



Chapter 7

Section 4(f) Evaluation



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7 Section 4(f) Evaluation

Chapter 7 identifies and evaluates the potential effects from the FEIS Preferred Alternative and the alternatives considered in the DEIS, including the DEIS NEPA Preferred Alternative. This chapter describes the effect of the Project on properties protected by Section 4(f) of the Department of Transportation Act of 1966, commonly known as Section 4(f).

Section 4(f) established requirements for USDOT, including FTA, to consider publicly owned parks/recreational areas that are accessible to the general public, publicly owned wildlife/waterfowl refuges, and publicly or privately owned historic sites of federal, state, or local significance in developing transportation projects (49 USC § 303). Section 4(f) prohibits use of these resources for transportation projects unless (1) it is proven that there is no feasible and prudent alternative to the use and the action includes all possible planning to minimize harm or (2) the agency determines that the use of the property, including any measure(s) to minimize harm, would have a *de minimis* impact on the property [23 CFR Part 774.3(a)].

This law is codified in 49 USC § 303 and 23 USC § 138 and is implemented by FTA through the regulations at 23 CFR Part 774. Additional guidance on the implementation of Section 4(f) may be found in FHWA's *Section 4(f) Policy Paper* (2012). FTA has formally adopted this guidance and the analysis was conducted consistent with the guidance.

In evaluating this Project for Section 4(f) impacts, FTA and NICTD identified one public recreational area and one historic site in the Project Area that are afforded protection under Section 4(f) and that would be subject to impacts that rise to the level of use by the FEIS Preferred Alternative. This Section 4(f) evaluation is a final document subject to approval with the ROD for the Project and as set forth by the Section 4(f) regulations.

7.1 Changes to This Chapter Since Publication of the DEIS

Since publication of the DEIS, design refinements have been made to the DEIS NEPA Preferred Alternative, and additional information has been gathered.

- One Section 4(f) protected recreational resource, the Erie Lackawanna Trail, which would have been used by the DEIS NEPA Preferred Alternative, would no longer be used by the FEIS Preferred Alternative.
- **Section 7.4** identifies properties in the Project Area that are afforded protection by Section 4(f). One additional recreational resource, the Dan Rabin Plaza, was added.
- **Section 7.4.3**, a discussion of the Little Calumet River Trail, which is not protected by Section 4(f), was added.
- **Section 7.5** provides further details on each Section 4(f) resource and explains the determinations of the proposed use for each resource. The DEIS did not recognize the Dan Rabin Plaza as a Section 4(f) property. The FEIS Preferred Alternative would result in no use of the recreational portion of the Dan Rabin Plaza.
- The analyses in **Sections 7.7** and **7.8** have been completed.

7.2 Regulatory Setting

Section 4(f) protects specific resources of federal, state, or local significance that are proposed to be used for a transportation project. The term “use” in the Section 4(f) context is defined in 23 CFR Part 774.17 and has a very specific meaning. The following three types of Section 4(f) resource uses may occur:

- **Permanent Incorporation:** A permanent incorporation of a Section 4(f) resource occurs when a resource is permanently removed or integrated into a proposed transportation project. This incorporation may occur as a result of partial or full acquisition, permanent easement, or temporary easement that exceeds regulatory limits.
- **Temporary Occupancy:** A temporary occupancy of a Section 4(f) resource occurs when there is a short-term use of a resource that is considered adverse in terms of the preservation purpose of the Section 4(f) statute. Under 23 CFR Part 774.13, a temporary occupancy of a resource does not constitute a “use” of a Section 4(f) resource when all of the following conditions are satisfied:
 - The duration of use would be temporary (i.e., less than the time needed for construction of the project), and there would be no change in ownership of land.
 - The scope of work would be minor [i.e., both the nature and magnitude of the changes to the Section 4(f) resource would be minimal].
 - There would be no anticipated permanent adverse physical impacts, nor would there be interference with the protected activities, features, or attributes of the resource, on either a temporary or permanent basis.
 - The land being used would be fully restored to a condition that is at least as good as that which existed before the project.
 - There is documented agreement among appropriate federal, state, and local official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.
- **Constructive Use:** A constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate land from the resource, but the proximity of the project results in impacts (e.g., noise, vibration, visual impacts, or property access) that substantially impair the activities, features, or attributes that qualify a resource for Section 4(f) protection. Factors for assessing substantial diminishment are provided in 23 CFR Part 774.15.

Section 4(f) identifies specific conditions in which effects on a protected Section 4(f) property are not considered uses. One of these conditions is joint planning, in which two or more governmental agencies with jurisdiction over a property have formally reserved that property for future transportation use before or at the same time as a public recreational facility is established on that property [23 CFR Part 774.11(i)]. In such a case, the impacts of a transportation facility on the public recreational facility are not considered a use of Section 4(f) property.

If a project uses Section 4(f) resources and does not meet the specific conditions in 23 CFR Part 774.111(i), FTA must either determine that (1) the project would have a *de minimis* impact on the property (as defined in 23 CFR Part 774.17) or (2) undertake an individual Section 4(f) evaluation to determine that there is no feasible and prudent avoidance alternative to that use, and that all measures to minimize harm to the resource have been undertaken [23 CFR Parts 774.3(a) and (b)]. For parks, a *de minimis* impact means FTA has determined that the use meets the following requirements: (1) the proposed use would not adversely affect the features, attributes, or activities that qualify the park for Section 4(f) protection; (2) the officials with

jurisdiction (the park owner or operator) concur; and (3) the public has been given an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource [23 CFR Part 774.5(b)]. For historic sites, a *de minimis* impact means FTA has determined (in accordance with 36 CFR Part 800) that either no historic resource would be affected by the project or that the project would have “no adverse effect” on the historic resource.

7.3 Organization of This Chapter

The sections in this chapter consider potential Section 4(f) uses in accordance with applicable regulations and guidance previously referenced. The sections are organized to follow the major analysis processes in FHWA’s *Section 4(f) Policy Paper* (FHWA 2012). Each section provides appropriate citations, definitions, and evaluation criteria for each of the steps:

- **Section 7.4** – Identification of Section 4(f) Resources
- **Section 7.5** – Assessment of Use of Section 4(f) Resources
- **Section 7.6** – Avoidance Analysis
- **Section 7.7** – Least Overall Harm Analysis
- **Section 7.8** – All Possible Planning to Minimize Harm
- **Section 7.9** – Consultation and Coordination

7.4 Identification of Section 4(f) Resources

This Section 4(f) evaluation identifies and assesses one public recreational area and one historic site in the Project Area that are afforded protection by Section 4(f) and would be affected by the FEIS Preferred Alternative in a manner that would constitute a “use” as defined by 23 CFR Part 774. Six additional public recreational areas were identified in the Project Area that would not be affected by the FEIS Preferred Alternative in a manner that would constitute a “use” as defined by 23 CFR Part 774. The FEIS Preferred Alternative would not affect any other parklands or wildlife or waterfowl refuges in a manner that would constitute a “use” as defined by 23 CFR Part 774.

In addition to the one historic site that would be affected by the FEIS Preferred Alternative in a manner that would constitute a “use” as defined by 23 CFR Part 774, an additional historic site, Federal Cement Tile Company, was identified in the Project Area during the preparation of the DEIS. Each historic site was determined eligible for listing in the NRHP during the Section 106 consultation for the Project. On November 7, 2016, FTA made the determination of eligibility and effects on historic resources in the context of the Section 106 process, and official concurrence from the SHPO has been received. The letter of concurrence can be found in **Appendix B**. This Section 106 consultation is described in **Section 4.6** of this FEIS and summarized in **Section 7.9** of this Section 4(f) evaluation. The additional historic site, the Federal Cement Tile Company, would not be affected by the FEIS Preferred Alternative in a manner that would constitute a “use” as defined by 23 CFR Part 774.

Table 7.4-1 and **Table 7.4-2** describe the public parks, recreational areas, and historic sites in the Project Area that were assessed in this Section 4(f) evaluation. **Figure 7.4-1** shows the locations of these protected properties.



Table 7.4-1: Parks, Recreational Lands, and Wildlife Refuges in the Project Area

Property Name	Classification	Location in the Project Area	Jurisdiction	Features/Attributes
West Lakes Park	Park	Margo Lane, Munster	Town of Munster	Trail, ball fields, playground, tennis courts
Pennsy Greenway (Pennsy Path)	Multiuse trail	NICTD ROW in Munster	Town of Munster	Unimproved
Monon Trail	Multiuse trail	NICTD ROW in Hammond and Munster	City of Hammond and Town of Munster	Paved thoroughfare
Harrison Park	Park	In Hammond, adjacent to Project	City of Hammond	Tennis, ice skating, fishing, bandshell
Erie Lackawanna Trail	Multiuse trail	NICTD ROW: Sibley Street to Ogden Street, Hammond	City of Hammond	Paved thoroughfare
Dan Rabin Plaza	Park	Between Sibley and State Streets and along the NS tracks in Hammond	City of Hammond	Green space with decorative features
Burnham Greenway	Multiuse trail	In Illinois, generally parallel to and near the state border	City of Calumet City, Village of Lansing	Paved thoroughfare

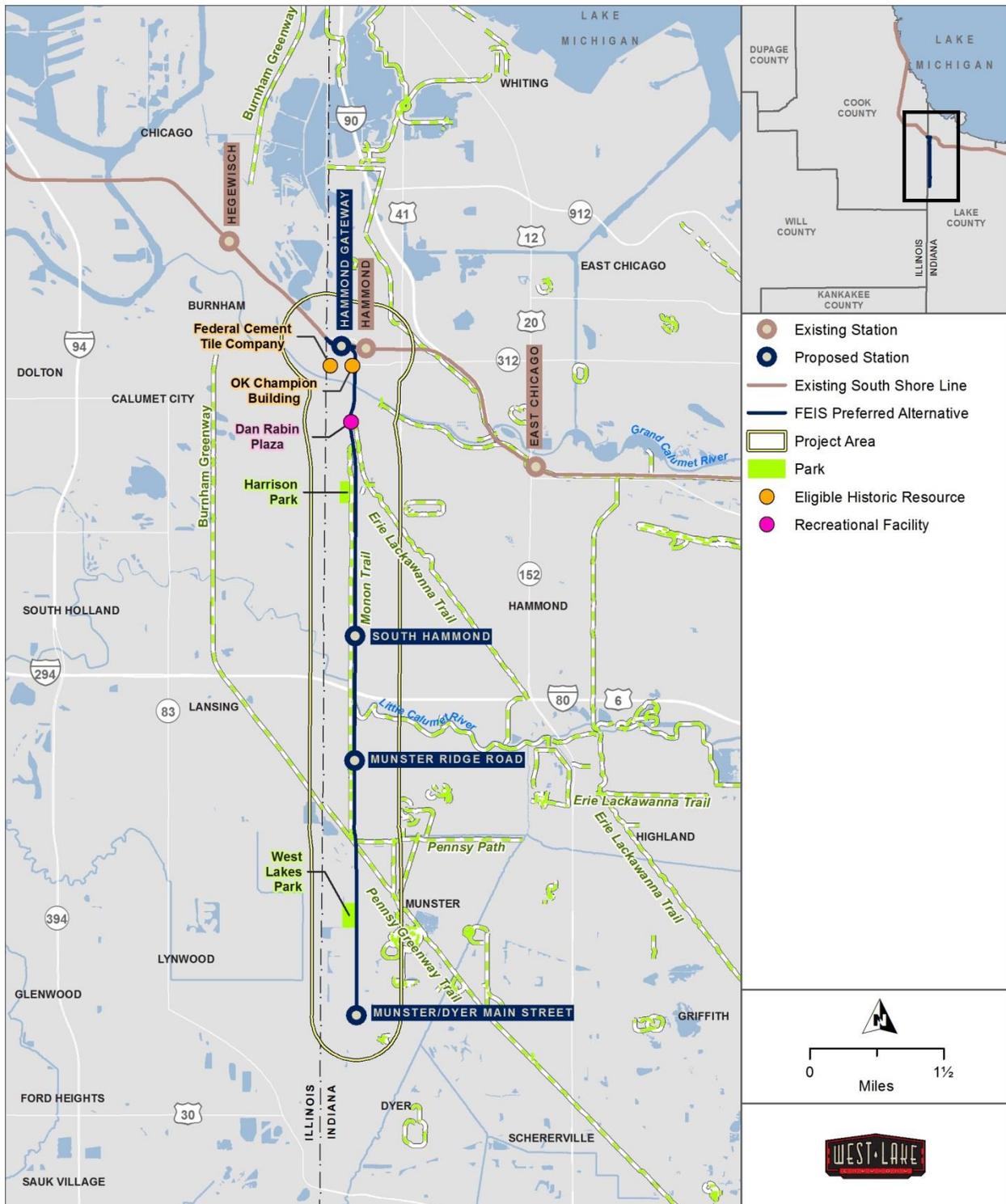
Source: HDR 2017a.

Table 7.4-2: NRHP-Eligible or Potentially Eligible Resources in the Project Area

Name	Address/Location	Date	Style	NRHP Evaluation
OK Champion Building	4714 Sheffield Avenue, Hammond	1905 to 1914	Industrial Vernacular	Eligible, Criterion A
Federal Cement Tile Company	24 Marble Street, Hammond	1909	Industrial Vernacular	Eligible, Criterion A

Source: NICTD 2016.

Figure 7.4-1: Section 4(f) Resources



Source: ESRI 2014.

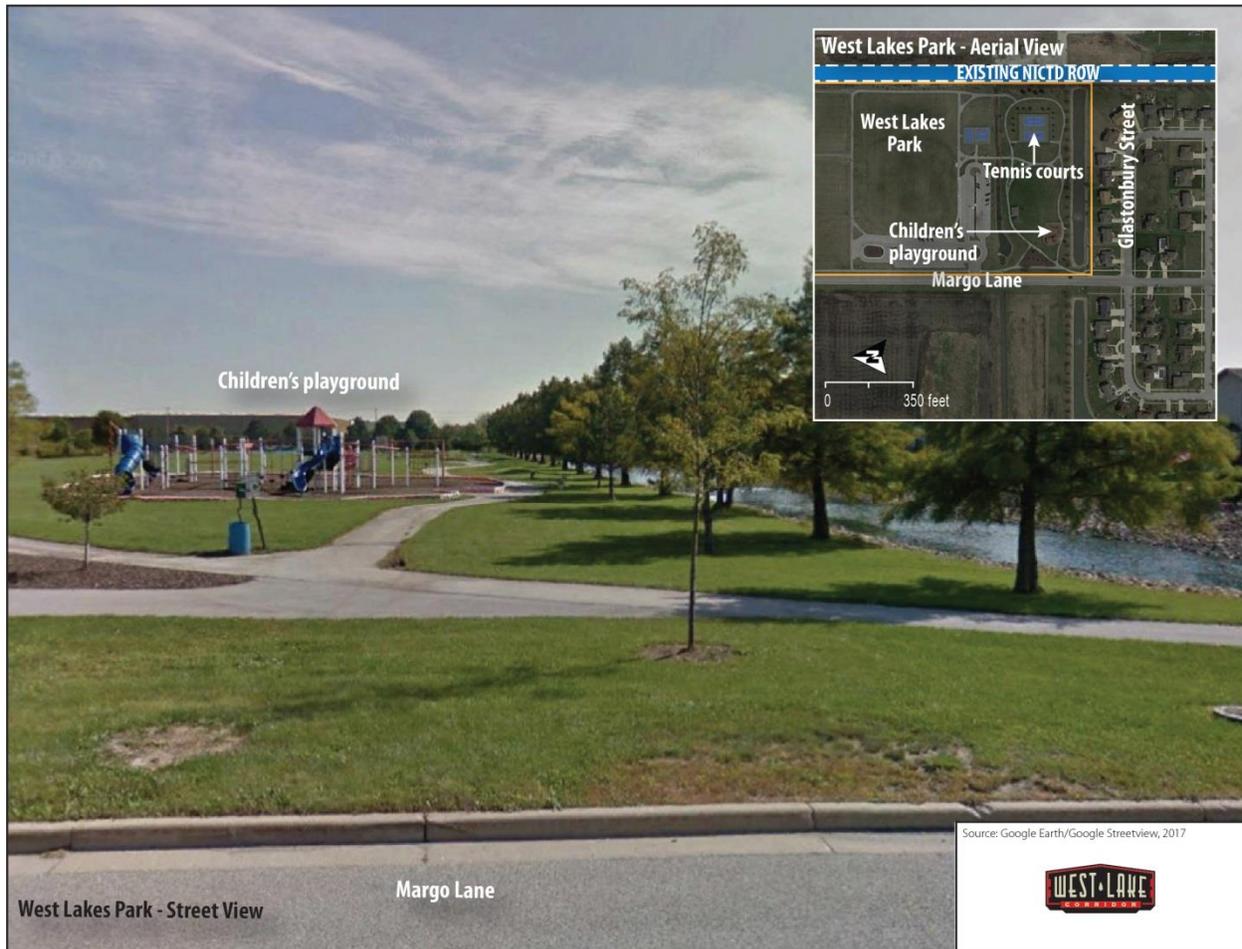
7.4.1 Resources Subject to Section 4(f) Evaluation

The public recreational areas and historic sites in the Project Area that were subject to Section 4(f) evaluation are described in greater detail below. **Section 7.5** assesses the potential use of these resources by the FEIS Preferred Alternative.

7.4.1.1 Resource 1 – West Lakes Park

West Lakes Park is a 26-acre public park and recreation facility owned and operated by the Town of Munster. The park is on Margo Lane between 45th and Glastonbury Streets. Access to the park is from Margo Lane. West Lakes Park is in a residential area; its eastern boundary abuts the CSX railroad existing ROW. Park amenities include a perimeter trail, an open lawn for ball fields, a playground, and tennis courts, as shown in **Figure 7.4-2**.

Figure 7.4-2: West Lakes Park, Looking East



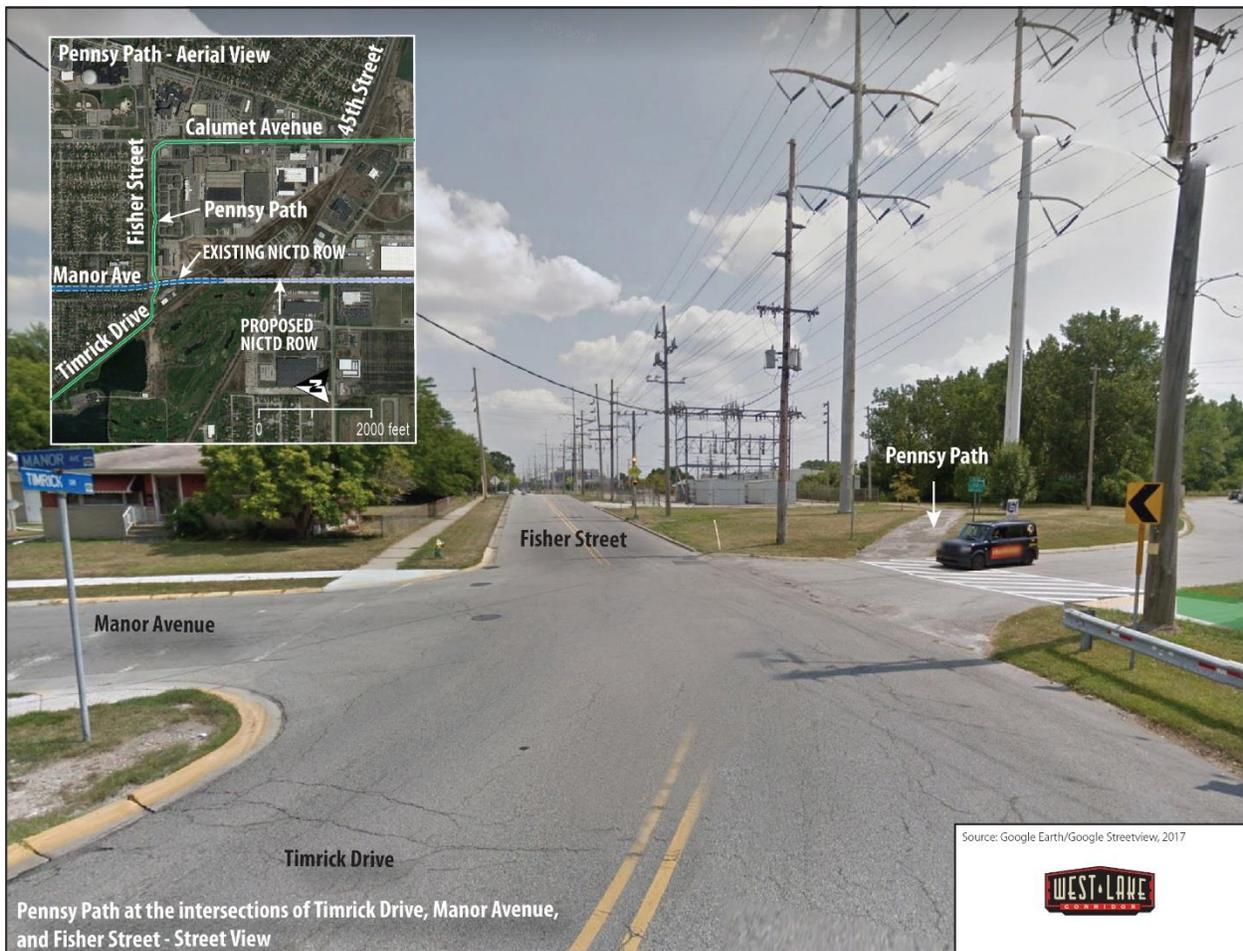
Source: Google Earth 2017.

7.4.1.2 Resource 2 – Pennsy Greenway (Pennsy Path)

The Pennsy Greenway is a multiuse trail that runs from Lansing, Illinois, to Crown Point, Indiana. It is largely aligned within the former Pennsylvania Central Railroad property, although in the Project Area it is alongside existing roadways for approximately 1.3 mile. The portion parallel to existing roadways is referred to as the Pennsy Path. Specifically, the existing trail connects to the Pennsy Greenway near Fisher Street and extends east running under high-tension electric wires south of and alongside Fisher Street, then turns south along the western side of Calumet Avenue to just north of the CN railroad. The connection to the original Pennsy rail alignment is made at a park east of Calumet Avenue and south of the CN railroad tracks. The original trail corridor crosses NICTD’s ROW in Munster south of Fisher Street and is undeveloped. The existing trail in Munster is operated by the Town of Munster.

Munster has a project in the NIRPC Transportation Improvement Program to construct the Pennsy Greenway from Fisher Street at Timrick Drive to Calumet Avenue north of 45th Street on the original trail corridor. The overall length of the Pennsy Greenway, including completed and planned sections, in Indiana and Illinois is 15 miles (see **Figure 7.4-3**).

Figure 7.4-3: Pennsy Greenway (Pennsy Path), Looking East



Source: Google Earth 2017.

7.4.1.3 Resource 3 – Harrison Park

Harrison Park is a multiuse 25-acre park bounded by Hohman Avenue, Webb Street, Waltham Street, and Lyman Avenue in Hammond, Indiana (see **Figure 7.4-4**). The park contains a bandshell and a small lake for fishing. Facilities are available to the public for ice skating, basketball, baseball, tennis, and a playground. The park is located just west of the Project.

Figure 7.4-4: Harrison Park, Looking Northwest

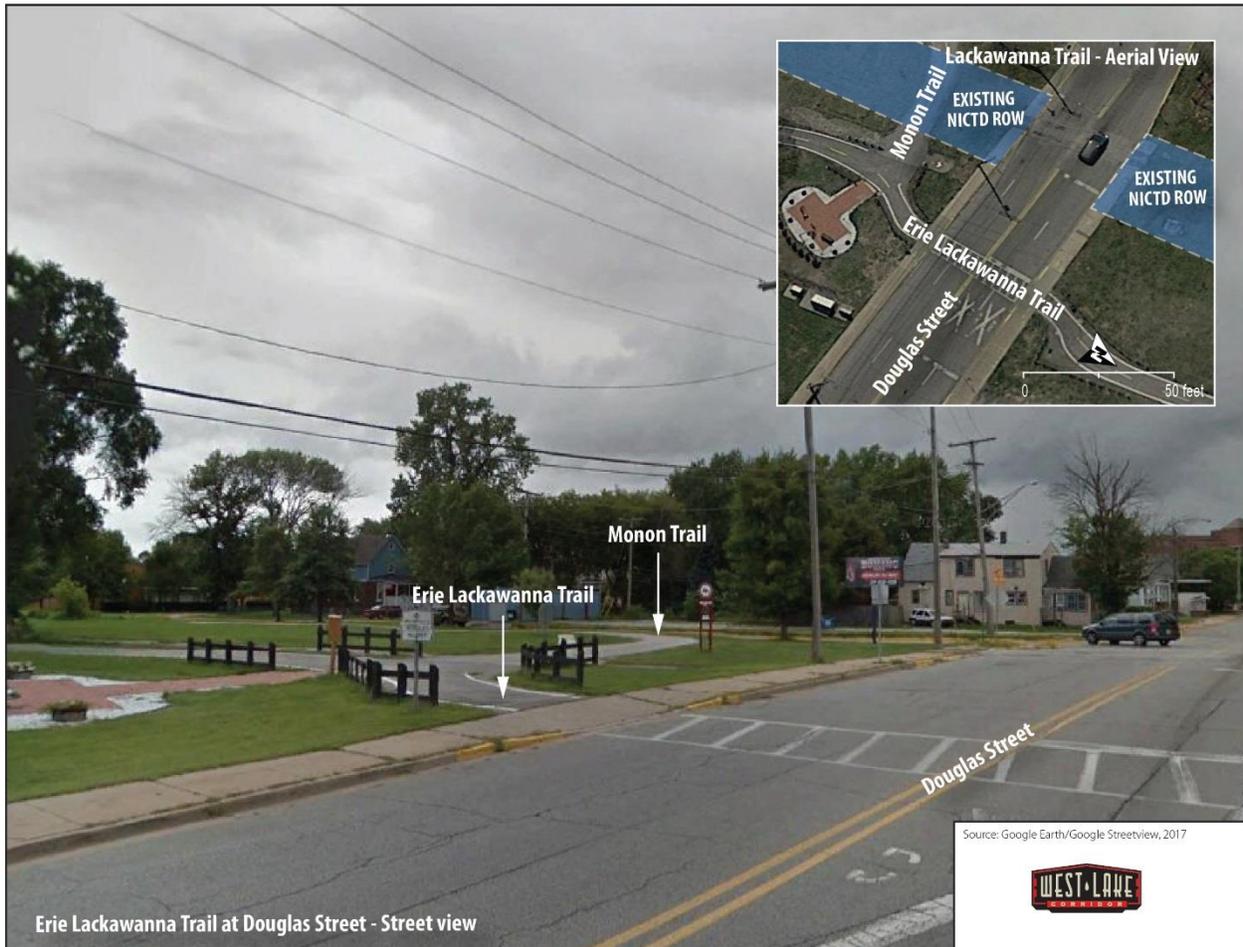


Source: Google Earth 2017.

7.4.1.4 Resource 4 – Erie Lackawanna Trail

The Erie Lackawanna Trail is a 17-mile-long continuous trail—the longest trail in northwest Indiana. In Hammond, the trail is approximately 4.5 miles long. The northern end of the trail begins at Sibley Street in Hammond. The trail runs south through the communities of Highland, Schererville, and Crown Point, where it terminates at Summit Street. In the Project Area, the trail consists of a paved, maintained thoroughfare for use by bicyclists and pedestrians. The portion of the trail in Hammond is within its own ROW, adjacent to NICTD’s ROW (see **Figure 7.4-5**).

Figure 7.4-5: Erie Lackawanna Trail in Hammond at Douglas Street, Looking Southwest



Source: Google Earth 2017.

7.4.1.5 Resource 5 – Dan Rabin Plaza

The Dan Rabin Plaza was developed as both a transit hub and recreational area. The recreational area is in the eastern portion of the plaza between Sibley and State Streets along the NS railroad ROW in Hammond. The eastern portion is approximately 24,000 square feet and is devoted to passive recreational uses such as walking and jogging. Park amenities include sidewalks and decorative features. The City of Hammond maintains the eastern portion of the plaza as a park (see **Figure 7.4-6**).

Figure 7.4-6: Dan Rabin Plaza, Looking South

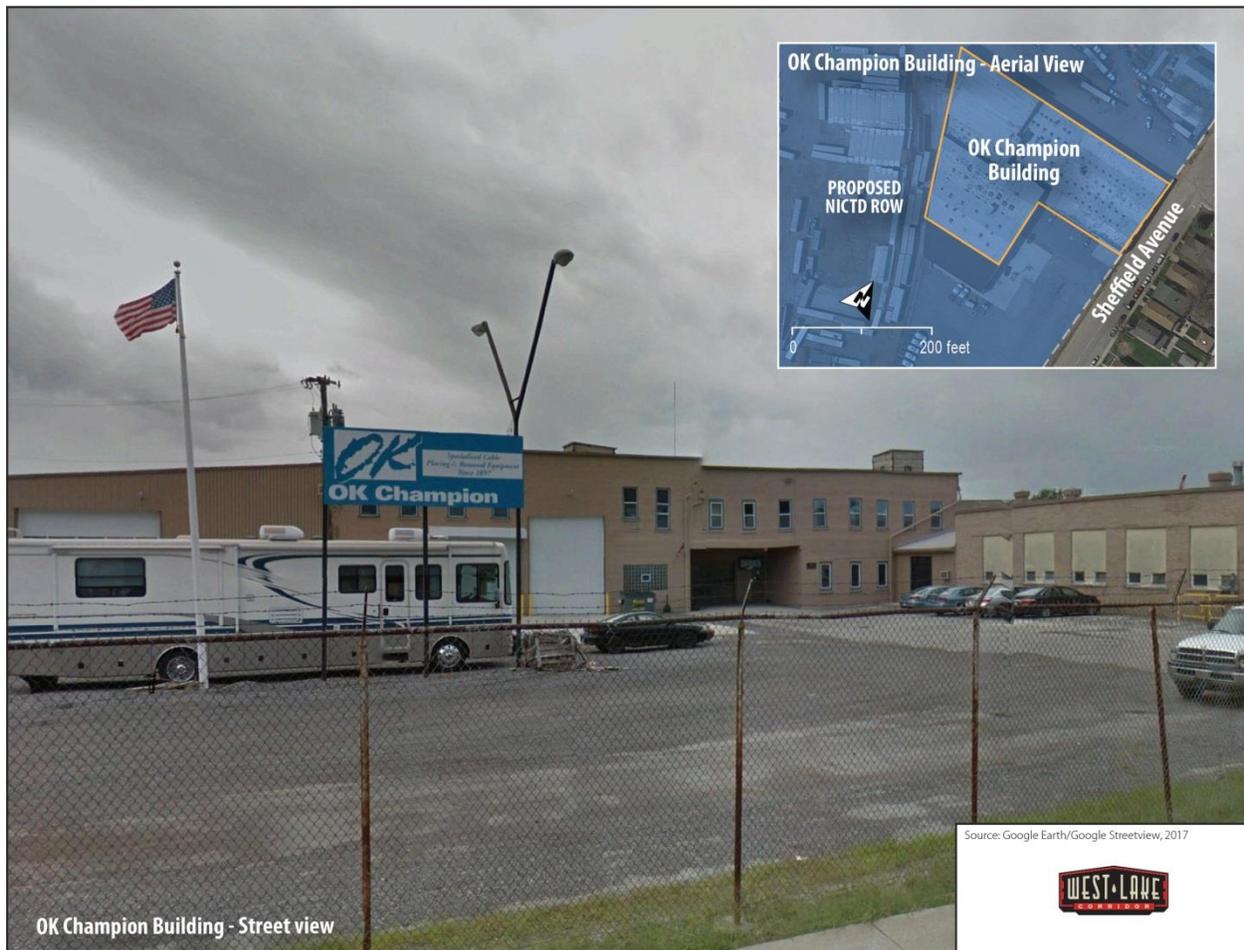


Source: Google Earth 2017.

7.4.1.6 Resource 6 – OK Champion Building

The Champion Potato Machinery Company, which later became OK Champion, was one of the pioneering industries in Hammond. Otto Knoerzer founded the company in 1897 when he invented the Champion Potato Digger. The OK Champion Building was constructed in an Industrial Vernacular style between 1905 and 1914. It is associated with a significant period of industrial growth in Hammond in the early 20th century. The OK Champion Building is significant under NRHP Criterion A for its association with Hammond’s manufacturing industry, the role the company played in the local community’s development and prosperity, and as a pioneering Hammond industry. The OK Champion Building retains its integrity of location, design, workmanship, materials, association, setting, and feeling (see **Figure 7.4-7**). The property, consisting of 2.3 acres along Sheffield Avenue, is eligible for the NRHP under Criterion A.

Figure 7.4-7: Two-story Section of the OK Champion Building, Looking Northwest



Source: Google Earth 2017.

7.4.1.7 Resource 7 – Federal Cement Tile Company

The Federal Cement Tile Company plant is a 20.8-acre industrial property with numerous buildings and structures constructed in an Industrial Vernacular style. Federal Cement Tile Company manufactured steel and concrete roof slabs, wall plates, floors, and other construction materials. At least four of the buildings remaining extant on the parcel appear to have been part of the original 1909 plant construction. The Federal Cement Tile Company plant is significant under NRHP Criterion A for its association with Hammond’s industrial history and the key role the company played in the development and prosperity of Hammond and surrounding areas. The property retains most of its original buildings and its original footprint including its location, design, workmanship, materials, association, setting, and feeling (see **Figure 7.4-8**). The property is eligible for the NRHP under Criterion A.

Figure 7.4-8: Federal Cement Tile Company, Present Day, Looking North



Source: Google Earth 2017.

7.4.1.8 Resource 8 – Burnham Greenway

The Burnham Greenway is an 11-mile multiuse trail that primarily uses a former railroad ROW to link Chicago to Lansing, Illinois. In the Project Area, the trail is incomplete, forming what is known locally as the Burnham Greenway gap, a 2-mile section where the existing network of railroads, utility lines, and other development pose challenges to completing the greenway (see **Figure 7.4-9**).

Figure 7.4-9: Burnham Greenway at State Street, Looking North



Source: Google Earth 2017.

7.4.2 Resources for Which Joint Planning Applies

The regulations adopted by FTA for processing compliance with Section 4(f) state in part as follows:

- (i) When a property is formally reserved for a future transportation facility before or at the same time a park, recreation area, or wildlife and waterfowl refuge is established and concurrent or joint planning or development of the transportation facility and the Section 4(f) resource occurs, then any resulting impacts of the transportation facility will not be considered a use as defined in 23 CFR Part 774.17. Examples of such concurrent or joint planning or development include, but are not limited to:
 - (1) Designation or donation of property for the specific purpose of such concurrent development by the entity with jurisdiction or ownership of the property for both the potential transportation facility and the Section 4(f) property; or
 - (2) Designation, donation, planning, or development of property by two or more governmental agencies with jurisdiction for the potential transportation facility and the Section 4(f) property, in consultation with each other. [23 CFR Part 774.11(i)].

The following discussion shows how the Monon Trail fits into the language of the cited regulation.

7.4.2.1 Resource 9 – Monon Trail

The Monon Trail is a multiuse trail that occupies NICTD's ROW in Hammond from Douglas Street south to the Munster border at the Little Calumet River. In Munster, the Monon Trail continues south alongside Manor Avenue (see **Figure 7.4-10**) to its terminus at Fisher Street. The Hammond portion of the trail is 3.6 miles long; the Munster portion is approximately 1.6 miles long. The trail consists of a paved, maintained thoroughfare for use by bicyclists and pedestrians. The Hammond portion is operated by the City of Hammond; the portion in Munster is operated by the Town of Munster.

The Monon Trail is within NICTD's ROW, the former Monon railroad property first acquired by the City of Hammond through a quit claim deed dated 1981. In 1993, NICTD, the City of Hammond, and the Town of Munster entered into a cooperative agreement enabling NICTD to acquire the former railroad property in Hammond and Munster. The agreement, provided in **Appendix C**, allows NICTD to develop and operate a transit rail line in the ROW. The agreement can be cancelled on December 31, 2018, subject to 1 year's notice. It also enables the City of Hammond and Town of Munster to build and operate multiuse trails within the same ROW. The Monon Trail was developed by Hammond and Munster according to the cooperative agreement.

Figure 7.4-10: Monon Trail in Munster along Manor Avenue, Looking North



Source: Google Earth 2017.

7.4.3 Little Calumet River Trail

The Little Calumet River Trail, also known as the Little Calumet Levee Trail in some areas, runs from Munster to Gary along the Little Calumet River levee system (see **Figure 7.5-4**). The Project would require a minor relocation of the junction of the trail with the Monon Trail near the border between Hammond and Munster north of the Little Calumet River levee.

During meetings and conversations with the Little Calumet River Basin Development Commission (the Commission, the entity with jurisdiction over the trail at the point where it intersects with the Monon Trail) it was disclosed that the trail is currently used informally at this location by bicyclists and pedestrians even though they are not the intended users. The paved path at this location is actually a maintenance road on privately owned land that was built pursuant to an easement so that the Commission could gain access to the levee for maintenance activities.

Since the trail is on privately owned land and the Commission did not acquire rights of public access for recreational purposes, the trail is not a Section 4(f) resource. Nevertheless, NICTD would continue to coordinate with the Commission so that the continuity of this trail for its

existing uses can be maintained. An additional analysis of the limitations on the intended uses of this trail is provided in **Appendix C**.

7.5 Assessment of Use of Section 4(f) Resources

This section provides further details on each Section 4(f) resource and explains the determinations of the proposed “use” for each resource. **Table 7.5-1** summarizes the assessment of proposed use findings. Alternatives to avoid Section 4(f) use of these resources are described in **Section 7.6**. The locations of Section 4(f) resources are shown in **Figure 7.5-1** through **Figure 7.5-8**.

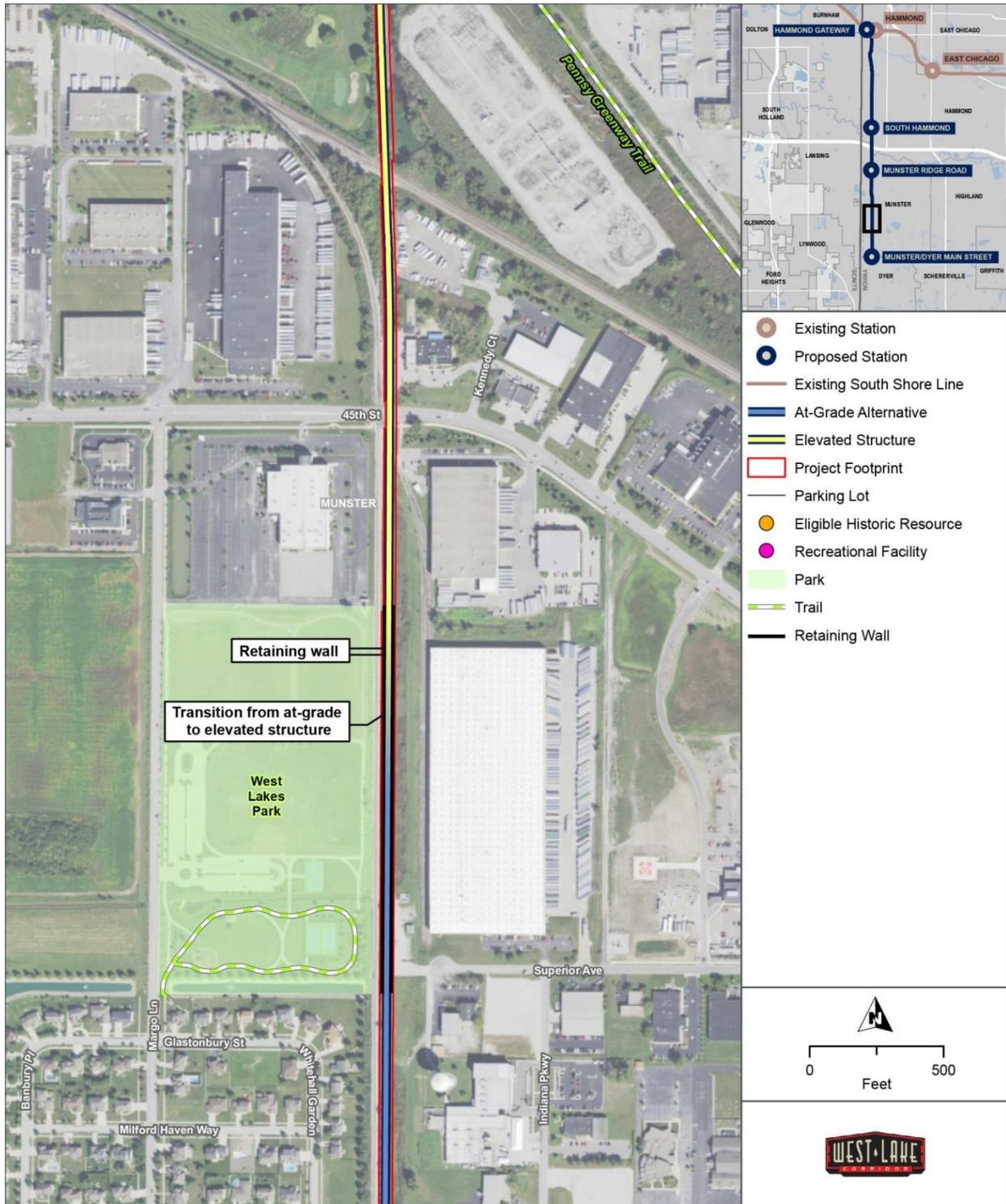
Table 7.5-1: Section 4(f) Assessment of Resources’ Use – FEIS Preferred Alternative

Section 4(f) Resource	Permanent Use, Not <i>de minimis</i>	Permanent Use, <i>de minimis</i>	No Use ^a	Existing Resource Dimension	Permanent Use Dimension	Percentage of Resource Permanently Used
West Lakes Park			•	26 acres (Munster)	0 acre	0%
Pennsy Greenway (Pennsy Path)		•		15 miles (overall); 3.4 miles (Munster)	0.30 acre	<1% (Munster)
Monon Trail			•	3.6 miles (Hammond); 1.6 mile (Munster)	0 mile	0%
Harrison Park			•	25 acres (Hammond)	0 acre	0%
Erie Lackawanna Trail			•	17 miles (overall); 4.5 miles (Hammond)	0 mile	0%
Dan Rabin Plaza			•	24,000 square feet (Hammond)	0 square feet	0%
OK Champion Building	•			2.3 acres (Hammond)	2.3 acres	100%
Federal Cement Tile Company			•	20.8 acres (Hammond)	0 acre	0%
Burnham Greenway			•	11 miles (overall)	0 mile	0%

Sources: NICTD 2016; HDR 2017a.

^a Joint planning applies to the Monon Trail.

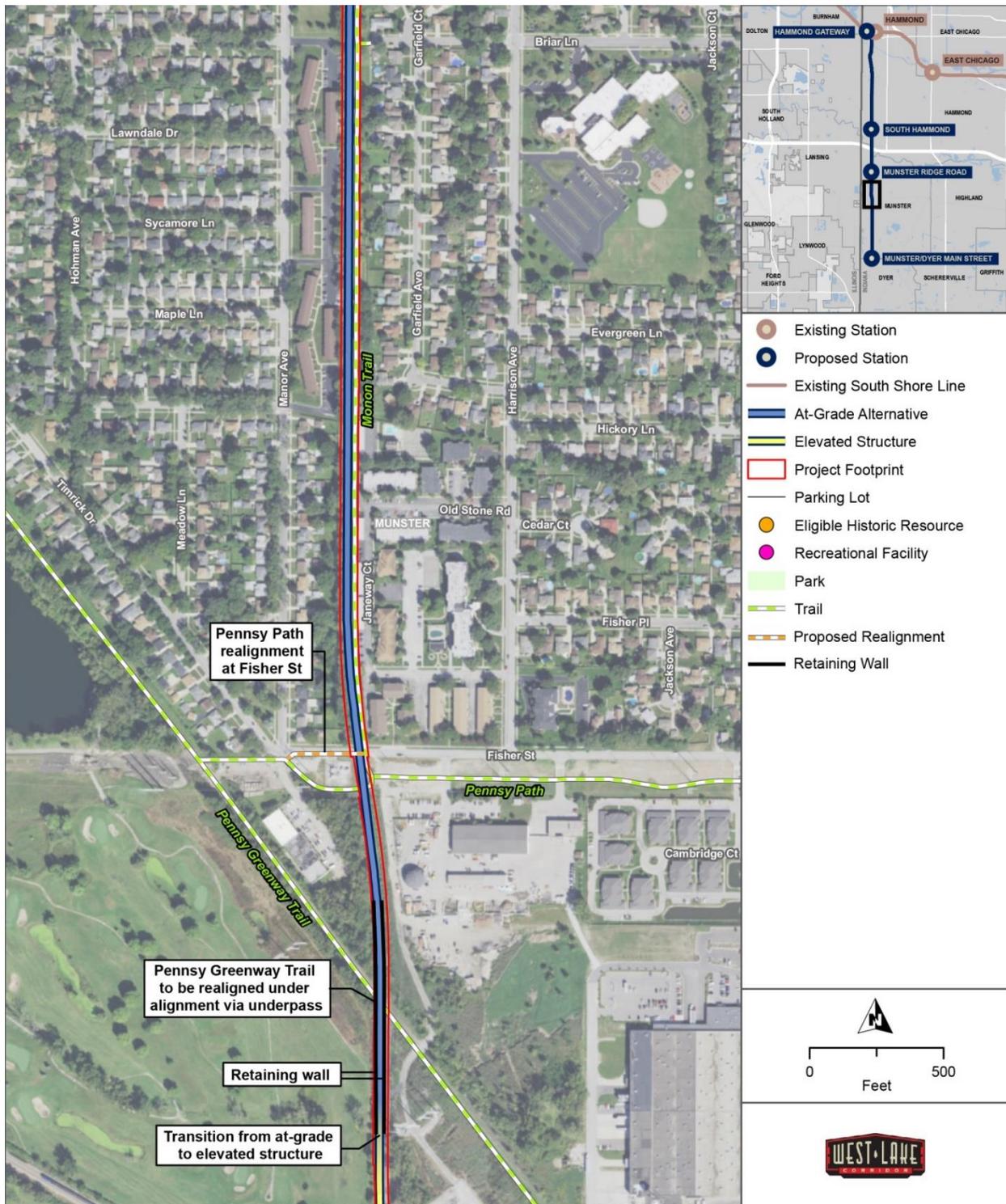
Figure 7.5-1: Location of West Lakes Park



Background Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Geomatics, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

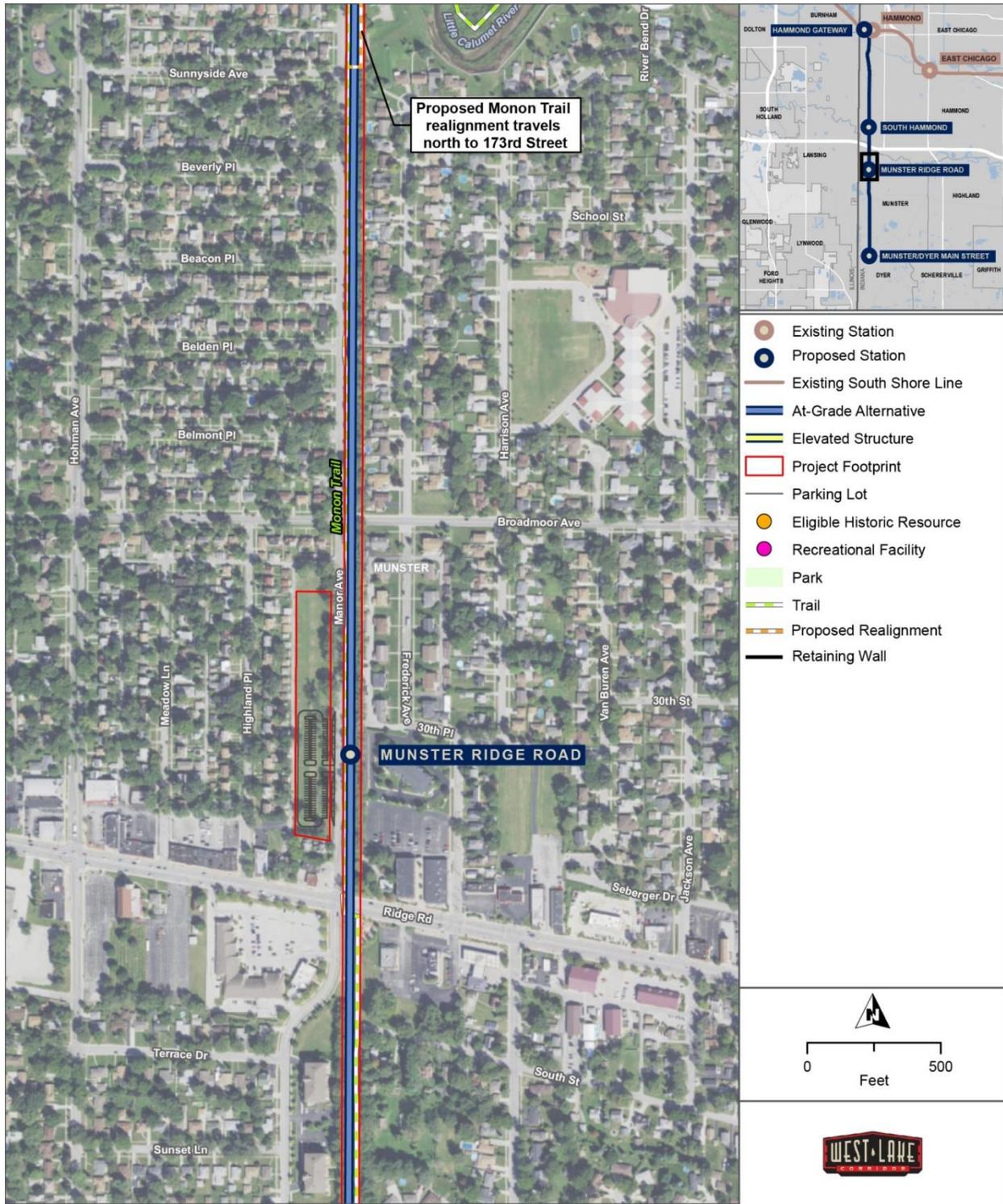
Sources: INDNR 2016; HDR 2017a.

Figure 7.5-2: Location of Pennsy Path, Pennsy Greenway, and Monon Trail



Sources: INDNR 2016; HDR 2017a.

Figure 7.5-3: Location of Monon Trail



Sources: INDNR 2016; HDR 2017a.

Figure 7.5-4: Location of Monon Trail (cont.)



Background Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, GeoMapping, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

Sources: INDNR 2016; HDR 2017a.

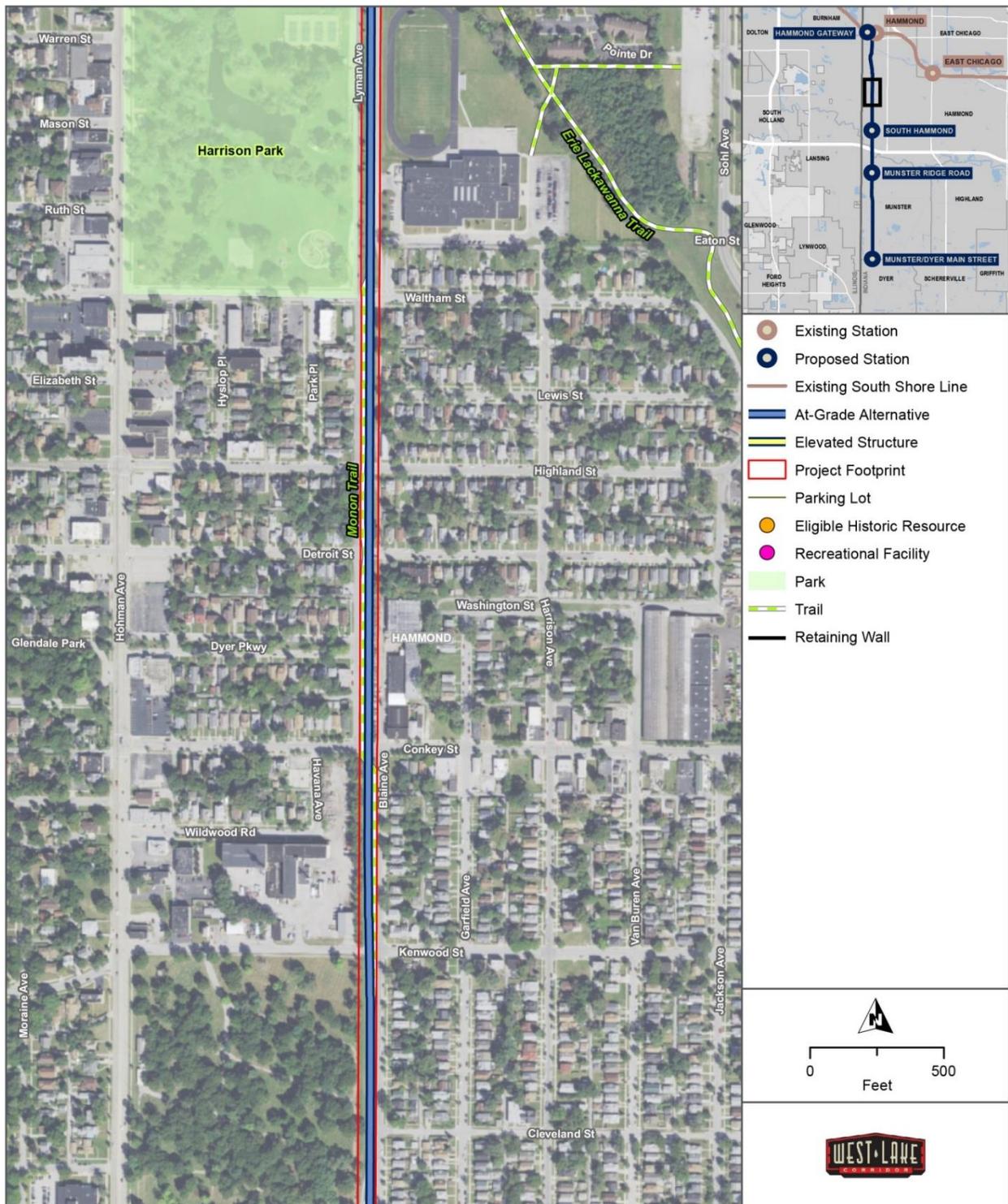
Figure 7.5-5: Location of Monon Trail (cont.)



Background Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, GeoEye, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

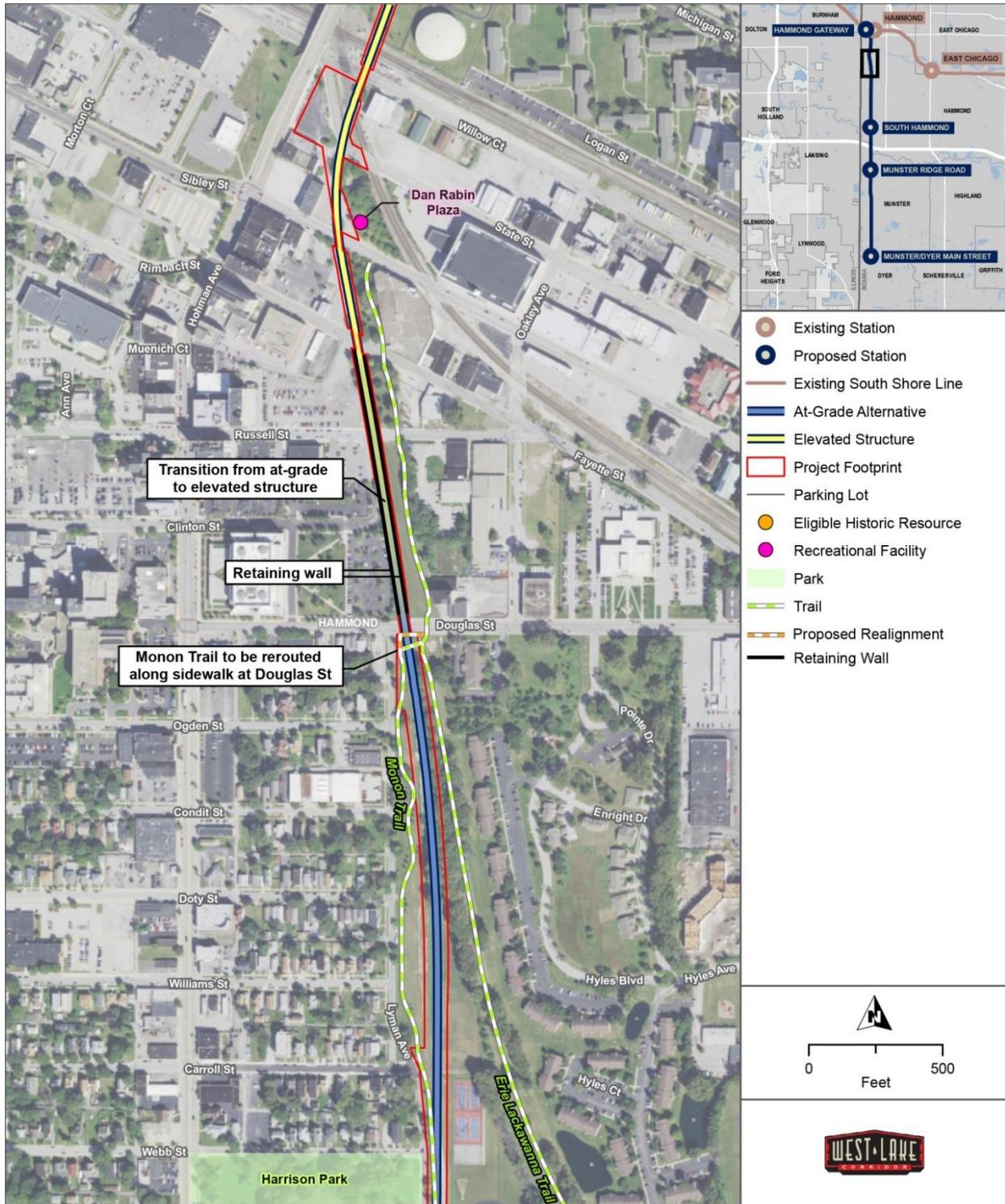
Sources: INDNR 2016; HDR 2017a.

Figure 7.5-6: Location of Harrison Park, Monon, and Erie Lackawanna Trails



Sources: INDNR 2016; HDR 2017a.

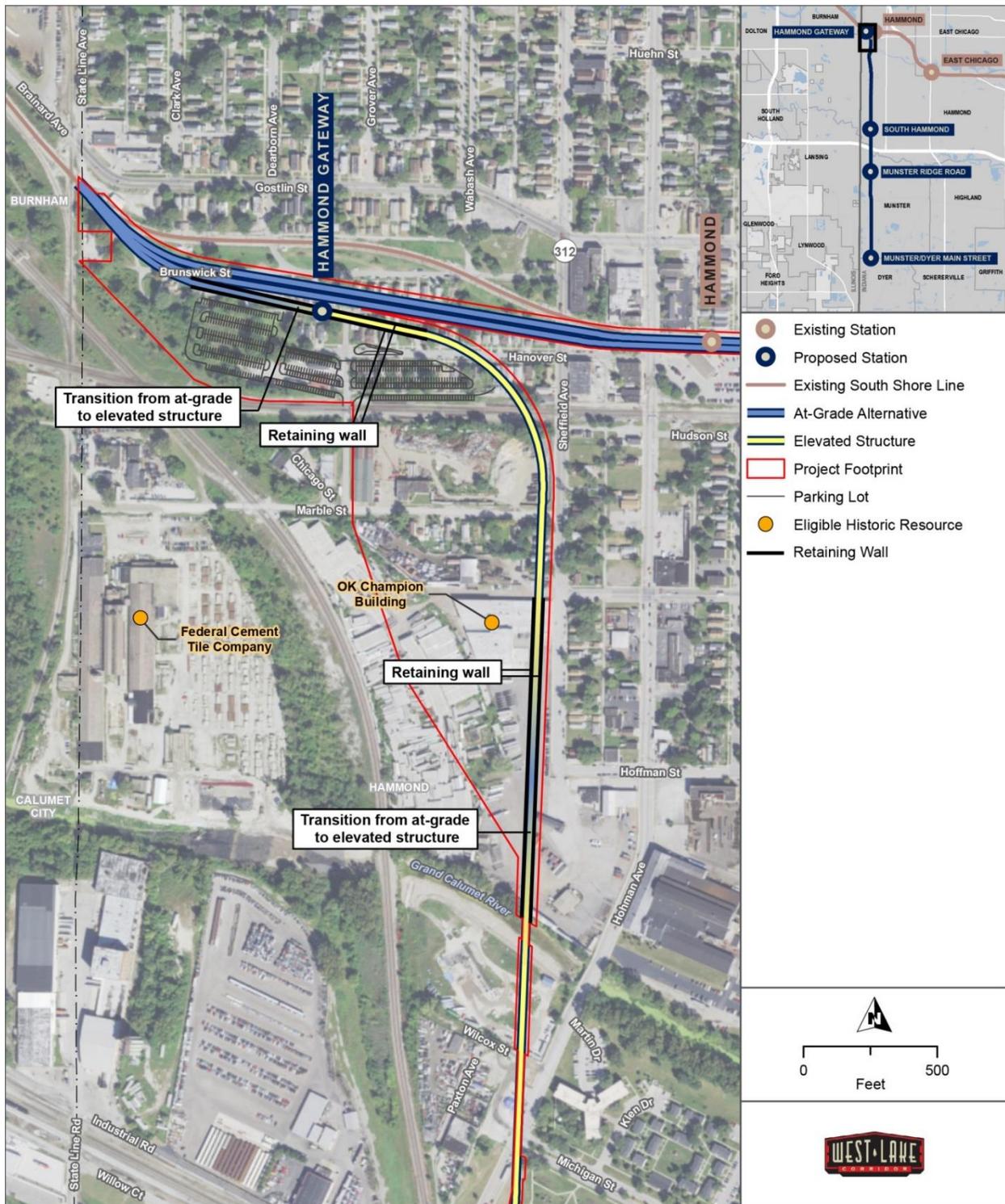
Figure 7.5-7: Location of Harrison Park, Dan Rabin Plaza, and Monon and Erie Lackawanna Trails



Background Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, ALEX, Geomapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Sources: INDNR 2016; HDR 2017a.

Figure 7.5-8: Location of Federal Cement Tile Company and OK Champion Building



Background Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Sources: INDNR 2016; HDR 2017a.

7.5.1 West Lakes Park

The FEIS Preferred Alternative would be aligned within the to-be-acquired ROW adjacent to and on the eastern side of the CSX railroad existing ROW in the area of West Lakes Park in Munster. The park is on the western side of the CSX railroad, as shown in **Figure 7.5-1**. No ROW acquisition would be required from West Lakes Park to implement the FEIS Preferred Alternative. The **Chapter 5** assessment of effects indicates that the FEIS Preferred Alternative would not cause noise, vibration, or visual effects on West Lakes Park that would constitute a constructive use.

Section 4(f) Use Determination: Based on the Project's preliminary engineering plans and analysis conducted to date, the Project would result in **no use** of West Lakes Park. No permanent incorporation, temporary occupancy, or constructive use would occur based on the scope of work. No substantial impairment of the activities, features, or attributes—of the park and its recreational amenities—that qualify West Lakes Park for protection under Section 4(f) would occur.

7.5.2 Pennsy Greenway (Pennsy Path)

The FEIS Preferred Alternative would be aligned within NICTD's ROW at the point where it crosses the undeveloped portion of the Pennsy Greenway corridor south of Fisher Street as shown in **Figure 7.5-9**. At this location, the FEIS Preferred Alternative would be elevated (slightly descending in a northbound direction) utilizing retaining walls, and the trail would be at grade. NICTD would construct an underpass or culvert as part of the guideway structure to enable the trail to pass under the rail line. Given the width of the Pennsy Greenway ROW, NICTD anticipates the need to use approximately 0.30 acre of Pennsy Greenway ROW to provide supports for the guideway structure in the ROW and a permanent easement for access and maintenance. However, the guideway structure would be designed to allow space for the future trail development.

NICTD would restore portions of the ROW it temporarily disturbs during construction of the Project to as good or better condition than prior to the start of construction. NICTD expects to require temporary closure of the crossing over Pennsy Greenway while the underpass or culvert and guideway are constructed. Closure would be necessary for construction work, access, and worker and trail user safety. The crossing would be closed for as long as it takes to build and open the underpass or culvert to allow safe future public access.

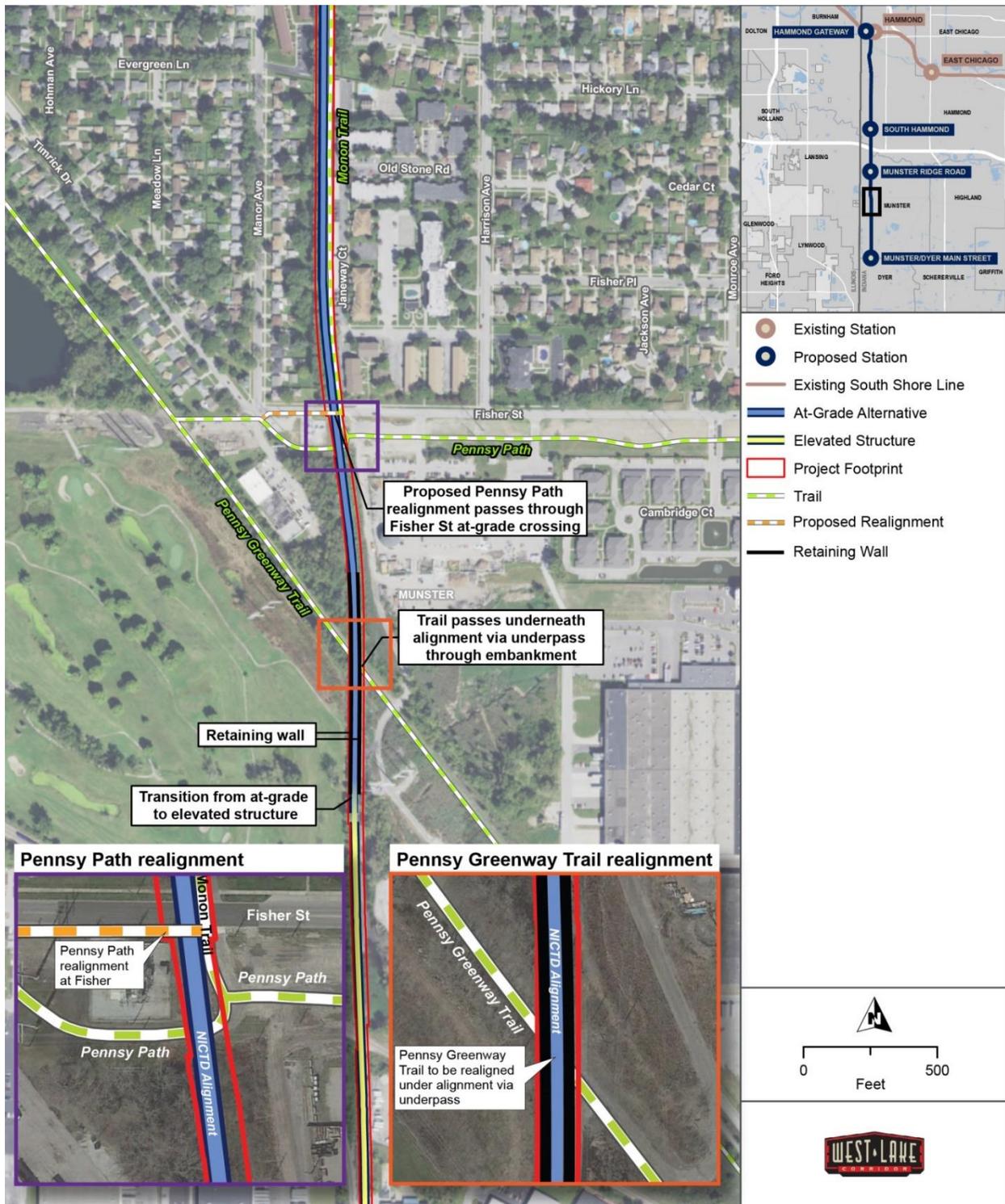
The FEIS Preferred Alternative would also cross Munster's developed portion of the Pennsy Path where it is aligned along the southern side of Fisher Street on NIPSCO ROW. At this location, the FEIS Preferred Alternative and the Pennsy Greenway would be at grade. NICTD would install a railroad-highway grade crossing and warning system at Fisher Street to enable motor vehicles and trail users to cross the railroad. NICTD would realign approximately 350 feet of the existing Pennsy Path between Manor Avenue and the Monon Trail to direct trail users to this proposed crossing (see **Figure 7.5-9**). NICTD would coordinate with Munster on the design of this realignment and crossing. NICTD expects to require temporary closure of the trail between Manor Avenue and the crossing while the realignment and crossing are constructed. Closure would be necessary for construction work, access, and worker and trail user safety. The crossing would be closed for as long as it takes to build and open the realignment and crossing to safe public access.



The **Chapter 5** assessment of effects indicates that the FEIS Preferred Alternative would not cause noise, vibration, or visual effects on the Pennsy Greenway that would constitute a constructive use. No permanent substantial impairment of the activities, features, or attributes—the paved thoroughfare—that qualify the trail for protection under Section 4(f) would occur.

Section 4(f) Use Determination: Based on the Project’s preliminary engineering plans and analysis conducted to date, FTA has made a determination of ***de minimis* impact** for the proposed crossings of the original Pennsy Greenway corridor and the existing path at Fisher Street. The finding of *de minimis* impact includes temporary closure of the path during Project construction. The determination is based on the fact that coordination between NICTD and the Town of Munster (see **Appendix C**) has resulted in NICTD’s commitment to temporarily close the path during Project construction in order to cross over Pennsy Greenway and adjust the Fisher Street crossing. NICTD’s commitment for the Pennsy Greenway and existing path have resulted in the Town of Munster’s agreement with the criteria of *de minimis* impact described in **Section 7.2**. By meeting these criteria, the FEIS Preferred Alternative would not permanently adversely affect the features, attributes, or activities that qualify the Pennsy Greenway for protection by Section 4(f).

Figure 7.5-9: Pennsy Greenway and the Project



Background Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Geomatics, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Sources: INDNR 2016; HDR 2017a.

7.5.3 Monon Trail

The FEIS Preferred Alternative would be aligned within NICTD's existing ROW (formerly the Monon railroad corridor), which is partly occupied by the Monon Trail between Douglas Street in Hammond and Fisher Street in Munster. NICTD, the City of Hammond, and the Town of Munster have a cooperative agreement for the jointly owned ROW, the same property the Monon Trail occupies. The agreement formally reserves the property for NICTD's future transportation use, but allows co-alignment of trails and other infrastructure (**Appendix C**).

The Monon Trail was developed by the City of Hammond and the Town of Munster subsequent to the agreement being executed. By having the agreement and subsequent development of the Monon Trail within the property that is the subject of the agreement, the Section 4(f) definition of joint planning is met. Specifically, the property was formally reserved by three governmental agencies in consultation with one another and with jurisdiction over the transportation facility as well as the Section 4(f) property for a future transportation facility before the trail was established. As a result, impacts of the Project on the Monon Trail are not considered a use as defined by 23 CFR Parts 774.11(i) and 774.17. The Monon Trail is, therefore, not considered further in this Section 4(f) evaluation.

Although it is not considered under Section 4(f), NICTD recognizes that this trail is an asset to the communities and has continued to work with the City of Hammond and the Town of Munster to relocate the trail where required. NICTD proposes to relocate approximately 0.95 mile (5,000 feet) of the paved trail within the existing ROW connecting the Hammond and Munster sections on a relocated trail bridge at the Little Calumet River (see **Figure 7.5-2** through **Figure 7.5-6** and the engineering drawings in **Appendix E**, Track Plans, Sheets 20 to 37).

Temporary closure of the parts of the trail to be relocated would occur during Project construction. NICTD would work with the City of Hammond and the Town of Munster to plan temporary trail closures in the Project Area during construction. In planning for temporary trail closures, the parties would consider the ability to provide temporary detours where reasonably feasible. The duration of temporary closures would only be as long as required to construct the portion of the Project in the trail area; the duration would be less than the construction duration of the overall Project.

7.5.4 Harrison Park

The FEIS Preferred Alternative would be aligned within the ROW adjacent to and on the eastern side of Lyman Avenue east of Harrison Park in Hammond as shown in **Figure 7.5-10**. No ROW would be required from Harrison Park to implement the FEIS Preferred Alternative. The **Chapter 5** assessment of effects indicates that the FEIS Preferred Alternative would not cause noise, vibration, or visual effects on Harrison Park that would constitute a constructive use.

Section 4(f) Use Determination: Based on the Project's preliminary engineering plans and analysis conducted to date, the Project would result in **no use** of Harrison Park. No permanent incorporation, temporary occupancy, or constructive use would occur based on the scope of work. No substantial impairment of the activities, features, or attributes that qualify Harrison Park for protection under Section 4(f) would occur.

Figure 7.5-10: Harrison Park and the Project



Background Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Sources: INDNR 2016; HDR 2017a.

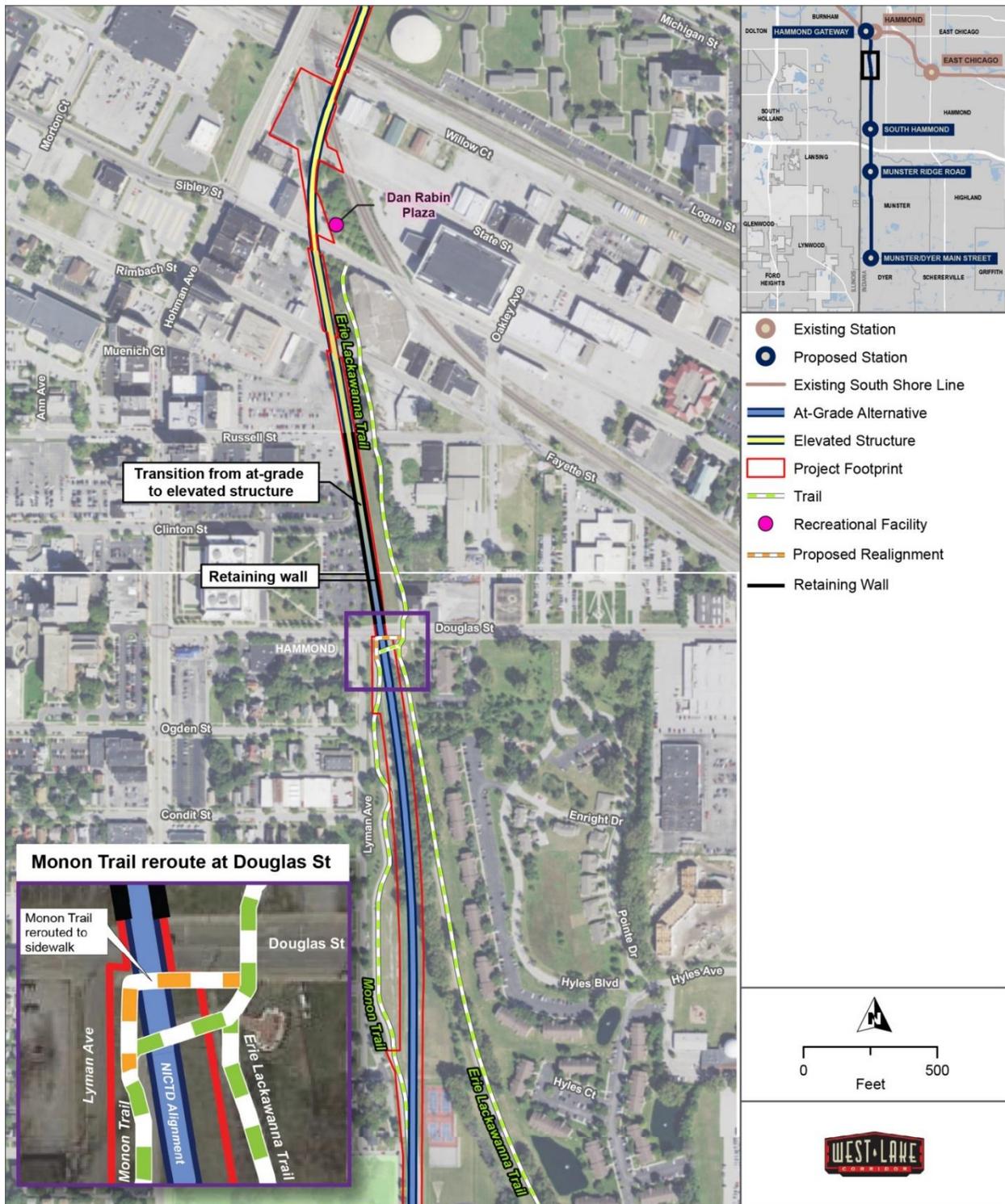


7.5.5 Erie Lackawanna Trail

The FEIS Preferred Alternative would be aligned within NICTD's existing ROW between Sibley and Ogden Streets in Hammond as shown in **Figure 7.5-11**. South of the point where Ogden Street would cross the trail if Ogden Street were to run east of Lyman Avenue, the trail gradually turns southeast, away from NICTD's ROW. As a result of design changes, the FEIS Preferred Alternative now avoids this trail. NICTD no longer proposes to permanently use any portion of the Erie Lackawanna Trail ROW for the FEIS Preferred Alternative.

Section 4(f) Use Determination: Based on the Project's preliminary engineering plans and analysis conducted to date, the Project would result in **no use** of the Erie Lackawanna Trail in Hammond. No permanent incorporation, temporary occupancy, or constructive use would occur based on the scope of work. No substantial impairment of the features, attributes, or activities that qualify the Erie Lackawanna Trail for protection under Section 4(f) would occur.

Figure 7.5-11: Erie Lackawanna Trail and the Project



Background Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Goolmapping, Aerial, IGN, IGN, swisslipo, and the GIS User Community

Sources: INDNR 2016; HDR 2017a.

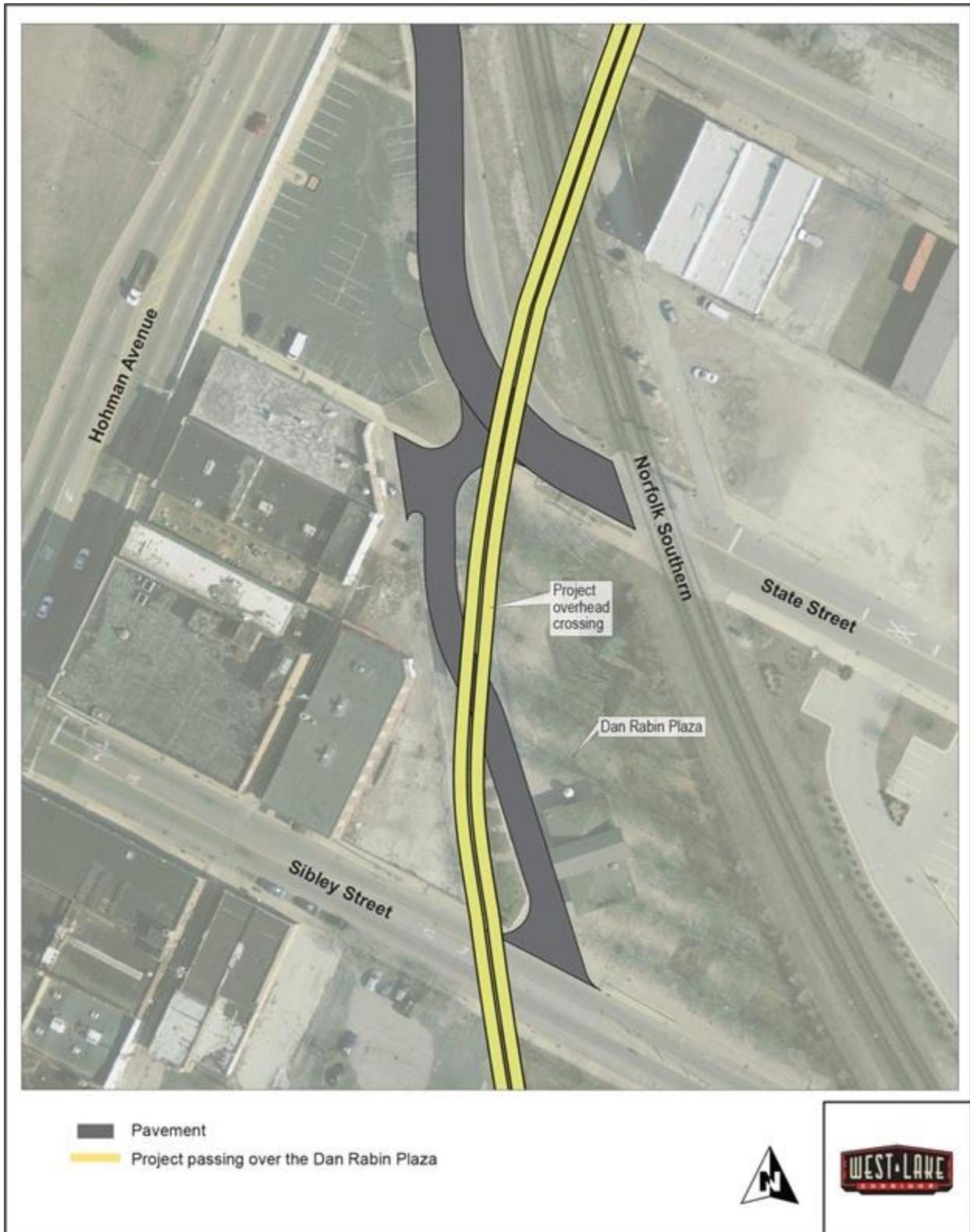


7.5.6 Dan Rabin Plaza

The FEIS Preferred Alternative would be elevated (approximately 25 feet) over the northwestern corner of the recreational portion of the Dan Rabin Plaza. The area of the recreational portion of the plaza under the Project would be approximately 960 square feet; however, no piers or support structures would be placed in the recreational portion of the plaza, as shown in **Figure 7.5-12**. The **Chapter 5** assessment of effects indicates that the FEIS Preferred Alternative would not cause noise, vibration, or visual effects on the recreational portion of the Dan Rabin Plaza that would constitute a constructive use. Note that the transportation building located in Dan Rabin Plaza is currently vacant.

Section 4(f) Use Determination: Based on the Project's preliminary engineering plans and analysis conducted to date, the Project would result in **no use** of the recreational portion of the Dan Rabin Plaza. No permanent incorporation, temporary occupancy, or constructive use would occur based on the scope of work. No substantial impairment of the activities, features, or attributes that qualify Dan Rabin Plaza for protection under Section 4(f) would occur.

Figure 7.5-12: Dan Rabin Plaza and the Project



Source: HDR 2017a.

7.5.7 OK Champion Building

As part of the FEIS Preferred Alternative, NICTD proposes to locate portions of the proposed alignment and the North Hammond MSF on properties west of Sheffield Avenue, including the OK Champion Building property, as shown in **Figure 7.5-8**. Specifically, the proposed alignment would occupy the property along its frontage with Sheffield Avenue. In this location, the proposed alignment would be rising in elevation in a northbound direction. However, the proposed alignment structure would block the only access to the OK Champion Building property, which is from Sheffield Avenue, making the building inaccessible. NICTD would remove the building and use the remainder of the property for a portion of the proposed North Hammond MSF. NICTD would acquire the 2.3-acre OK Champion Building property and demolish the building, resulting in removal of the historic property and relocation of the existing business.

Section 4(f) Use Determination: The FEIS Preferred Alternative would result in the **permanent incorporation** of the OK Champion Building into a transportation facility, a use under Section 4(f). The FEIS Preferred Alternative would permanently remove the historic OK Champion Building. Based on the Project's preliminary engineering plans and analysis conducted to date, FTA also determined this would result in an adverse effect on the historic property under Section 106, and concurrence with this determination has been received from the Indiana SHPO (see **Appendix C**).

7.5.8 Federal Cement Tile Company Building

The Federal Cement Tile Company Building is adjacent to the Commuter Rail Alternative, near the Indiana–Illinois state line between the Grand Calumet River and Marble Street in Hammond. This building was identified in the DEIS as a potential Section 4(f) use associated with the Commuter Rail Alternative. The building is approximately 0.3 mile west of the FEIS Preferred Alternative (see **Figure 7.5-8**). No use of this property would be required to implement the FEIS Preferred Alternative. The **Chapter 5** assessment of effects indicates that the FEIS Preferred Alternative would not cause noise, vibration, or visual effects on the Federal Cement Tile Company building that would constitute a constructive use.

Section 4(f) Use Determination: Based on the Project's preliminary engineering plans and analysis conducted to date, the Project would result in **no use** of the Federal Cement Tile Company building. No permanent incorporation, temporary occupancy, or constructive use would occur based on the scope of work. No substantial impairment of the activities, features, or attributes that qualify the Federal Cement Tile Company Building for protection under Section 4(f) would occur.

7.5.9 Burnham Greenway

The Burnham Greenway is a trail between Chicago and Lansing, Illinois, with two distinct segments just north and south of the SSL (see **Figure 7.4-9**). The FEIS Preferred Alternative would operate additional train service on the existing SSL at this location. No use of the Burnham Greenway property would be required to implement the FEIS Preferred Alternative. The **Chapter 5** assessment of effects indicates that the FEIS Preferred Alternative would not cause noise, vibration, or visual effects on the Burnham Greenway that would constitute a constructive use.

Section 4(f) Use Determination: Based on the Project's preliminary engineering plans and analysis conducted to date, the Project would result in **no use** of the Burnham Greenway. No permanent incorporation, temporary occupancy, or constructive use would occur based on the

scope of work. No substantial impairment of the activities, features, or attributes that qualify the Burnham Greenway for protection under Section 4(f) would occur.

7.6 Avoidance Analysis

Once permanent incorporation of Section 4(f) uses has been determined, it is necessary to consider any avoidance alternatives that would eliminate individual use of Section 4(f) resources. Feasible and prudent avoidance alternatives are those that would avoid using any Section 4(f) resource and would not cause other problems of a magnitude that would substantially outweigh the importance of protecting the Section 4(f) resource (23 CFR Part 774.17). Alternatives evaluated to avoid use of the OK Champion Building include the No Build Alternative and the following types of alternatives as identified in FHWA's *Section 4(f) Policy Paper* (FHWA 2012):

- **Location Alternatives:** A location alternative refers to the rerouting of the entire project along a different alignment.
- **Alternative Actions:** An alternative action involves actions that do not require construction or that consist of a different transit mode.
- **Alignment Shifts:** An alignment shift is the rerouting of a portion of the project to a different alignment to avoid the use of a specific resource.
- **Design Changes:** A design change is a modification of the proposed design in a manner that would avoid impacts.

7.6.1 Alternatives Evaluated

The Section 4(f) regulations and policy guidance require evaluation of a reasonable range of alternatives to avoid using Section 4(f) resources. These include the No Build Alternative, the other Build Alternatives considered in the DEIS, and other alternatives that involve different modes, alignment shifts, or design changes. As required by Section 4(f), the descriptions below provide sufficient documentation to explain why these alternatives may be feasible but not prudent and were not further considered viable avoidance alternatives.

7.6.2 Feasibility and Prudence Standards

Definitions of feasible and prudent alternatives under 23 CFR Part 774.17 note that an alternative that would use any Section 4(f) resource is not an avoidance alternative for further prudence evaluation. The FEIS Build Alternative and the other Build Alternatives considered in the DEIS would affect at least one Section 4(f) resource and are not considered avoidance alternatives. Based on the identification of potential avoidance alternatives described above, only one alternative option was identified that could avoid use of Section 4(f) resources: the No Build Alternative. This avoidance alternative is further evaluated using the feasible and prudent standards of Section 4(f).

As defined in 23 CFR Part 774.17, an alternative is determined infeasible if it cannot be built as a matter of sound engineering judgment. Also, 23 CFR Part 774.17 lists factors for determining whether an alternative is prudent. An alternative could be not prudent for any of the following reasons:

- **Factor 1:** It would compromise the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need.
- **Factor 2:** It would result in unacceptable safety or operational problems.
- **Factor 3:** After reasonable mitigation, it would still cause one or more of the following:
 - Severe social, economic, or environmental impacts
 - Severe disruption to established communities
 - Severe, disproportionate impacts on low-income or minority populations
 - Severe impacts on environmental resources protected under other federal statutes
- **Factor 4:** It would result in additional construction, maintenance, or operational costs of an extraordinary magnitude.
- **Factor 5:** It would cause other unique problems or unusual factors.
- **Factor 6:** It would involve multiple factors in 1 through 5 above that, while individually minor, could cumulatively cause unique problems or impacts of extraordinary magnitude.

The following narrative evaluates the No Build Alternative and other potential location alternatives, alternative actions, alignment shifts, and design changes using these feasible and prudent factors. As indicated in this narrative, none of the potential actions is a feasible and prudent avoidance alternative.

7.6.2.1 No Build Alternative

The No Build Alternative is defined as the existing transportation system, plus any committed transportation improvements included in the NIRPC 2040 CRP (2011) and the Chicago Metropolitan Agency for Planning *GO TO 2040* CRP (2014) through the planning horizon year of 2040. It also includes capacity improvements to the existing MED line and Millennium Station as documented in NICTD's *20-Year Strategic Business Plan* (NICTD and Northwest Indiana Regional Development Authority 2014).

The No Build Alternative would avoid the use of any Section 4(f) resource by making no alterations to the existing infrastructure; however, it is not a prudent avoidance alternative under Factor 1 because it would compromise the Project to a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need. Specifically, the No Build Alternative would not meet the purpose of and need for the Project. The Project purpose is to increase transportation options for central and southern Lake County residents traveling to downtown Chicago, reduce travel time and travel costs, and promote economic development opportunities for Lake County. The No Build Alternative would not establish the infrastructure and service needed to change the existing transportation options for central and southern Lake County residents traveling to downtown Chicago, or reduce travel times and costs. In the absence of these benefits, the No Build Alternative would not promote economic development opportunities for Lake County beyond what can be achieved under existing transportation conditions.

7.6.2.2 *Alternative Actions*

Upgrade Existing Facilities: The Project Area is currently served by the following existing facilities:

- **Amtrak (Dyer and Hammond/Whiting):** As described in **Section 3.2.3** of this FEIS, service to and from Chicago is limited to one round trip daily at Dyer and two round trips daily at Hammond/Whiting.
- **SSL:** NICTD provides commuter rail service to Chicago via the SSL and MED 7 days per week, with Hammond and Hegewisch Stations in the Project Area.
- **Pace:** Bus service to Morton Court/Willow Court in Hammond from points in Illinois is provided.
- **GPTC:** Bus service between Gary and Hammond is provided, including connections with Pace and Chicago Transit Authority.

Expansion of Pace and/or GPTC bus service in the Project Area, while potentially feasible, would not address the problems regarding travel time delays attributable to traffic congestion on the way to downtown Chicago as described in **Section 1.2.2.2**. Amtrak is an intercity and long-distance passenger rail service that is not designed or intended to serve the growing Project Area's commuter needs. NICTD's SSL service is remote from the southern portions of the Project Area, requiring Project Area SSL users to travel across the Project Area to the nearest station. In summary, while upgrading existing bus, Amtrak, or SSL facilities is potentially feasible, none is prudent because none of these changes would achieve the Project purpose and need (Factor 1).

Alternative Modes: Potential alternative modes considered include bus and light rail because these are commuter-oriented transit modes that could potentially serve a similar function to commuter rail service. Bus service in shared lanes, while potentially feasible, would not achieve the Project purpose and need because it would be subject to roadway congestion and delays (Factor 1). Bus rapid transit and light rail transit in dedicated lanes would have the same issues as the Project in terms of alignment and ROW needs. In addition, bus rapid transit and light rail transit could require more ROW adjacent to freight railroad corridors to meet safety requirements for horizontal separation. More ROW needs would increase Project costs and cause more property and community impacts than the Project, including potential impacts on properties protected by Section 4(f), including the OK Champion Building. Thus, while potentially feasible, bus rapid transit and light rail transit are not prudent because of a combination of cost and impact issues (Factor 6).

7.6.2.3 *Location Alternatives*

Use Existing Railroad Corridors: NICTD examined the feasibility of using existing Project Area freight railroad corridors, either by sharing track with freight operators or using a portion of private railroad ROW. Each Build Alternative Option, presented in the DEIS and in this FEIS, proposes to use portions of existing railroad ROW including CSS (SSL), IHB, and/or the CSX railroad. In some locations, such as along the SSL, sufficient track capacity is available and additional ROW is not needed to accommodate the Project. However, in most cases, NICTD would need to acquire additional ROW for its own track needs. As presented in **Section 7.5**, none of the Build Alternative options completely avoids the use of property protected by Section 4(f).

In the north Hammond area, the NS railroad is aligned west of the OK Champion Building and was examined early in Project planning as a potential location for the Project. However, NICTD's conversations with NS about possibly using its ROW were not favorable. NS is not interested in sharing its ROW with the Project. NS is a private railroad company and is not required to make its ROW available to the Project. Based on discussions with NS, they are not interested in selling their ROW, and eminent domain is not applicable to private railroad companies. As a result, NICTD determined that, while use of the NS ROW may be potentially feasible, it is not prudent (Factor 5). Acquiring a separate ROW adjacent to the NS was also considered, but it would have the same issues as the Commuter Rail Alternative options, including a more distant connection to the SSL to avoid the CSS freight yard and the use of NS ROW to complete the connection to the SSL. As a result, this is not prudent (Factor 5).

Use Existing Roadway Corridors: NICTD examined the potential to align the Project within existing Project Area roadways as an alternative to using existing railroad corridors. Aligning a commuter rail corridor along a roadway requires a dedicated guideway separated from roadway operations for safety. This can be accomplished with physical barriers or grade separation. In either case, additional ROW would be needed. Also, the configuration of the roadway network between the SSL and Munster/Dyer is such that forming a continuous, generally straight commuter rail alignment would require linking multiple roadway corridors across properties and neighborhoods. Property impacts and neighborhood fragmentation would be likely. Construction-phase impacts related to traffic and roadways could be substantial in duration and magnitude. For these reasons, while using existing roadway corridors may be potentially feasible, it is not prudent (Factor 6).

7.6.2.4 Alternative Shifts

Tunnel: Placing the FEIS Preferred Alternative in a tunnel for the entirety of the alignment south of the SSL connection would be cost-prohibitive. NICTD considered whether the portion of the Project in north Hammond could be placed in a tunnel to avoid affecting the OK Champion Building. In concept, a tunnel from north of Douglas Street in downtown Hammond to the proposed connection with SSL near the state line would be approximately 1.4 miles long. This distance would be required to enable the track to transition from the tunnel and meet the proposed at-grade section south of Douglas Street.

The tunnel would need to be deep enough to pass under the Grand Calumet River near the tunnel midpoint. The underlying geology is unconsolidated sands, which would be challenging for tunnel construction in the Project Area and would require special stabilization techniques for safe and efficient construction activities as well as long-term operations. Given the combination of geologic conditions, the developed character of the area under which the tunnel would pass, and the numerous railroads and roadways to be crossed, a bored tunnel construction methodology would be required. While bored construction would minimize surface disturbance, a higher cost is inherent in this type of construction. The cost for tunneling would be approximately \$325 million. By comparison, the Project cost for this section of the FEIS Preferred Alternative is approximately \$134 million for ROW improvements only, or 59 percent less than a tunnel. The substantially greater cost and the construction challenges in the Project Area result in this alternative being not prudent (Factor 4).

Use Existing NS Railroad in North Hammond: Early in the Project study, NICTD considered aligning the Project along or on the NS railroad in north Hammond, which would provide the most direct route through the north Hammond area. However, as described previously, NS did not support shared use of the alignment. As a result, this alternative is not prudent (Factor 5).

Alignment on Sheffield Avenue: NICTD considered aligning the FEIS Preferred Alternative within the Sheffield Avenue ROW, either alongside the travel lanes or elevated on an aerial structure. However, the portion of Sheffield Avenue being considered is part of Hammond's Chicago Street Widening and Reconstruction Project (<http://gochicagostreet.com/>). The focus of the City's project along Sheffield Avenue is to improve safety, reduce congestion, enhance mobility, and address deteriorating infrastructure. The intentions of this project along Sheffield Avenue are especially important for the well-being of residents in the neighborhood east of Sheffield Avenue who bear the brunt of traffic and deteriorating physical conditions on Sheffield Avenue. Placing NICTD's guideway structure on top of the roadway would complicate the purpose of and need for the Chicago Street project and create an undesirable urban elevated track condition, having a substantial, negative visual impact on the adjacent residential community. For this reason, while using the alignment of Sheffield Avenue is potentially feasible, it is not prudent (Factor 3).

Alignment East of Sheffield Avenue: NICTD considered aligning the FEIS Preferred Alternative east of Sheffield Avenue. The extra distance between the CSX railroad crossing and the proposed Hammond Gateway Station would have been favorable for NICTD in terms of bringing the elevated guideway down to meet the SSL grade at the station. However, an existing high-density residential neighborhood is east of Sheffield Avenue. The relocation impacts on this community make this alternative not prudent (Factor 3).

Span the OK Champion Property: NICTD considered whether it might be feasible to span the OK Champion Building property with the proposed elevated guideway. Typically, a distance of this length would require a truss bridge with an estimated cost of approximately \$48,000 per track foot in 2016 dollars. The proposed structure through this area would include aerial bridge structures (at \$9,300 per track foot) and retained fill (at \$4,500 per track foot). The use of a longer-span truss bridge would increase construction costs between 4 and 10 times. Thus, a clear span of the property is not prudent from a cost perspective (Factor 4).

7.7 Least Overall Harm Analysis

Since there is no feasible and prudent avoidance alternative, FTA is required to select the alternative that causes the least overall harm in light of the preservation purpose of the Section 4(f) statute. This selection is accomplished by balancing the factors at 23 CFR Part 774.3(c)(1).

The alternatives to be considered in the least overall harm analysis include the Build Alternatives as described in **Section 2.2**. These include:

- FEIS Preferred Alternative
- DEIS NEPA Preferred Alternative
- Commuter Rail Alternative (Options 1 to 4)
- IHB Alternative (Options 1 to 4)
- Hammond Alternative (Options 1 and 3)

In addition to the Build Alternatives, the least overall harm analysis considers the potential avoidance alternatives described in **Section 7.6.1**, which include:

- No Build Alternative
- Location Alternatives
 - Use existing railroad corridors
 - Use existing roadway corridors
- Alternative Actions
 - Upgrade existing transit facilities
 - Use alternative modes (bus rapid transit or light rail)
- Alternative Shifts
 - Place alignment in a tunnel south of the SSL connection
 - Use existing NS ROW in north Hammond
 - Place alignment in the Sheffield Avenue ROW
 - Place alignment east of Sheffield Avenue
 - Span the OK Champion property

The Section 4(f) regulations require balancing the following seven factors when determining which alternative would cause the least overall harm [23 CFR Part 774.3(c)(1)]:

1. Ability to mitigate adverse impacts on each Section 4(f) resource (including any measures that would result in benefits for the resource);
2. Relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) resource for protection;
3. Relative significance of each Section 4(f) resource;
4. Views of the officials with jurisdiction over each Section 4(f) resource;
5. Degree to which each alternative meets the purpose and need for the project;
6. After reasonable mitigation, the magnitude of any adverse impacts on resources not protected by Section 4(f);
7. Substantial differences in cost among alternatives.

The discussion below describes and compares the alternatives to each other in the context of the seven factors. Following this discussion, **Table 7.7-1** summarizes how the alternatives compare with the FEIS Preferred Alternative for each of the seven factors.

7.7.1 Ability to Mitigate Adverse Impacts on Each Section 4(f) Resource

7.7.1.1 No Build Alternative

The No Build Alternative would not use any Section 4(f) resources and would not require any mitigation for Section 4(f) resources.

7.7.1.2 FEIS Preferred Alternative

The FEIS Preferred Alternative would permanently incorporate one historic resource, the OK Champion Building, and would cause a *de minimis* impact on one recreational resource, the Penny Greenway/Penny Path. The loss of the OK Champion Building would be documented,



and an appropriate display or interpretive material depicting the OK Champion Building would be prepared. In addition, a nomination to the NRHP would be prepared for the P.H. Mueller Sons Hardware Building. These commitments are described in the MOA in **Appendix C**.

The Pennsy Greenway/Pennsy Path would be treated in a manner that continues its availability for public use after interruptions attributable to construction. Concurrence from the Town of Munster is provided in **Appendix C**.

7.7.1.3 DEIS NEPA Preferred Alternative

The DEIS NEPA Preferred Alternative would use the same Section 4(f) resources as the FEIS Preferred Alternative and would include the same mitigation. In addition, the DEIS NEPA Preferred Alternative would require the relocation of a short stretch of the Erie Lackawanna Trail. This relocation would qualify as a *de minimis* impact. The relocation would be temporary during the period of construction.

7.7.1.4 Other Build Alternatives Considered in the DEIS

Commuter Rail Alternative (Options 1 to 4)

The Commuter Rail Alternative (Options 1 to 4) would permanently incorporate one historic resource, the Federal Cement Tile Company Building, and would cause *de minimis* impacts on the same two recreational resources, the Erie Lackawanna Trail and Pennsy Greenway/Pennsy Path, that would be affected by the DEIS NEPA Preferred Alternative. The loss of the Federal Cement Tile Company Building would be documented, and an appropriate display or interpretive material depicting the Federal Cement Tile Company Building would be prepared. In addition, a nomination to the NRHP would be prepared for a similar representative of Hammond's industrial history.

All other Build Alternatives in the DEIS would have the same impact after mitigation as the DEIS NEPA Preferred Alternative, with the exception of the IHB Alternative, for which only *de minimis* impacts would be anticipated.

Use Existing Railroad Corridors

Many of the Build Alternatives, most notably the Commuter Rail Alternative (Options 1 to 4) and the IHB Alternative (Options 1 to 4), would occupy portions of freight railroad ROW. Although the Commuter Rail Alternative would avoid the permanent use of the OK Champion Building site, it would require the permanent use of the Federal Cement Title Company Building. Either alternative would result in permanent use of a Section 4(f) resource.

Use Existing Roadway Corridors

Using existing roadway corridors would not avoid use of either the OK Champion Building or the Federal Cement Tile Company Building. Using existing roadway corridors would also most likely not avoid *de minimis* impacts on trails, since crossings and relocations would be inevitable. Using existing roadway corridors could cause use of additional recreational and historic resources, since additional ROW along these roadway corridors and on connecting routes would be necessary. Mitigation for Section 4(f) resources would be based on the uses of these resources that would occur.

Upgrade Existing Transit Facilities

Providing upgraded service on existing bus lines, Amtrak service, or SSL service would not require the use of any Section 4(f) resources and would not require any mitigation for Section 4(f) resources.

Use Alternative Modes Such as Bus Rapid Transit or Light Rail

The use of bus rapid transit or light rail would result in the same uses of Section 4(f) resources and mitigation for Section 4(f) resources as the use of existing roadway corridors, described previously.

Place Alignment in a Tunnel South of the SSL Connection

Placing the Project in a tunnel for its entire length would avoid use of any historic or recreational Section 4(f) resources and would not require any mitigation for these resources. Placing the Project in a tunnel from north of Douglas Street to the SSL connection would avoid use of any historic Section 4(f) resources and mitigation for historic resources.

Use Existing NS ROW in North Hammond

Use of the NS corridor or acquiring ROW adjacent to the corridor in North Hammond would avoid the use of any historic Section 4(f) resources or any mitigation for these resources but would require the use of and mitigation for the recreational Section 4(f) resource affected by the FEIS Preferred Alternative.

Place Alignment in the Sheffield Avenue ROW

Placing the alignment in the Sheffield Avenue ROW would not avoid use of or mitigation for the OK Champion Building, since the location of the maintenance yard would not change, but the acquisition of additional ROW along Sheffield Avenue could require the use of and mitigation for additional historic Section 4(f) resources. Placing the alignment in the Sheffield Avenue ROW would still require the use of and mitigation for the recreational Section 4(f) resource affected by the FEIS Preferred Alternative.

Place Alignment East of Sheffield Avenue

Placing the alignment east of Sheffield Avenue would not avoid use of or mitigation for the OK Champion Building, since the location of the maintenance yard would not change, but the acquisition of additional ROW in the neighborhood east of Sheffield could require the use of and mitigation for additional historic Section 4(f) resources. Placing the alignment east of Sheffield would still require the use of and mitigation for the recreational Section 4(f) resource affected by the FEIS Preferred Alternative.

Span the OK Champion Property

Placing the Project on a structure and spanning the OK Champion property would avoid the use of and mitigation for historic Section 4(f) resources, but spanning would still require the use of and mitigation for the recreational Section 4(f) resource affected by the FEIS Preferred Alternative.

7.7.2 Relative Severity of the Remaining Harm, after Mitigation, to the Protected Activities, Attributes, or Features that Qualify Each Section 4(f) Resource for Protection

7.7.2.1 No Build Alternative

The No Build Alternative would not use any Section 4(f) resources. As a result, there would be no mitigation or remaining harm.

7.7.2.2 FEIS Preferred Alternative

After mitigation, the OK Champion Building would no longer exist as a standing monument to Hammond's industrial history. After mitigation, the Pennsy Greenway/Pennsy Path would continue to provide the public benefit it provided before the Project.

7.7.2.3 DEIS NEPA Preferred Alternative

After mitigation, the OK Champion Building would no longer exist as a standing monument to Hammond's industrial history. After mitigation, the Pennsy Greenway/Pennsy Path and the Erie Lackawanna Trail would continue to provide the public benefit they provided before the Project.

7.7.2.4 Other Build Alternatives Considered in the DEIS

Commuter Rail (Options 1 to 4)

After mitigation, the Federal Cement Tile Company Building would no longer exist as a standing monument to Hammond's industrial history. After mitigation, the Pennsy Greenway/Pennsy Path and the Erie Lackawanna Trail would continue to provide the public benefit they provided before the Project.

All other Build Alternatives in the DEIS would have the same impact after mitigation as the DEIS NEPA Preferred Alternative, with the exception of the IHB Alternative, for which only *de minimis* impacts would be anticipated.

Use Existing Railroad Corridors

The use of existing railroad corridors is already part of the Commuter Rail Alternative (Options 1 to 4) and the IHB Alternative (Options 1 to 4). The remaining harm to Section 4(f) resources would be the same as what is described for these alternatives.

Use Existing Roadway Corridors

Since using existing roadway corridors may involve the loss of historic structures, these losses could be permanent. The historic structures affected by using existing roadway corridors are not known. Since using existing roadway corridors may involve permanent incorporation of portions of parkland, these uses would most likely need to be compensated. Compensation should greatly reduce the severity of remaining harm. The inevitable *de minimis* impacts on trails would occur because relocations would not permanently affect the public uses of the trails.

Upgrade Existing Transit Facilities

Providing increased bus, Amtrak, and SSL service would not use any Section 4(f) resources. As a result, there would be no remaining harm.

Use Alternative Modes such as Bus Rapid Transit or Light Rail

Using alternative modes such as bus rapid transit or light rail would result in the same severity of remaining harm as the use of existing roadway corridors.

Place Alignment in a Tunnel South of the SSL Connection

Placing the Project in a tunnel for its entire length south of the SSL connection would most likely result in no use of any Section 4(f) resources. As a result, there would be no remaining harm. Placing the Project in a tunnel from Douglas Street to the SSL connection would result in no use of historic Section 4(f) resources. The remaining *de minimis* impacts on the Pennsy Greenway/Pennsy Path would not affect the public use of this trail. As a result, there would be no remaining harm.

Use Existing NS ROW in North Hammond

Use of the existing NS ROW or acquiring additional ROW in north Hammond would most likely avoid the use of any historic Section 4(f) resources. The mitigation associated with the remaining *de minimis* impacts on recreational Section 4(f) resources would restore all of the public uses of these resources. As a result, there would be no remaining harm to Section 4(f) resources.

Place Alignment in the Sheffield Avenue ROW

Placing the alignment in the Sheffield Avenue ROW would result in the permanent loss of the OK Champion Building as a standing monument to Hammond's industrial past and could result in the loss of additional historic resources. Mitigation for the recreational Section 4(f) resources would result in no effect on the public uses of these resources and no remaining harm.

Place Alignment East of Sheffield Avenue

Placing the alignment east of Sheffield Avenue would result in the permanent loss of the OK Champion Building as a standing monument to Hammond's industrial past and could result in the loss of additional historic resources. Mitigation for the recreational Section 4(f) resources would result in no effect on the public uses of these resources and no remaining harm.

Span the OK Champion Property

Spanning the OK Champion Building would result in no use of historic resources and no remaining harm. Mitigation for the recreational Section 4(f) resources would result in no effect on the public uses of these resources and no remaining harm.

7.7.3 Relative Significance of Each Section 4(f) Resource

Two historic Section 4(f) resources would be affected by the Project, depending on the alternative being studied: the OK Champion Building and the Federal Cement Tile Company building. Both are equally significant as monuments to Hammond's industrial past. Two recreational Section 4(f) resources would be subject to *de minimis* impacts depending on the alternative being studied: the Erie Lackawanna Trail and Pennsy Greenway/Pennsy Path. The recreational Section 4(f) resources are all equally significant.

7.7.4 Views of the Officials with Jurisdiction over Each Section 4(f) Resource

The officials with jurisdiction over the recreational Section 4(f) resources have all given their written concurrence with the findings of *de minimis* impact. The letters from these officials are provided in **Appendix C**. FTA, NICTD, and the Indiana SHPO—the officials with jurisdiction over the historic resources—have drafted an MOA for the mitigation of the adverse effect on historic properties, which is provided in **Appendix C**. The MOA was fully executed on December 11, 2017.

7.7.5 Degree to Which Each Alternative Meets the Purpose and Need for the Project

The FEIS Preferred Alternative, DEIS NEPA Preferred Alternative, Commuter Rail Alternative (Options 1 to 4), IHB Alternative (Options 1 to 4), and Hammond Alternative (Options 1 and 3) would achieve the Project's purpose to effectively address the long-term regional transit mobility and local accessibility needs while providing efficient, travel-time-competitive transit service that supports economic development goals and objectives of local, regional, and statewide plans.

However, the FEIS Preferred Alternative alignment along Sheffield Avenue best meets the Project's purpose and need and offers practical advantages over the Commuter Rail and IHB Alternatives. The FEIS Preferred Alternative would connect to the SSL before reaching the state line, thereby avoiding impacts on the approximately 3,000-foot-long CSS yard. The less-direct routing that would be required to connect the Commuter Rail Alternative with the SSL near Hegewisch Station would also involve the use of NS ROW. NICTD's conversations with NS about possibly using its ROW were not favorable. NS is not interested in sharing its ROW with the Project. NS is a private railroad company and is not required to make its ROW available to the Project. In addition, NS is not interested in selling their ROW, and eminent domain is not applicable to private railroad companies.

The FEIS Preferred Alternative would also allow development of the joint West Lake Corridor/SSL Hammond Gateway Station. This joint station would allow passengers efficient and convenient cross-platform access between the West Lake Corridor and SSL services. With the Commuter Rail and IHB Alternatives, developing a combined station west of the proposed Hammond Gateway Station site would be feasible only at the existing SSL Hegewisch Station because the location of the CSS freight yard separates the two rail lines. However, this operation would conflict with CSS's desire to minimize commuter rail traffic during off-peak hours when freight traffic is heavier.

The remaining alternatives could be designed to meet the Project's purpose and need, except for the No Build Alternative and upgrading existing transit facilities. The No Build Alternative and upgrading existing transit facilities would not meet the purpose and need.

7.7.6 After Reasonable Mitigation, the Magnitude of Any Adverse Impacts on Resources Not Protected by Section 4(f)

The FEIS Preferred Alternative alignment along Sheffield Avenue likely would have residual adverse impacts on resources not protected by Section 4(f).

The other Build Alternatives considered in the DEIS, along with the alternatives analyzed as potential avoidance alternatives, likely would have substantial impacts on freight rail companies and their operations, and impacts on roadway operations and traffic.

The No Build Alternative would not likely have adverse impacts on resources not protected by Section 4(f).

7.7.7 Substantial Differences in Cost Among Alternatives

The FEIS Preferred Alternative, DEIS NEPA Preferred Alternative, Commuter Rail Alternative (Options 1 to 4), IHB Alternative (Options 1 to 4), Hammond Alternative (Options 1 and 3), use of existing railroad corridors, use of existing roadway corridors, and use of the NS ROW in north Hammond would not have substantial differences in cost. The use of alternative modes such as bus rapid transit and light rail could cost more than the FEIS Preferred Alternative. Placing the alignment in Sheffield Avenue or east of Sheffield Avenue, placing the alignment in a tunnel south of the existing SSL connection, and spanning the OK Champion Building would cost substantially more than the FEIS Preferred Alternative. The No Build Alternative and the use of existing transit facilities would cost substantially less than the FEIS Preferred Alternative.

7.7.8 Conclusion

Table 7.7-1 compares the alternatives within the context of the seven factors discussed above in **Sections 7.7.1 to 7.7.7**. The Commuter Rail and IHB Alternatives have at least one factor in **Table 7.7-1** rated as performing poorly compared to the FEIS Preferred Alternative. As a result, these two alternatives cause more overall harm than the FEIS Preferred Alternative. Although the IHB Alternative would affect one fewer Section 4(f) resource than the FEIS Preferred Alternative, the FEIS Preferred Alternative best meets the Project's purpose and need and would have fewer impacts on non-Section 4(f) resources.

The FEIS Preferred Alternative would have the least impact on existing freight railroads based on the connection to the existing SSL, would incorporate the joint West Lake Corridor/SSL Hammond Gateway Station, and has the support of local stakeholders. As a result, the FEIS Preferred Alternative is the alternative that would cause the least overall harm in light of the preservation purpose of the Section 4(f) statute.



Table 7.7-1: Least Overall Harm Comparisons with FEIS Preferred Alternative

Factor	DEIS NEPA Preferred Alternative	Commuter Rail Alternative (Options 1 to 4)	IB Alternative (Options 1 to 4)	Hammond Alternative (Options 1 and 3)	No Build Alternative	Use Existing Railroad Corridors	Use Existing Roadway Corridors	Upgrade Existing Transit Facilities	Alternative Modes such as Bus Rapid Transit and Light Rail	Tunnel South of Existing SSL Connection	Use Existing NS ROW in North Hammond	Sheffield Avenue ROW	East of Sheffield Avenue	Span OK Champion Building
1. Ability to mitigate adverse impacts on Section 4(f) resources	Additional mitigation	Additional mitigation	Less mitigation	Additional mitigation	No mitigation	Same mitigation	Additional mitigation	No mitigation	Additional mitigation	Less mitigation	Less mitigation	Additional mitigation	Additional mitigation	Less mitigation
2. Relative severity of remaining harm	Same relative severity	Same relative severity	Less relative severity	Same relative severity	No harm	Same relative severity	Additional relative severity	Less relative severity	Additional relative severity	Less relative severity	Less relative severity	Additional relative severity	Additional relative severity	Less relative severity
3. Relative significance of each Section 4(f) resource	Same relative	Same relative	Less relative	Same relative	No Section 4(f) impacts	Same relative	Higher relative	Less relative	Higher relative	Less relative	Less relative	Higher relative	Higher relative	Less relative
4. Views of officials with jurisdiction	Less acceptable	Less acceptable	More acceptable	Less acceptable	Not applicable	Less acceptable	Less acceptable	Less acceptable	Less acceptable	More acceptable	Less acceptable	Less acceptable	Less acceptable	Less acceptable
5. Degree to which alternative meets purpose and need	Meets purpose and need	Meets purpose and need	Meets purpose and need	Meets purpose and need	Does not meet purpose and need	Meets purpose and need	Meets purpose and need	Does not meet purpose and need	Meets purpose and need	Meets purpose and need	Meets purpose and need	Meets purpose and need	Meets purpose and need	Meets purpose and need
6. Magnitude of impacts on non-Section 4(f) resources	Same	Potentially greater	Potentially greater	Same	None	Potentially greater	Potentially greater	Less impacts	Same	Same	Potentially greater	Same	Same	Same
7. Substantial differences in cost	No substantial difference	No substantial difference	No substantial difference	No substantial difference	No costs	No substantial difference	No substantial difference	Substantially less cost	No substantial difference	Substantially more cost	No substantial difference	No substantial difference	No substantial difference	Substantially more cost

Source: HDR 2017a.

Note: Shading indicates a fatal flaw with the alternative.



7.8 All Possible Planning to Minimize Harm

Section 4(f) requires a finding that the selected alternative includes all possible planning to minimize harm to Section 4(f) resources. "All possible planning" is defined in 23 CFR Part 774.17, stating that a project must include documented consideration of all reasonable measures identified for minimizing and mitigating effects on Section 4(f) resources that would be used by the project. In evaluating the reasonableness of measures to minimize harm, FTA has considered the following as defined in 23 CFR Part 774.17:

- The preservation purpose of the statute;
- The views of the official(s) with jurisdiction over the Section 4(f) resource;
- The cost of the measures as a reasonable public expenditure in light of the adverse effects of the project on the Section 4(f) resource and the benefits of the measure to the resource; and
- Impacts or benefits of the measures for communities or environmental resources outside of the Section 4(f) resource.

Through the Section 106 review process, FTA and participating consulting parties reached an agreement on appropriate mitigation measures to resolve adverse effects on historic properties. The agreed-upon measures are detailed in the MOA among FTA, NICTD, and the Indiana SHPO, represented by the INDNR Division of Historic Preservation and Archaeology (see **Appendix C**). NICTD is responsible for implementing the mitigation measures on the schedule established in the MOA.

Mitigation to resolve adverse effects on cultural resources includes the following measures as described in the MOA:

- **Archival Documentation:** A full recording of the OK Champion Building, consistent with the standards of the NPS Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) documentation, will be prepared.
- **Educational Materials:** In concert with HABS/HAER documentation, a display and/or interpretive material for public exhibition concerning the OK Champion Building will be prepared in the vicinity of the OK Champion Building. The location of the display and/or interpretive material will be determined in consultation with local officials.
- **NRHP Nomination:** To offset the unavoidable demolition of a historic property representative of Hammond's significant industrial history, i.e., the OK Champion Building, an NRHP nomination for the P.H. Mueller Sons Hardware Building will be prepared.

Because no adverse impacts on archaeological resources are anticipated from the Project, the MOA also states that no additional measures are required to mitigate impacts on NHRP-eligible or listed archaeological resources in the Project Area. The MOA states that an 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.



7.9 Consultation and Coordination

The Section 4(f) evaluation involved consultation and coordination with agencies and the public. Within the NEPA process and as described in **Chapter 9** of this FEIS, NICTD and FTA conducted outreach efforts with area residents, property owners, and key stakeholders with respect to development and selection of the FEIS Preferred Alternative and its effects on recreational areas and historic properties. This effort included coordination with the Indiana SHPO, the Illinois SHPO, and other consulting parties as part of the Section 106 process for historic properties, as well as with the City of Hammond and the Town of Munster for recreational areas.

On September 29, 2014, FTA initiated Section 106 consultation with both the Indiana and Illinois SHPOs. Coordination and consultation with the two SHPOs, consulting parties, and the public has continued throughout the NEPA process and concluded with the MOA included in **Appendix C**. The MOA was fully executed on December 11, 2017.

In addition, to meet the Section 4(f) coordination and review requirements [23 CFR § 774.5(a)], this evaluation was sent to the U.S. Department of Interior (USDOI) on December 21, 2017 for a 45-day review and comment period. The USDOI correspondence dated February 5, 2018 indicated no comments or objections to FTA's approval of the Section 4(f) evaluation. The DOI correspondence is included in **Appendix C**.