Chapter 4
Community and Social Analysis

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4 Community and Social Analysis

4.1 Introduction

Chapter 4 describes characteristics, conditions, and effects on the community and social resources from the FEIS Preferred Alternative and identifies the effects of the alternatives considered in the DEIS, including the DEIS NEPA Preferred Alternative. This chapter describes the effect of the Project on the community and the proposed mitigation of significant impacts. Areas of analysis for this chapter include land use and zoning, land acquisitions and displacements, socioeconomics and economic development, neighborhoods and community resources, cultural resources, visual resources, safety and security, and environmental justice (EJ).

Changes to This Chapter since Publication of the DEIS

Since the publication of the DEIS, the data on existing conditions have been updated and design refinements have been made to the DEIS NEPA Preferred Alternative. The Project Area for each of the alternatives remains the same; therefore, some resource areas have few to no changes from the DEIS to the FEIS. The majority of the Project Area is in Indiana, with a small portion extending into Illinois. Construction activities in Illinois would be limited to the existing railroad ROW.

- **Section 4.2** describes the effect of the Project on land use and development patterns within the Project Area. This section is largely unchanged since publication of the DEIS. The completed Corridor Transit-oriented Development (TOD) plan has been included as well as updated planned developments in the Project Area.
- **Section 4.3** describes the potential property acquisitions and displacements for the Project. The Project design has been refined to minimize acquisitions and displacements and to calculate required easements.
- **Section 4.4** describes the socioeconomic characteristics (population, housing, and employment) and economic development trends of the Project Area. The socioeconomic and economic analysis has been updated to reflect Project design refinements, existing conditions, and current Project data. The methodology to estimate jobs and earnings from Project construction and operations was changed to focus on the labor component of operations and maintenance (O&M) costs and its impact on the local economy.
- **Section 4.5** describes the neighborhoods and community facilities in the Project Area and assesses the effects of the Project on these resources. The neighborhoods and community resources analysis have been updated to include no effects to the Dan Rabin Plaza and Lake County Superior Court and Probate Clerk building. The Project would no longer affect the Family Christian Center but would affect Hartsfield Village.
- **Section 4.6** describes the effects of the Project on historic properties. The review process under Section 106 of the National Historic Preservation Act of 1966 (NHPA) was completed for the Project. This section is largely unchanged since publication of the DEIS.
- **Section 4.7** describes the effects of the Project on visual resources and includes a discussion of the visual impact assessment that has been conducted since publication of the DEIS. The Project and the visual effects have been refined to address safety and security concerns.

- **Section 4.8** describes the general safety and security considerations related to the design and operation of the Project. The Passenger Train Joint Emergency Preparedness Plan has been included in this section and the Project has been refined to address safety and security concerns.
- **Section 4.9** describes the environmental justice (EJ) populations in the Project Area and identifies potentially disproportionately high and adverse impacts on EJ populations. This section has been updated to reflect the design refinements of the Project and ongoing public engagement. The potential for the Project to result in disproportionately high and adverse effects on minority and low-income populations regarding land acquisitions and displacements (long-term effects) as well as socioeconomics and economic development (short-term effects) have been noted. However, the Project would not result in disproportionately high and adverse effects on EJ populations Project-wide.

Table 4.1-1 summarizes the effects, commitments, and mitigation measures for the FEIS Preferred Alternative. For reference, conceptual engineering plans for the FEIS Preferred Alternative are included in **Appendix E**.

Section 2.4.3 of this FEIS lists the alternatives considered and the design refinements included in the FEIS Preferred Alternative.

Table 4.1-1: Summary of Community and Social Resource Effects, Commitments, and Mitigation Measures for the FEIS Preferred Alternative

Category	FEIS Preferred Alternative	Summary of Community and Social Resource Effects, Commitments, and Mitigation Measures
Land Use and Zoning	Operating Phase (Long-term) Direct Impacts	• Munster/Dyer Main Street Station parking would be incompatible with surrounding residential land uses and inconsistent with the suburban residential zoning. • Munster Ridge Road Station could be incompatible with adjacent residential uses but would support the high-density residential zoning for that area. Additionally, the ADA parking, "Kiss-and-Ride" accommodations, and surface parking lot west of the tracks would be incompatible with existing residential uses and zoning, although the station and parking areas would not substantially alter access or land use patterns. • South Hammond Station would not conflict with existing land uses, and no changes to overall land use patterns are anticipated. The station and parking would be incompatible with adjacent areas zoned for single-family residential on small lots. • The North Hammond MSF and Hammond Gateway Station would not conflict with existing land uses and zoning in the area.
	Construction Phase (Short-term) Impacts	• Limited temporary difficulties accessing properties during construction. • Temporary increases in noise and vibration levels, dust, fumes, traffic congestion, and visual changes from construction activities would affect land use compatibility; there would be no construction-related impacts on zoning.
	Commitments and Mitigation Measures	Operating Phase (Long-term): • NICTD would make improvements to four intersections to reduce congestion and access impacts: Sheffield Avenue and Main Street (upgraded traffic signal), 173rd Street and Harrison Avenue (striped to include right-turn lane), Russell Street and Hohman Avenue (modified traffic signal), and new roundabout in Hammond (monitored by the City of Hammond for traffic operations). • For safety, noise, and vibration concerns that would disrupt land use patterns, mitigation measures would include noise barriers or receiver-based treatments to specific buildings, ballast mats, sleeper pads, or other track support system modifications as described in the evaluations for those resources in Sections 4.8, 5.2, and 5.3 of this FEIS. • NICTD would collaborate with community stakeholders, local elected officials, and the state and county transportation departments on proposed station parking lots. • Where the alternative would be incompatible with existing zoning designations, NICTD would work with local officials during the engineering phase to make the alternative compatible, to the extent feasible and practical, with the intended purposes and design standards of the applicable zoning.

Category	FEIS Preferred Alternative	Summary of Community and Social Resource Effects, Commitments, and Mitigation Measures
		Construction Phase (Short-term): • NICTD would develop a *Maintenance and Protection of Traffic Plan* to address disruptions to travel. • BMPs for minimizing visual changes, noise and vibration levels, dust, and fumes due to traffic detours, staging areas, and maintaining safety of construction sites would be implemented.
Land Acquisitions and Displacements	Operating Phase (Long-term) Direct Impacts	• Acquisitions ◦ 226 acquisitions totaling 106.68 acres ▪ 202 total acquisitions and 24 partial acquisitions • Displacements ◦ 107 displacements ▪ 94 residential, 4 commercial, and 9 industrial land uses displaced • Easement ◦ 0.33 acres of permanent easement
	Construction Phase (Short-term) Impacts	• 5.59 acres of temporary easements
	Commitments and Mitigation Measures	Operating Phase (Long-term): • Acquisition and displacements would be done in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC § 4601). ◦ Relocation advisory assistance would be provided to eligible persons. ◦ Ample notice would be given to those being relocated. Minimum 90 days' written notice would be given to vacate prior to requiring possession. ◦ Reimbursement for moving and re-establishment expenses would be provided. ◦ Relocation planning and services would be provided to businesses. • NICTD would continue proactive communication, coordination, and engagement with local community organizations to work with displaced business owners to: ◦ Identify preferred relocation options and prepare for a smooth transition to a new location for both the business and its employees; and ◦ Provide information to the communities where businesses would be displaced about the businesses' new locations, with

Category	FEIS Preferred Alternative	Summary of Community and Social Resource Effects, Commitments, and Mitigation Measures
		transit options to access the new business location and/or other options to meet their needs. Construction Phase (Short-term): • NICTD would restore properties affected through a temporary easement to an acceptable pre-construction condition following construction activities, in accordance with the individual easement agreements.
Socioeconomics and Economic Development	Operating Phase (Long-term) Direct Impacts	• Socioeconomics and Demographic Effects: The Project would shift population, housing, and employment growth. • Government Finance and Tax Sources: The FEIS Preferred Alternative would decrease the property tax base for Lake County by 0.043 percent.
	Construction Phase (Short-term) Impacts	• Temporary disruptions to business access or operations from construction equipment or activities, as well as from noise, vibration, dust, and/or fumes, could occur.
	Commitments and Mitigation Measures	Operating Phase (Long-term): • Mitigation would include identifying and promoting redevelopment, infill, and economic-development opportunities as well as proactive policies to relocate businesses near their existing location to offset any potential loss of property tax revenue. Construction Phase (Short-term): • Temporary and short-term socioeconomic impacts would be mitigated through the following measures: ◦ NICTD would coordinate with individual businesses to ensure that critical business activities are not disrupted and that reasonable access during regular operating hours is maintained. ◦ NICTD would notify property owners, businesses, and residences of major construction activities on a real-time basis. ◦ NICTD would coordinate with the affected utility companies to minimize disruption of service.
Neighborhoods and Community Resources	Operating Phase (Long-term) Direct-Impacts	• Introduction of commuter rail service would affect the perceived or actual connectivity of neighborhoods where no rail operations currently exist. • Neighborhood housing would be affected by localized changes in visual context, noise, and vibration from adjacent commuter rail–related facilities. • The FEIS Preferred Alternative would be adjacent to community resources within the Project Area, such as trails, parks, and schools. Users of the community resources could experience changes in the visual context and/or noise and vibration levels.

Category	FEIS Preferred Alternative	Summary of Community and Social Resource Effects, Commitments, and Mitigation Measures
Neighborhoods and Community Resources (cont.)	Construction Phase (Short-term) Impacts	• Traffic detours would increase traffic through residential neighborhoods or change access to community facilities. • Sidewalk closures and detours would affect pedestrian traffic patterns. • Increased levels of noise, vibration, and dust and the presence of large construction equipment would temporarily affect neighborhood character, primarily in relatively quiet areas. • Residences and community resources would experience short-term disruptions of utility services, as utilities need to be moved or replaced.
	Commitments and Mitigation Measures	Operating Phase (Long-term): • Noise and vibration mitigation measures would include noise barriers or receiver-based treatments to specific buildings, ballast mats, sleeper pads, or other track support system modifications. • NICTD would conduct ongoing coordination and collaboration with community stakeholders and local elected officials to mitigate impacts that would diminish the value of community resources or pose a nuisance to residents. • NICTD would make improvements to four intersections to reduce traffic congestion and access impacts. • NICTD would collaborate with community stakeholders, local elected officials, and the state and county transportation departments on proposed station parking lots. • Displaced businesses and residents would be relocated in accordance with the Uniform Act. NICTD would continue to coordinate with affected residents, businesses, and community facilities to identify strategies to minimize the effects on the employees and customers of the displaced businesses. • Construction Phase (Short-term): • Work zone traffic-control plans would be coordinated with agencies having jurisdiction over and/or maintenance responsibility for affected roadways. The plans would identify requirements for maintaining access to neighborhoods, businesses, medical facilities, and emergency facilities. • BMPs for minimizing visual changes, noise and vibration levels, dust, and fumes and for maintaining safety of construction sites would be implemented including those from United States Environmental Protection Agency (USEPA). • NICTD would coordinate with the jurisdictional agency of the roadway regarding the construction and detour plan. • The State Archaeologist at the Indiana State Preservation Office (SHPO), represented by the INDNR Division of Historic Preservation and Archaeology (DHPA), reviewed and concurred with the Oak Hill Cemetery Development Plan on December 8, 2017. In accordance with the MOA between FTA, NICTD, and Indiana SHPO, if any prehistoric or historic archaeological artifacts or human remains are discovered during construction:

Category	FEIS Preferred Alternative	Summary of Community and Social Resource Effects, Commitments, and Mitigation Measures
		◦ All work would cease immediately. ◦ The SHPO and the County Coroner would be contacted. ◦ All state and federal laws regarding human burial remains would be followed, including state law (Indiana Code 14-21-1-27 and -29), that require the discovery be reported to the INDNR within 2 business days. The Memorandum of Agreement between FTA, NICTD, and Indiana SHPO is included in Appendix B.
Cultural Resources	Operating Phase (Long-term) Direct Impacts	• Adverse effect on one historic property: the OK Champion Building, resulting from demolition.
	Construction Phase (Short-term) Impacts	• No adverse effects on historic properties.
	Commitments and Mitigation Measures	Operating Phase (Long-term): • Implement the December 12, 2017, Section 106 Memorandum of Agreement. Mitigation measures would include: ◦ Prior to any alterations to or demolition of the OK Champion Building, Historic American Building Survey documentation of the existing building would be completed by a Secretary of the Interior–qualified professional in history or architectural history (36 CFR Part 61). ◦ A public exhibit discussing the history and context of the OK Champion Building, specifically highlighting the industrial development of Hammond, would be designed in consultation with a qualified historian who meets the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) and who would assess the context and presentation to ensure that the important history and associations that contribute to the significance of the property are incorporated into the exhibit. ◦ A National Register of Historic Places (NRHP) nomination for the P.H. Mueller Sons Hardware Building at 416–418 Sibley Street in Hammond would be completed. Construction Phase (Short-term): ◦ Appropriate noise- and vibration-control measures and BMPs would be implemented by NICTD to minimize any potential temporary impacts during construction of the Project.

Category	FEIS Preferred Alternative	Summary of Community and Social Resource Effects, Commitments, and Mitigation Measures
Visual Resources	Operating Phase (Long-term) Direct Impacts	• The FEIS Preferred Alternative is not expected to substantially change the visual character of the Project Area as a whole. Moderately high visual effects would occur where full or partial acquisitions would be required, where the alignment would be elevated, and where residential or recreational uses are located adjacent to the Project Area.
	Construction Phase (Short-term) Impacts	• Visually intrusive views would be associated with construction staging areas, concrete and form installation, removal of existing structures and/or vegetation, lights and glare from construction areas, and generation of dust and debris in the Project Area.
	Commitments and Mitigation Measures	Operating Phase (Long-term): • Operational effects on the visual environment would be minimized or mitigated through high-quality design and construction. • NICTD would coordinate with the local communities and responsible agencies to create visual design guidelines for the Project, such as through the selection of landscape treatments, which would be consistent with applicable local policies and would be compatible with the character of the affected community. • NICTD would coordinate with affected viewers and would consider strategies to avoid or minimize and mitigate visual effects. Construction Phase (Short-term): • Short-term construction effects would be minimized or mitigated by carefully managing those construction activities, including minimizing lighting during nighttime work, limiting work to daytime hours in the vicinity of particularly sensitive receptors, and restoring staging areas following Project completion.
Safety and Security	Operating Phase (Long-term) Direct Impacts	• The Project would introduce 10 new railroad-highway grade crossings (see Figure 3.5-4) The Project would run adjacent to nearby activity areas including schools, parks, churches, residential developments, and trails. • Stations could pose safety and security concerns for pedestrians and transit users in parking areas due to increased potential for pedestrian/automobile collisions.
	Construction Phase (Short-term) Impacts	• Construction could cause temporary negative safety concerns including temporary increased traffic congestion and road closures for the public. • Contractors would be working on freight railroad property. • Construction activities could result in temporary increased congestion along adjacent roads that could affect access and response times for emergency service providers.

Category	FEIS Preferred Alternative	Summary of Community and Social Resource Effects, Commitments, and Mitigation Measures
Safety and Security (cont.)	Commitments and Mitigation Measures	Operating Phase (Long-term): • NICTD would implement a *Safety and Emergency Preparedness Plan* (SEPP) and a *Safety and Security Management Plan* (SSMP) to consider safety and security, operational staff training, and emergency response measures. • NICTD police and local law enforcement would maintain safety and security during Project construction and operations. • To reduce potential risks in station areas, NICTD would include security cameras and would work closely with municipal police services to develop and implement measures to deter loitering and criminal activity. • Pedestrian safety in station areas would be enhanced through improved intersections and crosswalks in key locations. ◦ Pedestrian safety at Munster/Dyer Main Street Station would be enhanced by constructing a pedestrian underpass under the CSX railroad from the "Park-and-Ride" lot to allow access to the platform. At this station, a pedestrian bridge would also be constructed over the station driveway to allow platform access from the south. ◦ Pedestrian safety at the Hammond Gateway Station would be accommodated by a paved plaza area under the elevated Project track to access the SSL platform from the parking lot to the south. Construction Phase (Short-term): • NICTD would be required to develop and implement a *Construction and Site Safety Plan* to address key topics including road closures, lane closures, bridge construction, excavations, access control, worker safety, public safety, and other relevant safety topics. • NICTD would provide construction barriers, signs, and fences to secure construction sites and staging areas and would evaluate the need for additional security measures such as security personnel. • If temporary road closures are necessary, advance notice would be provided to neighbors and local businesses, and alternative routes and detours would be clearly identified. To minimize inconvenience to the local population, the duration of closures would be limited to the extent feasible. • NICTD would comply with each freight railroad operator's access, safety, and operational requirements during Project construction on or near the respective freight railroad operator's property.

Category	FEIS Preferred Alternative	Summary of Community and Social Resource Effects, Commitments, and Mitigation Measures
Environmental Justice	Operating Phase (Long-term) Direct Impacts	• The FEIS Preferred Alternative would displace four commercial and nine industrial businesses, all located in EJ neighborhoods. Impacts to business owners would be mitigated according to the Uniform Act. With the implementation of mitigation measures, the Project-wide finding is that the FEIS Preferred Alternative would not result in disproportionately high and adverse effects on EJ populations.
	Construction Phase (Short-term) Impacts)	• The FEIS Preferred Alternative has the potential to result in short-term effects on socioeconomics by temporarily affecting business access and/or causing noise, dust, and/or fumes that could disrupt business operations. These impacts may primarily affect EJ populations.
	Commitments and Mitigation Measures	Operating Phase (Long-term): • NICTD would work with displaced business owners to (1) identify preferred relocation options and prepare for a smooth transition to a new location for both the business and its employees and (2) provide information to the communities where businesses would be displaced about the businesses' new locations, with transit options to access the new business location and/or other options to meet their needs. Construction Phase (Short-term): • NICTD would: (1) develop construction staging plans that maintain access to all businesses during construction to the extent possible, (2) incorporate noise- and dust-control measures that minimize environmental effects on businesses adjacent to project construction activities, and (3) continually communicate with affected businesses prior to and during construction to understand and address their needs and concerns.

Source: HDR 2017a.

4.2 Land Use and Zoning

Land use broadly refers to the different functions of human use of land (for example, residential, commercial, or industrial). It is influenced by development patterns and activity centers, population and employment levels, growth potential and trends, local and regional land use policies, and other factors that affect area growth. This section describes land use and land use policy in the Project Area and the effects of the No Build and FEIS Preferred Alternatives on land use. For more information, see the *West Lake Corridor Project Land Use, Neighborhoods, and Community Resources Technical Report* in Appendix H-2 of the DEIS.

4.2.1 Regulatory Setting

There have been no changes to the regulatory setting since the publication of the DEIS.

The CEQ guidelines that implement NEPA (40 CFR Part 1502) contain regulatory requirements for describing the affected environment and environmental consequences for general resources, which include land use, zoning, and local plans. Chapter 4 of the Indiana State Code establishes the authority of municipalities for planning and zoning, and subsequent local zoning regulations govern the land development process. Similarly, Chapter 55 on Counties and Chapter 65 on Municipalities of the Illinois State Code establish zoning authority locally within the state.

4.2.2 Methodology

Since the publication of the DEIS, the methodology was updated to include an explanation of the existing MED/SSL included in the analysis area for this resource and to incorporate the completed Corridor TOD plan.

The Project Area considered for this analysis includes the area within 0.5 mile on either side of the proposed alignment and within 500 feet of the portion of the alignment along the existing MED/SSL. The following items were analyzed and are discussed in the following sections:

- Existing land uses and zoning
- Local plans and regulatory environment, including zoning regulations
- Upcoming corridor-development projects

The land use impact assessment focused largely on how the FEIS Preferred Alternatives would affect land use and development patterns in the Project Area compared to the No Build Alternative. The assessment evaluated future conditions in the region as set forth in the local jurisdictions' land use plans and zoning ordinances and the consistency of the FEIS Preferred Alternatives with those plans.

4.2.3 Affected Environment

The existing land use and zoning remain largely unchanged since the publication of the DEIS. Minor updates to the DEIS have been made to the data on existing conditions. Figures have been updated graphically to reflect current data.

4.2.3.1 Existing Land Uses and Zoning

Current land use in the Project Area generally transitions from rural and suburban in the community of Dyer in the south to increasingly dense suburban development around south Hammond to the urban environment of Chicago. Zoning designations generally mirror and

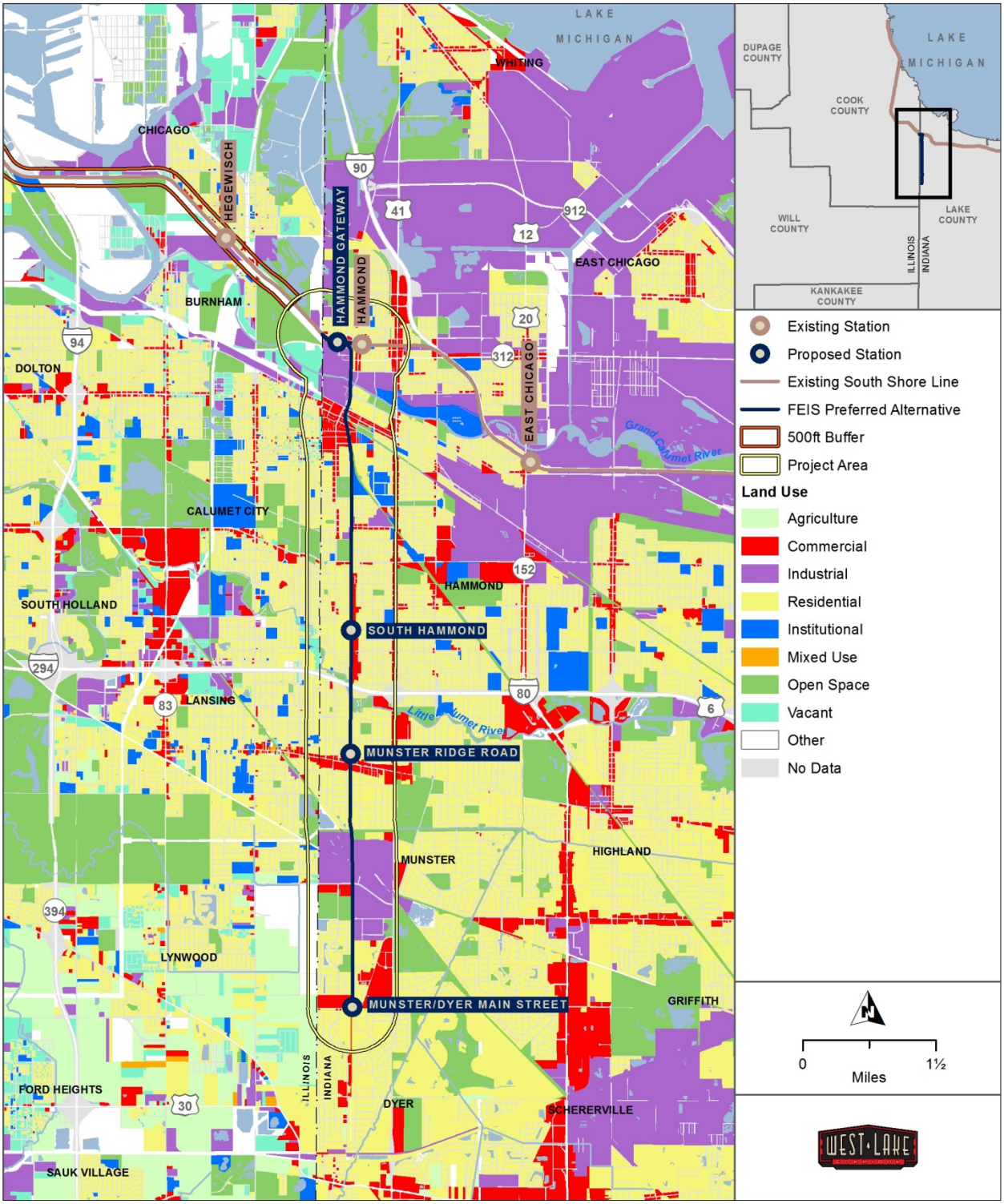
support the existing land use patterns. Generalized land use types are shown in **Figure 4.2-1** and **Figure 4.2-2**. Each of the municipalities and counties in the Project Area has distinct zoning districts as established in its respective local zoning regulations; for example, a C-1 commercial zone in Munster is similar, but not identical, to a B-2 commercial zone in Dyer. The specific zoning designations for each Project element (for example, alignments and stations) are listed in **Table 4.2-1** by jurisdiction. These are the specific zoning designations in each municipality or county in the Project Area and are listed from south to north.

Table 4.2-1: Existing Land Use Patterns and Zoning in the Project Area

Jurisdiction	Description of General Land Uses and Patterns	Predominant Local Zoning Districts
Dyer	Medium-density suburban residential.	R-1 Single-Family (SF) Residential; R-2 SF Residential; B-2 Business, Light Industrial, Special Use District; PUD (Planned Unit Development); RD (Rural Development District)
Munster	Medium-density suburban residential interspersed with an industrial park, some commercial, a golf course, a vacant site with new streets in a planned subdivision that is mostly undeveloped, and the Monon Trail.	R-1 SF Residential; R-2 SF Residential; O-1 Office, Manufacturing, Public Lands; C-1 Commercial; R-3 Multi-family Residential
Hammond	Residential single-family homes on small lots; downtown Hammond in the northern stretch of the Project Area; some vacant, undeveloped land; and industrial uses. The Monon Trail runs along this alignment section.	R1-U Urban SF Residential; PUD; S-1 OS (Open Space); R-1 SF Residential; C-3 Central Business District; I-1 Light Industrial; S-2 Institutional
Chicago	Existing rail alignment passes along a golf course and transitions into a mix of urban uses; stretch of industrial land near Hegewisch transitions to a mix of high-density residential neighborhoods with areas of mixed commercial uses; some areas of industrial uses interspersed throughout; major recreation/ entertainment/job destinations.	I-2 Industrial; R1-U Urban Residential Mixed-Use Zones including PD (Mix of Residential and Commercial) and MU-CI (Mixed Commercial and Industrial); HD (High-Density Housing); large areas of OS for parks and OS to the east between the rail line and the waterfront
Cook County portion	Vacant land along Grand Calumet River transitioning to industrial land uses and then to high-density, multi-family residential and a high school complex.	Calumet City – Heavy and Light Industrial Chicago – Predominantly I-2 Industrial and R1-U Urban Residential Cook County portion – data unavailable

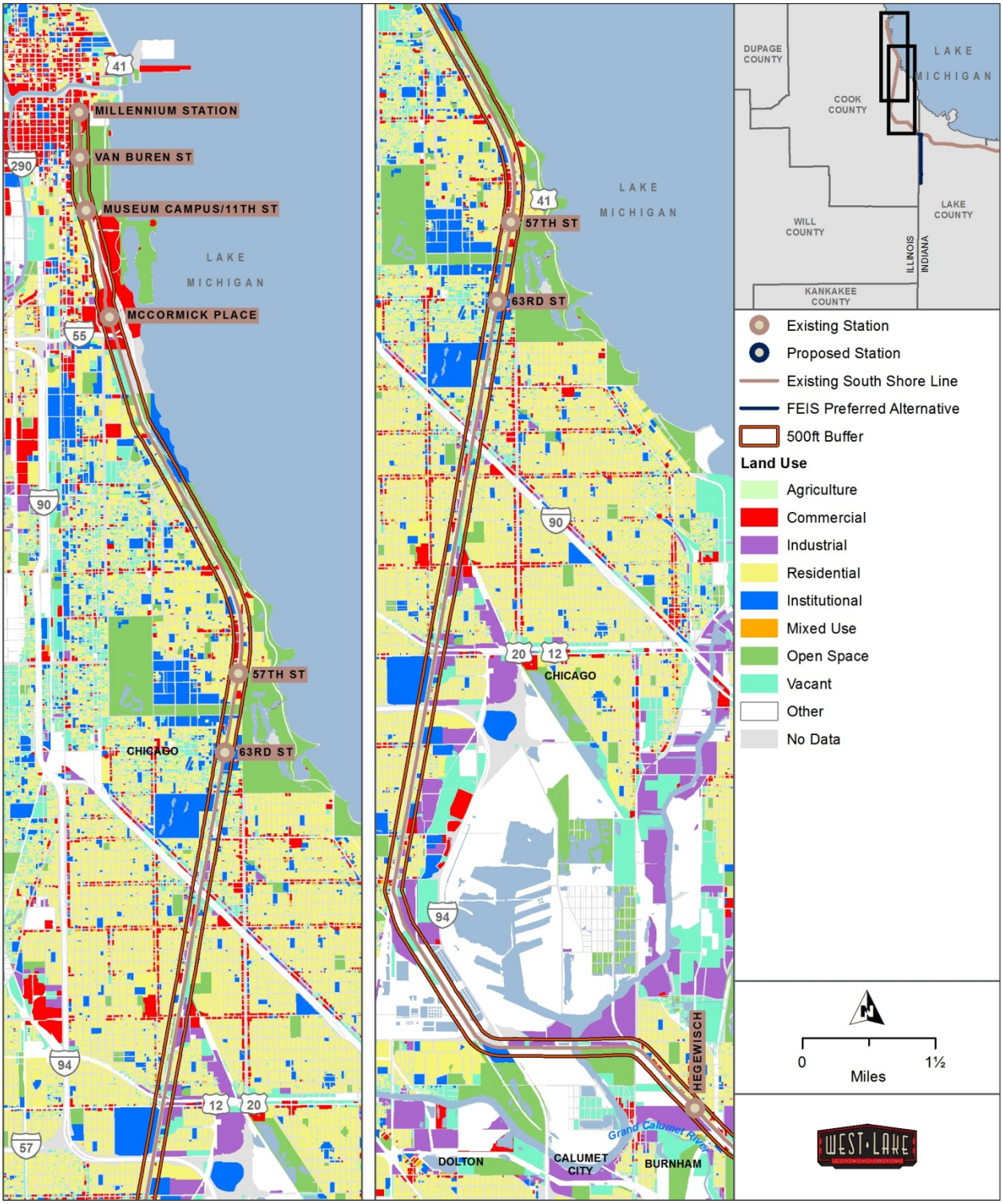
Sources: CMAP 2013; NIRPC 2014b.

Figure 4.2-1: Existing Land Uses in the Project Area



Sources: CMAP 2013; NIRPC 2014b.

Figure 4.2-2: Existing Land Uses along the Existing MED/SSL



Sources: CMAP 2013; NIRPC 2014b.

4.2.3.2 Land Use Plans and Development Projects

The long-range vision for land use and development in the Project Area is articulated in the master plan for each jurisdiction. The potential for changes in land use is reflected in the planned and programmed development projects in the Project Area. For this analysis, such projects include those that have municipal or county endorsement, are in the queue to acquire development and zoning approval, or are under construction. The master plans that encompass the Project Area are summarized below.

- **Dyer** – *The Town of Dyer Comprehensive Plan* (Town of Dyer 2012): This plan includes a policy of maintaining the current patterns of land use with over 50 percent of the community in residential use. It also notes the need to enhance the transportation system in anticipation of commuter rail service, primarily by making the existing system more multimodal and with greater connectivity. The Dyer Amtrak Station site, which is in the Project Area, is designated on the future land use plan as a mixed-use development.
- **Munster** – *A Vision for the 21st Century: 2010 Comprehensive Plan* (Town of Munster 2010, revised 2012): This plan focuses on sustainable growth, of which a sound and strong transit system is seen as a critical part. The plan directly supports a new West Lake Line with a Munster/Dyer Main Street Station location and proposes TOD to complement this. Redevelopment and TOD opportunity areas are also envisioned surrounding one of the potential station locations, Munster Ridge Road.
- **Hammond** – *City of Hammond Comprehensive Land Use Plan* (City of Hammond 1992, reprinted 2013): This future land use plan shows the Project Area as light industrial use at the gateways to Hammond and a mix of mostly low-density residential use with some commercial areas in between. It supports implementing commuter rail in the Project Area with the rail line routed near Hammond's central business district.
- **Regional Plan** – *2040 CRP, A Vision for Northwest Indiana* (NIRPC 2011): A key strategy in the NIRPC *2040 CRP* for northwest Indiana 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 and land use projects that bring vitality to downtown areas, neighborhoods, station areas, commercial cores, and transit corridors. NIRPC has identified four "neighborhood" livable centers near Munster/Dyer Main Street, Munster Ridge Road, South Hammond, and Downtown Hammond Stations. 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

- **Corridor TOD Plan** – *Pilot Program for TOD Planning*: The Northwest Indiana RDA has a strong focus on fostering TOD opportunities in the Project Area. For proposed station areas, RDA and NICTD, in coordination with the Town of Dyer, the Town of Munster, the City of Hammond, have completed an FTA-funded pilot program for TOD planning. Through this program, NICTD, RDA and the communities examined ways to improve economic development and ridership, foster multimodal connectivity and accessibility, improve transit access for pedestrian and bicycle traffic, engage the private sector, identify infrastructure needs, and enable mixed-use development near the proposed stations. The West Lake Corridor TOD plan was completed in September 2017 and is included in **Appendix F**.

Land use plans that cover the existing MED/SSL portion of the Project Area are listed below. Each plan supports improved transit service and connectivity as a way to facilitate economic vitality and strengthen and sustain neighborhood character. The plans recognize that Chicago and the surrounding communities make up an economically co-dependent metropolitan area, and they endorse investment in multimodal travel options, particularly transit, to improve quality of life and economic sustainability. Additionally, they encourage transit-supportive land use forms.

- **Calumet City**: *The Calumet City Comprehensive Plan* (Teska Associates et al. 2014)
- **Chicago**: *State Wabash & Michigan Plan*, *Central Area Plan*, *Reconnecting Neighborhoods Plan*, and *A Plan for Economic Growth and Jobs* (CMAP 2000, 2003, 2009, 2012)
- **Cook County**: *Partnering for Prosperity: An Economic Growth Action Agenda for Cook County* (Cook County 2013)
- **Regional Plan**: *GO TO 2040 Comprehensive Regional Plan* (CMAP 2013)

NICTD consulted local planners and economic development officials for information regarding any major planned or programmed land-development projects in the Project Area. For this Project, a *major development* is defined as one that encompasses 10 acres or more; includes 25 housing units or more, including those developed as public-private partnerships; or is a municipal project for parks, facilities, or new institutions. Most of the jurisdictions consulted reported no major developments with the exception of the Town of Munster and the City of Chicago.

The following is a list of planned developments in the Project Area. Planned and programmed transportation infrastructure projects are listed in **Chapter 2** of this FEIS.

- The 31-acre Centennial Village, a sustainable, mixed-use, walkable community at Calumet Avenue and 45th Street in Munster
- Lear Corporation Factory, a factory north of Michigan Street near Hammond Station in Hammond
- Obama Presidential Library
- City Hyde Park residential development (Solstice on the Park)
- Central Station Planned Development (One Grant Park) in Chicago's South Loop
- 1000M, a residential development on South Michigan Avenue

Essex on the Park, a residential development and hotel renovation on South Michigan Avenue. A limited number of new subdivisions are currently planned or under construction in Dyer and

Munster. However, they do not meet the above criteria for a major planned or programmed development project, so they have not been included as part of this evaluation.

4.2.4 Environmental Consequences

This section describes the environmental consequences of the FEIS Preferred Alternative on land use and zoning and summarizes the environmental consequences of the other Build Alternatives considered in the DEIS. Railroads were a part of the established setting of the communities in the Project Area, and constructing the Project would be compatible with the longstanding uses in the Project Area. The FEIS Preferred Alternative would permanently convert existing land uses to transportation-related use. Long-term operating effects for the No Build and all Build Alternatives are summarized in **Table 4.2-2**.

Table 4.2-2: Summary of Land Use and Zoning Effects

Alternative	Summary of Land Use and Zoning Effects
No Build	No direct impact on existing land uses, land use patterns, the character and intensity of existing development, or compatibility with zoning.
FEIS Preferred Alternative (Alt.)	Munster/Dyer Main Street Station parking would be incompatible with surrounding residential land uses and inconsistent with the suburban residential zoning. Munster Ridge Road Station could be incompatible with adjacent residential uses but would support the high-density residential zoning for that area. Additionally, the ADA parking, "Kiss-and-Ride" accommodations, and surface parking lot west of the tracks would be incompatible with existing residential uses and zoning, although the station and parking areas would not substantially alter access or land use patterns. South Hammond Station would not conflict with existing land uses, and no changes to overall land use patterns are anticipated. The station and parking would be incompatible with adjacent areas zoned for single-family residential on small lots. The North Hammond MSF and Hammond Gateway Station would not conflict with existing land uses and zoning in the area.
Other Build Alternatives Considered in the DEIS[a]	
DEIS NEPA Preferred Alt., CR Alt. Option (Opt.) 1–4, IHB Alt. Opt. 1–4, and Hamm. Alt. Opt. 1 and 3	Same as FEIS Preferred Alt.

Sources: NICTD 2016; HDR 2017a.

[a] Shaded areas indicate alternatives evaluated in the DEIS.

4.2.4.1 Long-term Operating Effects

No Build Alternative

The No Build Alternative would be a continuation of existing conditions; therefore, it would have no direct impact to existing land uses, land use patterns, the character and intensity of existing development, or compatibility with zoning. Additionally, the No Build Alternative would not result in any beneficial transportation effects. The lack of enhanced transit service would, instead, constrain improvement to regional multimodal access.

The No Build Alternative would limit the potential for TOD, which depends on access to transit and generally occurs surrounding a rail or transit station or hub with frequent commuter services. The No Build Alternative would not include the new commuter rail line or any new stations; regional Amtrak service and the existing MED/SSL would be the only passenger or commuter rail service that would operate in the Project Area. Therefore, with the No Build Alternative, there would be no impetus for TOD.

Additionally, the No Build Alternative would not be consistent with most regional, county, and municipal comprehensive plans. With the exception of Calumet City, all regional, county, and municipal plans directly support enhanced transit and/or commuter rail service and TOD.

FEIS Preferred Alternative

The FEIS Preferred Alternative is generally consistent with the vision and goals expressed in the local, county, and regional comprehensive plans for the communities in the Project Area. West and north of the Indiana–Illinois state line on the existing SSL and also on the MED/SSL to Millennium Station, land uses would not be affected, since no new construction would be required. Location-specific effects are discussed below.

ROW: Between Dyer and Maynard Junction, the Project would acquire separate ROW adjacent to the CSX railroad, which is used for freight and Amtrak service. Since CSX and Amtrak operations were in existence before the current development in the area, introducing new rail infrastructure that is adjacent to the CSX ROW would be compatible with this established use. From Maynard Junction to downtown Hammond, the Project would use the abandoned ROW of the out-of-service Monon Railroad, which has been in public ownership (by NICTD, the Town of Munster, and the City of Hammond) since the 1990s. This previous freight rail use, which included major rail vehicle maintenance shops near 173rd Street in Hammond, influenced the development pattern of the Project Area. The Town of Munster and the City of Hammond constructed the Monon Trail with the understanding that the trail would eventually coexist with commuter rail passenger service in the future. Segments of the existing trail would need to be relocated to accommodate the Project, although the new infrastructure would not substantially alter land uses.

Stations: Although the Project would convert land to transportation-related uses, it would not adversely affect surrounding land uses. The FEIS Preferred Alternative would be located near some residential areas. Many of these residential areas are already adjacent to railroad ROW. The FEIS Preferred Alternative would not create new physical divisions or barriers between residential areas. In these areas, the Project service would add to an existing transportation corridor but would not change the function or interaction of adjacent land uses. Although visual effects would change in some areas where the guideway would be elevated, they would not change land use patterns in station areas. The land use effects in proposed station areas are described below.

- At **Munster/Dyer Main Street Station**, ADA parking and “Kiss-and-Ride” accommodations on the east side and a parking area on the west side of the CSX railroad would be incompatible with surrounding residential land uses and inconsistent with the suburban residential zoning. The tract of vacant land on the west side of the CSX railroad, which is used for agriculture, was previously proposed for development. The Towns of Dyer and Munster have been active participants in the FTA-funded pilot program for TOD planning directed by RDA and NICTD and are looking to transform the area to fully leverage the opportunities that would be provided by a commuter rail station.

- **Munster Ridge Road Station** would be situated by a developed residential neighborhood that is north of Ridge Road. The station would be incompatible with adjacent residential uses but would support the high-density residential zoning for that area. Additionally, the ADA parking, "Kiss-and-Ride" accommodations, and surface parking lot west of the tracks would be incompatible with existing residential uses and zoning at that location, though the station and parking areas would not substantially alter access or land use patterns. The station would provide access to shopping, restaurants, and services near the Project. The Town of Munster has been an active participant in the FTA-funded pilot program for TOD planning directed by RDA and NICTD and is looking to transform the area to fully leverage the opportunities that would be provided by a commuter rail station.
- **South Hammond Station** would not conflict with existing land uses, but the station and parking would be incompatible with adjacent areas zoned for single-family residential on small lots. The parking areas would be north and south of 173rd Street, a minor arterial. NICTD does not anticipate changes to overall land use patterns; however, the proposed parking area would increase traffic congestion during peak periods, making travel across the tracks slightly less convenient at 173rd Street. The City of Hammond has been an active participant in the FTA-funded pilot program for TOD planning directed by RDA and NICTD and is looking to transform the area to fully leverage the opportunities that would be provided by a commuter rail station.
- **Hammond Gateway Station** and parking area would be located in an area of mixed residential and vacant land. The new uses would not conflict with existing land uses and zoning in the area. Although constructing the station would require acquiring residences, this would not affect the existing predominant land use pattern in the surrounding area, which is industrial. Several changes to the local street network are proposed by others (for example, the City of Hammond's Chicago Street Widening and Reconstruction Project) that would complement Hammond Gateway Station and would have a beneficial effect on access for the residential neighborhoods and nearby businesses. The City of Hammond has been an active participant in the FTA-funded pilot program for TOD planning directed by RDA and NICTD and is looking to transform the area to fully leverage the opportunities that would be provided by a commuter rail station. The surrounding street system is a walkable environment, and there is some vacant land available for potential future TOD development.
- The **North Hammond MSF** would require the acquisition of 21 acres, which are mostly industrial properties along with some residential properties. The new uses would not conflict with existing land uses and zoning in the area. Although constructing the MSF would require acquiring residences, this would not affect the existing predominant land use pattern in the surrounding area, which is industrial. The North Hammond MSF would not facilitate TOD development.

Other Build Alternatives Considered in the DEIS

Few differences would occur among the other Build Alternatives considered in the DEIS because all proposed alignment options generally lie within the same area. The other Build Alternatives considered would have similar effects on regional land use and development as the FEIS Preferred Alternative. A summary of effects is provided in **Table 4.2-2**. For specific possible effects of the other Build Alternatives considered in the DEIS on land use and zoning, refer to Section 4.2.4.1 of the DEIS. The other Build Alternatives considered are consistent with the plans of local governmental, quasi-governmental, and community organizations.

4.2.4.2 Short-term Construction Effects

The No Build Alternative would have no construction impacts, since the Project would not be built. Impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects.

The FEIS Preferred Alternative and the other Build Alternatives considered would have limited temporary difficulties accessing properties as well as on land use compatibility as a result of construction activities; there would be no construction-related impacts to zoning. NICTD does not anticipate any effects on land use patterns or consistency with community plans during construction.

Temporary impacts could include increases in noise and vibration levels, dust, fumes, traffic congestion, and visual changes. Although some businesses might experience hardship due to these effects during construction, this would not alter land use types unless a property were to become vacant. Temporary construction easements might also be required that could change parking and access or close some areas of the affected properties or adjacent properties.

4.2.5 Avoidance, Minimization, and/or Mitigation Measures

4.2.5.1 Long-term Operating Effects

No mitigation measures are proposed for the No Build Alternative, since there would be no direct impacts.

For the FEIS Preferred Alternative, the following mitigation measures would be used where there is potential for long-term impacts to land use:

- Where the parking facilities would contribute to local traffic congestion and affect access, NICTD would make improvements to four intersections; Sheffield Avenue and Main Street (upgraded traffic signal), 173rd Street and Harrison Avenue (striped to include right-turn lane), Russell Street and Hohman Avenue (modified traffic signal), and new roundabout in Hammond (monitored by the City of Hammond for traffic operations) as described in the evaluations for traffic and transportation in **Section 3.5.3.1** of this FEIS.
- Where the rail activity would create safety, noise, and vibration concerns that would disrupt land use patterns, mitigation measures would include noise barriers or receiver-based treatments to specific buildings, ballast mats, sleeper pads, or other track support system modifications as described in the evaluations for those resources in **Sections 4.8**, **5.2**, and **5.3** of this FEIS.
- Where large, surface parking facilities are developed in association with the proposed stations, NICTD would collaborate with community stakeholders. As the FEIS Preferred Alternative's design advances, NICTD would work with local elected officials, the state and county transportation departments, and the community to address site-specific issues and concerns.
- Although state and federal projects are exempt from local zoning, the final design for the FEIS Preferred Alternative would take conflicts with zoning into consideration. Where the alternative would be incompatible with existing zoning designations, NICTD would work with local officials during the engineering phase to make the alternative compatible, to the extent feasible and practical, with the intended purposes and design standards of the applicable zoning.

4.2.5.2 Short-term Construction Effects

No mitigation measures are proposed for the No Build Alternative, since there would be no construction impacts.

For the construction of the FEIS Preferred Alternative, NICTD would develop a *Maintenance and Protection of Traffic Plan* during the engineering and construction phases of the Project to address disruptions to travel. Through this and NICTD's consultation with affected property owners, access closures and temporary disruptions due to use of land for construction staging are expected to be minor. Specifically, temporary changes in land use due to maintenance-of-traffic flows and sequence of construction would be planned and scheduled to minimize traffic delays and inconvenience.

In addition, BMPs for minimizing visual changes, noise and vibration levels, dust, and fumes due to traffic detours, staging areas, and maintaining safety of construction sites would be implemented including those from the USEPA. These BMPs would buffer the construction activities from surrounding land uses and would reduce adverse temporary effects to the extent feasible and practical.

4.3 Land Acquisitions and Displacements

This section describes the expected property acquisitions and displacements for the No Build and FEIS Preferred Alternative. For more-detailed information about the expected acquisitions and displacements, see the *West Lake Corridor Project Acquisitions and Displacements/ Economic Assessment Technical Report* in **Appendix G3** of this FEIS.

4.3.1 Regulatory Setting

There have been no changes to the regulatory setting since the publication of the DEIS.

The ROW acquisition and relocation assistance program would be conducted in accordance with the Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970, as amended (42 USC § 4601 et seq.), commonly known as the Uniform Act. This act identifies the process, procedures, and timeframe for ROW acquisition and relocation of affected residents or businesses. The requirements of the Uniform Act apply whenever a project uses federal dollars in any phase of a project.

4.3.2 Methodology

Since the publication of the DEIS, the design of the Project has advanced; therefore, land acquisitions and displacements have been updated to reflect the design refinements of the Project and to include easement information.

NICTD identified properties to be fully or partially acquired based on the Project footprint, or limit of disturbance (LOD). The LOD is the boundary within which construction, materials storage, grading, landscaping, and related activities would occur. NICTD used aerial photographs, project engineering design, and county land parcel data to determine the properties, or portions of properties, within the LOD and to determine the extent of impact to each property.

For partial acquisitions, NICTD determined whether acquisition would affect the use of the property as currently designed and/or whether modifications to the property would be required to maintain use. When assessing the number and size of full and partial acquisitions, the properties were grouped into three categories: Residential, Commercial, and Other. The Other

category parcels include freight railroad property, industrial property, government offices, religious institutions, and charitable organizations.

The following types of real estate transactions and effects are discussed in this section:

- **Full Acquisition**: This is the purchase of all fee simple land ownership rights of a property.
- **Partial Acquisition**: This is the purchase of a portion of an overall property. A partial acquisition would include fee simple or easement acquisitions.
- **Displacement**: Displacement results from full acquisitions and the conversion of the existing land use to a transportation use. Displacements are measured by housing unit or business, not tax parcel. For example, the acquisition of an apartment building on a single tax parcel with six units would result in six residential displacements. Displacements occur on occupied property. For the Project, 51 percent of the property to be acquired is occupied property, 49 percent is vacant property.
- **Easement**: An easement provides for the temporary (during construction) or permanent use of a property for a particular purpose. A temporary easement might be purchased from a property owner for the purpose of storing materials and equipment, providing access to construction areas, site grading, or other construction-related activities. Properties affected by temporary easements would be restored to an acceptable pre-construction condition depending on the individual easement need and agreement. Alternately, a permanent easement might be purchased from a property owner to permanently locate infrastructure on the property without completely diminishing the property owner's use of the land. Examples of uses provided by permanent easements include stormwater management, drainage channels or storm drains, utilities, grading, and subsurface tunnels.

Full acquisitions entail the purchase of an entire parcel, whereas **partial acquisitions** entail the purchase of a portion of a parcel.

Displacements occur when a full acquisition is necessary, or when a partial acquisition would result in an impact that would affect the continued economic viability or use of a property. Owners and renters displaced as a result of the Project might be eligible for relocation assistance according to federal, state, and local laws and regulations.

Easements are purchased from property owners to compensate for temporary or permanent use of property. The legal title remains with the property owner.

4.3.3 Affected Environment

Since the publication of the DEIS, the data on land acquisitions and displacements have been updated to reflect the design refinements of the Project and to include easement information.

Lake County's industrial market is a choice location for businesses, given its proximity to interstate highways and freight rail lines. In addition, relatively low tax rates have made this area attractive to many businesses. The industrial vacancy rate is 6.6 percent (NAI Hiffman 2017). According to the 5-year estimates (2011–2015) in the United States Census Bureau's ACS, 13 percent of housing units in Lake County were vacant. Cook County's vacancy rate was 11 percent (United States Census Bureau 2016).

The parcels to be acquired consist mostly of single or multi-family homes in residential areas, as well as some commercial and "other" uses. For a description of the land uses in the Project Area, see **Section 4.2.**

4.3.4 Environmental Consequences

This section describes the environmental effects of the No Build and FEIS Preferred Alternatives. The FEIS Preferred Alternative would require land acquisitions for rail line ROW, stations, parking areas, and a vehicle MSF. NICTD estimates that the new ROW needed for the Project would affect 226 parcels and approximately 107 acres of land. This is reduced from the DEIS NEPA Preferred Alternative, which would affect 319 parcels resulting in approximately 139 acres of impact. Long-term operating effects for the No Build and all Build Alternatives are summarized in **Table 4.3-1**.

Table 4.3-1: Summary of Acquisitions and Displacements Effects

Alternative	Summary of Acquisitions and Displacements Effects
No Build	No acquisitions or displacements required.
FEIS Preferred Alt.	Acquire 202 full parcels and 24 partial parcels resulting in 106.68 acres and 107 displacements. Acquire 0.33 acre of permanent easement.
Other Build Alternatives Considered in the DEIS[a]	
DEIS NEPA Preferred Alt.	Acquire 243 full parcels and 76 partial parcels resulting in 139.40 acres and 174 displacements.
CR Alt. Opt. 1	Acquire 177 full parcels and 64 partial parcels resulting in 112.78 acres and 98 displacements.
CR Alt. Opt. 2	Acquire 153 full parcels and 64 partial parcels resulting in 123.29 acres and 97 displacements.
CR Alt. Opt. 3	Acquire 204 full parcels and 57 partial parcels resulting in 114.80 acres and 110 displacements.
CR Alt. Opt. 4	Acquire 141 full parcels and 50 partial parcels resulting in 121.60 acres and 103 displacements.
IHB Alt. Opt. 1	Acquire 172 full parcels and 63 partial parcels resulting in 132.42 acres and 108 displacements.
IHB Alt. Opt. 2	Acquire 148 full parcels and 63 partial parcels resulting in 142.93 acres and 107 displacements.
IHB Alt. Opt. 3	Acquire 199 full parcels and 56 partial parcels resulting in 134.44 acres and 120 displacements.
IHB Alt. Opt. 4	Acquire 136 full parcels and 49 partial parcels resulting in 141.24 acres and 113 displacements.
Hamm. Alt. Opt. 1	Acquire 267 full parcels and 76 partial parcels resulting in 128.89 acres and 175 displacements.
Hamm. Alt. Opt. 3	Acquire 233 full parcels and 70 partial parcels resulting in 148.84 acres and 173 displacements.

Sources: NICTD 2016; HDR 2017a.

[a] Shaded areas indicate alternatives evaluated in the DEIS.

4.3.4.1 Long-term Operating Effects

No Build Alternative

The No Build Alternative consists of the existing corridor with no acquisitions or displacements. Therefore, there would be no acquisitions or displacements with the No Build Alternative.

FEIS Preferred Alternative

The FEIS Preferred Alternative would require acquiring property and easements and displacing residential, commercial, and properties currently used for other purposes. Approximately 107 acres would be acquired for the FEIS Preferred Alternative with an additional 5.92 acres of permanent and temporary easements. Of the 5.92 acres, 0.33 acre would be permanent easement. Vacant property, including parcels of vacant land, accounts for 49 percent of the total

acreage proposed for acquisition. The FEIS Preferred Alternative would cause 107 displacements, reduced from 174 displacements for the DEIS NEPA Preferred Alternative.

Table 4.3-2 summarizes the acreage and number of acquisitions by land use and community for the FEIS Preferred Alternative. **Table 4.3-3** lists the number of displacements by land use type and community.

Table 4.3-2: Acreage and Acquisitions for the FEIS Preferred Alternative

Acquisitions	Total	Dyer	Munster	Hammond
Full acquisition area (acres)	78.20	9.60	34.09	34.51
Partial acquisition area (acres)	28.48	0.00	5.66	22.82
Total acquisition area (acres)	106.68	9.60	39.75	57.33
Full Acquisitions				
Full residential parcels	138	10	43	85
Full commercial parcels	4	0	0	4
Other full parcels[a]	60	1	30	29
Total full acquisitions	202	11	73	118
Partial Acquisitions				
Partial residential parcels	0	0	0	0
Partial commercial parcels	4	0	4	0
Other partial parcels[a]	20	0	9	11
Total partial acquisitions	24	0	13	11
Parcel Acquisitions				
Total parcel acquisitions	226	11	86	129
Temporary Easements				
Residential temporary easements area (acres)	0.00	0.00	0.00	0.00
Commercial temporary easements area (acres)	1.20	0.00	1.20	0.00
Other temporary easements area (acres)	4.39	0.00	1.78	2.61
Total temporary easements area (acres)	5.59	0.00	2.98	2.61
Permanent Easements				
Residential permanent easements area (acres)	0.00	0.00	0.00	0.00
Commercial permanent easements area (acres)	0.00	0.00	0.00	0.00
Other permanent easements area (acres)[a]	0.33	0.00	0.00	0.33
Total permanent easements area (acres)	0.33	0.00	0.00	0.33

Source: HDR 2017a.

[a] Other displacements can include freight railroad property.

Table 4.3-3: Displacements for the FEIS Preferred Alternative

Type of Displacement	Total	Dyer	Munster	Hammond
Residential	94	10	10	74
Commercial	4	0	0	4
Industrial	9	0	0	9
Municipal	0	0	0	0
Other[a]	0	0	0	0
Total	107	10	10	87

Source: HDR 2017a.

[a] Other can include freight railroad property.

Other Build Alternatives Considered in the DEIS

The other Build Alternatives considered in the DEIS would also have effects on land acquisitions and displacements. A summary of the effects is provided in **Table 4.3-1**. For specific possible effects of the other Build Alternatives considered in the DEIS on land acquisitions and displacements, refer to Section 4.3.4.1 of the DEIS.

4.3.4.2 Short-term Construction Effects

There would be no construction impacts as a result of the No Build Alternative. The impacts of other projects associated with the No Build Alternative would be evaluated separately as part of the planning for those projects.

Construction activities associated with the FEIS Preferred Alternative would result in short-term impacts to properties primarily due to activities requiring advance clearing of the ROW and temporary construction easements. A summary is included in **Table 4.3-2** under "Temporary Easements." Temporary easements would amount to 5.59 acres. Advance clearing of the ROW, such as demolishing homes and clearing trees, would include impacts such as increased heavy-machinery traffic, noise and vibration, and dust. The easement areas would be needed by the Project for a variety of uses including drainage, stormwater management, utilities, storage of materials and equipment, access to construction areas, or other Project-related needs. For temporary easement needs, the use of the property would be for the duration of construction activity. The locations of potential temporary easements have been determined as part of the conceptual engineering drawings and are included in **Appendix E**.

4.3.5 Avoidance, Minimization, and/or Mitigation Measures

4.3.5.1 Long-term Operating Effects

Acquisitions

No mitigation measures are proposed for the No Build Alternative, since there would be no direct impacts.

For the FEIS Preferred Alternative, FTA and NICTD will conduct the acquisition process in accordance with the Uniform Act. The Act requires that property owners be paid fair market value for the acquired property as well as equitable compensation normally associated with relocating.

Property acquisitions and displacements might affect some property owners and tenants whose primary language is not English. Accordingly, property acquisition and relocation discussions would be conducted in alternate languages whenever necessary. After NICTD decides to acquire a property, the acquisition process will generally be as follows:

- NICTD would contact the real property owner or owner's representative in order to explain the acquisition process, including the right to accompany the appraiser during inspection of the property, and would provide the owner with a written notice of NICTD's intent to acquire the property.
- NICTD would provide the owner 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.
- NICTD would give the property owner an opportunity to consider the offer for at least 30 days.
- NICTD would conduct negotiations without any attempt to coerce the property owner into reaching an agreement.
- NICTD would provide the property owner or tenant with at least 90 days' written notice to vacate the property before NICTD takes possession as per 49 CFR Part 24.203(c).

If negotiations with property owners are not successful, NICTD may acquire the property through eminent domain. If eminent domain is necessary, NICTD would follow the procedures set forth under state laws including Indiana Eminent Domain (Indiana Code § 32-24) and Relocation Assistance (Indiana Code § 8-23-17). In addition, the Hammond City Council has passed an ordinance for Hammond residents whose homes are being acquired for the Project offering market price to sell their homes and a $5,000 stipend provided they purchase a replacement home in Hammond. The ordinance is called Hammond is My Home. For information about the Hammond is My Home ordinance, contact the City of Hammond or go to http://www.gohammond.com/.

Displacements

There would be no displacements from the No Build Alternative; therefore, no mitigation measures are proposed.

For the FEIS Preferred Alternative, any relocation of a displaced individual or business would be conducted in accordance with the Uniform Act. Ample notice will be given to those being relocated to allow for any planning contingencies that might arise. 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. NICTD would make every reasonable effort to identify available comparable properties within the existing community and maintain access to community services and activities for displaced individuals.

NICTD anticipates 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 be

made available to displaced persons. According to 49 CFR Part 24.404, 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, NICTD would provide relocation planning and services 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 reinstallation of machinery and other personal property
- Identification and resolution of personal property and 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

NICTD would continue proactive communication, coordination, and engagement with local community organizations to work with displaced business owners to:

- Identify preferred relocation options and prepare for a smooth transition to a new location for both the business and its employees.
- Provide information to the communities where businesses would be displaced about the businesses' new locations, with transit options to access the new business location and/or other options to meet their needs.

4.3.5.2 Short-term Construction Effects

There would be no construction impacts from the No Build Alternative; therefore, no mitigation measures are proposed.

For construction of the FEIS Preferred Alternative, NICTD would restore properties affected through a temporary easement to an acceptable pre-construction condition following construction activities, in accordance with the individual easement agreements.

4.4 Socioeconomics and Economic Development

This section describes the existing socioeconomic characteristics (population, housing, and employment) of the Project Area. To ensure that potential effects on people and communities are integrated into the decision-making process for transit investments, NEPA specifically requires the consideration of social and economic impacts of the Project. Note that minority and low-income populations are specifically discussed in **Section 4.9**. Further information about the socioeconomic and economic analysis is provided in the *West Lake Corridor Project Acquisitions and Displacements/Economic Assessment Technical Report* in **Appendix G3**.

4.4.1 Regulatory Setting

There have been no changes to the regulatory setting since the publication of the DEIS.

The CEQ regulations that implement NEPA (40 CFR Parts 1500–1508) state that the "[h]uman environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment."

4.4.2 Methodology

Since publication of the DEIS, the data on existing conditions have been updated. The methodology to estimate jobs and earnings from Project operations was changed to focus on the labor component of O&M costs and its impact on the local economy.

The Project Area considered for this analysis includes the area within 0.5 mile on either side of the centerline of the proposed alignments for the FEIS Preferred Alternative. Socioeconomic information was derived from the following sources using the most current data available, including:

- 2010 United States Census
- 2015 ACS – 5-year averages (2011-2015)
- 2014 CMAP subzone data
- 2015 NIRPC Traffic Analysis Zone (TAZ) data

Comparable data included in state, local, and regional plans were reviewed to further inform the assessment of demographic data. Economic development trends were identified through coordination with the municipalities and CMAP and NIRPC. Impacts to socioeconomic conditions and economic development were qualitatively assessed for the No Build Alternative and the Build Alternatives.

To estimate the fiscal effects of the FEIS Preferred Alternative, government finance and tax sources were reviewed, in particular property taxes. Data on properties that would be acquired by the Project were obtained from the Lake County Property Assessors. For this analysis, the expected change in the tax base because of property acquisitions for the Project was estimated.

The Bureau of Economic Analysis (BEA) Regional Input-Output Modeling System (RIMS) II Series 2013 (updated in 2015) multipliers were used to estimate jobs and earnings effects resulting from construction and operations of the FEIS Preferred Alternative. The multipliers are constructed to reflect the structure of economies of the Chicago-Naperville-Elgin, IL-IN-WI Metropolitan Statistical Area including Lake County, Indiana, and Cook County, Illinois. Derived from the BEA RIMS, the multipliers measure the total change (direct plus indirect effects) in output, employment, and earnings that results from an incremental change to a particular

industry. They represent the most updated version available at the time this analysis was prepared.

4.4.3 Affected Environment

Since the publication of the DEIS, socioeconomic and economic analyses have been updated to reflect Project design refinements, existing conditions, and current Project data.

4.4.3.1 Population

In 2015, the population in the Project Area was nearly 253,000, with 51 percent of the population living in Indiana and 49 percent living in Illinois. The population is relatively evenly distributed across the Project Area, with denser clustering near the proposed station locations in Hammond and the lowest density of persons per square mile in Dyer.

Table 4.4-1 summarizes the CMAP population projections for 2010 to the 2040 horizon year and projections for 2015 to 2040 available from NIRPC. No single source of projections was available across the entire Project Area for the same years and using the same projection methodology. Consequently, the most current estimates are shown separately by state.

However, some trends in population growth can be observed. The data indicate that both the Indiana and Illinois portions of the Project Area would steadily grow in population to 2040. Outside of the City of Chicago, the strongest population growth (total population change) is projected to be in the north Hammond area in Indiana.

Table 4.4-1: Population Projections in the Project Area

Area	2015	2040	Percent Change
Indiana (NIRPC Projections)			
Dyer	18,352	21,725	18
Munster	24,163	26,499	10
Hammond	87,927	99,207	13
NIRPC region	799,626	938,683	17
Area	2010	2040	Percent Change
Illinois (CMAP Projections)			
Chicago Existing MED/SSL Portion	123,133	152,423	24
Cook County Portion (not including MED/SSL portion)	159,648	194,013	22
CMAP region	8,304,113	10,677,414	29

Sources: NIRPC 2015; CMAP 2014c.

4.4.3.2 Housing

Table 4.4-2 presents the housing characteristics of the Project Area. Home ownership is highest in Dyer at nearly 91 percent. Traveling north in the Project Area, the percentage of home ownership declines steadily, and the percentage of rental housing units changes to a high of 63 percent at the Project terminus in Chicago.

Household size remains essentially constant across the Project Area. An average household size of approximately three persons, along with the age cohort data, suggests families with one or more children. Similar to the rental housing data, the number of households without a personal vehicle rises from the southern end of the Project Area to the northern end, with the greatest number of households without a vehicle in Chicago. The existing MED/SSL portion of the Project Area has a relatively high concentration of transit-dependent workers. By contrast, the southern end of the Project Area has a very low percentage of households without a vehicle available.

Table 4.4-2: Housing Characteristics in the Project Area

Area	Total Housing Units	Housing as % of Municipal Total	Housing that is Owner Occupied	Housing that is Renter Occupied	Vacant Housing	Average HH Size	HH without Vehicle
Dyer	6,020	NA	91%	9%	4%	3	2%
Munster	9,186	NA	87%	13%	4%	3	5%
Hammond	32,612	NA	62%	38%	13%	3	9%
Chicago Existing MED/SSL Portion	71,855	6%	37%	63%	16%	3	20%
Cook County Portion (not including MED/SSL portion)	9,955	NA	59%	41%	14%	3	11%
Project Area Total	10,625	NA	50%	50%	15%	3	17%
NIRPC region	323,602	NA	69%	33%	14%	3	9%
CMAP region	3,369,908	NA	64%	37%	10%	3	14%
Illinois	5,307,222	NA	66%	44%	13%	3	22%
Indiana	2,829,532	NA	70%	30%	14%	3	17%

Source: United States Census Bureau 2016.

Note: NA = not available

4.4.3.3 Employment and Income

Employment projections are available from CMAP and NIRPC, and these projections are summarized in **Table 4.4-3** (CMAP employment projections for 2010 to the 2040 horizon year and NIRPC projections for 2015 to 2040). As with the population projections, no single source of projections was available across the entire Project Area for the same years and using the same projection methodology. Consequently, the most current estimates are shown separately by state. However, some trends in employment growth can be observed. The data indicate that employment across the Project Area would grow steadily. The variation among jurisdictions in employment growth would not be substantial. Overall, the data suggest that employment would grow the most in the area from Hammond to just across the state line into Illinois.

Table 4.4-3: Employment Forecasts in the Project Area

Area	2015	2040	Percent Change
Indiana (NIRPC Forecasts)			
Dyer	5,212	5,836	12
Munster	13,655	15,992	17
Hammond	29,609	38,014	28
NIRPC Region	290,206	353,315	22
Area	2010	2040	Percent Change
Illinois (CMAP Forecasts)			
Chicago Existing MED/SSL Portion	107,026	124,527	16
Cook County Portion (not including MED/SSL portion)	112,051	132,266	18
CMAP region	3,806,256	4,992,117	31

Sources: NIRPC 2015; CMAP 2014c.

Table 4.4-4 summarizes employment and income characteristics of residents in the Project Area. Unemployment is comparatively low in Dyer and Munster. It rises sharply in the Cook County portion and in Chicago at more than triple the percentage of each of the two southern-most communities. Similarly, with the exception of Hammond, median household income is higher at the southern end of the Project Area and declines toward the northern end of the Project Area in Chicago.

The data for Hammond, Chicago, and the Cook County portion, along with the housing data previously described, collectively indicate that these areas are more economically distressed than the balance of the Project Area. Despite this and the unemployment rate in Hammond (8 percent), the highest density of employment in the Project Area after Cook County and pockets along the existing MED/SSL corridor is also in Hammond. This reflects the fact that Hammond is more densely developed in general than the rest of the Indiana portion of the Project Area.

Table 4.4-4: Employment and Income in the Project Area

Geography	Total Employed	Employed Persons as Percentage of Municipal Total	Unemployed	Median Household Income
Dyer	8,233	NA	6%	$79,708
Munster	10,767	NA	5%	$70,503
Hammond	32,111	NA	8%	$39,576
Chicago Existing MED/SSL Portion	51,974	NA	20%	$59,469
Cook County Portion (not including MED/SSL portion)	9,661	NA	18%	$41,755
NIRPC Region	339,022	NA	13%	$49,654
CMAP Region	4,013,150	NA	12%	$64,518
Illinois	6,086,226	NA	6%	$57,574
Indiana	3,300,531	NA	5%	$49,255

Source: United States Census Bureau. 2016.
Notes: NA = not available

4.4.4 Environmental Consequences

The direct impacts of the FEIS Preferred Alternative in terms of socioeconomic conditions and economic development are discussed in the following sections. The long-term operating effects for the No Build and all Build Alternatives are summarized in **Table 4.4-5**.

Table 4.4-5: Summary of Socioeconomic Effects

Alternative	Summary of Socioeconomic Effects
No Build	No direct impacts to socioeconomic conditions or trends. Neutral effect on economic vitality, and no impact on access to developable land.
FEIS Preferred Alt.	Socioeconomics and Demographic Effects: The Project would shift population, housing, and employment growth. Government Finance and Tax Sources: The FEIS Preferred Alternative would decrease the property tax base for Lake County by 0.043 percent.
Other Build Alternatives Considered in the DEIS[a]	
DEIS NEPA Preferred Alt.	Socioeconomics and Demographic Effects: Same as FEIS Preferred Alt. Government Finance and Tax Sources: The DEIS NEPA Preferred Alternative would decrease the property tax base for Lake County by 0.044 percent.
CR Alt. Opt. 1	Socioeconomics and Demographic Effects: Same as DEIS NEPA Preferred Alt. Government Finance and Tax Sources: 0.025 percent loss in the tax base for Lake County.
CR Alt. Opt. 2	Socioeconomics and Demographic Effects: Same as DEIS NEPA Preferred Alt. Government Finance and Tax Sources: 0.024 percent loss in the tax base for Lake County.
CR Alt. Opt. 3	Socioeconomics and Demographic Effects: Same as DEIS NEPA Preferred Alt. Government Finance and Tax Sources: 0.031 percent loss in the tax base for Lake County.
CR Alt. Opt. 4	Socioeconomics and Demographic Effects: Same as DEIS NEPA Preferred Alt. Government Finance and Tax Sources: 0.044 percent loss in the tax base for Lake County.
IHB Alt. Opt. 1	Socioeconomics and Demographic Effects: Same as DEIS NEPA Preferred Alt. Government Finance and Tax Sources: 0.021 percent loss in the tax base for Lake County.
IHB Alt. Opt. 2	Socioeconomics and Demographic Effects: Same as DEIS NEPA Preferred Alt. Government Finance and Tax Sources: 0.020 percent loss in the tax base for Lake County.
IHB Alt. Opt. 3	Socioeconomics and Demographic Effects: Same as DEIS NEPA Preferred Alt. Government Finance and Tax Sources: 0.027 percent loss in the tax base for Lake County.
IHB Alt. Opt. 4	Socioeconomics and Demographic Effects: Same as DEIS NEPA Preferred Alt. Government Finance and Tax Sources: 0.040 percent loss in the tax base for Lake County.
Hamm. Alt. Opt. 1	Socioeconomics and Demographic Effects: Same as DEIS NEPA Preferred Alt. Government Finance and Tax Sources: 0.046 percent loss in the tax base for Lake County.
Hamm. Alt. Opt. 3	Socioeconomics and Demographic Effects: Same as DEIS NEPA Preferred Alt. Government Finance and Tax Sources: 0.064 percent loss in the tax base for Lake County.

Sources: NICTD 2016; HDR 2017a.

[a] Shaded areas indicate alternatives evaluated in the DEIS.

4.4.4.1 Long-term Operating Effects

No Build Alternative

The No Build Alternative would be a continuation of existing conditions. As such, it is not expected to have direct impacts to socioeconomic conditions or trends. It would have a neutral effect on economic vitality and no impact to access to developable land. At the same time, the No Build Alternative would not offer any beneficial effects; it would not provide enhanced transit service, so it would not offer enhanced multimodal access for jobs or access to developable land. It would not support economic development initiatives in Hammond. In particular, the No

Build Alternative would limit the potential for TOD as an economic development strategy because no new rail line or stations would be built. Intercity Amtrak service and the existing SSL would be the only passenger/commuter rail service operating in the Project Area. Therefore, the impetus for TOD would not be created.

FEIS Preferred Alternative

Socioeconomics and demographic effects: The FEIS Preferred Alternative is not expected to increase or decrease population, housing, or employment from a regional perspective. However, it is expected to shift and focus where growth would occur. Overall, the FEIS Preferred Alternative would have a direct beneficial impact to access to employment opportunities, particularly for people who are transit-dependent, because the availability of options for commuting to work in downtown Chicago would improve. The FEIS Preferred Alternative complements the trend of job growth in downtown Chicago and expected limited job growth in the suburban communities of Hammond, Munster, and Dyer by connecting these areas. Additionally, the Project would provide a beneficial effect by creating more modes of access to developable land throughout the Project Area.

Government finance and tax sources: When private property is acquired by a public entity, the property is no longer subject to property taxes and is removed from the tax base. This analysis presents the total assessed value of the properties that would be acquired for the FEIS Preferred Alternative as documented in **Section 4.3**. The acquisition of private property, which would be necessary to build the FEIS Preferred Alternative, is expected to decrease the property tax base for Lake County as shown in **Table 4.4-6**. The total taxable value of property that would be removed from the tax base would be more than $8.4 million (2017 dollars), assuming a maximum deduction. This value does not include the value of any land that would be removed from properties that are exempt from tax, such as religious organizations or public property, because these would not affect the tax revenues generated.

The property acquisitions for the FEIS Preferred Alternative are in Lake County: Dyer, Munster, and Hammond. Based on the property tax rates for these cities, the annual revenue that would be lost under the FEIS Preferred Alternative would be $343,922 (2017 dollars). The FEIS Preferred Alternative would decrease the property tax base for Lake County by 0.043 percent. Therefore, the FEIS Preferred Alternative would not have any substantial negative fiscal impacts for Lake County. This decrease in the property tax base represents a conservative (high) estimate because it does not account for any relocation or replacement of the value elsewhere within the county. In addition, likely increases in the property tax base due to redevelopment in the transit station areas are not accounted for.

> Job-year is defined as one job for one person for 1 year. For example, 3 job-years are equal to three people doing a job for 1 year, or one person doing a job for 3 years.

Operation and maintenance economic impacts: The FEIS Preferred Alternative is expected to create jobs and earnings associated with operation and maintenance of the North Hammond MSF. Operation and maintenance of the FEIS Preferred Alternative on the national economy would have the potential to stimulate an estimated 164 total job-years annually, with earnings of $5.1 million. Operation and maintenance of the FEIS Preferred Alternative on the local economy (Chicago-Naperville-Elgin, IL-IN-WI Metropolitan Statistical Area) would have the potential to stimulate an estimated 56 total job-years annually, with earnings of $1.7 million (including weekend operations).

Table 4.4-6: Taxable Value of Property Removed from Tax Base after Deductions[a] and Annual Tax (2017 Dollars) – FEIS Preferred Alternative

Alternative	Total Taxable Value of Property Removed From Tax Base[b]		Annual Revenue Lost (Percentage of Tax Base)	
	Lake County	Cook County	Lake County	Cook County
FEIS Preferred Alt.	$8,404,785	$0	$343,922 (0.043%)	$0

Source: HDR 2017a.

[a] Assumes maximum deductions.

[b] After deductions; properties for which no information was available were assumed to be valued at $0.

4.4.4.2 Short-term Construction Effects

There would be no construction impacts as result of the No Build Alternative. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects.

Short-term, construction-related impacts to socioeconomic conditions and economic vitality related to the FEIS Preferred Alternative would relate to the generation of construction jobs and construction costs as well as increased trade at local retail and service businesses during construction. The FEIS Preferred Alternative (construction activities) would have the potential to stimulate approximately 4,257 total job-years, with earnings of more than $198 million, or an average of $46,700 per job-year.

Construction of the FEIS Preferred Alternative would be a substantial capital investment in the local economy as construction-related impacts would last for the duration of the Project's construction cycle.

Other short-term impacts would result from temporary disruptions to business access from construction equipment or activities as well as from noise, dust, and/or fumes that could disrupt business operations. Temporary construction easements could be required, which could result in changes to parking and access, or closures of some areas of affected properties or adjacent properties. Although some businesses could experience hardship due to these construction effects, this impact would not alter local economic vitality unless some properties become vacant.

4.4.5 Avoidance, Minimization, and/or Mitigation Measures

4.4.5.1 Long-term Operating Effects

No mitigation measures are proposed as a result of the No Build Alternative because no impacts are expected.

For the FEIS Preferred Alternative, the redistribution of growth in population, households, and employment that could be generated by the Project is consistent with local plans and policies, as described in **Section 4.2**. The FEIS Preferred Alternative is not expected to result in negative effects on economic output, job creation, or income. Therefore, mitigation measures would not be warranted.

The tax revenue losses due to property acquisitions from construction of the FEIS Preferred Alternative would be minimal in comparison to the overall tax base, and expected longer-term development would help replenish the tax revenue. Mitigation efforts by NICTD would include identifying and promoting redevelopment, infill, and economic-development opportunities by the affected municipalities through the Corridor TOD plan as discussed in the next paragraph. Mitigation efforts by FTA and NICTD would also include proactive policies to relocate businesses near their existing location to offset any potential loss of property tax revenue as discussed in **Section 4.3.5.1**.

NICTD's role in promoting transit-supportive development in proximity to station areas is to encourage jurisdictions that have land use decision-making controls to maximize the benefits of the transit investment. NICTD was awarded an FTA pilot program for TOD planning grant for the corridor, and this TOD study has been completed. NICTD continues to support each community's TOD efforts and the study findings now that the study is complete.

4.4.5.2 Short-term Construction Effects

No mitigation measures are proposed as a result of the No Build Alternative because no impacts are expected.

For the FEIS Preferred Alternative, temporary and short-term socioeconomic impacts would be mitigated through the following measures:

- NICTD would coordinate with individual businesses to ensure that critical business activities are not disrupted and that reasonable access during regular operating hours is maintained.
- NICTD would notify property owners, businesses, and residences of major construction activities on a real-time basis.

NICTD would coordinate with the affected utility companies to minimize disruption of service

4.5 Neighborhoods and Community Resources

This section describes the existing neighborhoods and community facilities in the Project Area and assesses the effects of the Project alternatives on these resources. Detailed descriptions of neighborhoods and community resources in the Project Area are included in the *West Lake Corridor Project Land Use, Neighborhoods, and Community Resources Technical Report* in Appendix H-2 of the DEIS.

4.5.1 Regulatory Setting

There have been no changes to the regulatory setting since the publication of the DEIS.

The CEQ guidelines that implement NEPA (40 CFR Part 1502) contain regulatory requirements for describing the affected environment and environmental consequences for general resources, including neighborhoods and community facilities.

4.5.2 Methodology

There have been no changes to the methodology since the publication of the DEIS.

Because FTA does not have guidelines for assessing effects on neighborhoods, NICTD used FHWA's *Community Impacts Assessment: A Quick Reference for Transportation* (FHWA 1996) as a guide to assess the Project's impacts to community resources and neighborhoods.

The Project Area considered for this analysis includes the area within 0.5 mile on either side of the proposed alignment and within 500 feet of the portion of the alignment along the existing MED/SSL. The neighborhoods that are wholly or partially within the Project Area (that is, 50 percent of the neighborhood or more) were identified through municipal websites as well as through discussions with municipal planning or economic development staff from the Project Area communities.

NICTD qualitatively assessed the impacts to community

Community resources provide basic needs and services to communities and neighborhoods:

- Emergency services including police, fire, and ambulance/ emergency medical services (EMS) stations
- Schools, colleges, and universities
- Religious institutions, places of worship, and cemeteries
- Cultural institutions such as libraries and museums
- Hospitals and medical facilities
- Recreation areas, parks, and trails
- Community and senior centers

resources and neighborhoods from the No Build Alternative, the FEIS Preferred Alternative, and the other Build Alternatives considered in the DEIS by considering the following effects:

- Changes in neighborhood quality of life and human health
- Changes in community cohesion
- Loss of community resources or institutions
- Changes in access to or from community resources or institutions
- Changes in safety and security

4.5.3 Affected Environment

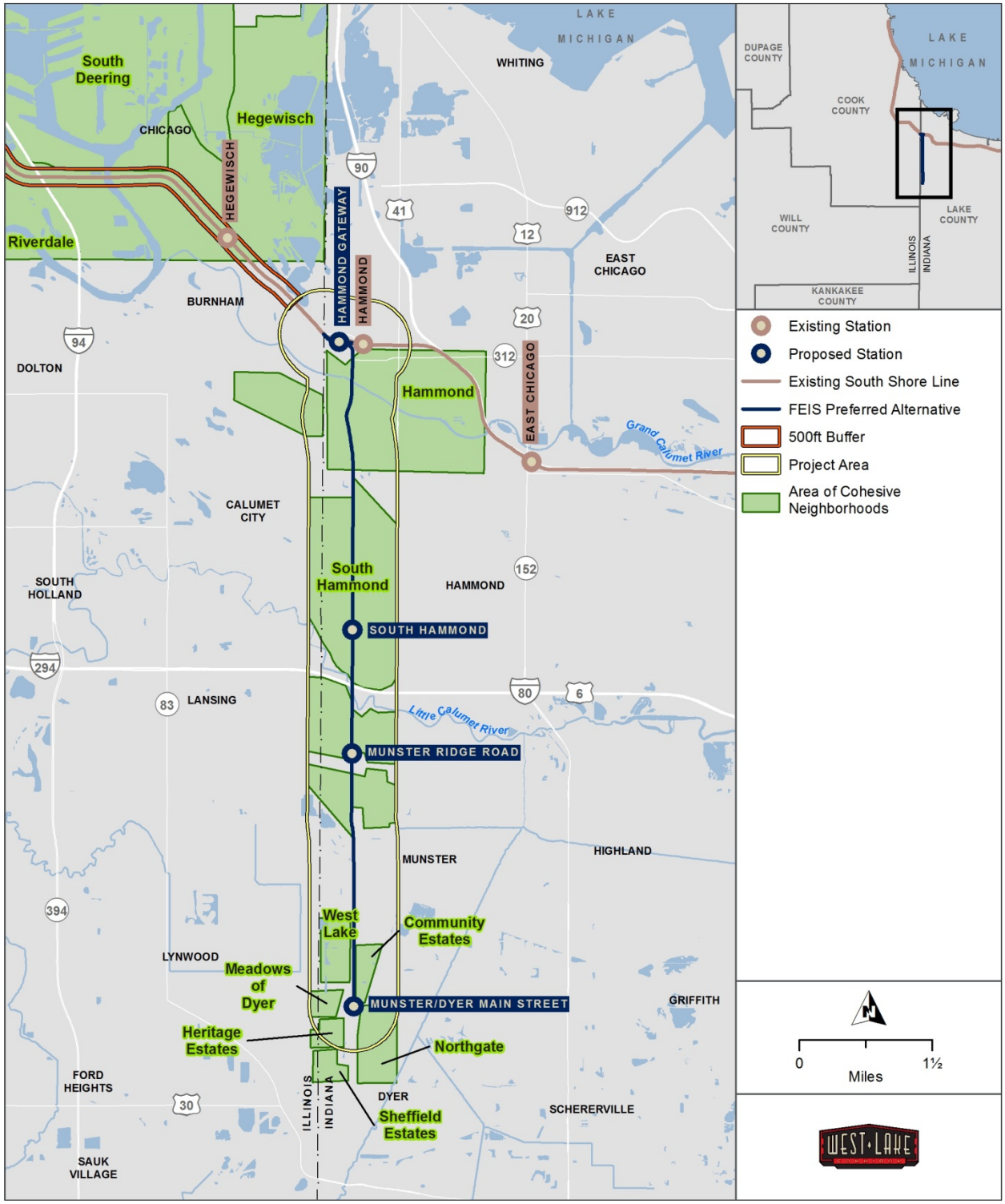
Since the publication of the DEIS, the design of the Project has advanced; therefore, the neighborhoods and community resources have been updated to reflect the design refinements of the Project. The effects on neighborhoods and community resources have been updated to include no effects to the Dan Rabin Plaza and Lake County Superior Court and Probate Clerk building. The Project would no longer affect the Family Christian Center but would affect Hartsfield Village. Figures have been updated graphically to reflect current data.

4.5.3.1 Neighborhoods

Neighborhoods are generally defined three ways. First, they can be identified by municipal governments for planning, urban renewal, political, or service purposes (such as sewer service areas). Secondly, neighborhoods are commonly defined by residents who live there and who identify themselves as living within a cohesive area where they have a sense of belonging or closeness. Such neighborhoods, as identified by residents, might have distinct geographic boundaries or might be informally or loosely understood, such as by virtue of being within a residential area with an internal network of local or residential streets and housing of a generally cohesive architectural style. Finally, neighborhoods might also be defined by formal homeowner or business owner associations encompassing a discrete area in a community.

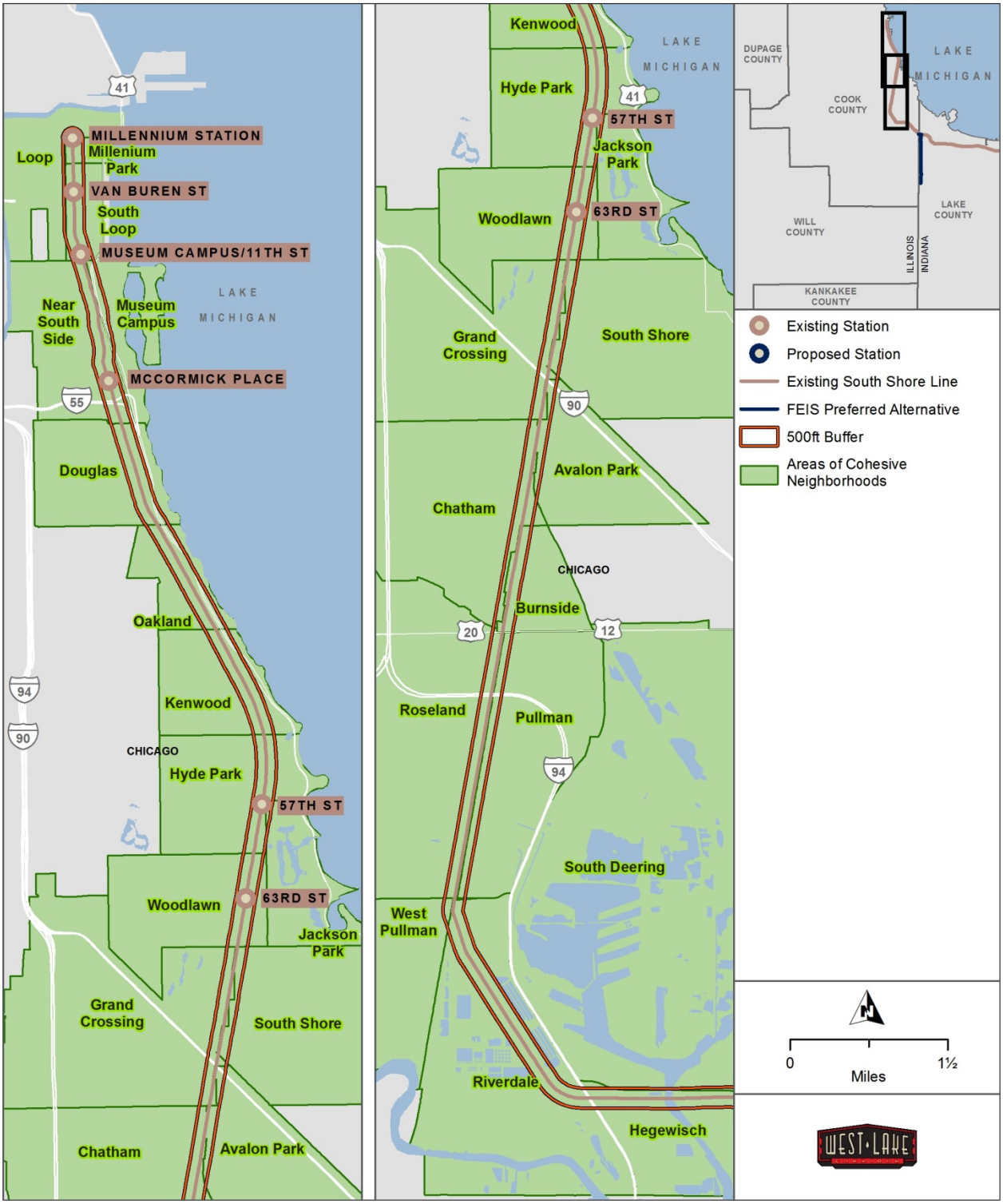
The Project Area traverses low-density suburban neighborhoods at its southern terminus in Dyer and then travels through more densely developed, urban neighborhoods near its northern terminus at Millennium Station in downtown Chicago. In the Project Area's more suburban southern communities, neighborhoods tend to take the form of housing subdivisions and are informally defined, if they are defined at all. More well-defined neighborhoods in Indiana tend to occur in the communities closer to Chicago. While neighborhoods in the Cook County portion of the Project Area are informally defined, the Chicago neighborhoods have recognized boundaries with place names. The neighborhoods that are wholly or partially within the Project Area are shown in **Figure 4.5-1** and **Figure 4.5-2**.

Figure 4.5-1: General Neighborhood Locations in the Project Area



Sources: CMAP 2013; NIRPC 2014b.

Figure 4.5-2: General Neighborhood Locations along the Existing MED/SSL



Sources: CMAP 2013; NIRPC 2014b.

4.5.3.2 Community Resources

Community resources are facilities that provide a broad spectrum of services for public benefit and contribute to a sense of place—facilities including civic, educational, and health care services; religious and cultural institutions; and public open space. More than 100 community resources, including parks, are located wholly or partially within the Project Area.

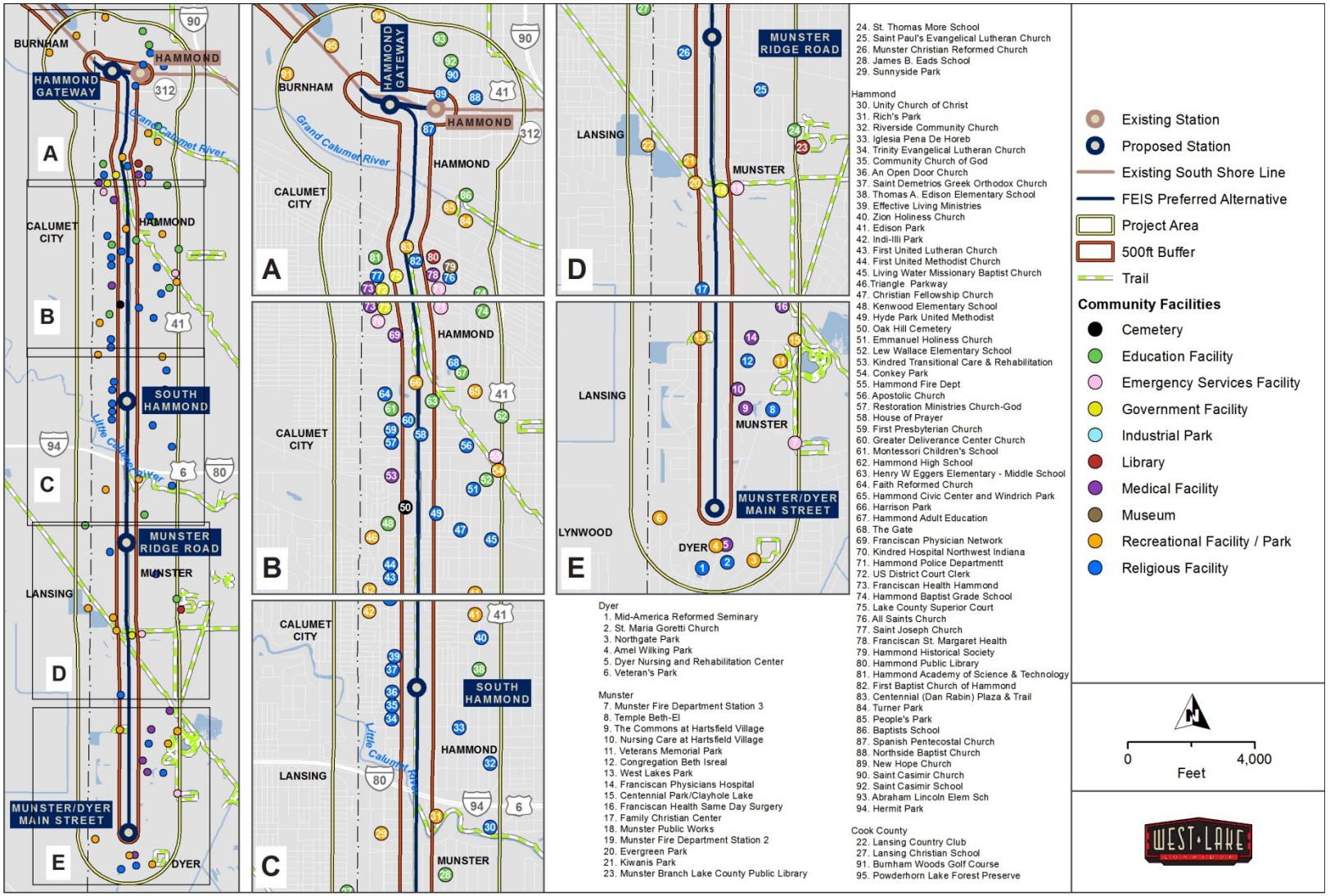
Table 4.5-1 summarizes the number of community resources by type in the Project Area; these resources are shown in **Figure 4.5-3** for the proposed alignment. Of these resources, those within 500 feet of the proposed alignment would have the highest potential for direct impacts; therefore, they are listed in **Figure 4.5-3** for the proposed alignment and shown in **Figure 4.5-4** for the portion along the existing MED/SSL.

Table 4.5-1: Summary of Community Resources in the Project Area

Location	Emergency Services	Schools	Religious Institutions and Cemeteries	Cultural Institutions	Hospitals and Medical Facilities	Government Facilities	Recreation
Dyer	0	0	2	0	1	0	3
Munster	2	2	4	1	4	0	5
Hammond	3	11	24	1	4	1	9
Cook County portion	0	1	0	0	0	0	3
Chicago-Millennium/ SSL portion	4	89	43	26	3	0	6
Total	9	103	73	28	12	1	26

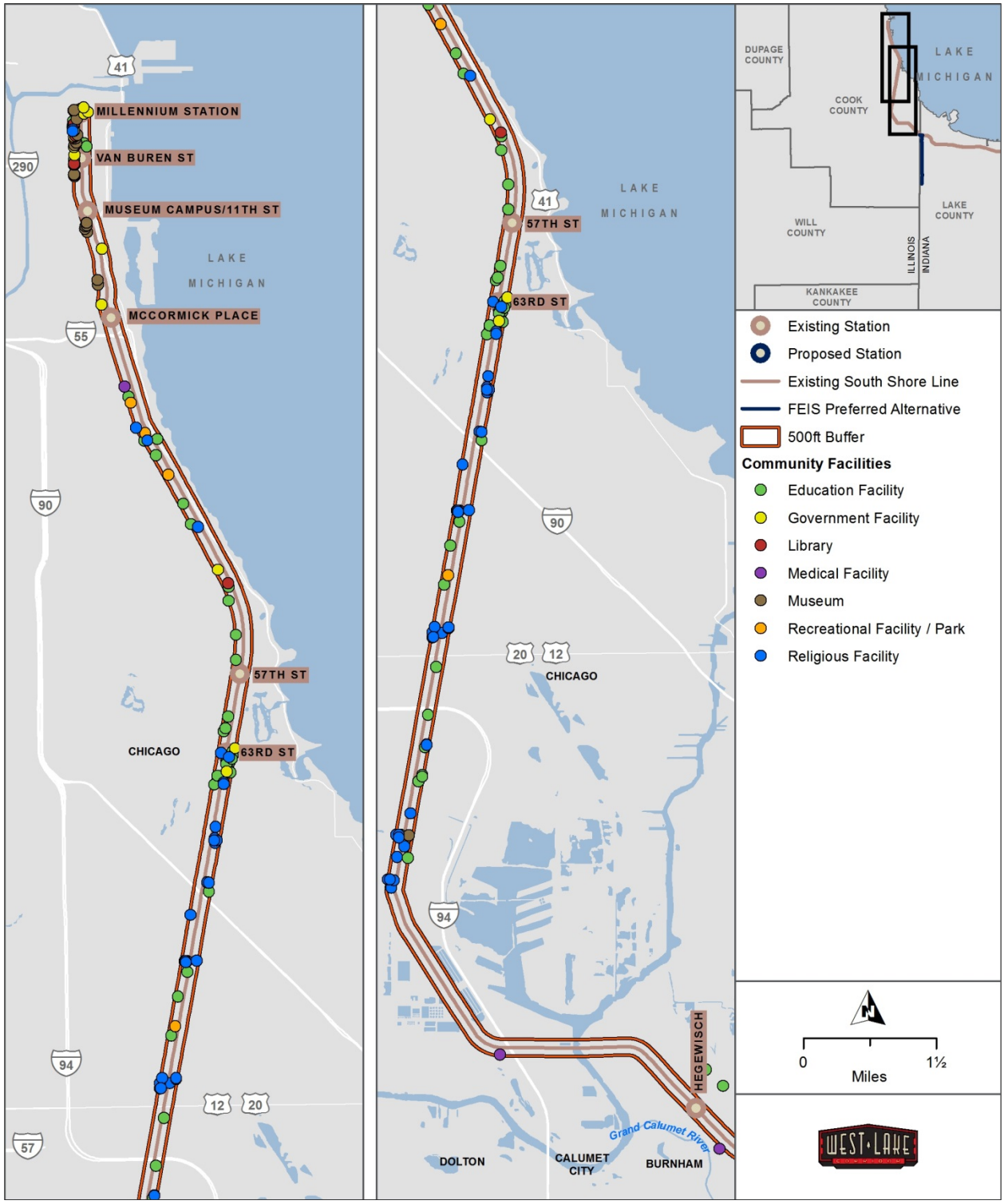
Sources: Google Earth; ESRI 2014.

Figure 4.5-3: Community Resources in the Project Area



Sources: CMAP 2013; NIRPC 2014b.

Figure 4.5-4: Community Resources along the Existing MED/SSL



Sources: CMAP 2013; NIRPC 2014b.

4.5.4 Environmental Consequences

This section describes the environmental effects of the No Build and FEIS Preferred Alternatives on neighborhoods and community resources. The long-term operating effects for the No Build and all Build Alternatives are summarized in **Table 4.5-2**.

Table 4.5-2: Summary of Neighborhood and Community Resources Effects

Alternative	Summary of Neighborhood and Community Resources Effects
No Build	No direct impacts to neighborhoods or community resources.
FEIS Preferred Alt.	Introduction of commuter rail service would affect the perceived or actual connectivity of neighborhoods where no rail operations currently exist. Neighborhood housing would be affected by localized changes in visual context, noise, and vibration from adjacent commuter rail–related facilities. The FEIS Preferred Alternative would be adjacent to community resources within the Project Area, such as trails, parks, and schools. Users of the community resources could experience changes in the visual context and/or noise and vibration levels. Various impacts to Hartsfield Village, Pennsy Greenway, Monon Trail, Oak Hill Cemetery, Harrison Park, and the playing field and lawn for Eggers Middle School.
Other Build Alternatives Considered in the DEIS[a]	
DEIS NEPA Preferred Alt., CR Alt. Opt. 1–4, Hamm. Alt. Opt. 1 and 3	Same impacts as FEIS Preferred Alternative. Various impacts to West Lakes Park, Family Christian Center Church, Pennsy Greenway, Monon Trail, Oak Hill Cemetery, Harrison Park, the playing field and lawn for Eggers Middle School, and Erie Lackawanna Trail.
IHB Alt. Opt. 1–4	Same impacts as DEIS NEPA Preferred Alt. plus various impacts to Burnham Prairie Nature Preserve, Beaubien Woods, and Flatfoot Lake.

Sources: NICTD 2016; HDR 2017a.

[a] Shaded areas indicate alternatives evaluated in the DEIS.

4.5.4.1 Long-term Operating Effects

No Build Alternative

The No Build Alternative would not have direct impacts to neighborhoods or community resources, since the Project would not be constructed under the No Build Alternative.

FEIS Preferred Alternative

Neighborhoods

ROW: The proposed rail line would require the acquisition of residential, business, and industrial properties. Vacant property, including parcels of vacant land, accounts for 49 percent of the total acreage proposed for acquisition. Between Dyer and Maynard Junction, the Project would acquire separate ROW adjacent to the existing CSX railroad, an active freight and Amtrak route. Since CSX freight and Amtrak operations are already in existence, widening the existing rail alignments to include Project infrastructure would not create new barriers in the community. From the Maynard Junction to downtown Hammond, the Project would use the abandoned ROW of the out-of-service Monon Railroad, which has been in public ownership (owned by NICTD, the Town of Munster, and City of Hammond) since the 1990s. This previous freight rail use, which included major rail vehicle maintenance shops near 173rd Street in Hammond,

influenced the development pattern of the Project Area. The Town of Munster and the City of Hammond developed the existing Monon Trail on the abandoned ROW with the understanding that the trail would eventually coexist with commuter passenger rail service in the future. The introduction of commuter rail service from Maynard Junction to downtown Hammond might affect the perceived or actual connectivity for neighborhoods where no rail operations and associated noise currently occur.

Stations: The ADA parking for the proposed Munster/Dyer Main Street Station would require the acquisition of a cluster of 10 homes on the west side of Sheffield Avenue and south of Main Street, which would have a direct but limited effect on neighborhood cohesion due to the existing Sheffield Avenue separation of these homes from their neighborhood. The proposed Munster/Dyer Main Street Station would cause minor impacts to quality of life to neighborhoods located on the west side of the tracks due to the presence of the commuter parking lot. Potential impacts would include local noise, visual effects, and public safety concerns.

Parking for Munster Ridge Road Station would create a visual barrier between the neighborhoods on either side of the tracks, creating a minor effect. Station parking would create local noise, traffic, public safety concerns, and visual effects, which could affect nearby housing.

The proposed South Hammond Station would not require the acquisition of any homes or businesses. It would, however, create a minor effect due to a visual barrier between the neighborhoods on either side of the tracks. The station parking would be located near small-lot houses and would create local noise, public safety concerns, and visual effects.

Hammond Gateway Station would be constructed in an urban neighborhood as part of a joint facility with a relocated SSL Hammond Station. The proposed station would require the acquisition of residential and industrial properties; however, NICTD does not expect this acquisition to create a gap in the neighborhood cohesion, and there are no anticipated impacts to quality of life due to the presence of an active rail line and the urban nature of the neighborhoods in this portion of the Project Area. The proposed station would be coordinated with Hammond's Chicago Street Widening and Reconstruction Project.

The North Hammond MSF would require the acquisition of residential, business, and industrial properties. NICTD does not anticipate any impacts to neighborhood cohesion or changes in quality of life because the area is already industrial in nature.

For the FEIS Preferred Alternative, there would be no physical changes in the area west and north of the Indiana–Illinois state line along the existing MED/SSL corridor; therefore, no impact to communities or neighborhoods is anticipated.

Community Resources

Partial property acquisitions for ROW would result in loss of property for some of the community resources listed below along the proposed alignment. Other impacts would be related to access, visual, noise, and vibration changes and are also listed below for the community resources adjacent to the Project. Within the Project Area noise and vibration impacts were indicated at residential locations only as discussed in **Sections 5.2** and **5.3**. Some community resources near the proposed stations would benefit from improved access that the Project would provide.

- The partial acquisition of a small portion (0.59 acre) of property for Hartsfield Village, a continuing care retirement community, along the proposed alignment would result in a loss of property area of 1.62 percent. The existing berm on the property to be acquired would be restored to provide separation from the railway. In addition to the partial acquisition, a temporary easement is required to restore the berm. No removal of any existing function of the property would occur.
- The FEIS Preferred Alternative would not require ROW from West Lakes Park in Munster. The FEIS Preferred Alternative would introduce new visual elements in addition to noise and vibration effects associated with commuter rail. The **Chapter 4** and **5** assessments of visual resources, noise, and vibration effects indicate that the FEIS Preferred Alternative would not prevent the park from serving its intended purpose of outdoor recreation. Therefore, there would not be significant impacts to West Lakes Park that would require mitigation.
- The DEIS NEPA Preferred Alternative would require the acquisition of a small portion of the parking area from the Family Christian Center Church in Munster. The FEIS Preferred Alternative would not require any property from the Family Christian Center Church.
- New visual elements associated with the proposed commuter-rail-related infrastructure, and also noise and vibration effects, would be introduced to users of the Pennsy Greenway and Path near Fisher Street, the existing Monon Trail between Fisher Street in Munster and the connection to the Erie Lackawanna Trail near Douglas Street in Hammond, and the existing Erie Lackawanna Trail between Condit and Sibley Streets in Hammond. The **Chapter 4** and **5** assessments of visual resources, noise, and vibration effects indicate that the FEIS Preferred Alternative would not prevent bicycle facilities from serving their intended purpose of outdoor recreation. Therefore, there would not be significant impacts to the Pennsy Greenway, Monon Trail, and Erie Lackawanna Trail that would require mitigation. More information regarding the visual, noise, and vibration effects is provided in **Sections 4.7.4**, **5.2.4**, and **5.3.4**. More information regarding impacts to the trails is provided in **Section 3.4.4** and **Chapter 7**. Safety fences would address safety concerns. There would be no long-term effects to the Erie Lackawanna Trail or the Burnham Greenway.
- The proposed alignment would border Oak Hill Cemetery in Hammond on its east side as previous rail operations have done. The FEIS Preferred Alternative would reintroduce visual elements in addition to noise and vibration effects associated with rail traffic. The **Chapter 4** and **5** assessments of visual resources, noise, and vibration effects indicate that the FEIS Preferred Alternative would not prevent the cemetery from serving its intended purpose. Therefore, there would not be significant impacts to Oak Hill Cemetery that would require mitigation. More information regarding visual, noise, and vibration effects is provided in **Sections 4.7.4**, **5.2.4**, and **5.3.4**. A physical barrier, to be coordinated with the City of Hammond, would be provided to prohibit pedestrians and bicyclists from crossing the track where east-to-west pedestrian or bicycling facilities do not exist or where NICTD determines that a barrier is important from a safety perspective.
- Harrison Park in Hammond would border the proposed alignment as it previously bordered active rail service on the alignment. The FEIS Preferred Alternative would introduce new visual elements in addition to noise and vibration effects associated with commuter rail. The **Chapter 4** and **5** assessments of visual resources, noise, and vibration effects indicate that the FEIS Preferred Alternative would not prevent the park from serving its intended purpose of outdoor recreation. Therefore, there would not be significant impacts to Harrison Park that would require mitigation. More information regarding visual, noise, and vibration effects is provided in **Sections 4.7.4**, **5.2.4**, and **5.3.4**. Fencing would be provided by NICTD in the

Harrison Park area to prohibit pedestrians and bicyclists from crossing the track where east-to-west pedestrian or bicycling facilities do not exist or where NICTD determines that fencing is important from a safety perspective. No existing function of the property would be removed.

- The proposed alignment would border the playing fields and lawn for the Henry W. Eggers Middle School in Hammond. The FEIS Preferred Alternative would introduce new visual elements and also noise and vibration effects associated with commuter rail. The **Chapter 4** and **5** assessments of visual resources, noise, and vibration effects indicate that the FEIS Preferred Alternative would not prevent the playing fields and lawn from serving their intended purpose of outdoor recreation. Therefore, there would not be significant impacts to the Eggers Middle School playing fields and lawn that would require mitigation. More information regarding visual, noise, and vibration effects is provided in **Sections 4.7.4**, **5.2.4**, and **5.3.4.** Fencing would be provided by NICTD in the Eggers school area to prohibit pedestrians and bicyclists from crossing the track where east-to-west pedestrian or bicycling crossing facilities do not exist. No existing function of the property would be removed.
- Changes to the street connectivity would occur at Russell Street in Hammond where the Lake County Superior Court and Probate Clerk building is located. Russell Street would be modified to accommodate two-way traffic between Hohman and Lyman Avenues, and six on-street parking spaces on the southern side of Russell Street would be removed. The change in street connectivity would not affect the Courthouse and Probate Clerk building, only the on-street parking. Off-street parking is available nearby to accommodate the loss of these on-street parking spaces. More information regarding the connectivity and parking effects is provided in **Sections 3.5** and **3.6**. Modifications to the existing street network have been incorporated into the design of the FEIS Preferred Alternative to maintain access and connectivity; therefore, no adverse impacts would result.

The FEIS Preferred Alternative would bridge over the Dan Rabin Plaza in Hammond, but no piers or support structures would be placed in the eastern portion of the plaza, the recreational portion. The FEIS Preferred Alternative would not require ROW from the Dan Rabin Plaza. The FEIS Preferred Alternative structure would overshadow approximately 926 square feet of the plaza. The Chapter 4 and 5 assessments of visual resources, noise, and vibration effects indicate that the FEIS Preferred Alternative would not prevent the plaza from serving its intended purpose. Therefore, there would not be significant impacts to the Dan Rabin Plaza that would require mitigation. More information regarding visual, noise, and vibration effects is provided in Sections 4.7.4, 5.2.4, and 5.3.4. More information regarding impacts to the Dan Rabin Plaza is provided in Chapters 7 and 8. No existing function of the property would be removed.

Other Build Alternatives Considered in the DEIS

The other Build Alternatives considered in the DEIS would have similar effects on neighborhoods and community facilities as the FEIS Preferred Alternative. A summary of the effects is provided in **Table 4.5-2**. For specific possible effects of the other Build Alternatives considered in the DEIS on neighborhoods and community resources, refer to Section 4.5.4.1 of the DEIS.

4.5.4.2 Short-term Construction Effects

Under the No Build Alternative, no construction impacts would result from the development of the Project. Impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects.

The FEIS Preferred Alternative and other Build Alternatives considered would have similar construction effects. Although they would be temporary in nature, construction impacts for the FEIS Preferred Alternative could affect neighborhoods and community facilities. Traffic detours could increase traffic through residential neighborhoods or change access to community facilities. Similarly, sidewalk closures and detours could affect pedestrian traffic patterns. Construction impacts such as increased levels of noise, vibration, and dust could temporarily affect neighborhood character, primarily in relatively quiet areas. The presence of large construction equipment might be perceived as visually disruptive and cause temporary effects on community character, particularly in residential settings. Residences and community resources might also experience short-term disruptions of utility services during construction activities as utilities need to be moved or replaced.

4.5.5 Avoidance, Minimization, and/or Mitigation Measures

4.5.5.1 Long-term Operating Effects

No mitigation measures are proposed for the No Build Alternative because there would be no impacts.

For the FEIS Preferred Alternative, where there would be long-term impacts to neighborhoods and community resources, the following mitigation measures would be implemented:

- Noise and vibration impacts near community resources would be mitigated. The added noise and vibrations from the alignment could affect the existing quality of life and cohesiveness of the community. As described in **Section 5.2.5.1** of this FEIS, specific locations would require mitigation measures for severe- and upper-range moderate noise impacts including barriers ranging from 3 to 5 feet above the top-of-rail or receiver-based treatments to specific buildings. Vibration mitigation measures were required at three locations where ballast mats or other track support system modifications would be implemented as described in **Section 5.3.5.1** of this FEIS.
- Where the proposed alignment is close to community resources, NICTD would conduct ongoing coordination and collaboration with community stakeholders and local elected officials to mitigate impacts that would diminish the value of community resources or pose a nuisance to residents.
- Where the added parking would contribute to local traffic congestion and impacts to access, NICTD would make improvements to four intersections, as described in the evaluations for traffic and transportation in **Section 3.5.5.1** of this FEIS.
- Where large, surface parking lots are developed in association with the proposed stations, NICTD would collaborate with community stakeholders. As the Project's design advances, NICTD would work with local elected officials, state and county transportation departments, and the community to address site-specific issues and concerns.
- Displaced businesses and residents would be relocated in accordance with the Uniform Act. NICTD would continue to coordinate with affected residents, businesses, and community

facilities to identify strategies to minimize the effects on the employees and customers of the displaced businesses.

4.5.5.2 Short-term Construction Effects

There would be no construction impacts from the No Build Alternative; therefore, no mitigation measures are proposed.

For construction of the FEIS Preferred Alternative, temporary use of land for construction staging and temporary disruptions to neighborhood access would be mitigated with the use of work zone traffic-control plans, which would be prepared and approved by the appropriate agency during the engineering and construction phases. These plans would be coordinated with the Town of Dyer, the Town of Munster, the City of Hammond Lake County, emergency services, and INDOT. The plans would identify requirements for maintaining access to neighborhoods, businesses, medical facilities, and emergency facilities. Lane closures that are required for construction would be limited to off-peak hours of traffic operation to the extent it is reasonably feasible. To construct railroad-highway crossings of existing roads, full closures could be used.

In addition, BMPs for minimizing visual changes, noise and vibration levels, dust, and fumes and for maintaining safety of construction sites would be implemented, including those from the United States Environmental Protection Agency (USEPA). These BMPs would buffer the construction activities from surrounding neighborhoods and minimize adverse temporary effects to the extent feasible and practical.

Major aerial construction over highways includes the crossings of 45th Street, Fayette Street, Sibley Street, Willow Court, and Hohman Avenue. Construction of the structures would use methods that minimize the impact to the roadway user. Lane closures on the major arterials must be approved by the agency with jurisdiction of the roadway and coordinated with the local police authority. Traffic detours would be restricted to maximum time durations via the contract and work zone traffic-control plans. NICTD would coordinate with the jurisdictional agency of the roadway regarding the construction and detour plan. The Project construction could require temporary closure or staged construction.

Because the FEIS Preferred Alternative would be located within 20 feet of the Oak Hill Cemetery in Hammond, a Cemetery Development Plan was prepared per Indiana Code 14-21-1-26.5. This law does not prohibit construction near a cemetery, nor does it prohibit moving cemeteries if the proper permits are acquired; this law requires only that developers' plans take into account cemetery locations. Cemetery Development Plans are required for projects that would disturb the ground within 100 feet of a cemetery or burial ground for the purpose of excavating or covering over the ground or erecting, altering, or repairing any structure. The Oak Hill Cemetery Development Plan states that the Project would be constructed on the former Monon Railroad grade, which previously existed concurrently with the Oak Hill Cemetery, and would be unlikely to disturb unmarked burials. However, if any prehistoric or historic archaeological artifacts or human remains are discovered, all work would cease immediately, the SHPO and the County Coroner would be contacted, and all state and federal laws regarding human burial remains would be followed, including state law (Indiana Code 14-21-1-27 and -29) that requires that the discovery be reported to the Department of Natural Resources within 2 business days. The State Archaeologist at the Indiana SHPO, represented by the INDNR Division of Historic Preservation and Archaeology (DHPA), reviewed and concurred with the Oak Hill Cemetery Development Plan on December 8, 2017. The Memorandum of Agreement between FTA, NICTD, and Indiana SHPO is included in **Appendix B**.

4.6 Cultural Resources

Cultural resources is an umbrella term for many heritage-related resources defined in several federal laws and executive orders (EOs) including the NHPA (54 USC § 300101 et seq.), the Archaeological and Historic Preservation Act (1974) (54 USC §§ 312501–312508), the American Indian Religious Freedom Act (1978) (42 USC § 1996), the Archaeological Resources Protection Act (1979) (16 USC §§ 470aa–mm), and the Native American Graves Protection and Repatriation Act (1990) (25 USC §§ 3001–3013).

Under Section 106 of the NHPA, federal agencies must take into account the effect of their undertakings on historic properties and give the Advisory Council on Historic Preservation a reasonable opportunity to comment. Under this process, the federal agency evaluates the NRHP eligibility of resources within the proposed undertaking's area of potential effects (APE) and assesses the possible effects of the proposed undertaking on historic properties in consultation with the SHPO and other parties. FTA initiated Section 106 consultation for the Project in September 2014 with both the Indiana and Illinois SHPOs. Through the Section 106 review process, FTA and participating consulting parties reached an agreement regarding appropriate mitigation measures to resolve the Project's adverse effects on historic properties. The agreed-upon measures are documented in the Memorandum of Agreement (MOA) between FTA and the Indiana SHPO, represented by the INDNR DHPA. NICTD is responsible for implementing the mitigation measures as established in the MOA. The fully executed MOA, signed on December 12, 2017, between FTA, NICTD, and the Indiana SHPO, as well as additional information regarding the identification of historic properties and the assessment of effects, is presented in the *West Lake Corridor Historic Property Report*, which is included in **Appendix B**. The *West Lake Corridor Archaeological Survey* reports for Indiana and Illinois are confidential and are on file with FTA (Gierek 2016; Parker et al. 2017).

4.6.1 Regulatory Setting

There have been no changes to the regulatory setting since the publication of the DEIS.

The NHPA focuses on cultural resources such as prehistoric and historic sites, buildings and structures, districts, or other physical evidence of human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or other reasons. Such resources might provide insight into the cultural practices of previous civilizations, or they might retain cultural and religious significance to modern groups. Resources found significant under criteria established in the NHPA are considered eligible for listing in the NRHP. Resources eligible for or listed in the NRHP are termed *historic properties* and can include historic districts, sites, buildings, structures, and objects.

4.6.2 Methodology

Since the publication of the DEIS, the methodology has not changed. The consultation process under Section 106 of the NHPA was completed for the Project.

To determine whether an undertaking (such as the Project) would result in adverse effects on historic properties, the federal agency applies the criteria of adverse effects (36 CFR Part 800.5). Through Section 106 consultation among the consulting parties, adverse effects can be avoided, minimized, and/or mitigated. Section 106 requires consultation with the SHPO, federally recognized Native American tribes with an interest in the area, local governments, and other interested parties (36 CFR Part 800.2); the identification of the APE and historic properties within it; and an assessment of the effects of the undertaking on historic properties in the APE.

4.6.2.1 Section 106 Consultation

On September 29, 2014, FTA sent a letter to the Indiana SHPO (DHPA) and the Illinois SHPO (Department of Natural Resources Historic Preservation Division) to initiate Section 106 consultation for the Project. FTA invited tribes and several stakeholder organizations to participate as Section 106 consulting parties on October 3 and October 8, 2014, respectively. The following participants accepted:

- Peoria Tribe of Indians of Oklahoma
- Hammond Historical Society
- Hammond Historic Preservation Commission
- Indiana Landmarks, Northwest Field Office
- Lake County Historical Society

A consultation meeting was held June 22, 2016, to review FTA's Preliminary Determination of Effects for the undertaking. On November 7, 2016, FTA sent letters to the SHPOs and consulting parties to obtain their input on the draft MOA as well as to request concurrence from the SHPOs on FTA's determinations of eligibility for historic properties and the assessment of effects for the Build Alternatives. A meeting was held with the Indiana SHPO (DHPA) in February 2017 to discuss the Project to date, to resolve the SHPO's concerns regarding visual impacts, and to discuss the proposed methodology for the remaining archaeological investigation. A second draft MOA was circulated to the consulting parties, and, after a call to discuss the MOA on August 22, 2017, a revised draft MOA was circulated (see **Appendix B**). The final MOA was sent out for signatures on November 7, 2017. The fully executed MOA, signed on December 12, 2017, between FTA, NICTD, and the Indiana SHPO, is included in **Appendix B** along with correspondence related to Section 106.

4.6.2.2 Area of Potential Effects

The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and could be different for different kinds of effects caused by the undertaking. For this reason, separate APEs have been defined for historic architectural resources and archaeological sites.

An APE for architectural resources encompasses all areas where the Project could affect historic properties as defined in 36 CFR Part 800.16(l)(1) and is termed the *Architectural APE*.

The Architectural APE considered potential physical, visual, noise, vibration, and/or functional changes to historic properties (see **Appendix B**).

An APE for archaeological resources was also defined to address the potential for effects on NRHP-listed or -eligible archaeological sites and is termed the *Archaeological APE*, also referred to as the *Direct APE* in the final archaeological survey report (submitted August 2017; Parker et al. 2017). The Indiana and Illinois SHPOs concurred with the APEs in April 2016.

A large segment of the Project in Illinois currently accommodates commuter service within the existing MED/SSL corridor. The Project would not involve any alterations to the ground along the existing commuter rail line and is unlikely to have any indirect effects on properties because it is already adjacent to the existing commuter rail line. Therefore, the Architectural APE and the Archaeological APE do not address historic properties in this segment. The excluded segment extends from Burnham Avenue and South Brainard Avenue in Burnham, Illinois, north to Millennium Station in downtown Chicago.

Architectural APE

During the DEIS, FTA defined the Architectural APE as the Project footprint including all alignment alternatives and design options that may have direct impacts on historic properties, and additional areas where indirect impacts may affect historic properties in terms of their visual or contextual environment. The Architectural APE covers the Project footprint within which tracks and ancillary facilities would be built, and the footprints of the proposed stations, MSF, layover track, and parking areas. Additionally, for architectural/historic resources, the Architectural APE encompasses parcels adjacent to the proposed railroad alignment where new aboveground infrastructure and facilities have the potential to alter the visual or contextual environment of historic properties.

Archaeological APE

Also during the DEIS, FTA determined the Archaeological APE (or Direct APE) to be the geographic area within which the undertaking may result in ground-disturbing activities that could cause alterations to archaeological sites. As such, the Archaeological APE comprises the commuter rail track alignments, including the alignment design options, with a width of approximately 30 feet, except where some additional land area is included due to proposed parcel acquisitions; space needed for access; as well as the footprints of the proposed stations, parking areas, MSF, and layover facility options. The Archaeological APE covers the proposed Project footprint to identify resources that may be directly affected by construction and operational activities.

4.6.2.3 Identification of Historic Architectural Resources

The historic architectural survey included a review of previous cultural resources surveys in the Architectural APE, historic maps encompassing the APE and vicinity, and aerial photographs; an intensive survey of the buildings, structures, and other above-ground features in the Architectural APE; and an evaluation of resources under the NRHP criteria. INDOT's *Cultural Resources Manual* (INDOT 2015) was followed for guidelines to complete the historic property survey for portions of the Project in both Indiana and Illinois per guidance from INDNR- DHPA and the Illinois SHPO.

Background Research and Previous Surveys

A literature review was conducted to identify known historic resources within the Architectural APE as defined by FTA. Records that were checked included the NRHP database, Indiana Historic Sites and Structures Inventory (IHSSI), Indiana's State Historic Architectural and Archaeological Research Database (SHAARD), Indiana's Historic Bridge Inventory, Illinois' Historic and Architectural Resources Geographic Information System (HARGIS), and historic maps.

Field Survey Methodology

A field survey of the Architectural APE was conducted November 19 through 22, 2014, and on December 29, 2015. The survey was conducted according to the guidelines set forth in *National Register Bulletin 24: Guidelines for Local Surveys: A Basis for Preservation Planning* (United States Department of the Interior [USDOI] National Park Service [NPS] 1977) and INDOT's *Cultural Resources Manual* (INDOT 2015) for intensive survey of aboveground resources. The Architectural APE was surveyed for resources that are or appeared to be 45 years old or older. Every building in the Architectural APE, regardless of age, was observed and noted. Surveyed resources were digitally photographed. Information from the literature review, including the IHSSI results and historic maps, was reviewed for field verification. A historic context was compiled to relate historical events and themes relevant to the development of the Architectural APE. Buildings less than 45 years old were examined for the potential to meet NRHP Criteria Consideration G for resources under 50 years of age that have exceptional significance.

Assessment of Effects

The analysis of impacts, or potential effects, on historic resources was based on the Criteria of Adverse Effect described in the implementing regulations of Section 106 (36 CFR Part 800.5). An undertaking has an effect on a historic property when the undertaking may alter, directly or indirectly, the characteristics of the property that may qualify the property for inclusion in the NRHP [36 CFR Part 800.5(a)]. An effect is considered adverse when it diminishes the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Consideration was given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's NRHP eligibility. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative. Adverse effects on historic properties include physical destruction of or damage to all or part of the property; alteration of a property that is not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines; removal of the property from its historic location; change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance; introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features; neglect of a property, which causes its deterioration, with certain exceptions; and transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance [36 CFR Parts 800.5(a)(1)–(2)].

4.6.2.4 Identification of Archaeological Resources

The archaeological studies included a review of previous archaeological sites and surveys in the vicinity of the Project and Archaeological APE; a review of historic plat maps and atlases,

topographic maps, and aerial photographs of the Archaeological APE; a reconnaissance survey of the Archaeological APE; and systematic field surveys of the Archaeological APE for the FEIS Preferred Alternative. The archaeological studies and surveys were conducted in accordance with guidelines established by INDNR-DHPA and the Illinois SHPO.

Background Research and Previous Surveys

An archaeological records check of previous sites and surveys was conducted using the online resources for professional archaeologists administered by INDNR- DHPA and the Illinois SHPO. These include the SHAARD in Indiana and the Illinois Inventory of Archaeological Sites (IIAS) in Illinois. These resources were consulted prior to initiating Archaeological APE visits in December 2014, July 2015, November 2015, December 2015, and February 2016. The resources were reviewed for previously conducted archaeological studies and surveys and previously recorded archaeological sites within a 0.5-mile radius of the Archaeological APE.

For the Indiana portion of the Project Area, historical Lake County plats and atlases, historical topographic maps, Sanborn Fire Insurance (Sanborn) Maps, and aerial photographs were consulted for the Archaeological APE. The historical maps and aerial photographs were reviewed for evidence of historic-period buildings, farmsteads, other structures, and current or historical cemeteries in the Archaeological APE. In addition to the above-listed historical sources, several books and websites chronicling the Monon Railroad's history were consulted as part of the Monon Railroad survey in Indiana.

For the Illinois portion of the Project Area, historical Cook County plats and atlases, historical topographic maps, and aerial photographs were consulted for the Archaeological APE. The historical maps and aerial photographs were reviewed for evidence of historic-period buildings, farmsteads, or other structures within the Archaeological APE, as well as current or historical cemeteries.

Field Survey Methodology

For Indiana, visits to the Archaeological APE to conduct a reconnaissance survey occurred on November 19, 2014, and February 1, 2016. For Illinois, visits to the Archaeological APE occurred on November 19, 2014, and on February 1 and 11, 2016. The archaeological APE was visited to determine whether the Project Area or components were developed and/or disturbed by modern development and whether a formal archaeological survey was warranted to identify historic properties.

As part of the DEIS, the Project components in the Archaeological APE at the proposed Munster/Dyer Main Street Station Project areas west of the existing CSX railroad (proposed station parking and previous location of the proposed MSF) were determined to warrant a formal archaeological field survey. The survey was completed in December 2014. In 2015 and 2016, new Project components were visited for this purpose. In addition, a formal archaeological survey of the former Monon Railroad located in the Archaeological APE, which is an abandoned segment of the Monon Railroad from Maynard Junction in Munster north to Hammond, was completed in August 2016. In 2017, a formal archaeological survey of the sections of the Archaeological APE not covered during the 2014, 2015, and 2016 investigations was completed.

4.6.3 Affected Environment

There have been no changes to the affected environment since the publication of the DEIS.

4.6.3.1 Historic Architectural Resources

As a result of the survey, 469 resources that are or appear to be more than 45 years old were identified within the Architectural APE. Of the 469 resources surveyed, 43 resources had characteristics that were potentially significant under the NRHP eligibility criteria and required further research and evaluation. The other 426 resources surveyed did not exhibit potential significance or adequate integrity to meet the NRHP criteria. Of the 43 evaluated resources, 31 resources, all located in Hammond, are recommended eligible for the NRHP, as shown in **Table 4.6-1**. Of the 31 eligible resources, 8 resources are individually eligible, and 23 resources are contributing properties to existing or potential historic districts. No eligible resources were identified in Illinois or in other areas of the Architectural APE. In total, there are 34 identified historic properties in the Architectural APE. Additional information regarding historic properties is presented in the *West Lake Corridor Project Historic Property Report* (see **Appendix B**).

Table 4.6-1: Historic Properties in the Architectural APE

Name/ Description	Address	Date	Style	NRHP Evaluation
Dyer Boulevard Historic District	Dyer Boulevard between Hohman Avenue and Lyman Avenue, Hammond	1912-1941		Eligible, Criteria A and C
Harrison Park Historic District	Bounded by Lyman Avenue, State Line, Ogden Street, Detroit Street, Hammond	Late 19th-Early 20th centuries		Eligible, Criteria A and C
State Street Commercial Historic District	State Street, Hammond	1885-1927		Listed, Criteria A and C
Straube Piano Company	252 Wildwood Road, Hammond	c. 1904–1925	Renaissance Revival	Eligible, Criterion A
Apartment building[a]	6136 Lyman Avenue, Hammond	1918	Vernacular	Eligible - Contributor
House[a]	267 Dyer Boulevard, Hammond	1923	Bungalow	Eligible – Contributor
House[b]	266 Detroit Street, Hammond	1912	Bungalow	Eligible – Contributor
House[b]	266 Highland Street, Hammond	1917	Bungalow	Eligible – Contributor
House[b]	5973 Park Place, Hammond	1915	Bungalow	Eligible – Contributor
House[b]	5969 Park Place, Hammond	1915	American Four-Square	Eligible – Contributor
House[b]	5967 Park Place, Hammond	1918	Bungalow	Eligible – Contributor
House[b]	5963 Park Place, Hammond	1917	Bungalow	Eligible – Contributor
House[b]	5959 Park Place, Hammond	1915	Bungalow	Eligible – Contributor

Name/ Description	Address	Date	Style	NRHP Evaluation
House[b]	5957 Park Place, Hammond	1915	Bungalow	Eligible – Contributor
House[b]	5949 Park Place, Hammond	1913	Bungalow	Eligible – Contributor
House[b]	5945 Park Place, Hammond	1915	Bungalow	Eligible – Contributor
House[b]	5943 Park Place, Hammond	1915	Bungalow	Eligible – Contributor
Harrison Park[b]	5728−59 Lyman Avenue, Hammond	1898	Park	Eligible – Contributor
House[b]	265 Webb Street, Hammond	1913	Bungalow	Eligible – Contributor
Duplex[b]	255−257 Carroll Street, Hammond	1907	Chicago two-flat	Eligible – Contributor
House[b]	256 Williams Street, Hammond	1900	Gable-front	Eligible – Contributor
House[b]	253 Williams Street, Hammond	1911	Gable-front	Eligible – Contributor
Duplex[b]	256 Doty Street, Hammond	1907	Chicago two-flat	Eligible – Contributor
House[b]	255 Doty Street, Hammond	1907	Gable-front	Eligible – Contributor
House[b]	255 Ogden Street, Hammond	1920	Queen Anne	Eligible – Contributor
Minas Parking Garage	442 and 462−64 Sibley Street, Hammond	1960	Brutalism	Eligible, Criterion C
Hotel Hammond	415½–417 Sibley Street, Hammond	1919	Commercial Vernacular	Eligible, Criterion A
P. H. Mueller Sons Hardware	416–18 Sibley Street, Hammond	1902	20th century commercial	Eligible, Criterion A
Commercial building[c]	424 Willow Court, Hammond	1907	Commercial Vernacular	Listed – Contributor
Hotel Goodwin[c]	422 Willow Court/5109 Bulletin Avenue, Hammond	1915	Commercial Vernacular	Listed – Contributor
Simplex Railway Appliance Company	4831 Hohman Avenue, Hammond	1898	Industrial Vernacular	Eligible, Criterion A
OK Champion Building	4714 Sheffield Avenue, Hammond	1905–1914	Industrial Vernacular	Eligible, Criterion A
Federal Cement Tile Company	24 Marble Street, Hammond	1909	Industrial Vernacular	Eligible, Criterion A
Hammond, Whiting, and East Chicago Railway Building	304 Gostlin Street, Hammond	1895	Commercial/ Industrial Vernacular	Eligible, Criterion A

Source: NICTD 2016.

[a] Within Dyer Boulevard Historic District

[b] Harrison Park Historic District

[c] Within State Street Commercial Historic District

FTA requested concurrence on its Determinations of Eligibility and Effects from the Illinois and Indiana SHPOs in separate correspondence to both agencies dated November 7, 2016. The Illinois SHPO had previously concurred with the finding that the Project would not affect any historic properties in Illinois. On December 14, 2016, the Indiana SHPO concurred with the eligibility determinations submitted and the general finding of adverse effect for the Project. They also requested additional information regarding the alternatives analysis for and visual impacts to some historic properties as well as noting the need for additional archaeological survey in some areas. A meeting was held with the Indiana SHPO on February 17, 2017, to address some of the outstanding questions regarding the visual effects of the Project. The Indiana SHPO responded to a summary of the meeting on May 30, 2017, concurring with the assessment of the visual impacts of the Project and stating the need for an additional archaeological survey. After completing the archaeological survey, a request for concurrence on eligibility findings and assessment of effect for the West Lake Corridor Project was submitted to the Indiana SHPO on August 7, 2017. The Indiana SHPO concurred with the findings of the archaeological survey and the overall finding of adverse effect for the Project as a whole on September 6, 2017.

4.6.3.2 Archaeological Resources

Based on the research completed for the DEIS, 14 previous cultural resource surveys have been conducted within a 0.5-mile radius of the Project Area in Indiana. These studies include three that cross or are within the proposed Project footprint. None of the locations of proposed stations, parking areas, and maintenance and storage facility options had been previously surveyed for archaeological resources (SHAARD 2014, 2015, 2016). According to SHAARD, there are no previously recorded archaeological sites in the Archaeological APE. None of the previous studies and surveys reviewed resulted in the discovery of archaeological resources. The results of the review of the 14 previous archaeological surveys are presented in **Table 4.6-2**.

According to the IIAS database, nine previous cultural resource surveys have been conducted within a 1-mile radius of the Illinois portion of the Project Area. These studies include one study that appears to include portions of the Archaeological APE (IIAS 2014, 2015, 2016). This study is discussed further below. According to the IIAS database, there is one previously recorded archaeological site with the potential to be located in the Archaeological APE. A total of 14 additional previously recorded archaeological sites are located within 0.5 mile of the Archaeological APE (IIAS 2014, 2015, 2016). Illinois State Museum (ISM) Site Forms were reviewed for each site. The results of the review of the previous archaeological surveys are presented in **Table 4.6-2**.

One archaeological site was located in the Archaeological APE during the formal field surveys. The abandoned segment of the former Monon Railroad alignment from Maynard Junction in Munster north to Hammond and the former South Hammond Yard, associated with the Monon Railroad, were surveyed and recorded as an archaeological site (Site 12-La-0707). This site was evaluated under NRHP criteria and was determined not eligible for the NRHP. No other archaeological resources were identified as a result of the formal surveys.

Table 4.6-2: Previous Archaeological Studies in Indiana

SHAARD Report No.	Report Author	Report Name	Report Date	Crosses APE (Y/N)	Archaeo-logical
60c40	Evans, D., and Cochran, Donald R.	Archaeological Records Review, Main Street/53rd Avenue, near Dyer, Lake County, Indiana	1990	No	No (NA)
60c77	Helmkamp, R. Criss	Archaeological Records Check: INDOT Project ST- 019-6 Des. No. 11465, 41-45-7745, Replacement of US 41 Bridge over the Grand Calumet River, Lake County, Indiana	1993	No	No (NA)
6258e/ 992143	Helmkamp, R. Criss	Archaeological Records Check: INDOT Project ST- 019-6, Road Rehabilitation on US 41 from I-80/I-94 to US 12/US 20, Lake County, Indiana	1999	No	No (NA)
619e5/RTP-010-2625a3/ 2001 2270	Helmkamp, R. Criss	Archaeological Records Check: Historic Grand Calumet Walking Trail Development Project, Lake County, Indiana	2001	No	No (NA)
60c&a/ 2005 1396	McAlpine, Thomas	Archaeological Records Check, Lake County Bridge #262, Lake County, Indiana	2005	No	No
625a0/ 20062851	Sills, Scott, and McGowan, Kevin	Phase Ia Archaeological Reconnaissance for a Proposed Telecommunications System at 636 Sheffield Avenue in Dyer, Lake County, Indiana	2006	Yes	No
56157/ 20131384	Stillwell, Larry	An Archaeological Field Reconnaissance of the Proposed Chicago Street Widening Project from White Oak Avenue to South Brainard Avenue in Hammond, Lake County, Indiana	2013	Yes	No
5d13f/ 20131760	Robertson, Charlie, and Stillwell, Larry	An Archaeological Field Reconnaissance of Proposed Wetland Mitigation Area in Munster, Lake County, Indiana	2013	No	No
7278a/ 20141397	Favret, Amy C., and Kaye Grob	Phase Ia Archaeological Records Review and Reconnaissance for the Calumet Avenue and 45th Street Realignment and Grade Separation, Lake County, Indiana	2014	No	No
Document on file at the IDNR, DHPA	DeRegnaucourt, Robert A. (Tony)	Archaeological Reconnaissance of Projects M-N 152 (1&2) and M-N 058 (1&2), Calumet Avenue Extension and Sheffield Avenue Improvements between Munster and Dyer in Lake County, Indiana	1982	No	No

SHAARD Report No.	Report Author	Report Name	Report Date	Crosses APE (Y/N)	Archaeo-logical
Document on file at the IDNR, DHPA	Draeger, Cathy	Archaeological Records Review for the Munster Grant Project, Lake County, Indiana	2001	Yes	No
Document on file at the IDNR, DHPA	Ryder, Keith G.	Archaeological Reconnaissance of Borrow Site (Extension of Site A, Little Calumet River Project), Lake County, Indiana, United States Army Corps of Engineers, Chicago District	1985	No	No
Document on file at the IDNR, DHPA	Sick, Rebecca	Lakewood Park, Lake County, Indiana Archaeological Records Review	2000	No	No
Document on file at the IDNR, DHPA	Zoll, Mitch	Archaeological Field Reconnaissance Main Street/53rd Avenue, Lake County, Indiana	1991	No	No

Source: NICTD 2016.

4.6.4 Environmental Consequences

This section discusses the potential effects the FEIS Preferred Alternative would have on historic properties in the Project's Architectural and Archaeological APEs. The long-term operating effects for the No Build and all Build Alternatives are summarized in **Table 4.6-3**.

Table 4.6-3: Summary of Cultural Resources Effects

Alternative	Summary of Cultural Resources Effects
No Build	No adverse effects on historic properties.
FEIS Preferred Alt.	Adverse effect on one historic property, the OK Champion Building, resulting from demolition.
Other Build Alternatives Considered in the DEIS[a]	
DEIS NEPA Preferred Alt. & Hamm. Alt. Opt. 1 and 3	Same impacts as FEIS Preferred Alt.
CR Alt. Opt. 1–4	Adverse effect on one historic property, the Federal Cement Tile Company, resulting from demolition.
IHB Alt. Opt. 1–4	No adverse effects on historic properties. Required further study of one site in Beaubien Forest Preserve if any of the IHB Alt. Options were advanced.

Sources: NICTD 2016; HDR 2017a.

[a] Shaded areas indicate alternatives evaluated in the DEIS.

4.6.4.1 Long-term Operating Effects

No Build Alternative

Under the No Build Alternative, there would be no changes to the existing corridor within either APE. Therefore, the No Build Alternative would have no effects on historic properties.

FEIS Preferred Alternative

Historic Architectural Resources

The FEIS Preferred Alternative would result in an adverse effect on one historic property in the Architectural APE. The OK Champion Building located at 4714 Sheffield Avenue in Hammond would be demolished to facilitate construction of the proposed North Hammond MSF and Hammond Gateway Station. This demolition would result in an adverse effect on historic properties.

Archaeological Resources

A full archaeological survey was completed for the FEIS Preferred Alternative (Gierek 2016; Parker et al. 2017). Based on the archaeological investigations conducted for the FEIS Preferred Alternative, no historic properties were identified in the Archaeological APE. Because no NRHP-listed or -eligible archaeological sites were identified, there would be no effect on archaeological resources.

Other Build Alternatives Considered in the DEIS

Few differences would occur among the other Build Alternatives considered in the DEIS because all proposed alignment options generally lie within the same area. The other Build Alternatives considered would have similar effects on historic architectural and archaeological resources as the FEIS Preferred Alternative with the exception of the Commuter Rail Alternatives. The Commuter Rail Alternatives would have an adverse effect of demolishing the Federal Cement Tile Company. All other effects would be similar to those of the FEIS Preferred Alternative. A summary of the effects is provided in **Table 4.6-3**. For specific possible effects of the other Build Alternatives considered in the DEIS on historic architectural and archaeological resources, refer to Section 4.6.4.1 of the DEIS.

4.6.4.2 Short-term Construction Effects

Under the No Build Alternative, no Project-related construction consequences would occur. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects.

Historic Architectural Resources

Under the FEIS Preferred Alternative and other Build Alternatives considered in the DEIS, construction-related noise, vibration, visual, and traffic impacts could be experienced. These impacts would be short-term and temporary, and would not result in adverse effects on historic properties with implementation of noise- and vibration-control measures by the construction contractor.

Archaeological Resources

There would be no potential effects on archaeologically historic properties, since none are in the Archaeological APE for the FEIS Preferred Alternative and other Build Alternatives considered in the DEIS.

4.6.5 Avoidance, Minimization, and/or Mitigation Measures

To resolve adverse effects to historic properties, FTA consulted with the Indiana and Illinois SHPOs, the ACHP, and other consulting parties to develop an MOA for the FEIS Preferred Alternative, which includes provisions for the resolution of adverse effects. A copy of the signed MOA dated December 12, 2017, is provided in **Appendix B**.

4.6.5.1 Long-term Operating Effects

Historic Architectural Resources

No mitigation measures are proposed for the No Build Alternative since no construction would occur.

Recommended mitigation to resolve adverse effects for the FEIS Preferred Alternative includes the following measures.

- Prior to any alterations to or demolition of the OK Champion Building, Historic American Building Survey documentation of the existing building would be completed by a Secretary of the Interior–qualified professional in history or architectural history (36 CFR Part 61).
- A public exhibit discussing the history and context of the OK Champion Building, specifically highlighting the industrial development of Hammond, would be designed in consultation with a qualified historian or architectural historian who meets the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) and who would assess the content and presentation to ensure that the important history and associations that contribute to the significance of the property are incorporated into the exhibit.
- An NRHP nomination for the P.H. Mueller Sons Hardware building at 416–418 Sibley Street in Hammond would be completed.

Although these mitigation measures would not eliminate adverse effects on historic properties, they would be implemented to reduce adverse effects on historic properties. FTA and NICTD would undertake these measures as stipulated in the MOA that was developed with input from FTA, NICTD, Indiana SHPO, Illinois SHPO, and other Section 106 consulting parties (see **Appendix B** for the signed MOA). FTA is responsible for implementing the mitigation measures on the schedule established in the MOA.

Archaeological Resources

No mitigation measures are proposed for the No Build Alternative since no construction would occur.

No archaeologically historic properties were identified in the Archaeological APE for the FEIS Preferred Alternative. The MOA (see **Appendix B**) states that any unanticipated discovery or unanticipated effect would be addressed in accordance with 36 CFR Part 800.13(b)(3) if such a discovery were to occur.

4.6.5.2 Short-term Construction Effects

Historic Architectural Resources

No mitigation measures are proposed for the No Build Alternative since no construction would occur.

For the FEIS Preferred Alternative, appropriate noise- and vibration-control measures and BMPs would be implemented by NICTD's construction contractors to minimize temporary impacts during construction of the Project. All noise control measures and BMPs would be confirmed during later stages of design when the details of the Project construction activities are developed and finalized as part of the construction bid contracts.

Archaeological Resources

No mitigation measures are proposed for the No Build Alternative since no construction would occur.

The construction phase of the Project would not affect archaeological resources except in the unlikely event of an unanticipated discovery. If such an event were to occur, the MOA for the Project (see **Appendix B**) stipulates the recommended surveys and/or studies and stipulates that an unanticipated discovery or an unanticipated effect would be addressed in accordance with 36 CFR Part 800.13(b)(3).

4.7 Visual Resources

This section describes the effect of the Project on visual resources. It discusses the methodology used, identifies existing visual resources in the Project Area, and discusses the long- and short-term impacts of the Project, including minimization strategies and mitigation measures. The analysis in this section is based on the results of the *Visual and Aesthetic Conditions Technical Report* prepared for the Project (see **Appendix G4**).

Terms used in this section include the following:

- **Project Area**: The term *Project Area* as applicable to this section is defined as the ROW for the Project alignment and the adjacent properties with a visual connection to the alignment, which include residential, commercial, industrial, and recreational properties. The Project Area can also be referred to as the *viewshed*, or the landscape formed by the area that can be seen from the Project alignment and the areas from which the Project would be seen. The viewshed includes a diverse array of development patterns, parks and natural areas, rail lines, highways, and local roads.
- **Visual Resources**: *Visual resources* refers to the appearance of the features that make up the visible landscape. These features can include elements of the natural, cultural, or project environments, as described in further detail below.
    - *Natural environment* includes the land, water, vegetation, animals, and atmospheric conditions that compose the natural surroundings. Although natural features might have been altered or imported by people, features that are primarily geological or biological in origin are considered natural.
    - *Cultural environment* includes the buildings, structures, artifacts, and art that compose the built surroundings. These are features that were constructed by people.
    - *Project environment* includes the geometrics (such as alignment, profile, and cross sections), grading, constructed elements (such as pavement and structures), vegetative cover, and ancillary visual elements (such as control devices and signs) of the various Project features. These are the constructed features which would be placed in the environment as part of the Project.
- **Viewers**: *Viewers* are defined as the affected population who occupy the land adjacent to a project, either long-term or short-term. An example of a long-term viewer is a homeowner with property located along the Project alignment, and an example of a short-term viewer is a pedestrian using a trail along the Project alignment. Viewers can be characterized by their association with a specific adjacent land use (for example, residential, commercial, industrial, agricultural, recreational, and institutional) and are collectively referred to as *viewer groups*.

4.7.1 Regulatory Setting

There have been no changes to the regulatory setting since the publication of the DEIS.

NEPA forms the general legal framework for the consideration of impacts to the human environment. CEQ regulations require a description of the affected environment and the environmental consequences for general resources, including visual and aesthetic considerations (40 CFR Part 1502). Further, Section 106 of the NHPA (16 USC § 470) and Section 4(f) of the Department of Transportation Act (23 CFR Part 774) require that visual impacts be addressed for the protection of publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historical sites.

4.7.2 Methodology

There have been no changes to the methodology since the publication of the DEIS.

Since FTA does not have visual assessment guidelines, the FHWA *Visual Impact Assessment for Highway Projects* (FHWA 1981) was used in this analysis. The visual resource inventory and assessment of potential impacts were determined by assessing the visual resource change that would occur as the result of the Project and by predicting the viewer response to those changes. Data were collected from several sources including aerial photographs, field reviews, public input, and other planning documents.

Visual resource change is the sum of the change in visual character and the change in visual quality. This change can be determined by assessing the compatibility of the Project with the visual character of the existing landscape and then comparing the visual quality of the existing resources with the projected visual quality after implementation of the Project. Visual character and visual quality are further described as follows.

- **Visual character**: *Visual character* refers to the physical features inherent to the potentially affected area. Both natural and artificial landscape features contribute to the visual character of an area or view. Visual character is descriptive and non-evaluative, which means that it is based on defined attributes that are neither good nor bad themselves. A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change. Changes in visual character can be identified by how visually compatible a proposed project would be with the existing condition.
- **Visual quality**: *Visual quality* refers to the value that viewers place on the visual character of, or what viewers like and dislike about, the visual features of a particular scene. Visual quality is inherently subjective, as different viewers might evaluate visual features differently. In general, people respond favorably to scenes that create a sense of perceived harmony, order, and coherence. Public attitudes help to determine the assessed level of visual quality and to predict how Project changes would be perceived. FHWA describes three aspects of visual perception, which determine the visual quality of a particular scene: vividness, intactness, and unity, as described in detail below.
    - *Vividness* is the visual power or memorability of landscape components as they combine in distinctive visual patterns.
    - *Intactness* is the visual integrity of the natural and built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes as well as in natural settings.
    - *Unity* is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual components in the landscape.

The viewer response to changes resulting from a project is the sum of viewer exposure and viewer sensitivity to the project. These elements combine to form a method of predicting how sensitive receptors might react to visual changes brought about by a project. Viewer exposure and viewer sensitivity are further described as follows.

- **Viewer exposure**: Viewer exposure is defined as the measurement of the number of viewers exposed to the resource change, the type of viewer activity, the duration of the view, the speed at which the viewers move, and the position of the viewers. Examples of typical viewer exposure levels are provided below.
    - *High* viewer exposure results when there are many viewers, consistent exposure for extended durations, close proximity to the resource, and unobstructed views.
    - *Moderate* viewer exposure results when there are some viewers, routine exposure for a short duration, moderate proximity to the resource, and partially obstructed views.
    - *Low* viewer exposure results when there are few viewers, limited exposure for a short duration, distance from the resource, and obstructed views.
- **Viewer sensitivity**: Viewer sensitivity is defined as both the viewers' concern for scenic quality and the viewers' response to change in the visual resources that make up the view. Examples of scale for viewer sensitivity levels are further described as follows.
    - *High* viewer sensitivity results when the viewer's activity is associated with the view, or the view is important to the viewer, or the view has cultural significance.
    - *Moderate* viewer sensitivity results when the viewer's activity might be associated with the view but might also distract them from the view, or when the view is of some importance to the viewer.
    - *Low* viewer sensitivity results when the viewer's activity distracts them from the view, or when the view is not of importance to the viewer.

As noted above, the visual impacts of a project are determined by assessing the visual resource change that would occur as the result of the project and by predicting the viewer response to those changes. Considering these processes, FHWA generally defines the level of visual impact as follows:

- **Low**: A slight change in visual character or quality, with no substantive effect on a visually sensitive area. New visual elements would be generally compatible with existing visual character, and little to no viewer response to visual changes is anticipated.
- **Moderate**: Either (1) a slight change in visual character or quality, resulting in a moderate level of viewer response, or (2) an extensive change in visual character or quality, resulting in a minimal viewer response. New visual elements would be somewhat compatible with existing visual character and quality.
- **Moderately high**: Either (1) a moderate change in visual character or quality, resulting in a high level of viewer response, or (2) an extensive change in visual character or quality, resulting in a moderate viewer response. New visual elements would be somewhat incompatible with existing visual character and quality.
- **High**: An extensive change to visual character or quality, or substantial effect on a visually sensitive area. New visual elements would be generally incompatible with existing visual character and quality, resulting in a high level of viewer response.

4.7.3 Affected Environment

A discussion of the visual impact assessment that has been conducted since publication of the DEIS has been included. The Project and the visual effects have been refined to address safety and security concerns raised by public comments to the DEIS.

The regional landscape establishes the general visual environment of a project. As described at the start of **Section 4.7**, the Project Area, or the viewshed, for this analysis is defined as the ROW for the Project alignment and the adjacent properties with a visual connection to the alignment, which include residential, commercial, and recreational properties.

The general land use patterns in the Project Area generally transition from rural and suburban in the community of Dyer in the south, to increasingly dense suburban development around south Hammond, to the urban environment of downtown Hammond. The regional landscape is mostly flat, with the majority of the Project alignment surrounded by developed land. Trees line a number of streets and, in places, separate the Project alignment from bordering development. As a result, the majority of views from the Project alignment are limited to existing roads and development that are located adjacent to the alignment. Project views can extend beyond adjacent properties in areas where the Project alignment would be elevated.

As noted above at the start of **Section 4.7**, the viewshed includes a variety of land use patterns that have been influenced by the transportation-oriented history of the Project Area. Additionally, the presence of the existing railway lines has influenced the development patterns and settings in much of the Project Area.

Natural areas, such as parks, where present, are scattered and often isolated. Other natural features include the Little Calumet and Grand Calumet Rivers.

4.7.3.1 Landscape Units

A landscape unit is a portion of the regional landscape. These units are commonly used to divide long, linear projects into logical geographic entities for assessment purposes. Landscape units generally are made up of areas with similar visual characteristics, although smaller locations within each landscape unit might differ from the overall unit's character.

For the purposes of **Section 4.7**, the Project Area is divided into two landscape units: Dyer/Munster and Hammond. The general limits of the Dyer/Munster landscape unit consist of the Project Area from the southern terminus of the Project to I-80/94 within the towns of Dyer and Munster. The general limits of the Hammond landscape unit consist of the Project Area from I-80/94 to the northern terminus of the Project. A figure depicting the limits of the Project Area is provided in the *West Lake Corridor Project Visual and Aesthetic Conditions Technical Report* in **Appendix G4**.

4.7.3.2 Visual Character and Quality of the Project Area

The visual character and quality of the Project Area are described in detail in **Table 4.7-1**. **Table 4.7-1** also includes representative photographs to document the existing conditions of the Project Area and a brief description of key resources and land uses that might be sensitive to visual resource change, such as residential, recreational, and other established land uses.

4.7.3.3 Viewer Groups in the Project Area

As described above at the start of **Section 4.7**, *viewers* refers to the affected population who occupy the land adjacent to a project. These viewers can be characterized in viewer groups by their association with a specific adjacent land use. The Project Area includes several types of

viewer groups such as roadway travelers, transit riders, pedestrians, residents, workers, and recreational users, as described in further detail in the following list. **Table 4.7-1** also notes the potentially affected viewer groups in each portion of the Project Area.

- **Roadway Travelers**: Roadway travelers include both routine (for example, commuters) and occasional (for example, recreational) travelers through the Project Area. Roadway travelers move at varying speeds due to differences in the mode of transportation used (vehicles, bicycles, etc.), the topography of the route, the traveler's familiarity with the route, and the current roadway and weather conditions. Roadway travelers are generally assumed to have low to moderate levels of viewer sensitivity due to the typically short-term exposure to changes in the environment, and because the passing landscape becomes familiar. Also, roadway travelers might be less focused on the passing views and more focused on the roadway conditions.
- **Transit Riders**: Transit riders include both routine (for example, commuters) and occasional (for example, recreational) passengers on transit lines using the Project Area. Single views for transit riders are typically of short duration. Transit riders who frequently travel a route generally have low to moderate viewer sensitivity to their surroundings due to the typically short-term exposure to changes in the environment, and because the passing landscape becomes familiar.
- **Pedestrians**: Pedestrians include individuals who are traveling on foot along or in the vicinity of the Project alignment. Pedestrians can include people traveling to and from residences, schools, places of employment, retail centers, transportation facilities, etc. Pedestrians are generally assumed to have higher levels of viewer sensitivity due to the typically long-term exposure to changes in the environment.
- **Residents**: Residents include individuals whose homes are located along or in the vicinity of the Project alignment. Residents are generally assumed to have higher levels of viewer sensitivity due to a concern for their home environment and the typically long-term exposure to changes in the environment. Residents can also have higher levels of viewer sensitivity due to the typically long-term exposure to changes in the environment, and because they are likely to place a high value on local visual resources.
- **Workers**: Workers include individuals whose place of employment or work activities are located along or in the vicinity of the Project alignment. Workers are generally assumed to have lower levels of viewer sensitivity because they are typically less focused on the visual resources surrounding their workplace and more focused on conditions in their work location. Workers can experience short- or long-term exposure to changes in the environment.
- **Recreational Users**: Recreational users include includes walkers, joggers, bicyclists, nature viewers, and other users whose recreational activities take place along or in the vicinity of the Project alignment. Recreational users are generally assumed to have higher levels of viewer sensitivity due to a particularly focused interest in scenic quality and the potential for varying durations of exposure to changes in the environment.

Table 4.7-1: Summary of Visual Character and Quality

Project Segment	Visual Character	Visual Quality	Viewer Groups	Representative Photograph of Existing Conditions
Dyer/Munster Landscape Unit				
Dyer	In the town of Dyer, land uses range from medium-density suburban residential, with the majority of the residential land uses consisting of single-family development, to business and light industrial districts. This area includes an existing active rail corridor that is located adjacent to the Project alignment. Adjacent homes generally face away from the Project alignment. Trees line much of the Project alignment.	Moderate	Roadway travelers, pedestrians, residents, workers	
Munster/Dyer Main Street Station Area	The west side of the Project alignment includes medium-density residential development as well as a large undeveloped area. The east side of the Project alignment includes medium-density residential development as well as a subdivision that is partially developed and partially vacant.	Moderate	Roadway travelers, pedestrians, residents, workers	
Munster	In the town of Munster, land uses are typically medium-density suburban residential along with a planned subdivision that is mostly undeveloped. Residential areas are interspersed with an industrial park and some commercial land uses. Within the residential area is an open-space area that is planned for station development. This area includes an existing active rail corridor that is located adjacent to the Project alignment. Adjacent homes face either toward or away from the proposed alignment. Trees line much of the Project alignment. Sensitive visual resources in this segment include West Lakes Park, Lansing Country Club, Pennsy Greenway, and the Monon Trail.	Low to moderate	Roadway travelers, pedestrians, residents, workers, recreation users	

Project Segment	Visual Character	Visual Quality	Viewer Groups	Representative Photograph of Existing Conditions
Munster Ridge Road Station Area	The west side of the Project alignment includes vacant, undeveloped land surrounded by medium-density residential development. Commercial development is present to the south along Ridge Road and includes various restaurants and small businesses.	Moderate	Roadway travelers, pedestrians, residents, workers	
Hammond Landscape Unit				
Hammond	In the city of Hammond, land uses are typically medium- to high-density residential and consist mostly of single-family homes on small lots. Downtown Hammond, at the north, is primarily commercial, residential, and industrial land uses and includes some vacant, undeveloped land. North of downtown Hammond, land uses consist of industrial and transportation uses with both occupied and vacant properties. Adjacent homes face either toward or away from the proposed alignment. Trees separate homes from the alignment in some locations. Sensitive visual resources in this segment include the Monon Trail, Erie Lackawanna Trail, Oak Hill Cemetery, Harrison Park, and the State Street Commercial Historic District.	Moderate	Roadway travelers, pedestrians, residents, workers, recreation users	
South Hammond Station Area	The east side of the Project alignment includes vacant, undeveloped land surrounded by medium-density residential development.	Moderate	Roadway travelers, pedestrians, residents, workers, recreation users	

Project Segment	Visual Character	Visual Quality	Viewer Groups	Representative Photograph of Existing Conditions
North Hammond MSF Area	This area includes single-family residential development and industrial buildings as well as vacant lots with debris.	Low to moderate	Roadway travelers, pedestrians, residents, workers, recreation users	
Hammond Gateway Station Area	This area includes single-family residential development as well as vacant parcels and industrial development, which are generally located at the edge of a transportation corridor.	Low to moderate	Roadway travelers, pedestrians, residents, workers, recreation users	

Sources: NICTD 2016; HDR 2017a.

4.7.4 Environmental Consequences

The long-term operating effects for No Build and all Build Alternatives are summarized in **Table 4.7-2**.

Table 4.7-2: Summary of Visual Resources Effects

Alternative	Summary of Visual Resources Effects
No Build	No direct change in visual character or quality.
FEIS Preferred Alt.	The FEIS Preferred Alternative is not expected to substantially change the visual character of the Project Area as a whole. Moderate visual effects are expected along most segments. Moderately high visual effects would occur where full or partial acquisitions would be required, where the alignment would be elevated, and where residential or recreational uses are located adjacent to the Project Area.
Other Build Alternatives Considered in the DEIS[a]	
DEIS NEPA Preferred Alt. & Hamm. Alt. Opt. 1 and 3	Visual impacts would be high and viewer sensitivity would be high for area residences on the south end of the alignment and medium for roadway travelers for station areas and where railroad service does not currently exist. As the alignment moves north, the visual impacts and sensitivity would lessen because the setting is more commercial and industrial. Where the alignment is elevated, visual impacts would be moderate and viewer sensitivity would be low for roadway travelers. Visual impacts and visual sensitivity for trail users would be high.
CR Alt. Opt. 1–4	Same impacts as DEIS NEPA Preferred Alt. south of Douglas Street. The CR alignment is at surface grade until Hohman Avenue; therefore, visual impacts would be low and viewer sensitivity would be low north of Douglas Street except for South Hammond MSF.
IHB Alt. Opt. 1–4	Same impacts as DEIS NEPA Preferred Alt. south of Douglas Street. The IHB alignment uses an existing, active freight corridor, and visual impacts would be minor.

Sources: NICTD 2016; HDR 2017a.

[a] Shaded areas indicate alternatives evaluated in the DEIS.

The potential visual and aesthetic impacts of the Project Alternatives are discussed below. The visual impacts of the Project were assessed by evaluating the changes to existing visual resources that would occur as a result of Project implementation and by evaluating the anticipated viewer response to those changes.

Visual impact assessment was based on direct field observation from multiple vantage points, including from neighboring properties and roads; evaluation of existing visual character; and review of Project plans and features. Visual impact assessment was also based on photographic documentation of several key viewpoints (KVP) of the Project alignment. However, because it is not feasible to analyze all the viewpoints from which the Project would be seen, a number of KVPs were selected to best demonstrate the change in the Project's visual resources. The KVPs selected for the Project are analyzed in detail in the *West Lake Corridor Project Visual and Aesthetic Conditions Technical Report* in **Appendix G4**, and a summary of the analysis is provided below.

4.7.4.1 Long-term Operating Effects

No Build Alternative

The No Build Alternative would result in no direct change in visual character or quality because the transportation projects in the No Build Alternative would not introduce or substantially change visual elements in the Project Area.

FEIS Preferred Alternative

The FEIS Preferred Alternative would change the visual environment by introducing new elements or removing or replacing existing elements. New elements could affect visually sensitive resources by altering the view to and/or from the resource, or by adding an element that would be out of scale or character with the existing visual context. New elements would include vehicles and tracks; the OCS, which includes the poles supporting the wires to power the vehicles; stations, sidewalks, and parking; ramps or pedestrian bridges; TPSS; ROW modifications; bridges and retaining walls; and the MSF. TOD around stations would add a new mixed-use visual element to the suburban-style visual character of existing residential areas.

The anticipated visual effects during Project operation would generally be consistent with existing similar features, such as roads and utility infrastructure, and the Project is not anticipated to substantially obstruct Project Area views or to substantially alter the existing visual character of the Project alignment. A summary of analysis by landscape unit is provided in the following sections. A more detailed analysis by landscape unit and KVP is provided in the *West Lake Corridor Project Visual and Aesthetic Conditions Technical Report* in **Appendix G4**.

Visual Impacts for the Dyer/Munster Landscape Unit

Within the Dyer/Munster Landscape unit, a portion of the Project alignment is adjacent to the existing CSX Monon Subdivision railroad ROW. The Project alignment would closely parallel the existing ROW and, as such, would be an addition to an existing dedicated transportation corridor rather than the introduction of a new transportation corridor. Therefore, the addition of the Project alignment to this portion of the corridor would generally be compatible with the existing land uses, and visual impacts are anticipated to be moderate. However, where residential acquisitions would be required, the addition of the Project alignment would alter the existing land uses, and visual impacts are anticipated to be moderately high. The Project alignment would be elevated from 45th Street to the CN Elsdon Subdivision railroad at the Maynard Junction, adjacent to an existing golf course. However, the nature of development surrounding the golf course includes an existing rail corridor to the south and an existing electrical substation to the east. Therefore, the addition of the Project alignment to this portion of the corridor would generally be compatible with the existing land uses; however, visual impacts are anticipated to be moderately high at this location based on the increased viewer sensitivity that is characteristic of recreational land uses. Where the Project alignment would be elevated over the Pennsy Greenway or would be located adjacent to the existing Monon Trail, visual impacts are anticipated to be moderately high at these locations based on the increased viewer sensitivity that is characteristic of recreational land uses.

Project implementation would also bring new or increased frequency of rail vehicles passing through the area, as well as a viewer group not previously represented in the Project Area (transit riders). Impacts to visual quality would range from moderate to moderately high, especially in some locations where the corridor would be elevated or would be located adjacent to sensitive visual resources (that is, recreation areas). Further, where residential areas are

present on one or both sides of the corridor, an increased level of viewer sensitivity is assumed based on the close proximity to the corridor and the varying degrees of openness of existing vegetation. Both temporary and permanent impacts on the vegetation along the corridor could alter the views and the amount of screening provided for adjacent neighborhoods and recreation areas. At locations where visual impacts are anticipated to be moderately high, implementation of the mitigation measures listed in **Section 4.7.5** would help to avoid or minimize and mitigate visual effects of the Project at each location.

Moderate impacts are generally anticipated as a result of the addition of a station and TPSS Project elements, as these features would be designed to complement their surroundings, with variations in design that are consistent with the context of each station and TPSS location. However, NICTD anticipates that station features would also include passenger information displays, lighting, and security systems, which could alter the visual quality and character at these locations. At station locations, the Project would also create a visual barrier between the neighborhoods on either side of the track and would result in local light and glare impacts.

Visual Impacts for the Hammond Landscape Unit

Within the Hammond Landscape unit, the Project alignment would closely parallel the existing Monon Trail, which would be relocated in some segments. The Monon Trail generally follows existing roads, and, as such, the Project elements would be an addition to existing transportation corridors rather than the introduction of a new transportation corridor. Therefore, the addition of the Project alignment to this portion of the corridor would generally be compatible with the existing land uses; however, visual impacts are anticipated to be moderately high at these locations based on the increased viewer sensitivity that is characteristic of recreational land uses. Further, where residential acquisitions would be required, the addition of the Project alignment would alter the existing land uses, and visual impacts are anticipated to be moderately high. From Douglas Street north, the Project alignment would be elevated over all streets and rails lines using a combination of retaining walls, elevated structures, and bridges. However, the nature of development surrounding this area includes other prominent, elevated transportation features. Therefore, the addition of the Project alignment to this portion of the corridor would generally be compatible with the existing land uses; however, visual impacts are anticipated to be moderately high at this location based on the increased viewer sensitivity that is characteristic of established land uses, such as historic resources.

Project implementation would also bring new and frequent rail vehicles passing through the area, as well as a viewer group not previously represented in the Project Area (transit riders). Impacts to visual quality would range from moderate to moderately high, especially in some locations where the corridor would be elevated or would be located adjacent to sensitive visual resources (that is, recreation areas, historic districts, etc.). Further, where residential areas are present on one or both sides of the corridor, an increased level of viewer sensitivity is assumed based on the close proximity to the corridor and the varying degrees of openness of existing vegetation. Both temporary and permanent impacts on the vegetation along the corridor could alter the views and the amount of screening provided for adjacent neighborhoods and recreation areas or historic resources. At locations where moderately high visual effects are anticipated, implementation of the mitigation measures listed in **Section 4.7.5** would help to avoid or minimize and mitigate visual effects of the Project at each location.

Moderate impacts are generally anticipated as a result of the addition of a station and TPSS Project elements, as these features would be designed to complement their surroundings, with variations in design that are consistent with the context of each station and TPSS location. However, NICTD anticipates that station features would also include passenger information

displays, lighting, and security systems, which could alter the visual quality and character at these locations. At station locations, the Project would also create a visual barrier between the neighborhoods on either side of the track and would result in local light and glare impacts.

Moderately high impacts are anticipated as a result of the addition of the MSF, which would require the acquisition of residential, business, and industrial properties. Where residential areas are present on one or both sides of the corridor, an increased level of viewer sensitivity is assumed. However, portions of this area are also industrial in nature. As noted above, new features would be designed to complement their surroundings, and at locations where moderately high visual effects are anticipated, implementation of the mitigation measures listed in **Section 4.7.5** would help to avoid or minimize and mitigate visual effects of the Project.

Summary of Visual Impacts Assessment

Project implementation is not anticipated to substantially change the visual character of the corridor as a whole, and moderate visual effects are anticipated to result from Project implementation along most segments. However, moderately high visual effects would occur in some areas, such as where full or partial residential acquisitions would be required (near the Munster/Dyer Main Street Station area), where the alignment would be elevated (near the Maynard Junction, the State Street Commercial Historic District, and the Hammond Gateway Station area), and where residential or recreational land uses are located adjacent to the Project corridor (throughout the Dyer/Munster and Hammond Landscape Unit).

Other Build Alternatives Considered in the DEIS

Few differences would occur among the other Build Alternatives considered in the DEIS because all proposed alignment options generally lie within the same area. The other Build Alternatives considered would have similar effects on visual character as the FEIS Preferred Alternative with the exception of the DEIS NEPA Preferred Alternative, Commuter Rail Alternative Option 3, and IHB Alternative Option 3, which had located the layover facility near Munster/Dyer Main Street Station instead of in North Hammond. The Munster/Dyer Layover Facility would cause visual impacts in this area to be high with viewer sensitivity high for area residences and medium for roadway travelers. All other effects would be similar to those of the FEIS Preferred Alternative. A summary of the effects is provided in **Table 4.7-2**. For specific possible effects of the other Build Alternatives considered in the DEIS on visual resources, refer to Section 4.7.4.1 of the DEIS.

4.7.4.2 Short-term Construction Effects

No Build Alternative

The No Build Alternative would result in no direct change in visual character or quality because there would be no construction of new facilities and no property acquisitions that would change the existing visual environment. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects.

FEIS Preferred Alternative

Anticipated visual effects during Project construction would be similar to the appearance of typical roadway projects, including the temporary presence of heavy equipment, traffic-control measures, and construction activities. Areas where construction activities for Project elements would be particularly noticeable to sensitive viewer groups include:

- Areas where the Project alignment is located adjacent to, and would require the acquisition of existing residences;
- Areas where the alignment is elevated, or is located adjacent to sensitive visual resources; and
- Areas that are currently designated for recreational land uses.

In general, the potential short-term effects during Project construction would be associated with construction staging areas, concrete and form installation, removal of existing structures and/or vegetation, lights and glare from construction areas, and generation of dust and debris in the Project Area.

Temporary construction activities are anticipated to include partial or complete road and lane closures, vehicle and pedestrian detours, construction material deliveries, and transport of construction equipment. In general, construction staging areas would be located adjacent to the Project alignment, where the presence of construction equipment and earthmoving activities are not anticipated to be visually intrusive and would be compatible with the surrounding landscape. Where the Project alignment passes along residential and recreation areas, construction activities, such as grading, vegetation removal, and lighting of work areas, would likely be perceived as visually disruptive to those typically more peaceful residential settings.

Construction effects would be temporary, and following the completion of construction activities, construction staging areas would be restored to pre-Project conditions to the extent feasible. At locations where moderately high visual effects are anticipated, implementation of mitigation measures listed in **Section 4.7.5** would help to further reduce the effects of Project construction on sensitive viewer groups in the Project Area.

4.7.5 Avoidance, Minimization, and/or Mitigation Measures

NICTD would construct facilities that fit within the context of the local environment and would engage local jurisdictions and stakeholders regarding landscaping around stations and along the corridor to maintain or improve the visual character of the area. In addition, the station locations were coordinated with the affected municipalities, including the Towns of Dyer and Munster and the City of Hammond. At locations where moderately high visual effects are anticipated, Project elements might be visually screened or softened using landscaping where adequate space permits, and the loss of existing vegetation would be replaced to the extent feasible. Proposed minimization and mitigation measures are described below.

4.7.5.1 Long-term Operating Effects

No mitigation measures are proposed for the No Build Alternative since no construction would occur.

Operational effects on the visual environment would be minimized or mitigated through high-quality design and construction of the FEIS Preferred Alternative. NICTD would coordinate with the local communities and responsible agencies to create visual design guidelines for the Project, such as through the selection of landscape treatments, which would be consistent with

applicable local policies and would be compatible with the character of the affected community. More-detailed information can be found in the *West Lake Corridor Project Visual and Aesthetic Conditions Technical Report* (in **Appendix G4**).

Public comments on the DEIS questioned what types of treatments were available. One such treatment could include the use of mechanically stabilized earth (MSE) approach walls for bridge construction, which can reduce visual effects for adjacent properties. Design specifications for parking lots would also include visual screening, which would be determined through ongoing coordination with the affected communities.

The Project would also minimize vegetation disturbances and clearing of trees and brush during construction. NICTD, in coordination with the Towns of Dyer and Munster and the City of Hammond, is also committed to maintaining the existing trails within the Project Area and would limit trail relocation to sections of trail where required for safety.

As the Project advances, NICTD would coordinate with affected viewers and would consider strategies to avoid or minimize and mitigate the visual effects of the FEIS Preferred Alternative, including but not limited to the following:

- Planting vegetation, street trees, and landscaping in and around the FEIS Preferred Alternative where reasonably feasible
- Giving special consideration to the design of alternatives that could result in visual impacts to highly sensitive viewers
- Designing station and MSF lighting to reduce impacts from glare
- Aiming lighting toward the maintenance and layover facilities to reduce spillage onto neighboring properties and adjacent roads
- Minimizing structural bulk where reasonably feasible
- Designing the facilities to complement or blend with the surrounding communities

4.7.5.2 Short-term Construction Effects

No mitigation measures are proposed for the No Build Alternative since no construction would occur.

Short-term construction effects on the visual environment would be minimized or mitigated by carefully managing those construction activities. Particular techniques that would be used include minimizing Project-related lighting during nighttime work, limiting work to daytime hours in the vicinity of particularly sensitive receptors, and restoring staging areas following Project completion.

4.8 Safety and Security

This section describes the general safety and security considerations related to the design, construction, and operation of the Project. Where applicable, it discusses proposed transit services, vehicles, "Park-and-Ride" lots, railroad-highway grade crossings, stations, sidings, and the MSF that would be associated with the Project and neighborhood security and emergency services. The Project would feature safety and security systems and procedures similar to those currently used by NICTD to protect passengers, workers, and adjacent communities.

4.8.1 Regulatory Setting

There have been no changes to the regulatory setting since the publication of the DEIS.

NICTD, as the owner and operator of the 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 and building codes and standards established by the Occupation Safety and Health Administration, American National Standards Institute, and American Society for Testing and Materials International. 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 Part 633, "Project Management Oversight"). The Project design would meet the following minimum objectives:

- Design for minimum hazard by identifying and eliminating 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, signals and train controls, and track.

4.8.2 Methodology

Since the publication of the DEIS, the methodology has not changed; however, the Passenger Train Joint Emergency Preparedness 49 CFR Part 239 Plan (as amended April 2017) has been included.

The following NICTD documents were reviewed to describe the existing safety and security procedures currently in place for the analysis of the affected environment and No Build Alternative:

- *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 Train Joint Emergency Preparedness 49 CFR Part 239 Plan*, April 2017
- *Passenger Safety Guidelines* brochure for the SSL

At this time, safety and security policies and procedures have not been developed specifically for the Project. During the engineering and construction phases, prior to operations, the 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. 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 safety and security concerns are addressed adequately through proper design and operational planning. This would include developing safety and security design criteria and conducting a subsequent certification process to confirm the criteria are met.

NICTD would work with FTA to provide regular updates to the PMP, Project safety and security activities, organizational updates, work scope changes, and changes to the assignments of responsibilities among Project participants based on FTA 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.

4.8.3 Affected Environment

Since the publication of the DEIS, the Project has been refined to address safety and security concerns raised during the DEIS comment period.

Public safety and security in the Project Area is currently provided by the police, fire departments, and emergency response units of the communities adjacent to the alignment. The FEIS Preferred Alternative would pass through the Towns of Dyer and Munster and the City of Hammond. Each municipality in the Project Area has a system for responding to emergencies including severe weather, fires, rescue incidents, hazardous materials issues, criminal activity, and homeland security incidents. The location of emergency services facilities in the Project Area are identified in **Section 4.5**.

Existing safety features used by NICTD are contained in the Project SSPP, which states that "[t]he mission of the Northern Indiana Commuter Transportation District … is to provide safe, reliable, efficient and convenient passenger rail transportation." In addition to the passenger safety elements in the Project SSPP, NICTD distributes a *Passenger Safety Guidelines* brochure that describes passenger safety features of the railroad and instructs passengers on actions to take in emergency situations as well as general safety actions. In an emergency, passengers can call 911 or contact NICTD police directly by telephone. NICTD also promotes safety and security through passenger on-board announcements and other public awareness programs (for example, Operation Lifesaver).

The Project SSPP also provides the framework for ensuring passenger and employee safety on NICTD property and leased facilities. The plan describes safety actions and functions to be observed by all NICTD employees along with facility maintenance and inspection guidelines. These include regular inspection and audits of stations and other facilities as well as detailed audit and reporting procedures followed by NICTD. In addition, the Emergency Preparedness Plan addresses emergency response topics including communication with passengers and dispatchers, employee training, joint operations, special circumstances (including elevated structures, procedures for de-energizing overhead power, and shared commuter train ROW with Metra), and liaison with emergency responders.

The NICTD Police Department has the primary responsibility to monitor and ensure the safety and protection of life and property within facilities owned and operated by NICTD. 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, including the four-county northwest Indiana area and the greater Chicago area. NICTD is a member agency of the Northwest Indiana Major Crimes Task Force and has developed strong cooperative relationships with all law enforcement agencies in the Project Area including the Chicago Police and Metra Police Departments.

In addition to the system safety and security, passenger safety on the trains, and passenger and employee safety on NICTD property, concerns were identified during the scoping process and during review of the DEIS related to the safety of motorists, bicyclists, pedestrians, trail users, neighborhood children, and transit commuters due to the Project itself. There were also concerns relating to neighborhood crime and safety due to the introduction of the proposed stations. These concerns would relate to Project design impacts from proposed railroad-highway grade crossings, modifications to trails and sidewalks for bicyclists and pedestrians, railroad systems, maintenance and TPSS facilities, and station locations. NICTD has included design elements to avoid, minimize, or mitigate vehicular transit bicycle and pedestrian accidents in addition to neighborhood crime and safety.

4.8.4 Environmental Consequences

The long-term operating effects for the No Build and all Build Alternatives are summarized in **Table 4.8-1**.

Table 4.8-1: Summary of Safety and Security Effects

Alternative	Summary of Safety and Security Effects
No Build	No positive or adverse impacts to safety and security.
FEIS Preferred Alt.	The Project would introduce 10 new railroad-highway grade crossings (see Figure 3.5-4). The Project would run adjacent to nearby activity areas including schools, parks, churches, residential developments, and trails. Stations could pose safety and security concerns for pedestrians and transit users in parking areas.
Other Build Alternatives Considered in the DEIS[a]	
DEIS NEPA Preferred Alt. & Hamm. Alt. Opt. 1 and 3	New railroad-highway grade crossings would be included as part of the DEIS NEPA Preferred Alt. south of Douglas Street in Hammond. North of Douglas Street in Hammond, the DEIS NEPA Preferred Alt. would be elevated. The Project would run adjacent to nearby activity areas including schools, parks, churches, residential developments, and trails. Stations could pose safety and security concerns for pedestrians and transit users in parking areas.
CR and IHB Alt. Opt. 1–4	Same impacts as DEIS NEPA Preferred Alt. south of Douglas Street. North of Douglas Street, the CR and IHB alignments would introduce additional new railroad-highway grade crossings.

Sources: NICTD 2016; HDR 2017a.

[a] Shaded areas indicate alternatives evaluated in the DEIS.

The impacts to safety and security from the FEIS Preferred Alternative in comparison with the No Build Alternative are discussed in the following sections. System safety and security policies and procedures have not been developed specifically for the Project. During the engineering

and construction phases, prior to operations, the Project PMP and SSMP would be developed to 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. The following design-related safety and security topics are considered:

- Railroad-highway grade crossing safety
- Bicycle and pedestrian safety
- Railroad safety including PTC systems
- Maintenance and TPSS facility security
- Station, parking, and transit security
- Neighborhood security

4.8.4.1 Long-term Operating Effects

No Build Alternative

No positive or adverse impacts to safety and security are anticipated to result from the No Build Alternative.

FEIS Preferred Alternative

Railroad-highway Grade Crossing Safety

New railroad-highway grade crossings in Munster and Hammond would be included as part of the FEIS Preferred Alternative. **Table 4.8-2** lists these new railroad-highway grade crossings.

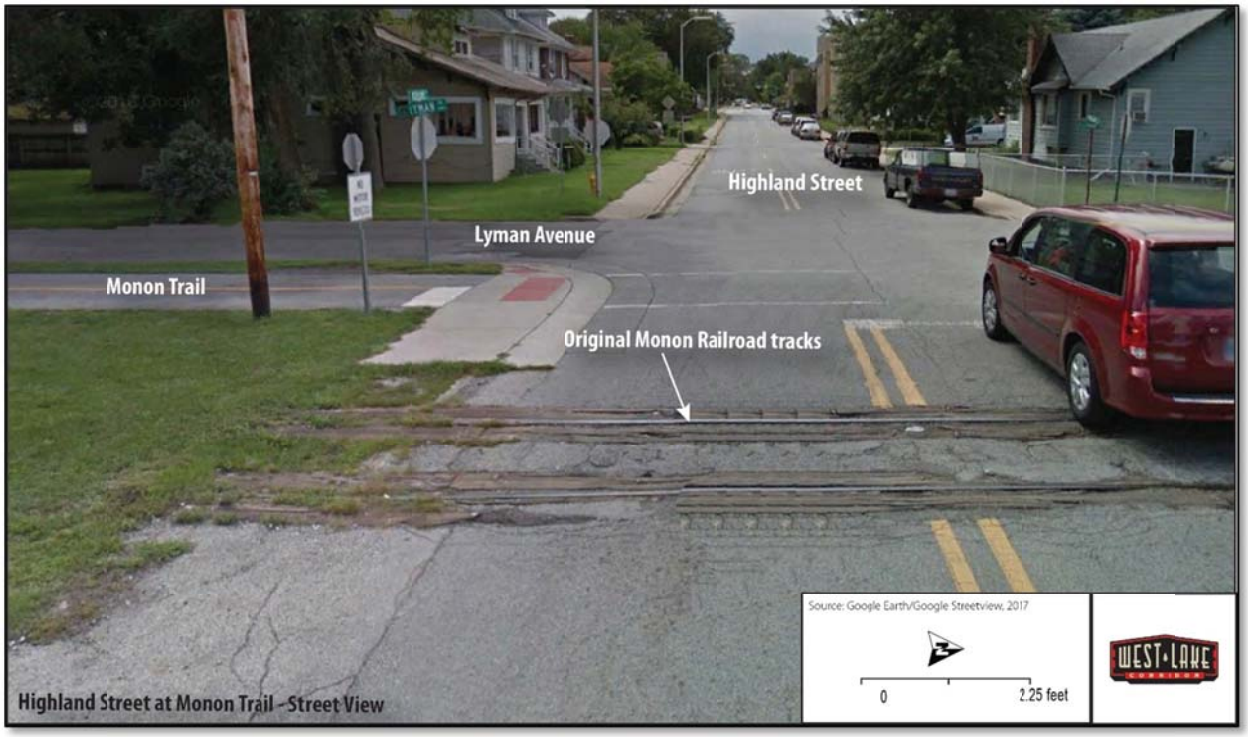
Table 4.8-2: New Railroad-highway Grade Crossings

Municipality	Streets with Proposed Railroad-highway Grade Crossings
Munster	Fisher Street, Ridge Road
Hammond	173rd Street, 165th Street, Kenwood Street, Conkey Street, Detroit Street, Highland Street, Waltham Street, Douglas Street

Source: HDR 2017a.

All new railroad-highway grade crossings would be designed to include appropriate warning and control devices as required by FRA and other agencies. Quiet Zones are being implemented by the respective municipality at all railroad-highway grade crossings along the new alignment. Quiet Zones are segments of a train corridor where the routine sounding of horns can be eliminated because other safety improvements are included at railroad-highway grade crossings. Four-quadrant gates and other improvements consistent with Quiet Zone readiness were included in the design of the Project. **Figure 4.8-1** shows a railroad-highway grade crossing where Project warning and control devices would be installed at Highland Street in Hammond (note that the original Monon Railroad rails can still be seen). **Figure 4.8-2** shows an example of the warning and control devices that currently exist at the SSL crossing of Sheffield Avenue in Hammond. Additional details on the automatic gates that are proposed for railroad-highway grade crossings are presented in **Chapter 3**.

Figure 4.8-1: Highland Street at Monon Trail in Hammond (View West)



Source: Google Streetview 2017.

Figure 4.8-2: Existing SSL Crossing Protection, Sheffield Avenue in Hammond

Source: Google Streetview 2017.

Bicycle and Pedestrian Safety

The FEIS Preferred Alternative would run adjacent to nearby activity areas including schools, parks, churches, and residential developments. The proposed alignment would also be adjacent to or cross pedestrian and bicycle trails, including the Monon Trail (from Fisher Street in Munster to its junction with the Erie Lackawanna Trail in Hammond) and the Pennsy Greenway and Pennsy Path near Fisher Street in Munster. Some reconstruction of the trails would be necessary to accommodate the FEIS Preferred Alternative and to maintain continuity and connectivity. Fencing would be used to prevent unauthorized access to the railroad ROW and to direct pedestrians and bicyclists to areas of safe crossing where appropriately designed crossing locations would be provided to maintain community connectivity. To provide uninterrupted and safe use of the future trail, a separated crossing would be constructed at the programmed Pennsy Greenway, and a closure and relocation of 350 feet of the Pennsy Path between Manor Avenue and the Monon Trail would occur. The relocation would direct trail users to the new railroad-highway grade crossing at Fisher Street. For more information regarding Pennsy Greenway and Path, see **Chapter 7** and **Figure 7.5-9**).

Railroad Safety Including PTC Systems

NICTD is in the process of implementing federally mandated PTC, which would be in place prior to the start of the proposed service. The proposed service would share the existing SSL tracks with the CSS freight operation, which would also have PTC. With the exception of shared service on the existing SSL tracks, the FEIS Preferred Alternative would operate independently of freight traffic on separate track. Existing freight rail tracks within the corridor would be crossed using grade-separated crossings. Given the implementation of PTC and NICTD's experience with the SSL, no new safety impacts are anticipated in those areas where passenger service would be co-located with freight rail operations.

> **Positive train control** is a set of advanced technologies designed to make rail transportation safer by automatically stopping a train before certain types of accidents occur, such as train-to-train collisions, over speed derailments, incursions into established work zone limits, and the movement of a train through a mainline switch in the improper position (FRA 2016). The Rail Safety Improvement Act of 2008 mandated that PTC be implemented across a significant portion of the nation's rail industry by December 31, 2015 (Public Law 110-432).

Maintenance and TPSS Facility Security

The proposed North Hammond MSF, located immediately south of Hammond Gateway Station, would be in an area of primarily industrial land use and would, therefore, not introduce new safety concerns to a residential neighborhood. The facility would provide for maintenance and cleaning of rail vehicles. The North Hammond MSF would consist of a maintenance shop building, inclusive of a welfare and administrative area, rail car wash building, substation, yard storage tracks, and maintenance-of-way open storage area. Major car overhauls or rehabilitations would not be performed at the site, nor would a paint booth be included. For security purposes, the facility would be fenced and gated to prevent unauthorized access. Applicable safety and security precautions associated with the MSF would be listed in the SSMP and *Safety and Emergency Preparedness Plan* (SEPP).

A siding/layover section of track would be constructed on the eastern side of the alignment to the north of the Munster/Dyer Main Street Station platform. This siding would facilitate train movements and positioning at the southern terminus of the FEIS Preferred Alternative. No safety or security impacts are anticipated with this siding.

Based on current track and system design, no specific safety or security issues have been identified concerning the TPSS facilities. The facilities would be contained within enclosed buildings that are not accessible to the public. Applicable safety and security precautions would be listed in the SSMP and SEPP and would be overseen by the NICTD Police Department in cooperation with local law enforcement authorities.

Station, Parking, and Transit Security

The proposed stations associated with the FEIS Preferred Alternative are described in **Section 2.4.5**, and parking is described in **Section 3.6.4**. Each of the stations would include parking, which would lead to an increase in pedestrian activity and traffic around those stations and along nearby roads. Increases in pedestrian activity near roads could result in increased pedestrian/automobile collisions.

Station areas would be designed according to BMPs for safety. Stations would include public address systems and digital message boards, video monitoring, and emergency telephones. A public address system, with both speakers and signs, would convey information to people with disabilities in compliance with ADA requirements. Speakers and signs would be positioned

to be clearly audible and visible. To deter vandalism, the speakers and signs would be out of public reach. Closed-circuit television would record activity at ticket vending areas, platforms, and the Munster/Dyer Main Street Station pedestrian underpass. Camera locations would be coordinated with the locations of other equipment such as lighting, audio equipment, and signs. Cameras would be visible to the public but not readily accessible. Stations would incorporate an emergency telephone on or near the platform and Munster/Dyer Main Street Station pedestrian underpass for use in emergency situations.

General illumination of station areas and vehicular and pedestrian circulation lighting would be consistent with established guidelines. Emergency lighting would be provided in all public areas, including platforms. Pedestrian lighting would be located along underpasses, walkways, crosswalks, ramps, stairs, and bicycle storage areas. Vehicular traffic areas within station boundaries, such as bus loading and unloading zones, would be illuminated. Lighting would also be provided for “Park-and-Ride” facilities.

NITCD’s existing transit security procedures would be continued under the FEIS Preferred Alternative. These procedures would be reviewed and modified if needed prior to operations to incorporate the new service along the Project Area. In addition, the security procedures would be reviewed on an as-needed basis once operations begin and would be modified if necessary.

Neighborhood Security

Comments received on the DEIS included concerns about the potential for increased crime in neighborhoods surrounding proposed stations. A literature review of multiple sources conducted for the CTA Red Line Extension in Chicago (CTA 2015) found that new train stations would be unlikely to have much, if any, effect on neighborhood crime (Denver Regional Transportation District 2006; Liggett et al. 2002; Plano 1993; San Diego Association of Governments 2009). However, some studies have found a correlation between train service and higher crime rates, particularly in low-income areas (Block and Davis 1996; Ihlanfeldt 2003; Poister 1996). A study of two stations in Atlanta found slight increases in crime after station openings, with rates regressing to the mean over the next several months (Poister 1996).

A study of crime patterns around Los Angeles Green Line stations considered a number of variables related to the surrounding environment and found that the rail line had no significant impacts on crime trends (Liggett et al. 2002). This study is mirrored by a recent study in San Diego to compare crime rates in neighborhoods that are similar demographically but differ with respect to rail transit access. No significant differences in crime were found between similar neighborhoods with and without train access, and crime around San Diego’s Green Line extension followed city and county trends after opening (San Diego Association of Governments 2009).

Overall, based on previous studies and NICTD’s current experience with the SSL, it appears that new train stations associated with the FEIS Preferred Alternative would be unlikely to have much, if any, effect on neighborhood crime.

Other Build Alternatives Considered in the DEIS

The other Build Alternatives considered in the DEIS would have similar impacts to safety and security as the FEIS Preferred Alternative. A summary of the effects is provided in **Table 4.8-1**. For specific possible effects of the other Build Alternatives considered in the DEIS on safety and security, refer to Section 8.7.4.1 of the DEIS.

The other Build Alternatives would include a combination of railroad-highway grade and elevated street crossings, and some of the impacts would vary geographically depending on the locations of various Project facilities under each of the Build Alternatives. All of the Build Alternatives would use PTC technology to improve rail safety. Similar safety and security devices and procedures would be used in all of the Build Alternatives considered in the DEIS.

4.8.4.2 Short-term Construction Effects

No Build Alternative

No construction impacts are anticipated as part of the No Build Alternative. Potential impacts associated with other projects under the No Build Alternative would be evaluated separately as part of the planning for those projects.

FEIS Preferred Alternative

Construction Safety

For the FEIS Preferred Alternative, public safety during construction would be a top priority. The use of construction equipment, delivery of materials, road closures, and other construction site activity could have temporary negative safety impacts on adjacent roads, trails, and pedestrian areas. Access to active construction sites would be limited by fencing and security gates to prevent unauthorized or inadvertent access by members of the public.

During construction of the FEIS Preferred Alternative, NICTD and its contractors would require access to CSX, NS, and IHB properties to build bridges and temporary tracks. Flagging would be used for safety of the freight railroads as well as NICTD contractors.

Emergency Services

Comments received on the DEIS included concerns about the ability of first responders to cross or access construction areas. Emergency services would be able to access construction sites at all times in the same way contractors access the sites, and detours would be needed at times because of roadway closures. Roadway closures would be planned in advance and coordinated with local municipalities, which would provide notification of upcoming closures and detours to the police and fire departments. In addition, emergency vehicle access would be available through certain active construction areas, even if public access has been restricted. The overall impact of construction on emergency service access or response times would be minimal.

4.8.5 Avoidance, Minimization, and/or Mitigation Measures

4.8.5.1 Long-term Operating Effects

No mitigation measures are proposed for the No Build Alternative since no impacts are anticipated.

For the FEIS Preferred Alternative, system safety and security oversight for the Project would be achieved through implementation of an SEPP by NICTD. The primary purpose of the plan is to consider safety and security, operational staff training, and emergency response measures. The SEPP specifies actions and requirements of the NICTD police to maintain safety and security during Project construction and operations. 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.

Safety improvements for railroad-highway grade crossings would include warning and control devices for Quiet Zone areas, including raised median barriers and four-quadrant gates.

Fencing would be used to prevent unauthorized access to the railroad ROW. To provide uninterrupted and safe use of the future trail, a separated crossing would be constructed at the programmed Pennsy Greenway, and a closure and relocation of 350 feet of the Pennsy Path between Manor Avenue and the Monon Trail would occur. For more information regarding Pennsy Greenway and Path, see **Chapter 7** and **Figure 7.5-9**.

For security purposes, the North Hammond MSF and TPSS facilities would be fenced and gated to prevent unauthorized access.

To reduce potential risks in station areas and surrounding neighborhoods, NICTD would include security cameras and would work closely with municipal police services to develop and implement measures to deter loitering and criminal activity.

Pedestrian safety in station areas would be enhanced through improved intersections and crosswalks in key locations as shown in **Figures 3.6-3** to **3.6-6**. Pedestrian safety at Munster/Dyer Main Street Station shown in **Figure 3.6-3** would be enhanced by constructing a pedestrian underpass under the CSX railroad from the “Park-and-Ride” lot to allow access to the platform. At this station, a pedestrian bridge would also be constructed over the station driveway to allow platform access from the south. For the Hammond Gateway Station access to the SSL platform (north of the Project track) from the parking lot (south of the Project track) would be accommodated by a paved plaza area under the elevated Project track as shown in **Figure 3.6-6**.

4.8.5.2 Short-term Construction Effects

No mitigation measures are proposed for the No Build Alternative since no impacts are anticipated.

For the FEIS Preferred Alternative, all construction contractors would be required to develop and implement a *Construction and Site Safety Plan* to address key topics including road closures, lane closures, bridge construction, excavations, access control, worker safety, public safety, and other relevant safety topics. Since construction would occur near active trails, parks, schools, and neighborhoods, the safety of trail and park users, schoolchildren, bicyclists, and neighbors is of paramount importance. The plans would show the locations of construction barriers and would highlight safe routes to access and use the nearby parks, schools, and trails. The plans would also identify any public information efforts to be used before and during construction activities to educate the public regarding safety near construction sites, locations and use of safe access routes, and any changes that occur once construction begins.

Semi-permanent safe routes to cross the construction corridor would be identified and clearly marked with signs, orange construction fencing, or other types of barriers. These safe routes would be identified on maps to be made available to the public and posted near the construction zones. If construction equipment needs to cross an identified safe route, flaggers would be posted on either side of the safe route to preclude public access until the equipment has crossed over and the barriers have been reestablished. The construction contractor or NICTD would provide a public information officer to answer questions and address concerns that arise over the course of the construction period.

NICTD and its contractors would provide construction barriers, signs, and fences to secure construction sites and staging areas and would evaluate the need for additional security measures such as security personnel. Barriers and fences would be used at all times to

preclude public access to active construction areas. If temporary road closures are necessary, advance notice would be provided to neighbors and local businesses, and alternative routes and detours would be clearly identified. To minimize inconvenience to the local population, the duration of closures would be limited to the extent feasible.

If temporary lane closures are needed to facilitate construction, variable-message signs and/or flaggers would be used to alert the traveling public to lane closures, slow-moving traffic, and the movement of construction vehicles and trucks. Temporary lane closures would be coordinated with the local jurisdictions, and the duration of temporary lane closures would be minimized as much as possible. If daily lane closures are required on arterial roads, the lane closures would occur during off-peak periods to the extent practicable.

To minimize the length of detours and out-of-direction travel, care would be taken to avoid simultaneous closures of adjacent roads or adjacent through streets. These precautions would minimize inconvenience to the traveling public and ensure that essential through streets remain accessible to emergency vehicles.

For the FEIS Preferred Alternative, NICTD and its contractors would comply with each freight railroad operator's access, safety, and operational requirements during Project construction on or near the respective freight railroad operator's property, including securing appropriate easements and agreements, adopting the freight railroad operator's safety procedures, and ensuring that each freight railroad operator has access to its facilities at all times. CSX, NS, and IHB operations would be maintained at all times during construction of the Project.

4.9 Environmental Justice

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

More detail is included in the *West Lake Corridor Project Environmental Justice Technical Report* in **Appendix G5** of this FEIS.

4.9.1 Regulatory Setting

There have been no changes to the regulatory setting since the publication of the DEIS.

The analyses presented in **Section 4.9** were prepared in compliance with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994); USDOT's *Order to Address Environmental Justice in Minority Populations and Low-Income Populations* [USDOT Order 5610.2(a), May 2, 2012]; and FTA's Circular 4703.1, *Environmental Justice Policy Guidance for Federal Transit Administration Recipients* (FTA, August 15, 2012).

In accordance with FTA Circular 4703.1, the EJ process and analysis for the Project, and specifically for the FEIS Preferred Alternative, were developed and completed to accomplish the following:

1. Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental impacts, including social and economic impacts, on EJ populations.
2. Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
3. Prevent the denial of, reduction in, or significant delay in the receipt of benefits by EJ populations.

4.9.2 Methodology

Since the publication of the DEIS, the design of the Project has advanced as well as public engagement; therefore, the EJ section has been updated to reflect the design refinements of the Project and ongoing public engagement.

The framework for the EJ evaluation in **Section 4.9** is based on FTA Circular 4703.1, which describes a methodology that addresses EO 12898 that includes both a robust public participation process and an analytical process that includes 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 effect could be avoided, minimized, or mitigated.

4.9.2.1 EJ Study Area and Data Sources

A GIS platform was used to identify a half-mile buffer around the Project alignment, including proposed stations, parking facilities, and maintenance and storage facilities. ACS 2010–2014 5-year estimates data were used to map and quantify EJ populations at the block group level, which is the smallest geographic unit for which income data are available. Each census block group that intersects or is completely within the half-mile buffer is included in the analysis and is considered part of the EJ Study Area.

4.9.2.2 Method for Identifying Minority Populations

As defined in FTA Circular 4703.1, persons of minority status include those who are (1) American Indian or Alaska Native, (2) Asian, (3) Black or African American, (4) Hispanic or Latino, or (5) Native Hawaiian or Other Pacific Islander. In this analysis, people identified as Other Race or Two or More Races are also considered as minorities.

Minority populations exist when there is at least one of the following:

- A readily identifiable group or cluster of minority population is located in the EJ Study Area.
- Minority populations exceed 50 percent of the total population for the census block group or other relevant geographic unit.
- The percentage of minorities in the EJ Study Area is meaningfully greater than that of a region of comparison; that is, Lake County, Indiana, and Cook County, Illinois.

In addition to United States Census Bureau's ACS data, NICTD engaged in a comprehensive outreach program to further identify minority populations, particularly any clusters, in the EJ Study Area through direct interactions with communities throughout Project development. Through these outreach efforts, discussed in **Section 4.9.5**, direct interaction with the communities confirmed the census data results regarding minority concentrations and shaped subsequent communications to maintain effective engagement throughout the Project.

4.9.2.3 Method for Identifying Low-Income Populations

As defined in FTA Circular 4703.1, a low-income person is one whose annual household income is at or below the United States Department of Health and Human Services' (DHHS) poverty guidelines. Poverty levels are defined at the national level and vary by the number of persons in a family and the age of the family members. For example, the 2014 poverty guidelines (the last year on which census data used in this analysis were based) for the 48 contiguous states and the District of Columbia provide a poverty threshold for a family of four of an annual household income of $23,850.

Low-income populations exist when there is at least one of the following:

- A readily identifiable group or cluster of low-income persons is located in the EJ Study Area.
- The percentage of low-income persons in the EJ Study Area is meaningfully greater than that of a region of comparison; that is, Lake County, Indiana, and Cook County, Illinois.

As with minority populations, NICTD engaged in a comprehensive outreach program to help identify additional low-income populations to supplement the United States Census Bureau's ACS data. The outreach efforts with the communities confirmed the census data results regarding concentrations of lower-income populations and shaped subsequent communications to maintain effective engagement throughout the Project.

4.9.2.4 Method for Determination of Impacts on EJ populations

The Project-wide EJ finding is based on whether the FEIS Preferred Alternative would result in disproportionately high and adverse effects on EJ populations. When making the final Project-wide EJ finding, NICTD considered the following criteria:

- Would the FEIS Preferred Alternative's adverse impacts be predominantly borne by EJ populations?
- Would adverse impacts on EJ populations be appreciably more severe or greater in magnitude than those experienced by non-EJ populations?
- Would the FEIS Preferred Alternative's benefits offset its adverse impacts?
- What would be the effect of mitigation measures that would be incorporated into the Project and any other enhancements or betterments that would be provided in lieu of mitigation when considering these impacts?

For each resource area, a preliminary EJ impact assessment was made. After all resources were considered and after examining the FEIS Preferred Alternative holistically by taking into account the adverse effects on EJ populations, committed mitigation measures for each resource area, benefits to EJ populations, and additional mitigation measures to address the potential for disproportionately high and adverse effects on minority and low-income populations, FTA made a Project-wide EJ finding, which is presented at the conclusion of the analysis.

4.9.3 Affected Environment

Since the publication of the DEIS, the data on existing conditions have been updated.

This section identifies and describes the EJ populations identified within the EJ Study Area.

4.9.3.1 Minority Populations

The racial and ethnic composition of the EJ Study Area, as well as of Lake County, Cook County, Indiana, and Illinois, are shown in **Table 4.9-1**. The table identifies minorities as those that identify as Latino/Hispanic (any race), Black/African American, Asian, and Other (that is, American Indian, Alaska Native, Native Hawaiian, Other Pacific Islander, Some Other Race, or Two or More Races). The EJ Study Area, which consists of 41 census block groups from Lake County and 16 block groups from Cook County, has a higher percentage of minority populations (58.3 percent) than Lake County as a whole (45.1 percent), Cook County as a whole (56.6 percent), Indiana (19.2 percent), and Illinois (37.1 percent).

The weighted average minority percentage of Lake County and Cook County (55.7 percent), which considers the total combined population of both counties, is greater than the 50 percent threshold noted in **Section 4.9.2.2**; therefore, the more-inclusive threshold of 50 percent was used to identify minority populations in the EJ Study Area. Block groups that have a lower percentage (0 to 49.9 percent) of minorities are considered non-minority block groups.

Table 4.9-1: Minority Populations by State, County, and EJ Study Area

Geography	Population	Non-Hispanic				Hispanic/ Latino (All Races)	All Minority Groups
		White	Black/African American	Asian	Other[a]		
Indiana							
Population	6,542,411	5,286,730	589,861	113,904	140,380	411,536	1,255,681
%	100%	80.8%	9.0%	1.7%	2.1%	6.3%	19.2%
Illinois							
Population	12,868,747	8,088,630	1,822,304	622,689	239,629	2,095,495	4,780,117
%	100%	62.9%	14.2%	4.8%	1.9%	16.3%	37.1%
Lake County							
Population	493,140	270,560	122,333	6,126	8,314	85,807	222,580
%	100%	54.9%	24.8%	1.2%	1.7%	17.4%	45.1%
Cook County							
Population	5,227,827	2,266,635	1,248,338	343,048	88,589	1,281,217	2,961,192
%	100%	43.4%	23.9%	6.6%	1.7%	24.5%	56.6%
EJ Study Area							
Population	71,665	29,568	18,701	1,268	1,060	21,068	42,097
%	100%	41.3%	26.1%	1.8%	1.5%	29.4%	**58.7%**

Source: United States Census Bureau 2015a.

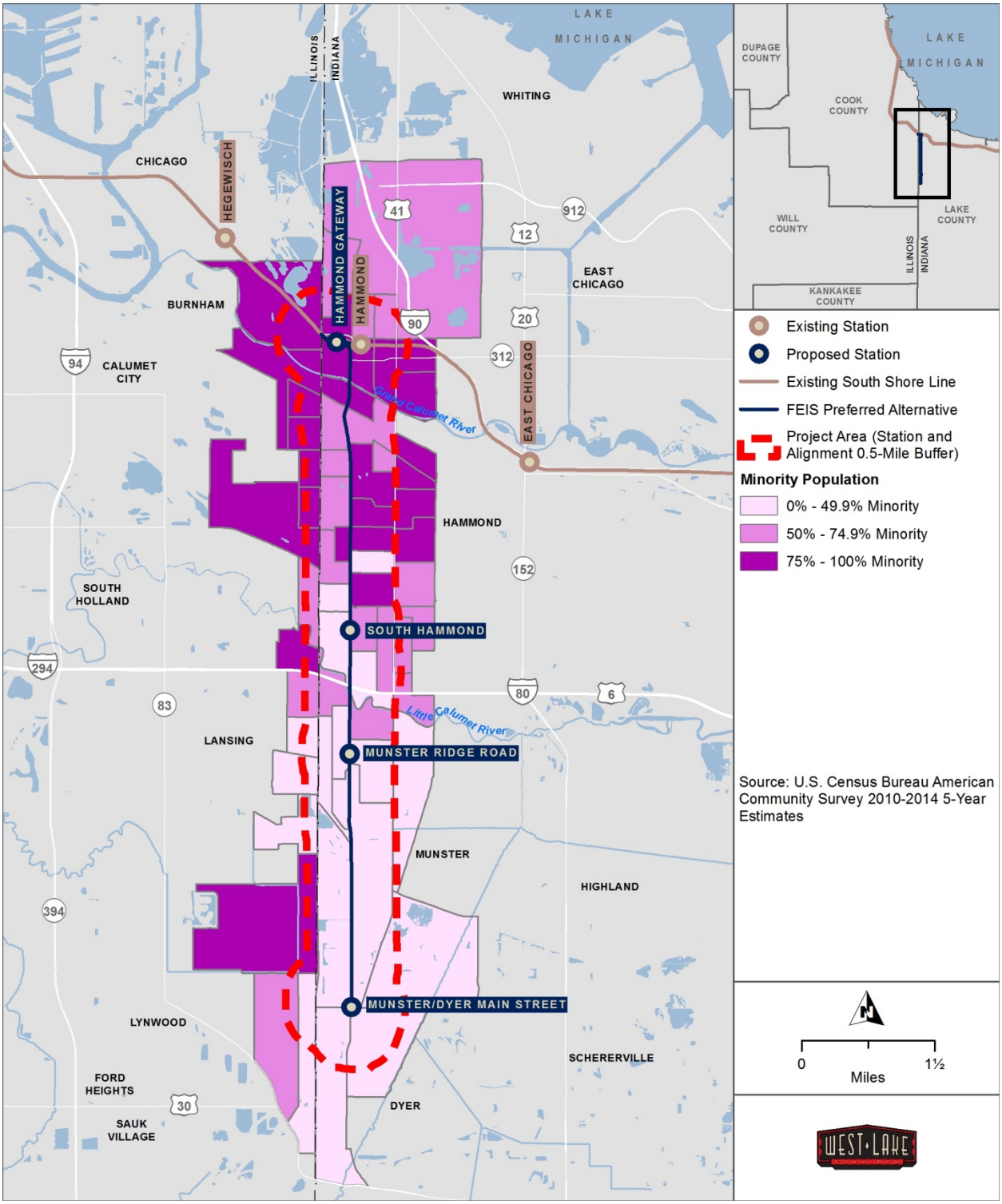
[a] Other includes American Indian/Alaska Native, Hawaiian Native/Pacific Islander, Some Other Race, or Two or More Races.

Figure 4.9-1 illustrates the locations of the block groups in the EJ Study Area that are below the 50 percent threshold, as well as those between 50 percent and 74.9 percent (minority block groups) and between 75 percent and 100 percent (high minority block groups). As the figure shows, the EJ Study Area has several neighborhoods with more than 50 percent of their population composed of minorities, most notably near the proposed Hammond Gateway Station. Other large concentrations of minority populations reside near but not immediately adjacent to South Hammond Station.

Figures 4.9-2 through **4.9-5** illustrate the percentages of specific minority groups by block group (Hispanic/Latino, Black/African American, Asian, and Other, which includes American Indian/ Alaska Native, Native Hawaiian or Other Pacific Islander, Some Other Race, and Two or More Races, respectively). For these minority groups, the threshold used to identify whether the block group has a meaningfully greater percentage of these minority groups is the two-county average. That is, for Hispanic/Latino populations (**Figure 4.9-2**) the threshold is 23.9 percent, for Black/African American populations (**Figure 4.9-3**) the threshold is 24.0 percent, for Asian populations (**Figure 4.9-4**) the threshold is 6.1 percent, and for Other minority populations (**Figure 4.9-5**) the threshold is 1.7 percent.

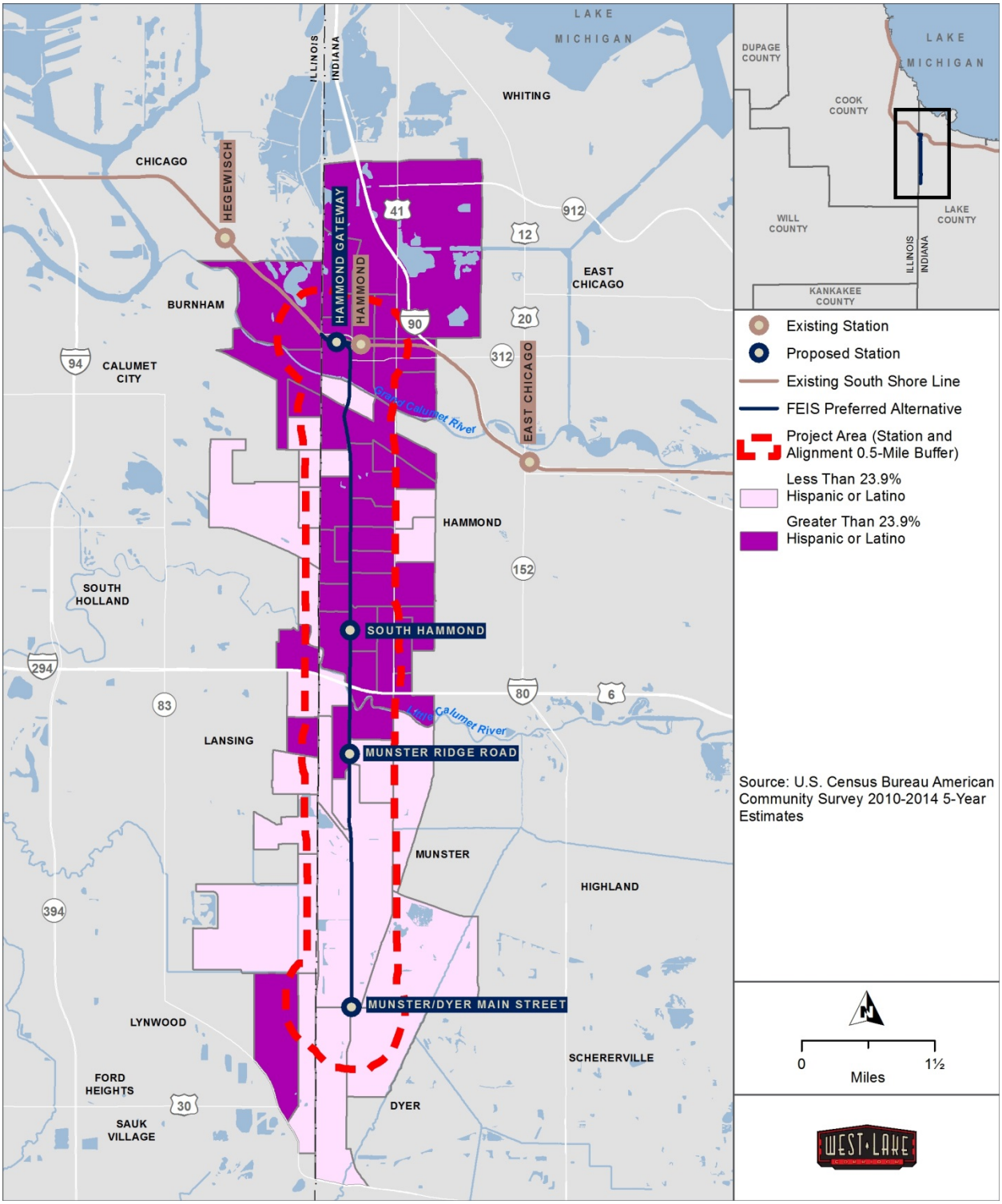
The figures show large concentrations of Hispanic/Latino populations north of Munster Ridge Road Station and near South Hammond and Hammond Gateway Stations, as well as concentrations of Black/African American populations in Hammond and west in Cook County, Asian populations in Munster and Hammond, and those identified as Other throughout the EJ Study Area.

Figure 4.9-1: Minority Populations in the EJ Study Area



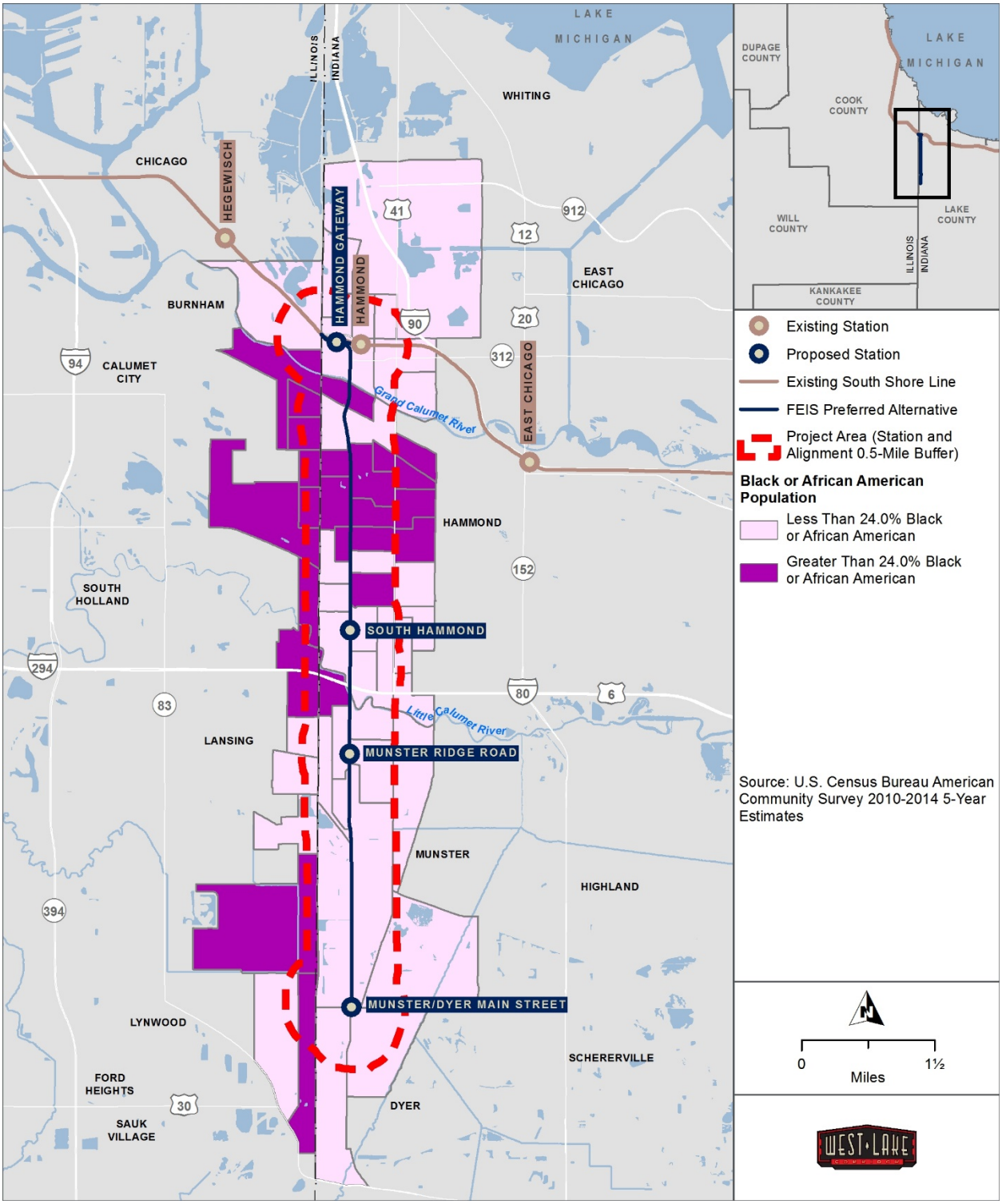
Source: HDR 2017a.

Figure 4.9-2: Hispanic/Latino Populations in the EJ Study Area



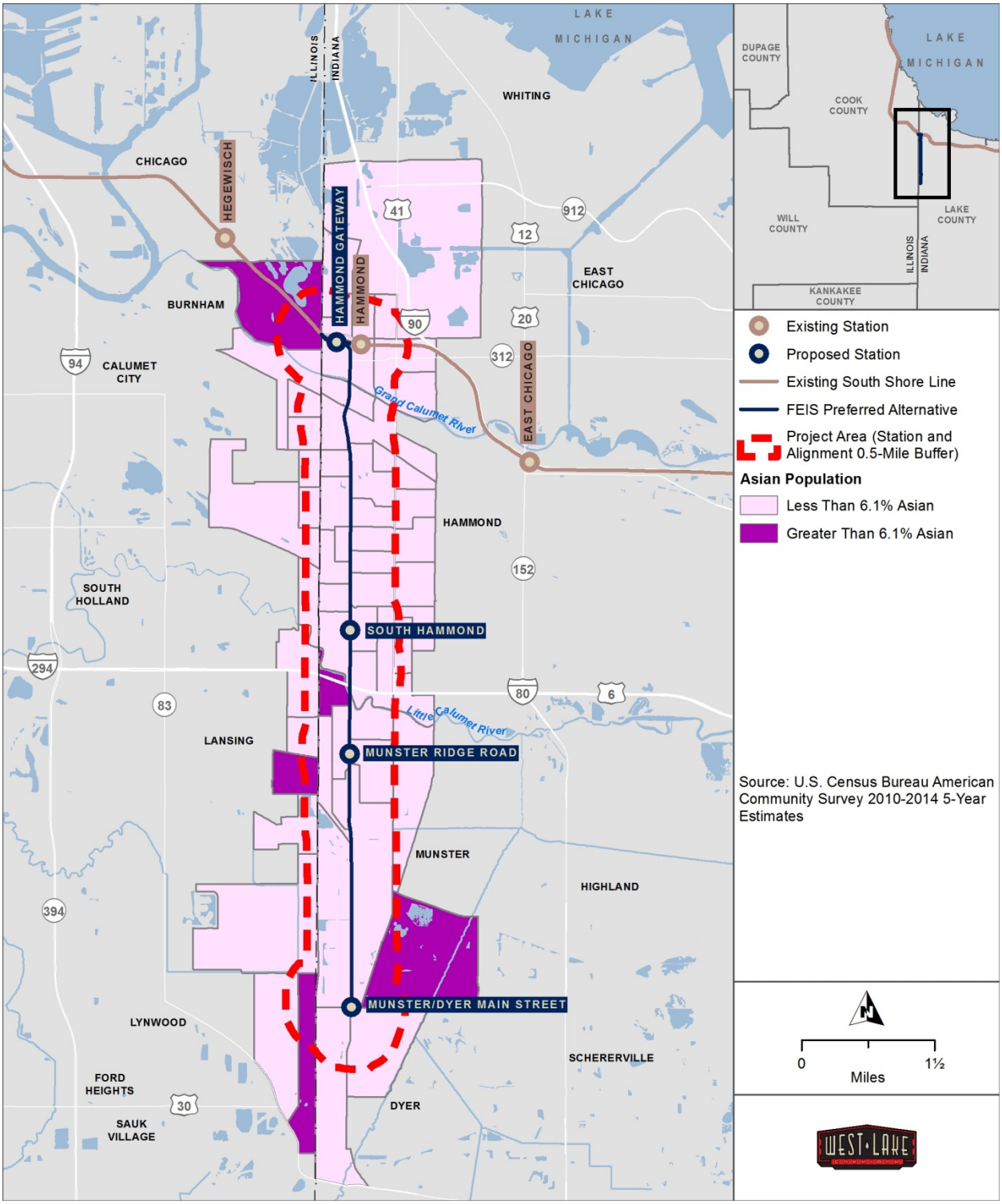
Source: HDR 2017a.

Figure 4.9-3: Black/African American Populations in the EJ Study Area



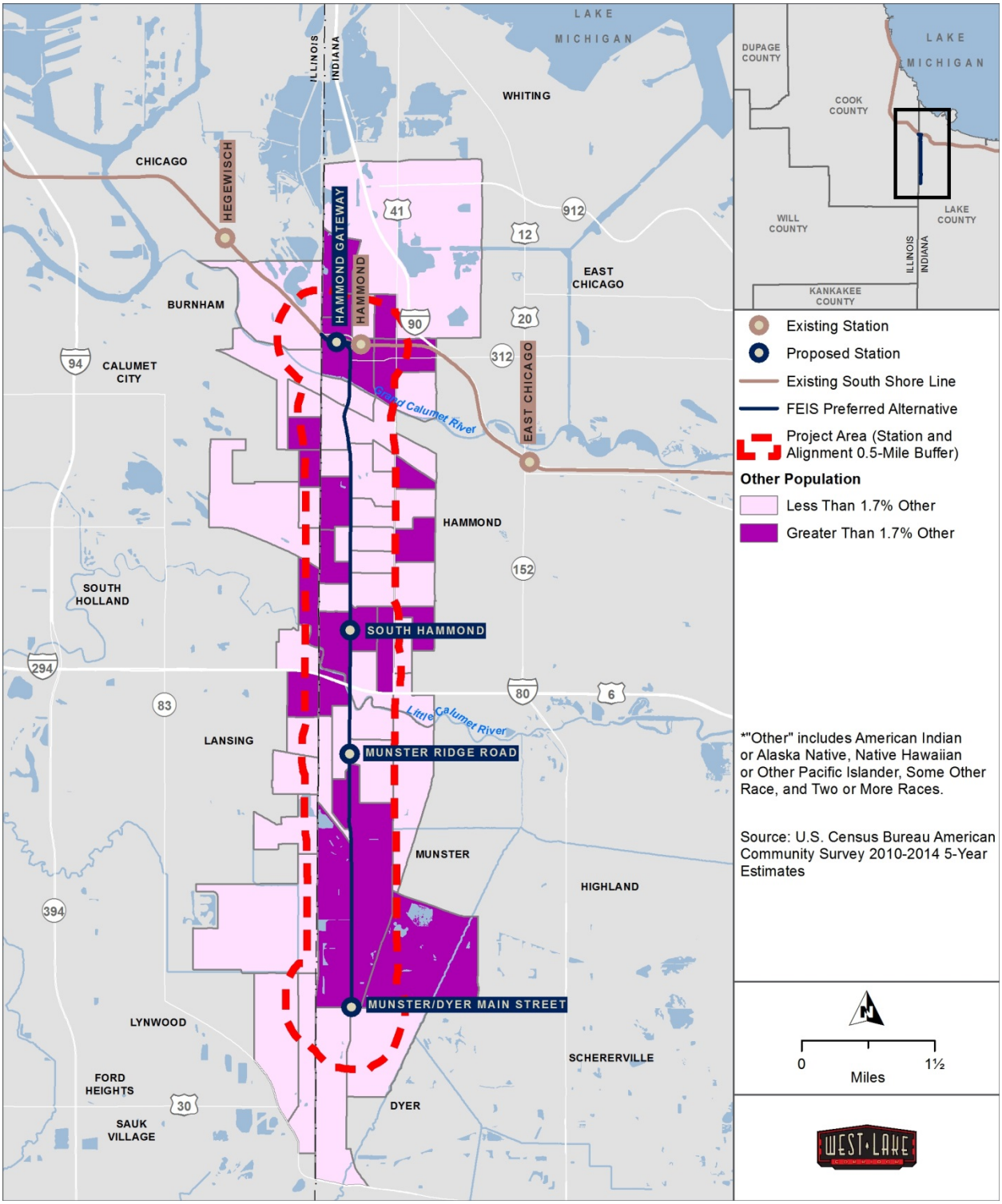
Source: HDR 2017a.

Figure 4.9-4: Asian Populations in the EJ Study Area



Source: HDR 2017a.

Figure 4.9-5: Other Minority Populations in the EJ Study Area



Source: HDR 2017a.

4.9.3.2 Low-Income Populations

The percentages of low-income populations, identified as those persons whose annual household income is below the federally established poverty level based on household size, are shown in **Table 4.9-2** for the EJ Study Area as well as for Lake County, Cook County, Indiana, and Illinois. The table indicates that the EJ Study Area (41 block groups from Lake County and 16 block groups from Cook County) has a higher percentage of low-income populations (22.4 percent) than Lake County (18.2 percent), Cook County (17.2 percent), Indiana (15.5 percent), and Illinois (14.4 percent).

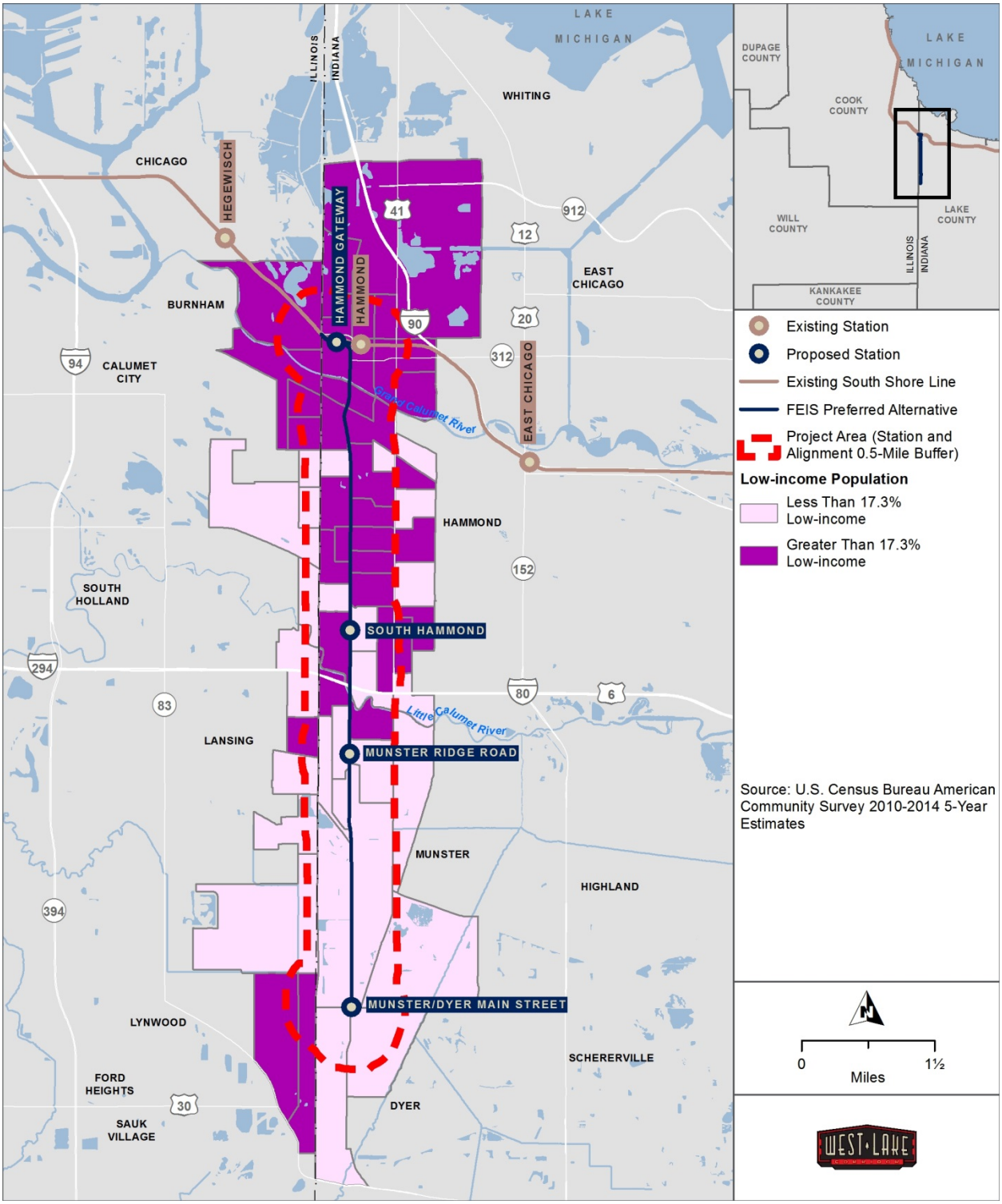
Table 4.9-2: Low-Income Populations by State, County, and EJ Study Area

Geography	Population	At or Above Poverty Level	Low Income (below Poverty Level)
Indiana			
Population	6,342,824	5,358,998	983,826
%	100%	84.5%	15.5%
Illinois			
Population	12,566,139	10,755,669	1,810,470
%	100%	85.6%	14.4%
Lake County			
Population	487,336	398,568	88,768
%	100%	81.8%	18.2%
Cook County			
Population	5,145,839	4,259,578	886,261
%	100%	82.8%	17.2%
EJ Study Area			
Population	71,058	55,291	15,767
%	100%	77.8%	**22.2%**

Source: United States Census Bureau 2015b.

Figure 4.9-6 shows the locations of the low-income block groups in the EJ Study Area. Low-income block groups are identified as those block groups whose percentage of low-income populations is greater than that of the combined weighted average of Lake and Cook Counties, which is 17.3 percent. Block groups that have a lower percentage (0 to 17.3 percent) of low-income populations than the two-county average are considered as non-low-income block groups. **Figure 4.9-6** shows that the EJ Study Area contains several neighborhoods with more than 17.3 percent of their population composed of low-income populations, most notably near the proposed South Hammond and Hammond Gateway Stations.

Figure 4.9-6: Low-Income Populations in the EJ Study Area



Source: HDR 2017a.

4.9.4 Environmental Consequences

To assess whether the FEIS Preferred Alternative would result in disproportionately high and adverse effects on EJ populations, NICTD assessed the likely Project impacts on the population in general. With the consideration of offsetting Project benefits and the effects of avoidance, minimization, and mitigation measures, NICTD then assessed whether those impacts would be predominantly borne by EJ populations and/or would be appreciably more severe or greater in magnitude than those suffered by non-EJ populations. The long-term operating effects for the No Build and all Build Alternatives are summarized in **Table 4.9-3**.

Table 4.9-3: Summary of Environmental Justice Effects

Alternative	Summary of Environmental Justice Effects
No Build	The No Build Alternative is not expected to result in adverse environmental impacts on EJ populations.
FEIS Preferred Alt.	The FEIS Preferred Alternative would displace four commercial and nine industrial businesses, all located in EJ neighborhoods. Impacts to business owners would be mitigated according to the Uniform Act. With the implementation of mitigation measures, the Project-wide finding is that the FEIS Preferred Alternative would not result in disproportionately high and adverse effects on EJ populations.
Other Build Alternatives Considered in the DEIS[a]	
DEIS NEPA Preferred Alt., CR Alt. Opt. 1–4, IHB Alt. Opt. 1–4 & Hamm. Alt. Opt. 1 and 3	The impacts associated with the Build Alternatives would occur throughout the Project Area, affecting both EJ and non-EJ populations alike. The adverse effects remaining after mitigation for neighborhood and community resources as well as visual resources would not be predominantly borne by EJ populations, nor would adverse impacts be appreciably more severe or greater in magnitude to EJ populations than to non-EJ populations. These alternatives offer substantial benefits that would accrue to all resident populations, including EJ populations.

Sources: NICTD 2016; HDR 2017a.

[a] Shaded areas indicate Alternatives evaluated in the DEIS.

4.9.4.1 Resources Considered in the EJ Impact Analysis

All environmental resource areas analyzed in this FEIS were reviewed to identify those that could be adversely affected by the FEIS Preferred Alternative. The environmental resource areas with no adverse impacts identified were eliminated from consideration for EJ analysis. Environmental resource areas with adverse impacts that require mitigation were further reviewed to consider the possibility of disproportionately high and adverse effects on EJ populations. Environmental resource areas that would likely have adverse effects were retained to determine whether the adverse effects could be predominantly borne by EJ populations. **Table 4.9-4** lists all environmental resource areas and identifies those that require additional EJ analysis and the rationale for the determination.

Table 4.9-4: Environmental Resource Areas Requiring EJ Analysis

Environmental Resource Area	EJ Analysis Required	Rationale
Public Transportation	No	No adverse impacts
Freight Rail	No	Adverse impacts would have no effect on EJ populations
Bicycle and Pedestrian	Yes	Adverse impacts could affect EJ populations
Traffic	Yes	Adverse impacts could affect EJ populations
Parking	Yes	Adverse impacts could affect EJ populations
Land Use and Zoning	No	No adverse impacts with mitigation
Land Acquisitions and Displacements	Yes	Adverse impacts could affect EJ populations
Socioeconomics and Economic Development	Yes	Potential indirect effects from station area development
Neighborhoods and Community Resources	Yes	Impacts on neighborhood cohesion and community resources could affect EJ populations
Cultural Resources	Yes	Historic property adversely affected in EJ area
Visual Resources	Yes	Adverse impacts could affect EJ populations
Safety and Security	Yes	Adverse impacts could affect EJ populations
Noise	Yes	Adverse impacts could affect EJ populations
Vibration	Yes	Adverse impacts could affect EJ populations
Air Quality	Yes	Short-term adverse impacts could affect EJ populations
Energy	No	No adverse impacts
Soils, Geologic Resources, and Farmlands	No	Adverse impacts not located in EJ areas
Water Resources	No	Adverse impacts would have no effect on EJ populations
Biological Resources	No	Adverse impacts would have no effect on EJ populations
Hazardous Materials	No	With best management practices, no adverse impacts
Utilities	No	No adverse impacts

Source: HDR 2017a.

4.9.4.2 Resource Analysis

A full EJ analysis was conducted for each of the 12 resource areas for which it had been identified that analysis is warranted because of the potential for adverse effects on EJ populations. The analysis is included in detail in **Appendix G5**, and the results of that analysis are summarized in **Table 4.9-5**.

Table 4.9-5: Environmental Justice Analysis Results

Environmental Resource Area Analyzed	Long-term Adverse Effects on EJ Populations	Short-term Adverse Effects on EJ Populations	Potential for Adverse Effects Predominantly Borne by EJ Populations
Bicycle and Pedestrian	No	Temporary closure of some street segments, sidewalks, and crosswalks would disrupt bicycle and pedestrian facilities.	No
Traffic	No	Temporary disruptions to traffic operations, including lane closures, short-term intersection and roadway closures, and detours would cause increases in local congestion.	No
Parking	No	On-street parking temporarily unavailable because of lane closures or staging of vehicles or equipment during construction.	No
Land Acquisitions and Displacements	Employees and customers of displaced businesses, all in EJ communities, might be EJ populations experiencing job loss, longer commutes, or lack of available nearby goods and services.	No	Yes; see discussion below
Socioeconomics and Economic Development	No	Temporary disruptions to business access and environmental impacts of noise, dust, and/or fumes could disrupt business operations.	Yes; see discussion below
Neighborhoods and Community Resources	Neighborhood impacts from noise and vibration, parking changes, property acquisition, and traffic would affect community cohesion.	No	No
Cultural Resources	No	No	No

Environmental Resource Area Analyzed	Long-term Adverse Effects on EJ Populations	Short-term Adverse Effects on EJ Populations	Potential for Adverse Effects Predominantly Borne by EJ Populations
Visual Resources	Visual barriers between neighborhoods adjacent to track could result in local light and glare impacts; elevated project elements and new stations cause adverse visual impacts.	No	No
Safety and Security	No	No	No
Noise	Adverse noise impacts in EJ neighborhoods could occur, including at a concentration of 28 apartment units.	No	No
Vibration	No	No	No
Air Quality	No	No	No

Source: HDR 2017a.

The results of the analysis indicate the potential for adverse effects predominantly borne by EJ populations related to two resource areas: land acquisitions and displacements, and socioeconomics and economic development. The adverse effects on EJ populations and proposed mitigation are discussed in detail below.

Land Acquisitions and Displacements

The FEIS Preferred Alternative would require the full acquisition of 202 parcels and the partial acquisition of 24 parcels, totaling approximately 106.7 acres of land, with an additional 5.9 acres of permanent and temporary easements. The property acquisitions would result in 107 displacements: 94 residential, 4 commercial, and 9 industrial land uses.

Seventy-four of the 94 residential displacements, all 4 of the commercial displacements, and all 9 of the industrial displacements would result from the construction of the North Hammond MSF and Hammond Gateway Station. Both the North Hammond MSF and Hammond Gateway Station would be located in areas identified as EJ communities, with high proportions of both minority and low-income populations. Dyer and Munster would experience 10 residential displacements each; however, these are not located in EJ areas.

FTA and NICTD would conduct the acquisition and relocation processes in accordance with the Uniform Act, as described in **Section 4.3.5.1**. The Act requires that property owners, regardless of minority or low-income status, be paid fair market value for the acquired property as well as equitable compensation normally associated with relocating. Because the North Hammond MSF and Hammond Gateway Station areas have high proportions of Hispanic and Latino populations (see **Figure 4.9-2**), property acquisition and relocation discussions would be conducted in alternate languages when necessary.

For those to be displaced and relocated, ample notice would be given to allow for any planning contingencies that might arise. 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.

NICTD anticipates 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 CFR Part 24.404, last-resort housing is additional alternative assistance when comparable replacement dwellings are not available within the monetary limits for displaced owner-occupants and tenants.

As mentioned above, the residential, commercial, and industrial displacements would occur primarily in minority and low-income communities in Hammond. The displacement impacts identified for the FEIS Preferred Alternative would be fewer than initially identified with the DEIS Alternatives because Project designers during the FEIS phase focused on minimizing property acquisitions and displacements to the extent possible. The remaining residential property acquisitions and displacements that would result from the FEIS Preferred Alternative would be mitigated as described above.

Displaced businesses would be provided assistance with relocation and re-establishment expenses. Since all of the business displacements would occur in EJ neighborhoods, employees of each of the businesses might be minority or lower-wage hourly workers that could have a longer or different commute to the new business site after the relocation, or might opt for alternate employment. Moreover, depending on the new location of the business and the availability of similar services or goods from non-affected businesses, customers of these displaced businesses, which might be from the EJ communities in which the businesses are located, might be adversely affected.

To minimize these potential effects, the Project has incorporated the following measures: identify preferred relocation options; prepare for a smooth transition to a new location for both the business and its employees; and, provide information to the communities where businesses would be displaced about the businesses' new locations, with transit options to access the new business location and/or other options to meet their needs.

Socioeconomics and Economic Development

Short-term, construction-related effects on socioeconomic conditions and economic vitality with the FEIS Preferred Alternative would result from the generation of construction jobs and increased trade at local retail and service businesses during construction. The FEIS Preferred Alternative would have the potential to stimulate the creation of approximately 4,149 total job-years, with earnings of more than $193 million, or an average of $46,700 per job-year. The construction-related economic benefits would last for the duration of the Project's construction cycle.

Other short-term effects on socioeconomics might be temporary disruptions to business access and environmental impacts of noise, dust, and/or fumes that could disrupt business operations. Some businesses might experience hardship due to these construction effects. Also, since many of the affected businesses are in EJ areas (that is, the South Hammond Station, North Hammond MSF, and Hammond Gateway Station areas) and might be owned by or have employees that are minority or low-income, or might have a predominantly EJ customer base, these impacts of the FEIS Preferred Alternative may primarily affect EJ populations. To minimize these effects, the Project has incorporated the following measures: construction staging plans would be developed to maintain access to all businesses during construction to the extent possible; noise- and dust-control measures would be incorporated into Project design plans and mitigation commitments that minimize environmental effects on businesses adjacent to project construction activities, and continued NICTD communication with affected businesses prior to and during construction to understand and address their needs and concerns.

4.9.4.3 Offsetting Benefits

FEIS Preferred Alternative

The FEIS Preferred Alternative would have a number of offsetting benefits as it meets the Project's purpose and need to improve public transportation in the Project Area. Offsetting benefits for EJ populations discussed below include:

- Faster travel times along the Project Area
- Improved regional connectivity and access to employment, educational, recreational, shopping, and cultural opportunities
- Reliable high-capacity service for transit-dependent populations

Faster Travel Times

The FEIS Preferred Alternative would provide a faster trip along the Project Area. For example, travel time by automobile would be 86 minutes from Munster/Dyer Main Street Station to Millennium Station. Without the FEIS Preferred Alternative and combining driving by automobile from Munster/Dyer Main Street Station to the existing Hammond Station with boarding the existing commuter rail service to Millennium Station, the travel time would be 67 minutes. With the FEIS Preferred Alternative, the travel time would be 47 minutes from Munster/Dyer Main Street Station to Millennium Station, saving travelers 39 minutes over driving and 20 minutes over the driving/rail combination.

Regional Connectivity and Access to Jobs and Services

The FEIS Preferred Alternative includes a new rail service that would enhance regional connectivity, providing access to jobs and services both within and outside the Project Area. As discussed in **Section 4.2.3.2**, the Project Area would experience changes in land use over the next two decades to accommodate residential density mixes, additional commercial development, and sustainable growth. In addition, developments such as a new events center and a library are planned in the Project Area.

According to the Illinois Department of Employment Security,[1] Cook County is expected to experience an increase of 171,244 new jobs between 2014 and 2024 across all employment sectors. In addition, northwest Indiana is expected to experience substantial job growth, with NIRPC reporting in the 2040 CRP[2] about 73,000 additional jobs between 2010 and 2040.

Figure 4.9-7 illustrates the percentages of the population in the census block groups identified as EJ block groups—that is, high minority and/or low-income in accordance with **Sections 4.9.3.1** and **4.9.3.2**—within a half mile of each proposed station that self-reported as unemployed. As the figure shows, there were high percentages of unemployed persons living near the proposed stations, with some block groups near South Hammond and Hammond Gateway Stations having unemployment rates over 20 percent. The FEIS Preferred Alternative would provide residents along the Project Area, including the 58.7 percent minority and 22.2 percent low-income populations, with improved access to the existing and anticipated new job opportunities in Cook County and northwestern Indiana.

The new rail service would provide improved access to services and activities, including educational opportunities, health care services, governmental and municipal services, parks and recreational facilities, and retail establishments. With the opportunity to transfer to SSL trains at Hammond Gateway Station, Project Area riders would have access to additional services along the SSL corridor in Gary and activities in Gary, Portage, Chesterton, Town of Pines, and Michigan City.

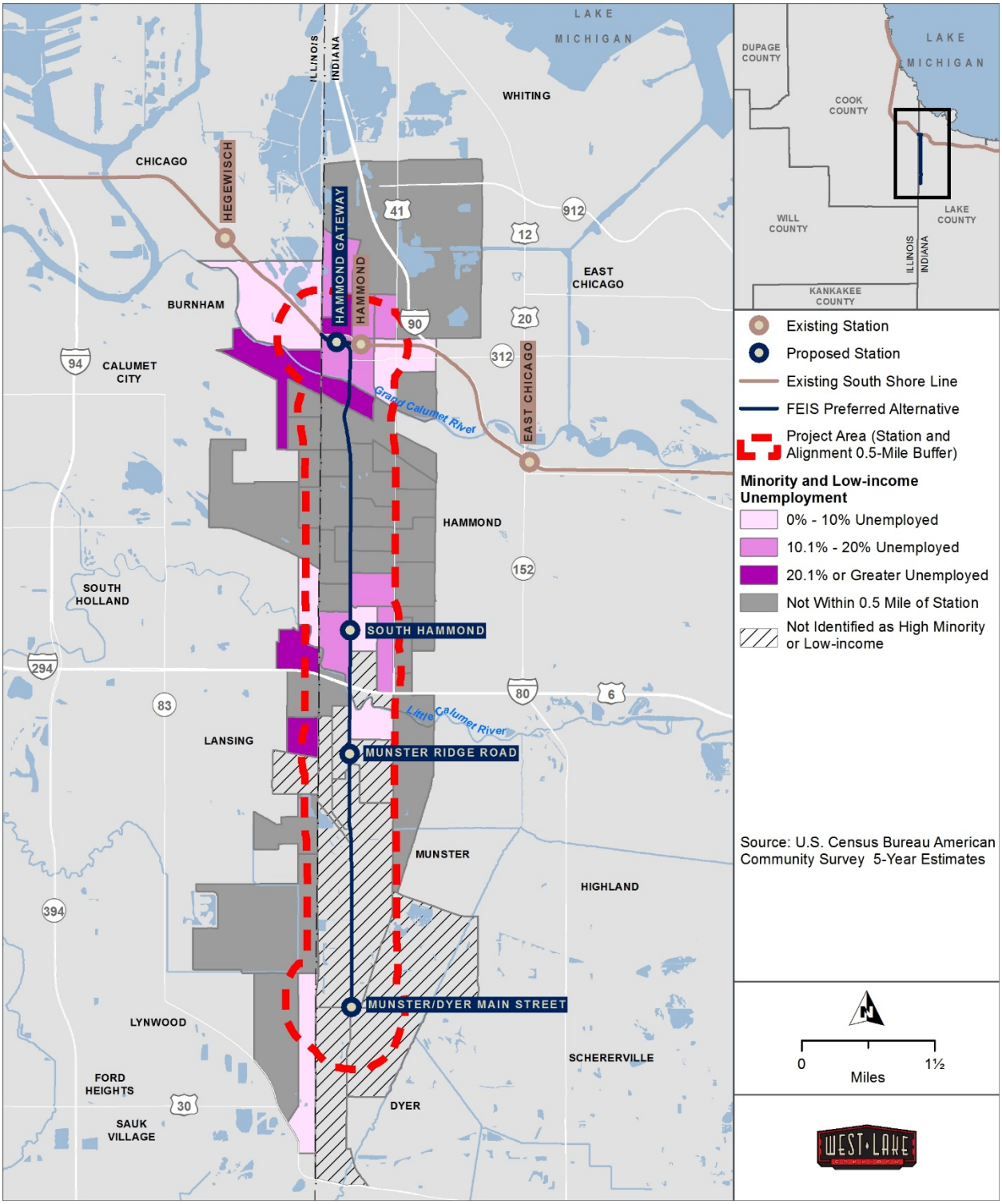
Service for Transit-dependent Populations

In addition to providing a faster trip for those who would otherwise drive the Project Area, the FEIS Preferred Alternative would provide an additional mode choice for non-drivers. Transit-dependent populations along the Project Area would have the opportunity to easily travel to jobs and services that would otherwise be challenging to access.

Figure 4.9-8 shows the percentage of households in the census block groups identified as EJ block groups—that is, high minority and/or low-income in accordance with **Sections 4.9.3.1** and **4.9.3.2**—within a half mile of each proposed station that reported no access to a personal vehicle. As the figure shows, more than 10 percent of the households in several block groups near South Hammond and Hammond Gateway Stations do not have access to a vehicle. With the FEIS Preferred Alternative, these transit-dependent populations specifically in EJ neighborhoods would have direct access to a fast, reliable rail service to both local and regional destinations.

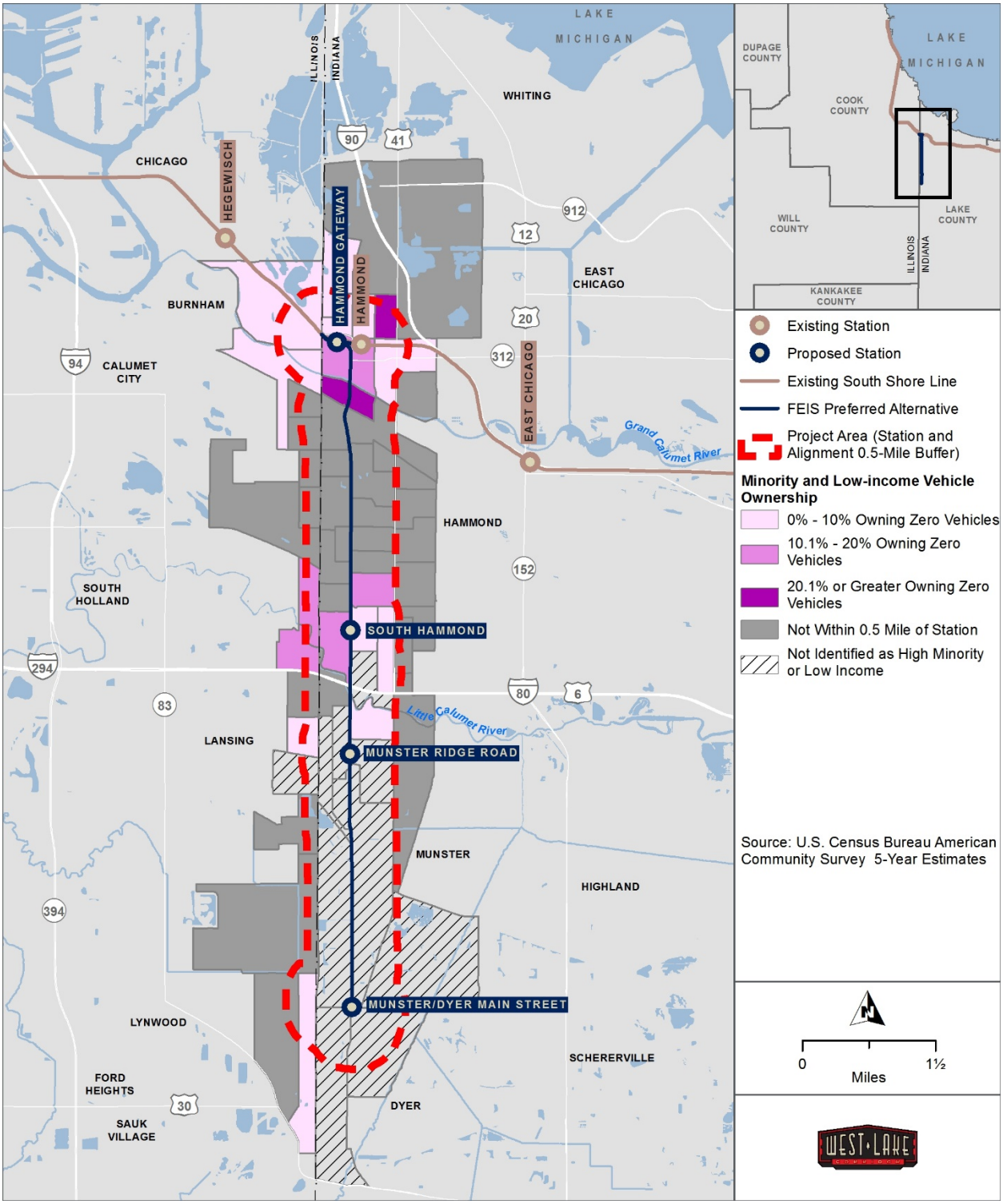
[1] http://www.ides.illinois.gov/LMI/Pages/Employment_Projections.aspx, Table wia_07_tocc
[2] http://www.nirpc.org/2040-plan/plan-documents/

Figure 4.9-7: Minority and Low-income Unemployment Rates within 0.5 Mile of Stations



Source: HDR 2017a.

Figure 4.9-8: Minority and Low-income Zero-Vehicle Households within 0.5 Mile of Stations



Source: HDR 2017a.

Other Build Alternatives Considered in the DEIS

Few differences would occur among the other Build Alternatives considered in the DEIS because all proposed alignment options are generally within the same area. The other Build Alternatives considered would have similar effects on EJ populations as the FEIS Preferred Alternative. A summary of effects is provided in **Table 4.9-3**. For specific possible effects of the other Build Alternatives considered in the DEIS on EJ populations, refer to Section 4.9.5.1 of the DEIS.

4.9.5 Public Outreach Strategies and Activities to Engage EJ Populations

Since the publication of the DEIS, the public outreach section has been updated to include DEIS and FEIS strategies and activities.

While the United States Census and ACS 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. Moreover, as a project develops, it is important to maintain two-way public engagement to provide the opportunity for members of the communities most affected by the project to provide input through the process. Proactive outreach efforts to engage EJ populations are necessary to involve community members that are often more likely to be under-represented. The Project's extensive outreach program has helped to identify and engage communities, neighborhoods, and groups with minority and low-income status outside the purview of census analysis from early in the planning process. In addition, to help engage Spanish-speaking populations, Spanish language translation at public meetings and outreach events and Spanish translations of Project outreach materials have consistently been made available on request. **Chapter 9** includes a detailed summary of the outreach activities for the Project.

NEPA-phase public involvement for the Project has included targeted outreach to EJ communities to supplement the broader Project public outreach program. Public outreach has been an iterative process, initiated by meetings and events to get to know the communities and to include additional organizations, businesses, individuals, and other community groups into the fold as the Project progressed. Initial mapping to identify EJ populations has helped identify neighborhoods in the EJ Study Area that would benefit from enhanced, proactive, and non-traditional outreach. The sections that follow describe the outreach activities during the DEIS and FEIS phases to identify EJ populations and actively engage them in the Project.

4.9.5.1 Overview of Early Outreach Activities

During the initial Project planning and DEIS phase of the Project, a Public and Agency Coordination Plan was created to identify the outreach efforts that FTA and NICTD planned to undertake during the environmental review process for the Project. A key focus of the Plan was to facilitate Project understanding with the public and agencies. It also served to solicit ideas, input, and comments on the Project, as well as opportunities to seek feedback on the potential transportation, social, and environmental consequences.

Public outreach efforts were extensive and broad-reaching through the DEIS phase. With the initiation of NEPA scoping with the issuance of the Notice of Intent (NOI) to prepare an EIS on September 30, 2014, NICTD invited public participation in the environmental review process. To reach EJ populations, email invitations were sent to organizations that represent EJ communities. A total of 27 EJ organizations and individuals, listed below, were contacted:

- Active Transportation Alliance
- Baptist Ministers
- Bishop Tavis Grant II
- Boys and Girls Club Northwest Indiana
- City of Gary
- City of Michigan City
- Civic Leaders
- Deaf Services, Inc. – Tradewinds
- Dyer Redevelopment Commission
- Gary Chamber of Commerce
- Gary Public Transportation Corporation
- Hammond Hispanic Community Committee
- Hammond Redevelopment Commission
- Hoffman Street Baptist Church
- Interfaith Clergy Council
- Michigan City Housing Authority
- Michigan City Human Rights Department
- National Association for the Advancement of Colored People – Gary Chapter
- North Central Community Action Agencies
- Northwest Indiana Baptist Association
- Northwest Indiana Deaf and Hard of Hearing
- Northwest Indiana Federation of Interfaith
- Northwest Indiana Hispanic Chamber of Commerce
- Porter County Aging and Community Service
- Unity Foundation of LaPorte County
- Urban League of Northwest Indiana
- Vocational Rehabilitation Services of Gary

During the 30-day Scoping period from October 13, 2014, to November 11, 2014, FTA and NICTD provided the public with multiple opportunities to submit comments, including online submission through the Project email address, website online comment section, by mail to the Project office, via the automated phone line, transcribed at the Scoping meeting, and through comment cards that were provided at the Scoping meeting held on October 28, 2014. There were 94 people in attendance at the Scoping meeting, and 144 public comments were received.

NICTD conducted four workshops in November 2015 at locations in the Project Area to maintain engagement with the public through the NEPA phase. One workshop was conducted to specifically encourage agency and elected official attendance, and the other three were held in each of the three municipalities along the Project Area to encourage local attendance. At these

workshops, the environmental process, Project features, and changes since the Scoping meetings were discussed. To maximize this outreach to Project stakeholders, NICTD used the following methods to advertise the workshops:

- Press release to three newspapers: *The Times of Northwest Indiana*, *Northwest Indiana Post-Tribune*, and *Gary Crusader*
- Announcement of the meetings on the Project's website
- Flyers at SSL stations and along the Project Area
- Postcards to residents in the Project Area
- Email blasts to all contacts listed in the Project database
- School notifications to families in the Project Area
- Email and direct phone calls to 27 EJ organizations

In total, there were 324 people in attendance, and 16 public comments were received. Spanish-language interpreters were available at the workshops, and Spanish translations of Project outreach materials were made available on request.

4.9.5.2 Draft EIS Public Hearings and Comments

In December 2016, NICTD published the DEIS, and hard copies were made available at the following locations for those unable to access it via the internet:

- Hammond Public Library, Hammond, IN
- Lake County Public Library – Dyer-Schererville Branch, Schererville, IN
- Lake County Public Library – Munster Branch, Munster, IN
- NICTD Administrative Offices, Chesterton, IN

Public hearings were held on January 17, 18, and 19, 2017, in Dyer, Hammond, and Munster, respectively. NICTD advertised the public hearings using the same methods identified in **Section 4.9.5.1**, and as a result of the broad outreach to inform the public of the release of the DEIS, about 656 people (146 in Dyer, 106 in Hammond, and 404 in Munster) attended the three hearings. The public comment period ended on February 3, 2017, and NICTD received 936 comments from agencies, Project stakeholders, and the general public on the DEIS from 464 distinct commenters. Comments were collected at the public hearings via comment cards or through a court reporter, by mail, through the Project website, by email, and by phone.

The comments received spanned all topic areas, including the Project purpose and need, alternatives considered, environmental effects, and community effects. Comments relevant to the EJ analysis presented in **Section 4.9.4** included those related to:

- Property values along the rail line and near stations as a result of TOD
- Safety, noise, and neighborhood disruption at stations and rail crossings
- Employment benefits of the Project
- Local access and connectivity with the Project
- Affordable housing requirements of the Project

Appendix H provides the complete list of comments received and NICTD's responses to each substantive comment. The EJ analysis included in **Section 4.9.4** considers these concerns in the evaluation of potential disproportionately high and adverse effects on EJ populations in the EJ Study Area.

4.9.5.3 Final EIS Phase Focused EJ Outreach Activities

NICTD followed the three public hearings in January 2017 with continued outreach targeting the EJ communities in the Project Area to keep these community members engaged in Project development. Communications with all communities, including those with EJ populations, included the following:

- Project website (http://www.nictdwestlake.com): fact sheet, frequently asked questions, station renderings, MSF renderings, media kit, and program photography
- Project phone hotline: (219) 250-2920
- Project email: project.email@nictdwestlake.com
- Spring newsletter (13,312 first-class mail, 250 distributed, and 452 emailed)
- Social media: https://www.facebook.com/WestLakeCorridorProject/

Table 4.9-6 summarizes the specific outreach activities conducted by NICTD and Project partners to maintain Project communications with local community groups, schools, hospitals, and other organizations that would include or serve EJ populations.

Table 4.9-6: EJ-Focused Community Outreach Activities

Date (2017)	Host Organization	Event	Attendance
Jan 5	One Region	Lake Co On Track Breakfast	300
Jan 12	One Region	Cocktail event with young families	50
Jan 13	One Region	TOD Bus Tour	45
Jan 15	One Region/Jewish Federation of Munster	Joint Meeting	50
Jan 19	One Region	Purdue Student Luncheon	70
Feb 7	Schererville Town Council GOP	Meeting	30
Feb 8	Rotary Crown Point	Meeting	40
Feb 10	Munster Town Hall Meeting	Meeting	150
Feb 14	RDA	Munster/Dyer TOD Workshop	N/A
Feb 16	RDA	Hammond TOD Workshop	N/A
Mar 10	One Region	TOD Bus Tour	40
Apr 3	Rotary Club	Meeting Valparaiso, IN	120
Apr 5	Real Estate Meeting - Hammond	Meeting with affected home owners	150
Apr 11	Rotary Club	Meeting in Hammond, IN	9
Apr 24	City Schools of Hammond	Meeting on safety concerns	N/A
Apr 28	Partners for Clean Air	Meeting discussing air quality	60
May 13	Informational Open House	Hammond, IN	52
May 30	RDA	Munster/Dyer TOD Workshop	N/A
Jun 1	RDA	Munster/Dyer TOD Workshop	N/A
Jun 7	Hammond Police and Fire Departments	Meeting on safety concerns	N/A
Jun 10	Dyer Summer Fest (pop-up info booth)	Pleasant Hills Park Dyer, IN	18
Jun 14	Little Calumet River Basin Commission	Discussion of relocation of River Trail	N/A
Jun 16	Munster Community Hospital	Discussion of Hospital concerns	N/A
Jun 25	Sunday Market in the Park (pop-up info booth)	Centennial Park, Munster, IN	20
Jun 29	Munster/Dyer Real Estate Meeting	Meeting with affected home owners	N/A
Jul 16	Sunday Market in the Park (pop-up info booth)	Centennial Park, Munster, IN	27
Jul 19	Festival of the Lakes (pop-up info booth)	Wolf Lake Memorial Park, Hammond, IN	8
Jul 20	Festival of the Lakes (pop-up info booth)	Wolf Lake Memorial Park, Hammond, IN	10

Source: HDR 2017a.

As noted in **Table 4.9-6** above, NICTD hosted an Information Open House on May 13, 2017, in Hammond. Many neighborhoods in Hammond near the Project Area are identified as EJ communities, and residents, business owners, and community organizations had been underrepresented in previous general Project outreach efforts. Therefore, NICTD conducted this open house to engage the Hammond communities in the Project. NICTD's outreach efforts to maximize attendance and participation in the event incorporated the following:

- Open house invitation mailed to community organizations and interested parties: 100 certified, 338 first-class mail
- Open house flyer distribution to community organizations and interested parties: 83 attempted (36 accepted, 46 not delivered)

After the May 13, 2017, open house, NICTD sent thank-you emails to 37 meeting attendees to encourage their continued involvement in the Project.

NICTD participated in five community events in June and July 2017 by hosting pop-up informational booths at those events:

- Dyer Summer Fest – June 10
- Sunday Market in the Park (Munster) – June 25 and July 16
- Festival of the Lakes (Hammond) – July 19 and 20

4.9.6 Project-wide EJ Analysis Results

The results discussed in **Section 4.9.4** indicate that there is the potential for the FEIS Preferred Alternative to result in adverse effects predominantly borne by minority and low-income populations regarding land acquisitions and displacements (long-term effects) as well as socioeconomics and economic development (short-term effects). These are both related to Project effects on businesses located in EJ communities.

The FEIS Preferred Alternative would displace four commercial and nine industrial businesses, all located in EJ neighborhoods. Impacts on business owners would be mitigated according to the Uniform Act; however, long-term effects on minority and low-income employees and customers have the potential to be disproportionately high and adverse. To minimize these effects, the Project has incorporated measures to provide additional assistance to the communities serviced by the displaced businesses (i.e., the employees and customers). The FEIS Preferred Alternative could also cause short-term effects on socioeconomics by temporarily affecting business access and/or causing noise, dust, and/or fumes that could disrupt business operations. The Project has incorporated a number of measures to minimize these adverse effects, including efforts to maintain access to businesses during construction, minimize dust and noise impacts, and maintain communication with the community through construction to understand and address their needs and concerns.

The FEIS Preferred Alternative would provide key benefits to all populations, including EJ populations, including faster travel times, improved regional connectivity and access, and reliable high-capacity service for transit-dependent populations. Moreover, with the incorporation of continued public outreach through design, construction, and operation to maintain proactive communication and engagement with the public, including the traditionally underserved EJ populations along the Project Area, the benefits of the FEIS Preferred Alternative would be maximized.

After examining the FEIS Preferred Alternative in its entirety, taking into account the potential adverse effects on EJ populations, committed mitigation measures for each resource area, and anticipated benefits to EJ populations, FTA and NICTD have concluded that the Project would *not result in disproportionately high and adverse effects on minority or low-income populations*.