Appendix I

Construction Impacts Technical Memorandum

- Final EIS Addendum I, Construction Impacts, July 2022

RED AHEAD

Red Line Extension

Chicago Red Line Extension Project

Construction Impacts

Final EIS Addendum I

July 2022

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Abbreviations

ACM	asbestos containing material
API	area of potential impact
BMPs	best management practices
CCDD	clean construction or demolition debris
CHA	Chicago Housing Authority
CMAP	Chicago Metropolitan Agency for Planning
CN/MED	Canadian National/Metra Electric District
Conrail	Consolidated Rail Corporation
CTA	Chicago Transit Authority
EA	Environmental Assessment
EJ	Environmental Justice
EIS	Environmental Impact Statement
ESA	Environmental Site Assessment
FTA	Federal Transit Administration
IHB	Indiana Harbor Belt Railroad
LBP	lead-based paint
MAC	Maximum Allowable Concentration
MWRD	Metropolitan Water Reclamation District of Greater Chicago
NS	Norfolk Southern
REC	recognized environmental condition
RLE	Red Line Extension
SPCC	Spill Prevention, Control and Countermeasure Plans
SRO	Soil Remediation Objectives
SWPPP	Stormwater Pollution Prevention Plan
TIP	Transportation Improvement Program
UPRR	Union Pacific Railroad
UST	underground storage tank

Section 1 - Summary

This Construction Impacts Addendum updates the analyses of construction impacts and mitigation for the Preferred Alignment of the Union Pacific Railroad (UPRR) Rail Alternative, as compared with the Draft Environmental Impact Statement (EIS) for the Red Line Extension (RLE) Project. These analyses draw on the descriptions of construction-related impacts and mitigation described in the other RLE technical memoranda for this Final EIS.

Because of the temporary nature of construction activities, the use of construction best management practices (BMPs), and the mitigation methods proposed, the construction impacts would not be adverse under the Preferred Alignment. The No Build Alternative would not involve any construction activities, so no construction impacts would occur.

Construction impacts are temporary in nature. Construction impacts are anticipated to occur for the construction phase of the project, up to five years, including construction staging and utility relocations. Construction of the RLE Project is anticipated to occur from 2025 through 2029.

Section 2 - Project Description and Background

The Chicago Transit Authority (CTA), as project sponsor to the FTA, proposes to extend the existing Red Line heavy rail transit service 5.6 miles south from the existing 95th/Dan Ryan terminal to Chicago's Far South Side. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The Red Line provides rapid transit services 24/7 and is the most heavily traveled rail line in the CTA System.

The RLE Project would reduce commute times for residents, improve mobility and accessibility, and provide connection to other transportation modes. The RLE Project could also foster economic development, where new stations may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts. The RLE Project would also provide a modern, efficient railcar storage yard and shop facility.

CTA undertook an extensive Alternatives Analysis process from 2006 to 2009 that considered multiple modes and corridor options for the RLE Project. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative on August 12, 2009. Based on further technical analysis and public input, CTA selected the UPRR Rail Alternative as the NEPA Preferred Alternative in August 2014. The Draft EIS, published on October 6, 2016, disclosed the environmental benefits and impacts of the No Build Alternative and the two UPRR Rail Alternative options: the East Option and the West Option shown in **Figure 2-1**.

Subsequent to the publication of the Draft EIS, continued design and outreach by CTA resulted in the selection of the Preferred Alignment for the RLE Project. The Preferred Alignment was announced to the public on January 26, 2018. The Preferred Alignment is a hybrid of the East and West Options of the UPRR Rail Alternative presented in the Draft EIS. CTA reviewed multiple locations for a cross-over area that would maximize the benefits and reduce the impacts of the East and West Options.

The UPRR provided comments on the Draft EIS where they expressed their preference for the West Option due to concerns for the proximity of the East Option to their tracks. UPRR noted that the location of the Roseland Pumping Station could not accommodate UPRR's requested clearance of 25 feet between the centerlines of the UPRR's potential tracks and the proposed East Option. Therefore, all hybrid options considered in selecting the Preferred Alignment started with the West Option and crossed over from the west to the east side of the UPRR tracks south of the pumping station and north of 115th Street to minimize property impacts. Comparative analysis of parcel impacts and alignment with the goals of the RLE Project identified the vicinity of 108th Place as the cross-over location that would provide the greatest benefit. A cross-over in the vicinity of 108th

Place would preserve viable businesses; minimize impacts on schools, residences, and the historic Roseland Pumping Station; and preserve properties slated for future development surrounding the station areas. However, additional engineering refined the alignment further, which moved the UPRR crossing north from 108th Place to 107th Place. The refinement would lower the 111th Street station platform height and would lower the profile of the elevated structure.

After the announcement of the Preferred Alignment in 2018, CTA continued to conduct stakeholder coordination and further develop design plans. Norfolk Southern Railway (NS) shared their plans for future potential access to Canadian National/Metra Electric District (CN/MED) tracks to the north of Kensington Yard and the national freight rail network at that location. This access would allow restoration of a former connection that the Michigan Central Railroad had with the CN/MED tracks, which were then owned by the Illinois Central Railroad. The 120th Street yard and shop presented in the Draft EIS would have precluded future potential access to those tracks as well as access to All American Recycling located west of the railroad tracks (11900 S. Cottage Grove Avenue). The All American Recycling facility is served by the NS via its joint ownership of Conrail and the Indiana Harbor Belt Railroad (IHB). This coordination with NS resulted in additional adjustments to the Preferred Alignment near the 120th Street yard and shop. The 120th Street yard and shop and the tracks south to 130th Street were shifted approximately 100 feet to the west to accommodate NS railroad access to the All American Recycling and potential improvements to the national freight rail network, namely a future connection from the NS track to CN tracks along the MED corridor. In addition, this design refinement would provide a rail connection to facilitate rail delivery of ballast, ties, and other material to support CTA operations.

In 2019, CTA began exploring an opportunity to relocate the 130th Street station, the terminating station of the RLE Project, to a location south of 130th Street. The Draft EIS had originally proposed the station location north of 130th Street. In 2017, after publication of the Draft EIS, the Chicago Housing Authority (CHA) demolished Blocks 11, 12, and 13 of the Altgeld Gardens neighborhood, creating an opportunity to relocate the station south of 130th Street to the area of the demolished blocks. The demolition of Blocks 11, 12, and 13 of Altgeld Gardens was an activity completed by CHA and was independent and unrelated to the RLE Project. CTA evaluated the station relocation for feasibility. Meetings were held with partner agencies and stakeholder groups of residents in the station area with these agencies and groups expressing support for the station relocation. The design refinement relocated the station from north of 130th Street, as presented in the Draft EIS, to south of 130th Street, adjacent to the Altgeld Gardens neighborhood.

Since the publication of the Draft EIS and selection of the Preferred Alignment, three design refinements were made as discussed above: (1) the location of the 107th Place cross-over between

UPRR East and West alignment options evaluated in the Draft EIS required for selection of a hybrid Preferred Alignment; (2) refinement of the 120th Street yard and shop location; and (3) relocation of the 130th Street station to extend the Preferred Alignment farther south so the 130th Street station would be within the Altgeld Gardens neighborhood. These design refinements were evaluated in a Supplemental Environmental Assessment (EA). The agency coordination and outreach associated with the Supplemental EA have influenced the design refinements incorporated into the Preferred Alignment and that is analyzed in this Final EIS.

Additional details about the Preferred Alignment may be found in **Appendix E**.

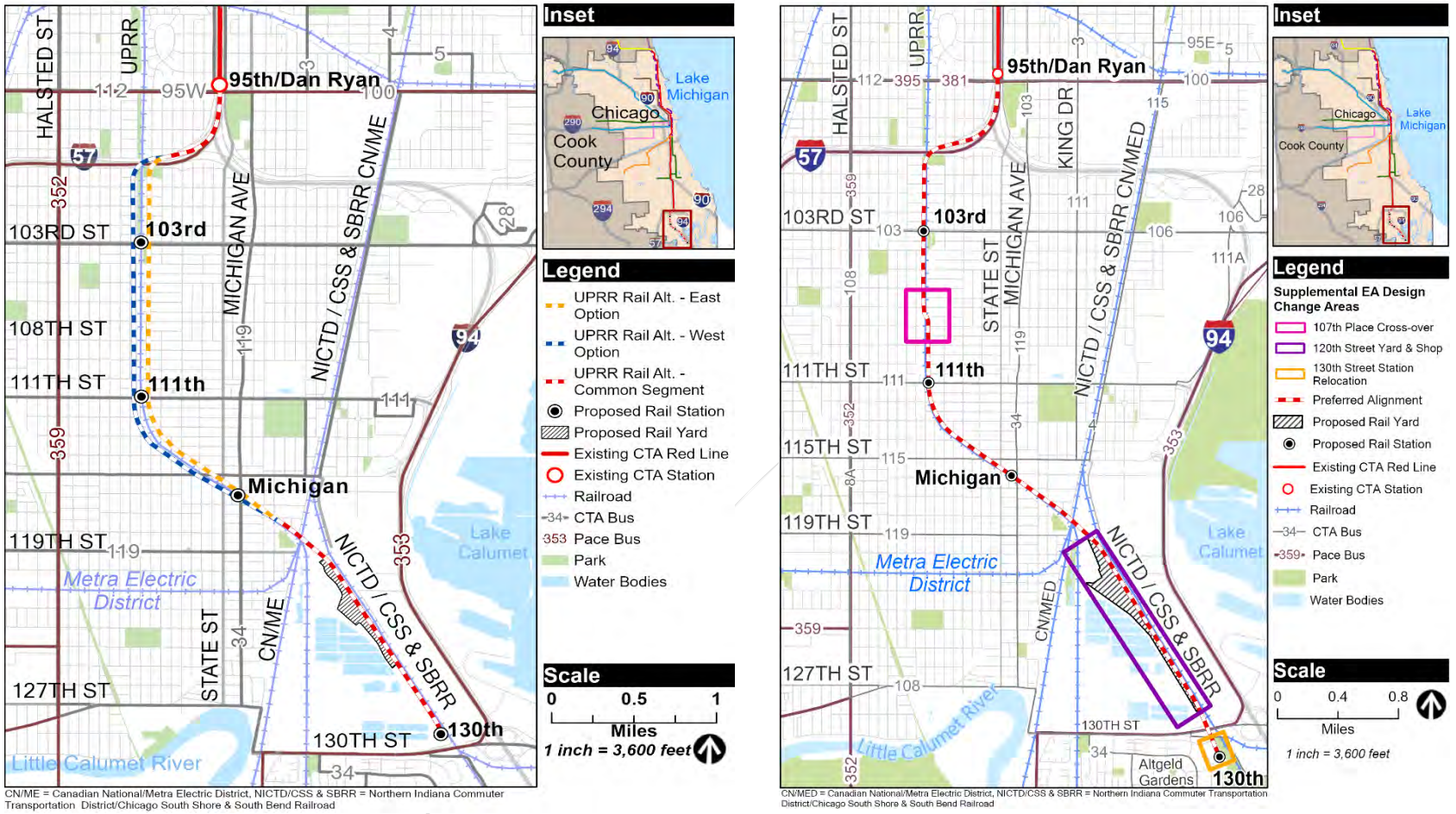


Figure 2-1: Left- East and West Options of the UPRR Rail Alternative (Draft EIS), Right- Preferred Alignment (Final EIS)

Section 3 - Methods for Impact Evaluation

Methods presented in the Draft EIS have been carried forward to evaluate the potential construction impacts and mitigation under the Preferred Alignment. The methods for evaluating the construction impacts depend on the environmental resource. The methods for impact evaluation of the Preferred Alignment are similar to those for the East and West Options described in the Draft EIS.

3.1 Federal, State, and Local Regulations

The regulatory framework is specific to each of the environmental resources evaluated in this Final EIS. Any updated regulations are documented in the respective technical memoranda. However, the updated regulations have no effect on the analyses of construction impacts for the Preferred Alignment, unless otherwise stated in the technical memoranda.

3.2 Impact Analysis Thresholds

NEPA does not set specific thresholds of significance for construction-related impacts. The impact thresholds for each environmental resource are identified in the technical memoranda. The construction-related impact thresholds have not changed from those in the Draft EIS.

3.3 Area of Potential Impact

The area of potential impact (API) is specific to each of the environmental resources, and the APIs are identified in the technical memoranda. In general, the APIs for the Preferred Alignment have been expanded farther south to include the relocation of the 130th Street station south of 130th Street.

3.4 Methods

The impact analyses are based on potential construction methods, staging, and possible impacts on environmental resources. The impacts were identified during the analysis performed for each of the environmental resources. Construction impacts are temporary in nature and are not relevant to the operation of transit services once the RLE Project has been constructed. Impacts associated with post-construction activities were therefore not included in these analyses.

Section 4 - Affected Environment

The affected environment for construction impacts depends on the geographic frame of reference used to analyze existing conditions for the environmental resources evaluated in the Final EIS. The affected environment for each of the environmental resources is described in the other RLE technical memoranda.

In general, the affected environment for the Preferred Alignment has been expanded farther south to include the relocation of the 130th Street station south of 130th Street. This extension south incorporates the entire Riverdale community into the project area. The project area encompasses parts of ten community areas in the Far South Side of Chicago: Beverly, Washington Heights, Roseland, Pullman, Morgan Park, West Pullman, Riverdale, South Deering, the Village of Calumet Park, and Hegewisch. Under the Preferred Alignment, the 130th Street station would be located closer to the Altgeld Gardens neighborhood in the Riverdale community.

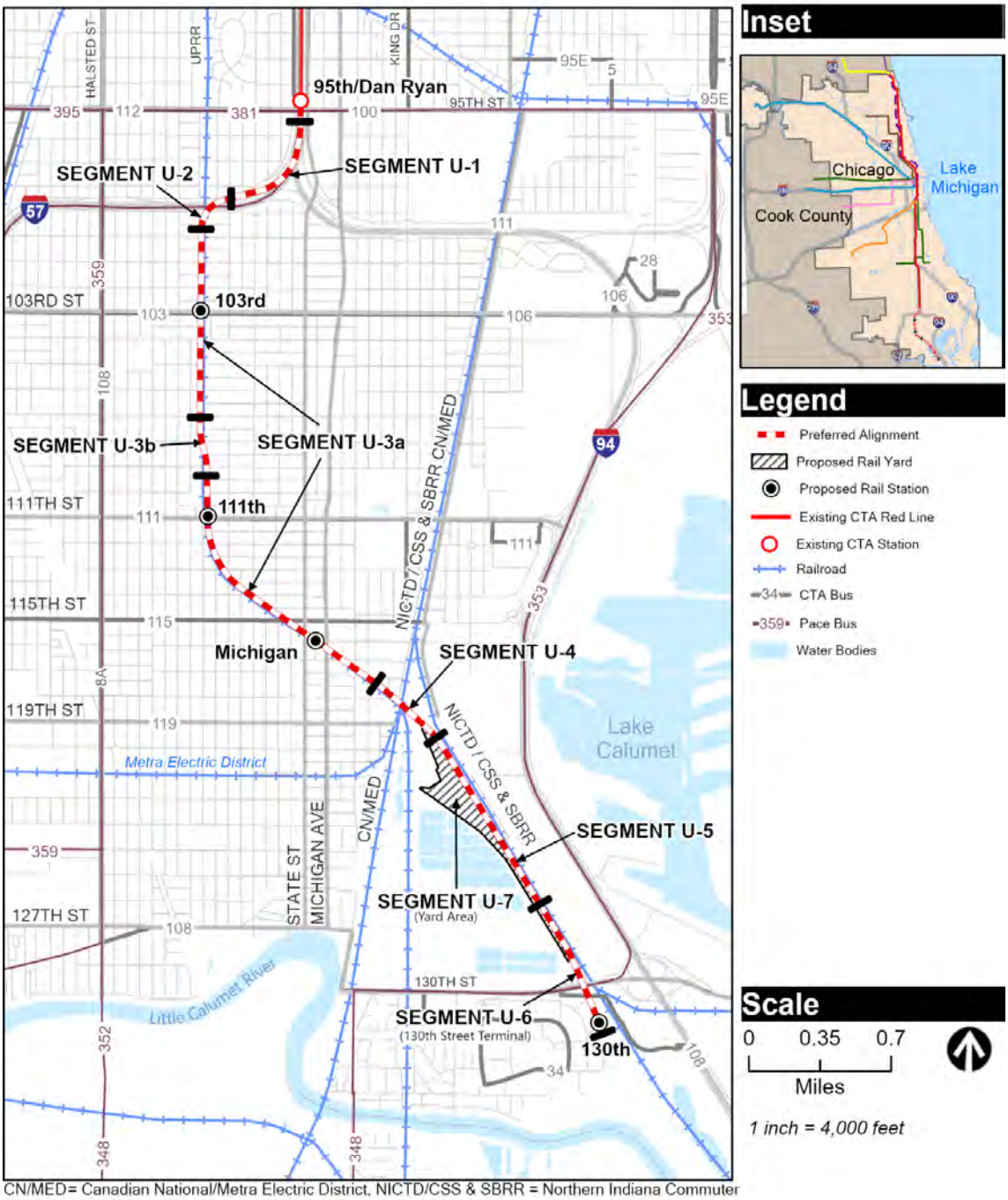
Section 5 - Description of Construction

Construction activities under the Preferred Alignment are not expected to be markedly different than those described for the East and West Options in the Draft EIS. The *Description of Construction and Phasing* (**Addendum G**) provides the details of the construction activities for the Preferred Alignment.

Construction activities would be grouped by type of work and location. The overall schedule and coordination of all construction segments would be phased and scheduled to maintain the CTA operations at the 95th/Dan Ryan terminal and 98th Yard and Shop, and the vehicular traffic on affected expressways and roadways.

For the purposes of describing construction activities, the RLE Project has been divided into seven segments. These segments indicate similar construction activities and are not intended to indicate any sequencing or phasing. The seven construction segments for the Preferred Alignment are shown on **Figure 5-1**. The work activities for each construction segment are summarized in **Table 5-1**, and described in greater detail in **Addendum G**.

The construction segments and phasing plans described here are based on preliminary engineering completed to date and provide the greatest amount of flexibility for future design within a maximum envelope for evaluating environmental impacts. Construction activities and phasing would be determined during final design of the RLE Project, in coordination with the design-build contractor. Construction is anticipated to occur from 2025 through 2029.



CN/MED= Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 5-1: Construction Segments of the Preferred Alignment

Table 5-1: Construction Segments and Summary of Work Activities

Segment	Location	Work Activities
U-1	From the 95th/Dan Ryan terminal to the beginning of the horizontal curve at the UPRR crossing	▪ Install trackwork and signals to tie into the 95th/Dan Ryan terminal. ▪ Relocate trackwork between the 95th/Dan Ryan terminal and the 98th Street Yard and Shop. ▪ Construct approximately 500 feet of retained fill structure south of the 95th/Dan Ryan terminal. ▪ Construct single-track, elevated structures over existing CTA tracks leading to the 98th Yard and Shop over the existing CTA/southbound I-94 tunnel. ▪ Construct the dual-track, elevated structure through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from southboundI-94, and north of the southbound I-57 lane. ▪ Replace the 95th Street substation with a new 96th Street substation.
U-2	The horizontal curve at the UPRR crossing	▪ Construct the dual-track, elevated structure spanning both lanes of I-57.
U-3a	From the end of the horizontal curve at the UPRR crossing to the CN/MED track crossing near 119th Street	▪ Demolish existing buildings and structures in the proposed right-of-way where necessary. ▪ Construct the dual-track, elevated structure along the UPRR corridor. ▪ Construct stations near 103rd Street, 111th Street, and Michigan Avenue. ▪ Construct parking lots/structures and bus turnarounds at stations. ▪ Construct three substations.
U-3b	From the end of the curves at the UPRR crossing at 107th Place	
U-4	From the CN/MED track crossing near 119th Street to the at-grade track	▪ Demolish existing buildings and structures in the proposed right-of-way where necessary. ▪ Construct the dual-track, elevated structure along the UPRR corridor and over the CN/MED tracks near 119th Street. ▪ Construct the 120th Street yard and shop track tie-in. ▪ Construct retained embankment structure to carry the elevated structure grade and the grade separation 120th Street yard access.

Segment	Location	Work Activities
U-5	From the end of the aerial structure crossing the CN/MED tracks near 119th Street to the south end of the yard test track near 124th Street	▪ Construct the track roadbed. • Construct the Metropolitan Water Reclamation District of Greater Chicago (MWRD) access road and bridge over the RLE tracks and the NICTD/CSS & SBRR crossing.
U-6	From the yard test track to the south end of the project including the 130th Street station	▪ Construct the track roadbed. ▪ Construct the 130th Street station. ▪ Construct an underpass at 130th Street for track alignment. ▪ Construct the parking garage/lot for the 130th Street station. ▪ Construct bus bays and road access for the 130th Street station. ▪ Construct the MWRD access road to 130th Street. ▪ Construct the substation.
U-7	120th Street yard and shop	▪ Construct the yard and track. ▪ Construct the shop building. ▪ Construct the access road and CTA employee parking. ▪ Construct the substation.

Section 6 - Impacts and Mitigation

Consistent with the Draft EIS, this section summarizes the impacts and mitigation during construction of the Preferred Alignment. Construction impacts are temporary and are anticipated to occur for the construction phase of the project, up to five years, including construction staging and utility relocations.

6.1 No Build Alternative

The No Build Alternative is defined as the existing transportation system plus any committed transportation improvements that are already in the current Chicago Metropolitan Agency for Planning (CMAP) Transportation Improvement Program (TIP). No new infrastructure would be built as part of the RLE Project under the No Build Alternative. The No Build Alternative would not involve any construction activities for the RLE Project, and therefore no construction impacts would occur.

6.2 Union Pacific Railroad Alternative – Preferred Alignment

This section summarizes the potential construction impacts and mitigation measures for the Preferred Alignment and is organized by each of the environmental resources evaluated as they appear in the Final EIS.

6.2.1 Transportation

Construction activities would temporarily affect the physical capacity of roadways, sidewalks, and intersections subject to lane closures, narrowing, and detours. This would affect bus transportation, vehicular traffic, bicycle traffic, truck freight, pedestrians, on-street parking, and potentially access to off-street parking. CTA would prepare traffic management and maintenance of traffic plans that identify traffic detours and emergency response access routes. Increased congestion due to construction may temporarily increase travel times along roadways within the RLE project area. CTA would mitigate these impacts on a case-by-case basis, coordinating with IDOT, Cook County Department of Transportation and Highways (CCDoTH), CDOT, and local businesses, organizations, and residents to select the most appropriate mitigation measures for each situation. Likewise, contractors would adhere to local, state, and federal guidelines for maintaining pedestrian and Americans with Disabilities Act (ADA) access during construction.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Temporary shutdown of other traffic would occur at nighttime and low traffic volume intervals per IDOT approval. Proposed structure construction in the vicinity of the I-94/I-57 interchange would be sequenced to limit effect on I-57 traffic flow to the extent practicable per IDOT traffic management requirements. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

Freight railroad traffic adjacent and underneath the Preferred Alignment would experience minimal impacts during construction. The most notable impacts would be the need to stop railroad traffic during bridge erections over tracks on both the UPRR and CN/MED. Coordination would be needed with the UPRR, NS, CN, Metra, and NICTD/CSS & SBRR for work near, adjacent to, or on their property. Impacts to freight and passenger rail would be minimized by efforts such as sequencing construction of crossings and through coordination with the affected railroads, appropriate flagging, and scheduled track outages.

Construction impacts are temporary and would not be adverse after mitigation.

6.2.2 Land Use and Economic Development

Construction activities would cause temporary impacts such as truck traffic, roadway detours, noise, vibration, and dust. Mitigation associated with truck traffic and roadway detours can be found in **Section 6.2.1** and **Section 6.2.4**; noise and vibration mitigation can be found in **Section 6.2.6**; dust mitigation can be found in **Section 6.2.12**. There could be short-term economic benefits due to jobs created by construction. Construction could be disruptive to businesses along the alignment, which would be an adverse impact.

To minimize the adverse impact, CTA would develop and implement a Construction Outreach and Coordination Plan. CTA would coordinate with communities, businesses, and aldermen's local ward offices to finalize and implement a Construction Outreach and Coordination Plan. The plan would include a Business Outreach Program to assist local businesses and residents affected by

construction. The plan would be tailored to business and community needs and would include a series of initiatives to minimize construction disruption to businesses and the surrounding community. Examples of these initiatives include a community calendar to inform residents of the construction schedule and avoid affecting special events or festivals, advertising campaigns, any provisions for additional parking during construction, and signage.

Construction impacts are temporary and would not be adverse after mitigation.

6.2.3 Displacements and Relocation of Existing Uses

Displacements and relocations would occur when land and/or structures are needed to accommodate construction or the permanent footprint for the Preferred Alignment. Some of the parcels acquired may be used partially or primarily for staging, crane erection, site access, or storage of materials during construction; however, these impacts would last long enough that use of the parcels would prevent any use of the property, and in some cases buildings on site would need to be displaced. Therefore, these are considered permanent impacts, and not noted as temporary construction (easement) impacts. There would be parcels needed for easements related to construction equipment access and staging of materials; these affected parcels would be considered temporary construction easements. Temporary construction easements would not result in displacement or relocation impacts; therefore, construction impacts would not occur.

The *Displacements and Relocation of Existing Uses Technical Memorandum* (**Appendix K**) includes additional details on displacements and relocations.

6.2.4 Neighborhoods and Community Impacts

Community disruption would occur temporarily during construction for the Preferred Alignment. Most of the construction activities and staging would occur within street right-of-way, properties to be acquired as part of the project's permanent envelope, and potentially other nearby vacant parcels through the establishment of temporary construction easements. Construction activities would cause temporary impacts such as truck traffic, roadway detours, noise, vibration, and dust. Mitigation associated with truck traffic and roadway detours can be found in **Section 6.2.1** and **Section 6.2.4**; noise and vibration mitigation can be found in **Section 6.2.6**; dust mitigation can be found in **Section 6.2.12**.

Neighborhoods would experience visual impacts, noise, and dust during construction on an intermittent basis, but construction impacts on the Washington Heights, Roseland, and West Pullman communities would not be adverse through the use of best management practices (BMPs).

The 120th Street yard and shop would be located far enough from established communities so that no construction impacts would occur. Mitigation measures associated with visual impacts, noise, and dust can be found in the **Section 6.2.5**, **Section 6.2.6**, and **Section 6.2.12**, respectively.

Construction activities would result in additional truck traffic and temporary street closures throughout Roseland, Washington Heights, West Pullman, and Riverdale. Anticipated hauling routes would be coordinated throughout the RLE Project to minimize the number of trucks and equipment passing through sensitive areas of the community and would utilize highways and major arterials over local roads to the extent feasible and practicable. Religious facilities, schools, community centers, and other facilities near the alignment and stations would be subject to temporary adverse impacts associated with potential traffic detours; however, access would be maintained throughout the duration of the project. Detours would be provided to maintain access to adjacent properties during construction, and CTA would coordinate with Pace Suburban Bus Service so bus transit service would detour around roadway closures. Businesses around the alignment and station park & ride facilities could be affected by construction activities, construction-related traffic, and road and sidewalk closures. Temporary roadway delays due to truck traffic and construction equipment would occur. CTA would provide early notification of construction activities and provision of temporary alternative access routes for the community and advertising programs to increase the visibility of affected businesses during construction. Contractors would perform work in a manner consistent with local ordinances.

Construction impacts are temporary and would not be adverse after mitigation.

6.2.5 Visual and Aesthetic Conditions

Construction-related visual impacts would not be adverse and would include construction fencing, demolition of existing buildings, temporary walls, temporary street closures and related signage, temporary lighting or entrances, and/or shoring of concrete structures or existing viaducts.

Although construction-related visual impacts related to the Preferred Alignment would not be adverse, CTA would maintain as much existing vegetation as practical, including shielding of tree root zones to prevent construction damage to existing trees that would remain. Temporary construction impacts on neighborhoods would be minimized by limiting construction light infiltration into adjacent neighborhoods when nighttime work would be required. In addition, BMPs and debris-free construction areas would mitigate temporary visual impacts from the construction sites.

Construction impacts are temporary and would not be adverse after mitigation.

6.2.6 Noise and Vibration

The Preferred Alignment would include the construction of elevated structures and at-grade tracks, stations, parking facilities at the stations, and roadway improvements. Construction noise levels for the Preferred Alignment are not expected to exceed the FTA construction noise criteria and this would be included in the mitigation measures and commitments for contractor adherence and compliance with local noise ordinances. Similarly, construction vibration levels for the Preferred Alignment are not expected to exceed the FTA construction criteria for vibration damage. Construction BMPs would be used to reduce noise and vibration, as described in the Draft EIS.

Contractors would employ noise-reducing construction BMPs. Contractors would keep all construction equipment exhaust mufflers in a state of good repair. As part of the construction specifications, contractors would be responsible for adhering to the noise control requirements of the project. To the extent possible, contractors would avoid idling of vehicles that are not in use on construction sites. CTA would limit nighttime construction near residences to the extent practical. Impact pile-driving would be avoided in the vicinity of the historic Roseland Pumping Station and the vicinity from the I-94 ramp crossing to the east of CN/MED and south of 130th Street, as well as adjacent to sensitive noise and vibration receivers identified in the Final EIS such as residences, parks, churches, etc. CTA would inform community members about construction schedules and would coordinate in advance with aldermen and local officials.

Construction noise impacts are temporary and would not be adverse after mitigation. Construction impacts due to vibration would not occur.

6.2.7 Safety and Security

Contractors performing primary construction activities would need to have an approved Construction Safety and Security Plan in place before any construction work begins. Contractors would perform job safety analysis, monitor safety and security activities, and comply with other relevant aspects of CTA's *Safety and Security Management Plan* (CTA 2011) or CTA's other manuals and policies. Contractors would be contractually committed to take prompt and decisive corrective action on safety deficiencies identified at the work sites. For example, CTA would require contractors performing work on, above, or adjacent to the CTA rail system to follow CTA's Safety Manual for Contract Construction On, Above, or Adjacent to the CTA Rail System (Construction Safety Manual) to protect themselves, their employees, sub-contractors, CTA passengers, employees, and the public.

Emergency services would have access to construction sites at all times and would access construction sites in the same way as contractors, using side streets and recommended detours. An access road for the Metropolitan Water Reclamation District of Greater Chicago (MWRD) would be constructed prior to commencing operation on the new CTA tracks, if necessary, to maintain access to the MWRD facility. This roadway would also be used by emergency services.

Construction impacts are temporary and would not be adverse after mitigation.

6.2.8 Historic and Cultural Resources

During project construction, the visual, noise, and vibration effects are not anticipated to affect the characteristics that qualify properties for inclusion on the National Registry of Historic Places. Construction noise and vibration levels for the Preferred Alignment with mitigation described in **Section 6.2.6** would not exceed FTA-recommended construction impact criteria. Contractors would be required to avoid impact pile-driving methods in the vicinity of the historic Roseland Pumping Station.

The Preferred Alignment would have no adverse construction effects on historic and cultural resources.

6.2.9 Hazardous Materials

Construction of the Preferred Alignment would include subsurface excavation, which would result in the generation of a large quantity of soil that could contain contaminated materials requiring off-site disposal. The results of the Phase II Environmental Site Assessments (ESAs) show the locations of where contaminated materials would be encountered and indicate how the materials should be handled. (See the *Hazardous Materials Technical Memorandum* **Appendix R.**) Hazardous materials typically used during construction, such as paints, solvents, fuels, and hydraulic fluids, could also be released accidentally during construction. In addition, there is the potential for encountering contaminated groundwater during construction.

Construction would require the demolition of existing structures that were likely constructed before 1978–1979. These structures may contain asbestos containing materials (ACM) and lead-based paint (LBP) that could result in a release of asbestos fibers and lead dust during construction. Prior to demolition of any structures, CTA would test for lead and asbestos and remediate, as necessary.

Maintenance and operation of railroad corridors typically include the use of fuel, oil, paints, herbicides, pesticides, creosote, and polynuclear aromatic hydrocarbons. Therefore, construction activities within or adjacent to existing railroad corridors may encounter these materials. There would be adverse construction-related impacts associated with the Preferred Alignment, but the impacts would be mitigated by implementing the BMPs and standard practices discussed below.

CTA would follow federal, state, and local laws and regulations regarding hazardous materials before and during construction. The following BMPs, at a minimum, would be implemented before and during construction to avoid and minimize the potential for impacts before and during construction:

- CTA would continue to conduct Phase II ESAs on properties identified as Recognized Environmental Conditions (RECs) in the site-specific Phase I ESAs before purchasing a property. The assessments would include characterization and evaluation of the potential for encountering hazardous materials and contaminated soil.
- CTA would prepare a Soil Management Plan for the RLE Project.
- CTA would manage soil by two categories, uncontaminated and contaminated soil. Uncontaminated soils meet all Tier 1 Soil Remediation Objectives (SROs) and Maximum Allowable Concentrations (MAC) levels that can be either reused on or off the RLE Project, disposed of at an approved clean construction or demolition debris (CCDD) facility, or used as fill material at an uncontaminated soil fill operation (35 IAC 1100, Subpart F). Contaminated soil exceeds the Tier 1 SROs and MAC for one or more contaminants. The soil is considered impacted, and any material removed as part of RLE Project construction is required to be disposed at a landfill permitted to accept the material.
- CTA would remove and dispose of creosote railroad ties that are encountered during construction at an approved disposal facility.
- CTA would require that any underground storage tanks (USTs) encountered during construction or previously identified during the Phase II ESAs be removed and disposed and any UST that was determined to be leaking would go through closure through the appropriate regulatory agency.
- CTA would close out any open leaking UST sites and obtain a No Further Remediation Letter from the appropriate regulatory agency.
- ACM, LBP, and hazardous material surveys of buildings or structures would be required before demolition, to identify any ACM, LBP, and hazardous materials, such as polychlorinated biphenyls or mercury-containing equipment. Any ACM, LBP, and hazardous materials identified would be abated and disposed of in accordance with federal, state, and local

regulations. Removal, abatement, and disposal of these materials would be completed by specialists that are trained and certified to conduct such activities.

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

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

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

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

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

Construction-related impacts would not be adverse after the implementation of the BMPs and standard practices.

6.2.10 Wetlands

Temporary construction access for installation of a stormwater outlet to Kensington Marsh would necessitate temporary impacts on wetlands. Temporary impacts on the marsh would not exceed 0.19 acre. Temporary affected areas would be restored to pre-construction conditions and would be monitored for a period to be determined in coordination with MWRD. The U.S. Army Corps of Engineers (USACE) determined they do not object to utilization of Kensington Marsh, provided that coordinated BMPs are implemented. In addition to restoration, BMPs would include nine proposed detention ponds per 30 percent design, which would limit runoff volumes. If modifications are made during final design regarding the outflow or use of detention ponds to limit runoff volumes, then CTA would coordinate with the USACE for concurrence. Construction staging areas would be sited outside of wetlands as much as practicable, but if there were any temporary

impacts, those areas would be restored to wetlands after construction. If any staging area is proposed to be sited outside of the previously cleared area, then contractors would coordinate with CTA to review the proposed site for the presence of wetlands.

Construction impacts are temporary and would not be adverse after mitigation.

6.2.11 Indirect and Cumulative Impacts

Construction impacts from the RLE Project were considered when combined with those of other past, present, and reasonably foreseeable projects. Construction impacts from the other potentially concurrent projects would not be likely to result in cumulative impacts when combined with RLE Project construction. Should construction of other nearby projects occur simultaneously with the RLE Project, CTA would coordinate construction activities among the projects to minimize disruption and use of resources.

6.2.12 Air Quality

Impacts on air quality during construction would be associated with temporary and localized emissions of particulate matter and exhaust from construction vehicles and equipment. Construction mitigation measures would include BMPs to reduce construction dust, to provide emissions controls on construction equipment, to use low-sulfur fuels, and to limit equipment operations such as excessive idling. In addition, the contractors performing primary construction activities would develop and implement a Dust Control Plan, which would address, in detail, how dust would be controlled at the construction site, the staging areas, and the access and egress routes. CTA would require contractors to follow Chicago's Clean Diesel Construction Ordinance, which would reduce the potential for construction-related air quality impacts. No additional construction mitigation measures would be required under the Preferred Alignment.

Construction impacts are temporary and would not be adverse after mitigation.

6.2.13 Water Quality

Construction activities could increase erosion and sedimentation near construction areas. However, the potential impact on water quality would be minor due to the highly urbanized nature of the majority of the project corridor. With implementation of construction BMPs to mitigate potential erosion and sedimentation, there would be no adverse water quality impacts associated with the Preferred Alignment from construction. CTA would require contractors to conduct periodic monitoring of runoff water quality before discharge from the site and into the storm

drainage system, at a frequency to be determined during Stormwater Pollution Prevention Plan (SWPPP) development. Contractors would properly store hazardous materials to prevent contact with precipitation and runoff. Coverage would be obtained under a National Pollutant Discharge Elimination System (NPDES) Construction General Permit and the contractors would abide by all terms of the permit.

Construction impacts are temporary and would not be adverse after mitigation.

6.2.14 Floodplains

There are no floodplains present in the RLE Project area of potential impact; therefore, there would be no impacts from the construction of the Preferred Alignment.

6.2.15 Vegetation and Wildlife Habitat

The Preferred Alignment would potentially have adverse impacts on vegetation and wildlife habitat during construction due to tree removal. The loss of trees would reduce migratory bird habitat. Migratory species passing through the Chicago area are likely to be adapted to urban habitats and are highly mobile, able to overcome industrial and land use barriers between the RLE Project and more natural areas. With the implementation of mitigation measures outlined in the Draft EIS and reiterated in mitigation below, potential adverse impacts would be minor. Construction contractors performing primary construction activities would time tree removal as much as possible to occur outside the migratory bird nesting season, which occurs generally from April 1–September 15 and as early as March 1 for some species. If tree removal must occur during the nesting season, two biological surveys will be conducted: one 15 days before and a second 72 hours before the construction that will remove or disturb suitable nesting habitat. This mitigation is likewise applicable for permanent impacts as described in the *Biological Resources Technical Memorandum* (**Appendix V**).

Construction impacts are temporary and would not be adverse after mitigation.

6.2.16 Threatened and Endangered Species

Temporary construction impacts on vegetation and wildlife habitat in the Preferred Alignment would potentially affect threatened and endangered species. However, construction impacts are unlikely with the inclusion of mitigation measures as concurred upon by U.S. Fish and Wildlife Service (northern long-eared bat) and Illinois Department of Natural Resources (wildlife associated with Lake Calumet and the osprey):

- For the protection of the northern long-eared bat, the CTA would require contractors to ensure that tree removal activities occur outside of the northern long-eared bat active season (April 1 through October 31).
- For the protection of wildlife associated with Lake Calumet, the CTA would require contractors to use fully shielded lighting fixtures that emit no light upward. Only "warm-white" or filtered LEDs (CCT < 3,000 K; S/P ratio <1.2) will be used to minimize blue emission. Only light the exact space with the amount (lumens) needed to meet industry safety requirements.
- For protection of the osprey, the CTA would require contractors to remove vertical structures, such as telephone poles, light poles, etc., outside of the osprey active season (April 1 and October 31). If these dates cannot be accommodated, a nesting survey will be conducted to determine if species are utilizing structures in the project area. Survey results will be coordinated with Illinois Department of Natural Resources.

Construction impacts are temporary and would not be adverse after mitigation.

6.2.17 Geology and Soils

Construction of the Preferred Alignment would not have adverse impacts on geologic or soil resources, because all of the features of the Preferred Alignment would be located primarily on or within existing transportation use areas such as streets and railroad corridors. No mitigation measures would be required.

6.2.18 Energy

Construction of the RLE Project would use energy for the production of the guideway and station components (including steel, cement, copper, and glass), and for the operation of construction equipment. The Draft EIS determined that short-term construction energy consumption of the UPRR Rail Alternative would amount to less than 1.2 percent of the total annual of Cook County energy consumption, as detailed in the *Energy Technical Memorandum* (**Appendix W**). Because construction energy use would be a very small fraction of energy use in the region, construction of the RLE Project would not have an adverse impact on regional energy consumption and no construction mitigation measures would be required. Construction energy use would be spread out over the duration of construction. No adverse energy impacts during construction would be anticipated under the Preferred Alignment, and no additional construction mitigation measures would be required.

6.2.19 Environmental Justice

Environmental justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The communities adjacent to the RLE Project are entirely minority communities, some of which are also low-income. FTA and CTA have undertaken outreach and ongoing coordination with affected communities to identify EJ populations, discuss project impacts and benefits, and identify mitigation measures where relevant.

As identified in other sections of this Addendum, construction activities under the Preferred Alignment would result in temporary impacts such as noise, dust, truck traffic, lane closures and detours, traffic congestion, loss of access and parking, encountering contaminated materials, and visual impacts. With the use of appropriate construction-related mitigation measures summarized in this Addendum, construction impacts would not be adverse under the Preferred Alignment.

Considering the construction impacts, mitigation measures, and benefits, the permanent impact under the Preferred Alignment on EJ communities would not be appreciably more severe or greater in magnitude than similar effects elsewhere in CTA's rail system. The mitigation measures proposed are similar in nature to those for other CTA projects and have been proposed by CTA consistently in EJ and non-EJ populations alike. The project offers considerable benefits that would accrue to the resident EJ populations. Although the Preferred Alignment would still have adverse impacts on EJ populations, these impacts would not be disproportionately high and adverse. As such, no EJ-specific mitigation measures beyond those already identified earlier would be required.

6.2.20 Section 4(f) Evaluation

During construction of the Preferred Alignment, there would be temporary and minor construction activities within Wendell Smith Park for a short duration. CTA would need to temporarily close the northwest corner of Wendell Smith Park (approximately 0.1 acre) in order to construct the RLE Project. Based on the discussions between Chicago Park District and CTA about construction activities within the northwest corner of Wendell Smith Park, the Chicago Park District agrees that the construction activities would be considered a temporary occupancy under 23 CFR Part 774.13 that is so minimal as to not constitute a Section 4(f) use. The Chicago Park District would require a construction permit that requires full restoration, and the land would be fully restored to a condition at least as good as that which exists prior to the RLE Project.

Public use of the park would continue throughout construction of the project, and construction would not affect the attributes, features, or activities of the park. There would be no noise impacts

related to operation of the Preferred Alignment after construction of mitigation measures (noise barrier). Trees within the park property would need to be cut to allow for construction activities, and the removal of tress for construction would be mitigated with replacement trees. Appropriate construction BMPs would be followed to shield construction activities, allow use of the property by the general public, and minimize any safety risks. This includes but is not limited to providing a detour for the sidewalks within Wendell Smith Park.

Section 7 - Impacts Remaining after Mitigation

This section describes the construction impacts of the Preferred Alignment remaining after mitigating for impacts as described in **Section 6**.

7.1 No Build Alternative

The No Build Alternative would not involve any construction activities. Consistent with the findings of the Draft EIS, construction impacts would not occur under the No Build Alternative.

7.2 Union Pacific Railroad Alternative - Preferred Alignment

Construction activities for the Preferred Alignment would include BMPs and other mitigation measures. Consistent with the findings of the Draft EIS, there would be no adverse impacts during construction of the Preferred Alignment remaining after mitigation.

Section 8 - References Cited

Chicago Transit Authority (CTA), 2016. Chicago Red Line Extension Draft Environmental Impact Statement and Section 4(f) Evaluation. Accessed at https://www.transitchicago.com/rle/drafteis/. Accessed on January 20, 2021.