



City On The Bay

AGENDA

CITY COUNCIL CONTINUATION MEETING THURSDAY, FEBRUARY 23, 2017 WALKER, MINNESOTA

- 5:00 p.m. **Call to Order –Mayor Shaw**
➤ Pledge of Allegiance
- 5:00 p.m. **Public Hearing –Mayor Shaw**
➤ Public hearing to consider the proposed Facility Plan-Sanitary Sewer Collection System Improvements (Plan).
- 5:00 p.m. **Consent Agenda-Mayor Shaw**
No Business
- 5:00 p.m. **Scheduled Citizen Presentations – Mayor Shaw**
No Business
- 5:00 p.m. **City Staff Comments – Administrator Terri Bjorklund**
No Business
- 5:10 p.m. **Personnel/Budget & Administration – Councilmember Senenfelder**
1. Consider approval of Resolution 09-2017, a Resolution adopting a Walker Sanitary Sewer System Facility Plan.
- 5:10 p.m. **Economic Development/Liquor Store/Airport&Library – Councilmember McMurrin**
No Business
- 5:10 p.m. **Parks/Ambulance Board & Culture Commission – Councilmember Moore**
No Business
- 5:10 p.m. **Public Works/Safety&Cemetery – Councilmember Wilkening**
No Business
- 5:10 p.m. **Other Business –Mayor Shaw**
No Business
- 5:10 p.m. **Adjournment-Mayor Shaw**

NOTICE OF PUBLIC HEARING

CITY OF WALKER

FACILITY PLAN – SANITARY SEWER COLLECTION SYSTEM IMPROVEMENTS

Public Notice is hereby given that the City of Walker will hold a public hearing at the Walker Fire Hall Meeting Room, 701 Elm Avenue West, Walker, Minnesota 56484 on Thursday, February 23, 2017 at 5:00 p.m. to consider the proposed Facility Plan – Sanitary Sewer Collection System Improvements (Plan).

The Plan addresses the sanitary sewer collection system needs in the City of Walker. The hearing will include a presentation to review key components of the Plan including plans to replace aged and failing collection pipes, replacing the aged water system piping. The City is preparing this plan to meet the requirements of the MPCA in order to apply for future funding through the Clean Water Revolving Fund. At this hearing, questions regarding the Plan will be addressed and public comments will be accepted for consideration and submission to the Minnesota Pollution Control Agency.

A copy of the Facilities Plan will be available for public review at the Walker City Hall, 205 Minnesota Avenue, Walker, Minnesota between the hours of 8:00 a.m. and 4:30 p.m. Monday through Friday. Copies of the Facilities Plan may be obtained by request from Ulteig Engineers, Inc., Attn: Chris J. Thorson, P.E., 1345 Highway 10 West, Detroit Lakes, MN 56501.

Written comments regarding the Facilities Plan will be accepted by Ulteig Engineers, Inc., Attn: Chris J. Thorson, P.E., 1345 Highway 10 West, Detroit Lakes, MN 56501 until March 1, 2017.

Dated this 6th day of February, 2017.

Terri Bjorklund, City Administrator

Run in the Pilot the week of February 6, 2017



UPCOMING TIMELINE
Proposed
Utility and Street Improvements
Walker, Minnesota

February 6, 2017

1. FUNDING APPLICATION TIMELINE

- a. Present Facility Plan to the Council – February 6th
- b. Public Hearing on the Facility Plan – February 23rd
- c. Resolution accepting Facility Plan – February 23rd
- d. Submittal to PFA for Sanitary Sewer Application – March 3rd
- e. Submittal to PFA for Watermain Application – May 5th
- f. Request for project to be on the PFA's Intended Use Plan – June 2nd

**State of Minnesota
County of Cass
City of Walker**

RESOLUTION 09-2017

**A RESOLUTION ADOPTING A WALKER
SANITARY SEWER SYSTEM FACILITY PLAN**

WHEREAS, the Minnesota Pollution Control Agency requires a city to develop and adopt a public facility plan in order to be eligible for funding thru the Clean Water Revolving Fund; and

WHEREAS, the City of Walker authorized Ulteig Engineers to prepare the Sanitary Sewer System Facility Plan; and

WHEREAS, the City Council held a duly advertised public hearing on February 23, 2017, to obtain public comments and questions; and

WHEREAS, the Walker City Council feels it is important to plan for the future of its wastewater system.
NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF WALKER:

The Walker Sanitary Sewer System Facility Plan (2017), attached as Exhibit A, is hereby adopted.

ADOPTED by the Walker City Council this 23rd day of February, 2017 by a vote of:

AYES: _____ NAYS: _____

APPROVED BY THE WALKER CITY COUNCIL this 23rd day of February, 2017.

Jed Shaw, Mayor

Attested: _____
Terri Bjorklund, City Administrator

Motion:
Second:
McMurrin:
Moore:
Senenfelder:
Shaw:
Wilkening:

FACILITY PLAN
SANITARY SEWER COLLECTION
SYSTEM IMPROVEMENTS

Walker, Minnesota



Prepared for
The City of Walker, Minnesota

February 2017



ULTEIG ENGINEERS, INC.
Consulting Municipal Engineers
Detroit Lakes, Minnesota

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

By:  Lic. No. 26805
Christopher J. Thorson, P.E.

FACILITY PLAN
SANITARY SEWER COLLECTION
SYSTEM IMPROVEMENTS

Walker, Minnesota

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Exhibits:

- Exhibit No. 1 – Proposed Project Area
- Exhibit No. 2 – Proposed Sanitary Sewer Improvements
- Exhibit No. 3 – Proposed Water Main Improvements

1.0 Introduction

This Facility Plan has been prepared at the request of the City of Walker to consider upgrades and replacements to the City's sanitary sewer collection system. In 2016 the City completed a major infrastructure upgrade project that resulted in the replacement of about a quarter of the City's original sanitary sewer collection system. The replacement of two lift stations was included with this project.

This Facility Plan will examine the condition of another major area of the city with remaining original sanitary sewer collection system including the main sewer trunk main that flows to the City's main lift station. A map of the planned project area is shown in Exhibit No. 1. Various data was used to determine the existing condition of the infrastructure. This information will be used to summarize any deficiencies and ultimately make improvement recommendations. The information and recommendations in this Facility Plan are preliminary in nature. The main objective is to provide general guidance for the future replacement planning process, as deemed necessary. More detailed information would be identified during the design process from field surveys, sewer televising, and soil borings. This information can and often does dictate changes to the data contained in this document and the resulting recommendations.

2.0 Existing Conditions and Deficiencies

Reasonable effort was made to determine historical information and the existing condition of the sewer collection system. Due to age of the infrastructure, much of this information was derived from historical documents, such as record drawings and plans, televising, visual observation, and discussion with City maintenance staff. This type of information is typically sufficient to make preliminary conclusions and recommendations. Further effort would be necessary during the technical design process.

2.1 Land Use and Adjacent Properties

The property adjacent to the project areas is mostly developed residential housing and commercial properties. Various streets experience traffic volumes and loads typical of a residential area while others adjacent to the business district experience higher traffic counts along with commercial delivery vehicles.

2.2 Soil Data

The general soil descriptions taken from the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey

identify the soils within the project areas to be predominantly loamy coarse sand material that fall within the Menahga series. The existing soils within the project areas appear to be well drained. From past experience, it is anticipated that ground water will not be an issue during the reconstruction.

2.3 Sanitary Sewer Collection System

Based on available data, it is estimated the original sanitary sewer collection system was constructed prior to and around the 1960's for all areas discussed within this Facility Plan. Records indicate that most of the sewer mains are constructed of 8 – 10 inch vitrified clay pipe (VCP) except on Second Street where the existing sanitary sewer consists of 10 inch PVC. Manholes are currently brick/block or precast concrete. A map showing the proposed sanitary sewer reconstruction is shown in Exhibit No. 2. Also, a map showing the proposed watermain reconstruction within the project area is shown in Exhibit No. 3.

Service laterals, which connect homes and businesses to the mains, are likely VCP, cast iron pipe (CIP), or orangeburg. These materials were used prior to that of PVC pipe. There may be service laterals that have been replaced with PVC since the original installation.

The existing sewer system is adequately sized to meet the current flows produced by the connected businesses and residences, however, record data shows that many of the segments have inadequate pipe slope to maintain flows with proper cleaning velocities. Inadequate pipe slope is evident in the Cleveland Boulevard, Second Street and Railroad Avenue segments, which serve as trunk lines/inceptors that receive large amounts of flow from upstream systems. The single largest issue with the sanitary sewer system is the material used to construct the mains, service laterals, and manholes. VCP is prone to cracking and/or collapsing. The joints are susceptible to root penetration, which can break apart the pipe or cause blockage.

Any of the above-described circumstances can lead to groundwater infiltration. As groundwater enters the pipe, it creates additional volume in the collection system, which consumes available capacity and increases the demand on lift stations and ultimately the wastewater treatment facility. This can increase operation costs to the City and its users. Infiltration has historically been a challenge for the City, due to its aging infrastructure.

The existing pipe material has an average life expectancy of 40 to 50 years. The system is still functioning but has reached the end of its useful life. City staff has indicated that more frequent repairs and maintenance are required

to keep these segments of the sanitary sewer functioning. Root growth in the sewer mains and service laterals has also created problems. These complications will likely increase in time and could ultimately lead to complete failure, resulting in sewer backup to connected structures.

The majority of areas of consideration have been televised in the last few years. Review of these televising reports supports the fact that expected deficiencies noted above are actually occurring in the collection system. Beyond the areas of root intrusion and leaking joints there are also many instances of cracked pipe and collapsed pipe.

2.4 Waste Water Treatment Facility

The City of Walker's existing wastewater system consists of a gravity collection system, along with five (5) wastewater lift stations. Wastewater is routed to the treatment system by means of a main wastewater lift station and approximately 10,800 linear feet of eight (8) inch forcemain. The City's wastewater treatment facility consists of three (3) stabilization basins, three (3) rapid infiltration basins (RIBs), and a spray irrigation field. At this time, the spray irrigation field is being retained as a contingency plan for the RIBs. The treatment system is designed to treat an average wet weather design flow of 303,000 gallons per day with a five (5) day biochemical oxygen demand of strength of 227 milligrams per liter.

3.0 Proposed Improvements

The following section outlines the recommended improvements, which are considered necessary to correct the concerns noted in the previous sections. The recommendations are general in nature. In many cases, the full requirements of the improvements will not be completely known until further investigation, such as soil borings and field surveys, can be conducted. This Facility Plan addresses the sanitary sewer utility of the City. However, the total extent of a project should look at addressing all of the deficiencies within a particular roadway. Where appropriate, costs for replacing the water mains and storm sewer adjacent to the sanitary sewer have been included to provide the City with a complete picture of the corrective work necessary.

3.1 Sanitary Sewer Collection System

There are major areas of concern within Walker's sanitary sewer collection system due to the VCP pipe in place, infiltration, and maintenance issues. The areas addressed in this Facility Plan do not encompass all areas planned for future sanitary sewer rehabilitation within the City. Importance has been placed on the area discussed in this plan since it is the route for

the main collector of sanitary sewage in the City. Should a section of this pipe fail the effects would be felt in a majority of the City including everything south of Trunk Highway 371/200. The affected area would include the downtown business district and residential area that sits adjacent to Leech Lake. Televising of these sewer lines shows multiple areas of cracked and deformed piping, root intrusion, and leaking joints.

The proposed improvements in this Area would be to replace the main sanitary sewer lines with new PVC lines and replace any original manholes. The sewer service lines would also be replaced with new PVC pipe from the main line to the road right-of-way. Cleanouts would be installed at the road right-of-way to assist in future maintenance.

4.0 Permits and Easements

If the proposed improvements advance to design and construction, it would be necessary to obtain several permits. Permits from the MPCA would be required for the sanitary sewer main replacement. A permit from the MDH would be required for watermain improvements, if they are completed.

Easements may be necessary, depending on the ultimate design. Easements from property owners adjacent to reconstruction areas may be necessary depending on the depth of the sanitary sewer.

5.0 Estimated Improvement Costs

The detailed estimated project costs for the improvements recommended in this Facility Plan are outlined in the attached spreadsheets. These figures include the estimated cost of construction, engineering, legal work, easements, financing, capitalized interest, permits, and other items which may be necessary to complete the work. The estimated costs are based on current material prices and bidding climates. Volatility of these items during the past few years, especially fuel prices, has added additional challenges in estimating project costs. The estimated costs for the proposed improvements are summarized as follows:

<u>Proposed Improvement</u>	<u>Total Estimated Cost</u>
Sanitary Sewer System	\$1,515,000
Water Distribution System	\$ 758,000
Storm Sewer Collection/Treatment	\$ 865,000
<u>Street Reconstruction**</u>	<u>\$ 798,000**</u>
TOTALS	\$3,936,000

**Cost for additional street reconstruction areas within the project area that are not a direct result of replacing water and sanitary sewer pipelines.

6.0 Funding and Financing

There are various funding sources that do provide financing for utility improvement projects. One is the Public Facilities Authority (PFA), which provides low interest 20-30 year loans with interest rates typically ranging from 1 to 3 percent. The City must submit application items in order to become eligible for funding through the PFA.

Another possible funding source is USDA Rural Development (RD). RD has a loan/grant program to assist communities with infrastructure improvement projects. This program provides 40 year loans, as well as grant dollars for project costs that result in operation and maintenance costs exceeding 1.5 percent of the median household income of the community.

7.0 Schedule

When the City commits to moving forward with the project, a defined schedule can be presented.

8.0 Summary

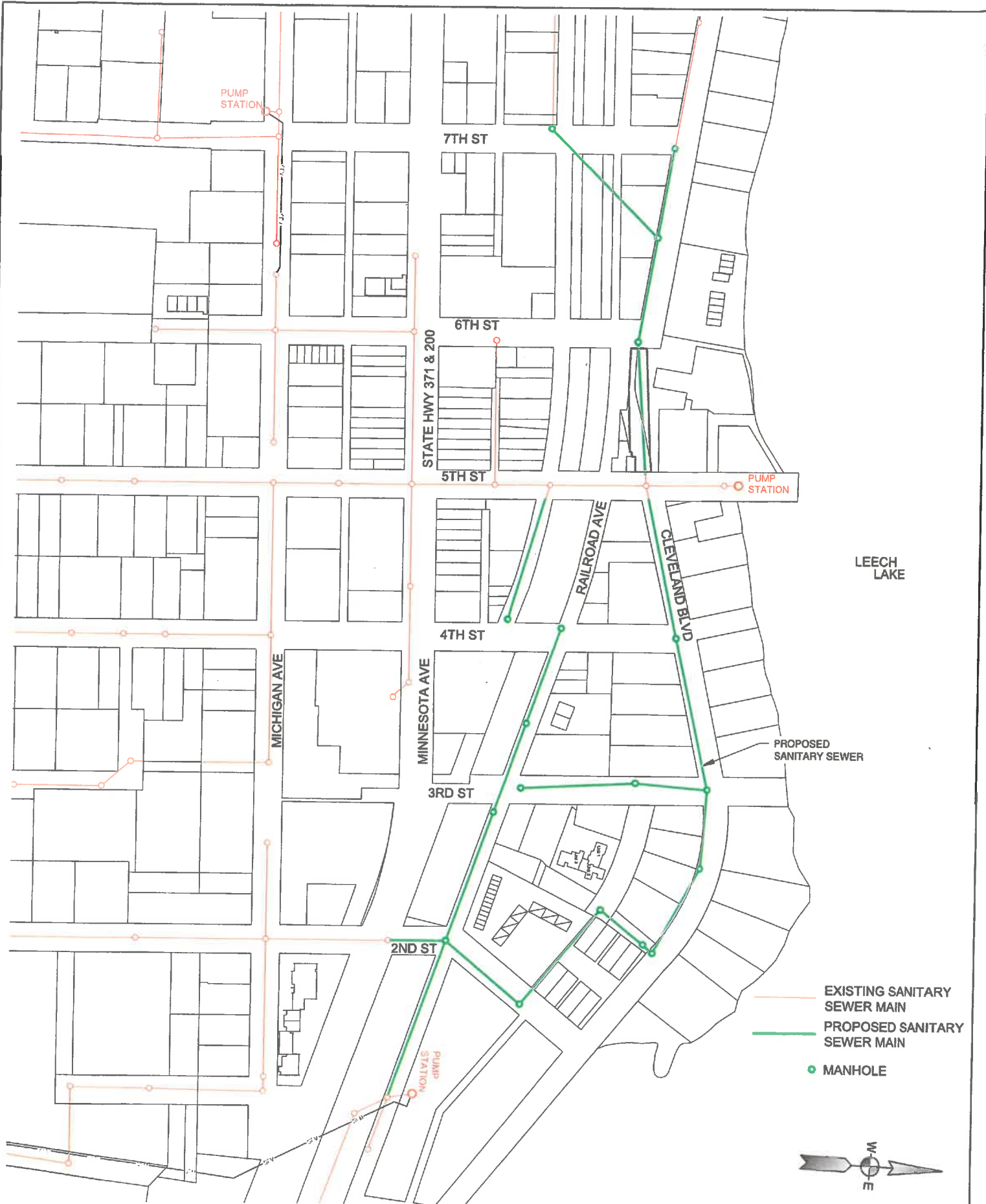
This Facility Plan has illustrated the need for various improvements to the sanitary sewer system within the project areas discussed. It is the City's discretion as to whether the recommended improvements are feasible and cost effective.

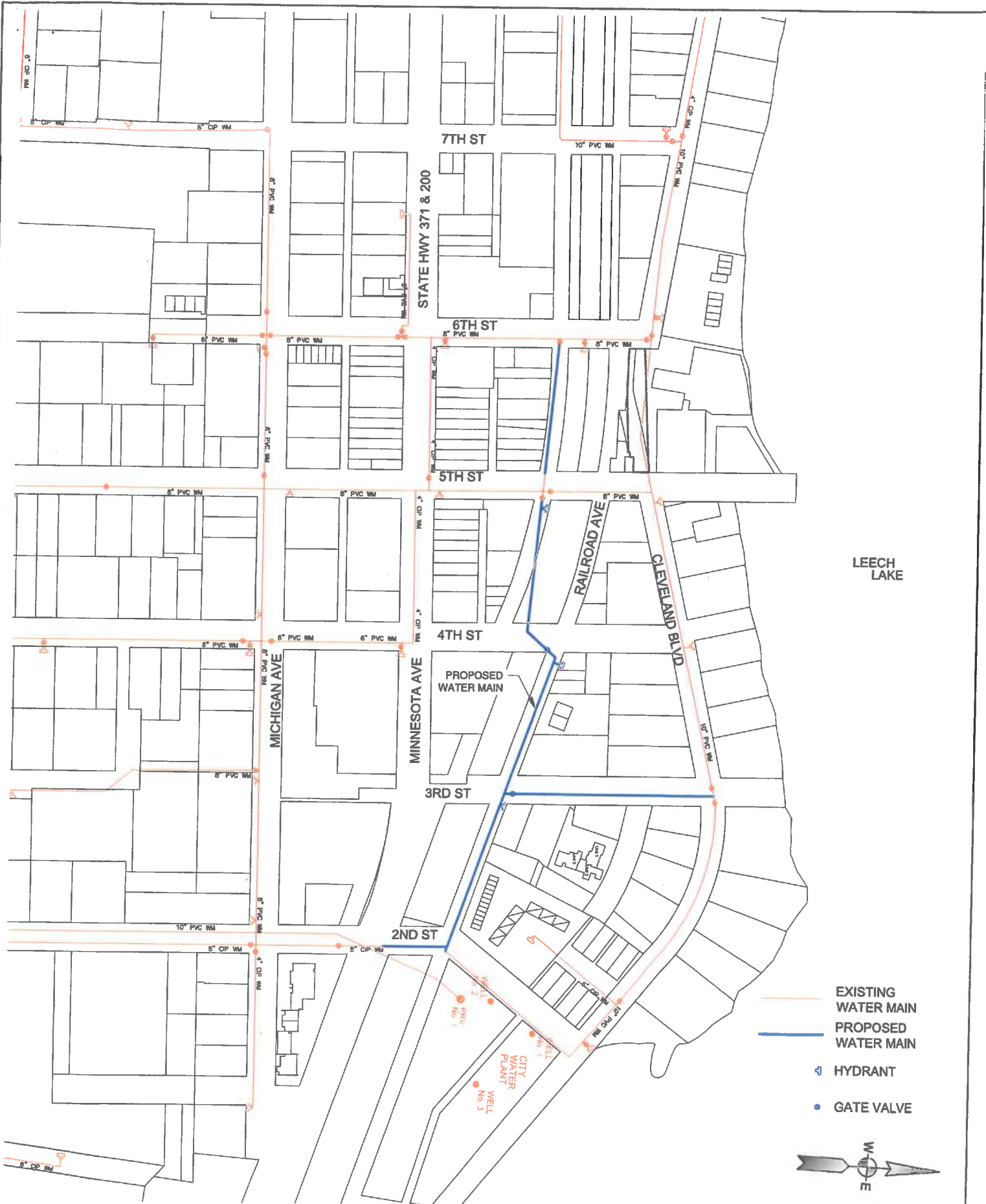
It is recommended that the City consider submitting application information to the PFA regarding the proposed improvements in order to put the City in position to move forward with the improvements when ready in the future.

Respectfully submitted,

ULTEIG ENGINEERS, INC.
Detroit Lakes, Minnesota

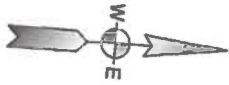






LEECH LAKE

- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- ⊕ HYDRANT
- GATE VALVE



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**UTILITY & STREET IMPROVEMENTS
 WALKER, MINNESOTA**

**EXHIBIT NO. 3
 WATER MAIN IMPROVEMENTS**

SCALE: 0 75 150 300

DATE: Feb 6, 2017 UEI PROJ. NO: 17.00155