



Appendix G3. Acquisitions and Displacements/Economic Assessment Technical Report



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Acquisitions and Displacements/ Economic Assessment Technical Report

West Lake Corridor Project

Federal Transit Administration
and
Northern Indiana Commuter
Transportation District

March 2018



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Appendices

Appendix A. Maps of Acquisitions



Acronyms and Abbreviations

ACS	American Community Survey
BEA	Bureau of Economic Analysis
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National Railway
CRP	<i>2040 Comprehensive Regional Plan</i>
CSX	CSX Transportation
DEIS	Draft Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GRP	Gross Regional Product
IHB	Indiana Harbor Belt
MED	Metra Electra District (system)
MSA	metropolitan statistical area
NEPA	National Environmental Policy Act
NICTD	Northern Indiana Commuter Transportation District
NIRPC	Northwestern Indiana Regional Planning Commission
O&M	Operation and Maintenance
Project	West Lake Corridor Project
RIMS	Regional Input-Output Modeling System
ROW	right-of-way
SSL	South Shore Line
TAZ	Traffic Analysis Zone
TOD	transit-oriented development
TPSS	traction power substation
USC	United States Code



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Executive Summary

The West Lake Corridor Project (Project) is sponsored by the Northern Indiana Commuter Transportation District (NICTD) to expand its commuter rail service through an approximate 9-mile southern extension, creating a new passenger rail service to the municipalities of Dyer, Munster, and Hammond in Lake County, Indiana. This new service would provide rail access to downtown Chicago. The Project would also expand service coverage, improve mobility and accessibility, and stimulate local job creation and economic development opportunities for Lake County.

This Acquisition and Displacement Economic Technical Report has been prepared in support of the Final Environmental Impact Statement for the Project. The objective of this technical memorandum is to identify and assess the economic and fiscal impacts associated with construction and operation of the Project. The analysis is intended to evaluate the potential fiscal impacts associated with losses to the tax base due to property acquisitions and displacements required to construct the Project and potential economic impacts associated with the construction and operation of the Project.

The Project is not expected to increase or decrease population, housing, or employment from a regional perspective. However, it is anticipated to shift and focus where growth would occur. The FEIS Preferred Alternative would have a direct beneficial impact to access to employment opportunities, particularly for people who are transit-dependent, because the availability of options for commuting to work in downtown Chicago would improve. The FEIS Preferred Alternative complements the trend of job growth in downtown Chicago and expected limited job growth in the suburban communities of Dyer, Munster, and Hammond by connecting these areas. Additionally, the Project would provide a beneficial effect by creating more modes of access to developable land throughout the Project Area. In addition, the Project would be generally compatible with local and regional economic development plans (NIRPC 2006, 2011, 2014).

For the Project, the total taxable value of property that would be removed from the tax base after deductions is over \$8.4 million (2017 dollars), assuming a maximum deduction and assuming a minimum deduction. Based on the property tax rates for Lake County, assuming a maximum deduction, the annual revenue that would be lost under the Project would be \$343,922 (2017 dollars). All of the revenue loss is attributable to Lake County and amounts to 0.043 percent loss in the tax base. Therefore, the Project would not have any substantial negative fiscal impacts for Lake County.

For the Project Area, construction of the Project would result in approximately 4,257 construction job-years. Project related earnings are estimated to be \$198 million, or an average of \$46,700 per job-year. The effect of local operation and maintenance (O&M) spending for the Project is estimated at 56 local total O&M job-years and \$1.7 million in local annual wages and salaries (2017 dollars) and 164 local total O&M job-years and \$5.1 million annual wages in the larger economy. With implementation of the Project, the increased earnings would result in positive economic impacts to the local economy, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, thus creating additional consumer demand and jobs to meet that demand.



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1 Introduction

The Federal Transit Administration (FTA) and Northern Indiana Commuter Transportation District (NICTD) are conducting the environmental review process for the West Lake Corridor Project (Project) in Lake County, Indiana, and Cook County, Illinois, in accordance with the National Environmental Policy Act (NEPA) and other regulatory requirements. This report has been prepared in support of the Final Environmental Impact Statement (FEIS) for the Project. FTA is the federal lead agency and NICTD is the local project sponsor responsible for implementing the Project under NEPA.

1.1 Purpose of Report

The purpose of this report is to identify and assess the economic and fiscal impacts associated with construction and operation of the Project. The analysis is intended to evaluate the following:

- Potential fiscal impacts associated with losses to the tax base due to property acquisitions and displacements required to construct the Project
- Potential economic impacts associated with the construction and operation of the Project



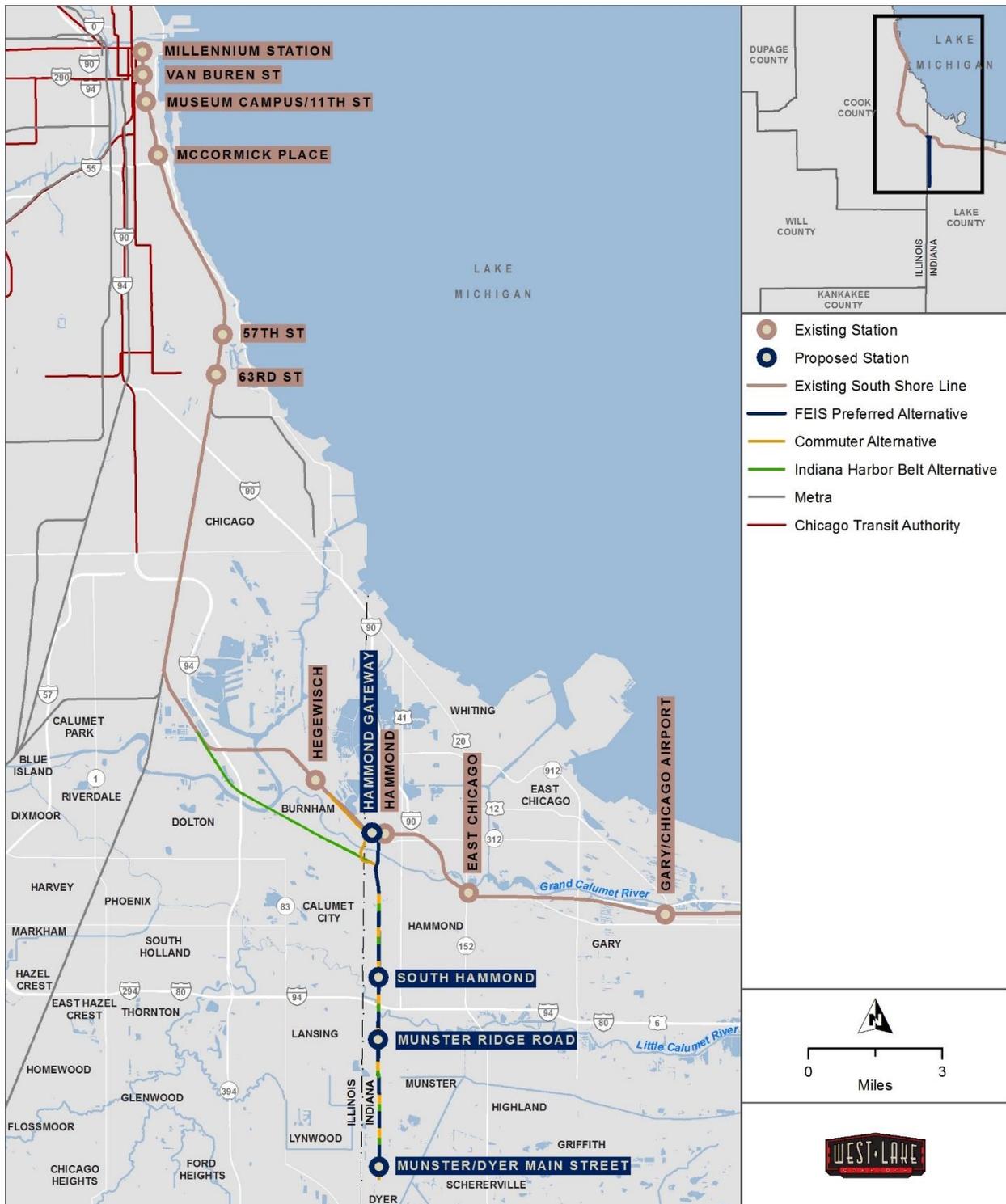
1.2 Project Overview

The environmental review process builds upon NICTD's prior West Lake Corridor studies that examined a broad range of alignments, technologies, and transit modes. The studies concluded that a rail-based service between the Munster/Dyer area and Metra's Millennium Station in downtown Chicago, shown in **Figure 1.2-1**, would best meet the transportation needs of the northwest Indiana area. Thus, NICTD advanced a Preferred Build Alternative (referred to as the FEIS Preferred Alternative) for more detailed analysis in the FEIS. NEPA also requires consideration of a No Build Alternative to provide a basis for comparison to the Build Alternative (see **Figure 1.2-2**).

1.2.1 No Build Alternative

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

Figure 1.2-1: Regional Setting for West Lake Corridor Project



Source: HDR 2017.



1.2.2 FEIS Preferred Alternative

The Project is an approximate 9-mile southern extension of the existing NICTD South Shore Line (SSL) between the town of Dyer and city of Hammond, Indiana. Traveling north from the southern terminus near Main Street at the Munster/Dyer municipal boundary, the Project would include new track operating at-grade on a separate right-of-way (ROW) to be acquired adjacent to the CSX Transportation (CSX) Monon Subdivision railroad in Dyer and Munster. The Project alignment would be elevated from 45th Street to the Canadian National Railway (CN) Elsdon Subdivision railroad at the Maynard Junction. North of the CN, the Project alignment would return to grade and join with the publicly owned former Monon Railroad corridor in Munster and Hammond, Indiana, and continue north. The Project would relocate the existing Monon Trail pedestrian bridge crossing over the Little Calumet River and build a new rail bridge at the location of the former Monon Railroad bridge. The Project alignment would cross under I-80/94 and continue north on the former Monon Railroad corridor to Sibley Street. From Douglas Street north, the Project would be elevated over all streets and railroads, using a combination of retaining walls, elevated structures, and bridges. The Project would terminate just east of the Indiana Harbor Belt railroad at the state line, where it would connect with the SSL. Project trains would operate on the existing MED line for the final 14 miles, terminating at Millennium Station in downtown Chicago.

Four new stations would be constructed along the alignment; Munster/Dyer Main Street, Munster Ridge Road, South Hammond, and Hammond Gateway Stations. Each station would include station platforms, parking facilities, benches, trash receptacles, bicycle racks, and other site furnishings. Shelter buildings would only be located at the Munster/Dyer Main Street and Hammond Gateway Stations.

The Project would include a vehicle maintenance facility with a layover yard and traction power substation (TPSS) to power the overhead contact system, located just south of the Hammond Gateway Station, west of Sheffield Avenue. Additional TPSSs would be located at the Munster/Dyer Main Street Station and the South Hammond Station parking lot. The TPSS would be enclosed to secure the electrical equipment and controls, with a footprint of approximately 20 feet by 40 feet.



2 Regulatory Setting

The Council on Environmental Quality (CEQ) is charged with implementation of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508). To address the NEPA responsibilities established by CEQ, the Federal Highway Administration (FHWA) and FTA issued regulations (23 CFR Part 771), Environmental Impact and Related Procedures. Subsequently, FHWA guidance complementing the regulations was issued in the form of a Technical Advisory (T.6640.8A), *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (1987). Section G5 of the Technical Advisory describes the assessment of foreseeable economic impacts. These include, but are not limited to:

- Regional and local economic impacts such as the effects of the project on development, tax revenues (property or retail), public expenditures, employment opportunities, and accessibility
- Impacts on established business districts, and any opportunities to minimize or reduce such impacts by the private or public sector

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



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3 Methodology

The economic impacts of each FEIS Preferred Alternative were identified for a combined Lake County, Indiana, and Cook County, Illinois, region. Fiscal impacts were identified individually for Lake County and Cook County, including the taxing entities for which each collects ad valorem property taxes. The following sections outline the method for estimating the economic and fiscal impacts for the Project.

3.1 Socioeconomics

The Project Area considered for the socioeconomic analysis is shown in **Figure 1.2-2** and includes the area within 0.5 mile on either side of the centerline of the proposed alignment. Socioeconomic demographic information was derived from the following sources using the most current data available, including:

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

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

3.2 Acquisitions and Displacements plus Fiscal Analysis

The annual lost tax revenue associated with potential property acquisitions due to ROW purchases, displacement, and relocation was determined by first identifying the actual properties that would be required for the Project. The property acquisitions that would be required under the FEIS Preferred Alternative were determined during preliminary engineering.

Assessing the impacts of property acquisitions helps form the basis to determine the residential and commercial displacements. The parcel data were generated by the Indiana Department of Homeland Security and accessed through Indiana Maps, which is hosted by Indiana University (Indiana Map 2016). The existing use of the property and whether part of the property or the full property would be acquired was determined. When assessing the number and size of full and partial acquisitions, the properties were grouped into three categories: Residential, Commercial, and Other. The Other category parcels include freight railroad property, industrial property, government offices, religious institutions, and charitable organizations.

Capital costs were developed for the Project and organized by FTA's Standardized Cost Categories. It is assumed that existing SSL vehicles would be acquired outside of the Project Area. Therefore, vehicles, in addition to ROW, are excluded from the total costs used to calculate impacts. ROW is excluded because it is a purchase of real property and there is no labor associated with this expenditure. **Table 3.3-2** shows the breakdown of capital costs for each of the Build Alternative Options.



Quantifying the amount and size of land that would be acquired for the Project helped to determine the impacts on the assessed value of the acquisitions and the associated lost tax revenue for the local counties. The assessed value of each property was taken from the Assessor’s Offices for Lake County, Indiana (Office of the Lake County Assessor 2015), and Cook County, Illinois (Cook County Assessor’s Office 2015). Acquisition type (full or partial), and percentage of parcel acquired, were based on the preliminary engineering ROW plans. For any parcel labeled as a full acquisition, 100 percent of the parcel was assumed to have been acquired. For full acquisitions, the total assessed value was used to determine the tax revenue lost. For partial acquisitions, the value of the land¹ and the percentage acquired was used to determine tax revenue lost. The assessed value of properties that are exempt from paying taxes, such as religious institutions, were not included in the calculated total taxable value lost from the tax base due to ROW acquisitions.

The 2015 assessed value of the acquisitions that would be required for each alternative and the tax rates for each county were used to estimate the annual property tax revenues lost. However, to be conservative, the total assessed value lost from the tax base does not reflect the deductions that were available to eligible properties. **Table 3.2-1** shows the tax rates used to derive revenues lost. Because 2015 Cook County tax rates were unavailable at the time of the analysis, 2014 tax rates were used (Cook County Clerk 2014) and it was assumed that they would remain the same in 2015.

Table 3.2-1: 2016 Tax Codes and Rates for All Properties

Location	Tax Code	Taxing District	Tax Rate (Per \$100 Assessed)
Lake County, Indiana	23	Hammond Corp (North)	4.7641
	27	Munster Corp (North)	3.2253
	34	Dyer Corp (Saint John)	2.3502
Cook County, Illinois	37023	Town of Thornton	20.841
	37024	Town of Thornton	19.174
	37025	Town of Thornton	23.577
	37026	Town of Thornton	23.268
	37034	Town of Thornton	22.312
	37163	Town of Thornton	26.004
	37176	Town of Thornton	26.004
	37238	Town of Thornton	26.004
	70002	City of Chicago	6.825

Sources: Cook County 2016; Cook County Clerk 2016; Lake County, State of Indiana Department of Local Government Finance. 2016.

The total value of the tax revenues lost due to the Project’s acquisitions was compared to the total property tax revenues collected to identify the percentage of revenues that would be permanently removed from each county. This comparison was used to determine whether the impacts on the property tax revenues would be significant for Lake County, Indiana, and Cook County, Illinois.

¹ This value does not include any improvements made to the property.

3.3 Economic Effects of Construction and Operation

3.3.1 Construction Impacts

Construction of the Project would support the local economy through hiring of construction personnel, renting or purchasing construction equipment, and procurement of construction materials for the duration of the construction period. These activities would provide direct, indirect, and induced effects for the local economy, which are explained later in the section.

The Bureau of Economic Analysis (BEA) Regional Input-Output Modeling System (RIMS II) Series 2013 (updated in 2015) multipliers for the Chicago-Naperville-Elgin, IL-IN-WI Metropolitan Statistical Area including Lake County, Indiana, and Cook County, Illinois, were used to estimate jobs and earnings effects resulting from construction of the FEIS Preferred Alternative. The multipliers are constructed to reflect the structure of economies of Lake County, Indiana, and Cook County, Illinois. Derived from the BEA RIMS and shown in **Table 3.3-2**, the multipliers measure the total change (direct plus indirect effects) in output, employment, and earnings that results from an incremental change to a particular industry. They represent the most updated version available at the time this analysis was prepared.

Capital costs were developed for the Project and organized by FTA's Standardized Cost Categories. It is assumed that existing SSL vehicles would be acquired outside of the Project Area. Therefore, vehicles, in addition to ROW, are excluded from the total costs used to calculate impacts. ROW is excluded because it is a purchase of real property and there is no labor associated with this expenditure. **Table 3.3-2** shows the breakdown of capital costs for each of the Build Alternative Options.

Construction and professional services values served as the basis for estimating construction spending impacts. Contingency was allocated to construction and professional services categories based on each category's share of the total non-contingency costs.

In order to isolate the potential economic effects of the Project to the Project Area, it is necessary to distinguish those resources that are new to the economy and that would not be invested in Project Area counties but for the Project, from those that would still be spent in the region with similar economic effects (e.g., funds that would be allocated to other transportation construction projects in the region). Only those impacts from new funding sources would have the potential to stimulate new employment in the Project Area. Impacts from existing funding sources would support employment in the Project Area. At this stage of planning, the funding sources are not known. Thus, the analysis applies the full project cost, which represents the maximum construction impact.

Total employment and total earnings impacts are estimated, which are the sum of three categories of impacts:

- **Direct effect:** Includes the effects on industries that are directly purchased to build the Project, including control equipment and construction.
- **Indirect effect:** Includes the effects on supporting industries that supply goods and services to the direct effect industries. This includes workers in industries that supply equipment parts, steel, concrete, wood, and other raw materials that are needed for building guideways and station facilities.
- **Induced effect:** Includes the effect of direct and indirect workers spending their income on consumer goods and services such as food, shelter, clothing, recreation, and personal services.



Capital investment for the Project would have the potential to stimulate additional jobs and subsequent wages during the construction of the Project. Capital expenditures were separated into construction and professional services expenditures, and multipliers for the appropriate industry were applied to the respective costs shown in **Table 3.3-1**.

Table 3.3-1: Lake County, Indiana and Cook County, Illinois Employment and Earnings Multipliers for Construction and Professional Services

Industry	Final Demand	
	Earnings	Employment
Construction	0.4494	9.6202
Professional Services	0.5598	11.1262

Source: United States Department of Commerce BEA 2015.

The interpretation of the RIMS II employment multipliers used in the analysis is as follows. The Final Demand Employment Multiplier represents the total change in number of jobs that occurs in all industries for each \$1 million of output (in 2013 dollars) delivered to final demand by the construction industry. For example, based on the multipliers in **Table 3.3-1** every \$1 million in construction goods and services delivered to final demand in the Project Area (in 2013 dollars) yields 9.6202 jobs in all industries.

The employment effects are expressed in job-years, which is defined as one job for one person for one year. For example, three job-years are equal to three people doing a job for one year, or one person doing a job for three years. The employment results are reported in **Chapter 7**.

In addition to the employment effects, the construction of the Build Alternative (versus the No Build Alternative) results in earnings impacts to the Project Area for both the construction and professional services industries. The Final Demand Earnings Multiplier represents the total dollar change in earnings of households employed by all industries for each additional dollar of output delivered to final demand by the construction industry. For example, based on the multipliers shown in **Table 3.3-1**, every \$1 delivered to final demand by the construction industry in the Project Area yields \$0.4494 of earnings for households employed by all industries. The earnings results are reported in **Chapter 7**.



Table 3.3-2: Construction Cost Breakdown by Alternative Option (2017 Dollars, not Including Finance Charges)

Alternative	Maynard Profile	Option	Construction North of Douglas Street	Construction South of Douglas Street	Construction Stations/ Parking	Construction Maintenance and Storage Facility	Right-of-way	Rolling Stock	Professional Services	Unallocated Contingencies	Total	Total Construction Expenditures	Total Professional Services Expenditures
FEIS Preferred Alternative			401,019,487				62,945,219	34,328,130	109,847,695	52,881,785	661,022,316	\$442,530,523	\$121,218,443
Commuter Rail	flyover	1	132,509,000	150,870,000	29,444,000	40,000,000	10,010,000	31,365,000	125,930,000	26,159,000	546,287,000	370,567,664	132,263,447
		2	132,509,000	158,264,000	29,444,000	40,000,000	10,010,000	31,365,000	128,517,000	26,557,000	556,666,000	378,262,879	134,955,348
		3	132,509,300	155,930,000	29,444,200	57,884,200	10,416,000	31,365,000	133,960,000	27,615,100	579,123,800	394,583,111	140,667,635
		4	132,509,000	156,088,000	29,444,000	40,000,000	10,057,000	31,365,000	127,756,000	26,402,000	553,621,000	375,970,928	134,153,747
	at-grade	1	132,509,000	128,080,000	29,444,000	40,000,000	10,010,000	31,365,000	117,953,000	24,509,000	513,870,000	346,562,267	123,860,520
		2	132,509,000	135,474,000	29,444,000	40,000,000	10,010,000	31,365,000	120,540,000	24,907,000	524,249,000	354,257,738	126,552,492
		3	132,509,300	133,140,000	29,444,200	57,884,200	10,416,000	31,365,000	125,983,000	25,965,100	546,706,800	370,577,791	132,264,735
		4	132,509,000	135,474,000	29,444,000	40,000,000	10,010,000	31,365,000	120,540,000	24,907,000	524,249,000	354,257,738	126,552,492
Indiana Harbor Belt (IHB)	flyover	1	145,396,000	150,870,000	29,444,000	40,000,000	11,918,000	31,365,000	130,440,000	27,125,000	566,558,000	384,099,464	136,999,081
		2	145,396,000	158,264,000	29,444,000	40,000,000	11,918,000	31,365,000	133,027,000	27,523,000	576,937,000	391,794,717	139,691,013
		3	145,396,000	155,930,000	29,444,200	57,884,200	12,324,000	31,365,000	138,470,000	28,581,100	599,394,500	408,114,648	145,403,308
		4	145,396,000	156,088,000	29,444,000	40,000,000	11,965,000	31,365,000	132,266,000	27,368,000	573,892,000	389,502,770	138,889,416
	at-grade	1	145,396,000	128,080,000	29,444,000	40,000,000	11,918,000	31,365,000	122,463,000	25,475,000	534,141,000	360,094,112	128,596,189
		2	145,396,000	135,474,000	29,444,000	40,000,000	11,918,000	31,365,000	125,050,000	25,873,000	544,520,000	367,789,613	131,288,190
		3	145,396,000	133,140,000	29,444,200	57,884,200	12,324,000	31,365,000	130,493,000	26,931,100	566,977,500	384,109,371	137,000,441
		4	145,396,000	135,474,000	29,444,000	40,000,000	11,918,000	31,365,000	125,050,000	25,873,000	544,520,000	367,789,613	131,288,190
Hammond	flyover	1	94,446,000	150,870,000	49,908,000	48,282,000	11,799,000	31,365,000	123,129,000	25,541,000	535,340,000	360,715,698	129,297,780
		2	94,446,000	158,264,000	49,908,000	48,282,000	11,799,000	31,365,000	125,717,000	26,040,000	545,821,000	368,479,396	132,015,173
		3	94,446,000	158,416,000	49,908,000	48,403,000	12,930,000	31,365,000	125,759,000	25,948,000	547,175,000	368,655,281	132,019,601
	at-grade	1	94,446,000	128,080,000	49,908,000	48,282,000	11,799,000	31,365,000	115,152,000	23,891,000	502,923,000	336,711,228	120,895,033
		2	94,446,000	135,474,000	49,908,000	48,282,000	11,799,000	31,365,000	117,740,000	24,390,000	513,404,000	344,474,773	123,612,385
		3	94,446,000	135,474,000	49,908,000	48,282,000	11,799,000	31,365,000	117,740,000	24,390,000	513,404,000	344,474,773	123,612,385

Sources: NICTD 2016; HDR 2017.

Note: Hammond Alternative Option 2 is the DEIS NEPA Preferred Alternative.

3.3.2 Operating Impacts

Operation and maintenance (O&M) impacts are calculated for the Project Area composed of Lake County, Indiana, and Cook County, Illinois. RIMS II Series 2013 multipliers for the Chicago-Naperville-Elgin, IL-IN-WI Metropolitan Statistical Area were used, as they were the most recent available at the time of the analysis. The economic impacts calculated are the total employment and total earnings, which are the sum of the direct, indirect, and induced effects. **Table 3.3-3** presents the multipliers used in the analysis for the O&M expenditures in the Project Area. Multipliers for transit and ground passenger transportation were applied to the O&M expenditures for the rail service.

This analysis uses only the Direct Effect Multipliers to generate estimates of earnings impacts attributable to O&M activities because output measures are less reliable in the context of transit service where market prices are not available. The multipliers applied in this section of the analysis are for the industry labeled “Transit and Ground Passenger Transportation.” The increased earnings would result in positive economic impacts to the local economy, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, thus creating additional consumer demand and jobs to meet that demand. The transit earnings are derived by multiplying the incremental O&M cost over the No Build Alternative by the transit on-site labor percentage. The transit on-site labor percentage (34 percent) is derived from NICTD’s Transit’s O&M cost model. The final transit earnings do not include benefits and only the wage element affects transit earnings.

The Final Demand Employment Multiplier represents the total change in number of jobs that occurs in all industries for each \$1 million of output (in 2017 dollars) delivered to final demand by the ground passenger transportation industry. For example, based on the multipliers in **Table 3.3-3**, every \$1 delivered to final demand by the transit and ground passenger transportation industry in the Project Area (in 2017 dollars) yields 17.1086 jobs in all industries.

Table 3.3-3: Lake County, Indiana, and Cook County, Illinois, Employment and Earnings Multipliers for Transit and Ground Passenger Transportation

Industry	Final Demand	
	Earnings	Employment
Transit and Ground Passenger Transportation (O&M)	0.5345	17.1086

Source: United States Department of Commerce BEA 2015.

The employment effects are expressed in job-years, which are defined as one full-time job for one person for one year. For example, three job-years are equal to three people doing a job for one year, or one person doing a job for three years. The employment results are reported in **Chapter 8**.

The Final Demand Earnings Multiplier represents the total dollar change in earnings of households employed by all industries for each additional dollar of output delivered to final demand by the transit and ground passenger transportation industry. Based on the multipliers shown in **Table 3.3-3**, every \$1 delivered to final demand by the transit and ground passenger transportation industry in the Project Area yields 0.5345 of earnings for households employed by all industries. The earnings impacts are reported in **Chapter 8**.

The estimated net change in O&M costs generated by the FEIS Preferred Alternative is shown in **Table 3.3-4**. The table describes anticipated cost of operating and maintaining the FEIS



Preferred Alternative in addition to current NICTD O&M expenditures. This analysis assumes that funding for O&M would be provided through a mix of government funds and project-generated funds. Although these expenses could include local sources, this represents spending that would not take place but for the implementation of the service. The expansion of transit service associated with the FEIS Preferred and Build Alternatives represents an expansion of economic activity in the Project Area and thus generates recurring net economic impacts.

Table 3.3-4: Annual O&M Costs by Alternative

Operating Option	Total O&M Costs (2017 dollars)
FEIS Preferred Alternative	\$9,607,191
DEIS Build Alternatives (2015)	Total O&M Costs (2015 dollars)
Commuter Rail Alternative	\$12,879,141
Indiana Harbor Belt (IHB) Alternative	\$12,841,036
Hammond Alternative Total	\$13,615,592
Hammond Alternative Option 3	\$13,247,022
Hammond Alternative - Weekend Shuttles	\$368,570

Sources: NICTD 2016; HDR 2017.



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4 Affected Environment

This section presents existing economic conditions for the Project Area to provide context for the corridor's transportation needs. It focuses on the commercial real estate market for the region, since there are some potential displacements and acquisitions required for the Project. It also presents an overview of the residential vacancy rates in Lake and Cook Counties.

4.1 Population

An overview of the demographics for the Project Area is provided below, addressing population totals and age characteristics.

4.1.1 Population

Table 4.1-1 shows the total population and population by age cohort of the Project Area by jurisdiction. In 2010, the Project Area had a population of 201,364 with 17 percent living in the Indiana portion of the Project Area and 83 percent living in Illinois. The existing MED/SSL portion of the Project Area was the most populous with approximately 126,000 people. All of the remaining jurisdictions had substantially lower resident populations. Among those, the portion of the city of Hammond within the Project Area and the Cook County portion of the Project Area in Illinois had comparable populations at approximately 23,700 residents each, representing the greatest number of residents residing within a single corridor jurisdiction outside of those living along the existing MED/SSL in eastern Chicago. The portion of the Project Area in Munster is the least populous at roughly 24 percent of the corridor's Indiana population and only around 10 percent of that along the existing MED/SSL in Chicago. This reflects the low-density suburban character of Munster compared with the dense, urban-edge character of Hammond and the urban character of the Chicago shoreline.

As shown in **Table 4.1-1**, the age cohorts suggest that the Project Area population has a high number of families, because of the substantial number of school-age children, and a relatively low percentage of older people (age 65 and older), with no more than 18 percent elderly residing across the Project Area.

As shown in **Figure 4.2-1** and **Figure 4.2-2**, the population is evenly distributed across the Project Area in Indiana, with denser clustering just north of the proposed South Hammond Station and in the vicinity of the proposed Hammond Gateway Station. The lowest density of persons per square mile occurs in Dyer. The highest density of persons per square mile occurs in the central portion of the Millennium Station/SSL segment of the proposed alignment. This corresponds with the location of very high density multifamily housing there and is typical of densities in major United States cities like Chicago.



Table 4.1-1: Project Area Population, by Age Cohort

Geography (Portion of Project Area)	Total Population	Project Area Population as Percentage of Municipal Total	Population of School Age (up to age 19)	Population of Employment Age (19-65)	Population that is Elderly (65 and older)
Dyer	14,886	13%	12%	38%	12%
Munster	12,304	52%	26%	56%	18%
Hammond	23,737	29%	35%	57%	8%
Chicago Existing MED/SSL Portion	125,841	5%	26%	58%	13%
Cook County Portion (not including MED/SSL portion)	23,708	NA	31%	59%	10%
NIRPC Region	770,951	NA	27%	57%	13%
CMAP Region	8,432,516	NA	27%	61%	12%
State of Illinois	12,859,995	NA	23%	63%	14%
State of Indiana	6,619,680	NA	24%	62%	14%

Source: United States Census Bureau 2016.

4.1.2 Population Projections

The analysis conducted for the *West Lake Corridor Project Existing Conditions Technical Memorandum* (NICTD 2014) provides general population projections for the Project Area to the year 2040. The analysis concluded that, while Lake County, Indiana, has seen an ongoing trend of population decline in its northern municipalities located in the heavily-industrialized areas along Lake Michigan, there has been and will continue to be population growth in the central areas of the county where the Project is proposed. The Cook County portion of the Project Area will also see population growth to 2040 at a similar rate to the Indiana communities to the south. **Table 4.1-2** summarizes the CMAP population projections for 2010 to the 2040 horizon year and projections for 2015 to 2040 available from NIRPC traffic modeling efforts. No single source of projections was available across the entire Project Area for the same years and using the same projection methodology. Consequently, the most current estimates are shown separately by state. Still, some trends in population growth can be observed.



Table 4.1-2: Population Projections in the Project Area

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

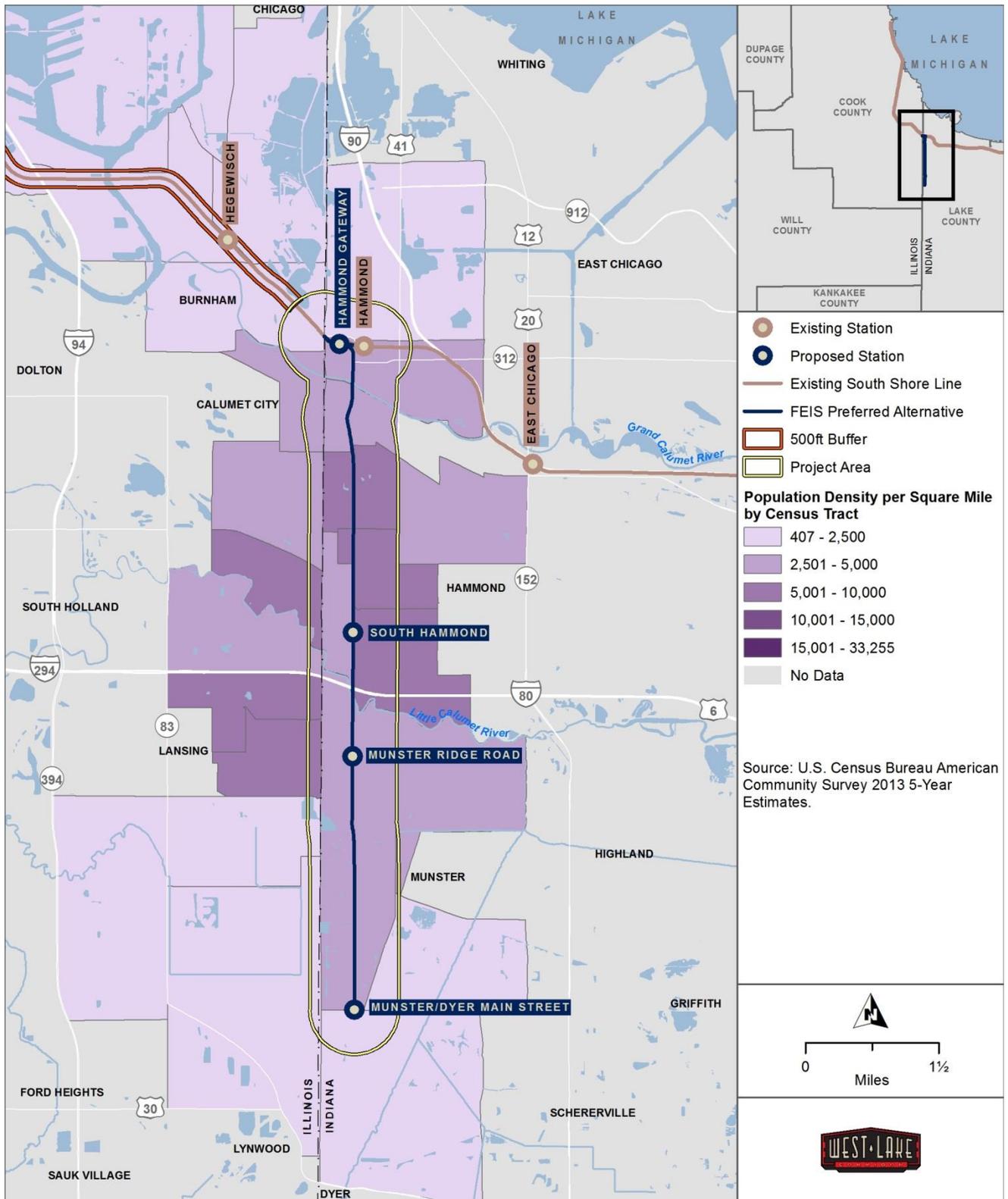
Sources: NIRPC 2015, CMAP 2014c.

The data indicate that both the Indiana and Illinois portions of the Project Area will grow in population steadily through to 2040. The strongest population growth will be in the north Hammond area.

4.2 Housing

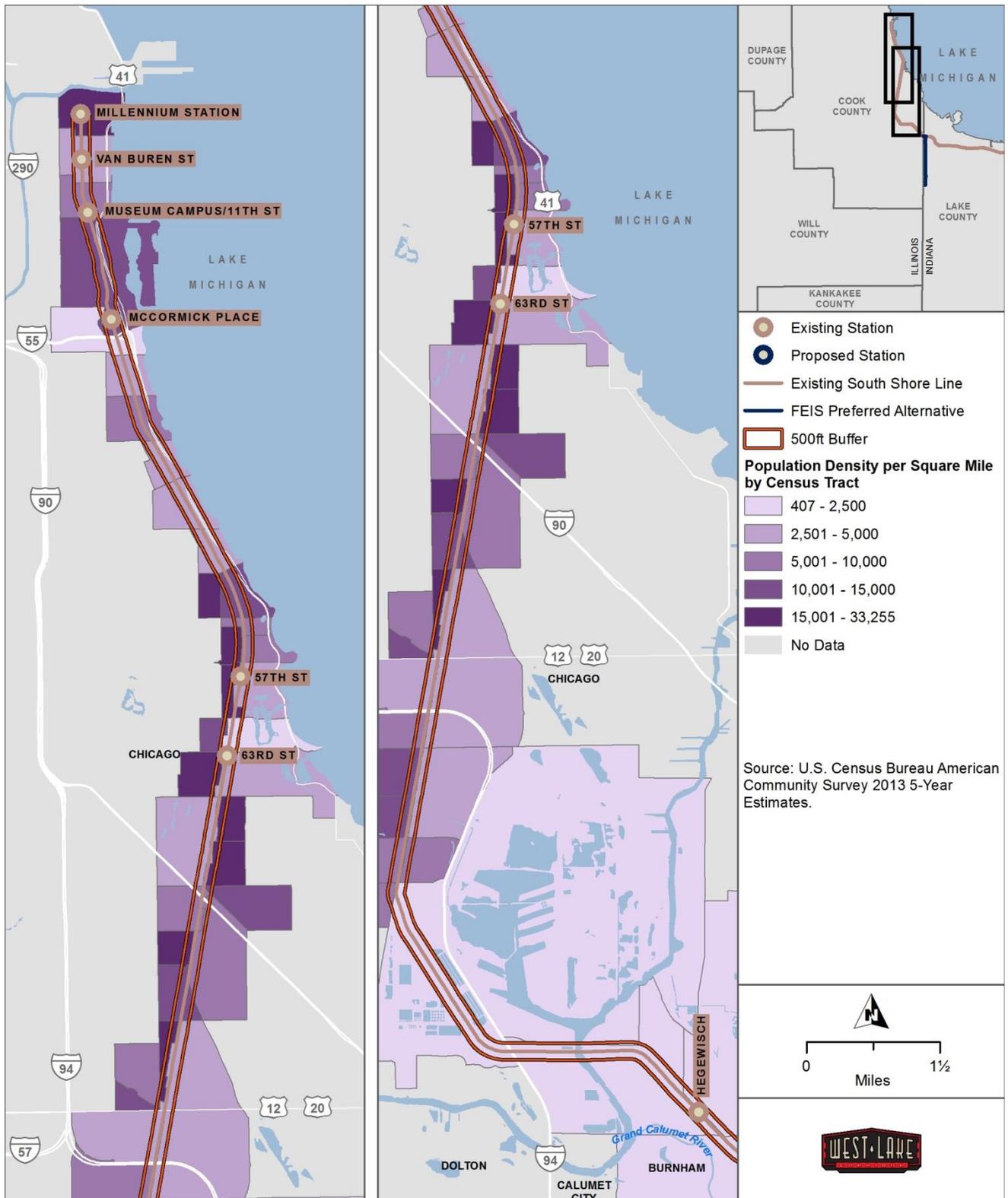
Table 4.2-1 presents the housing characteristics of the Project Area. Home ownership is highest in Dyer at almost 91 percent. Traveling north in the Project Area, the percentage of home ownership declines steadily and the percentage of rental housing units changes to a high of 63 percent at the project terminus in Chicago.

Figure 4.2-1: Project Area Population Density/Distribution



Source: NICTD 2016.

Figure 4.2-2: Project Area Population Density/Distribution along the Existing MED/SSL



Source: NICTD 2016.

Table 4.2-1: Housing Characteristics in the West Lake Corridor Project Area

Area	Total Housing Units	Housing as Percentage of Municipal Total	Housing that is Owner Occupied	Housing that is Renter Occupied	Vacant Housing	Average HH Size	HH without Vehicle
Dyer	6,020	NA	91%	9%	4%	3	2%
Munster	9,186	NA	87%	13%	4%	3	5%
Hammond	32,612	NA	62%	38%	13%	3	9%
Chicago Existing MED/SSL Portion	71,855	NA	37%	63%	16%	3	20%
Cook County Portion (not including MED/SSL portion)	9,955	NA	59%	41%	14%	3	11%
Project Area Total	10,625	NA	50%	50%	15%	3	17%
NIRPC Region	323,602	NA	69%	33%	14%	3	9%
CMAQ Region	3,369,908	NA	64%	37%	10%	3	14%
State of Illinois	5,303,675	NA	66%	34%	10%	3	11%
State of Indiana	2,501,937	NA	69%	31%	11%	3	7%

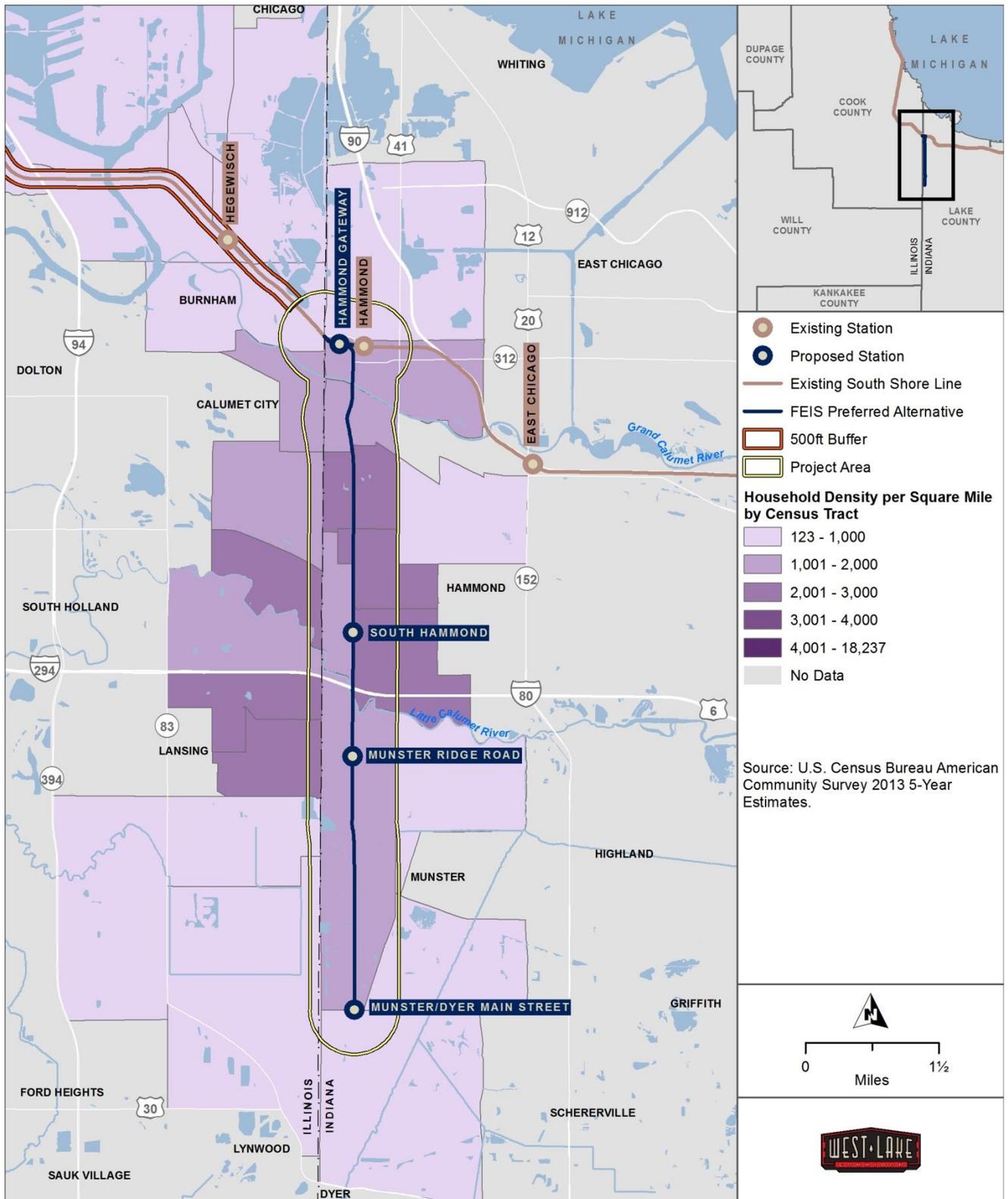
Source: United States Census Bureau 2016.

Note: HH: Household

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

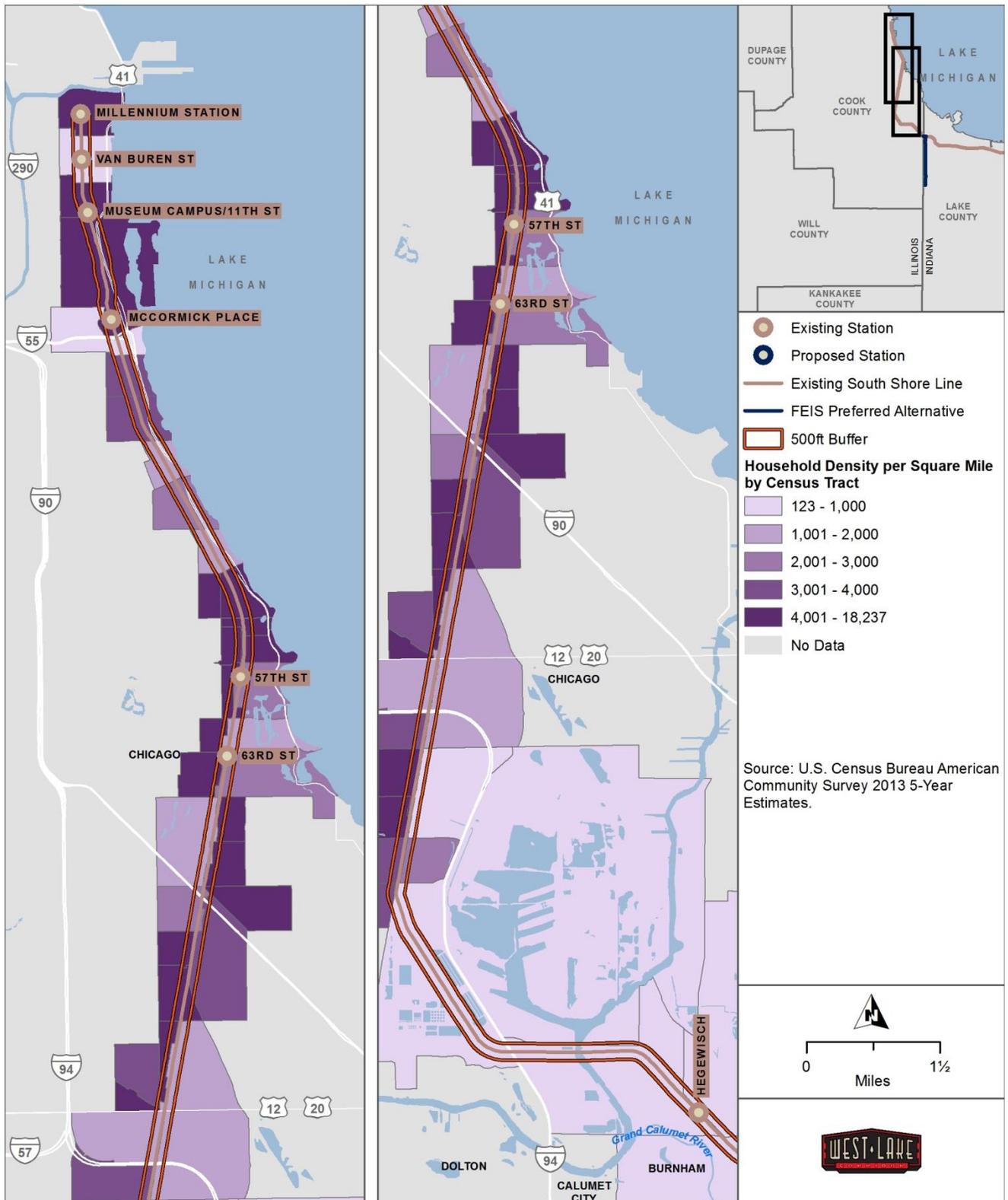
Figure 4.2-3 and **Figure 4.2-4** display the distribution of housing units in the Project Area and along the existing MED/SSL, respectively. Similar to the population density graphic, it indicates high-density housing in the vicinity of the proposed Hammond Gateway Station. To the north of that location, housing density is particularly high in the Hegewisch neighborhood in Chicago and northward to the Millennium Station. Housing unit density is lowest in north Hammond and between the proposed Downtown Hammond Station and South Hammond Station sites. When compared to the information on employment density, the housing data suggest that many of those Project Area residents who live and work in Chicago may have jobs in relative close proximity to where they live. At the same time, many of those who live in Indiana are commuting north for work.

Figure 4.2-3: Housing Density/Distribution in the Project Area



Source: NICTD 2016.

Figure 4.2-4: Housing Density/Distribution along the Existing MED/SSL



Source: NICTD 2016.

4.3 Employment, Income, and Employers

4.3.1 Employment and Income

Table 4.3-1 summarizes employment and income characteristics of residents in the Project Area. **Figure 4.3-1** and **Figure 4.3-2** display employment density across the Project Area and along the existing MED/SSL, respectively. Unemployment is comparatively low in Dyer, Munster, and Hammond. It rises sharply in the Cook County portion and in Chicago at more than triple the percentage of each of the two southernmost communities. Similarly, with the exception of Hammond, median household income is higher at the southern end of the Project Area and declines towards the northern end of the Project Area in Chicago. The data for Hammond, Chicago, and the Cook County portion, along with the housing data described above, collectively indicate that these areas are more economically distressed than the balance of the Project Area. Despite this and the unemployment rate in Hammond (8 percent), the highest density of employment in the Project Area after Cook County and pockets along the existing MED/SSL is also in Hammond. This reflects the fact that Hammond is more densely developed in general than the rest of the Indiana portion of the Project Area.

Table 4.3-1: Employment and Income in the Project Area

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

Source: United States Census Bureau 2011, 2016.

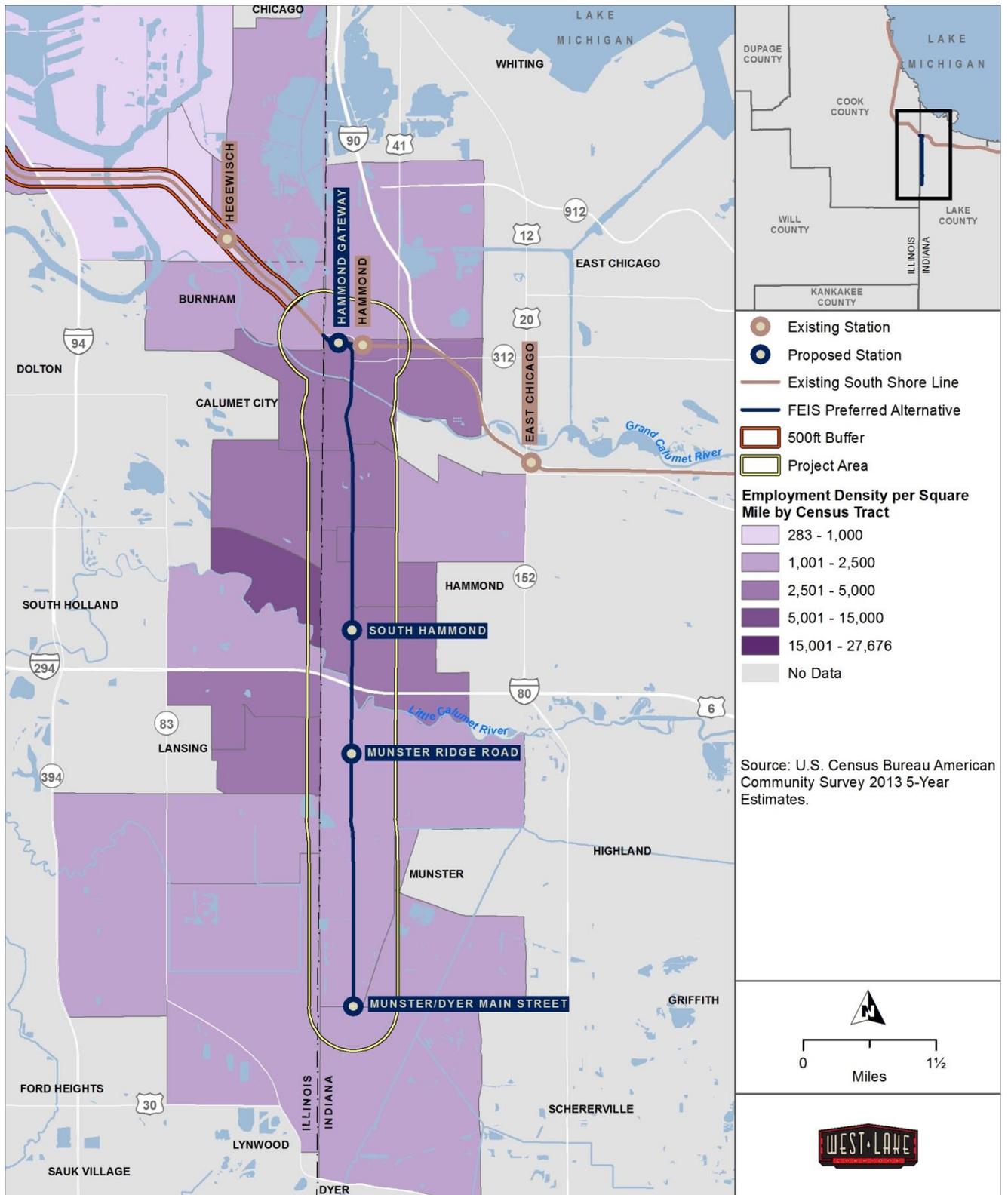
4.3.2 Major Employers

Employment by industry sector within the Project Area is presented in **Table 4.3-2**, while major employers (i.e., employers having 100 or more employees) are listed in **Table 4.3-3**. Educational services and healthcare are the largest single-industry sectors in the Project Area, followed by manufacturing and retail trade. There are a limited number of major employers, all of whom are mostly dispersed within the Project Area, and there are none located in Dyer. There are clusters of major employers along the existing MED/SSL portion of the rail corridor; however, there are relatively few major employers scattered throughout the remainder of the Project Area.



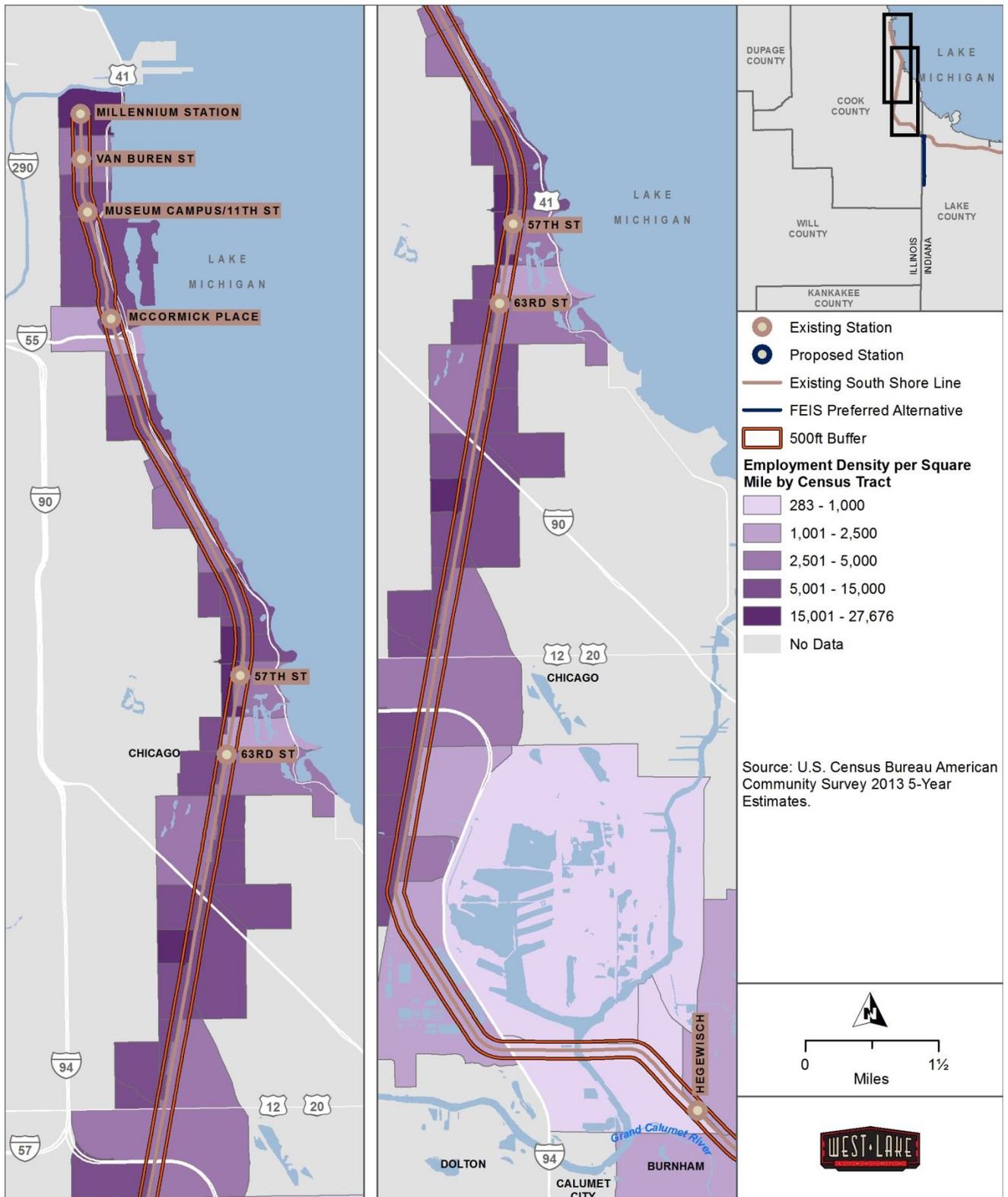
The Chicago existing MED/SSL portion of the rail corridor has the greatest number of large employers at 43. The three largest employers are Pullman Wheel Works (3,900 employees); Ford Motor Company (2,479 employees) in Chicago; and St. Margaret Hospital in Hammond (1,588 employees). It is notable that as many as 40 major employers occur to the south of the 57th Street Station in Chicago, while one of the largest clusters of high density housing and population occurs around that same station area. This suggests that there are strong opportunities for reverse commuting from the downtown area of Chicago out to employers' south along the proposed alignment. The location of major employers in the Project Area and along the existing MED/SSL is shown in **Figure 4.3-3** and **Figure 4.3-4**, respectively.

Figure 4.3-1: Density of Employed Persons in the Project Area



Source: NICTD 2016.

Figure 4.3-2: Density of Employed Persons along the Existing MED/SSL



Source: NICTD 2016.



Table 4.3-2: Employment by Percentage of Industry Sector

Industry Sector	Dyer	Hammond	Munster	Chicago	NIRPC Region	CMAP Region
Construction	9%	6%	7%	4%	6%	5%
Manufacturing	16%	16%	16%	9%	16%	12%
Wholesale trade	3%	3%	3%	2%	2%	3%
Retail trade	15%	12%	10%	9%	12%	10%
Transportation and warehousing, and utilities	5%	7%	4%	7%	6%	6%
Information	1%	1%	2%	2%	2%	2%
Finance and insurance, and real estate and rental and leasing	7%	4%	8%	8%	5%	8%
Professional, scientific, and management, and administrative and waste management services	8%	9%	9%	14%	8%	13%
Educational services, and healthcare and social assistance	22%	20%	26%	24%	24%	22%
Arts, entertainment, and recreation, and accommodation and foodservices	8%	14%	5.6%	11%	11%	9%
Other services, except public administration	5%	5%	7%	5%	8%	5%
Public administration	2%	3%	3.8%	5%	4%	4%

Source: United States Census Bureau 2011.



Table 4.3-3: Major Employers in the Project Area

Map ID	Business Name	Address	City	State	Number of Employees
1	Franciscan Physicians Hospital, LLC	701 Superior Ave.	Munster	IN	200
2	Medical Specialists	761 45th Ave St.	Munster	IN	100
3	Pepsico	9300 Calumet Ave.	Munster	IN	200
4	Peoples Bank	9204 Columbia Ave.	Munster	IN	110
5	Jewel - Osco 3096	716 Ridge Rd.	Munster	IN	300
6	Franciscan Hammond	7905 Calumet Ave.	Munster	IN	375
7	Transportation Dept.	5727 Sohl Ave.	Hammond	IN	160
8	CRC Hammond	222 Douglas St.	Hammond	IN	100
9	St. Margaret Hospital	5454 Hohman Ave.	Hammond	IN	1,588
10	Northern Indiana Public Service Company	5265 Hohman Ave.	Hammond	IN	101
11	Bank Calumet, Inc.	5231 Hohman Ave.	Hammond	IN	144
12	Dolton School District 149	292 Torrence Ave.	Calumet City	IL	400
13	Dolton School District 149	292 Torrence Ave.	Calumet City	IL	400
14	Plastics Color & Compounding Inc.	14201 Paxton Ave.	Calumet City	IL	100
15	Cassens Transport Company	13511 S Torrence Ave.	Chicago	IL	108
16	School District 81	13100 S Doty Ave.	Chicago	IL	115
17	Division C	3400 E 126th St.	Chicago	IL	249
18	Ford	12600 S Torrence Ave.	Chicago	IL	2,479
19	Police Dept. District 5 Calumet	727 E 111th St	Chicago	IL	431
20	Kellog	750 E 110th St	Chicago	IL	703
21	Sherwin-Williams	10909 S Cottage Grove Ave.	Chicago	IL	110
22	Jackson Park Hospital and Medical	7531 S Stony Island Ave.	Chicago	IL	700
23	Brookfield Farms	700 E 107th St.	Chicago	IL	500
24	Jewel - Osco 3030	7530 S Stony Island Ave.	Chicago	IL	152
25	Pullman Wheel Works Apartments	901 E 104th St.	Chicago	IL	3,900
26	Streets and Sanitation, Dept.	900 E 103rd St.	Chicago	IL	149
27	Cart Program	900 E 103rd St	Chicago	IL	146
28	SCR Medical Transportation	8801 S Greenwood Ave.	Chicago	IL	250
29	Great Lakes Maintenance & Security Corp	8734 S Cottage Grove Ave.	Chicago	IL	300
30	Target	8560 S Cottage Grove Ave.	Chicago	IL	177



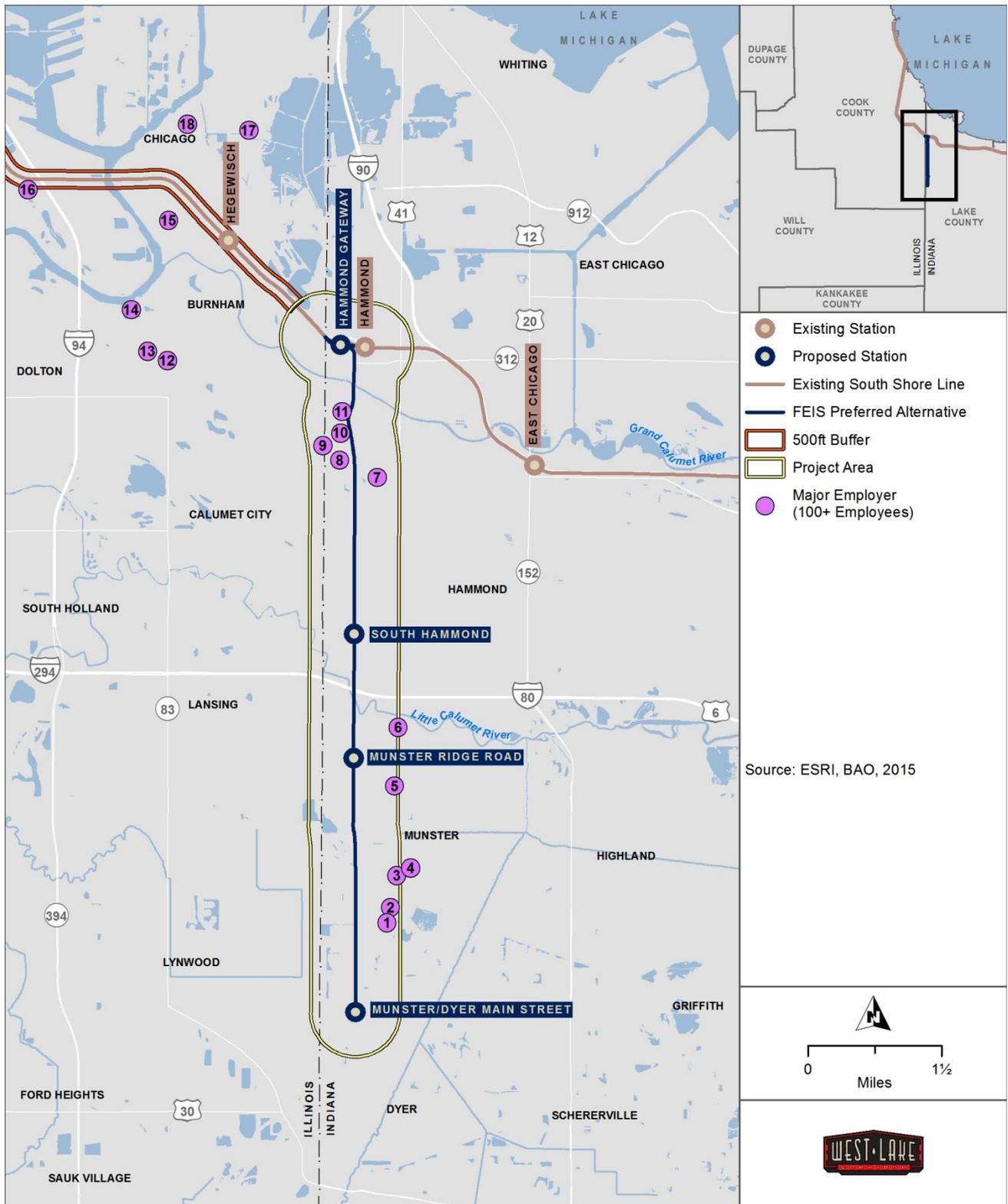
Map ID	Business Name	Address	City	State	Number of Employees
31	Arthur Ash Elementary School	8505 S Ingleside Ave.	Chicago	IL	120
32	Jewel-Osco 3030	7530 S Stony Island Ave.	Chicago	IL	200
33	Chicago Metro S Commercial Zone 1	7340 S Stony Island Ave.	Chicago	IL	270
34	Hyde Park Academy	6220 S Stony Island Ave.	Chicago	IL	224
35	Kenwood Health Care Corp.	6125 S Kenwood Ave.	Chicago	IL	230
36	Chapin Hall Center for Children	1313 E 60th St.	Chicago	IL	125
37	Press Journals Division	1427 E 60th St.	Chicago	IL	300
38	Comptroller's Office	1225 E 60th St.	Chicago	IL	256
39	Press Journals	1427 E 60th St.	Chicago	IL	250
40	University Chicago Lab Schools	1362 E 59th St.	Chicago	IL	300
41	The University of Chicago	1313 E 60th St.	Chicago	IL	100
42	Superior Fibers, Inc.	4218 S Cottage Grove Ave.	Chicago	IL	123
43	Designer Link Inc.	3840 S Evans Ave.	Chicago	IL	247
44	Financial Aid Office	600 S Michigan Ave.	Chicago	IL	298
45	Graduate Admission Office	600 S Michigan Ave.	Chicago	IL	1,000
46	Academic Computing	600 S Michigan Ave	Chicago	IL	298
47	Congress Plaza Hotel	520 S Michigan Ave.	Chicago	IL	350
48	Chicago Housing Authority	60 E Van Buren St.	Chicago	IL	300
49	Cision Us, Inc.	332 S Michigan Ave.	Chicago	IL	100
50	Chicago Housing Authority Inc.	318 S Michigan Ave.	Chicago	IL	263
51	Forensic Technologies Intl.	332 S Michigan Ave.	Chicago	IL	150
52	CNA Unisource of America, Inc.	310 S Michigan Ave.	Chicago	IL	100
53	South Shore Rail Road	151 E Randolph St.	Chicago	IL	260
54	Obama for America	130 E Randolph St.	Chicago	IL	400
55	Integrays Business Support, LLC	130 E Randolph St.	Chicago	IL	100
56	Marketing Werks Inc.	130 E Randolph St.	Chicago	IL	165
57	Standard & Poor's	130 E Randolph St.	Chicago	IL	200
58	Optiver Us LLC	130 E Randolph St.	Chicago	IL	140
59	Michael Best & Friedrich LLP	180 N Stetson Ave.	Chicago	IL	100
60	Shared Services	180 N Stetson Ave.	Chicago	IL	116
61	CSG	180 N Stetson Ave.	Chicago	IL	200



Map ID	Business Name	Address	City	State	Number of Employees
62	Leydig, Voit & Mayer, Ltd.	180 N Stetson Ave.	Chicago	IL	160
63	Aon Plc	180 N Stetson Ave.	Chicago	IL	300
64	McDonough Associates Inc.	180 N Stetson Ave.	Chicago	IL	110

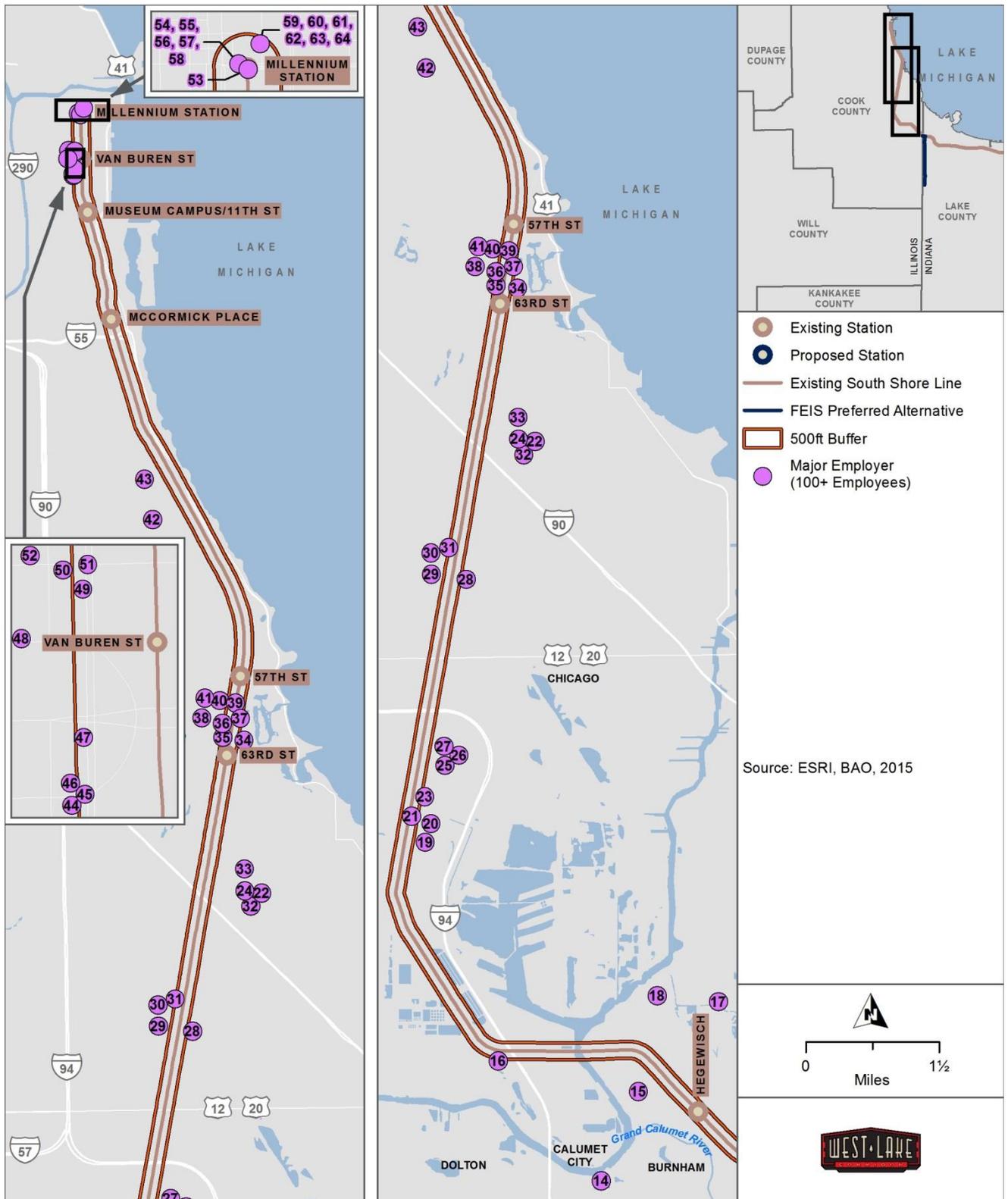
Source: ESRI Database 2014.

Figure 4.3-3: Major Employers in the Project Area



Source: NICTD 2016.

Figure 4.3-4: Major Employers along the Existing MED/SSL



Source: NICTD 2016.

4.3.3 Employment Projections

The *West Lake Corridor Project Existing Conditions Technical Memorandum* (NICTD 2014) provided employment forecasts, as derived from CMAP, for the downtown central area of Chicago (e.g., Division Street-Halsted Street-Roosevelt Road-Michigan Avenue). The data indicate that jobs will increase from 479,700 in 2010 to 675,900 in 2040, which represents an increase of 196,200 jobs (+41 percent) over 30 years. This suggests—along with the journey to work data, information on planned and programmed developments, and limited number of existing large employers in the Project Area south of Chicago—that jobs will grow in proximity to the city of Chicago, and demand for transit to reach those jobs is expected to grow as well.

Employment projections are available from CMAP and NIRPC. **Table 4.3-4** summarizes the CMAP employment projections for 2010 to the 2040 horizon year and NIRPC projections for 2015 to 2040. As with the population projections, no single source of projections was available across the entire Project Area for the same years and using the same projection methodology. Consequently, the most current estimates are shown separately by state. Still, some trends in employment growth can be observed.

Table 4.3-4: Employment Forecasts in the Project Area

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

Sources: CMAP 2014c; NIRPC 2015.

The data indicate that employment across the Project Area will grow steadily. The variation among jurisdictions in employment growth will not be substantial, except in the area of the IHB Alternative alignment in Illinois, which is expected to see the strongest growth in the Project Area at 36 percent. The data suggest that employment will grow the most in the area from Hammond to just across the state line into Illinois, particularly along the IHB Alternative alignment.

4.4 Commute to Work

The *West Lake Corridor Project Existing Conditions Technical Memorandum* provides an assessment of commute-to-work patterns in the region that encompasses the Project Area (NICTD 2014). The assessment concluded that the share of employees from each of the Project

Area communities who work in downtown Chicago declines as the distance from the city core increases. Nonetheless, mode split data for downtown Chicago indicate that transit usage is consistently high for almost all Project Area communities, with slightly less than 50 percent of workers from across the Project Area travelling to downtown Chicago and using transit for their commute.

United States Census Bureau commute-to-work data included in **Table 4.4-1** indicate that the majority of the employed persons in the Project Area communities work in the county in which they live. The percentage increases in the communities along the Project Area from south to north and closer to Chicago. This reflects the relationship of employment/jobs in the Project Area to workers, with slightly less than half of the workers in the Indiana Project Area communities commuting outside Lake County to work.

Table 4.4-1: Commute Work Patterns in the Project Area

Geography	Percentage of Employed Persons Worked in State of Residence	Percentage of Employed Persons Worked in County of Residence
Dyer	55%	54%
Hammond	68%	65%
Munster	64%	63%
Chicago	99%	93%
NIRPC Region	82%	69%
CMAP Region	99%	78%

Source: United States Census Bureau 2014.

Table 4.4-2 summarizes statistics from the *West Lake Corridor Project Existing Conditions Technical Memorandum* regarding employed workers in Lake and Cook Counties and Chicago versus the number of jobs available in each area. The data are consistent with the commute-to-work data above. As shown in **Table 4.4-2**, there are more workers than jobs in Lake County, requiring these areas to export workers to fill jobs in other areas. Additionally, the assessment found that approximately one-fifth of Lake County residents work in Cook County.

Table 4.4-2: Job Deficit/Surplus (2006-2010)

Area	Workers Residing in Area	Workers Employed in Area	Jobs Versus Workers
Lake County	211,795	194,539	-17,256
Cook County	2,377,334	2,581,745	204,411
City of Chicago	1,219,311	1,396,768	177,457

Source: American Association of State Highway and Transportation Officials (AASHTO) 2010.

4.5 Economic Trends

Economic trends can be understood from current development activity as well as documentation of economic activity by the regional planning agencies. There are currently a limited number of major planned and programmed development projects within the Project Area, which indicates slow or very limited growth in the localized economy. The NIRPC economic development

planning project (Policy Analytics LLC 2006) made the following observations about the region's economic trends:

- “The Manufacturing sector is crucial to the NIRPC region's economic success. It is the largest in terms of total employment, and pays substantially higher wages than the average for the state or nation. However, from 1999-2005, the region lost over 14,000 manufacturing jobs.”
- “Northwest Indiana faces a dearth of white collar jobs. The jobs that exist pay substantially lower wages than the national average. Neighboring Cook County, IL has a high concentration of high wage professional industries.”
- “The two fastest growing employment sectors in the NIRPC region are Education Services and Healthcare. These two industries do not rely completely on traditional market forces.”
- “Employment patterns in the NIRPC area tend to follow Chicago employment trends more closely than Indiana trends, reinforcing the NIRPC region's strong association to the Chicago economy.”

The CMAP website (<http://www.cmap.illinois.gov/economy/regional-economic-indicators/trends>) offers the following summary of regional economic trends:

- “The Chicago region's real gross regional product (GRP) output grew between 2001-07 before experiencing a substantial decline between 2007-09 during the most recent recession. From 2009-13, real GRP recovered and grew at a rate of roughly 1.5 percent annually. In 2013 the region's real GRP reached \$551 billion, roughly \$3 billion short of the region's 2007 pre-recession GRP peak.”
- “Since 2001, real GRP growth in Chicago has lagged behind growth rates in Washington, D.C., Boston, Los Angeles, and New York.”
- “Growing job counts in the region indicate that Chicago-area businesses are hiring and that the region's economy is growing. There are currently an estimated 4.7 million jobs in the region. This total is less than the region's pre-recession jobs peak of 4.8 million in 2007; however, initial data suggest that 2014 will be the fourth straight year for which the region's total job count has grown.”
- “In 2013, the unemployment rate in the Chicago metropolitan statistical area (MSA) was 9.1 percent, which was higher than both the national average of 7.4 percent and higher than rates in peer regions such as Los Angeles, New York, Boston, and Washington, D.C.”
- The Region has higher than the estimated national median household income. Since 1989, real median household income has declined by 7.1 percent in the region as compared with 7.5 percent nationwide.

Indicators are that the economy of the region is generally remaining stable or growing slightly. The region is still recovering from the 2008 recession, and there have not been notable gains in average household income. In addition, unemployment, relative to peer metropolitan regions, remains high.

4.6 Vacancy Rates

Lake County's industrial market is a choice location for businesses, given its proximity to interstate highways and freight rail lines. In addition, relatively low tax rates have made this area



attractive to many businesses. The industrial vacancy rate, which measures vacant square footage, is 6.6 percent (NAI Hiffman 2017).

According to the 5-year estimates (2011-2015) in the United States Census Bureau's ACS, 13 percent of housing units in Lake County were vacant. Cook County's vacancy rate was 11 percent (United States Census Bureau 2016).

5 Socioeconomic Impacts

The potential impacts of the Project in terms of socioeconomic conditions are discussed in the following sections.

5.1 No Build Alternative

The No Build Alternative would be a continuation of existing conditions. As such, it is not expected to have direct impacts on socioeconomic conditions or trends. It would also have a neutral effect on economic vitality and no impact on access to developable land. At the same time, the No Build Alternative would not offer any beneficial effects. It would not provide enhanced transit service so would not offer enhanced multimodal access for jobs or access to developable land. It would not support economic development initiatives in Hammond. In particular, the No Build Alternative would limit the potential for transit-oriented development (TOD) as an economic development strategy because no new rail line or stations would be built. Intercity Amtrak service and the existing MED/SSL would be the only passenger/commuter rail service operating in the Project Area. Therefore, the impetus for TOD would not be created.

5.2 FEIS Preferred Alternative

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

In addition, the FEIS Preferred Alternative would be generally compatible with local and regional economic development plans. These plans seek to change land use patterns over time with more transit-friendly, cohesive community downtowns and commercial nodes that would help to foster economic sustainability. These plans envision access to rail as one mechanism that would stimulate the type of economic growth that would be preferred in the communities along the Project Area. There would be a need for improved access to transit to and from the rail stations for this benefit to be fully realized.



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6 Acquisitions/Displacements and Fiscal Impacts

The following sections outline the acquisitions/displacement and fiscal impacts for the No Build Alternative and the FEIS Preferred Alternative. In addition, the economic impacts that are associated with the construction and operation of the Project are presented.

6.1 No Build Alternative

The No Build Alternative consists of the existing corridor with no acquisitions or displacements. As the No Build Alternative would require no acquisitions or displacements, there would be no fiscal impacts associated with it. In addition, no additional direct construction and O&M expenditures would be associated with this alternative; therefore, there would be no new economic impacts.

6.2 FEIS Preferred Alternative Overview

Of the permanent acquisitions required for the FEIS Preferred Alternative, vacant property, including parcels of vacant land, accounts for approximately 49 percent of the total acreage proposed for acquisition. Acquisitions are illustrated in **Appendix A**.

6.2.1 Acquisitions and Displacements

A total of 202 full permanent acquisitions and 24 partial permanent acquisitions are required to be purchased for the FEIS Preferred Alternative, and approximately 49 percent are vacant. Of the 226 parcels that would be affected, 138 are residential, 8 are commercial, and 80 are of other land uses. In total, approximately 107 acres would be acquired for the FEIS Preferred Alternative. **Table 6.2-1** summarizes the acreage and number of acquisitions by land use and community for the FEIS Preferred Alternative. **Table 6.2-2** lists the number of displacements by land use type and community. Displacements occur on occupied property. Of the total land acquired for the Project, 51 percent is occupied.



Table 6.2-1: Acreage and Acquisitions for the FEIS Preferred Alternative

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

Source: HDR 2017.

^a Other displacements can include freight railroad property.

Table 6.2-2: Displacements by Land Use Type and Community for the FEIS Preferred Alternative (full/permanent impact)

Type of Displacement	Number of Displacements	Dyer	Munster	Hammond
Residential Displacements	94	10	10	74
Commercial Displacements	4	0	0	4
Industrial Displacements	9	0	0	9
Municipal Displacements	0	0	0	0
Other Displacements ¹	0	0	0	0
Total Displacements	107	10	10	87

Source: HDR 2017.

¹ Other may include freight railroad.

6.2.2 Fiscal Impact

For the FEIS Preferred Alternative 2, the total taxable value of property that would be removed from the tax base after deductions is over \$8.4 million (2017 dollars), assuming a maximum deduction and assuming a minimum deduction. All of the taxable values loss is attributable to Lake County. This value does not include the value of any land that would be removed from properties that are exempt from tax, such as religious organizations or public property, as these would not impact the tax revenues generated. **Table 6.2-3** shows the taxable value of property that would be removed from the tax base due to acquisitions under Hammond Alternative Option 2.

Based on the property tax rates for Lake County, assuming a maximum deduction, the annual revenue that would be lost under the FEIS Preferred Alternative would be \$343,922 (2017 dollars). All of the revenue loss is attributable to Lake County and amounts to 0.043 percent loss in the tax base. Therefore, the FEIS Preferred Alternative would not have any substantial negative fiscal impacts for Lake County. A detailed breakdown of property tax that would be lost under Hammond Alternative Option 2 is shown in **Table 6.2-4**.

Table 6.2-3: Taxable Value of Property Removed from Tax Base for the FEIS Preferred Alternative

Proposed Alignment	Residential	Commercial	Other	Total
FEIS Preferred Alt.	\$5,164,948	\$463,418	\$2,776,419	\$8,404,785
Total	\$5,164,948	\$463,418	\$2,776,419	\$8,404,785
Lake County Total	\$5,164,948	\$463,418	\$2,776,419	\$8,404,785
Cook County Total	\$0	\$0	\$0	\$0

Source: HDR 2017.



Table 6.2-4: Annual Tax Revenue Lost by Land Use for the FEIS Preferred Alternative

Proposed Alignment	Maximum Deduction			
	Residential	Commercial	Other	Total
FEIS Preferred Alt.	\$192,636	\$20,232	\$131,053	\$343,922
Total	\$192,636	\$20,232	\$131,053	\$343,922
Lake County Total	\$192,636	\$20,232	\$131,053	\$343,922
Cook County Total	\$0	\$0	\$0	\$0

Source: HDR 2017.



7 Construction-related Impacts

The following section describes the construction impacts of the Project in terms of jobs and earnings.

7.1 No Build Alternative

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

7.2 FEIS Preferred Alternative

The economic impacts in terms of jobs and earnings from the construction of the FEIS Preferred Alternative are shown in **Table 7.2-1** and **Table 7.2-2**. Earnings and job impacts are separated into construction jobs and earnings, and professional services jobs and earnings. Jobs are shown in job-years, while earnings are shown in dollars. One job year is one job for one person over one year. Construction jobs are considered more impactful because they have a more direct impact on the region.

For the Project Area, construction of the FEIS Preferred Alternative would result in approximately 4,257 construction job-years. Project related earnings are estimated to be \$198 million, or an average of \$46,700 per job-year.



Table 7.2-1: Employment from Construction of the FEIS Preferred Alternative (job-years)

Construction Costs	Construction Employment Multiplier	Construction Jobs (job-years)	Professional Services Costs	Professional Services Employment Multiplier	Professional Services Jobs (job-years)	Total Jobs
\$442,530,524	9.6202	4,257	\$121,218,443	11.1262	1,349	5,606

Source: HDR 2017.

Table 7.2-2: Earnings from Construction of the FEIS Preferred Alternative

Construction Costs	Construction Earnings Multiplier	Construction Earnings	Professional Services Costs	Professional Services Earnings Multiplier	Professional Services Earnings	Total Earnings
\$442,530,524	0.4494	\$198,873,217	\$121,218,443	0.5598	\$67,858,085	\$266,731,302

Source: HDR 2017.

8 Operation and Maintenance Impacts

The economic impacts in terms of jobs and earnings from the O&M of the Project are shown by alternative in **Table 8.1-1** and **Table 8.1-2**. Jobs are shown in job-years, while earnings are shown in dollars. One job-year is equal to one job for one person over one year.

8.1 Impacts by Alternative

The FEIS Preferred Alternative would have the potential to stimulate jobs and additional earnings as a result of O&M expenditures. The projected O&M expenditures are calculated based on the existing NICTD rail services. The analysis assumes that funding for O&M would be procured primarily from local funds and project-generated funds.

Although these expenditures would originate from local sources, they represent spending that would not take place except for the implementation of this service. The expansion of transit service associated with the FEIS Preferred Alternative has the potential to stimulate an expansion of economic activity in the Chicago-Naperville-Elgin, IL-IN-WI Metropolitan Statistical Area including Lake County, thus generating recurring net economic impacts (long-term). Other potential sources of Federal funding for maintenance exist as grants and could be applied to preventative maintenance in later years. If future Federal funds are received and applied to maintenance activities, they could generate additional net economic effects to the local and state economies through increased employment and earnings.

The estimated net change in local earnings generated by the FEIS Preferred Alternative is shown in **Table 8.1-3** and by the DEIS Alternatives in **Table 8.1-4**. The tables describe anticipated payroll expansion beyond implementation of the No Build Alternative. This analysis uses the BEA multipliers to generate estimates of earnings impacts attributable to O&M activities because output measures are less reliable in the context of transit service where market prices are not available. The multipliers applied in this section of the analysis are for the industry labeled "Transit and Ground Passenger Transportation." The increased earnings would result in positive economic impacts to the local economy, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, thus creating additional consumer demand and jobs to meet that demand. The transit earnings are derived by multiplying the incremental O&M cost over the No Build Alternative by the transit on-site labor percentage. The transit on-site labor percentage (34 percent) is derived from NICTD's O&M cost model. The final transit earnings do not include benefits as only the wage element impacts affects transit earning for the local economy. The O&M cost impact of the FEIS Preferred Alternative on the national economy uses the total O&M costs and not just the salary and wages portion of O&M costs.

Table 8.1-1: Annual Employment from Operation and Maintenance of FEIS Preferred Alternative (job-years)

Alternative	Annual O&M Costs	Transit On-site Labor Percentage	O&M Employment Multiplier	Total O&M Jobs (job-years)
FEIS Preferred Alternative (local economy only)	\$9,607,191	34%	17.1086	56
FEIS Preferred Alternative (using total O&M costs)	\$9,607,191	Not Applicable	17.1086	164

Source: HDR 2017.

Table 8.1-2: Annual Employment from Operation and Maintenance of the Project by DEIS Build Alternative (job-years)

Alternative (All Options)	Annual O&M Costs	Deflator	O&M Employment Multiplier	Total O&M Jobs (job-years)
Commuter Rail	\$12,879,141	0.9701	17.1086	214
IHB	\$12,841,036			213
Hammond Total	\$13,615,592			226
Hammond	\$13,247,022			220
Hammond - Weekend Shuttles	\$368,570			6

Source: The Whitehouse, Office of Management Budget 2015; NICTD 2016.

Table 8.1-3: Annual Earnings from Operation and Maintenance of the FEIS Preferred Alternative

Alternative	Annual O&M Costs	Transit On-site Labor Percentage	O&M Earnings Multiplier	Total O&M Earnings
FEIS Preferred Alternative	\$9,607,191	34%	0.5345	\$1,751,050
FEIS Preferred Alternative (using total O&M costs)	\$9,607,191	Not Applicable	0.5345	\$5,135,044

Source: HDR 2017.

Table 8.1-4: Annual Earnings from Operation and Maintenance of the Project by Build Alternative

Alternative (All Options)	Annual O&M Costs	O&M Earnings Multiplier	Total O&M Earnings
Commuter Rail	\$12,879,141	0.5345	\$6,883,901
IHB	\$12,841,036		\$6,863,534
Hammond Total	\$13,615,592		\$7,277,534
Hammond Design 3	\$13,247,022		\$7,080,533
Hammond - Weekend Shuttles	\$368,570		\$197,001

Source: The White House, Office of Management Budget 2015; NICTD 2016.

8.1.1 Long-term Effects

8.1.1.1 No Build Alternative

The No Build Alternative consists of the future programmed transportation system without the FEIS Preferred Alternative. The economic analysis focused on the incremental differences between the No Build condition and implementation of the FEIS Preferred Alternative relative to earnings.

8.1.1.2 FEIS Preferred Alternative

The effect of local O&M spending for the FEIS Preferred Alternative is estimated at 56 local total O&M job-years and \$1.7 million in local annual wages and salaries (2017 dollars) and 164 local total O&M job-years and \$5.1 million annual wages in the larger economy. With implementation of the FEIS Preferred Alternative, the increased earnings would result in positive economic impacts to the local economy, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, thus creating additional consumer demand and jobs to meet that demand.

8.1.2 Short-term Effects

O&M expenditures would not create short-term effects. The earnings impacts generated by O&M expenditures would be long-term recurring benefits.



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9 Mitigation

This section documents the mitigation measures that may be needed for both long-term operating and short-term construction effects.

9.1 Long-term Operating Effects

9.1.1 Acquisitions

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

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

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

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

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

9.1.2 Displacements

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

For the FEIS Preferred Alternative, any relocation of a displaced individual or business would be conducted in accordance with the Uniform Act. Ample notice would be given to those being relocated to allow for any planning contingencies that might arise. In accordance with Title VI of the Civil Rights Act of 1964, NICTD would provide relocation advisory assistance to all eligible persons without discrimination.

Displaced persons would be offered the opportunity to relocate in areas at least as desirable as their original property with respect to public utilities and commercial facilities. Rent and sale prices of replacement property offered to those displaced would be within their financial means, and replacement property would be within reasonable access to displaced individuals' places of employment. NICTD would make every reasonable effort to identify available comparable properties within the existing community and maintain access to community activities for displaced individuals.

NICTD anticipates that comparable decent, safe, and sanitary housing would be available on the real estate market to relocate those who would be displaced from their residences. However, if comparable housing cannot be offered, last-resort housing assistance would be made available to displaced persons. According to 49 CFR Part 24.404, last-resort housing is additional alternative assistance when comparable replacement dwellings are not available within the monetary limits for displaced owner-occupants and tenants.

Additionally, NICTD would also provide relocation planning and services to businesses. These relocation services include the following:

- Site requirements, current lease terms, and other contractual obligations
- Outside specialists to assist in planning and moving assistance for the actual move, and the reinstallation of machinery and other personal property
- Identification and resolution of personal property/real property issues
- An estimate of time required for the business to vacate the site
- An estimate of the anticipated difficulty in locating replacement property
- An identification of any advance relocation payments required for the move

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

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

9.2 Short-term Construction Effects

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

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

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

- Coordination with individual businesses to identify business usage, delivery, and shipping patterns, as well as critical times of the day or year for business activities to aid in developing worksite traffic control plans and to ensure that critical business activities are not disrupted
- Notification of property owners, businesses, and residences of major construction activities on a real-time basis
- Coordination with the affected utilities to minimize disruption of service
- Coordination with local businesses to ensure reasonable access to businesses during regular operating hours.

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

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



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Appendix A. Maps of Acquisitions



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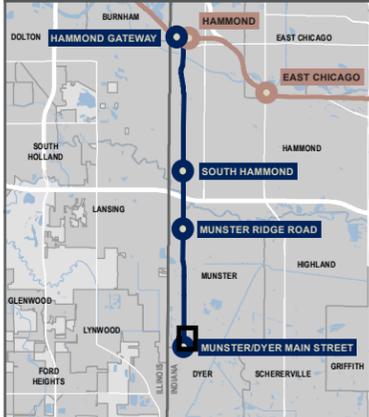
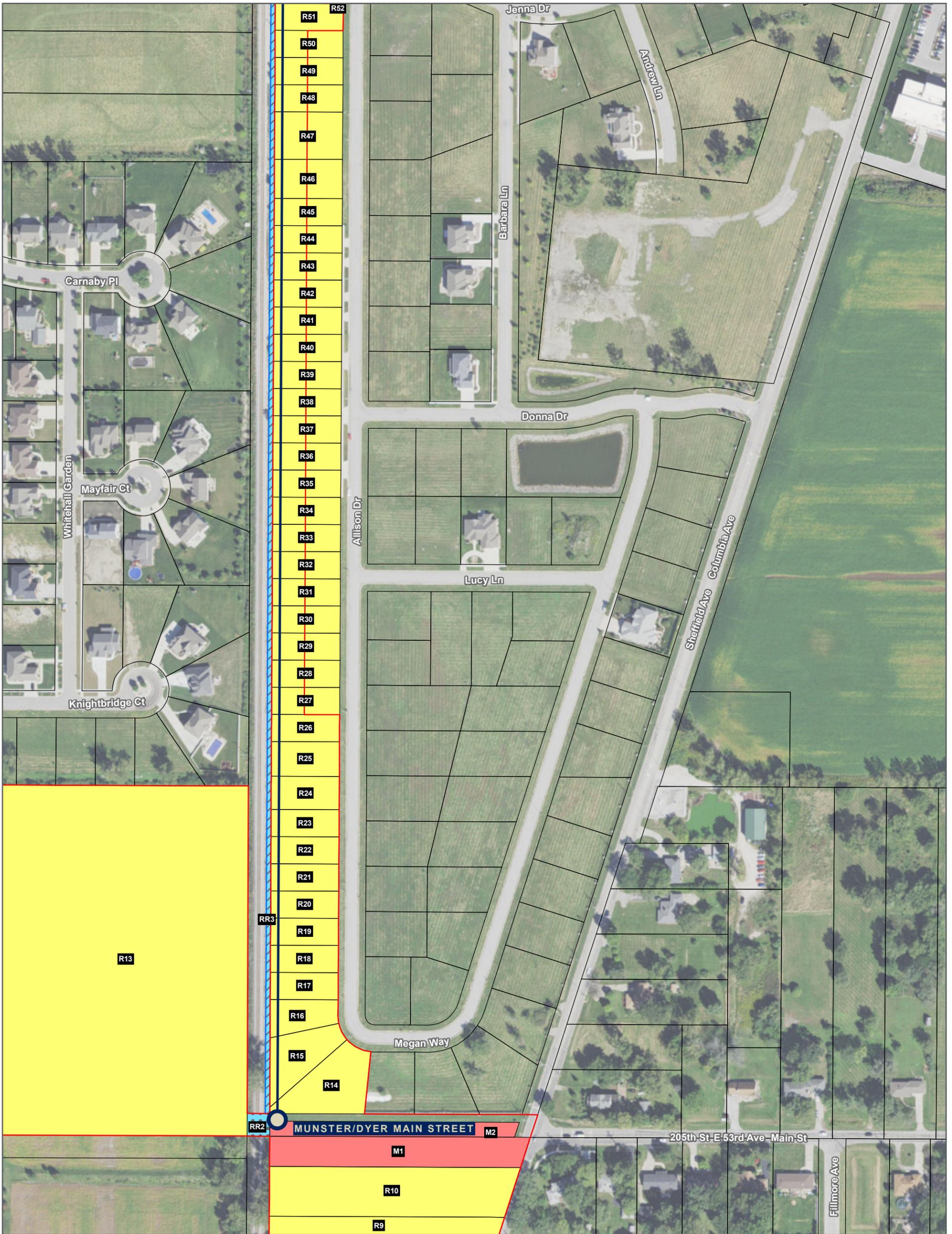
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 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

SHEET 1 OF 18
Data for Reference Only

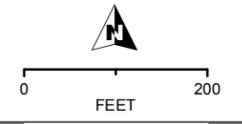


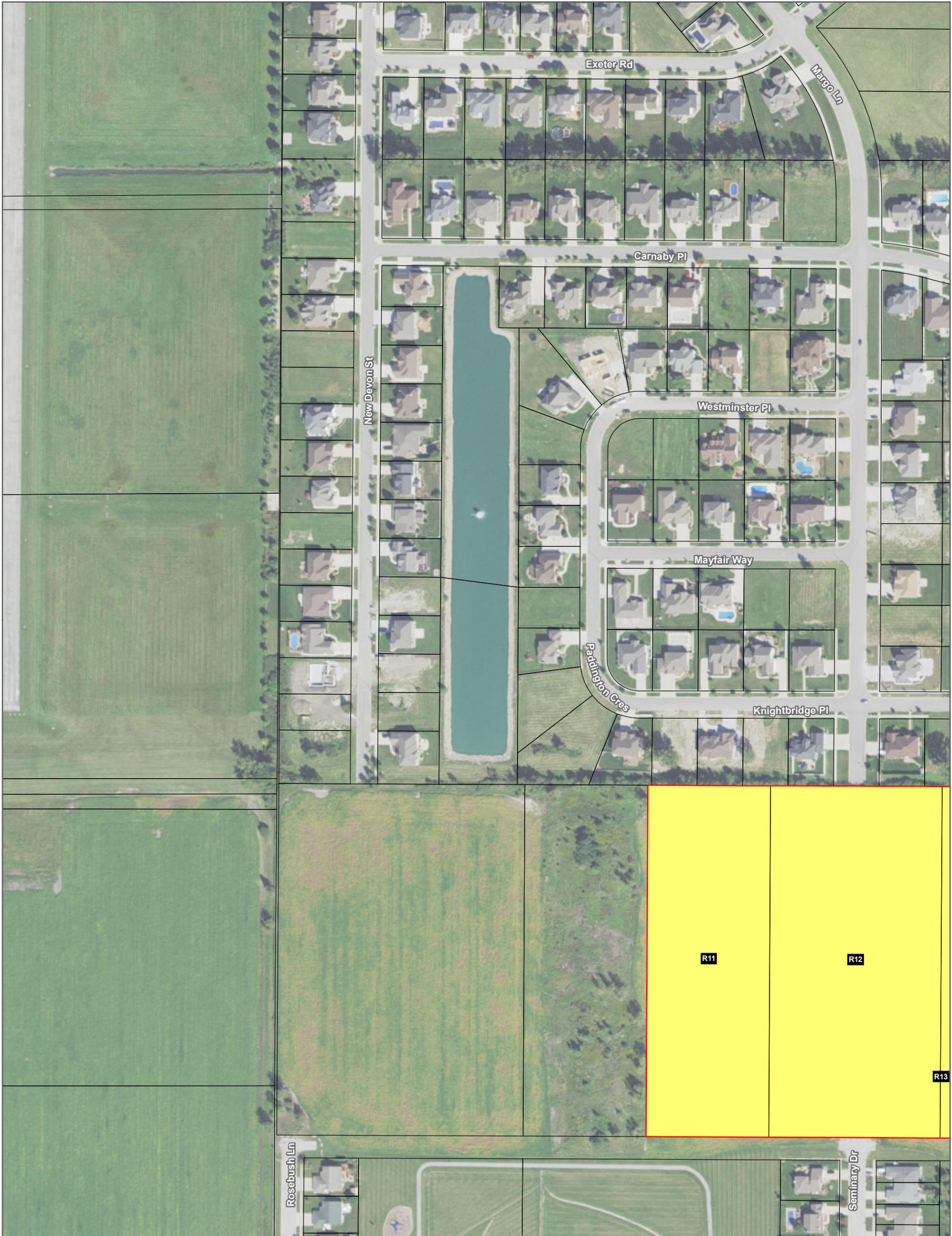
- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown
- **Drawing may not include all parcels that may be impacted by acquisition for the project as project planning and engineering are still in progress.

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS





- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

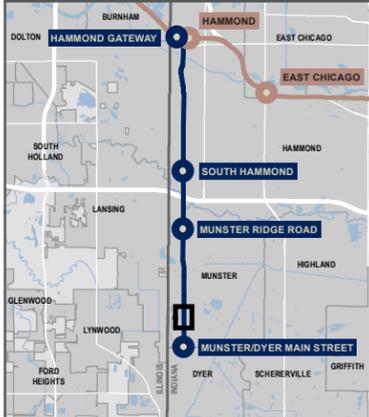
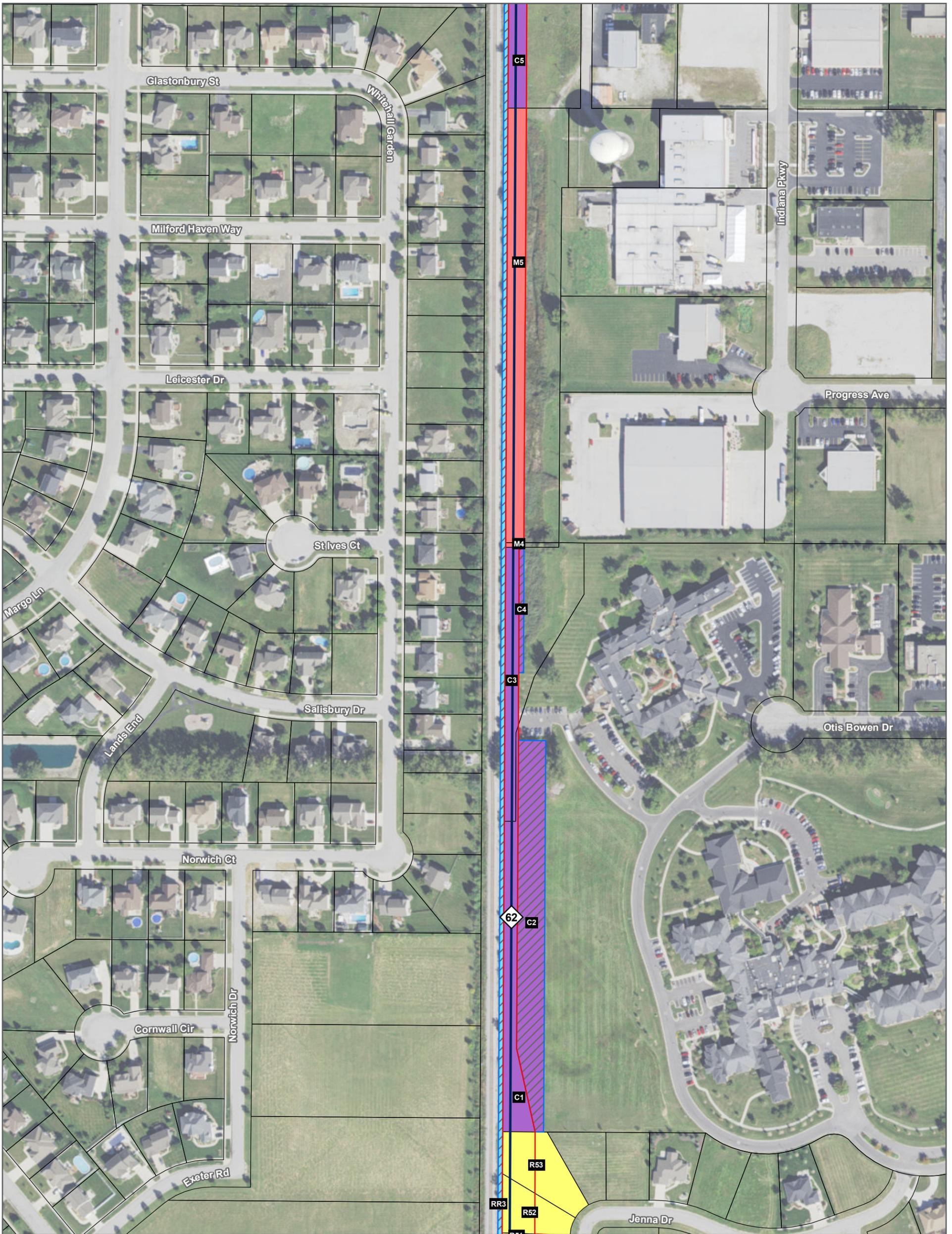
ANTICIPATED PARCEL ACQUISITION AREAS

0 FEET 200

WEST LAKE CORRIDOR

SHEET 3 OF 18
Data for Reference Only

BACKGROUND SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY



- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

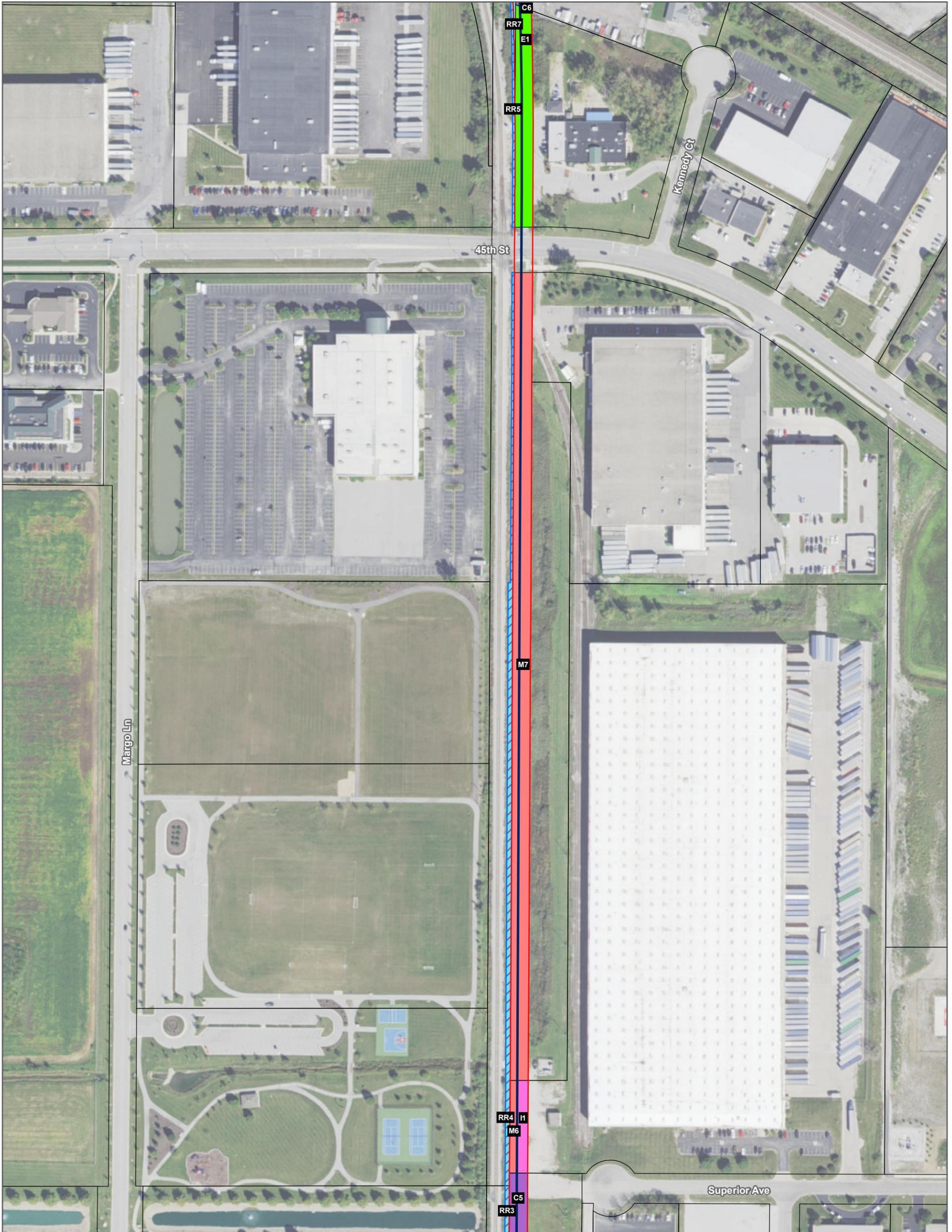
ANTICIPATED PARCEL ACQUISITION AREAS

0 FEET 200

WEST LAKE CORRIDOR

SHEET 4 OF 18
Data for Reference Only

BACKGROUND SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY



- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown
- **Drawing may not include all parcels that may be impacted by acquisition for the project as project planning and engineering are still in progress.

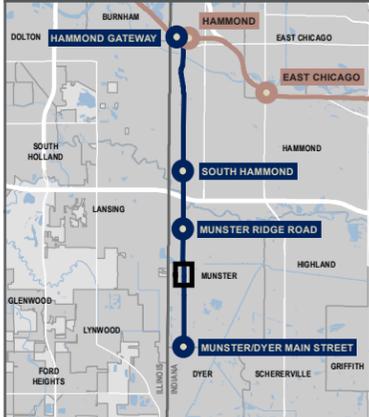
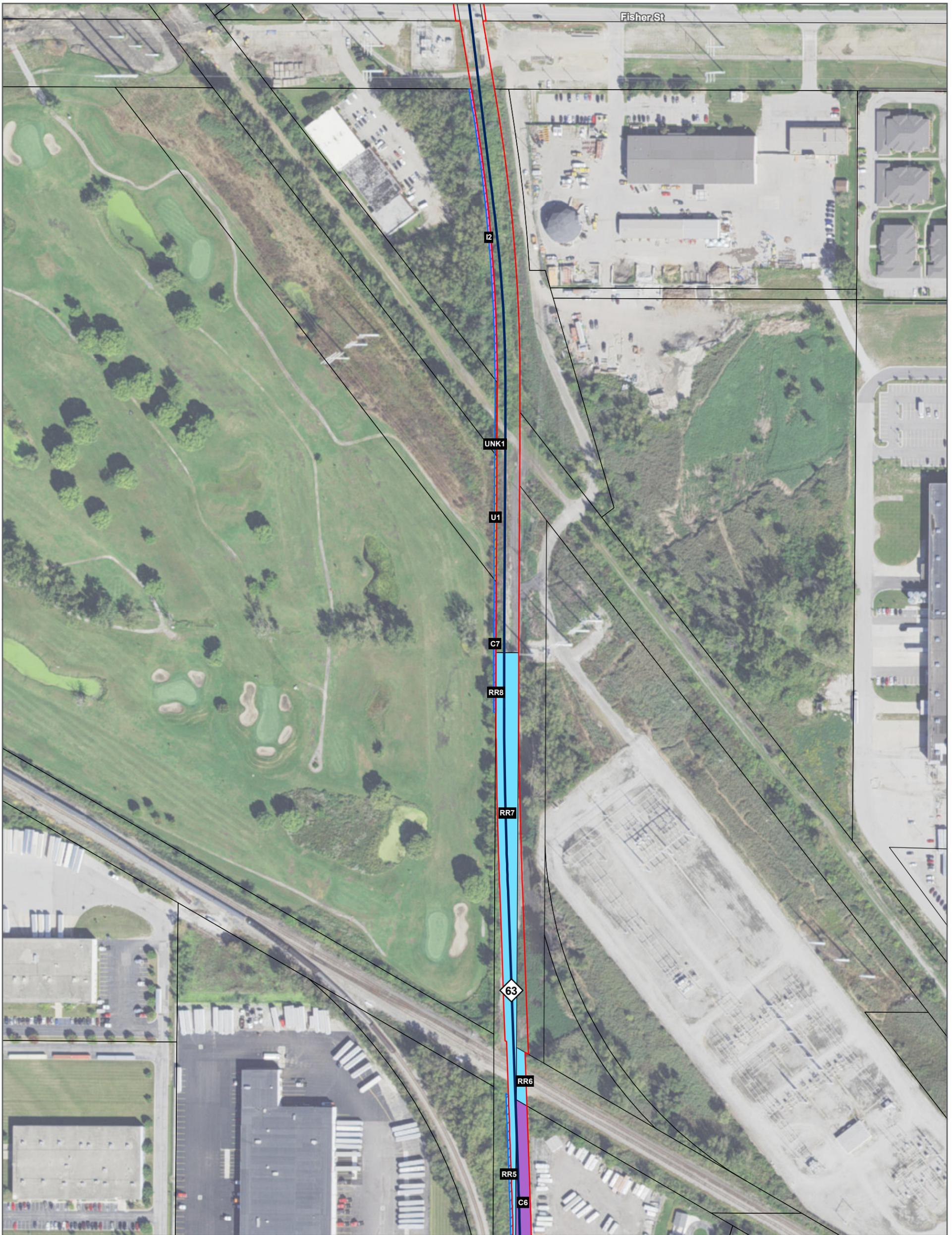
- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

0 FEET 200

WEST LAKE CORRIDOR

SHEET 5 OF 18
Data for Reference Only



- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

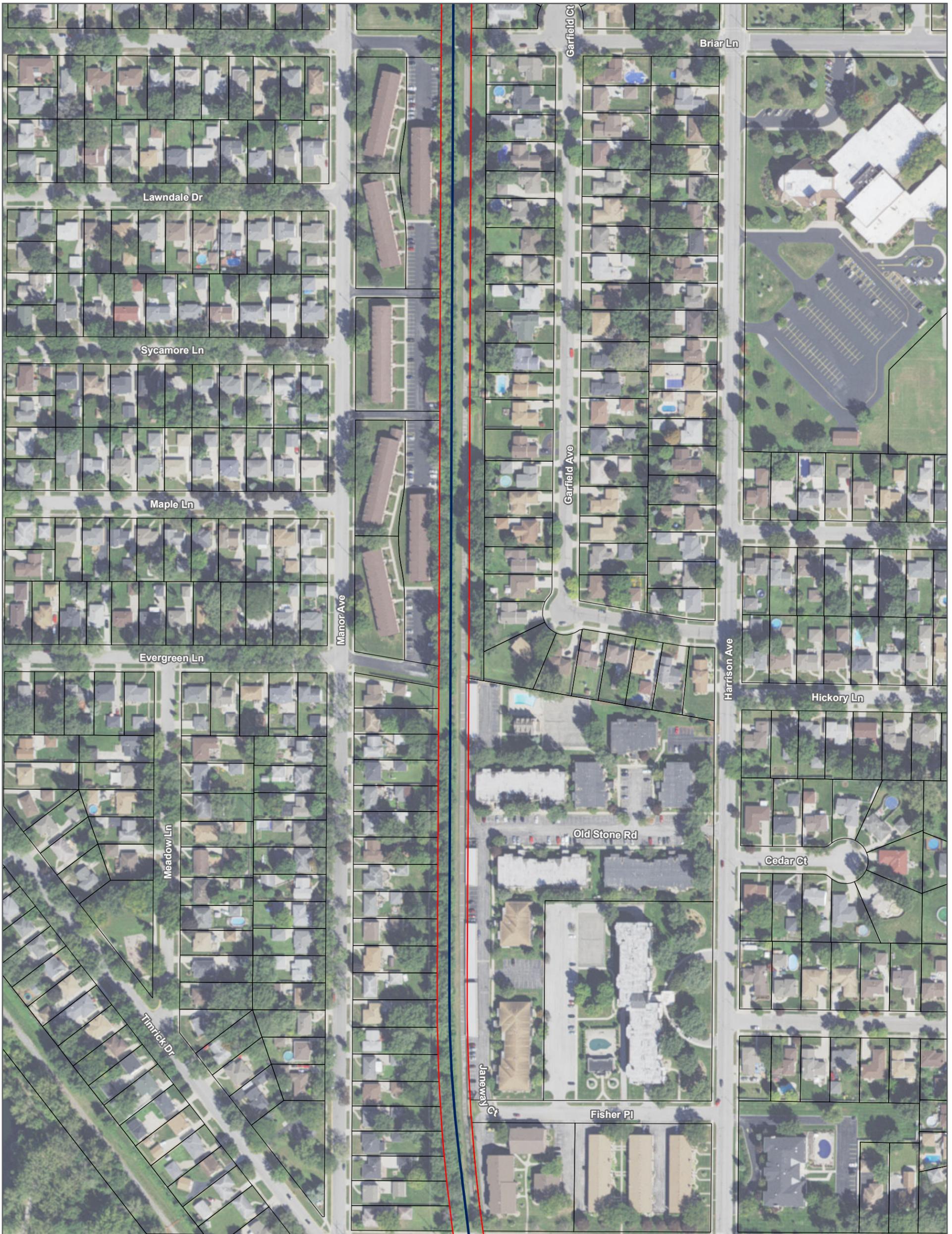
- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown
- **Drawing may not include all parcels that may be impacted by acquisition for the project as project planning and engineering are still in progress.

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

0 FEET 200

SHEET 6 OF 18
Data for Reference Only



- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

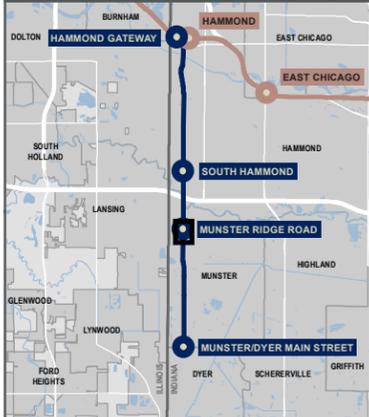
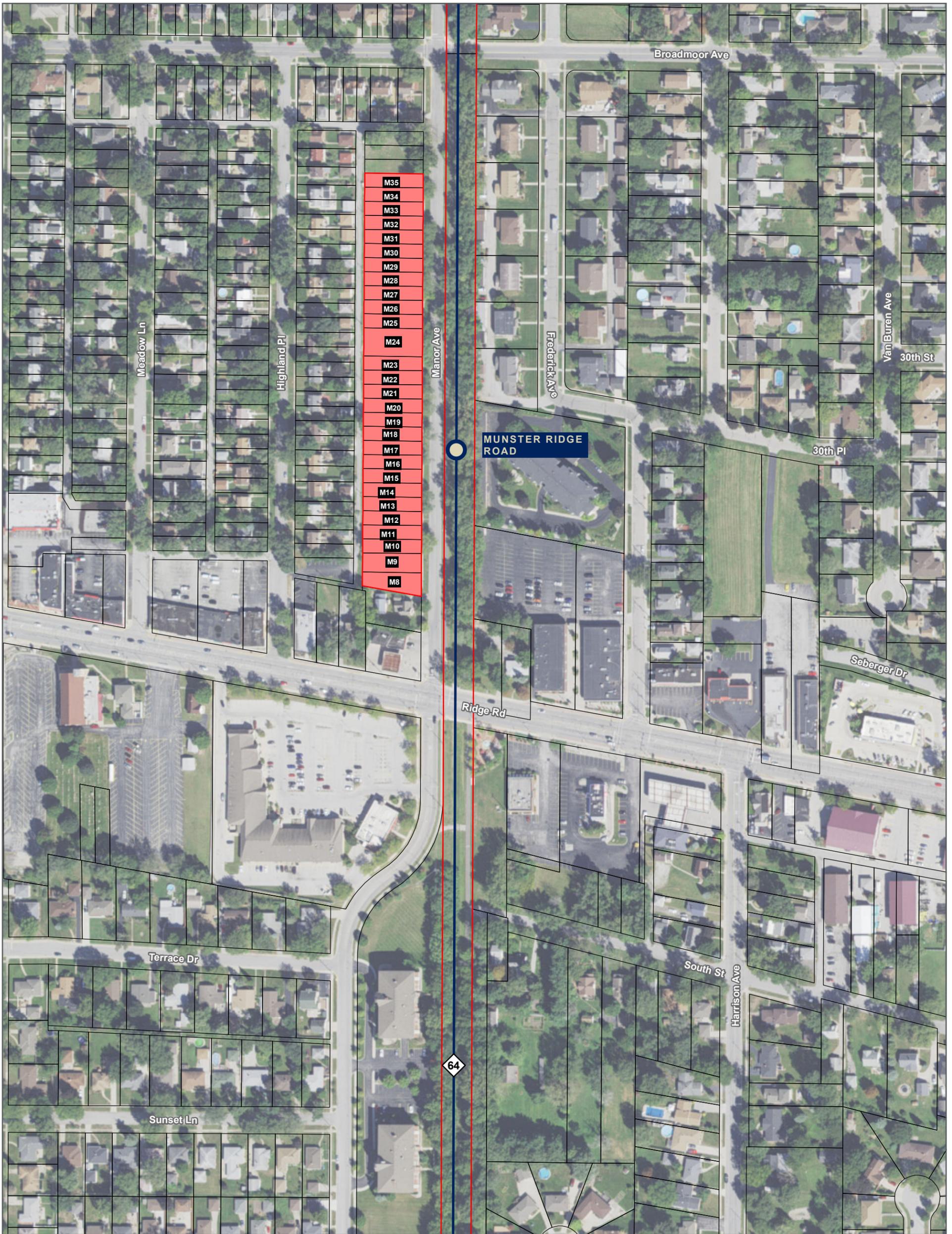
ANTICIPATED PARCEL ACQUISITION AREAS

0 FEET 200

WEST LAKE CORRIDOR

SHEET 7 OF 18
Data for Reference Only

BACKGROUND SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY



- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

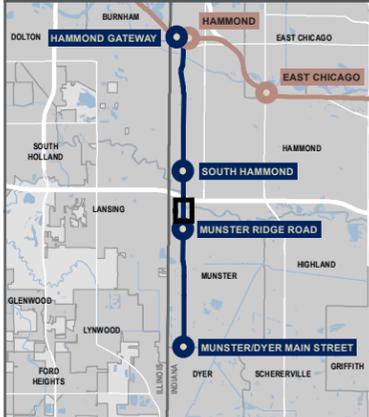
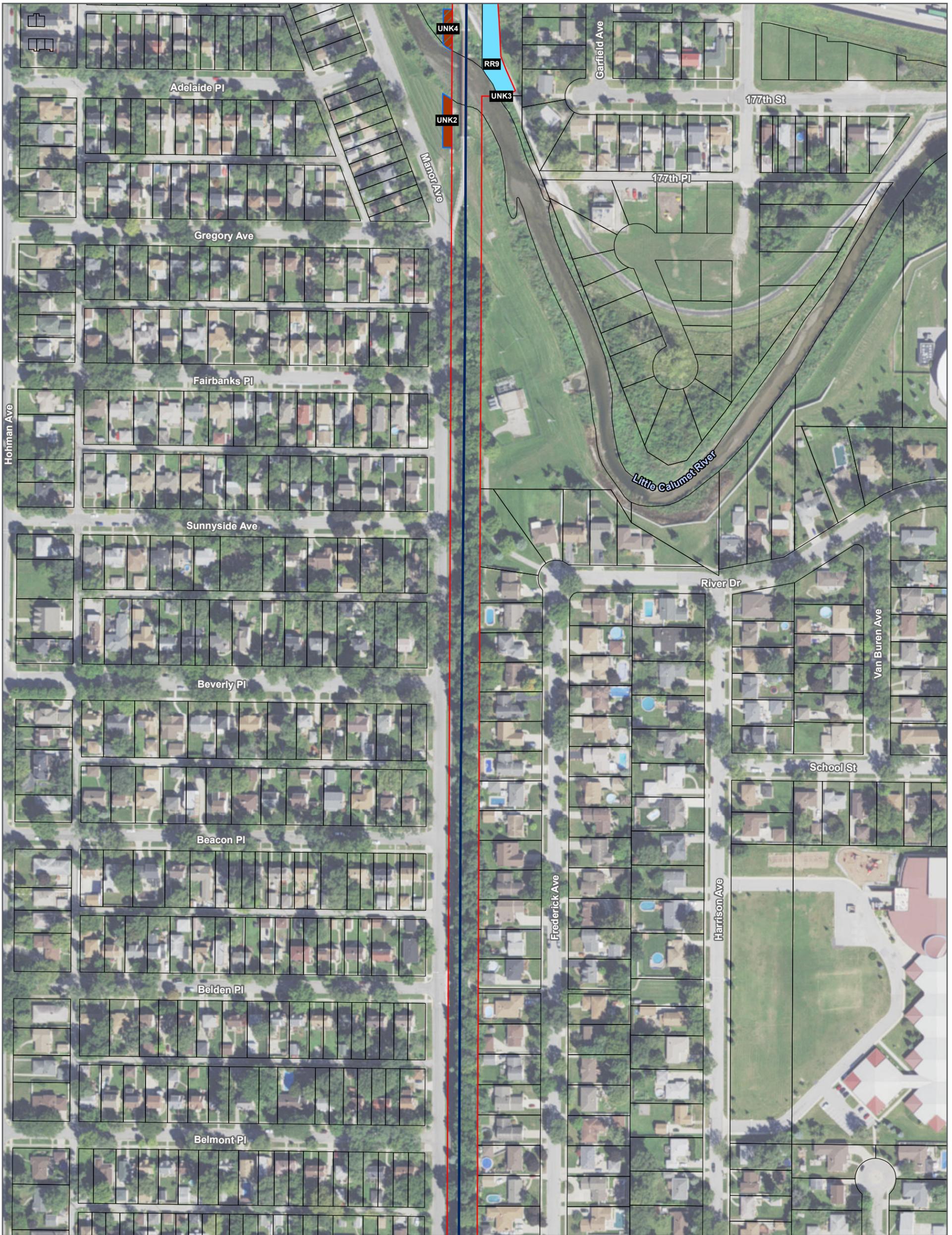
ANTICIPATED PARCEL ACQUISITION AREAS

0 FEET 200

WEST LAKE CORRIDOR

SHEET 8 OF 18
Data for Reference Only

BACKGROUND SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY



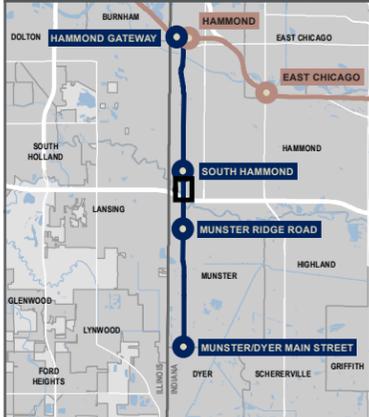
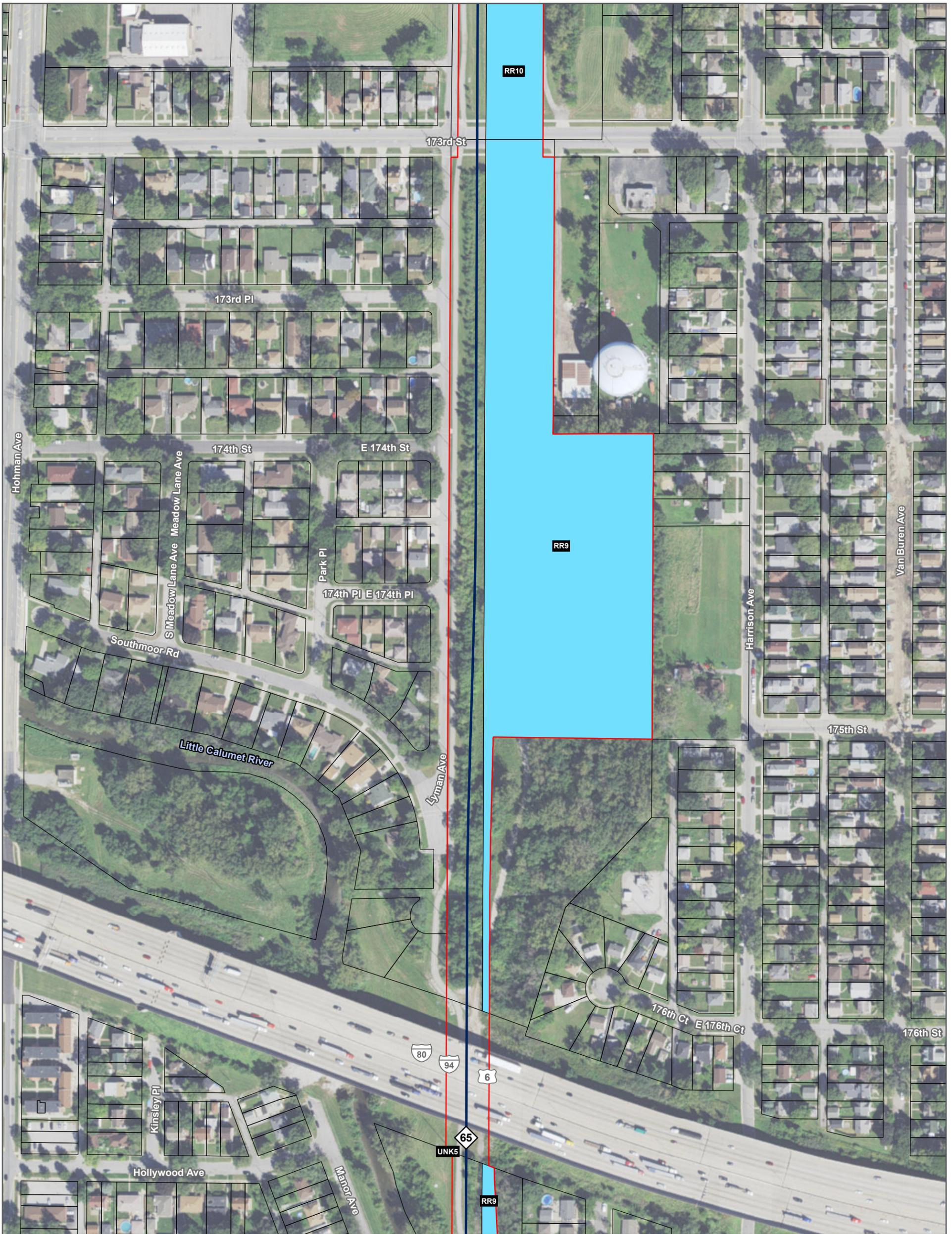
- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown
- **Drawing may not include all parcels that may be impacted by acquisition for the project as project planning and engineering are still in progress.

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

SHEET 9 OF 18
Data for Reference Only



- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

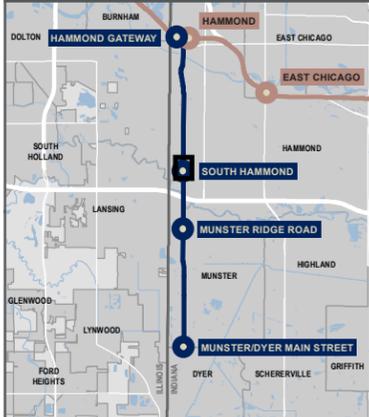
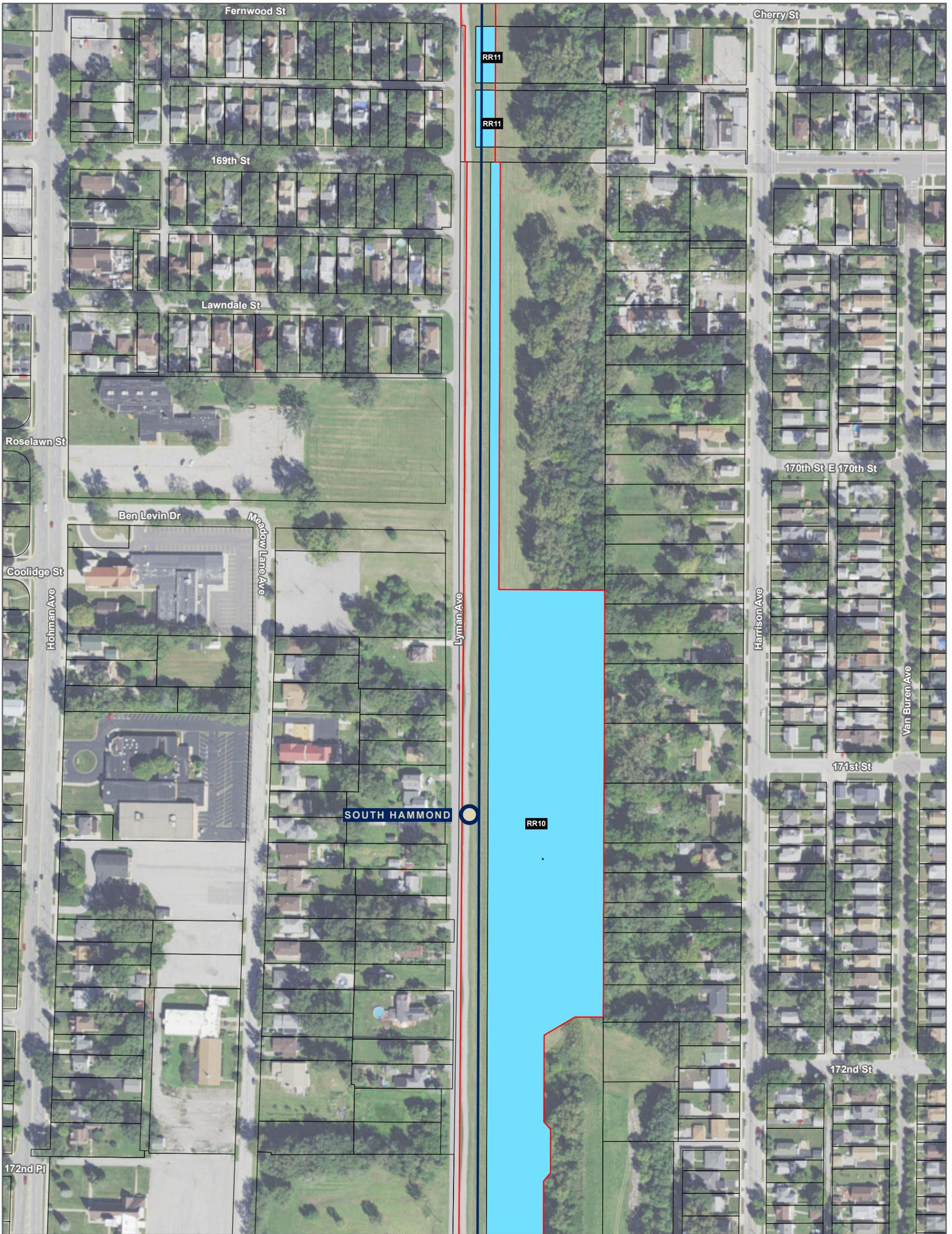
- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown
- **Drawing may not include all parcels that may be impacted by acquisition for the project as project planning and engineering are still in progress.

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

0 FEET 200

SHEET 10 OF 18
Data for Reference Only



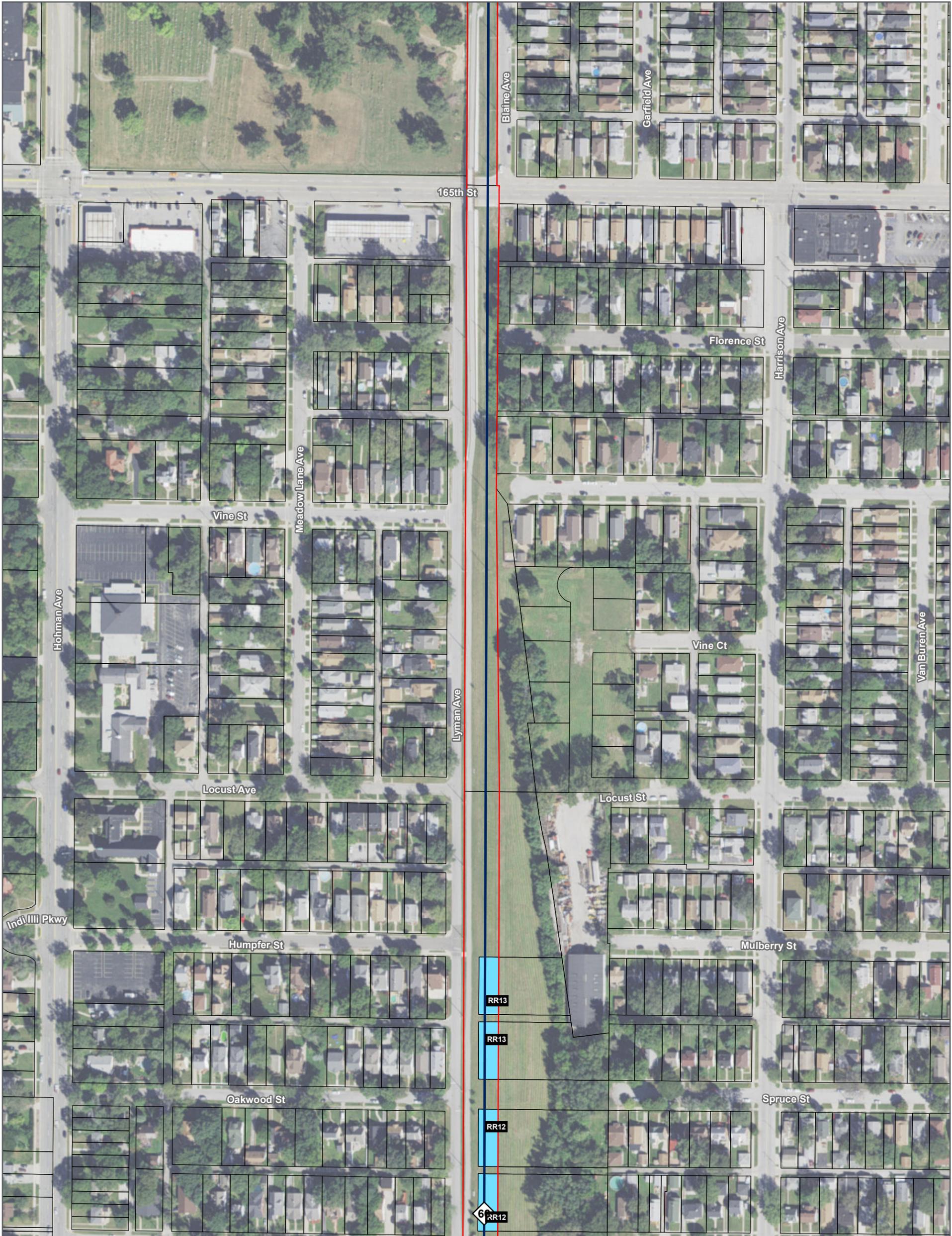
- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

SHEET 11 OF 18
Data for Reference Only



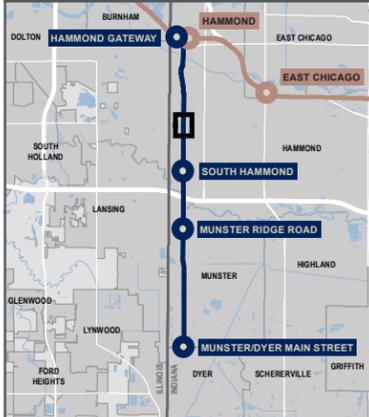
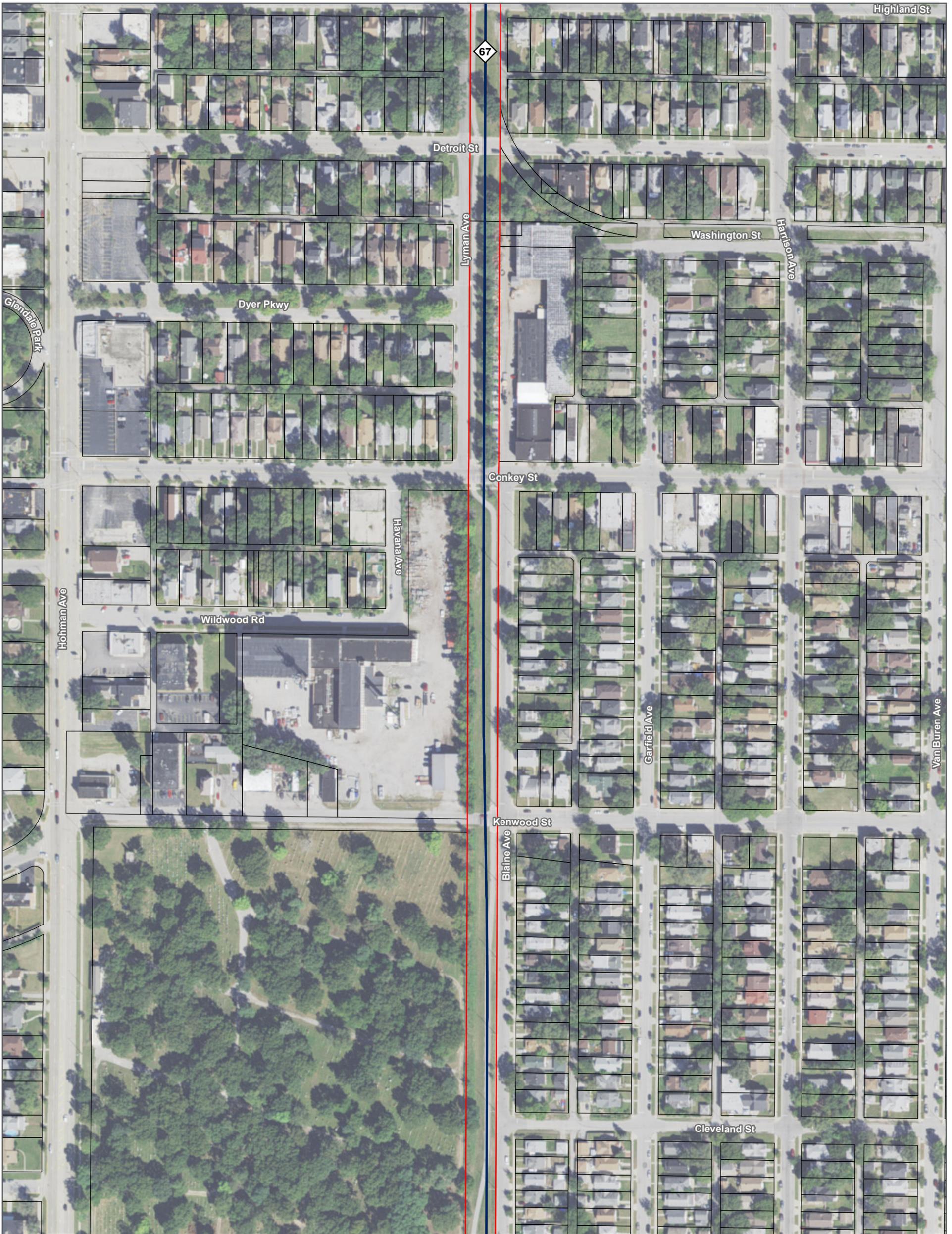
- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown
- **Drawing may not include all parcels that may be impacted by acquisition for the project as project planning and engineering are still in progress.

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

SHEET 12 OF 18
Data for Reference Only



- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown

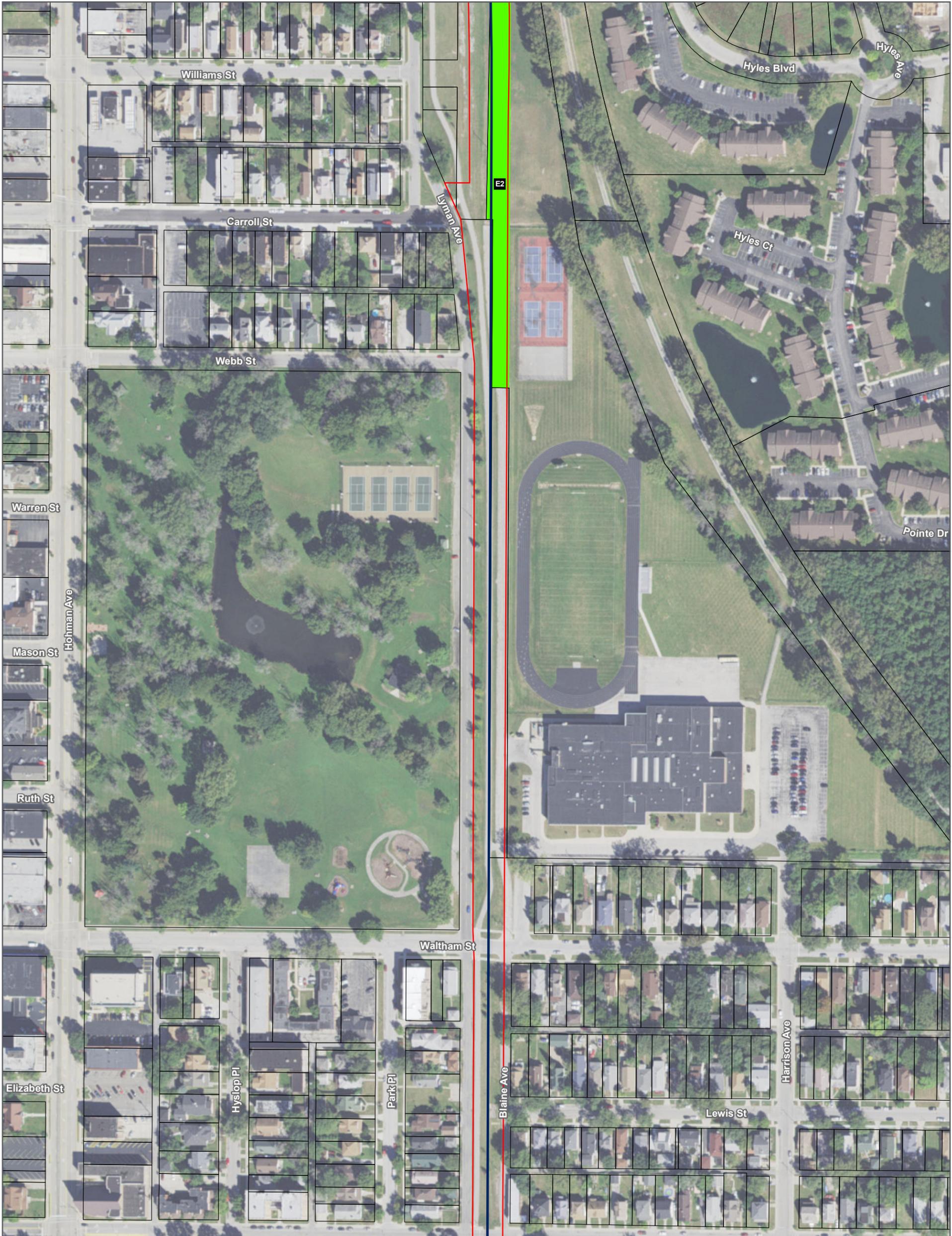
- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

0 FEET 200

WEST LAKE CORRIDOR

SHEET 13 OF 18
Data for Reference Only



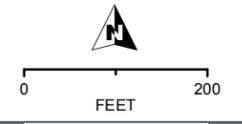
- Existing Station
- Proposed Station
- Existing South Shore Line
- FEIS Preferred Alternative
- Milepost
- Permanent Construction Footprint
- Temporary Construction Footprint
- Parcel Boundary*

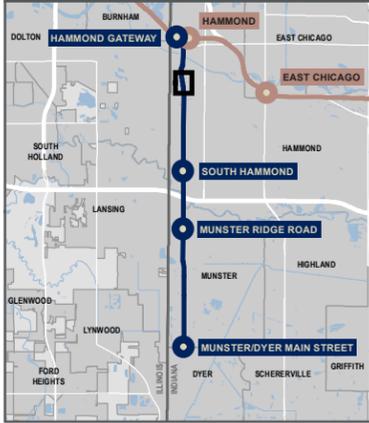
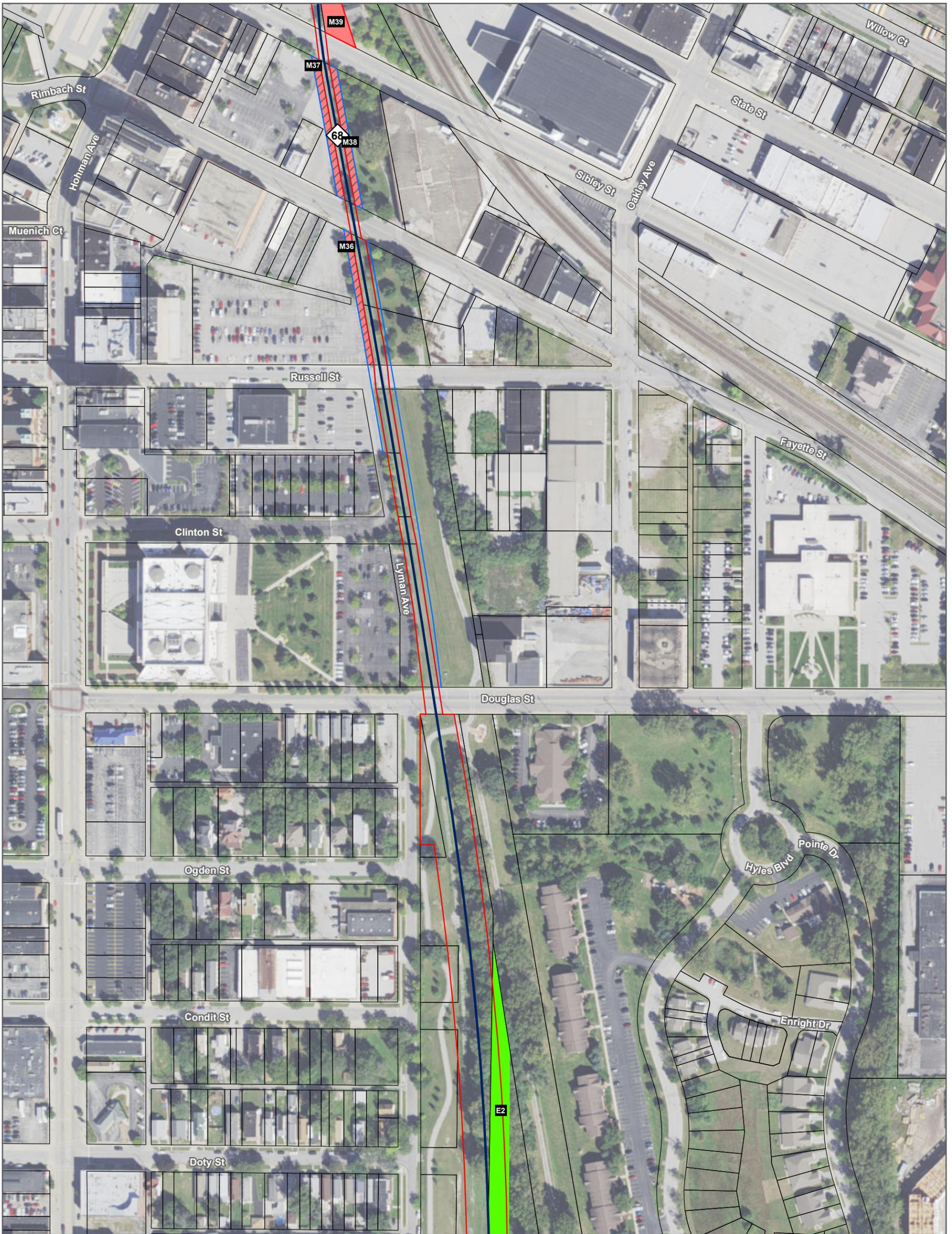
- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

*Parcel Boundaries shown are not survey-grade.
 **Drawing may not include all parcels that may be impacted by acquisition for the project as project planning and engineering are still in progress.

ANTICIPATED PARCEL ACQUISITION AREAS



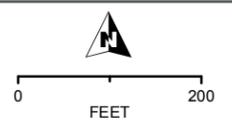


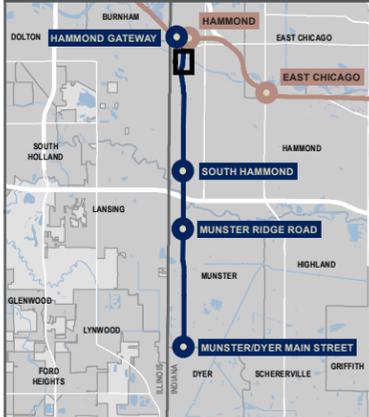
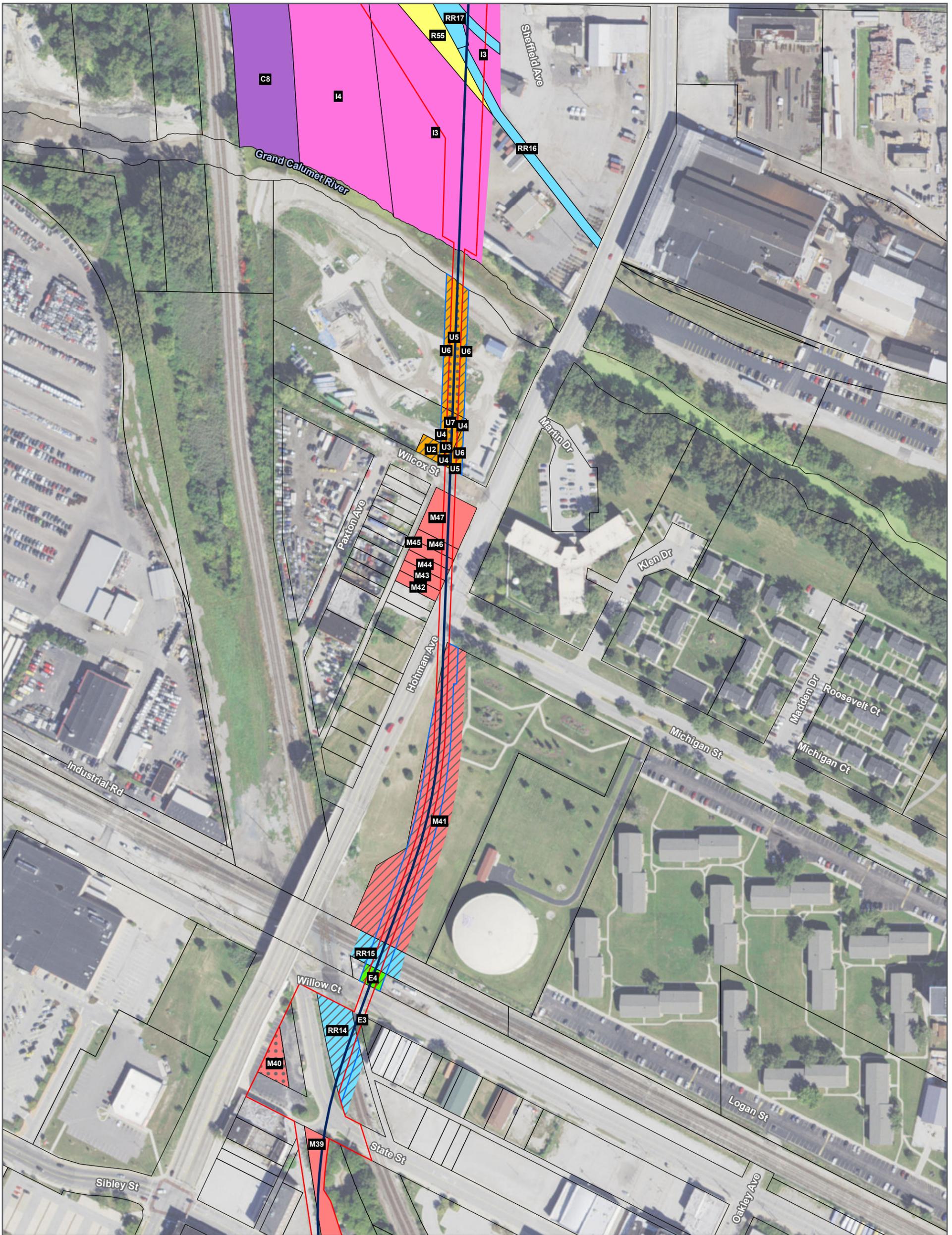
- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown
- **Drawing may not include all parcels that may be impacted by acquisition for the project as project planning and engineering are still in progress.

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS





- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

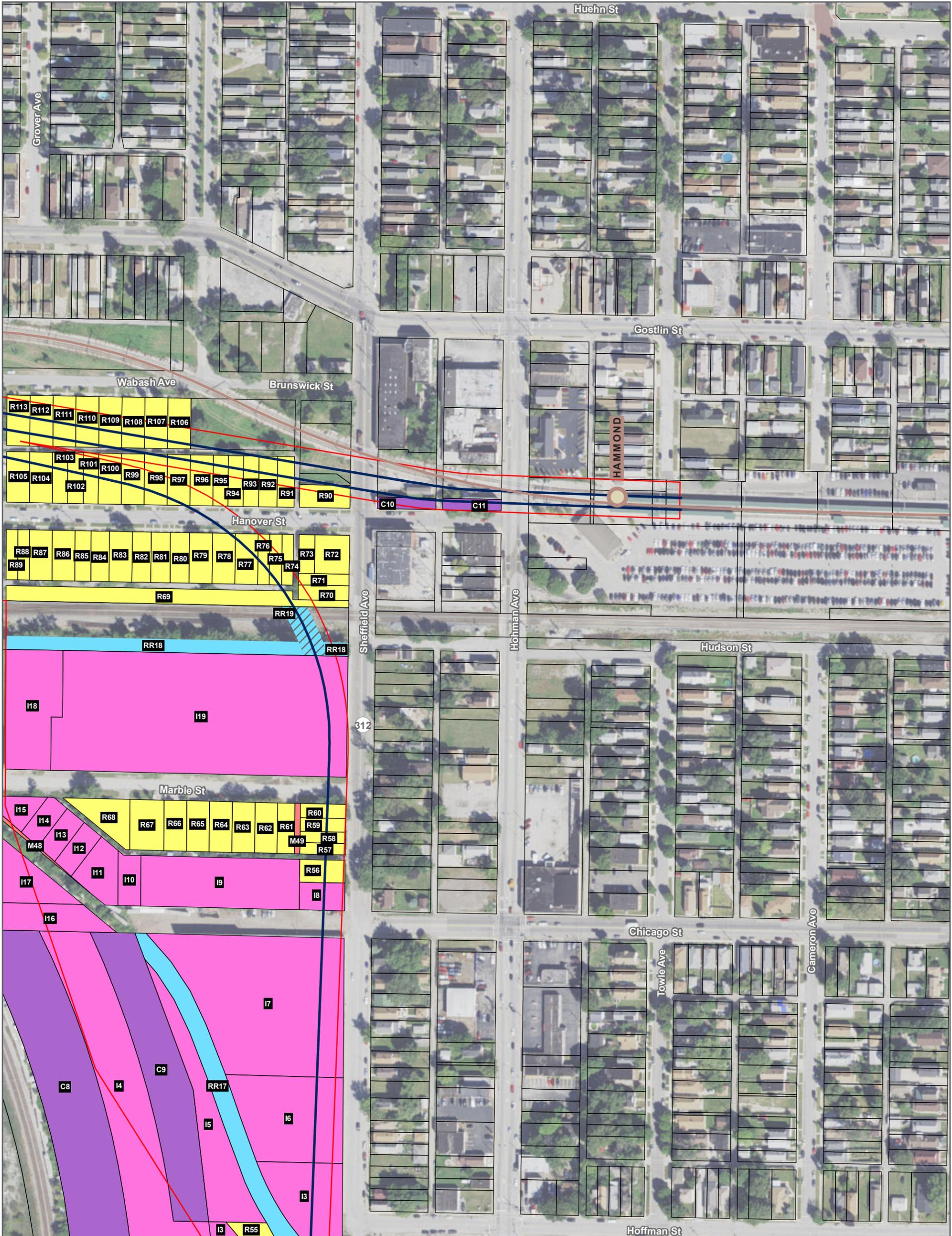
- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown
- **Drawing may not include all parcels that may be impacted by acquisition for the project as project planning and engineering are still in progress.

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

0 FEET 200

SHEET 16 OF 18
Data for Reference Only



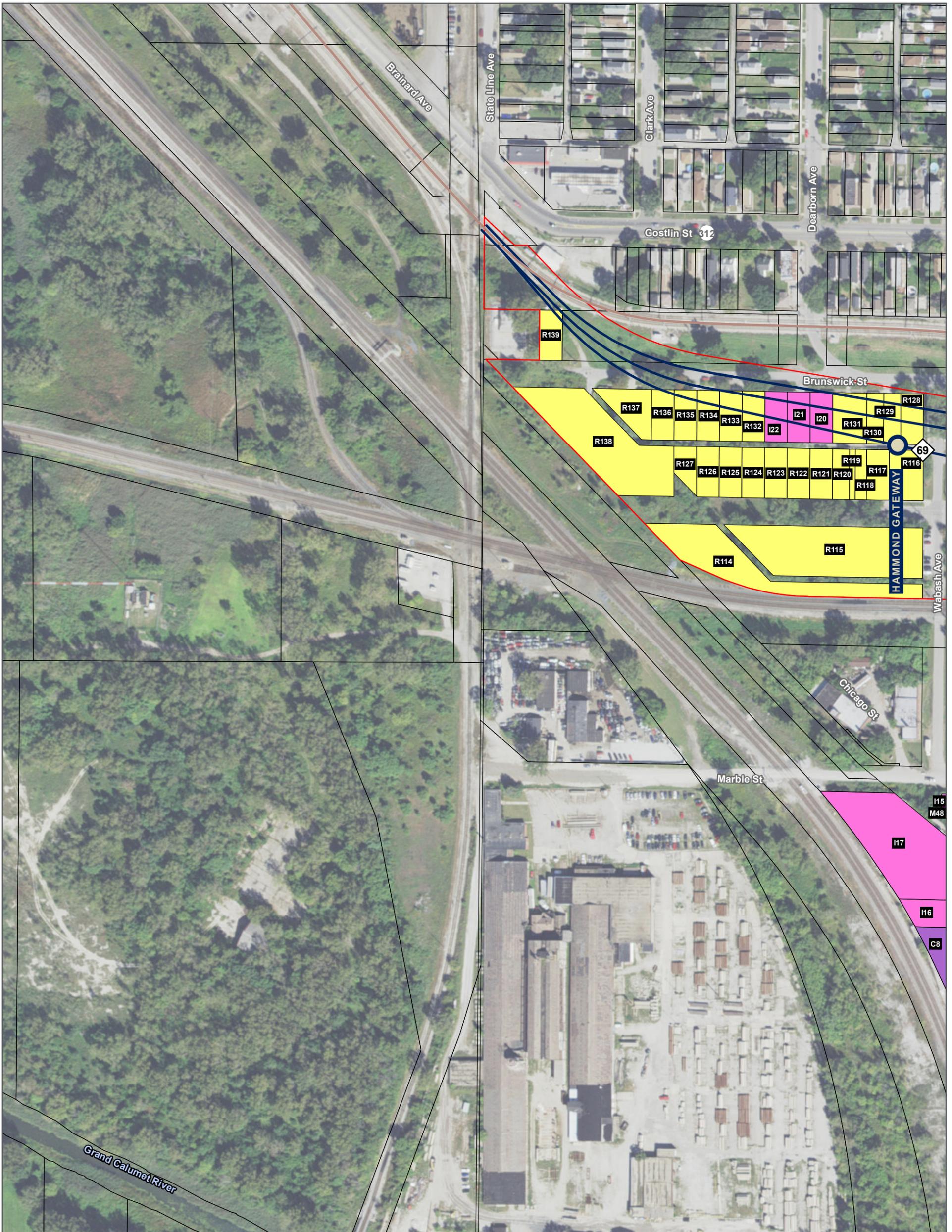
- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown
- **Drawing may not include all parcels that may be impacted by acquisition for the project as project planning and engineering are still in progress.

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

SHEET 17 OF 18
Data for Reference Only



- Existing Station
 - Proposed Station
 - Existing South Shore Line
 - FEIS Preferred Alternative
 - Milepost
 - Permanent Construction Footprint
 - Temporary Construction Footprint
 - Parcel Boundary*
- *Parcel Boundaries shown are not survey-grade.

- Anticipated Acquisition Areas****
- Residential
 - Commercial
 - Industrial
 - Municipal
 - Exempt Non-Municipal
 - Utility
 - Freight Railroad Owned
 - Unknown

- Easement Type**
- Permanent Easement
 - Temporary Easement
 - Acquisition Number

ANTICIPATED PARCEL ACQUISITION AREAS

SHEET 18 OF 18
Data for Reference Only

BACKGROUND SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGIRD, IGN, AND THE GIS USER COMMUNITY