

Silver Lake Infrastructure Improvement Project

Public Hearing

Sam Fink, PE
October 21, 2024

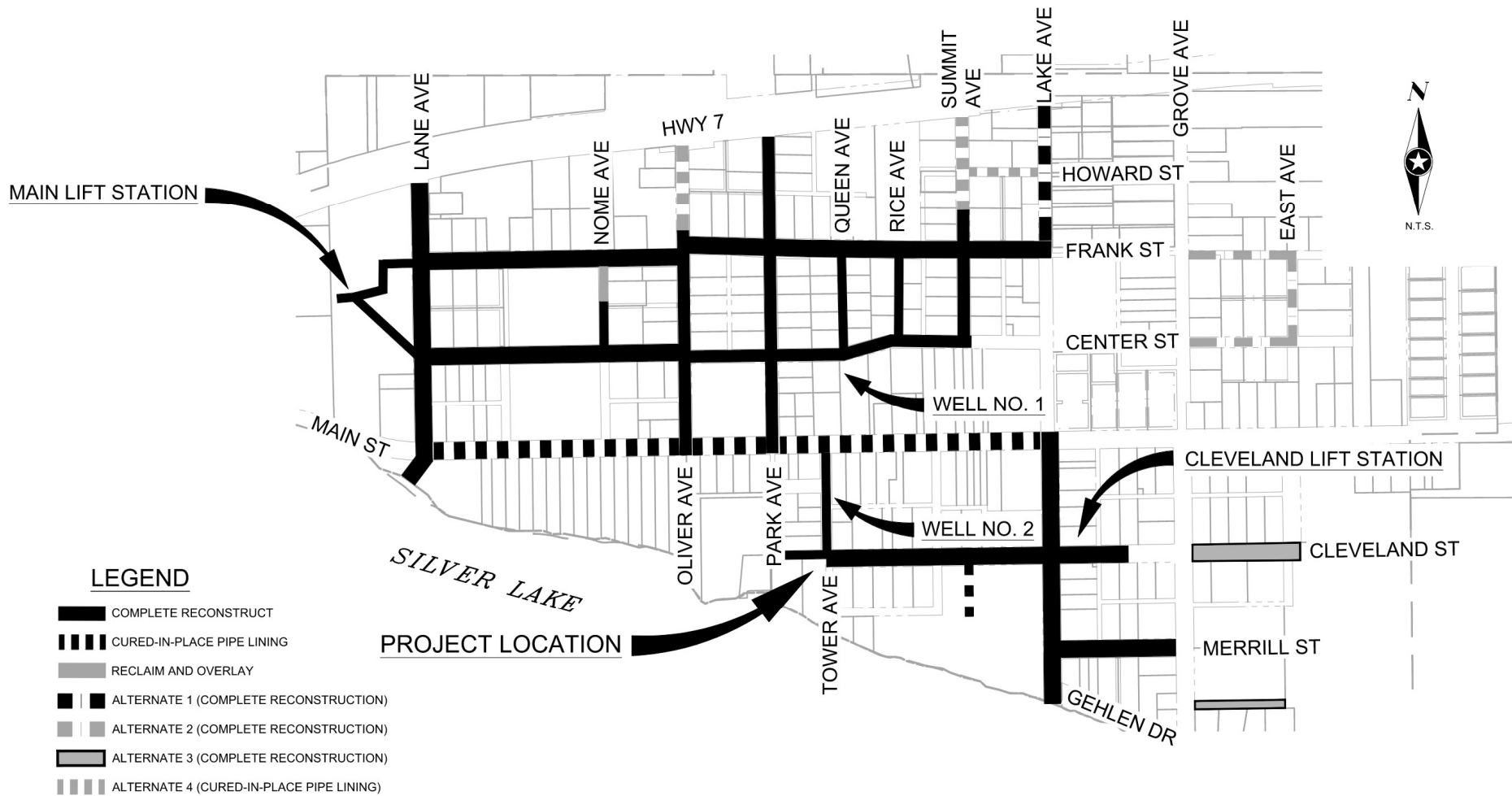


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Project Overview



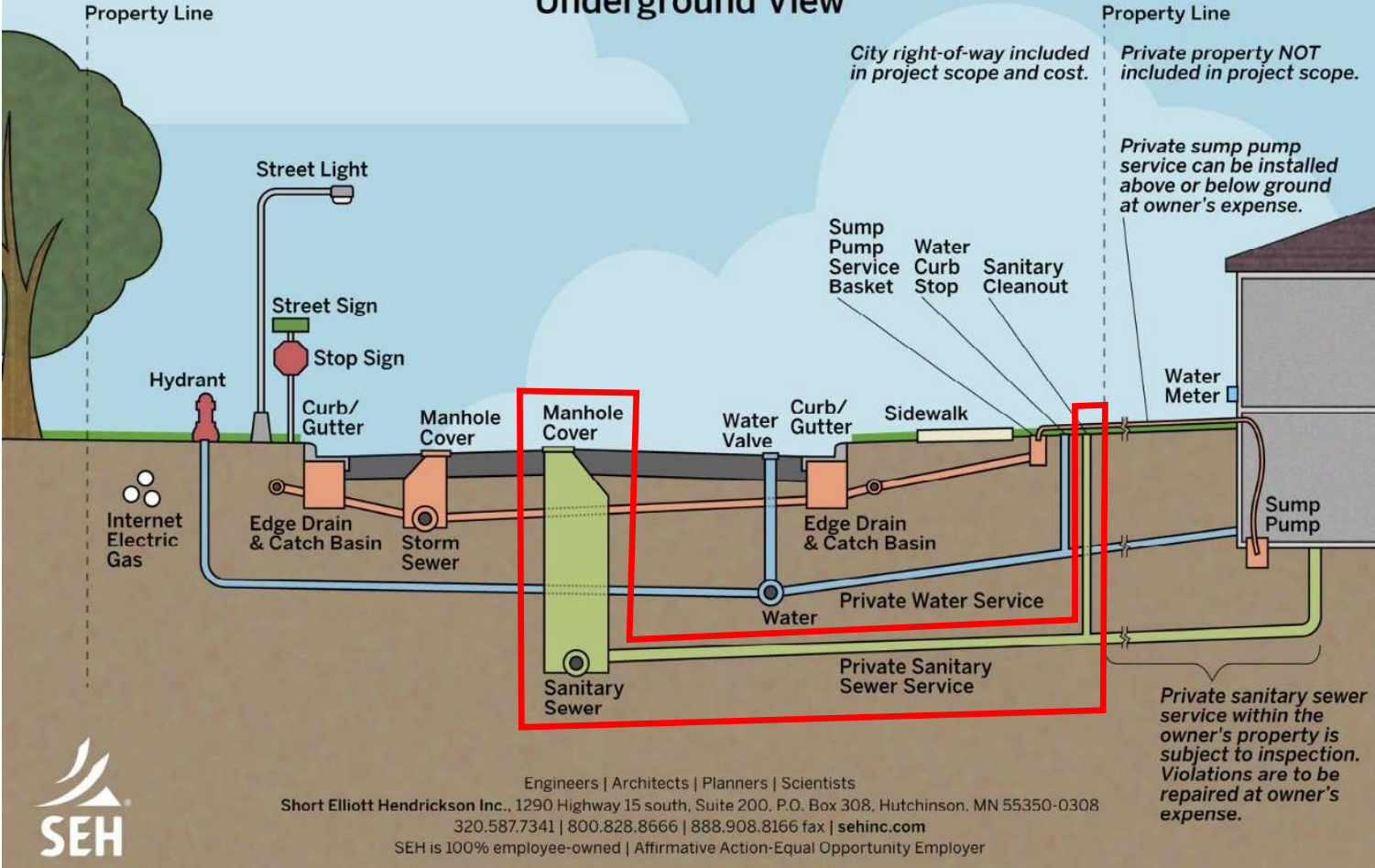
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Project Scope



Common Municipal Street Underground View



Engineers | Architects | Planners | Scientists
 Short Elliott Hendrickson Inc., 1290 Highway 15 south, Suite 200, P.O. Box 308, Hutchinson, MN 55350-0308
 320.587.7341 | 800.828.8666 | 888.908.8166 fax | sehinc.com
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Existing Sanitary Collection System

- Current material is primarily Vitrified Clay Pipe (VCP)
- Various issues with existing system
 - Broken, misaligned, and sagging pipes
 - Substandard service connections
 - Active infiltration
 - Cross Connections

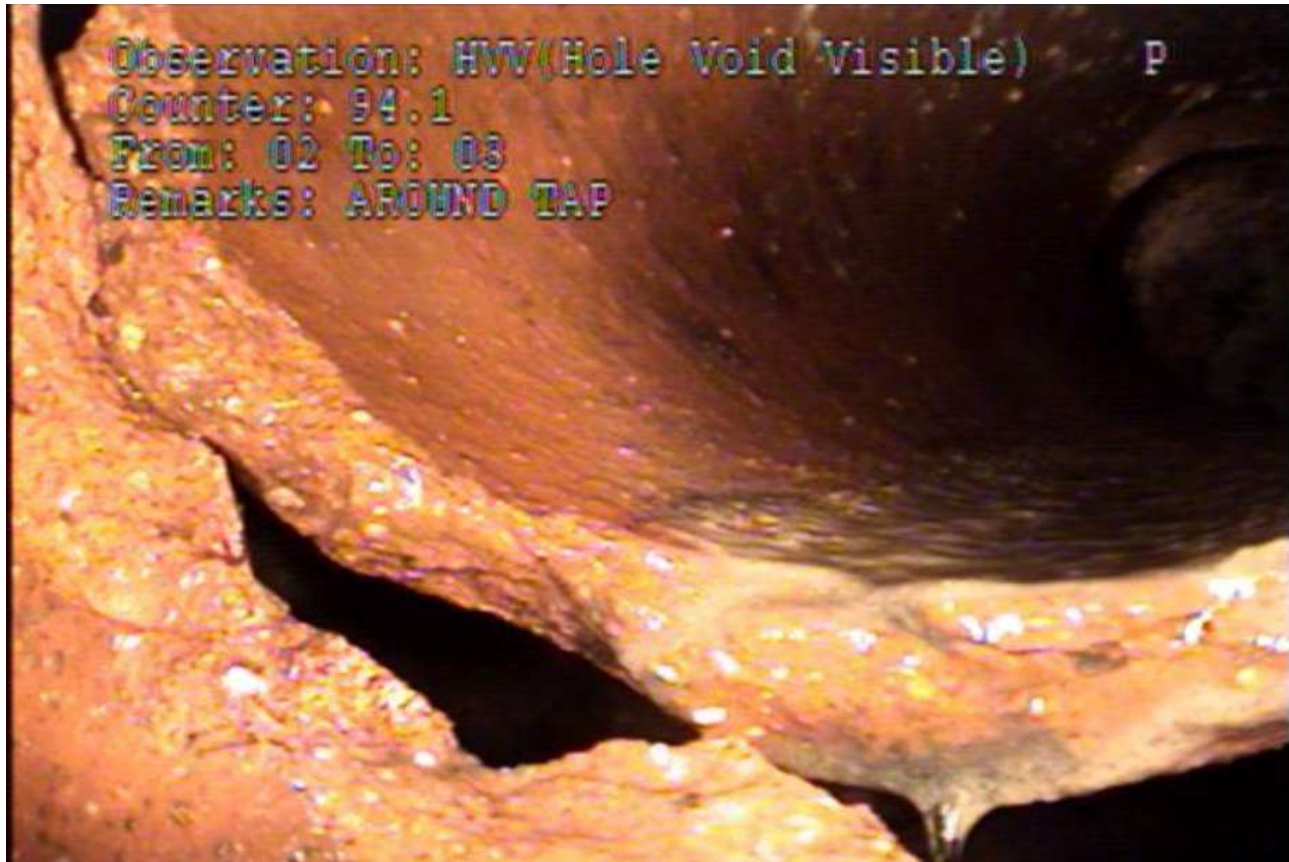
Roots in Sanitary System



Roots in Sanitary System



Voids in Sanitary System

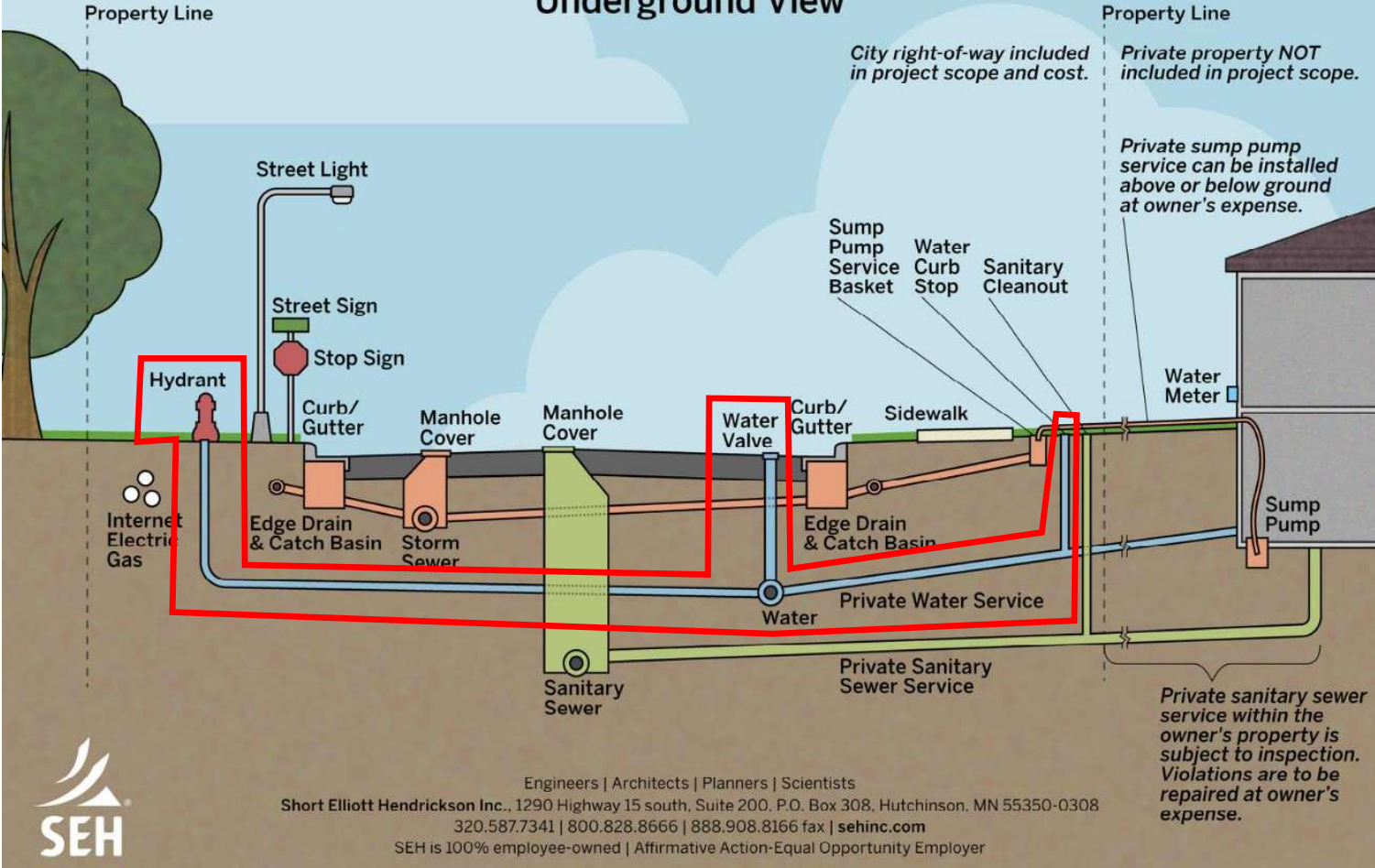


Proposed Sanitary Collection System

- Proposed material will be PVC, HDPE, or approved other
- Various pipes will be repaired via cured-in-place-pipe lining technology
- New pipe will be televised following installation to confirm that there are no breaks, misalignments, or sags
- Services will be replaced to the right-of-way
- A new cleanout will be installed at the right-of-way
- Cross connections will be corrected



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Existing Water Distribution System

- Current material is primarily Cast Iron Pipe (CIP)
- Various issues with existing system
 - CIP of this age tends to become corroded and brittle
 - Much of the system is 4-inch diameter pipe (undersized)
 - Many curb stops do not function properly
 - About 35 hydrants are over 30 years old
 - Lack of functioning gate valves to properly isolate during shutdowns

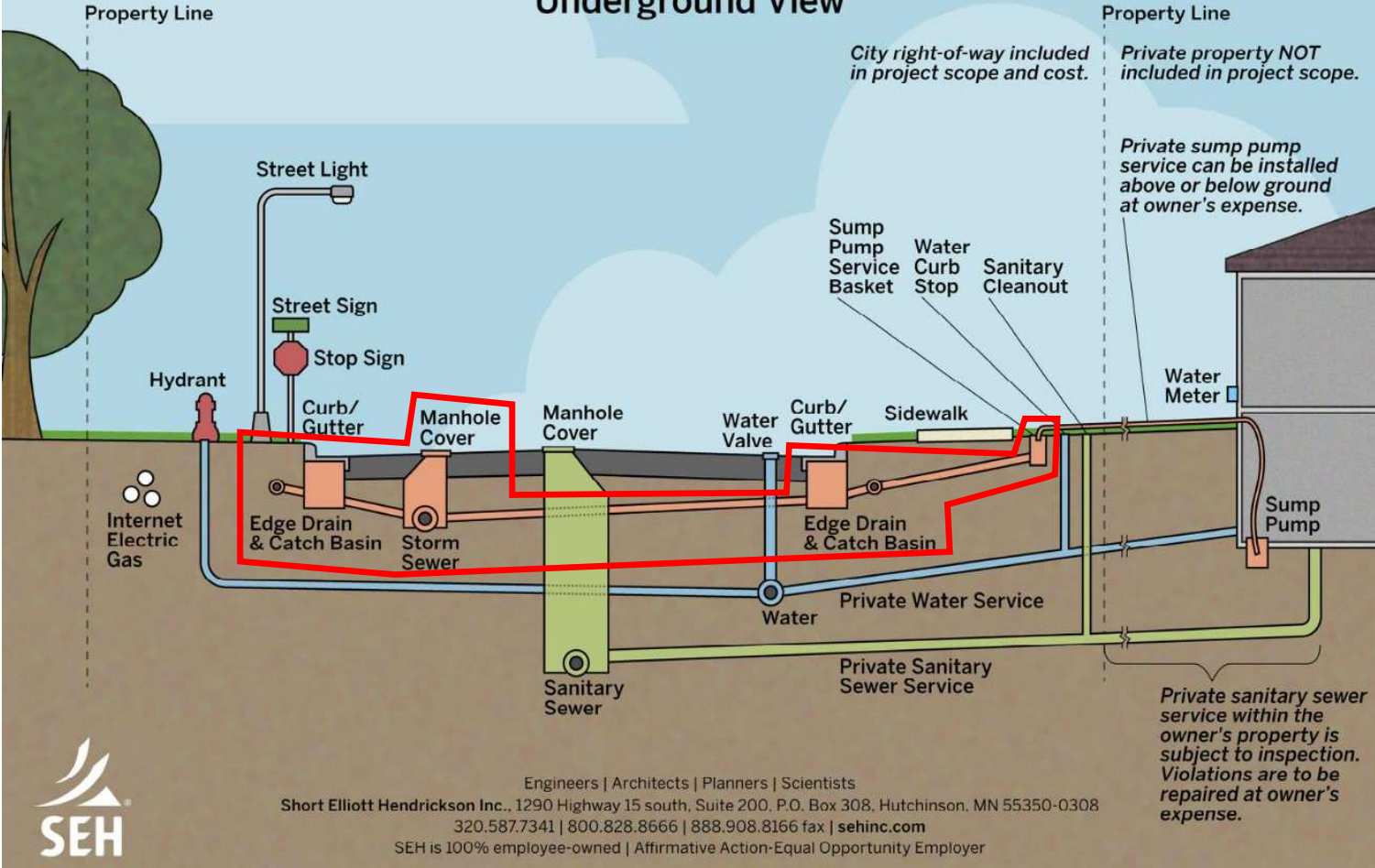


Proposed Water Distribution System

- Proposed material will be PVC, Ductile Iron, or approved other
- New pipe will be pressure-tested following installation to confirm functionality.
- The majority of pipes will be 6-inch diameter, with various pipes being 8-inch diameter.
- A new curb stop will be installed at the right-of-way
- Hydrants will be replaced with new hydrants
- New gate valves will be installed at several locations



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Existing Storm Sewer System

- Various issues with existing system
 - Several existing pipes are undersized (much are 8” to 12” pipe)
 - Quantity and size of the existing catch basins are inadequate (18” wide)
 - Broken, misaligned, and sagging pipes
 - Infiltration issues

Ponding During Minor Rain Event



Ponding During Minor Rain Event



Sags in Existing Storm Sewer (Standing Water)

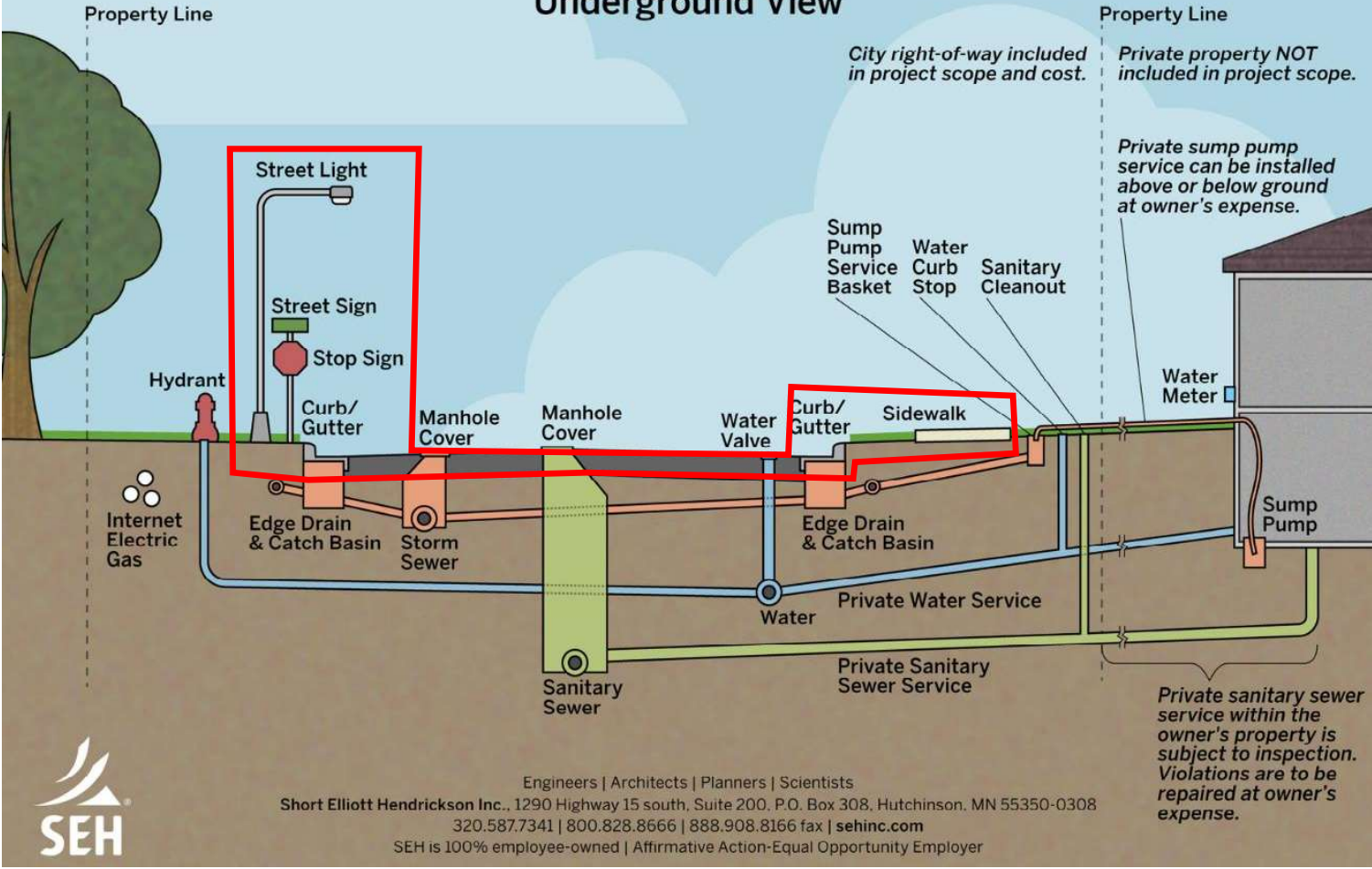


Proposed Storm Sewer System

- New material will be PVC, Reinforced Concrete, or approved other
- Pipes will be installed to modern standards with a design storm event of 10-years. The largest pipe will be 48” in diameter.
- More catch basins will be installed, and will be 36” wide.
- Sump pump service baskets will be installed at every lot to provide access to pump storm water directly to the storm system.



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Existing Streets, Driveways, Alleys, Sidewalks, and Trails

- Existing pavement conditions are fair to poor
- Existing street widths vary from 30 to 45 feet wide
- Several driveways and alleys do not include a concrete apron
- There are several sidewalks with varying widths throughout the project
- There is no existing trail
- Several street signs are in need of replacement



Proposed Streets, Driveways, Alleys, Sidewalks, & Trails

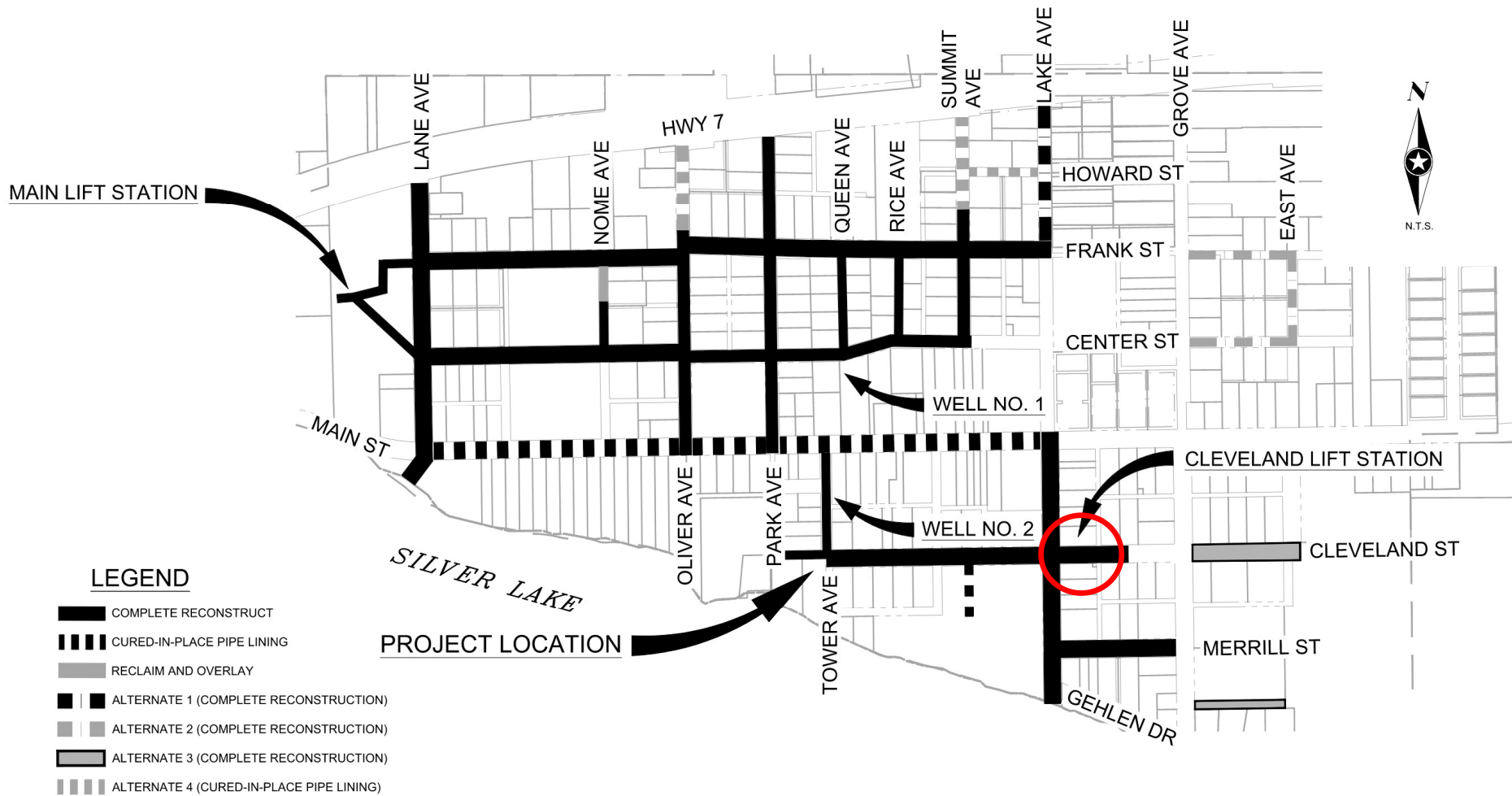
- Streets will be replaced with a 36” thick pavement section
- The majority of the street widths will be the lesser of 36 feet or the existing width.
- All driveways will receive a minimum 5’ wide concrete apron
- Sidewalks are to be constructed/reconstructed at various locations
- A new 10’ wide bituminous trail will be constructed on the west side of Lane Avenue from Main Street to Trunk Highway 7










Benefits of 36' Street Standard Width

- Still allows parking on both sides of the street
- Allows space within the right-of-way to include sidewalks with grass boulevards
- Cost savings to the project (and therefore the residents)
- Decreases amount of runoff into the storm sewer (smaller pipes are needed)
- Reduces future maintenance costs
- Less snow removal for public works





LEGEND

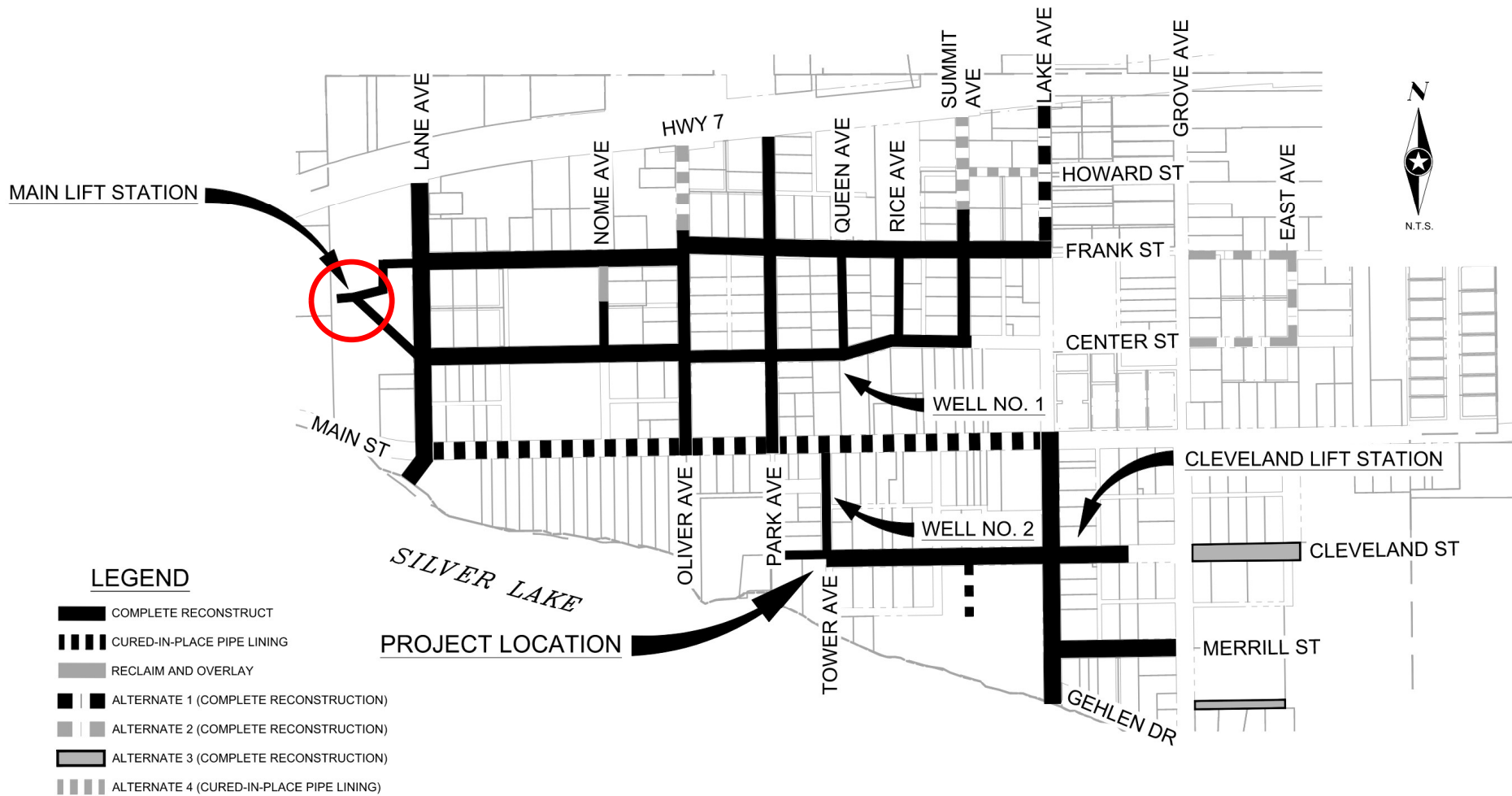
-  COMPLETE RECONSTRUCT
-  CURED-IN-PLACE PIPE LINING
-  RECLAIM AND OVERLAY
-  ALTERNATE 1 (COMPLETE RECONSTRUCTION)
-  ALTERNATE 2 (COMPLETE RECONSTRUCTION)
-  ALTERNATE 3 (COMPLETE RECONSTRUCTION)
-  ALTERNATE 4 (CURED-IN-PLACE PIPE LINING)



Cleveland Lift Station

- In general, the existing lift station (south of Cleveland Street and east of Lake Avenue) is in poor condition and has exceeded its design life.
- A new lift station will be constructed in the northeast quadrant of Cleveland Street and Lake Avenue
- A new forcemain will be constructed from the new lift station north along Lake Avenue to Main Street
- The existing pumps will be salvaged and used at the new lift station as they were recently purchased.

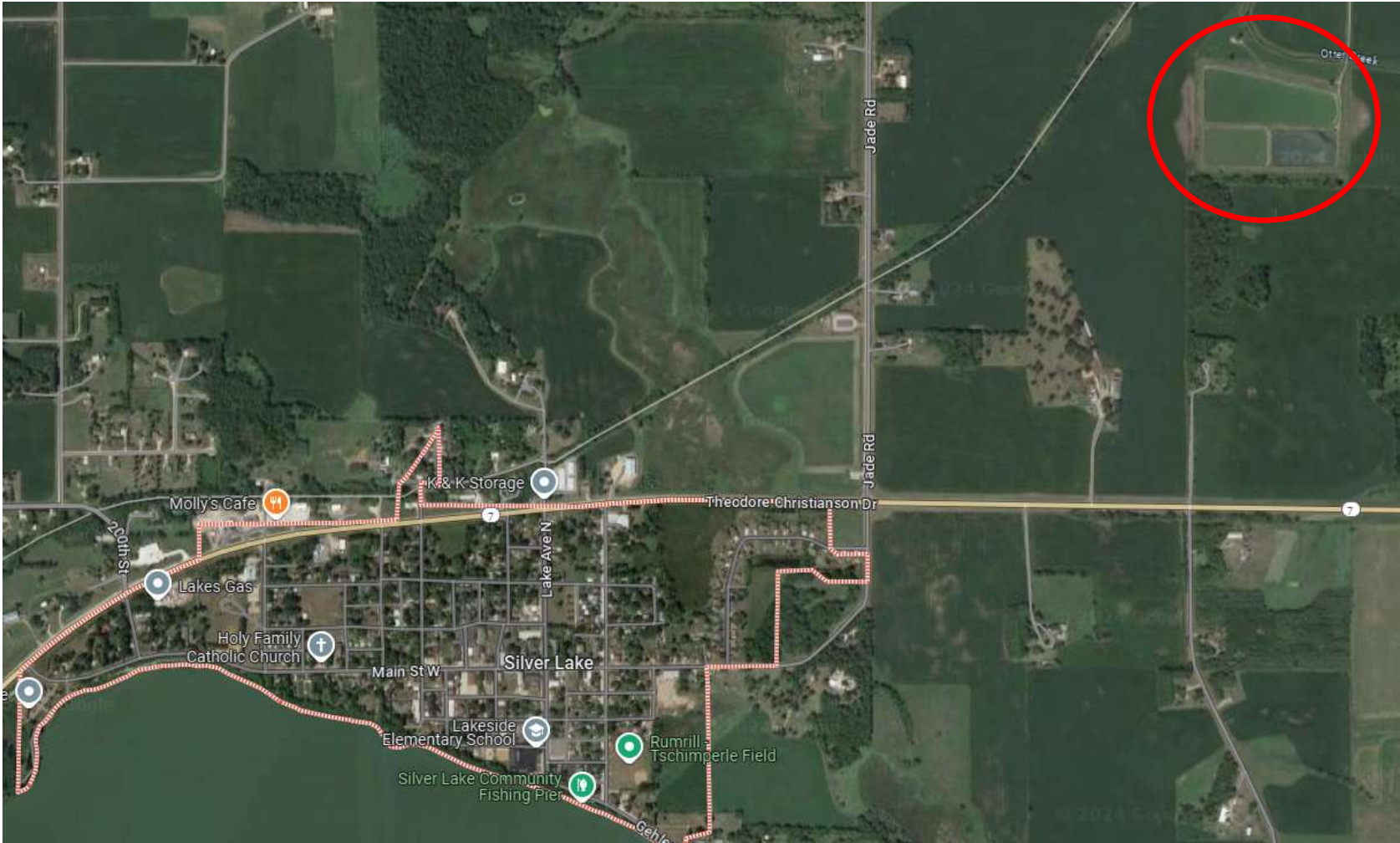




Main Lift Station and Meter Manhole

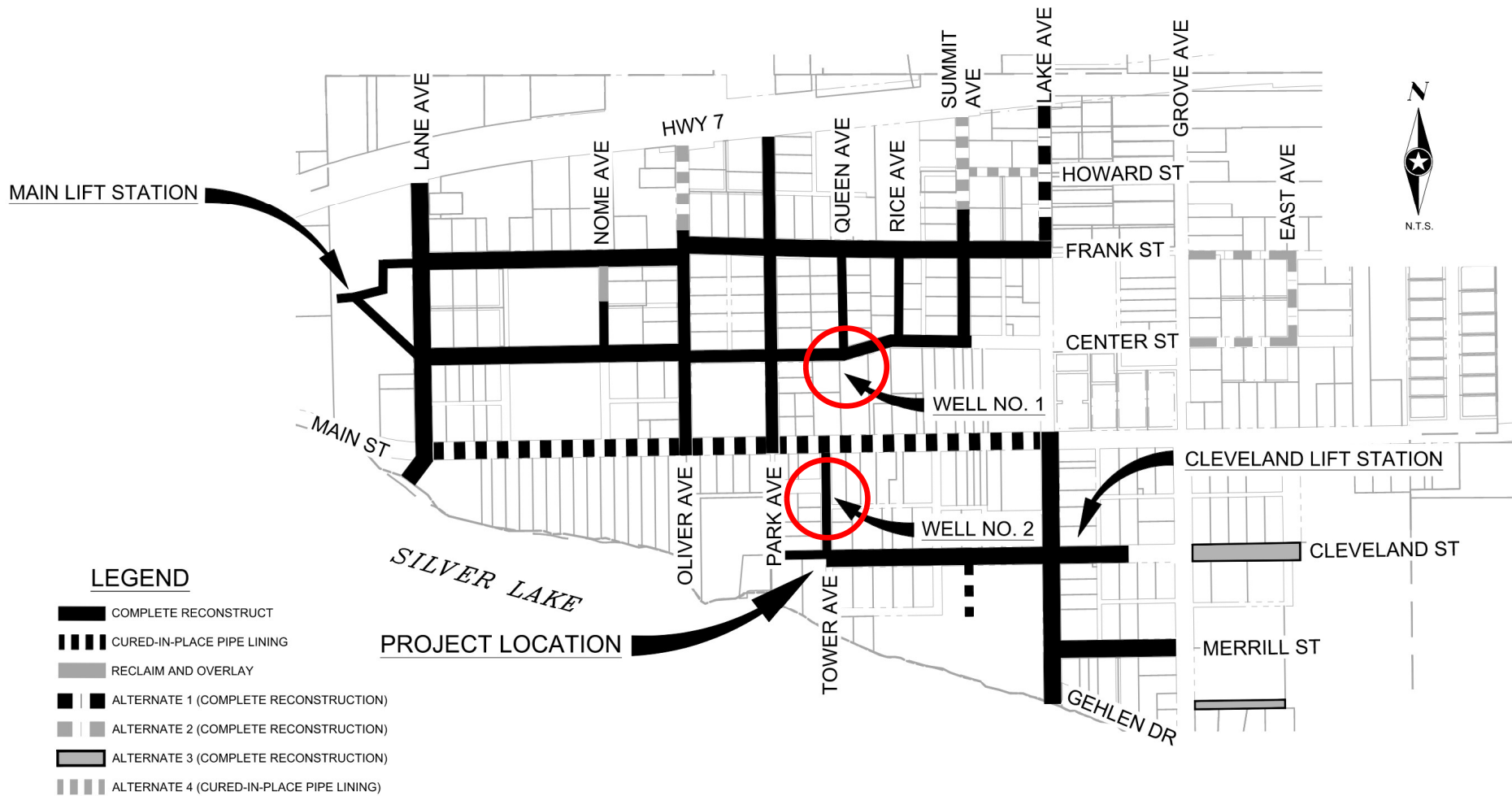
- In general, the existing lift station (west of Lane Avenue) is in acceptable conditions. The electrical control panel is well past its service life.
- The electrical control panel will be removed and replaced.
- A meter manhole is proposed to be constructed north of the lift station. The meter manhole will eliminate the need to meter raw wastewater by monitoring pump run times. This item is included as an alternate.





Treatment Ponds

- In general, the existing treatment ponds (northeast of town) is in acceptable conditions, with the following exceptions that are proposed to be improved:
 - The perimeter fence is in poor condition (to be removed and replaced)
 - There are various buildups of solids (to be agitated, redistributed, and reduced by engineered “bugs”)
 - The primary control structure is currently inoperable (to be reconstructed as an alternate)



Drinking Water Wells (Well Houses 1 and 2)

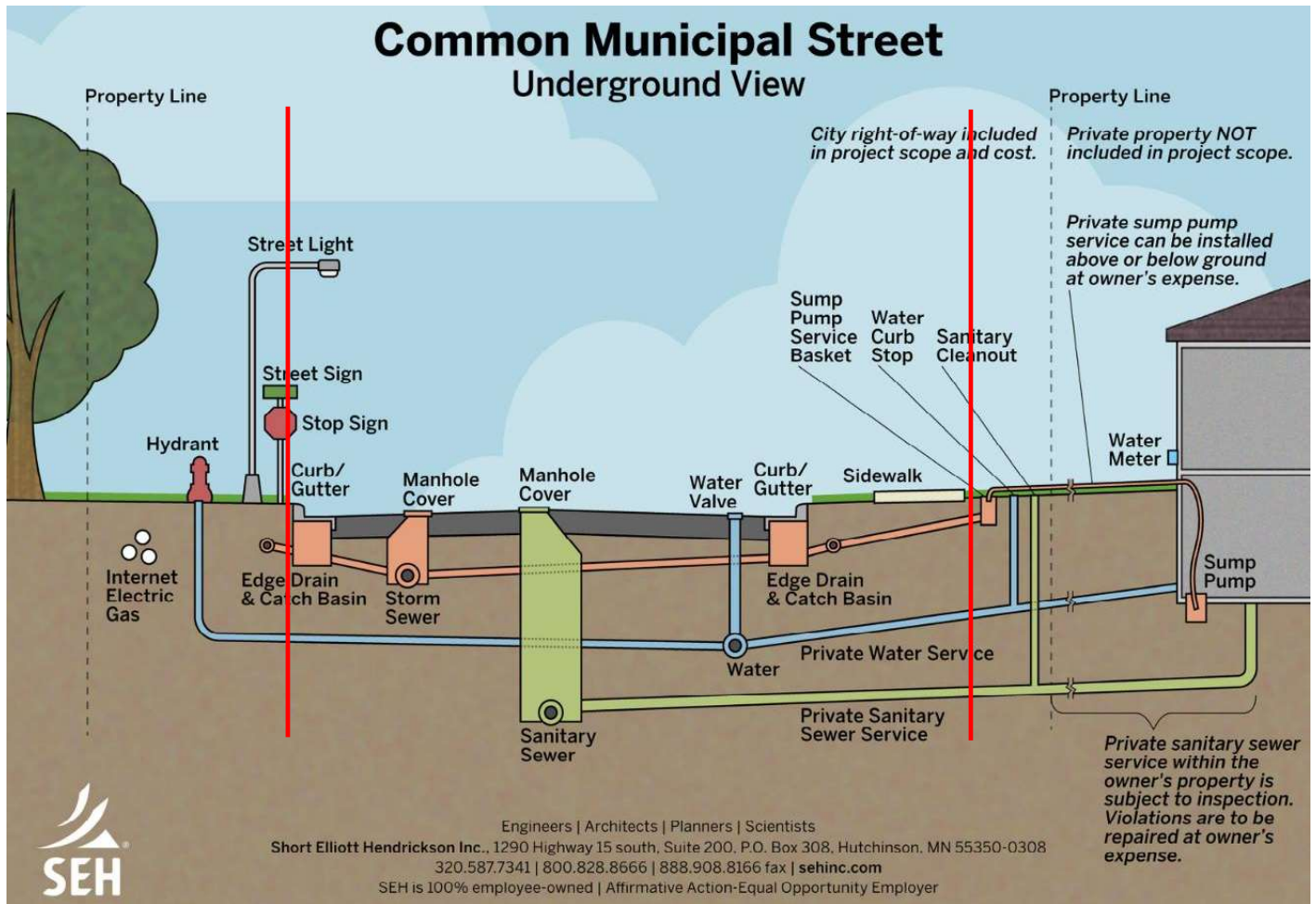
- Well House 1 (Secondary Well)
 - The pump, well shaft, process piping, and other components will be replaced
- Well House 2 (Primary Well)
 - The process piping and other components will be replaced
 - A variable frequency drive (VFD) will be installed to provide backup pressure to the system if/when the water tower is offline



Right-of-Way and Private Property



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Estimated Costs and Proposed Project Funding



Estimated Costs

- Estimated costs are provided in the Feasibility Report dated September 16, 2024.
 - Table 1 outlines the estimated costs for the base bid
 - Table 2 includes estimated costs of the alternates
- A detailed spreadsheet of the cost breakdowns is provided in Appendix A of the report.
- Following receiving bids from potential contractors, council will review options with SEH representatives, USDA-RD representatives, and the City's financial advisor prior to awarding the project.



Estimated Costs

Item	Base Bid + Alternates Estimated Construction Cost (By Eligibility)				
	Wastewater Eligible	Water Eligible	Storm Eligible	City Cost (Not Eligible)	Total
Sanitary Collection, Water Distribution, and Storm Sewer	\$4,885,804	\$4,351,338	\$3,149,901	\$1,896,971	\$14,284,014
Cleveland Lift Station	\$600,000	\$0	\$0	\$0	\$600,000
Main Lift Station	\$80,000	\$0	\$0	\$0	\$80,000
Pond Improvements	\$180,000	\$0	\$0	\$0	\$180,000
Well Rehabs	\$0	\$300,000	\$0	\$0	\$300,000
Alternate 1 - Lake Avenue	\$349,159	\$201,384	\$202,762	\$97,512	\$850,818
Alternate 2 - Frank-Center Loop	\$349,411	\$301,867	\$76,117	\$123,917	\$851,311
Alternate 3 - Cleveland and Utilities E of Grove	\$239,647	\$134,888	\$45,541	\$56,297	\$476,374
Alternate 4 - Additional Lining	\$139,853	\$0	\$0	\$0	\$139,853
Alternate 5 - Metering Manhole	\$150,000	\$0	\$0	\$0	\$150,000
Alternate 6 - Primary Control Structure	\$80,000	\$0	\$0	\$0	\$80,000
Estimated Construction Cost	\$7,053,874	\$5,289,478	\$3,474,320	\$2,174,698	\$17,992,370
Contingency and Soft Costs	\$2,069,157	\$2,119,746	\$1,110,991	\$667,170	\$5,967,064
	Wastewater Eligible	Water Eligible	Storm Eligible	City Cost (Not Eligible)	Total
Estimated Total Capital Cost	\$9,123,031	\$7,409,224	\$4,585,312	\$2,841,868	\$23,959,440



Estimated Costs

Item	Base Bid + Alternates Estimated Construction Cost (By Category)				
	Street	Storm	Sanitary	Water	Total
Base Bid (Street and Utilities)	\$8,312,032	\$2,033,629	\$2,070,020	\$1,868,333	\$14,284,014
Cleveland Lift Station	\$0	\$0	\$600,000	\$0	\$600,000
Main Lift Station	\$0	\$0	\$80,000	\$0	\$80,000
Pond Improvements	\$0	\$0	\$180,000	\$0	\$180,000
Well Rehabs	\$0	\$0	\$0	\$300,000	\$300,000
Alternate 1 - Lake Avenue	\$408,972	\$137,782	\$173,792	\$130,272	\$850,818
Alternate 2 - Frank-Center Loop	\$529,447	\$29,339	\$145,208	\$147,317	\$851,311
Alternate 3 - Cleveland and Utilities E of Grove	\$264,574	\$15,824	\$112,259	\$83,717	\$476,374
Alternate 4 - Additional Lining	\$700	\$0	\$139,153	\$0	\$139,853
Alternate 5 - Metering Manhole	\$0	\$0	\$150,000	\$0	\$150,000
Alternate 6 - Primary Control Structure	\$0	\$0	\$80,000	\$0	\$80,000
Estimated Construction Cost	\$9,515,725	\$2,216,574	\$3,730,432	\$2,529,639	\$17,992,370
Contingency and Soft Costs	\$3,155,835	\$735,114	\$1,237,176	\$838,940	\$5,967,064
	Street	Storm	Sanitary	Water	Total
Estimated Total Capital Cost	\$12,671,560	\$2,951,688	\$4,967,608	\$3,368,579	\$23,959,440



Funding Sources

- Long-Term Low-Interest Loans, to be paid by the following means:
 - City Utility Funds
 - General Tax Levy
 - Special Assessments (preliminary total: \$2,590,600)
- Grants from the following:
 - Department of Agriculture – Rural Development (USDA-RD)
 - Minnesota Public Facility Authorization (PFA)



Funding Sources

Table 3 – Proposed Project Funding

Source	Estimated Amount
RUS Loan	\$12,585,000
RUS Grant	\$4,177,000
Applicant Contribution	\$1,086,000
USDA Community Facility Loan	\$2,817,000
Minnesota PFA Grant	\$3,114,000
Total Estimated Project Funding	\$23,779,000

USDA-RD Proposed Budget

Item	Estimated Construction Cost				
	Wastewater Eligible	Water Eligible	Storm Eligible	City Cost (Not Eligible)	Total
Construction	\$6,519,193	\$5,170,683	\$3,222,295	\$2,060,018	\$16,972,189
Contingency	\$651,919	\$557,568	\$322,230	\$207,648	\$1,739,359
Estimated Construction + Contingency	\$7,171,112	\$5,728,251	\$3,544,525	\$2,267,666	\$18,711,548
Land Acquisition	\$25,000	\$0	\$10,000	\$0	\$35,000
Engineering	\$1,315,269	\$1,028,737	\$644,459	\$412,004	\$3,400,468
Assessment Process and Staking Services	\$44,608	\$36,755	\$24,167	\$15,450	\$120,980
Legal and Admin	\$118,375	\$92,562	\$56,390	\$36,050	\$303,377
Testing	\$52,154	\$41,405	\$25,778	\$16,480	\$135,818
Non-Construction Cost Subtotal	\$1,555,406	\$1,199,459	\$760,794	\$479,984	\$3,995,643
Interim Interest	\$225,144	\$178,735	\$111,077	\$70,847	\$585,803
Refinance Water Bond	\$0	\$486,000	\$0	\$0	\$486,000
	Wastewater Eligible	Water Eligible	Storm Eligible	City Cost (Not Eligible)	Total
Estimated Total Capital Cost	\$8,951,661	\$7,592,446	\$4,416,397	\$2,818,497	\$23,779,000



Special Assessments

- The City will apply Special Assessments to properties directly adjacent to the project. Preliminary Assessment Information is included in Appendix B of the Feasibility Report (including the policy, rates, rolls, and maps).
- The Special Assessment Hearing will be held in Fall of 2026 (following the majority of construction). Once approved, the assessments will be applied to the McLeod County property taxes starting in 2027.
- The rates and loan term will be finalized at the hearing. A 4.5% interest assessment for a 20-year term was used for preliminary affordability discussions.



Estimated Assessment Rates

Item	Estimated Assessment Rate
Water Service Line	\$3,300 per Unit
Sanitary Sewer Service Line	\$2,700 per Unit
Reconstructed Street, Curb and Gutter	\$5,400 per Unit – Residential \$6,480 per Unit – Commercial
CIPP Service	\$3,700 per Unit



Example Assessment Calculation (Standard Lot)

Assume the following:

Front Footage = 82' (not a corner lot)

One Water Service Line Replacement

One Sanitary Sewer Service Line Replacement

Assessment Calculation

This frontage is equivalent to 1 Residential Equivalent Unit (REU)

Reconstructed Street = 1 REU * \$5,400 per Unit = \$5,400

One Water Service Line = \$3,300

One Sanitary Service Line = \$2,700

Total = \$11,400



Example Assessment Calculation (Corner Lot)

Assume the following:

Front Footage = 82' Side Footage = 140'
One Water Service Line Replacement
One Sanitary Sewer Service Line Replacement

Assessment Calculation

Front is 0.5 REU's, and Side is 0.5 REU's (Total of 1 REU)	
Reconstructed Street = 1 REU * \$5,400 per Unit	= \$5,400
One Water Service Line	= \$3,300
One Sanitary Service Line	= \$2,700
Total	= \$11,400



Approximate Assessment Payback for Typical Assessment

- The typical assessment amount is \$11,400
- Assume a term of 20-years and an interest rate of 4.5%.
- The yearly amount added to the county taxes would be about \$880

- Assessments can be immediately paid off to avoid interest
- Interest will be based on the City's overall project loan



Proposed Schedule

Table 5 – Proposed Schedule

Task	Date
City to Host Public Hearing (with SEH); Council Authorizes Preparation of Plans and Specifications*	Monday, October 21, 2024
SEH to Present Final Plans and Specifications to Council; Council Authorizes Advertisement for Bids*	Monday, November 18, 2024
Advertise for Bids	Friday, November 22, 2024– Tuesday, January 14, 2025 (SEH to submit Ad to paper November 19, 2024)
Pre-Bid Meeting with Bidders	Thursday, December 19, 2024
Workshop with New Council Members (optional)	Monday, January 13, 2025
Bid Opening	Tuesday, January 14, 2025
Council Receive Bids*	Tuesday, January 21, 2025
Council Accept Bids; Consider Award*	Tuesday, February 18, 2025
Construction Begins	Spring 2025
Substantial Completion	Fall 2026
Final Completion	Summer 2028

*Milestones where City Council Actions/Resolutions are required.



Contact Information

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Questions?



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