through traffic at the access drives would continue to flow freely. For more details, see the Parking and Traffic Technical Memorandum (Appendix III).
Figure 3-8. Dune Park Station Park-and-Ride Parking – Existing
Figure 3-9. Dune Park Station Park-and-Ride Parking – Existing, Opening Year (2020), and 2040

<table>
<thead>
<tr>
<th>Lot</th>
<th>Existing</th>
<th>Opening Year</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot 1</td>
<td>193</td>
<td>193</td>
<td>193</td>
</tr>
<tr>
<td>Lot 2</td>
<td>314</td>
<td>314</td>
<td>314</td>
</tr>
<tr>
<td>Lot 3</td>
<td>-</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td>Lot 4</td>
<td>-</td>
<td>-</td>
<td>307</td>
</tr>
<tr>
<td>Total</td>
<td>507</td>
<td>579</td>
<td>886</td>
</tr>
</tbody>
</table>
MITIGATION

No mitigation would be needed to meet traffic demands at Opening Year and 2040.

3.6.4 BEVERLY SHORES STATION

EXISTING

The station is located on the northeast corner of U.S. 12 and Broadway in Beverly Shores. A small lot providing 38 spaces serves the station.

PROPOSED

Proposed improvements to the Beverly Shores Station include a second track and two new low-level platform only. No changes to parking at the Beverly Shores Station are proposed.

IMPACTS

There would be no impacts to parking at the Beverly Shores Station.

MITIGATION

No mitigation is required.

3.6.5 11TH STREET (MICHIGAN CITY) STATION

EXISTING

This station is located on 11th Street at Pine Street. A small corner parking lot providing 37 spaces with two-way access from Pine Street serves the 11th Street (Michigan City) Station. Pine Street is under stop control at 11th Street. Westbound 11th Street, however, is under signal control. When trains are present, the westbound traffic must stop for boarding and alighting passengers crossing the street. The existing parking is shown in Figure 3-10.

PROPOSED

Parking would be expanded at the 11th Street (Michigan City) Station. NICTD, through joint development with the City of Michigan City, proposes a multi-level parking structure that would include the station and commercial enterprises on the ground floor. The initial structure would be constructed as part of the proposed Project, and would be designed to accommodate expansion by Michigan City or a developer, as needed in the future. The structure is proposed to be sited on the block bound by Pine Street, 11th Street, Franklin Street, and 10th Street. The structure would accommodate both commercial customers/employees and commuter parking, and could be expanded in the future to accommodate mixed use development, including retail and residential uses. In addition, NICTD would construct a surface parking lot east of Franklin Street between Pine Street and Cedar Street. For Opening Year, the parking garage would provide 400 parking spaces for commuter use. The surface parking lot would be constructed to provide 25 Kiss-and-Ride spaces and 103 Park-and-Ride spaces. As the commuter demand increases over time, Michigan City would expand the parking garage and/or develop additional surface lots. The parking garage expansion would accommodate NICTD's 2040 Park-and-Ride demand of 687 spaces and commercial or other uses (Figure 3-11).
Figure 3-10. 11th Street (Michigan City) Station Park-and-Ride Parking – Existing

<table>
<thead>
<tr>
<th>Lot</th>
<th>Existing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot 1</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
</tr>
</tbody>
</table>

BACKGROUND SOURCE: ESRI, DIGITALGLOBE, GEODE, EARTHSTAR GEOGRAPHICS, OCHPA/ARBUS 3D, USDA, USGS, MEREDITH, GSI, AND THE GSI USER COMMUNITY
Figure 3-11. 11th Street (Michigan City) Station Park-and-Ride Parking – Proposed

Park and Ride Demand:
- Opening Year – 197 spaces
- 2040 – 667 spaces

Parking provided in lots shown:

<table>
<thead>
<tr>
<th>Lot</th>
<th>Opening Year</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot 1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lot 2</td>
<td>103</td>
<td>103</td>
</tr>
<tr>
<td>Lot 3</td>
<td>400</td>
<td>786</td>
</tr>
<tr>
<td>Total</td>
<td>503</td>
<td>889</td>
</tr>
</tbody>
</table>

1 3-story parking garage
2 5-story parking garage
The double-tracking, station, and parking lot improvements along 11th Street would result in the closure of 10 side streets. The streets would no longer serve through traffic. Traffic would reroute to adjacent roadways, generally within two to three blocks of the closure, to traverse the community. The full analysis of the road closures is detailed in the Parking and Traffic Technical Memorandum in Appendix III.

Kentucky Street and Tennessee Street traffic is expected to reroute to Chicago Street as a result of the road closures at 11th Street. The intersection of Chicago Street and 11th Street would continue to operate at LOS A in 2040 with the rerouted traffic from Kentucky Street and Tennessee Street.

In the future condition, Elston Street is one-way northbound, Manhattan Street is one-way southbound, and Buffalo Street is one-way northbound. The total traffic of these three streets that would be diverted to another street is less than 50 vehicles in an hour. Engineering practice deems this rerouted volume to be a negligible impact to the adjacent street network, and LOS analysis is not required.

Pine Street, Spring Street, and Cedar Street traffic is expected to be split between Franklin Street and Lafayette Street. The traffic would be distributed to Franklin Street or Lafayette Street based upon travel patterns of the street network.

In year 2020, the LOS for each intersection with existing lane assignments and traffic controls would result in LOS C or better, except at Franklin Street and 10th Street. The westbound approach is projected to operate at LOS D in the AM peak hour and LOS F in the PM peak hour; however, installing a traffic signal would improve the LOS to B for both peak hours.

In 2040, the LOS for each intersection with existing lane assignments and the proposed traffic control improvements from year 2020 would result in LOS C or better, except at Pine Street and 10th Street in the PM peak hour. 10th Street would continue to operate at LOS A and the southbound Pine Street at LOS C; however, during the PM peak hour when the commuter traffic is exiting, the LOS would be F. The LOS may be less than desired, but is typical for events where a large mass is released at a common time. This occurs at movie theaters, schools, commuter stations, and office complexes. The delay is expected to occur for 15 minutes or less and the roadway would operate acceptably at all other times. No traffic control or pavement improvements are recommended for 2040. The future LOS for 2020 and 2040 are reflected in Table 3-4.

The intersections of York Street and Maple Street would be closed at 11th Street. The traffic would be rerouted to Oak Street. The intersections of Oak Street with 10th Street and 11th Street with existing lane assignments, existing traffic controls, and 2040 traffic would operate at LOS B or better in both the AM and PM peak hours. The 2040 LOS for the Oak Street intersections with 10th Street and 11th Street are summarized in Table 3-5.
Table 3-4. Intersection Future LOS with Rerouted Traffic, with Mitigation

<table>
<thead>
<tr>
<th>Location</th>
<th>Year 2020</th>
<th></th>
<th>Year 2040</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM Peak Hour</td>
<td>PM Peak Hour</td>
<td>AM Peak Hour</td>
<td>PM Peak Hour</td>
</tr>
<tr>
<td>Franklin Street and 11th Street</td>
<td>A</td>
<td>B</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Pine Street and 11th Street</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Spring Street and 11th Street</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Cedar Street and 11th Street</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Lafayette Street and 11th Street</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Franklin Street and 10th Street</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>Pine Street and 10th Street</td>
<td>B</td>
<td>C</td>
<td>C</td>
<td>F*</td>
</tr>
<tr>
<td>Spring Street and 10th Street</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Cedar Street and 10th Street</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Lafayette Street and 10th Street</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

*Typical short-term (15 minute) poor LOS occurs at movie theaters, schools, commuter stations, and office complexes. LOS C or better all other times of the day.

Table 3-5. Oak Street Future LOS with Rerouted Traffic

<table>
<thead>
<tr>
<th>Location</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oak Street and 11th Street</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Oak Street and 10th Street</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

MITIGATION

To maintain LOS C or better, NICTD would coordinate with the City of Michigan City to implement the following mitigation measures:

- Install a traffic signal at Franklin Street at 10th Street to improve the LOS of the signalized intersection to B.
- Move stop control from 10th Street to Pine Street. Typically, the lower volume street would stop at a higher volume street. With the closure of Pine Street to through traffic and area traffic rerouted to 10th Street, Pine Street would carry less volume than 10th Street. With Pine Street under stop control, 10th Street would be free flow and the LOS for Pine Street would be C or better.

NICTD has discussed these measures with the City of Michigan City, who concurs with the recommendations. No other roadway or traffic control improvements are recommended.
4.0 ENVIRONMENTAL RESOURCES, IMPACTS, AND MITIGATION MEASURES

4.1 LAND ACQUISITIONS, DISPLACEMENTS, AND RELOCATIONS

This section describes the NICTD ROW expansion needed for the proposed Project, including acquisition of property for permanent ROW or easements.

4.1.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended ("Uniform Act," 42 USC § 4601, et seq.), mandates that relocation services and payments be made available to eligible residents, businesses, and nonprofit organizations displaced as a direct result of any project undertaken by a federal agency or with federal financial assistance. The Indiana Code (IC) Title 32, Article 24, sets forth the procedure for acquiring property through eminent domain.

While no specific NEPA thresholds exist for assessing displacement impacts, compliance with the Uniform Act includes provisions for uniform and equitable treatment of persons displaced from their homes or businesses by establishing uniform and equitable land acquisition policies to address impacts.

4.1.2 EXISTING CONDITIONS

The Build Alternative would occur primarily within NICTD ROW. However, near the Gary/Miller Station, several commercial properties would need to be acquired to support the proposed Project, many of which are vacant. Several homes and some businesses in Michigan City that are adjacent to 10th and 11th Streets in the Project Area would be acquired to support the proposed Project.

Further, in several locations, the proposed Project is adjacent to CSS, NIPSCO, INDOT, and municipal property. Temporary and/or permanent easements would be required from all of these entities.

4.1.3 ENVIRONMENTAL IMPACTS

The following sections summarize the potential displacement and relocation impacts of the No Build and Build Alternatives.

NO BUILD ALTERNATIVE

The No Build Alternative would not displace any properties; no temporary construction or permanent displacement or relocation impacts would occur.

BUILD ALTERNATIVE

PERMANENT IMPACTS

The proposed Project would result in permanent impacts to 158 properties, as shown in Table 4-1. A total of 67 buildings would be removed. The full list of property displacements is included in the Land Acquisitions, Displacements, and Relocations Technical Memorandum in Appendix III, and the displacements are mapped in Appendix II. Details on the residential and commercial acquisitions are provided in the following sections.
### Table 4-1. Permanent Property Acquisitions, by Land Use

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>Number</th>
<th>Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>Parcel (land only) – 29</td>
<td>9.76</td>
</tr>
<tr>
<td></td>
<td>Parcel (with building) – 51*</td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>Parcel (land only) – 47</td>
<td>15.00</td>
</tr>
<tr>
<td></td>
<td>Parcel (with building) – 15</td>
<td></td>
</tr>
<tr>
<td>Transportation, Communication, Utilities</td>
<td></td>
<td>18.31</td>
</tr>
<tr>
<td>Municipal (includes City and County)</td>
<td>Parcel (land only) – 7</td>
<td>1.02</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>44.09</strong></td>
</tr>
</tbody>
</table>

*Two residential structures that would be permanently acquired are located on one parcel, making the total number of buildings to be acquired 67.

### Residential

A total of 80 residential properties would be acquired. One residential vacant parcel is located in Gary. In Michigan City, 51 residential properties that would be acquired have buildings and 29 properties are vacant parcels. A total of 52 residences would be removed (one residential property to be acquired has two residential structures).

### Commercial

There would be 62 commercial property acquisitions in total. In Gary, there would be 37 commercial property acquisitions, 6 of which have buildings and 31 of which are vacant parcels. There are two active businesses that would be displaced in Gary.

In Portage, one commercial property with a building and active business would be acquired and one vacant parcel would be acquired.

In Michigan City, 23 commercial properties would be acquired. Of these commercial properties, 15 are vacant parcels and 8 have buildings that would be removed. There are five active businesses that would be displaced.

### Other

Construction of the proposed Project would require construction of infrastructure within permanent easements. In Lake and Porter Counties, five partial easements and one full parcel easement would be required from INDOT. There would be six partial municipal easements and one full municipal easement required from Michigan City.

### CONSTRUCTION IMPACTS

Table 4-2 indicates the number of properties or parcels that would be temporarily affected by construction for the Build Alternative, by land use type. The full list of temporary impacts is included in the *Land Acquisitions, Displacements, and Relocations Technical Memorandum*, and properties are mapped in Appendix II of this EA. The Build Alternative would require 20.16 acres of temporary construction easements from 42 properties. No temporary impacts to residential properties would occur. NICTD would need construction easements from 4 commercial and industrial parcels and 38 temporary easements from other railroads, INDOT, municipal, and NIPSCO.
Table 4-2. Temporary Property Acquisitions (Construction Easements), by Land Use

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>Number</th>
<th>Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>1</td>
<td>2.10</td>
</tr>
<tr>
<td>Residential</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Industrial</td>
<td>3</td>
<td>0.51</td>
</tr>
<tr>
<td>Transportation, Communication, Utilities</td>
<td>37</td>
<td>17.54</td>
</tr>
<tr>
<td>Municipal (includes City and County)</td>
<td>1</td>
<td>0.01</td>
</tr>
<tr>
<td>Public (includes federal, state, and local properties that are not INDOT)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>42</td>
<td><strong>20.16</strong></td>
</tr>
</tbody>
</table>

During construction, NICTD would use, to the extent possible, existing NICTD ROW and properties that are permanently acquired for the proposed Project for construction activities, staging, equipment, and materials storage. The exact area of each property needed for the final proposed Project would be determined as part of the engineering phase of the Project.

4.1.4 MEASURES TO AVOID OR MINIMIZE HARM

Through implementation of the mitigation measures identified below, displacement impacts would be minimized to a level less than significant under NEPA.

ACQUISITIONS

FTA and NICTD would conduct the acquisition process in accordance with the Uniform Act, as amended. The Uniform Act requires that property owners be paid fair market value for the acquired property and be provided equitable compensation for expenses normally associated with relocating.

It is possible that property acquisitions and displacements would affect some property owners and tenants whose primary language is not English. Accordingly, property acquisition and relocation discussions would be conducted in other appropriate languages whenever necessary. Following a decision to acquire a property, a general overview of the acquisition process is as follows:

- Each real property owner or the owner’s representative would be contacted to explain the acquisition process, including the right to accompany the appraiser during inspection of the property, and to provide the owner with a written notice of NICTD’s intent to acquire.
- The owner would be provided with a written offer of the approved estimate of just compensation for the real property to be acquired and a summary statement of the basis for the offer.
- The property owner would be given an opportunity to consider the offer for at least 30 days.
- Negotiations would be conducted without any attempt to coerce the property owner into reaching an agreement.
- The property owner/tenant would be provided at least 90 days written notice to vacate prior to the transfer of possession.

If negotiations with property owners are not successful, NICTD may acquire the property through eminent domain. If an eminent domain process is necessary, NICTD would follow the procedures set forth under state laws including Indiana Eminent Domain (IC § 32-34) and Relocation Assistance (IC § 8-23-17).
DISPLACEMENTS

Acquisitions generally refer to the purchase of property. Displacements refer to the relocation of people and businesses as a result of acquisitions and would also be conducted in accordance with the Uniform Act. Ample notice would be given to those being relocated to allow for careful planning prior to relocation. In accordance with Title VI of the Civil Rights Act of 1964, NICTD would provide relocation advisory assistance to all eligible persons without discrimination.

Displaced persons would be offered the opportunity to relocate in areas at least as desirable as their original property with respect to public utilities and commercial facilities. Rent and sale prices of replacement property offered to those displaced would be within their financial means, and replacement property would be within reasonable access to displaced individuals’ places of employment. Relocations are not expected to remove individuals from their community activities. It is anticipated that comparable decent, safe, and sanitary housing would be available on the real estate market to relocate those who would be displaced from their residences. However, if comparable housing cannot be offered, last-resort housing assistance would become available to displaced persons. According to 49 Code of Federal Regulations (CFR) § 24.04, last-resort housing is additional alternative assistance when comparable replacement dwellings are not available within the monetary limits for displaced owner-occupants and tenants. Additionally, relocation planning and services would be provided to businesses. These relocation services include the following:

- Site requirements, current lease terms, and other contractual obligations
- Outside specialists to assist in planning, and moving assistance for the actual move, and the reinstallamentof machinery and other personal property
- Identification and resolution of personal property/real property issues
- An estimate of time required for the business to vacate the site
- An estimate of the anticipated difficulty in locating replacement property
- An identification of any advance relocation payments required for the move

4.2 LAND USE AND ECONOMIC DEVELOPMENT

This section reviews the compatibility of the proposed Project with existing and planned land uses and zoning designations. It also considers the consistency of the proposed Project with other land use and economic development plans for areas near the Project and the region.

4.2.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

NIRPC is the regional planning organization that defines the regional planning principles, while the cities and towns along the SSL regulate land use policies and zoning within their local jurisdictional boundaries. NICTD conducted an analysis to determine whether the proposed Project would cause land use and economic impacts. This analysis included reviewing existing land use plans and zoning maps and using field observations of the Project Area to determine consistency of the Project with the goals and policies presented in the regional and local land use and economic development plans.

A land use impact occurs if the proposed Project is:

- Incompatible with surrounding land uses, or
- Encourages land use and development inconsistent with local plans, goals, and objectives, or
• Inhibits allowable development that might otherwise have occurred.

An economic development impact occurs if the proposed Project causes:

• Direct or indirect taxation changes, or

• Substantial displacements of businesses and individuals, defined in this analysis as those of a magnitude that would preclude relocation in the immediate area because of a lack of available real estate, disruption of business activities, or impacts that would influence regional construction costs.

NICTD prepared a qualitative evaluation of the potential benefits associated with TOD, livability, access to jobs, and local economic activity. As part of the community outreach for the proposed Project, NICTD reviewed near-term development activities and plans to verify that indirect impacts from the Build Alternative, such as induced development, were consistent with land use plans.

4.2.2 EXISTING CONDITIONS

Although the SSL has been operating for many years, land use in the Project Area is only somewhat transit supportive. Urban environments are present in Gary and Michigan City. Less dense suburban development is present around the community of Ogden Dunes and within Porter County, with lower residential densities in Dune Acres and Beverly Shores.

Zoning designations generally mirror and support the existing land use patterns. Generalized land use types are shown in Figure 4-1.
Figure 4-1. Existing Land Uses in the Project Area
4.2.3 STATION AREA AND LAND USE

GARY/MILLER

The Gary/Miller Station is located in the eastern portion of Gary on a site bounded by the NICTD/CSS railroad tracks on the north and U.S. 12 on the south. Across U.S. 12 to the south is parking for the station and commercial businesses. The property across U.S. 12 is zoned B3 (limited service-retail commercial) and B5 (wholesale-motor vehicle). The land north of the NICTD/CSS railroad tracks is residential and is zoned R3 (single-family residential).

The RDA has contributed funds to the effort to redevelop this portion of Gary. Plans are underway for TOD around the Gary/Miller Station. In 2016, the City of Gary initiated a Tax Increment Finance (TIF) District around the Gary/Miller Station area.

PORTAGE/OGDEN DUNES

The Portage/Ogden Dunes Station and parking are located in the two communities of Portage and Ogden Dunes on the north side of U.S. 12. The west end of the existing parking lot is located in Ogden Dunes across U.S. 12 from a small commercial area. The remaining portion of the parking and station is located in Portage across U.S. 12 from a residential area and marina. The parking lots are located between the NS railroad tracks to the north, and the NICTD/CSS railroad tracks to the south. The Indiana Dunes National Lakeshore and Lake Michigan lie to the north of the station.

The vision of the Portage Northside Master Plan (2005) is to create a livable lakefront. Guiding principles have been identified to help achieve this vision: 1) protect open space and environmental features with sustainable design; 2) create traditional and transit-oriented neighborhoods focused on recreation; 3) use high-quality design techniques; 4) provide transportation options; and 5) promote public and private partnerships. The plan aims to create a sense of community, promote pedestrian-oriented development for a healthy lifestyle, integrate land uses, and offer a mix of housing types. Transportation options include light and heavy rail, bus service, and bicycle/pedestrian paths.

DUNE PARK

The Dune Park Station and parking are located off U.S. 12, near the State Route 49 overpass in unincorporated Chesterton. The land for the station and parking is controlled by the Porter County Commissioners. The station and parking are surrounded by heavily wooded areas of the Indiana Dunes National Lakeshore and Indiana Dunes State Park.

Dune Acres is a small community just northwest of the station. The Dune Acres Comprehensive Plan (2010) is a goal-oriented comprehensive plan outlining goals for existing and future planning and development policies for Dune Acres. In addition to the comprehensive plan, this document also addresses significant natural, historic, and cultural attributes. The overall goals for Dune Acres are to continue to attract a diversity of people, recognize its unique natural setting as one of its most valuable assets, and embrace its role as steward of its town parks, beaches, and dune land environment.
BEVERLY SHORES/TOWN OF PINES

The Beverly Shores Station and parking are located in a commercial area known as “The Strip” near the Indiana Dunes National Lakeshore. The Town of Beverly Shores Comprehensive Plan (2012) states that “The Strip” should be developed as a combination of small-scale commercial/retail uses. The comprehensive plan includes initiatives pertaining to housing and zoning, land use policy, capital planning, green space, public service and facilities, community, and the protection of the national lakeshore.

The Town of Pines Comprehensive Plan (2014) is structured around five main objectives: 1) ensure residential quality of life; 2) protect and enhance the natural environment; 3) increase economic development in a way that balances residents’ and visitors’ needs; 4) provide infrastructure and essential services that will increase quality of life for residents and spur economic growth; and 5) encourage intergovernmental cooperation. The plan includes recommendations for land use, public ways, public utilities, and public places. Additionally, it provides an overview of recommendations for a community economic development strategy.

The Porter County Land Use Thoroughfare Plan (2001) is a comprehensive, countywide plan that incorporates transportation, recreation, and land use plans. The plan does not include zoning and does not impose legal limitations to land development. Rather, it is meant to be a tool that county residents can use to implement their vision for the county’s future. Specifically, the goal of the plan’s land use section is to balance the significant expected population growth without changing the current character of the county. Detailed development scenarios include status quo development, modified status quo development, urban/rural character development, and future land use classifications.

11TH STREET (MICHIGAN CITY)

The 11th Street (Michigan City) Station and parking are located in a commercial area that borders a residential area, within the Franklin Street Commercial Historic District. The area around the station and parking is zoned CBD1. This designation is meant to maintain and enhance the pedestrian-oriented, mixed-use downtown in which a variety of retail, commercial, office, civic, and residential uses are permitted. The area along 10th and 11th Streets, where the Project alignment would be located, is designated as an “Urban Enterprise Zone,” as is much of the downtown. This designation allows Michigan City businesses within the zone to access grants for improvements and redevelopment. Additionally, the area along 11th Street is included in the North TIF District.

Several land use and economic impact studies and plans have been prepared, including:

- In 2007, Andrews University prepared the North End Plan for Michigan City. The North End Plan recommends TOD for the area surrounding the 11th Street (Michigan City) Station, which includes restoration of the historic station building. The North End Plan intends for the TOD to act as a gateway to the historic Franklin Street corridor within Michigan City’s Enterprise Zone boundary.

- In 2009, the Michigan City North End Action Team commissioned an economic impact study to determine impacts of track improvements and improvement to the 11th Street (Michigan City) Station. The study concluded such improvements would catalyze significant economic development and area revitalization.

- In 2013, Michigan City completed the Lake Michigan Gateway Implementation Strategy Opportunity Analysis, which identified the 11th Street (Michigan City) Station and potential redevelopment as an opportunity, as it relates to the Franklin Street corridor and downtown revitalization.
The LaPorte County Countywide Land Development Plan (2008) includes strategic goals and objectives to address land development strategies for existing urban areas, planned urban expansion areas, planned growth areas, planned rural estate areas, planned rural industrial areas, traditional agricultural areas, towns and rural villages, airport influence areas, and economic opportunity overlay areas. Planning implementation techniques address infrastructure and zoning.

4.2.4 REGIONAL LAND USE AND ECONOMIC DEVELOPMENT PLANS AND POLICY

In northwest Indiana, land use planning and development is guided by regional planning goals and objectives implemented through local land use plans and codes. The following sections describe plans and programs relevant to the proposed Project and Project Area and provide brief assessments of their applicability to the proposed Project.

NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION

A key strategy in NIRPC’s 2040 CRP is the Livable Communities Initiative, which aims to focus growth and revitalization around existing communities. The program provides funding support for development and redevelopment projects that are community-based transportation/land use projects that bring vitality to downtown areas, neighborhoods, station areas, commercial cores, and transit corridors. Livable centers have the following characteristics (NIRPC 2013):

- Support existing communities, leverage public investment, and encourage efficient growth patterns
- Are compact in form with a vibrant mix of uses in a concentrated area
- Promote ease of movement between the mix of uses, requiring coordinated planning of public and private investments
- Promote regional connectivity, including public transportation
- Promote walkability and offer alternative modes of transportation

NIRPC has identified 74 "neighborhood" livable centers within 40 municipalities in northwest Indiana. Ten of the 74 neighborhood livable centers are near the Project Area and are identified in Table 4-3.

<table>
<thead>
<tr>
<th>Community</th>
<th>Neighborhood Livable Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gary</td>
<td>Miller/Aetna</td>
</tr>
<tr>
<td>Portage</td>
<td>Marina District</td>
</tr>
<tr>
<td>Ogden Dunes</td>
<td>Ogden Dunes</td>
</tr>
<tr>
<td>Burns Harbor</td>
<td>Burns Harbor</td>
</tr>
<tr>
<td>Chesterton</td>
<td>Coffee Creek</td>
</tr>
<tr>
<td>Beverly Shores</td>
<td>Beverly Shores</td>
</tr>
<tr>
<td>Town of Pines</td>
<td>Town of Pines</td>
</tr>
<tr>
<td>Michigan City</td>
<td>Downtown Michigan City</td>
</tr>
<tr>
<td>Michigan City</td>
<td>Westside</td>
</tr>
<tr>
<td>Michigan City</td>
<td>Krueger</td>
</tr>
</tbody>
</table>
NORTHWEST INDIANA REGIONAL DEVELOPMENT AUTHORITY (RDA)

The RDA put forth its first comprehensive strategic plan for Lake and Porter Counties in 2007. The RDA works with NICTD and the communities to develop strategic plans that include the enhancement of the SSL to capitalize on the economic benefits that improved rail service could bring to the region. The 2014 NICTD/RDA 20-Year Strategic Business Plan discusses how improvements in the Project Area would spur economic growth in the region. It further describes the need for local communities and regional entities to have transit-supportive land use policies in place to support the transit rider market and realize the potential economic and fiscal benefits that improved transportation service can provide.

The most recent plan is the Comprehensive Strategic Plan 2016 Update. This plan recognizes that for transit to be an effective economic development generator, station-area development must be incentivized. The plan lays out strategies for TOD.

In April 2017, the Indiana Governor approved House Enrolled Act 1144, which authorizes the establishment of transit development districts (TDD) near SSL stations. RDA will lead the effort to attract new TOD within these station areas, working closely with local municipalities.

4.2.5 ENVIRONMENTAL IMPACTS

The following sections summarize the potential land use and economic development impacts of the No Build and Build Alternatives.

NO BUILD ALTERNATIVE

Under the No Build Alternative, the proposed Project would not be constructed and no impacts on current land use or zoning would occur. No major construction would be associated with the No Build Alternative; therefore, no construction-related land use and economic development impacts would occur.

The NIRPC 2040 CRP includes the proposed Project as a priority infrastructure project in its fiscally constrained list of capital investments; therefore, by definition, the No Build Alternative would be inconsistent with this plan.

The No Build Alternative would not facilitate economic growth in the region that is anticipated as a result of the development of improved transportation.

BUILD ALTERNATIVE

PERMANENT IMPACTS

Construction of the Build Alternative would require the permanent acquisition of residences, businesses, and parcels in Gary, Portage, and Michigan City. Properties would shift from their current use, including commercial, residential, and mixed-use, and would be used for NICTD ROW, roadway, and parking; however, the station area at Gary/Miller and 11th Street (Michigan City) would also be available for future mixed-use development, including residential, retail, and parking. These changes are consistent with regional and local land use plans. Any required zoning designations would be changed upon development of the proposed Project in coordination with the local municipalities.

3 TIP ID# 1500461, 1592142, 1592071, and 1592128 per Fiscal Year 2018—2021 TIP for Lake, Porter, and LaPorte Counties, Indiana – NIRPC
Construction of the Build Alternative would have a net benefit on economic development and property taxes for local governments and the State of Indiana. The successful execution of TOD strategies around rail stations would enhance property tax revenue for the local taxing units. The station area planning process undertaken by the RDA in 2016 showed the potential for extensive commercial and multi-family residential development adjacent to stations along the SSL. By using strategies such as TIF districts and TDDs, municipalities would be able to reinvest in their communities. The RDA's 2016 Comprehensive Plan Update estimates that station area development that results from the proposed Project would generate $227 million in property tax revenue over a 20-year period.

Station area development related to business activity and jobs created by businesses that locate near transit stations would provide positive long-term economic impacts. The RDA estimates that by 2046, the DT-NWI rail investment would support an additional 3,200 annual jobs.4

CONSTRUCTION IMPACTS

Construction of the Build Alternative would have a temporary impact on economic development in the Project Area because of property displacements (including commercial, residential, and mixed-use properties) and associated Project construction. The acquisition of private property for public use would initially reduce property tax revenues; however, the property tax impact is expected to be offset by the permanent and long-term economic benefits generated by the proposed Project. Construction activities would occur in the Project Area, but would not substantially influence regional construction costs given the large size of the local construction industry. The Build Alternative would provide construction employment; the increased construction employment would offset some of the jobs temporarily affected by business displacements.

4.2.6 MEASURES TO AVOID OR MINIMIZE HARM

While state and federal projects are exempt from local zoning, the final design for the proposed Project would take conflicts with zoning into consideration. The proposed Project has been coordinated with local development plans. NICTD would work with local municipalities if any changes in zoning are necessary because of station or parking improvements. No adverse economic impacts are anticipated, and as a result no mitigation is proposed.

4.3 NEIGHBORHOODS, COMMUNITIES, AND BUSINESSES

This section discusses Project impacts on the surrounding neighborhood, community, and businesses. The analysis considers the surrounding community character and cohesion; mobility; and community resources, such as schools, parks, and religious centers near the Project Area.

4.3.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

Following the USDOT Community Impact Assessment Manual (USDOT 1996), the analysis considers the following types of impacts of the proposed Project:

- **Community Character and Cohesion** – Impacts from commercial and residential displacements and changes in land use, visual/aesthetics, noise levels, and population/demographics. Community character includes attributes and features that make the community unique.

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4 The RDA's 2016 Comprehensive Plan Update indicates that an additional 5,700 annual jobs could be supported in the West Lake Corridor (2,500) and Double Track (3,200) scenarios.
Community cohesion is a quality of a geographic area where segmentation of the area would reduce its desirability to current and future residents.

- **Mobility** – Overall community impacts of changes in transportation options, station access, travel patterns, parking, physical barriers, and access for emergency service providers.

- **Community Resources** – Impacts on key facilities in the Project Area that play an important role in shaping and defining the community, such as landmarks, parks, community centers, and other places that serve as focal points or provide community services.

The community and business impact analysis involves creating demographic and community profiles and identifying key community resources within 0.5 mile of the Project Area. Key community resources include public facilities that fulfill a social function or provide services to a community, such as schools, libraries, religious centers, emergency services providers, and recreational areas. Private facilities that provide services to a community, such as private schools, hospitals, and nursing homes, may also be key community resources. For permanent impacts, the Project Area for community facilities/community character and cohesion are defined as the area within 0.5 mile of the transit stations. Transit planners commonly use a 0.5-mile radius to represent the distance that transit users are willing to walk to access a transit station.

Impacts on businesses are evaluated by identifying commercial areas, existing multi-modal access, displacements, and potential impacts during and after construction. Mitigation measures are proposed to offset identified impacts, with an emphasis on community and transit-supportive solutions to address temporary construction impacts.

### 4.3.2 EXISTING CONDITIONS

The Project Area traverses many different communities, ranging from dense urban development to dispersed development to natural areas.

While the SSL runs through five counties, the Project Area is within only three counties: Lake County, Porter County, and LaPorte County. Communities in the Project Area through which the SSL travels include, from west to east: Gary (Lake County); Ogden Dunes, Portage, Burns Harbor, Dune Acres, Porter, Chesterton, Beverly Shores, and Town of Pines (Porter County); and Michigan City (La Porte County). **Tables 4-4 through 4-6** provide an overview of the Project Area’s demographics by county, community, and block group within 0.5 mile of the Project Area. Community resources are listed below and depicted in maps contained in **Figure 4-2** and **Appendix II**.

### LAKE COUNTY/GARY–MILLER AREA

The Gary/Miller Station in Gary is on U.S. 12, immediately west of Lake Street, a popular commercial corridor that serves as the Miller neighborhood’s main street. Residential areas north of the SSL railroad tracks and Gary/Miller Station are accessible from 7th Street and Lake Street. The Miller Beach Garden Club maintains a small community garden at the east end of the station area.

Lake Street businesses include restaurants, bars, boutique shops, art galleries, and a performance space, including the following:

- **Miller Beach Farmers Market**, northeast of the Gary/Miller Station.
- **U.S. Social Security Administration**, south of the Gary/Miller Station.
- **Marshall J. Gardner Center for the Arts**, north of the Gary/Miller Station, is a 6,000-square-foot space for the presentation of visual and performing arts along with an active schedule of other events.
community events. It is home to art exhibits, dance and concert performances, art classes, art workshops, and community meetings. The center is run by the not-for-profit Miller Beach Arts and Creative District.

- **Lake Street Gallery**, north of the station, specializing in local art inspired by the Indiana Dunes and the shores of Lake Michigan.

- **St. Mary of the Lake Church**, northeast of the station.

- **Gary Public Library Woodson Branch**, northeast of the station.

Other community resources within a 0.5-mile radius of the SSL railroad tracks within Gary city limits include the Benjamin Banneker Achievement Center, a kindergarten through 8th grade school for academically advanced children, and the Charter School of the Dunes, a kindergarten through 8th grade charter school. Miller Beach Terrace, a senior living community, is located on Melton Drive, just southwest of the Gary/Miller Station.

The main north-south street in the Gary Project Area is Lake Street. Clay Street is west of the Gary/Miller Station. East-west roads include U.S. 12, U.S. 20, and Indiana Toll Road. I-94 is located less than 1 mile to the south of the proposed Project. The Gary/Miller Station area and surrounding community resources are shown in Figure 4-2.
Figure 4-2. Community Resources within a 0.5-Mile Radius of the Project Area
Table 4-4 provides a community area profile of the area within 0.5 mile of the proposed Project, as well as data for Lake County and the City of Gary.

Table 4-4. Community Profile for Lake County and Project Area within Lake County

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Lake County</th>
<th>Gary</th>
<th>Block Groups within 0.5 Mile of Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 2015 (number of persons)</td>
<td>491,596</td>
<td>78,483</td>
<td>16,958</td>
</tr>
<tr>
<td>Households 2015 (number of households)</td>
<td>183,314</td>
<td>30,814</td>
<td>6,687</td>
</tr>
<tr>
<td>Employment 2015 (%)</td>
<td>89.0</td>
<td>82.0</td>
<td>84.0</td>
</tr>
<tr>
<td>Minority 2015 (%)</td>
<td>45.0</td>
<td>89.3</td>
<td>85.0</td>
</tr>
<tr>
<td>Low Income 2015 (%)</td>
<td>45.2</td>
<td>37.1</td>
<td>37.0</td>
</tr>
<tr>
<td>Elderly 2015 (%)</td>
<td>14.0</td>
<td>15.7</td>
<td>15.0</td>
</tr>
<tr>
<td>Owner-Occupied Households 2015 (%)</td>
<td>68.9</td>
<td>51.2</td>
<td>49.0</td>
</tr>
<tr>
<td>Median Home Value 2015 ($)</td>
<td>136,100</td>
<td>67,000</td>
<td>60,400</td>
</tr>
<tr>
<td>Average Household Size 2010 (persons)</td>
<td>2.65</td>
<td>2.52</td>
<td>2.62</td>
</tr>
<tr>
<td>Median Gross Rent per Month 2010–2014 ($)</td>
<td>819</td>
<td>728</td>
<td>796</td>
</tr>
<tr>
<td>Transit Dependent 2015 (%)</td>
<td>8.7</td>
<td>19.4</td>
<td>19.0</td>
</tr>
<tr>
<td>Average Commute Time 2015 (minutes)</td>
<td>30</td>
<td>27</td>
<td>25</td>
</tr>
</tbody>
</table>


PORTER COUNTY AND COMMUNITIES

Within Porter County, the Project Area is located in several communities, including Ogden Dunes, Portage, Burns Harbor, Dune Acres, Porter, Chesterton, Beverly Shores, and Town of Pines. In Portage and Burns Harbor, the area adjacent to the proposed Project is primarily industrial, dominated by the presence of U.S. Steel, ArcelorMittal, the Port of Indiana, and several freight railroads. The rest of the communities lie within and adjacent to Indiana Dunes National Lakeshore and Indiana Dunes State Park. Key community resources in Porter County include the following:

- **Ogden Dunes Community Church**, north of the Portage/Ogden Dunes Station on Hillcrest Road.
- **Ogden Dunes Soccer Fields**, approximately 1.3 miles north of the Portage/Ogden Dunes Station on Hillcrest Road.
- **Ogden Dunes Police Department**, just northwest of the Portage/Ogden Dunes Station on Hillcrest Road, slightly north of the Ogden Dunes Community Church.
- **Ogden Dunes Fire Station**, just north of the Ogden Dunes Police Department on Hillcrest Road.
- **Portage-Burns Waterway and Portage Public Marina**, just east of the Portage/Ogden Dunes Station.
- **Indiana Dunes National Lakeshore**, a 15,000-acre national park that surrounds the NICTD/CSS railroad tracks from Gary to the west edge of Michigan City. The national lakeshore contains 50 miles of hiking trails, historic and cultural attractions, beaches, and ecologically unique natural areas. More information about trails is included in **Chapter 5, Section 4(f) Evaluation**.
• **Bailly Homestead and Cemetery**, located approximately 0.125 mile south of the NICTD/CSS railroad tracks east of Mineral Springs Road in Porter. Joseph Bailly was a well-known pioneer in the area; his home is a featured attraction in the Indiana Dunes National Lakeshore and is the burial site for the entire Joseph Bailly family.

• **Indiana Dunes State Park**, located north of the Dune Park Station. The park contains campgrounds, hiking trails, a large beach on Lake Michigan, and a nature preserve.

• **St. Ann Roman Catholic Church**, southwest of the Beverly Shores Station on Golf Wood Road.

• **Beverly Shores Police and Fire Departments**, located next to each other, off of Broadway near the Beverly Shores Station.

• **Depot History Museum and Gallery**, which shares the historic pink stucco building known as the Depot with the Beverly Shores Station. Inside, visitors can find exhibits and information about the town's history, groundbreaking architecture, and changing landscape of this part of the dunes. Also within the historic Depot building is an art gallery and gift shop. Works from local and regional artists and artisans are exhibited.

• **Portage Lakefront and Riverwalk**, located north of U.S. 12, runs north-south along the west side of the east arm of the Little Calumet River.

• **Pines Bible Church**, south of the NICTD/CSS railroad tracks, located on Pine Street just south of U.S. 20.

• **Pines Park**, north of U.S. 20, west of Birch Street in the Town of Pines.

• **NPS Dunewood Campground**, 0.25 mile south of the Beverly Shores Station.

I-94 is south of the NICTD/CSS railroad track, as is U.S. 12. Access to many of the community resources, including the Portage Public Marina, Indiana Dunes National Lakeshore, and Indiana Dunes State Park, is from U.S. 12. The Porter County communities and key resources are shown in **Figure 4-2**.

**Table 4-5** shows a comparison of each community within Porter County, as well as information for the area within 0.5 mile of the proposed Project.
Table 4-5. Community Profile for Porter County and Project Area within Porter County

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Porter County</th>
<th>Ogden Dunes</th>
<th>Portage</th>
<th>Burns Harbor</th>
<th>Dunes Acres</th>
<th>Porter</th>
<th>Chesterton</th>
<th>Beverly Shores</th>
<th>Town of Pines</th>
<th>Block Groups within 0.5 Mile of Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 2015 (number of persons)</td>
<td>166,570</td>
<td>1,203</td>
<td>37,197</td>
<td>1,326</td>
<td>188</td>
<td>4,887</td>
<td>14,124</td>
<td>547</td>
<td>734</td>
<td>8,842</td>
</tr>
<tr>
<td>Households 2015 (number of households)</td>
<td>62,103</td>
<td>542</td>
<td>13,959</td>
<td>495</td>
<td>99</td>
<td>1,912</td>
<td>5,191</td>
<td>278</td>
<td>276</td>
<td>3,611</td>
</tr>
<tr>
<td>Employment 2015 (%)</td>
<td>92.7</td>
<td>92.5</td>
<td>90.5</td>
<td>94.1</td>
<td>92.8</td>
<td>94.3</td>
<td>91.4</td>
<td>97.8</td>
<td>91.2</td>
<td>94.0</td>
</tr>
<tr>
<td>Minority 2015 (%)</td>
<td>15.5</td>
<td>7.8</td>
<td>27.3</td>
<td>7.7</td>
<td>3.2</td>
<td>7.6</td>
<td>16.3</td>
<td>1.8</td>
<td>12.8</td>
<td>11.0</td>
</tr>
<tr>
<td>Low Income 2015 (%)</td>
<td>11.3</td>
<td>3.8</td>
<td>16.3</td>
<td>10.8</td>
<td>1.6</td>
<td>13.0</td>
<td>8.7</td>
<td>3.1</td>
<td>25.4</td>
<td>14.0</td>
</tr>
<tr>
<td>Elderly 2015 (%)</td>
<td>13.9</td>
<td>26.4</td>
<td>13.0</td>
<td>10.2</td>
<td>50.0</td>
<td>9.0</td>
<td>13.3</td>
<td>42.4</td>
<td>12.9</td>
<td>18.0</td>
</tr>
<tr>
<td>Owner-Occupied Households 2015 (%)</td>
<td>77.0</td>
<td>91.7</td>
<td>71.1</td>
<td>80.0</td>
<td>93.9</td>
<td>84.3</td>
<td>72.3</td>
<td>90.3</td>
<td>73.2</td>
<td>86.0</td>
</tr>
<tr>
<td>Median Home Value 2015 ($)</td>
<td>165,500</td>
<td>321,200</td>
<td>135,700</td>
<td>154,400</td>
<td>631,800</td>
<td>162,000</td>
<td>172,200</td>
<td>455,900</td>
<td>103,900</td>
<td>166,200</td>
</tr>
<tr>
<td>Average Household Size 2015 (number of persons)</td>
<td>2.62</td>
<td>2.22</td>
<td>2.65</td>
<td>2.68</td>
<td>1.90</td>
<td>2.56</td>
<td>2.70</td>
<td>1.97</td>
<td>2.66</td>
<td>2.48</td>
</tr>
<tr>
<td>Median Gross Rent per Month 2015 ($)</td>
<td>862</td>
<td>1,375</td>
<td>851</td>
<td>1,095</td>
<td>-</td>
<td>1,007</td>
<td>862</td>
<td>-</td>
<td>730</td>
<td>912</td>
</tr>
<tr>
<td>Transit Dependent 2015 (%)</td>
<td>4.3</td>
<td>0.6</td>
<td>5.4</td>
<td>7.1</td>
<td>1.0</td>
<td>1.4</td>
<td>2.4</td>
<td>0.7</td>
<td>6.5</td>
<td>4.0</td>
</tr>
<tr>
<td>Average Commute Time 2015 (minutes)</td>
<td>28</td>
<td>35</td>
<td>28</td>
<td>25</td>
<td>43</td>
<td>29</td>
<td>28</td>
<td>44</td>
<td>23</td>
<td>31</td>
</tr>
</tbody>
</table>

LAPORTE COUNTY/MICHIGAN CITY

Within LaPorte County, the proposed Project is primarily located in Michigan City, specifically along 10th and 11th Streets between Sheridan Avenue and Carroll Avenue. At the far west end, the area is mostly residential, and the Indiana State Prison is located just to the south. Community resources within 0.5 mile or near the Project Area in Michigan City include the following:

- **Church of Jesus Christ Apostolic**, located at the west end of Michigan City, north of the NICTD/CSS railroad track on Hayes Avenue.
- **Sacred Heart Church**, located on 8th Street, north of the NICTD/CSS railroad track on 10th Street.
- **Michigan City Fire Department**, located on Michigan Boulevard, east of Carroll Avenue. The Michigan City Fire Department is east of the Project Area.
- **Fire Station 1**, located on Ohio Street, north of the NICTD/CSS railroad track on 11th Street.
- **St. Mary Immaculate Conception Church and School**, located on 11th Street with a congregation of 234 families. The church and school campus is adjacent to the current alignment along 11th Street, as well as the proposed alignment.
- **Lighthouse Place Premium Outlets**, located north of the Project Area. Lighthouse Place has 120 retail tenants and draws five to six million visitors annually from northern Indiana, southwestern Michigan, and the south portion of the Chicago area. Employment in the summer months is nearly 1,500, and the number of holiday jobs can be up to 1,800.
- **Blue Chip Casino**, located northeast of the proposed Project, off 2nd Street.
- **St. Anthony Health**, part of the Franciscan Alliance, is an acute care hospital located south of the Project Area in Michigan City that provides comprehensive medical care, including emergency and urgent care. The hospital has 187 licensed beds. St. Anthony has approximately 1,200 employees, including HealthPartners, its affiliated medical group.
- **Marquette High School**, located just north of the NICTD/CSS railroad track on 10th Street between Buffalo and Wabash Streets in Michigan City. It is adjacent to the existing tracks along 10th Street. Built in 1955, the school has 195 students in grades 9 through 12, drawing from La Porte and other surrounding counties.
- **St. Paul Lutheran Church and School**, located approximately one block north of the Project Area on Franklin Street in Michigan City. The sanctuary was built in 1876. The school has about 225 students in grades kindergarten through 8.
- **Elston Middle School**, located approximately 0.125 mile south of the SSL railroad tracks on Pine Street in Michigan City.
- **Franklin Street Commercial Historic District**, located along 11th Street in Michigan City with a number of businesses between Washington and Pine Streets. These businesses are part of the Franklin Street Commercial Historic District, a district on the National Register of Historic Places (NRHP) that is bounded by 11th Street on the south and is part of Michigan City’s commercial business district.
- **Elston Grove Historic District**, a primarily residential district registered on the NRHP that lies just north of 11th Street in Michigan City between Michigan Avenue and Pine Street.
• **Haskell and Barker Historic District**, located north of 10th Street between Wabash and Cedar Streets; this registered NRHP district overlaps with the Franklin Street Commercial Historic District and Elston Grove Historic District.

• **The Bride Church, formerly the First Christian Church**, located south of 11th Street between Lafayette and Cedar Streets. This church was damaged in a fire and is no longer usable. The congregation must now gather in a different location.

• **Michigan City Police Department**, located on Michigan Boulevard, between Cleveland Avenue and Hendricks Street. It is outside of the Project Area.

• **St. Stanislaus Catholic School**, located on Washington Street, four blocks south of 11th Street. The school has approximately 200 students from preschool through 8th grade. It is outside of the Project Area.

Michigan City and its key community resources are shown in Figure 4-2. Table 4-6 shows the demographic profile of LaPorte County, Michigan City, and the Project Area.

**Table 4-6. Community Profile for LaPorte County and Project Area within LaPorte County**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>LaPorte County</th>
<th>Michigan City</th>
<th>Block Groups within 0.5 Mile of Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 2015 (number of persons)</td>
<td>111,280</td>
<td>31,197</td>
<td>15,477</td>
</tr>
<tr>
<td>Households 2015 (number of households)</td>
<td>62,103</td>
<td>12,769</td>
<td>5,196</td>
</tr>
<tr>
<td>Employment 2015 (%)</td>
<td>90.2</td>
<td>85.5</td>
<td>85.0</td>
</tr>
<tr>
<td>Minority 2015 (%)</td>
<td>15.5</td>
<td>38.8</td>
<td>49.0</td>
</tr>
<tr>
<td>Low Income 2015 (%)</td>
<td>11.3</td>
<td>27.8</td>
<td>25.0</td>
</tr>
<tr>
<td>Elderly 2015 (%)</td>
<td>13.9</td>
<td>14.7</td>
<td>9.0</td>
</tr>
<tr>
<td>Owner-Occupied Households 2015 (%)</td>
<td>70.6</td>
<td>54.0</td>
<td>60.0</td>
</tr>
<tr>
<td>Median Home Value 2015 ($)</td>
<td>123,300</td>
<td>93,000</td>
<td>79,600</td>
</tr>
<tr>
<td>Average Household Size 2015 (number of persons)</td>
<td>2.38</td>
<td>2.21</td>
<td>2.48</td>
</tr>
<tr>
<td>Median Gross Rent per Month 2015 ($)</td>
<td>702</td>
<td>698</td>
<td>719</td>
</tr>
<tr>
<td>Transit Dependent 2015 (%)</td>
<td>7.9</td>
<td>14.7</td>
<td>14.0</td>
</tr>
<tr>
<td>Average Commute Time 2015 (minutes)</td>
<td>24</td>
<td>21</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 4-7 shows the 2010 population of all census blocks in each community that touches the Project Area. The immediately adjacent area population had 4,100 people. Population is relatively low in most areas, with the exception of Michigan City, the most urban area within the Project Area. Some development has started to occur since 2010 in suburban locations, such as Portage and Ogden Dunes, that is not reflected in this table of 2010 census data.

Table 4-7. Population 2010

<table>
<thead>
<tr>
<th>Community</th>
<th>Adjacent Area Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gary</td>
<td>865</td>
</tr>
<tr>
<td>Ogden Dunes</td>
<td>3</td>
</tr>
<tr>
<td>Portage</td>
<td>73</td>
</tr>
<tr>
<td>Burns Harbor</td>
<td>1</td>
</tr>
<tr>
<td>Dune Acres</td>
<td>181</td>
</tr>
<tr>
<td>Porter</td>
<td>0</td>
</tr>
<tr>
<td>Chesterton</td>
<td>21</td>
</tr>
<tr>
<td>Beverly Shores</td>
<td>7</td>
</tr>
<tr>
<td>Town of Pines</td>
<td>102</td>
</tr>
<tr>
<td>Michigan City</td>
<td>2,847</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,100</strong></td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau 2010
Note: The adjacent population listed for Chesterton lives in an unincorporated area north of Chesterton.

4.3.3 ENVIRONMENTAL IMPACTS

The following sections summarize the potential neighborhood and community impacts of the No Build and Build Alternatives.

**NO BUILD ALTERNATIVE**

Under the No Build Alternative, there would be no impacts to community facilities, character, or cohesiveness within communities.

**BUILD ALTERNATIVE**

**PERMANENT IMPACTS**

*Lake County/Gary*

A total of 39 parcels have been identified for permanent acquisition, 37 of which are commercial, 1 of which is residential, and 1 of which is INDOT ROW. Of the 39 parcels, 32 of these parcels are empty lots without buildings and 4 have vacant buildings. The immediate change of land use for these parcels would be to station and parking lot uses, and the parcels could be converted to mixed-use by the City of Gary in the future. Such uses would be consistent with the character of Lake Street and planning efforts by the City of Gary for the Gary/Miller Station area. Property acquisitions are mapped in Appendix II and discussed in the Land Acquisitions, Displacements, and Relocations Technical Memorandum included in Appendix III.
Segments of U.S. 12 would be relinquished to accommodate realigned tracks and station. Through traffic on U.S. 12 would be redirected to U.S. 20 at a new connection east of Lake Street, a distance of approximately 350 feet to the south. Existing cross streets (Clay and Lake Streets) would remain open and access to these areas would not change. U.S. 12 west of the Gary/Miller Station area would become a local road with a cul-de-sac to maintain access to businesses in that area. An artist’s conceptual rendering of the Gary/Miller Station area is provided in Figure 4-3, for illustrative purposes only.

The Build Alternative would improve mobility in the Gary/Miller Station area by providing faster travel time; adding more trains; and improving station, parking, and pedestrian facilities within the Project Area. The proposed Project is anticipated to serve as a catalyst for new private investment and economic development in the project areas, consistent with the City of Gary’s Northside Redevelopment Project.

There would be a moderate noise impact from train horn noise at one residential location in Gary, discussed further in Section 4.6. There would not be any vibration impacts. The noise impact would be mitigated by lowering the horn level on NICTD vehicles.

There would be no impacts to community cohesion, mobility, or key resources within the Lake County section of the Project Area and the proposed Project would not reduce the desirability of the community for current or future residents.

Figure 4-3. Artist’s Conceptual Rendering of Gary/Miller Station (Facing West)

5 U.S. 12/U.S. 20 realignment to be completed by INDOT as a separate project.
Porter County
The communities adjacent to the NICTD/CSS railroad tracks have developed around the existing rail infrastructure and industrial areas. The railroad is part of the community character. Likewise, the Indiana Dunes National Lakeshore and Indiana Dunes State Park have been features within Porter County for decades.

Seven parcels in Porter County would be purchased. Of the seven parcels, two are commercial and five are transportation, communication, or utility parcels.

Two residences in near Broadway Avenue in Beverly Shores would experience moderate noise and vibration impacts as a result of the proposed Project. One residence in the Town of Pines would experience vibration impacts. The noise impact would be mitigated by lowering the horn level on NICTD vehicles. To mitigate the projected vibration impacts, NICTD would install crosstie pads, ballast mats, resilient fasteners, or other track support system modifications in the discrete areas where impacts occur. See Section 4.7 for more information.

Given that tracks and commuter rail service currently exist in these locations and mitigation measures would be employed to address noise impacts and vibration impacts, it is not anticipated that the noise and vibration impacts would be severe enough to reduce the desirability of the community for current or future residents. There would be no impacts to community cohesion, mobility, or key resources within the Porter County section of the Project Area.

LaPorte County
The highest potential for change in community character is expected in Michigan City. The Build Alternative would replace the existing street-running rail with a new, separated alignment on 10th and 11th Streets.

Seventy-nine residential property acquisitions would be required. Twenty-three commercial properties would be permanently acquired. Vacated parcels would be converted to rail uses or parking. Easements on seven municipal parcels and three transportation and utility parcels would be required. Property acquisitions are discussed in Section 4.1.3.

Two-way traffic would still operate on 10th Street, with no change for drivers approaching 10th Street from the north. Pedestrian crosswalks would be provided at Willard Avenue. South of the NICTD/CSS railroad tracks, three streets would be closed. Community cohesion would not be directly impacted in the 10th Street area, as reasonable alternate routes would be maintained for pedestrian and vehicular traffic to cross the realigned tracks.

As noted in Table 3-3, 11 at-grade crossings would be removed on 11th Street. Ten streets would have a cul-de-sac north of 11th Street and 11th Street would be changed from a two-way street to a one-way, eastbound street. Traffic would be diverted to 10th Street, a parallel roadway to the north with capacity to accommodate the additional traffic. Eight north-south cross streets would remain open to accommodate vehicular and pedestrian access to the north and south of 11th Street, as identified in Table 4-8.
Table 4-8. Proposed Open North-South Cross Streets Intersecting at 11th Street

<table>
<thead>
<tr>
<th>Street Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Street</td>
<td>The removal of at-grade road/rail crossings on 11th Street, and permanent road closures would change to pedestrian and vehicular traffic patterns, which may be perceived as an interruption to community continuity. However, the at-grade road/rail crossings that would remain open are spaced to enable continued access to community resources, including schools, churches, and commercial districts. Additionally, improved pedestrian facilities and ADA-compliant crossings would provide a safer, more inviting environment for pedestrians to travel within the community.</td>
</tr>
<tr>
<td>Ohio Street</td>
<td>Today, the community resources that are located along 10th and 11th Streets, namely St. Mary Immaculate Conception Church and Marquette High School, experience high levels of noise from train horns. Noise levels would be reduced after implementation of the proposed Project, through the lowering of the train horn decibel level and removal of several at-grade road/rail crossings.</td>
</tr>
<tr>
<td>Wabash Street</td>
<td>There would be five vibration impacts along 11th Street, clustered between Elston and Washington Streets. This is due to locating the new tracks approximately 14 feet closer to existing buildings. To mitigate the projected vibration impacts, NICTD would install crosstie pads, ballast mats, resilient fasteners, or other track support system modifications in discrete areas where impacts occur.</td>
</tr>
<tr>
<td>Washington Street</td>
<td>The 11th Street (Michigan City) Station area and parking structure would be located on the block between Franklin Street and Pine Street. The historic façade of the existing station building would be preserved and reused as part of a new station building, if structurally feasible. The new station building would include aesthetic features and landscaping that would enhance the station area. A parking garage with commercial uses on the ground floor would replace the vacant station building and create an inviting space for commuters, contributing to a sense of place within the neighborhood.</td>
</tr>
<tr>
<td>Franklin Street</td>
<td>CONSTRUCTION IMPACTS</td>
</tr>
<tr>
<td>Lafayette Street</td>
<td>Throughout the Project Area, construction activities associated with the Build Alternative would result in temporary adverse impacts on the surrounding neighborhoods, communities, and businesses. Temporary construction impacts would include noise, vibration, dust, temporary utility disruptions, detours, altered access to some businesses, visual and aesthetic changes from construction, changes in emergency vehicle routing, construction vehicle emissions, and truck traffic within the Project Area.</td>
</tr>
<tr>
<td>Oak Street</td>
<td>Construction would take place within existing ROW and properties acquired to accommodate the expanded ROW for the proposed Project. Temporary detours or road closures may occur but would have minimal impact on community resources because alternate routes would be provided to ensure access during construction.</td>
</tr>
<tr>
<td>E. Michigan Boulevard</td>
<td></td>
</tr>
</tbody>
</table>

CONSTRUCTION IMPACTS
4.3.4 MEASURES TO AVOID OR MINIMIZE HARM

Before construction, NICTD would develop a construction outreach plan to include specific techniques to communicate with neighborhoods and businesses to prepare for construction. Methods of communication about upcoming construction may include a Construction Update section on the Project website, email alerts, and/or social media posts. In addition to traffic, visual, noise, and vibration mitigation outlined in Sections 3.5, 4.5, 4.6, and 4.7, NICTD would manage construction stages with the contractor to maintain access and provide alternate access to business, residential, and community facilities with temporary access changes during construction. All redevelopment within historic districts would be completed through coordination with local historic preservation commissions and/or the SHPO.

During construction, the Project contractor would implement construction best management practices (BMPs) to plan for the following:

- maintenance of access
- traffic control
- access to businesses in the construction area
- erosion and dust control
- maintenance of equipment
- noise
- vibration monitoring

NICTD would work with local governments to ensure safe mobility would be maintained within the Project Area, including reasonable traffic plans, safe pedestrian-friendly crossings, and accessibility to businesses.

NICTD and its contractor would coordinate with NPS and Indiana Dunes State Park to ensure continued access to the Indiana Dunes National Lakeshore and Indiana Dunes State Park. NICTD would stage construction access points to maintain access to the parks and trailheads. Likewise, the Cowles Bog Trail, Calumet Trail, and other trails are expected to remain open, although there could be some minor detours during construction.

4.4 HISTORIC, ARCHAEOLOGICAL, AND CULTURAL RESOURCES (SECTION 106)

This section summarizes findings under Section 106 of the NHPA of 1966 (as amended) and coordination with the Indiana SHPO and consulting parties to the Section 106 process.

This section uses the term "effects" instead of "impacts" because of the unique requirements and terminology related to historic resources. Chapter 5 summarizes Section 106 coordination efforts to date. The Assessment of Effects Report in Appendix VII includes correspondence to date with the SHPO.
4.4.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

Cultural resources are historic sites, buildings, structures, objects, or districts considered important to a culture, subculture, or community for scientific, traditional, religious, or other purposes. They include archaeological resources, historic architectural or engineering resources, and traditional cultural resources.

Several federal laws and regulations govern protection of cultural resources, including the NHPA, the Archeological and Historic Preservation Act (1974), the American Indian Religious Freedom Act (1978), the Archaeological Resources Protection Act (1979), the Native American Graves Protection and Repatriation Act (1990), and Section 4(f) of the Department of Transportation Act of 1966. Section 106 of the NHPA (Section 106) requires federal agencies to take into account the effects of their undertakings on historic properties.

The NHPA defines historic properties as buildings, structures, sites, districts, or objects listed in or eligible for listing in the NRHP, the official listing of properties significant in U.S. history, architecture, or prehistory administered by the NPS. Historic properties are generally 50 years of age or older, are historically significant, and retain sufficient integrity to convey their historic significance. Typically, cultural resources are subdivided into archaeological resources, architectural resources, or resources of traditional or religious significance. Archaeological resources comprise areas where human activity has measurably altered the earth or where deposits of physical remains are found (e.g., projectile points and bottles) but standing structures do not remain. Architectural resources include standing buildings, bridges, dams, and designed landscapes of historic or aesthetic significance. Generally, architectural resources must be more than 50 years old to warrant consideration for the NRHP; more recent structures might meet the criteria for designation if they are of exceptional importance or if they have the potential to gain significance in the future. Resources of traditional, religious, or cultural significance can include archaeological resources, sacred sites, structures, districts, prominent topographic features, habitat, plants, animals, or minerals considered essential for the preservation of traditional culture (NPS 1997).

The goal of Section 106 consultation is to identify historic properties potentially affected by the undertaking; assess project effects; and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. To achieve compliance with Section 106 requirements, the federal agency must consult with the relevant SHPO and consulting parties on the Project regarding potential effects of the Project on historic properties.

Sixty-four interested parties were invited to participate in the Section 106 process as consulting parties for the proposed Project. Of these, 20 accepted the invitation to be consulting parties, including 2 Native American tribes. See Appendix VII for more information.

AREA OF POTENTIAL EFFECTS

In accordance with Section 106, FTA determined the Area of Potential Effects (APE) for the Project. The APE was established in consultation with the SHPO and NICTD, along with input from the consulting parties. The APE is defined by 36 CFR § 800.16(d) as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. The APE is a delineation of the farthest extent of the area in which historic properties may be affected by any Project component.

For this Project, the APE is divided into two components: the direct effects APE and the indirect effects APE. The APE for direct effects was limited to the proposed Project footprint, including any areas that might be subject to ground-disturbing activities (e.g., construction areas, temporary staging areas, new access roads) or acquisition. The indirect effects APE includes any parcels that could be affected visually...
or by noise and vibration from the operation of the trains, and by temporary effects such as construction noise, staging areas, closure of streets, rerouting of traffic, etc. The indirect effects APE was generally defined as those parcels immediately fronting the proposed alignment. However, in some instances when shallow, narrow, or cleared/empty parcels allowed indirect effects to extend farther, the APE was expanded to include more parcels. The indirect effects APE was verified in the field to ensure it captured all parcels that would be visible from or may be impacted by Project components. Maps of the APE are located in Appendix VII. The SHPO reviewed the proposed APE and provided concurrence on January 19, 2017. Further discussions and a tour of the proposed Project Area with Indiana Landmarks, one of the consulting parties for the Project, took place on February 24, 2017. The APE was subsequently revised in April 2017. Consulting parties were also invited to attend a meeting and tour of the Project Area, which was held on May 11, 2017 (Assessment of Effects Report, Appendix VII).

IDENTIFICATION OF HISTORIC PROPERTIES

NICTD’s cultural resources consultant conducted background research at the Indiana Department of Natural Resources (IDNR) Division of Historic Preservation and Archaeology (DHPA) and through the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and SHAARD Geographic Information System (GIS), the Indiana Historic Sites and Structures Inventory (IHSSI), the NPS’s National Register Database, and other sources, to identify the presence of previously recorded cultural resources within the Project Area. This list was cross-referenced with historic maps, atlases, county interim reports, and county assessor records. Research was also conducted to develop a framework for understanding the local land use history and patterns of community and industrial development in order to establish significance standards by which to evaluate surveyed resources.

Per consultation with the SHPO, the 2017 architectural survey did not include the vast majority of contributing resources with IHSSI numbers to the Elston Grove Historic District, the Franklin Street Commercial Historic District, or the Haskell and Barker Historic District, due to their recent survey and listing in the NRHP in 2013. Further, only contributing resources with previously assigned IHSSI numbers were to be surveyed in order to evaluate them individually for listing in the NRHP.

Field methods and reporting of identified historic properties were executed in accordance with IDNR DHPA’s Guidebook for Indiana Historic Sites and Structures Inventory – Archaeological Sites (2008), INDOT’s Cultural Resources Manual (2014), and the Secretary of the Interior’s Standards for Identification for Archeology and Historic Preservation.

Due to the large size of the Project Area, fieldwork and evaluations were divided among three Historic Property Reports, each covering one county from east to west. In consideration of the 2019 construction date for the Project, the reports included those resources in the APE constructed in 1969 or earlier. Fieldwork in LaPorte County was conducted February 6–10, 2017; in Lake County, March 6–10, 2017; and in Porter County during both weeks. Following the survey and local research, three Historic Property Reports were prepared successively: Segment 1 (LaPorte County), Segment 2 (Porter County), and Segment 3 (Lake County).

4.4.2 EXISTING CONDITIONS

ARCHAEOLOGICAL RESOURCES

There are 257 previously recorded archaeological sites within 1 mile of the direct APE, none of which are in the direct APE. This includes 3 in Lake County, 242 in Porter County, and 12 in LaPorte County.

The Phase I archaeological investigation of the direct APE included visual inspection, pedestrian survey conducted at 10-meter intervals in areas with surface visibility greater than 30 percent, and subsurface
testing. The field survey included photo-documentation, mapping, and a controlled surface inspection of the direct APE, followed by excavation of shovel test pits (STPs) in select portions of the direct APE. No prehistoric or historic materials were recovered from the STPs. However, a review of historic aerial photographs and the presence of modern structural debris encountered on the surface resulted in the identification of four previously unidentified sites in the direct APE during the investigation; none of these were recommended eligible for listing in the NRHP. More detailed information is provided in the Summary of Phase I Archaeological Survey in Appendix VII.

HISTORIC RESOURCES

The architectural survey included 613 architectural resources constructed in or prior to 1969 in the direct and indirect effects APE: 243 in Lake County, 46 in Porter County, and 324 in LaPorte County. Thirty-one of these resources were previously listed or determined eligible for listing in the NRHP, or were recommended eligible for listing in the NRHP as part of the 2017 architectural survey (Table 4-9). The SHPO concurred with the eligibility determinations on May 31, 2017 and June 11, 2017 (Appendix VII). Historic resources within the APE are depicted and described in Appendix VII.

Table 4-9. Surveyed Historic Properties in the APE

<table>
<thead>
<tr>
<th>Property Name</th>
<th>County</th>
<th>IHSSI No. / NRHP No.</th>
<th>Address</th>
<th>Construction Date</th>
<th>NRHP Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elston Grove Historic District</td>
<td>LaPorte</td>
<td>091-406-18001/</td>
<td>N/A</td>
<td>c. 1860-1965</td>
<td>Listed (2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NR-2331</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haskell &amp; Barker Historic District</td>
<td>LaPorte</td>
<td>091-406-17001/</td>
<td>N/A</td>
<td>1860-1958</td>
<td>Listed (2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NR-2355</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Franklin Street Commercial Historic District</td>
<td>LaPorte</td>
<td>091-406-16001/</td>
<td>N/A</td>
<td>1867-1963</td>
<td>Listed (2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NR-2339</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elston Grove Historic District Boundary Expansion</td>
<td>LaPorte</td>
<td>091-406-18001</td>
<td>N/A</td>
<td>c. 1875 to c. 1925</td>
<td>Eligible</td>
</tr>
<tr>
<td>DeWolfe’s Addition Historic District</td>
<td>LaPorte</td>
<td>N/A</td>
<td>N/A</td>
<td>c. 1889 to 1905</td>
<td>Eligible</td>
</tr>
<tr>
<td>St. Mary of the Immaculate Conception Church</td>
<td>LaPorte</td>
<td>091-406-17032</td>
<td>406 W. 10th Street, Michigan City</td>
<td>1868; 1932</td>
<td>Eligible</td>
</tr>
<tr>
<td>House</td>
<td>LaPorte</td>
<td>091-406-21102</td>
<td>1109 Manhattan Street, Michigan City</td>
<td>c. 1880</td>
<td>Eligible as Contributing to DeWolfe’s Addition Historic District</td>
</tr>
<tr>
<td>Property Name</td>
<td>County</td>
<td>IHSSI No. / NRHP No.</td>
<td>Address</td>
<td>Construction Date</td>
<td>NRHP Status</td>
</tr>
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<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>House</td>
<td>LaPorte</td>
<td>091-406-21103</td>
<td>1101 Elston Street, Michigan City</td>
<td>c. 1880</td>
<td>Eligible as Contributing to DeWolfe's Addition Historic District</td>
</tr>
<tr>
<td>House</td>
<td>LaPorte</td>
<td>091-406-21105</td>
<td>1116 Ohio Street, Michigan City</td>
<td>c. 1880</td>
<td>Eligible as Contributing to DeWolfe's Addition Historic District</td>
</tr>
<tr>
<td>House</td>
<td>LaPorte</td>
<td>091-406-21106</td>
<td>1115 Ohio Street, Michigan City</td>
<td>c. 1880</td>
<td>Eligible as Contributing to DeWolfe's Addition Historic District</td>
</tr>
<tr>
<td>House</td>
<td>LaPorte</td>
<td>091-406-21078</td>
<td>410 York Street, Michigan City</td>
<td>c. 1890</td>
<td>Eligible as Contributing to DeWolfe's Addition Historic District</td>
</tr>
<tr>
<td>House</td>
<td>LaPorte</td>
<td>091-406-21080</td>
<td>505 E. 11&lt;sup&gt;th&lt;/sup&gt; Street, Michigan City</td>
<td>c. 1870</td>
<td>Eligible as Contributing to DeWolfe's Addition Historic District</td>
</tr>
<tr>
<td>Commercial Building</td>
<td>LaPorte</td>
<td>091-406-21150</td>
<td>1004 Kentucky Street, Michigan City</td>
<td>c. 1925</td>
<td>Eligible</td>
</tr>
<tr>
<td>First Christian Church</td>
<td>LaPorte</td>
<td>091-406-21081</td>
<td>1102 Cedar Street, Michigan City</td>
<td>c. 1920</td>
<td>Individually Eligible/Contributing to expansion of Elston Grove Historic District</td>
</tr>
<tr>
<td>Apartment Building</td>
<td>LaPorte</td>
<td>091-406-21082</td>
<td>328 E. 11&lt;sup&gt;th&lt;/sup&gt; Street, Michigan City</td>
<td>c. 1917</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>Commercial Building</td>
<td>LaPorte</td>
<td>091-406-21091</td>
<td>1101 Franklin Street, Michigan City</td>
<td>c. 1880</td>
<td>Individually Eligible/Contributing resource to Franklin Street Commercial Historic District</td>
</tr>
<tr>
<td>Apartment Building</td>
<td>LaPorte</td>
<td>091-406-21083</td>
<td>1009 Cedar Street, Michigan City</td>
<td>c. 1910</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>South Shore Station</td>
<td>LaPorte</td>
<td>091-406-21092</td>
<td>114 E. 11&lt;sup&gt;th&lt;/sup&gt; Street, Michigan City</td>
<td>1926</td>
<td>Individually Eligible/Contributing to Franklin Street Commercial Historic District</td>
</tr>
<tr>
<td>Property Name</td>
<td>County</td>
<td>IHSSI No. / NRHP No.</td>
<td>Address</td>
<td>Construction Date</td>
<td>NRHP Status</td>
</tr>
<tr>
<td>-----------------------------------</td>
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<td>-------------------------------------------------------</td>
<td>-------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>House</td>
<td>LaPorte</td>
<td>N/A</td>
<td>1116 W. 10\textsuperscript{th} Street, Michigan City</td>
<td>c. 1937</td>
<td>Eligible</td>
</tr>
<tr>
<td>Berhndt Flats</td>
<td>LaPorte</td>
<td>N/A</td>
<td>1111 Cedar Street, Michigan City</td>
<td>c. 1926</td>
<td>Eligible</td>
</tr>
<tr>
<td>Oscar and Irene Nelson Site</td>
<td>Porter</td>
<td>NR-2441</td>
<td>217 U.S. 12, Burns Harbor</td>
<td>c.1880</td>
<td>Eligible under Multiple Property Document</td>
</tr>
<tr>
<td>Al &amp; Sally's Motel</td>
<td>Porter</td>
<td>N/A</td>
<td>3221 W. Dunes Highway, Town of Pines</td>
<td>c. 1950</td>
<td>Eligible</td>
</tr>
<tr>
<td>Glen Ryan Park Historic District</td>
<td>Lake</td>
<td>N/A</td>
<td>N/A</td>
<td>c. 1955</td>
<td>Eligible</td>
</tr>
<tr>
<td>Hiway Homes Historic District</td>
<td>Lake</td>
<td>N/A</td>
<td>N/A</td>
<td>c. 1948</td>
<td>Eligible</td>
</tr>
<tr>
<td>Miller School</td>
<td>Lake</td>
<td>089-232-07095</td>
<td>665 S. Lake Street, Gary</td>
<td>1910</td>
<td>Eligible</td>
</tr>
<tr>
<td>House</td>
<td>Lake</td>
<td>089-232-07104</td>
<td>5512 E. Melton Road, Gary</td>
<td>c. 1924</td>
<td>Eligible</td>
</tr>
<tr>
<td>House</td>
<td>Lake</td>
<td>089-232-19670</td>
<td>602 Illinois Street, Gary</td>
<td>c.1948</td>
<td>Eligible as a Contributing Resource to Hiway Homes Historic District</td>
</tr>
<tr>
<td>House</td>
<td>Lake</td>
<td>089-232-19671</td>
<td>608 Mississippi Street, Gary</td>
<td>c. 1947</td>
<td>Eligible as a Contributing Resource to Hiway Homes Historic District</td>
</tr>
<tr>
<td>House</td>
<td>Lake</td>
<td>089-232-19672</td>
<td>628 Mississippi Street, Gary</td>
<td>c. 1947</td>
<td>Eligible as a Contributing Resource to Hiway Homes Historic District</td>
</tr>
<tr>
<td>House</td>
<td>Lake</td>
<td>089-232-19674</td>
<td>637 Indiana Street/Martin Luther King Drive, Gary</td>
<td>c. 1947</td>
<td>Eligible as a Contributing Resource to Hiway Homes Historic District</td>
</tr>
</tbody>
</table>
4.4.3 ENVIRONMENTAL EFFECTS

NO BUILD ALTERNATIVE

The No Build Alternative would have no adverse effects to historic properties since the proposed Project would not be implemented.

BUILD ALTERNATIVE

PERMANENT IMPACTS

Archaeological Resources

The Build Alternative would have no permanent impacts to archaeological resources since no NRHP-eligible or -listed archaeological sites are present in the direct APE.

Historic Resources

Effects from the proposed Project were assessed on surveyed historic properties as well as contributing resources to the three listed historic districts for which IHSSI numbers were previously assigned but were not surveyed in 2017. The criteria for adverse effects were applied to all historic resources in the APE.

There would be adverse effects to 27 historic properties as a result of the proposed Project, all of which are located within Michigan City. These are listed in Table 4-10 and shown in Figure 4-4. The SHPO concurred with the adverse effects finding on August 15, 20176 (Appendix VII).

Adverse permanent impacts to cultural resources would be primarily limited to acquisition and subsequent demolition of contributing resources to historic districts (Table 4-10). A total of 27 historic properties would be affected including 3 individually eligible resources: Elston Grove Historic District and 10 contributing resources therein, the boundary expansion of the Elston Grove Historic District and 6 contributing resources therein, and the Franklin Street Commercial Historic District and 5 contributing resources therein.

The loss of buildings along the south side of the Elston Grove Historic District and the edges of the Franklin Street Commercial Historic District compounded with street closures and the creation of cul-de-sacs, would result in fractures to the districts' historic and architectural cohesion and would alter view sheds and streetscapes resulting in adverse effects to the historic districts. Further, the installation of high-level platforms in front of the 11th Street (Michigan City) Station would have an adverse visual impact on the South Shore Station, and the historic districts. There would be no permanent adverse impacts to the Haskell and Barker Historic District or the DeWolfe’s Addition Historic District.

The proposed Project would remove existing street-running tracks, replace OCS, add new ballasted tracks, add high-level platforms, permanently reroute traffic, and increase SSL service. Although these Project components would have indirect impacts on historic properties in the APE, they would not compromise the integrity of historic properties in the indirect APE nor would the indirect impacts affect the character-defining features of these resources or rise to the level of an adverse effect.

6 The 8/15/2017 SHPO letter indicates concurrence on adverse effects to 29 properties. Since the time that the adverse effects report was prepared in July 2017, 2 adverse effects had been eliminated due to design refinements in late August 2017, bringing the correct total of adverse effects to 27.
Table 4-10. Adverse Effects on Historic Properties

<table>
<thead>
<tr>
<th>Name</th>
<th>IHSSI/ NRHP No.</th>
<th>Address</th>
<th>County</th>
<th>NRHP Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elston Grove Historic District</td>
<td>091-406-18001/NR-2331</td>
<td>N/A</td>
<td>LaPorte</td>
<td>Listed</td>
</tr>
<tr>
<td>Apartment Building</td>
<td>091-406-21082</td>
<td>328 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>House (Scherrbaum Residence)</td>
<td></td>
<td>1012 Spring Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>House</td>
<td></td>
<td>1015 Spring Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>House (Lubniecki Residence)</td>
<td></td>
<td>202 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>House (Hill Residence)</td>
<td></td>
<td>206 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
</tbody>
</table>
### Table 4-10. (cont.)

<table>
<thead>
<tr>
<th>Name</th>
<th>IHSSI/ NRHP No.</th>
<th>Address</th>
<th>County</th>
<th>NRHP Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>House (Isbell Residence)</td>
<td></td>
<td>210 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>House</td>
<td></td>
<td>218 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>House (Bibb Residence)</td>
<td></td>
<td>314 Lafayette Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>Apartment Building</td>
<td></td>
<td>320-322 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>House (Vance Residence)</td>
<td></td>
<td>716 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
</tr>
<tr>
<td>Elston Grove Historic District Boundary Expansion</td>
<td></td>
<td>N/A</td>
<td>LaPorte</td>
<td>Eligible</td>
</tr>
</tbody>
</table>
Table 4.10. (cont.)

<table>
<thead>
<tr>
<th>Name</th>
<th>IHSSI/ NRHP No.</th>
<th>Address</th>
<th>County</th>
<th>NRHP Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>House</td>
<td></td>
<td>501 E. 11&lt;sup&gt;th&lt;/sup&gt; Street, Michigan City</td>
<td>LaPorte</td>
<td>Eligible as contributing resource to Elston Grove Historic District Expansion</td>
</tr>
<tr>
<td>House</td>
<td></td>
<td>509 E. 11&lt;sup&gt;th&lt;/sup&gt; Street, Michigan City</td>
<td>LaPorte</td>
<td>Eligible as contributing resource to Elston Grove Historic District Expansion</td>
</tr>
<tr>
<td>House</td>
<td></td>
<td>513 E. 11&lt;sup&gt;th&lt;/sup&gt; Street, Michigan City</td>
<td>LaPorte</td>
<td>Eligible as contributing resource to Elston Grove Historic District Expansion</td>
</tr>
<tr>
<td>House</td>
<td></td>
<td>517 E. 11&lt;sup&gt;th&lt;/sup&gt; Street, Michigan City</td>
<td>LaPorte</td>
<td>Eligible as contributing resource to Elston Grove Historic District Expansion</td>
</tr>
<tr>
<td>House</td>
<td></td>
<td>523 E. 11&lt;sup&gt;th&lt;/sup&gt; Street, Michigan City</td>
<td>LaPorte</td>
<td>Eligible as contributing resource to Elston Grove Historic District Expansion</td>
</tr>
<tr>
<td>House</td>
<td></td>
<td>505 E. 11&lt;sup&gt;th&lt;/sup&gt; Street, Michigan City</td>
<td>LaPorte</td>
<td>Eligible as contributing resource to Elston Grove Historic District Expansion</td>
</tr>
</tbody>
</table>
Table 4-10. (cont.)

<table>
<thead>
<tr>
<th>Name</th>
<th>IHSSI/ NRHP No.</th>
<th>Address</th>
<th>County</th>
<th>NRHP Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Christian Church</td>
<td>091-406-21081</td>
<td>1102 Cedar Street, Michigan City</td>
<td>LaPorte</td>
<td>Individually eligible and as contributing resource to Elston Grove Historic District Expansion</td>
</tr>
<tr>
<td>Franklin Street Commercial Historic District</td>
<td>091-406-16001/ NR-2339</td>
<td>N/A</td>
<td>LaPorte</td>
<td>Listed</td>
</tr>
<tr>
<td>Commercial Building</td>
<td></td>
<td>1010 Franklin Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Franklin Street Commercial Historic District</td>
</tr>
<tr>
<td>Commercial Building (Inca Properties LLC)</td>
<td></td>
<td>1015 Franklin Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Franklin Street Commercial Historic District</td>
</tr>
<tr>
<td>Commercial Building (Inca Properties LLC)</td>
<td></td>
<td>1019 Franklin Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Franklin Street Commercial Historic District</td>
</tr>
</tbody>
</table>
Table 4-10. (cont.)

<table>
<thead>
<tr>
<th>Name</th>
<th>IHSSI/ NRHP No.</th>
<th>Address</th>
<th>County</th>
<th>NRHP Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Building (Andrea Italian Kitchen/Dough Boys/3rd Degree BBQ Restaurants)</td>
<td></td>
<td>106 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Franklin Street Commercial Historic District</td>
</tr>
<tr>
<td>House</td>
<td></td>
<td>121 E. 10th Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Franklin Street Commercial Historic District</td>
</tr>
<tr>
<td>South Shore Station</td>
<td>091-406-21092</td>
<td>114 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Individually eligible/contributing resource to the Franklin Street Commercial Historic District</td>
</tr>
<tr>
<td>House</td>
<td></td>
<td>1116 W. 10th Street, Michigan City</td>
<td>LaPorte</td>
<td>Individually eligible</td>
</tr>
</tbody>
</table>
Figure 4-4. Locations of Adverse Effects on Historic Properties
CONSTRUCTION IMPACTS

Archaeological Resources
The proposed Project would have no construction impacts to archaeological resources since no NRHP-eligible or -listed archaeological sites are present in the direct or indirect effects APE.

Historic Resources
Construction impacts resulting from the Project would typically include construction noise, staging areas, temporary closure of streets, and rerouting of traffic that would result in temporary, indirect effects on historic properties. Although these components would introduce atmospheric and audible impacts on historic properties, these impacts would be temporary and would not rise to the level of an adverse effect.

4.4.4 MEASURES TO AVOID OR MINIMIZE HARM

FTA and NICTD, in consultation with the SHPO and consulting parties, would develop and execute a Memorandum of Agreement (MOA) to resolve the adverse effects on historic properties resulting from the proposed Project. FTA and NICTD proposed the following mitigation measures to resolve the adverse effects to historic properties. The draft MOA is currently being developed and consulting parties and SHPO are still reviewing the document. Once consultation is complete, the treatment measures will be presented in the environmental decision document along with the final, executed MOA.

A. NICTD shall work with a qualified architectural firm to preserve the façade of the South Shore Station at 114 E. 11th Street in order to incorporate it into a new mixed-use building to serve as the entrance to the new 11th Street Station, subject to engineering and financial feasibility. Because the new mixed-use building will be located within the Franklin Street Commercial Historic District, the proposed design of the new station will be subject to the Michigan City Historic Review Board design review process which will ensure that the design is compatible with the existing historic district. NICTD will keep the consulting parties identified in Attachment B informed on the design process.

B. Prior to the demolition of the South Shore Station at 114 E. 11th Street in Michigan City or any alterations to the façade, NICTD shall hire a Secretary of the Interior-qualified professional in history or architectural history (36 CFR § 61) to complete Historic American Building Survey (HABS) Documentation Level II on the station building. This work will include large-format photography and may include LiDAR scanning to assist in the execution of Treatment Measure A. The work will adhere to the standards set forth in Historic American Buildings Survey Guidelines for Historical Reports. NICTD shall provide draft documentation to the National Park Service (NPS) to verify that it meets the specified standards and formats. Upon NPS approval, NICTD shall finalize the documentation for submittal to the HABS office. One paper copy and one electronic copy of the final HABS documentation shall be provided to Indiana Landmarks, the Indiana Room at the Michigan City Public Library, and the Calumet Regional Archives at the Indiana University Northwest Library. Electronic copies will be provided to consulting parties at their request.

C. Prior to any alterations or the demolition of the First Christian Church at 1102 Cedar Street and the houses at 1116 W. 10th Street and 314 Lafayette Street, all in Michigan City, NICTD shall hire a Secretary of the Interior-qualified professional in history or architectural history (36 CFR § 61) to complete a HABS Short Format Report for each building as specified in the Historic American Buildings Survey Guidelines for Historical Reports. NICTD shall provide draft documentation to NPS to verify that it meets the specified standards and formats. Upon NPS approval, NICTD shall finalize the documentation for submittal to the HABS office. One paper copy and one electronic
E. Prior to the demolition of any individual resource listed in Table 4-10 (with the exception of resources already being documented in Treatment Measures B and C), NICTD shall hire a Secretary of the Interior-qualified professional in history or architectural history (36 CFR § 61) to complete HABS Level III documentation for the adversely affected areas of the Elston Grove and Franklin Street Commercial Historic Districts, both of which are located in Michigan City. The written documentation will follow the *Historic American Buildings Survey Guidelines for Historical Reports*. Should any individual property warrant additional information, a short form will be prepared for that property to include with the district report. NICTD shall provide draft documentation to the NPS to verify that it meets the specified standards and formats. Upon NPS approval, NICTD shall finalize the documentation for submittal to the HABS office. One paper copy and one electronic copy of the final HABS documentation shall be provided to the SHPO, Indiana Landmarks, the Indiana Room at the Michigan City Public Library, and the Calumet Regional Archives at the Indiana University Northwest Library. Electronic copies will be provided to consulting parties at their request.

D. NICTD shall install one interpretive panel each for the Franklin Street Commercial and Elston Grove Historic Districts focusing on the history of the surrounding neighborhoods. Because the signs would be located within two locally designated historic districts, the signs will be subject to review by the Michigan City Historic Review Board.

4.5 VISUAL AND AESTHETIC CONDITIONS

This section discusses the physical improvements of the proposed Project that would result in changes to the surrounding visual environment. More information is found in the *Visual and Aesthetic Conditions Technical Memorandum* in Appendix III.

4.5.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

NEPA requires federal agencies to examine the impacts of federal actions on visual resources. In addition, Section 106 of the NHPA and Section 4(f) of the U.S. Department of Transportation Act of 1966 require that visual impacts be considered to protect public parks, recreational areas, wildlife and waterfowl refuges, and public and private historical sites.

For the purposes of this analysis, NICTD assessed visual and aesthetic impacts first by identifying the Project Area’s visual resources, including sensitive views, categories of potential viewers of both existing and potential future visual resources, and any Project-related changes to important visual features.

Visual resources are prominent features such as parks and open space; landmark structures or districts; and natural resources such as vegetation, wetlands and other natural features within the proposed Project Area. Such resources define the overall visual quality of an area and the context for determining
potential visual impacts of a proposed project. The evaluation focuses on whether and how the proposed Project Area’s visual quality would be altered with the proposed Project and whether any anticipated change would be generally positive or would degrade the existing essential visual character or context of the surrounding community areas.

NEPA does not identify thresholds for visual impacts. For the purposes of this analysis, an impact would be adverse if it resulted in one of more of the following:

- A substantial change in the community’s visual character that would degrade the existing visual character or quality of a site and its surroundings
- A major incompatibility with the context or character of the area (that is, a project feature would contrast strongly with its surroundings)
- Incompatibility with community goals
- Impacts on a historic site through extensive remodeling or removal of buildings or their surrounding area

Information for this evaluation was drawn from aerial photographs, Google Earth, photographs of the proposed Project Area, and field observation. The visual impacts of any Project-related construction (stations, parking, signals and catenary, and bridges) was compared to the existing terrain and viewshed to determine if any mitigation should be proposed. Mitigation measures are identified where it is determined that adverse visual impacts would be likely.

4.5.2 EXISTING CONDITIONS

The SSL corridor has served as an active passenger rail and freight line for over a century. A variety of landscapes, including residential, parks/open space, wetlands, industrial, commercial, and seven historic districts, characterize the Project Area. The existing SSL rail infrastructure traverses the full length of the Project Area and includes improvements to five stations. The SSL has been a feature of the proposed Project Area’s landscape since it was constructed in the early 1900s.

The determination of impacts considered viewer sensitivity, which is qualitatively considered based on adjacent land use. Viewers include proposed Project Area residents; recreational users of parks, open spaces, and trails; commercial business owners, employees, and patrons; SSL commuters; railroad workers; motorists; and visitors to the area with views of the SSL.

Residential and commercial landscapes are more prevalent in the Gary and Michigan City areas, where the Project Area is more urbanized and offers predominant views of buildings; roadways, including U.S. 12; and parking. Industrial landscapes are prevalent in the Gary and Burns Harbor areas, with views of ArcelorMittal steel mill and the NIPSCO Bailly Generating Station. Other areas along the Project Area offer views of open space and trails, with periodic clusters of houses and retail and commercial buildings. Scenic resources scattered within the Project Area include wetland areas, streams, and woodlands associated with the Indiana Dunes National Lakeshore and the Indiana Dunes State Park, trails, and historic buildings in Michigan City, including the former South Shore Station building. See the Visual and Aesthetic Conditions Technical Memorandum in Appendix III for detailed information on locations, viewers, and representative landscape photos within the Project Area.
4.5.3 ENVIRONMENTAL IMPACTS

NO BUILD ALTERNATIVE

As the No Build Alternative would not result in changes to the Project Area's visual resources or quality, there would be no visual impacts in the future without the proposed Project.

BUILD ALTERNATIVE

PERMANENT IMPACTS

Elements of the proposed Project that would alter the visual environment include new station buildings, platforms and pedestrian crossings, additional parking lots or structures, a second track, new signal and catenary equipment, four new bridges, and replacement of large culverts.

Construction of the second track between Tennessee Street in Gary and Sheridan Avenue in Michigan City would not create an adverse impact to the visual quality of the overall corridor. It would generally be constructed parallel to the existing track, and is consistent with the context of the existing corridor. Likewise, the four new bridges would be similar to what exists presently and their construction would be consistent with the existing landscape. Some trees and vegetation would be removed throughout the corridor; however, given the density of existing vegetation and woodlands, these limited removals would not result in a visual impact. There would also be 4.75 acres of fill in scattered wetlands along the Project Area, but this would not result in a visual impact because the fill would be in limited sections of numerous wetlands along the alignment.

There would be visual impacts resulting from the track realignment and roadway modifications between Sheridan Avenue and Michigan Boulevard in Michigan City. There may also be visual impacts at the five existing stations and in Michigan City, as described in the following sections.

**Gary/Miller Station**

Several parcels would be purchased to realign the tracks to the south, add gauntlet and storage tracks, and construct additional and reconstructed parking lots, consistent with TOD plans for the area. Construction of the high-level platforms and warming shelters would create some changes in views from the street but would be within the context of the existing station area.

The storage tracks would be constructed east of the immediate station area within a vacated section of U.S. 12. The retaining wall and storage tracks would be below the grade of both the NICTD/CSS railroad tracks to the north and the adjacent parcel and newly aligned U.S. 12 to the south (**Figure 4-5**). The storage tracks would require an 800-foot-long, approximately 14-foot-high retaining wall between the storage tracks and the realigned NICTD/CSS railroad tracks. South of the storage tracks, a NICTD maintenance road would run parallel to the storage tracks. A 12-foot-high retaining wall would separate the maintenance road from U.S. 12 and the adjacent parcel to the south.
The SSL storage tracks would be viewed looking east from Lake Street and would be consistent with the character of a railroad station area. The visual character of the immediate station area would change due to the removal of six existing buildings and trees on some of the purchased parcels for the realigned tracks and new platforms. The view shed of the immediate area would be changed as a result of the proposed Project only to the extent that the footprint of the station area, associated tracks, and parking would be expanded past its existing footprint. The changes in visual surroundings are compatible with the existing setting and with community goals, and would not degrade the visual character of the Project Area. Figure 4-3 provides and artist’s rendering of the Miller Station area and storage tracks.

*Portage/Ogden Dunes Station*

Construction of new high-level platforms and warming shelters would improve the visual setting of the existing station area and would be consistent with the context of the existing station area. The proposed parking area south of U.S. 12 would remove some woodland area south of the existing station, as viewed from U.S. 12, the station, adjacent businesses, and the tracks. Lighting would be installed at the parking lots and would impact adjacent residences if not mitigated. Landscaping, lighting, and parking would be designed in accordance with the Town of Ogden Dunes’ and City of Portage’s development standards and community goals.

*Dune Park Station*

Construction of the platform north of the existing tracks would be consistent with the context of the existing station area, as viewed from the Calumet Trail and the State Route 49/County Road 25 bridge. The new parking area would remove some woodland area south of the existing parking lot. While visible from the existing station, Calumet Trail, and U.S. 12, the new parking area would still be consistent with the overall context of the surrounding visual landscape and would not negatively impact the visual character of the area. Landscaping and parking would be designed in accordance with Porter County ordinances and community goals.

Additionally, a small segment of the Calumet Trail would need to be relocated under the State Route 49/County Road 25 bridge; however, the view shed from and toward this segment of the trail would not be impacted because it is being moved less than 20 feet to the north.
**Beverly Shores Station**

Addition of the second track and construction of the low-level platforms would not be anticipated to create adverse visual impacts to the historic station building or neighboring residential and commercial areas.

**Michigan City**

**10th Street**

Along 10th Street, the existing street-running tracks would be realigned south of the roadway. Homes along the south side of this segment of 10th Street would be removed to accommodate the new alignment. This would change the visual character of the south side of the roadway from residential to a pedestrian path with new landscaping and lighting. The railroad tracks, OCS, and a short (approximately 3-foot) barrier wall would be visible from the street and homes to the north of 10th Street but would be buffered by new landscaping. **Figure 4-6** and **Figure 4-7** provide a before and after perspective of 10th Street, respectively. **Figure 4-7** is provided as a conceptual rendering for visualization purposes only.

**Figure 4-6. Existing 10th Street (Looking East)**

![Existing 10th Street](image1)

**Figure 4-7. Conceptual Rendering of 10th Street with Proposed Project (Looking East)(For Illustrative Purposes Only)**

![Conceptual Rendering](image2)

Source: Transystems 2013
11th Street (Michigan City) Station

Construction of the high-level platforms and parking structure at the 11th Street (Michigan City) Station would alter the visual setting of the station area. The high-level platforms require grade changes on the approaches to the station that would block views of the existing surroundings as viewed from the street, businesses, and residences on the south side of 11th Street. Although the platforms would not alter the existing character and context of a rail corridor and adjacent roadway, they would be considered an adverse effect because they are located in a historic district. Figure 4-8 shows the existing 11th Street (Michigan City) Station area. A conceptual rendering of the 11th Street (Michigan City) Station area with the proposed Project is provided in Figure 4-9 for visualization purposes only.

Figure 4-8. Existing 11th Street (Michigan City) Station (Looking Northeast)
Removal of structures on 11th Street would impact the views of the historic buildings and streetscapes that contribute to the Elston Grove Historic District, proposed expansion of the Elston Grove Historic District, and the Franklin Street Commercial Historic District, as detailed in Section 4.4.3 and the Visual and Aesthetic Conditions Technical Memorandum (Appendix III).

In summary, the permanent visual impacts of the proposed Project would be primarily at station areas and within Gary and Michigan City. Between Gary and Michigan City, removal of limited trees and woodlands, marginal fill in scattered wetlands, introduction of parking lots, and additional tracks would not change the existing landscapes. Removal of structures, realigned tracks, and new structures in Michigan City would alter the existing landscape.

CONSTRUCTION IMPACTS

Construction of the proposed Project would result in temporary impacts on the surrounding visual environment because of construction work zones. Construction would primarily take place within existing SSL railroad ROW, on property acquired for the proposed Project, or on temporary construction easements immediately adjacent to railroad ROW, which would minimize visual impacts during construction.

4.5.4 MEASURES TO AVOID OR MINIMIZE HARM

Visual impacts of the proposed Project would be mitigated by developing the improvements according to the local communities’ design standards. This may include landscaping; lighting; reusing building façades; and/or using building construction materials, colors, and architectural styles consistent with station sites’ surroundings, to the extent possible. Measures to mitigate potential adverse visual impacts affecting the integrity of historic properties would be developed in consultation with SHPO, local historic planning commissions, and consulting parties as part of the Section 106 consultation process.
NICTD would continue to coordinate with the IDNR and NPS regarding the appropriate ratio and species for tree replacement mitigation. Mitigation for the loss of wetlands would be coordinated with the U.S. Army Corps of Engineers (USACE), Indiana Department of Environmental Management (IDEM), and NPS by enhancing areas within the Indiana Dunes National Lakeshore.

With application of these mitigation measures, no adverse visual impacts would occur.

4.6 NOISE

This section describes the predicted noise impacts of the proposed Project. More information can be found in the Noise and Vibration Technical Memorandum in Appendix III.

4.6.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

Procedures published by the FTA were used to evaluate the potential for noise and vibration impacts at sensitive receiver locations in the Project Area. The criteria are described in the FTA’s 2006 Transit Noise and Vibration Impact Assessment (FTA Manual). The guidance sets forth the basic concepts, methods, and procedures for evaluating the extent and severity of the noise and vibration impacts resulting from transit projects.

Noise is “unwanted or undesirable sound,” generally measured in terms of loudness. The loudness or magnitude of noise determines its intensity and is measured in decibels (dB). The overall noise level from transit sources is described in A-weighted decibels (dBA). The A-weighted decibel scale was developed to approximate the way the human ear responds to sound levels. Because the decibel is based on a logarithmic scale, a 10-dB increase in noise level is generally perceived as a doubling of loudness, while a 3-dB increase in noise is just barely perceptible to the human ear (FTA 2006). Figure 4-10 shows typical noise levels from transit and non-transit sources as well as typical noise levels associated with them.

The equivalent average sound level ($L_{eq}$) is often used to describe sound levels that vary over time, usually a 1-hour period. Using 24 consecutive 1-hour $L_{eq}$ values, it is possible to calculate daily cumulative noise exposure. A common community noise rating is the Day-Night Average Sound Level (DNL or $L_{dn}$). The $L_{dn}$ is the 24-hour $L_{eq}$ but includes a 10-dBA adjustment on noise that occurs during nighttime hours (between 10 PM and 7 AM) when sleep interference might be an issue. The $L_{dn}$ is useful when assessing noise in residential areas, or land uses where overnight sleep occurs (FTA 2006).

The proposed Project would upgrade an existing rail corridor where track currently exists and is currently generating relatively high levels of noise and vibration. FTA thresholds for noise and impacts depend on existing noise levels. As existing noise levels increase, the allowed increase in transit noise exposure decreases. Because existing noise levels from NICTD operations are quite high in some locations, noise impacts may be caused by relatively small increases in noise exposure.

NOISE ASSESSMENT METHODOLOGY

The operational noise assessment consists of the following general steps:

1. Establish the Project Area and identify noise-sensitive receptors
2. Evaluate the existing conditions and set corresponding impact thresholds
3. Predict the noise effects due to the proposed Project
4. Identify receptors anticipated to experience moderate or severe noise impacts
The FTA Manual provides screening distances with respect to particular project types or features. The screening distance defines the noise Project Area, and the area of potential noise influence due to the proposed Project. Receptors that are potentially influenced by the noise from the proposed Project are those that are described in land use categories 1, 2, or 3, as shown in Table 4-11.

Table 4-11. Land Use Categories

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Description of Land Use Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tracts of land where quiet is an essential element in their intended purpose. This category includes lands set aside for serenity and quiet, and such land uses as outdoor amphitheaters and concert pavilions, as well as National Historic Landmarks with significant outdoor use.</td>
</tr>
<tr>
<td>2</td>
<td>Residences and buildings where people normally sleep. This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.</td>
</tr>
<tr>
<td>3</td>
<td>Institutional land uses with primarily daytime and evening uses, including schools, libraries, theaters, churches, cemeteries, museums, parks, historical sites*, and certain parks and recreational facilities used for study or meditation. Parks and trails used for active recreation, such as sporting fields, playgrounds, trails, or areas where social groups gather, are not considered noise sensitive.</td>
</tr>
</tbody>
</table>

*Historic buildings are a special case. Noise sensitivity is determined by the current land use, not the historic land use. For example, a historic house that is used as a commercial shop today is not considered noise sensitive, whereas a historic warehouse converted to multi-unit residences is considered under land use category 2.
Noise sensitive receptors were identified by reviewing a combination of available land use-related GIS data; field surveys; available digital aerial photographs; and other area photography, including publicly available internet imagery. Receptors in the Project Area were identified and categorized for noise sensitivity based on the descriptions in Table 4-11.

The existing noise environment was characterized by measurements of outdoor noise in the Project Area. Five representative locations were chosen and measurements were taken on November 3, 2016. The FTA Manual provides a method for calculating the noise emissions of rail-related noise sources and the propagation from the source to a receptor. The noise emission of each Project-related noise source was estimated as a sound pressure level at 50 feet. This assessment relied on the default sound exposure level values found in the FTA Manual and adjusted for the particular train volumes, number of cars in each, and speeds of this Project. The existing NICTD transit vehicle horn level was measured by HDR in June 2017 and was used in this noise analysis.

The FTA Manual also provides a method for a cumulative noise analysis that was applied in Michigan City. Section 3.2.3 of the FTA Manual discusses circumstances where a project proposes to change existing service in an active transit corridor, rather than implement transit service in an area previously without transit service. In cases like this, the FTA Manual notes that it can be difficult to distinguish project-related noise from the existing noise. In these circumstances, FTA recommends an assessment of the cumulative changes in noise.

This cumulative method was applied in Michigan City because of the proposed removal of 21 at-grade crossings and proposed upgrades to the remaining at-grade crossings to include flashers, gates, and bells. The assessment of cumulative changes in noise was performed by modeling noise from the existing fleet of commuter and freight trains (including train horn use, where appropriate) and by modeling noise from the future fleet of commuter and freight trains (omitting train horn use where appropriate). The impact assessment was then performed by comparing these two results (existing modeled noise and future modeled noise), determining whether future noise levels would increase, and comparing that increase with Figure 3-2 in the FTA Manual. This cumulative approach is consistent with FTA Manual guidelines and recommendations and also allows the noise analysis to account for the benefits of the proposed Project (reductions in locomotive horn use in Michigan City). FTA approved the use of this method for this Project on April 12, 2017.

The noise impact thresholds used for the assessment were based on the FTA limits of allowable increase in noise levels and provide the framework for identifying the magnitude of the impact. Noise contours were developed for moderate and severe impacts for the Category 2 and 3 land uses, and were based on where the sound level meets the FTA’s allowable increase threshold. The moderate impact threshold defines areas where the noise would be noticeable, but might not be sufficient to cause a strong, adverse community reaction. The severe impact threshold defines the noise limits above which a substantial percentage of the population would be highly annoyed by new noise. Wayside noise (wheel-rail noise) contour distances are identified in Table 4-12. The third step in the noise assessment was to predict future noise levels and identify predicted noise impacts using a noise prediction model. Noise sensitive receptors that fell within the Category 2 or 3 moderate or severe noise contours were predicted to experience a noise impact. Those receptors that did not fall within the contours were not expected to experience noise impacts.
The construction noise assessment is based upon the methodology described in the FTA Manual. The construction noise assessment identified construction equipment commonly used for this type of project. Data from similar projects were used to estimate for internal combustion engines, numbers of equipment to be used during each phase of construction, the rated horsepower for each piece of equipment, and the duration for which each piece of equipment is anticipated to operate during construction activities. The resulting noise level from all noise sources during construction (construction equipment) was calculated at fixed distances from the noise source.

Table 4-12. Wayside Noise Contour Screening Distances (feet)

<table>
<thead>
<tr>
<th>Noise Analysis Segment</th>
<th>MP Begin</th>
<th>MP End</th>
<th>Land Use Category 1</th>
<th>Land Use Category 2</th>
<th>Land Use Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Moderate</td>
<td>Severe</td>
<td>Moderate</td>
</tr>
<tr>
<td>N1*</td>
<td>58.1</td>
<td>55.1</td>
<td>129</td>
<td>56</td>
<td>76</td>
</tr>
<tr>
<td>N2</td>
<td>55.1</td>
<td>48.0</td>
<td>110</td>
<td>48</td>
<td>63</td>
</tr>
<tr>
<td>N3</td>
<td>48.0</td>
<td>39.3</td>
<td>125</td>
<td>54</td>
<td>58</td>
</tr>
<tr>
<td>N4</td>
<td>39.3</td>
<td>35.5</td>
<td>97</td>
<td>43</td>
<td>60</td>
</tr>
<tr>
<td>N5</td>
<td>35.5</td>
<td>33.4</td>
<td>31</td>
<td>14</td>
<td>28</td>
</tr>
</tbody>
</table>

*N is the prefix used in the noise and vibration analyses to define geographic segments.

4.6.2 EXISTING CONDITIONS

Potential noise and vibration sensitive land use in the Project Area includes Land Use Category 2 receptors, such as single and multi-family residences and motels, as well as Category 3 receptors, such as churches, park areas, and schools. The concentrations of these types of receptors are most dense along the corridor in Gary, Portage/Ogden Dunes, Beverly Shores, Town of Pines, and Michigan City. Portage/Ogden Dunes and Beverly Shores have no Category 3 receptors in the corridor.

Between Gary and Michigan City, the proposed second track would be located adjacent to the existing NICTD/CSS railroad track. U.S. 12/U.S. 20 is also located just south of the existing and proposed track. The Project alignment is also parallel to the NS dual main tracks from MP 53.5 to MP 47.5. Generally, existing noise in this part of the Project Area is dominated by freight and passenger train traffic on the existing railroads. Roadway traffic on U.S. 12/U.S. 20, especially truck traffic associated with the ArcelorMittal steel mill, the Port of Indiana (at MP 49), and other industrial land uses in the area, also contributes to the noise environment.

In Michigan City, there is noise associated with the cars on 10th and 11th Streets, but the primary source of noise is the train horns that must be repeatedly blown due to the high number of at-grade road/rail crossings without AWDs and potential conflicts with automobiles, pedestrians, and bicyclists. Some vibration occurs where there is special track work or truck traffic.
Table 4-13 summarizes the noise monitoring data in the Project vicinity. Noise measurement locations are indicated in Figure 4-11 and correspond with receptor numbers in Table 4-13. The measurements concluded that the existing noise levels in the Project Area are already relatively high.

Table 4-13. Existing Noise Level Measurements in Project Area

<table>
<thead>
<tr>
<th>Receptor</th>
<th>MP</th>
<th>Municipality</th>
<th>Location (dBA)</th>
<th>Analysis Segment</th>
<th>$L_{eq}$ (dBA)</th>
<th>$L_{dn}$ (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1H</td>
<td>57.60</td>
<td>Gary</td>
<td>Dunes Court Apartments, 1738 E. 7th Avenue</td>
<td>NV1</td>
<td>64</td>
<td>68</td>
</tr>
<tr>
<td>3B</td>
<td>51.00</td>
<td>Ogden Dunes</td>
<td>27 Deer Trail</td>
<td>NV2</td>
<td>64</td>
<td>70</td>
</tr>
<tr>
<td>5C</td>
<td>43.70</td>
<td>Chesterton</td>
<td>33 U.S. 12</td>
<td>NV3</td>
<td>63</td>
<td>71</td>
</tr>
<tr>
<td>6A</td>
<td>36.65</td>
<td>Town of Pines</td>
<td>Central Avenue near U.S. 12</td>
<td>NV4</td>
<td>66</td>
<td>72</td>
</tr>
<tr>
<td>7K</td>
<td>33.95</td>
<td>Michigan City</td>
<td>11th Street (Michigan City) Station</td>
<td>NV5</td>
<td>70</td>
<td>76</td>
</tr>
</tbody>
</table>

Note: Arbitrary receptor numbers were assigned for fieldwork purposes.
Figure 4-11. Noise Measurement Locations in the Project Area
4.6.3 ENVIRONMENTAL IMPACTS

The following sections summarize the potential noise impacts of the No Build and the proposed Project.

NO BUILD ALTERNATIVE

There would be no predicted change in noise levels for the No Build Alternative. The noise levels for the No Build Alternative would not change over existing conditions and no noise impact from the Project would be predicted.

BUILD ALTERNATIVE

PERMANENT IMPACTS

Train noise levels under the proposed Project were calculated throughout the Project Area. These calculations accounted for both wayside noise and train horn use at at-grade crossings. The existing SSL train horn level was measured to be approximately 105 dBA at 50 feet. Analysis results were used to determine the distance from the tracks at which train noise levels equal the noise impact thresholds for moderate and severe noise impacts at Category 2 and 3 land uses. This information was then used to determine whether any noise-sensitive land uses exist within those distances to the track.

The distance-to-noise-impact contours were mapped, and the receptors within the impact contours were counted and identified as noise impacts as defined by FTA. Figures in the Noise and Vibration Technical Memorandum (Appendix III) show the noise contours and where noise impacts are projected to occur under the Build Alternative.

In Michigan City, the proposed Project would close 13 cross streets, eliminating the need for trains to sound their horns at these locations. For the remaining open cross streets, NICTD would work with Michigan City and FRA to implement a quiet zone between Sheridan Avenue and Carroll Avenue. As a result, neither SSL nor freight trains would need to sound their warning horns on a routine basis. To assess the net impact of the proposed Project in Michigan City, this analysis modeled existing SSL and freight operations including train horn use, and modeled future SSL and freight operations without train horn use. Results of those analyses were compared to determine the cumulative change in noise levels, and the cumulative change was compared with the FTA noise impact thresholds. Results of the cumulative assessment indicate that noise impacts would not occur in Michigan City, and in fact project-related noise would be reduced by up to 20 dBA. Details on the modeled existing and future sound levels for receptors in Michigan City can be found in the Noise and Vibration Technical Memorandum in Appendix III.

Table 4-14 shows the results of the noise impact assessment conducted using impact contours. Three impacts would be to Category 2 residential land uses in Gary and Beverly Shores.
Table 4-14. Operational Noise Impact Summary

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Moderate</td>
<td>Severe</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lake County Impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gary</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Porter County Impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portage</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Town of Pines</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Beverly Shores</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>LaPorte County Impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michigan City</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

One moderate impact is projected to occur at a residence in Gary, attributable to train horn noise at the Tennessee Street and Ohio Street at-grade crossing south of U.S. 12. Two moderate noise impacts are projected to occur at residences in Beverly Shores attributable to train horn noise at the Broadway Avenue at-grade crossing.

CONSTRUCTION IMPACTS

The proposed Project is expected to have only temporary, intermittent noise impacts from construction. Equipment used to move soil and other earthen materials are often the loudest construction noise sources. The FTA does not have standardized criteria for construction noise, but suggests reasonable criteria that can be used for assessment purposes. The criteria for residential land uses are 1-hour $L_{eq}$ of 90 dBA during the day and 80 dBA during the night. All of the construction equipment emits noise that is potentially louder than maximum allowable noise levels in Michigan City’s noise ordinance. The placement of construction equipment would be evaluated at various times during construction to avoid overexposure at any single receptor and to avoid potential complaints. Coordination and review by the City of Michigan City would be required prior to construction.

Construction noise analysis results indicate the total combined noise for all equipment types and construction phases never reaches over the 90 dBA threshold at 200 feet, even using a conservative approach to the evaluation. The results conservatively overestimate actual expected construction noise levels by assuming that all equipment (i.e., all dump or pickup trucks) would operate at the same location simultaneously. Typically, construction equipment would be spread throughout the construction work zone. Given the linear nature of the proposed Project and the relatively confined width of the railroad ROW, it is reasonable to assume that all equipment would not operate next to each other in the same (stationary) location for the entirety of one hour. In all other cases, the results were assumed to be within 3 dBA of likely construction noise levels, assuming that the equipment has been properly maintained and the mufflers are in good condition.
4.6.4 MEASURES TO AVOID OR MINIMIZE HARM

The need to mitigate Project operational noise depends on the magnitude of the impact. According to the FTA Manual, severe noise impacts are likely to result in a significant percentage of people being highly annoyed by Project-related noise. Noise mitigation would normally be specified for severe impact areas, unless there is no practical method of mitigating the impact. FTA does not require mitigation for moderate noise impacts; however, the moderate impacts from the Project are in the upper moderate impact range and warrant mitigation.

NICTD would mitigate the noise increase attributable to train horn noise in Gary and Beverly Shores by lowering the horn level on NICTD trains to 100 dBA at 50 feet. Doing so would still be compliant with FRA minimum requirements of 96 dBA. NICTD would work with Michigan City to implement a quiet zone between Sheridan Avenue and Carroll Avenue; the quiet zone requires approval from the FRA. This will eliminate the need for routine locomotive horn use by NICTD and freight trains in this segment of the proposed Project.

Construction activities generate some degree of noise and vibration, although usually the effects are temporary and unavoidable. An effective method to limit noise and vibration effects during construction is to include noise and vibration performance specifications in construction contract documents that are consistent with local jurisdictional ordinances.

Additionally, construction contractors would be required to develop a construction noise and vibration management plan. This may be a singular plan or it may be included in a larger environmental management plan for the construction project. At a minimum, the plan would include the following:

- Identification of the proposed Project’s noise control objectives and potential components
- Summary of noise and vibration-related criteria and local ordinances for construction contractors to abide by
- Requirement of a pre-construction survey to identify receptors potentially affected by construction noise and vibration and document the pre-construction conditions of particularly susceptible receptors
- List of potential mitigation measures, a plan to implement mitigation, and an approach for deciding the appropriateness of mitigation by construction activity and receptor
- Identification of methods to minimize noise impacts on adjacent noise-sensitive stakeholders while maintaining construction progress
- Plans for coordination with affected project stakeholders to minimize intrusive construction effects
- Process to handle and resolve any noise-related complaints

4.7 VIBRATION

This section describes the predicted vibration impacts of the proposed Project. More information can be found in the Noise and Vibration Technical Memorandum in Appendix III.

Ground-borne vibration (GBV) can be caused by the vibration of a transit structure, creating vibration waves that propagate through the soil and rock to the foundations of nearby buildings. The vibration of floors and walls may be perceptible and cause rattling of items such as windows or dishes on shelves, a rumble noise, or damage to buildings in extreme cases (FTA 2006).
In contrast to airborne noise, GBV is not an everyday experience for most people. Vibration is described in terms of velocity (L_v) and is measured in decibels (VdB). The background vibration level in residential areas is usually 50 VdB or lower—well below the threshold of perception for humans, which is around 65 VdB (FTA 2006). Levels at which vibration interferes with sensitive instrumentation can be much lower than the threshold of human perception, such as for medical imaging equipment or extremely high-precision manufacturing. Most perceptible indoor vibration is caused by sources within a building, such as the operation of mechanical equipment, movement of people, or slamming of doors (Figure 4-12). Typical outdoor sources of perceptible GBV are construction equipment, steel-wheeled trains, and traffic on rough roads; however, GBV dissipates very rapidly in most soils.

**Figure 4-12. Typical Vibration Levels and Responses**

<table>
<thead>
<tr>
<th>Human/Structural Response</th>
<th>Velocity Level</th>
<th>Typical Sources (50 ft from source)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold, minor cosmetic damage, fragile buildings</td>
<td>100</td>
<td>Blasting from construction projects</td>
</tr>
<tr>
<td>Difficulty with tasks such as reading a VDT screen</td>
<td>90</td>
<td>Bulldozers and other heavy tracked construction equipment</td>
</tr>
<tr>
<td>Residential annoyance, infrequent events (e.g. commuter rail)</td>
<td>80</td>
<td>Commuter rail, upper range</td>
</tr>
<tr>
<td>Residential annoyance, frequent events (e.g. rapid transit)</td>
<td>70</td>
<td>Rapid transit, upper range</td>
</tr>
<tr>
<td>Limit for vibration sensitive equipment. Approx. threshold for human perception of vibration</td>
<td>60</td>
<td>Commuter rail, typical</td>
</tr>
<tr>
<td>Typical background vibration</td>
<td>50</td>
<td>Bus or truck over bump</td>
</tr>
</tbody>
</table>

* RMS Vibration Velocity Level in VdB relative to 10^-6 inches/second

Source: FTA 2006

**4.7.1 VIBRATION ASSESSMENT METHODOLOGY**

The vibration assessment was conducted according to the FTA Manual. The vibration assessment consisted of the following general steps:

1. Establish the study area and identify vibration-sensitive land uses
2. Evaluate the train traffic conditions and set corresponding impact thresholds
3. Predict the vibration impacts attributable to implementation of the project
4. Identify receptors anticipated to experience vibration impacts

The FTA Manual provides screening distances with respect to particular project types. The screening distance defines the vibration study area for each land use type. Vibration-sensitive receptors in the Project Area were identified and categorized according to the land use categories identified in Table 4-15.
### Table 4-15. Land Use Categories for Transit Vibration Impact Criteria

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Description of Land Use Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High Vibration Sensitivity: Buildings where ambient vibration well below levels associated with human annoyance is essential for equipment or operations within the building. Typically includes vibration-sensitive research and manufacturing facilities, hospitals, and university research operations.</td>
</tr>
<tr>
<td>2</td>
<td>Residential: Includes all residential land uses and any building where people sleep, such as hotels and hospitals.</td>
</tr>
<tr>
<td>3</td>
<td>Institutional: Schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference. Includes certain office buildings, but not all buildings that have office space.</td>
</tr>
</tbody>
</table>

Source: FTA 2006  
Notes: Special buildings such as concert halls, television and recording studios, and theaters have separate vibration impact thresholds due to the unique sensitivity of such buildings.

The FTA’s vibration impact criteria were used to predict future vibration impacts from transit operations. FTA identifies separate criteria for both GBV and ground-borne noise (GBN). Since GBN criteria are primarily applied to subway operations in which airborne noise is negligible, it was not evaluated in this study.

Vibration impact thresholds are differentiated between vibration-sensitive land uses and the frequency of the events. More vibration events would result in more vibration impacts.

- **Infrequent Events**: Fewer than 30 vibration events per day. This category includes most commuter rail branch lines.
- **Occasional Events**: Between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
- **Frequent Events**: More than 70 vibration events per day. Most rapid transit projects fall into this category.

Based on these thresholds, the existing SSL was considered to have “Infrequent Events,” and the future SSL after completion of the proposed Project would be considered to have “Occasional Events” due to the increase in service.

The impact thresholds for vibration from rail transit systems are also used to assess vibration impact from freight trains in shared ROW situations, such as the proposed Project.

However, the locomotive and rail car vibration caused by freight trains must be considered separately because of the greater length, weight, and axle loads of a typical line-haul freight train. Locomotive vibration lasts for only a very short time; therefore, locomotive event frequency is essentially the same as the train event frequency. However, the rail car vibration of a typical line-haul freight train lasts for several minutes; therefore, each freight car is considered a separate event. More information is found in the *Noise and Vibration Technical Memorandum* in Appendix III.

A brief qualitative assessment of construction vibration impacts is provided, as suggested by the FTA Manual, since construction methods would not be expected to have potential for damaging fragile buildings or interfering with equipment or activities that are highly sensitive to GBV. Examples include
projects that utilize blasting, pile-driving, pavement breaking, vibratory compaction, and drilling or excavating the ground near sensitive structures.

4.7.2 EXISTING CONDITIONS

Existing vibration sources in the corridor include SSL and CSS rail operations and heavy truck traffic on U.S. 12. The FTA Manual guidelines for a general vibration assessment were followed for this Project to provide a conservative prediction of potential impacts for the Build Alternative at this stage of design.

Table 4-16 shows the existing traffic volume for SSL trains and train speeds for the track segments used in the vibration analysis. The proposed Project would result in an increase in the number of trips on each track segment and an increase in the train speeds in some segments.

Table 4-16. Vibration Analysis Segments for Existing Conditions

<table>
<thead>
<tr>
<th>Code</th>
<th>MP Begin</th>
<th>MP End</th>
<th>Daily Trains</th>
<th>Train Speed (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV1</td>
<td>58.1</td>
<td>55.1</td>
<td>28</td>
<td>58.8</td>
</tr>
<tr>
<td>NV2</td>
<td>55.1</td>
<td>48.0</td>
<td>28</td>
<td>75.0</td>
</tr>
<tr>
<td>NV3</td>
<td>48.0</td>
<td>39.3</td>
<td>28</td>
<td>76.8</td>
</tr>
<tr>
<td>NV4</td>
<td>39.3</td>
<td>35.5</td>
<td>28</td>
<td>79.0</td>
</tr>
<tr>
<td>NV5</td>
<td>35.5</td>
<td>33.4</td>
<td>28</td>
<td>23.8</td>
</tr>
</tbody>
</table>

Source: NICTD 2016e
Existing Track Layout (HDR)
Notes: Trains are counted in one-way trips; one train represents a single train pass-by event. Train speed is the linear average of the existing track design speeds throughout the segment defined by the mileposts.

Existing vibration levels were determined from the combined number of all types of trains per day (existing SSL trains and existing freight trains). The volume of existing SSL train traffic generates fewer than 30 vibration events per day (Infrequent Events). Consequently, very few receptors would be considered to be adversely affected by vibration from the existing train traffic.

For sensitive receptors (Category 1 land uses) within an existing rail corridor, the FTA General Vibration Assessment was used to determine existing vibration levels. The existing conditions as described in this section were determined from the combined number of all types of trains per day. The volume of existing SSL trains combined with the volume of existing freight trains is more than 12 trains per day; therefore, this was considered a “Heavily Used Rail Corridor,” which is a term defined by the FTA and used in the general vibration assessment in the FTA Manual (FTA 2006). Along 10th Street in Michigan City, the track realignment was considered to be “Moving Existing Tracks.”
4.7.3 ENVIRONMENTAL IMPACTS

The following sections summarize the potential vibration impacts of the No Build and Build Alternatives.

NO BUILD ALTERNATIVE

There would be no predicted change in vibration levels for the No Build Alternative. The vibration levels for the No Build Alternative would not change over existing conditions and no vibration impact would be predicted.

BUILD ALTERNATIVE

PERMANENT IMPACTS

Train vibration levels under the Build Alternative were calculated throughout the Project Area as described in previous sections. Analysis results were used to determine the distance from the tracks at which train vibration levels would equal the vibration impact thresholds for impacts at Category 1, 2, and 3 land uses. This information was then used to determine whether any vibration-sensitive receptors exist within those distances to the track; if so, they could be considered vibration impacts.

Distance-to-vibration-impacts were mapped and the receptors within the impact contours were identified as vibration impacts as defined in the FTA Manual. Eight vibration impacts are projected to occur: one in the Town of Pines, two in Beverly Shores, and five in Michigan City. These impacts are attributable to train wheels rolling on the rail. Details on these vibration impacts can be found in the Noise and Vibration Technical Memorandum in Appendix III.

Table 4-17 shows the results of the vibration impact assessment. No impacts to any Category 1 or Category 3 receptors would occur; all impacts would affect Category 2 land uses, all residential.  

Table 4-17. Operational Vibration Impact Summary

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake County Impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gary</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Porter County Impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portage/Ogden Dunes</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Beverly Shores</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Town of Pines</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>LaPorte County Impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michigan City</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

Three mobile home residences at the Oak Grove Trailer Court in the Town of Pines, between MP 37 and MP 38, are within the vibration contour. Because mobile homes typically have aboveground stands, they are less sensitive to vibration than standard foundations. The vibration impact contours assume that all structures have standard foundations. The analysis concluded that these mobile homes would not experience vibration impacts and are, therefore, not included in Table 4-17.
Vibration impacts would include:

- Two residential vibration impacts in Beverly Shores, east of Broadway Avenue
- One vibration impact in the Town of Pines, in a residential neighborhood between Lake Shore County Road and Poplar Street
- Five vibration impacts in Michigan City on the north side of West 11th Street, between Elston and Washington Streets (MP 34 to MP 35)

CONSTRUCTION IMPACTS

Most construction equipment can cause ground vibration, which diminishes in strength rapidly with distance. Some construction activities have potential for producing higher vibration levels, such as pavement breaking, vibratory compaction, and drilling or excavating the ground, and the highest vibration levels typically result from blasting activities or impact pile driving. The construction activities associated with the proposed Project would not include blasting or impact pile driving. Other activities have the potential to create temporary perceptible vibrations when construction activities move very close to a structure. However, these effects would be temporary, occurring only while the construction equipment moves through that location.

4.7.4 MEASURES TO AVOID OR MINIMIZE HARM

To limit vibration impacts from construction activities and reduce the potential for impacts, the construction contract documents would specify vibration limits for construction activities. The vibration control measures include, but are not limited to the following:

- Rerouting construction-related truck traffic along roadways that would cause the least disturbance to residents
- Performing a pre-construction survey in the vicinity of sites where vibration activities would occur in order to document the pre-construction conditions of potentially affected structures
- Conducting vibration monitoring during construction to verify compliance with the limits
- Establishing a complaint resolution procedure to rapidly address any problems that may develop during construction
- Coordinating with the communities

To mitigate the projected vibration impacts in the Town of Pines, Beverly Shores, and Michigan City, NICTD would consider installing crosstie pads, ballast mats, resilient rail fasteners, or other track support system modifications. These materials would be evaluated for effectiveness at impacted receptors and for durability in a shared freight corridor during the final design phase of the project; final mitigation measure selection would be performed at that time.
Crosstie pads are highly elastic pads that are fitted to the base of a tie for providing vibration isolation (Figure 4-13). In addition to reducing disruptive vibrations, these types of pads offer other advantages including a possible reduction in maintenance expenses and lengthening the service life of the track structure. They also represent an economical alternative to ballast mats as a vibration isolating measure.

A ballast mat has a top layer consisting of geotextile or fleece with high stretch and tear resistance. The resilient layer consists of microcellular polyurethane materials. Ballast mats would be places between the ballast and subballast layers of a typical track cross section (Figure 4-14). Ballast mats can also be placed on a layer of hot mix asphalt under the rail, ties, and ballast, which may be needed to stiffen up the subsurface layer. A ballast mat consists of a pad made of rubber or rubber-like material placed on an asphalt concrete base with the normal ballast, ties, and rail on top. The reduction in GBV provided by a ballast mat is strongly dependent on the vibration frequency content and the design and support of the mat.

Resilient ties involve a special soft rubber pad embedded in the base of a tie. The pad provides a pliable surface to help anchor the ties on ballast and also provides vibration isolation between the tie and the ballast. Test results have shown this treatment to be very effective at frequencies above 25 Hertz (Hz). Resilient rail fasteners are also used to provide vibration isolation between rails and ties. These fasteners include a soft, resilient element to provide greater vibration isolation than standard rail fasteners in the vertical direction. There are resilient fasteners available that can be used on high axle load systems such as locomotive hauled trains. Resilient rail fasteners are shown to be effective at frequencies above 40 Hz.

4.8 HAZARDOUS/REGULATED MATERIALS

This section discusses the potential for encountering hazardous materials during proposed Project construction and implementation. Hazardous materials may include petroleum products, pesticides, organic compounds, heavy metals, asbestos-containing materials, lead paint, or other compounds that would harm human health or the environment (ASTM E1527-13). The nature and extent of contamination can vary widely; early detection, evaluation, and determination of appropriate remediation of hazardous materials are essential. Information in this section is derived from the Hazardous and Regulated Materials Technical Memorandum and Phase II Environmental Site Assessment included in Appendix III.
**4.8.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY**

Federal and state laws have been established for the protection of human health and the environment. At the federal level, the regulations include the Resource Conservation and Recovery Act (RCRA)(42 USC 82); the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)(42 USC 103); the Superfund Amendments and Reauthorization Act; the Clean Air Act (CAA)(42 USC §7401 et seq.); the Toxic Substances Control Act; and the Occupational Safety and Health Act (OSHA)(29 USC 15). At the state level, regulations and programs include the Indiana Title 329 Solid Waste Management Division (329 IC 3.1), with oversight by IDEM.

The corridor Phase I Environmental Site Assessment (ESA) was conducted in general conformance with American Society for Testing and Materials (ASTM) E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM International 2013). The purpose of the corridor Phase I ESA was to identify Recognized Environmental Conditions (RECs) and to provide information for use in evaluating the potential impacts of RECs on the proposed Project. A search for environmental liens and activity and use limitations (AUL) was also conducted as a part of this corridor Phase I ESA.

NICTD also performed Phase II ESAs on properties that they would acquire that were determined to be high- or medium-risk sites in the Phase I ESA. The Phase II ESA included verification of environmental impacts concerning current, former, or historic site uses at four locations along U.S. 12 in Gary. Eight soil borings were advanced to depths of 8 to 12 feet below ground surface, into the groundwater surface. Two soil samples were collected from each boring, and one groundwater sample was collected from each location. Soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and RCRA metals. Groundwater samples were analyzed for VOCs, SVOCs, and total and dissolved RCRA metals. RECs can include historical RECs (HRECS) and controlled RECs (CRECs). RECs, HRECS, and CRECs are defined below.

A **REC**, as defined by ASTM E1527-13, is the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not RECs. A de minimis release, as defined in ASTM E1527-13, is a release that generally does not pose a threat to human health or the environment and that generally would not be the subject of an enforcement action if it were brought to the attention of appropriate government agencies.

A **CREC**, as defined by ASTM E1527-13, refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

An **HREC**, as defined by ASTM E1527-13, refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

RECs and CRECs could adversely affect the Project Area; therefore, NICTD evaluated each identified REC and CREC for its risk potential to the proposed Project based on the following criteria:

- **Low Risk**: Environmental condition is unlikely to adversely affect the design, scope, schedule, or fee of the proposed Project based on distance, gradient, and/or known subsurface conditions not meeting or exceeding regulatory thresholds.
- **Medium Risk**: Environmental concern source is not located within and/or does not immediately adjoin the construction footprint; however, migration of contaminants could potentially adversely affect the Project Area. Further subsurface investigation may be warranted to assess whether potential contamination is present within the construction footprint.

- **High Risk**: Environmental concern source is within or immediately adjoins the construction footprint and/or has known environmental impacts that extend into the construction footprint. High-risk concerns have the potential to substantially affect scope, schedule, and/or budget of construction activities and/or acquisition areas along the Project Area. Further subsurface investigation would be required to confirm soil conditions within the construction footprint.

A review of federal, state, and local regulatory databases was conducted to identify sites that currently or have historically handled, stored, transported, released, or disposed of hazardous or regulated materials, as these types of sites are potential sources of hazardous material contamination. In addition, NICTD reviewed historical Sanborn® fire insurance maps, topographic and aerial maps, and other sources for the analysis (Envirosite Corporation 2017a, 2017b; IGS 2017).

### 4.8.2 EXISTING CONDITIONS

NICTD conducted a desktop-level review of standard environmental records available on the IDEM IndianaMAP and the USEPA EnviroMapper to identify sites of potential environmental concern within 1,000 feet of the existing SSL track centerline. This review was completed July 27, 2016, and identified 41 listings within the Project Area.

Based on the review of databases, historical data, and observations from the site visit, 22 RECs were identified along the Project Area, including 10 high-risk RECs, 5 medium-risk RECs, and 7 low-risk RECs. **Figure 4-15** provides an overview of locations of areas of concern (AOCs). A summary of the RECs in each AOC is provided in **Table 4-18**. A search for parcel-specific environmental liens and AULs was completed with no findings.

Given that the proposed Project traverses a number of urban areas, the potential exists for the presence of typical urban fill in portions of the Project Area. Typical urban fill normally contains elevated concentrations of polynuclear aromatic hydrocarbons and metals, which are present because of the urban setting that includes nearby roadways, railways, and industrial and commercial land uses. This type of contamination is not necessarily associated with a release from a specific site or source. Urban fill may also include building demolition debris, which was commonly used as fill material in excavations.

Additionally, hazardous materials are included in the commodities CSS transports through the Project Area. These cargos typically consist of chemical compounds and do not include nuclear or radioactive materials. CSS has a number of safety and security protocols in place to protect hazardous materials and to prevent and respond to releases. Due to their confidential nature, CSS safety, security and hazardous materials plans are not included in this EA.
Figure 4-15. Locations of AOCs
Table 4-18. RECs Identified for the AOCs in the Project Area

<table>
<thead>
<tr>
<th>AOC #</th>
<th>REC #: Facility Name (Address)</th>
<th>Direction/Distance from Construction Footprint</th>
<th>Risk Level</th>
<th>Analysis (acronyms are defined at the end of the table)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>REC 1-1: E. T. Doyne (unknown facility type) (5813 E. Dunes Highway)</td>
<td>Within construction footprint</td>
<td>Low</td>
<td>5813 E. Dunes Highway is listed on the UST database (FID #11897). According to the UST database, the site was occupied by one permanently out-of-service 275-gallon used oil. No records of previous sampling were identified during the investigation of the site. No records of previous sampling were identified during the investigation, and the site is within the construction footprint. IDEM issued a No Further Action (NFA) for the site. The E. T. Doyne facility is a low-risk REC.</td>
</tr>
<tr>
<td>01</td>
<td>REC 1-2: Various Filling Stations and Oil Service Facilities (Speedway #8333) (750 S. Lake Street)</td>
<td>South/ adjacent</td>
<td>Medium</td>
<td>Various filling stations and oil service facilities were located at 750 S. Lake Street between at least 1952 and 1990. The Speedway-branded filling station that currently occupies the site has existed since at least 2006. Speedway filling station #8333 is located at 750 S. Lake Street, which is listed in the LUST database (FID #5696; IDEM Incident #199405538 and 199412518). Groundwater monitoring was conducted until 2009 (The Environmental Solutions Group 1994). According to the most recent groundwater monitoring data, petroleum-contaminated groundwater remains on site (Speedway SuperAmerica 2009). Additionally, groundwater impacts were detected offsite to the north, but were below cleanup target level guidance. Nevertheless, IDEM issued an NFA for the site in September 2009. Additionally, in a subsequent response to an NFA objection letter, IDEM indicated there was no known contamination that had migrated offsite. Given petroleum-contaminated groundwater remains onsite and could have potentially migrated offsite to the north, the filling station is a medium-risk REC.</td>
</tr>
<tr>
<td>01</td>
<td>REC 1-3: Filling Station (5601 E. Dunes Highway)</td>
<td>Within construction footprint</td>
<td>High</td>
<td>A filling station was located at 5601 E. Dunes Highway during the 1940s. The site is not listed in the standard environmental records that were researched. Any previous spills or releases could have adversely affected soil and/or groundwater in the Project Area; therefore, the former filling station is a high-risk REC.</td>
</tr>
<tr>
<td>01</td>
<td>REC 1-4: Filling Station (5890 E. Melton Road)</td>
<td>South/ adjacent</td>
<td>High</td>
<td>A filling station was located at 5890 E. Melton Road (formerly E. 8th Avenue) during the 1940s. Any previous spills or releases could have adversely affected soil and/or groundwater in the Project Area; therefore, the former filling station is a high-risk REC.</td>
</tr>
</tbody>
</table>
Table 4-18. (cont.)

<table>
<thead>
<tr>
<th>AOC #</th>
<th>REC #: Facility Name (Address)</th>
<th>Direction/Distance from Construction Footprint</th>
<th>Risk Level</th>
<th>Analysis (acronyms are defined at the end of the table)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>REC 1-5: Filling Station (5880 E. Melton Road)</td>
<td>Within construction footprint</td>
<td>High</td>
<td>A filling station was located at 5880 E. Melton Road (formerly E. 8th Avenue) during the 1970s. Any previous spills or releases could have adversely affected soil and/or groundwater in the Project Area; therefore, the former filling station is a high-risk REC.</td>
</tr>
<tr>
<td>01</td>
<td>REC 1-6: Auto Body Paint and Repair Shop (5705 E. Dunes Highway)</td>
<td>Within construction footprint</td>
<td>High</td>
<td>An auto repair facility was located at 5705 E. Dunes Highway between circa 1949 and circa 1977. Any previous spills or releases could have adversely affected soil and/or groundwater in the Project Area; therefore, the former auto repair facility is a high-risk REC.</td>
</tr>
<tr>
<td>01</td>
<td>REC 1-7: Filling Station/Auto Repair Facility (5401 E. Dunes Highway)</td>
<td>Within construction footprint</td>
<td>High</td>
<td>A filling station and auto repair facility was located at 5401 E. Dunes Highway between circa 1946 and circa 1977. Any previous spills or releases could have adversely affected soil and/or groundwater in the Project Area; therefore, the former filling station and auto repair facility is a high-risk REC.</td>
</tr>
<tr>
<td>01</td>
<td>REC 1-8: Auto Repair Facility (5939 Miller Avenue)</td>
<td>North/300 feet</td>
<td>Low</td>
<td>An auto repair facility was located at 5939 Miller Avenue during the 1940s. The former auto repair facility was located 300 feet north and downgradient of the construction footprint; therefore, the former auto repair facility is a low-risk REC.</td>
</tr>
<tr>
<td>01</td>
<td>REC 1-9: Broadway Lumber &amp; Supply Corp (5400 Miller Avenue)</td>
<td>North/400 feet</td>
<td>Low</td>
<td>5400 Miller Avenue is listed on the LUST (LUST Incident #199011513) database. The LUST case was started following the removal of a 1,000-gallon UST at the site. The highest contamination level of soil samples collected following the removal of the UST was 66 mg/kg of TPH (IDEM 1998). Based on the results of the sampling, IDEM issued a No Further Action determination for the site. No further monitoring or remediation activities have been conducted at the site since 1998. The Broadway Lumber &amp; Supply Corp site is a low-risk REC.</td>
</tr>
</tbody>
</table>
Table 4-18. (cont.)

<table>
<thead>
<tr>
<th>AOC #</th>
<th>REC #: Facility Name (Address)</th>
<th>Direction/Distance from Construction Footprint</th>
<th>Risk Level</th>
<th>Analysis (acronyms are defined at the end of the table)</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>REC 2-1: CSX Train Derailment (6700 Old Hobart Road)</td>
<td>South/adjacent</td>
<td>Low</td>
<td>6700 Old Hobart Road is listed on the SCP (SCP Code #201228224) and CERCLIS/SEMS (CERCLIS Site ID #0510765) databases. IDEM was notified about a release of petroleum and/or hazardous substances at this location in 2012. IDEM issued a Site Closure Letter in 2013 (IDEM 2013), which stated that site investigation and remediation were conducted in accordance with the IDEM Remediation Closure Guide. The CSX Train Derailment is a low-risk REC.</td>
</tr>
<tr>
<td>03</td>
<td>REC 3-1: Dunes Service Station (5865 E. Dunes Highway)</td>
<td>Southwest/adjacent</td>
<td>High</td>
<td>A Marathon-branded filling station has occupied 5865 E. Dunes Highway since at least 2013. The property at 5865 E. Dunes Highway is listed on the UST database (FID #521) as Dunes Service Station. According to the UST database, the site has one permanently out-of-service, 4,000-gallon gasoline UST and two currently in-use 6,000-gallon gasoline USTs. The site is located adjacent to and upgradient of the construction footprint. The site is occupied by a filling station. No records of previous sampling were encountered during the investigation. Any potential nondocumented spills or releases could have adversely affected soil and/or groundwater in the Project Area; therefore, the Dunes Service Station is a high-risk REC.</td>
</tr>
<tr>
<td>04</td>
<td>REC 4-1: Bethlehem Steel Corp Phillip Metals (U.S. 12 and State Route 149)</td>
<td>Southeast/150 feet</td>
<td>Medium</td>
<td>U.S. 12 and State Route 149 is listed on the LUST database (FID #18269/10914/17988/15662). Petroleum contamination was discovered at the site following the removal of a 50,000-gallon diesel-fuel UST in 1988. Soil samples collected following the excavation of about 900 cubic yards of contaminated soil averaged 71 mg/kg of TPH. IDEM issued an NFA rail determination for the site. No further monitoring or remediation activities have been conducted at the site since. Although the documented release did not extend to the Project Area, any undocumented spills or releases since remedial activities were conducted could have adversely affected the soil and/or groundwater in Project Area. The site is located about 150 feet southeast and upgradient of the construction footprint; therefore, the Bethlehem Steel Corp Phillip Metals facility is a medium-risk REC to AOC #4.</td>
</tr>
<tr>
<td>04</td>
<td>REC 4-2: Rail Yard</td>
<td>Northeast/250 feet</td>
<td>Medium</td>
<td>A rail yard has existed toward the northeast portion of the AOC since at least 1973. Any previous spills or releases could have adversely affected soil and/or groundwater in the Project Area; therefore, the rail yard is a medium-risk REC.</td>
</tr>
<tr>
<td>AOC #</td>
<td>REC #: Facility Name (Address)</td>
<td>Direction/Distance from Construction Footprint</td>
<td>Risk Level</td>
<td>Analysis</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------</td>
<td>-----------------------------------------------</td>
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<td>----------</td>
</tr>
<tr>
<td>05</td>
<td>REC 5-1: NIPSCO Bailly Generating Station (246 Bailly Station Road)</td>
<td>Northeast/adjacent</td>
<td>Low</td>
<td>246 Bailly Station Road is listed on the CERCLIS NFRAP/SEMS-Archive, LUST (FID #6096), and RCRA CORRACTS (RCRA ID #IND000718114) databases. Several UST removals from the site between 1988 and 2015 resulted in the creation of IDEM Incidents #199008591, 199211072, and 201504507. All soil samples collected following the most recent UST removals from the site in 2015 were below detection levels for all potential petroleum contaminants. Additionally, all groundwater samples collected during the sampling were below detection levels for all potential petroleum contaminants, with the exception of lead detected at 20 µg/L (the IDEM RCG residential tap screening level for lead is 15 µg/L). The site is currently occupied by ArcelorMittal, a steel manufacturer. According to NIPSCO representatives, contaminated soil remains on site within the boundaries of the facility, which is currently capped and controlled via an Environmental Restrictive Covenant. Based on current regulatory status with regards to soil contamination controls and lack of groundwater contamination, the NIPSCO Bailly Generating Station is a low-risk REC.</td>
</tr>
<tr>
<td>13</td>
<td>REC 13-1: Jannsen Dunes Mart (2 E. Dunes Highway)</td>
<td>South/adjacent</td>
<td>High</td>
<td>2 E. Dunes Highway has been occupied by a Marathon-branded filling station since at least 2005. The facility is listed on the LUST database (FID #12781/11674). A release was discovered during the removal of three USTs at the site in 1995, resulting in the creation of IDEM Incident #199510519. Soil sampling was conducted at the site between 1995 and 1998. The most recent soil samples collected from the site all contained TPH concentrations less than 25 mg/kg. The filling station is located adjacent to and upgradient of the construction footprint. Any previous spills or releases could have adversely affected soil and/or groundwater in the Project Area; therefore, the Jannsen Dunes Mart is a high-risk REC.</td>
</tr>
<tr>
<td>17</td>
<td>REC 17-1: Goodyear Asc 6141 (1102 Franklin Street)</td>
<td>South/adjacent</td>
<td>Low</td>
<td>The former Goodyear Asc 6141, located at 1102 Franklin Street, is listed on the UST and LUST databases (FID #2148). A 550-gallon waste-oil UST was removed from the site in 1994. During the UST removal activities, samples were collected from the excavation pit and of the solidified sludge in the UST. All samples collected were below IDEM RCG MTG screening levels with the exception of benzene (2.63 mg/kg) and toluene (35.0 mg/kg) in the solidified sludge sample. Based on the most recent sampling event, contamination does not extend to the construction footprint; therefore, the former Goodyear Asc 6141 is a low-risk REC.</td>
</tr>
</tbody>
</table>
## Table 4-18. (cont.)

<table>
<thead>
<tr>
<th>AOC #</th>
<th>REC #: Facility Name (Address)</th>
<th>Direction/Distance from Construction Footprint</th>
<th>Risk Level</th>
<th>Analysis (acronyms are defined at the end of the table)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>REC 17-2: Virks BP Amoco (1204 Franklin Street)</td>
<td>South/200 feet</td>
<td>Medium</td>
<td>A filling station has been located at 1204 Franklin Street since the late 1990s. The facility is listed on the LUST database (FID #10560). Free product was discovered during an investigation at the site in 1990. Quarterly groundwater monitoring events have been conducted at the site since 1999. Confirmatory soil samples collected in 2009 were below detection levels for all COCs analyzed. Additionally, the most recent groundwater samples collected from the site in 2009 were all below IDEM RCG residential tap screening levels for all COCs analyzed. Although the contamination from the 1990 release did not extend to the Project Area, any spills or releases since the 2009 sampling event could have adversely affected soil and/or groundwater in the Project Area; therefore, the Virks BP Amoco site is a medium-risk REC.</td>
</tr>
<tr>
<td>17</td>
<td>REC 17-3: Filling Station (918 Franklin Street)</td>
<td>Northwest/adjacent</td>
<td>High</td>
<td>A filling station was located at 918 Franklin Street between at least 1936 and 1948. The site configuration has remained unchanged since that time. Additionally, no regulatory records related to USTs were identified. Based on the potential that UST(s) and/or contamination remain onsite, the former filling station is a high-risk REC.</td>
</tr>
<tr>
<td>17</td>
<td>REC 17-4: Filling Station (1002-1008 Franklin Street)</td>
<td>Within Construction Footprint – to be purchased by Michigan City</td>
<td>High</td>
<td>A filling station was located at 1002-1008 Franklin Street between at least 1936 and 1965. The site configuration has remained unchanged since that time. Additionally, no regulatory records related to USTs were identified. Based on the potential that UST(s) and/or contamination remain onsite, the former filling station is a high-risk REC.</td>
</tr>
<tr>
<td>19</td>
<td>REC 19-1: Michigan City Chrysler Plymouth/Baron Financial Corp (824 E. 11th Street)</td>
<td>North/adjacent (Partially within construction footprint)</td>
<td>Low</td>
<td>Various auto repair and sales facilities were located at 824 E. 11th Street between at least 1925 and 2001. The facility is listed on the UST (FID #13666) and RCRA CESQG (RCRA ID #IND984901223) databases. Following UST removal activities conducted at the site in 1991, soil samples collected from the UST pit were all below detection levels for TPH. Based on the most resent sampling event, contamination did not extend to the construction footprint. Any other potential nondocumented releases could have adversely affected soil and/or groundwater in the Project Area. Therefore, the former Michigan City Chrysler Plymouth/Baron Financial Corp facility is a low-risk REC.</td>
</tr>
</tbody>
</table>
Table 4-18. (cont.)

<table>
<thead>
<tr>
<th>AOC #</th>
<th>REC #: Facility Name (Address)</th>
<th>Direction/Distance from Construction Footprint</th>
<th>Risk Level</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>REC 19-2: Concord Cleaners (1033 E. Michigan Boulevard)</td>
<td>North/adjacent</td>
<td>High</td>
<td>A former filling station was located at 1033 E. Michigan Boulevard between at least 1936 and 1948. The site operated as a dry cleaning facility from at least 1965 to 2008. The site is listed on the UST database (FID #18102). According to the UST database, the site has five permanently out-of-service gasoline USTs. The USTs were removed from the site in 1992. No records of previous sampling were identified during the investigation, and the site is currently unoccupied. Any previous spills or releases could have adversely affected soil and/or groundwater in the Project Area; therefore, the former Concord Cleaners facility is a high-risk REC.</td>
</tr>
<tr>
<td>19</td>
<td>REC 19-3: GoLo filling station (1133 E. Michigan Boulevard)</td>
<td>East-southeast/150 feet</td>
<td>Medium</td>
<td>1133 E. Michigan Boulevard is currently occupied by a GoLo-branded filling station. Based on the close proximity, any potential spills or releases at the site could have adversely affected soil and/or groundwater in the Project Area. Therefore, the GoLo-branded filling station is a medium-risk REC.</td>
</tr>
</tbody>
</table>

Source: Metric Environmental analysis of historical records and standard environmental databases.

Notes:
AOC = area of concern
# = number
REC = Recognized Environmental Condition
UST = underground storage tank
FID = Facility Identification Number
LUST = leaking underground storage tank
mg/kg = milligram per kilogram
SCP = State Cleanup Program
CERCLIS = Comprehensive Environmental Response Compensation and Liability Information System
TPH = total petroleum hydrocarbons
IDEM = Indiana Department of Environmental Management
SEMS = Superfund Enterprise Management System
ID = identifier
NIPSCO = Northern Indiana Public Service Company
NFRAP = No Further Remedial Action Planned
RCRA = Resource Conservation and Recovery Act
CORRACTS = RCRA Corrective Action Sites
µg/L = microgram per liter
RCG = Remediation Closure Guide
COC = chemical of concern
MTG = migration to ground
Of the RECs listed in Table 4-18, sites within the construction footprint that were identified as medium and high risk and would be purchased by NICTD for the proposed Project were advanced to a Phase II ESA (See Table 4-19). A Phase II ESA was conducted to provide information regarding the potential location and severity of contamination, if present, from operations at these four former and historic automobile filling stations and service stations. These four locations are located near the Gary/Miller Station, at MP 55. A fifth high-risk site (Concord Cleaners) was identified in Michigan City; however, Michigan City is purchasing that property and has conducted a Phase II ESA.

The scope included advancement of eight soil borings to a depth of 8 to 12 feet below ground surface (bgs), into the groundwater surface. The selection of the specific boring locations was based on the layout of the historic facilities listed in Table 4-18. Two discrete soil samples from each boring (16 total soil samples), and four discrete groundwater samples (one from each REC location) were collected. Table 4-19 provides the site locations investigated within the Project Area in the limited Phase II ESA. The Hazardous and Regulated Materials Technical Memorandum (Appendix III) contains additional supporting maps and documentation.

Table 4-19. Summary of Site Locations

<table>
<thead>
<tr>
<th>REC ID</th>
<th>Facility Name</th>
<th>Parcel(s)</th>
<th>Address</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>E. T. Doyne (Former Auto Repair)</td>
<td>C12, C13, and C73</td>
<td>5813 E. Dunes Highway</td>
<td>Dunes Properties LLC</td>
</tr>
<tr>
<td>1-3</td>
<td>Former Filling Station</td>
<td>C6</td>
<td>5601 E. Dunes Highway</td>
<td>Dunes Miller LLC</td>
</tr>
<tr>
<td>1-6</td>
<td>Former Auto Body Paint and Repair Shop</td>
<td>C8 and C9</td>
<td>5705 E. Dunes Highway</td>
<td>Dunes Miller LLC</td>
</tr>
<tr>
<td>1-7</td>
<td>Former Filling Station/ Auto Repair Facility</td>
<td>C2</td>
<td>5401 E. Dunes Highway</td>
<td>Chicago Plank and Pine, Inc.</td>
</tr>
</tbody>
</table>

VOCs, SVOCs, and metals were not detected at concentrations exceeding their respective 2017 IDEM Office of Land Quality Commercial / Industrial or Excavation Screening Levels in the soil and groundwater samples collected from the four locations.

4.8.3 ENVIRONMENTAL IMPACTS

The following discussion summarizes the potential impacts from hazardous materials for the No Build and Build Alternatives.

NO BUILD ALTERNATIVE

The No Build Alternative would have no impacts related to hazardous materials. There would be no change in existing conditions, no construction impacts, and no operational impacts.

Construction activities associated with the No Build Alternative, such as routine maintenance, could encounter and/or generate hazardous materials, such as paints, solvents, fuels, and hydraulic fluids, which may be accidentally released during construction. Adherence to federal, state, and local regulations would avoid and minimize any construction-related impacts associated with the No Build Alternative.
BUILD ALTERNATIVE

PERMANENT IMPACTS

Station maintenance activities could result in accidental releases of contaminants such as paints, solvents, and cleaning agents. NICTD would implement a facility management, safety, and health program for the safe handling and storing of the materials; therefore, a release, other than a potential de minimis release, is unlikely.

The long-term operation of the proposed Project would require management and containment of hazardous materials that are used and stored on-site, consistent with applicable regulatory standards and NICTD’s Safety and Emergency Preparedness Plan (SEPP). Waste materials generated during track maintenance and repair activities would be collected and disposed of in accordance with recognized industry BMPs for rail transit facilities. See Section 4.13.2 for more information on existing safety and security plans and procedures for the operation of the SSL.

The proposed Project would result in benefits through the cleanup and/or removal of contaminated material (soil, groundwater, and/or asbestos and lead-based paint) during construction, if encountered.

CONSTRUCTION IMPACTS

Construction impacts would relate primarily to the potential to encounter soil and/or groundwater containing hazardous materials during construction. The new station platforms, parking areas, bridges, culverts, retaining walls, and some track construction would require subsurface excavation in portions of the Project Area. There would be the potential to encounter hazardous materials, whether from the sites identified in the ESAs; from the presence of urban fill; or from the existing rail corridor, which may have been previously contaminated. In addition, if groundwater were encountered during construction, it may contain hazardous materials as well. High- and medium-risk sites are the greatest potential sources of hazardous material impacts.

The Build Alternative would include demolition of existing structures, including properties acquired for the proposed Project that were constructed before 1978–1979. The structures potentially include asbestos-containing material and lead-based paint that could result in a release of asbestos fibers and lead dust during construction. There is also the potential for hazardous materials involved with construction activities, such as fuels, hydraulic fluids, grease, paints, and/or solvents, to be accidentally released during construction.

4.8.4 MEASURES TO AVOID OR MINIMIZE HARM

Federal, state, and local laws and regulations regarding hazardous materials would be followed before property acquisition and during construction.

- Surveys of buildings or structures would be required before reconstruction or demolition of any property, including NICTD-owned properties or structures, to identify any asbestos, lead-based paint particles, and hazardous materials, such as polychlorinated biphenyl or mercury-containing equipment. Any hazardous materials identified would be abated and disposed of in accordance with federal, state, and local regulations.

- During final design and prior to acquisition, NICTD would evaluate if Phase II ESAs are necessary for other sites that NICTD would acquire that are adjacent to high- or medium-risk sites identified in the Phase I ESA.
For high- or medium-risk properties within the construction footprint that would be purchased by Michigan City, NICTD would consult with Michigan City about requirements to perform appropriate Phase II ESA investigations prior to acquisition.

NICTD would perform a Full Title Search prior to property acquisition.

The following specific and required plans would be developed before construction to further minimize or avoid the potential for hazardous material impacts:

- A Contaminated Material Management Plan that provides the procedures for identifying, characterizing, managing, storing, and disposing of contaminated soil and groundwater encountered during construction activities would be required. The plan would cover the entire Project Area, as it is assumed that all excavated material has at least some level of contamination associated with it.

- Spill Control and Prevention Plans to address the use, storage, and disposal of materials such as asphalt, fuel, paint, solvents, and cleaning agents would be required. The Spill Control and Prevention Plans would provide BMPs to limit the potential for accidental releases of potentially hazardous materials.

- Construction Stormwater Pollution Prevention Plans, which describe methods to prevent or minimize stormwater runoff from encountering contaminated soil or other hazardous materials, would be required.

- Health and Safety Plans for construction activities would be developed by the contractors and approved by NICTD before starting any construction work. The Health and Safety Plans would identify potential contaminants of concern, required personal protective equipment and procedures, and emergency response procedures.

- As a protective measure for contaminants not noted in the Phase II ESA, final plans would include instruction to construction contractor to stop all subsurface activities in the event that odors or significantly stained soil are discovered during construction. Contractors would be instructed to follow all applicable regulations regarding discovery and response for hazardous materials encountered during the construction process.

NICTD would establish and operate each facility according to procedures that minimize the potential for a release of regulated materials. All regulated material waste would be disposed of in accordance with federal, state, and local laws and policies. NICTD does not anticipate a release, other than potentially a *de minimis* release; therefore, no mitigation measures are proposed.

### 4.9 BIOLOGICAL RESOURCES

This section summarizes the existing federal and state threatened, endangered, and rare species; woodland habitat within the Project Area; and potential impacts of the proposed Project on these resources.

Information in this section is derived from the following reports included in Appendix III:

- *Indiana Bat and Northern Long-Eared Bat Habitat Assessment*
- *Habitat Surveys for the Eastern Massasauga, Kirtland’s Snake, Spotted Turtle, and Northern Leopard Frog*
- *Floristic Quality Assessment, Threatened and Endangered Species Plant Survey, and Woodland Characterization Investigation*
The abovementioned reports include figures depicting the Project Area investigated for the proposed Project as well as the construction footprint. These reports also provide additional information on the survey methodology and results, existing conditions, and environmental impacts.

### 4.9.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

The following laws, which are further explained in the aforementioned reports in Appendix III, regulate federal and state listed threatened and endangered species in Indiana:

- Migratory Bird Treaty Act of 1918 (16 USC §§ 703–712, as amended)
- Indiana Nongame and Endangered Species Act of 1973 (IC 14-22-34)
- The Indiana Nature Preserves Act of 1967 (IC 14-31-1)

At the project kick-off meeting in June 2016, U.S. Fish and Wildlife Service (USFWS) noted the proposed Project was within the range of multiple federally listed species, but that impacts would likely be limited to three species. Additionally, the IDNR indicated the need to survey for three state listed species. These six species are listed in Table 4-20.

The IDNR search of the Natural Heritage Data Center and their Environmental Review of the Project Area identified 31 plant species listed as either state endangered (4 species), threatened (5 species), rare (15 species) or watch list (7 species) that are previously known to occur within the general Project Area. Appendix IV includes a complete list of species and a summary of coordination with federal and state regulatory agencies.

#### Table 4-20. Federal and State Threatened or Endangered Species

<table>
<thead>
<tr>
<th>Species</th>
<th>Listing Status</th>
<th>Primary Threats</th>
<th>Photo Credit: Andrew King (USFWS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana bat (Myotis sodalis)</td>
<td>Endangered (Federal level)</td>
<td>• White-nose syndrome&lt;br&gt;• Wind farms¹</td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Listing Status</td>
<td>Primary Threats</td>
<td>Photo Credit</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>----------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
</tbody>
</table>
| Northern long-eared bat (*Myotis septentrionalis*) | Threatened (Federal level)                   | • White-nose syndrome  
• Habitat loss¹                          | Photo Credit: Rusty Yeager (Lochmueller Group)                                    |
| Eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*) | Threatened (Federal level) Endangered (State level) | • Habitat destruction  
• Degradation, fragmentation, and succession  
• Intentional killing  
• Over-collecting  
• Introduction of swine² | Photo Credit: J. Harding                                                           |
| Kirtland’s snake (*Clonophis kirtlandii*)         | Endangered (State level)                     | • Urbanization  
• Wetland drainage  
• Hydrological alterations  
• Habitat succession  
• Limited habitat management  
• Pet trade³                           | Photo Credit: A. Hoffman                                                           |
| Spotted turtle (*Clemmys guttata*)                | Endangered (State level)                     | • Habitat degradation  
• Pet trade³                               | Photo Credit: T. Brust (ESI)                                                       |

¹ Habitat loss ² Introduction of swine ³ Pet trade
### Table 4-20. (cont.)

<table>
<thead>
<tr>
<th>Species</th>
<th>Listing Status</th>
<th>Primary Threats</th>
<th>Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Northern leopard frog</strong></td>
<td><em>Lithobates pipiens</em> (State level)</td>
<td>• Chemical contamination</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fragmentation of landscapes once dominated by wetlands</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Agriculture&lt;sup&gt;4&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>

Sources:
<sup>1</sup> Boyles et al. 2011;
<sup>2</sup> Cronon 1991; Szymanski 1998;
<sup>3</sup> Harding 1997,

### METHODOLOGY

#### INDIANA BAT AND NORTHERN LONG-EARED BAT

A habitat assessment for the Indiana bat and the northern long-eared bat was conducted in September and October 2016 in accordance with the 2016 Range-Wide Indiana Bat Summer Survey Guidelines (USFWS 2016).

#### AMPHIBIANS AND REPTILES

Habitat assessments took place in summer 2016 for the eastern massasauga rattlesnake and the three state-listed species. This involved both desktop reviews and field surveys. During the field surveys, each habitat segment surveyed was classified as high, medium, low, or containing no habitat for each species.

#### FLORISTIC QUALITY ASSESSMENT AND LISTED PLANT SPECIES

A survey of vascular plants was conducted in the 2016 mid- to late-summer season and spring 2017. The Project Area was divided into 58 habitat units, 52 of which were inventoried using floristic quality metrics (i.e., species richness<sup>8</sup>, mean coefficient of conservatism [C value]<sup>9</sup>, Floristic Quality Index [FQI]<sup>10</sup>). The

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<sup>8</sup> Total number of species in a specific survey area or wetland.

<sup>9</sup> C value is a number from 0 to 10 assigned to a plant species to represent its affinity for occurrence in disturbed versus more natural communities. A low C value indicates that a species is more likely to occur in a disturbed community whereas a high C value indicates that a species is likely to occur in a more natural community. The mean C value is the average of all of the C values for the species identified within a specific area divided by the total number of species.

<sup>10</sup> The FQI ranges from 0 to 60 and is calculated by multiplying the mean C value of the plant community by the square root of the total number of species. Generally, an FQI below 20 is indicative of disturbed conditions, whereas values between 20 and 30 are representative of moderate diversity and vegetative quality.
remaining six habitat units were not surveyed due to reduction in Project Area size (three habitat units), access restrictions (two habitat units), and mowing (one habitat unit). This survey was also intended to document any federally or state-listed plant species occurring in the Project Area.

WOODLAND HABITAT

A tree count inventory was employed to survey approximately 10 percent\(^{11}\) of the woodland habitat identified. The inventory only incorporated trees with a diameter at breast height of at least 6 inches.

4.9.2 EXISTING CONDITIONS

Suitable habitat for the Indiana and northern long-eared bats and the four amphibian and reptile species is summarized below. Additional detail is shown in the mapbook included in Appendix II of this EA and Exhibit 3 of the Indiana Bat and Northern Long-Eared Bat Habitat Assessment; and Appendices C and D of the Habitat Surveys for the Eastern Massasauga, Kirtland’s Snake, Spotted Turtle, and Northern Leopard Frog. These reports are in Appendix III.

INDIANA BAT AND NORTHERN LONG-EARED BAT

No potential winter habitat (i.e., caves, mines) is observed in the Project Area. No high-quality summer habitat is documented in the Project Area. Most of the low- and moderate-quality potential habitat is along the south side of the NICTD/CSS railroad tracks east of the ArcelorMittal steel mill near the Indiana Dunes National Lakeshore and the Indiana Dunes State Park. Even though some of these areas include a few very good individual roost trees, none are considered to represent good overall bat roosting habitat for two reasons: 1) the existing NICTD/CSS railroad tracks represent a consistent noise disturbance and 2) the wetland and mesic\(^{12}\) woodland and open water habitat within the Indiana Dunes National Lakeshore north of the NICTD/CSS railroad tracks represents more desirable and remote roosting habitat.

AMPHIBIANS AND REPTILES

Generally, suitable habitat for eastern massasauga rattlesnake, Kirtland’s snake, spotted turtle, and northern leopard frog is concentrated in the eastern 9.5-mile portion of the proposed Project, generally between Mineral Springs Road near MP 45 and County Line Road near MP 36. The westernmost 12.9 miles of the Project Area are heavily developed and provide little habitat for any of the four target species.

Approximately 108.6 acres of high- or moderate-quality habitat for the eastern massasauga rattlesnake and Kirtland’s snake exists in the Project Area. It is predominantly concentrated between MP 48 and MP 35. High- or moderate-quality habitat for the spotted turtle (11.3 acres) and the northern leopard frog (15.3 acres) includes Brown Ditch (between MP 37.5-37.6) and a small pond (Wetland 57-1).

FLORISTIC QUALITY ASSESSMENT (FQA)

A total of 502 plant species are identified within the Project Area. Species richness ranges from a low of 8 species for the 2 small culvert improvement locations on the north and south side of the NICTD/CSS railroad tracks east and west of Lake Shore County Road to a high of 173 species within the area along

\(^{11}\) From previous experience and current coordination with the USFWS in conducting woodland habitat characterizations for bat habitat, sampling 10 percent of each woodland habitat area potentially impacted was considered to provide suitable data on species composition, size classes, and snag density for habitat characterization.

\(^{12}\) Habitat with a moderate amount of moisture.
the north side of the NICTD/CSS railroad tracks from Lake Shore County Road to U.S. 12 towards the east end of the Project Area (approximately MP 36.0 to MP 38.0). Non-native species comprised between 12 and 61 percent of the inventory for each habitat unit surveyed.

The mean C value and FQI for the habitat units associated with the Indiana Dunes National Lakeshore and Indiana Dunes State Park portion is higher than that in the central and western parts of the Project Area. Most of the larger habitat units associated with the Indiana Dunes National Lakeshore and Indiana Dunes State Park have an FQI above 20 for all species and for only native species. In contrast, most of the units from the central and western portion of the Project Area have an FQI between 6.7 and 19.8 for all species, and 9.4 to 16.28 for only native species.

**STATE-LISTED PLANT SPECIES**

The floristic inventory did not yield any occurrences of federally listed plant species in the Project Area. Seven state-listed plant species are identified. Generally, they are located between MP 38.5 and 55.7 (Table 4-21). General locations of where these species were documented in the Project Area are depicted in Exhibit 3 of the *Floristic Quality Assessment, Threatened and Endangered Species Plant Survey, and Woodland Characterization Investigation* in Appendix III.
Table 4-21. Plant State-listed Species Observed within the Project Area and Potential Impacts to Their Habitats

<table>
<thead>
<tr>
<th>Common Name (Scientific Name)</th>
<th>State Status</th>
<th>Locations within Project Area</th>
<th>Locations within Construction Footprint</th>
<th>Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skinner's false foxglove (Agalinis skinneriana)</td>
<td>State threatened</td>
<td>• Open wetland along the north side of the NICTD/CSS railroad tracks between Waverly Road and Mineral Springs Road (MP 44.05–45.12)</td>
<td>Wetlands 44-2 and 44-3 - A small portion of both wetlands (0.26 and 0.30 acres, respectively) is within the construction footprint. Without mitigation, this species would potentially be affected.</td>
<td><img src="image1.png" alt="Photo Credit: R.W. Smith" /></td>
</tr>
</tbody>
</table>
| Speckled alder (Alnus incana) | State watch list      | • Along the north side of the NICTD/CSS railroad tracks between Lake Shore County Road and Broadway Road (MP 38.56–39.30)  
• Between Broadway Road and Kemil Road (MP 39.34–40.73)  
• Along the north side of the NICTD/CSS railroad tracks between Waverly Road and Mineral Springs Road (MP 44.05–45.12) | Portions of the three habitat units are within the construction footprint. Without mitigation, the proposed Project is likely to affect the speckled alder. | ![Photo Credit: The Morton Arboretum](image2.png) |
Table 4-21. (cont.)

<table>
<thead>
<tr>
<th>Common Name (Scientific Name)</th>
<th>State Status</th>
<th>Locations within Project Area</th>
<th>Locations within Construction Footprint</th>
<th>Photo Credit: Max Licher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bebb’s sedge (<em>Carex bebbii</em>)</td>
<td>State threatened</td>
<td>• Wetland 40-3 along the north side of the NICTD/CSS railroad tracks between Kemil Road and the Furnessville substation (MP 40.73–41.82)  &lt;br&gt; • Wetland 41-1 along the north side of the NICTD/CSS railroad tracks between the Furnessville substation and Tremont Road (MP 41.86–42.94)  &lt;br&gt; • Wetland 43-3 between State Route 49 and Waverly Road (MP 43.78–44.03)  &lt;br&gt; • Wetland 47-1 east of the CSX crossing at the abandoned exit ramp for State Route 149 (MP 47.43–48.01)  &lt;br&gt; • Wetland 55-1 between Lake and Clay Streets (MP 55.05–55.69)</td>
<td>Four of the five wetlands in which this species was observed are partially within the construction footprint. Without mitigation, Bebb’s sedge is likely to be affected by the proposed Project.</td>
<td>Photo Credit: Max Licher</td>
</tr>
<tr>
<td>Common Name (Scientific Name)</td>
<td>State Status</td>
<td>Locations within Project Area</td>
<td>Locations within Construction Footprint</td>
<td>Photo</td>
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</tbody>
</table>
| Northern long sedge (*Carex folliculata*) | State rare | • Wetland 38-1 along the north side of the NICTD/CSS railroad tracks between Lake Shore County and Broadway Roads (MP 38.56–39.30)  
• Wetland 39-2 and/or 40-1 along the north side of the NICTD/CSS railroad tracks between Broadway and Kemil Roads (MP 39.34–40.73)  
• Wetland 40-3 along the north side of the NICTD/CSS railroad tracks between Kemil Road and Furnessville substation (MP 40.73–41.82)  
• Wetland 41-1 along the north side of the NICTD/CSS railroad tracks between Furnessville substation and Tremont Road (MP 41.86–42.94)  
• Wetland 43-1 along the north side of the NICTD/CSS railroad tracks between Tremont Road and State Route 49 (MP 42.95–43.74)  
• Wetland 44-2 and 44-4 along the north side of the NICTD/CSS railroad tracks between Waverly and Mineral Springs Roads (MP 44.05–45.12) | Portions of seven of the eight wetlands where this species was documented are within the construction footprint. Without mitigation, the northern long sedge is likely to be affected. | ![Photo Credit: D. Goldman (National Plants Database Team)](image) |
<table>
<thead>
<tr>
<th>Common Name (Scientific Name)</th>
<th>State Status</th>
<th>Locations within Project Area</th>
<th>Locations within Construction Footprint</th>
<th>Photo</th>
</tr>
</thead>
</table>
| Hairy golden aster (Chrysopsis villosa) | State threatened | • Along the south side of the NICTD/CSS railroad tracks, west of the Brown Bag restaurant (MP 46.5047.30)  
• Along the north side of the NICTD/CSS railroad tracks between the Portage Burns Waterway and Tollerston Dunes entrance (MP 50.15–50.50) | One of two habitat units where this species was found is partially within the construction footprint. Without mitigation, the hairy golden aster would likely be affected by the proposed Project. | ![Photo Credit: Katy Chayka](image1) |
| Russet buffaloberry (Shepherdia canadensis) | State extirpated | • Along the north side of the NICTD/CSS railroad tracks between Furnessville substation and Tremont Road (MP 41.86–42.94) | A small portion of the habitat unit where these two species were found is contained in the construction footprint. Without mitigation, the proposed Project is likely to affect these two species. | ![Photo Credit: R. Howard (Smithsonian Institute)](image2) |
| Forked bluecurls (Trichostema dichotomum) | State rare | | | ![Photo Credit: T. Barnes (Wildflowers and Ferns of Kentucky)](image3) |
WOODLAND HABITAT

Overall tree density ranges from 19 per acre to 339 per acre. The lowest density is observed in a disturbed area south of the NICTD/CSS railroad tracks immediately east of the ArcelorMittal steel mill entrance. In contrast, the highest density was documented in the Indiana Dunes National Lakeshore, east of Waverly Road. Additionally, the greatest tree diversity—10 and 12 species—is observed in plots located between the NICTD/CSS and CSX railroad tracks in Gary.

4.9.3 ENVIRONMENTAL IMPACTS

The following section summarizes the potential impacts to biological resources from the No Build and the Build Alternative.

NO BUILD ALTERNATIVE

No adverse permanent or temporary impacts to biological resources would occur as a result of the proposed Project.

BUILD ALTERNATIVE

PERMANENT IMPACTS

Amphibians and Reptiles

Approximately 29.3 acres of suitable habitat for the eastern massasauga and the Kirtland’s snake would be cleared. Approximately 4.0 and 4.7 acres, respectively, of high- or moderate-quality habitat for the spotted turtle and the northern leopard frog would be impacted. Impacts to the turtle and frog species occur primarily in Brown Ditch (near MP 37.5) and Wetland 57-1. These areas would be filled to support construction of the Build Alternative.

Indiana Bat and Northern Long-Eared Bat

The proposed Project would potentially require the clearing of approximately 7.68 acres of potentially suitable habitat for Indiana bat and northern long-eared bat roosting.

State-listed Plant Species

General locations of listed species documented during the field surveys are described as the habitat unit where they were observed. A species would likely be impacted by ground disturbance associated with the proposed Project if it was documented in a habitat unit that is fully or partially within the construction footprint. Table 4-21 lists the state-listed species documented, the portion of the Project Area where they were observed, and the areas within the construction footprint where such species would be potentially located.

Without mitigation, Skinner’s false foxglove (Agalinis skinneriana), speckled alder (Alnus incana), Bebb’s sedge (Carex bebbii), northern long sedge (Carex foliculata), hairy golden aster (Chrysopsis villosa), russet buffalo-berry (Shepherdia canadensis), and forked bluecurls (Trichostema dichotomum) would likely be unsettled by ground disturbance within the construction footprint.

Woodland Habitat

Approximately 20.56 acres of woodland exist within the construction footprint and, therefore, would need to be cleared for construction of the proposed Project.
CONSTRUCTION IMPACTS

Construction impacts include removal of woodland habitat (including suitable roosting habitat for the Indiana and northern long-eared bats) and suitable habitat for state-listed plant species as well as for the eastern massasauga rattlesnake, Kirtland’s snake, spotted turtle, and northern leopard frog. Construction is anticipated to affect state-listed plant species and the amphibian or reptile species. Therefore, mitigation measures would be implemented to offset these impacts, as described in the following section.

4.9.4 MEASURES TO AVOID OR MINIMIZE HARM

Several measures to avoid or minimize harm to biological resources resulted from a coordination meeting with multiple federal and state agencies on February 7, 2017. Minutes from this meeting are included in Appendix IV. A mitigation plan would be developed with NPS and USACE outlining measures to develop suitable habitat for impacted species.

INDIANA BAT AND NORTHERN LONG-EARED BAT

NICTD would restrict tree clearing to the winter season, as directed by USFWS in the following documents:

- Revised Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat (December 15, 2016)
- Range-wide Programmatic Consultation for Indiana Bat and Northern Long-Eared Bat, Avoidance and Minimization Measures (December 2016)

Since there are no maternity roosts present, USFWS does not require any acoustic surveys.

AMPHIBIANS AND REPTILES

NICTD would install drift fences in active work areas before individuals from any of the four target species come out in the spring (see Appendix IV), as recommended by USFWS and IDNR. In addition, contract plans would specify that the construction area be inspected every morning by a qualified herpetologist before work activities begin. If individuals from any of the four target species are found in the construction area, the herpetologist would relocate them off site, to the extent practicable.

STATE-LISTED PLANT SPECIES

To the extent practicable, NICTD would relocate any of the documented listed plant species found in the construction footprint prior to disturbance. NICTD would coordinate with the IDNR and NPS to mitigate impacts to listed plant species, either through relocation prior to disturbance or planting new vegetation. NICTD would coordinate this mitigation with the overall wetland and natural resource mitigation plan that would be prepared as part of the Section 404 permit. This plan would be developed with the NPS and IDNR and would provide mitigation on land within the Indiana National Lakeshore.

WOODLAND HABITAT

To mitigate the loss of trees as a result of construction of the proposed Project, NICTD would continue to coordinate with the IDNR and NPS regarding the appropriate mitigation for tree replacement. NICTD would consult the IDNR’s tree replacement guidelines, as well as with NPS regarding the appropriate ratios and species. Such mitigation would also be coordinated with the proposed wetland mitigation plan, as appropriate.
4.10 WATER RESOURCES

This section summarizes the existing wetlands, streams, floodplains, and floodways within the Project Area and describes the water quality in the Project Area. This section also discusses the potential impacts of the proposed Project as well as the mitigation measures that NICTD proposes to offset any Project-related impacts on water resources.

Information concerning wetlands and streams is derived from the Waters of the U.S. Delineation Report included in Appendix III. This report also provides more in-depth information regarding desktop and survey methodology, results, existing conditions, and environmental impacts.

4.10.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

WATERS OF THE U.S.

Waters of the U.S. include Traditional Navigable Waters (TNWs) of the U.S. and adjacent wetlands, non-navigable tributaries to TNWs, and wetlands that directly abut such tributaries (USACE and USEPA 2015). USACE has jurisdiction over all navigable Waters of the U.S. under the Rivers and Harbors Act of 1899 (33 U.S.C. 403). USACE also regulates the placement of dredged or fill materials into Waters of the U.S. under Section 404 of the federal Clean Water Act (CWA) (33 USC §1251 et seq.).

WATERS OF THE STATE

Waters of the State are defined as surface and underground waterbodies that exist wholly in the state of Indiana (IDEM 2016). In Indiana, IDEM and USACE have jurisdiction over Waters of the State. IDEM administers the Section 401 Water Quality Certification (WQC) Program. If Waters of the State are determined to be non-jurisdictional by USACE, IDEM regulates these waters under the State Isolated Wetlands Law and a State Isolated Wetlands Permit may be required prior to any construction.

WETLANDS

Wetlands are a category of Waters of the U.S. for which a specific identification methodology has been developed. There is a category of Waters of the State known as State Regulated Wetlands, which are regulated under Indiana’s State Isolated Wetland Law. Prior to the placement of dredged or fill material into these waters, a State Isolated Wetland Permit must be obtained (IDEM 2016).

Under Executive Order (EO) 11990 (May 24, 1977), and as amended by EO 12608, federal agencies, to the extent permitted by law, must avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds there is no practical alternative to such construction and the proposed action includes all practical measures to minimize harm to wetlands that may result from such use.

FLOODPLAINS

A floodplain is defined as “the lowland and relatively flat areas adjoining inland and coastal waters including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year” (44 CFR § 9.4).

13 A floodway is the area within a floodplain closest to the stream that is reasonably required to efficiently carry and discharge the floodwater of a river or stream.
Floodway is “the portion of the floodplain which is effective in carrying flow, within which this carrying capacity must be preserved and where the flood hazard is generally highest, i.e., where water depths and velocities are the greatest. It is that area which provides for the discharge of the base flood so the cumulative increase in water surface elevation is no more than one foot” (44 CFR § 9.4).

Floodplains are protected by federal, state, and local legislation because of their value and functionality. Regulatory agencies with floodplain/floodway authority in the Project Area include the Federal Emergency Management Agency (FEMA), USDOT, and IDNR. In some instances, the municipality and/or the county also has authority over impacts to floodplains in its jurisdiction.

The following federal orders apply to floodplains and floodways:

- **EO 11988**, *Floodplain Management*
- **EO 13690**, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*
- **USDOT Order 5650.2**, *Floodplain Management and Protection*

In addition, there are state regulations that apply to floodplains and floodways:

- **IC 14-28-1**, *Indiana Flood Control Act*
- **IC 14-28-3**, *Indiana Floodplain Management Act*

Construction activities in a floodway require a permit from IDNR (IDNR 2016). Additionally, compensatory storage is required to place fill in a floodway.

Fill volumes would be calculated and compensatory storage would be determined in the engineering phase of the proposed Project. **Section 4.10.3** discusses the potentially impacted floodplain/floodway area as a result of the proposed Project.

**GROUNDWATER AND WATER SUPPLY**

The Safe Drinking Water Act (42 USC § 300f et seq.) protects the quality of public drinking water and its sources and establishes wellhead protection areas. The Safe Drinking Water Act requires states to develop a wellhead protection program to protect public water supplies from pollution. In Indiana, IDEM administers the wellhead protection program. In addition, public water supplies are protected through the 1989 Groundwater Protection Act (IC 13-18-17-6).

**WATER QUALITY**

IDEM issues the Section 401 WQC if it determines that construction activities on or near a waterway will maintain the integrity of such waterway.

In addition, Section 303(d) of the CWA requires states to publish a list of waterways every 2 years that are not meeting their designated uses because of excess pollutants (i.e., impaired waters). The 303(d) list is based on violations of water quality standards. In Indiana, IDEM determines which waterways should be included in such a list.
METHODOLOGY

WETLANDS AND STREAMS

NICTD performed a delineation of waterbodies, including wetlands and streams, in July through October 2016. Wetland determinations were made using the three criteria of assessment approach defined in the 1987 U.S. Army Corps of Engineers' Wetland Delineation Manual and the Northcentral and Northeast Regional Supplement “Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) July 2012.” According to this manual, areas that reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology are considered wetlands. A second survey was conducted in April 2017 to capture changes to the Project Area.

As part of a separate project, NIPSCO had previously delineated wetlands that partially coincide with the proposed Project Area. NIPSCO provided wetland boundaries and associated data to NICTD, which were included in this assessment if they fell within the Project Area. NICTD consulted with USACE to obtain approval on this methodology. These wetlands are identified with an “N” after the wetland name in the Wetland Table provided in Appendix A of the Waters of the U.S. Delineation Report. Data sheets and photographs for these wetlands are provided in Appendix F and Appendix G of the Waters of the U.S. Delineation Report, respectively (Appendix III).

Streams were identified based on the presence of an ordinary high water mark as defined in 33 CFR § 328.3(3). Once identified, streams were assessed using one of the two following indexes. Both the USACE and IDEM Office of Water Quality approved the use of the Ohio EPA’s indexes as acceptable methods to conduct such assessments of Indiana streams.

- Ohio EPA Primary Headwater Habitat Evaluation Index – For streams with a drainage area of less than 1 square mile or a maximum pool depth less than 40 centimeters (Ohio EPA 2009)
- Qualitative Habitat Evaluation Index – For streams with a drainage area greater than 1 square mile or a pool depth greater than 40 centimeters (Ohio EPA 2006)

Wetlands and streams identified within the Project Area are named by the MP in which they are located, moving from east to west, with a number after a dash corresponding to the number of the wetland or stream within that MP. USACE directed that all wetlands be considered jurisdictional Waters of the U.S. and subject to regulation by USACE. The final determination of jurisdictional waters will ultimately be made by USACE.

FLOODPLAINS

The Flood Insurance Rate Map (FIRM) of the area within the survey boundary was obtained from the FEMA website (FEMA 2016). Floodplain spatial data were obtained from the IndianaMAP to determine where the construction footprint crossed floodplains or floodways.

A hydraulic survey was conducted and preliminary hydraulic modeling and analysis were performed at each channel/swale crossing location, with the modeled channel/swale reaches extending a reasonable distance upstream and downstream of the channel embankment. Preliminary design of the proposed structures at all locations was performed to satisfy identified design criteria and to avoid adverse hydraulic impacts in the vicinity of the proposed Project.
GROUNDWATER

Aquifer systems in Lake, Porter, and LaPorte Counties as described by the IDNR Division of Water were consulted to determine the types of groundwater systems in the Project Area (IDNR 1990, 1994a, 1994b, 1994c).

WATER SUPPLY

NICTD researched information prepared by the IDNR to determine water supply in Lake, Porter, and LaPorte Counties. Municipalities within the Project Area in Lake and Porter Counties mainly obtain their water from Lake Michigan. The groundwater supply in the Project Area is insufficient to support the population’s needs (Hartke et al. 1975). Similarly, Michigan City relies on Lake Michigan for its water supply, whereas groundwater is the water source for the rest of LaPorte County (Hill et al. 1979). The well database provided by the IDNR Water Well Viewer was also searched for any potential wells in the Project Area.

WATER QUALITY

Water resources in the Project Area were identified using the U.S. Geological Survey (USGS) 7.5-minute series quadrangle topographic maps, local USGS National Hydrography Datasets, USFWS National Wetland Inventory maps, lists of impaired waters prepared by the IDEM under Section 303(d) of the CWA, and publicly available aerial photographs.

The potential impacts on water quality were evaluated using ArcGIS tools by quantifying the length and number of stream crossings and/or longitudinal encroachments, and the area and number of lakes and ponds within the Project Area that would be impacted by the construction footprint.

4.10.2 EXISTING CONDITIONS

The Project Area is located in two watersheds:

- Little Calumet – Galien watershed (Hydrologic Unit Code [HUC] 04040001) covers the majority of the Project Area.
- Chicago watershed (HUC 07120003) covers the portion of the Project Area west of MP 54.8.

Figure 4-16 provides an overview of water resources in the Project Area.

WETLANDS

The field investigation identified 76 wetlands, accounting for approximately 43.01 acres within the Project Area as shown in Figure 4-17 through Figure 4-21 and in more detail in the mapbook included in Appendix II of this EA and in the Waters of the U.S. Delineation Report (Appendix III of this EA). Wetlands located north of the NICTD/CSS railroad track along the Calumet Trail, east of MP 45 near Mineral Springs Road, are predominantly wet meadow and contain mostly native plant species. These wetlands showed some disturbance from the adjacent NICTD/CSS railroad tracks, Calumet Trail, and local road crossings.

Wetlands south of the NICTD/CSS railroad track, east of MP 45, are mostly associated with ditches created for railroad drainage and with forested wetlands in the Indiana Dunes National Lakeshore. Wetlands in this area also contain mostly native plant species.
Figure 4-16. Wetlands and Watershed Boundaries Overview Map
Figure 4-17. Wetlands and Watershed Boundaries – Gary
Figure 4-18. Wetlands and Watershed Boundaries – Portage and Burns Harbor
Figure 4-19. Wetlands and Watershed Boundaries – Dune Acres and Porter
Figure 4-20. Wetlands and Watershed Boundaries – Beverly Shores and Town of Pines
Figure 4-21. Wetlands and Watershed Boundaries – Town of Pines and Michigan City
Wetlands north and south of the NICTD/CSS track, west of MP 45, are highly disturbed and mostly dominated by cattails (*Typha angustifolia* and *Typha x glauca*) and common reed (*Phragmites australis*). Some of these wetlands appear to be created by manmade drainage of the adjacent roads and railroad, although some are associated with the natural marshes on the shores of Lake Michigan. Details on the hydrophytic vegetation, soils, and hydrology present within each wetland and in the associated uplands adjacent to the wetlands are provided on the wetland determination data sheets in Appendix B of the *Waters of the U.S. Delineation Report*. In addition, photographs for each sampling point are included in Appendix E of the *Waters of the U.S. Delineation Report* (Appendix III of this EA).

An FQA was completed for wetlands and plant communities located within the Project Area using the Chicago Region Floristic Quality Assessment Calculator (USACE 2014). A wetland with a native mean C value of 3.5 or greater or with an FQI of 20 or greater is identified as a high-quality aquatic resource (HQAR) (USACE 2012). The native mean C value and FQI for each wetland delineated are provided in Appendix A of the *Waters of the U.S. Delineation Report* (Appendix III of this EA).

The FQI values (native species) for the wetlands in the Indiana Dunes National Lakeshore and Indiana Dunes State Park portion of the Project Area range from 9.24 at Wetland 39-1 to 45.01 at Wetland 44-4. In contrast, the FQI (native species) for the few wetlands west of the Indiana Dunes National Lakeshore range from 6.00 to 24.94.

Since the boundaries of the wetlands delineated by NIPSCO as part of its project partially coincided with the wetlands for the proposed Project, the wetland boundaries and associated data provided by NIPSCO were included in this assessment if they fell within the Project Area. Appendix F of the *Waters of the U.S. Delineation Report* contains the NIPSCO-delineated wetland determination data sheets, and Appendix G contains site photographs for the wetlands delineated by NIPSCO (Appendix III of this EA).

**STREAMS**

The field investigation identified 20 streams (approximately 10,866 linear feet) within the Project Area as shown in Appendix II of this EA and Exhibit 4 of the *Waters of the U.S. Delineation Report* (Appendix III). A total of 13 ephemeral (flows briefly after rainfall), 3 intermittent, and 4 perennial streams are present. Streams with a drainage area of less than one square mile or a maximum pool depth less than 40 centimeters were evaluated using the Primary Headwater Habitat Evaluation Index and streams with a drainage area greater than one square mile or a pool depth greater than 40 centimeters were evaluated using the Qualitative Habitat Evaluation Index. For both indices, scores range from 0–100, with a higher number indicating better quality. Scores are based on substrate characteristics, pool characteristics, and bank full width.

Three streams are determined to be of very poor to fair quality, with scores ranging from 28 to 52, as identified in Table 4-22. Two streams are classified as Modified Class I, and 10 are classified as Modified Class II, with scores ranging from 13 to 69.5. Modified Class I and II indicate that the stream has been modified and is of poor to fair quality. Details regarding each stream are provided in Appendix D of the *Waters of the U.S. Delineation Report*. Additionally, photographs of identified streams are included in Appendix E of the *Waters of the U.S. Delineation Report*. 
Table 4.22. 303(d)-listed Water Resources within the Project Area

<table>
<thead>
<tr>
<th>MP</th>
<th>Water Resource Name</th>
<th>Designated Use</th>
<th>Category in 303(d) List</th>
<th>Impairment</th>
<th>Water Quality Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP 42.6-42.7</td>
<td>Dunes Creek&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Aquatic Life Use</td>
<td>5A</td>
<td>Escherichia coli (E. coli), impaired biotic communities</td>
<td>13 to 69.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recreational Use</td>
<td>5A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fish Consumption</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP 37.5-37.6</td>
<td>Brown Ditch</td>
<td>Aquatic Life Use</td>
<td>3</td>
<td>E. coli</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recreational Use</td>
<td>5A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fish Consumption</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP 36.2-36.3</td>
<td>Kintzele Ditch</td>
<td>Aquatic Life Use</td>
<td>3</td>
<td>E. coli</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recreational Use</td>
<td>5A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fish Consumption</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: IDEM 2016; USEPA 2017a, 2017b
Notes: <sup>a</sup> Branch of the creek extending north from the Project Area is referred to as Munson Ditch throughout this EA per the National Hydrography Dataset (NHD). The branch of the creek extending south from the Project Area is referred to as unnamed tributary to Munson Ditch throughout this EA.

**FLOODPLAINS**

There are three floodplains in the Project Area, all within the mapped Flood Zone A, which corresponds to the 100-year floodplain. Locations of the 100-year floodplain within the Project Area are depicted in Appendix II of this EA and in the Waters of the U.S. Delineation Report (Appendix III). No floodways exist in the Project Area.

Within the Project Area, there are 21 channel/swale crossings of the track embankment. These crossings are listed in the Basis of Design Report – Drainage Analysis (HDR 2016). Out of the 21 crossings, there are 4 channel crossings that are within a FEMA-designated floodplain. These crossing locations are at MP 35.98, 36.20, 37.54, and 44.51. There are no channel crossings that are in FEMA-designated floodways.

**GROUNDWATER**

The Project Area is within the Lacustrine Plain, a physiographically and geologically distinct region in northwestern Indiana. The surficial deposits of this region are the products of the Wisconsinan age of glaciation that ended approximately 10,000 years ago, and consist of a low-lying and poorly drained complex of clay, sand, and silt. These deposits overlie a bedrock aquifer system that is composed of limestone, dolomite, and shale. An aquifer is a geologic formation that can store and transmit groundwater. The bedrock aquifer system consists of consolidated rock, whereas the unconsolidated aquifer system consists of loose sediments, ranging in grain size from clay and silt to coarse sand.

A wellhead protection area is a surface and subsurface land area that is regulated to prevent contamination of a well that supplies a public water system. A sole source aquifer is the sole or principal drinking water source for an area and, if contaminated, would create a significant hazard to public health. In Indiana, there is only one legally designated sole source aquifer, the St. Joseph aquifer. This aquifer is located in the north-central portion of the state and does not provide drinking water in the Project Area.
BEDROCK AQUIFER SYSTEM

The Silurian and Devonian Carbonates aquifer system limestone and dolomite cover northeastern Lake County and northwestern Porter County. Karst development occurred before the advancement of the glaciers when bedrock was exposed. Karst is dissolution of the carbonate rocks along fractures by slightly acidic surface water or groundwater. This system is not very susceptible to contamination because the overlying unconsolidated deposits are relatively thick (IDNR 1990, 1994a, 1994b, 1994c). The Silurian and Devonian Carbonates aquifer system is not present in LaPorte County.

The central and eastern portions of the Project Area are within the Devonian and Mississippian Coldwater, Ellsworth, and Antrim shales aquifer system. This system is not susceptible to surface contamination due to the low permeability of shale and the thickness of the overlying surficial deposits (IDNR 1990, 1994a, 1994b, 1994c).

UNCONSOLIDATED AQUIFER SYSTEM

The Calumet aquifer comprises the unconsolidated aquifer system that underlies the majority of the Project Area. The Calumet aquifer is composed of wind- or water-deposited sand and extends from Lake Michigan through a wedge-shaped area encompassing the northern quarter of Lake County and northern Porter County. The Calumet aquifer is unconfined and has not been significantly developed due to the proximity of Lake Michigan, the main source of drinking water. The Calumet aquifer receives recharge from precipitation and the underlying bedrock aquifer system, and discharges to the Grand Calumet River, Little Calumet River, and Lake Michigan. The thickness of the Calumet aquifer ranges from 5 to 75 feet (20 feet average thickness), while the total thickness of the surficial deposits in the project area is 125–175 feet. The Calumet aquifer is susceptible to groundwater contamination from urban and industrial sources because permeable sand is exposed at the surface.

The Lacustrine Plain aquifer covers the central portion of the Project Area where the Calumet aquifer is absent. The susceptibility to contamination varies from low to high based upon the thickness of the lacustrine clays and glacial till (IDNR 1990, 1994d, 1994e, 1994f).

WATER SUPPLY

Municipalities within the Project Area in Lake and Porter Counties mainly obtain their water from Lake Michigan. The groundwater supply in the Project Area is insufficient to support the population’s needs (Hartke et al. 1975). Similarly, Michigan City relies on Lake Michigan for its water supply, whereas groundwater is the water source for the rest of LaPorte County (Hill et al. 1979).

The well database provided by the IDNR Water Well Viewer was searched for any potential wells in the Project Area. One well is located in the Project Area, at the former Texaco gas station at 6000 Miller Avenue in Gary (MP 55.0). The depth of the water well is not provided (IDNR 2017).

WATER QUALITY

The most recent Section 303(d) List of Impaired Waters approved by the USEPA is from 2008. However, IDEM is now preparing the addendum to the 2016 Integrated Report, which will be submitted to USEPA. Information on this section was obtained from the 2016 Draft 303(d) List and is the most recent and readily available data (IDEM 2016; USEPA Undated a, b).

Three waterways within the Project Area are considered impaired (Table 4-22). These waters are listed under Categories 3 and 5A of the 303(d) list. Category 3 contains waterways for which available data are insufficient to make a use support determination. Category 5A includes waterways for which one or more
4.10.3 ENVIRONMENTAL IMPACTS

The following section summarizes the potential impacts to wetlands, streams, floodplains, and water quality from the No Build and Build Alternatives, detailed in the Waters of the U.S. Delineation Report (Appendix III of this EA).

NO BUILD ALTERNATIVE

The No Build Alternative would result in no adverse permanent or temporary impacts to wetlands, streams, floodplains, groundwater, water supply, or water quality.

BUILD ALTERNATIVE

PERMANENT IMPACTS

Wetlands and Streams

Approximately 51 wetlands totaling 5.73 acres would be impacted by filling these wetlands to create ballast for the track, service roads, and temporary construction access (Table 4-23). The majority of the wetlands are narrow, linear, and run parallel to the proposed Project, often not more than 25 feet from the track. There would be 4.75 acres of permanent fill and 0.98 acre would be temporarily filled and restored. A total of 4.09 acres of permanently impacted wetlands are considered to be HQAR wetlands.

Table 4-23. Wetland and Stream Impacts Anticipated within the Construction Footprint

<table>
<thead>
<tr>
<th>Type of Waters</th>
<th>Number within Project Area</th>
<th>Cowardin Class/Flow Regime</th>
<th>Estimated Amount of Water Resource in Project Area</th>
<th>Estimated Impact of Water Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetlands</td>
<td>76 total; 51 impacted</td>
<td>Palustrine Emergent</td>
<td>37.59 acres</td>
<td>5.03 acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Palustrine Scrub-shrub</td>
<td>0.22 acre</td>
<td>0.13 acre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Palustrine Forested</td>
<td>5.19 acres</td>
<td>0.57 acre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Palustrine Unconsolidated Bottom</td>
<td>0.01 acre</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>43.01 acres</td>
<td>5.73 acres</td>
</tr>
<tr>
<td>Streams</td>
<td>13 total; 11 impacted</td>
<td>Ephemeral</td>
<td>9,891 linear feet</td>
<td>508 linear feet</td>
</tr>
<tr>
<td></td>
<td>3 total; 3 impacted</td>
<td>Intermittent</td>
<td>439 linear feet</td>
<td>300 linear feet</td>
</tr>
<tr>
<td></td>
<td>4 total; 4 impacted</td>
<td>Perennial</td>
<td>536 linear feet</td>
<td>309 linear feet</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>10,866 linear feet</td>
<td>1,117 linear feet</td>
</tr>
</tbody>
</table>
Environmental Assessment and Section 4(f) Evaluation

The proposed Project would require in-stream work in 18 streams, for a total of 1,117 linear feet. Construction work primarily includes extending or widening existing culverts, or constructing new culverts.

The construction footprint for the proposed Project was also compared against the Great Lakes Restoration Initiative’s Project database. There would be no impact to any areas or projects funded by the Great Lakes Restoration Initiative.

**Floodplains**

There are three areas accounting for 2.02 acres in which the proposed Project crosses a FEMA-designated 100-year floodplain (Table 4-24 and Appendix II) and, therefore, have the potential to be impacted by adding fill. Specific impacts include:

- The 100-year floodplain associated with Lake Michigan would be impacted as a result of constructing a new track on the north and south sides of the existing track and extending the existing culvert at MP 44.51 near Bailly to the south in order to accommodate the new track.
- The 100-year floodplain associated with Brown Ditch would be disturbed as a result of a new proposed track on the north side of the existing track. In addition, the headwalls and the wingwalls of the existing culvert for Brown Ditch would need to be repaired.
- The 100-year floodplain associated with Kintzele Ditch would be disturbed as a result of constructing a new track on either the north or south side of the existing track. Additionally, the existing culvert for Kintzele Ditch would be enlarged, as it would be replaced with three new culverts west of the existing culvert.

### Table 4-24. 100-Year Floodplain Impacts

<table>
<thead>
<tr>
<th>Flood Zone Code</th>
<th>Water Resource Associated with Floodplain</th>
<th>Milepost</th>
<th>Floodplain Area in Construction Footprint (acres)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Lake Michigan</td>
<td>44.4 – 44.6</td>
<td>0.56</td>
</tr>
<tr>
<td>A</td>
<td>Brown Ditch</td>
<td>37.5 – 37.6</td>
<td>0.28</td>
</tr>
<tr>
<td>A</td>
<td>Kintzele Ditch</td>
<td>36.0 – 36.3</td>
<td>1.18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>2.02</strong></td>
</tr>
</tbody>
</table>

Source: FEMA 2016

The hydraulic survey and preliminary hydraulic modeling and analysis indicate that preliminary proposed structures do not cause a rise in water surface elevations upstream of the track crossings during a 100-year flood event. The *Basis of Design Report – Drainage Analysis* (included in the Engineering Plans for the proposed Project as a separate submittal) provides details of the preliminary hydrologic and hydraulic analysis performed for this project.

**Water Supply**

The water well that is located within the Project Area is outside the construction footprint. Therefore, no impacts to water wells are anticipated as a result of the proposed Project.

**Water Quality**

Three impaired waterways (Dunes Creek, Brown Ditch, and Kintzele Ditch) are within the proposed Project Area. Culverts in these waterways would be replaced as part of the proposed Project. Water quality in these waters could be impacted by increased sediment levels as a result of construction activities.
GROUNDWATER

A review of IDEM databases and environmental records reveals that the Project Area is near environmental remediation institutional control sites and other sites where spills and releases have occurred, including leaking underground storage tank sites. The proposed Project will not likely result in additional discharges or impacts to either the unconsolidated aquifer system or the deeper bedrock aquifer system.

The proposed Project would not create a significant amount of impervious area or require establishment of a new wellhead protection area. The Project Area does not cross a wellhead protection area and is not near a designated sole source aquifer.

CONSTRUCTION IMPACTS

Construction activities associated with the Build Alternative would cause disturbance of vegetation and soils, which in turn would increase the potential for erosion and sedimentation. Sediments could be released to wetlands and streams, including impaired waterways. Construction impacts would be limited to potential occurrences of sediment runoff that would not affect groundwater. Post construction impacts would be diminished in quality and any minor detection of hydrocarbons or metals would attenuate in the soil before reaching groundwater. NICTD would develop erosion and sediment control plans that incorporate BMPs to avoid or minimize construction-related impacts to floodplains.

4.10.4 MEASURES TO AVOID OR MINIMIZE HARM

NICTD would avoid and/or minimize impacts to wetlands, waterways, floodplains, and water quality to the maximum extent possible. Because the Project would potentially impact more than one acre of wetlands and streams, a USACE Section 404 Individual Permit and a Section 401 WQC from IDEM would be required. USACE would determine the number of acres of wetlands that NICTD would be required to provide as mitigation. The Section 401 WQC would confirm that the proposed Project complies with Indiana’s water quality standards and, therefore, maintains the integrity of existing waterways. NICTD would also apply for and obtain permits from local and state regulatory authorities to fill portions of the floodplain. To mitigate impacts to wetlands and streams, NICTD would continue to partner with the NPS to develop a wetland mitigation strategy that would allow NICTD to create, restore, and enhance wetlands within the Indiana Dunes National Lakeshore. Such a plan would not only replace lost wetlands, but would also provide mitigation for lost habitat for threatened and endangered plant, reptile, and amphibian species.

The NPS has indicated, through a Letter of Intent (see Appendix IV), their desire to partner with NICTD on this strategy. They have identified the following sites within their boundaries as potential mitigation sites: Miller Woods, Pepoon Ditches, and South Bailly (Figure 4-16, Figure 4-17, and Figure 4-19). As an example, mitigation could include the restoration of former wetland areas in these sites by removing non-native species, removing man-made ditches, and restoring the natural flow of water.

NICTD and NPS would develop the specific details of the mitigation strategy, in consultation with the USACE and IDEM, during final design. This mitigation plan would be submitted to regulatory agencies as part of the permitting process before construction activities begin.

NICTD would apply for and obtain federal, state, and/or local permits and would adhere to any conditions laid out in the permits to further minimize impacts to water resources during construction. Other permits that would be required include the IDEM Construction/Land Disturbance Storm Water Permit (327 IAC 15-5).
Impacts to water quality as a result of the proposed Project would not be anticipated after implementation of BMPs during construction and adherence to permit conditions. These would include implementing BMPs during construction, including preparing an erosion control plan and a stormwater management plan, installing silt and drift fences, informing contractors of areas that must be avoided during construction, and requiring an environmental specialist to be on site during construction, among other requirements. All commitments would be specified in a final NEPA decision document.

4.10.5 NO PRACTICAL ALTERNATIVE FINDING – WETLANDS

The proposed Project is expected to impact approximately 51 of the 76 wetlands found in the Project corridor, totaling 5.73 acres. Under EO 11990, and as amended by EO 12608, federal agencies, to the extent permitted by law, must avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds:

- There is no practical alternative to such construction; and
- The proposed action includes all practical measures to minimize harm to wetlands that may result from such use.

In making this finding, the head of the agency may take into account economic, environmental, and other pertinent factors. The finding is also required before USACE can issue a federal permit under Section 404 of the CWA or if any other federal agency must issue an approval or permit. This section explains why there is no practical alternative to impacting wetlands and the practical measures that have been incorporated into the design to reduce impacts to wetlands to the greatest extent possible while minimizing harm to the remainder.

NO PRACTICAL ALTERNATIVE

The existing alignment of the NICTD/CSS railroad track is adjacent to the Indiana Dunes National Lakeshore and the Indiana Dunes State Park. There are wetlands present on both sides of the railroad ROW, and in some cases, wetlands exist within the railroad ROW. The SSL and CSS have operated adjacent to the natural ecosystems contained within the two parks and wetlands adjacent to the track for a century.

In order to meet the Purpose and Need of the proposed Project, a second track adjacent to the existing track would be added. Since the existing transit service operates on this alignment, it is not practical or cost effective to shift the transit service to another corridor.

The placement of the new main track in relation to the existing track (north or south) was based on operational, environmental and ROW considerations as they relate to the need for the proposed Project. Today, the SSL and CSS operate on the same track in many segments. In the proposed condition, the new mainline track would also be used by both CSS and SSL trains. The location of the new mainline track is dictated, to a large degree, by the location of existing stations and platforms, the location of freight customers (primarily NIPSCO and ArcelorMittal), the availability of NICTD/CSS ROW, and CSS’s operational movements along the line.

Because there are wetlands located on both sides of the existing track, within and adjacent to the NICTD/CSS ROW, there is no practical alternative that completely avoids wetland resources and still meets the Purpose and Need of the proposed Project.
MEASURES TO MINIMIZE HARM TO WETLANDS

The design has progressed throughout the NEPA process, and has minimized impacts to wetlands and other sensitive resources to the extent possible.

Wetland delineations were conducted in October 2016 and again in April 2017 to capture changes that occurred as design progressed. The survey boundary extended beyond the NICTD/CSS ROW. The estimated acres of impact from the initial design dated October 31, 2016, and the revised design are shown below. Wetland impacts were reduced by 10.27 acres, from 16.00 acres to 5.73 acres (Table 4-25).

Table 4-25. Wetland Impact Changes

<table>
<thead>
<tr>
<th>Type of Waters</th>
<th>Number within Project Area</th>
<th>Cowardin Class/Flow Regime</th>
<th>Estimated Amount of Water Resource in Project Area</th>
<th>Estimated Impact 10/31/16</th>
<th>Estimated Impact Revised Design</th>
<th>Wetland Impact Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetlands</td>
<td>76</td>
<td>Palustrine Emergent</td>
<td>37.59 acres</td>
<td>11.9 acres</td>
<td>5.03 acres</td>
<td>- 6.87 acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Palustrine Scrub-shrub</td>
<td>0.22 acre</td>
<td>0.2 acre</td>
<td>0.13 acre</td>
<td>- 0.07 acre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Palustrine Forested</td>
<td>5.19 acres</td>
<td>3.9 acres</td>
<td>0.57 acre</td>
<td>- 3.33 acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Palustrine Unconsolidated Bottom</td>
<td>0.01 acre</td>
<td>0.003 acre</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>41.01 acres</td>
<td>16.00 acres</td>
<td>5.73 acres</td>
<td>- 10.27 acres</td>
</tr>
</tbody>
</table>

Nearly two-thirds of the reductions are the result of tightening up the construction grading footprint throughout the corridor. The remaining approximately one-third of the wetland reduction was achieved through the following two specific design changes:

1. At the west end of the project at the Goff/CN Interchange, between MP 57.1 and MP 56.25, high-quality wetlands were identified north of the existing tracks. This same area north of the tracks also supports “moderate” habitat for several threatened and endangered species, including Indiana and northern long-eared bats. There are also wetlands located south of the tracks; however, they are not contiguous and, based on observation, serve as drainage ditches between the NICTD MOW facility and the access roads. The October 2016 design placed a new track to the north. This was changed to place the additional main track to the south instead, between the existing track and U.S. 12. This change reduced the total wetland impacts by 2.89 acres.

2. Between MP 48 and 47, a retaining wall would be constructed on the approaches to the NS and ArcelorMittal Road bridges. This reduced impacts to wetlands that are located south of the tracks by 0.42 acre.

4.10.6 NO PRACTICAL ALTERNATIVE – FLOODPLAINS

In compliance with EO 11988, as amended, four floodplain questions were evaluated in order to demonstrate that the proposed Project would not cause any significant floodplain impacts. These four questions concern the following topics:
- potential flood-related disruption of emergency services
- significant adverse impacts on natural and beneficial floodplain values
- increased risk of flooding
- encouragement of incompatible floodplain development

Preliminary analyses conducted as part of the proposed Project suggest that the impacts of the Project would be below the threshold of significance for each of these concerns. However, this would be evaluated and confirmed in the next phase of design.

4.11 SECTION 6(F) RESOURCES

The purpose of this section is to identify and evaluate the effects of the proposed Project on properties protected by Section 6(f) of the Land and Water Conservation Fund Act (LWCFA) of 1965.

4.11.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

The LWCFA (16 USC §§ 4601-4 to 4601-11 et seq.) regulates the use of parklands that were purchased or developed using LWCFA funds. Section 6(f) of the LWCFA, administered by the Interagency Committee for Outdoor Recreation and NPS, provides funding for acquiring property and developing public recreational facilities, and protects against the loss of that property to other uses. The act states, “No property acquired or developed with assistance under this section shall, without the approval of the Secretary [of the Department of the Interior], be converted to other than public outdoor recreation uses” (16 USC § 4601-8[f][3]). Section 6(f) applies when a project proposes to convert property where LWCFA funds have been used to develop all or a portion of the property (36 CFR § 59 et seq.). A conversion occurs when the use of all or part of a Section 6(f) site is changed to a non-outdoor recreation use for longer than 6 consecutive months, or when a project occurs on the Section 6(f) property and would affect access to the Section 6(f) resource for more than 6 months (NPS 2008).

When property is converted, mitigation is required in the form of replacement property of at least equal recreation value. NICTD’s review of the Indiana listing of properties encumbered by Land and Water Conservation Grant funding revealed two Section 6(f) properties in the Project Area.

NICTD’s evaluation of the Project’s effects on properties protected by Section 6(f) began with identifying whether and where such properties are found in the Project Area. The tools used to make this determination included the LWCFA list of sites and coordination with IDNR and NPS. Section 6(f) properties in the Project Area were identified and then assessed for impacts.

4.11.2 IDENTIFICATION OF SECTION 6(F) RESOURCES

The Indiana Dunes National Lakeshore is an NPS property and the entire property is considered a Section 6(f) resource. Additionally, INR has received LWCFA funding for improvements at the Indiana Dunes State Park, including the Indiana Dunes Nature Center, restroom and picnic area improvements, and the Indiana Dunes Pavilion.

4.11.3 ASSESSMENT OF CONVERSION OF SECTION 6(F) RESOURCES

NO BUILD ALTERNATIVE

The No Build Alternative is not expected to use or convert Section 6(f) protected properties.

4-101
BUILD ALTERNATIVE

The proposed Project is adjacent to the Indiana Dunes National Lakeshore. NICTD has developed the proposed Project to avoid any encroachments on the Indiana Dunes National Lakeshore. In all places where the proposed Project is adjacent to the Indiana Dunes National Lakeshore, all NICTD assets, including track, stations, and OCS equipment, would be located on NICTD or CSS property. Additionally, the proposed Project plans would restrict contractors from the temporary use of NPS property during construction.

NICTD has proposed to mitigate corridor-wide wetland loss through wetland creation, restoration, and enhancement of portions of the Indiana Dunes National Lakeshore. NPS has provided a Letter of Intent to partner with NICTD on the mitigation for the preservation and enhancement of the NPS property. The wetland restoration and enhancement would not convert the parkland to a non-Section 6(f) use.

No proposed Project activities would encroach upon the Indiana Dunes State Park; therefore, there is no Section 6(f) use.

4.11.4 CONSULTATION AND COORDINATION (IF REQUIRED)

No further consultation or coordination is required, since none of the Section 6(f) properties in the Project Area would be permanently converted to a non–Section 6(f) use.

4.11.5 SECTION 6(F) DETERMINATION CONCLUSIONS

Though there are Section 6(f) properties in the Project Area, none would be permanently converted to a non-Section 6(f) use. Proposed Project elements to occur on NPS land are limited to mitigation efforts that enhance the Indiana Dunes National Lakeshore and do not constitute a conversion to non-outdoor recreation use. Construction of wetland enhancement and restoration would last less than 6 consecutive months. Therefore, the proposed Project would have no Section 6(f) impacts and does not require further consultation and coordination.

4.12 ENVIRONMENTAL JUSTICE

This section describes the proposed Project’s compliance with applicable federal requirements for environmental justice (EJ), including NICTD’s review of the regulatory context and methodology, identification of minority and/or low-income populations (that is, EJ populations), an overview of public outreach strategies and activities to engage EJ populations in the project planning process, an assessment of impacts that would affect EJ populations, and a project-wide EJ finding.

More detail is included in the Environmental Justice Technical Memorandum in Appendix III.

4.12.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

There are several orders and guidance documents that require consideration of the impacts of federal actions on EJ populations. EJ analysis requirements address low-income people in addition to minority populations and are integrated into the procedures of the National Environmental Policy Act (NEPA).

FEDERAL

The analyses presented in this section were prepared in compliance with the Presidential Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994); the U.S. Department of Transportation’s (USDOT) Order to Address Environmental Justice in Minority Populations and Low-Income Populations [USDOT Order
As outlined in FTA Circular 4703.1, USDOT and FTA are required to make EJ part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority populations and/or low-income populations (collectively, environmental justice populations). FTA includes incorporation of EJ and non-discrimination principles into transportation planning and decision-making processes and project-specific environmental reviews.

Furthermore, USDOT Order 5610.2(a) sets forth the USDOT policy to consider EJ principles in all USDOT programs, policies, and activities. It describes how the objectives of EJ are integrated into planning and programming, rulemaking, and policy formulation. This EJ evaluation addresses only impacts to minority and low-income populations that would be caused by the proposed Project, because the No Build Alternative would not directly or indirectly change existing conditions of the surrounding environment.

State and local agencies in the Project Area are subject to the above federal requirements as applicable and do not have additional regulatory requirements pertaining to EJ.

METHODOLOGY

The framework for the EJ evaluation incorporated in this EA is based on FTA C4703.1, described above, which outlines a methodology that addresses EO 12898 including both a robust public participation process and an analytical process with three basic steps:

1. Determine whether there are EJ populations potentially affected by the Project.
2. If EJ populations are present, consider the potential effects of the Project on the EJ population, including any disproportionately high and adverse effects.
3. Determine whether any adverse effects could be avoided, minimized, or mitigated.

The term “minority” and “low-income” are defined by FTA Circular 4703.1. Minority includes persons who are American Indian/Alaska Native, Asian, Black/African American, Hispanic/ Latino, and Native Hawaiian and other Pacific Islander. Low-income is a person whose household income is at or below the Department of Health and Human Services (DHHS) poverty guidelines. The 2015 DHHS poverty guidelines for a family of four is $24,250 per year.

The analysis for both temporary construction and permanent impacts takes into account direct adverse impacts and indirect or cumulative adverse impacts on EJ populations based on the following factors:

- Direct impacts would be permanent, result from implementation of the proposed Project, and occur at the same time and place (40 CFR § 1508.8). A direct impact distance of 700 feet that increases to 1,600 feet at at-grade roadway crossing locations was applied. This distance was applied based on expected direct impacts from construction and implementation of this Project in an existing mixed urban and rural transportation corridor.

- Indirect impacts would be caused by the Project, but are separated from direct impacts by time and/or distance and include induced growth and related environmental impacts, such as changes to land use patterns, population density or growth rates, and related impacts on air quality, water and other natural systems. Cumulative impacts would be those that result from the incremental impact of the proposed Project when added to other past, present, and reasonably foreseeable
future actions, regardless of what agency or person undertakes such other actions (40 CFR § 1508.67). An area encompassing 0.5 mile around the alignment was assessed for potential indirect or cumulative impacts on EJ populations affected by the proposed Project.

The project-wide EJ finding is based on whether the proposed Project would result in disproportionately high and adverse effects on EJ populations. Based on FTA guidance, when making the final project-wide EJ finding, FTA considers the following criteria:

- Would the proposed Project’s adverse impacts be predominantly borne by EJ populations?
- Would adverse impacts to EJ populations be appreciably more severe or greater in magnitude than those suffered by non-EJ populations?
- What would be the effect of the proposed Project’s offsetting benefits when considering these impacts?
- What would be the effect of mitigation measures that would be incorporated into the proposed Project and any other enhancements or betterments that would be provided in lieu of mitigation when considering these impacts?

4.12.2 EXISTING CONDITIONS

MINORITY POPULATIONS

There are 44,328 people living within 0.5 miles of the alignment. The most prevalent race is White (46 percent). The largest minority race is Black/African American (42 percent). Hispanic or Latino populations of any race (including White) make up 7 percent of the total population. Of the total population living within 0.5 mile of the alignment, minority persons make up 53.8 percent.

Geographically, minorities within 0.5 miles of the Project alignment are not dispersed equally across the corridor. Figure 4-22 shows the distribution of the minority population throughout the Project Area. Higher percentages of minorities are located at the west end of the Project in Gary and at the east end in Michigan City. The racial makeup for the area between these two cities is predominantly White.

LOW-INCOME POPULATIONS

Geographically, low-income populations within 0.5 mile of the alignment are dispersed somewhat equally across the corridor. Within 0.5 miles of the alignment, 30 percent of the population is considered low income. This is higher than any of the counties, with 12 percent in Porter County, 17 percent in LaPorte County, and 18 percent in Lake County. Figure 4-23 shows that there are several Census block groups with 25 to 50 percent low-income populations within 0.5 mile of the alignment. These are located in Gary, Portage, the Town of Pines, and Michigan City. The two census block groups with more than 50 percent low-income residents are located at the far western end of the Project Area in Gary.

More information about the racial and income characteristics for each community is included in Section 4.3 and in the Environmental Justice Technical Memorandum in Appendix III.
Figure 4-22. Minority Populations in the Project Area
Figure 4-23. Low-Income Populations in the Project Area
4.12.3 IMPACTS

The section describes the potential for disproportionate impacts and unevenness of benefits in the Project Area’s EJ communities. The FTA Circular defines a disproportionately high and adverse effect on human health or the environment to include an adverse effect that:

- Is predominantly borne by a minority population and/or a low-income population; or,
- Would be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than those suffered by the non-minority population and/or low-income population.

NO BUILD ALTERNATIVE

The No Build Alternative would not have adverse EJ effects. No disproportionately high and adverse impacts would occur on low-income or minority populations. The No Build Alternative would also lack the benefits of the proposed Project, including faster, more reliable, and more frequent SSL service and enhanced livability.

BUILD ALTERNATIVE

PERMANENT IMPACTS

Environmental resources that would require mitigation were reviewed to determine if and to what extent these adverse effects would disproportionately impact EJ populations. These include:

- Transportation
- Land Acquisitions and Relocations
- Cultural resources (Section 106 and Section 4(f))
- Visual and Aesthetics
- Noise
- Vibration
- Construction Impacts

NICTD and FTA recognize that without mitigation, some of the specific impacts of the proposed Project could disproportionately affect EJ populations. All adverse impacts associated with the proposed Project would be mitigated and FTA would monitor compliance with environmental commitments during Project implementation. Additionally, targeted outreach and coordination with community organizations is necessary to maintain continued engagement with EJ populations as the proposed Project advances.

Transportation

The proposed Project would change the transportation environment for residents, business patrons, motorists, pedestrians, bicyclists, and transit users. There would be temporary and permanent impacts. The majority of the improvements would take place in the communities of Gary and Michigan City, both of which have higher percentages of minorities and low-income households.
In Gary, there would be changes to traffic patterns resulting from the consolidation of U.S. 12 and U.S. 20, a project being completed separately by INDOT. GPTC's bus Route 13 would still serve the Gary/Miller Station at Lake Street during and after construction.

In Michigan City, the road conversion of 11th Street to one-way eastbound and the closure of several north/south roads would change traffic patterns. Many of the crossing closures occur in areas identified as low-income or minority. The traffic studies conducted for the proposed Project indicate that the Michigan City roadways to which traffic would be rerouted are able to accommodate the increase in traffic. Motorists would not need to travel far out of their way to find the next available north-south crossing. No adverse effects to traffic would occur and no mitigation is proposed.

MC Transit Routes 1 and 3, which use 10th Street, Willard Avenue, and Chicago Street would be temporarily rerouted during construction. The 11th Street (Michigan City) Station is currently served by MC Transit Route 2 via Pine Street. In the future, Pine Street will be closed at the SSL tracks, but Franklin Street (to the west) would remain open and could continue to serve the station. NICTD would coordinate with MC Transit regarding the temporary changes to Routes 1 and 3, the permanent changes to Route 2 and continuance of serving the 11th Street (Michigan City) Station, during and after construction.

NICTD would work with these communities and MC Transit to identify specific strategies to reach EJ populations to inform residents, businesses, and public transit users of the proposed Project, and changes to the transportation system. NICTD would develop maintenance of traffic (MOT) plans that would indicate detour routes, including those that accommodate buses, safe pedestrian-friendly crossings, and accessible business, residential, and community facilities. NICTD would also inform SSL commuters of any temporary changes to service or travel times during construction. The construction outreach plan would contain specific strategies to reach EJ populations before and during construction.

The proposed Project would result in benefits to the EJ residents, commuters, and patrons in Michigan City, in terms of safety and improved access to transit. Michigan City currently has some of the highest automobile/train accident rates in Indiana. By removing 21 of the 39 at-grade crossings, removing the embedded in-street track, and upgrading the remaining crossings with safety equipment, safety in the corridor would be greatly improved.

The area served by the proposed Project would benefit from implementation of the proposed Project. The proposed Project would serve the EJ communities in Gary and Michigan City by enhancing stations, improving safety, and providing faster, safer and more reliable SSL service. For transit-dependent populations, which are often low-income and minority, the enhanced transit connectivity provides greater access to employment opportunities, services, shopping, and recreation.

There would be some changes to traffic patterns at U.S. 12/U.S. 20 in Gary and within Michigan City, but traffic studies indicate that none of the changes would rise to the level of adverse effect. NICTD would work with MC Transit regarding changes to bus service to the 11th Street (Michigan City) Station. Changes to traffic patterns and bus routes would be communicated to the public, with specific strategies developed to engage EJ populations. With these measures, potential adverse impacts would be
minimized, and **the proposed DT-NWI Project would not result in disproportionately high and adverse effects on EJ populations related to transportation.**

**Land Acquisitions and Relocations**

There would be 80 residential properties acquired for the proposed Project. Seventy-nine are located in Michigan City along 10th or 11th Streets and one is located in Gary. There are 52 residential buildings and the remaining properties are vacant parcels of land (Table 4-1 in Section 4.2). Based on census data, it is likely that some of these residences are owned or leased by minority and/or low-income individuals.

Sixty-two commercial properties would be acquired for the proposed Project, including 37 in Gary, 2 in Portage along U.S. 12, and 23 in Michigan City. Of the commercial properties, 15 have buildings and 47 are parcels only. Only eight house active businesses. This includes two in Gary, one in Portage, and five in Michigan City. Some of these businesses are owned by minority individuals.

FTA and NICTD would conduct the acquisition process in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act (Uniform Act), as amended. The Uniform Act requires that property owners be paid fair market value for the acquired property and be provided equitable compensation for expenses normally associated with relocating. It is possible that property acquisitions and displacements would affect some property owners and tenants whose primary language is not English. Accordingly, property acquisition and relocation discussions would be conducted in other appropriate languages whenever necessary. **Therefore, the proposed Project would not result in disproportionately high and adverse effects on EJ property owners and renters displaced by the proposed DT-NWI Project.**

Both EJ and non-EJ business and property owners would be compensated consistent with state and federal requirements. NICTD would identify relocation sites by working with the business owners, homeowners and tenants through the ROW acquisition process. Relocation sites would be considered based on the business owners’ preferences to retain their client base and/or continue to serve a similar population, and based on the homeowner or tenant’s preferences. Relocation expenses would be considered consistent with state and federal requirements. **Therefore, the proposed Project would not result in disproportionately high and adverse effects on EJ business owners displaced by the proposed DT-NWI Project.**

All of the businesses to be acquired would have suitable replacement property available in their respective communities. Since it is unknown at this time whether businesses would relocate within the same community, the result of the displacements of the businesses may have an adverse effect on EJ populations in the communities currently served by the businesses. However, in all cases, comparable businesses exist within 0.5 mile of the business that would be displaced and they would be able to continue to serve the EJ population.

NICTD will provide notices to the affected EJ community with the business’ new location (if a suitable relocation was identified) with transit options to access the new business location, and/or other options to meet their needs. With these measures, potential adverse impacts would be minimized. **Therefore, the**
proposed Project would not result in disproportionately high and adverse effects on EJ employees or customers.

**Cultural Resources (Section 106 and Section 4(f))**

The proposed Project would only have *de minimis* use of two trails that are afforded protection under Section 4(f). As such, there are no impacts to EJ populations related to recreational resources. There are no adverse effects to archaeological resources resulting from the Project; therefore, there are no impacts to EJ populations related to archaeology.

Although there are historic buildings and districts present within low-income and/or minority communities in Lake and Porter Counties, the proposed Project would have no direct impacts to them (such as property acquisition), or indirect impacts (such as noise and vibration), and consequently no disproportionately adverse impacts to any EJ communities associated with those resources. In LaPorte County, however, the proposed Project would permanently incorporate 27 historic properties in Michigan City that are afforded protection under Section 4(f) through demolition. All of these are located in areas with EJ populations. As determined through the Section 106 consultation process, the proposed Project’s adverse effects to 27 historic properties (which includes the acquisition and demolition of 24 historic resources and 3 historic districts), compounded with street closures and the creation of cul-de-sacs, would result in fractures to the districts’ historic and architectural cohesion. It would also alter view sheds and streetscapes, resulting in adverse effects to these historic districts. Without mitigation, the EJ populations within these districts would potentially be disproportionately affected.

FTA and NICTD, in consultation with the SHPO and consulting parties, would develop and execute a Memorandum of Agreement (MOA) to resolve the adverse effects on historic properties resulting from the proposed Project. FTA and NICTD have proposed mitigation measures to resolve the adverse effects to historic properties (See Section 4.4.4). The draft MOA is currently being developed and consulting parties and SHPO are still reviewing the document. Once consultation is complete, the treatment measures will be presented in the environmental decision document along with the final, executed MOA See Section 4.4, Chapter 5 and Appendix VII of the EA for specific details regarding the stipulations of the MOA.

Additionally, all demolitions, new construction, and changes within the historic districts must be reviewed and approved by the City of Michigan City’s Historic Review Board. This is a public process, whereby input from local citizens is taken into consideration on final decisions. NICTD would work with the City of Michigan City to actively inform and solicit input from the EJ populations during the public review process regarding any changes to the historic districts and/or eligible properties that result from the proposed Project. With these measures, potentially disproportionately high and adverse effects to EJ populations as they relate to Section 106 and Section 4(f) resources would be minimized.

Based on a review of the distribution of Project-related cultural resource impacts throughout the Project Area and after the consideration of mitigation to be implemented through the MOA, the cultural resource impacts are not disproportionately borne by EJ populations or appreciably higher than those experienced by non-EJ populations. **Therefore, the proposed DT-NWI Project would not result in disproportionately high and adverse effects on EJ populations related to cultural resources.**

**Visual and Aesthetics**

Project implementation would not result in a substantial change to the visual character of the Project Area as a whole. The majority of visual quality changes resulting from the proposed Project are considered “neutral” (either before or after mitigation) or “beneficial.” Visual changes would occur at all five stations. However, the most dramatic changes would be at Gary/Miller Station and 14th Street (Michigan City) Station, where EJ populations are located.
The proposed Project would have positive visual impacts for the EJ populations located in Gary and Michigan City, especially in the station areas. Because there are buildings and trees that would be removed on some of the purchased parcels, the visual character of the immediate station areas would be changed; however, the station and parking improvements would be designed with attractive landscaping and visual features to mitigate the loss of existing fabric and vegetation, and the community would also have the opportunity to create positive visual changes with attractive landscaping and design. Station area plans would be subject to public review as part of the community planning process. As described in the previous section, NICTD would work with the cities of Gary and Michigan City to actively inform and solicit input from the EJ populations during the public review process, including changes to the historic districts, as applicable. With these measures, visual impacts to EJ populations would be minimized.

Based on a review of the distribution of Project-related visual quality impacts throughout the Project Area and after the consideration of visual quality mitigation to be implemented, the visual quality impacts are not disproportionately borne by EJ populations or appreciably higher than those experienced by the non-EJ populations. Therefore, the proposed DT-NWI Project would not result in disproportionately high and adverse effects on EJ populations related to visual quality.

**Noise**

Due to the fact that the SSL trains and freight trains have been operating in this corridor for several decades, the entire corridor and the communities in which it passes through already experience relatively high noise levels ranging from 68 dBA to 76 dBA. The noise is primarily due to the sounding of the NICTD train horn at grade crossings. The train horn is currently 105 dBA, much higher than typical transit horns (93 dBA).

In Michigan City, the proposed Project would close 13 cross streets, eliminating the need for trains to sound their horns at these locations. For the remaining grade crossings, NICTD would work with Michigan City and FRA to implement a quiet zone between Sheridan Avenue and Carroll Avenue. As a result, neither NICTD nor freight trains would need to sound their warning horns on a routine basis. Residents of Michigan City, both EJ and non-EJ, would benefit from a reduction in train horn noise by up to 20 dBA with this measure.

Outside of Michigan City, there are three moderate noise impacts projected to occur because of the proposed Project. Two are in Beverly Shores and do not impact an EJ population. The third moderate impact is in Gary, in an area that is both low-income and minority. The noise is caused by train horns at crossings and would be mitigated by lowering the train horn decibel level on NICTD trains. This measure would eliminate the one impact in Gary, reduce the magnitude of the noise impact at the two impacts in Beverly Shores to a level less than significant, and further benefit other noise-sensitive receptors along the corridor.

Based on the analysis described above, the impacts are not disproportionately borne by the EJ population or appreciably higher than those experienced by the non-EJ population. Therefore, the proposed DT-NWI Project would not result in disproportionately high and adverse effects on EJ populations related to noise.
Vibration

A total of eight vibration impacts would potentially occur as a result of the increased number of trains: one in the Town of Pines, two in Beverly Shores and five in Michigan City. These impacts are attributable to train wheels rolling on the rail. The impacts occurring in the Town of Pines and in Michigan City occur in areas identified as EJ populations.

To mitigate the projected vibration impacts, NICTD will install crosstie pads, ballast mats, resilient fasteners, or other track support system modifications. These materials would be evaluated for effectiveness at impacted receptors and for durability in a shared freight corridor during the final design phase of the Project; final mitigation measure selection will be performed at that time. With this mitigation, vibration would be reduced to a level less than significant.

Based on a review of the distribution of Project-related vibration impacts throughout the Project Area and after the consideration of vibration mitigation to be implemented, the vibration impacts are not disproportionately borne by EJ populations or appreciably higher than those experienced by the non-EJ populations. Therefore, the proposed DT-NWI Project would not result in disproportionately high and adverse effects on EJ populations related to vibration.

CONSTRUCTION IMPACTS

The Build Alternative would result in temporary adverse construction impacts on neighborhoods surrounding the proposed Project. Construction impacts would be similar throughout the proposed Project Area. No disproportionately high and adverse effects due to construction are anticipated, because impacts would be experienced by EJ and non-EJ communities alike. Construction, including staging areas, would primarily occur within railroad ROW or on properties acquired for the proposed Project, which would limit street closures and other neighborhood and community impacts.

NICTD would limit noise effects during construction by including noise and vibration performance specifications in construction contract documents that are consistent with local jurisdictional ordinances. Construction contractors would be required to develop a construction noise and vibration management plans, which include coordinating with project stakeholders to minimize intrusive construction effects.

To reduce adverse air quality impacts during construction, NICTD would direct the contractor to prepare and implement a dust control plan, a work-zone traffic management plan, and a strategy to control emissions from diesel-powered equipment. Additionally, the contractor would be required to follow the USEPA’s Construction Emission Control Checklist. Several mitigation measures would be employed including limiting idling of construction equipment during periods of inactivity, maintaining construction equipment in proper working condition, and limiting dust-producing construction activities near sensitive receptors, such as schools and residential areas, where feasible. Additionally, the construction contractor would employ at least one environmental staff member responsible for monitoring construction activities within residential areas to help ensure that construction does not become a nuisance to nearby residences.

Construction would cause temporary changes to roadways and transit near stations and during construction of track and crossing improvements. NICTD would work with communities and public transit agencies to inform the public of the changes in traffic patterns, during and after construction. Specific outreach to residents in the immediate area would be conducted, as well as to transit users. NICTD would work with communities to identify specific strategies to reach EJ populations as part of the construction outreach plan to inform residents, businesses, and public transit users of the proposed Project, construction duration, and changes to the transportation system during construction.
Based on a review of the distribution of Project-related construction impacts throughout the Project Area and after the consideration of mitigation to be implemented, the construction impacts are not disproportionately borne by EJ populations or appreciably higher than those experienced by the non-EJ populations. Therefore, the proposed DT-NWI Project would not result in disproportionately high and adverse effects on EJ populations related to construction.

PUBLIC OUTREACH TO EJ COMMUNITIES

While the U.S. Census and Census data are useful tools to help characterize a neighborhood or other geographic region, they are not comprehensive and do not incorporate the communities’ views on the composition of their neighborhoods and potential issues of concern. NEPA-phase public involvement has included targeted outreach to EJ communities identified through the Census analysis, as well as follow-up communications and outreach to newly identified EJ populations. For the proposed Project, NICTD has conducted over 50 meetings and events since October 2016 to get to know the communities and has included additional organizations, businesses, individuals, and other community groups as the proposed Project progressed. NICTD used information obtained at these meetings, consulted with community leaders, and used census mapping to identify minority and low-income populations to develop and implement enhanced, pro-active, and non-traditional outreach with EJ populations.

Meetings with property owners who would be affected by acquisition were held in EJ communities, and information was distributed at local libraries. An informational meeting was held at Michigan City’s City Hall on June 28, 2017, to answer questions related to property acquisition. Michigan City property owners and tenants that would be impacted by land acquisition were invited by certified letter and follow up phone calls to attend the meeting. Approximately 75 people attended the meeting. NICTD staff described the project, funding structure, timelines, and the anticipated schedule for acquisition should the project be approved; the acquisition and relocation process, and the Uniform Real Estate and Relocation Act. Brochures were handed to individuals and a question/answer session took place. Questions were asked and answered regarding the operational changes to the SSL, how the value of properties to be acquired were established, the duration of acquisition for specific property types, whether personal property would be included in acquisition, and relocation benefits.

NICTD also presented the project on August 28, 2017 to Michigan City’s P.A.R.C. (Politics, Art, Roots and Culture) organization, the Michigan City Main Street Association, and the Michigan City Social Justice Group. The event was publicized through invitations to community organizations, through NICTD’s mailing and email list, the Michigan City Main Street Facebook open page, the Michigan City Social Justice Group’s closed Facebook page, and other sources. The meeting, which was hosted by P.A.R.C. in their community center, lasted for about 1 ½ hours including a PowerPoint presentation on the Project and the NEPA process followed by a question and answer session. NICTD representatives remained after the formal presentation to answer questions of individuals in attendance and to generally converse with the public regarding the Project.

Most questions asked centered around the acquisition process for homes in Michigan City. Other questions focused on the previous 2013 NICTD/Michigan City rail alignment study, the project schedule and funding, the number of jobs to be created, and wetlands mitigation...
issues. NICTD representatives encouraged community members to stay involved in the Project through communication with NICTD and Michigan City throughout the process. Media coverage by the Michigan City News Dispatch was published the following day. NICTD also attended and participated in several events sponsored by others, distributing project information, and taking comments. NIRPC held public meetings in April 2017 regarding changes to the regional transportation plan, including the proposed Project. Three of the five public meetings were held in communities within the Project Area and outreach to EJ populations was conducted through that process. NICTD has reviewed comments received during the NIRPC public comment period for consideration during Project development and design.

NICTD conducted specialized outreach to reach EJ populations to heighten awareness of the proposed Project improvements and, most importantly, to provide opportunities for EJ populations to have meaningful participation in the development of the proposed Project and respective benefits and impacts. More information on outreach activities is described in Chapter 5 and the Environmental Justice Technical Memorandum in Appendix III.

PROJECT-WIDE EJ FINDING

NICTD and FTA recognize that some of the specific impacts of the proposed Project may adversely affect both EJ and non-EJ populations, and additional outreach and coordination with community organizations would be necessary to maintain continued engagement with EJ populations as the proposed Project advances. As NICTD prepares final plans for station and track designs in EJ areas, including Gary and Michigan City, public input would be sought as part of the local review process. NICTD would work with communities to include specific outreach to EJ populations. If additional adverse effects are found during this process, NICTD would consider additional mitigation to offset the effects.

After examining the proposed Project holistically, taking into account the adverse impacts on EJ populations, and mitigation measures committed to by NICTD, FTA has concluded that the proposed Project will not result in disproportionately high and adverse effects to EJ populations.

4.13 SAFETY AND SECURITY

This section describes the general safety and security considerations related to the design and operation of the proposed Project. Where applicable, it includes a discussion of proposed transit services, Park-and-Ride lots, track alignment, at-grade crossings, stations, bridges, and ROWs that would be associated with the Build Alternative. The proposed Project would feature safety and security systems and procedures similar to those currently used by NICTD to protect passengers, workers, and surrounding communities.

Safety includes all incidents within NICTD ROW. This ROW includes areas along tracks and at stations. Potential safety hazards include collisions, derailments, fires, property damage, injuries, and fatalities. Security refers to freedom from harm resulting from intentional acts or circumstances.

4.13.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

Federal safety and security requirements for rail systems are provided through a combination of federal and state laws. Most safety-related rules and regulations fall under the jurisdiction of FRA, as set forth in the Rail Safety Act of 1970 and other legislation, such as the Rail Safety Improvement Act of 2008.

The railroad sector maintains communications with the U.S. Department of Defense, the U.S. Department of Homeland Security, USDOT, the Federal Bureau of Investigation, and local law-enforcement agencies regarding all aspects of rail security. The lead agency for rail security in Indiana is the Indiana Department of Homeland Security. Rail security is implicit within the organization’s work in coordinating security
planning, performing risk assessments, training, certifying emergency services and first responder personnel, and maintaining emergency response and recovery capabilities.

NICTD, as the owner and operator of the proposed Project, follows safety and security policies that establish minimum requirements for facilities based on local, state, and federal codes or standards, including those for fire protection, building codes, American National Standards Institute standards, and American Society for Testing and Materials International standards. In addition, FTA provides safety and security oversight for major capital projects (Safety and Security Guidance for Recipients with Major Capital Projects, covered under 49 CFR § 633, “Project Management Oversight”). The design of the proposed Project would meet the following minimum objectives:

- Design for minimum hazard through the identification and elimination of hazards through the use of appropriate safety design concepts and/or alternative designs.
- Use fixed, automatic, or other protective safety devices to control hazards that cannot be eliminated.
- Use warning signals and devices if neither designs nor safety devices can effectively eliminate or control an identified hazard.
- Provide special procedures to control hazards that cannot be minimized by the aforementioned devices.

FRA would be the responsible agency to ensure compliance with federal railroad safety regulations, covering vehicles, operating practices, signal and train control, and track.

Authors of this EA reviewed the following NICTD documents to describe the existing safety and security procedures that are currently in place:

- System Safety Program Plan (SSPP), April 2015
- Written Hazard Communications Program, January 2014
- Personal Protective Equipment Program, February 2016
- Fall Protection Program for General Industry, September 2012
- Control of Hazardous Energy (Lock-out/Tag-out) Program, February 2014
- Passenger Safety Guidelines brochure for the SSL

At this time, safety and security policies and procedures have not been developed specifically for the proposed Project. During the engineering and construction phases, prior to operations, the proposed Project would be guided by a Project Management Plan (PMP). The PMP would set forth requirements to be met for the design and construction process and results. The PMP would be supported by a Safety and Security Management Plan (SSMP) prepared specifically for the Project. The SSMP would detail the steps to be taken during design and construction to ensure that safety and security concerns are addressed adequately through proper design and operational planning. This would include the development of safety and security design criteria, and a subsequent certification process to confirm that the criteria are met. Other safety plans to be completed include the System EPP, Safety and Security Certification Plan, Preliminary Hazards Analysis Report, and Threat and Vulnerability Analysis.

NICTD would work with FTA to provide regular updates to the PMP, including Project safety and security activities, organizational updates, work scope changes, and changes to the assignments of responsibilities among Project participants based on FTA’s feedback. NICTD would continue to assess
whether adequate provisions have been made for safe and secure operations and what design features would be included to avoid, minimize, or mitigate vehicular, transit, and pedestrian accidents.

The effects for the proposed Project are assessed in this section by identifying the following:

- Whether adequate provisions for safe and secure operations would be made with the introduction of the Build Alternative
- Whether the Build Alternative would alter existing patterns of vehicular, transit, and/or pedestrian accidents, and what design features would be included to avoid, minimize, or mitigate these accidents
- Whether the Build Alternative would improve safety and security compared to the existing conditions in the Project Area

4.13.2 EXISTING CONDITIONS

Public safety and security in the Project Area is provided by the police departments, fire departments, and emergency response units of the communities adjacent to the Build Alternative alignment, as well as through NICTD’s Police Department. Each municipality and unincorporated area in the Project Area has a system for responding to emergencies such as weather, fire, rescue incidents, hazardous materials issues, and homeland security. Emergency services located within and near the Project Area are identified in Section 4.3 and Figure 4-2.

Existing safety features used by NICTD are listed in the SSPP, which states that NICTD’s mission is “to provide safe, reliable, efficient and convenient passenger rail transportation.” In addition to the passenger safety elements in the SSPP, NICTD distributes a Passenger Safety Guidelines brochure that describes passenger safety features of the railroad and instructs passengers on the actions to take in emergency situations as well as general safety actions. NICTD also promotes safety and security through passenger on-board announcements and other public awareness programs (e.g., Operation Lifesaver).

The SSPP also provides the framework for ensuring passenger and employee safety on NICTD property and leased facilities. The plan details safety actions and functions to be observed by all NICTD employees along with facility maintenance and inspection guidelines. Safety actions include regular inspection and audits of stations and other facilities as well as detailed audit and reporting procedures followed by NICTD.

NICTD’s Police Department has the primary responsibility to monitor and ensure the safety and protection of life and property throughout the Project Area. A Chief of Police, who reports directly to the General Manager, heads NICTD’s Police Department of seven full-time police officers. NICTD trains operate through 26 jurisdictional police districts in four counties in the northwest Indiana area and Cook County in Illinois. NICTD’s Police Department has developed strong cooperative relationships with the law enforcement agencies throughout the SSL service area.

With the exception of one 6.5-mile section of double track and several 1-mile-long passing sidings, the SSL mainline between Gary and Michigan City is currently single track. While the track is controlled by NICTD, it is shared with CSS freight operations under a franchise agreement. With shared operations on a single track in high traffic areas, the potential for accidents or other incidents are increased.

There are 22 at-grade road/rail crossings of the NICTD/CSS track in the Project Area between Virginia Street in Gary and County Line Road/U.S. 12 in Beverly Shores. In the 3 miles between Sheridan Avenue and Carroll Avenue in Michigan City, there are an additional 39 at-grade roadway crossings, only 7 of which have active forms of AWDs. According to FRA’s Office of Safety Web Accident Prediction System,
eight NICTD crossings in Michigan City are ranked in the top 100 for predicted accidents in Indiana because of their volume of traffic, frequency of crossing, and lack of crossing AWDs. Of the 53 NICTD grade crossing accidents over the last 10 years, 24 have occurred between Sheridan Avenue and E. Michigan Boulevard in Michigan City alone (FRA 2016), as depicted in Figure 1-7 in Chapter 1. These statistics do not account for the inherent danger of trains traveling down the middle of residential and commercial streets with automobiles, pedestrians, and bicyclists moving alongside. Additionally, the current 11th Street (Michigan City) Station layout requires passengers to board and alight the train in the middle of the street.

4.13.3 ENVIRONMENTAL IMPACTS

This section summarizes the impacts to safety and security from the Build Alternative in comparison to the No Build Alternative.

NO BUILD ALTERNATIVE

NICTD plans to implement PTC for the entire SSL route by the end of 2018. PTC uses a satellite-based communication-based/processor-based train-control technology that provides a system capable of reliably and functionally preventing train-to-train collisions, over-speed derailments, and the movement of a train through a mainline switch in the wrong position (FRA 2016b). This is a federally mandated safety initiative, unrelated to this Project, to prevent train-to-train collisions, eliminate work zone incursions and automatically enforce all speed restrictions. PTC is, therefore, assumed to be included as part of the No Build Alternative. While NICTD is running a safe railroad today, the No Build Alternative would enhance safety through implementation of PTC.

Like today, the No Build Alternative would provide stretches of single-track operations, 1.9 miles of embedded street-running track in Michigan City, a high number of at-grade crossings without active warning devices, and passengers boarding from the street. Additionally, maintenance and repairs to the embedded street-running tracks would require NICTD to periodically close sections of the 10th and 11th Street corridors; renew deteriorated rail, crossties, and ballast; and replace broken rails. The No Build Alternative would perpetuate these street closures.

BUILD ALTERNATIVE

PERMANENT IMPACTS

The Build Alternative would modernize the SSL system, add a second track, remove embedded street-running track, eliminate 21 of 61 at-grade crossings, thereby reducing the risk of major incidents—including collisions and derailments—and provide safety benefits for NICTD passengers and employees. Modernizing the system would involve straightening out existing curves in the alignment, expanding ROW in Michigan City to meet modern safety standards, providing adequate clearances for track maintenance, and allowing NICTD to meet minimum emergency access standards. Although NICTD maintains fail-safe signal systems in the single-track areas, adding a second adjacent track would improve safety by providing system redundancy, separating opposing train movements, and reducing interference with freight trains. Additionally, separating the rail from the roadway (removing the existing embedded street-running tracks) through Michigan City, closing certain at-grade crossings, and establishing automatic warning systems for the remaining at-grade crossings would reduce the likelihood of train, automobile, and pedestrian conflicts. The proposed improvements would also increase rail capacity and would accommodate increased train volume and frequency. The proposed Project is being designed, and would be operated, consistent with federal, state, and local safety and security policies and guidance.
The Build Alternative would run adjacent to nearby activity areas including schools, parks, churches, and residential developments. The proposed alignment would be adjacent to the Indiana Dunes National Lakeshore and the Indiana Dunes State Park, as well as several pedestrian and bicycle trails. Fences or other appropriate barrier treatments would be used at the Gary/Miller Station and in Michigan City to discourage general access to the railroad ROW. The barrier design would direct pedestrians and bicyclists to appropriately designed crossing locations that would provide safe crossing and help maintain community connectivity.

Where the proposed Project would be co-aligned with freight rail operations, NICTD expects safety to be improved because of the separation of freight and commuter trains in high-traffic locations. Freight operations would have sidings and turnouts sufficient to accommodate traffic and movement in these areas with minimal interference with the SSL.

All station improvements would be designed according to best practices for safety and in compliance with ADA and National Fire Protection Association 130 standards. NICTD would follow established guidelines in the design of station improvements as they related to information sharing, vandalism prevention, emergency response, illumination, circulation, and overall passenger safety. New high-level boarding platforms constructed at the Gary/Miller, Portage/Ogden Dunes, and 11th Street (Michigan City) Stations would facilitate passengers’ step-free access to train cars and would reduce the potential for falls during boarding and alighting. The new platforms would be designed according to best practices for safety and would include general, pedestrian, vehicle circulation, and lighting design that is consistent with established guidelines. With the full reconstruction of the track and 11th Street in Michigan City, the 11th Street (Michigan City) Station would be completely redesigned. The current station at Pine Street would be expanded with a larger, fully accessible station between Franklin Street and Pine Street.

Additional automobile parking areas would be constructed at all stations except Beverly Shores Station. Where new parking areas are across the street and/or across tracks from the platform, appropriate at-grade pedestrian crossings and AWDs would be installed. The new parking areas and access points would be designed according to local agency design guidelines and would include general, pedestrian, and vehicle circulation and emergency lighting that is consistent with established guidelines.

Based on the current track and system design, no specific safety or security issues have been identified concerning the traction power substation facilities. The facilities would be contained within enclosed buildings that are not accessible to the public. Applicable safety and security precautions would be described in the SSMP and SEPP and would be overseen by NICTD Police in cooperation with local law-enforcement authorities.

The federally mandated PTC safety overlay system to be implemented prior to construction of the proposed Project would be included in the train signaling control system for the Build Alternative.

CONSTRUCTION IMPACTS

Construction activities would result in temporary lane and road closures and detours and could affect access and response times for emergency service providers.

As appropriate, signage and fencing would be installed where practical to prevent or discourage public access to active construction sites. OSHA standards for safety of construction site personnel would be maintained to minimize or avoid injuries to construction workers. Specific construction safety and security management activities would be outlined in the SSMP and SEPP. All contractors would be required to prepare a project safety and health program along with a site-specific safety plan to ensure that, while on the work site and during construction activities, contractor and subcontractor personnel comply with the specified safety practices, codes, and regulations as described in the proposed SSMP and SEPP.
4.13.4 MEASURES TO MINIMIZE HARM

System safety and security oversight for the proposed Project would be achieved by NICTD by implementing a number of plans prepared in support of the PMP, including the SEPP, Safety and Security Certification Plan, Preliminary Hazards Analysis Report, and Threat and Vulnerability Analysis. The primary purpose of these plans is to identify hazards, risks, and vulnerabilities within the system and consider safety and security, operational staff training, and emergency response measures. The plans would specify actions and requirements of the NICTD Police to maintain safety and security during Project construction and implementation of transit operations.

Construction safety and security oversight for the proposed Project would be achieved by NICTD by implementing the SSMP. The SSMP facilitates identification and resolution of hazards through the most cost-effective use of available resources to achieve the safest working environment practical. The SSMP would specify methods, responsibilities, and procedures to maintain a safe and secure environment for employees, passengers, and the general public within the NICTD service area. Applicable safety and security precautions would be specified in the SSMP and SEPP and would be overseen by NICTD in cooperation with local law-enforcement and emergency-response personnel.

Increased delay for emergency response vehicles during construction would be minimized through coordination with the affected emergency service providers prior to and during construction.

4.14 INDIRECT AND CUMULATIVE IMPACTS

This section considers two types of impacts (indirect and cumulative) that are not directly related to the proposed Project but that could be influenced by the Project.

4.14.1 LEGAL/REGULATORY CONTEXT AND METHODOLOGY

INDIRECT IMPACTS

Indirect impacts are reasonably foreseeable impacts that could occur in the future or at a distance from the proposed Project (40 CFR § 1508.8). Indirect impacts include induced growth and related environmental impacts, such as changes to land use patterns, population density or growth rates, and related impacts on air quality, water, and other natural systems. Cumulative impacts are the result of the combined impacts of past, current, and future projects within a project’s geographic area (40 CFR § 1508.7). The indirect and cumulative impacts analysis used the following guidance documents for determining the potential for impacts:

- Guidance on the Consideration of Past Actions in Cumulative Effects Analysis (CEQ 2005)

NICTD used the eight-step method described in NCHRP Report 466 to determine the potential indirect impacts of the proposed Project. The Project Area boundary for the analysis was a 0.5-mile radius around each proposed station. This approach is supported by NCHRP's Report 466 which states that "development effects are most often found up to 0.5 miles around a transit station." The indirect impacts (such as induced development) from the Project are most likely to occur in the areas around the stations.
because the improved transit service would improve access to these areas. Beyond 0.5 mile, new development induced by the Project is less likely.

For the analysis, findings from the environmental resource analyses were reviewed to determine the potential for indirect impacts on land use, transportation, and economic development plans and goals. NICTD also considered notable or sensitive resources within the surrounding communities, specifically:

- community facilities
- historic resources/districts
- wetlands
- environmental justice populations
- circulation/access
- recreational areas, including trails, Indiana Dunes National Lakeshore, and Indiana Dunes State Park

The potential for and impacts of induced growth that could result from the proposed Project were evaluated, considering factors that relate to changes in growth and development expected as a result of increased transit accessibility. Based on these factors, a determination was made regarding the indirect impacts that could result from the Project and whether those impacts would be consistent with planned growth in the Project Area.

4.14.2 CUMULATIVE IMPACTS

Areas within 0.5 mile of the Project Area were used to evaluate the potential for cumulative impacts. NICTD reviewed applicable current and future regional and local plans.

The horizon year for assessing indirect and cumulative impacts is 2040, which represents the regional transportation and land use planning horizon currently in effect for the region. Past actions are summarized in the existing conditions section of each resource area and reflect the current state of the resource within the boundaries of this analysis. Present actions are projects by local, state, or federal agencies just completed or under construction or private development projects known to local jurisdictions. Reasonably foreseeable projects include projects identified in NIRPC’s TIP, NIRPC’s 2040 CRP, and known future private development and redevelopment projects in the Project Area. Present and reasonably foreseeable projects are outlined in Table 4-26.
Table 4-26. Present and Reasonably Foreseeable Future Actions

<table>
<thead>
<tr>
<th>Action</th>
<th>Sponsor</th>
<th>Description</th>
<th>Timing</th>
<th>Potential Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lake County: Gary/Miller Station Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. 20 Overlay</td>
<td>INDOT</td>
<td>Preventative maintenance overlay from U.S. 120 to west of State Route 51</td>
<td>2019</td>
<td>Construction, traffic, transportation</td>
</tr>
<tr>
<td>Lake Street Junction Project</td>
<td>Gary</td>
<td>Framework to encourage private development, including retail, housing, and</td>
<td>To be</td>
<td>Construction, traffic, land use, visual resources, pedestrian circulation, EJ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>office space surrounding Gary/Miller Station</td>
<td>determined</td>
<td></td>
</tr>
<tr>
<td><strong>Porter County</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>County Line Road Safety</td>
<td>Indiana Dunes</td>
<td>Safety improvements at intersections along Lake-Porter County Line Road</td>
<td>To be</td>
<td>Construction, traffic, transportation</td>
</tr>
<tr>
<td>Improvements</td>
<td>National Lakeshore</td>
<td></td>
<td>determined</td>
<td></td>
</tr>
<tr>
<td>U.S. 12 Preventative Maintenance</td>
<td>INDOT</td>
<td>U.S. 12 overlay, 1.07 miles west of State Route 249 (at Burns Harbor Ditch)</td>
<td>2019</td>
<td>Construction, traffic, transportation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to 1.32 miles east of State Route 149 (Oak Hill Road) (3.93 miles – Ogden Dunes, Portage, Burns Harbor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Route 249 – Bridge</td>
<td>INDOT</td>
<td>State Route 249 new bridge over U.S. 12, two railroads, and two port roads,</td>
<td>2020</td>
<td>Construction, traffic, transportation</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td></td>
<td>2 miles north of I-94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marquette Greenway Trail</td>
<td>Burns Harbor</td>
<td>Construct Marquette Greenway Trail from State Route 149 to Babcock Road (County Road 200W)</td>
<td>2021</td>
<td>Construction, transportation, pedestrian/bike facilities, recreational areas</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>Calumet Trail Rehabilitation</td>
<td>Porter County</td>
<td>Calumet Trail rehabilitation, P1 and P2 (from Mineral Springs Road to State Route 49)</td>
<td>2019</td>
<td>Construction, transportation, pedestrian/bike facilities, recreational areas</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>State Route 49 Road Reconstruction</td>
<td>Porter</td>
<td>Oak Hill to NICTD bridge</td>
<td>To be</td>
<td>Construction, transportation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>determined</td>
<td></td>
</tr>
<tr>
<td>Train Activated Gates</td>
<td>INDOT</td>
<td>NICTD Crossing at E State Park Road, Beverly Shores</td>
<td>2017</td>
<td>Construction, transportation</td>
</tr>
<tr>
<td>Action</td>
<td>Sponsor</td>
<td>Description</td>
<td>Timing</td>
<td>Potential Impacts</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
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<td>-----------------------------------------------------------------------------------</td>
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<tr>
<td><strong>Porter County (cont.)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calumet Trail</td>
<td>Porter County</td>
<td>Construct Calumet Trail from Broadway in Beverly Shores to U.S. 12 at LaPorte/Porter County line</td>
<td>2024</td>
<td>Construction, transportation, pedestrian/bike facilities, recreational areas, wetlands, threatened and endangered habitat</td>
</tr>
<tr>
<td>Portage Northside Master Plan – Porter Gateway Sub-Area Plan Transit-oriented Development Area</td>
<td>Portage</td>
<td>Includes recommendations for mixed-use neighborhood center with private development, to include retail, multifamily housing, active sidewalks and streetscapes, and appropriately placed and scaled parking surrounding the Portage/Ogden Dunes Station</td>
<td>To be determined</td>
<td>Construction, transportation, pedestrian/bike facilities, community cohesion, safety and security, threatened and endangered habitat, recreational areas</td>
</tr>
<tr>
<td>Singing Sands Lighthouse Trail</td>
<td>Michigan City</td>
<td>Michigan City – Singing Sands Lighthouse Trail Phase 1, Porter County to Michigan City</td>
<td>2018</td>
<td>Construction, transportation, pedestrian/bike facilities, recreational areas, threatened and endangered habitat, recreational areas</td>
</tr>
<tr>
<td>Town of Pines Comprehensive Plan</td>
<td>Town of Pines</td>
<td>Includes adding a mixed use land use category to include commercial shops, restaurants, multifamily residential in the U.S. 12 corridor between SR 520 and County Line Road, with new trail extensions</td>
<td>To be determined</td>
<td>Construction, transportation, pedestrian/bike facilities, recreational area, community cohesion, safety and security, aquatic resources, threatened and endangered habitat</td>
</tr>
<tr>
<td><strong>LaPorte County/Michigan City</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Lake Michigan Gateway</td>
<td>Michigan City</td>
<td>Implementation strategy for redevelopment of commercial business district and surrounding areas in Michigan City to draw visitors</td>
<td>To be determined</td>
<td>Safety and security, EJ, business impacts, community resources</td>
</tr>
<tr>
<td>Michigan City North End Form-based Districts</td>
<td>Michigan City</td>
<td>Guiding development within a 0.25 mile of the 11th Street (Michigan City) Station</td>
<td>Present</td>
<td>Visual resources, community resources, EJ</td>
</tr>
</tbody>
</table>
4.14.3 ENVIRONMENTAL IMPACTS

This section identifies and assesses the potential indirect and cumulative impacts of the proposed Project.

INDIRECT IMPACTS

BUILT ENVIRONMENT

The proposed Project would make commuting to Chicago and other employment centers along the corridor quicker and more reliable. With these benefits, it is anticipated that the population of areas surrounding the stations would grow and opportunities for walkable, mixed-use environments, including residential, would develop. This growth could require additional services in the region, including schools, utilities, and other roadway transportation infrastructure. Diversification of the housing types within the station areas could boost infill and redevelopment of land that is vacant or not fully utilized.

The proposed Project is anticipated to induce growth near stations, which could result in an indirect adverse impact if the growth changes existing residential neighborhoods and small businesses where EJ populations are found. Potential effects may include increases in property values, loss of housing, and displacement of businesses. While TOD typically offers opportunities for multifamily housing that is more affordable than single-family residences, economic development associated with infill and redevelopment around the stations may result in an increase in property values. If property values, taxes, and rents increase, low-income EJ populations may no longer be able to afford to remain in their neighborhood or would have fewer housing choices.

Development around station areas may have an offsetting indirect beneficial effect on EJ neighborhoods by including affordable housing and development space for local businesses. TOD could offer opportunities for economic revitalization, particularly in the Gary/Miller Station and 11th Street (Michigan City) Station areas, benefitting EJ populations with job opportunities and diversity of services. Faster, more frequent, and more reliable transit also would indirectly generate potential for access to more jobs and/or higher-paying jobs in Chicago for EJ populations. Economic growth could serve as a catalyst for redevelopment in a wider geographic area that may also indirectly strengthen neighborhood cohesion. It is expected that the existing and in-progress TOD plans would be implemented by the respective communities.

Development and redevelopment associated with the improved transit stations could change the setting, context, and land use in the station areas. Such changes could have indirect impacts on existing historic resources by changing the visual quality of the setting by adding a new building or by increasing the density of the area. The induced development might also directly affect historic properties through demolition, changes in property values, or other impacts. It is expected that such changes would be reviewed and approved by the respective communities and their local historic preservation entities.

The proposed Project would have an indirect impact on the roadway network. The areas of indirect impact on roadways and traffic include additional vehicle traffic from the anticipated new development in the region, and a modest decrease in auto trips on the surrounding roadway network as people switch from auto to transit.

Portions of land acquired for permanent ROW would be needed for the final track realignment, including portions of INDOT ROW to be relinquished as part of the U.S. 12/U.S. 20 realignment. Property currently identified as surface parking lots for Opening Year are identified by Gary TOD plans as possible multistory parking structures that also could include retail and commercial ground floor uses. Potential redevelopment of the properties would be the responsibility of the communities and may result in a net
increase in square footage of commercial space and residential units, resulting in an increased tax base and economic opportunities.

Additionally, NICTD expects that improved access to SSL communities, the Indiana Dunes National Lakeshore, the Indiana Dunes State Park, and trail networks would boost tourism to these parklands along the lakefront, consistent with the Marquette Plan. An influx of visitors would provide a benefit to the local economy but would require additional maintenance of existing public facilities and increased patrols for safety.

Land values could increase from current conditions as a result of enhanced transit service. Nevertheless, some temporary losses to land values could also occur during construction. NICTD would continue to work with municipalities on TOD plans to coordinate land use and development plans with the proposed Project.

NATURAL ENVIRONMENT

The proposed Project is adjacent to wetlands, waterways, woodlands and biologically sensitive habitats. The proposed Project could lead to increased development, especially around station areas. This in turn could result in indirect impacts on woodlands, wildlife habitat, plant species, threatened or endangered species, and sensitive habitats, due to further clearing for construction. Such activities would be regulated by the respective communities as well as permitting agencies, such as USACE, USFWS, and IDEM. BMPs and other special conditions would be included in the development permits, as appropriate.

The proposed Project has the potential to indirectly impact three impaired waterways (Dunes Creek, Brown Ditch, and Kintzele Ditch), as well as wetlands and floodplains. NICTD would include BMPs related to erosion control, vegetation, and water quality in the construction documents to minimize these impacts. As part of the mitigation for wetland, stream, and habitat impacts, NICTD would work with NPS to develop an on-site mitigation strategy to create, restore, and enhance wetlands within the Indiana Dunes National Lakeshore. NICTD and NPS would coordinate this strategy with the local communities, and USACE and IDEM would ultimately approve and permit. The strategy would not only provide the required mitigation for the direct impacts caused by the proposed Project, but would provide long-term indirect benefits to the wetlands, waterways, and hydrology in the NPS property.

Potential future impacts to wetlands, floodplains, and water quality due to the proposed Project and station area development could include increased export of pollutants from impervious surfaces and compacted soil, decreased pollutant filtration, increased water temperatures as a result of riparian vegetation removal, and export of pollutants from motor vehicles using Park-and-Ride lots and other associated infrastructure. Station area development could indirectly diminish wetland function due to increased pollutant loading from runoff. In the final design of the proposed Project, NICTD would include BMPs to filter runoff and control releases, such as vegetated swales and filter strips. Indirect impacts are less likely if regulatory permit and specified conditions are followed and erosion control plans are developed.

CUMULATIVE IMPACTS

Table 4-27 summarizes potential cumulative impacts that could result from the Project in combination with past actions and reasonably foreseeable future actions (Table 4-26).
Table 4-27. Cumulative Impacts Summary

<table>
<thead>
<tr>
<th>Resource</th>
<th>Cumulative Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transportation</strong></td>
<td>Induced development resulting indirectly from the improvements to the SSL (the Project), in combination with other reasonably foreseeable transportation and development actions, would likely result in increased demand on the transportation system, in the station areas in particular.</td>
</tr>
<tr>
<td><strong>Land Acquisition, Displacements, and Relocations</strong></td>
<td>The Project would result in conversion of land in the Project Area to transportation use. This, in combination with reasonably foreseeable future transportation and development actions, would likely result in higher density redevelopment of the station areas, consistent with land use and other plans.</td>
</tr>
<tr>
<td><strong>Land Use and Economic Development</strong></td>
<td>The Project would result in conversion of land in the Project Area to transportation use and provision of improved transit service. This, in combination with reasonably foreseeable future transportation and development actions, would likely result in continued urbanization of the station areas and support for economic development, consistent with land use and other plans.</td>
</tr>
<tr>
<td><strong>Neighborhoods, Communities and Businesses</strong></td>
<td>The Project would result in conversion of land in the Project Area to transportation use and provision of improved transit service. This, in combination with reasonably foreseeable future transportation and development actions, would likely result in continued urbanization of the station areas and support for economic development, consistent with land use and other plans.</td>
</tr>
<tr>
<td><strong>Historic, Archaeological and Cultural Resources (Section 106)</strong></td>
<td>Induced development associated with the proposed Project in combination with the reasonably foreseeable future actions could cumulatively diminish the integrity of a historic property's or district's location, feeling, or association.</td>
</tr>
<tr>
<td><strong>Visual and Aesthetic Conditions</strong></td>
<td>The Project, in combination with other reasonably foreseeable future actions, would likely result in increased urbanization in station areas, including additional development and potentially less vegetation, contributing to a gradual change in views over time.</td>
</tr>
<tr>
<td><strong>Noise and Vibration</strong></td>
<td>The Project would result in conversion of land in the Project Area to transportation use and provision of improved transit service. This, in combination with reasonably foreseeable future transportation and development actions, would likely result in continued urbanization of the station areas, which could lead to increases in ambient (background) noise. In Michigan City, the Project would lead to reduced noise levels.</td>
</tr>
<tr>
<td><strong>Hazardous/Regulated Materials</strong></td>
<td>Induced development in combination with the reasonably foreseeable future actions would have a positive effect by contributing to the remediation of hazardous materials sites, because such sites would be required to be cleaned up as a condition of development or redevelopment.</td>
</tr>
<tr>
<td><strong>Biological Resources</strong></td>
<td>Induced development in combination with the reasonably foreseeable future actions could have a cumulative effect on habitat or wildlife because of proximity of these resources to the Project Area.</td>
</tr>
<tr>
<td><strong>Water Resources</strong></td>
<td>Induced development associated with the reasonably foreseeable future actions could have a cumulative effect if new development were to cause wetland impacts, sedimentation, and pollutant loading if BMPs are not implemented.</td>
</tr>
<tr>
<td><strong>Section 6(f) Resources</strong></td>
<td>None (no direct impacts)</td>
</tr>
<tr>
<td><strong>Environmental Justice</strong></td>
<td>Induced development associated with the reasonably foreseeable future actions could have a cumulative effect if new development does not include affordable housing and development space for local businesses.</td>
</tr>
<tr>
<td><strong>Safety and Security</strong></td>
<td>The Project, which would include improved safety features, in combination with other reasonably foreseeable future actions, would improve road and rail safety in the Project Area.</td>
</tr>
</tbody>
</table>
HUMAN ENVIRONMENT

Foreseeable future projects by others near the Gary/Miller, Portage/Ogden Dunes, and 11th Street (Michigan City) Station areas include private redevelopment within the neighborhoods surrounding the Project Area and potential redevelopment of the remaining station areas after construction. TIF Districts have been identified for public improvements near the Gary/Miller and 11th Street (Michigan City) Stations. Additional redevelopment is also identified as a long-term plan for the adjacent U.S. 12 corridor in the Town of Pines. The redevelopment would be similar to existing land uses in the area, but would expand commercial and residential uses. The long-term benefits of redevelopment in the area would be expected to offset short-term construction impacts. Construction impacts would be avoided or minimized through contractor limits on traffic flow disruption, access disruption, work hours, noise, vibration, emissions, and dust.

The Lake Michigan Gateway Implementation Strategy proposes converting Franklin, Pine, and Washington Streets in Michigan City to two-way streets to improve circulation within the downtown business district. The improvements would include pedestrian facilities and landscaping that creates a cohesive neighborhood and creates connections from 11th Street to the Lighthouse Outlets and Blue Chip Casino. The 11th Street (Michigan City) Station could serve as a southern gateway to the historic downtown districts.

INDOT, Burns Harbor, Porter County, and Portage are all planning improvements and extensions to trails near the Project Area. It is expected that these trail improvements would be implemented by 2024. In addition, a number of roadway projects near the Project Area may be constructed in the same timeframe as the proposed Project. Improvements include preventative maintenance resurfacing, roadway reconstruction, bridge rehabilitation, and intersection safety improvements. Construction staging plans would take into account that these projects would be constructed in the same timeframe, and NICTD would ensure the contractor coordinates with other entities to minimize delays while passing through construction zones.

The potential for these and other future actions to result in cumulative impacts is described in Table 4-27.

NATURAL ENVIRONMENT

The proposed Project has the potential to impact biological and water resources in the context of other past, present, and reasonably foreseeable actions in the Project Area for cumulative effects.

Because the concept of protecting wildlife and wildlife habitat was in its very early days between 1956 and 1969, it is difficult to speculate on public transportation and private development projects’ impact on the natural environment during that period. Public transportation and private development projects after 1969 continued to adversely affect ecosystems, but in general, as habitat areas became smaller and more disturbed, the projects’ impacts on the function and value of the ecosystems have been less pronounced. In addition, the enactment of environmental protection laws at that time and since has reduced transportation and development impacts to ecosystems.

The proposed Project station locations would be located mostly in areas that have been previously disturbed or developed with impervious surfaces and buildings. Portions of the proposed Project Area would be near natural or open areas with vegetative cover that may provide foraging, migrating, or nesting habitat for wildlife. Long-term impacts on habitat include removal, conversion, degradation, or fragmentation of existing habitat. Continued development of transit and transportation facilities in the proposed Project Area over time, combined with future actions and the direct and indirect impacts of the proposed Project, could cumulatively affect biological and water resources.
There are four actions in the present and foreseeable future (Table 4-26) that could cause potential adverse cumulative effects on the biological and water resources over time when considered in combination with potential impacts from the Project. The first is the Calumet Trail Project in Porter County. Portions of the proposed trail project would be near potential threatened and endangered species habitat, the Indiana Dunes National Lakeshore, high-quality aquatic resources, and wetlands. The second is the Portage Northside Master Plan - Porter Gateway Sub-Area Plan Transit-oriented Development Area that surrounds the Portage/Ogden Dunes Station. Portions of the proposed development area would be near potential bat roost habitat and the Indiana Dunes National Lakeshore. The third is the Singing Sands Lighthouse Trail that would be built from Porter County to Michigan City. Portions of the proposed trail project would be near potential threatened and endangered species habitat, the Indiana Dunes National Lakeshore, and high quality aquatic resources. The fourth action is the Town of Pines Comprehensive Plan that would be in the U.S. 12 corridor between IN-520 and County Line Road. Portions of the area covered by the plan would be near potential threatened and endangered species habitat, the Indiana Dunes National Lakeshore, high quality aquatic resources, impaired streams, and a 100-year floodplain.

Overall, if future development does occur, it would be subject to current regulations and required BMPs, which would minimize potential adverse cumulative effects on biological and water resources over time.

4.15 RESOURCES WITH LIMITED OR NO IMPACTS

4.15.1 AIR QUALITY

This section evaluates the short-term and long-term effects of the proposed Project on air quality. A qualitative analysis was completed to assess potential impacts from the proposed Project on air quality. More information is found in the Air Quality Technical Memorandum located in Appendix III.

LEGAL/REGULATORY CONTEXT AND METHODOLOGY

The CAA (42 U.S.C. §7401 et seq.) and its associated regulations are the basic federal statutes and regulations governing air pollution. The provisions that are potentially relevant to this Project are the National Ambient Air Quality Standards (NAAQS), the Transportation Conformity rule, and mobile source air toxics (MSAT). Each of these provisions is discussed below.

NAAQS

The CAA requires USEPA to establish NAAQS for pollutants considered harmful to public health and the environment. Primary standards set limits to protect public health. Secondary standards set limits to protect public welfare (USEPA 2016).

USEPA has established NAAQS for six principal pollutants, which are called “criteria” pollutants. These pollutants are carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), lead (Pb), particulate matter at both 10 microns (respirable particulate matter; PM₁₀) and 2.5 microns or less (fine particulate matter; PM₂.₅), and sulfur dioxide (SO₂). The NAAQS can be found on the following website: https://www.epa.gov/criteria-air-pollutants/naaqs-table.

TRANSPORTATION CONFORMITY RULE

The Transportation Conformity Rule (40 CFR Part 93, Subpart A) requires that projects that are developed, funded, or approved by USDOT and by metropolitan planning organizations or other recipients of federal funds demonstrate conformity with the State Implementation Plan (SIP) developed pursuant to the CAA. A determination of conformity is made by the metropolitan planning organization and USDOT.
MSAT

In addition to the NAAQS, the CAA requires USEPA to regulate MSAT. MSATs are a subset of air toxics, which include nine compounds emitted from highway vehicles, trucks, buses, and nonroad equipment. Diesel particulate matter remains the dominant MSAT of concern for highway and other transportation projects.

GREENHOUSE GAS EMISSIONS (GHG)

Current USEPA rules regarding GHG do not require any controls or establish any standards related to GHG emissions for transportation projects.

The FTA considers it practicable to assess the effects of GHG emissions and climate change for transit projects at a programmatic level and has prepared a programmatic assessment to estimate direct and indirect GHG emissions generated from the construction, operations, and maintenance phases of various transit projects across selected transit modes (FTA 2017). The results of that programmatic assessment have been incorporated into this analysis by reference.

EXISTING CONDITIONS

The Region of Influence for air quality includes Lake, Porter, and LaPorte Counties. For air quality planning purposes, Lake and Porter Counties are typically grouped with Cook County and other Chicago area counties and are included in the Chicago-Naperville ozone nonattainment area.

REGIONAL ATTAINMENT STATUS

Lake and Porter Counties are designated as “moderate nonattainment” with regard to the 2008 8-hour O₃ standard. Portions of Lake County are designated “maintenance” for CO and PM₁₀. LaPorte County is designated “attainment” for all of the NAAQS.

The proposed Project was recently added to the 2040 CRP and the list of fiscally constrained capacity expansion projects (referred to as the TIP), all of which were determined to conform with the SIP (NIRPC 2017b). The Air Quality Conformity Determination was issued in May 2017 and is provided in Appendix IV.

ENVIRONMENTAL IMPACTS

NO BUILD ALTERNATIVE

Service quality and effective capacity of the SSL would decline over time under the No Build Alternative. Interference with freight train operations would worsen due to the anticipated growth in freight traffic. The lack of upgrades to the commuter rail facility would discourage new ridership and result in an increased number of motor vehicle trips. As a result, the No Build Alternative would have a detrimental effect on regional air quality.

Under the No Build Alternative, maintenance and repair activities would continue, which could result in minor localized short-term air quality impacts in the immediate vicinity of the maintenance activities.
BUILD ALTERNATIVE

Permanent Impacts

Given the regional air quality conformity determination and the fact that the proposed Project is anticipated to have a beneficial long-term air quality impact, the proposed Project is expected to meet the requirements of the Transportation Conformity rule.

The proposed Project would result in an increase in transit ridership with a commensurate reduction in vehicular traffic. In accordance with FHWA guidance (FHWA 2016), the proposed Project is classified as one with “No Meaningful Potential MSAT Effects” because it would have beneficial traffic impacts, and the guidance recommends that no MSAT analysis be conducted for these types of projects.

Project implementation would mean that criteria pollutant and GHG emissions would be reduced from motor vehicles within the Project Area as trips migrate from automobiles to transit. However, slightly increased emissions could result to the extent that fossil-fueled power plants are used to produce electricity to power the trains via overhead electric wires.

The Vehicle Miles Traveled (VMT) estimated for the Build Alternative is slightly lower than that for the No Build Alternative, because the Build Alternative would result in additional trains and higher ridership which would reduce highway commute trips. This lower VMT would result in reduced emissions of both criteria pollutants and GHG. The proposed Project is not expected to have a substantial effect on motor vehicle speeds in the Project Area.

The proposed Project would include new parking at four stations. Parking lots can result in slightly elevated local pollutant concentrations, particularly during the morning and evening commute periods when a number of vehicles attempt to enter or leave a parking lot simultaneously. However, given the improvements in motor vehicle emission standards, these elevated pollutant concentrations would not result in pollutant “hot spots” and would not result in exceedances of the NAAQS at any location within the Project Area.

The closure of some residential streets within Michigan City could divert additional motor vehicle trips to other roadways that remain open. While this could result in some additional congestion on the arterial roadways, this effect is minor and would have only minimal air quality effects.

The proposed Project would result in a slight increase in electricity consumption due to the increased number of trains operating in the Project Area, which would result in a slight increase in both criteria and GHG emissions from the regional power plants. This increase in criteria pollutants from regional power plants would have a minor incremental impact on regional air quality.

FTA’s programmatic assessment (FTA 2017) assessed the impact of electrified light rail and diesel commuter rail projects on overall emissions of GHG, taking into account increased emissions from power plants and decreased emissions from motor vehicles. The majority of GHG emissions that electrified light rail projects are expected to generate are operations-related emissions associated with the production and generation of the purchased electricity used to power the light rail vehicles. For this reason, the net volume of annual GHG emissions from light rail projects largely depends on the fuel source used for electricity generation. Each of the light rail projects analyzed was expected to displace emissions through a reduction in personal vehicle VMT. In 80 percent of the projects (8 of 10), the light-rail project displaced more emissions than it generated on an annual basis (FTA 2017).

The commuter rail projects evaluated in the FTA programmatic assessment consisted solely of diesel-powered commuter rail service, and thus may not be directly comparable to the proposed Project. However, based on the expected reduction in personal vehicle VMT compared with the No Build
Alternative, and the fact that this commuter rail line is, and would continue to be, electrified, the Build Alternative would result in a slight reduction of criteria pollutant and GHG emissions compared with the No Build Alternative. This conclusion is consistent with the analysis presented in the programmatic assessment (FTA 2017), the details of which are incorporated by reference into this EA.

**Construction Impacts**

The primary emission sources during construction would be standard types of heavy-duty diesel construction equipment and highway trucks. Construction and earthmoving activities would result in localized increases in pollutant concentrations that would persist for the duration of the construction activities. In addition, because construction activities would be spread out along the Project Area, the duration of construction at any one location within the Project Area would be relatively short (i.e., several weeks). This would tend to limit localized air quality impacts at any given location. The short-term increases in pollutant concentrations are not expected to exceed any NAAQS, and the construction-related air quality impacts are considered minor to moderate.

To reduce adverse air quality impacts during construction, NICTD would direct the contractor to prepare and implement a dust control plan, a work-zone traffic management plan, and a strategy to control emissions from diesel-powered equipment. Additionally, the contractor would be required to follow the USEPA’s Construction Emission Control Checklist. Several mitigation measures would be employed including limiting idling of construction equipment during periods of inactivity, maintaining construction equipment in proper working condition, and limiting dust-producing construction activities near sensitive receptors, such as schools and residential areas, where feasible. Additionally, the construction contractor would employ at least one environmental staff member responsible for monitoring construction activities within residential areas to help ensure that construction does not become a nuisance to nearby residences.

4.15.2 FARMLAND

The Project Area does not have any farmland. Therefore, no adverse impacts to this resource would occur from the Build Alternative.

4.15.3 ENERGY

Because NICTD expects the Build Alternative to have negligible-to-minor impacts to energy use, the impacts of energy use have been assessed qualitatively. Project-related energy use includes the use of fuels for motor vehicles and equipment, the use of energy to produce the materials used in construction, and the use of energy to power commuter rail vehicles.

**ENVIRONMENTAL IMPACTS**

**NO BUILD ALTERNATIVE**

With the No Build Alternative, additional motor vehicles fuels would be consumed. NICTD expects traffic congestion to worsen under this alternative, and vehicles would spend additional time idling in traffic or operating at low speeds on congested roads.

There would be no major construction activities. Maintenance and repair activities would continue under the No Build Alternative and these activities would result in ongoing energy use from motor vehicles and the production of replacement parts.
BUILD ALTERNATIVE

Permanent Impacts

The Build Alternative would modestly increase the electrical power demand to operate the double-track system. Today's SSL weekday commuter service includes 19 inbound (westbound) trains and 20 outbound (eastbound) trains. Ultimately, NICTD anticipates operating an additional three round trips per day on the improved system, which would be an increase in the number of about 21 percent. NICTD expects a proportional increase in electricity consumption of about 21 percent, based on current levels. In order to determine the electrical (traction) system impacts of this additional energy use, Burns/HDR (2016) conducted a traction power system evaluation. This study found that the existing electrical system components that provide power to the trains could easily handle the increased load. The total electrical demand of NICTD’s system is a small fraction of the regional electrical demand, and this increase in consumption to accommodate the Build Alternative would be negligible compared with the regional electrical demand.

One of the biggest benefits of an improved commuter rail system is increased ridership, which results in fewer VMT by motor vehicles. Based on ridership forecasts, the proposed Project improvements are projected to reduce VMT by an estimated 55,338 by 2037 (NICTD 2017). This reduction in VMT would substantially reduce the amount of energy used in motor vehicles, though this reduction would be small on a regional basis. Overall, NICTD expects the Build Alternative to result in a negligible-to-minor decrease in the total energy consumed over the operational life of the proposed Project compared with the No Build Alternative.

Construction Impacts

The Build Alternative would add infrastructure including stations, parking lots, and double-track segments. Energy would be used to produce the materials used for these facilities, materials including steel, cement, copper, glass, and asphalt. Energy would also be used to operate construction equipment. Both the production of the materials and the use of fuel by construction equipment would be a one-time irreversible commitment of energy resources. The Build Alternative would require a minor-to-modest increase in the use of energy resources compared with the No Build Alternative but would not significantly change regional energy use.

4.15.4 NAVIGABLE WATERS

The Project Area contains one navigable water, the Burns Waterway. However, no construction is planned here because this section is already double-tracked. Therefore, no adverse impacts to this resource would occur from the Build Alternative.

4.15.5 COASTAL ZONE MANAGEMENT

LEGAL/REGULATORY CONTEXT AND METHODOLOGY

The Coastal Zone Management Act of 1972 (CZMA) (16 USC §§ 1451–1464) provides the basis for protecting the nation’s coastal resources and the Great Lakes (NOAA 2016). The National Coastal Zone Management Program is authorized through the CZMA and is overseen by a partnership of the National Oceanic and Atmospheric Administration and local or state agencies. A project that is located within a CZMA boundary must be reviewed to ensure that the project is consistent with the CZMA. In Indiana, the IDNR Division of Nature Preserves manages its coastal zone management program through the Lake Michigan Coastal Program (LMCP).
The federal consistency aspect of coastal zone management is administered in Indiana as a networked program. The LMCP evaluates whether a federal activity is consistent with the laws administered by the State, such as those related to coastal hazards, water quality, water quantity, natural areas, fisheries, wildlife, native and exotic species, recreation, access, cultural resources, economic development, pollution prevention, recycling, reuse, waste management, air quality, and property rights.

The Build Alternative alignment is located in the LMCP coastal zone management boundaries, so a federal consistency review is required. This consistency review would be performed by IDNR when final design plans are developed and during the CWA Section 401/404 permitting process.

In Indiana, the LMCP is tasked with considering regional issues and trying to balance preservation, protection, restoration, and, when possible, development (IDNR 2017b). NICTD obtained information regarding the location of coastal zone management boundaries from IDNR. This information was obtained as a GIS dataset from the LMCP.

EXISTING CONDITIONS

The Build Alternative alignment is located within the coastal zone management area associated with Lake Michigan, as shown in Figure 4-24.

ENVIRONMENTAL IMPACTS

This section summarizes the impacts of the No Build and Build Alternatives on coastal zone management areas.

NO BUILD ALTERNATIVE

The No Build Alternative would have no impacts on coastal zone management areas. There would be no change in existing conditions, no construction impacts, and no operational impacts.

BUILD ALTERNATIVE

Permanent Impacts and Construction Impacts

The entire Build Alternative alignment is located within Indiana’s coastal zone management area. The federal consistency review and certification would be conducted by IDNR in coordination with the CWA Section 404 permit reviews. Early coordination has taken place with several state agencies responsible for the enforcement of these laws during the NEPA process including several IDNR divisions. See Section 6.2.1 and Appendix III for more information.

The proposed activities of the Build Alternative would comply with Indiana's approved coastal management program and would be conducted in a manner consistent with such program.

MEASURES TO AVOID OR MINIMIZE HARM

The Build Alternative would be conducted in a manner consistent with Indiana’s approved coastal management program. NICTD would request federal consistency certification as part of the permitting process. No mitigation is proposed.
Figure 4-24. Coastal Zone Management Area
4.15.6 GEOLOGY, SOILS, AND KARST

This section presents an inventory of geologic resources and soils in the Project Area and identifies the impacts from the proposed Project.

LEGAL/REGULATORY CONTEXT AND METHODOLOGY

Federal, state, and local governments may impose special restrictions on land use or land treatment based on soil properties. The following regulations and agencies may require permits to protect soil and geological resources during construction and/or operation of a proposed project.

Federal:
- River Basin Activities (Natural Resources Conservation Service (NRCS)) General Manual Tile 150, Part 405
- CWA, Section 404 Permit
- EO 11988, Floodplain Management (3 CFR § 117 [1978])

State:
- IDEM and IDNR
- U.S. Department of Agriculture (USDA), Soil and Water Conservation Districts, Conservation Reserve Enhancement Program

NICTD assessed soil characteristics and geological features and resources in the Project Area using a published online soil survey, surficial geology maps, and online mapping services provided by USDA-NRCS. Soils that can be seasonally wet, are poorly drained, make up steep slopes, or are more prone to erosion and flooding were considered, since these areas can become unstable as foundation for transportation infrastructure. Using the USDA-NRCS Web Soil Survey, NICTD determined suitabilities and limitations for use for all soil units in the Project Area. This determination resulted in ratings of “not limited,” “somewhat limited,” or “very limited” for the suitability of shallow excavations, as explained below (USDA-NRCS 2016):

- **Not Limited:** The soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.
- **Somewhat Limited:** The soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.
- **Very Limited:** The soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

EXISTING CONDITIONS

Unconsolidated material in the Project Area includes glacial drift sediment composed of sand, gravel, and clay that ranges from 25 to 350 feet thick in LaPorte County and 15 to 210 feet thick in Lake and Porter Counties. This material was deposited during the Pleistocene Epoch by either glaciers or processes (for example, meltwater) associated with glaciation (Hartke et al. 1975; Hill et al. 1979).
There are no known karst features documented in the Project Area (IGS 2016). The bedrock geology in the Project Area is primarily limestone, dolomite, sandstone, and shale of the Cambrian through Mississippi age. The regional economic mineral resources in the Project Area are derived from unconsolidated sediments. Mineral resources in Lake and Porter Counties include sand and gravel, lake clays, clay-rich tills, dolomite, peat, and slag. Mineral resources in LaPorte County include sand and gravel, peat, and clay. Bedrock mineral resources in LaPorte County include gypsum and anhydrite (Hartke et al. 1975; Hill et al. 1979).

NICTD determined that, within the construction footprint, 2.2 acres in Lake County, 36.0 acres in Porter County, and 0.6 acre in LaPorte County have characteristics and physical properties that make the soil suitability “very limited” for shallow excavations. Very limited suitability for shallow excavations means that these soils, when disturbed during construction, would result in poor performance and high maintenance (Table 4-28). These designations are listed in the USDA-NRCS Web Soil Survey (USDA-NRCS 2016).

<table>
<thead>
<tr>
<th>Suitability</th>
<th>Acreage in Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake County</td>
<td></td>
</tr>
<tr>
<td>Very Limited</td>
<td>2.2</td>
</tr>
<tr>
<td>Urban Land – Not Rated</td>
<td>68.5</td>
</tr>
<tr>
<td>Porter County</td>
<td></td>
</tr>
<tr>
<td>Very Limited</td>
<td>36.0</td>
</tr>
<tr>
<td>Somewhat Limited</td>
<td>2.4</td>
</tr>
<tr>
<td>Urban Land – Not Rated</td>
<td>1.8</td>
</tr>
<tr>
<td>Water – Not Rated</td>
<td>7.8</td>
</tr>
<tr>
<td>LaPorte County</td>
<td></td>
</tr>
<tr>
<td>Very Limited</td>
<td>0.6</td>
</tr>
<tr>
<td>Urban Land – Not Rated</td>
<td>41.5</td>
</tr>
</tbody>
</table>

Source: USDA-NRCS 2016

ENVIRONMENTAL IMPACTS

NO BUILD ALTERNATIVE

The No Build Alternative would not affect soils or geologic resources, since there would be no change in existing conditions and, therefore, no permanent or construction impacts.

BUILD ALTERNATIVE

Permanent Impacts

There would be no permanent impacts to natural soils in the Project Area in Lake and LaPorte Counties, as the land is covered by streets, parking lots, buildings, and other structures of urban areas and consists of fill material brought in during land development. The underlying geology would not be affected. The track improvements for the natural soils in Porter County would primarily be constructed on soils that the NRCS classifies as Morocco loamy sand, Maumee loamy sand and Oakville fine sand south of the existing SSL alignment. No permanent impact to soil is anticipated for the Build Alternative, as none of
the Project Area soils is used for agricultural or forest land production. No substantial below-grade structures are proposed, and underlying geological conditions would not change or be affected by the Project if this alternative is constructed. The construction of the Build Alternative would result in minor changes to the topography resulting from the second station platform and added sections of track.

**Construction Impacts**

Impacts during construction would result in soil disturbance as a result of clearing, grading, and excavating; compaction from heavy-machinery traffic; potential reduction of soil quality as a result of mixing of rock with topsoil; and loss of soil from water and wind erosion. Soil units that are characterized as having "very limited" suitability for shallow excavations are hydric soils, which may influence ponding and drainage.

**MEASURES TO AVOID OR MINIMIZE HARM**

Erosion control measures and BMPs would be developed as part of a Stormwater Pollution Prevention Plan to be prepared as part of the USEPA’s National Pollution Discharge Elimination System (NPDES) permit. BMPs would help minimize the loss of soils during construction.
5.0 SECTION 4(F) EVALUATION

Section 4(f) of the US Department of Transportation Act of 1966 established requirements for USDOT (including FTA) consideration of publicly owned parks/recreational areas that are accessible to the general public, publicly owned wildlife/waterfowl refuges, and publicly or privately owned historic sites of federal, state, or local significance in developing transportation projects (23 USC § 303, 23 CFR § 774). Section 4(f) prohibits use of these resources for transportation projects unless (1) it is proven that there is no feasible and prudent alternative to the use and the action includes all possible planning to minimize harm, or (2) the agency determines that the use of the property, including any measure(s) to minimize harm, will have a de minimis impact on the property (23 CFR § 774.17).

This law, commonly known as Section 4(f), is now codified in 23 USC § 303, and is implemented by FTA through the regulation 23 CFR § 774. Additional guidance on the implementation of Section 4(f) may be found in FHWA’s Section 4(f) Policy Paper (FHWA 2012). FTA has formally adopted this guidance, and this analysis was conducted consistent with the guidance.

Based on the evaluation in this EA, public parklands, recreational areas, or wildlife and waterfowl refuges that are afforded protection by Section 4(f) would be “used” by the proposed Project, but the use would be de minimis. Through the Section 106 process (detailed in Section 4.4), FTA, NICTD, and the SHPO identified NRHP-eligible and listed historic resources within the Project Area that are also afforded protection under Section 4(f).

5.1 SUPPORTING INFORMATION FOR THIS SECTION 4(F) EVALUATION

Sections 1.4 and 1.5 in Chapter 1 summarize the purpose of and need for the proposed Project. Chapter 2 contains information regarding the planning process undertaken to develop alternatives to date and includes a detailed description of the Build Alternative. Section 4.4 and the Assessment of Effects Report in Appendix VII discuss historic resources that are afforded protection under Section 4(f).

5.2 REGULATORY FRAMEWORK

Section 4(f) protects specific resources of federal, state, or local significance that are proposed to be used for a transportation project. The term “use” in the Section 4(f) context is defined in 23 CFR § 774.17 and has a specific meaning. There are three types of Section 4(f) resource uses:

1. Permanent Incorporation – A permanent incorporation of a Section 4(f) resource occurs when a resource is permanently removed or integrated into a proposed transportation project. This incorporation may occur as a result of partial or full acquisition, permanent easement, or temporary easement.

2. Temporary Occupancy – A temporary occupancy of a Section 4(f) resource occurs when there is a short-term use of a resource that is considered adverse in terms of the preservationist purpose of the Section 4(f) statute. Under 23 CFR § 774.13, a temporary occupancy of a resource does not constitute a “use” of a Section 4(f) resource when all of the following conditions are satisfied:
   - The duration of use would be temporary (that is, less than the time needed for construction of the project), and there would be no change in ownership of land.
   - The scope of work would be minor (that is, both the nature and magnitude of the changes to the Section 4(f) resource would be minimal).
• There would be no anticipated permanent adverse physical impacts, nor would there be interference with the protected activities, features, or attributes of the resource, on either a temporary or a permanent basis.

• The land being used would be fully restored to a condition that is at least as good as that which existed before the project.

• There is documented agreement among appropriate federal, state, and local official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

3. **Constructive Use** – A constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate land from the resource, but the *proximity* of the project results in impacts (for example, noise, vibration, visual impacts, or property access) that substantially impair the activities, features, or attributes that qualify a resource for Section 4(f) protection. Factors for assessing substantial diminishment are provided in 23 CFR § 774.15.

Before approving a project that uses a Section 4(f) resource, FTA must either determine that the impacts are *de minimis* impact or undertake an individual Section 4(f) evaluation to determine that there is no feasible and prudent avoidance alternative to that use, and that all measures to minimize harm to the resource have been undertaken (23 CFR § 774.17).

**De Minimis for Parklands and Recreational Resources** – A *de minimis* impact means FTA has determined that the use meets the following requirements: (1) the proposed use would not adversely affect the features, attributes, or activities that qualify the park for Section 4(f) protection; (2) the officials with jurisdiction (the park owner or operator, known as OWJ) concur; and (3) the public has been given the opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource.

**De Minimis for Historic Resources** – A *de minimis* impact means that FTA has determined (in accordance with 36 CFR § 800) that either no historic resource would be affected by the project or that the project would have “no adverse effect” on the historic resource.

5.3 **ORGANIZATION OF THIS SECTION 4(F) EVALUATION**

This Section 4(f) evaluation considers Section 4(f) resources in accordance with all applicable regulations and guidance referenced in the previous chapters, and the sections are organized to follow the major analysis processes in FTA and FHWA’s *Section 4(f) Policy Paper*. Each section provides appropriate citations, definitions, and evaluation criteria for each of these steps:

- **Section 5.4** – Identification of Section 4(f) Resources. This includes figures and summary tables indicating the Section 4(f) resource and the FTA’s determinations on use.

- **Section 5.5** – Assessment of Use of Section 4(f) Resources

- **Section 5.6** – Avoidance Analysis

- **Section 5.7** – Least Overall Harm Analysis

- **Section 5.8** – All Possible Planning to Minimize Harm

The concluding sections of this evaluation provide details regarding the consultation and coordination process undertaken (Section 5.9) and summarize the finding of this Section 4(f) evaluation (Section 5.10).
5.4 IDENTIFICATION OF SECTION 4(F) RESOURCES

5.4.1 RECREATIONAL AREAS

Four public recreational areas are identified within the Project Area and are shown in Figure 5-1. These resources are listed in Table 5-1 and then discussed individually.

Table 5-1. Section 4(f) Assessment of Recreational Areas' Use with the Build Alternative

<table>
<thead>
<tr>
<th>Section 4(f) Resource</th>
<th>Permanent Use, Not De Minimis</th>
<th>Permanent Use, De Minimis</th>
<th>Constructive Use</th>
<th>No Use</th>
<th>Existing Resource Dimensions</th>
<th>Permanent Use Dimension</th>
<th>Percentage of Resource Permanently Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana Dunes National Lakeshore</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>15,000 acres</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Indiana Dunes State Park</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>2,182 acres</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Dunes Kankakee Trail Porter Brickyard Segment</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>10.1 miles</td>
<td>64.4 feet</td>
<td>0.1%</td>
</tr>
<tr>
<td>Calumet Trail</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>9.1 miles</td>
<td>274.2 feet</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

INDIANA DUNES NATIONAL LAKESHORE

Indiana Dunes National Lakeshore is a unit of the National Park System designated as a U.S. National Lakeshore and is located in northwest Indiana and managed by the U.S. Department of the Interior, NPS. It was authorized by Congress in 1966. The national lakeshore runs for nearly 25 miles along the southern shore of Lake Michigan with its headquarters in Chesterton, Indiana. The park contains about 15,000 acres. The park lies on one or both sides of the SSL for nearly the entire distance of the proposed Project between Gary and Michigan City, adjacent to the railroad tracks. See Figure 5-1.
Figure 5-1. Section 4(f) Parkland and Trail Resources
The park consists of 15 separate areas that together are known as the Indiana Dunes National Lakeshore. See Figure 5-1. Along the lakefront, the western area is roughly the shoreline south to U.S. 12 between the Burns Ditch west to Broadway Avenue in downtown Gary, Indiana. The Calumet Prairie State Nature Preserve and the Hobart Prairie Grove, both in Lake County, are in the western end of the park. The Heron Rookery in Porter County is in the center of the park. The eastern area is roughly the lakeshore south to U.S. 12 or U.S. 20 between the ArcelorMittal steel mill on the west and Michigan City, Indiana, on the east. A small extension, south of ArcelorMittal, continues west along Salt Creek to SR 249. In addition, there are several outlying areas, including Pinhook Bog in LaPorte County to the east.

The park contains 15 miles of beaches as well as sand dunes, wetlands, prairies, rivers, oak savannas, and woodland forests. The park is also noted for its singing sands. More than 350 species of birds have been observed in the park. It has one of the most diverse plant communities of any unit in the U.S. National Park System with 1,418 vascular plant species, including 90 threatened or endangered species. The Indiana Dunes area is unique in that it contains both arctic and boreal plants (such as the bearberry) alongside desert plants (such as the prickly pear cactus).

Camping is available at the Dunewood Campground on U.S. 12. The campground includes a recreational vehicle (RV) dump station and two loops of trailer-accessible sites (some with pull-through drives). All sites have grills, a picnic table, and access to restrooms with running water and showers. There are a limited number of walk-in sites in the Douglas Loop.

The park provides opportunities for bird watching, camping, 45 miles of hiking, fishing, swimming, horseback riding, and cross-country skiing. The park has about two million visitors a year.

**INDIANA DUNES STATE PARK**

Indiana Dunes State Park consists of 2,182 acres of primitive, historic, and unique Hoosier landscape. It lies at the north end of State Route 49 in Porter County and includes more than 3 miles of beach along Lake Michigan’s southern shore. In the early 1900s, scientists, recreationists, and nature enthusiasts recognized the value and potential of the Indiana Dunes area and fought to have the region preserved. As a result, the state park was established in 1925. The park lies north of the SSL between Dune Park and Beverly Shores, and is physically separated from the NICTD/CSS railroad by the NIPSCO utility corridor. See Figure 5-1. The INDNR has jurisdiction over the State Park.

Large sand dunes, located beyond the entire shoreline, have taken thousands of years to form, and tower nearly 200 feet above Lake Michigan. A wide range of habitats and plant species is found in the park, with vegetation stabilizing some of the sand. These habitats provide homes for many types of plants and animals. Lake Michigan also provides habitat for many aquatic species as well as a constantly changing fishery.

Recreational opportunities include swimming, sunbathing, bird watching, a nature center, picnic shelters, hiking, arts and crafts, and camping. The Dunes Nature Preserve covers the eastern two-thirds of the state park, and totals 1,530 acres. It is accessible only on foot. All eight of the park’s trails enter the nature preserve, offering easy to rugged experiences amongst the dunes.
DUNES KANKAKEE TRAIL (PORTER BRICKYARD TRAIL SEGMENT)

The Dunes Kankakee Trail is 10.1 miles long and runs primarily north and south. The Dunes Kankakee Trail is actually made up of segments that will eventually connect the Indiana Dunes State Park and Indiana Dunes National Lakeshore at the north end to the Kankakee River at the south end. It would tie into the coast-to-coast American Discovery Trail at its southern terminus. When all segments have been completed, the Trail will run the entire length of Porter County and will be 33 miles long (NIRPC 2010).

The segment of the trail that intersects the proposed Project Area is located along Mineral Springs Road between U.S. 20 and the SSL tracks, and is known as the Porter Brickyard Trail. The Porter Brickyard Trail segment is 3.5 miles long and was constructed on NPS land by the Town of Porter in 2005. The Porter Brickyard Trail continues to be maintained by the Town of Porter. At the existing tracks, the trail turns slightly so users can cross the tracks using the Mineral Springs Road crossing and then connect to the Calumet Trail and Cowles Bog Trail to the north, and eventually to the Dune Park Station.

CALUMET TRAIL

Within the NIPSCO utility easement to the north and roughly parallel to the NICTD/CSS railroad tracks and U.S. 12, NICTD provides access to the trail with a crossing at the Dune Park Station (Figure 5-2). The Calumet Trail crosses under the SR 49 bridge adjacent to the existing NICTD/CSS track and just west of the Dune Park Station, as shown in Figure 5-3.

The entire Calumet Trail runs for approximately 9.1 miles from Mineral Springs Road in Dune Acres, near Cowles Bog, to a point near the county line of Porter County and LaPorte County, very close to the parking lot entrance of a local sand dune landmark, Mount Baldy. The surface is crushed limestone, and the trail is frequently used by cyclists and joggers in the warmer months.

Deer and other wildlife are often seen along the trail, which loosely connects with other bicycle/multi-use trails in northwest Indiana in a loose arc from near the Illinois state line to near the Michigan state line, bringing trail users in proximity to the Indiana Dunes National Lakeshore and the Indiana Dunes State Park.

The Calumet Trail is owned by NIPSCO, a private utility, and managed by the Porter County Parks Department. Porter County has plans to improve various segments of the trail, including asphalt paving by the year 2024.
5.4.2 HISTORIC RESOURCES SUBJECT TO SECTION 4(F) EVALUATION

Thirty-one historic resources were previously listed or determined eligible for listing in the NRHP, or were recommended eligible for listing in the NRHP as part of the architectural survey. Per consultation with the SHPO, the survey did not include the vast majority of contributing resources to the Elston Grove Historic District, the Franklin Street Commercial Historic District, or the Haskell and Barker Historic District, because of their recent survey and listing in the NRHP in 2013. Table 5-2 lists the 50 surveyed historic properties and non-surveyed contributing resources in the APE. Historic resources within the APE are depicted in figures in this chapter and in the Assessment of Effects Report (Appendix VII).

Section 4.4 describes the Section 106 process in greater detail, including coordination with the SHPO regarding eligibility and effect determinations. Brief descriptions of the historic resources considered in this Section 4(f) evaluation are provided in this chapter.

HISTORIC PROPERTIES IN GARY (LAKE COUNTY)

MILLER SCHOOL, 665 S. LAKE STREET, GARY (089-232-07095) (FIGURE 5-4; MAP NO. 1)

Constructed in 1910, the former school building is located on the southeast corner of E. 6th Place and Lake Street. The former Miller School possesses sufficient integrity of location, design, setting, workmanship, feeling, and association to convey its historic significance. The building was therefore recommended eligible for the NRHP under Criteria A and C.

5512 E. MELTON ROAD, GARY (089-232-07104) (FIGURE 5-4; MAP NO. 2)

The single-family dwelling at 5512 E. Melton Road was rated Contributing in 1994 for its architectural significance as an example of a Tudor Revival-style residence. The property is significant as a local example of the Tudor Revival style applied to a residential building and was recommended individually eligible for listing in the NRHP under Criterion C.

GLEN RYAN PARK HISTORIC DISTRICT, GARY

The newly recommended Glen Ryan Park Historic District is bounded by S. New Jersey Street on the west, E. 6th Avenue on the north, Allen Street to the east, and E. 7th Avenue to the south.

The recommended Glen Ryan Park Historic District is locally significant under Criterion A as an intact example of community development following World War II and the Korean War, as well as under Criterion C as an example of a cohesive, intact collection of late 1950s Ranch-style domestic architecture. The neighborhood was platted in March 1956, and homes began being sold in May 1957.

HIWAY HOMES HISTORIC DISTRICT, GARY (FIGURE 5-4; MAP NOS. 3-6)

The newly recommended Hiway Homes Historic District is located at the southeast corner of Gary's historic residential grid, bound on the west by the east side of Ohio Street; on the east by the west side of Illinois Street; and on the south by the north side of 7th Avenue. The north boundary follows the north side of E. 6th Avenue between Ohio and Louisiana Streets, the south side of 6th Avenue between Louisiana and Mississippi Streets, and U.S. 12 between Mississippi and Illinois Streets.

The recommended Hiway Homes Historic District is significant under Criteria A and C. The district is significant under Criterion A for its representation of residential development during Gary's postwar era,
a time period distinct from the city’s earlier and well-documented steel-driven booms that took place from 1906 through the 1920s and again during World War II.

**Contributing Resources to the Recommended Hiway Homes Historic District, Gary**

These properties were assessed individually and are grouped together based on their shared historic and geographical identity within the Hiway Homes Historic District in Gary. They are listed below, described in Table 5-2 and depicted in Figure 5-4.

- 602 Illinois Street – Map No. 3
- 608 Mississippi Street – Map No. 4
- 628 Mississippi Street – Map No. 5
- 637 Indiana Street/Martin Luther King Drive – Map No. 6

**HISTORIC RESOURCES IN PORTER COUNTY**

**BEVERLY SHORES RAILROAD STATION, BROADWAY AND U.S. 12; BEVERLY SHORES (NR-0945, 127-406-02014) (FIGURE 5-5; MAP NO. 7)**

The Beverly Shores Railroad Station sits on the east side of Broadway Avenue and on the north side of the railroad tracks. The Beverly Shores Railroad Station was listed in the NRHP in 1989. Although no longer an active station for the SSL, Beverly Shores is a flag stop. The Beverly Shores Railroad Station retains good physical integrity with virtually no changes since its NRHP listing; therefore, it remains eligible under Criterion C.

**OSCAR AND IRENE NELSON SITE, 217 W. DUNES HIGHWAY, BURNS HARBOR (127-175-05015/NR-2441) (FIGURE 5-5; MAP NO. 8)**

The Oscar and Irene Nelson Site sits on a 3.28-acre wooded property on the north side of W. Dunes Highway and faces south. The Site was rated as a Contributing property by the IHSSI survey in 1990, and is currently under review by the SHPO as part of the draft multiple property documentation form (MPDF) NRHP nomination for Swedish Properties of Baillytown, c. 1850–c. 1950. The property has been nominated for its significance under Criterion A, due to its ethnic and agricultural significance in Westchester Township of Porter County, as well as under Criterion C as an example of a Swedish-American log cabin exhibiting Nordic folk craftsmanship adapted to a rural Midwestern setting. Due to the ongoing status of its review by SHPO, and for the purposes of Section 106 for the Project, the Oscar and Irene Nelson Site is considered eligible under Criteria A and C, as recommended in the MPDF NRHP nomination.

**AL & SALLY’S MOTEL, 3221 W. DUNES HIGHWAY, MICHIGAN CITY (FIGURE 5-5; MAP NO. 9)**

Al & Sally’s Motel at 3221 W. Dunes Highway stands on the north side of Dunes Highway (U.S. 12) and faces southeast. Al & Sally’s Motel is significant under Criterion A for its association with mid-century lakeshore tourism in Porter County. The building remains physically intact, and additionally retains its integrity of location, setting, feeling, and association. Al & Sally’s Motel was recommended eligible for individual listing in the NRHP under Criterion A.
Table 5-2. Surveyed Historic Properties and Non-Surveyed Contributing Resources in the APE

<table>
<thead>
<tr>
<th>Map No.</th>
<th>Photo</th>
<th>Name</th>
<th>IHSSI/NR No.</th>
<th>Survey (Y/N)</th>
<th>Address</th>
<th>County</th>
<th>NRHP Eligibility</th>
<th>Permanent Incorporation</th>
<th>Permanent Use, De Minimis</th>
<th>Constructive Use</th>
<th>No Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Elston Grove Historic District</td>
<td>091-406-18001/ NR-2331</td>
<td>N</td>
<td>Michigan City</td>
<td>LaPorte</td>
<td>Listed</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Elston Grove Historic District Boundary Expansion</td>
<td></td>
<td>Y</td>
<td>Michigan City</td>
<td>LaPorte</td>
<td>Eligible</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Franklin Street Commercial Historic District</td>
<td>091-406-16001/ NR-2339</td>
<td>N</td>
<td>Michigan City</td>
<td>LaPorte</td>
<td>Listed</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Haskell &amp; Barker Historic District</td>
<td>091-406-17001/ NR-2355</td>
<td>N</td>
<td>Michigan City</td>
<td>LaPorte</td>
<td>Listed</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>DeWolfe’s Addition Historic District</td>
<td></td>
<td>Y</td>
<td>Michigan City</td>
<td>LaPorte</td>
<td>Eligible</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Hiway Homes Historic District</td>
<td></td>
<td>Y</td>
<td>Gary</td>
<td>Lake</td>
<td>Eligible</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Glen Ryan Park Historic District</td>
<td></td>
<td>Y</td>
<td>Gary</td>
<td>Lake</td>
<td>Eligible</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Map No.</td>
<td>Photo</td>
<td>Name</td>
<td>IHSSI / NR No.</td>
<td>Survey(^a) (Y/N)</td>
<td>Address</td>
<td>County</td>
<td>NRHP Eligibility</td>
<td>Permanent Incorporation</td>
<td>Permanent Use, De Minimis</td>
<td>Constructive Use</td>
<td>No Use</td>
</tr>
<tr>
<td>--------</td>
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<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td>1.</td>
<td><img src="image1" alt="Miller School" /></td>
<td>Miller School</td>
<td>089-232-07095</td>
<td>Y</td>
<td>665 S. Lake Street, Gary</td>
<td>Lake</td>
<td>Eligible</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>2.</td>
<td><img src="image2" alt="House" /></td>
<td>House</td>
<td>089-232-07104</td>
<td>Y</td>
<td>5512 E. Melton Road, Gary</td>
<td>Lake</td>
<td>Eligible</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>3.</td>
<td><img src="image3" alt="House" /></td>
<td>House</td>
<td>089-232-19670</td>
<td>Y</td>
<td>602 Illinois Street, Gary</td>
<td>Lake</td>
<td>Eligible as a contributing resource to Hiway Homes Historic District</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>4.</td>
<td><img src="image4" alt="House" /></td>
<td>House</td>
<td>089-232-19671</td>
<td>Y</td>
<td>608 Mississippi Street, Gary</td>
<td>Lake</td>
<td>Eligible as a contributing resource to Hiway Homes Historic District</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Map No.</td>
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<td>Address</td>
<td>County</td>
<td>NRHP Eligibility</td>
<td>Permanent Incorporation</td>
<td>Permanent Use, De Minimis</td>
<td>Constructive Use</td>
<td>No Use</td>
</tr>
<tr>
<td>--------</td>
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<td>5.</td>
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<td>628 Mississippi Street, Gary</td>
<td>Lake</td>
<td>Eligible as a Contributing Resource to Hiway Homes Historic District</td>
<td></td>
<td></td>
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<tr>
<td>6.</td>
<td><img src="image" alt="House" /></td>
<td>House</td>
<td>089-232-19674</td>
<td>N</td>
<td>637 Indiana Street/ Martin Luther King Drive, Gary</td>
<td>Lake</td>
<td>Eligible as a Contributing resource to Hiway Homes Historic District</td>
<td></td>
<td></td>
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<tr>
<td>7.</td>
<td><img src="image" alt="Beverly Shores Railroad Station" /></td>
<td>Beverly Shores Railroad Station</td>
<td>127-406-02014/ NR-0945</td>
<td>N</td>
<td>Northeast corner of Broadway and U.S. 12, Beverly Shores</td>
<td>Porter</td>
<td>Listed</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>8.</td>
<td><img src="image" alt="Oscar and Irene Nelson Site" /></td>
<td>Oscar and Irene Nelson Site</td>
<td>127-175-05015/ NR-2441</td>
<td>N</td>
<td>217 U.S. 12, Burns Harbor</td>
<td>Porter</td>
<td>Eligible</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
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</tbody>
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Table 5-2. (cont.)

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<td>Al &amp; Sally’s Motel</td>
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<td>Porter</td>
<td>Eligible</td>
<td></td>
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<td><img src="image2.png" alt="Image" /></td>
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<td>091-406-17032</td>
<td>Y</td>
<td>406 W. 10th Street, Michigan City</td>
<td>LaPorte</td>
<td>Eligible. Contributing resource to the Haskell and Barker Historic District</td>
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<td>11.</td>
<td><img src="image3.png" alt="Image" /></td>
<td>House</td>
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<td>1109 Manhattan Street, Michigan City</td>
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<td>12.</td>
<td><img src="image4.png" alt="Image" /></td>
<td>House</td>
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<td>1101 Elston Street, Michigan City</td>
<td>LaPorte</td>
<td>Eligible as contributing resource to recommended DeWolfe’s Addition Historic District</td>
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<td></td>
<td></td>
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</table>
Table 5-2. (cont.)

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<th>Photo</th>
<th>Name</th>
<th>IHSSI / NR No.</th>
<th>Survey³ (Y/N)</th>
<th>Address</th>
<th>County</th>
<th>NRHP Eligibility</th>
<th>Permanent Incorporation</th>
<th>Permanent Use, De Minimis</th>
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<th>No Use</th>
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</thead>
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<tr>
<td>13.</td>
<td></td>
<td>House</td>
<td>091-406-21105</td>
<td>Y</td>
<td>1116 Ohio Street, Michigan City</td>
<td>LaPorte</td>
<td>Eligible as contributing resource to recommended DeWolfe’s Addition Historic District</td>
<td></td>
<td></td>
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<td>14.</td>
<td></td>
<td>House</td>
<td>091-406-21106</td>
<td>Y</td>
<td>1115 Ohio Street, Michigan City</td>
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<td>Eligible as contributing resource to recommended DeWolfe’s Addition Historic District</td>
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<tr>
<td>15.</td>
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<td>Commercial Building</td>
<td>091-406-21150</td>
<td>Y</td>
<td>1004 Kentucky Street, Michigan City</td>
<td>LaPorte</td>
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<td>16.</td>
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<td>House</td>
<td>091-406-21078</td>
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<td>17.</td>
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<td>x</td>
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<tr>
<td>18.</td>
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<td>First Christian Church</td>
<td>091-406-21081</td>
<td>Y</td>
<td>1102 Cedar Street, Michigan City</td>
<td>LaPorte</td>
<td>Individually eligible and contributing resource to Elston Grove Historic District Expansion</td>
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<td>1101 Franklin Street, Michigan City</td>
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<tr>
<td>20.</td>
<td>Apartment Building</td>
<td>091-406-21083</td>
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<td>1009 Cedar Street, Michigan City</td>
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<tr>
<td>21.</td>
<td>South Shore Station</td>
<td>091-406-21092</td>
<td>Y</td>
<td>114 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Individually Eligible and Contributing to Franklin Street Commercial Historic District</td>
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<td>22.</td>
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<td>23.</td>
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<td>Berndt Flats</td>
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<td><img src="image" alt="Apartment Building" /></td>
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<td>091-406-21082</td>
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<td>25.</td>
<td><img src="image" alt="House" /></td>
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<td>1012 Spring Street, Michigan City</td>
<td>LaPorte</td>
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<td>x</td>
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<tr>
<td>26.</td>
<td><img src="image" alt="House" /></td>
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<td>Y</td>
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<td>1015 Spring Street, Michigan City</td>
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<td>27.</td>
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<td>202 E. 11(^{th}) Street, Michigan City</td>
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<td>28.</td>
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<td>House</td>
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<td>206 E. 11(^{th}) Street, Michigan City</td>
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<td>Contributing resource to Elston Grove Historic District</td>
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<td>29.</td>
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<td>210 E. 11(^{th}) Street, Michigan City</td>
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<td>30.</td>
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<td>House</td>
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<td>218 E. 11(^{th}) Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Elston Grove Historic District</td>
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Table 5-2. (cont.)

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<td>House</td>
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<td>314 Lafayette Street, Michigan City</td>
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<td>32.</td>
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<td>Apartment Building</td>
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<td>320-322 E. 11th Street, Michigan City</td>
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<td>33.</td>
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<td>716 E. 11th Street, Michigan City</td>
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<td>34.</td>
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Table 5-2. (cont.)

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<td>36.</td>
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<td>513 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
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<td>37.</td>
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<td>517 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
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<td>38.</td>
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<td>523 E. 11th Street, Michigan City</td>
<td>LaPorte</td>
<td>Eligible as contributing resource to Elston Grove Historic District Expansion</td>
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Table 5-2. (cont.)

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<tr>
<td>39.</td>
<td></td>
<td>Commercial Building</td>
<td>N</td>
<td>1010 Franklin Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Franklin Street Commercial Historic District</td>
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<td>40.</td>
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<td>Commercial Building (Inca Properties LLC)</td>
<td>Y</td>
<td>1015 Franklin Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Franklin Street Commercial Historic District</td>
<td>x</td>
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<tr>
<td>41.</td>
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<td>Commercial Building (Inca Properties LLC)</td>
<td>Y</td>
<td>1019 Franklin Street, Michigan City</td>
<td>LaPorte</td>
<td>Contributing resource to Franklin Street Commercial Historic District</td>
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<tr>
<td>42.</td>
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<td>Commercial Building (Andrea Italian Kitchen/ Dough Boys/3rd Degree BBQ Restaurant)</td>
<td>Y</td>
<td>106 E. 11th Street, Michigan City</td>
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<td>43.</td>
<td>House</td>
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<td>Contributing resource to Franklin Street Commercial Historic District</td>
<td>x</td>
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\(^a\) Contributing resources to the Elston Grove Historic District, the Franklin Street Commercial Historic District, or the Haskell and Barker Historic District were not resurveyed, because of the recent survey and listing in the NRHP in 2013.
Figure 5-4. Historic Resources in Lake County
Figure 5-5. Historic Resources in Porter County
HISTORIC RESOURCES IN MICHIGAN CITY (LAPORTE COUNTY)

ST. MARY OF THE IMMACULATE CONCEPTION CHURCH, 406 W. 10TH STREET, MICHIGAN CITY (091-406-17032) (FIGURE 5-6; MAP NO. 10)

St. Mary of the Immaculate Conception Catholic Church, founded by German Catholic immigrants in 1858, was the second Catholic parish in Michigan City. The church stands at the corner of 10th and Buffalo Streets, and faces north onto 10th Street. The church was **recommended individually eligible for listing in the NRHP under Criteria A**. It has historic significance under Criterion A as a locally significant resource that expresses the general trend of increasing wealth and social integration that characterized the congregation as it evolved through the nineteenth and twentieth centuries, a trend which corresponded to the enlargement and ornamentation of the church itself. St. Mary of the Immaculate Conception Church is also a **contributing resource to the NRHP-listed Haskell and Barker Historic District**.

DEWOLFE’S ADDITION HISTORIC DISTRICT, MICHIGAN CITY (FIGURE 5-6; MAP NOS. 11 – 14)

The newly recommended DeWolfe’s Addition Historic District, named for the original plat that encompassed the majority of the present neighborhood, is bounded on the west by Kentucky Street, on the north by 11th Street, on the east by Buffalo Street, and on the south by Wall Street. The east side of the recommended historic district abuts with the western boundary of the Haskell and Barker Historic District. The neighborhood was constructed between c. 1888 and 1905. The recommended DeWolfe’s Addition Historic District is **locally significant under Criterion A** as an example of community development at the peak of Michigan City’s industrial and residential growth. The recommended historic district is also **locally significant under Criterion C** as a cohesive and intact collection of National Folk and Folk Victorian styles.

**Contributing Resources to the Recommended DeWolfe’s Addition Historic District, Michigan City**

The following properties were assessed individually and are grouped together based on their shared historic and geographical identity within the DeWolfe’s Addition Historic District in Michigan City. These properties are within the proposed Project’s APE. They are listed below, described in **Table 5-2**, and depicted in **Figure 5-6**.

- 1109 Manhattan Street – Map No. 11
- 1101 Elston Street – Map No. 12
- 1116 Ohio Street – Map No. 13
- 1115 Ohio Street – Map No. 14

COMMERCIAL BUILDING, 1004 KENTUCKY STREET (091-406-21150) (FIGURE 5-6; MAP NO. 15)

The one-story automotive body shop at 1004 Kentucky Street is located southeast of the intersection of Chicago Street, Kentucky Street, and W. 10th Street. The building faces northwest and has a semi-circular concrete driveway that extends from Kentucky Street to W. 10th Street. Constructed c. 1925, the filling station was **recommended eligible for listing in the NRHP as a locally significant resource under Criteria A and C** associated with the early automobile era in Michigan City. The filling station is also **significant under Criterion C** as an overall intact example of an early-twentieth century filling station.
Figure 5-6. Historic Resources in LaPorte County
FIRST CHRISTIAN CHURCH, 1102 CEDAR STREET (091-406-21081) (FIGURE 5-6; MAP NO. 18)

Formerly the First Christian Church, this vacant church building was constructed c. 1925 in the Spanish Mission Revival style. The church stands on the southeast corner of 11th Street and Cedar Street and faces west. The church was rated Outstanding in the LaPorte County Interim Report of 1989. The church meets Criteria A for religious properties and is recommended eligible under Criterion C for its architecture. See Figure 5-7.

COMMERCIAL BUILDING, 1101 FRANKLIN STREET, MICHIGAN CITY (091-406-21091) (FIGURE 5-6; MAP NO. 19)

The two-story corner commercial building at 1101 Franklin Street stands on the southwest corner of 11th Street and Franklin Street and is located within the Franklin Street Commercial Historic District. Constructed c. 1880, the rectangular building is a Contributing resource to the Franklin Street Commercial Historic District, which is listed in the NRHP under Criteria C and A for its significance in the areas of local architecture and commercial development of Michigan City. Though the building at 1101 Franklin Street does not possess sufficient significance to merit individual eligibility under Criterion A, it was recommended individually eligible under Criterion C as a good local example of typical late-nineteenth century urban commercial architecture.

1009 CEDAR STREET, MICHIGAN CITY (FIGURE 5-6; MAP NO. 20)

The building at 1009 Cedar Street is a Contributing resource to the Elston Grove Historic District. Constructed c. 1910, the two-story apartment building exhibits elements of the Italianate style. The building does not possess sufficient architectural significance to merit individual listing; however, it is representative of vernacular forms within the Elston Grove Historic District. The property associated with 091-406-21083 was therefore recommended eligible as a contributing resource to this historic district.

SOUTH SHORE STATION, 114 E. 11TH STREET, MICHIGAN CITY (091-406-21092) (FIGURE 5-6; MAP NO. 21)

The South Shore Station, constructed in 1926, is located at 114 E. 11th Street (see Figure 5-8). The South Shore Station is significant under Criterion A as the earliest, if not the only, purpose-built multi-modal transportation facility of the early-twentieth century in LaPorte County.
The South Shore Station's association with the railroad has been impacted as it is no longer owned by the SSL and is no longer in use. Although all of the fenestration has been replaced on the façade and the building is currently boarded up, the South Shore Station retains its integrity of location, design, setting, materials, workmanship, and feeling. The building retains sufficient integrity to convey its significance under Criteria A and C, and is eligible for individual listing in the NRHP. The building is also a contributing resource to the Franklin Street Commercial Historic District.

1116 W. 10TH STREET, MICHIGAN CITY (FIGURE 5-6; MAP NO. 22)

According to LaPorte County Assessor data, the dwelling at 1116 W. 10th Street was built in 1937. The building stands on the south side of W. 10th Street and faces north. The residence at 1116 W. 10th Street is significant under Criterion C as a rare, possibly locally unique, example of an Eclectic-style dwelling that incorporates an unusual stylistic combination including Tudor Revival, Minimal Traditional, Art Moderne, and Craftsman. The building at 1116 W. 10th Street is recommended eligible under Criterion C for individual listing in the NRHP.

BERNDT FLATS, 1111 CEDAR STREET, MICHIGAN CITY (FIGURE 5-6; MAP NO. 23)

The Berndt Flats at 1111 Cedar Street were constructed c. 1926. The two-story brick apartment building stands on the west side of Cedar Street and faces east. The Berndt Flats were designed by John Lloyd Wright, son of Frank Lloyd Wright and a master architect in his own right, who was prolific in northwest Indiana and the Chicago area. An MPDF for John Lloyd Wright’s work in northwest Indiana was listed in the NRHP in 2011. The MPDF identifies the Berndt Flats as one of Wright’s extant works in Michigan City. The building meets the criteria established for significance and integrity by the MPDF for eligibility in association with John Lloyd Wright. Due to the significance in association with the historic context identified by the MPDF for John Lloyd Wright’s work in northwest Indiana, the Berndt Flats at 1111 Cedar Street were recommended eligible under Criterion C for individual listing in the NRHP.

ELSTON GROVE HISTORIC DISTRICT, MICHIGAN CITY (NR-2331 091-406-18001)

The primarily residential district is wedge shaped and bound by 11th Street on the south, Michigan Boulevard and 6th Street on the north, and Pine Street (also the east boundary of Franklin Street Commercial Historic District) on the west. The Elston Grove Historic District was listed in the NRHP in 2013 under Criterion A for its role in local industry and education, as well as under Criterion C for its exemplary representation of a range of architectural styles and forms.

Per consultation with the SHPO, the 2017 architectural survey did not include the vast majority of contributing resources with IHSSI numbers to the Elston Grove Historic District due to their recent survey and listing in the NRHP in 2013. Further, only contributing resources with previously assigned IHSSI numbers were to be surveyed in order to evaluate them individually for listing in the NRHP. The 10 surveyed contributing properties to the Elston Grove Historic District that are within the proposed Project's APE are listed below, described in Table 5-2, and depicted in Figure 5-6.

**Surveyed Contributing Resources in the Elston Grove Historic District within the APE**

- 328 E. 11th Street – Map No. 24
- 1012 Spring Street – Map No. 25
- 1015 Spring Street – Map No. 26
- 202 E. 11th Street – Map No. 27
- 206 E. 11th Street – Map No. 28
ELSTON GROVE HISTORIC DISTRICT BOUNDARY EXPANSION, MICHIGAN CITY

The newly recommended expansion of the Elston Grove Historic District extends the southern boundary south of 11th Street. The architectural character and construction dates of the buildings on the south side of 11th Street (located outside of the historic district boundaries, but within the APE) are similar to those of the buildings on the north side of 11th Street (located within the Elston Grove historic district boundaries). FTA recommended, and SHPO concurred, that the boundaries of the Elston Grove Historic District be expanded on its south side to include those residential buildings located primarily on the south side of 11th Street generally between Oak Street on the east and Pine Street on the west. The district expansion extends approximately one block deep, in order to include historic buildings located on York, Cedar, Spring, and Pine Streets. The SHPO concurred with this recommendation on July 11, 2017.

The following properties were assessed individually and are grouped together based on their shared historic and geographical identity within the Elston Grove Historic District boundary expansion. They are described in Table 5-2, and depicted in Figure 5-6. One of the eight properties that are within the proposed Project’s APE is also individually eligible (First Christian Church) and was described previously.

**Contributing Resources in the Elston Grove Historic District Boundary Expansion within the APE**

- 410 York Street – Map No. 16
- 505 E. 11th Street – Map No. 17
- 1102 Cedar Street – Map No. 18 (also individually eligible)
- 501 E. 11th Street – Map No. 34
- 509 E. 11th Street – Map No. 35
- 513 E. 11th Street – Map No. 36
- 517 E. 11th Street – Map No. 37
- 523 E. 11th Street – Map No. 38

HASKELL AND BARKER HISTORIC DISTRICT, MICHIGAN CITY (NR-2355, 091-406-17001)

The Haskell and Barker Historic District stretches along Washington and Wabash Streets from 4th Street on the north to Homer Street on the south, runs north along Buffalo Street until 11th Street, where it extends west to Manhattan Street for a single block, then runs east along 10th Street until intersecting again with Wabash Street. The historic district shares its east boundary with the Franklin Street Commercial Historic District. Buildings in the Haskell and Barker Historic District, located on the west side of the historic city center. The Haskell and Barker Historic District was listed in the NRHP in 2013 under Criterion C for its exemplary collection of architectural styles, which includes some of the highest residential styles in the city, among them Queen Anne, Italianate, and Tudor Revival. The period of significance for the residential neighborhood extends from 1860 to 1958. St. Mary of the Immaculate Conception Church (Map No. 10, discussed previously) is a contributing resource to this Historic District.
FRANKLIN STREET COMMERCIAL HISTORIC DISTRICT, MICHIGAN CITY (NR-2339, 091-406-16001)

Franklin Street Commercial Historic District, bound by 4th Street on the north, Franklin Street on the west, 11th Street on the south, and Pine Street on the east, is also bordered by Elston Grove Historic District on the east and Haskell and Barker Historic District on the west. Franklin Street Commercial Historic District is primarily commercial in character, with some residential, religious, and civic properties included as well. Many of the previously surveyed properties in the Franklin Street district, all lying south of 10th Street, are now parking lots or vacant parcels. The Franklin Street Commercial Historic District was listed in the NRHP in 2013 under Criterion A for its role in local commerce, as well as under Criterion C for its exemplary collection of commercial and residential buildings built in a variety of styles that include predominantly Italianate and Colonial Revival. The district constitutes part of Michigan City’s original plat. The period of significance for the district was identified in the nomination form as 1867–1963.

Six surveyed contributing properties to the Franklin Street Commercial Historic District that are within the proposed Project’s APE are listed below, described in Table 5-2, and depicted in Figure 5-6.

One of the six surveyed contributing properties within the district is also considered individually eligible (South Shore Station) and was described previously.

Surveyed Contributing Resources to the Franklin Street Commercial Historic District in the APE

- 1010 Franklin Street – Map No. 39
- 1015 Franklin Street – Map No. 40
- 1019 Franklin Street – Map No. 41
- 106 E. 11th Street – Map No. 42
- 121 E. 10th Street – Map No. 43
- 114 E. 11th Street (South Shore Station) – Map No. 21 (also individually eligible)

5.5 ASSESSMENT OF USE OF SECTION 4(f) RESOURCES

This section provides further details on the Section 4(f) resources and explains appropriate determination of “use” for each resource.

5.5.1 RECREATIONAL AREAS

FTA has determined that there would be no use of two recreational areas protected by Section 4(f): the Indiana Dunes National Lakeshore and Indiana Dunes State Park. A de minimis use determination has been made for two recreational areas protected by Section 4(f): the Dunes Kankakee Trail Porter Brickyard Segment and the Calumet Trail. Preliminary concurrence from the OWJs has been received and is included in Appendix IV.
INDIANA DUNES NATIONAL LAKESHORE

The proposed Project is adjacent to the NPS Indiana Dunes National Lakeshore in several locations. The parkland areas adjacent to the proposed Project consist mainly of open wetland or grassy areas or tree clusters, with no active uses. NICTD has enjoyed a long-standing relationship with the NPS and has developed the proposed Project to avoid any encroachments on this important resource. NPS has reviewed the preliminary plans. The proposed Project has been designed to keep all NICTD assets, including track, stations, and OCS equipment on NICTD or CSS property in all places where the proposed Project is adjacent to the Section 4(f) resource. Additionally, the proposed Project plans would restrict contractors from the temporary use of NPS property during construction. Alternatives that encroached upon the parklands were considered and dismissed due to these impacts. See Chapter 2 of the EA for this discussion.

While NICTD would not permanently incorporate any of this Section 4(f) resource, NICTD has proposed to mitigate the proposed Project’s corridor-wide wetland and habitat impacts by creating, restoring, and enhancing portions of the Indiana Dunes National Lakeshore. NICTD has already begun this coordination with the USACE, IDEM, and NPS and developed a wetland mitigation strategy (See Section 4.10.4 for more information). NPS, as OWJ, has indicated through a Letter of Intent their desire to partner with NICTD on this endeavor. NPS agrees that the wetland mitigation activities are for the preservation and enhancement of the NPS property (see Appendix IV of the EA).

Preliminary Section 4(f) Use Determination – As the proposed mitigation activities are for the preservation and enhancement of the Indiana Dunes National Lakeshore, and the NPS as the OWJ for this resources has preliminarily agreed with this assessment in writing, FTA has made the preliminary Section 4(f) determination in accordance with 23 CFR § 774.113(g) that the proposed Project would result in no use of the Indiana Dunes National Lakeshore as no permanent incorporation, temporary occupancy, or constructive use would result from the scope of work for this resource. Documentation is included in Appendix IV.

INDIANA DUNES STATE PARK

No proposed Project activities would impact the Indiana Dunes State Park. The parkland areas near the proposed Project consist mainly of open wetland or grassy areas or tree clusters, with no active uses. The State Park property is physically separated from the NICTD/CSS railroad by the NIPSCO utility corridor. NICTD has coordinated with the IDNR State Park officials on the development of the preliminary plans for the proposed Project to avoid any encroachments to this important resource. See Appendix IV for minutes of joint agency meetings that took place in June 2016, October 2016, and February 2017. In all places where the proposed Project is near the Section 4(f) resource, the proposed Project has been designed to keep all NICTD assets, including track, stations, and OCS equipment on NICTD or CSS property. Additionally, the proposed Project plans would restrict contractors from the temporary use of State Park property during construction.

Constructive use of the Indiana Dunes State Park was also evaluated. NICTD compared the location of the protected resources with the results of the proposed Project’s noise and vibration, visual, and property access effects assessment. Based on the existing NICTD/CSS railroad track alignment and the NIPCSO utility buffer, there would be no proximity impacts. The proposed Project would not impair the features or attributes of the Section 4(f) resource.

Preliminary Section 4(f) Use Determination – Based on preliminary engineering plans and analysis conducted to date, FTA has made the preliminary Section 4(f) determination that the proposed Project would result in no use of the Indiana Dunes State Park. All work would be within NICTD ROW. No
permanent incorporation, temporary occupancy, or constructive use would occur based on the scope of work. No substantial impairment of the activities, features, or attributes that qualify the Indiana Dunes State Park for protection under Section 4(f) would occur.

DUNES KANKAKEE TRAIL, PORTER BRICKYARD TRAIL SEGMENT

The proposed Project requires the relocation of the Porter Brickyard Trail segment of the Dunes Kankakee Trail, approximately five feet to the south, where it intersects Mineral Springs Road. This is due to the addition of the second track to the south, closest to the trail. The total length of the trail to be relocated is 64.4 linear feet. The existing trail would remain open during construction of the new, relocated trail. Additionally, other segments of the Dunes Kankakee Trail system are parallel to this segment and cross the SSL along SR 49, one mile east of the Porter Brickyard Trail segment. Discussions with the OWJs (Town of Porter and NPS) took place on April 17, 2017, and April 24, 2017, respectively. The NPS indicated preliminarily in writing on June 7, 2017 that “this relocation will not affect the features, attributes or activities of the Dunes Kankakee Trail that qualify the trail for protection under Section 4(f)” and that “the relocation will be performed by NICTD pursuant to trail relocation plans that have been approved by the National Park Service.” The Town of Porter indicated the same in writing on June 13, 2017. Documentation is included in Appendix IV.

Preliminary Section 4(f) Use Determination – Since the percentage of use of the Dunes Kankakee Trail is low (0.1%), the trail would not be closed during construction, the relocated trail would be in a similar location and alignment, there are parallel trails nearby, the relocation would not significantly change the features, attributes or activities of the resource, and the OWJs preliminarily agree that the proposed Project would have a de minimis use on the trail. As such, FTA has concluded that the Project actions would result in a Section 4(f) de minimis impact at Dunes Kankakee Trail Porter Brickyard Trail Segment, consistent with 23 CFR § 774.17.

CALUMET TRAIL

The proposed Project requires the relocation of the trail approximately 20 feet to the north, where it crosses under the State Route 49 bridge near the Dune Park Station, and the relocation of the trail/railroad crossing at the station to the proposed pedestrian crossing. This is due to the addition of the second track to the north of the existing track. The existing trail and crossing would remain open during construction of the new, relocated portions of the trail. The total length of the trail to be relocated is 274.2 linear feet. Discussions with the OWJ (Porter County) took place on April 12, 2017. The OWJ indicated preliminarily in writing on June 27, 2017 that “this relocation will not affect the features, attributes or activities of the Dunes Kankakee Trail that qualify the trail for protection under Section 4(f)” and that “the relocation will be performed by NICTD pursuant to trail relocation plans that have been approved.” As the trail lies within the NIPSCO utility corridor, NICTD also coordinated with this private entity about the trail relocation. NIPSCO has preliminarily approved the relocation as well. Documentation is included in Appendix IV.

Preliminary Section 4(f) Use Determination – Since the percentage of use of the Calumet Trail is low (0.6%), the trail would not be closed during construction, the relocated trail would be in a similar location and alignment, the relocation would not significantly change the user experience, and the OWJ has preliminarily agreed that the proposed Project would have a de minimis impact on the trail, FTA has made a preliminary determination that the proposed Project actions would not adversely affect the features, attributes, or activities that qualify the Calumet Trail for protection under Section 4(f). As such, FTA has concluded that the Project actions would result in a Section 4(f) de minimis impact at Calumet Trail, consistent with 23 CFR § 774.17.
5.5.2 HISTORIC RESOURCES

Per consultation with the SHPO, the 2017 architectural survey did not include the vast majority of contributing resources with IHSSI numbers to the Elston Grove Historic District, the Franklin Street Commercial Historic District, or the Haskell and Barker Historic District, due to their recent survey and listing in the NRHP in 2013. Further, only contributing resources with previously assigned IHSSI numbers were to be surveyed in order to evaluate them individually for listing in the NRHP.

Throughout the corridor, 31 resources were previously listed or determined eligible for listing in the NRHP, or were recommended eligible for listing in the NRHP as part of the 2017 architectural survey. Effects from the proposed Project were assessed on surveyed historic properties as well as contributing resources to the three listed historic districts for which IHSSI numbers were previously assigned but were not surveyed in 2017. Table 5-2 indicates the 50 surveyed historic properties and non-surveyed contributing resources within the APE.

The NRHP criteria for adverse effects under Section 106 were applied to all historic resources in the APE. The proposed Project would permanently incorporate 27 historic properties in Michigan City that are afforded protection under Section 4(f) as indicated in Table 5-2. The SHPO concurred with 27 adverse effects findings on August 15, 2017 (See Appendix VII). These effects would constitute a “use” as defined by 23 CFR § 774. Alternatives to avoid Section 4(f) use of the historic resources are described in Section 5.6.

LAKE AND PORTER COUNTIES

The proposed Project would not require acquisition or demolition of any of the identified historic properties in Lake County or Porter County, whether individually NRHP listed or eligible or as a contributing resource to an NRHP-eligible historic district. No portion of the Section 106 properties identified as part of the Section 106 process within Lake and Porter counties would be permanently incorporated into the proposed Project or temporarily occupied; therefore, there would be no Section 4(f) use of Section 106 resources in these counties.

Constructive use of the Section 4(f) resources in Lake and Porter counties was also evaluated. NICTD compared the location of the protected resources with the results of the proposed Project’s noise and vibration, visual, and property access effects assessment. The proximity impacts of these effects would be minimal and would not impair the features or attributes of the historic resources. FTA determined that no constructive uses of NRHP-listed or eligible properties would occur as a result of the Project.

Preliminary Section 4(f) Use Determination – The proposed Project would not substantially impair the activities, features, or attributes that qualify these resources for Section 4(f) protection and would therefore result in no use of the historic properties in Lake and Porter counties.

LAPORTE COUNTY

Within LaPorte County, the following historic resources are within or near the proposed construction footprint. A preliminary Section 4(f) Use Determination has been made for each property or historic district.

15 The 8/15/2017 SHPO letter indicates concurrence on adverse effects to 29 properties. Since the time that the adverse effects report was prepared in July 2017, two adverse effects had been eliminated due to design refinements in late August 2017, bringing the correct total of adverse effects to 27.
1116 W. 10th STREET, MICHIGAN CITY

The residential building stands on a narrow rectangular parcel on the south side of W. 10th Street. The property lies within the direct effects APE and is an anticipated acquisition for the Project. The property at 1116 W. 10th Street lies within a 0.8-mile stretch west of Kentucky Street that comprises several dozen private properties on the south side of W. 10th Street that would be acquired and demolished as part of the Project. The proposed Project was found to have an Adverse Effect through the Section 106 consultation process on 1116 W. 10th Street, Michigan City.

Preliminary Section 4(f) Use Determination – The NEPA Preferred Alternative would result in a permanent incorporation of 1116 W. 10th Street, Michigan City, into a transportation facility, and as such, would result in a use under Section 4(f).

1102 CEDAR STREET (091-406-21081)

This large church sits at the bend of 11th Street where it intersects with Cedar Street. It is at the top of a substantial grade change. Formerly the First Christian Church and now the Bride Church, this vacant church building has been damaged from natural causes and is no longer used by the congregation. The existing curve in the track at this location needs to be straightened in order to increase speeds and operate safely, and the substantial grade change needs to be flattened as well. The building and surrounding property cannot be avoided due to this improvement and would be acquired and demolished as part of the Project. The proposed Project was found to have an Adverse Effect through the Section 106 consultation process on the First Christian Church.

Preliminary Section 4(f) Use Determination – The NEPA Preferred Alternative would result in the permanent incorporation of the First Christian Church at 1102 Cedar Street into a transportation facility, a use under Section 4(f).

ELSTON GROVE HISTORIC DISTRICT, MICHIGAN CITY (NR-2331 091-406-18001)

The proposed Project overlaps with the south boundary of the district, and parts of the district would be directly affected (Figure 5-9). Along W. 11th Street, which forms the south border of the district, the proposed undertaking would entail the removal of the existing embedded, street-running single track, catenary, and overhead wires, and the installation of two new tracks with associated catenary and overhead wires. Permanent use of 10 contributing resources within the historic district through acquisition and demolition would occur. Temporary effects would include noise, vibrations, and atmospheric pollution resulting from the demolition of 10 buildings within the historic district and the removal and installation of railroad tracks along E. 11th Street.

Additionally, at least four streets within the historic district (Pine, Spring, Lafayette, and Oak) would be temporarily closed and/or have construction near their intersections with 11th Street (north and/or south sides), which would result in temporary traffic rerouting. Permanent street closures would take place on
Pine, Spring, Maple, and York Streets, resulting in new cul-de-sacs at their junctures with 11th Street (Figure 5-10).

Figure 5-10. Proposed Typical Cul-De-Sac, View South

The anticipated demolition of 10 contributing resources within the historic district boundaries would negatively impact the district’s overall integrity of setting and feeling. These properties contribute to the district’s significance under Criterion A, as they represent the neighborhood’s development, which was spurred by local industrial prosperity in the early 1900s. The loss of these buildings would contribute to a loss of the neighborhood’s historic and architectural cohesion, and would alter view sheds and streetscapes on the south part of the district. The proposed Project was found to have an Adverse Effect through the Section 106 consultation process on the Elston Grove Historic District.

Preliminary Section 4(f) Determination – The NEPA Preferred Alternative would result in the use of the Elston Grove Historic District under Section 4(f), with property from 10 contributing resources permanently incorporated into the Project by demolition.

ELSTON GROVE HISTORIC DISTRICT BOUNDARY EXPANSION, MICHIGAN CITY

The proposed Project overlaps with the boundary expansion of the Elston Grove Historic District, and parts of the expansion would be directly affected with similar Project components as those described for the Elston Grove Historic District (above). The anticipated acquisition and demolition of seven contributing resources within the historic district expansion boundaries would negatively impact the district’s overall integrity of setting and feeling. The historic residences slated for probable demolition typify the early twentieth century domestic type of the Elston Grove neighborhood—wood frame, 1.5 or 2 stories, and front gable or gable-and-wing in form, as well as brick bungalows. These properties contribute to the district’s significance under Criterion A, as they represent the neighborhood’s development, which was spurred by local industrial prosperity in the early 1900s. The loss of these buildings would contribute to a loss of the neighborhood’s historic and architectural cohesion, and would alter view sheds and streetscapes on the north part of the district boundary expansion. The proposed Project was found to have an Adverse Effect through the Section 106 consultation process on the Elston Grove Historic District boundary expansion.
Preliminary Section 4(f) Determination – The NEPA Preferred Alternative would result in the use of the Elston Grove Historic District boundary expansion under Section 4(f), with property from seven contributing resources permanently incorporated into the Project by demolition.

FRANKLIN STREET COMMERCIAL HISTORIC DISTRICT, MICHIGAN CITY

The proposed Project overlaps with the Franklin Street Commercial Historic District (Figure 5-11) which would be directly affected with similar Project components as those described for the Elston Grove Historic District (above).

Figure 5-11. Franklin Street Commercial Historic District, View East along 11th Street from Pine Street

Six properties in the historic district located on the north side of E. 11th Street between Franklin and Pine Streets would be acquired and demolished. One of the properties, the South Shore Station, is addressed separately in this section, as it is also individually eligible for listing in the NRHP.

The demolition of six contributing resources to the Franklin Street Commercial Historic District would contribute to a loss of the neighborhood’s historic and architectural cohesion, and would alter view sheds and streetscapes on the south part of the district. Temporary effects to remaining buildings within the district would include noise, vibrations, and atmospheric pollution resulting from the demolition of buildings and the removal and installation of railroad tracks along 11th Street. Through the Section 106 consultation process, the proposed Project was found to have an Adverse Effect on the Franklin Street Commercial Historic District.

Preliminary Section 4(f) Determination – The NEPA Preferred Alternative would result in the direct use of the Franklin Street Historic District under Section 4(f), with property from six contributing resources permanently incorporated into the Project. A separate finding for the individually eligible South Shore Station building is presented below.
The historic South Shore Station building stands on the north side of 11th Street, facing south. The South Shore Station has not been in use in several decades, has not been owned by the SSL since the 1980s, and has also not been used as a transportation facility since the 1980s. The building was recently purchased by the City of Michigan City. The 11th Street ROW is 66 feet, and the station building stands very near the existing property line, curb, and tracks, as shown in Figure 5-12.

In keeping with the objectives established by NICTD and the City of Michigan City in 2013, the 11th Street (Michigan City) station would be improved with a larger, fully accessible station located between Spring Street and Franklin Street, a multi-level parking structure, two high-level boarding platforms, waiting area, and gauntlet tracks. The station building would be demolished, but the façade would be dismantled and re-used as part of the new station and parking structure. The façade would mark the entrance to the SSL station waiting area. Through the Section 106 consultation process, the proposed Project was found to have an Adverse Effect on the South Shore Station.

**Preliminary Section 4(f) Use Determination** – The demolition of the historic station building, in addition to the demolition of its immediate neighbors (1015-1019 Franklin Street, 1010 Franklin Street, and 106 E. 11th Street), the location of the new station building north of the existing historic station, the widened roadway, new setback, and new raised platforms, would cause a major visual and physical adverse effect to the property, resulting in an overall loss of integrity of design, materials, workmanship, setting, association, and feeling. The proposed Project would result in a permanent incorporation of the South Shore Station, and as such, would result in a use under Section 4(f).
5.6 AVOIDANCE ANALYSIS

Once preliminary Section 4(f) uses have been determined, it is necessary to consider avoidance alternatives that would eliminate individual use of Section 4(f) resources. Feasible and prudent avoidance alternatives are those that would avoid using any Section 4(f) resource and would not cause other problems of a magnitude that would substantially outweigh the importance of protecting the Section 4(f) resource (23 CFR § 774.17). Alternatives evaluated to avoid use of the historic properties and districts in Michigan City include the No Build Alternative and the following types of alternatives as identified in FHWA’s Section 4(f) Policy Paper (FHWA 2012):

- **Alternative Actions**: An alternative action involves actions that do not require construction or that consist of a different transit mode.
- **Location Alternatives**: A location alternative refers to the rerouting of the entire Project along a different alignment.
- **Alignment Shifts**: An alignment shift is the rerouting of a portion of the Project to a different alignment to avoid the use of a specific resource.
- **Design Changes**: A design change is a modification of the proposed design in a manner that would avoid impacts.

5.6.1 ALTERNATIVES EVALUATED

The Section 4(f) regulations and policy guidance require evaluation of a reasonable range of alternatives to avoid using Section 4(f) resources. A total of 13 alternatives were considered based on early planning work done for the 2013 NICTD/Michigan City Realignment Study and FHWA’s Section 4(f) Policy Paper guidance on considerations for identifying potential avoidance alternatives. These include the No-Build Alternative; the NEPA Preferred Alternative; nine alternatives that involve location changes, alignment shifts or design changes; and two alternative actions that consist of a different transit mode and do not involve any construction.

As required by Section 4(f), the sections below provide sufficient documentation to explain why eight of these alternatives were not further considered as avoidance alternatives, because they would not avoid the use of one or more Section 4(f)-protected resources. These alternatives are described below and shown in Figure 5-13 and Figure 5-14. These were eliminated from further prudence evaluation. Only the alternatives that do not involve construction and the No Build Alternative were carried forward in the prudence evaluation. The prudence evaluation for these alternatives is found in Section 5.6.2.
Figure 5-13. Alternative A – NS/Amtrak/NIPSCO

See Figure 5-14 for a detailed view of alternatives through Michigan City.
Figure 5-14. Section 4(f) Alternatives within Michigan City
LOCATION ALTERNATIVE: A – NORFOLK SOUTHERN (NS) RAILWAY/AMTRAK/NIPSCO

This alternative would move the NICTD/CSS track out of the existing NICTD corridor between Gary and Michigan City, rerouting it to the NS Railway corridor that parallels the NICTD/CSS track. See Figure 5-13. The new SSL service would start in Gary with a new greenfield connection between the Gary Metro Station and the NS tracks to the north. It would follow the NS eastward through Burns Harbor, where it turns southeast towards Porter. In Porter, it would then transition to the Amtrak corridor. It would follow the Amtrak ROW into Michigan City, where it could take several different options to reach NICTD’s Carroll Avenue yard. Some of these options were studied in the 2013 NICTD/Michigan City Realignment Study, but they would require a new connection to the Amtrak ROW using NIPSCO ROW. The existing NICTD track would be abandoned between Gary and Michigan City, and no transit service would operate on the existing tracks. This alternative would require the purchase of substantial additional ROW adjacent to the existing NS and Amtrak tracks, or the purchase of easements from the NS and Amtrak to operate within their ROW. This alternative would require substantially more track infrastructure because two tracks with OCS would be needed the entire distance between Gary and Michigan City, and five new stations would need to be constructed. New track would need to be constructed on both ends to connect to the existing NICTD/CSS track.

The NS and Amtrak railroads are adjacent to the Indiana Dunes National Lakeshore and the Indiana Dunes State Park, and new tracks, connections, and stations would need to be constructed within these properties. The existing Calumet Trail would also be crossed and require relocation in certain areas. According to Section 4(f) guidance, if an alternative would use any Section 4(f) resource, it is not an avoidance alternative; therefore, this alternative was not further considered for prudence factors.

ALIGNMENT SHIFT ALTERNATIVE: A1 – MICHIGAN CITY NORTHERN CORRIDORS

Generally, these routes follow the existing CSS freight tracks from U.S. 12 northward in Michigan City, through the east edge of NIPSCO’s Lincoln Yard, then eastward along the Amtrak ROW near Lake Michigan. The route would cross Trail Creek, a navigable waterway leading to Lake Michigan, and then use the former Nickel Plate Railroad ROW south to rejoin the NICTD ROW near Carroll Yard. These alternatives are shown in Figure 5-14.

The northern corridor options considered in the 2013 NICTD/Michigan City Realignment Study are located near each other and were known as Option 3/3A, Option 4, Option 5, Option 6/6A, and Option 7. These options generally follow the same circuitous path along U.S. 12 and/or Michigan Boulevard (See Figure 5-14). Although this alternative would avoid use of the historic properties that the NEPA Preferred Alternative uses, other Section 4(f) resources, particularly parklands, are potentially used by all of these options, including Winding Creek Cove, Trail Creek Greenway, Singing Sands Trail, public marinas, and Ridgeland Park. The Michigan Central Railroad Depot (currently in use by Amtrak) is a potentially historic building\(^\text{16}\) that would be incorporated into the proposed Project under Options 3/3A, 4, and 5. The LaPorte County Courthouse is also a potentially historic building\(^\text{17}\), that would be incorporated into the proposed Project under Options 6/6A and 7. There are several more buildings in the immediate vicinity of these options that were previously identified in the IHSSI database as potentially eligible for the NRHP. According to Section 4(f) guidance, if an alternative would use any Section 4(f) resource, it is not an avoidance alternative; therefore, this alternative and associated northern corridor options are not further considered for prudence factors.

\(^{16}\) According to the IHSSI database, viewed 2017.

\(^{17}\) Ibid.
ALIGNMENT SHIFT ALTERNATIVE: A2 – MICHIGAN CITY SOUTHERN CSX CORRIDOR

This southern corridor was considered in the 2013 study as well. This alternative uses the existing CSX ROW in Michigan City. It requires a new track through the Indiana Dunes National Lakeshore to connect to the existing NICTD/CSS track, as shown in Figure 5-14. The connection would occur either near the NICTD/U.S. 12 crossing, or near the former Illiana Block property. If this alternative is used in conjunction with the NS/Amtrak/NIPSCO Alternative A described previously, then a new connection would be required between the CSX and the Amtrak tracks, southeast of the Indiana State Prison, near Woodlawn Avenue and County Road 1100W. In this alternative, the NIPSCO ROW is not used, but it is crossed.

Once it reaches the existing CSX railroad, the alignment would stay on the north side of the CSX ROW to Karwick Nature Park, cross through the park, then go under the CSX ROW and rejoin the existing NICTD track toward South Bend. Construction of this corridor would require re-aligning at least two miles of the CSX railroad and building a new maintenance yard to service and store SSL trains, since the existing NICTD Carroll Yard would no longer be on the alignment. This alternative would directly impact the Indiana Dunes National Lakeshore, Karwick Park, Gardena Park, and St. Stanislaus Cemetery. According to Section 4(f) guidance, if an alternative would use any Section 4(f) resource, it is not an avoidance alternative; therefore, this alternative is not further considered for prudence factors.

DESIGN CHANGE ALTERNATIVE: B – UNDERGROUND TUNNEL

This alternative would excavate and construct a new, underground rail tunnel along the existing 10th and 11th Street alignment between Sheridan Avenue and Michigan Boulevard. See Figure 5-14. The SSL would not operate on the existing embedded tracks, but freight service would still operate above ground. The new station would be built underground, or at the surface at one end of the tunnel. The tunnel would need to cross under the Amtrak tracks. The footprint for this alternative would be greater than the NEPA Preferred Alternative, stretching farther east and west in order to transition to and from surface level. Given the age of most of the structures along 10th and 11th Streets, their proximity to the street, and the condition of the existing pavement, it is doubtful that the extremely disruptive, vibratory activities of excavating a large, long trench could avoid damaging the historic structures above.

If the existing track and station within 10th and 11th Streets were completely replaced by non-transit uses, the alternative would irreversibly alter the historic function of the SSL Station and its eligibility under Criterion A for its contribution to the development of Michigan City; and under Criterion C as one of the last extant train stations designed by Arthur Gerber. It would also negatively affect the Franklin Street Commercial Historic District for which the South Shore Station building is a contributing resource and the Elston Grove Historic District, as passenger train service would no longer operate within 11th Street, resulting in a major visual change to the district. Maintenance or modification of the existing South Shore Station building and the First Christian Church would be required in order to preserve these resources in place, and it would still constitute a Section 4(f) use of resources contributing to the Franklin Street Commercial Historic District and the Elston Grove Historic District. According to Section 4(f) guidance, if an alternative would use any Section 4(f) resource, it is not an avoidance alternative; therefore, this alternative is not further considered for prudence factors.

ALIGNMENT SHIFT ALTERNATIVE: C – 10TH AND 11TH STREET SOUTH

This alternative would place the tracks south of the 10th and 11th Street roadway ROW between Sheridan Avenue and Michigan Boulevard. See Figure 5-14. This was also studied during the 2013 NICTD/Michigan City Realignment Study and was known as Option 1. This would require the acquisition and demolition of over 275 homes and businesses. It would require the use of four historic districts and several historic properties south of 11th Street. The First Christian Church and 1116 10th Street would still
be demolished. Contributing resources to the Franklin Street Commercial District, Haskell and Barker Historic District, Elston Grove Historic District, and DeWolfe’s Addition Historic District would be demolished. According to Section 4(f) guidance, if an alternative would use any Section 4(f) resource, it is not an avoidance alternative; therefore, this alternative is not further considered for prudence factors.

ALIGNMENT SHIFT ALTERNATIVES: D1 AND D2

NICTD considered different alignment shifts to avoid the Section 4(f) resource located on the south side of 10th Street at 1116 W. 10th Street.

D1 – 10TH STREET NORTH REALIGNMENT

This alignment would remove the embedded track from 10th Street between Sheridan Avenue and the Amtrak diamond near Chicago Street, and place it on a separate alignment either outside the street ROW on the north side, or within the street ROW but on the north side. This alignment would avoid the Section 4(f) resource at 1116 W. 10th Street, but would instead directly impact the Section 4(f) resource at 1004 Kentucky Street (gas station). Therefore, this is not an avoidance alternative, and is not further considered for prudence factors.

D2 – 10TH STREET IN ROW - SOUTH

This alignment would remove the embedded track and construct double tracks on a separate alignment on the south side of the street, but within the 10th Street ROW. This alignment would no longer allow for two automobile travel lanes. This alignment would not avoid the Section 4(f) resource at 1116 W. 10th Street because the driveway would be cut off and there is no way to provide alternative access, rendering the property inaccessible. Therefore, this is not an avoidance alternative, and is not further considered for prudence factors.

ALIGNMENT SHIFT ALTERNATIVES: E1 AND E2

NICTD considered if the 11th Street alignment could be shifted only in the vicinity of the new 11th Street (Michigan City) Station, since that is the section of 11th Street with the greatest number of Section 4(f) resources and where the greatest amount of ROW is needed. The components of the new station extend seven blocks, from Wabash Street on the west to York Street on the east, to accommodate the gauntlet tracks, approaches to the station, and re-alignment of the tracks and roadway. The South Shore Station building, First Christian Church, Elston Grove Historic District and Franklin Street Commercial District are located in this seven-block stretch. Overall, the NEPA Preferred Alternative would use 2 individually eligible historic properties, 2 historic districts, and 20 contributing properties along 11th Street between Wabash and York Streets.

E1 – 11TH STREET (MICHIGAN CITY) STATION ALIGNMENT SHIFT - SOUTH

The new station needs to accommodate a modern station design with two, eight-car high-level boarding platforms (approximately 800 feet in length); an additional 1,000 feet of gauntlet tracks to allow freight trains to pass the station without damaging the platforms; pedestrian access and safety accommodations which meet ADA guidelines; provide adequate parking to meet demand; provide a station depot and warming shelters; provide sufficient space for station amenities, fencing and landscaping; catenary and signal equipment; and allow 11th Street to continue to operate as a one-way, eastbound street. This constitutes approximately seven blocks. The station area requires 93 feet, 6 inches at its widest point to accommodate the necessary station elements, while the 11th Street ROW is only 66 feet. Figure 5-15 shows all impacted properties, including historic properties, within the red construction footprint that would be acquired if the station were shifted to the south.
Figure 5-15. 11th Street (Michigan City) Station Alignment Shift - South
This alignment shift would avoid the historic South Shore Station. However, it would not avoid the acquisition and demolition of at least 10 Section 4(f) resources that are located on the south side of 11th Street, including the First Christian Church. It would use contributing resources to the Franklin Street Commercial Historic District, the Elston Grove Historic District, the Elston Grove Historic District boundary expansion, and the Haskell and Barker Historic District. Therefore, this is not an avoidance alternative, and is not further considered for prudence factors.

**E2 – 11TH STREET (MICHIGAN CITY) STATION ALIGNMENT SHIFT – EAST OR WEST**

Centering the station at Franklin Street has been a central component of Michigan City’s planning efforts, as it is the main north/south arterial and the gateway to the City’s commercial area. Shifting the seven-block station area east or west on 11th Street would still use Section 4(f) properties, including schools, churches, and historic resources. Either option would also have engineering and operational challenges, as it would encounter the curvature and grade change near Cedar and Lafayette Streets to the east, and the Amtrak diamond and transition to 10th Street on the west. Therefore, this is not an avoidance alternative, and is not further considered for prudence factors.

### 5.6.2 AVOIDANCE ALTERNATIVE FEASIBILITY AND PRUDENCE STANDARDS

None of the alternatives described above would avoid the use of Section 4(f) properties. Alternatives that use a different mode, including Amtrak passenger rail and enhanced bus, were developed for consideration as alternatives that avoided the use of the Section 4(f) historic properties that would result from implementation of the NEPA Preferred Alternative. The No Build Alternative is also considered as an avoidance alternative. These three alternatives would avoid the use of Section 4(f) resources, and are further evaluated here under the feasible and prudent standards of Section 4(f).

An alternative is determined feasible if it could be built as a matter of sound engineering judgment. Under 23 CFR § 774.17, factors are defined for determining alternatives to be not prudent. An alternative could be not prudent for any of the following reasons:

- **Factor 1**: It would compromise the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need.
- **Factor 2**: It would result in unacceptable safety or operational problems.
- **Factor 3**: After reasonable mitigation, it would still cause one or more of the following:
  - Severe social, economic, or environmental impacts
  - Severe disruption to established communities
  - Severe, disproportionate impacts on low-income or minority populations
  - Severe impacts on environmental resources protected under other federal statutes
- **Factor 4**: It would result in additional construction, maintenance, or operational costs of an extraordinary magnitude.
- **Factor 5**: It would cause other unique problems or unusual factors.
- **Factor 6**: It would involve multiple factors in one through five above that, while individually minor, could cumulatively cause unique problems or impacts of extraordinary magnitude.
AVOIDANCE ALTERNATIVE F – NO BUILD ALTERNATIVE

The No Build Alternative would avoid the use of all Section 4(f) resources by making no alterations to the existing infrastructure; however, it is not a prudent avoidance alternative for any of the Section 4(f) resources under factors 1, 2, 3, 4, and 5:

- **Factor 1 – Purpose and Need:** The No Build Alternative would not meet the Project’s Purpose and Need. Functional improvements under the No Build Alternative would be insufficient to respond to the constrained capacity needs. The single track is not adequate to meet current and future ridership demand. By leaving the track embedded in the street, trains must travel at slow speeds, and safety at the multiple grade crossings is not improved.

- **Factor 2 – Safety and Operational Considerations:** The No Build Alternative would not address the need to improve operational speeds through Michigan City, which results in delay. The No Build Alternative would not improve safety in Michigan City that is currently compromised by the in-street track and at-grade crossings.

- **Factor 3 – Social, Economic, Environmental, and Community Impacts:** The No Build Alternative would not allow NICTD to provide capacity expansion of the line and at stations. Over time, the inability to make these capacity improvements would be expected to result in increased traffic congestion, leading to potentially severe social and economic impacts. Increased congestion, along with a limited ability to add capacity to roadways in dense urban communities, would be expected to result in severe disruption to established communities in the corridor. Further, limiting public transportation options would be expected to result in potentially severe, disproportionate impacts on low income and minority populations who rely upon public transportation to meet their travel needs and may not have alternative transportation options.

- **Factor 4 – Cost:** The cost of attempting to extend the useful life of the existing infrastructure would not be commensurate with any benefit that could be realized, and would become extraordinary in magnitude over time. Maintenance costs for typical repairs (tie replacements, rail replacement, OCS power replacement and upgrades, signal component replacement and signal upgrades) require that the street is closed for several days, shutting down service in Michigan City, and the need to bus passengers to the next stop. To minimize disruption to the passengers and neighborhood, NICTD must perform most of the work on weekends, which requires overtime pay. These costs would continue to rise.

- **Factor 5 – Unique Problems:** The No Build Alternative would not promote economic development in Michigan City. The additional capacity, enhanced service, and an expanded, modern station are essential for the growth of Michigan City, as detailed in past planning efforts that date back to the year 2007. Michigan City, NICTD, and the RDA recognize that a modern station and faster, more reliable service to Chicago would catalyze TOD, which translate to more population, employment, and economic stability for the entire city and region.

AVOIDANCE ALTERNATIVE DETERMINATION

The No Build Alternative would avoid uses of all Section 4(f) resources, but it is deemed not prudent under the definition in 23 CFR § 774.17. The No Build Alternative is not prudent per 23 CFR § 774.17 because it neither addresses nor corrects the transportation Purpose and Need that prompted the proposed Project.
AVOIDANCE ALTERNATIVE G – AMTRAK ALTERNATIVE

A portion of the proposed Project Area is served by the existing Amtrak Wolverine intercity passenger rail service between Chicago and Detroit, Michigan. Amtrak is an intercity and long-distance passenger rail service that is not designed or intended to serve the needs of the everyday commuters, as it does not provide very frequent service and makes longer distance trips with fewer stops. There is currently an Amtrak station in Michigan City at the historic Michigan Central Railroad Station (See Figure 5-14) Between Porter and Chicago, Amtrak runs on NS track. From Porter to Michigan City and beyond, Amtrak operates on its own tracks. Service is limited to one westbound late morning train to Chicago, and two eastbound trains to Michigan City, one during the mid-day and one in the evening.

The Amtrak Alternative would avoid the use of all Section 4(f) resources by augmenting the existing SSL service with additional bi-directional Amtrak service between Michigan City and Chicago. The Amtrak Alternative includes the same track network and station that Amtrak uses today. The Amtrak Alternative does not include any modifications to the existing highway or roadway infrastructure in the proposed Project Area.

The Amtrak Alternative would avoid the use of all Section 4(f) resources; however, it is not a prudent avoidance alternative for any of the Section 4(f) resources under factors 1, 2, 3, and 5:

- **Factor 1 – Purpose and Need:** The Amtrak Alternative would not meet the Project’s Purpose and Need. Amtrak is neither designed nor intended to provide frequent service for daily commuters between Chicago and Michigan City. The Amtrak Alternative would not improve travel time, safety or reliability of the existing SSL service. Additional capacity in the form of additional train service is provided only for Michigan City commuters. Other commuters would need to drive to and from the Michigan City Amtrak Station to use it, adding to their travel time.

- **Factor 2 – Safety and Operational Considerations:** The Amtrak Alternative would require running additional trains on NS track. This would cause operational problems for both Amtrak and NS. Chicago’s Union Station would need to be improved to handle the additional frequency of Amtrak trains. The Amtrak Alternative would not address the need to improve operational speeds through Michigan City, which would result in delays. The Amtrak Alternative would not improve safety in Michigan City that is currently compromised by the in-street trackage and at-grade crossings.

- **Factor 3 – Social, Economic, Environmental and Community Impacts:** The Amtrak Alternative would not allow NICTD to provide capacity expansion of the SSL to serve commuters at the other stations between Gary and Michigan City. Commuters would need to drive and park at the Michigan City Amtrak Station. Over time, this would be expected to result in increased traffic congestion on U.S. 12 and other roadways within Michigan City, leading to potentially severe social and economic impacts. Increased congestion, along with a limited ability to add capacity to roadways in dense urban communities, would be expected to result in severe disruption to established communities in the corridor. Additionally, track capacity improvements on the NS may be required to accommodate the additional Amtrak trains. Improvements at the Michigan City Amtrak Station and Chicago’s Union Station would be needed to accommodate additional trains and passengers, both considered historic stations.

- **Factor 5 – Unique Problems:** The Amtrak Alternative would not be consistent with NICTD, RDA, and the communities’ long-planned goals to promote transit-oriented economic development. The additional capacity, enhanced service, and an expanded, modern station are essential for growth as detailed in past planning efforts. The communities, NICTD, and the RDA recognize that a modern station and faster, more reliable service to Chicago would catalyze TOD,
which translate to more population, employment and economic stability for the entire city and region.

AVOIDANCE ALTERNATIVE DETERMINATION

The Amtrak Alternative would avoid uses of all Section 4(f) resources used by the NEPA Preferred Alternative, but it is deemed not prudent under the definition in 23 CFR § 774 because it neither addresses nor corrects the transportation Purpose and Need that prompted the proposed Project.

AVOIDANCE ALTERNATIVE H – ENHANCED BUS

Enhanced bus is a commuter-oriented transit mode that could potentially serve a similar function to commuter rail service. Enhanced bus service between Michigan City and Gary could be accomplished via U.S. 12 and/or I-90/94, both under the jurisdiction of INDOT. If U.S. 12 is used, it would stop at the existing SSL stations to pick up or drop off passengers. After Gary, it would continue on I-90 into Chicago. If I-94 is used instead, stops would only occur at Michigan City and Miller. Additional parking lots would need to be constructed in Michigan City. By definition, the Enhanced Bus Alternative is a low-capital cost alternative that would provide the best transit service to the corridor without a major capital investment. The Enhanced Bus Alternative includes the same highway and roadway network improvements contained in the No Build Alternative. The Enhanced Bus Alternative did not include any modifications to the existing highway or roadway infrastructure in the proposed Project Area. In addition to the improvements included in the No Build Alternative, the Enhanced Bus Alternative includes the following:

- New park-and-ride facilities at all stations to accommodate additional commuters
- Limited stop bus routes providing bi-directional service between downtown Chicago and Michigan City, with stops in Gary, Portage, Chesterton, Beverly Shores, and Michigan City
- Restructuring of existing bus routes in the corridor to connect to the new limited stop routes and enhance connections within the corridor
- Acquisition, maintenance, and operation of an entirely new fleet of bus vehicles
- Maintenance and storage facility for buses

The Enhanced Bus Alternative would avoid the use of all Section 4(f) resources by augmenting the existing SSL service with bi-directional bus service between Michigan City and Chicago and making no alterations to existing infrastructure. The Enhanced Bus Alternative would avoid the use of Section 4(f) resources; however, it is not a prudent avoidance alternative under Factors 1, 2, and 5:

- **Factor 1 – Purpose and Need**: While the Enhanced Bus Alternative would avoid potential use of Section 4(f) resources in the corridor, the Enhanced Bus Alternative would not adequately support the proposed Project’s Purpose and Need. In summary, the Enhanced Bus Alternative would be inconsistent with local and regional comprehensive plans, which include, or are consistent with, implementation of the proposed Project. The Enhanced Bus Alternative using U.S. 12 would result in a travel time of 1 hour and 40 minutes (assuming 2 minute dwell time/station during normal driving conditions), similar to the existing travel time for the SSL service; therefore, it does not improve travel time. Using I-90/94, the travel time is 1 hour and 15 minutes, plus additional travel time for commuters to access a station in Michigan City; therefore, it does not improve travel time. The Enhanced Bus Alternative would subject commuters to the same traffic congestion and weather-related delays currently faced by drivers on U.S. 12 and I-90/94, adding more travel time. The Enhanced Bus Alternative would only marginally improve capacity, and it would not provide a cost-effective, efficient travel option.
• **Factor 2 – Safety and Operational Considerations**: The Enhanced Bus Alternative would require NICTD to acquire, maintain, and operate an entirely new fleet of vehicles. It would also require a new maintenance and bus storage facility and personnel to operate and maintain the vehicles.

• **Factor 5 – Unique Problems**: The Enhanced Bus Alternative would not be consistent with NICTD, RDA, and the communities’ long-planned goals to promote transit-oriented economic development. The additional capacity, enhanced service and an expanded, modern station are essential for the growth, as detailed in past planning efforts. The communities, NICTD, and the RDA recognize that a modern station and faster, more reliable service to Chicago would catalyze TOD, which translate to more population, employment, and economic stability for the entire city and region.

**AVOIDANCE ALTERNATIVE DETERMINATION**

The Enhanced Bus Alternative would avoid uses of all Section 4(f) resources used by the NEPA Preferred Alternative, but it is deemed not prudent under the definition in 23 CFR § 774.17 because it neither addresses nor corrects the transportation purpose and need that prompted the proposed Project.

**5.7 LEAST OVERALL HARM ANALYSIS**

As described in Section 5.6, NICTD determined that there are no feasible and prudent alternatives that would avoid the use of Section 4(f) resources. All of the alternatives described in Section 5.6.1, as well as the NEPA Preferred Alternative, would use resources protected under Section 4(f), as defined in 23 CFR § 774.17; therefore, FTA is required to select the build alternative (which uses a Section 4(f) resource) that causes the least overall harm in light of the statute’s preservation purposes.

**ALTERNATIVES EVALUATED**

The alternatives described in Section 5.6.1 are enumerated below and were further considered for this least overall harm analysis.

- NEPA Preferred Alternative
- Alternative A – NS Railway/Amtrak/NIPSCO
- Alternative A1 – Michigan City Northern Corridors
- Alternative A2 – Michigan City Southern CSX Corridor
- Alternative B – Underground Tunnel
- Alternative C – 10th and 11th Street South
- Alternative D1 – 10th Street North Re-alignment
- Alternative D2 – 10th Street in ROW – South
- Alternative E1 – 11th Street (Michigan City) Station Alignment Shift – South
- Alternative E2 – 11th Street (Michigan City) Station Alignment Shift – East or West
5.7.1 LEAST OVERALL HARM ANALYSIS

The Section 4(f) regulations require a balancing of the following seven factors when determining which alternative would cause the least overall harm (23 CFR § 774.3(c) (1)).

1. Ability to mitigate adverse impacts on each Section 4(f) resource (including any measures that would result in benefits for the resource)
2. Relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) resource for protection
3. Relative significance of each Section 4(f) resource
4. Views of the officials with jurisdiction over each Section 4(f) resource
5. Degree to which each alternative meets the Purpose and Need for the Project
6. After reasonable mitigation, the magnitude of any adverse impacts on resources not protected by Section 4(f)
7. Substantial differences in costs among the alternatives

FACTOR 1 – ABILITY TO MITIGATE ADVERSE IMPACTS ON EACH SECTION 4(F) RESOURCE

The NEPA Preferred Alternative would result in the use of 27 historic resources that are protected under Section 4(f). The use of historic resources would be mitigated through execution of an MOA with the SHPO that would address the adverse effects of the proposed Project. Treatment measures included in the draft MOA are currently under review by the SHPO and consulting parties, and include re-use of the historic façade of the South Shore Station building; documentation of properties in accordance with the Historic American Building Survey (HABS); public exhibits describing the history of the South Shore Line; and interpretive panels describing the history of the surrounding neighborhoods. Alternatives A and A2 would have a greater project footprint than the NEPA Preferred Alternative because of the need to construct two new tracks, infrastructure and stations. Large portions of the freight railroads in each alternative are bordered on one or both sides by the Indiana Dunes National Lakeshore or the Indiana Dunes State Park. These alternatives would require the acquisition and use of long, linear swaths from these Section 4(f) resources, which would also trigger a Section 6(f) use, as the entire Indiana Dunes National Lakeshore is considered a Section 6(f) property. Converting property under the jurisdiction of the NPS to non-park use would cause NICTD to acquire and transfer additional property for park use. Consultation with the NPS and the IDNR has indicated that they agree that the NEPA Preferred Alternative would cause the least amount of harm to these resources. Alternative A2 would also use two other parks in Michigan City – Karwick Nature Park and Gardenia Park, as well as St. Stanislaus Cemetery. Karwick Nature Park is a 23.5-acre park located at the end of the corridor where it rejoins the NICTD SSL tracks towards South Bend. St. Stanislaus Cemetery and Gardenia Park lie on opposite sides of the track from each other, making avoidance or mitigation difficult. Mitigation for the cemetery could involve the relocation of graves, which is extremely difficult.

All of the options under Alternative A1 would avoid the historic resources along 11th Street, but would instead use historic resources and parks in other parts of Michigan City. Mitigation for the historic sites would likely be similar to that of the NEPA Preferred Alternative, and acquisition of additional parkland property would be needed for mitigation of greenways, trails, and park uses. Mitigating the public marinas would require wholesale relocation of these functions to other parts along Trail Creek, causing disruption to the local community, users, and visitors.
Alternative B proposes to construct a tunnel under 10th and 11th Street, removing the SSL trains from the surface level. Mitigating these uses would be similar to that of the NEPA Preferred Alternative; however, there would be more uses to mitigate as the footprint is larger; and it would irreversibly affect the historic character and value of the South Shore Station building.

Alternatives C, D1, D2, E1, and E2 would have a similar size footprint as the NEPA Preferred Alternative and mitigation would be similar.

FACTOR 2: SEVERITY OF THE REMAINING HARM

Under the NEPA Preferred Alternative, the remaining harm after mitigation to individually eligible NRHP resources, the historic districts, and the contributing structures would be minimized by implementation of treatment measures specified in the MOA. With the exception of the house at 1116 W. 10th Street, all of the historic buildings to be used by the proposed Project are part of larger historic districts, the majority of which would remain intact. Because of this, the severity of remaining harm, after implementation of treatment measures, is lessened. The new 11th Street (Michigan City) Station building would incorporate historic elements of the South Shore Station. The location of the new station building is within 28 feet of the original location. With the proposed mitigation, harm to the resource is reduced.

The new building would constitute a 60-80 year improvement to the transportation facility, and improve the functionality of the transportation system. The track and station improvements would lay within historic districts analyzed within this Section 4(f) evaluation and would be constructed in a context-sensitive manner. While contributing buildings adjacent to 11th Street would be removed, an improved station area would have a positive benefit to the historic districts.

Alternative A using the NS/Amtrak/NIPSCO ROW and Alternative A2 using the CSX corridor would have more remaining harm after mitigation than the NEPA Preferred Alternative because they would permanently use land from a national park. The Indiana Dunes National Lakeshore is a property of national significance, with habitat and ecosystems found in no other parts of the world. Loss of any portion of this park would result in irreversible harm to this resource. Alternative A2 would also cut through the Karwick Nature Park and other local parks, which are important recreational areas to the local community. St. Stanislaus Cemetery has graves dating back to the early 1900s, making notification of next of kin extremely difficult, and potentially causing irreversible harm to graves.

All of the options under Alternative A1 would use historic resources and parks that are important civic and recreational areas used by the public every day. The LaPorte County Courthouse, public marinas, greenways/trails and parks would be permanently changed. The historic resources used under the NEPA Preferred Alternative are either not currently in use, damaged by natural causes, or are private properties. The remaining harm after mitigation would be greater under Alternative A1 because these Section 4(f) resources are used by many people today.

The remaining harm after implementing Alternative B would be greater than the NEPA Preferred Alternative because its footprint stretches farther east and west in order to transition to and from surface level, and the historic structures above the tunnel along 11th Street would likely still be damaged during construction. Additionally, it would forever change the feeling and setting of the SSL service, which would negatively affect the SSL station building and historic districts.

Alternatives C, D1, D2, E1, and E2 would have a similar size footprint as the NEPA Preferred Alternative. They would all still use the same or similar resources in the 10th and 11th Street corridor, since several historic properties and districts line both sides of the streets. The severity of remaining harm after mitigation for any of these alternatives would be similar to the NEPA Preferred Alternative.
FACTOR 3: RELATIVE SIGNIFICANCE OF EACH SECTION 4(F) RESOURCE

NEPA Preferred Alternative, Alternative B, C, D1, D2, E1, and E2

The relative significance of each Section 4(f) resource was compared for the alternatives. Generally, a Section 4(f) resource was considered “more significant” if it was: individually eligible for the NRHP, a national or state park, a nature preserve, considered an archaeological site, or used by the public.

Three properties are individually eligible for the NRHP: the house at 1116 10th Street; the South Shore Station building; and the First Christian Church.

The house at 1116 10th Street is situated amongst other houses built in the same era, which would also be demolished. The house is unique in that it is an eclectic mix of architecture styles. The significance of this building is localized to the community and does not rise to the state or national level. The house is also privately owned and not open to the public.

The South Shore Station is a significant resource under Criteria A and C, and is also a contributing resource to the Franklin Street Commercial District. However, it has been vacant for many years and has not been used as a transportation facility for several decades. Although it is owned by the City of Michigan City, it is not open to the public.

The First Christian Church is individually eligible, but has been damaged by natural causes and is no longer in use. It is significant to the community but is structurally unsound and no longer able to be used. It is privately owned and not open to the public due to the damage it has incurred.

Most of the Section 4(f) resources to be used under the NEPA Preferred Alternative are contributing structures to historic districts. In these cases, they have retained sufficient integrity to contribute to the significance of their respective historic districts; however, none were considered significant enough to be considered individually eligible. Further, many of them are private residences and not open to the public.

Alternatives A and A2

The Indiana Dunes National Lakeshore would be used under either of these alternatives. This is a nationally significant resource. Under Alternative A2, the Karwick Nature Park was previously a brownfield site, and was turned into an asset to the local community using state and federal funds. St. Stanislaus Cemetery is also listed in IHSSI database as an archaeological site.

Alternative A1

All of the options under Alternative A1 would either permanently incorporate or have constructive use of publicly owned historic resources and parks that are important civic and recreational areas used by the public every day. The LaPorte County Courthouse, public marinas, greenways/trails and parks would be permanently changed.

FACTOR 4: VIEWS OF THE OFFICIALS WITH JURISDICTION OVER EACH SECTION 4(F) RESOURCE

Consultation with the NPS and the IDNR throughout the EA process indicate that neither would be in favor of an alternative that includes permanent incorporation or use of national or state parkland. See Appendix IV.

Michigan City owns the local parks that would be used, and is not supportive of using them for the SSL improvement. This is evidenced by resolutions passed in 2009, 2010, and 2016 for the 10th and 11th
Street alignment. Michigan City also owns the existing South Shore Station building, and is in favor of demolishing the building and re-using components of it in the new station building.

SHPO is the OWJ for historic resources that would be used by the proposed Project. SHPO has reviewed the previously prepared NICTD/Michigan City Realignment Study where several of these alternatives were evaluated and did not indicate disagreement with its findings. SHPO has been actively involved in the development and review of this project since 2016. Given that the individually eligible resources lie to the north and south of 10th and 11th Streets; and historic districts (and contributing structures) straddle both sides of 11th Street, the effects of any of these alternatives on historic properties is essentially equal.

**FACTOR 5: DEGREE TO WHICH EACH ALTERNATIVE MEETS THE PURPOSE AND NEED FOR THE PROJECT**

The NEPA Preferred Alternative fully meets the Purpose and Need of the Project by reducing travel time, improving safety, improving reliability, and meet current and future travel demand. It is also the most consistent with NICTD and the communities’ planning efforts.

Alternatives B, C, D1, D2, E1, and E2 would meet the Purpose and Need of the Project.

Alternatives A, A1, and A2 would require that the SSL service operate in the ROW of the NS, CSX or Amtrak railroads. The need to provide improved travel time and reliability is directly related to interference with other train operations. The NS, CSX, and Amtrak routes have many more trains than does the CSS; therefore, the number of potential SSL/freight or passenger train conflicts would be even higher than it is today. Additionally, all of these alternatives have more track miles than the existing NICTD corridor, increasing travel time to and from Chicago, which does not meet the Purpose and Need of the Project.

**FACTOR 6: AFTER REASONABLE MITIGATION, THE MAGNITUDE OF ANY ADVERSE IMPACTS ON RESOURCES NOT PROTECTED BY SECTION 4(F)**

The development of the NEPA Preferred Alternative alignment along 11th Street was largely influenced by the location of the proposed station. Since 2007, the consideration of a modern, well-equipped station that would serve as a catalyst to promote growth and development in Michigan City was a major factor in the decision making and public engagement process.

Figure 5-16 shows the vision from the City’s 2007 Andrews North End Plan. The train station and parking structure north of 11th Street are indicated by #1 and #5, respectively, and the platform on 11th Street is #4. A park was proposed south of 11th Street. The public was in favor of expanded SSL service in Michigan City and agreed that it would bring new economic development to the city. This was further detailed in Michigan City’s Lake Michigan Gateway Implementation Strategy Opportunity Analysis (2013), which identified the 11th Street (Michigan City) Station and potential redevelopment as an opportunity, as it relates to the Franklin Street corridor and downtown revitalization. It was also determined to be the Preferred Alternative in the 2013 NICTD/Michigan City Realignment Study, and ultimately became the NEPA Preferred Alternative. The NEPA Preferred Alternative provides the best balance between the operational, safety, and capacity needs for NICTD; and the economic development goals for Michigan City.

The NEPA Preferred Alternative does not impact any natural or water resources in Michigan City, including wetlands, floodplains, threatened and endangered species, or habitat. There are no civic or community gathering facilities impacted by the Project. Impacts associated with property acquisition would be mitigated by following the Uniform Act.
The **NEPA Preferred Alternative** impacts 5.73 acres of wetlands between Gary and Michigan City, primarily located within existing NICTD ROW. Habitat for two endangered species is located within wetland areas. These impacts would be mitigated by developing new wetland areas with appropriate habitat within the Indiana Dunes National Lakeshore, subject to permits from the USACE and in coordination with NPS. Impacts to floodplains are minimized because only one track with impermeable surface would be added, and culverts would only be extended the length of one track (rather than two entirely new tracks), minimizing construction in streams and lessening effects to water quality.

**Alternative A** would use land within the Indiana Dunes National Lakeshore and the Indiana Dunes State Park. These areas contain several high-quality wetlands and critical habitat. Compared to the NEPA Preferred Alternative, building two tracks and four new stations between Gary and Michigan City to support SSL service would require filling many more acres of wetlands, floodplain, loss of habitat, and more in-stream construction due to its greater project footprint.

**Alternatives A1 and A2** were already considered in the aforementioned 2013 *NICTD/Michigan City Re-alignment Study*, and dismissed. **Alternative A1** must cross the navigable Trail Creek waterway, sometimes in two locations, as well as other tributaries to Trail Creek. This requires in-stream work and has the potential to affect water quality. There are also wetlands and floodplains associated with this waterway which would be filled. There are between 8 and 13 hazardous waste sites along A1 options. Alternative A1 would also introduce new noise and vibration sources to the downtown core.

**Alternative A2** has six hazardous waste sites, compared to two for the NEPA Preferred Alternative. Because the CSX railroad must be realigned under Alternative A2, it would require acquisition of many...
residential properties. This alternative would introduce additional noise and vibration to the primarily residential area. Alternative A2 is not consistent with the City’s zoning or plans for redevelopment. It also creates new track alignments through floodplains and wetlands, and has five stream crossings.

Placing the tracks and a station in a tunnel under 10th and 11th Streets as part of Alternative B would not eliminate impacts on the surrounding community, because construction sites would be larger than for the NEPA Preferred Alternative, and permanent ventilation and emergency exit facilities would be required. This alternative would require a substantially larger Project Area that would result in acquisition and displacement of more residences, businesses, and other environmentally protected resources outside of the NEPA Preferred Alternative Project limits. Permanent street realignments or closures would likely be required at the incline locations where the trains would transition to and from the underground tunnel. Temporary street closures and detours would be required where station construction would occur.

Placing the project south of 10th and 11th Street as part of Alternatives C or E1 result in more property acquisitions than the NEPA Preferred Alternative, and is not consistent with Michigan City’s plans for redevelopment. As shown in Figure 5-17, the City’s zoning south of 11th Street quickly transitions to single family residential, a designation that is not consistent with the commercial/retail uses associated with TOD. This alternative requires more roadway crossings of north/south arterial streets when transitioning between 10th and 11th Streets. There are also few continuous east-west streets south of 11th Street to handle traffic detours during construction, or when the north/south streets are permanently closed at their intersection with 11th Street.

Placing the tracks north of 10th Street, as in Alternative D1, would have more traffic-related impacts than placing it to the south of 10th Street, as in the NEPA Preferred Alternative. There are many more north/south streets that connect to 10th Street from the north than from the south. Closing these streets at their intersection with 10th Street would force traffic to nearby open roads, causing traffic congestion and safety concerns. It would also impede the ability of emergency vehicles to safely serve this area.

Alternative D2 has more traffic impacts than the NEPA Preferred Alternative because it reduces 10th Street to one-way only traffic.

**FACTOR 7: SUBSTANTIAL DIFFERENCES IN COSTS AMONG THE ALTERNATIVES**

The total cost of the NEPA Preferred Alternative is estimated to be $290 million to $312 million. Between Gary and Michigan City, the cost is $220 million, and within Michigan City, the cost is between $70 million and $92 million. Table 5-3 compares the order of magnitude cost estimates for the other alternatives. The NEPA Preferred Alternative is estimated to cost substantially less than Alternatives A, A1, A2, or B. It is anticipated that costs for Alternatives C, D1, D2, E1, and E2 would be similar to the NEPA Preferred Alternative, as they are merely shifts in the 10th and 11th Street corridor alignment.
Figure 5-17. Michigan City Zoning Map (excerpt)
<table>
<thead>
<tr>
<th>Alternative</th>
<th>Gary to Michigan City Segment</th>
<th>Michigan City (Low)</th>
<th>Michigan City (High)</th>
<th>Total (low)</th>
<th>Total (high)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEPA Preferred Alternative 10th/11th Streets</td>
<td>$220a</td>
<td>$70a</td>
<td>$92b</td>
<td>$290</td>
<td>$312</td>
</tr>
<tr>
<td>Alternative A</td>
<td>NS/Amtrak/NIPSCO</td>
<td>$1,368c</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Alternative A1</td>
<td>MI City Northern Corridor Options</td>
<td>$220</td>
<td>$93b</td>
<td>$197b</td>
<td>$313</td>
</tr>
<tr>
<td>Alternative A2</td>
<td>MI City Southern CSX Corridor</td>
<td>$220</td>
<td>$223b</td>
<td>$443</td>
<td>$1,607</td>
</tr>
<tr>
<td>Alternative B</td>
<td>MI City Underground Tunnel</td>
<td>$220a</td>
<td>$344d</td>
<td>$688d</td>
<td>$564</td>
</tr>
<tr>
<td>Alternative C</td>
<td>10th &amp; 11th Streets – South</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative D1</td>
<td>10th Street – North</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative D2</td>
<td>10th Street – South in Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative E1</td>
<td>Station Shift South</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative E2</td>
<td>Station Shift East or West</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These are only alignment shifts within 10th/11th Street corridor. Cost is assumed to be similar to NEPA Preferred Alternative.

Table 5-4 compares the factors for each alternative to the NEPA Preferred Alternative. Based on this analysis, the NEPA Preferred Alternative results in the least overall harm.

---

*a* Based on DT-NWI Cost Estimate, September 2017  
*b* NICTD/Michigan City Rail Realignment Study 2013  
*c* Based on $57m/track mile and $3.25m/station, per West Lake Cost Estimate, July 2017  
*d* Assumed to be 4x (low) or 8x (high) cost for NEPA Preferred Alternative, based on similar projects in other states
### Table 5-4. Least Overall Harm Comparison to the NEPA Preferred Alternative

<table>
<thead>
<tr>
<th>Least Overall Harm Analysis</th>
<th>Alternative A - NS/Amtrak/ NIPSCO Corridor</th>
<th>Alternative A1 - Michigan City Northern Corridors</th>
<th>Alternative A2 - Michigan City Southern CSX Corridor</th>
<th>Alternative B - Underground Tunnel</th>
<th>Alternative C - 10&lt;sup&gt;th&lt;/sup&gt;/11&lt;sup&gt;th&lt;/sup&gt; Street South</th>
<th>Alternative D1 - 10&lt;sup&gt;th&lt;/sup&gt; Street North</th>
<th>Alternative D2 - 10&lt;sup&gt;th&lt;/sup&gt; Street in ROW - South</th>
<th>Alternative E1 - 11&lt;sup&gt;th&lt;/sup&gt; Street Station Alignment Shift South</th>
<th>Alternative E2 - 11&lt;sup&gt;th&lt;/sup&gt; Street Station Alignment Shift East or West</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ability to mitigate adverse impacts on each Section 4(f) resource</td>
<td>Less ability than NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Less ability than NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
</tr>
<tr>
<td>2. Relative severity of remaining harm</td>
<td>Greater than NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Greater than NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
</tr>
<tr>
<td>3. Relative significance of each Section 4(f) resource</td>
<td>Greater than NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Greater than NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
<td>Similar to NEPA Preferred Alternative</td>
</tr>
<tr>
<td>4a. Views of the officials with jurisdiction - NPS and Michigan City</td>
<td>NPS would not be in favor of an alternative that uses national parkland. IDNR would not be in favor of an alternative that uses land from the State Park</td>
<td>Michigan City owns the parks that would be used, and is not in favor of these alternatives. Resolutions in 2009, 2010 and 2016</td>
<td>Michigan City owns the parks that would be used, and is not in favor of these alternatives. Resolutions in 2009, 2010 and 2016</td>
<td>Construction of a tunnel would be extremely disruptive to the area and would cut off access at many streets. City is in full support of the NEPA Preferred Alternative</td>
<td>This option was previously studied in 2013 and dismissed by Michigan City. Not consistent with zoning or future economic development plan</td>
<td>Greater traffic impacts than NEPA Preferred Alternative</td>
<td>This is not consistent with zoning or future economic development plans</td>
<td>This is not consistent with zoning or future economic development plans</td>
<td></td>
</tr>
</tbody>
</table>
### Table 5-4. (cont.)

<table>
<thead>
<tr>
<th>Least Overall Harm Analysis</th>
<th>Alternative A - NS/Amtrak/ NIPSCO Corridor</th>
<th>Alternative A1 - Michigan City Northern Corridors</th>
<th>Alternative A2 - Michigan City Southern CSX Corridor</th>
<th>Alternative B - Underground Tunnel</th>
<th>Alternative C - 10th/11th Street South</th>
<th>Alternative D1 - 10th Street North</th>
<th>Alternative D2 - 10th Street in ROW - South</th>
<th>Alternative E1 - 11th Street Station Alignment Shift South</th>
<th>Alternative E2 - 11th Street Station Alignment Shift East or West</th>
</tr>
</thead>
</table>

#### 4b. Views of the officials with jurisdiction - SHPO

SHPO reviewed the previously prepared Michigan City re-alignment study and did not disagree with its findings. SHPO has been actively involved in the development and review of this Project since 2016. Given that the individually eligible resources lie to the north and south of 10th and 11th Streets, and historic districts (and contributing structures) straddle both sides of 11th Street, the effects of any of these alternatives on historic properties are essentially equal.

#### 5. Degree to which each alternative meets purpose and need

<table>
<thead>
<tr>
<th></th>
<th>Alternative A - NS/Amtrak/ NIPSCO Corridor</th>
<th>Alternative A1 - Michigan City Northern Corridors</th>
<th>Alternative A2 - Michigan City Southern CSX Corridor</th>
<th>Alternative B - Underground Tunnel</th>
<th>Alternative C - 10th/11th Street South</th>
<th>Alternative D1 - 10th Street North</th>
<th>Alternative D2 - 10th Street in ROW - South</th>
<th>Alternative E1 - 11th Street Station Alignment Shift South</th>
<th>Alternative E2 - 11th Street Station Alignment Shift East or West</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not meet purpose and need</td>
<td>Does not meet purpose and need</td>
<td>Does not meet purpose and need</td>
<td>Meets purpose and need</td>
<td>Meets purpose and need</td>
<td>Meets purpose and need</td>
<td>Meets purpose and need</td>
<td>Meets purpose and need</td>
<td>Meets purpose and need</td>
<td>Meets purpose and need</td>
</tr>
</tbody>
</table>

#### 6. Magnitude of adverse impacts not protected by Section 4(f)

<table>
<thead>
<tr>
<th></th>
<th>Alternative A - NS/Amtrak/ NIPSCO Corridor</th>
<th>Alternative A1 - Michigan City Northern Corridors</th>
<th>Alternative A2 - Michigan City Southern CSX Corridor</th>
<th>Alternative B - Underground Tunnel</th>
<th>Alternative C - 10th/11th Street South</th>
<th>Alternative D1 - 10th Street North</th>
<th>Alternative D2 - 10th Street in ROW - South</th>
<th>Alternative E1 - 11th Street Station Alignment Shift South</th>
<th>Alternative E2 - 11th Street Station Alignment Shift East or West</th>
</tr>
</thead>
</table>

#### 7. Substantial differences in cost

<table>
<thead>
<tr>
<th></th>
<th>Alternative A - NS/Amtrak/ NIPSCO Corridor</th>
<th>Alternative A1 - Michigan City Northern Corridors</th>
<th>Alternative A2 - Michigan City Southern CSX Corridor</th>
<th>Alternative B - Underground Tunnel</th>
<th>Alternative C - 10th/11th Street South</th>
<th>Alternative D1 - 10th Street North</th>
<th>Alternative D2 - 10th Street in ROW - South</th>
<th>Alternative E1 - 11th Street Station Alignment Shift South</th>
<th>Alternative E2 - 11th Street Station Alignment Shift East or West</th>
</tr>
</thead>
</table>

5-58
5.8 ALL POSSIBLE PLANNING TO MINIMIZE HARM

Section 4(f) requires a finding that the selected alternative includes all possible planning to minimize harm to Section 4(f) resources. “All possible planning” is defined in 23 CFR § 774.17 and states that a project must include documented consideration of all reasonable measures identified for minimizing and mitigating effects on Section 4(f) resources used by the project. In evaluating the reasonableness of measures to minimize harm, FTA considered the following as defined in 23 CFR § 774.17:

- The preservation purpose of the statute
- The views of the official(s) with jurisdiction over the Section 4(f) resource
- The cost of the measures as a reasonable public expenditure in light of the adverse effects of the project on the Section 4(f) resource and the benefits of the measure to the resource
- Impacts or benefits of the measures for communities or environmental resources outside of the Section 4(f) resource

During the development of the preliminary engineering plans for the station and improvements along 10th and 11th Streets, NICTD consulted with Michigan City to consider the design constraints and the design requirements for a modern transportation facility that would need to serve several hundred riders. The design considered the environmental and historic considerations of the former SSL Station building; four historic districts with several contributing buildings; potentially contaminated soils from nearby properties; important community resources, including schools and churches located along 11th Street near the station; residences and businesses as well as their parking areas, and Michigan City’s plans for TOD in the station area. The NEPA Preferred Alternative was developed to meet NICTD and Michigan City’s station and community objectives, as indicated in Table 5-5.

Table 5-5. 11th Street (Michigan City) Station Objectives

<table>
<thead>
<tr>
<th>Engineering and Operational Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would provide second mainline track</td>
</tr>
<tr>
<td>Would maintain speeds up to 45 miles per hour (mph) for commuter trains</td>
</tr>
<tr>
<td>Would allow freight trains to pass the proposed station using gauntlets</td>
</tr>
<tr>
<td>Would be compliant with the Americans with Disabilities Act (ADA), including ramps</td>
</tr>
<tr>
<td>Would provide sidewalks on both sides of corridor</td>
</tr>
<tr>
<td>Would provide two high-level boarding platforms</td>
</tr>
<tr>
<td>Would accommodate usual boarding and alighting on north platform</td>
</tr>
<tr>
<td>Would provide depot building with waiting room, restrooms and ticketing machines</td>
</tr>
<tr>
<td>Would provide warming shelter off north platform</td>
</tr>
<tr>
<td>Would accommodate catenary and signal equipment</td>
</tr>
<tr>
<td>Would provide parking for projected ridership (approximately 850 vehicles)</td>
</tr>
<tr>
<td>Would be compliant with state and local design standards</td>
</tr>
<tr>
<td>Would safely separate automobile, pedestrian and train movements</td>
</tr>
</tbody>
</table>
Table 5-5. Cont.

**Environmental and Cultural Objectives**

- Would avoid or minimize impacts on cultural (historic) resources
- Would minimize impacts on special waste sites
- Would minimize impacts on community resources (for example, churches and schools)

**Community Objectives**

- Would minimize residential property acquisition on south side of 11th Street
- Would avoid acquisition of properties north of 11th Street between Wabash and Washington Streets, near school
- Would maintain one-way, eastbound traffic on 11th Street after completion
- Would allow for potential reuse of the former South Shore Station building façade on the new station
- Would provide parkway area on south side of 11th Street for residents
- Would provide sufficient parking
- Would be consistent with local planning codes and requirements
- Would have decorative landscaping and fencing
- Would promote transit-oriented development in the station area
- Would promote economic development in the community

*a “Usual” means that boarding would take place on the north platform, except if, for some reason, the north platform were unavailable (i.e., freight train blockage, maintenance).*

To meet these objectives, the NEPA Preferred Alternative requires the expansion of the ROW by 27 feet, 6 inches to the north (Figure 5-18).

**Figure 5-18. Typical Section of 11th Street at the South Shore Station**
Following the Section 106 consultation with SHPO and consulting parties regarding adverse effects to identified historic resources, FTA and NICTD developed treatment measures for the proposed Project to reduce the severity of effects, as well as to offset or mitigate adverse effects. The Draft MOA is included in Appendix VII, Assessment of Effects Report. The final signed MOA will be included in the environmental decision document. The following is a summary of the stipulations developed as part of the Draft MOA to minimize and mitigate effects on historic resources that are also afforded protection under Section 4(f). A consultation meeting with SHPO and consulting parties was held on August 2, 2017 to solicit feedback on these provisions. The Draft MOA was provided to all consulting parties on August 31, 2017 and the MOA will be updated based on comments received as part of this process.

To minimize and mitigate effects on individually eligible properties and historic districts, FTA and NICTD, in consultation with the SHPO and consulting parties, would develop and execute a Memorandum of Agreement (MOA) to resolve the adverse effects on historic properties resulting from the proposed Project. FTA and NICTD have proposed mitigation measures to resolve the adverse effects to historic properties. FTA shall ensure that the stipulations of the MOA which describe the treatment measures are carried out by NICTD and will require, as a condition of any approval of federal funding for the undertaking, adherence to the stipulations set forth herein. It is noted that the draft MOA is currently being developed and consulting parties and SHPO are still reviewing the document. Once consultation is complete, the treatment measures will be presented in the environmental decision document along with the final, executed MOA.

A. NICTD shall work with a qualified architectural firm to preserve the façade of the South Shore Station at 114 E. 11th Street in order to incorporate it into a new mixed-use building to serve as the entrance to the new 11th Street Station, subject to engineering and financial feasibility. Because the new mixed-use building would be located within the Franklin Street Commercial Historic District, the proposed design of the new station would be subject to the Michigan City Historic Review Board design review process which would ensure that the design is compatible with the existing historic district. NICTD will keep the consulting parties identified in Attachment B informed on the design process.

B. Prior to the demolition of the South Shore Station at 114 E. 11th Street in Michigan City or any alterations to the façade, NICTD shall hire a Secretary of the Interior-qualified professional in history or architectural history (36 CFR § 61) to complete Historic American Building Survey (HABS) Documentation Level II on the station building. This work will include large-format photography and may include LiDAR scanning to assist in the execution of Treatment Measure A. The work will adhere to the standards set forth in Historic American Buildings Survey Guidelines for Historical Reports. NICTD shall provide draft documentation to the National Park Service (NPS) to verify that it meets the specified standards and formats. Upon NPS approval, NICTD shall finalize the documentation for submittal to the HABS office. One paper copy and one electronic copy of the final HABS documentation shall be provided to Indiana Landmarks, the Indiana Room at the Michigan City Public Library, and the Calumet Regional Archives at the Indiana University Northwest Library. Electronic copies will be provided to consulting parties at their request.

C. Prior to any alterations or the demolition of the First Christian Church at 1102 Cedar Street and the houses at 1116 W. 10th Street and 314 Lafayette Street, all in Michigan City, NICTD shall hire a Secretary of the Interior-qualified professional in history or architectural history (36 CFR § 61) to complete a HABS Short Format Report for each building as specified in the Historic American Buildings Survey Guidelines for Historical Reports. NICTD shall provide draft documentation to
NICTD DT-NWI MP 58.8 to MP 32.2
Environmental Assessment and Section 4(f) Evaluation

NPS to verify that it meets the specified standards and formats. Upon NPS approval, NICTD shall finalize the documentation for submittal to the HABS office. One paper copy and one electronic copy of the final HABS documentation shall be provided to Indiana Landmarks, the Indiana Room at the Michigan City Public Library, and the Calumet Regional Archives at the Indiana University Northwest Library. Electronic copies will be provided to consulting parties at their request.

D. Prior to the demolition of any individual resource listed in Attachment A of the MOA (with the exception of resources already being documented in Treatment Measures B and C), NICTD shall hire a Secretary of the Interior-qualified professional in history or architectural history (36 CFR § 61) to complete HABS Level III documentation for the adversely affected areas of the Elston Grove and Franklin Street Commercial Historic Districts, both of which are located in Michigan City. The written documentation will follow the *Historic American Buildings Survey Guidelines for Historical Reports*. Should any individual property warrant additional information, a short form will be prepared for that property to include with the district report. NICTD shall provide draft documentation to the NPS to verify that it meets the specified standards and formats. Upon NPS approval, NICTD shall finalize the documentation for submittal to the HABS office. One paper copy and one electronic copy of the final HABS documentation shall be provided to the SHPO, Indiana Landmarks, the Indiana Room at the Michigan City Public Library, and the Calumet Regional Archives at the Indiana University Northwest Library. Electronic copies will be provided to consulting parties at their request.

E. NICTD shall prepare a public exhibit focusing on the history of the South Shore Line for incorporation into the new station building. The display and/or interpretive materials for the exhibit shall be designed in consultation with a qualified historian or architectural historian who meets the Secretary of the Interior’s Professional Qualification Standards (36 CFR § 61) and who shall assess the content and presentation to ensure that the important history and associations that contribute to the significance of the property is incorporated into the exhibit. The content and plan for the exhibit shall be provided to Indiana Landmarks for review prior to completion.

F. NICTD shall install one interpretive panel each for the Franklin Street Commercial and Elston Grove Historic Districts focusing on the history of the surrounding neighborhoods. Because the signs would be located within two locally designated historic districts, the signs will be subject to review by the Michigan City Historic Review Board.

A conceptual rendering of the proposed 11th Street (Michigan City) Station building that incorporates the historic façade is shown in Figure 5-19. NICTD proposes to construct a mixed-use facility with residential, commercial, and parking surrounding a new station and would be similar in design to the station’s historic garage and bus depot that was once extant in this location. The new station building would be located farther north from its current location by approximately 27 feet, 6 inches, and would accommodate a multi-use purpose that includes waiting room, restrooms, and ticket vending machines.
5.9 CONSULTATION AND COORDINATION

The Section 4(f) evaluation has involved consultation and coordination with agencies and the public. NICTD conducted outreach efforts with area residents, property owners, and key stakeholders with respect to development of the NEPA Preferred Alternative and effects on parkland, public recreation areas and historic resources.

This effort has included coordination with Porter County, the Town of Porter, NPS, and NIPSCO with regards to the *de minimis* finding for trail impacts.

Section 106 consultation with interested parties including SHPO was initiated by FTA in December 2016. Sixty-four individuals, organizations, government officials, and Native American tribes with a demonstrated interest in the Project were invited to participate in the Section 106 process as consulting parties. Property owners of historic properties that may be affected by the Project were also invited to participate as consulting parties. Twenty responded to the invitations, including two tribes.

SHPO and consulting party involvement has been extensive, including written and verbal coordination and communications, resource identification and evaluations, one-on-one meetings, and field reviews. FTA and NICTD have consulted with SHPO, consulting parties, and the general public about effects on historic resources and measures to avoid and/or minimize effects on historic resources. A Draft MOA was developed to avoid, minimize, and mitigate effects on historic resources and shared with consulting parties for input. Effects determinations were also shared with the Advisory Council on Historic Preservation (ACHP) on August 31, 2017. This coordination will culminate in a final, signed MOA for the Section 106 process, two public hearings, and requisite comment period on the EA and Section 4(f) *de minimis* findings, and a final decision document for this NEPA analysis. The Draft MOA and full correspondence from Section 106 process is included Appendix VII of the EA. The final signed MOA will be included in the environmental decision document and is the mechanism to minimize and mitigate adverse effects to historic resources afforded protection under Section 4(f).
In addition, in order to meet Section 4(f) coordination and review requirements, FTA’s evaluation and finding is required to be made available to SHPO and ACHP (OWJs) and the Department of Interior for a 45-day review and comment period.

5.10 SECTION 4(F) DETERMINATION CONCLUSIONS

Based on the analysis above, FTA finds that there is no feasible and prudent avoidance alternative (23 CFR § 774.17) to the use of properties afforded protection under Section 4(f). As described in Section 5.7, the NEPA Preferred Alternative represents the alternative of least overall harm. The NEPA Preferred Alternative includes all possible planning to minimize harm to the Section 4(f) resources resulting from use, as described in Section 5.8.
6.0 PUBLIC AND AGENCY COORDINATION

NICTD developed a holistic outreach and communication program that incorporated public input from the Michigan City/NICTD Rail Realignment Study and the City of Gary’s TOD planning efforts to clarify the scope of this EA and facilitate the early identification of impacts. Elements and details of the outreach program are identified in this chapter.

6.1 PUBLIC OUTREACH

In September 2016, NICTD issued a press release announcing the Project kickoff and inviting the public to workshops in October 2016. In addition to the press release, NICTD sent postcards to nearly 300 community members, sent email invitations to 385 email addresses, posted flyers on rail cars and in Project Area stations, and distributed flyers to local businesses. NICTD contacted federal, state, and local elected officials and briefed them on the proposed Project status and upcoming workshops. Postcard notices were mailed to community- and faith-based organizations and educational institutions to be shared with members of low-income, minority, and/or limited-English-proficiency communities. NICTD also launched a project website that included an online comment form, an online public meeting, and translation capabilities.

A follow-up press release was distributed on September 30, 2016, and an updated flyer was distributed on October 3, 2016. Multiple news outlets ran stories about the proposed Project and upcoming workshops, including, the following:

- ABC 57 News
- NWI Times
- Lakeshore Public Radio (interview with Michael Noland, president of SSL)
- LaPorte County Life
- Chicago Post Tribune – Northwest Indiana
- Chesterton Tribune
- Northwest Indiana Times
- Michigan City News – Dispatch

Workshops and presentations were conducted to gather early input from the public regarding the proposed Project and to determine AOCs to be analyzed and documented in this EA.

6.1.1 PUBLIC WORKSHOPS

Public workshops were held at accessible locations in Gary, Porter, and Michigan City on October 3, 4, and 5, 2016, respectively. The workshops included a formal presentation by NICTD staff and staff from HDR. Presenters provided the history of, purpose of, and need for the proposed Project and described environmental considerations, alternatives, and the project schedule. An open house followed the presentation. Meeting attendees viewed exhibit boards, including ROW maps, and were able to review specific AOCs with Project Team members. Attendees could comment in writing during the open houses or submit their comments after the open house via email, mail, or the project website. A total of 227 people attended the public workshops. Copies of the presentation and display boards are provided in Appendix V.

<table>
<thead>
<tr>
<th>Workshop Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miller</td>
</tr>
<tr>
<td>75 attendees</td>
</tr>
<tr>
<td>Porter</td>
</tr>
<tr>
<td>46 attendees</td>
</tr>
<tr>
<td>Michigan City</td>
</tr>
<tr>
<td>106 attendees</td>
</tr>
</tbody>
</table>
In addition to the public workshops, an online public meeting was posted on the Project website to allow those unable to attend a meeting in person to view the information presented and submit comments. The online meeting is archived at www.doubletrack-nwimeeting.com/. Comments submitted through the website were acknowledged, and responses to substantive comments were provided.

A total of 63 comments were received during the comment period. Comments and responses are provided in Appendix V. Numerous comments indicated support for the proposed Project, noting that the increased efficiency and capacity would provide faster, more-convenient service. Some commenters expressed concerns about property displacements, cost, and traffic impacts. Commenters also discussed impacts on the surrounding neighborhoods in Michigan City and ADA accessibility in Gary.

6.1.2 PROJECT WEBSITE

NICTD created a project website to provide information about the project to the public, including a discussion about the project and its benefits, process, and schedule. The website serves as a repository for project documents such as reports and maps, and hosts the online public meeting discussed above. Further, the website provides a form for the public to submit comments and questions to the Project Team. The website is located at www.doubletrack-nwi.com/.

6.1.3 ELECTED OFFICIAL BRIEFINGS

NICTD worked closely with U.S. and State of Indiana elected representatives, as well as local elected officials, to inform them of the scheduled public workshops and provide an opportunity for a briefing about the proposed Project. Discussions with local officials and town councils have been ongoing as the proposed Project continues to develop. Appendix IV lists federal, state, and local elected officials with whom NICTD has been in contact about the proposed Project.

6.1.4 COMMUNITY GROUP MEETINGS

In addition to the public workshops, NICTD presented information about the project at over 30 community group and special interest group meetings since the fall of 2016. NICTD continues to present project information to local community groups to provide additional opportunities for understanding specific
community needs and concerns. NICTD has tailored the format of these meetings to the audience—ranging from formal presentations with question-and-answer sessions to informal overviews of the proposed Project. Appendix V lists past and scheduled community group meetings.

6.1.5 PROPERTY DISPLACEMENT OUTREACH

NICTD sent postcards to property owners and lessees who would potentially be affected by the property displacements required for the proposed Project. The postcards invited them to participate in the public workshops. Brochures were distributed at the workshops and included a description of relocation rights, requirements, and processes, and anticipated timelines for property purchases.

An informational meeting was held at Michigan City’s City Hall on June 28, 2017, to answer questions related to property acquisition. Michigan City property owners and tenants that would be impacted by land acquisition were invited by certified letter and follow up phone calls to attend the meeting. Approximately 75 people attended the meeting. NICTD staff described the Project, funding structure, timelines, and the anticipated schedule for acquisition should the Project be approved; the acquisition and relocation process, and the Uniform Act. Brochures were handed to individuals and a question/answer session took place. Questions were asked and answered regarding the operational changes to the SSL, how the value of properties to be acquired was established, the duration of acquisition for specific property types, whether personal property would be included in acquisition, and relocation benefits.

NICTD also presented the project on August 28, 2017 to Michigan City’s P.A.R.C. (Politics, Art, Roots and Culture) organization, the Michigan City Main Street Association, and the Michigan City Social Justice Group. The event was publicized through invitations to community organizations, through NICTD’s mailing and email list, the Michigan City Main Street Facebook open page, the Michigan City Social Justice Group’s closed Facebook page, and other sources. The meeting, which was hosted by P.A.R.C. in their community center, lasted for about one and a half hours including a PowerPoint presentation on the Project and the NEPA process followed by a question and answer session. NICTD representatives remained after the formal presentation to answer questions of individuals in attendance and to generally converse with the public regarding the Project.

Most questions asked centered around the acquisition process for homes in Michigan City. Other questions focused on the previous 2013 NICTD/Michigan City Rail Alignment Study, the project schedule and funding, the number of jobs to be created, and wetlands mitigation issues. NICTD representatives encouraged community members to stay involved in the Project through communication with NICTD and Michigan City throughout the process. Media coverage by the Michigan City News Dispatch was published the following day.

Specific outreach will continue through Project development to engage potentially displaced residents and/or businesses. This outreach will include community-specific meetings to discuss the process under the Uniform Act, as well as targeted outreach to EJ populations.

6.1.6 OTHER PUBLIC OUTREACH ACTIVITIES

From March 14, 2017, through April 13, 2017, NIRPC held a 30-day public comment period on its 2018–2021 TIP, Amendment #4 to its 2040 CRP Update Companion. One of the key projects added to the TIP and 2040 CRP is the proposed Project. During the public comment period on the TIP, NIRPC hosted five public open houses, three of which were within the Project Area communities. NICTD staff attended the open houses to answer questions about the proposed Project. NICTD has reviewed comments received during the NIRPC TIP public comment period for consideration during Project development and design.
6.2 AGENCY COORDINATION

Agency outreach for the proposed Project included coordination with a variety of federal, state, and local agencies as well as Native American tribes. Outreach efforts were conducted in compliance with NEPA and other applicable regulations, including but not limited to, Section 106 of the NHPA, Section 4(f) of the U.S. Department of Transportation Act of 1966, joint guidance and regulations from FTA and FHWA, and other agency regulations and guidelines.

6.2.1 FEDERAL, STATE, AND LOCAL AGENCY COORDINATION

FTA and NICTD invited federal, state, and local agencies to participate in a kickoff meeting on June 15, 2016. The kickoff meeting provided agency staff with an overview of the proposed Project and prompted early discussion of considerations to be addressed in this EA. The Project Team continued to coordinate with agencies and had follow-up agency meetings on February 7 and 16, 2017, to review impacts to wetlands, threatened and endangered species, and EJ communities; mitigation; and project development. Further coordination with NPS, USACE, and IDEM took place in April and May 2017 regarding strategies for wetland mitigation. See Appendix IV.

6.2.2 SECTION 106 COORDINATION

FTA initiated Section 106 consultation with the Indiana SHPO by submitting a draft APE on August 31, 2016. After concurrence from the SHPO on the APE, methodology, and a list of consulting parties, FTA formally invited consulting parties to participate in Section 106 consultation.

Sixty-four potential consulting parties were invited to participate in the proposed Project (Appendix VII). Consulting parties included Indiana Landmarks, NPS, USACE, USFWS, historical and cultural societies, and counties, cities, and towns in the Project Area. To date, the following organizations and individuals have agreed to participate as consulting parties:

- Mitchell Zoll, Deputy State Historic Preservation Officer, SHPO
- John Carr, Team Leader for Historic Structures Review, IDNR DHPA
- Wade Tharp, Archaeologist, IDNR DHPA
- Sarah C. Stokely, Program Analyst, Advisory Council on Historic Preservation (only if the proposed Project would have adverse effects)
- Judith Collins, NPS
- Todd Zeiger, Director, Indiana Landmarks, Northern Regional Office
- Brad Miller, Director, Indiana Landmarks, Northwest Field Office
- Stephen Sostaric, Planner, NIRPC
- Richard Meister, President, Historical Society of Ogden Dunes/Hourglass Museum
- Mayor Ron Meer, Mayor, Michigan City
- Craig Phillips, Executive Director, Michigan City Planning & Redevelopment Commission
- G. Wallace Hook, President, Michigan City Planning Commission
- Brian O'Neil, Beverly Shores Town Council
- Carolyn Saxton, President, Legacy Foundation

6-4
6.2.3 TRIBAL CONSULTATION

FTA initiated consultation with the following tribes on February 3, 2017:

- Absentee Shawnee Tribe of Oklahoma
- Citizen Potawatomi Nation
- Delaware Tribes of Indians, Oklahoma
- Eastern Shawnee Tribe of Oklahoma
- Forest County Potawatomi Community
- Hannahville Indian Community
- Ho-Chunk Nation, Wisconsin
- Miami Tribe of Oklahoma
- Prairie Band of Potawatomi Nation
- United Keetoowah Band of Cherokee Indians

Responses have been received from the Forest County Potawatomi Community and the Miami Tribe of Oklahoma to participate as consulting parties.

Meetings or conference calls have taken place with the SHPO and consulting parties on April 5, May 11, and August 2, 2017, along with additional calls with individual consulting parties.
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APPENDIX I

References Cited
CHAPTER 1 – PROJECT PURPOSE AND NEED


- 2016a. Technical Memorandum, RSG for NICTD, January 5, 2016, Ridership Forecasting Results.
- 2016c. NICTD South Shore Line Schedules, Effective May 2, 2016.
- 2016d. Core Capacity Grant Request, May 2016.


RDA. 2016. Comprehensive Strategic Plan Update.

Policy Analytics, LLC. 2014. West lake Corridor and South Shore Line Strategic Planning Investments: A Regional Benefits Analysis (prepared as part of the NICTD Strategic Business Plan).


CHAPTER 2 – ALTERNATIVES CONSIDERED


CHAPTER 3 – TRANSPORTATION


- 2017. 10th and 11th Street Corridor Traffic Impact Analysis.
CHAPTER 4 – ENVIRONMENTAL RESOURCES, IMPACTS, AND MITIGATION MEASURES

Section 4.1 – Land Acquisitions, Displacements, and Relocations


Section 4.2 – Land Use and Economic Development


NIRPC. 2013. Livable Communities Initiative.

NICTD/RDA. 2014 20-year Strategic Business Plan


RDA. 2016. Comprehensive Strategic Plan 2016 Update.


Section 4.3 – Neighborhoods, Communities, and Businesses


NICTD DT-NWI MP 58.8 to MP 32.2
Environmental Assessment and Section 4(f) Evaluation


Section 4.4 – Historic, Archaeological, and Cultural Resources


Section 4.5 – Visual and Aesthetics Conditions
No references listed.

Section 4.6 – Noise

Section 4.7 Vibration

NICTD. 2016e. SSL Train Schedule. July 1, 2016.

Section 4.8 – Hazardous/Regulated Materials


Section 4.9 – Biological Resources


USFWS. 2016. 2016 Range-Wide Indiana Bat Summer Survey Guidelines.

**Section 4.10 – Water Resources**

**Wetlands and Streams**

FEMA. 2016. FEMA Flood Map Service Center: Welcome!. Available at https://msc.fema.gov/portal.


IDNR. 2016. Indiana Natural Regions Map.


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Floodplains

FEMA. 2016. FEMA Flood Map Service Center: Welcome!. Available at https://msc.fema.gov/portal.

IDNR. 1990. Title.


Water Supply


Water Quality


Section 4.11 – Section 6(f) Resources


Section 4.12 – Environmental Justice


Section 4.13 – Safety and Security

INDOT. 2011. INDOT State Rail Plan.
       ______. 2014b. Written Hazard Communications Program.
       ______. 2016b. Personal Protective Equipment Program.

Section 4.14 – Indirect and Cumulative Impacts

RDA. 2016. Comprehensive Strategic Plan Update.

Section 4.15 – Resources with Limited or No Impacts

Air Quality


Farmland

No references listed.
**Energy**


**Navigable Waters**

No references listed.

**Coastal Zone Management**


**Geology, Soils, Karst**


IGS. 2016. IGS IndianaMAP. Available at [http://maps.indiana.edu/index.html](http://maps.indiana.edu/index.html).


**CHAPTER 5 – SECTION 4(F) EVALUATION**


**CHAPTER 6 – PUBLIC AND AGENCY COORDINATION**

No references listed.
APPENDIX II

Affected Environment Mapbook
APPENDIX III

Environmental Assessment Technical Memoranda
APPENDIX IV
Agency Coordination
APPENDIX V

Public Outreach
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APPENDIX VII

Historic, Archaeological, and Cultural Resources (Section 106)