



Environmental Mitigation

NICTD has committed to specific mitigation measures that are intended to reduce the adverse effects of NICTD's West Lake Corridor Project. The information below summarizes the mitigation measures that the FTA and NICTD committed to in the 2018 Final Environmental Impact Statement / Record of Decision.

The progress and status of each environmental commitment is provided below. This information will be updated on the West Lake Corridor Project website on a quarterly basis, at a minimum.

Should you have questions about items on this list, please call 219-296-6004 or email project.email@nictdwestlake.com.

Number	Public Transportation Requiring Mitigation	Mitigation Measures	Mitigation Status
1	Existing Transit System	Minimize disruption to the existing transit service to the extent reasonably feasible.	Closed. Work affecting the existing transit services has been completed. It is anticipated that there will be no more potential disruptions.
2	Work Zone Traffic Control	Coordinate with transit authorities to develop work zone traffic control plans.	Closed. All work requiring mitigation measures has been completed.
3	Lane Closures and Detours	Provide advance warning for lane closures and detours.	Closed. All work requiring mitigation measures has been completed.
4	Construction Updates	Issue construction updates and post to Project website.	Closed. All work requiring mitigation measures has been completed.
5	Hotline	Establish 24-hour construction hotline.	Closed. QR codes are included on project signage throughout the project corridor. The QR codes lead to the project website which includes the 24-hour construction hotline (219.296.6004).
6	Public Information	Prepare materials with information about construction.	Closed. All work requiring mitigation measures has been completed.



Number	Public Transportation Requiring Mitigation	Mitigation Measures	Mitigation Status
7	Public Information	Assign staff to serve as liaisons between the public and contractors during construction.	Closed. NICTD and the Design Builder have assigned dedicated liaisons to the project.
8	Temporary Transit Stop Closures and Detours	Post information at bus stops and regional transit centers indicating temporary stop closures or detour details.	Closed. There are no more potential temporary transit stop closures or detours anticipated.
9	Metra Notifications	Publish information in advance on Metra's website and in its on-board brochure.	Closed. It is not anticipated that this construction will cause any service interruptions.

Number	Freight Rail Requiring Mitigation	Mitigation Measures	Mitigation Status
10	Third-party Agreements	Third-party agreements will be executed for use of property not owned by CSX, NS, or IHB.	Closed. All work requiring mitigation measures has been completed.
11	Construction Staging Plans	Develop construction staging plans that will be submitted for approval by the freight railroad entities.	Closed. All work requiring mitigation measures has been completed.
12	Construction Sequencing	Work with affected freight rail entities to sequence construction to reduce effects on freight rail.	Closed. All work requiring mitigation measures has been completed.
13	Railroad Flagging	Use flaggers to allow freight rail operations to continue during construction.	Closed. All work requiring mitigation measures has been completed.



Number	Bicycle and Pedestrian Requiring Mitigation	Mitigation Measures	Mitigation Status
14	Bicycle and Pedestrian Protection	Fencing will be provided to prohibit pedestrians and bicyclists from crossing the track where east-to-west facilities do not exist or where NICTD deems fencing important for safety.	Closed. All required project fencing has been installed per plans.
15	Bicycle and Pedestrian Access	All railroad-highway grade crossings will include east-to-west pedestrian access to maintain the sidewalk network's existing continuity.	Closed. This work has been completed.
16	Signage	Signs will be provided at Russell Street and the Project directing bicyclists and pedestrians to the north or south.	Closed. This work has been completed.
17	Crossings and Other Restrictions	A plan to manage the closure of pedestrian crossings and other restrictions on nonmotorized transportation facilities will be developed for construction.	Closed. All work requiring mitigation measures has been completed.
18	Temporary Closures	Alternative crossings will be provided for temporary crosswalk closures.	Closed. All work requiring mitigation measures has been completed..
19	Accessibility	Sidewalks and crosswalks will be required to meet minimum standards for accessibility and to be free of slipping and tripping hazards.	Closed. Sidewalks and crosswalks have been installed and meet the minimum standards required.
20	Temporary Protection	Special facilities such as temporary handrails, fences, barriers, ramps, and walkways will be implemented to maintain bicyclist and pedestrian safety as needed.	Closed. No temporary or special facilities are currently anticipated. If special circumstances arise, the Contractor will implement temporary or special facilities.
21	Debris Management	A plan for appropriate access provisions in the work zone, traffic control plans, and best management practices (BMPs) to manage debris will be developed for construction.	Closed. All work requiring mitigation measures has been completed.



Number	Traffic Requiring Mitigation	Mitigation Measures	Mitigation Status
22	Agency Coordination	NICTD will coordinate with agencies having jurisdiction over and/or maintenance responsibility for affected roadways as well as emergency services and school districts regarding railroad-highway grade crossings, road closures, and changes to the roadway network connectivity.	Closed. All work requiring mitigation measures has been completed.
23	Existing Traffic Signals	Existing traffic signal at Sheffield Avenue and Main Street in Munster and Dyer will be upgraded to accommodate the parking lot driveway as a fourth leg to the intersection.	Closed. The traffic signal has been installed.
24	173 rd Street & Harrison Avenue	Intersection of 173 rd Street and Harrison Avenue near South Hammond Station will be restriped to provide a shared left-turn/through lane and a right-turn lane to maintain acceptable LOS.	Closed. Re-striping for the designated configuration has been completed per plans.
25	Traffic Operations at Hohman Ave and Chicago Street	Traffic operations of the roundabout at Hohman Avenue and Chicago Street being built by the City of Hammond near Hammond Gateway Station will be monitored by the City of Hammond.	Closed. The roundabout is complete. The City of Hammond will monitor traffic operations.
26	Russell Street	Signalized intersections within 200 feet of the railroad-highway grade crossings will be upgraded to include traffic signal interconnection with the rail warning system. Russell Street in Hammond will be converted to a two-way street from Hohman Avenue to Lyman Avenue and from the Project track to Oakley Avenue. Signs will direct pedestrians and bicyclists to safe crossings. The traffic signal, signage, and striping at Hohman Avenue and Russell Street will be modified accordingly.	Closed. Ridge Road traffic signal has been tied-into the rail warning system. Russell Street has been converted to two-way traffic. There is no signal at Hohman Avenue and Russell Street but signage has been installed to indicate the new two-way configuration east of Hohman along Russell St.
27	Work Zone Traffic	Work zone traffic-control plans will be coordinated with agencies having jurisdiction over and/or maintenance	Closed. All work requiring mitigation measures has been completed.



Number	Traffic Requiring Mitigation	Mitigation Measures	Mitigation Status
		responsibility for affected roadways as well as emergency services and will identify requirements for maintaining access to businesses and medical and emergency facilities.	
28	Lane Closures	Lane closures required for construction will be limited to off-peak hours of traffic operation to the extent feasible.	Closed. All work requiring mitigation measures has been completed.
29	Traffic Detours	Traffic detours will be restricted to maximum durations through the contract and work zone traffic-control plans.	Closed. All work requiring mitigation measures has been completed.
30	Congestion and Access Impacts	NICTD will 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).	Closed. All noted intersection improvements have been accommodated with the exception of a signal modification at Hohman and Russel as there is no signal that exists there. This signal will not be added as part of this project. Signage and pavement markings were modified at that intersection for the revised street configuration.
31	Roadway Construction and Detours	NICTD will coordinate with the jurisdictional agency of the roadway regarding the construction and detour plan.	Closed. All work requiring mitigation measures has been completed.

Number	Parking Requiring Mitigation	Mitigation Measures	Mitigation Status
32	Parking Overspill	NICTD will work with municipalities to address the potential for parking to spill over onto nearby streets from new stations in Dyer, Munster and Hammond. Mitigation measures by the municipalities will include	Closed. NICTD has designed parking lots to allow for future expansion. The municipalities will perform mitigation measures as necessary to minimize avoidable overspill.



Number	Parking Requiring Mitigation	Mitigation Measures	Mitigation Status
		the use of signs and enforcement of parking restrictions. All NICTD parking lots can be expanded should demand exceed capacity.	
33	Parking Restrictions During Construction	Work zone traffic-control plans will be coordinated with the agency having jurisdiction over the road, as appropriate. Advance warning for parking restrictions will be provided in accordance with the work zone traffic-control plans.	Closed. All work requiring mitigation measures has been completed.
34	Station Parking Lots	NICTD will collaborate with community stakeholders, local elected officials, and the state and county transportation departments on proposed station parking lots.	Closed. NICTD has provided parking lot design plans to the local municipalities for review and approval.

Number	Land Use and Zoning Requiring Mitigation	Mitigation Measures	Mitigation Status
35	Land Use and Zoning	Where the alternative would be incompatible with existing zoning designations, NICTD will 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.	Closed. NICTD designed for the specific number of parking spaces pursuant to its Full Funding Grant Agreement (FFGA) with the FTA. Designs at all parking lots and grade crossings comply with local ordinances to the extent feasible, considering site constraints and parking requirements. Parking islands requested by Munster have been incorporated where possible; however, a number of these islands were removed to accommodate the required number of parking spaces per the FFGA.
36	Maintenance and Protection of Traffic Plan	NICTD will develop a Maintenance and Protection of Traffic Plan to address disruptions to travel.	Closed. All work requiring mitigation measures has been completed.



Number	Land Use and Zoning Requiring Mitigation	Mitigation Measures	Mitigation Status
37	Visual Changes, Noise & Vibration Levels, Dust, and Fumes	BMPs for minimizing visual changes, noise and vibration levels, dust, and fumes due to traffic detours, staging areas, and maintaining safety of construction sites will be implemented.	Closed. All work requiring mitigation measures has been completed.

Number	Land Acquisition and Displacement Requiring Mitigation	Mitigation Measures	Mitigation Status
38	Land Acquisition and Displacement	Acquisition and displacements will be done in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC § 4601).	Closed. All property owners have been contacted and NICTD completed the purchase of properties and is finalizing easement agreements. All actions are conducted according to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
39	Advisory Assistance	Relocation advisory assistance will be provided to eligible persons.	Closed. Relocation advisory assistance has been provided according to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
40	Notice	Ample notice will be given to those being relocated. Minimum 90 days written notice to vacate prior to requiring possession.	Closed. All property owners have been contacted and NICTD completed the purchase of properties and is finalizing easement agreements. All actions are conducted according to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.



Number	Land Acquisition and Displacement Requiring Mitigation	Mitigation Measures	Mitigation Status
41	Reimbursement	Reimbursement for moving and reestablishment expenses will be provided. NICTD retains this obligation.	Closed. Reimbursement was being provided to eligible parties according to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
42	Relocation Planning & Services	Relocation planning and services will be provided to businesses. NICTD retains this obligation.	Closed. All businesses to be relocated have been contacted and relocation services have been provided according to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
		NICTD will continue proactive communication, coordination, and engagement with local community organizations to work with displaced business owners to:	
43	Land Acquisition and Displacement	Identify preferred relocation options and prepare for a smooth transition to a new location for both the business and its employees; and	Closed. All actions are conducted according to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
44	Public Information	Provide information to the communities where businesses will be displaced about the businesses' new locations, with transit options to access the new business location and/or other options to meet their needs.	Closed. All actions are conducted according to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
45	Restoration of Properties Temporarily Affected by Construction	NICTD will restore properties affected through a temporary easement to an acceptable pre-construction condition following construction activities, in accordance with the individual easement agreements.	Closed. All actions are conducted according to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. Properties will be returned to acceptable pre-construction condition in accordance with this policy.
46	Displacement of Businesses and Residents	Displaced businesses and residents will be relocated in accordance with the Uniform Act. NICTD will continue to coordinate with affected residents, businesses, and community facilities to identify	Closed. All offer packages were presented with all required state and federal documentation. A mutually agreeable vacating time was identified through the process. NICTD is working diligently to resolve business



Number	Land Acquisition and Displacement Requiring Mitigation	Mitigation Measures	Mitigation Status
		strategies to minimize the effects on the employees and customers of the displaced businesses.	relocations and have provided assistance to businesses to complete relocations. All relocation offers have been accepted.

Number	Socioeconomics and Economic Development Requiring Mitigation	Mitigation Measures	Mitigation Status
47	Socioeconomics and Economic Development	Mitigation will 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.	Closed. The Regional Development Authority (RDA), in partnership with NICTD, has worked with municipalities to establish Transit Development Districts (TDD) in each community. These have been the subject of public meetings as well. See https://www.nwitdd.com .
48	Coordination with Individual Businesses	NICTD will coordinate with individual businesses to ensure that critical business activities are not disrupted and that reasonable access during regular operating hours is maintained.	Closed. The Maintenance of Traffic and Transportation Management Plans identify individual business that will have potential impacts and provides the types of notifications that will be distributed to those businesses. This includes but is not limited to verbal and written communications.
49	Notification of Property Owners, Businesses and Residences	NICTD will notify property owners, businesses, and residences of major construction activities on a real-time basis.	Closed. The Maintenance of Traffic and Transportation Management Plans identify individual business, property owners and residents that will have potential impacts and provides the types of notifications that will be distributed. This includes but is not limited to verbal and written communications.



Number	Socioeconomics and Economic Development Requiring Mitigation	Mitigation Measures	Mitigation Status
50	Coordination with Utility Companies	NICTD will coordinate with the affected utility companies to minimize disruption of service.	Coordination meetings are conducted as necessary with the utility companies to schedule and minimize disruptions of service.

Number	Neighborhoods and Community Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
51	Value of Community Resources	NICTD will 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.	Closed. Coordination was completed through municipal meetings and other communications. Meetings and workshops with the Town of Munster have been held to finalize the new station improvements proposed by Munster. NICTD attended a community meeting in South Hammond on 10/13/22 to provide information about the project and answer questions.
52	Access to Neighborhoods, Businesses, Medical Facilities, and Emergency Facilities	Work zone traffic-control plans will be coordinated with agencies having jurisdiction over and/or maintenance responsibility for affected roadways. The plans will identify requirements for maintaining access to neighborhoods, businesses, medical facilities, and emergency facilities.	Closed. All work requiring mitigation measures has been completed.
53	Visual Changes, Noise & Vibration Levels, Dust, and Fumes	BMPs for minimizing visual changes, noise and vibration levels, dust, and fumes and for maintaining safety of construction sites will be implemented including those from United States Environmental Protection Agency (USEPA).	Closed. BMP's have been addressed in the various Appendixes of the Comprehensive Environmental Protection Plan. These include the Contaminated Media Management Plan, the Hazardous Waste Operations, Safety and Health Plan, the Dust Control and Odor Control Plan, the Off-road Diesel Equipment



Number	Neighborhoods and Community Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
			Emission Control Plan and the Construction Noise and Vibration Management Plan.

Number	Cultural Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
54	Memorandum of Understanding	Implement the December 12, 2017 Section 106 MOA. Mitigation measures will include:	Closed. NICTD completed documentation of the OK Champion Building prior to demolition of the building. NICTD's consultant will design an exhibit focused on the history of the O.K. Champion Building and highlighting the industrial development of Hammond as outlined in the 12/17 Memorandum of Agreement. NICTD plans to hire a firm to develop the content of the exhibit in 2023. The exhibit would be installed within one year of completing construction. In lieu of the PH Mueller and Sons nomination to the National Register of Historic Places, NICTD is preparing a historical exhibit about Hammond that will be displayed at the Hammond Gateway Station. Archaeology finds during construction are included in the Design-Builder's Environmental Management Plan and



Number	Cultural Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
			will be followed if any discoveries are made.
55	OK Champion Building Demolition	Prior to any alterations to or demolition of the OK Champion Building, Historic American Building Survey documentation of the existing building will be completed by a Secretary of the Interior–qualified professional in history or architectural history (36 CFR Part 61).	[Reference Item #54 Mitigation Status.]
56	OK Champion Building History Preservation	A public exhibit discussing the history and context of the OK Champion Building, specifically highlighting the industrial development of Hammond, will 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 will 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. FTA, NICTD, and the Indiana SHPO retains this obligation.	[Reference Item #54 Mitigation Status.]
57	P.H. Mueller Sons Hardware Building Nomination	A National Register of Historic Places (NRHP) nomination for the P.H. Mueller Sons Hardware Building at 416–418 Sibley Street in Hammond will be completed. FTA, NICTD, and the Indiana SHPO retains this obligation.	[Reference Item #54 Mitigation Status.]
		The State Archaeologist at the Indiana State Historic 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 Memorandum of Agreement (MOA) between FTA, NICTD, and Indiana SHPO, if any prehistoric or historic archaeological artifacts or human remains are discovered during construction:	



Number	Cultural Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
58	Prehistoric or Historic Archaeological Artifacts or Human Remains	All work would cease immediately.	Closed. All work requiring mitigation measures has been completed.
59	Prehistoric or Historic Archaeological Artifacts or Human Remains	The SHPO and the County Coroner would be contacted.	[Reference Item #54 Mitigation Status.]
60	Human Burial Remains	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.	Closed. All work requiring mitigation measures has been completed.

Number	Visual Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
61	Operational Effects on the Visual Environment	Operational effects on the visual environment will be minimized or mitigated through high-quality design and construction.	Closed. Landscape design elements have been used throughout the project to minimize the visual impact of the project. These elements are shown in the civil design plans.
62	Visual Aesthetics	NICTD will 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 will be consistent with applicable local policies and will be compatible with the character of the affected community.	Closed. Landscape design elements have been used throughout the project to adhere to the local landscape ordinances, with exceptions taken within NICTD owned parking lots for the purpose of meeting FFGA required parking space #s. These elements are shown in the civil design plans.



Number	Visual Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
63	Visual Effects	NICTD will coordinate with affected viewers and will consider strategies to avoid or minimize and mitigate visual effects.	Closed. The Design Builder has presented plans to the local Authorities Having Jurisdiction (AHJs) for feedback on site and landscaping designs that would affect the neighbors of projects and have incorporated the feedback as feasible into the design packages.
64	Short-term Construction Effects	Short-term construction effects will be minimized or mitigated by carefully managing 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.	Closed. All work requiring mitigation measures has been completed.

Number	Safety and Security Requiring Mitigation	Mitigation Measures	Mitigation Status
65	Safety, Security and Emergency Preparedness	A NICTD will 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.	Closed. NICTD has developed a Safety and Emergency Preparedness Plan and Safety and Security Management Plan.
66	Safety and Security During Project Construction and Operations	NICTD police and local law enforcement will maintain safety and security during Project construction and operations.	Closed. All work requiring mitigation measures has been completed.
67	Potential Risks in Station Areas	To reduce potential risks in station areas, NICTD will include security cameras and will work closely with municipal police services to develop and	Closed. Security cameras have been installed in all station parking lot plans to reduce potential risks at stations.



Number	Safety and Security Requiring Mitigation	Mitigation Measures	Mitigation Status
		implement measures to deter loitering and criminal activity.	
68	Pedestrian Safety in Station Areas	Pedestrian safety in station areas will be enhanced through improved intersections and crosswalks in key locations.	Closed. Pedestrian crossings have been installed adjacent to and within the parking lots to provide the enhanced areas for pedestrian travel.
69	Pedestrian Safety at Munster/Dyer Main Street Station	Pedestrian safety at Munster/Dyer Main Street Station will 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 will also be constructed over the station driveway to allow platform access from the south.	Closed. Both a pedestrian underpass and a pedestrian bridge over Main Street from the SE parking lot have been installed.
70	Pedestrian Safety at the Hammond Gateway Station	Pedestrian safety at the Hammond Gateway Station will be accommodated by a paved plaza area under the elevated Project track to access the SSL platform from the parking lot to the south.	Closed. A paved pedestrian crossing has been constructed at the Hammond Gateway Station parking lot plans for providing access to the SSL. The pedestrian plaza is currently under construction.
71	Road Closures, Lane Closures, Bridge Construction, Excavations, Access Control, Worker Safety, Public Safety and other Relevant Safety Topics	NICTD will 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.	Closed. The Project's Safety and Health Plan addresses the topics of road closures, lane closures, bridge construction, excavations, access control, worker safety, public safety, and other relevant safety topics.
72	Security of Construction Site and Staging Areas	NICTD will provide construction barriers, signs, and fences to secure construction sites and staging areas and will evaluate the need for additional security measures such as security personnel.	Construction barriers, signs and fences have been erected. Areas are being constantly evaluated for any additional security measures necessary.



Number	Safety and Security Requiring Mitigation	Mitigation Measures	Mitigation Status
73	Temporary Road Closures	If temporary road closures are necessary, advance notice will be provided to neighbors and local businesses, and alternative routes and detours will be clearly identified. To minimize inconvenience to the local population, the duration of closures will be limited to the extent feasible.	Closed. All work requiring mitigation measures has been completed.
74	Freight Railroad Access, Safety and Operations	NICTD will 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.	Closed. All work requiring mitigation measures has been completed.

Number	Environmental Justice Requiring Mitigation	Mitigation Measures	Mitigation Status
75	Displaced Owners	NICTD will 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 will be displaced about the businesses' new locations, with transit options to access the new business location and/or other options to meet their needs.	Closed. All offer packages were presented with all required state and federal documentation. A mutually agreeable vacating time was identified through the process. NICTD is working diligently to resolve business relocations and have provided assistance to businesses to complete relocations. All relocation offers have been accepted.
76	Access to Businesses, Noise & Dust Control, Communication	NICTD will: (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	Closed. No further impacts will affect businesses.



Number	Environmental Justice Requiring Mitigation	Mitigation Measures	Mitigation Status
		during construction to understand and address their needs and concerns.	

Number	Noise Requiring Mitigation	Mitigation Measures	Mitigation Status
		Receiver-based treatments will be applied as follows:	
77	2 3 Single-Family Homes in Dyer / Munster	For 2 3 single-family homes in Dyer, between mileposts (MP) 61.5 and 61.6	Closed. All work requiring mitigation measures has been completed.
		400 Knightbridge Place	
		408 Knightbridge Place	
		417 Knightbridge Place	
78	5 Single-Family Homes in Hammond	For 5 single-family homes in Hammond, between MP 66.9 and 67.2	Closed. All work requiring mitigation measures has been completed.
		403 Detroit Street	
		403 Lewis Street	
		404 Lewis Street	
		404 Waltham Street	
		406 Highland Street	
		Barriers ranging in height from 4 to 5 feet above top-of-rail will be constructed as follows:	



Number	Noise Requiring Mitigation	Mitigation Measures	Mitigation Status
		In Munster:	
79	Noise between MP 63.4 and 63.6	Between MP 63.4 and 63.6, a barrier approximately 1,210 feet long on the eastern side of the Project alignment	Closed. Permanent noise barriers were incorporated into the civil design plans and have been constructed for this area.
80	Noise between MP 63.7 and 63.9	Between MP 63.7 and 63.9, a barrier approximately 1,330 feet long on the western side of the Project alignment.	Closed. Permanent noise barriers were incorporated into the civil design plans and have been constructed for this area.
		In Hammond:	
81	Noise between MP 65.3 and 65.5	Between MP 65.3 and 65.5, a barrier approximately 580 feet long on the western side of the Project alignment.	Closed. Permanent noise barriers were incorporated into the civil design plans and have been constructed for this area.
82	Noise between MP 66.3 and 66.4	Between MP 66.3 and 66.4, a barrier approximately 700 feet long on the eastern side of the Project alignment.	Closed. Permanent noise barriers were incorporated into the civil design plans and have been constructed for this area.
83	Noise During Construction	NICTD will include noise performance specifications in the construction contract documents and will develop a construction noise management plan.	Closed. A Noise and Vibration Management Plan has been developed and included as Appendix I of the Comprehensive Environmental Protection Plan. The Contractor will minimize noise impacts when possible and has engaged a consultant to monitor construction noise.
84	Noise and Vibration Control	Appropriate noise- and vibration-control measures and BMPs will be implemented by NICTD to minimize any potential temporary impacts during construction of the Project.	Closed. No more impacts will occur.
85	Safety, Noise and Vibration	For safety, noise, and vibration concerns that would disrupt land use patterns, mitigation measures will include noise barriers or receiver-based treatments to specific buildings, ballast mats, sleeper pads or other track support system modifications as	Closed. Noise and vibration mitigation measures were addressed in the CEPP, Appendix I (Construction Noise and Vibration Management Plan).



Number	Noise Requiring Mitigation	Mitigation Measures	Mitigation Status
		described in the evaluations for those resources in Sections 4.8, 5.2, and 5.3 of the FEIS.	
86	Noise and Vibration	Noise and vibration mitigation measures will include noise barriers or receiver-based treatments to specific buildings, ballast mats, sleeper pads or other track support system modifications.	Closed. Noise and vibration mitigation measures were addressed in the CEPP, Appendix I (Construction Noise and Vibration Management Plan). Mitigation measures have been incorporated as appropriate.

Number	Vibration Requiring Mitigation	Mitigation Measures	Mitigation Status
87	Vibration between MP 63.7 and 63.9	Between MP 63.7 and 63.9 in Munster, ballast mats or other track support system modifications will be implemented. This treatment will extend the length of one full trainset on either side of the affected receptor, which will result in approximately 2,360 feet of treatment.	Closed. Ballast mats were included in the track design plans and have been installed.
88	Vibration between MP 66.3 and 66.4	Between MP 66.3 and 66.4 in Hammond, ballast mats or other track support system modifications will be implemented. This treatment will extend the length of one full trainset on either side of the affected receptor, which will result in approximately 1,360 feet of treatment.	Closed. Ballast mats were included in the track design plans and have been installed.
89	Vibration Limits during Construction	NICTD will include vibration performance specifications and will specify vibration limits for construction activities in the construction contract documents.	Closed. A Noise and Vibration Management Plan has been developed and included as Appendix I of the Comprehensive Environmental Protection Plan.
90	Vibration during Construction	NICTD will develop a construction vibration management plan.	Closed. A Noise and Vibration Management Plan has been developed and included as Appendix I of the Comprehensive Environmental Protection Plan.



Number	Air Quality Requiring Mitigation	Mitigation Measures	Mitigation Status
91	Dust, Work Zone Traffic and Diesel Emissions	NICTD will be required to prepare and implement a dust-control plan, a work zone traffic-management plan, and a strategy to control emissions from diesel-powered equipment.	Closed. A Dust Control and Odor Control Plan (Appendix G of the CEPP), Transportation Management Plans and Off-road Diesel Equipment Emission Control Plan (Appendix H of the CEPP) have been implemented for this project.
92	Construction Equipment Emissions	Limit idling of construction equipment during periods of inactivity.	Closed. All work requiring mitigation measures has been completed.
93	Construction Equipment	Maintain construction equipment in proper working condition.	Closed. All work requiring mitigation measures has been completed.
94	Fugitive Dust	Use water or other dust suppressants to ensure that fugitive dust does not leave the construction site.	Closed. All work requiring mitigation measures has been completed.
95	Dust from Construction Vehicles	Limit the speed of construction vehicles on unpaved areas.	Closed. All work requiring mitigation measures has been completed.
96	Spills and Dirt Tracking onto Roadways	Promptly clean up spills and dirt tracked onto paved roads.	Closed. All work requiring mitigation measures has been completed.
97	Nuisance to Residents	NICTD will require the construction contractor to monitor construction activities near residential areas to help ensure that construction does not become a nuisance to nearby residents.	Closed. All work requiring mitigation measures has been completed.



Number	Energy Requiring Mitigation	Mitigation Measures	Mitigation Status
98	Fuel Usage from Trucks and Construction Equipment	NICTD will require the construction contractor to limit idling of machinery and optimize construction methods and staging areas in order to reduce fuel use in trucks and construction equipment.	Closed. All work requiring mitigation measures has been completed.

Number	Soils, Geologic Resources, and Farmlands Requiring Mitigation	Mitigation Measures	Mitigation Status
99	Soil Erosion	Soil erosion will be minimized through the implementation of BMPs and erosion and sediment control plans.	Closed. All work requiring mitigation measures has been completed.
		The Project will comply with applicable permit conditions:	
100	INDNR Recommendations	NICTD will follow INDNR recommendations where appropriate, including revegetation, clearing of trees and brush, stabilizing soils with temporary vegetation, debris and materials management, use of erosion controls, and application of seed mixes on disturbed areas at the time of restoration.	Closed. INDNR's recommendations have been incorporated into the Project's plans and specifications.
101	Suitability of Soils from On-site Materials	On-site soil and geotechnical investigations will be completed by NICTD to identify soils within the Project footprint showing limitations for suitability. Soils with limited suitability will require additional engineering and special design in order to minimize poor performance and high maintenance.	Closed. Geotechnical report has identified locations of poor soil performance and additional stability recommendations have been implemented as necessary in these locations.



Number	Water Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
102	Fill within the Jurisdictional Wetlands	Only fill of jurisdictional wetlands within the construction limits requires mitigation. A total of 3.43 acres of wetlands would be affected by the Project in the USACE NEPA concurrence letter dated January 9, 2018 (Appendix D of the FEIS), USACE stated that jurisdictional palustrine emergent wetlands would be required to be mitigated at a minimum 1.5:1 ratio and jurisdictional palustrine forested wetlands would need to be mitigated at a 3:1 ratio. Based on these mitigation ratios, a minimum of 6.56 acres of wetland mitigation will be provided to ensure no net loss of wetlands.	Closed. NICTD provided the required compensatory mitigation by purchasing emergent wetland and forested wetland credits as part of the Indiana Department of Natural Resources in-lieu fee program. The wetland credits were used for compensatory mitigation in the Calumet-Dunes Service area.
103	Grand Calumet & Little Calumet River Channel Impacts	Track that spans the Grand Calumet River and Little Calumet River will have no piers or abutments in the river channel.	Closed. Bridge construction has been completed for BR107 and does not include any piers or abutments in the river channel.
104	Little Calumet River Channel Impacts	The relocated Monon Trail bridge will use new support structures that will fully span the river. No abutments, piers, or sheet pile walls will be constructed in the river channel.	Closed. Bridge construction has been completed for BR107A and does not include any piers, abutments or sheet pile walls in the river channel.
105	Well near Munster/Dyer Main Street Station	The well near Munster/Dyer Main Street Station will be acquired by NICTD and will be properly capped and abandoned.	Closed. Addressed in the CEPP, Appendix A: Environmental Compliance and Mitigation Plan. Per NICTD, the well near the in Munster/Dyer Main Street Station has been acquired and mitigated.
106	Sediment, Heavy Metals and Other Pollutants	In addition to detention facilities, other practices such as vegetated basins/buffers, infiltration basins, and bioswales will be evaluated to minimize transport of sediment, heavy metals, and other pollutants.	Closed. Addressed in the SWPPP/Erosion and Sediment Control Plan. The Contractor will monitor for compliance.



Number	Water Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
107	Watershed Release Rate	Necessary regional stormwater detention storage per watershed will be developed to ensure that the overall watershed release rate to the designated waterway crossings is not increased.	Closed. Addressed in the SWPPP/Erosion and Sediment Control Plan. The Contractor will monitor for compliance.
108	Displacement of Soil and Other Sediments via Stormwater Runoff	Erosion- and sediment-control plans will be included with the contract drawings to prevent or reduce the displacement of soil and other sediments via stormwater runoff within the land development area.	Closed. Addressed in the SWPPP/Erosion and Sediment Control Plan. The Contractor will monitor for compliance.

Number	Biological Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
109	State-listed Plant Species	State-listed Plant Species: INDNR did not suggest any long-term mitigation for state-listed plant species. However, measures were taken to avoid potential impacts to Bebb's sedge during Project design. Bebb's sedge can grow only in wetland habitats, and impacts to wetlands were avoided where possible.	Closed. Addressed in the IDEM Section 401 Water Quality Certification (Wetlands) permit and the City of Hammond Floodplain Development Permits. Design has minimized impacts to wetlands where possible and Contractor will comply with permits and restrictions.
110	Woodland Habitat	Woodland Habitat: To mitigate the loss of trees as a result of Project construction, NICTD will continue to coordinate with INDNR regarding the appropriate mitigation for tree replacement. NICTD will comply with INDNR's tree-replacement guidelines.	Closed. Addressed in the CEPP, Appendix A: Environmental Compliance and Mitigation Plan and the Landscaping Plans. Tree replacement has been designed into the project to comply with INDNR's guidelines.



Number	Hazardous Materials Requiring Mitigation	Mitigation Measures	Mitigation Status
111	Use, Storage and Maintenance of Equipment and Disposal of Regulated Materials	NICTD's safety plan will establish procedures and staff training for proper use, storage, and maintenance of equipment and disposal of regulated materials.	Closed. Addressed in the CEPP, Appendix A: Environmental Compliance and Mitigation Plan; Appendix B: Environmental Protection Training Plan; Appendix C: Contaminated Media Management Plan; and Appendix D: Hazardous Waste Operations, Safety and Health Plan. Contractor will comply with all restrictions.
112	Disposal of Regulated Materials Generated	All regulated materials generated as part of maintenance will be disposed of in accordance with state and local guidelines.	Closed. All work requiring mitigation measures has been completed.
113	Contamination Identified in Phase II ESA at AOC's 2, 3 and 4.	To address contamination identified in the Phase II Environmental Site Assessment (ESA) at Areas of Concern (AOCs) 2, 3, and 4, a Contaminated Media Management Plan and Health and Safety Plan will be prepared by NICTD and will include special provisions beyond normal construction recommendations. These provisions may include detailed handling and disposal requirements and additional safety measures to limit worker exposure to contaminated media.	Closed. A Contaminated Media Management Plan (Appendix C of the CEPP) and a Health and Safety plan have been developed. Additionally, Environmental Work Plans for the AOC's and a Soil Management Plans have also been created to address the requirements. Regulated materials generated are being disposed of in accordance with state and local guidelines.
114	AOC 2 Additional Coordination	NICTD will provide additional coordination of construction activity and mitigation measures at AOC 2 (Northern Indiana Public Service Company (NIPSCO) Corporation manufactured gas plant site) since the property is undergoing active remediation with engineering controls in place.	Closed. NICTD provided utility information to designers, and plans were reviewed by NIPSCO. Coordination with NIPSCO continued through construction and is now complete.
115	Protective Cap within the Grand Calumet River	Disturbance of the protective cap installed by USEPA, located within the Grand Calumet River and along the northern side of AOC 2, will be	Closed. Construction along the northern side of AOC 2 has been completed. There were no disturbances to the protective cap installed by USEPA.



Number	Hazardous Materials Requiring Mitigation	Mitigation Measures	Mitigation Status
	along the northern side of AOC 2.	avoided during construction and operation by NICTD.	
116	Subsurface Investigation of AOC 1 and 5	Prior to property acquisition and construction, NICTD will provide subsurface investigation of AOC 1 and 5 after site access is granted. These sites will be evaluated relative to the original work plan submitted for the Phase II ESA for the Project. Any remediation and construction safety measures needed following the investigation will be incorporated with the construction plans.	Closed. NICTD completed subsurface investigations at AOC 1 and 5. Design-Builder has completed the work and performed all necessary mitigation and remedial work.
117	Inactive Water Wells, Underground Storage Tanks or Hazardous Materials/Wastes	If inactive water wells, underground storage tanks, or hazardous materials/wastes are encountered during Project planning or construction, Project construction will cease and they will be properly closed and removed in accordance with state and local requirements.	Closed. No more construction activities will result in the possibility of the construction team encountering any inactive water wells.

Number	Utilities Requiring Mitigation	Mitigation Measures	Mitigation Status
118	Utility Facilities Conflicting with the Project	NICTD will coordinate with public and private utility owners to identify utility facilities that would conflict with the Project and to develop conceptual plans and cost estimates for the expected relocation, replacement, or protection of such utilities.	Closed. All construction activities with the possibility of conflicting with local utilities are complete.
119	Overhead Power Line Conflicts	Where the Project would conflict with overhead power lines, the lines will be raised by the utility owner to ensure vertical clearance from the track.	Closed. All construction activities with the possibility of conflicting with overhead power lines are complete.



Number	Utilities Requiring Mitigation	Mitigation Measures	Mitigation Status
120	Additional Conflicts Coordination	Ongoing coordination will continue as the engineering phase progresses to identify additional conflicts and minimize service disruptions, in coordination with utility owners and appropriate local agencies.	Closed. For information only. No response or action is required.
121	Existing Utility Surveys	Existing utilities will be surveyed during the engineering phase and efforts will be made to avoid or limit conflicts with existing utilities when practical. Where the Project may conflict with existing utilities, the utilities will be protected in place, relocated, replaced, or abandoned (if possible) in consultation with the utility owner.	Closed. Surveying took place during initial phases of design to positively locate the existing site utilities and determine the conflicts that exist for proposed infrastructure. Relocation plans have been developed for all known conflicts or have been presented to the 3rd party owner/representative for development of their own relocation plans.
122	Utility Relocation Relocations	Where relocation would be required, efforts will be made to consolidate existing utilities where practical as permitted by the utility owners.	Closed. For information only. No response or action is required.
123	Utility Service Outages	To the extent possible, NICTD will minimize utility service outages and schedule them with the utility owner and customers such that they will present the least inconvenience. Special measures may be incorporated to ensure continuous service to life safety functions such as hospitals, fire protection, emergency response, and other facilities providing critical support such as private medical offices/care facilities	Closed. All work requiring mitigation measures has been completed.
124	Utility Service Locating	Prior to any construction, NICTD will use the Indiana utility-locating service (811now.com) to identify and mark underground utilities within the Project footprint.	Closed. All construction activities requiring the locating of existing utilities are complete.
125	Utility Company and Customer Coordination	NICTD will continue to coordinate with utility companies and customers throughout the Project to minimize temporary effects during construction.	Coordination meetings are conducted as necessary with the utility companies to schedule and minimize disruptions of service.



Number	Utilities Requiring Mitigation	Mitigation Measures	Mitigation Status
126	Planned Service Interruptions	Planned service interruptions will be limited in duration and geographic area. NICTD will provide those affected with advance notification.	Closed. All work requiring mitigation measures has been completed.
127	Project Construction, Education and Outreach	NICTD will develop a project construction, education, and outreach plan that will identify how NICTD will educate the public and stakeholders about ongoing and upcoming construction and construction impacts.	Closed. All work requiring mitigation measures has been completed.

Number	Secondary and Cumulative Impacts Requiring Mitigation	Mitigation Measures	Mitigation Status
128	Cumulative Effects of the Project and the Chicago Street Improvement Project	NICTD and the City of Hammond will coordinate to assess and address the potential cumulative effects of the Project and the Chicago Street Improvement Project on the north Hammond residential area.	Closed. Meetings between NICTD and City of Hammond were conducted to coordinate between the Project and the Chicago Street Improvement Project. Work has been completed for the Chicago Street Improvement Project.
129	New or Ongoing Projects Coordination	NICTD will make every reasonable effort to coordinate with other project sponsors on new or ongoing projects in or near the Project area to avoid or minimize and mitigate the Project's role in potentially causing cumulative effects in affected communities.	Closed. All work requiring mitigation measures has been completed.
130	Secondary and Cumulative Impacts	To ensure that noise levels at sensitive receptors are not adversely increased, construction of the Project will be coordinated with nearby projects.	Closed. All work requiring mitigation measures has been completed.



Number	Resources Requiring Mitigation	Mitigation Measures	Mitigation Status
131	Resources	The loss of the OK Champion Building will be documented, and an appropriate display or interpretive material depicting the OK Champion Building will be prepared. In addition, a nomination to the National Register of Historic Places will be prepared for the P.H. Mueller Sons Hardware Building.	Closed. Historic property documentation of the OK Champion building was approved by NPS on 12/31/20 and has been archived as stipulated in the Memorandum of Agreement. NICTD has contacted the owner of the Mueller and Sons Hardware Building regarding preparation of a nomination to the National Register of Historic Places; this remains an open item.
132	Resources	The Pennsy Greenway and Path will be treated in a manner that continues their availability for public use after interruptions attributable to construction.	Closed. The Pennsy Greenway and Path are open to the public for use.