



State Revolving Fund Loan Programs

Drinking Water, Wastewater, Nonpoint Source

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

CITY OF LAKE STATION WATER IMPROVEMENT PROJECT PHASE II IMPROVEMENTS SRF PROJECT DW 12 03 45 02

DATE: March 8, 2013

TARGET PROJECT APPROVAL DATE: April 7, 2013

I. INTRODUCTION

The above entity has applied to the Drinking Water State Revolving Loan Fund (SRF) for a loan to finance all or part of the 2012 Water Improvement Project, Phase II Improvements described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF Drinking Water Program has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

Amy Henninger
Senior Environmental Manager
State Revolving Fund -- IGCN 1275
100 N. Senate Ave.
Indianapolis, IN 46204
317-232-6566
ahenning@ifa.in.gov

ENVIRONMENTAL ASSESSMENT

I. PROJECT IDENTIFICATION

Project Name and Address: Water Improvement Project
Phase II Improvements
City of Lake Station
1969 Central Avenue
Lake Station, IN 46405

SRF Project Number DW 12 03 45 02

Authorized Representative: Mr. Keith Soderquist, Mayor

II. PROJECT LOCATION AND BACKGROUND

The City of Lake Station is located in northeast Lake County. Lake Station is primarily located in Hobart Township with a small portion in Calumet Township. The water system is located on the Gary and Portage quadrangles. Specifically in the Gary quadrangle in Township 36N Range 7W, Sections 7-9 and 16-22, and in the Portage quadrangle in Township 36N, Range 8W, Section 13. See Figures 1.2 and 5.1.

III. PROJECT NEED AND PURPOSE

The Lake Station Utility consists of a groundwater supply, storage reservoirs, booster station and distribution system. In addition to the existing wells a portion of the Lake Station demand is met by purchasing water from IAWC via an interconnection. The existing water supply has levels of iron and manganese above the Environmental Protection Agency's recommended Secondary Maximum Contaminant Levels, which cause ongoing water quality issues related to taste, odor and color. Many of the existing facilities experience operation and maintenance challenges due to the age and condition of the equipment.

The purpose of the new elevated storage tank is to meet state storage requirements as well as provide increased water pressure for the distribution system. The new booster station is necessary to replace the existing booster station which has gone beyond its useful life and needs replacement. The purpose of the water loss audit and leak detection survey is to identify components within the water system that will assist in the reducing the city's water loss quantity. The finished water main is necessary to deliver finished water from the under construction water treatment plant to the existing ground storage tank and to the new elevated storage tank. Also, these Phase II improvements are necessary to complete water system improvements that are necessary to decrease the city's dependency on purchased water from an adjacent water utility.

IV. PROJECT DESCRIPTION (See Figure 1.2)

The proposed project involves:

- The construction of a new 500,000 gallon elevated water storage tank located approximately 325 feet west of the intersection of Pike and Edison Streets. Implementation of this item is dependent on the City's funding capacity and therefore may

be constructed at a later time;

- The construction of approximately 2,836 feet of 12-inch diameter finished water transmission main from the new ground water treatment plant to the existing ground water storage tank located in Riverview Park on Ripley Street;
- Construction of a new 700 gallons per minute (GPM) triplex water booster station with new emergency generator with all associated pumps, exterior piping and electrical improvements located in Riverview Park on Ripley Street;
- Various electrical and control improvements, existing piping replacement, various building improvements and pump replacement in the existing water booster station located in Riverview Park on Ripley Street. This as an alternate improvement which may be implemented instead of the construction of a new water booster station. Implementation of this item will be dependent on actual bids and the City’s funding capacity;
- The construction of approximately 2,910 feet of 12-inch diameter of finished water main from the new water booster station to the new elevated water storage tank;
- The implementation of a system wide water loss audit and leak detection survey;
- The installation of approximately 570 feet of 12-inch diameter transmission water main on Pike Street from the new elevated water storage tank location to a point of connection to the existing 8-inch diameter water main on Fairview Street;
- Demolition of the existing 400,000 gallon elevated water storage tank located at the intersection of Ripley Street and Central Avenue. Implementation of this item is dependent on the City’s funding capacity and will be only demolished after the new elevated water storage tank is constructed.

V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

A. Selected Plan Estimated Cost Summary:

DESCRIPTION	ESTIMATED COSTS
1. Elevated Water Storage Tank	\$1,925,000
2. Finished Water Mains and Booster Station	1,192,896
Construction Sub-Total	<u>\$3,117,896</u>
3. Water Loss Audit and Leak Detection Survey	230,000
Construction Total	<u>\$3,347,896</u>
**Non-Construction Total	\$ 879,104
Total Estimated Project Cost	\$4,227,000

*Includes a construction contingency

**Non-construction costs include design engineering, construction engineering, legal and financial fees.

- B. Lake Station will finance the project improvements up to the maximum amount of \$4,227,000 through a 20-year SRF loan at a fixed interest rate to be determined at the loan closing.

VI. DESCRIPTION OF EVALUATED ALTERNATIVES

The city evaluated the no-action alternative and rejected it, since the deficiencies listed above would continue and would not be corrected. The above were chosen based on cost-effectiveness, practicality, technical feasibility, ease of implementation and environmental soundness.

VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts of Construction and Operation

Disturbed / Undisturbed Land: Construction will primarily occur in areas previously disturbed by construction activity. An archaeology report for Phase II was completed and provided to the DHPA for review.

Structural Resources (Figure 5.3): Construction and operation of the project will not alter, demolish or remove historic properties. If any visual or audible impacts to historic properties occur, they will be temporary and will not alter the characteristics that qualify such properties for inclusion in or eligibility for the National Register of Historic Places. The SRF's finding pursuant to Section 106 of the National Historic Preservation Act is: "no historic properties affected."

Wetlands (Figures 5.4, 6.6 and 6.7): Wetlands will not be impacted by the construction or operation of the project. A portion of the finished water main from the new water treatment plant to the existing ground water storage tank will be constructed using the directional drilling construction method to avoid impacts. A wetland delineation was conducted on October 2, 2012 for the proposed water works improvements. The City's PER states: *a 401/404 permit application is not being submitted at this time as no impacts to the wetlands or streams are anticipated.*

Surface Waters (Figures 6.6 and 6.7): The project will not adversely affect waters of high quality listed in 327 IAC 2-1-2(3), exceptional use streams listed in 327 IAC 2-1-11(b), Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-(2), Salmonid Streams listed in (327 IAC 2-1.5-5(a)(3), or waters on the Outstanding Rivers list. The Deep River has been identified as an Outstanding River. A portion of the finished water main will cross the Deep River in two locations. The finished water main will be constructed under the Deep River in two locations utilizing the directional drilling construction method, thereby not affecting the river.

Floodplain (Figure 5.5): A portion of the water main will be installed within the 100-year floodplain. The City's PER states: *Coordination with Matt Buffington of IDNR is currently underway to request an exemption for general licenses for this utility crossing. The project meets the General Licenses and Specific Exemption from Floodway Licensing criteria in 312 IAC 10-5-0.3 with the exception of the Outstanding River listing.*

Groundwater: The project will not adversely affect local wells or the water table.

Plants and Animals: There will be two trees removed at the new booster station site. The construction and operation of the project will not negatively impact state or federal-listed endangered species and their habitat. Mitigation measures cited in comment letters from the

Indiana Department of Natural Resources and U.S. Fish and Wildlife Service will be implemented.

Prime Farmland: The project will not cause a conversion of prime farmland.

Air Quality: Construction of the project will result in increased fumes and noise in the vicinity of the project during the length of the proposed construction period. No direct long-term air quality impacts are expected.

Open Space and Recreational Opportunities: The new booster station will be located in Riverview Park. The new booster station occupies a relatively small portion of the park land and will not remove any existing recreational facilities from operation. Construction and operation of the new booster station is not anticipated to adversely affect the recreational setting and features of the park. The proposed new booster station architecture will conform to the other recreational architecture in the park. Also, in the park there will be installation of finished water main which a majority of the water main will be installed utilizing the directional drilling construction method (figure 6.7). As an alternate to constructing the new booster station, the city may choose to rehabilitate the existing booster station. All mitigation measures cited by the environmental review authorities will be upheld following project completion. The balance of the project will be constructed on previously disturbed ground that has no recreational opportunities. Therefore, the project will neither create nor destroy any open space and recreational opportunities.

Lake Michigan Coastal Program: The project is located within the Lake Michigan Coastal Zone area and will not impact it.

National Natural Landmarks: Construction and operation of the proposed project will not impact National Natural Landmarks.

B. Indirect Impacts

The city's Preliminary Engineering Report (PER) states: *Lake Station, through the authority of its Council, building commission, or other means, will ensure that future development, as well as future supply, storage, distribution or treatment works projects connecting to SRF-funded facilities, will not adversely impact wetlands, forested areas, steep slopes, 100-year floodplains, archaeological/historical/structural resources, or other sensitive environmental resources. The City will require such new development and treatment works projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, IDNR, IDEM, and other environmental review authorities.*

C. Comments from Environmental Review Authorities

In correspondence dated August 14, 2012 the Natural Resources Conservation Service stated: *The proposed project to make waterworks improvements in the City of Lake Station, Lake County, as stated in your letter received August 6, 2012, will not cause a conversion of prime farmland.*

In correspondence dated November 7, 2012 the Department of Natural Resources Division of Water stated: *The project falls within the Lake Michigan Coastal Program's boundary therefore, it may be subject to Federal Consistency review. Portions of the new 12" water lines crossing the Deep River will required the formal approval for construction in a floodway under the Flood Control Act, IC 174-28-1, unless it qualified for*

a general license under Administrative Rule 312 IA 10-5 that applies to utility line crossings...Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

- 1) *Riparian Habitat: Impacts that remove trees from a non-wetland, riparian area should be mitigated. Impacts to non-wetland forest over one acre should be mitigated at a minimum of 2:1 ratio. If less than one acres of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ration based on area. Impacts to non-wetland forest under one (1) acres in an urban setting should be mitigated by planting five trees at least 2 inches in diameter-at-breast (dbh) height for each tree which is removed that is 10" dbh or greater..*
- 2) *Directional Boring: We recommend that a trenchless method be used for crossing streams or wetlands with utility lines (such as crossing Deep River in Phase II). If the open-trench method is necessary and the only feasible option at any of the planned stream or wetland crossings due to the site conditions, then the following measures should be implemented:*
 - a. *Any open-trench stream crossing should be timed to coincide with the low-water time of year (typically mid to late summer).*
 - b. *Restore disturbed streambanks using bioengineering bank stabilization methods and revegetate disturbed banks with native trees, shrubs and herbaceous plants. Stream bank slopes after project completion should be restored to stable-slope steepness (not steeper than 2:1)*
 - c. *The cleared width through any forested area should be the minimum heeded to install the line and no wider than 20 feet wide through the forested area to allow the canopy to close over the line.*
 - d. *Use graded stone or riprap to protect the section of trench below the normal water level from scour or erosion (any stone or riprap fill in the streambed must remain at the existing streambed level to avoid creating a fish passage obstruction).*
- 3) *Wetland Habitat: Due to the presence or potential presence of wetlands on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management 401 program and also the US army Corps of Engineers 404 program. Impacts to wetlands should be mitigated at the appropriate ratio.*
- 4) *Bank Stabilization: Establishing vegetation along the banks is critical for stabilization and erosion control. In addition to vegetation, some other form of bank stabilization may be needed. While hard armoring alone may be needed in certain instances, soft armoring and bioengineering techniques should be considered first. In many instances, one or more methods are necessary to increase the likelihood of vegetation establishment. Combining vegetation with most bank stabilization methods can provide additional bank protection while not compromising the benefits to fish and wildlife... Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage. Riprap may be used only at the toe of the sideslopes up to the ordinary high water mark. The banks above the ordinary high water mark should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion.*
- 5) *Cofferdams: Any proposed dewatering should be detailed using the following guidelines:*
 - a. *Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.*
 - b. *Dewatering should be limited to one streambank or side of the creek (at the bridge construction site) at a time so at least half of the creek is always flowing naturally. On larger streams, both sides can be dammed at once as long as the center of the channel is allowed to flow naturally.*
 - c. *Do not dewater directly into the stream. Dewater into a sediment bag, into a roll*

- off box, and onto a riprap apron or similar system.*
- d. *Cofferdam materials and methods can vary. Self-contained and encapsulated materials and methods are recommended. Anything filled with water is better than soil-filled where there is a potential for leaking or failure of the system due to length of use or accidents.*
 - e. *Dewatering pumps should incorporate filters or bypasses to avoid injuring or killing fish and other aquatic organisms.*

The additional measures listed below should be implemented to avoid, minimize or compensate for impacts to fish, wildlife, and botanical resources:

- 1) *Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion.*
- 2) *Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.*
- 3) *Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.*
- 4) *Do not cut any trees suitable for Indiana bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark) from April 1 through September 30.*
- 5) *Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap.*
- 6) *Minimize the movement of resuspended bottom sediment from the immediate project area.*
- 7) *Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.*
- 8) *See and protect all disturbed streambanks and slopes that are 3:1 or steeper with erosion control blankets (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.*
- 9) *Inspect structural erosion and sediment control practices daily and repair as necessary until all construction is complete and disturbed areas are permanently stabilized.*

This document is the first notice of Phase II to the U.S. Fish and Wildlife Service (USFWS) and the Division of Historic Preservation and Archaeology.

VIII. MITIGATION MEASURES

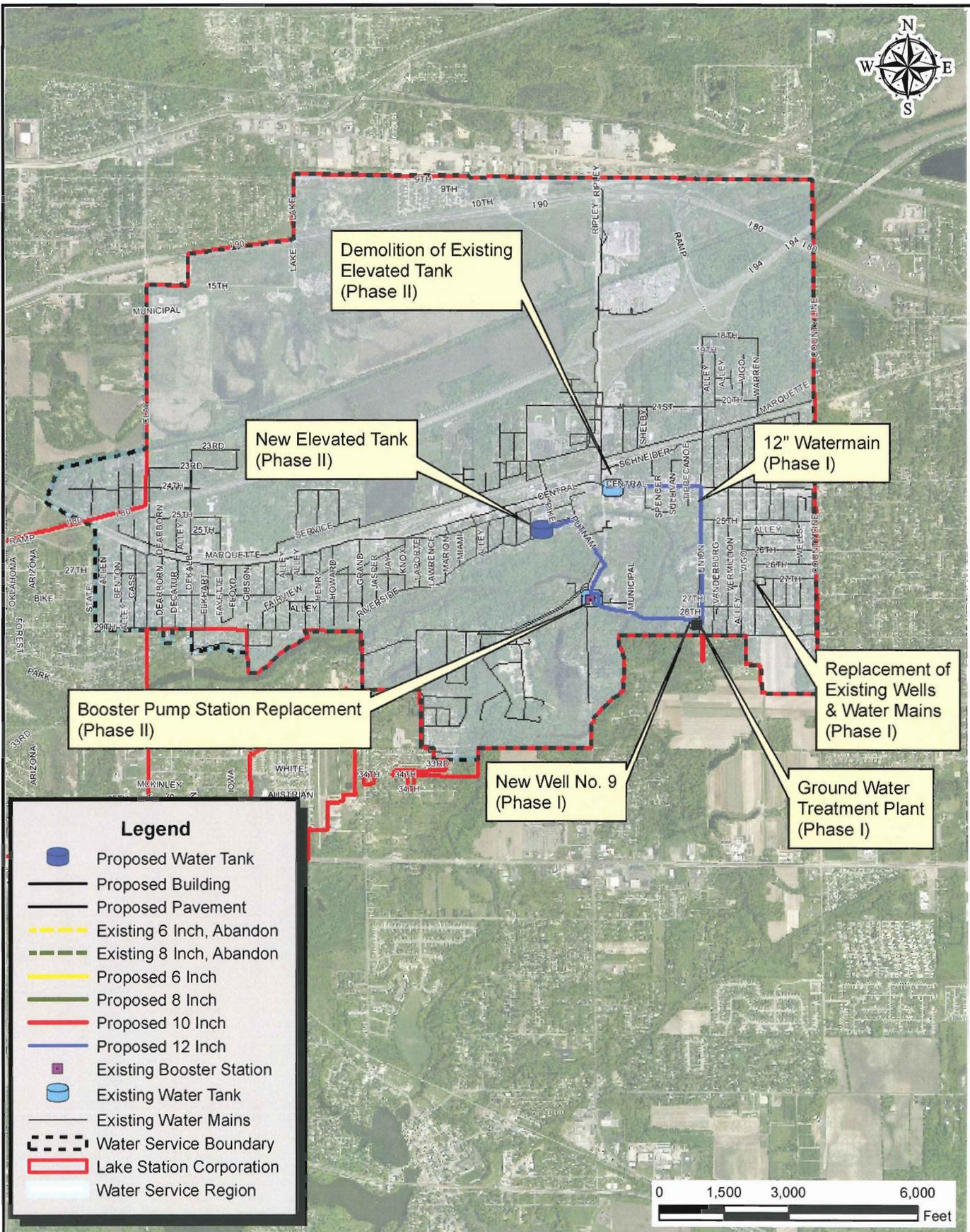
The City of Lake Station states in their PER that:

- 1. *Natural vegetation will be retained wherever feasible, and when appropriate, grading and excavating will be kept to a minimum in order to reduce excessive runoff and erosion problems.*
- 2. *Erosion and sediment control measures including clearing, grading, excavating, and restoring of disturbed areas will be required in the project specifications. The program shall meet all applicable federal, state, and local requirements.*
- 3. *Appropriate structural or agronomic practices to control runoff and sedimentation during and after construction. Such practices may include silt fencing, seeding and mulching.*
- 4. *Surface and subsurface drainage patterns will be restored as early as possible.*

5. *Construction entrances, roadways, and staging areas will be stabilized prior to construction by means of stone pads or paving.*
6. *Construction activities will be scheduled to avoid excessive wet conditions.*
7. *Topsoil will be stockpiled separately for use as top-dressing for site restoration.*
8. *Excess excavated materials will be used on other parts of the project construction were feasible.*
9. *Groundwater discharges will be aerated prior to diversion to storm sewers or surface water to reduce the iron and/or manganese content.*
10. *If significant cultural resources are encountered during construction, all activities will be ceased until the resource can be studied, protected or recovered.*
11. *Mitigation measures typically cited in comment letters from the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service, will be implemented.*

IX. PUBLIC PARTICIPATION

A discussion of the revisions of the original project and to re-organize the original project into various phases was published in a newspaper article in the Northwest Indiana Times newspaper on December 2, 2012, which was available to the public via print media and internet access. The revisions to the project were also discussed at a public Board of Public Works meeting at 8:00 am on March 5, 2013 at the Lake Station City Hall.



Legend

- Proposed Water Tank
- Proposed Building
- Proposed Pavement
- Existing 6 Inch, Abandon
- Existing 8 Inch, Abandon
- Proposed 6 Inch
- Proposed 8 Inch
- Proposed 10 Inch
- Proposed 12 Inch
- Existing Booster Station
- Existing Water Tank
- Existing Water Mains
- Water Service Boundary
- Lake Station Corporation
- Water Service Region



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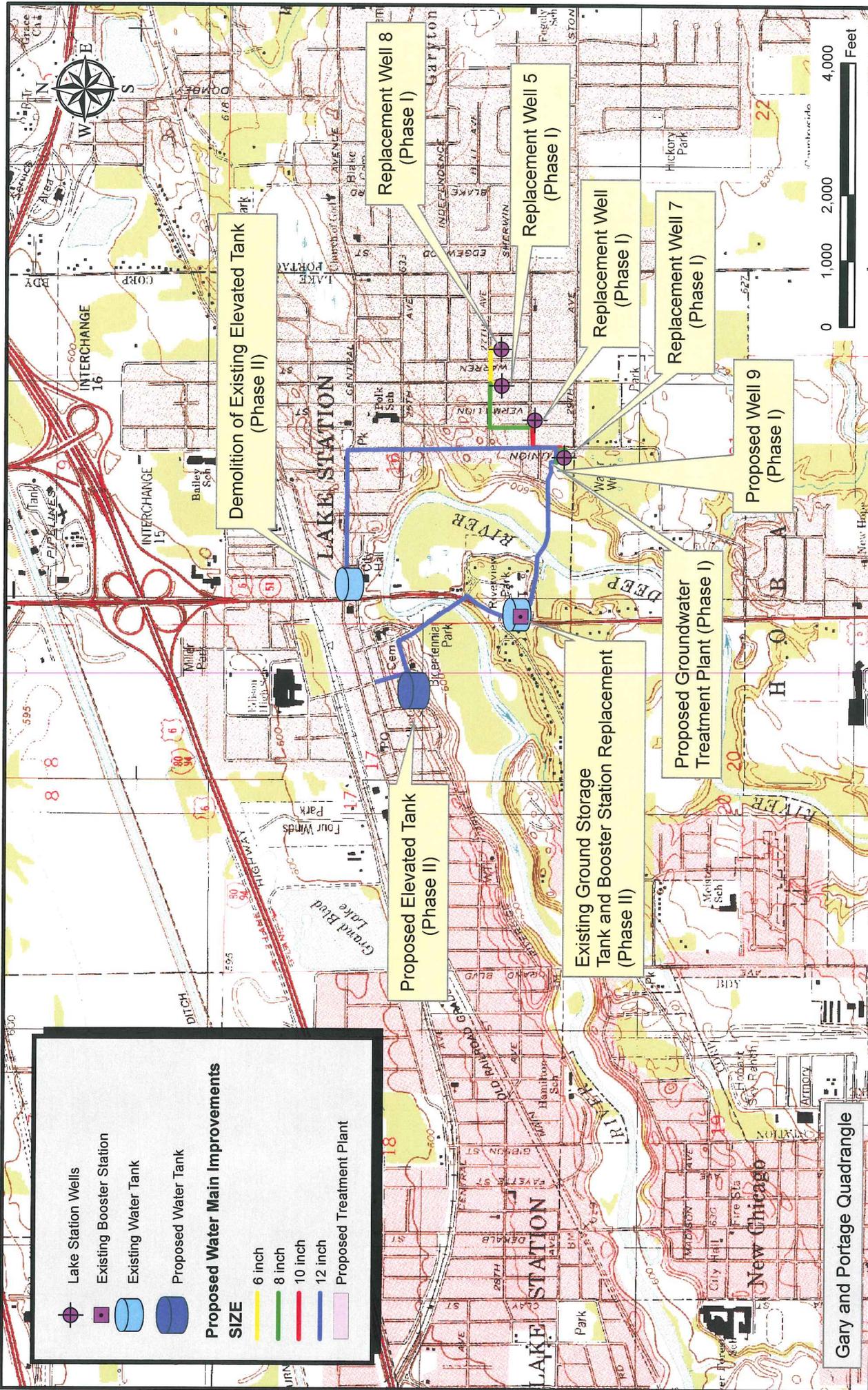
Proposed Project Areas

City of Lake Station Public Works
1969 Central Avenue
Lake Station, Indiana 46405

2012 Water Improvements
City of Lake Station, IN

Date: 09/28/2012

Figure 1.2



2012 Water Improvements
City of Lake Station, IN

USGS Topographic Mapping

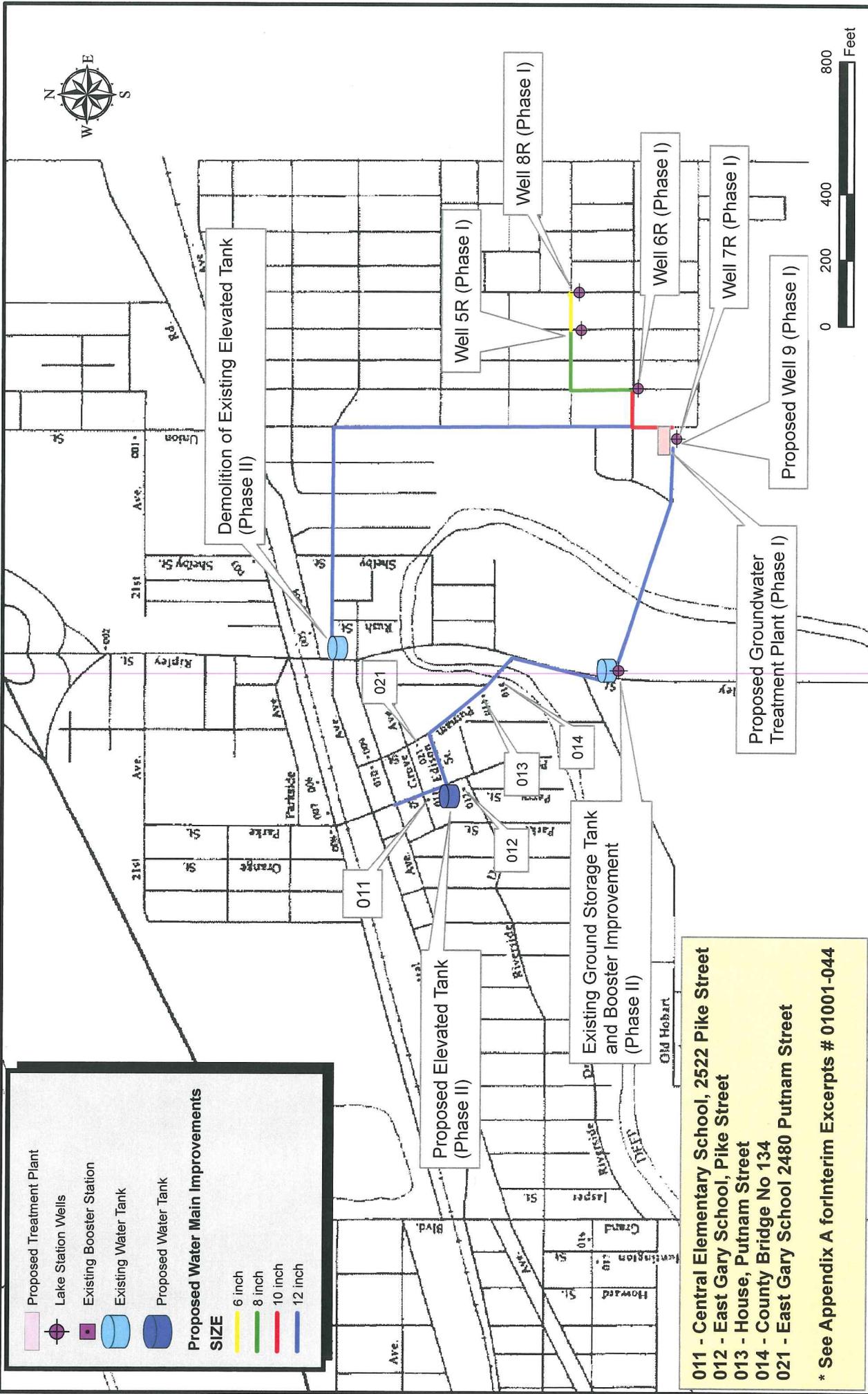
City of Lake Station Public Works
1969 Central Avenue
Lake Station, Indiana 46405



Gary and Portage Quadrangle

Date: 08/17/2012

Figure 5.1



011 - Central Elementary School, 2522 Pike Street
 012 - East Gary School, Pike Street
 013 - House, Putnam Street
 014 - County Bridge No 134
 021 - East Gary School 2480 Putnam Street

*** See Appendix A for Interim Excerpts # 01001-044**

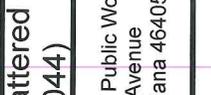
**Lake Station Scattered Sites
 (01001-044)**

City of Lake Station Public Works
 1969 Central Avenue
 Lake Station, Indiana 46405

2012 Water Improvements
 City of Lake Station, IN

Date: 08/17/2012

Figure 5.3





2012 Water Improvements
City of Lake Station, IN

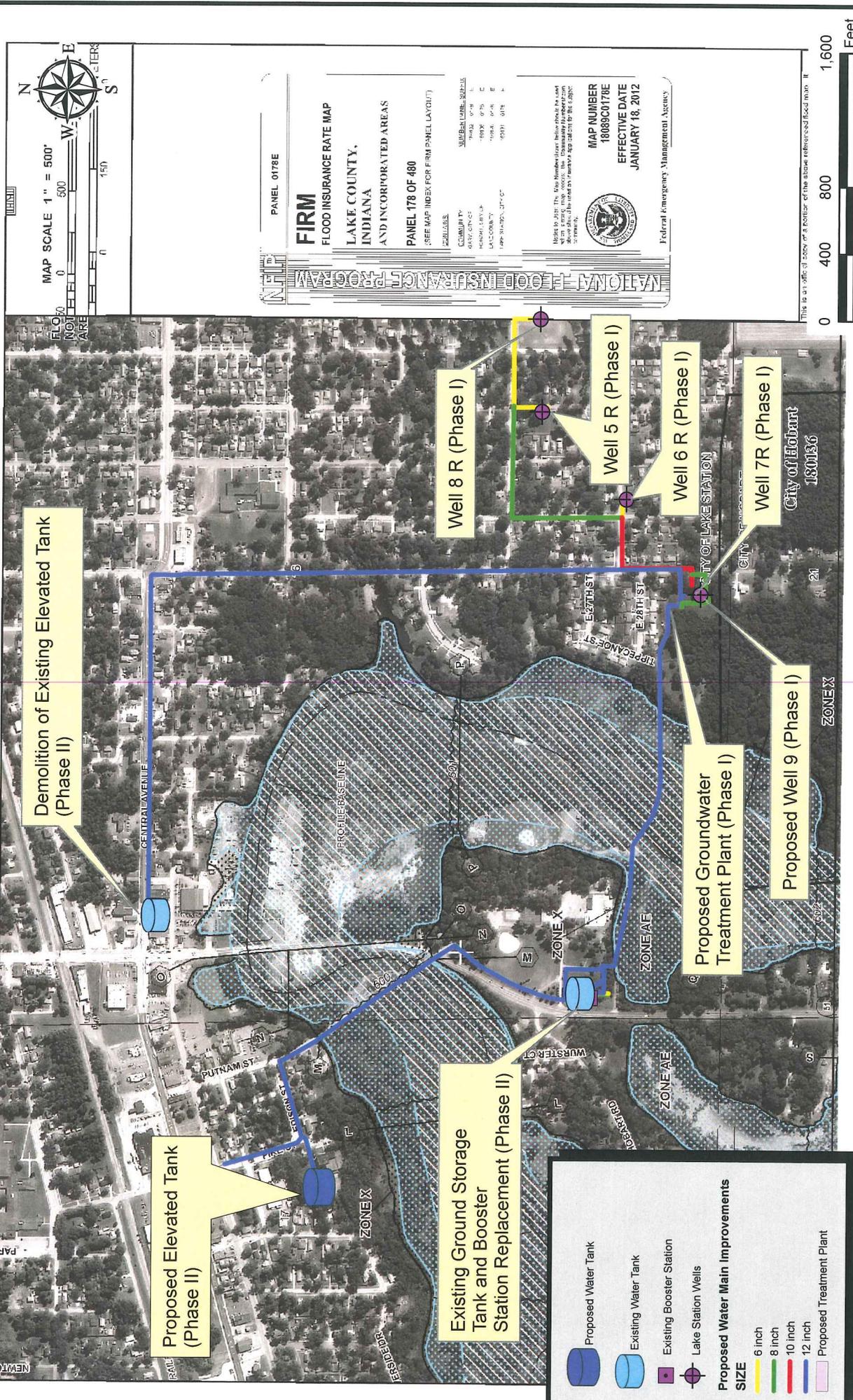
National Wetlands Inventory
City of Lake Station Public Works
1969 Central Avenue
Lake Station, Indiana 46405

2005 Aerial Photography

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Date: 08/17/2012

Figure 5.4



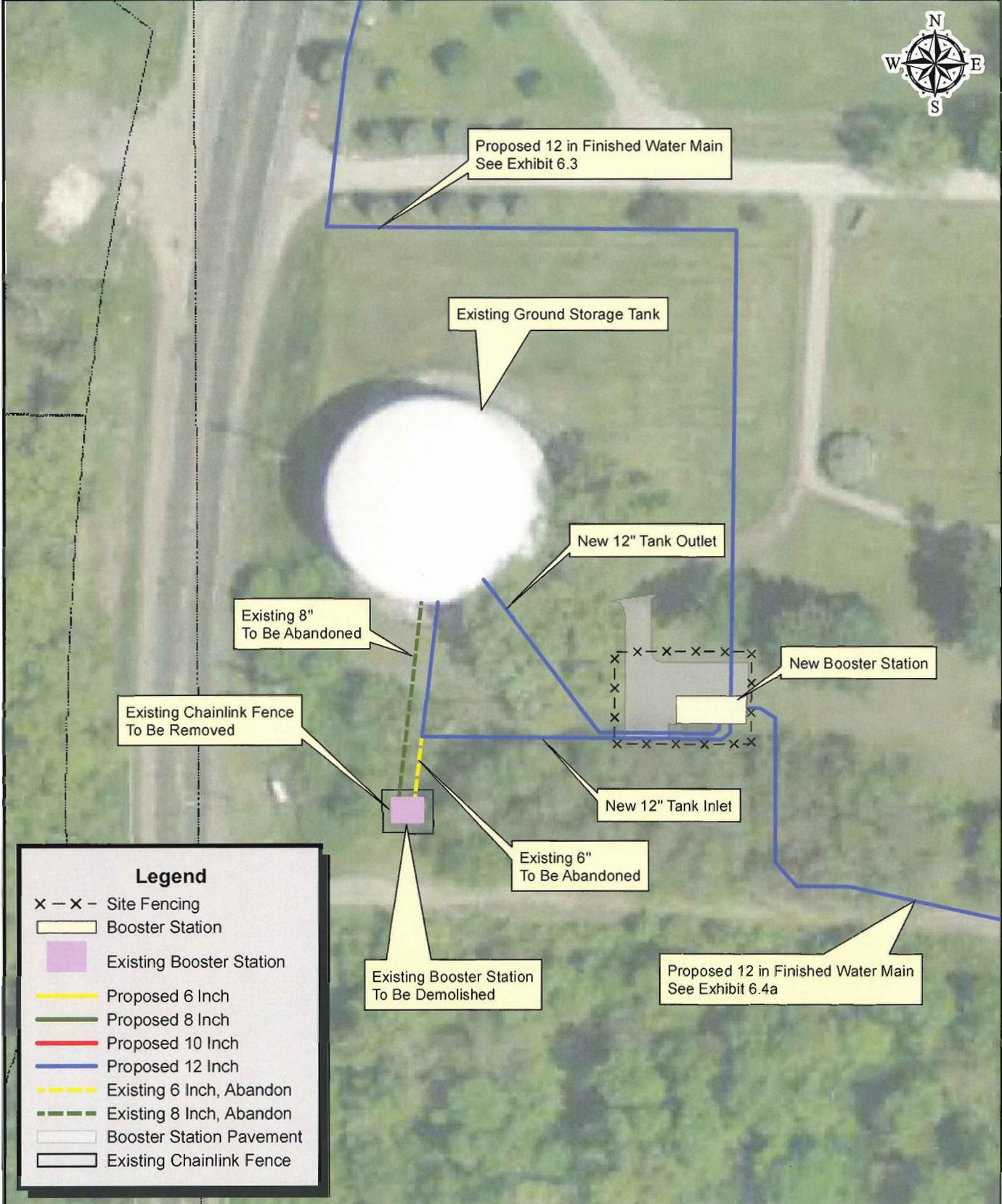
2012 FEMA 100-Year Floodplain Map
Map # 18089C0178E

City of Lake Station Public Works
1969 Central Avenue
Lake Station, Indiana 46405



Date: 08/17/2012

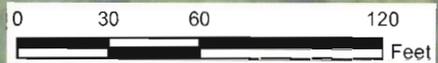
Figure 5.5



Legend

- X - X - Site Fencing
- Yellow rectangle Booster Station
- Pink square Existing Booster Station
- Yellow line Proposed 6 Inch
- Green line Proposed 8 Inch
- Red line Proposed 10 Inch
- Blue line Proposed 12 Inch
- Yellow dashed line Existing 6 Inch, Abandon
- Green dashed line Existing 8 Inch, Abandon
- White rectangle Booster Station Pavement
- Black rectangle Existing Chainlink Fence

2008 Aerial Photography



Path: P:\IN2008\0505\ID. Drawings\Environmental\ArcView\Exhibits\PER\PER Admin\20080505 EV FIG 6.4.PER Adm Proposed Booster Station Improvements.AMB.mxd Date:9/28/2012 User:jmccann

Phase II: Booster Station Replacement and Water Main Improvements

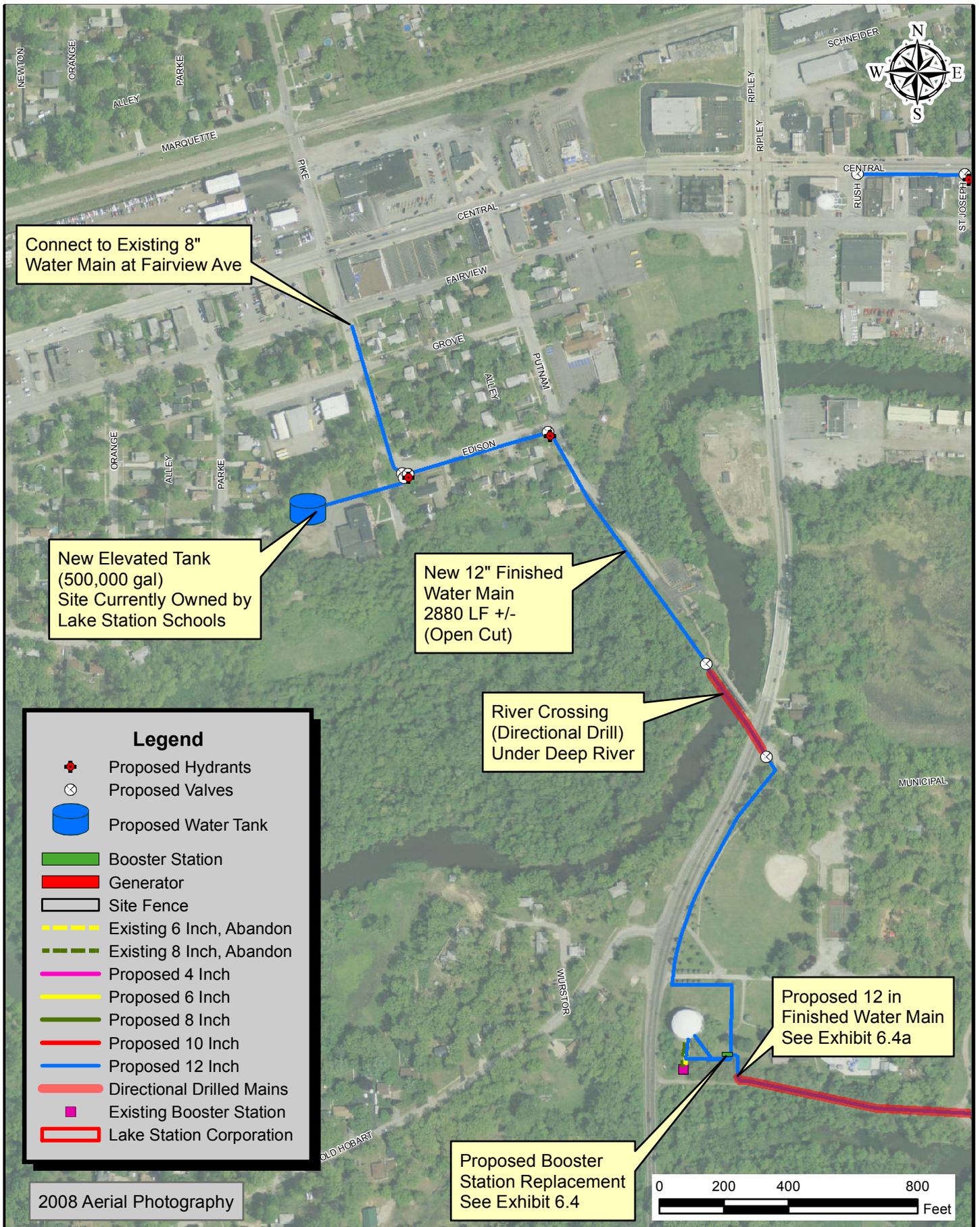
City of Lake Station Public Works
1969 Central Avenue
Lake Station, Indiana 46405

2012 Water Improvements
City of Lake Station, IN

Date: 09/28/2012

Figure 6.4

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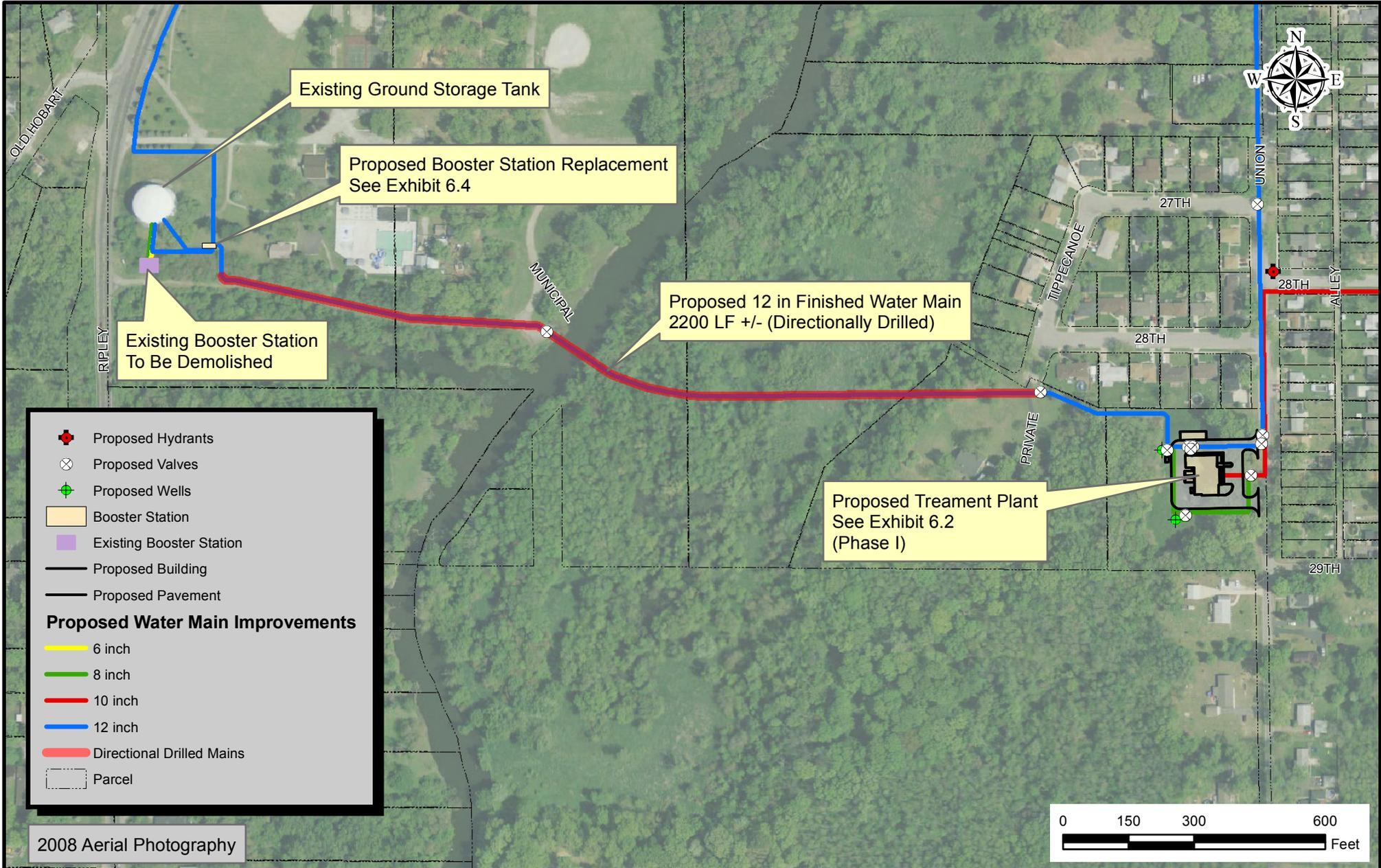
Phase II: Water Mains (Fairview to Riverview Park Booster Pump Station)

City of Lake Station Public Works
 1969 Central Avenue
 Lake Station, Indiana 46405

2012 Water Improvements
 City of Lake Station, IN

Date: 02/26/2013

Figure 6.6



**Phase II: Water Mains (Riverview Park
Booster Pump Station to Treatment Plant)**

City of Lake Station Public Works
1969 Central Avenue
Lake Station, Indiana 46405

2012 Water Improvements
City of Lake Station, IN

Date: 02/26/2013

Figure 6.7

