

2016 Utility & Street Improvements

Improvement Hearing – January 11, 2016



I+S GROUP



INTRODUCTION

- Please sign in!
- Provide email address(es) to get included on the distribution list for project newsletters!



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PROJECT AREA



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EXISTING WASTEWATER FLOWS

- City experiences relatively high wastewater flows due to clear water entering the sanitary collection system through inflow and infiltration (I/I)
- Excess flows result in additional conveyance and treatment expenses; Interconnection Agreement with the City of Mankato requires that the City work towards I/I reduction
- High flows can also cause basement back-ups
- Several reports have identified the sewers within the project area to be susceptible to I/I due to the age and condition of the sanitary sewer as well as the lack of an adequate storm sewer outlet for sump pump discharges





EXISTING SANITARY SEWER

- Existing sewer within the project area installed in mid-1970s
- Sewer televised and shown to be in poor condition
 - Cracked, sagged, offset joints, etc.



EXISTING WATER SYSTEM

- Poor water quality and inadequate fire flows have been experienced in some areas of town
- 2004 Report Identified Recommended Improvements to the City's water supply and distribution system
 - New Municipal Well; constructed in 2010
 - New Water Tower; constructed in 2012
 - Replacement and looping of watermains; partially completed through various projects
- Some dead-end and undersized watermains still remain





EXISTING WATER SYSTEM

- 4th and 5th Street Watermains are 4-inch diameter
 - Looped at north end by a 2-inch main through private property
- Lake Street area served entirely by long dead-end main
- Sarah Circle, southern Park Road, and Melwood Court served by long dead-end main
- Point Pleasant Road, Point Avenue, and Point Pleasant campground served by long dead-end main
- Watermain within project area is circa 1975 and 6-inch diameter





EXISTING DRAINAGE

- Area north of Sakatah Trail drains to south side of Spruce Avenue
 - Normally drained by 5th Street Storm Sewer
 - 5th Street Storm Sewer cannot keep up during large events, resulting in flooding on the south side of Spruce Avenue
- Upper 5th Street storm sewer drains to Highway 60 storm system
 - Storm sewer collapsed in 2010 resulting in upstream flooding
- Lower 5th Street storm sewer failed during June 2014
 - Televising indicates storm sewer drains an area north of Highway 60, but blockages precluded the upstream end from being located.
- 4th Street storm sewer drains entire residential area east of 4th Street and discharges directly to Madison Lake
- Chestnut Avenue and Block 17 & Block 18 Alleys experience poor drainage due to flat grades and lack of storm sewer





EXISTING STREETS

- Pavement within project area in poor condition
- Road sections lack subsurface drainage, making them more susceptible to frost action
- Roads lack curb & gutter and are too narrow.





PROPOSED IMPROVEMENTS

- Sanitary Sewer Reconstruction
- Watermain Reconstruction
- Watermain Looping
- Storm Sewer Reconstruction
- Street Reconstruction
- Curb & Gutter Construction
- Subsurface Drainage Construction
- Sanitary Lining
- Sanitary Capacity Improvements

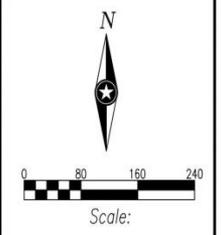




SANITARY SEWER IMPROVEMENTS

- Sanitary sewer to be replaced:
 - 4th Street from Highway 60 to Spruce Avenue and north of Lakeshore Drive
 - 5th Street from Chestnut Avenue to Spruce Avenue
 - Chestnut Avenue from Main Street to 4th Street
 - Chestnut Avenue upsizing from Main Street to Alley west of Main Street (trenchless)
 - Within alleys of Blocks 17 & 18
 - Sanitary to be lined within Block 12
- All sewer to be 8-inch PVC except Chestnut Avenue would be 10-inch PVC based on existing and future service area.
- Services will be replaced up to the right-of-way
 - Services will be televised during construction to inspect for leaks or other sources of I/I





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PROJECT

2016 STREET IMPROVEMENTS

MADISON LAKE MINNESOTA

NO	DATE	REVISION SCHEDULE	DESCRIPTION

PROJECT NO. 13324
 FILE NAME 13324-PRELIM
 DRAWN BY NPH
 DESIGNED BY CSJ
 REVIEWED BY CSJ
 ISSUE DATE 1/07/16
 CLIENT PROJECT NO. -

TITLE

OVERALL UTILITY

SHEET

LEGEND	
--- >> ---	STORM DRAIN
--- > ---	SANITARY SEWER
--- ---	WATER
====	CURB
--- >> ---	PROPOSED STORM DRAIN
--- > ---	PROPOSED SANITARY SEWER
--- ---	PROPOSED WATER
====	PROPOSED CURB

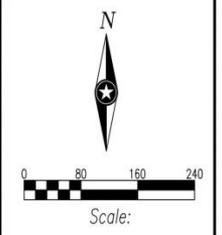


WATERMAIN IMPROVEMENTS

- All existing watermain within the project area will be replaced with 8-inch mains for improved fire protection and water quality
- Services will be replaced up to and including the curb stop, approximately at the property line
- Loop connecting north end of 4th & 5th Streets will be relocated to Spruce Avenue right-of-way
- Loop to be added along 1st Street between Chestnut Avenue and Highway 60 to provide redundancy to Lake Street area and aid in the provision of temporary water service during construction to the eastern portion of the City
- Loops to be added between Sarah Circle & Park Road and between Park Road & Point Pleasant Road to provide redundancy and improve water quality in these areas



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--- > ---	PROPOSED SANITARY SEWER
--- ---	PROPOSED WATER
====	PROPOSED CURB



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Scale:

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PROJECT

2015 STREET IMPROVEMENTS

MADISON LAKE MINNESOTA

REVISION SCHEDULE		
NO	DATE	DESCRIPTION

PROJECT NO.	13324
FILE NAME	13324-POINTAVE
DRAWN BY	NJH
DESIGNED BY	CSJ
REVIEWED BY	CSJ
ISSUE DATE	1/07/16
CLIENT PROJECT NO.	-

TITLE

POINT AVENUE WATERMAIN

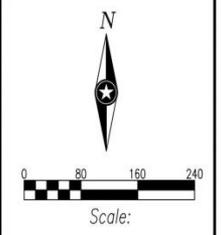
SHEET



DRAINAGE IMPROVEMENTS

- Typical design standards require drainage infrastructure to be designed for a 10-year rainfall event (10% chance of occurring within a given year)
- Drainage from north of Sakatah Trail to be tied directly into storm sewer systems
- Subdrainage to be added along each street will also provide outlet for sump pump discharges
- Coordinate with Madison Lake Watershed Association for new rain garden connection.





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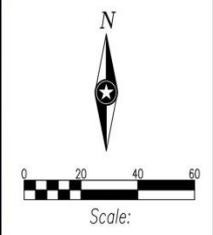
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OVERALL UTILITY

SHEET

LEGEND	
	PROPOSED
--- >> ---	--- >> ---
--- > ---	--- > ---
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====	====



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MADISON LAKE MINNESOTA

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 REVIEWED BY CSJ
 ISSUE DATE 1/07/16
 CLIENT PROJECT NO. -

TITLE

SPRUCE STORM

SHEET

LEGEND	
	PROPOSED
--- >>---	STORM DRAIN
--- >---	SANITARY SEWER
--- ---	WATER
====	CURB



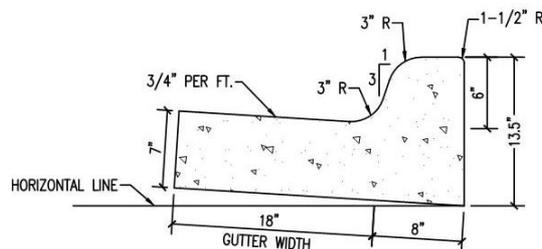
STREET IMPROVEMENTS

- Streets to be reconstructed with urban sections, including concrete curb & gutter
- 4th & 5th Streets to be 24-foot wide except lower 5th Street to be 32-foot wide
- Chestnut Avenue to be 32-foot wide to allow two-way traffic and parking on one side
- Western portion of Chestnut Avenue within commercial area to be slightly narrowed such that the power poles are located behind the curb
- Spruce Avenue to be 24-foot wide to allow two-way traffic
- Spruce Avenue currently receives over-limit farm traffic
 - City intends to increase enforcement of weight limits
- Proposed pavement sections include:
 - Subgrade Preparation
 - Geotextile Fabric
 - 10 inches MnDot Class 5 Aggregate Base
 - 3.5 inches Bituminous Pavement

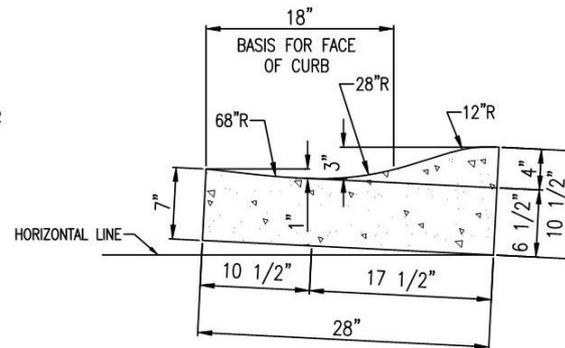


STREET IMPROVEMENTS

- Spruce Avenue from Main Street to 250 feet east and from 4th Street to 1st Street to receive mill & overlay
- Curb Sections
 - 4th and 5th Street and Chestnut Avenue
 - B618 Curb & Gutter
 - Spruce Avenue
 - S418 Curb & Gutter



B618 CONCRETE CURB
N.T.S



S418 CONCRETE CURB
N.T.S





SUBSURFACE DRAINAGE IMPROVEMENTS

- 6-inch perforated drain tile will be installed behind the curb for the entire length of the street
 - Tile will remove moisture from the street section, making it less susceptible to frost action
- 4-inch service stubs will be provided to each property for the connection of sump pump discharge lines





ALLEY & SIDEWALK IMPROVEMENTS

- Existing gravel alleys within Blocks 17 & 18 to be paved in addition to the necessary trench restoration from utility improvements
- Pedestrian Ramps to be reconstructed in accordance with current ADA standards
- Pedestrian route to be added to north side of Chestnut Avenue





CONSTRUCTION EXPECTATIONS

- This project will be an inconvenience to adjacent properties
 - The City, ISG, and the Contractor will do what is feasible to limit the impact to public
- Vehicular access to some neighborhoods will be unavailable at times
 - Residents should not expect to be able to pull into their driveway every night during construction
- Project updates will be issued as often as weekly once construction starts
 - Information can be disseminated much more quickly via email, so please provide your email address!
- Property owners should expect that the entire right-of-way will be disturbed
 - Landscaping within the right-of-way will be removed and replaced
 - Property owners that are particular about landscaping may want to remove and restore landscaping privately





OPINION OF PROBABLE COST

- Total Estimated Project Cost, including contingency & soft costs:

Segment Description	Estimated Cost
Upper 5th	\$ 437,112.63
Upper 4th	\$ 535,465.12
Lower 5th	\$ 197,619.09
Lower 4th	\$ 143,501.06
Chestnut East (4th to 5th)	\$ 247,024.64
Chestnut Ave (Main to 5th)	\$ 197,750.31
Spruce (Main to Fasnacht Park)	\$ 242,222.87
Spruce Overlay	\$ 54,303.70
Block 17 Alley (Walnut to Chestnut)	\$ 39,174.38
Block 18 Alley (Chestnut to 4th St)	\$ 91,661.57
CSAH 26 Watermain Loop	\$ 80,575.00
Point Ave Watermain Loop	\$ 135,422.50
Chestnut Ave Upsizing	\$ 34,386.50
Block 12 Lining	\$ 19,850.00
TOTAL	\$ 2,456,069.37





PROJECT COSTS & FUNDING

- Estimated costs based on recent bid results for similar projects. Actual costs will be based on bid results and actual construction quantities. Costs include contingencies for unforeseen circumstances and soft costs such as surveying, engineering, contract administration, etc.
- Potential outside funding available for watermain looping and replacement
- A portion of project costs to be specially assessed to the benefitted properties in accordance with the Minnesota Statute 429





SPECIAL ASSESSMENTS

- Preliminary Assessment Roll calculated based on City's assessment policy
- Watermain loops and Sanitary Capacity Improvements not assessed
- Mill & Overlay segment of Spruce Avenue not assessed
- Footages
 - Side footage on corner lots defined as the longest side and shall be assessed at 50% of the footage, or a minimum of 75 feet



SPECIAL ASSESSMENTS

- 30% of mainline sanitary & water costs to be assessed on a footage basis
 - Sanitary costs to be assessed discounted to cost of 8-inch pipe
 - Watermain costs to be assessed discounted to cost of 6-inch pipe
- 30% of sanitary & water service costs to be assessed per connection
- 30% of storm sewer costs to be assessed on a square footage basis
 - Storm sewer costs to be assessed discounted to cost of 12-inch pipe
- 30% of street costs to be assessed on a footage basis
- 50% of reconstructed sidewalk to be assessed on a front footage basis
- 80% of alley pavement costs to be assessed on footage basis
- 30% of new & reconstructed curb & gutter costs to be assessed on a front footage basis



SPECIAL ASSESSMENTS

- Assessments will appear on 2017 Property Tax Statements
- Assessments assumed to be over a 15 year term at an interest rate of 5%, but actual term and interest rate will be dependent on the actual bond rates and terms obtained by the City
- Assessments can be deferred in accordance with Minnesota Statute 435
 - Owner is 65 years of age or older or retired by virtue of a permanent and total disability
 - Owner is a member of the Minnesota National Guard or other military reserves who is ordered into active military service
- Preliminary Assessment Roll provides *estimate* of the amount to be assessed to each property





PROJECT PROCEDURE & SCHEDULE

- City Council to Pass Resolution Ordering Feasibility Study – *Complete*
- City Engineer to Prepare the Feasibility Study - *Complete*
- City Council to Pass Resolution Calling for Public Hearing – *Complete*
- City Council to Pass Resolution Receiving Feasibility Study – *Complete*
- City Council to Hold Public Hearing on Improvement – *Tonight*
- City Council to Pass Resolution Ordering the Improvement and Preparation of Plans and Specifications – *Anticipated Tonight*



PROJECT PROCEDURE & SCHEDULE

- City Council to Pass Resolution Approving Plans & Specifications and Ordering Advertisement for Bids – *Anticipated Tonight*
- City to Open Bids – *Anticipated February 4, 2016*
- City Council to Pass Resolution Calling for Hearing on Special Assessments – *Anticipated February 8, 2016*
- City Council to Hold Assessment Hearing – *Anticipated February 24 or 29, 2016*
- City Council to Pass Resolution Adopting Assessments – *Anticipated February 24 or 29, 2016*
- City Council to Pass Resolution Receiving Bids and Awarding Contract – *Anticipated April 4, 2016*
- Begin Construction – *Anticipated May 2016*
- Construction Substantially Complete – *Anticipated October 2016*
- Final Construction Final Complete – *Anticipated June 2017*



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COMMUNICATION

- Listserv will be used as primary resource for fast communication
- Patience is key in projects like this, but make sure to use your resources below if you see an issue.
 - First contact will be the Construction Field Representative
 - Second Contact will be Nathan Hermer, Project Designer
 - Third contact will be Chris Larson, City Engineer
 - Fourth contact will be Ari Klugman Lenz, City Administrator
 - Fifth contact will be City Council



THINGS TO CONSIDER

- When was the last time you replaced your individual service lines?
- Should you be considering replacing them while everything is dug up?
- City will supply contact information for local plumbers but property owners can contract with any qualified contractor.
- How about your sump pump line?
 - City ordinance requires this to be connected if a storm line is available. We will be testing sanitary lines to see if sump pumps or drain tiles are connected to the sanitary system. I&I fine are \$100/month for any property who has an illegal storm connection to the sanitary system. If you are concerned you may have an illegal connection, contact City Hall and they will send a staff member to review.
- Driveway replacement?
 - Individuals on previous projects have contacted the paving company and had them redo their driveway during the project.



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