Lafayette Water Works

March 29, 2024

Jennifer Pence, SRF Program Manager
Indiana Finance Authority
100 North Senate Ave., Suite 1275
Indianapolis, IN 46204

Subject: Preliminary Engineering Report (PER) – Lead Service Line Replacements
City of Lafayette, Indiana

Dear Jennifer Pence:

On behalf of the City of Lafayette, we are submitting this Lead Service Line Replacements PER dated March 2024 for review and approval by the SRF loan program. Enclosed is a digital copy of the PER for the Lead Service Line Replacements. Two (2) hard copies of the report will be mailed to the Indiana Finance Authority. We appreciate your consideration.

We look forward to your response to the PER. If you have any questions, please contact our engineer, Andrew D. Gordon, P.E. with Wessler Engineering, Inc. at (317) 788-4807.

Sincerely,

Steve Moore

Steve Moore
Water Works Superintendent

Preliminary Engineering Report
Lead Service Line Replacements
for the **Lafayette Water System**

prepared for the

BOARD OF PUBLIC WORKS AND SAFETY
LAFAYETTE, INDIANA

March 2024

WESSLER ENGINEERING
More than a Project™

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1.0 PROJECT LOCATION

1.1 Project Area

The City of Lafayette (City) is located in Tippecanoe County, Indiana, east of the Wabash River and west of Interstate 65 shown on **Figure A-1.1** in **Appendix A.** A service area map is shown in **Figure A-1.2** in **Appendix A.** A USGS Map is provided on **Figure A-2.1** in **Appendix A**.

1.2 Study Area

The study area is located within the Lafayette East, Lafayette West, Romney, and Stockwell Quadrangle Maps, T22N and T23N, R4W. Sections numbers within the service area are shown on the Project Location Map on **Figure A-1.1** in **Appendix A**. The City serves 30,773 customers, most of which are within the City's corporate limits. The City also provides wholesale water to the Town of Dayton, located southeast of Lafayette on State Road 38.

1.3 Projected 20-Year Service Area

Projected 20-year development is expected to occur within the City's service areas 7, 8, 11A, and 11B. These areas are shown in **Figure A-1.2** in **Appendix A.**

1.4 Project Purpose

On December 16, 2021, the U.S. Environmental Protection Agency (EPA) announced next steps to strengthen the regulatory framework on lead drinking water. The Lead and Copper Rule Revisions (LCRR) require the creation of lead service line inventories to plan for and complete 100% removal of lead service lines from the distribution system. Completed inventories are due on October 16, 2024. The purpose of this preliminary engineering report is replacement of approximately 6,700 lead service lines to achieve compliance with the upcoming regulatory improvements.

2.0 CURRENT NEEDS

2.1 Existing Facilities

2.1.1 Supply and Treatment

The City's water source consists of two (2) wellfields: the Canal wellfield, and Glick wellfield. Collectively, both wellfields contain a total of fourteen (14) groundwater wells, which are adjacent to the Wabash River.

2.1.1.1 Canal Wellfield

Canal Wellfield has nine (9) active groundwater wells. The wellfield and treatment facility are located at 1020 Canal Road. No improvements were evaluated for the wellfield in this report.

2.1.1.2 Glick Wellfield

There are five (5) active groundwater wells in the existing Glick Wellfield. The wellfield is located in McAllister Park south of Sagamore Parkway North along North 9th Street, north of the Canal Wellfield. The wells are located within the floodway of the Wabash River and are constructed on elevated platforms above the 100-year flood elevation. No improvements were evaluated for the wellfield in this report.

2.1.2 Distribution System

There is approximately 2,258,620 feet (428 miles) of water main ranging in size from ¾-inch to 36-inch diameter. The distribution system consists of 3,665 hydrants and 8,989 valves, with sizes ranging from 2-inch to 36-inch. The water distribution system is comprised of two (2) pressure zones. The lower pressure zone system is believed to have been installed in the late 1800s and the upper pressure zone system in the early to mid-1900s. Both zones have mostly looped mains, but the system does contain dead-end mains on the edges of the City's distribution system limits.

The system's water mains are primarily cast iron, with more recent improvements and new development being ductile iron. Based on hydraulic modeling, the typical system pressures range between 50-80 psi, with a system average of about 65 psi. The City currently has a reported 30,773 active service connections.

2.1.3 Water Storage

The City has four (4) elevated tanks and two ground reservoirs for finished water storage. A fifth elevated tank (Wea Ridge) is currently under construction and is anticipated to be online in May 2024. The tanks and reservoir have a combined storage capacity of fifteen (15) million gallons. **Table 2.3** summarizes the City's existing water storage.

2.1.4 Booster Stations

The City has two (2) water booster stations that pump water out of the ground water storage reservoirs into the upper pressure zone. The Columbian Park Booster station is located at the

intersection of Main Street and Scott Street within Columbian Park. The Murdock Park Booster Station is located at the intersection of Cason Street and 22nd Street in Murdock Park.

2.1.5 Water Service Line Inventory

The City completed their lead service line inventory and submitted it to the IDEM PWS Service Line Inventory Portal in May of 2023. The inventory contains documentation for 30,773 active and inactive service lines. **Figure A-4.1** in **Appendix A** shows the area in the older northwest portion of the City's lower pressure zone where LSLs are concentrated in the distribution system. **Table 2.5** summarizes the total lead lines that will need to be replaced.

Table 2.5 Summary of Lead Replacement Lines

Owner	*Lead*	*Unknown/Likely Lead*	*Total*
Customer	43	6,318	**6,361**
Utility	6,032	424	**6,456**
Total	**6,075**	**6,742**	**12,817**

To reduce the number of service lines in the inventory with unknown materials, the City is completing meter pit investigations and strategic potholing. There are eleven (11) areas shown on **Figure A-4.1** that the City needs to investigate for lead service lines. On February 12, 2024, the City began inspecting water meter pits to identify service line materials. Any service addresses with a curb stop and no outside meter pit, were noted for future potholing. Any meter pits with evidence of old infrastructure are also being noted for future potholing. Meter pit investigations are expected to take 3 months to complete using the funds available from the Type III IFA grant. As of mid-March 2024, the City has completed investigations in Areas 1, 2, and half of Area 3. A total of 1,750 meter pits have been inspected and approximately 100 potholes have been identified for further service line investigation to identify service line pipe material. See **Figure A-4.2** for determined locations of where potholes will be needed.

Potholing of service lines is anticipated to start in May 2024 and finish in July 2024 using the funds available from the Type III IFA funding grant.

3.0 FUTURE NEEDS

3.1 Current Population

The City distributes water to customers inside their corporate limits and outside, including the Town of Dayton, Indiana. The 2020 Census lists the total population of Tippecanoe County to be 186,251 and the population of the City to be 70,783. Current population information is calculated assuming a linear increase in population between the 2010 and 2020 census data and extrapolating this trend for 2023.

Table 3.1 summarizes the historical and current population data for the County, City, and Town of Dayton, which was collected from the US Census Bureau.

Table 3.1: Historical and Existing Populations

Year	Population		
-	Tippecanoe Co.	Lafayette	Dayton
1990	130,598	43,764	996
2000	148,955	56,397	1,120
2010	172,780	67,140	1,420
2020	186,251	70,783	1,330
2023	190,607*	71,935*	1,330**

**Calculated using historical trends from 2010 to 2020*
***Assumed a growth rate of 0%*

In addition to the Town of Dayton, the City has approximately 5,759 water service connections outside the corporate limits. Assuming an average of 2.38 persons per household, a population of 13,706 are served outside the City. **Table 3.2** shows the total population served by the City.

Table 3.2: Total Estimated Population Served by the City

Year	Population		
-	Lafayette	Outside Customers	**TOTAL**
2022	71,935	15,036	**86,971**

4.0 DESCRIPTION OF ALTERNATIVES

4.1 Alternatives Evaluation

4.1.1 Alternative L1 - No action

This alternative leaves the lead service lines in place. This alternative was not considered acceptable as it does not achieve compliance with the Lead and Copper Rule Revisions issued by the EPA. For this reason, the no action alternative was eliminated from consideration.

4.1.2 Alternative L2 – Regionalization

This alternative does not apply to the replacement of lead service lines. For this reason, the regionalization alternative was eliminated from consideration.

4.1.3 Alternative L3 - Lead Service Line Replacements

This alternative includes the replacement of approximately 12,817 utility-side and customer-side lead services within the project areas shown **in Figure A-4.1** in **Appendix A**. The scope of work will include the utility-owned portion of the service line, customer side, or both. When the customer side is replaced, a new service line will be installed from the meter pit to the building or just inside the building at the closest shut-off valve. If the meter is located inside the building, then the customer's service line will be replaced to the meter. Meter pits and appurtenances that are old and outdated will be replaced. Necessary rights of entry will be secured prior to construction. The timeline for this alternative is estimated to be 7 years to complete all of the lead service line replacements. As additional meter pit investigations and potholing of service lines are completed, it is anticipated that the number of replacements will be less and the timeframe of the project will be reduced. The estimated project cost of this alternative is **$61,372,000**. Cost details are included in **Appendix B.**

4.2 Present Worth Analysis

A life cycle cost analysis was calculated which estimates the capital cost, energy cost, maintenance cost and short-lived assets for the replacement of lead service lines. The life cycle cost was analyzed for a period of 20 years at a State Revolving Fund (SRF) interest rate of 0.40%. The results are summarized in **Table 4.1** below. The breakdown of life cycle cost is shown in **Appendix C**.

Table 4.1: Life Cycle Cost Analysis Summary

Description	Lead Service Line Replacement
Period	20 Years
Interest Rate	0.40%
Capital Construction	$61,372,000
Annual O&M	$100,000
Net Present Value (O&M)	$1,918,418
Net Present Value (Capital + O&M)	$61,712,408

4.3 Rationale For the Recommended Alternative

The "Lead Service Line Replacements" Alternative L3 was chosen because complete physical replacement of lead services is the most certain way to reduce the risk of lead exposure entering the drinking water. This approach provides a long-term solution, ensures compliance with EPA regulations, and builds public trust by demonstrating a commitment to community well-being.

5.0 ENVIRONMENTAL IMPACTS

Environmental impacts discussed in this chapter that relate to the replacement of lead or galvanized water service lines. Direct impacts resulting from the replacement process may occur from the construction, operation, and maintenance processes of the project. Indirect impacts are those that are made possible by the project. The following sections will discuss specific environmental impacts.

5.1 Disturbed and Undisturbed Land

The proposed project will be constructed on previously disturbed land. Therefore, the construction activities will not occur in undisturbed areas including agricultural land, such as row-crop farmland, orchards, pasture, fallow farmland, or land that was previously farmland, but is now grass or other vegetation. The Web Soil Survey program (Web Soil Survey - Home (usda.gov)), developed and maintained by the Natural Resources Conservation Service (NRCS), provided a Soils Map of the project area. Refer to **Exhibit 5-1** in **Appendix D.**

5.2 Historical, Architectural and Archaeological

Historic properties within the project area were identified using the Indiana Department of Natural Resources' (IDNR) Indiana Historic Buildings, Bridges, and Cemeteries Map application (Indiana Historic Buildings, Bridges, and Cemeteries Map - Overview (arcgis.com)) that includes data from the State Historic Architectural and Archaeological Research Database (SHAARD). There are several historical, architectural, and archaeological sites, and historic districts within the proposed project area. However, it is expected that the proposed Project will affect none of the identified sites or structures. Refer to the Historic Sites and Structures Map in **Appendix D**, **Exhibits 5-2A, 5-2B, 5-2C,** and **5-2D**.

5.3 Wetlands

Wetlands within the project area were identified using U.S. Fish & Wildlife Service's (USFWS) Wetlands Mapper (National Wetlands Inventory (usgs.gov)) application. The National Wetlands Inventory map was reviewed and the proposed Project will not impact any adjacent wetlands. If identified during the Project, impacts and disturbance of wetlands will be avoided, minimized, or mitigated, as needed. **Exhibit 5-3** in **Appendix D** shows the location of wetlands adjacent to the project area.

5.4 Surface Waters

The proposed project will not require any stream crossings. The project will not adversely affect Outstanding State Resource Waters (327 IAC 2-1-11(b), 327 IAC 2-1.3-3 (d), and 327 IAC 2-1.5-19 (b)), Natural, Scenic and Recreational Rivers and Streams (312 IAC 7-2), Salmonid Streams (327 IAC 2-1.5-5 (a)(3)), or waters on the Outstanding Rivers list (20070530-IR-312070287NRA.xml.pdf (in.gov)).

5.5 100-year Floodplains and Floodways

The City is aware of the hazards of locating structures in areas subject to the base flood. The proposed project is not located within the currently defined 100-year floodplain. The City, through local building codes, the authority of its council or planning commission, or other means, will ensure that the SRF-funded facilities will be protected from the 500-year flood, to two feet above the base flood elevation for non-critical infrastructure, or to three feet above the base flood elevation for critical infrastructure, in accordance with Executive Order 14030. The Indiana Map GIS Atlas (IndianaMAP) was used to identify the floodway and floodplains. A small portion of the southwest corner of the Project Area is in the floodway and/or floodplain of the Wabash River. A Floodplain Map is included in **Appendix D, Exhibit 5-4**.

5.6 Groundwater

This project will have no impact on local wells, water table, or groundwater quality. If temporary dewatering is needed, discharge from dewatering activities will be filtered or settled to remove sediment and will not be directly discharged to any waterway, wetland, or stormwater conveyance.

A sole source aquifer is an underground water supply designated by the U.S. Environmental Protection Agency (USEPA) as the principal source of drinking water for an area. According to the USEPA's interactive map of Sole Source Aquifers (Sole Source Aquifers (arcgis.com)), the Project Area is not located in the counties associated with a Sole Source Aquifer.

5.7 Plants and Animals

The construction and operation of this project should not negatively impact state or federal-listed endangered species or their habitat. The project will be implemented to minimize impact to non-endangered species and their habitat. The USFWS's Information for Planning and Consultation (IPaC) system was used to obtain an official species list. The IPaC Resource List for the project area is included in **Appendix E**.

5.8 Prime Farmland and Geology

The NRCS was contacted to determine the proposed Project's impacts on prime and/or unique farmland. A Farmland Conversion Impact Rating form was submitted to NRCS on November 29, 2023; the response was received on December 13, 2023, and will not cause a conversion of prime farmland. Refer to **Appendix E** for copies of NRCS correspondence and the completed Farmland Conversion Impact Rating form.

Karst is a landscape formed from the dissolution of limestone and is characterized by sinkholes, caves, and underground drainage systems. Karst features and underground aquifers are susceptible to pollution and contamination from surface waters that enter these formations. The Project Area does not contain karst features. These underground features are not prevalent for the Project Area per the Indiana Map GIS Atlas.

5.9 Air Quality

Short-term air quality impacts for the proposed Project may generate dust and noise during construction. Mitigation measures include limiting construction activity to daylight hours on weekdays to minimize noise effects. Construction specifications will require the utilization of proper control measures to control wind erosion from construction areas. Proper cleanup practices will be required to reduce the generation of dust and other construction debris. When impacts cannot be avoided, appropriate measures will be utilized.

5.10 Open Space and Recreational Opportunities

According to local and county websites and review of recent aerial photographs, the Lafayette Linear Parks Trail and various local parks are located near the proposed Project. However, any disruption to parks, the trail, or their access would only be temporary. The proposed Project's construction and operation with neither create nor destroy open space and recreational opportunities.

5.11 Lake Michigan Coastal Program

The proposed Project is not located in the Lake Michigan Coastal Zone; therefore, the proposed Project will not affect the Lake Michigan Coastal Program.

5.12 National Natural Landmarks

The National Natural Landmarks website (National Natural Landmarks Directory - National Natural Landmarks (U.S. National Park Service) (nps.gov)) identified no National Natural Landmarks within the Project Area. Therefore, the construction and operation of the proposed Project will not affect National Natural Landmarks. No local landmarks were identified in or near the Project Area.

5.13 Secondary Impacts

The City of Lafayette, through local zoning laws, the authority of its council, planning commission or other means, will ensure that future development and utility projects connecting to SRF-funded facilities will not adversely affect wetlands, wooded areas, steep slopes, archaeological/historical/structural resources, or other sensitive environmental resources. The City will require new development and utility projects to be constructed within the guidelines of the USFWS, IDNR, IDEM, and other environmental review authorities.

5.14 Mitigation Measures

Erosion control measures will be implemented during all construction activity. Areas disturbed by construction will be restored and revegetated with seeding and other measures, such as erosion control blankets, as necessary.

6.0 SELECTED PROJECT

6.1 Recommended Project Components and Processes

The recommended project includes the replacement of approximately 12,817 utility-side and customer-side lead service lines within the area shown in **Figure A-4.1** of **Appendix A**.

6.1.1 Project Costs

Table 6.1 summarizes project costs for the recommended project. The total cost for the recommended project is **$61,372,000**. A detailed cost breakdown is included in **Appendix B**.

Table 6.1: Proposed Project Costs

Item	Description	Cost
1	Lead Service Line Replacement (Utility)	$25,820,000
2	Lead Service Line Replacement (Customer)	$15,900,000
3	Meter Pit and Appurtenances	$6,456,000
4	Mob, Demob, Bonds, Ins	$2,410,000
5	Maintenance of Traffic	$960,000
10% Contingency		$5,155,000
3% Inflation		$1,546,000
Non-Construction Costs		$3,125,000
TOTAL ESTIMATED PROJECT COSTS		**$61,372,000**

6.1.2 Project Schedule

Table 6.2 summarizes the proposed project schedule for the recommended project.

Table 6.2: Proposed Project Schedule

Milestone	Target Date
PER Submittal	April 1, 2024
Anticipated PER Approval	June 1, 2024
Complete Bid Package and Advertise Project	September 2024
Open Bids	October 2024
SRF Loan Closing	December 2024
Start Construction	January 2025
Substantial Completion of Construction	February 2032

6.2 Green Project Reserve

This project involves no Green Project Reserve components.

7.0 LEGAL, FINANCIAL & MANAGERIAL CAPABILITIES

7.1 Authorized Representative Resolution

A copy of the executed Authorized Representative Resolution will be provided when available.

7.2 Preliminary Engineering Report Acceptance

A copy of the executed Preliminary Engineering Report Acceptance will be provided when available.

7.3 SRF Financial Information

SRF Financial Information Form is included in **Appendix F**.

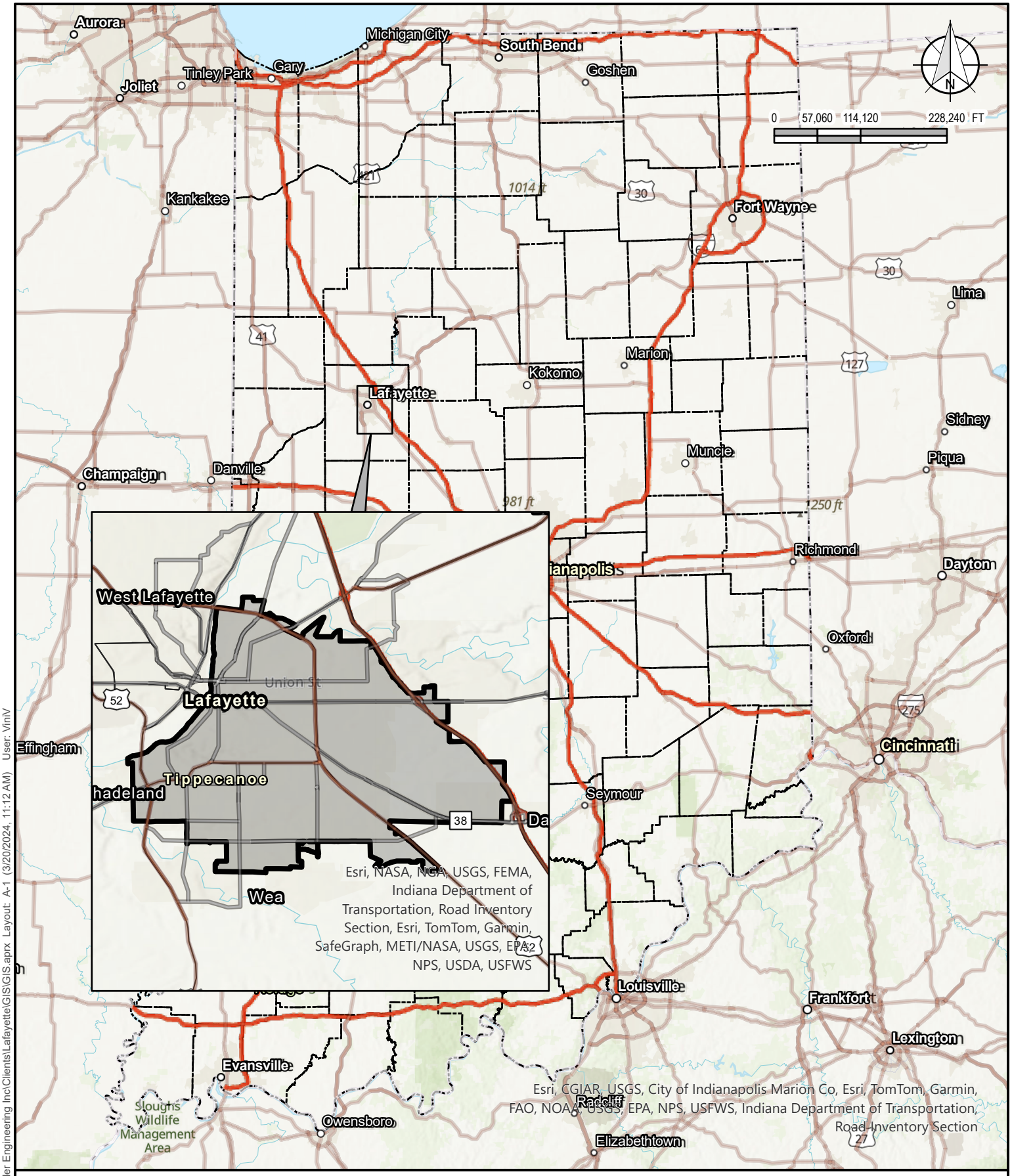
7.4 Asset Management Plan

Lafayette Water Works has an asset management plan that meets the requirements defined by the State Revolving Fund's Asset Management Program Guidelines and can submit a completed AMP Certification Form prior to requesting final disbursement related to the selected project.

8.0 PUBLIC PARTICIPATION

Public hearing documentation will be provided when available.

Appendix A
Figures



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Legend

- State Boundary
- County Boundary
- Interstates (INDOT, 2015)

FIGURE A-1.1
Project Location

City of Lafayette, Indiana
Lead Service Line Replacements
Preliminary Engineering Report

March 2024
Project No-267323.00

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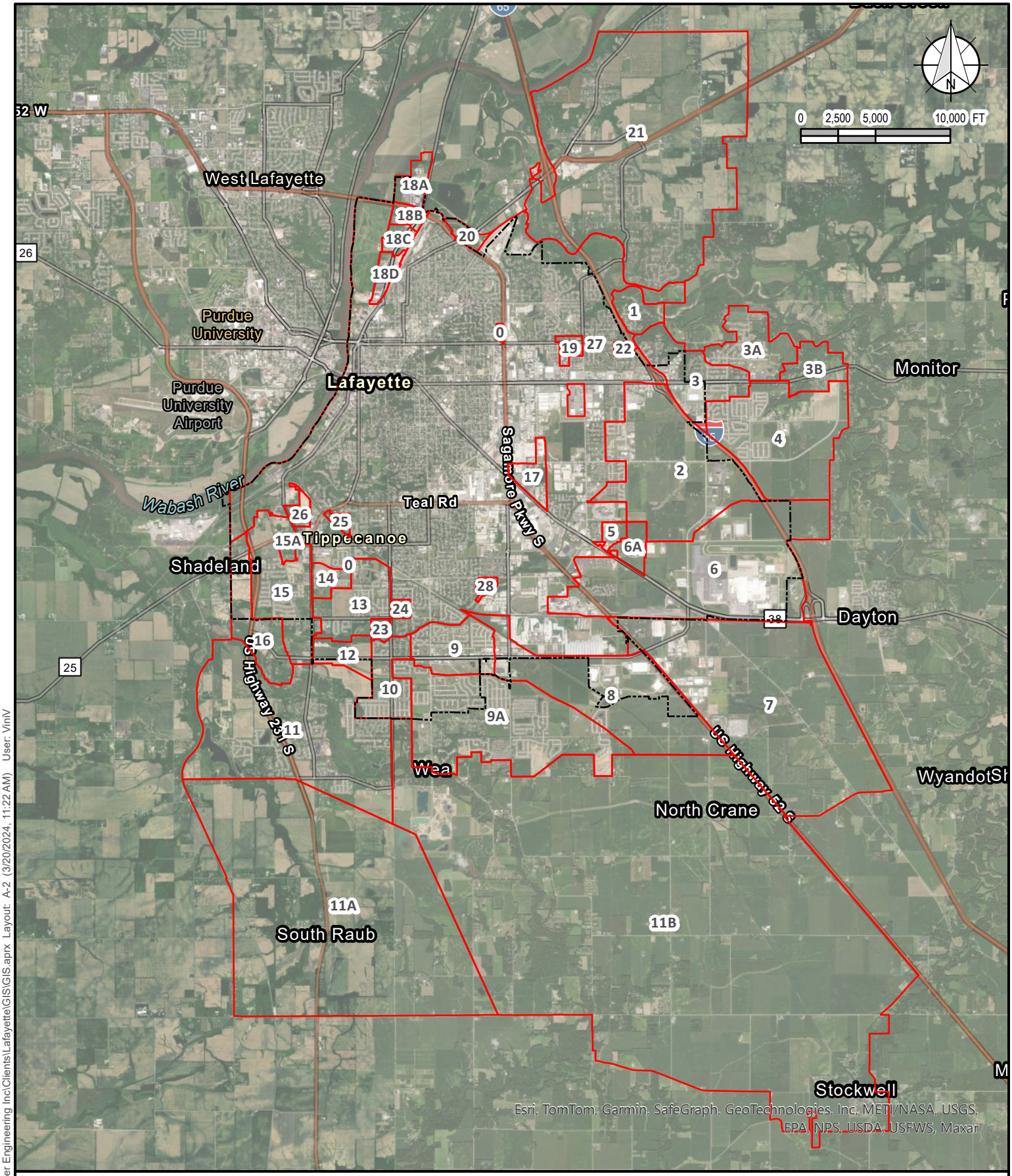

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Legend

- Utility Service Area
- Lafayette Corporation Limits

FIGURE A-1.2
Service Area Map

City of Lafayette, Indiana
Lead Service Line Replacements
Preliminary Engineering Report

March 2024
Project No-267323.00

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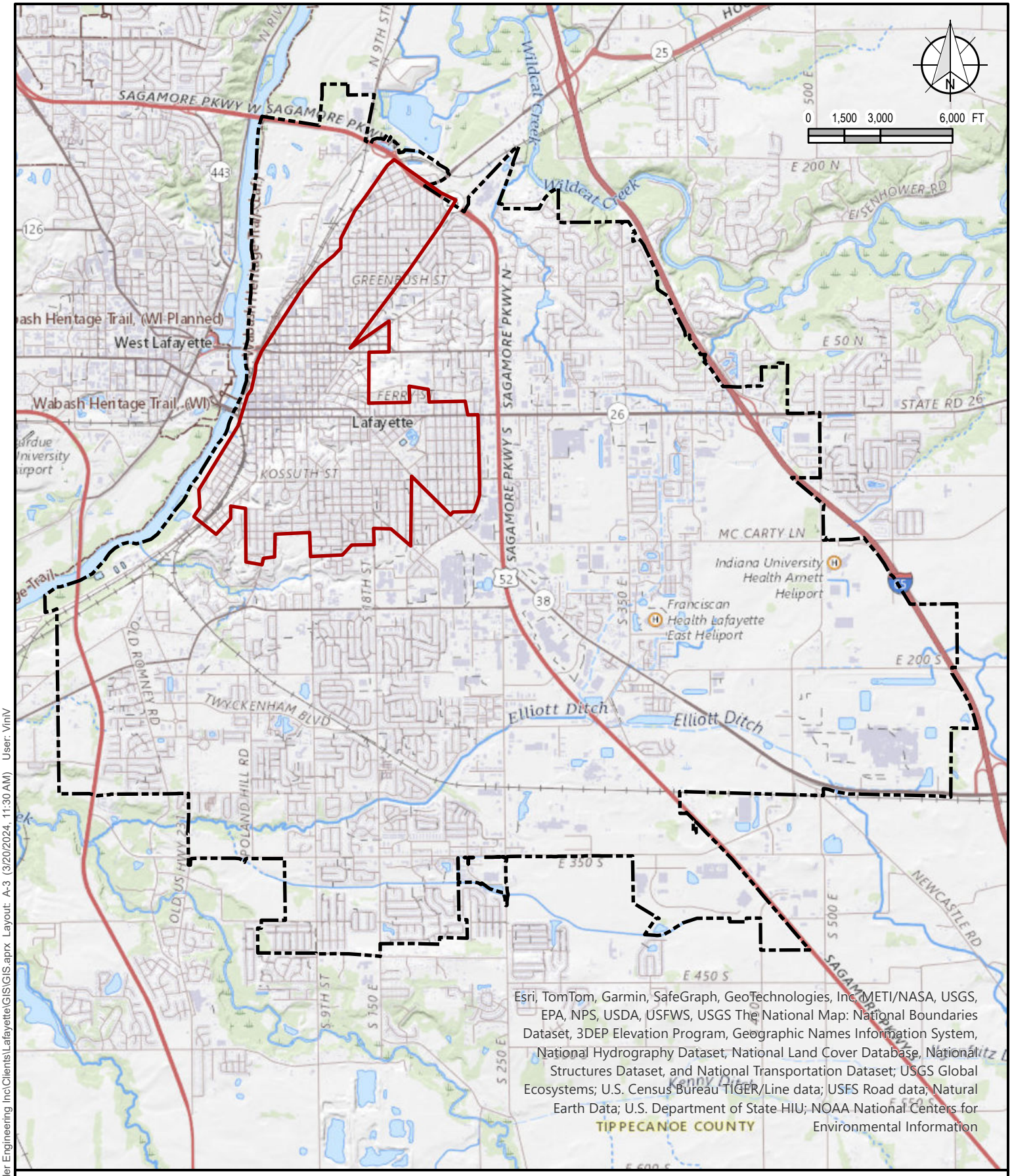

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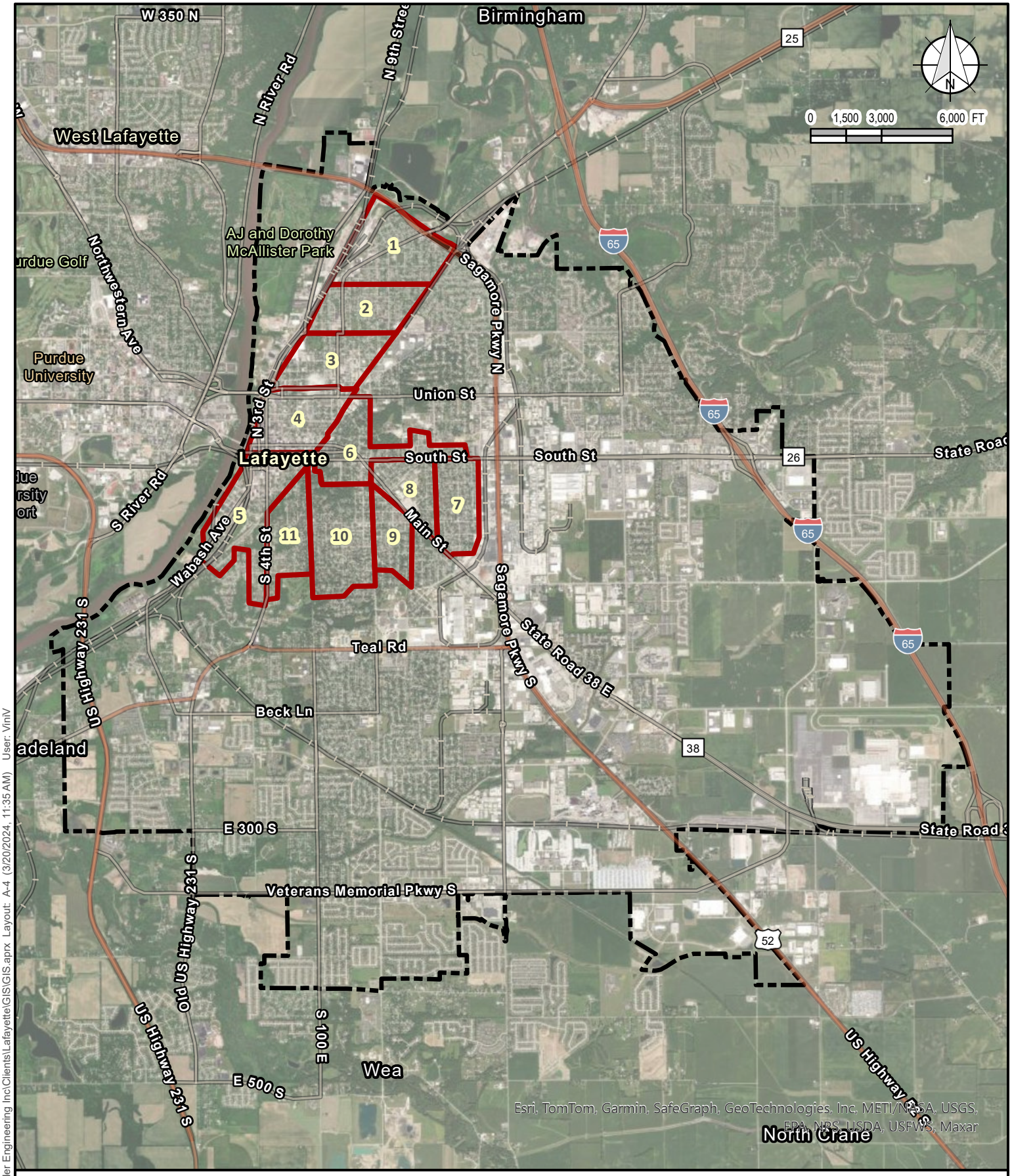
Legend

- Lead Service Line Replacement Area
- Corporation Limits

FIGURE A-2.1
USGS Map

City of Lafayette, Indiana
Lead Service Line Replacements
Preliminary Engineering Report

March 2024
Project No-267323.00



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Legend

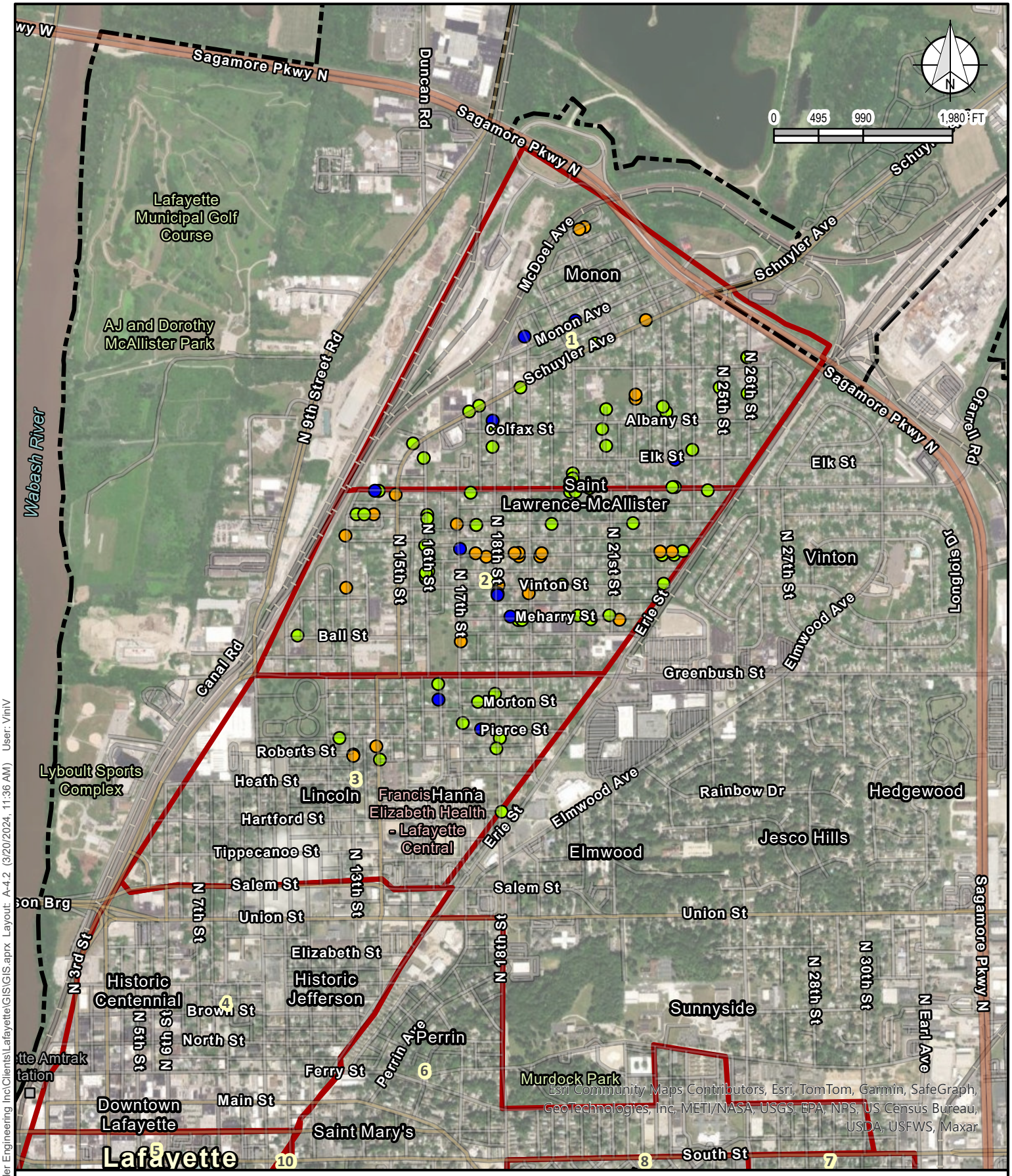
- Investigation Areas
- Corporation Limits

FIGURE A-4.1

Lead Service Line Area

City of Lafayette, Indiana
Lead Service Line Replacements
Preliminary Engineering Report

March 2024
Project No-267323.00



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Legend

Owner

- Both (65)
- Customer Side (10)
- Utility Side (27)
- Investigation Areas
- Corporation Limits

FIGURE A-4.2

Current Pothole Locations

City of Lafayette, Indiana
Lead Service Line Replacements
Preliminary Engineering Report

March 2024
Project No-267323.00

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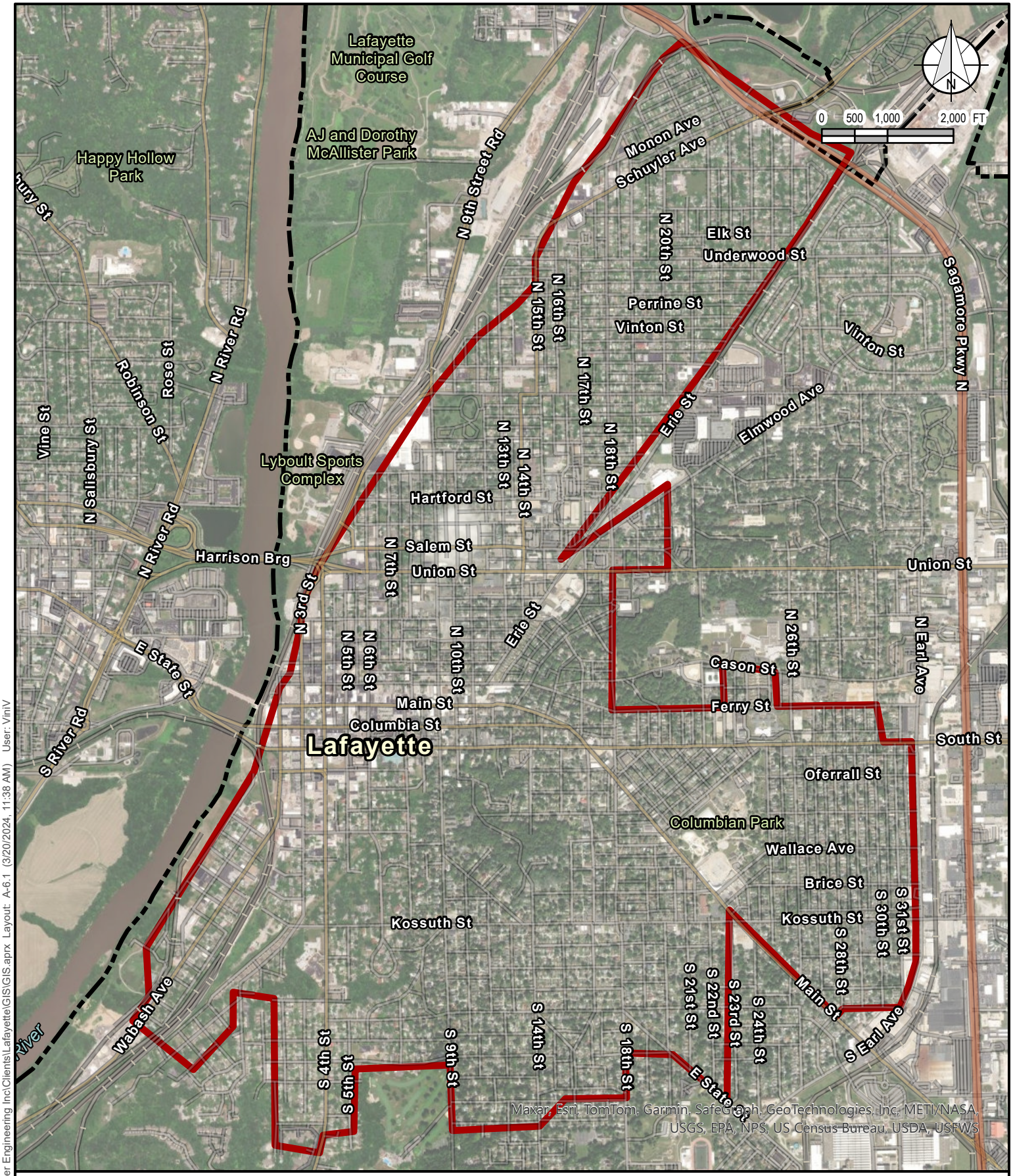

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Legend

- Lead Service Line Replacement Area
- Corporation Limits

FIGURE A-6.1

Recommended Alternative

City of Lafayette, Indiana
Lead Service Line Replacements
Preliminary Engineering Report

March 2024
Project No-267323.00

Appendix B
Cost Estimate Tables

Table B-1: Lead Service Lines Replacement Cost

Engineer's Preliminary Estimated Construction Costs: Lead Service Lines Replacement

Item	Description	Est Qty	Unit	Unit Price	Total Price
1	Lead Service Lines Replacement (Utility)	6,456	EA	$ 4,000	$ 25,820,000
2	Lead Service Lines Replacement (Customer)	6,361	EA	$ 2,500	$ 15,900,000
3	Meter Pit and Appurtenances	6,456	EA	$ 1,000	$ 6,456,000
4	Mob, Demob, Bonds, & Insurance	1	LS	$ 2,410,000	$ 2,410,000
5	Maintenance of Traffic	1	LS	$ 960,000	$ 960,000
				Subtotal	$ 51,546,000
				10% Contingency	$ 5,155,000
				3% Inflation	$ 1,546,000
				Total Estimated Construction Costs	**$ 58,247,000**

Preliminary Engineer's Opinion of Non-Construction Costs

Item	Description	Est Qty	Unit	Unit Price	Total Price
6	Engineering Fees *(Design, Bid, CA)*	1	LS	$ 1,200,000	$ 1,200,000
7	Construction Observation	1	LS	$ 1,700,000	$ 1,700,000
8	Labor Standards	1	LS	$ 75,000	$ 75,000
9	Legal/Bond/Financial	1	LS	$ 150,000	$ 150,000
				Total Estimated Non-Construction Costs	**$ 3,125,000**

Total Probable Overall Project Costs	**$**	**61,372,000**

Notes:

1 *All estimated construction costs are based upon 2024 dollars, and estimated project costs will likely increase with time. Construction costs are volatile and have increased significantly in recent years, due primarily to costs of fuel and raw materials. In providing these cost estimates, Wessler Engineering has no control over the costs of labor, equipment, and materials, or the contractors' methods of*

2 *The cost estimates are based on past similar projects and were made without the benefit of design plans and specifications. These estimates are provided on the basis of the Engineer's qualifications and experience. Wessler Engineering makes no warranty, expressed or implied, as to the accuracy of such cost estimates as compared to bids or actual costs.*

3 *Pavement replacement, erosion and sediement control, final cleanup and restoration costs are included in Items 1 and 2.*

Appendix C
Life Cycle Cost Analysis

Life-Cycle Cost Analysis

Project No. 267323.03.016
Life Cycle Cost Analysis

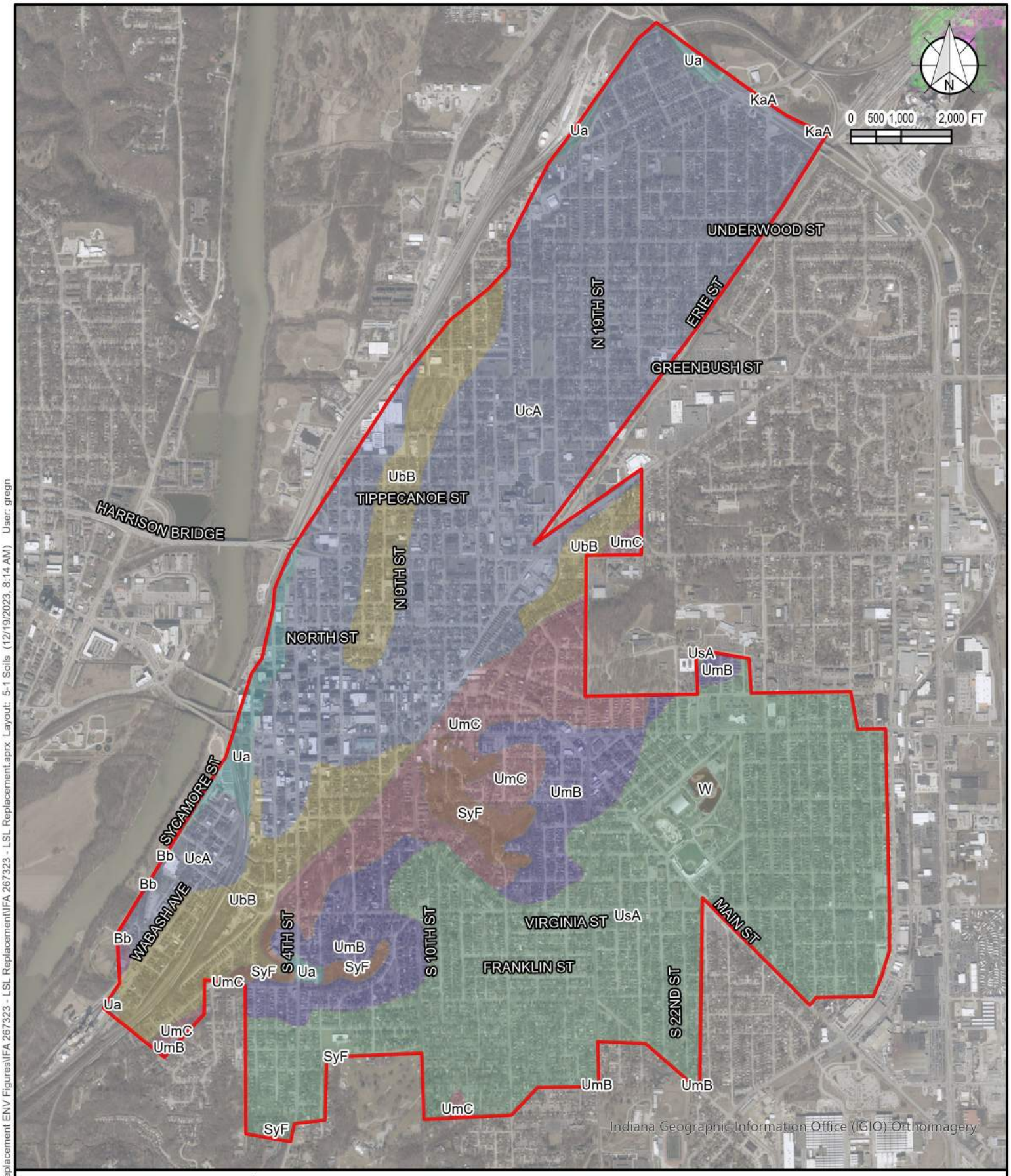
Lead Service Line Replacements
City of Lafayette, Indiana

	Proposed Project (LSL Replacements)	Notes
Capital Cost Summary		
Construction Costs - LSL Replacements	$ 58,247,000	
Total Project Cost	$ 58,247,000	
Non-Construction Costs		
Non-Construction Costs	$ 3,125,000	
Operation and Maintenance Costs		
Total Annual O&M Cost	$ 100,000	Based upon an average of 10 annual service line replacements @ $10K ea.
20-Year Net Present Value Analysis		
Term (years)	20	
Interest Rate ("Real" Assumed Rate)	0.40%	
NPV (O&M)	$ 1,918,408	
NPV (Capital + O&M)	$ 60,165,408	

Notes:
1. City repairs or replaces an average of 10 service lines per year. Estimated cost per each is $10,000.

2. All probable construction costs are based upon 2024 dollars, and estimated project costs will likely increase with time. Construction costs are volatile and have increased significantly in recent years. In providing these cost estimates, Wessler Engineering has no control over the costs of labor, equipment, and materials, or the contractors' methods of pricing. The cost estimates were made without the benefit of design plans and specifications and are provided on the basis of the Engineer's qualifications and experience. Wessler Engineering makes no warranty, expressed or implied, as to the accuracy of such cost estimates as compared to bids or actual costs.

Appendix D
Environmental Exhibits



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Legend

- Lead Service Line Area

MUSYM

- Bb
- KaA
- SyF
- Ua
- UbB
- UcA
- UmB
- UmC
- UsA
- W

EXHIBIT 5-1
Soils Map
Page 1 of 2

City of Lafayette, Indiana
Indiana Finance Authority
Phase II Lead Service Line Investigation
Preliminary Engineering Report
December 2023
Project No. 267323

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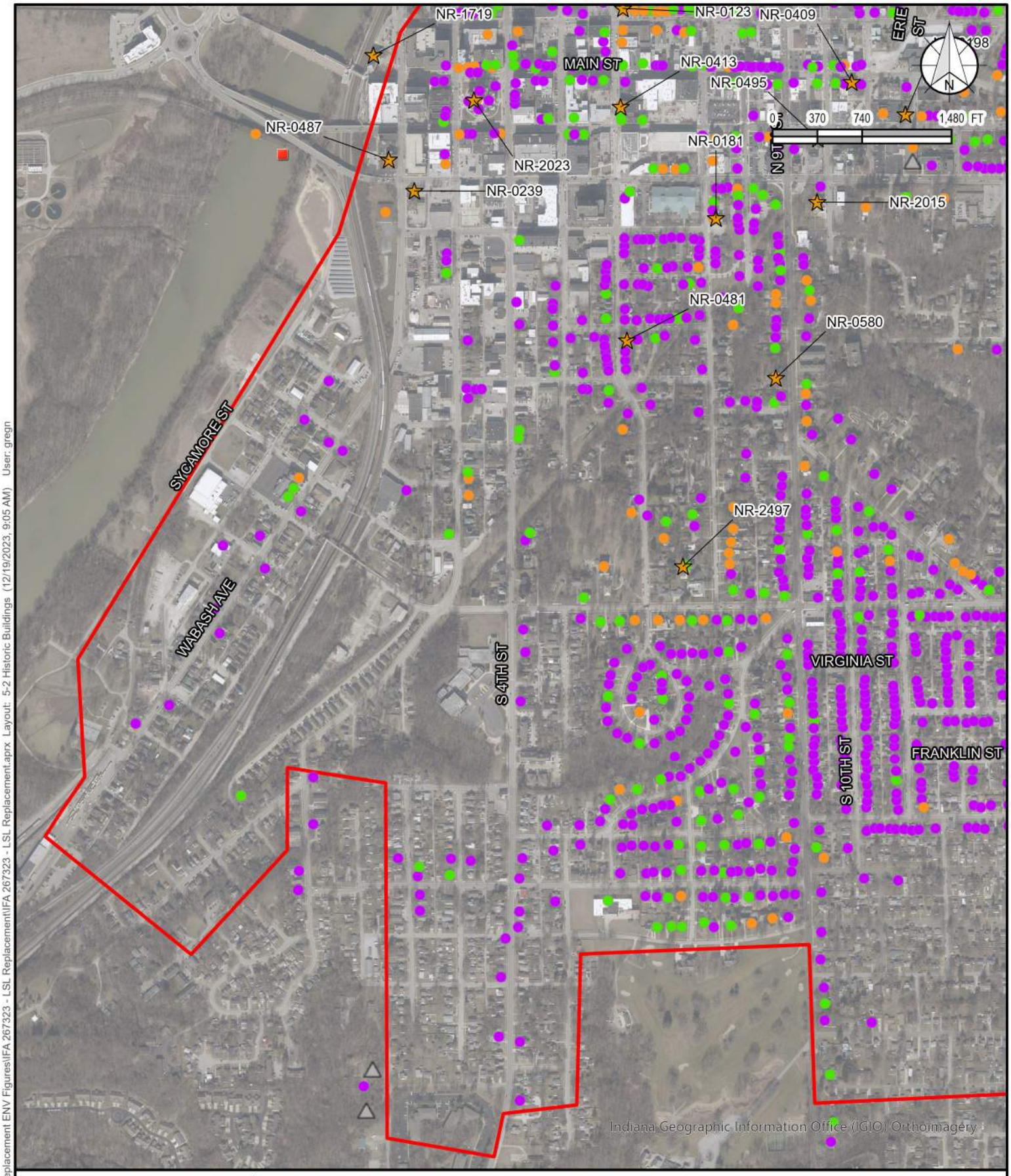
Map unit symbol	Map unit name	Rating (centimeter	Acres in AOI	Percent of AOI
Bb	Battleground silt loam, frequently flooded	>200	2.9	0.001
KaA	Kalamazoo loam, 0 to 2 percent slopes	>200	0.3	0
SyF	Strawn-Rodman complex, 18 to 50 percent slopes	>200	48.8	0.022
Ua	Udorthents, loamy	>200	46.8	0.021
UbB	Urban land-Billett, gravelly substratum, complex, 2 to 8 percent slopes	>200	237.4	0.107
UcA	Urban land-Carmi complex, 0 to 2 percent slopes	>200	820.9	0.369
UmB	Urban land-Miami complex, 2 to 8 percent slopes	>200	171.4	0.077
UmC	Urban land-Miami complex, 8 to 15 percent slopes	>200	163.8	0.074
UsA	Urban land-Starks-Fincastle complex, 0 to 2 percent slopes	>200	726.4	0.327
W	Water	>200	4	0.002
Totals for Area of Interest			2222.7	1



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WESSLER ENGINEERING
More than a Project™

Legend

- National Register of Historic Places
- Cemeteries

Historic Bridges

- Outstanding

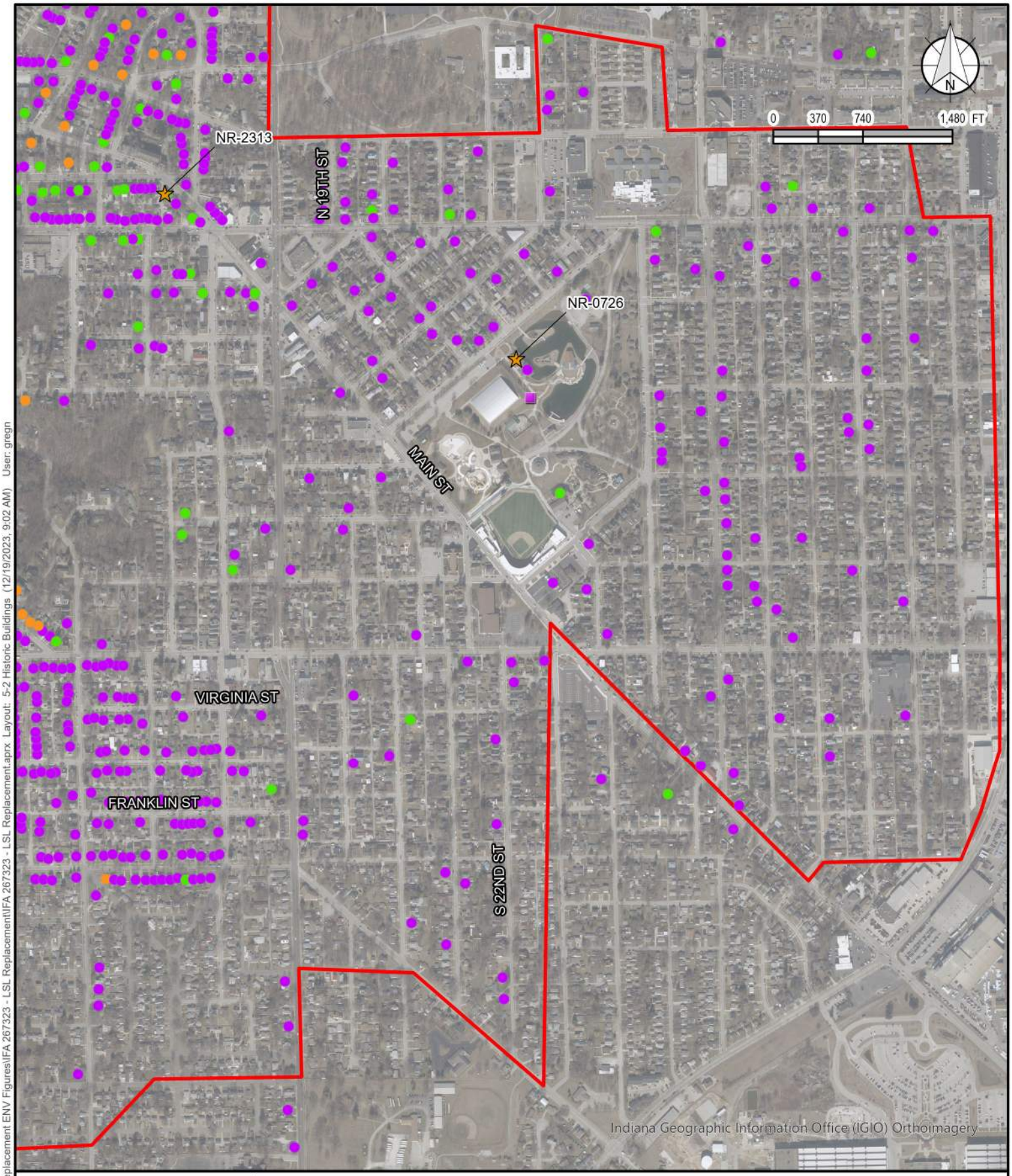
County Survey Sites

- Outstanding
- Notable
- Contributing
- Lead Service Line Area

EXHIBIT 5-2 A

Historic Sites and Structures Map

City of Lafayette, Indiana
Indiana Finance Authority
Phase II Lead Service Line Investigation
Preliminary Engineering Report
December 2023
Project No. 267323



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WESSLER ENGINEERING
More than a Project™

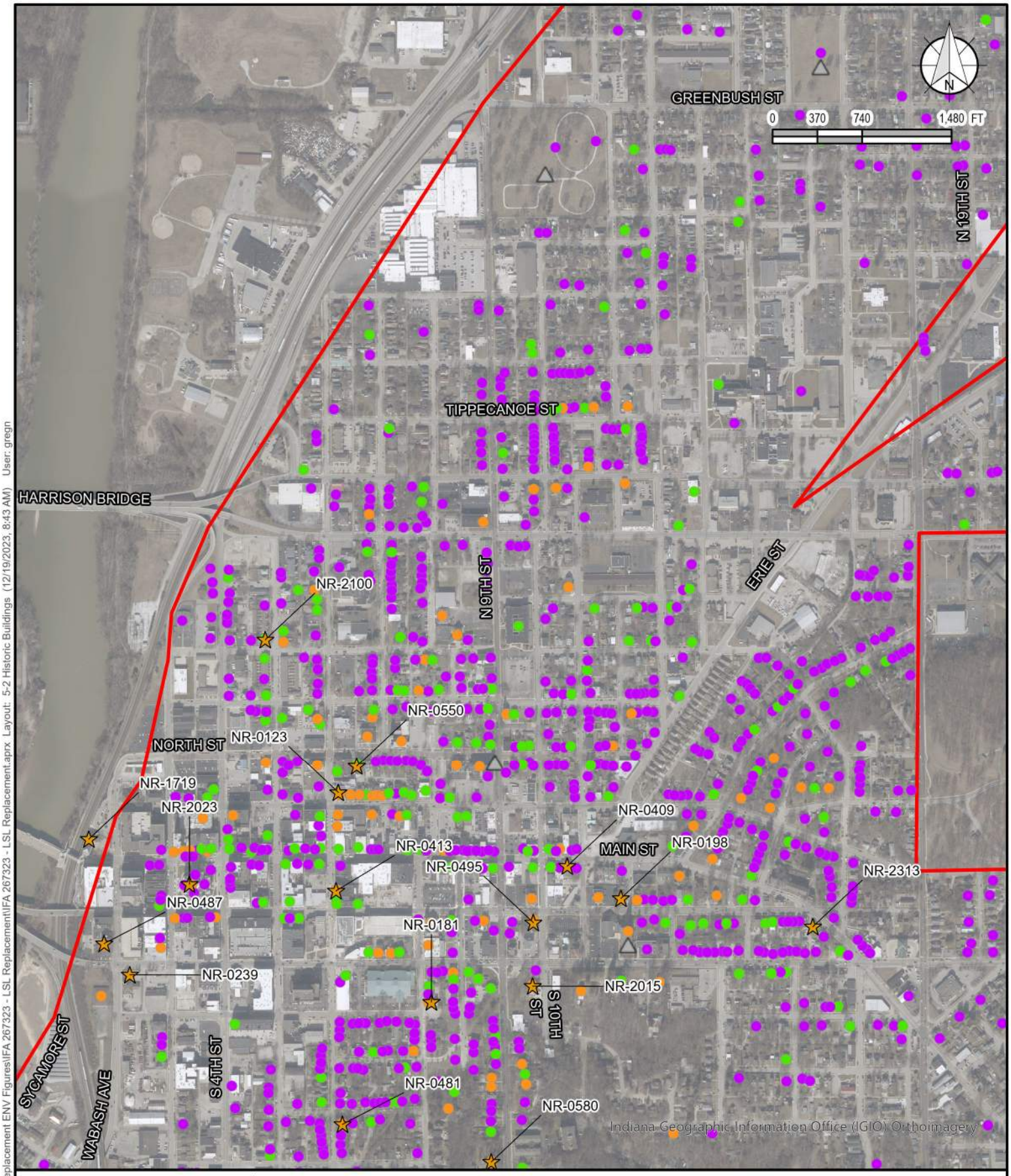
Legend

- National Register of Historic Places
- Historic Bridges
  - Contributing
- County Survey Sites
  - Outstanding
- Notable
- Contributing
- Lead Service Line Area

EXHIBIT 5-2 B

Historic Sites and Structures Map

City of Lafayette, Indiana
Indiana Finance Authority
Phase II Lead Service Line Investigation
Preliminary Engineering Report
December 2023
Project No. 267323



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WESSLER ENGINEERING
More than a Project™

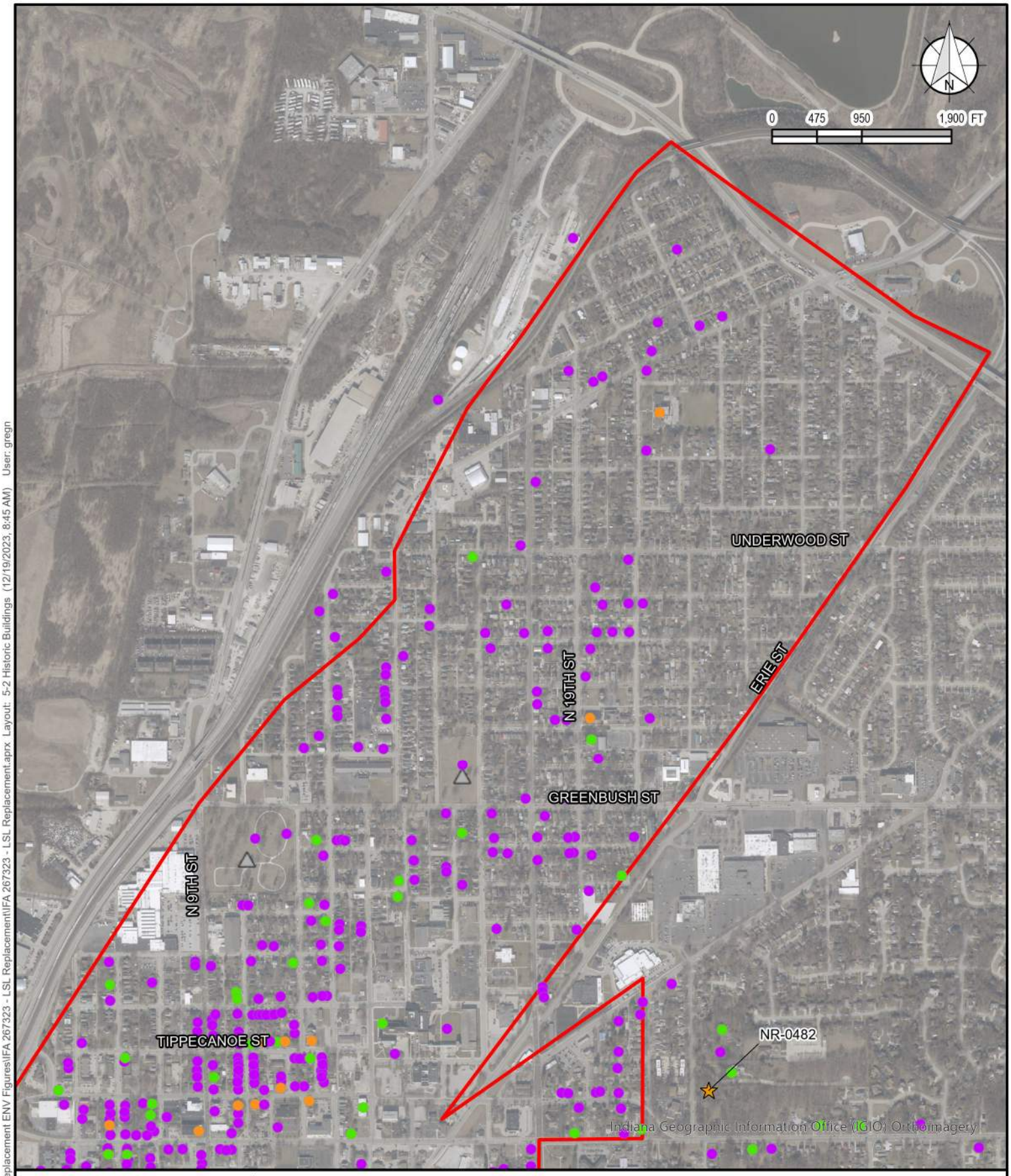
Legend

- National Register of Historic Places
- Cemeteries
- County Survey Sites
  - Outstanding
  - Notable
  - Contributing
- Lead Service Line Area

EXHIBIT 5-2 C

Historic Sites and Structures Map

City of Lafayette, Indiana
Indiana Finance Authority
Phase II Lead Service Line Investigation
Preliminary Engineering Report
December 2023
Project No. 267323



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WESSLER ENGINEERING
More than a Project™

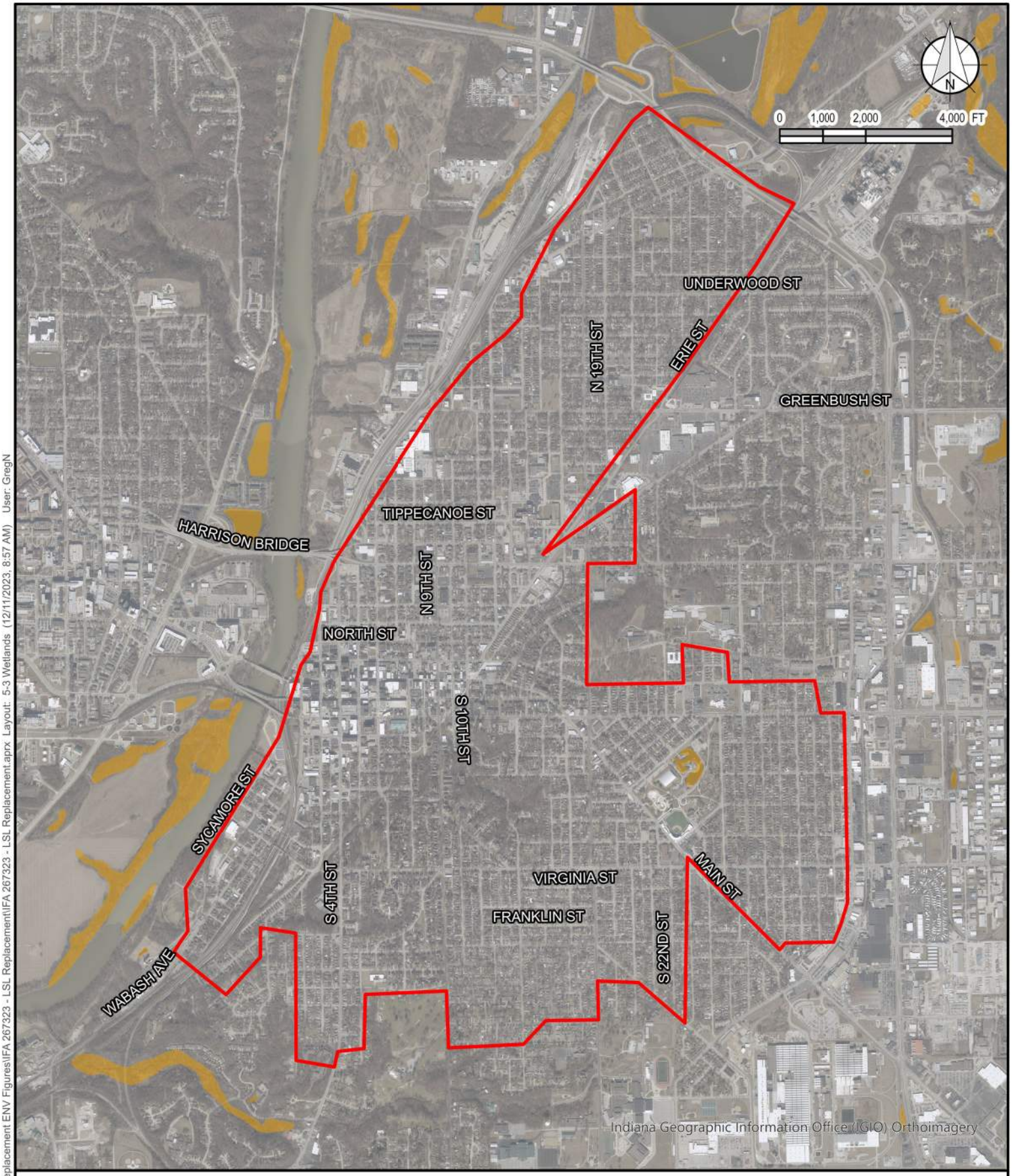
Legend

- National Register of Historic Places
- Cemeteries
- County Survey Sites
  - Outstanding
  - Notable
  - Contributing
- Lead Service Line Area

EXHIBIT 5-2 D

Historic Sites and Structures Map

City of Lafayette, Indiana
Indiana Finance Authority
Phase II Lead Service Line Investigation
Preliminary Engineering Report
December 2023
Project No. 267323



WESSLER ENGINEERING
More than a Project™

Legend

- Lead Service Line Area
- NWI Wetlands
- Palustrine

EXHIBIT 5-3

Wetlands Map

City of Lafayette, Indiana
Indiana Finance Authority
Phase II Lead Service Line Investigation
Preliminary Engineering Report
December 2023
Project No. 267323

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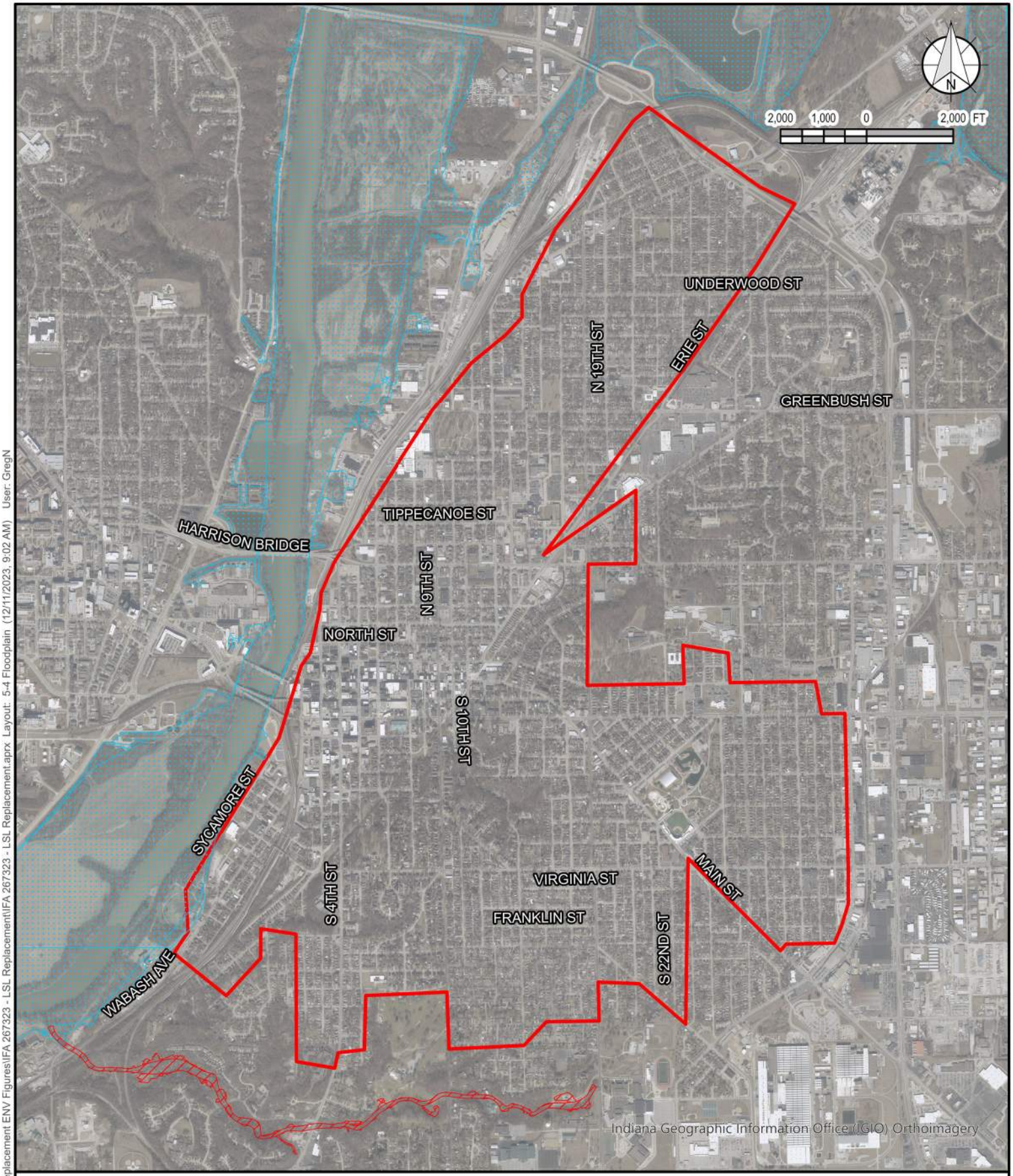


WESSLER ENGINEERING
More than a Project™

Legend

- Lead Service Line Area
- Flood Zone
  - A
  - AE

EXHIBIT 5-4

Floodplain Map

City of Lafayette, Indiana
Indiana Finance Authority
Phase II Lead Service Line Investigation
Preliminary Engineering Report
December 2023
Project No. 267323

X:\Lafayette\CLIENT GIS\LSL Replacement ENV Figures\IFA 267323 - LSL Replacement\IFA 267323 - LSL Replacement.aprx Layout: 5-4 Floodplain (12/11/2023, 9:02 AM) User: GregN

Appendix E
Environmental Agency Coordination

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

In Reply Refer To:
Project code: 2024-0016631
Project Name: Lafayette LSL PER

November 29, 2023

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Lafayette LSL PER'

Dear Natalie Nichols:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on November 29, 2023, for 'Lafayette LSL PER' (here forward, Project). This project has been assigned Project Code 2024-0016631 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A

consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Fanshell *Cyprogenia stegaria* Endangered
- Indiana Bat *Myotis sodalis* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate
- Rabbitsfoot *Quadrula cylindrica cylindrica* Threatened
- Salamander Mussel *Simpsonaias ambigua* Proposed Endangered
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Whooping Crane *Grus americana* Experimental Population, Non-Essential

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of "No Effect" on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Indiana Ecological Services Field Office and reference Project Code 2024-0016631 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Lafayette LSL PER

2. Description

The following description was provided for the project 'Lafayette LSL PER':

> Replacement of lead service lines within the City of Lafayette.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.422775099999996,-86.88580233971443,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   No

6. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   Yes

8. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

   If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer "No" below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project's action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a "no effect" determination for the northern long-eared bat.

   Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer "No" and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

   No

9. [Semantic] Is the action area located within 0.5 miles of a known northern long-eared bat hibernaculum?

   Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

   Automatically answered

   No

10. Does the action area contain any caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating northern long-eared bats?

    No

11. Does the action area contain or occur within 0.5 miles of (1) talus or (2) anthropogenic or naturally formed rock crevices in rocky outcrops, rock faces or cliffs?

    No

12. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?
    (If unsure, answer "Yes.")

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥3 inches (12.7 centimeter) dbh), answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat can be found at: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

13. Will the action cause effects to a bridge?

    No

14. Will the action result in effects to a culvert or tunnel?

    No

15. Does the action include the intentional exclusion of northern long-eared bats from a building or structure?

    Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local U.S. Fish and Wildlife Services Ecological Services Field Office to help assess whether northern long-eared bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures

    No

16. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats?**

    No

17. Will the action directly or indirectly cause construction of one or more new roads that are open to the public?

    Note: The answer may be yes when a publicly accessible road either (1) is constructed as part of the proposed action or (2) would not occur but for the proposed action (i.e., the road construction is facilitated by the proposed action but is not an explicit component of the project).

    No

18. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic on one or more existing roads?

    Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

    No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

20. Will the proposed action involve the creation of a new water-borne contaminant source (e.g., leachate pond pits containing chemicals that are not NSF/ANSI 60 compliant)?

    No

21. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

    No

22. Will the action include drilling or blasting?

    No

23. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

    No

24. Will the proposed action involve the use of herbicides or pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

    No

25. Will the action include or cause activities that are reasonably certain to cause chronic nighttime noise in suitable summer habitat for the northern long-eared bat? Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time.

    Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    No

26. Does the action include, or is it reasonably certain to cause, the use of artificial lighting within 1000 feet of suitable northern long-eared bat roosting habitat?

    Note: Additional information defining suitable roosting habitat for the northern long-eared bat can be found at: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    No

27. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

    No

28. Will the action result in the use of prescribed fire?

    No

29. Will the action cause noises that are louder than ambient baseline noises within the action area?

    No

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Natalie Nichols
Address: 6606 Constitution Drive
City: Fort Wayne
State: IN
Zip: 46804
Email natalien@wesslerengineering.com
Phone: 3177884551

USDA United States Department of Agriculture

Farm Production and Conservation

Natural Resources Conservation Service

Indiana State Office
6013 Lakeside Boulevard
Indianapolis, Indiana 46278
317-295-5800

December 13, 2023

Natalie Nichols
Wessler Engineering, Inc.
6606 Constitution Drive
Fort Wayne, Indiana 46804

Dear Ms. Nichols:

The proposed Lead Service Line Replacement project located in Lafayette, Tippecanoe County, Indiana, as referred to in your letter received November 29, 2023, will not cause a conversion of prime farmland.

If you need additional information, please contact John Allen at 317-295-5859 or john.allen@usda.gov

Sincerely,

JOHN ALLEN

Digitally signed by JOHN ALLEN
Date: 2023.12.13 15:41:08 -05'00'

JOHN ALLEN
State Soil Scientist

Enclosures

Michaela Tauil

From: Natalie Nichols
Sent: Wednesday, March 20, 2024 1:28 PM
To: Michaela Tauil
Subject: FW: Lafayette Lead Service Line Replacement
Attachments: Letter_ Lead Service Line Replacement Tippecanoe.pdf; PER for Lafayette Lead Service Line_1006.pdf

Natalie Nichols | Environmental Scientist
Wessler Engineering, Inc.
6606 Constitution Drive, Fort Wayne, Indiana 46804

P:260-422-8279

From: Stucker, Kacie - FPAC-NRCS, IN <Kacie.Stucker@usda.gov>
Sent: Thursday, December 14, 2023 1:39 PM
To: Natalie Nichols <NatalieN@wesslerengineering.com>
Cc: Allen, John - FPAC-NRCS, IN <john.allen@usda.gov>
Subject: Lafayette Lead Service Line Replacement

WARNING: External email, verify sender before opening attachments or clicking on links.

Please find attached the NRCS response to the above project.

Respectfully,

Kacie Stucker
United States Department of Agriculture
Natural Resources Conservation Services
6013 Lakeside Blvd.
Indianapolis, IN 46278
Office: (317) 295-5800

NO Impact--this area has already been converted to urban development

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 11/29/2023
Name of Project PER for Lafayette Lead Service Line	Federal Agency Involved EPA through state revolving fund
Proposed Land Use Water service lines	County and State Tippecanoe County, Indiana
PART II *(To be completed by NRCS)*	Date Request Received By NRCS / Person Completing Form: JRA

Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)* YES ☐ NO ☑		Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %	
Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS 12/13/2023	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	0			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	15			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide Important or Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)				

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)				
2. Perimeter In Non-urban Use	(10)				
3. Percent Of Site Being Farmed	(20)				
4. Protection Provided By State and Local Government	(20)				
5. Distance From Urban Built-up Area	(15)				
6. Distance To Urban Support Services	(15)				
7. Size Of Present Farm Unit Compared To Average	(10)				
8. Creation Of Non-farmable Farmland	(10)				
9. Availability Of Farm Support Services	(5)				
10. On-Farm Investments	(20)				
11. Effects Of Conversion On Farm Support Services	(10)				
12. Compatibility With Existing Agricultural Use	(10)				
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	0	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	0	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	0	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES ☐ NO ☐

Reason For Selection:

Name of Federal agency representative completing this form: Natalie Nichols, Wessler Engineering — Date: 11/29/2023

(See Instructions on reverse side) **Form AD-1006 (03-02)**

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, http://fppa.nrcs.usda.gov/lesa/.

Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s)of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map**,** or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)

Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.

Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.

Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.

Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.

2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.
Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \text{ X } 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

Natalie Nichols

From: Natalie Nichols
Sent: Wednesday, November 29, 2023 9:53 AM
To: daniel.phillips@usda.gov
Cc: john.allen@usda.gov; Michaela Tauil
Subject: Farmland Conversion - Lafayette Lead Service Line Replacement
Attachments: Project Area Map.pdf; Soils Map_Farmland Classification.pdf; Farmland Conversion Impact Rating Form.pdf

Good Morning,

The following attachments are for the proposed Lead Service Line Replacement project located in Lafayette, Indiana. This is a Farmland Conversion Impact Rating Form to determine whether the site of the proposed project contains prime, unique, statewide or local important farmland. This farmland conversion impact rating form is being submitted as part of the development of the PER in order to obtain funding through SRF. The proposed project is located within an urban area and includes 6,075 known lead service lines and 6,859 additional lines that could potentially contain lead. Our total project area in this form is based on the assumption that all service lines are lead and require replacement.

1. Project Area Map; and
2. Soils Figure; and
3. Farmland Conversion Impact Rating Form.

Please let me know if you have any questions or concerns.

Thank you,

Natalie Nichols | Environmental Scientist
Wessler Engineering, Inc.
6606 Constitution Drive Fort Wayne Indiana 46804

P:260-422-8279

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*		Date Of Land Evaluation Request 11/29/2023	
Name of Project PER for Lafayette Lead Service Line		Federal Agency Involved EPA through state revolving fund	
Proposed Land Use Water service lines		County and State Tippecanoe County, Indiana	
PART II *(To be completed by NRCS)*		Date Request Received By NRCS	Person Completing Form:
Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☐ NO ☐	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %	
Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	0			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	15			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide Important or Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)				

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)				
2. Perimeter In Non-urban Use	(10)				
3. Percent Of Site Being Farmed	(20)				
4. Protection Provided By State and Local Government	(20)				
5. Distance From Urban Built-up Area	(15)				
6. Distance To Urban Support Services	(15)				
7. Size Of Present Farm Unit Compared To Average	(10)				
8. Creation Of Non-farmable Farmland	(10)				
9. Availability Of Farm Support Services	(5)				
10. On-Farm Investments	(20)				
11. Effects Of Conversion On Farm Support Services	(10)				
12. Compatibility With Existing Agricultural Use	(10)				
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	0	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	0	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	0	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES ☐ NO ☐

Reason For Selection:

Name of Federal agency representative completing this form: Natalie Nichols, Wessler Engineering | Date: 11/29/2023

(See Instructions on reverse side)

Form AD-1006 (03-02)

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, http://fppa.nrcs.usda.gov/lesa/.

Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s)of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map**,** or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)

Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.

Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.

Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.

Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.

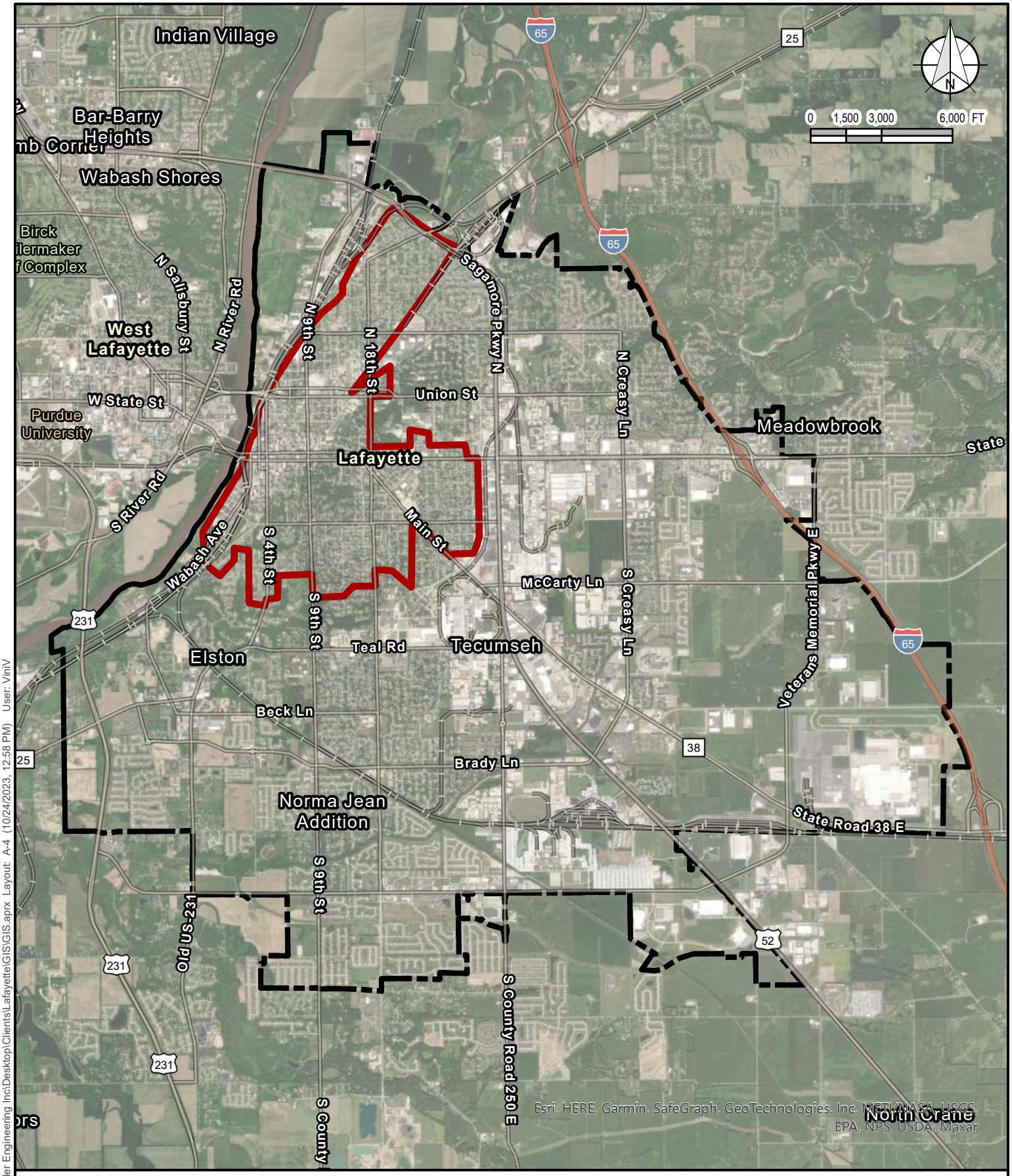
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.
Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \text{ X } 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.



WESSLER ENGINEERING
More than a Project™

Legend

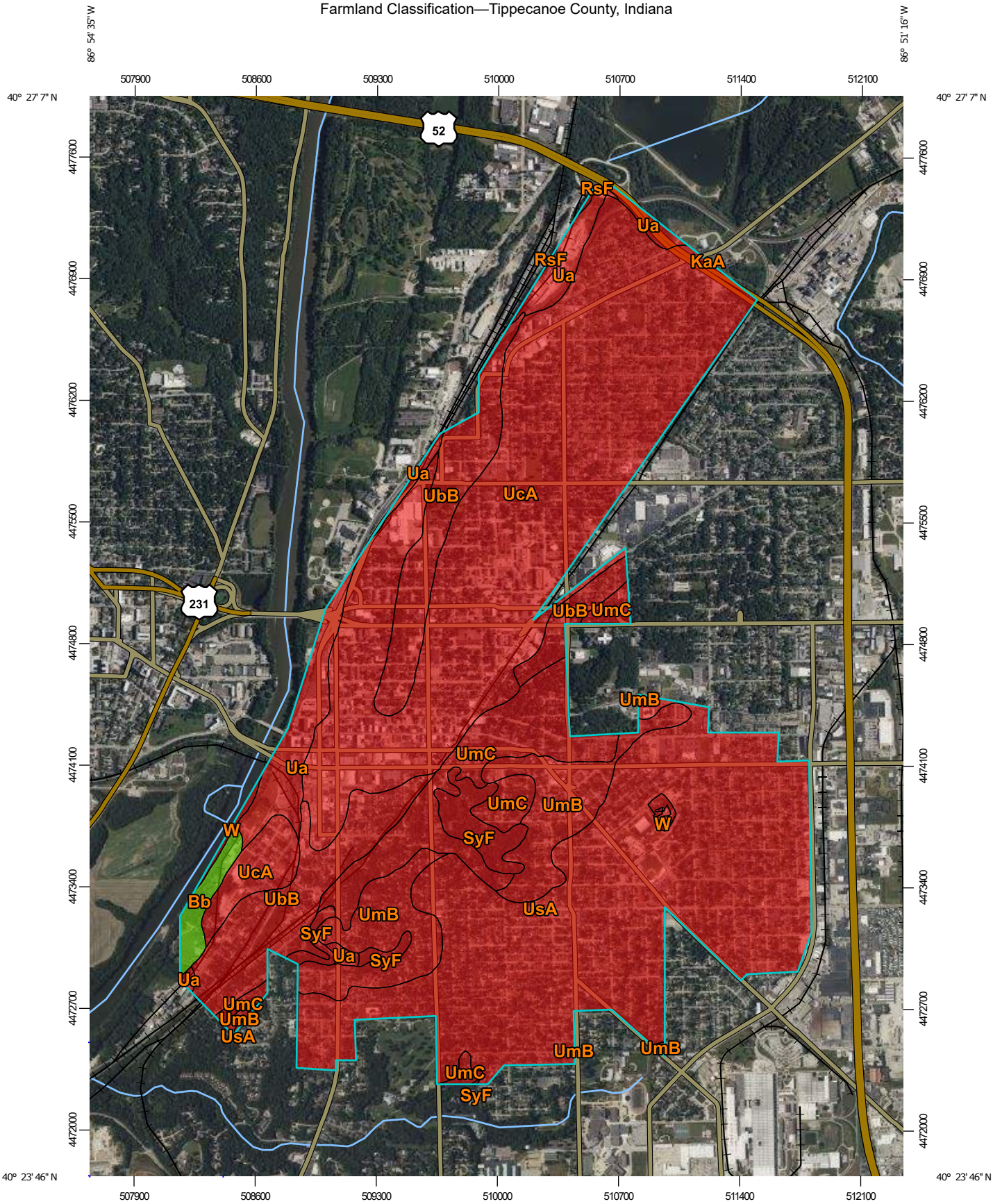
- Lead Service Line Replacement Area
- Municipal Boundaries

FIGURE A-4
Project Area

City Of Lafayette, Indiana
Lead Service Lines

October 2023
ProjectNo-267323.00

C:\Users\ViniV\OneDrive - Wessler Engineering Inc\Desktop\Clients\Lafayette\GIS\GIS.aprx Layout: A-4 (10/24/2023, 12:58 PM) User: ViniV


86° 54' 35" W
86° 51' 16" W
40° 27' 7" N
40° 23' 46" N
507900
508600
509300
510000
510700
511400
512100
4477600
4476900
4476200
4475500
4474800
4474100
4473400
4472700
4472000
52
231
RsF
Ua
KaA
UbB
UcA
UbB
UmC
UmB
UmC
UmB
SyF
W
UcA
Bb
UbB
UmB
UsA
SyF
Ua
SyF
UmC
UmB
UsA
UmB
UmB
UmC
SyF
Map Scale: 1:30,300 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0
400
800
1600
2400
Feet
0
1000
2000
4000
6000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

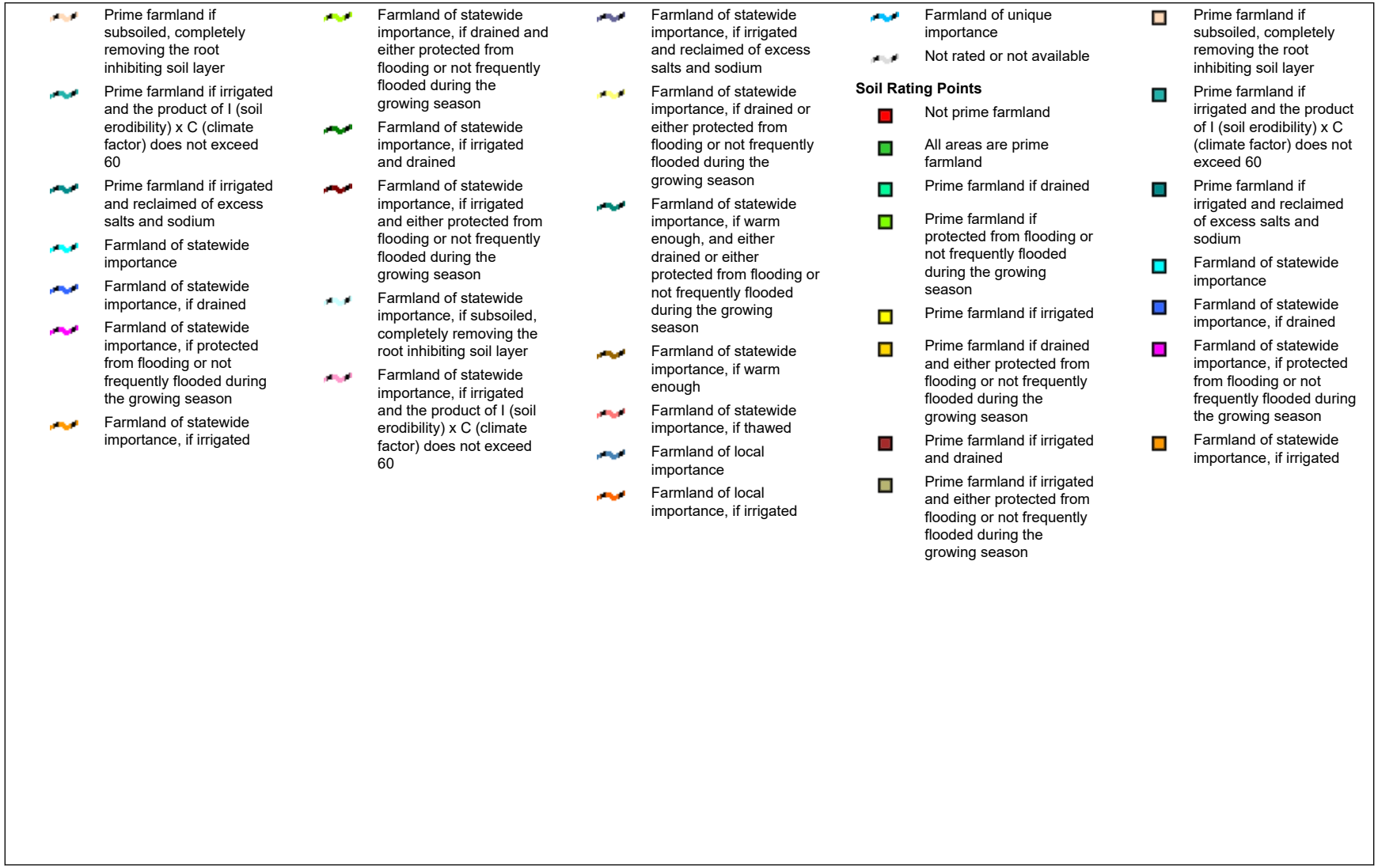
Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tippecanoe County, Indiana
Survey Area Data: Version 25, Sep 1, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 15, 2022—Jun 27, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Bb	Battleground silt loam, frequently flooded	Prime farmland if protected from flooding or not frequently flooded during the growing season	23.3	1.0%
KaA	Kalamazoo loam, 0 to 2 percent slopes	All areas are prime farmland	0.0	0.0%
RsF	Rodman gravelly loam, 25 to 60 percent slopes	Not prime farmland	1.8	0.1%
SyF	Strawn-Rodman complex, 18 to 50 percent slopes	Not prime farmland	47.8	2.0%
Ua	Udorthents, loamy	Not prime farmland	110.0	4.6%
UbB	Urban land-Billett, gravelly substratum, complex, 2 to 8 percent slopes	Not prime farmland	259.0	10.9%
UcA	Urban land-Carmi complex, 0 to 2 percent slopes	Not prime farmland	847.3	35.5%
UmB	Urban land-Miami complex, 2 to 8 percent slopes	Not prime farmland	176.3	7.4%
UmC	Urban land-Miami complex, 8 to 15 percent slopes	Not prime farmland	174.2	7.3%
UsA	Urban land-Starks-Fincastle complex, 0 to 2 percent slopes	Not prime farmland	736.5	30.9%
W	Water	Not prime farmland	7.8	0.3%
Totals for Area of Interest			**2,384.1**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Appendix F
Financial Information

DWSRF Loan Program
Financial Information Form

Proposed Project Costs:		
Supply / wells cost		$
Transmission / distribution System cost		$ 51,546,000
Treatment cost		$
Storage cost		$
Subtotal construction cost		$ 51,546,000
Contingencies (should not exceed 10% of construction cost)		$ 5,155,000
Annual Inflation (3%)		$ 1,546,000
Non-construction costs		$ 3,125,000
e.g., engineering, legal and financial services related to the project, land costs, start-up costs, and construction inspection		
Total Proposed Project Cost		$ 61,372,000
The following are not SRF Loan Program eligible:		
Previously funded SRF components that have not met useful life		$ 0
Materials and work done on private property		$ 0
Grant applications and income surveys done for other agencies		$ 0
Expenses incurred as a part of forming a utility, Regional Sewer / Water District, or Conservancy District		$ 0
Total Ineligible Costs		$ N/A
List other grant / loan funding sources and amounts		
Other grants	*(ARP Funds)*	$ 0
Other grants	*(Infrastructure Bill)*	$ 0
Other grants/loans	*(OCRA Grant – if qualify)*	$ 0
Hook-on fees		$ 0
Cash on hand		$ 0
Total Other Funding Sources		$ 0
Requested SRF Loan		$ 61,372,000
Estimated post-project user rate for 4,000 gallons		$ TBD
Anticipated SRF interest rate		

Financial Advisor: Crowe Horwath LLP
Firm Contact: (317) 269-6696
jennifer.wilson@crowehorwath.com
Name: Jennifer Wilson, CPA

Bond Counsel: Dentons
Firm Contact: (317) 361-8352
david.mcgimpsey@dentons.com
Name: David McGimpsey

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Project #267323.00