

# CITY OF HARRISON

CLARE COUNTY, MICHIGAN



DRINKING WATER

STATE REVOLVING FUND (SRF)

FY27 PROJECT PLAN

LEAD SERVICE LINE REPLACEMENT

Date: May 2026  
Project No.: 877280



DRAFT

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## EXECUTIVE SUMMARY

This Project Plan was completed to qualify for funding through the Drinking Water State Revolving Fund (DWSRF) for lead service line replacements throughout the City of Harrison. The proposed project includes replacement of approximately 230 water service lines that are non-compliant with EGLE's Lead and Copper Rule. The SRF program assists municipalities in financing certain utility improvements project over a 20 to 30-year term at favorable interest rates – typically between 2% and 2.75%. As such, projects reflect the long-term needs of the community.

This Project Plan is the first step in an application process to secure SRF financing to complete the necessary improvements. This report presents the results of the engineering and scientific evaluations performed to determine the need for the project, develop alternatives to remedy identified problems, and to define the scope of the selected alternative. Background information is also provided along with the rationale used to define alternative projects that can meet the long-term water service line replacement needs of the City. The viable alternatives are evaluated and compared with regard to their financial and technical feasibility and the ability to implement.

Two project alternatives were developed including: alternative 1 - regionalization and alternative 2 – replacement. Based on the technical and financial feasibility of each alternative, Alternative 2 was the selected alternative because it meets the project objectives and it is the most practical from an economical and operational standpoint.

Alternative 2 includes replacement of approximately 230 water service lines that are non-compliant with EGLE's Lead and Copper Rule. The project would include replacement of non-compliant lead service lines and associated appurtenances including, but not limited to, corporations, curb stops, interior plumbing, and exploratory digging.

The User Charge for a typical residential customer, if Selected Alternative 2 is implemented, is based on the conditions of an SRF loan for an assumed 30-year bond. Actual quarterly bills will vary depending on financing terms, principal forgiveness/grant eligibility, individual usage, and community rate structure. If grant funding for the project is awarded, the user charge increase would be reduced proportionally. At this time, it is expected that the City will qualify for Significantly Overburdened Community Status Principal Forgiveness. Actual grant eligibility will not be determined by EGLE until later in the project planning stages.

## I. INTRODUCTION

The City of Harrison was established in 1891, is located in central Clare County, and is home to the county seat. The city, located in Hayes Township (T19N-R4W), has a total area of approximately four square miles, of which 3.7 square miles is land and 0.3 square miles are water. Harrison is near the junction of US 127 and M-61. US 127 bypasses the city on the east, though a business route that serves the downtown area. The adjacent cities of Clare and Grayling are 14 miles to south and 40 miles to the north, respectively. Harrison was founded as a lumber town, with sawmills located on the shores of Budd Lake. One of the lumber companies donated the land which is now Wilson State Park. The City of Harrison attracts thousands of visitors from throughout the state, with its "twenty lakes in twenty minutes" and large amount of state land for recreational sports.

Major assets in the City's drinking water system include three type 1 municipal water supply wells, approximately 109,000 feet of watermain ranging from 6-inches to 12-inches in diameter, one 100,000-gallon single-pedestal elevated steel water storage tank, one seasonal 300,000-gallon single-pedestal elevated steel water storage tank, and 143 fire hydrants. The drinking water system services approximately 800 customers, comprised of both residential and commercial users.

The purpose of this Project Plan is to fulfill and document the requirements found in the state statutes (MCL§324.5303) and rules that govern the State Revolving Fund (SRF) and the Strategic Water Quality Initiation Fund (SWQIF) programs (Michigan Administrative Code R323.952). In addition, this project plan provides a basis for ranking the City's proposed drinking water system improvements in comparison to projects by other municipalities in a project priority listing for a low-interest State Revolving Fund loan. This is a financially attractive program where municipalities across Michigan compete for limited funds based on the merits of their proposed projects.

The scope of this Project Plan includes a summary of current issues with the City's drinking water system with respect to lead service line replacements. The Project Plan identifies principal alternatives to meet the current and future drinking water needs and evaluates the environmental impacts of the Selected alternative.

The Project Plan presents projected costs necessary to repay the low-interest loan for the selected alternative. The draft project plan is available for public review 15 days prior to the public meeting which will be held on May 18<sup>th</sup>, 2026. A summary of public participation and public comments solicited by the City regarding the project plan and selected alternative will be included in Appendix C.

The format of this report follows the project planning guidelines for Drinking Water State Revolving Funds (SRF) prepared by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Revolving Loan Section.

## II. PROJECT BACKGROUND

The most recent review of Harrison's drinking water system needs was performed in 2025 as part of the City's Drinking Water Asset Management (DWAM) Project. Review of the water system identified areas of improvement for distribution main, as well as a number of lead service line replacements throughout the City.

### A. Study and Service Area

#### Delineation of Study Area

The Study Area is the City of Harrison water system Service Area, which includes most of the City of Harrison. See the existing system map shown in Figure 2.

#### Land Use in the Study Area

The land use distribution for the City of Harrison, includes residential, commercial, and industrial zones as well as passive recreation spaces. The City of Harrison Zoning Map (found in Appendix D) provides a detailed breakdown regarding planned land use and zoning for the City of Harrison. It is a general framework intended to guide land use and policy decisions within the City over the next 15-20 years, with an emphasis on redevelopment ready properties.

Future land use categories and locations are based on an analysis of several factors including the pattern of existing land use, environmental conditions, available community services and facilities, the existing patterns of land divisions, and community goals.

Most of the planned future growth is anticipated along the M-61/BUS-127 corridor, identifying a considerable amount of this property as Mixed Use Neighborhood, Greater Business District, or Central Business District. Development of this type has the potential to create an impact on the water distribution system.

#### Surface and Ground Waters

Budd Lake is a 175-acre lake located almost entirely in the city limits of Harrison. A small section of Little Long Lake also falls in with the limits. Both lakes drain to the Tittabawassee watershed.

The City of Harrison water system consists of three wells designated as Well No. 3, Well No. 4, and Well No. 5; a 100,000-gallon elevated steel storage tank (north tank), a 300,000-gallon elevated steel storage tank (south tank), watermain, hydrants, valves, water services and appurtenances. The locations of the wells can be seen in the Existing Water Distribution System Map (found in Appendix A). The City has a complete Wellhead Protection Program in place to protect the drinking water supply.

### B. Existing Environmental Evaluation

#### Cultural Resources

The City of Harrison surrounds Budd Lake which is an important feature of the area. The Michigan Historic Sites Online website did not identify any state registered historical sites within the City of Harrison.

There are no known issues with the current sites. The proposed project will affect only existing utility rights-of-way and water service replacement areas. No other landscape changes are proposed, and the sites will be restored to approved or pre-project conditions.

It is not anticipated that the proposed project will impact tribally important cultural or religious sites of Native American tribes since none are found directly within Clare County. Any nearby tribes that need to be notified will be contacted by EGLE to review the proposed sites if deemed necessary.

## **The Natural Environment**

### Air Quality

Air quality impacts due to construction dust and emissions in the area due to construction equipment would be temporary and similar for the principal alternatives. Typically, the average Air Quality Index values for the City of Harrison are below 50, indicating that the city has good air quality overall.

### Wetlands

A wetlands map was generated by the USFWS National Wetlands Inventory website. The map is included in Appendix A as Figure 6. Areas of wetlands and wetland soils exist within the City of Harrison, the largest area being Budd Lake which contains wetland soils. The city contains more wetland soils than wetlands, both of which may be adjacent to the water system improvements in certain areas. However, no environmental impact is anticipated given the scope of work, all of which will be done within road right-of-way, city owned property, and water service replacement areas. The implementation of appropriate SESC measures will occur at any locations where construction is larger than one acre or within 500 feet of the water's edge.

EGLE will review any potential impacts to land-water interfaces and the proper permits will be acquired before any construction commences.

### Great Lakes Shorelands, Coastal Zones, and Coastal Management Areas

The Michigan Coastal Management Program (MCMP), which was established in 1978, oversees community outreach to provide knowledge and monetary assistance for Michigan's coastal areas and subsequent habitats. The goal of the program is to mitigate any detrimental impacts to the coastal areas and promote sustainability.

After reviewing the Department of Environment, Great Lakes, and Energy website, the City of Harrison does not fall within the coastal zone boundary map. Thus, the proposed project plan does not impose any threats to areas located along Great Lakes shorelines or subsequent coastal management areas in which would require further review and considerations.

### Floodplains

The City of Harrison participates in the FEMA National Flood Insurance Program (NFIP). The FEMA issued Flood Insurance Rate Maps (FIRM) are shown in Figure 5. Areas adjacent to Budd Lake are in "Zone AE", the 1% annual chance flood hazard area. Various water service lines may be located within, or directly adjacent to, 1% annual chance flood hazard areas. Appropriate permits will be acquired before any construction commences.

### Special Designation Rivers (Trout, Natural, Wild & Scenic)

The Wild and Scenic Rivers Act, as amended by the Michigan Scenic Rivers Act of 1991, prohibits federal assistance to a project which will have a direct and adverse effect on the values for which a river segment listed in the National Wild and Scenic Rivers System or designated for study on the National Rivers Inventory was established.

The City of Harrison does not contain any Rivers within its borders, so there is no environmental impact to any specially designated rivers.

### Major Surface Waters

The most noticeable natural feature in the service area is Budd Lake. Budd Lake provides recreational opportunities and aesthetic beauty to the area. Budd Lake is almost centered in the city, and portions of Little Long Lake are within city limits at the northeast section of the city.

### Topography and Geology

Figure 3 shows the existing topography from the USGS quadrangle map. The elevations in the city gradually slope towards Budd Lake from the West and South and is relatively flat to the East and North. Ground elevations vary from 1150 feet to 1250 feet.

The regional geology for the area is based on a review of the Quaternary Geology of Michigan Map (W.R. Farrand, 1982) and the Bedrock Geology of Michigan Map (MDNR Geological Survey Division, 1987).

The general geology of the Harrison area is characterized by glacial outwash sand and gravel and post glacial alluvium as well as End moraines of coarse-textured till which overlie the Saginaw Formation and Red Beds of the Michigan basin.

### Soils

Figure 7 is the USDA National Resources Conservation Service soil map for the City of Harrison. Soils located at the WWTP site are Graycalm sand, Grayling Sand, McBride Sandy Loam, and Montcalm loamy sand.

There are a variety of soil types located throughout the city which may be encountered during water service line replacements. The most common soils within city limits are Graycalm sand, Grayling sand, Mancelona loamy sand, and Montcalm loamy sand. These soil types are well drained and commonly experience little to no flooding.

### Agricultural Resources

There is no anticipated impact to farmlands with the proposed project. All proposed work will occur on city owned property, road right-of-way, or water service replacement areas which has been previously disturbed for roads or water system needs. Construction activities will minimize surface disturbance, and all surface surrounding new construction will be restored to pre-construction or approved conditions. Mancelona loamy sand is farmland of local importance. Any of this farmland that may be adjacent to project sites will be protected with the appropriate SESC measures.

### Flora and Fauna and Unique Natural Features

Because the proposed work is limited several small areas throughout the City that have already been disturbed for utilities, roads, or home construction, it is not anticipated that any federally listed endangered or threatened species or unique natural features will be encountered. The city will review the project scope with EGLE and complete the necessary investigations based on the project requirements prior to implementation.

## C. Need for the Project

Need for the project was in part established in the DWAM completed in 2025 and in part of EGLE's Lead and Copper Rule update from the EPA that requires all states to replace lead service lines by 2037. The DWAM project and more recent needs identified the following:

1. Lead Service Line Replacements: identified through DWAM, historical records, City employee knowledge, and compliance with EGLE's Lead and Copper Rule

### Distribution System – Lead Service Line Replacements

Through hydro-excavations during the DWAM project, numerous water services were found containing galvanized material that could have previously been connected to lead goosenecks or lead service lines. Utilizing past project records and City employee knowledge of the system, the number of service lines requiring replacement was pared down more. Considering EGLE's Lead and Copper Rule in conjunction with the EPA, the City's focus is on water service line replacements to comply with the rule and replace all violating water service lines before 2037. The City plans to replace approximately 230 water service lines to comply with the rule.

## III. ANALYSIS OF ALTERNATIVES

### A. Identification of Potential Alternatives

Alternatives to address the identified needs of the city's water service line replacements were developed and evaluated based on their ability to meet the technical, financial, and regulatory constraints. The alternatives analysis presented below is required to justify the selected alternative.

Project objectives include:

- Provide reliable and quality water service to the customers.
- Comply with EGLE's Lead and Copper Rule.
- Provide infrastructure capable of consistent reliable service.
- Minimize financial burden to the water distribution system users.
- Minimize environmental impact during construction of the improvements project.

Two alternatives were developed for the City of Harrison's Lead Service Line Replacement Water System Improvements Project:

1. Connect to regional water distribution system
2. Replacement of non-compliant water service lines

The alternatives are described in detail in the following report subsections. Each alternative was initially screened based on effectiveness, constructability, and financial requirements. Feasible alternatives were then subjected to a comprehensive evaluation with attention to detailed economic, technical, environmental, and public concerns.

Financial analysis of feasible alternatives followed a net present worth methodology. Capital costs, operations, maintenance and replacement costs, and salvage values were determined separately and discounted back to present value. The sum of these costs represents the net present worth of the project.

#### **Alternative 1 – Regionalization**

There are no regional alternatives being considered due to critical system improvements relating to the existing water distribution system that will continue to be utilized even if regional alternatives were utilized for water service.

The nearest water distribution system to the City of Harrison is in the City of Gladwin. Approximately 20 miles of water main would be required to transport water from one community to another. The water service line replacements within the existing City of Harrison's system would still need to be completed to provide reliable and compliant service to the residents. A conceptual estimate for the regional water main is in excess of \$15 million.

The Regional alternative is not feasible and will not be evaluated further as a principal alternative.

#### **Alternative 2 – Replacement of Non-Compliant Water Service Lines**

Alternative 2 would complete all the identified replacements and improvements to improve safety, reliability, and compliance.

Prior to the development of the scope listed below, Alternative 2 assessed the number of water service lines throughout the system that contain galvanized, lead, or unknown materials. This alternative also had an analysis performed on the EGLE Lead and Copper Rule and compliance aspects of this rule. The City of Harrison is required to comply with the rule by 2037 and therefore must replace approximately 230 water service lines. Water service line replacements could be required from the corporation at the water main to 18" inside the home or building or to the water meter, whichever is further, or from the corporation to the curb stop, or from the curb stop to 18" inside the home or building or to the water meter, whichever is further. These limits will be established based on records as much as feasible in the project documents. The scope could include exploratory digging in a case where a contractor excavates and is anticipating only replacing a specific section of the water service, but upon excavation finds a non-compliant material on a section of the water service that was not deemed to be replaced.

Alternative 2 includes the following improvements to the Water Distribution System:

- Water service line replacements at approximately 230 locations throughout the City of Harrison to comply with EGLE's Lead and Copper Rule

Alternative 2 is the only alternative that met the project objectives. This alternative was reviewed further for effectiveness, reliability, constructability, environmental impacts, and cost effectiveness.

## B. Monetary Evaluation

The monetary evaluation includes a present worth analysis. This analysis does not identify the source of funds but compares cost uniformly for each alternative over the 20-year planning period. The present worth is the sum which, if invested now at a given interest rate, would provide the same funds required to pay projected costs within the planning period. The total present worth, used to compare the alternatives, is the sum of the initial capital cost, plus the present worth of Operation, Maintenance, and Replacement (OM&R) costs, minus the present worth of the salvage value of the facility at the end of the 20-year planning period. The salvage value is calculated at the end of 20 years where portions of the project structures or equipment may have a salvage value, which is determined by using straight-line depreciation. In general, water service lines and associated appurtenances have a useful book life of 30-50 years.

The cost of labor, equipment and materials is not escalated over the 20-year life since it assumes any increase in these costs will apply equally to all alternatives. The interest charge during construction (capitalized interest) would not significantly influence the comparison of alternatives and was not included in the cost-effectiveness analysis.

The following cost comparison details were specifically addressed and were applied in the present worth analysis as per the EGLE guidance:

- Capital costs were included for all identified improvements.
- Sunk costs were excluded from the present worth cost. Sunk costs for the project include existing land, existing water system facilities, and outstanding bond indebtedness.
- Operation, Maintenance, and Replacement, (OM&R) costs were included in the present worth cost.
- The economic comparison is based on a 20-year planning period and a real discount rate of 2.0%, per OMB Circular No. A-94 for FY2027.
- Salvage values were included in the present worth cost.
- Energy costs escalation was assumed equal between the alternatives and therefore are not adjusted over the 20-year period.

Table 1 compares the opinion of probable cost for each of the principal alternatives. A detailed breakdown of project costs is included in Appendix B.

**Table 1: Summary of Present Worth Cost Analysis**

Alternative	Capital Cost of Project	Annual OM&R Cost	Net Present Worth of OM&R Cost	Salvage Value	Total Present Worth
2	\$2,494,000	\$344,813	\$5,638,187	\$671,356	\$7,460,831

### C. Environmental Evaluation

An environmental evaluation was conducted for Alternative 2.

Alternative 2 includes replacement of approximately 230 water service lines throughout the City of Harrison. The mitigation measures will be designed and implemented as required for the construction phase of the project, including dust control and erosion control activities, and restoration. Table 2 evaluates the impacts on various environmental features for Alternative No. 2.

**Table 2: Environmental Evaluation for Alternative No. 2**

Environmental Feature	Alternative No. 2
Agricultural and Open Space Lands	NSI
Air Quality	T
Archeological Historic Sites	NSI
Drinking Water Supply Source	NSI
Endangered or Threatened Species	NSI
Fauna and Flora Communities/ habitat	NSI
Floodplains	NSI
Great Lakes Shoreline	NA
Lakes and Streams	NSI
Parks and Recreational Facilities	NSI
Unique Features	NA
Wetlands	NSI
Wild & Scenic Rivers	NSI

**Explanation of Abbreviations:**

NSI: No Significant Impact                      T: Temporary Impact  
 L: Low, But Measurable Impact              B: Beneficial  
 SI: Significant Impact                          NA: Not Applicable

No substantial indirect, direct, or cumulative impacts were identified for the implementation of Alternative 2.

## IV. SELECTED ALTERNATIVE

The objectives of the water distribution system improvements project with respect to water service line replacement are identified as:

- Provide reliable and quality water service to the customers.
- Comply with EGLE's Lead and Copper Rule.
- Provide infrastructure capable of consistent reliable service.
- Minimize financial burden to the water distribution system users.
- Minimize environmental impact during construction of the improvements project.

Each feasible alternative that met the project objectives was reviewed for effectiveness, reliability, constructability, environmental impacts, and cost effectiveness.

### A. Description of the Recommended Alternative and Design Parameters

Alternative No. 2 was found to be the only feasible alternative and is therefore the recommended.

#### Lead Service Line Replacements

Water service lines constructed with galvanized lines previously connected to lead, lead lines, or lines of unknown material are a risk to the water system and water users. It is also a rule put out by the EPA and EGLE to have all water service lines be compliant with EGLE's Lead and Copper Rule by 2037. The City of Harrison has approximately 230 water service lines that are required to be replaced to be compliant with the rule. The project would include individual service line replacements at each of the 230 locations. The scope at each location could slightly differ depending on what sections of the service line currently contain the non-compliant materials. It is anticipated that lead service line replacements will cost approximately \$2,494,000.

### B. Useful Life

The City of Harrison intends to secure the long term with SRF loan with the lowest rate for the construction of the selected alternative. The weighted useful life for the Alternative 2 has been calculated to greater than the 30-year loan period. The weighted useful life is the total of all calculated life values (each asset's dollar value times its estimated useful life) divided by the total estimate of all the project dollars spent on those assets. This analysis verifies that the components of the selected alternative will cost-effectively address replacement requirements for the term of the loan. It is not anticipated that all the equipment will last the entirety of the planning period. The City will have to annually reserve funds to account for some equipment replacement.

### C. Project Maps

A project location map and additional figures can be found in Appendix A.

### D. Estimated Schedule for Design and Construction

Table 3 presents the proposed project schedule, which follows the SRF FY2026 Q4 milestone schedule for traditional design, bid, build projects.

**Table 3: Proposed Schedule for Design and Construction**

Anticipated Date	Activity
April 2026	Submit Final SRF Project Plan to EGLE
October 2026	Proceed with Project Development and Preliminary Design
November 2026	Begin Detailed Design
February 2027	Finalize Design
May 2027	EGLE Approval of Plans & Specs
August 2027	SRF Loan Closing
September 2027	Begin Construction
November 2028	Complete Construction
December 2028	Project Closeout and Record Drawings

### E. Project and User Cost Summary

Table 4 summarizes the net present worth (NPW) for the selected alternative. Appendix B shows the breakdown of the project costs, as well as NPW calculations.

**Table 4: Cost Summary of the Selected Alternative**

Description	Capital Costs	OM&R Costs PW	Salvage Value PW	TPW
Alternative No. 2 – Replacement of Non-Compliant Water Service Lines	\$2.494 M	\$5.639 M	\$0.672 M	\$7.461 M

#### User Costs

The City of Harrison funds water distribution system operations entirely through user fees. The anticipated project cost is \$2.494 million. The exact sources of funding cannot be determined at this time, nor is it reasonable to assume a certain percent of principle forgiveness, even if that may seem likely given the current SRF program funding. The following assumptions were made to show the likely bond amount a community would have to cover each year to afford the project:

1. Funded over a loan term of 30 years.
2. Rate of 2.75%
3. Assume project is 100% loan.

With these assumptions applied to the project cost of \$2.494 million, The City of Harrison would have to pay \$125,000 each year to cover the project loan payment.

## F. Implementability of the Selected Alternative

The City of Harrison has established legal, institutional, technical, financial, and managerial resources to improve, maintain, and operate its water distribution system.

The ability for the City of Harrison to implement the selected alternatives depend on the success of the City's application to EGLE for DWSRF financial assistance. The city intends to utilize consultants to assist with project coordination, design, financing, and construction administration. For water distribution system operations, the City of Harrison will operate and maintain its own water distribution system.

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## V. ENVIRONMENTAL AND PUBLIC HEALTH IMPACTS

The potential beneficial and detrimental environmental impacts of the selected alternative is evaluated in this section of the project plan. The analyses of impacts are divided into direct, indirect, and cumulative impacts. Direct environmental impacts are those that are directly attributable to the construction and operation of the project. Indirect impacts are caused by the project but are removed in time and/or distance and are often considered secondary in nature. Cumulative impacts are those impacts which increase in magnitude over time, or which result from individually minor, but collectively significant actions.

### **Beneficial or Adverse Impacts**

A discussion of the full range of potential impacts (i.e., direct, indirect, and cumulative) must identify the nature of the impacts in terms of both beneficial and adverse impacts. The following section will describe the positive and negative impacts resulting from the selected alternative with special emphasis on cultural or environmentally sensitive resources.

### **Short-Term and Long-Term Impacts**

The analysis includes trade-offs between short-term uses and the maintenance enhancement of long-term productivity and vice versa.

### **Irreversible or Irretrievable Resources**

The analysis of the environmental impacts also includes any irreversible commitments or use of irretrievable resources, such as the commitment of construction materials, energy, and land to the proposed project.

### **A. Direct Impacts**

Direct impacts are the environmental impacts directly attributable to the construction and operation of the project. The city must consider impacts resulting from construction in areas which have not been previously disturbed. The effects of the proposed project are considered for each of the following environmental factors:

#### Historic, Archaeological, Geological, Cultural, or Recreational Areas

The Michigan Historic Sites Online website did not identify any state registered historical sites within the City of Harrison.

There are no known issues with the current sites. The proposed project will affect only existing utility rights-of-way and water service replacement areas. No landscape changes are proposed and the sites will be restored to approved or pre-project conditions.

It is not anticipated that the proposed project will impact tribally important cultural or religious sites of Native American tribes since none are found directly within Clare County. Any nearby tribes that need to be notified will be contacted by EGLE to review the proposed sites if deemed necessary.

#### Natural Settings and Sensitive Ecosystems

The selected alternative includes water service line replacements. This work will be performed in existing utility rights-of-way, easements, and water service replacement areas and could include excavations in the road at the water main to buildings and homes depending on the sections of service line requiring replacement. No long-term impacts to the natural setting of project area are anticipated.

### Existing and Future Quality of Surface Water and Groundwater

The primary goal of the project is to replace non-compliant water service lines throughout the City's distribution system. The proposed project is not anticipated to cause negative changes to the quality of nearby surface or groundwaters.

### Consumption of Materials, Land, Energy, and Construction & Operation

Construction materials, public funds, energy, and manpower will be consumed to construct and operate the proposed improvements. No known shortage of these items exists, nor is it expected that a shortage of these items will result from implementing this project.

The only chemicals used during the construction would be fertilizers used after the seeding and mulching of disturbed areas from the construction operations.

Energy (both electrical and fossil fuels) will be used during the construction of the improvements.

### Human, Social, and Economic Impacts

There will be no dislocation of people during the construction. Brief water service disruptions to residents are anticipated because of having to take the water service line out of service for the replacement of piping. Work occurring in the roadway will be coordinated and planned to minimize traffic impacts. Small surface disturbances are anticipated while water service lines are being installed but will be restored to approved or pre-project conditions.

Employment of some residents by the contractor(s) is a possibility for certain construction operations.

### Construction and Operational Impacts

A minor impact on local traffic may occur during the construction of the proposed water service line replacements. During construction, equipment will increase local noise and dust levels during operations. There will be a short-term adverse impact on air quality during the construction phase due to dust and construction equipment emissions generated during the excavation operations.

## **B. Indirect Impacts**

Indirect impacts are those caused by the proposed project but removed in time and/or distance. Indirect impacts are often secondary in nature and are generally caused by residential and/or commercial development made possible by the project.

Examples of indirect impacts include undirected growth including additional traffic, over-extended police and fire protection, or heavy financial burden on existing and future residents for the cost of the water service line replacements. It is not expected that the proposed project would cause any significant undirected growth that would result in changes to zoning, population density, or types of developments found throughout the city, including residential, commercial, and industrial areas.

Transportation and infrastructure are already in place within the service area, and the proposed water service line replacements within the water distribution system will only serve to enhance the existing City infrastructure.

The proposed project will not result in any changes in anticipated land use.

There are no anticipated indirect impacts due to changes to the natural setting or sensitive ecosystems or jeopardy to any endangered species resulting from potential secondary growth. The City of Harrison does have habitat suitable for 2 animals on the threatened list, the Northern Long-eared bat and Eastern Massasauga rattlesnake, which is worth mentioning.

There are no anticipated changes in air or water quality stemming from any primary or potential secondary development as a result of the improvements since any additional commercial/industrial development would be subject to the city's existing zoning or land use requirements.

There will be minimal additional groundwater consumption over the useful life of the facility due to the projected annual growth of the city. In addition, no additional generation of wastes is anticipated as a result of the proposed project.

### C. Cumulative Impacts

There are no anticipated cumulative impacts that would increase in magnitude over time or result from individually minor, but collectively significant actions of the project. There is no anticipated new infrastructure proposed in conjunction with the proposed water service line replacements.

## VI. MITIGATION

Structural and non-structural measures which avoid, eliminate, or mitigate adverse impacts on the environment need to be identified in the project plan. The cost of mitigation was considered during the financial analysis and is included in the unit costs and lump sum prices developed during the capital cost evaluation for the principal alternatives.

The structural measures involve the specific design and construction of the improvements while the non-structural measures involve regulatory, institutional, governmental or private plans, policies or regulations of the city. Mitigation of short-term, long-term, and indirect impacts must be considered in the project plan.

### A. Mitigation of Short-Term Construction-Related Impacts

#### **Traffic and Safety Hazard Control**

Traffic control and maintaining access to homes and businesses will be the responsibility of the Contractor. However, access to all homes and businesses will be maintained and emergency vehicle access will be ensured throughout construction. Residents will be notified when construction work is scheduled in their area. Traffic detour signs and flag control will be incorporated to provide non-local traffic with the information they need to navigate the construction site and to travel safely.

Construction site safety is the responsibility of the Contractor. The Contractor will be required to have only trained persons performing all phases of the work. The Contractor will also be required to comply with the Occupational Safety & Health Act (OSHA), including using back up alarms on all equipment, having employees trained in hazard control, and maintaining materials safety data sheets (SDS) for materials that may be used or handled by construction personnel.

#### **Dust Control**

Construction activities will result in increased dust in the vicinity of the construction sites during the length of the proposed construction. Mitigation measures to minimize the negative effect of dust on residents and construction workers will be defined in the project specifications. It is anticipated that dust control will be provided by the application of water and/or dust palliative during dry and dusty periods. The Contractor will be required to control dust in accordance with methods described in the project specifications.

#### **Noise Control**

Noise levels will increase temporarily during construction of the proposed project. Construction activities will only be allowed during the hours approved by the city and would be subject to all local noise control ordinances. Construction workers and site visitors may be required to wear earplugs to minimize the effects of long-term noise during the construction operations.

#### **Soil Erosion and Sedimentation Control**

The Contractor will be required to obtain a soil erosion and sedimentation control permit from the local agency prior to the start of the work. It is anticipated that mitigation measures that may be utilized will include silt fence, straw bales, rip rap, geotextile fabric, and other such methods, as appropriate.

## Restoration of Disturbed Areas

As previously stated, the project specifications will require the Contractor to provide and maintain access at all times to homes and businesses. Traffic control, including signage and flag persons must be provided. Restoration of disturbed areas will also be defined in the specifications. Restoring disturbed lawn areas, roadways, existing utilities, etc. will be completed in a timely fashion and in accordance with the project specifications.

## Service Disruption

Minor and brief water service disruptions are anticipated during construction.

## B. Mitigation of Long-Term Impacts

### General Construction

Mitigation measures would be developed to ensure that sensitive environments do not suffer permanent damage. Every effort will be made to avoid potential long-term or irreversible adverse impacts during the construction of the lead service line replacements.

The construction will incorporate “best management practice” methods for installing pipelines or disturbing the earth. Wetland, floodplain, and inland stream mitigation would be handled through the permit process. If impacts cannot be avoided, wetland mitigation measures will be used. The design and project specifications will include the proper use of physical measures to reduce soil erosion to a manageable level and any disturbed slope areas will be immediately seeded, mulched and/or sodded to prevent soil erosion and/or sedimentation.

### Siting Decisions

Water service line replacement construction activities are expected to be contained within existing utility right-of-way, easements, and water service line replacement areas. Where traffic must be re-routed for any construction activities, the City will work closely with MDOT and state authorities to develop detours within urban areas.

### Operational Impacts

Noise and dust levels will be monitored throughout construction. No major operation issues are anticipated.

## C. Mitigation of Indirect Impacts

### Master Plan and Zoning

The most effective way of mitigating unrestricted growth in any community is proactive creation of zoning districts and effective enforcement of that zoning. The city has zoning in place, and officials have historically had a significant role in the development of the city. Unrestricted growth is not anticipated with or without the proposed project.

## **Ordinances**

The City of Harrison has adopted various code of ordinances throughout history. Appropriate subsections are standardized for new construction in its relation to indirect impacts and its agenda for community development.

All ordinances related to the proposed project are expected to be abided by the Contractor in which preemptive measures need to be reviewed and approved by the city. Relevant propositions include insurance that construction activities do not impact levels of existing surface runoff or areas prone to standing water. In such occurrences, the Contractor will be expected to effectively re-route water to approved collection areas. Collection areas, such as nearby storm structures and drainage basins, must be properly able to withstand excess amounts of water prior to introducing such activities. Final plan grades of restored vegetation, walkways, pavement, etc. must meet drainage requirements within the project plans and specifications with detailed implementation.

It is not anticipated that combustion sources or any vehicle emissions caused by increased population growth will be directly acquired by the project scope. Nonpoint source pollution from impervious surfaces, stormwater, yard fertilizers, and permanently disturbed areas are not expected to increase due to growth within the community. All City standards and limitations (i.e., approved working hours) will follow proper compliance.

## **Staging of Construction**

Indirect impacts to the community's master plan and zoning are not directly foreseen with the associated project agenda.

Within the proposed project, construction materials may be temporarily staged. There will also be miscellaneous equipment, vehicles, etc. that may be parked throughout the project duration. However, these disturbances will be assigned to designated areas approved by the city and will not be permanent.

## VII. PUBLIC PARTICIPATION

### A. Public Meetings on Project Alternatives

A public meeting for the SRF Project Plan was held on May 18<sup>th</sup>, 2026 at Harrison City Hall to discuss the need for the project, principal alternatives, environmental impacts, description of the selected alternative and associated cost estimates and user charge, and schedule of the proposed project.

A copy of the meeting minutes and handout is included in Appendix C.

### B. The Formal Public Meeting

A formal public meeting on project alternatives and user costs was held on May 18<sup>th</sup>, 2026 at Harrison City Hall.

#### Public Meeting Advertisement

The public meeting was advertised on the City's website and Facebook page on May 7<sup>th</sup>, 2026, 12 days prior to the meeting date, in accordance with SRF guidelines. Copies of the Draft Project Plan detailing the proposed project were available for inspection on May 7<sup>th</sup>, 2026 at the Harrison City Offices. The public meeting advertisement is included in Appendix C.

#### Public Meeting Summary

The handout used at the public meeting is included in Appendix C.

#### Public Meeting Contents

The following items were discussed at the public hearing:

- Project background.
- A description of the water service line replacement scope.
- A description of the principal alternatives considered.
- A breakdown of capital costs and OM&R costs for each of the principal alternatives.
- Proposed method of financing.
- Comparison of environmental impacts for the principal alternatives.
- Selected Alternative.
- Proposed monthly user costs for the implementation of the Selected Alternative for the average residential customer.

#### Public Meeting Comments Received and Answered

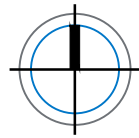
Any comments from the public received before, or during the public meeting were addressed as a part of the question and answer portion of the presentation.

## C. Adoption of the Project Plan

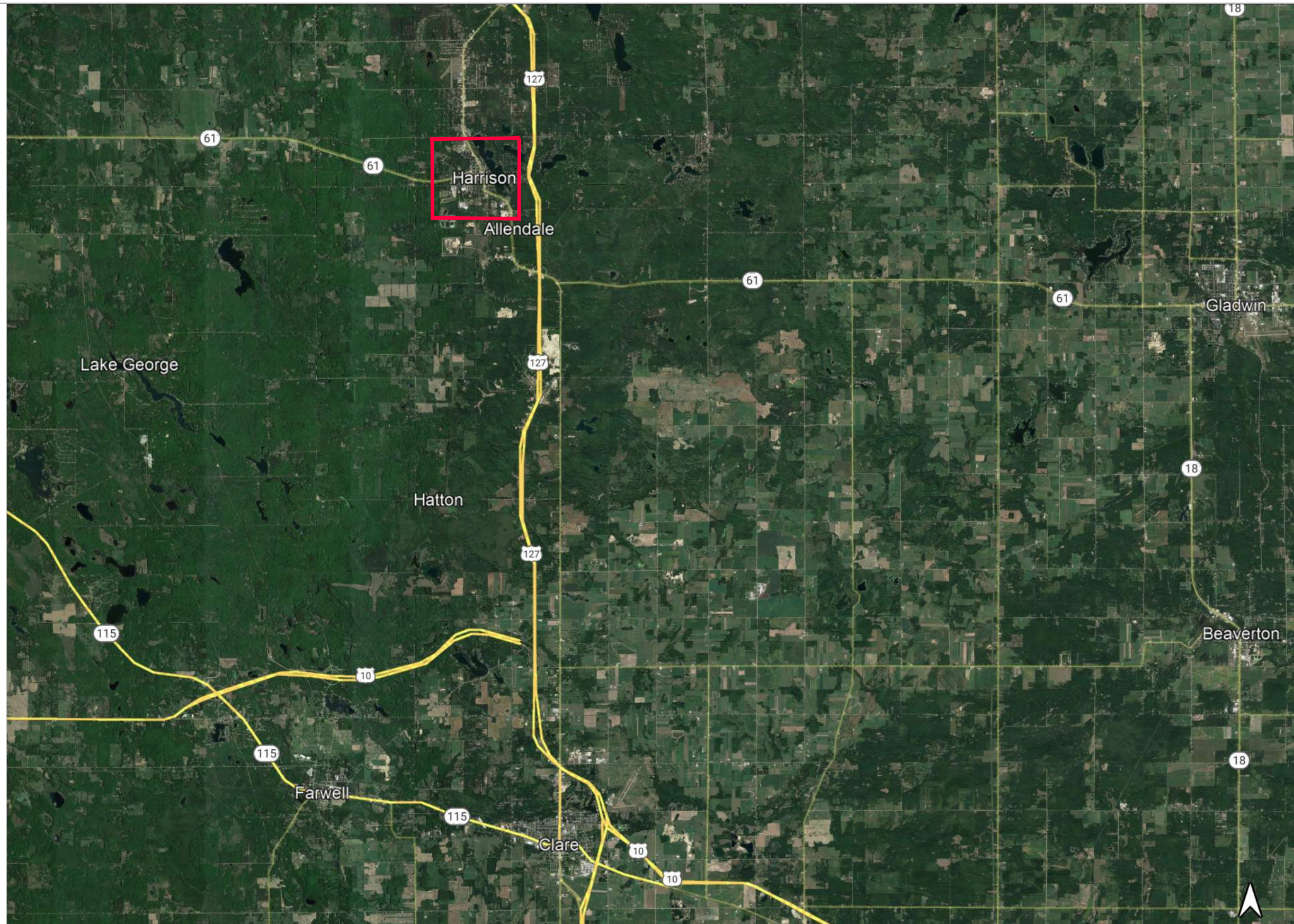
The official period for receiving comments ended at the close of the public meeting. After the close of the public comment period, the proposed alternative 2 was selected for implementation by the City Council. A copy of the city's resolution to adopt the Project Plan and to implement the selected alternative is included in Appendix C.

DRAFT

**APPENDIX A**  
**MAPS AND FIGURES**



NORTH  
NO SCALE



**LEGEND**

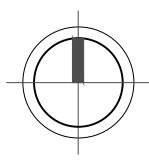
 APPROXIMATE LOCATION OF PROJECT

**CITY OF HARRISON  
CLARE COUNTY, MICHIGAN  
DWSRF FY27 PROJECT PLAN  
LSL REPLACEMENTS**

**FIGURE 1 - VICINITY MAP**

F&V PROJECT NO. 877280

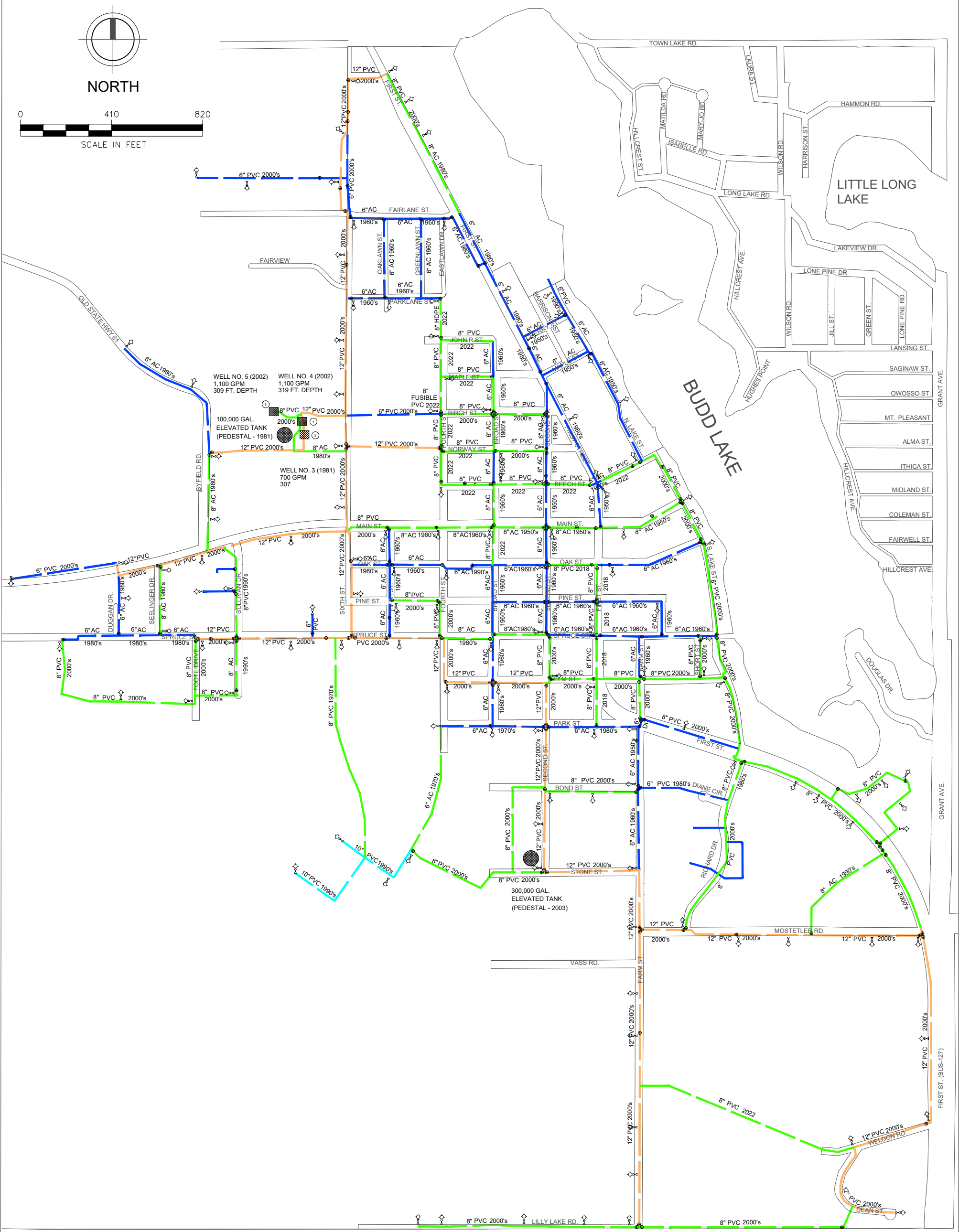










NORTH



SCALE IN FEET



### LEGEND

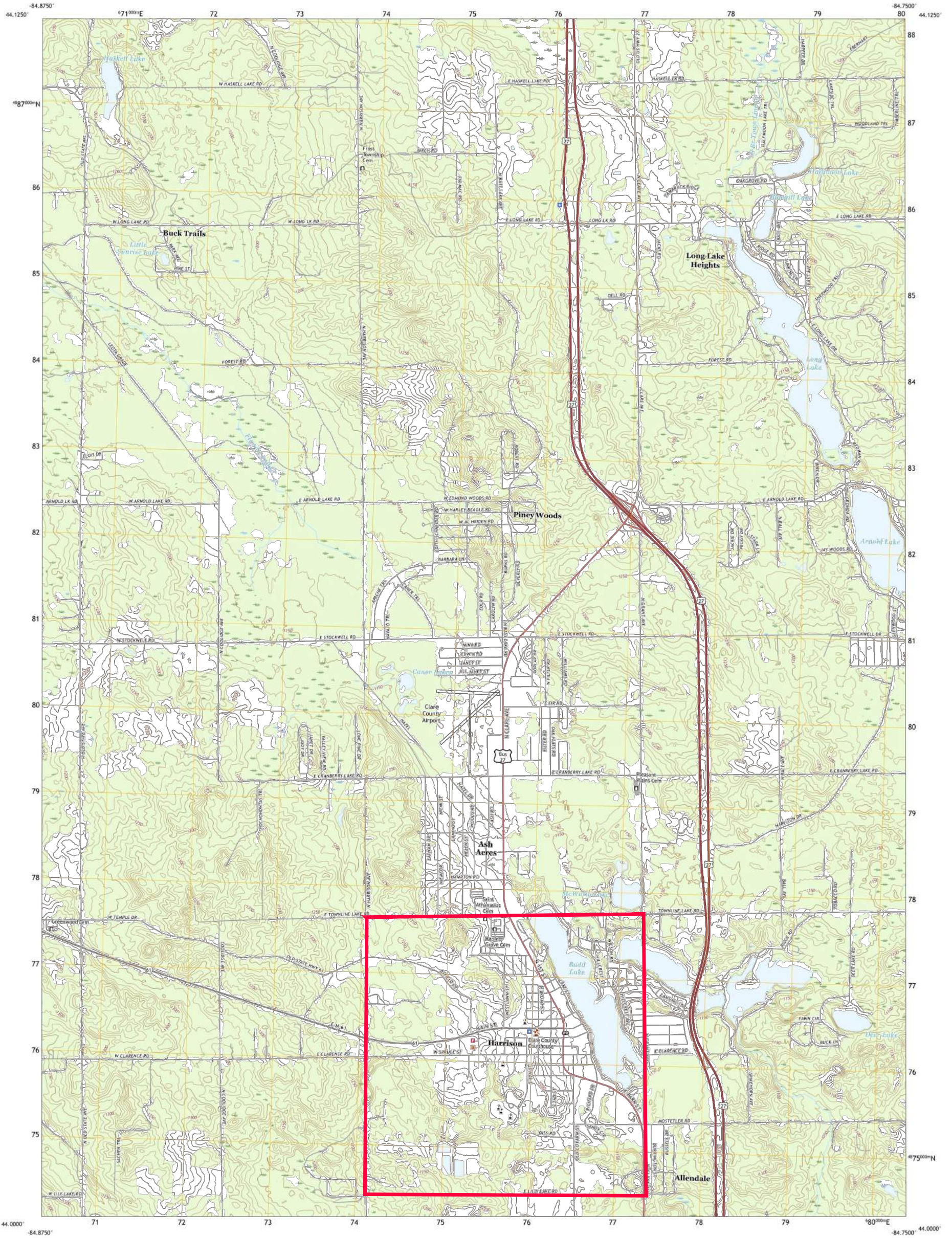
-  6" WATERMAIN
-  8" WATERMAIN
-  10" WATERMAIN
-  12" WATERMAIN
-  FIRE HYDRANT
-  VALVES

**CITY OF HARRISON  
CLARE COUNTY, MICHIGAN  
DWSRF FY27 PROJECT PLAN  
LSL REPLACEMENTS**

**FIGURE 2 - EXISTING SYSTEM**

F&V PROJECT NO. 877280





**Produced by the United States Geological Survey**  
North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid: Universal Transverse Mercator, Zone 16T  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, July 2016 - October 2016  
Roads.....U.S. Census Bureau, 2016  
Names.....GNS, 1980 - 2019  
Hydrography.....National Hydrography Dataset, 2004 - 2019  
Contours.....National Elevation Dataset, 2018  
Boundaries.....Multiple sources; see metadata file 2017 - 2018  
Public Land Survey System.....BLM, 2018  
Wetlands.....FWS National Wetlands Inventory 2005



**NORTH**  
NO SCALE

**LEGEND**

**PROPOSED PROJECT AREA**



QUADRANGLE LOCATION

1	2	3
4	5	6
7	8	

ADJOINING QUADRANGLES

**ROAD CLASSIFICATION**

- Expressway
- Secondary Hwy
- Ramp
- Interstate Route
- Local Connector
- Local Road
- 4WD
- US Route
- State Route

**CITY OF HARRISON**  
**CLARE COUNTY, MICHIGAN**  
**DWSRF FY27 PROJECT PLAN**  
**LSL REPLACEMENTS**

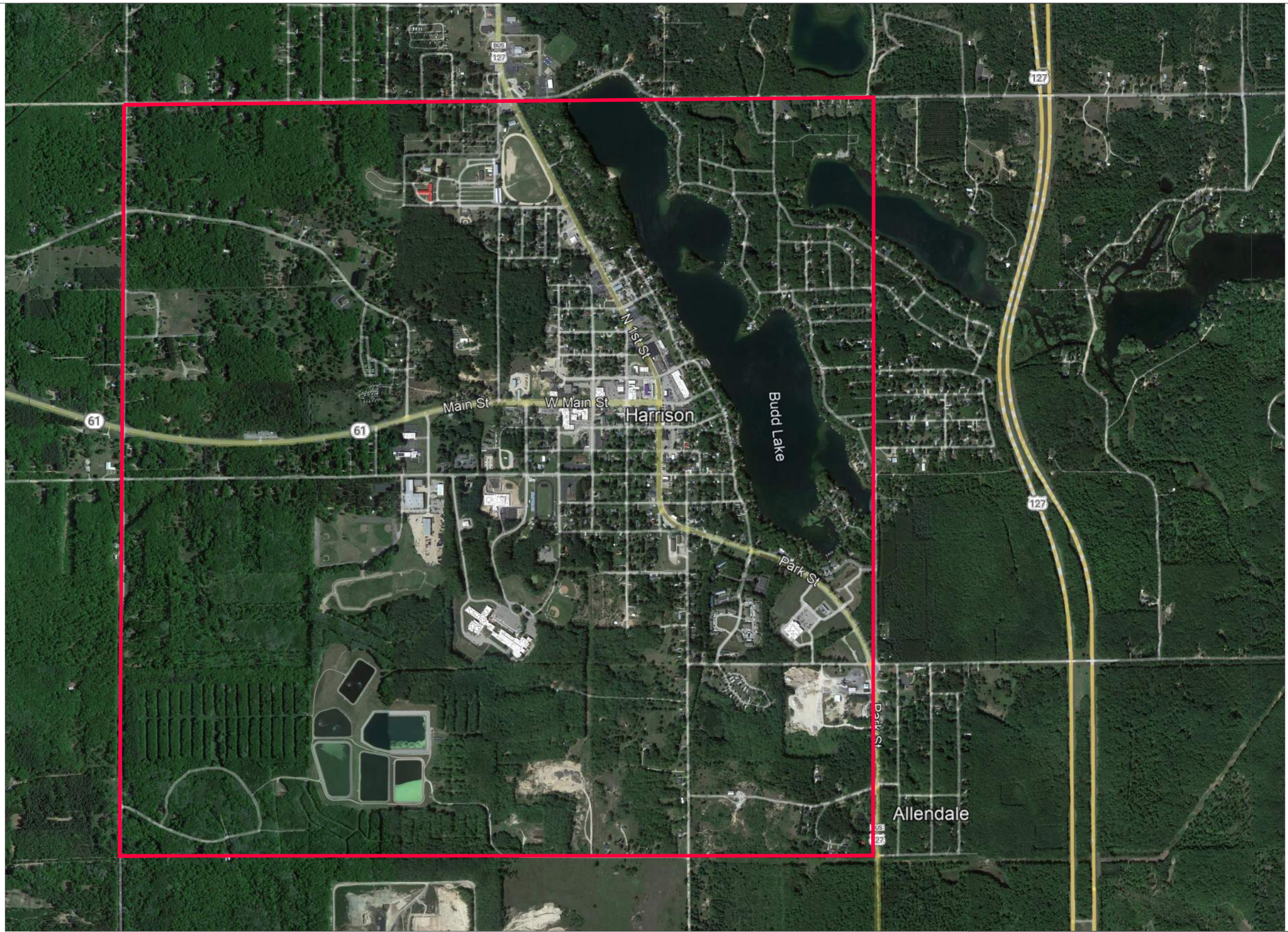
**FIGURE 3 - TOPOGRAPHIC MAP**

877280  
F&V PROJECT NO.





NORTH  
NO SCALE



LEGEND

 PROPOSED PROJECT AREA

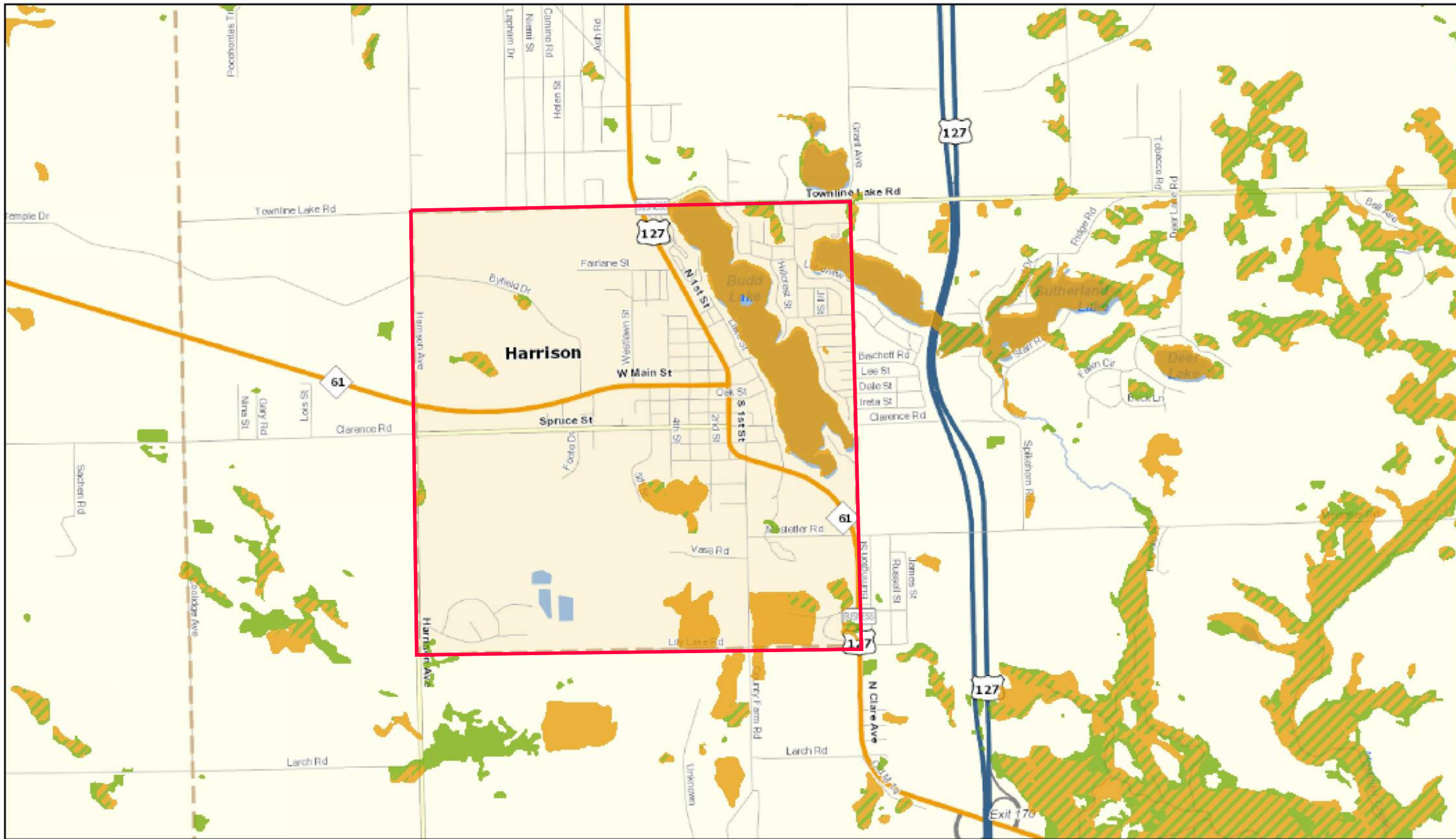
CITY OF HARRISON  
CLARE COUNTY, MICHIGAN  
DWSRF FY27 PROJECT PLAN  
LSL REPLACEMENTS

FIGURE 4 - AERIAL MAP


F&V PROJECT NO. 877280







Part 303 Final Wetlands Inventory

-  Wetlands as identified on NWI and MIRIS maps
-  Soil areas which include wetland soils
-  Wetlands as identified on NWI and MIRIS maps and soil areas which include wetland soils

LEGEND

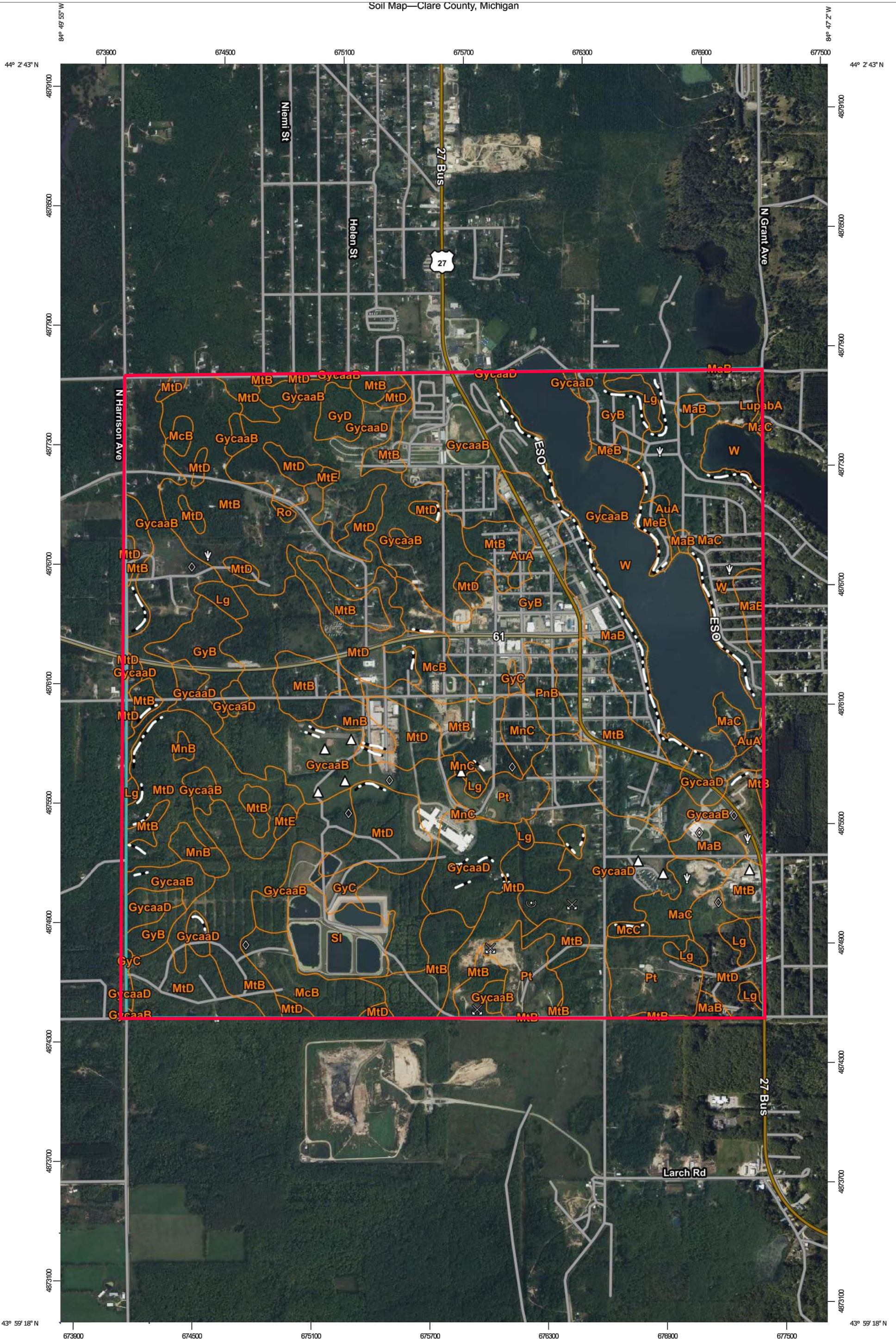
-  PROPOSED PROJECT AREA

**CITY OF HARRISON**  
**CLARE COUNTY, MICHIGAN**  
**DWSRF FY27 PROJECT PLAN**  
**LSL REPLACEMENTS**

**FIGURE 6 - WETLANDS MAP**

F&V PROJECT NO. 877280





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LEGEND

PROPOSED PROJECT AREA

**CITY OF HARRISON**  
**CLARE COUNTY, MICHIGAN**  
**DWSRF FY27 PROJECT PLAN**  
**LSL REPLACEMENTS**


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**FIGURE 7 - NRCS SOILS MAP**



### MAP LEGEND

**Area of Interest (AOI)**

 Area of Interest (AOI)




















**Soils**





 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

**Special Point Features**






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

**Water Features**

 Streams and Canals

**Transportation**

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

**Background**

 Aerial Photography

### MAP INFORMATION

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: Clare County, Michigan  
 Survey Area Data: Version 21, Aug 25, 2022

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

Date(s) aerial images were photographed: Jul 2, 2020—Nov 12, 2020

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.

morgon.barnhart/M:\Proj\876001-879000\877280 Harrison - FY27 DWSRF LSL Repl Proj Plan\Cad\FY27 Project Plan\CAD\877280\_7 NRCS Soils Map.dwg

# Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AuA	Au Gres loamy sand, 0 to 2 percent slopes	10.5	0.4%
GyB	Grayling sand, 0 to 6 percent slopes	166.2	6.4%
GyC	Grayling sand, 6 to 18 percent slopes	13.2	0.5%
GycaaB	Graycalm sand, 0 to 6 percent slopes	428.6	16.6%
GycaaD	Graycalm sand, 6 to 18 percent slopes	340.0	13.2%
GyD	Grayling sand, 18 to 35 percent slopes	13.5	0.5%
Lg	Loxley and Greenwood soils	33.0	1.3%
LupabA	Lupton muck, 0 to 1 percent slopes	1.4	0.1%
MaB	Mancelona loamy sand, 0 to 6 percent slopes	89.8	3.5%
MaC	Mancelona loamy sand, 6 to 12 percent slopes	167.0	6.5%
McB	McBride sandy loam, 2 to 6 percent slopes	60.0	2.3%
McC	McBride sandy loam, 6 to 12 percent slopes	3.7	0.1%
MeB	Melita sand, 0 to 6 percent slopes	12.3	0.5%
MnB	Menominee loamy sand, 0 to 6 percent slopes	26.4	1.0%
MnC	Menominee loamy sand, 6 to 12 percent slopes	19.2	0.7%
MtB	Montcalm loamy sand, 0 to 6 percent slopes	477.4	18.5%
MtD	Montcalm loamy sand, 6 to 18 percent slopes	361.3	14.0%
MtE	Montcalm loamy sand, 18 to 35 percent slopes	4.8	0.2%
PnB	Onekama loam, Saginaw Lobe, 2 to 6 percent slopes	17.2	0.7%
Pt	Pits	91.7	3.5%
Ro	Roscommon mucky loamy sand	1.7	0.1%
Sl	Sewage lagoon	45.8	1.8%
W	Water	198.2	7.7%
<b>Totals for Area of Interest</b>		<b>2,583.1</b>	<b>100.0%</b>

CITY OF HARRISON  
CLARE COUNTY, MICHIGAN  
DWSRF FY27 PROJECT PLAN  
LSL REPLACEMENTS

FIGURE 7 - NRCS SOILS LEGEND

877280  
F&V PROJECT NO.



**APPENDIX B**

**COST ESTIMATES AND FINANCIAL DOCUMENTATION**



## Present Worth Analysis

**Community Name:**

City of Harrison

**Federal Discount Rate for Water Resources Planning (Interest Rate) i =** 2.000%

**Number of Years, n =** 20 years

**Alternative 2:**

Initial Capital Costs = \$2,494,000

Annual Operations  
& Maintenance Costs = \$344,813

Future Salvage Value = \$997,600

Present Worth  
of 20 years of O & M = \$5,638,187

$$PW = \text{Annual OM} \frac{(1+i)^n - 1}{i(1+i)^n}$$

Present Worth  
of 20 yr Salvage Value = \$671,356

$$PW = \text{FSV} \frac{1}{(1+i)^n}$$

Alternate 2  
Total Present Worth = \$7,460,831

*Note: A present worth analysis was not considered for Alternative No. 1 as it is not a feasible alternative.*

**APPENDIX C**  
**PUBLIC PARTICIPATION DOCUMENTS**

## **NOTICE OF PROJECT PLANNING PUBLIC MEETING**

The City of Harrison will hold a public meeting on the proposed lead service line replacement project for the purpose of receiving comments from interested persons.

The meeting will be held in conjunction with the City's regularly scheduled Council meeting on Monday, May 18<sup>th</sup>, 2026, which begins at 6:00 p.m. at Harrison's City Hall.

The purpose of the proposed project is improvements to the City's Water System.

Project construction will involve improvements to the water system. Improvements to the water system will include approximately 230 water service replacements from the existing water main to the structure.

Impacts of the proposed project include minor traffic operation, increased local noise and dusts levels typically of a construction project. There are no anticipated long-term impacts from this project.

The estimated project costs total to be approximately \$2.49 million. User rates will be adjusted to service the debt and operate and maintain the proposed improvements over time. The estimated cost increase to users for the proposed project will be discussed at the public meeting and the final costs will be dependent on the terms of the financing proposed by EGLE for this project.

Copies of the plan detailing the proposed project are available for inspection at the following location(s): Harrison's City Hall – 2105 Sullivan Drive, Harrison, MI 48625. Hours: Mon-Thurs: 7:30AM – 5:30PM.

Written comments received before the meeting record closes on Monday, May 18<sup>th</sup>, 2026 will receive responses in the final project planning document. Written comments should be sent to: Justin Cavanaugh, City Manager, at 2105 Sullivan Drive, Harrison, MI 48625.

# PROJECT PLAN FACT SHEET

## PUBLIC MEETING TO DISCUSS THE PROPOSED ALTERNATIVE OF THE DWSRF PROJECT PLAN CITY OF HARRISON LEAD SERVICE LINE REPLACEMENTS

### Why are we here?

The City of Harrison submitted an intent to apply to the State of Michigan’s Department of Environment, Great Lakes, and Energy’s (EGLE) Drinking Water State Revolving Fund (DWSRF) FY27 funding program. The next step is completing a project plan that provides a more in-depth outline of a project to improve the performance and operation of the water distribution system. The City Council will receive and address public comments, if necessary, and determine if the Council will adopt a resolution that approves the project plan. Once submitted, EGLE will score the project against all applicants and propose financial terms for an agreement, if within the fundable range.

### What issues are the City looking to address?

- Replacement of water services to comply with EGLE Lead and Copper Rule.

### What alternatives were considered?

- **Alternative 1: Regionalization** – this alternative would only address a water supply need, which the City does not have. This alternative does not address the needs outline in the project plan and is not a feasible alternative. It will not be evaluated further as a principal alternative.
- **Alternative 2: Replacement of Non-Compliant Water Service Lines** – Make improvements to the existing system to improve safety and reliability, and make the necessary upgrades to the service lines. Alternative 2 is the only alternative that met the project objectives. This alternative was reviewed further for effectiveness, reliability, constructability, environmental impacts, and cost effectiveness. More details will be discussed below.

### What is the scope of the recommended project?

The water distribution system improvements consist of replacement of approximately 230 water services.

### How much would this cost?

- Total Estimated Project Cost: \$2,494,000.
  - Includes: design, construction, administrative and legal fees, contingencies, etc.
- User costs will be based on financing determined by EGLE later in the project planning stages.
- Harrison is anticipated to be classified as a “Significantly Overburdened” community.
  - Qualifies for up to a 40-year term at a 1.00% interest rate.
- Principal forgiveness varies from 0-50% (typically), but is unknown at this time for FY27.
- The proposed method of funding is a Revenue Bond.

Item No.	Alternative #2 Cost Breakdown: Item Description	Estimated Total
1	Lead Service Line Replacements (230 location)	\$1,886,000
	<b>Construction Subtotal (Inc. 10% Contingency)</b>	<b>\$2,080,000</b>
	Application, Equivalency, Survey, Design, Engineering, Legal, Bonding, Admin, Etc.	\$414,000
	<b>Total Estimated Project Cost</b>	<b>\$2,494,000</b>



Principal Forgiveness	Amount Financed	Annual Payment	Cost/REU/Month
0%	\$2,494,000	\$91,170	\$3.48
25%	\$1,870,500	\$68,378	\$2.61
50%	\$1,247,000	\$45,585	\$1.74
75%	\$623,500	\$22,793	\$0.87

Assumptions: \$2.49M project; 40-year loan; 1.00% interest rate; 2,184 REUs

### When would this project happen?

- Project plans for the DWSRF program are due to EGLE by June 1<sup>st</sup>, 2026.
- It is anticipated that final financial terms will be offered in the Fall of 2026.
- If the City chooses to move forward, project will begin in the Fall of 2026.
- Construction contracts would be awarded and may commence in summer of 2027.

### How would this impact residents?

Minimal impact to residents is anticipated as water services will be maintained, and construction work will still allow for traffic flow. No significant environmental impacts are anticipated from this project. Typical construction related impacts of noise, dust, and traffic detours may be experienced during the construction period. The cost of the project is reimbursed through the life of the debt through customers' water billings.

### What are the next steps?

Adoption of the resolution to approve the project plan and submittal of the project plan to EGLE do not obligate the City to implement the project listed above. The City may choose to implement the project once financing terms have been offered by EGLE in the Fall of 2026.

**A RESOLUTION ADOPTING A FINAL PROJECT PLANNING DOCUMENT  
FOR WATER SYSTEM IMPROVEMENTS  
AND DESIGNATING AN AUTHORIZED PROJECT REPRESENTATIVE**

**WHEREAS**, the City of Harrison recognizes the need to make improvements to its existing water distribution system; and

**WHEREAS**, the City of Harrison authorized Fleis & VandenBrink to prepare a Project Planning Document, which recommends the construction of improvements to the Village’s water distribution system.

**WHEREAS**, said Project Planning Document was presented at a Public Meeting held on May 18<sup>th</sup>, 2026 at 6 p.m. and all public comments have been considered and addressed.

**NOW THEREFORE BE IT RESOLVED**, that the City of Harrison formally adopts said Project Planning Document and agrees to implement the selected alternative #2 Replacement of Non-Compliant Water Service Lines.

**BE IT FURTHER RESOLVED**, that the City Manager, a position currently held by Justin Cavanaugh, is designated as the authorized representative for all activities associated with the project referenced above, including the submittal of said Project Planning Document as the first step in applying to the State of Michigan for a Drinking Water State Revolving Fund Loan to assist in the implementation of the selected alternative.

Yeas (names of Members voting Yes):

Nays (names of Members voting No):

I certify that the above Resolution was adopted by the Harrison City Council on May 18<sup>th</sup>, 2026.

BY: \_\_\_\_\_  
Name (please print or type) Title

\_\_\_\_\_  
Signature Date

**APPENDIX D**  
**EXISTING ZONING MAP**





603 Bay Street, First Floor  
Traverse City, MI 49684  
P: 231.932.8600  
F: 231.932.8700  
[www.fveng.com](http://www.fveng.com)