Appendix X

Environmental Justice Technical Memorandum

- Final EIS Addendum X, Environmental Justice Technical Memorandum, July 2022

Chicago Red Line Extension Project

Environmental Justice

Final EIS Addendum X

July 2022

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
TranSystems
222 S. Riverside Plaza, Suite 610
Chicago, IL 60606

Table of Contents

Figures

Tables

Abbreviations

ACS	American Community Survey
API	area of potential impact
BMPs	best management practices
CHA	Chicago Housing Authority
CN/MED	Canadian National/Metra Electric District
CMAP	Chicago Metropolitan Agency for Planning
CTA	Chicago Transit Authority
EA	Environmental Assessment (EA)
EIS	Environmental Impact Statement
EJ	Environmental Justice
FTA	Federal Transit Administration
IHB	Indiana Harbor Belt
LBP	Lead Based Paint
LEP	Limited English Proficiency
MSAT	mobile source air toxics
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
NS	Norfolk Southern

RLE	Red Line Extension
TIP	Transportation Improvement Program
TSD	Transit-Supportive Development
UPRR	Union Pacific Railroad

Section 1 - Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project on Environmental Justice (EJ) communities. The EJ analysis and outreach process were undertaken to accomplish the following goals, consistent with Federal Transit Administration (FTA) Circular 4703.1, *Environmental Justice Policy Guidance for Federal Transit Administration* (August 2012), and Circular 4702.1B, *Title VI Requirements and Guidelines for Federal Transit Administration Recipients* (October 2012):

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

While project areas comprising entirely EJ populations do not necessarily preclude disproportionately high and adverse effect findings, the following characteristics are true of the area of potential impact (API) surrounding the Preferred Alignment of the Union Pacific Railroad (UPRR) Rail Alternative:

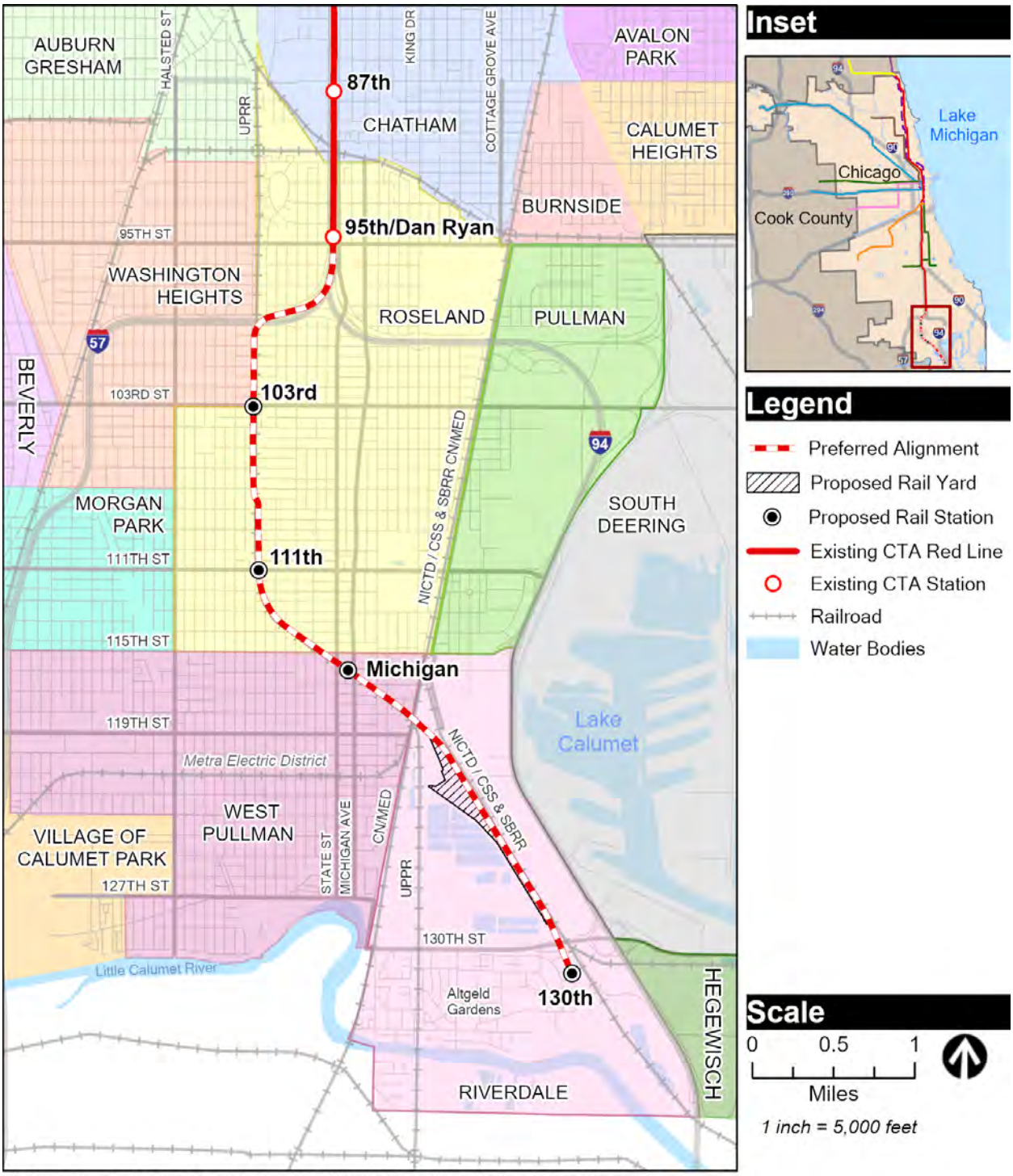
- The entire API comprises predominantly minority populations. All communities in the API contain 90 percent or more minority populations, and the API comprises 98.0 percent minority populations.
- All of the impacts and benefits of the RLE Project would accrue to the same minority populations, and few project benefits would occur outside the API.
- The purpose of this community-initiated project includes connecting disadvantaged communities to Chicago's major employment and activity centers in an effort to spur economic development and improve livability. The RLE Project would help remediate the geographic isolation and lack of employment and development opportunities that currently exist in the API.

Given these findings, the Preferred Alignment would not result in disproportionately high and adverse impacts on EJ populations. Some adverse impacts on EJ communities presented in the Draft Environmental Impact Statement (EIS) remain under the Preferred Alignment; however, these impacts would not be disproportionate. In some instances, impacts would remain adverse despite

implementation of mitigation measures, as shown in **Table 1-1** and described further in **Section 5**. These remaining adverse impacts would be associated with the change in community and visual characteristics caused by locating an elevated rail structure and parking structures in low-density residential areas. **Figure 1-1** shows where each affected community area is located.

Table 1-1: Adverse Impacts Remaining After Mitigation (Not Disproportionate)

Impact Category	No Build Alternative	Preferred Alignment
Displacements	No	No
Land Use and Economic Development	No	No
Noise and Vibration	No	No
Energy	No	No
Air Quality and Climate Change	No	No
Biological Resources	No	No
Hazardous Materials	No	No
Neighborhood and Community	No	Yes
Parklands and Community Facilities	No	No
Safety and Security	No	No
Visual and Aesthetic Conditions	No	Yes
Water Resources	No	No
Transportation	No	No
Historical and Cultural Resources	No	No
Geology and Soils	No	No
Cumulative	No	No



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

Figure 1-1: Community Areas

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**.

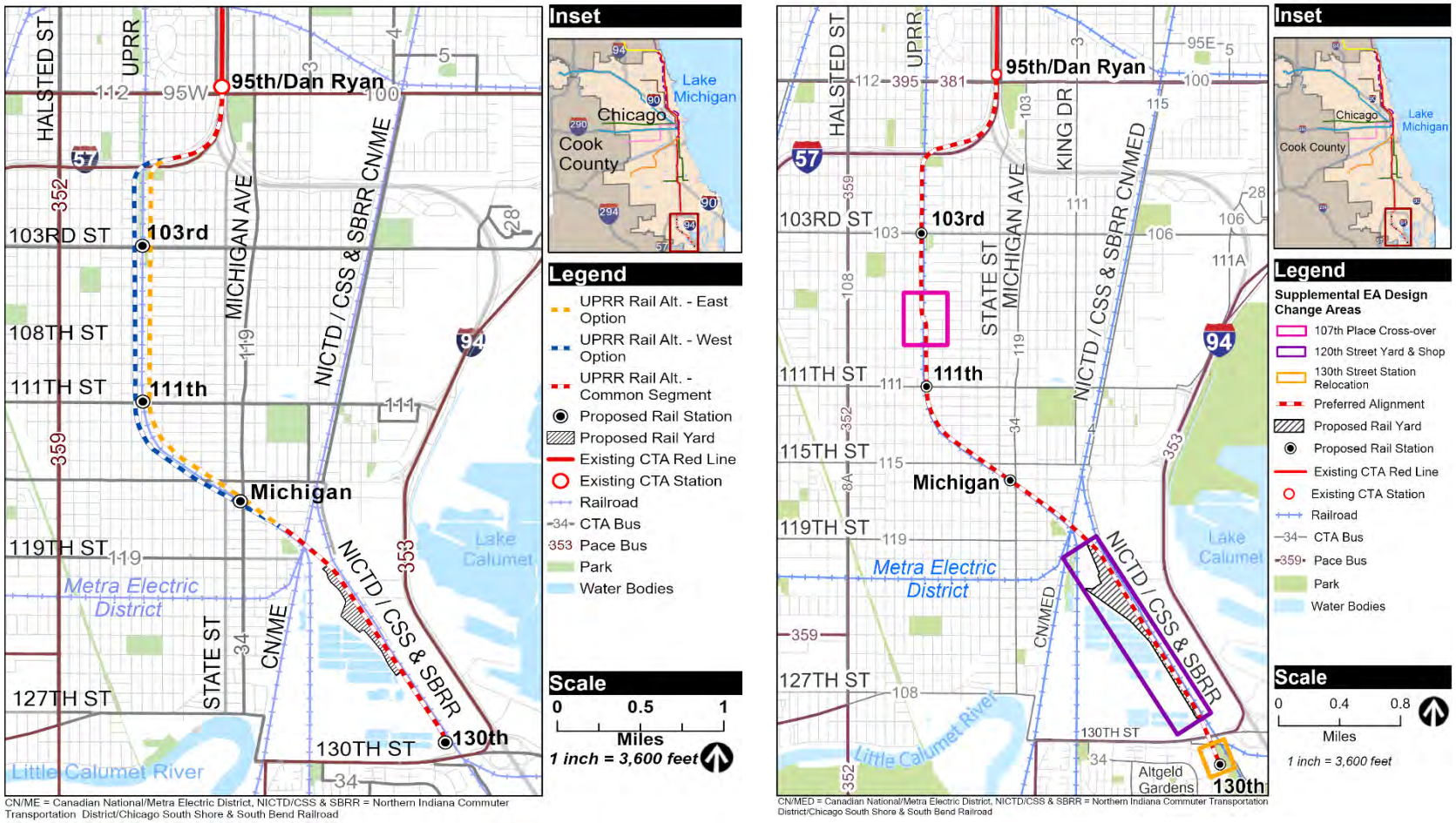


Figure 2-1: Left- East and West Options of the UPRR Rail Alternative (Draft EIS), Right- Preferred Alignment (Final EIS)

Section 3 - Methods for Impact Evaluation

Methods presented in **Appendix *X*** for the Draft EIS analysis have been carried forward to evaluate EJ. This section documents the methodology for evaluating this resource, consistent with the methodology used in the Draft EIS, and any methodological changes.

3.1 Regulatory Framework

There are no changes to the applicable federal or state regulations referenced in **Appendix X** of the Draft EIS. FTA issued its most recent guidance for meeting the requirements of EO 12898 as Circular 4703.1 in August 2012.

3.2 Impact Analysis Thresholds

There are no changes to the impact analysis thresholds referenced in **Appendix X** of the Draft EIS. As noted above, FTA issued its most recent guidance for meeting the requirements of EO 12898 as Circular 4703.1 in August 2012.

3.3 Area of Potential Impact

The geographic area of the API for analyzing permanent, construction, and cumulative impacts was established based on FTA Circular 4703.1 (August 2012), which recommends the following:

- Identifying the presence of distinct minority and/or low-income communities residing both within and in proximity to the RLE Project or activity.
- Identifying those minority and/or low-income groups that utilize or are dependent on natural resources and the human environment that could be potentially affected by the RLE Project.

Adverse impacts would be likely to occur within a ¼ mile radius of the RLE Project infrastructure, whereas beneficial impacts would accrue to a larger area of approximately ½ mile or more around station locations. Identification of EJ populations affected by the RLE Project was conducted pursuant to NEPA guidance (40 Code of Federal Regulations 1508) and FTA Circular 4703.1 (August 2012). For the purposes of locating EJ communities, all block groups within ½ mile of the Preferred Alignment right-of-way were included in the analysis, with the exception of selected block groups that do not have any population living within ½ mile of the Preferred Alignment right-of-way.

This methodology is consistent with the Draft EIS but results in a smaller area. While the Draft EIS included multiple alignments, this report focuses on the potential impacts of the Preferred Alignment on EJ populations. Therefore, comparisons between the EJ figures presented in the Draft

EIS and those presented in this report must consider both the changed parameters of this study and changing demographics in the City of Chicago.

3.4 Methods

The analysis of the Preferred Alignment's impact on EJ populations was performed using the same methods as were documented in the Draft EIS consistent with **Appendix X**. Updated data from the U.S. Census Bureau 2018 5-Year American Community Survey (ACS) were used to identify EJ populations. The API for EJ populations is defined as the area within ½ mile of the Preferred Alignment. All block groups within ½ mile of the Preferred Alignment right-of-way were included in the analysis, with the exception of selected block groups that do not have any population living within ½ mile of the Preferred Alignment right-of-way.

Section 4 - Affected Environment

This section describes any updates to the EJ populations near the RLE Project since the publication of the Draft EIS. This section documents updates to the baseline data and planning horizon.

4.1 Minority Populations

Consistent with the Draft EIS, this analysis defines a minority population as a population that meets one or both of the following descriptions:

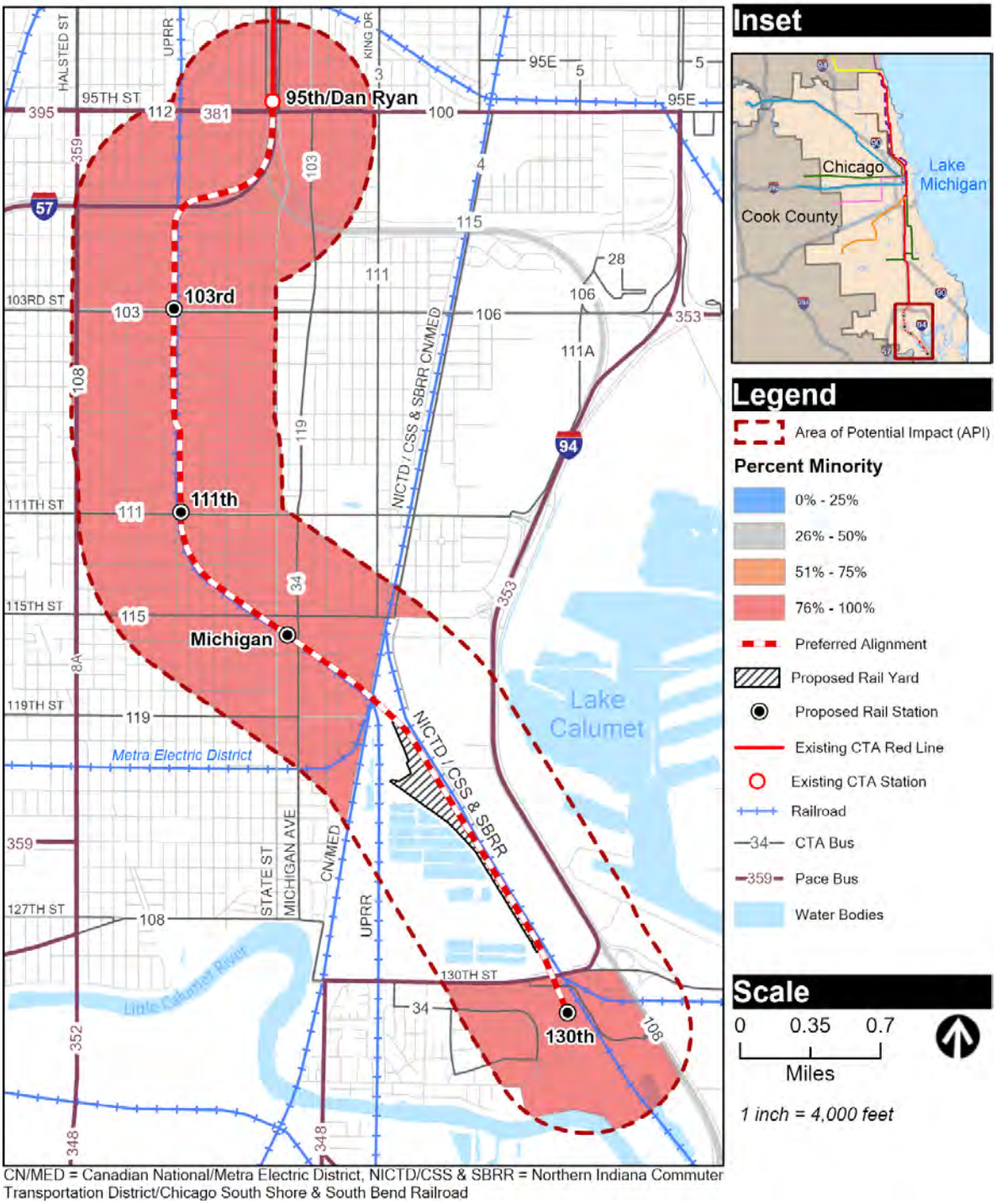
- Any readily identifiable group of persons and/or a community who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans), who experience common conditions of exposure or impact.
- A group consisting of persons classified by the U.S. Census Bureau as minority, including those persons of two or more races.

As shown in **Table 4-1**, the U.S. Census Bureau's 2018 5-Year ACS was used to identify minority population in the API as a whole and the specific affected communities in the API. Most of the populated portions of the API contain predominantly minority populations; the API population consists of 98.0 percent minority persons. The communities with the highest percentage of minority persons are West Pullman and Washington Heights, followed closely by Roseland and Riverdale. The community with the lowest percentage of minority persons is Pullman. **Figure 4-1** identifies the percent minority populations in the API at the census block level.

Table 4-1: Percent Minority Population

Area	Percent Minority
City of Chicago	67.2%
API	**98.0%**
Washington Heights	99.0%
Roseland	98.8%
West Pullman	99.3%
Pullman	90.1%
Riverdale	98.2%

Source: U.S. Census Bureau 2014-2018a.



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

[1] Block groups with no data have no population living within ½ mile of the Preferred Alignment right-of-way. No block groups have below 76% minority populations.

Figure 4-1: Percent of Minority Populations

The racial composition of the API is shown in **Table 4-2**. All communities in the API have a majority Black or African American population. The second largest ethnicity in the API is Hispanic.

Table 4-2: Racial Composition within the API

Area	White Alone	Hispanic	Black or African American Alone	American Indian/Native Alaskan Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Multiracial
City of Chicago	32.8%	29.0%	29.7%	0.1%	6.4%	0.0%	0.2%	1.8%
API	**2.0%**	**3.8%**	**92.3%**	**0.1%**	**0.2%**	**0.0%**	**0.5%**	**1.0%**
Washington Heights	1.0%	0.6%	96.9%	0.0%	0.1%	0.0%	0.0%	1.3%
Roseland	1.2%	1.2%	96.1%	0.1%	0.4%	0.0%	0.5%	0.5%
West Pullman	0.7%	5.7%	92.1%	0.1%	0.1%	0.0%	0.2%	1.2%
Pullman	9.9%	4.4%	83.5%	0.0%	0.1%	0.0%	0.1%	2.0%
Riverdale	1.8%	2.6%	95.3%	0.0%	0.3%	0.0%	0.0%	0.0%

Source: U.S. Census Bureau 2014-2018a

4.2 Low-Income Groups

The low-income classification remains the same as the Draft EIS: persons whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines. Median household income data in the 2018 5-year ACS are reported in 2018 dollars in order to compare the 2018 poverty guidelines. **Table 4-3** shows the U.S. Department of Health and Human Services 2018 Poverty Guidelines.

Table 4-3: U.S. Department of Health and Human Services 2018 Poverty Guidelines

People in Household	Income
1	$12,140
2	$16,460
3	$20,780
4	$25,100
5	$29,420
6	$33,740
7	$38,060
8	$42,380

Source: U.S. Department of Health and Human Services 2018

According to the 2014-2018 ACS, the median household income for the API was $39,529, which is less than the median household income for the City of Chicago ($55,198). **Table 4-4** shows the median household income in affected communities. Median household income for each block group within the API is shown in **Figure 4-2** (except four block groups for which data are unavailable due to a low volume of respondents). Since the Draft EIS, the median household income in the City of Chicago has increased by 17 percent. In contrast, the median household income for the new API decreased. The decrease in median income for households in the API can be attributed to re-defining the API to ½ mile within the Preferred Alignment. Some communities surrounding the API experienced a decrease in median household income (-4.5 percent in Roseland), while other communities experienced an increase (+7.3 percent in Washington Heights). The median income in Riverdale increased the most, more than 53 percent from the former median income of $11,181 when the Draft EIS was published.

Table 4-4: Median Household Income in Affected Community Areas

Area	Median Household Income
City of Chicago	$55,198
API	**$39,529**
Washington Heights	$52,212
Roseland	$40,032
West Pullman	$38,824
Pullman	$44,633
Riverdale	$17,097

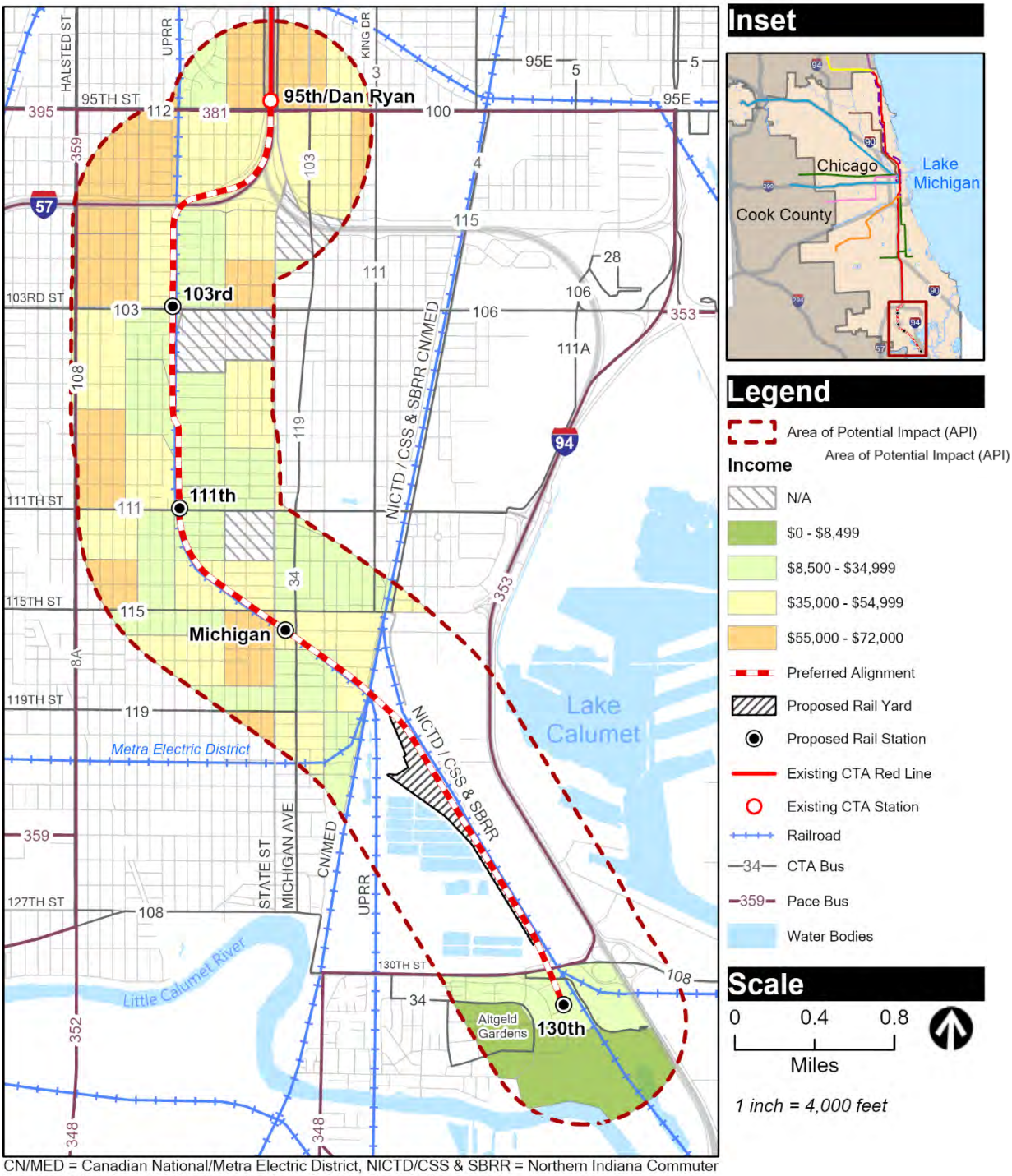
Source: U.S. Census Bureau 2014-2018b

According to the U.S. Department of Health and Human Services 2018 Poverty Guidelines, six block groups (out of 56) in the API have populations with median household income below poverty guidelines for the average household size. As shown in **Table 4-5**, three of those block groups are in Riverdale and three are in Roseland. **Figure 4-3** shows where these low-income block groups are located.

Table 4-5: Block Groups in the API with Populations below Poverty Level

Block Group	Median Household Income	Average Household Size	Community Area
Block Group 3, Census Tract 5401.01, Cook County, Illinois	$8,356	2.78	Riverdale
Block Group 2, Census Tract 4910, Cook County, Illinois	$17,237	3.81	Roseland
Block Group 2, Census Tract 5401.02, Cook County, Illinois	$17,719	2.87	Riverdale
Block Group 5, Census Tract 4910, Cook County, Illinois	$21,250	3.81	Roseland
Block Group 1, Census Tract 4914, Cook County, Illinois	$18,382	3.13	Roseland
Block Group 4, Census Tract 5401.01, Cook County, Illinois	$7,868	2.78	Riverdale

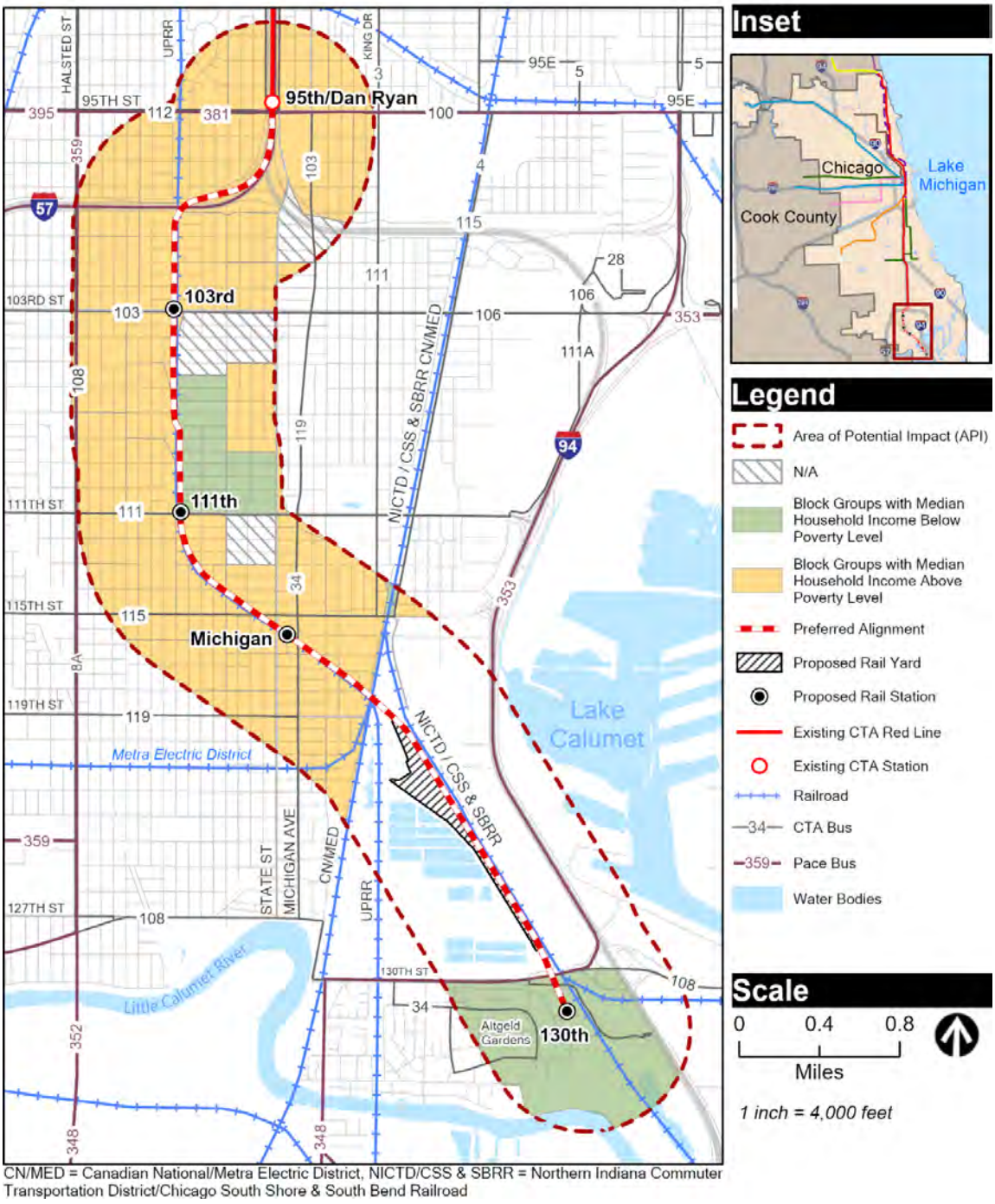
Note: Household size data not available at block group level.
Source: U.S. Census Bureau 2014-2018b, c



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

[1] No data are available for four block groups due to a low volume of census respondents.

Figure 4-2: Median Household Income



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

[1] No data are available for four block groups due to a low volume of census respondents.

Figure 4-3: Low-income Block Groups

As shown in **Table 4-6**, the unemployment rate for the entire API is nearly 23 percent. Since the Draft EIS, the unemployment rate has decreased in the City of Chicago, Washington Heights, and Pullman; however, unemployment rates have increased in the communities of Roseland, West Pullman, and Riverdale.

Table 4-6: Unemployment Rates in Affected Community Areas

Area	Draft EIS	Update
City of Chicago	12.0%	8.9%
API		**22.6%**
Washington Heights	18.8%	18.2%
Roseland	21.2%	22.9%
West Pullman	18.5%	23.4%
Pullman	21.4%	16.8%
Riverdale	34.8%	33.3%

Source: U.S. Census Bureau 2014-2018d

According to the 2018 5-Year ACS, the median home value in the City of Chicago was approximately $246,500, and the median rent was $930. Home values and rental prices in the API and surrounding community areas are lower than the City of Chicago, as shown in **Table 4-7**.

Table 4-7: Housing Costs in Affected Community Areas

Area	Median Home Value	Median Monthly Rent
City of Chicago	$246,500	$930
API	**$117,792**	**$807**
Washington Heights	$143,891	$913
Roseland	$123,015.00	$862.55
West Pullman	$105,809	$780
Pullman	$125,029	$783
Riverdale	$68,267	$474

Source: U.S. Census Bureau 2014-2018e, f

4.3 Limited English Proficiency Groups

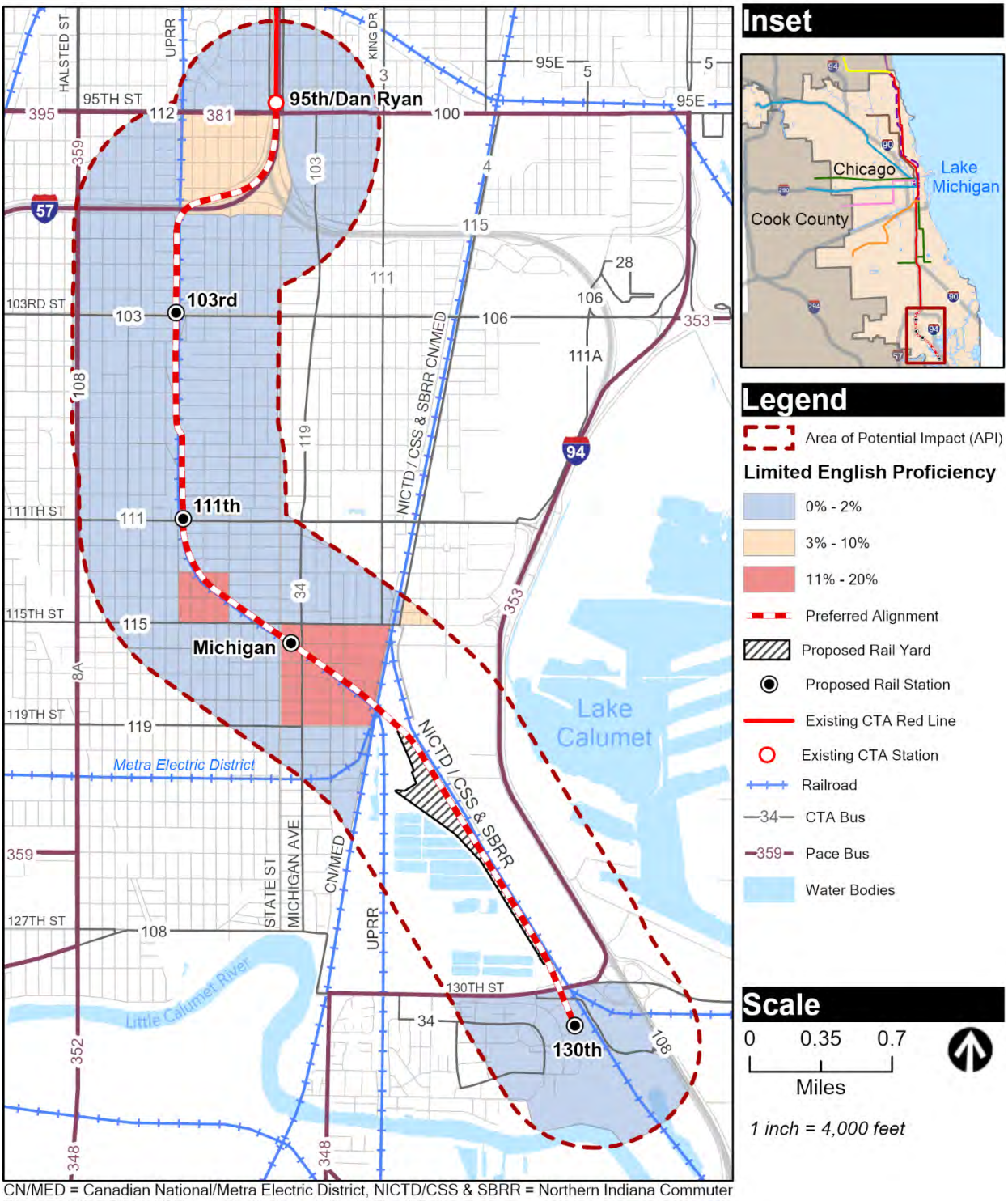
Limited English Proficiency (LEP) persons are defined as individuals for whom English is not their primary language and who have limited ability to read, write, speak, or understand English. Similar to the Draft EIS, the majority of households in the API speak English, with Spanish as the second most common language spoken at home. **Table 4-8** displays the languages spoken at home within the City of Chicago, the API, and the surrounding communities. The study area around the Preferred Alignment no longer includes some of the block groups from the Draft EIS with the

highest percentage of LEP populations. **Figure 4-4** identifies the percentage of LEP populations in the API.

Table 4-8: Languages Spoken at Home within the Affected Community Areas

Area	English	Spanish	Other Indo-European Languages	Asian or Pacific Island Languages	Other Languages
City of Chicago	66.3%	19.9%	7.6%	4.4%	1.8%
API	**93.2%**	**5.0%**	**1.1%**	**0.3%**	**0.5%**
Washington Heights	97.6%	1.0%	1.1%	0.3%	0.0%
Roseland	95.0%	2.2%	1.5%	0.5%	0.7%
West Pullman	90.9%	7.0%	1.2%	0.0%	0.9%
Pullman	92.7%	4.2%	2.5%	0.0%	0.6%
Riverdale	96.7%	2.7%	0.0%	0.3%	0.4%

Source: U.S. Census Bureau 2014-2018i



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

Figure 4-4: Limited English Proficiency Population

4.4 Older Adults

According to the 2018 5-year ACS, 15.5 percent of the population in the API is older adults, defined as 65 years of age and older. As shown in **Table 4-9**, the areas with the highest percentage of older adults are Washington Heights (19.9 percent) and Roseland (17.3 percent). Riverdale (4.9 percent) is the only community area with a percentage of older adults lower than the City of Chicago (12.0 percent). **Figure 4-5** shows the percentage of older adults living in the API.

Table 4-9: Percentage of Population 65 Years and Older in Affected Communities

Area	Percent of Population
City of Chicago	12.0%
API	**15.5%**
Washington Heights	19.9%
Roseland	17.3%
West Pullman	14.7%
Pullman	15.8%
Riverdale	4.9%

Source: U.S. Census Bureau 2014-2018g

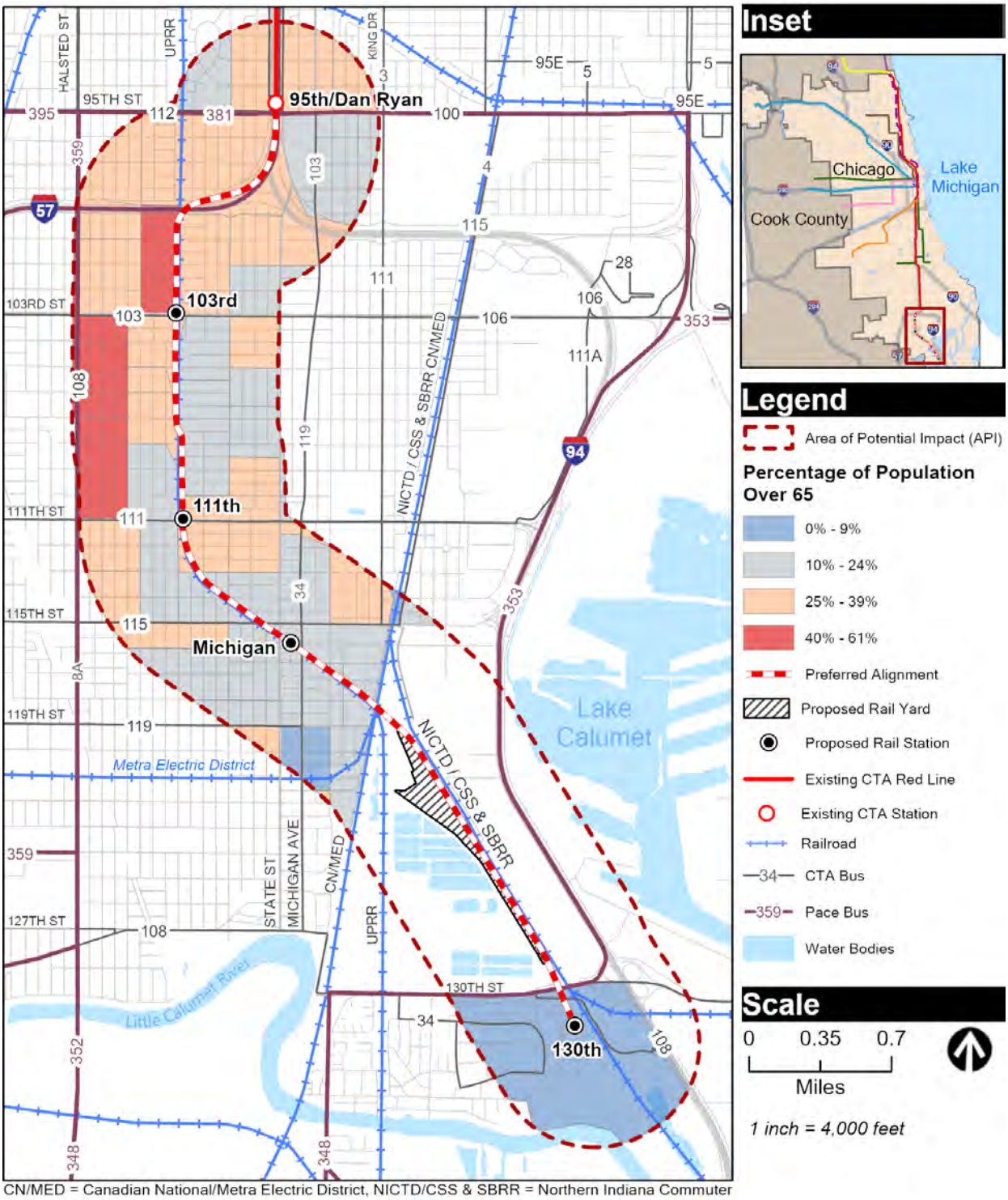


Figure 4-5: Percentage of Population 65 Years and Older in API

4.5 Persons with a Disability

According to the 2018 5-Year ACS, the percentage of people with a disability in the API is approximately 16 percent. This figure is considerably lower than the API for the Draft EIS, which reported 24.8 of the population with a disability. However, the percentage of the population with a disability is higher in the API than the City of Chicago. **Table 4-10** shows the percentage of the population with a disability in the API and affected communities. **Figure 4-6** shows the percentage of the population with a disability at the census tract level, although disability data are not available at the block group level.

Table 4-10: Percentage of Population with a Disability

Area	Percentage of Population with Disabilities	Percentage of Male Population with a Disability	Percentage of Female Population with a Disability
City of Chicago	10.5%	9.7%	11.2%
API	**16.0%**	**15.1%**	**16.0%**
Washington Heights	17.0%	17.0%	17.0%
Roseland	17.2%	16.4%	17.8%
West Pullman	13.7%	13.3%	14.0%
Pullman	18.3%	14.8%	21.3%
Riverdale	8.2%	6.3%	9.3%

Source: U.S. Census Bureau 2014-2018h
Note: Data not available at block group level.

4.6 Identification of Environmental Justice Populations

The API was evaluated in the above subsections using census tract and block group level data. Based on field observations and research, these geographic boundaries do not artificially dilute or inflate the affected minority population and/or low-income population findings. Every affected community in the API comprises mostly minority populations, ranging from Pullman with 90.1 percent minority population to West Pullman with 99.3 percent minority population. The API has a median household income ($39,529) that is lower than the citywide median ($55,198), and some communities have an even lower median income, such as Riverdale ($17,097). The API and surrounding communities also experience a higher unemployment rate than the citywide average. There are a higher percentage of older adults and persons with a disability in the API compared to the citywide average as well.

These findings are similar to those presented in the Draft EIS. Compared to Chicago as a whole, the API has a lower median household income, higher unemployment rate, higher percentage of minority communities, and a higher percentage of population over the age of 65. As such, the

analyzed demographic data indicate that the entire API and surrounding communities are made up of EJ communities.

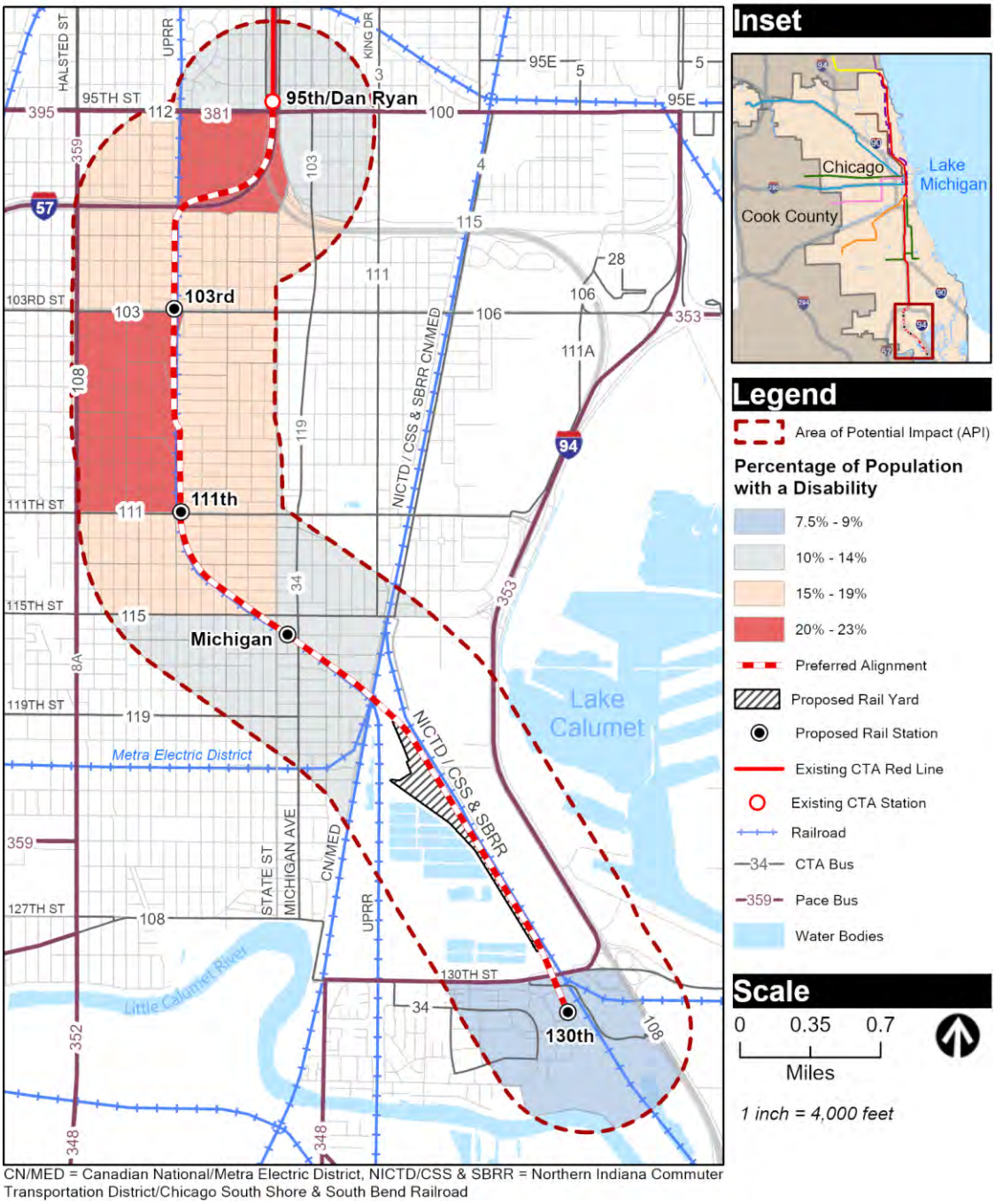


Figure 4-6: Percentage of Population with a Disability

Section 5 - Impacts and Mitigation

Consistent with the Draft EIS, the impacts and mitigation summaries are organized into three impact categories—permanent, construction, and cumulative—with references to affected communities (see **Figure 1-1**).

- Permanent impacts relate to system operations after the RLE Project has been constructed, as well as land acquisitions necessary for the permanent right-of-way.
- 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.
- Cumulative impacts are those of the RLE Project combined with other past, present, or near future projects within the API.

This section also documents the new or revised mitigation measures for identified project impacts, where applicable. If there is no change in the mitigation measures, this section indicates where there is no change when compared to the East or West Options of the UPRR Alternative evaluated in the Draft EIS. Likewise, this section indicates what additional (or fewer) measures apply to the Preferred Alignment. More detailed information about mitigation measures can be found in the respective resource sections of the Final EIS.

5.1 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 is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of implementing the Preferred Alignment.

As described in **Appendix X** in the Draft EIS, the No Build Alternative would have no adverse impacts within EJ communities. The EJ communities in the API are, however, currently underserved by the CTA rail system compared to many other parts of Chicago, and the No Build Alternative would lack the beneficial increase in livability and economic development that the RLE Project would provide.

5.2 Union Pacific Railroad Alternative - Preferred Alignment

The August 2012 FTA Circular 4703.1, Environmental Justice Policy Guidance for Federal Transit Administration, and subsequent FTA webinar presentations indicate that projects in areas consisting entirely of EJ communities do not necessarily preclude disproportionately high and adverse effect findings; however, the following characteristics are true of the API:

- The entire API is predominantly minority populations. No community area contains less than 90.1 percent minority populations and the API as a whole contains 98.0 percent minority populations.
- All of the impacts and benefits of the Preferred Alignment would accrue to the same minority populations, and few project benefits would occur outside the API.
- The purpose of this community-initiated project includes connecting disadvantaged communities to Chicago's major employment and activity centers in an effort to spur economic development and improve livability. The RLE Project would help remediate the geographic isolation and lack of employment and development opportunities that currently exist in the API.

Given these findings, the Preferred Alignment would not result in disproportionately high and adverse impacts on EJ communities, consistent with findings presented in the Draft EIS. To provide a complete picture of how the Preferred Alignment would affect EJ communities, this section summarizes the adverse impacts that would occur in EJ communities, as well as the associated mitigation measures.

5.2.1 Permanent Impacts and Mitigation – Preferred Alignment

5.2.1.1 Resources with No Adverse Permanent Impacts

- Air Quality: No adverse air quality impacts from carbon monoxide, greenhouse gases, particulate matter with an aerodynamic diameter of 2.5 micrometers and less, or mobile source air toxics are anticipated. Because the Preferred Alignment would divert passenger trips to the Red Line, regional emissions from motor vehicles would decrease.
- Historic and Cultural Resources: The APE includes 73 historic properties eligible for listing on the National Register of Historic Places (NRHP). A complete listing and evaluation of NRHP eligibility can be found in **Appendix Q**. No adverse effects on historic properties are anticipated to occur.

- Energy: Compared to existing conditions, energy consumption would increase to operate Red Line trains and the four new stations. The increase in energy demand would not be adverse, as it is not expected to affect local or regional energy availability or require the development of new sources. Some beneficial reduction in fuel consumption would occur because the RLE Project would cause motorists to begin using transit for some trips.

- Geology and Soils: Operation of the Preferred Alignment would not cause adverse changes to geology or soil resources.

- Cumulative: No adverse cumulative impacts are expected.

5.2.1.2 Resources with No Adverse Permanent Impacts after Mitigation

- Biological Resources: Permanent impacts on vegetation and wildlife habitat under the Preferred Alignment would include removal of up to 64.1 acres of trees. Tree removal mitigation measures would be required, as defined in the Draft EIS, including following local tree ordinances and nesting bird surveys.

- Displacements: The Preferred Alignment would require 228 parcel acquisitions and 97 building displacements. The permanent impacts would not be adverse, because of compensation and relocation assistance per the Uniform Act (42 USC § 4601, et seq.), the general availability of vacant land near the project, the beneficial impacts of the project, and new development opportunities in the vicinity of the project.

- Hazardous Materials: Implementation of the Preferred Alignment would result in beneficial impacts through the cleanup and/or removal of contaminated material. Without implementation of the Preferred Alignment, this cleanup and removal would occur either at a later date or not at all. The Preferred Alignment also has the potential for hazardous material impacts associated with adjacent freight rail lines. Although there would be no permanent adverse impacts related to hazardous materials, CTA would adhere to all applicable federal, state, and local regulations, as well as existing system-wide hazardous material usage, storage, and disposal plans and procedures, which would further minimize the potential for hazardous material impacts.

- Land Use and Economic Development: The Preferred Alignment would cause displacements as a result of construction of the track structure and park & ride facilities. With the compensation and relocation assistance to be provided, the displacement impacts would not be adverse after mitigation. Facilities would be designed to be compatible with surrounding uses. Implementation of the Preferred Alignment could foster economic benefits by providing new public transit options and opportunities for economic

development. CTA has completed a Transit-Supportive Development (TSD) plan that would help minimize adverse impacts due to incompatible land use types resulting from the RLE Project.

- Noise and Vibration: Without mitigation, the Preferred Alignment would result in noise impacts at a total of 369 residences, with moderate impacts at 278 residences and severe impacts at 91 residences. A noise barrier with a minimum height of 3.5 feet above the top-of-rail elevation would provide a noise reduction of up to 15 decibels for RLE Project train noise. The noise barrier would mitigate all severe noise impacts, but 15 moderate noise impacts would remain after mitigation along the corridor. No noise impacts are projected at any noise-sensitive institutional locations after noise mitigation. Vibration levels would be below the FTA impact criterion, and there would be no vibration impacts from RLE train operations. No adverse noise or vibration impacts would remain after mitigation.

- Parklands and Community Facilities: Of the 10 parklands within the API, the Preferred Alignment would permanently affect two parklands: Fernwood Parkway and Beaubien Woods Forest Preserve. The visual impacts due to removal of vegetation on Fernwood Parkway would be mitigated. After mitigation, these impacts on Fernwood Parkway would still remain; however, they would not be adverse. The elevated track structure and the 103rd Street station would be constructed over a portion of Fernwood Parkway from 99th Street to 103rd Street between the existing UPRR tracks on the east and Eggleston Avenue on the west. The impacts from reduction in open space in Fernwood Parkway would be mitigated with 4.5 acres of replacement park in the form of pocket parks within the Washington Heights community and along the Major Taylor Trail. These pocket park sites would be directly adjacent to the Major Taylor Trail, or additional areas based on future coordination with the Chicago Park District. The 130th Street station access road requires closure of Old 130th Street at the new RLE track crossing. Old 130th Street provides an existing connection to the Beaubien Woods Forest Preserve access road east of the new RLE at-grade track crossing. Closure of Old 130th Street would eliminate the access road connection into the Beaubien Woods Forest Preserve from Old 130th Street. However, the main access route to the Beaubien Woods Forest Preserve would continue to be from Ellis Avenue to Greenwood Avenue to 132nd Street. After mitigation and enhancement measures, coordinated with the Forrest Preserves of Cook County, no adverse impacts to Beaubien Woods Forest Preserve are anticipated. The *Parklands and Community Facilities Technical Memorandum* (**Appendix M**) contains a full listing of the community and park resources. The number of community resources has been updated to reflect resources within the API of the Preferred Alignment. There are 101 community facilities within the API of the Preferred Alignment compared to 76 community facilities within the API for the East and West Options in the Draft EIS. They included: 62 religious facilities, 12 schools, six community centers, three fire

stations, four healthcare centers or hospitals, one library, nine landmarks, and five government facilities. By improving travel time, the Preferred Alignment would improve access to parklands and community facilities within walking distance (½ mile) of station locations when compared to the No Build Alternative. After mitigation, there would be no adverse construction/permanent impacts on any of the parklands or community facilities.

- Safety and Security: A large volume of pedestrians would be expected to cross the major streets near the stations without positive traffic control. This would be an adverse impact on pedestrian safety without additional improvements or mitigation measures. The final design of the four RLE stations would include appropriate improvements to enhance safety for crossing pedestrians, resulting in no permanent adverse impacts after mitigation. All potential improvements would be coordinated with CDOT. The Preferred Alignment would improve safe access for transit users. New train stations would be unlikely to have much, if any, impact on neighborhood crime. Mitigation measures would include lighting under the elevated structure in station, parking, and on CTA right-of-way to contribute to improved safety and security, and to improve surveillance visibility.

- Water Resources: The Preferred Alignment would not cross any waterbody or result in any new structures or construction in a waterbody. No permanent adverse impacts are anticipated on the Illinois coastal zone. The Preferred Alignment would not cross a floodplain or result in any new structures or construction in a floodplain. The Preferred Alignment would affect up to 15.7 acres of wetlands, primarily in the vicinity of the 120th Street yard and shop. All federal, state, and local regulations regarding wetland impacts would be adhered to, which may require compensatory mitigation of wetland impacts.

- Transportation: During peak travel times, the Preferred Alignment would increase traffic congestion beyond applicable thresholds at some intersections, largely due to cars accessing the park & ride facilities at stations. CTA has provided RLE Project traffic analysis to agencies of jurisdiction through ongoing coordination and recommended improvements as documented in the Final EIS through 30 percent design. CTA would coordinate intersection improvements with Illinois Department of Transportation, Chicago Department of Transportation, and Cook County Department of Transportation and Highways for intersections affected by the change in traffic volumes and patterns associated with the final design of the RLE Project. However, the mitigation measures would be based on actual (measured) traffic volumes, agency requirements, coordination within the traffic network, and any traffic demand management and/or traffic calming measures being implemented at the time of mitigation. The park & ride facilities may also draw some motorists away from nearby highways, thereby improving traffic flow for automobiles and freight trucks. The Preferred Alignment would not affect freight rail operations. CTA would coordinate with

Pace Suburban Bus Service and existing bus routes would be adjusted to interface better with the RLE stations and service. Pedestrian and bicycle access would also be included in the final design of the RLE Project, which would improve transit connections. Transit access to the API would improve, particularly for low-income residents who do not have access to automobiles.

5.2.1.3 Resources with Adverse Permanent Impacts after Mitigation

- Visual and Aesthetic Conditions: Due to the proximity and height of the elevated structure and stations near residential areas, impacts on visual and aesthetic conditions would remain adverse after mitigation. The Preferred Alignment would have permanent adverse visual and aesthetic impacts north of I-57, between 99th Street and the 103rd Street station area, near the 107th Place cross-over, at 117th Street and Prairie Avenue, and at the 130th Street station, despite implementation of mitigation measures. Mitigation measures to reduce visual impacts would include landscaping (trees), using urban design techniques to reduce adverse impacts, and creating pedestrian-friendly surroundings.

- Neighborhood and Community Impacts: The Preferred Alignment would have permanent adverse impacts on community character and cohesion that could not be mitigated due to the visual encroachment of the elevated structure into adjacent neighborhoods. Because of the relocated 130th Street station, the residential character and scale would be noticeably altered by the removal of vegetation and the addition of the park & ride facility and station for the residences that front on Greenwood Avenue. However, the RLE Project would allow residents to easily access community resources in other neighborhoods and could serve as a focal point for the development of additional community resources. The Preferred Alignment would improve transit accessibility and provide residents with fast, reliable transit service to job centers to the north and areas where more services are available. The Preferred Alignment would reduce travel times for communities surrounding the API and would enhance their connection with major job and activity centers north of the API.

5.2.1.4 Changes to Adverse Permanent Impacts and Mitigation since the Draft EIS

The Preferred Alignment, when compared to the options evaluated in the Draft EIS, would reduce adverse permanent impacts and the requirement for mitigation measures. Community input, as well as alignment refinement, has resulted in fewer impacts on EJ communities.

5.2.2 Construction Impacts and Mitigation - Preferred Alignment

5.2.2.1 Resources with No Adverse Construction Impacts

- Displacements: Because all construction activities would occur on land acquired for the permanent right-of-way, there would be no temporary displacement or relocation impacts associated solely with the construction phase.
- Historic and Cultural Resources: There would be no adverse effects on historic resources during construction.
- Energy: The construction activities would not require fuel consumption and energy use at a scale that would adversely affect energy availability and would not require development of new energy sources. No adverse impacts would occur.
- 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.
- Cumulative: No adverse cumulative impacts are expected to occur. There are not currently any foreseeable nearby projects of sufficient magnitude to cause impacts that would be under construction at the same time as RLE Project. Should such a project occur, CTA would coordinate construction activities to minimize impacts.

5.2.2.2 Resources with No Adverse Construction Impacts After Mitigation

- Air Quality: Impacts during construction would be associated with temporary and localized emissions of fugitive dust and exhaust from construction vehicles and equipment. Construction air emissions under the Preferred Alignment would be similar to the East Option and West Option in the Draft EIS. Construction mitigation measures would include best management practices (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 on air quality would not be adverse after mitigation.

- Noise and Vibration: Construction noise levels are not expected to exceed the FTA construction noise limits, with mitigation measures to limit nighttime construction and impact pile driving near noise-sensitive receivers. Construction-related vibration impacts are not expected. Construction BMPs would be used to reduce noise and vibration.

- Biological Resources: The Preferred Alignment would potentially have adverse impacts on vegetation and wildlife habitat during construction due to tree removal. Compliance with local tree protection ordinances would mitigate the impacts of tree removal. As needed, mitigation measures to reduce potential impacts on wildlife habitat would be performed, including replanting trees as required by applicable local codes and ordinances, lighting restrictions for the protection of wildlife associated with Lake Calumet, and timing tree removal for the protection of migratory birds, northern long-eared bat, and the osprey.

- Hazardous Materials: Construction would require the demolition of existing structures that were likely constructed before 1978–1979, which 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. Construction-related impacts would not be adverse after the implementation of BMPs and standard practices, such as following the local, state, and federal laws regarding handling of hazardous materials. Detailed information about mitigation can be found in the Final EIS.

- Land Use and Economic Development: Construction would take up to 5 years and would cause temporary impacts on adjacent residential neighborhoods due to noise, vibration, fugitive dust, truck traffic, and roadway detours. Mitigation methods would include focusing construction activities primarily during the least impactful times of day and other BMPs. CTA would develop a Construction Outreach and Coordination Plan. CTA would also coordinate with the communities, businesses, and aldermen's local ward offices, and contractors performing primary construction activities to finalize and implement a Construction Outreach and Coordination Plan. There would be short-term beneficial economic impacts from construction jobs. The land use impacts from construction would not be adverse after mitigation. The overall economic development impact from construction would be beneficial.

- Neighborhood and Community Impacts: Construction activities would cause temporary impacts such as noise, vibration, dust, truck traffic, and roadway detours. Impacts on the EJ communities would not be adverse provided that BMPs were employed and nighttime construction near residences was limited to the extent practicable. Storage of materials,

equipment, and trucks would introduce temporary intermittent visual impacts within communities, but these impacts would not be adverse given their temporary nature and CTA's use of BMPs. Construction would be temporary, and major activities would be scheduled so as not to conflict with community events to the extent possible. This potentially adverse impact would be mitigated through early notification of construction activities, provision of temporary alternate access routes, and advertising programs to increase the visibility of affected businesses during construction.

- Parklands and Community Facilities: The adverse impacts would be mitigated using construction BMPs, clearly marked detour routes, and notification to nearby schools and community centers regarding the construction schedule.

- Safety and Security: Impacts on emergency services, including access to the construction site and travel around the site, would not be adverse after mitigation, which would include minimizing detour lengths. CTA would prepare traffic management and maintenance of traffic plans that identify traffic detours and emergency response access routes.

- Visual and Aesthetic Conditions: Construction-related visual impacts would include construction fencing, demolition of existing buildings, temporary street closures and related signage, temporary lighting or entrances, and/or shoring of concrete structures or existing viaducts. 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. There would be no adverse construction impacts after mitigation.

- Water Resources: There would be no adverse construction impacts on water resources after mitigation. Stormwater drainage mitigation measures would include incorporating new stormwater management structures and establishing an erosion control plan, including for construction activities at the locations of park & ride facilities. Water quality mitigation measures would include installing properly designed and maintained biological oil and grease removal systems, proper storage of hazardous materials, development and maintenance of an effective monitoring and cleanup program for spills and leaks of hazardous materials, proper storage and maintenance of equipment, periodic removal of landscape and construction debris, installation of detention basins to remove suspended solids, and regular monitoring of runoff water quality. 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.

Construction staging areas would be sited outside of wetlands as much as practicable. Any areas temporarily impacted would be restored to pre-construction condition after construction.

- Transportation: Construction of rail facilities, parking structures, and park & ride facilities would require lane and sidewalk closures that would temporarily reduce roadway capacity. These closures may lead to temporarily increased travel times for both motorists and transit riders, and bus stop locations may be temporarily relocated. Bicycles and pedestrians would need to be rerouted around work areas. Detours would be provided to maintain access, and closures would be scheduled during low-traffic periods to the extent feasible to minimize impacts. Construction would also be phased to minimize disruption to passenger and freight rail services. CTA would require contractors performing primary construction activities to sequence the proposed structure construction in the vicinity of the I-94/I-57 interchange to limit effect on I-57 traffic flow to the extent practicable per IDOT traffic management requirements. The UPRR freight tracks would remain active during construction. Temporary intermittent track closures may be needed; however, construction would be staged to minimize disruption. With adherence to established construction management guidelines for rerouting traffic and transit service, no adverse construction impacts would occur after mitigation.

5.2.2.3 Resources with Adverse Construction Impacts After Mitigation

No adverse construction impacts would remain after mitigation.

5.2.2.4 Changes to Construction Impacts since the Draft EIS

Construction impacts and mitigation measures are consistent with those presented in the Draft EIS.

5.2.3 Cumulative Impacts and Mitigation - Preferred Alignment

No cumulative adverse impacts are expected. This is consistent with the Draft EIS.

Section 6 - Impacts Remaining after Mitigation

This section describes the permanent impacts of the RLE Project remaining after mitigating for impacts as described in **Section 5**.

6.1 No Build Alternative

Consistent with the findings of the Draft EIS, there would be no adverse impacts on EJ communities as a result of the No Build Alternative.

6.2 Union Pacific Railroad Alternative - Preferred Alignment

The Preferred Alignment reduces the amount of adverse permanent impacts on EJ communities, compared to East and West Options presented in the Draft EIS. However, despite mitigation efforts, adverse permanent impacts would occur in the API.

6.2.1 Resources with Adverse Permanent Impacts after Mitigation

The Preferred Alignment would have adverse impacts remaining after mitigation in the following categories:

- Visual and Aesthetic Conditions (related to community visual character)
- Neighborhood and Community Impacts (related to community visual character)

Impacts and benefits would occur entirely within the same minority and low-income communities. As such, no disproportionately high and adverse effects on minority or low-income communities would occur.

6.2.2 Resources with Adverse Construction Impacts After Mitigation

No adverse construction impacts would remain after mitigation.

6.2.3 Resources with Cumulative Impacts After Mitigation

No cumulative adverse impacts are expected. This is consistent with the Draft EIS.

Section 7 - 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 October 28, 2020.

U.S. Census Bureau. 2011-2015. 5-Year American Community Survey (ACS), Table 16002, Household Language by Household Limited English Speaking Status. Accessed at https://data.census.gov/. Accessed on December 28, 2020.

U.S. Census Bureau. 2014-2018a. 5-Year American Community Survey (ACS), Table B03002, Hispanic or Latino Origin by Race. Accessed at https://data.census.gov/. Accessed on December 28, 2020.

U.S. Census Bureau. 2014-2018b. 5-Year American Community Survey (ACS), Table B019013, Median Household Income in the Past 12 Months (in 2015 Inflation-adjusted Dollars). Accessed at https://data.census.gov/. Accessed on December 28, 2020.

U.S. Census Bureau. 2014-2018c. 5-Year American Community Survey (ACS), Table S1101, Households and Families. Accessed at https://data.census.gov/. Accessed on December 28, 2020.

U.S. Census Bureau. 2014-2018d. 5-Year American Community Survey (ACS), Table B23025, Employment Status for the Population 16 Years and Over. Accessed at https://data.census.gov/. Accessed on December 28, 2020.

U.S. Census Bureau. 2014-2018e. 5-Year American Community Survey (ACS), Table B25077, Median Value (Dollars). Accessed at https://data.census.gov/. Accessed on December 28, 2020.

U.S. Census Bureau. 2014-2018f. 5-Year American Community Survey (ACS), Table B25058, Median Contract Rent (Dollars). Accessed at https://data.census.gov/. Accessed on December 28, 2020.

U.S. Census Bureau. 2014-2018g. 5-Year American Community Survey (ACS), Table B01001, Sex by Age. Accessed at https://data.census.gov/. Accessed on December 28, 2020.

U.S. Census Bureau. 2014-2018h. 5-Year American Community Survey (ACS), Table B18101, Sex by Age by Disability Status. Accessed at https://data.census.gov/. Accessed on December 28, 2020.