



**CITY OF DULUTH, MN
REQUEST FOR PROPOSALS FOR**

**Engineering Services for 2026
Lead Service Line Replacements**

Issued April 30, 2025

Solicitation Number: 25-AA15

**Proposals Due: May 14, 2025
3:00 PM Central Time**

PROJECT OVERVIEW

The City of Duluth is interested in retaining multiple consultants to provide engineering services for the design of 5 lead service line replacement (LSLR) projects. These projects will include public and private water service replacements and water main extensions.

BACKGROUND

The City of Duluth is pursuing funding from the Minnesota Public Facilities Authority (PFA) for the replacement of lead services within the City. This funding has been approved at both the State and Federal levels for municipalities to use on both public and private water services. The City is confident they will be awarded both loan and grant dollars for multiple LSLR projects for construction in 2026.

The Lead and Copper Rule (LCR) is a federal regulation established in 1991 to ensure that public water systems act to reduce levels of lead and copper in drinking water. On January 15, 2021, the Environmental Protection Agency (EPA) issued revisions to the LCR, known as the Lead and Copper Rule Revisions (LCRR). The LCRR added many new regulatory requirements including the necessity for water systems to submit an initial lead service line inventory by October 16, 2024. On October 8, 2024, the EPA published the Lead and Copper Rule Improvements (LCRI), which act to strengthen the regulations of the LCRR and further reduce exposure to lead in drinking water. Lead service lines (LSLs) are the primary source of lead exposure from drinking water. The LCRI requires water systems to replace all lead water services by October 2034.

Lead was the most common material used for small diameter water services within Duluth until 1927. Lead was entirely phased out of use by the end of 1930 except for a small number of lead services that were installed in 1942-1945. The City's current water service inventory indicates that there are approximately 31,200 water services in Duluth. The City's current estimate of lead service lines (LSLs) and galvanized requiring replacement (GRR) is 10,700 services. The need to replace lead water service lines to protect public health, comply with the LCRI, and leverage the available funding is urgent.

The City's lead service line replacement program identifies multiple priority levels for LSLRs. Confirmed lead service lines at schools and daycares are the highest priority and all such services were replaced in 2024. The City has an ongoing "High Priority LSLR" project that urgently responds to leaking lead services, lead services adjacent to concurrent excavation and other opportunistic or urgent LSLRs identified by the Chief Engineer of Utilities. All other lead services will be included in neighborhood-wide LSLR projects

The City has developed a prioritization matrix for neighborhood LSLR projects. Consistent with the requirements of the federal and state grant and funding programs, the City has used census tract level data to select and scope project areas based on the following criteria: areas having children with elevated blood lead levels; the percent of the population that is children under the age of five; The percent of the households that are considered low income; the supplemental demographic index; and the percent of the service lines that are known to be lead or GRR. In defining the exact project area boundaries, the City also takes into account major roadway, water system and natural

boundaries, street surface improvements in the last 5 years, and the number of LSLRs in any single project area. The City has used these criteria to identify 5 projects areas for construction in 2026. Below are the approximate number of service replacements, main extensions, and the general location of each project area.

- LSLR Spirit Valley
 - 470 LSLRs
 - 6 Water main extensions
 - 46th Ave W to 59th Ave W
 - This project includes 35 dispersed addresses:
 - 5 properties on S 71st Ave W
 - 4 properties in the Fond Du Lac Neighborhood
 - 26 Properties along Hwy 23 in Gary/New Duluth
 - This project will require MNDOT coordination and acquiring a MNDOT permit
- LSLR Denfeld
 - 540 LSLRs
 - 11 Water main extensions
 - 34th Ave W to 46th Ave W
- LSLR Central Hillside 2
 - 380 LSLRs
 - 10 Water main Extensions
 - 11th Ave W to Mesaba Ave and Mesaba Ave, from 1st St to 10th St, also from Mesaba Ave to N 6th Ave E, from 7th St to Central Entrance Dr
- LSLR Endion
 - 370 LSLRs
 - 11 Water main extensions
 - 4th Ave E to 20th Ave E, Below 4th St
- LSLR East Hillside 1
 - 510 LSLRs
 - 20 Water main extensions
 - 9th Ave E to Wallace Ave, from 4th St to 7th St

The City's goals for the 2026 LSLR projects are to:

- **Protect public health** by eliminating lead contamination from the City's drinking water system to ensure safe and clean drinking water for all residents.
- **Effectively and efficiently utilize available funding** set aside by State and Federal governments to replace lead water services, thereby minimizing the costs and burdens on residents for private water service replacements.
- **Develop and implement a comprehensive property owner coordination process** that includes scheduling home and building inspections, and securing work agreements with property owners, and achieving >95% owner participation in the project design.
- **Perform efficient, detailed site investigations and building inspection** to gather all necessary and required information for a complete and accurate design.

- **Provide a technically complete design** and final plans and specifications that fully meet the project's needs, incorporating a rigorous quality control and quality assurance process overseen by a dedicated quality manager.
- **Fulfill the specified project design and delivery schedule** to meet all City and regulatory plan review deadlines and ensure that the bidding process can take place during the optimal window in the fall/winter of 2025/2026. This will facilitate start of construction in April of 2026 and ensure the City is able to utilize the available funding for the projects.

The City of Duluth will provide the following to the awarded consultants in the first two weeks after award:

- LSLR Design Guidelines (With any updates for 2026 LSLR Projects).
- LSLR Example Plan (With any updates for 2026 LSLR Projects).
- SEQs previous LSLR projects.
- Initial special provision template.
- Examples of letters and door hangers distributed in previous LSLR projects.
- GIS data: The City will extract a subset of its GIS data covering the entire design area for the consultant(s)' use including utilities, lead service information, aerial photography, property information, etc. The consultant is responsible for organizing and manipulating the City provided data to access and interpret relevant attributes and generally conform to the symbology, layouts in the Reference Plan Set to complete the design.
- GIS data for water service lines and valves for LSLR. This data will include:
 - Expected service line material and "Certainty".
 - Water service lines and valves represented at their approximate spatial location.
 - Building and street "ties" to locate the service valves in the field .
- Shapefile of all LSLR parcels within a project area. This shapefile will include:
 - Public and private service line expected material and "Certainty".
 - Addresses needing material verification and verification steps.
 - Addresses expected to need water main extensions.
- Shapefile of expected typical street type to be replaced.
- An address list including property "nominal address", owner address, taxpayer address and number of expected residential units.
- Utility account holder contact information that is able to be exported but the City system (this is not 100% of accounts).
- Sanitary sewer book records indicating any known bedrock information.

The City of Duluth will provide the following to the awarded consultants upon specific request:

- Additional available street and utility drawings from previous projects.
- Copies of "service cards" for specific addresses.
- Individual utility account holder contact information for specific addresses.
- Assistance in obtaining other related information in City files pertaining to the project if needed.

QUESTIONS & ANSWERS

Any questions regarding this RFP must be submitted by e-mail to the Purchasing Office at purchasing@duluthmn.gov. Answers to the questions will be posted as an Addendum to the RFP.

ADDENDA TO THE RFP

If the City deems it necessary to revise any part of this RFP before the proposal response date, the City will post an addendum to its website <http://www.duluthmn.gov/purchasing/bids-request-for-proposals/>. Although an e-mail notification will be sent, it is the Consultant's responsibility to periodically check the website for any new information

SMALL DIVERSE BUSINESS INFORMATION

The City encourages participation by minority, women, and veteran-owned businesses as prime contractors, and encourages all prime contractors to make a significant commitment to use minority, women, veteran-owned and other disadvantaged business entities as subcontractors and suppliers. A list of certified Disadvantaged Business Enterprises is maintained by the Minnesota Unified Certification Program at <http://mnucp.metc.state.mn.us/>.

MANDATORY DISCLOSURES

By submitting a proposal, each Bidder understands, represents, and acknowledges that:

- A. Their proposal has been developed by the Bidder independently and has been submitted without collusion with and without agreement, understanding, or planned common course of action with any other vendor or suppliers of materials, supplies, equipment, or services described in the Request for Proposals, designed to limit independent bidding or competition, and that the contents of the proposal have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder.
- B. There is no conflict of interest. A conflict of interest exists if a Bidder has any interest that would actually conflict, or has the appearance of conflicting, in any manner or degree with the performance of work on the project. If there are potential conflicts, identify the municipalities, developers, and other public or private entities with whom your company is currently, or have been, employed and which may be affected.
- C. It is not currently under suspension or debarment by the State of Minnesota, any other state or the federal government.
- D. The company is either organized under Minnesota law or has a Certificate of Authority from the Minnesota Secretary of State to do business in Minnesota, in accordance with the requirements in M.S. 303.03.

GENERAL PROJECT SCOPE

Consulting Engineering Services are expected to include all work necessary to provide final design including plans, special provisions, final deliverable documents and bidding services.

All work shall be performed in accordance with the most recent versions of the City Standard Specifications and Engineering Guidelines; both are available on the City of Duluth website at <https://duluthmn.gov/engineering/>.

The Consultant may propose on one or more projects. The Consultant shall clearly identify which project(s) they are proposing on and is encouraged to propose on multiple projects. Should they be interested in designing more than one project, the Consultant shall identify the total number of services and/or projects they can confidently complete within the identified schedule. The City will award projects to more than one consultant but may choose to award qualified consultants more than one project.

SCOPE OF SERVICES

1. Coordination Meetings

- a. The Consultant shall meet with City of Duluth representatives to review project scope and complexity, design criteria, related requirements, view existing conditions, gather data from the City engineering files and previously prepared designs.
 - i. All aspects of the design shall be conducted in conformance with the City's Lead Water Service Replacement Design Guidelines (provided as an attachment to this RFP).
- b. The Consultant shall plan to meet with the City (bi-weekly, at a minimum) for design progress meetings. The Consultant will prepare meeting agendas, minutes, and an issues tracking log and shall provide regular updates on progress for building inspections, work agreements secured, and plan progress. The Consultant's project manager, property owner coordination and building inspection lead, and project design lead are expected to attend all applicable coordination meetings.

2. Site Assessments

- a. Physical site assessments are necessary to accurately verify lead services, estimate quantities, create replacement plans, acquire signed work agreements, and inform owners/residents about the LSLR replacement process. The Consultant shall provide all outreach and **Property Owner Coordination and Documentation** necessary to schedule and perform internal and external property assessments and to secure a signed property owner work Agreements.
 - i. The Consultant is responsible for all Property Owner outreach and coordination including mailing notices, phone calls, emails and physical outreach (door knocking) to homeowners to secure a time for Building Inspection and to obtain the signed work Agreement with the property owner. In preparing their proposal, the Consultant is responsible for assessing the method(s) to be used to secure the Building Inspection and signed work Agreement. No adjustment to the Consultant's scope or fee shall be made for the success or lack thereof of the various methods utilized by the Consultant in securing the Inspection or signed work Agreement from the property owner. The LCRI requires documentation of 5 good-faith outreach attempts to offer LSLR to property owners. Successful contact and participation of 95% of owners has been achieved in previous LSLR projects and is the City's goal for all 2026 LSLR project designs. Owner Notification shall be in accordance with the City's **Lead Water Service Replacement Design Guidelines**.

- ii. The Consultant should assume that many of these outreach attempts and inspections will need to occur in the evening or on the weekend when residents are home and available.
 - iii. The City will provide the work Agreement for the Consultant's use and distribution. Signed work Agreements must be returned to the City and organized by property location (address). In addition to paper and pdf work agreements, the City is developing a method for owners to submit work agreement through the permitting software ePlace (<https://duluthmn.gov/eplace/>). The consultant will be prepared to field test this new agreement protocol by distributing instructions and helping owners to create ePlace accounts and submit agreements online.
 - b. The Consultant shall provide **Site Assessment** of the exterior and interior of properties designated for LSLR. The site assessments shall include all interpretation of existing information, material verification, information collection, measurements, and photos necessary to make specific design decisions for the property and create a site-specific replacement plan. The City will provide the selected consultants with a list of properties to be inspected. All properties shall have an exterior assessment performed. All properties with successful owner participation (the goal is 95%) shall have an interior assessment performed. This inspection shall, at the minimum, be conducted in accordance with the City's **Lead Water Service Replacement Design Guidelines**.
 - i. The site assessment shall verify the material of the private water service by:
 - 1. Visually observation.
 - 2. Collecting a water sample when deemed necessary and useful. Sample bottles will be supplied by the City and samples analyzed by the City's contracted lab.
 - 3. Prescribing potholing during construction.
 - c. Personnel performing site assessments shall:
 - i. Be experienced with water service material identification.
 - ii. Be familiar with house plumbing and electrical grounding in order make accurate assessments regarding a building's water service material and location, sewer service location, and presence or absence of supplemental grounding electrodes.
 - iii. Have access to the City-provided water service information in the field to properly locate the existing water service and orient the assessment to the actual work area.
 - iv. Have access to the City-provided sewer main and service information in the field to properly assess the building for potential conflicts with the sewer service.
 - v. Use existing information and observations to deduce the appropriate steps for material identification and prescribe appropriate service replacement directions.
3. Geotechnical Evaluation
- a. The consultant shall provide and/or procure & coordinate geotechnical services. Soil probes shall be performed along the proposed alignments of water main extensions

to evaluate the presence and depth of bedrock. These probes shall be at 50' intervals and to the depth of refusal or 14', whichever is reached first.

- b. All efforts and costs for soil probes shall be incorporated into this proposal for LSLR design based on the assumption that 6 soil probes will be required for each anticipated main extension.

4. Plans and Specifications

- a. The consultant shall prepare construction drawings as necessary to provide for the replacement of existing lead services.

- i. The selected consultants shall provide a final plan that mirrors the plan composition and drawing standards reflected in the City provided **Reference Plan Set** incorporating any revisions identified in the first few weeks of the design phase. The Final plan shall match the Reference Plan Set including the organization and presentation of plan sheets, formatting, plan symbology, text sizes and styles, presentation of quantities and information, and overall plan organization.

- 1. The Final Plans shall include the following sheets:

- a. Title Sheet
 - b. Site Index Maps
 - c. Statement of Estimated Quantities
 - d. Charts
 - e. Construction Details
 - f. Erosion Control Plan & SWPPP
 - g. Traffic Control Plan (if applicable)
 - h. Lead Service Replacement Site Plans
 - i. Water Main Extension Plan and Profile Sheets

- i. The consultant design should include provision for the design of small diameter water main extensions for each project. An example of a water main extension is included in the sample plans. However, the water main extension plan should consist of a plan sheet and a separate profile that includes a water main profile with stationing, intersecting utilities, bedrock (based on City sewer plats), and other relevant design information shown. Topographic survey and mapping should be included for water main extension locations to confirm and capture features relevant to the water main extension(s). In general water main extensions are provided over the length of a single City block to connect to an in-place water main on an intersecting avenue or street to houses on that block.

- 2. No deviations from the standards established by the Reference Plan Set standard(s) shall be permitted unless otherwise approved or directed by the City. The Consultant shall be prepared to make collaborative revisions to the plan format in the early phases of

design. The Consultant shall be responsible for utilizing, interpreting and modifying the City provided GIS data to meet/provide the stated plan standards.

3. The design shall include utility coordination in conformance with MnDOT's utility coordination process. A design locate request shall be submitted and City and third-party utilities (fiber, electric, telephone, steam, etc.) data shall be requested and drawn on the plans based on the utility owner supplied mapping, review and feedback. The preliminary design should include two utility coordination meetings (verification and design steps) to ensure accuracy and to coordinate minor adjustments and support needs during construction with utility owners. Utility relocations, relocation meetings, and relocation coordination are not anticipated.
4. As outlined in the "Initial Site Visit and Consultation" section, the consultant must scrutinize the City sewer plats, GIS data, field observations, and any other provided information for the presence of bedrock at each site. Bedrock information shall be included in the replacement plan for each site, including a note indicating the source of the information, presence of rock, the approximate depth of bedrock, and horizontal location, if known.

- b. The City intends to bid five separate projects for construction. Each project will require an individual construction plan, special provision, engineer estimate, etc. regardless of how many projects any individual consultant is awarded.
- c. The specification preparation shall also include appropriate sections for bidding, bonding, agreements, general and special provisions, and other appropriate contract provisions as well. These sections shall be developed in accordance with the City standards, which shall be made available to the consultant.
- d. The drawings shall include all necessary site maps, plans, elevations, sections, details, and notes as needed or necessary to adequately show, explain or describe all features of the project.

5. Cost Estimate

Following the completion of the plans and specifications, a quantity takeoff and a detailed itemized construction cost estimate for each individual phase of the project shall be provided.

6. Project Bidding

Upon completion of plans and specifications, the consultant shall provide all documents and services to provide for bidding and award for construction. The consultant shall answer any questions brought up during bidding and attend a pre-bid conference. This design phase

shall be considered complete upon award of the project following bidding. **It is anticipated that the projects will bid on 5 different days. As such, the consultant's proposal should include time for multiple bids.**

7. Construction Administration & Inspection

This RFP does not include Construction Administration or Inspection. The City anticipates issuing a separate RFP for these tasks for the 2026 construction season at a later date.

DELIVERABLES

The Consultant shall provide the listed **LSLR Project Deliverables** as part of the design. The Consultant shall provide and maintain a file sharing platform to be utilized throughout the design. The platform shall allow viewing and editing access that allows for the regular upload and download of project files, test results, design deliverables, etc. by both the City and the consultant. The file sharing platform and deliverables shall be continuously updated as the design proceeds and not less frequently than bi-weekly to match the required progress update schedule.

1. LSLR Project Deliverables:

- a. Timely Project Correspondence
 - i. Include the City project number in the title of email correspondence and in the name of project documents.
- b. Project Quality Management Plan (QMP)
 - i. Consultant's QMP shall outline and prescribe who, what, when and how quality control and quality assurance activities will be performed on the project to ensure a technically complete, constructible design that minimizes errors and conflicts.
 - ii. Consultant is expected to use Bluebeam Studio a session for 30%, 60%, and 90% plan submittals.
- c. Project Meeting Agenda & Minutes (Bi-Weekly)
 - i. Shall include a rolling agenda / issues log tracking design issues / needs.
 - ii. Meeting Agenda shall include a Progress Update Summary per item d.
- d. Utility Coordination Agenda, Minutes, & Documentation
- e. Detailed & Continuously Updated Project Design Schedule (Bi-Weekly)
 - i. Provide in Critical Path Format organized by Task, Sub-Task, and Milestone Dates and shall include a moving status bar with status / progress update as a percentage of the overall design completion by Task / Sub-Task.
- f. Progress Updates (Bi-Weekly)
 - i. Status of Property Owner Notification & Outreach
 1. Outreach attempts, methods used, and responses.
 - ii. Agreement Status
 1. Agreements sent and secured with Property Owner.
 - iii. Status of Building Inspections.
 1. # Scheduled
 2. # Completed
 3. # Confirmed Lead

4. # Confirmed Non-Lead
 5. # Requiring Additional Investigation
 6. # Prescribed for potholing
- g. 30% Design Submittal – The purpose of the 30% design will be to validate the Consultant’s plan design approach for conformance with the City’s stated standards and overall design intent.
- i. Title Sheet
 - ii. Site Index Map – include Project Overview Map and at least (1) detailed Index Map.
 - iii. Statement of Estimated Quantities – include relevant / anticipated pay items.
 - iv. Lead Service Replacement Site Plan – provide (5) representative plan sheets including at least (1) partial private LSLR, (1) partial public LSLR, and (1) full LSLR replacement. Sheets should include photos (3), tabular data, annotation, and plan layout conforming to the required plan standards.
 - v. Water Main Extension Plan and Profile Sheet – (1) representative water main extension plan and profile sheet. Sheets should include tabular quantity, annotation, and plan layout conforming to the required plan standards.
 - vi. 30% Engineer’s Estimate.
- h. 60% & 90% Design Submittals – shall include plans, special provisions, and engineer’s estimate. The 60% & 90% submittal shall include all water main extension plans in the project. For site-specific replacement plan pages, in lieu of submission of the entire group of site plans, the City may consider submissions of smaller batches of site plans that are 100% complete to spread out the plan review effort of both the consultant and the City. Any such alternate submission scheme and schedule must be proven to track and account for review of every site plan, be approved by the City, and must ensure 60%/90% of the site plans are complete at the 60%/90% deadline dates.
- i. 100% Design Submittals and Project Design Files & Documentation
- i. 100% Plan, signed.
 - ii. 100% Special Provisions, signed.
 - iii. 100% Engineers Estimate.
 - iv. SEQ, in excel format.
 - v. Site-Specific Quantity Chart, in excel format.
 1. Combined into one excel tab
 2. Include row (s) for each site with whether it is a public-only replacement, private-only replacement, full replacement, or main extension.
 - vi. Signed property owner agreements.
 1. Hard copies scanned and submitted as paper and pdf.
 2. Digital-only copies submitted as pdf.
 - vii. Documentation of all outreach attempts, specifically highlighting a minimum of 5 outreach efforts to any and all properties that were not able to be reached.
 - viii. Provide the City with a copy of all Property Owner Coordination & Building Inspection files including, but not limited to, property owner letters,

- agreements, inspection records, photographs, and other relevant, collected documentation.
- ix. Property Owner Coordination & Building Inspection files shall be organized by Site / Address and shall include separate sub-folders for letters, agreements, inspection records, photographs, and miscellaneous information.
 - x. Provide the City with a comprehensive contact list of all sites. This list should include:
 - 1. Title holder with up to 2 phone numbers and an email address.
 - 2. Preferred construction contact person with type, up to 2 phone number and an email.
 - 3. Alternate contact person with type, up to 2 phone number and an email.
 - xi. Provide the City with a comprehensive list of mailing addresses for multi-unit buildings. This list should include the site number, nominal property address, parcel number, number of residential units and mailing address of each unit including unit numbers/letter. (Format template available from the City)
 - xii. Provide the City with a copy of all project design files including, but not limited to, drawing / GIS data files and information sets, design computations, quantity calculations, and special provisions.

PROJECT COMPLETION DATES

Date	Milestone / Deadline
April 30, 2025	RFP Issued
May 14, 2025	Proposals Due
May 27, 2025	Council Approval to Award Contracts
July 11, 2025	30% Plans
September 5, 2024	60% Plans and Specifications Complete
November 3	90% Plans and Specifications Complete
December 5, 2025	100% Plans and Specifications Complete
December 12, 2025	Plans submitted to MDH
TBD	MDH Plan Certification
December 2025 – February 2026	Advertise for bids
April 2026	Start Construction
November 2026	Construction Completion

Note: This schedule is subject to change.

QUALIFICATION PROPOSAL CONTENTS

To be considered, hard copies of proposals must arrive at the City on or before the time and date specified in the RFP. The proposal shall be submitted in the following format broken into the six (6) sections identified below. Proposals not following the specified format will not be reviewed. No additional sections or appendices are allowed. The proposal shall be limited to 15 pages (8.5" x 11"

page size, portrait or landscape orientation) plus a cover letter. Proposals that exceed this limit will not be reviewed. The use of an 11" x 17" page size (landscape orientation) for the project work plan and/or project schedule are permitted and each use of an 11" x 17" page shall count as a single page against the specified page limit. Dividers and covers are not included in the page limitation.

The proposal format shall be as follows:

1. Goals and Objectives

A restatement of the goals and objectives and the project tasks to demonstrate the responder's view and understanding of the project and their plan to meet the project schedule.

2. Experience

An outline of the responder's background and experience with similar projects. Prior work with the City of Duluth including knowledge of City standards, specifications, and best practices are considered essential for this project. Consultants should include lead service replacement projects and projects where there is extensive interaction with residents. Project descriptions shall include a list key staff and their role.

3. Personnel

Identify personnel to conduct the project and detail their work experience. Identify how personnel proposed for this project were involved with the projects listed as experience. Identify a professional engineer registered in the State of Minnesota who will oversee the overall project. The identified personnel must be available to complete the designated tasks during the identified work schedule. No change in personnel assigned to the project will be permitted without approval of the City.

4. Work Plan

Include a detailed work plan identifying the work tasks to be accomplished and the budget hours to be expended on each task and subtask for the design. The work plan shall include a narrative identifying experience and efficiency in similar projects. The work plan shall include a spreadsheet and shall list each task and the number of hours for each staff person on that task.

The work plan shall also identify the deliverables at key milestones in the project as well as any other services to be provided by the City. Do NOT include any costs in the work plan.

The work plan narrative can apply to all projects being proposed on if the spreadsheet is subdivided for each project area and the specific number of LSLRs and main extensions in each area.

5. Work Schedule

An anticipated work schedule shall also be provided. The work schedule shall identify all key milestone dates. **Meeting or exceeding the specified schedule in this RFP is of the essence to the City and critical to the success of the project and the City's program delivery. The Consultant's proposal should clearly communicate and reflect the Consultant's**

commitment and ability to provide the necessary staff and resources to meet the project schedule.

6. References

References may be requested prior to final consultant selection and do not need to be included.

COST PROPOSAL CONTENTS

Provide, in separate **SEALED** envelope, one copy of the cost proposal, clearly marked on the outside “Cost Proposal” along with the responder’s official business name and address. Terms of the proposal as stated must be valid for the project length of time.

Each consultant may propose on one or more of the lead service line replacement projects if they feel they can complete the designs per the required schedule. Each proposal must clearly identify how many and which project(s) the proposal is for. Cost estimate(s) must be in a separate, sealed envelope.

For each proposal, the consultant must include a not-to-exceed total project cost, as well as subtotals for design services and bidding and any sub consultant fees. The cost proposal shall include all of the following:

- A cover/transmittal letter
- A breakdown of the hours by task for each employee. This shall be in the same format as the work plan in the Qualifications proposal with the addition of costs.
- Hourly rates for employees.
- Identification of anticipated direct expenses and rates for miscellaneous charges such as mileage and copies.
- Identification of any assumption made while developing this cost proposal.
- Identification of any cost information related to additional services or tasks. Include this in the cost proposal, but identify it as additional costs and do not make it part of the total project cost.
- The consultant must not include any cost information within the body of the RFP qualification proposal response.
- The Consultant must have the cost proposal/cover letter/transmittal signed in ink by a member of the firm authorized to bind the company into a contract.
- The attached Appendices A and C must be completed, signed and submitted.

SELECTION

The proposals will be reviewed by City Staff. The intent of the selection process is to review proposals and make an award based upon qualifications as described herein. A 100-point scale will be used to create the final evaluation recommendations. The factors and weighting on which proposals will be judged are:

	Item	Percent
1	Goals and Objectives	10%
2	Experience	20%
3	Personnel	20%
4	Work Plan and Schedule	30%
5	Project costs/fees	20%

Proposals will be evaluated on a best value basis with 80% qualifications and 20% cost consideration. The review committee will not open the cost proposal until after the qualification points have been awarded. The City reserves the right to interview Consultants (in-person or virtually) prior to making a final decision.

SUBMITTAL DATE

Submit four (4) hard copies of the proposal, a signed cover letter, completed appendices A and C, a flash drive containing a complete copy of the proposal and a the separate cost estimate in an envelope marked, 25-AA15 RFP Engineering Services for 2026 Lead Water Service Replacements by 3:00 PM central time, May 14, 2025 to:

Purchasing
City Hall Room 120
411 West 1st Street
Duluth, MN 55802

CONTACT

All questions concerning the project shall be directed to:

Jon Maruska, Senior Engineering Specialist
City of Duluth - Engineering Division
411 W. 1st Street, Room 240 City Hall
Duluth, Minnesota 55802-1191
jmaruska@duluthmn.gov
(218) 730-5093

LIMITATIONS

This Request for Proposal does not commit the City of Duluth to award a contract or pay costs incurred in the preparation of the proposal, or to procure a contract for services or supplies.

The Proposal shall not in any way include any restrictions on the City of Duluth. The Consultant shall NOT provide proposed contract language.

The City of Duluth specifically reserves the right to accept or reject any or all proposals, to negotiate with any qualified source, to cancel in part or in its entirety the Request for Proposal, to waive any

requirements, to investigate the qualifications of any proposal, to obtain new proposals, or proceed to have the service provided in any way as necessary to serve the best interests of the City of Duluth. The City is not liable for any costs the Consultant incurs in preparation and submission of its proposal, in participating in the RFP process or in anticipation of award of the contract.

The selected consultant must sign the City of Duluth standard Professional Engineering Services Agreement, a sample of which is available at <https://duluthmn.gov/purchasing/forms/>. Any questions concerning this agreement should be asked PRIOR to proposal submittal. These questions should be directed to Eric Shaffer in the City Engineering Office.

All materials submitted in response to this RFP will become property of the City and will become public record after the evaluation process is completed and an award decision made.

Prior to entering into an agreement with the city, the consultant shall furnish proof that it has all legal requirements for transacting business in the State of Minnesota.

APPENDICES

- Appendix A – Proposal Cover Sheet
- Appendix B – Federal Supplementary Provisions City
- Appendix C – Byrd Anti-Lobbying Certificate: Submit completed certificate with proposal
- Appendix D – Project Area Overview Maps.
- Appendix E - City of Duluth's Lead Water Service Replacement Design Guidelines.
- Appendix F – Example Plan.

APPENDIX A - PROPOSAL COVER SHEET
CITY OF DULUTH
RFP# 25-AA15
RFP Engineering Services for 2026 Lead Service Line Replacements

Bidder Information:	
Bidder Name	
Mailing Address	
Contact Person	
Contact Person's Phone Number	
Contact Person's E-Mail Address	
Federal ID Number	
Authorized Signature	
Name & Title of Authorized Signer	
Email of Authorized Signer	

Appendix B
City of Duluth
Supplementary Provisions – State & Federal Funding

1. Disbursements

- a. No money under this Contract shall be disbursed by the City to any Contractor unless the Contractor is in compliance with the Federal Agency requirements with regard to accounting and fiscal matters to the extent they are applicable.
- b. Unearned payments under this Contract may be suspended or terminated upon the Contractor's refusal to accept any additional conditions that may be imposed by the Federal Agency at any time; or if the grant, if applicable, to the City under which this Contract is made is suspended or terminated.

2. Subcontracting Requirements

- a. The Contractor shall include in any subcontract the clauses set forth in these City of Duluth Supplementary Provisions in their entirety and shall also include a clause requiring the subcontractors to include these clauses in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.
- b. The Contractor shall not subcontract any part of the work covered by this Contract or permit subcontracted work to be further subcontracted without the City's prior written approval of the subcontractors. The City will not approve any subcontractor for work covered by this Contract who is at the time ineligible under the provisions of any applicable regulations issued by a Federal Agency or the Secretary of Labor, United States Department of Labor, to receive an award of such subcontract.

3. Breach of Contract.

The City may, subject to the Force Majeure provisions below and in addition to its other rights under the Contract, declare the Contractor in breach of the Contract by written notice thereof to the Contractor, and terminate the Contract in whole or in part, in accordance with Section 4, Termination, for reasons including but not limited to any of the following:

- a. Failure to begin the Work within the time specified in the Contract;
- b. Failure to perform the Work with sufficient labor, equipment, or material to insure the completion of the specified Work in accordance with the Contract terms;
- c. Unsatisfactory performance of the Work;
- d. Failure or refusal to remove material, or remove and replace any Work rejected as defective or unsatisfactory;
- e. Discontinuance of the Work without approval;
- f. Failure to resume the Work, which has been discontinued, within a reasonable time after notice to do so;
- g. Insolvency or bankruptcy;
- h. Failure to protect, to repair, or to make good any damage or injury to property;
- i. Breach of any provision of the Contract;
- j. Misrepresentations made in the Contractor's bid/proposal; or
- k. Failure to comply with applicable industry standards, customs, and practice.

4. Termination

If the Contractor is in breach of the Contract, the City, by written notice to the Contractor, may

terminate the Contractor's right to proceed with the Work. Upon such termination, the City may take over the Work and prosecute the same to completion, by contract or otherwise, and the Contractor and its sureties shall be liable to the City for any additional cost incurred by the City in its completion of the Work and they shall also be liable to the City for liquidated damages for any delay in the completion of the Work as provided below. If the Contractor's right to proceed is terminated, the City may take possession of and utilize in completing the Work such materials, tools, equipment, and plant as may be on the site of the Work and necessary therefore.

City shall have the right to terminate this contract immediately without other cause in the event that all or a portion of the funds that the City intends to use to fund its obligations under the contract have their source with the State or Federal government or any agency thereof and said source reduces or eliminates their obligation to provide some or all of the funds previously committed by it to fund City's payment obligations under the Contract. The City agrees that termination hereunder will not relieve the City of its obligation to pay Contractor for Work satisfactorily performed and reasonable costs incurred prior to the effective date.

Notwithstanding anything herein to the contrary, the City may terminate this Contract at any time upon written notice given by the City (for any reason, including the convenience of the City) to the Contractor at least thirty (30) days prior to the effective date of the termination of this Contract. The City agrees that termination hereunder will not relieve the City of its obligation to pay Contractor for Work satisfactorily performed and reasonable costs incurred prior to the effective date of the termination provided that Contractor has not committed a breach of this Contract. Nothing contained in this section shall prevent either party from pursuing or collecting any damages to which it may be entitled by law.

5. Force Majeure.

The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the Work due to any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, National Defense, or any other national emergency; any acts of the City; causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in their performance of some other contract with the City, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones, and other extreme weather conditions; nor to any delay of any Subcontractor occasioned by any of the causes specified above. The Contractor shall promptly notify the City in writing within ten (10) days of the delay. Upon receipt of such notification, the City shall ascertain the facts and the cause of the delay. If, upon the basis of facts and the terms of the Contract, the delay is properly excusable, the City shall extend the time for completing the Work for a period of time commensurate with the period of excusable delay.

6. Contracting with Small and Minority Businesses, Women's Business Enterprises, and Labor Surplus Area Firms.

Per 2 CFR 200.321, prime contractor must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms (collectively referred to as socioeconomic firms) are used when possible. The affirmative steps must include:

- a. Placing qualified socioeconomic firms on solicitation lists;
- b. Assuring that socioeconomic firms are solicited whenever they are potential sources;
- c. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by socioeconomic firms;

- d. Establishing delivery schedules, where the requirements permit, which encourage participation by socioeconomic firms; and
- e. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

7. Rights to Inventions Made Under a Contract or Agreement.

For any contracts involving the “substitution of parties, assignment or performance of experimental, developmental, or research work”, Contractor shall comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

8. Clean Air Act and Federal Water Pollution Control Act

Contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251–1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Contractor agrees to include this provision in any subcontract exceeding \$150,000 that is financed in whole or in part with Federal funds.

9. Energy Standards.

Contractor shall comply with all mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201).

10. Suspension and Debarment.

This contract is a covered transaction for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945. The contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. A contract award must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM.gov), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 19898 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

11. Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended)

Contractors must certify that that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352.

12. Telecommunications and Video Surveillance Services or Equipment

In the performance of this contract, Contractor/Supplier shall comply with Public Law 115-232, Section 889, which prohibits the procurement or use of covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, use of video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities) is prohibited.

In addition, telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country is prohibited.

APPENDIX C – BYRD ANTI-LOBBYING CERTIFICATION FORM CITY OF DULUTH

RFP# 25-AA15

RFP Engineering Services for 2026 Lead Service Line Replacements

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION

(To be submitted with each bid or offer exceeding \$100,000)

The undersigned, [Company] _____, certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

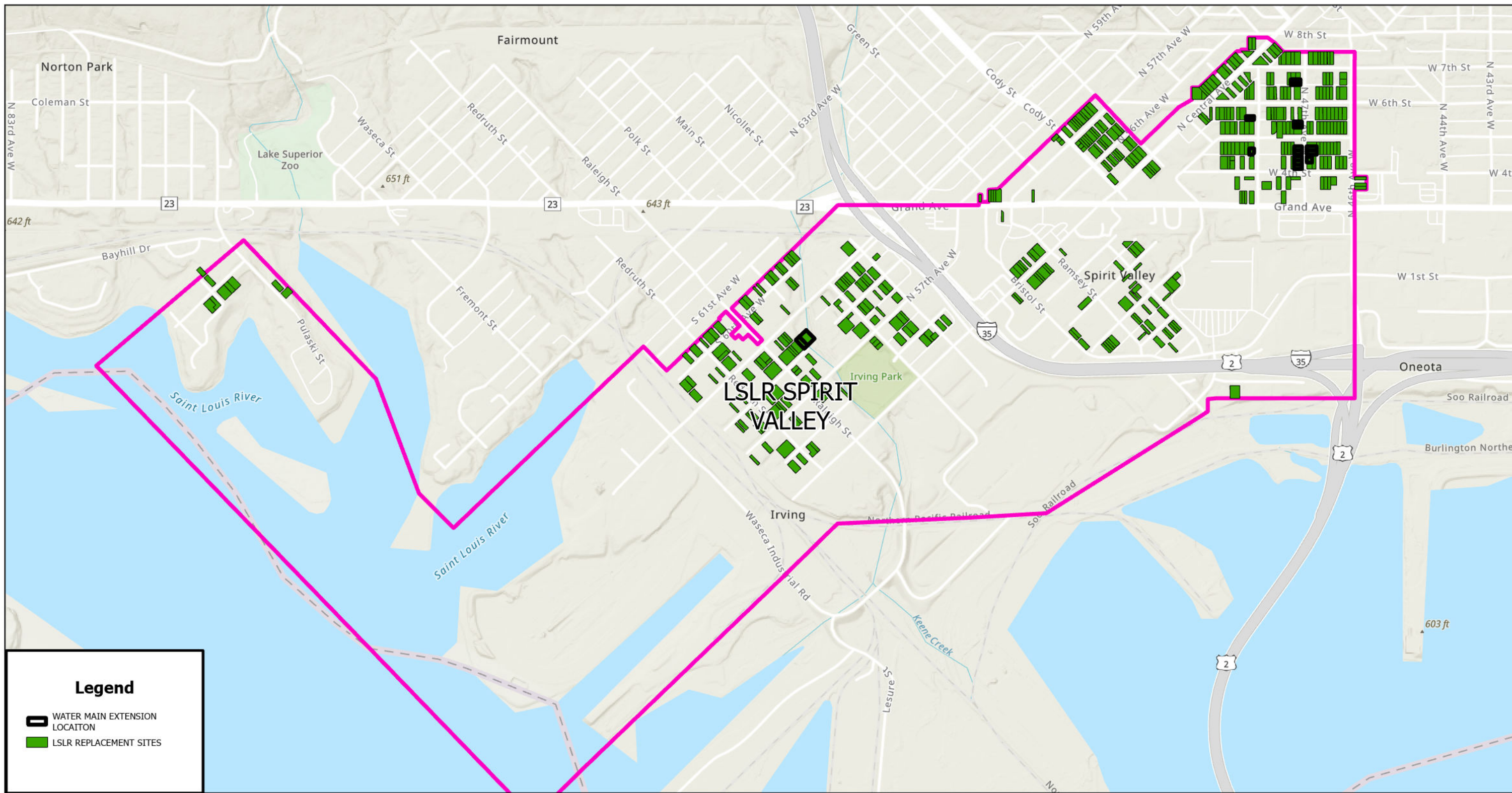
This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, [Company] _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 *et seq.*, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date



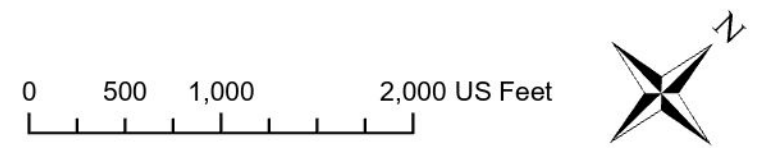
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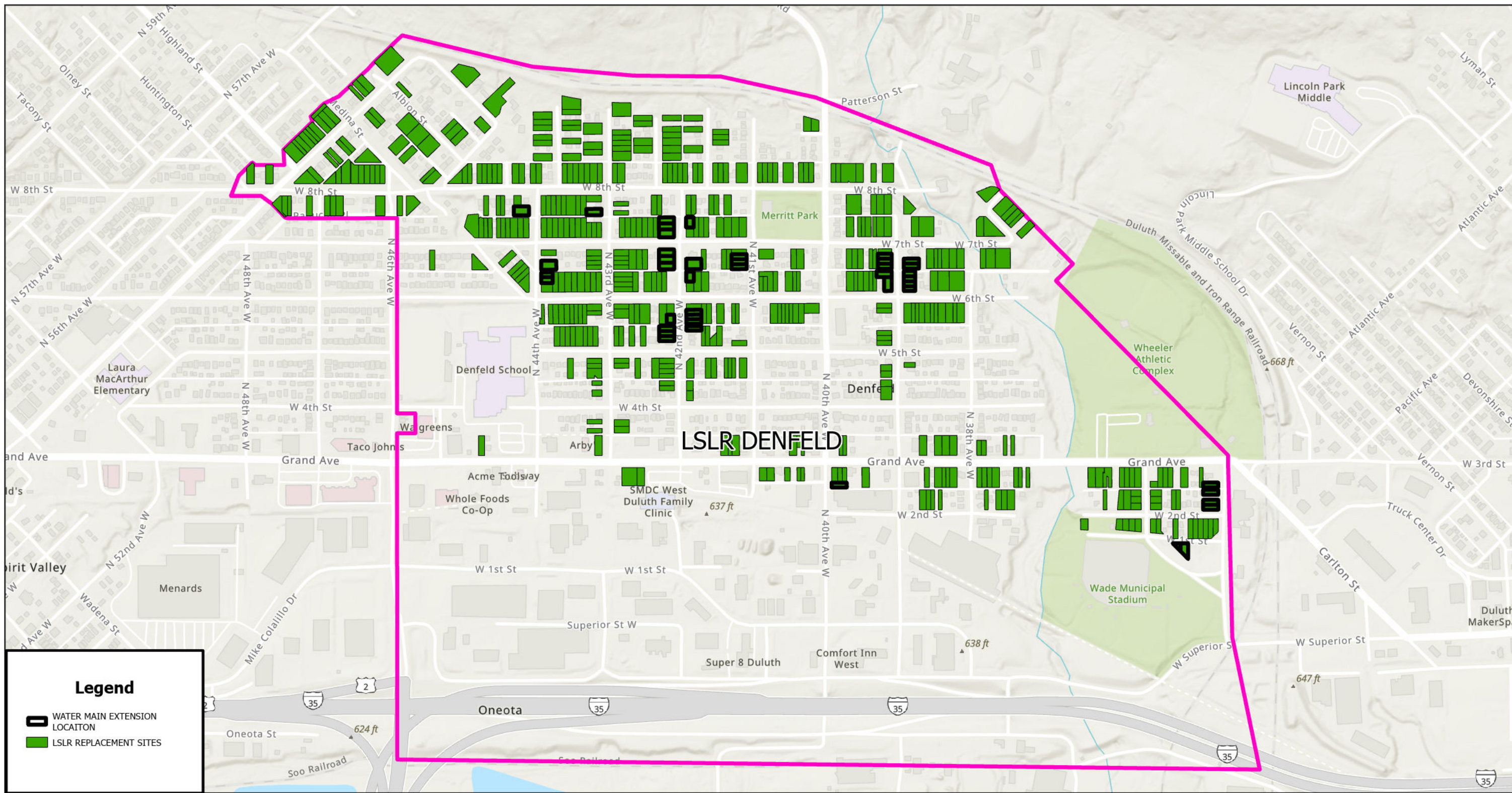
-  WATER MAIN EXTENSION LOCATION
-  LSLR REPLACEMENT SITES



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ENGINEERING DIVISION
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DULUTH, MN 5580

LSLR SPIRIT VALLEY PROJECT AREA OVERVIEW





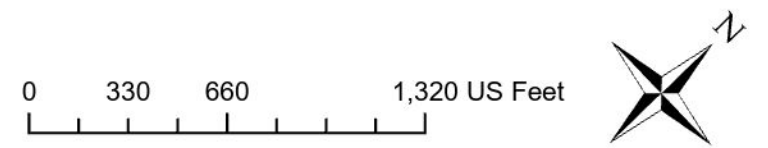
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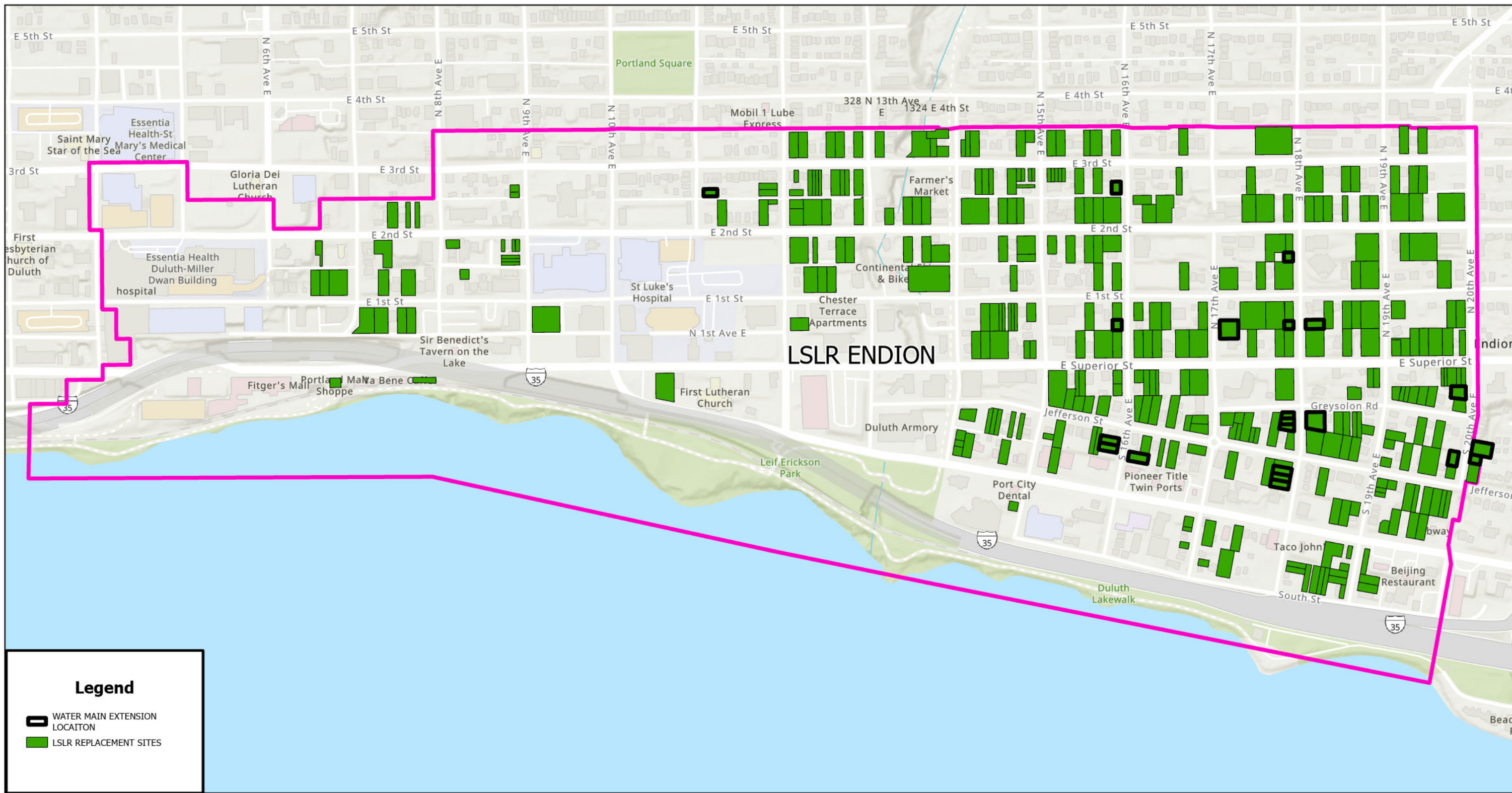
- WATER MAIN EXTENSION LOCATION
- LSLR REPLACEMENT SITES




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ENGINEERING DIVISION
411 W 1ST ST RM 240
DULUTH, MN 5580


LSLR DENFELD PROJECT AREA OVERVIEW





Legend

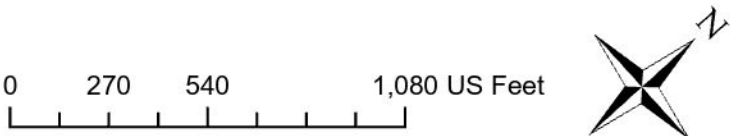
 WATER MAIN EXTENSION LOCATION

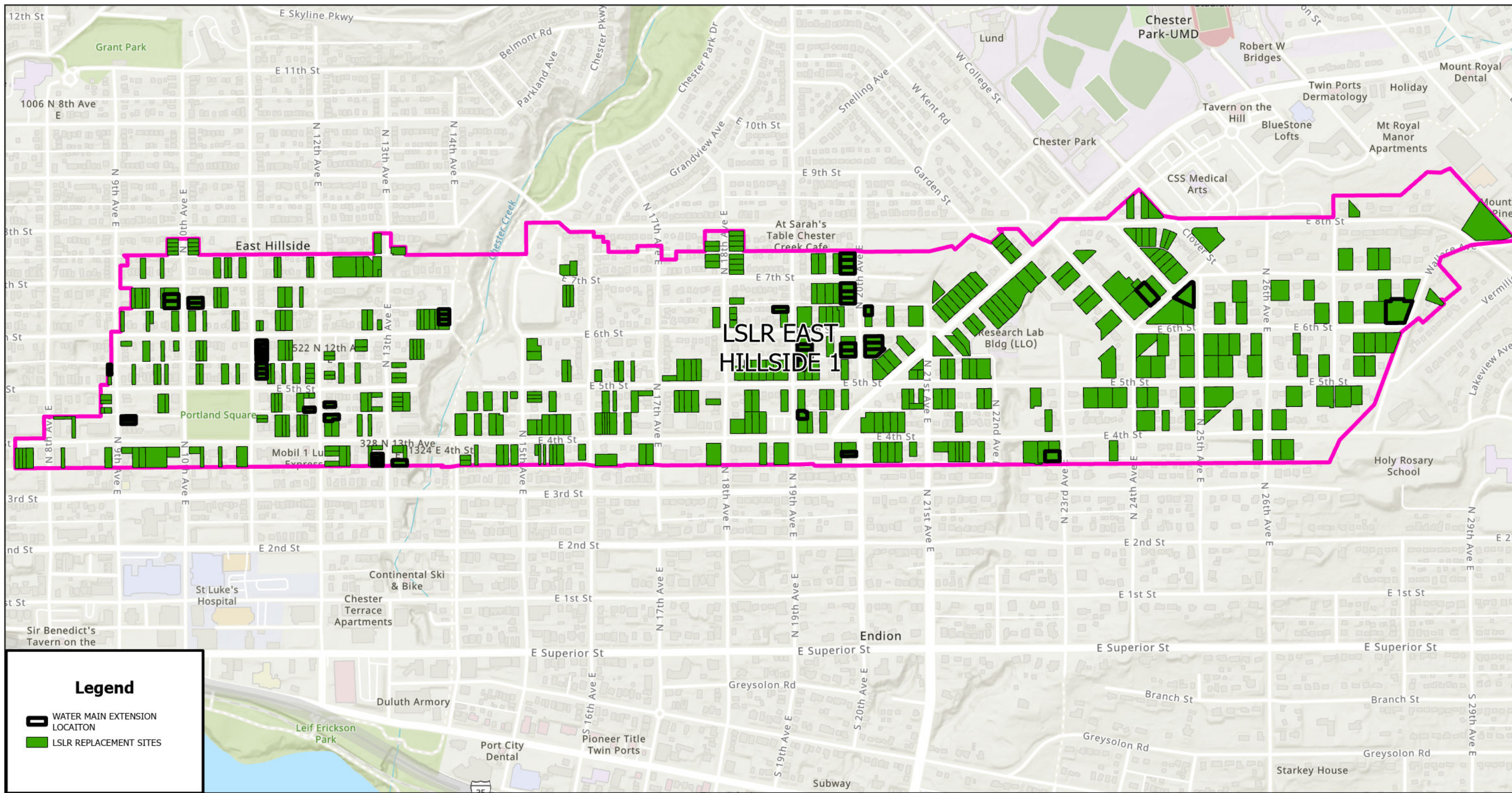
 LSLR REPLACEMENT SITES



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411 W 1ST ST RM 240
DULUTH, MN 5580

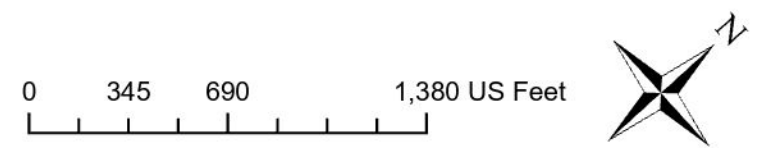
**LSLR ENDION
PROJECT AREA OVERVIEW**





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DULUTH, MN 5580


LSLR EAST HILLSIDE 1 PROJECT AREA OVERVIEW





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 218-730-5200

Lead Water Service Replacement Design Guidelines

*These guidelines are meant to supplement, clarify, and modify the City of Duluth Construction standards and are meant to be used only for design of lead service line replacement projects.


1) Owner Outreach Coordination

- a) For all properties on the project list having a private water service material listed as lead, suspected lead or unknown, the property owner must be contacted to arrange a building inspection to collect the information necessary to prepare a site replacement plan and to secure a signed Agreement with the property owner(s) to complete the work.
 - i) Attempts to contact the owner shall, at a minimum, include:
 - (1) The Consultant shall maintain a record of homeowner outreach attempts.
 - (2) The consultant shall make (5) good faith efforts to reach the owner of the property.
 - (3) Outreach attempts shall include:
 - (a) A minimum of (2) letters mailed to the property title holder. If the title holder does not reside at the property, a separate letter must also be sent to the physical property with each mailing.
 - (b) If no response is received to the mailed letters, a minimum of (3) additional outreach attempts must be made and documented. These additional attempts shall include:
 - (i) Phone calls if numbers are available.
 - (ii) Emails, if email addresses are available.
 - (iii) Physical outreach (door knocking). Physical outreach methods shall also include leaving door hangers and letters at the residence with project team contact information.
 - (c) The Consultant outreach record shall include identifying information (address, homeowner, resident/renter (as applicable), etc.) and the dates and outcomes of each outreach attempt.
 - b) For properties on the project list having a public service that is lead (or GRR) and a private service that is confirmed 'Not Lead', outreach to the title holder and resident are still required but the messaging may differ from the general outreach and the site assessment may be abbreviated. A full basement inspection may not be necessary. The private service has already been determined to not be lead and will be inspected again with a camera during replacement of the public service.
 - c) Throughout the design phase, the consultant shall keep track of non-responsive owner/residents and discuss unresponsive properties with the City.



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2) Site Assessment

- a) Site Assessments shall include collecting exterior and interior information at the individual address (water service replacement site). An exterior assessment shall be conducted at all sites. An interior assessment shall be performed in all buildings at the site connected to the water system. The assessments shall include:
 - i) Identification and/or confirmation of private water service material.
 - (1) Review the material information provided by the City.
 - (2) Visually identify the material of the private water service entering the building.
 - (3) If the private water service is not visually verified to be lead or GRR, and the public water service is copper, take a water sample for laboratory analysis.
 - (4) If the water service material cannot be verified in steps 1-3, prescribe the service to be potholed during construction.
 - ii) Investigate and document the field conditions between the water service connection to the main in the street to entrance point to the building. Note and document (e.g. size, type, composition) any yard features (e.g. landscaping, trees, walls, decks, walks, stairs, etc.) that may be impacted by the work by either directional drilling or open trench excavation along the alignment of the existing / proposed water service.
 - iii) Locate existing curb stop, document location and measure distance to back of curb and other potential construction obstacles.
 - iv) Confirm and document the location of water service entrance and water meter within the building.
 - v) Confirm and document the location of the sanitary sewer service.
 - vi) Confirm and document the location of sanitary service cleanout and material type.
 - vii) Search for and document the presence of an electrical ground rod outside the building and/or second ground wire at the electric panel leaving the foundation to the outside.
 - viii) Document the presence of any accessory dwelling units that are served by the primary building. Perform an entire inspection and lead water service replacement design for any accessory dwelling units encountered.
 - ix) Document the number of residential units on the parcel and the individual, unit-specific mailing addresses for each unit (including the addresses and unit numbers of any accessory dwellings).
 - x) Investigate and document any construction (demolition / restoration) that will be required within the basement to replace the water service.
 - xi) Collect photo documentation of the existing yard and basement conditions and all inspection items noted above.



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- xii) Review available City sewer plat books for the presence of bedrock.
- xiii) Any other information relevant to the project design.

3) Water Service Material Inventory and Verification

- a) All available water service material records have been reviewed for all addresses within each LSLR project area. Addresses confirmed or suspected to have lead water services are included in the design phase for a project area.
- b) Some included addresses have limited or conflicting material information.
- c) Visual observation of a non-lead material entering a building does not prove the service is entirely non-lead.
- d) The Consultant shall understand and interpret water service materials observed in the field along with information supplied by the City and prescribe further verification or replacement as necessary.

4) Galvanized Iron Pipes

- a) Galvanized iron water service pipes that have been downstream of lead pipes are considered “Galvanized Requiring Replacement” (GRR) and should be treated as lead water services for the purposes of LSLR projects.
- b) Galvanized iron water service pipes that CANNOT be proven to NEVER have been downstream of lead services should also be considered GRR.

5) Commercial and Industrial Properties

- a) Lead replacements in concentrated commercial and industrial areas should be deferred until future projects.
- b) Commercial properties with residential apartments should be included and have lead services replaced.
- c) Non-residential properties dispersed among residential neighborhoods may be included and have lead services replaced.

6) Vacant Lots

- a) Lead service lines to vacant lots can be cut off during LSLR projects. Discuss with the City instances of lead services to vacant lots within the project area and include cutting off and capping such services in the LSLR plan.

7) Abandoned, Condemned or Uninhabited Residences

- a) Make an attempt to contact property owner to assess their intentions for the property
 - i) If the owner intends to rehabilitate the residence, replace all parts of the service that are lead.



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- ii) If the owner intends to demolish the residence, replace only the public side service if lead.
- iii) If the owner is unreachable, replace only the public side service if lead

8) Service Cutoffs

- a) Lead water services that do not serve a building can be cut off at the main during LSLR projects. These services are not included in the site list but should be investigated, discussed with the City and added in to the replacement plans during design. Service cutoffs are not counted as a lead service line replacement but the costs to properly abandon (cut off) lead services at the main can be reimbursed by the PFA.

9) Services Shared Between Three or More Properties or Private Service Lines Installed Parallel to the Right of Way

- a) Design a water main extension with individual services.

10) Services Shared Between Two Properties

- a) If the shared public service is a material other than lead the service will remain as-is and only private services replaced if lead.
- b) If the shared public service is lead and the existing curbstops are within 5' of the property line between the two properties, a 1" HDPE shared public service can be reconnected to the existing corporation stop. Install two curbstops and install the private services so they do not cross adjoining private property.
- c) If the shared private service is lead and the existing curbstops are not within 5' of the property line between the two properties, one property should be connected to the existing corporation stop. Install a new corporation stop and separate service in front of the second property. This work may require a second excavation at the main.


11) Curbstop Location

- a) The standard location for new curbstops in the City of Duluth is behind the sidewalk (if present) and approximately 2' in front of the private property line.
- b) Use judgement for planning the location of proposed curb stops.
- c) There are several acceptable reasons to vary from the standard curbstop location including:
 - i) The public water service has already been replaced. Connect to the existing curbstop where it is.
 - ii) The existing curb stop location is in front of the sidewalk.
 - iii) To reduce surface impact and restoration cost.
 - iv) To avoid concrete steps, retaining walls, mature trees, other utilities, etc.



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- d) There are times when excavation to the standard curb stop location may still be necessary including:
 - i) To verify the water service material.
 - ii) To insulate.
 - iii) The existing curb is in the standard location.
- e) If excavation at the current curbstop location is necessary, the existing curbstop shall be removed.
- f) If excavation at the current curbstop location is not necessary, the existing curbstop shall be abandoned by cutting off the existing stand pipe(s) a minimum of 2' below grade.

12) Tapping

- a) Hot tapping the existing main for main extensions and additional services will be by City of Duluth utility crews. Trenches must be prepared by the contractor according to standard detail W-11.

13) Pipe Cover Depth and Insulation

- a) All water mains shall be designed to have 7.5' of cover. All water services shall be designed to have 7.0' of cover.
- b) In areas cleared of snow (streets, driveways and sidewalks) if 7.0' of cover cannot be achieved, insulation must be installed at an elevation of 6-12" above the service pipe.
- c) In areas that are not typically cleared of snow (yards), if 6.0' of cover cannot be achieved, insulation must be installed at an elevation of 6-12" about the service pipe.
- d) 6" of Granular backfill will be required for leveling under insulation and will be considered incidental to the insulation item.

14) Connection to Existing Indoor Plumbing

- a) Moving the water meter up to 5' horizontally and any distance vertically from the existing location to accommodate the location of the new 1" HDPE service line will be incidental to the "Connect to existing indoor plumbing" bid item.
- b) Moving the water meter more than 5' horizontally from the existing location, if approved by the engineer in the field, will be paid for under additional bid items.
- c) If vinyl floor tiles are present that could contain asbestos, the homeowner will be responsible for having the floor tiles removed in the area of work. This should be discussed with the owner at the time of basement survey.

15) Electrical Service Grounding



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- a) The Consultant will be responsible to inspect a building's existing electrical grounding and, if necessary, prescribe the installation of supplemental grounding.
- b) It is expected that all buildings will have the electrical service grounded to the metallic water service. All buildings with a planned private water service replacement shall be inspected for the presence of supplemental grounding:
 - i) Inspect the property for evidence of an existing supplemental grounding electrode which could include:
 - (1) A visible ground rod(s) outside the building
 - (2) A visible grounding wire outside the building that disappears underground. This may be a bare copper wire, a wire inside a protective conduit or a wire hidden behind building features.
 - (3) Additional grounding wire found inside the building that leave the building envelope indicating the location to search for (1) or (2) above.
- c) Buildings with no evidence of existing supplemental grounding shall have installation of grounding electrodes included in the plan.

16) Backfill

- a) Utility trench backfill should be suitable onsite material both within and outside of the roadway.
- b) Where onsite material is not suitable, imported materials should be used. Imported materials shall be:
 - i) Granular backfill within the roadway
 - ii) Common borrow outside of the roadway
- c) Estimated quantities for imported backfill materials should be included in all projects.
- d) Project areas where bedrock is present are assumed to have blast rock in the onsite material and may need larger quantities of imported backfill.

WATER MAIN EXTENSION SYMBOLS

- BUILDING
CONCRETE SURFACE
5 FOOT CONTOUR
1 FOOT CONTOUR
CURB & GUTTER
GRAVEL SURFACE
EASEMENT LINE
FENCE LINE
LOT LINE
VACATED PLAT LINE
ROAD RIGHT-OF-WAY LINE
OVERHEAD ELECTRIC
BURIED ELECTRIC
BURIED GAS
BURIED SANITARY SEWER
BURIED STORM
BURIED TELEPHONE
BURIED WATER / WATER SERVICE
EXISTING STORM MANHOLE
EXISTING SANITARY MANHOLE
EXISTING CATCH BASIN
WATER SHUTOFF
WATER VALVE
HYDRANT
GAS VALVE
GAS METER
CLEAN OUT
CONSTRUCTION LIMITS
SODDING TYPE LAWN
BITUMINOUS PAVEMENT
CONCRETE WALK
B624 CONCRETE CURB & GUTTER
2" HDPE IPS DR 9 WATER MAIN PIPE
1" HDPE SDR 9 SERVICE PIPE (PRIVATE OR PUBLIC)

LSLR SITE REPLACEMENT SYMBOLS

- EXISTING WATER MAIN
ABANDONED WATER MAIN
EXISTING WATER SERVICE
EXISTING SERVICE TO BE ABANDONED
EXISTING GAS MAIN
ABANDONED GAS MAIN
EXISTING GAS SERVICE
EXISTING SANITARY MAIN
ABANDONED SANITARY MAIN
EXISTING SANITARY SERVICE
EXISTING STORM
EXISTING BURIED ELECTRIC
EXISTING OVERHEAD ELECTRIC
ABANDONED BURIED ELECTRIC
EXISTING BURIED TELE/FIBER OPTIC
EXISTING OVERHEAD TELE/FIBER OPTIC
EXISTING CURB STOP
EXISTING WATER VALVE
EXISTING GAS VALVE
EXISTING GAS METER
EXISTING SANITARY MANHOLE
EXISTING STORM CATCH BASIN
EXISTING STORM MANHOLE
EXISTING LIGHT POLE
EXISTING ELEC MANHOLE
ROUTE INTERIOR PLUMBING
1" HDPE SDR 9 SERVICE PIPE

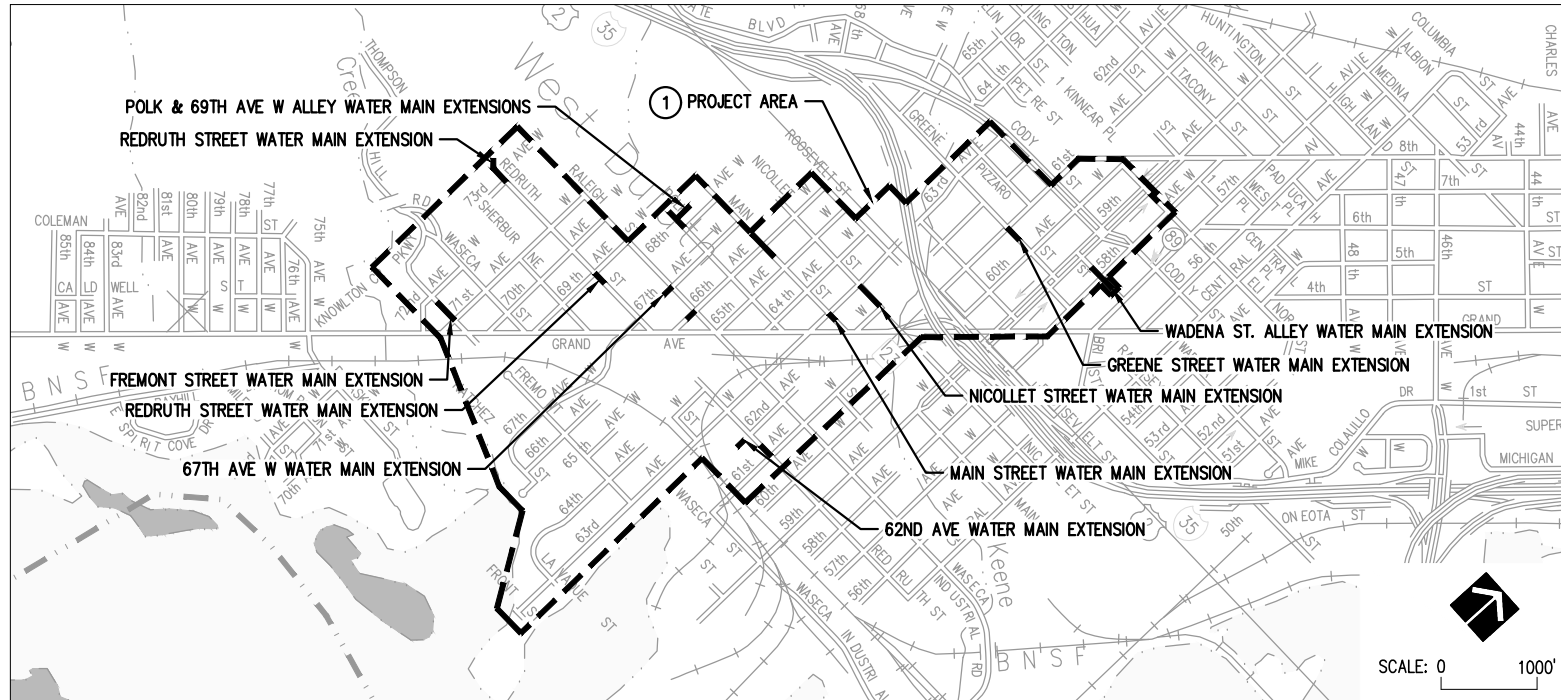
CITY OF DULUTH
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

CONSTRUCTION PLAN FOR LEAD SERVICE LINE REPLACEMENT (LSLR) - FAIRMOUNT 1

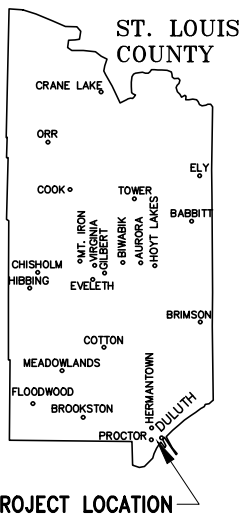
LEAD WATER SERVICE LINE REPLACEMENT, GRADING, BASE, ROADWAY PAVEMENT,
SIDEWALK, CURB & GUTTER, AND WATER MAIN EXTENSIONS

LOCATION

FAIRMOUNT NEIGHBORHOOD



WARNING
LOCATION OF UNDERGROUND UTILITIES
TO BE VERIFIED BY CONTRACTOR.
CALL BEFORE DIGGING.
GOPHER STATE ONE CALL
811 OR 1-800-252-1166
REQUIRED BY LAW



PROJECT LOCATION

KEY NOTE:

- 1 REFER TO SHEET INDEX MAP FOR INDIVIDUAL LSLR SITE LOCATIONS.

UTILITY NOTE:

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".



21 W. Superior St., Ste. 500 | Duluth, MN 55802 | 218.727.8446

SCALES			
WATER MAIN PLAN	10 ft.		
WATER SERVICE PLAN	10 ft.		
PROFILE	10 ft.	5 ft.	
	HORIZ.	VERT.	
INDEX MAP	1000 ft.		

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY
03/19/2025	ALL	ADAM BESSE

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION
"STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE "SUPPLEMENTAL
SPECIFICATIONS" DATED SEPTEMBER 2022, SHALL GOVERN.

THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES DEPARTMENT ENGINEERING DIVISION
2019 EDITION STANDARD CONSTRUCTION SPECIFICATION SHALL APPLY.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST MN MUTCD, INCLUDING
THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET AND INDEX MAP
I1-I12	SITE INDEX PLANS
Q1	STATEMENT OF ESTIMATED QUANTITIES
N1	NOTES
C1-C56	CHARTS
D1-D15	CONSTRUCTION DETAILS
E1-E2	EROSION CONTROL & SWPPP
S1-S533	SERVICE REPLACEMENT PLANS
T1-T5	TRAFFIC CONTROL PLANS
W1-W17	WATER MAIN EXTENSION PLAN AND PROFILE SHEETS

— THIS PLAN CONTAINS 643 SHEETS —

DESIGNERS: (LHB) A. BESSE, I. LARSON, P. BARDEN, D. GAYNOR, C. FARROW

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE
LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: ADAM F. BESSE

SIGNATURE:

DATE: 03/19/2025 LIC. #: 52597

CITY APPROVALS

APPROVED: DULUTH CITY ENGINEER DATE: _____

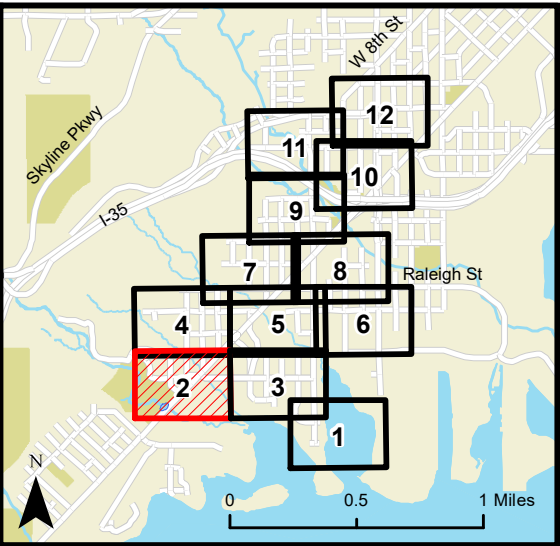
APPROVED: DULUTH CHIEF ENGINEER OF TRANSPORTATION DATE: _____

APPROVED: DULUTH CHIEF ENGINEER OF UTILITIES DATE: _____

CITY OF DULUTH PROJECT: 2248

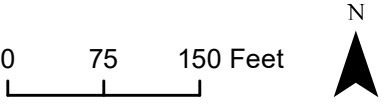
MPFA PROJECT NO. 1690011-21

SHEET 1 OF 643 SHEETS



- NOTES**
1. THE DATA PRESENTED IN THIS MAP IS FROM THE CITY OF DULUTH GIS.
 2. SANITARY MANHOLE DEPTHS REPRESENTED ARE THE MEASUREMENT FROM THE MANHOLE RIM TO THE INVERT OF THE LOWEST PIPE IN THE MANHOLE. MEASUREMENTS DO NOT ACCOUNT FOR THE POSSIBILITY OF INSIDE OR OUTSIDE DROPS. NO NUMBER INDICATES NO DEPTH INFORMATION IS AVAILABLE. MEASUREMENTS ARE AN APPROXIMATION BASED ON RECORDS; CONTRACTOR SHALL FIELD VERIFY FIELD CONDITIONS AND ALL UTILITY LOCATIONS AND DEPTHS.
 3. ROCK DEPTHS AT MANHOLES ARE BASED ON RECORD INFORMATION. ROCK DEPTHS AT SANITARY SEWER MAINS ARE APPROXIMATE BASED ON AVERAGE DEPTH IN AREA.
 4. COORDINATE SYSTEM IS ST. LOUID COUNTY TRANSVERSE MERCATOR 1996.

- LEGEND**
- SERVICE REMOVED FROM PROJECT
 - SERVICE REPLACEMENT SITE
 - SANITARY GRAVITY MAIN
 - SANITARY MANHOLE
 - WATER MAIN
 - WATER HYDRANT
 - STATIC PRESSURE AT HYDRANT
 - SANITARY MANHOLE DEPTH (FT)
 - INDICATES SHALLOW BEDROCK EXPECTED
 - WATER MAIN EXTENSION



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

ADAM F. BESSE
PRINTED NAME

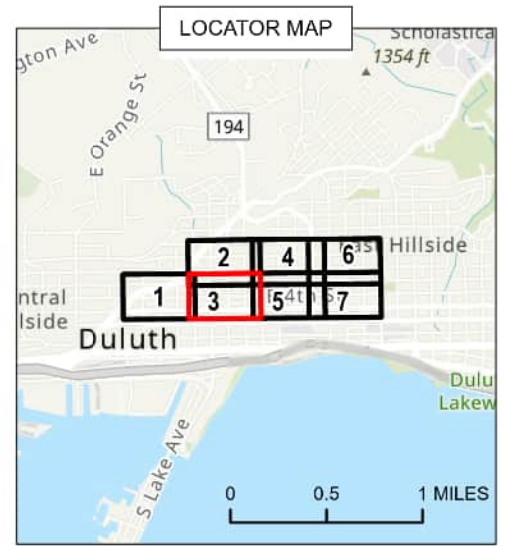
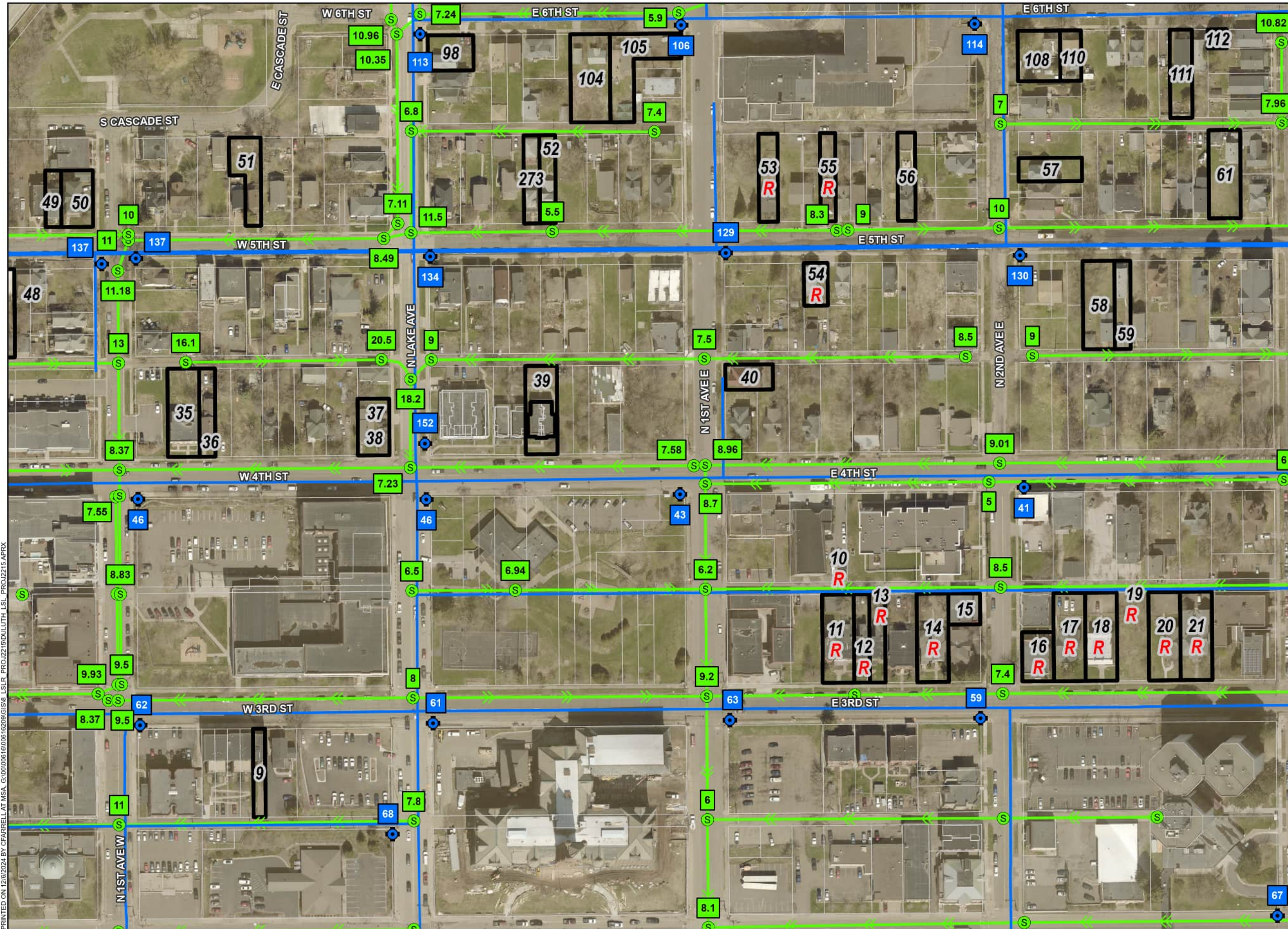
SIGNATURE

03/19/25
DATE
52597
LIC. NO.

CITY PROJECT NUMBER: 2248
2024 LEAD WATER
SERVICE REPLACEMENT
FAIRMOUNT 1

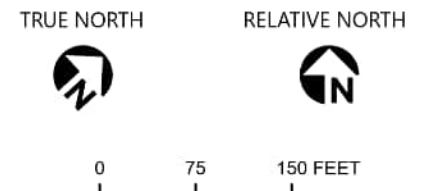
LOCATION
DULUTH, MN 55807

PLANSET
PAGE
I2



- PROJECT SITES
- SANITARY GRAVITY MAIN
- SANITARY MANHOLE
- WATER GRAVITY MAIN
- WATER HYDRANT
- 8.06 STATIC PRESSURE AT HYDRANT (PSI)
- 7.55 SANITARY MANHOLE DEPTH (FT)
- R INDICATES SHALLOW BEDROCK EXPECTED

Historic rock information researched and indicated on the index sheets and plan sheets



PRINTED ON 12/6/2024 BY CAPRELL AT MSA. G:\00\006\16006\16006\GIS\LSLR PROJ\2215\0215\APRX

NOTES:

1. QUANTITIES ARE AN ESTIMATE. NECESSARY QUANTITIES WILL BE DETERMINED BY FIELD CONDITIONS.
2. INCLUDES SALVAGED OR IMPORTED TOPSOIL.
3. UNDISTRIBUTED QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER.
4. PROVIDE TEMPORARY WATER FOR ANY SERVICE INSTALLATION THAT CAN NOT BE COMPLETED IN A SINGLE DAY.
5. REFER TO CITY DETAIL LSLR-14 & LSLR-14A FOR REQUIREMENTS.
6. REFER TO SPECIAL PROVISIONS FOR REQUIREMENTS.
7. ADDRESSES LOCATED ALONG GRAND AVENUE.

STATEMENT OF ESTIMATED QUANTITIES					
NOTES	LINE NUMBER	SPEC NUMBER	DESCRIPTION	UNIT	TOTAL EST. QUANTITY
	1	2021.501	MOBILIZATION	LUMP SUM	1
	2	2101.602	TREE REMOVAL	EACH	57
	3	2104.602	SALVAGE & REINSTALL SIGN	EACH	3
	4	2104.502	SALVAGE & REINSTALL MAILBOX	EACH	1
6	5	2104.603	REMOVE & REPLACE CONCRETE CURB & GUTTER (P)	LIN FT	1 334
6	6	2104.603	REMOVE & REPLACE INTEGRANT CURB (P)	LIN FT	1 052
1	7	2402.603	SALVAGE & REINSTALL RAILING	LIN FT	30
	8	2104.604	REMOVE & REPLACE STREET SECTION, TYPE (A) (P)	SQ YD	157
	9	2104.604	REMOVE & REPLACE STREET SECTION, TYPE (B) (P)	SQ YD	585
	10	2104.604	REMOVE & REPLACE STREET SECTION, TYPE (C) (P)	SQ YD	439
	11	2104.604	REMOVE & REPLACE STREET SECTION, TYPE (D) (P)	SQ YD	193
	12	2104.604	REMOVE & REPLACE STREET SECTION, TYPE (E) (P)	SQ YD	647
	13	2104.604	REMOVE & REPLACE STREET SECTION, TYPE (F) (P)	SQ YD	50
	14	2104.604	REMOVE & REPLACE STREET SECTION, TYPE (G) (P)	SQ YD	50
1	15	2104.604	REMOVE & REPLACE CONCRETE DRIVEWAY	SQ YD	127
1	16	2104.604	REMOVE & REPLACE BITUMINOUS DRIVEWAY	SQ YD	24
1	17	2104.604	REMOVE & REPLACE GRAVEL DRIVEWAY	SQ YD	64
6	18	2104.618	REMOVE & REPLACE 4" CONCRETE WALK (P)	SQ FT	35 771
3	19	2104.618	REMOVE & REPLACE 6" CONCRETE WALK (P)	SQ FT	500
1	20	2104.618	SALVAGE & REINSTALL BRICK PAVERS	SQ FT	93
3	21	2106.507	GRANULAR EMBANKMENT (CV)	CU YD	100
3	22	2106.507	COMMON EMBANKMENT (CV)	CU YD	100
1	23	2411.607	REMOVE & REPLACE CONCRETE STEPS	CU YD	30
3	24	2411.607	CONCRETE RETAINING WALL, TYPE L	CU YD	30
3	25	2451.507	STRUCTURE EXCAVATION CLASS R	CU YD	100
	26	2451.602	POTHOLE WATER SERVICE FOR MATERIAL IDENTIFICATION	EACH	78
	27	2451.602	PROVIDE EXCAVATION FOR HOT TAP BY CITY EMPLOYEES	EACH	32
	28	2503.602	TELEWISE & LOCATE SANITARY SERVICE	EACH	301
3	29	2503.602	SANITARY SERVICE REPAIR IN TRENCH	EACH	20
4	30	2504.601	TEMPORARY WATER	LUMP SUM	1
	31	2504.602	CONCRETE ENCASED VALVE BOX COVER	EACH	32
	32	2504.602	CONNECT TO EXISTING CORPORATION STOP	EACH	110
	33	2504.602	CONNECT TO EXISTING CURB STOP	EACH	361
	34	2504.602	REPLACE CURB STOP	EACH	112
	35	2504.602	INSTALL CURB STOP	EACH	50
	36	2504.602	PREPARE FINISHED BASEMENT FOR WATER SERVICE REPLACEMENT	EACH	27
	37	2504.602	CONNECT TO EXISTING INDOOR PLUMBING	EACH	490
	38	2504.602	ABANDON WATER SERVICE AT CORPORATION STOP IN SEPARATE EXCAVATION	EACH	32
	39	2504.602	CONNECT TO EXISTING PLUMBING, CRAWLSPACE	EACH	31
	40	2504.602	2" CURB STOP & BOX	EACH	18
	41	2504.602	BLOWOFF ASSEMBLY	EACH	18
	42	2504.602	2"x1" TAPPING TEE WITH ELECTROFUSION SADDLE	EACH	40
	43	2504.603	2" DIPS HDPE WATER MAIN SDR 11 (HORIZONTAL DIRECTIONAL DRILL)	LIN FT	2 799
	44	2504.603	INDOOR PLUMBING TO RELOCATE WATER METER	LIN FT	4 645
6	45	2504.603	1" HDPE SDR 9 SERVICE PIPE (PUBLIC) (P)	LIN FT	3 172
3	46	2504.603	1" COPPER SERVICE PIPE (PUBLIC)	LIN FT	200
6	47	2504.603	1" HDPE SDR 9 SERVICE PIPE (PRIVATE) (P)	LIN FT	18 293
3	48	2504.603	1" COPPER SERVICE PIPE (PRIVATE)	LIN FT	239
1, 3, 5	49	2504.604	POLYSTYRENE INSULATION	SQ YD	300
	50	2545.602	ELECTRICAL SERVICE GROUND	EACH	297
1	51	2545.603	SALVAGE & REINSTALL FENCE	LIN FT	352
7	52	2563.601	TRAFFIC CONTROL--GRAND AVENUE	LUMP SUM	1
	53	2563.601	TRAFFIC CONTROL	LUMP SUM	1
	54	2573.601	EROSION CONTROL	LUMP SUM	1
3	55	2575.604	TURF ESTABLISHMENT	SQ YD	775
2, 8	56	2575.604	SODDING TYPE LAWN (PUBLIC) (P)	SQ YD	2 726
2	57	2575.618	SALVAGE & REINSTALL LANDSCAPE GARDEN	SQ FT	1 031

(P) DENOTES PLAN QUANTITY

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

ADAM F. BESSE
PRINTED NAME


SIGNATURE

03/19/2025
DATE
52597
LIC. NO.

FAIRMOUNT 1 LSLR

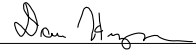
CITY PROJECT NO. 2248

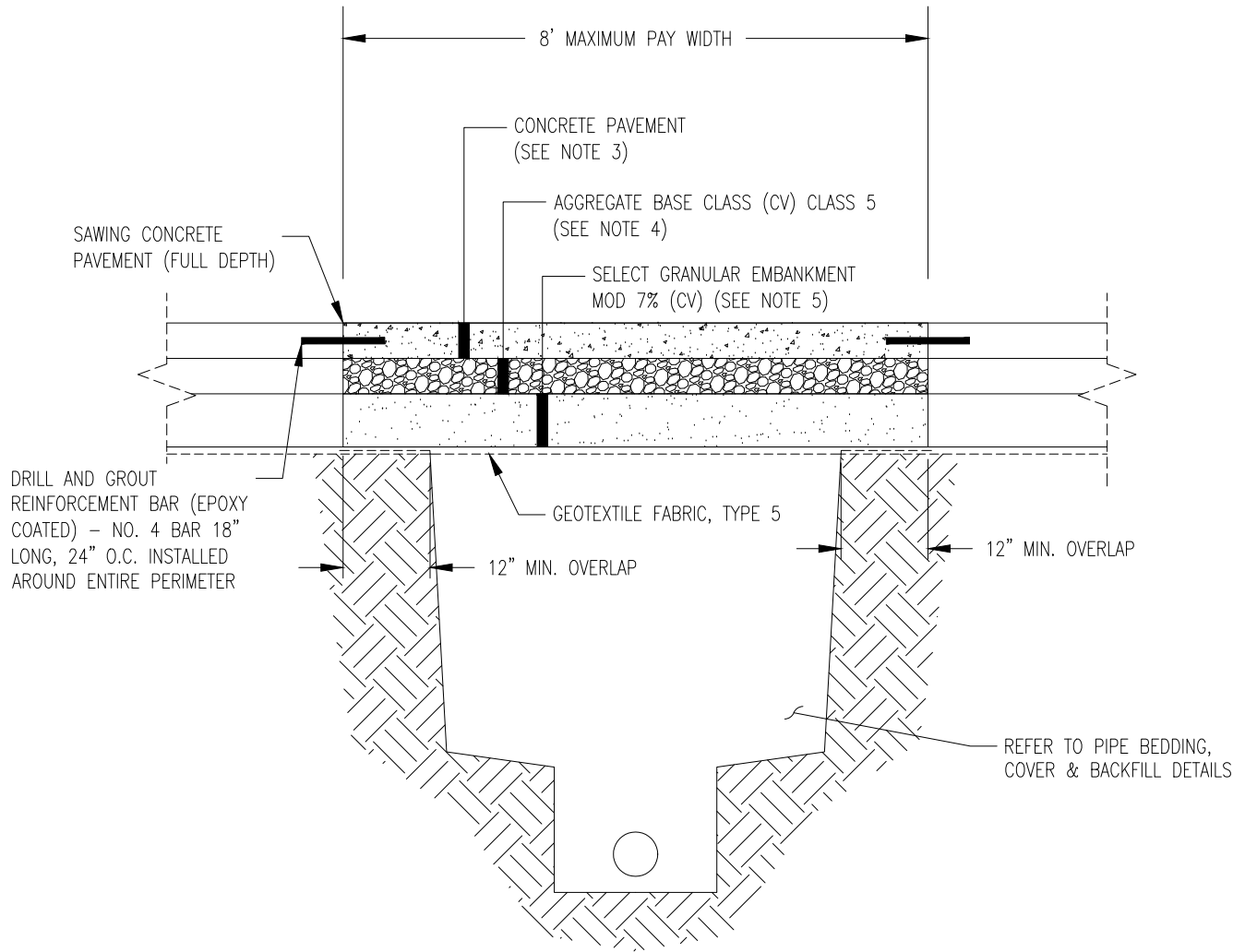
LEAD SERVICE LINE REPLACEMENT
FAIRMOUNT 1

STATEMENT OF ESTIMATED QUANTITIES

SHEET NO. Q1

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LINE	SPEC NUMBER	DESCRIPTION	UNIT	UNDISTRI- BUTED QTY	SITE 1 3202 RESTORM EL ST	SITE 2 3303 VERNON ST	SITE 3 3301 VERNON ST	SITE 4 3305 VERNON ST	SITE 5 3307 VERNON ST	SITE 6 3309 VERNON ST	SITE 7 3313 VERNON ST	SITE 8 3315 VERNON ST	SITE 9 3319 VERNON ST	SITE 10 3321 VERNON ST	SITE 11 3140 RESTORM EL ST	SITE 12 3207 VERNON ST	SITE 13 3209 VERNON ST	SITE 14 3211 VERNON ST	SITE 15 3215 VERNON ST	SITE 16 3217 VERNON ST	SITE 17 3223 VERNON ST	SITE 18 3227 VERNON ST	SITE 19 3226 VERNON ST			
1	2021.501	MOBILIZATION	LUMP SUM	1																						
2	2101.502	CLEARING	TREE					1					1				1									
3	2101.502	GRUBBING	TREE			1		1					1				1									
4	2104.602	SALVAGE & REINSTALL STREET SIGN	EACH	20																						
5	2104.603	REMOVE & REPLACE CONCRETE CURB & GUTTER	(P) LIN FT																							
6	2104.603	REMOVE & REPLACE INTEGRANT CURB	(P) LIN FT			8	8			8	8		8		8		8		8	16	8	8	8			
7	2104.603	SALVAGE & REINSTALL FENCE	LIN FT	200																						
8	2104.604	REMOVE & REPLACE BITUMINOUS DRIVEWAY	SQ YD	38																						
9	2104.604	REMOVE & REPLACE CONCRETE DRIVEWAY	SQ YD	39																						
10	2104.604	REMOVE & REPLACE STREET SECTION, TYPE A	(P) SQ YD																							
11	2104.604	REMOVE & REPLACE STREET SECTION, TYPE B	(P) SQ YD																							
12	2104.604	REMOVE & REPLACE STREET SECTION, TYPE C	(P) SQ YD																							
13	2104.604	REMOVE & REPLACE STREET SECTION, TYPE D	(P) SQ YD																							
14	2104.604	REMOVE & REPLACE STREET SECTION, TYPE E	(P) SQ YD			7	7	7		7	7		7		7		7		7	9	7	2	4			
15	2104.604	REMOVE & REPLACE STREET SECTION, TYPE F	SQ YD	100																						
16	2104.604	REMOVE & REPLACE STREET SECTION, TYPE G	SQ YD	100																						
17	2104.618	REMOVE & REPLACE 4" CONCRETE WALK	(P) SQ FT		75	75	100	75		75	75		75			75	75		75	75	75	75				
18	2104.618	REMOVE & REPLACE 6" CONCRETE WALK	(P) SQ FT																							
19	2104.618	REMOVE & REPLACE BRICK PAVERS	SQ FT																							
20	2106.507	COMMON EMBANKMENT (CV)	CU YD	250																						
21	2301.602	DRILL AND GROUT DOWEL BAR (EPOXY COATED)	EACH																							
22	2411.607	REMOVE & REPLACE CONCRETE STEPS	CU YD	24																						
23	2411.607	RETAINING WALL TYPE L	CU YD	50																						
24	2451.507	GRANULAR EMBANKMENT (CV)	CU YD	250																						
25	2451.507	STRUCTURE EXCAVATION CLASS R	CU YD	500																						
26	2451.602	POTHOLE WATER SERVICE FOR MATERIAL IDENTIFICATION	EACH	9																		1				
27	2451.602	PROVIDE EXCAVATION FOR HOT TAP BY CITY EMPLOYEES	EACH																							
28	2451.607	GRANULAR BEDDING (CV)	CU YD	150																						
29	2503.602	TELEVISE AND LOCATE SANITARY SERVICE	EACH	25	1		1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1			
30	2503.603	SANITARY SERVICE REPAIR IN TRENCH	LIN FT	200																						
31	2504.601	TEMPORARY WATER SERVICE	LUMP SUM	1																						
32	2504.602	2" x 1" TAPPING TEE W/ ELECTROFUSION SADDLE	EACH																							
33	2504.602	2-INCH CURB STOP AND BOX	EACH																							
34	2504.602	ABANDON CURB STOP	EACH																							
35	2504.602	ABANDON WATER SERVICE AT CORPORATION STOP IN SEPARATE EXCAVATION	EACH																							
36	2504.602	BLOWOFF ASSEMBLY	EACH																							
37	2504.602	CONCRETE ENCASED VALVE BOX COLLAR	EACH																							
38	2504.602	CONNECT TO EXISTING CORPORATION STOP	EACH			1	1	1		1	1		1		1		1		1	1	1					
39	2504.602	CONNECT TO EXISTING CURB STOP	EACH		1											1						1	1			
40	2504.602	CONNECT TO EXISTING INDOOR PLUMBING	EACH		1		1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1			
41	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, CRAWL SPACE	EACH							1																
42	2504.602	INSTALL CURB STOP	EACH																							
43	2504.602	PREPARE FINISHED BASEMENT FOR WATER SERVICE REPLACEMENT	EACH	4																						
44	2504.602	REPLACE CURB STOP	EACH			1	1	1	1	1	1	1	1	1	1		1	1	1	1	1					
45	2504.603	1" COPPER SERVICE PIPE (PRIVATE)	LIN FT	250																						
46	2504.603	1" COPPER SERVICE PIPE (PUBLIC)	LIN FT	250																						
47	2504.603	1" HDPE SDR 9 SERVICE PIPE (PRIVATE)	(P) LIN FT		12		28	40	23	36	30	29	26	27	40	28	28	36	35	34	23	37	39			
48	2504.603	1" HDPE SDR 9 SERVICE PIPE (PUBLIC)	(P) LIN FT			31	31	32	3	31	31	3	34	3	8		30	3	26	26	37					
49	2504.603	2" HDPE SDR 9 WATER MAIN	LIN FT																							
50	2504.603	INDOOR PLUMBING TO RELOCATE WATER METER	LIN FT	228			10				16	30	35	20		30		10	25							
51	2504.604	3" POLYSTYRENE INSULATION	SQ YD	404																						
52	2531.618	TRUNCATED DOMES	SQ FT																							
53	2545.602	ELECTRICAL SERVICE GROUND	EACH	19	1		1			1		1	1	1	1		1		1		1	1				
54	2563.601	TRAFFIC CONTROL	LUMP SUM	1																						
55	2563.602	TRAFFIC CONTROL, ARTERIAL ROAD	EACH	10																						
56	2571.602	SALVAGE & REINSTALL PLANTING (BUSH, SHRUB, SMALL TREE)	EACH	7																						
57	2573.601	EROSION CONTROL	LUMP SUM	1																						
58	2575.504	SODDING TYPE LAWN (PUBLIC)	(P) SQ YD		8	7	5	7		7	7		7			7	7		7	7	7	7	7			
59	2575.604	TURF ESTABLISHMENT, SEEDING	SQ YD	200																						
60	2575.618	SALVAGE & REINSTALL LANDSCAPE GARDEN	SQ YD	17																						
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.					DAN HINZMANN PRINTED NAME		 SIGNATURE		12/23/2024 DATE 49874 LIC. NO.		LINCOLN PARK LSLR					2025 LEAD WATER SERVICE REPLACEMENTS LINCOLN PARK							STATEMENT OF ESTIMATED QUANTITIES			
											CITY PROJECT NO. 2249												SHEET NO. C1			



- NOTES:
1. REMOVE AND REPLACE STREET SECTION TYPE "F" SHALL BE CONSTRUCTED WHERE EXISTING STREET CONSISTS OF UP TO 8" OF CONCRETE PAVEMENT WITH AGGREGATE BASE AND GRANULAR SUBBASE LAYER.
 2. MAXIMUM PAY WIDTH SHALL BE 8'.
 3. CONCRETE PAVEMENT SHALL MATCH EXISTING PAVEMENT THICKNESS.
 4. AGGREGATE BASE (CV) CLASS 5 SHALL MATCH EXISTING BASE THICKNESS OR 8.5", WHICHEVER IS GREATER.
 5. SELECT GRANULAR EMBANKMENT MOD 7% (CV) SHALL MATCH EXISTING SUBBASE THICKNESS OR 12", WHICHEVER IS GREATER.
 6. FOR CONCRETE PATCHES THAT FALL ON CONTRACTION JOINTS, DOWEL BARS WILL BE PAID UNDER SEPARATE ITEMS.
 7. EXISTING STREET SECTION MAY OR MAY NOT INCLUDE CURB AND GUTTER. REPLACEMENT OF CURB AND GUTTER SHALL BE PAID FOR UNDER SEPARATE BID ITEMS.
 8. INCLUDES ANY NECESSARY AGGREGATE SHOULDER RESTORATION.
 9. INCLUDES PROTECTING AND/OR REPLACING CURB DRAIN, IF PRESENT.
 11. UNLESS OTHERWISE INDICATED, ALL WORK SHOWN ON THIS DETAIL SHALL BE CONSIDERED AS INCLUDED FOR PAYMENT UNDER THE "REMOVE & REPLACE STREET SECTION TYPE 'F'" PAY ITEM.

REMOVE & REPLACE STREET SECTION TYPE 'F'

LSLR-8

REVISED/APPROVED 04/23/2024

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: _____

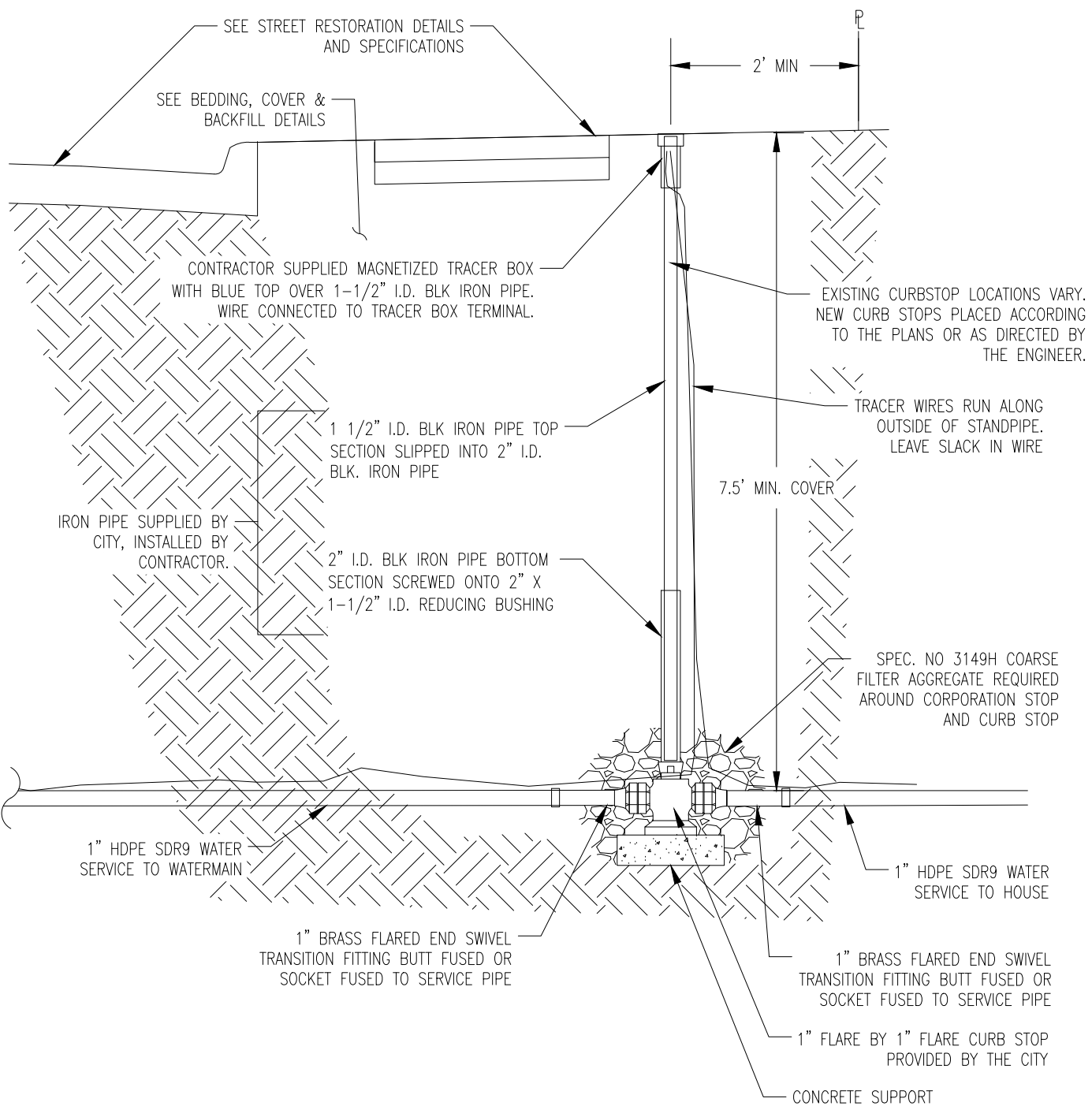
JON LOYE, P.E.
TYPE NAME

DATE: DECEMBER 6, 2024

LIC. NO: 52222



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802



- NOTES:
1. INCLUDES REMOVAL OR ABANDONMENT OF EXISTING CURB STOP AT THE DIRECTION OF THE ENGINEER.
 2. THE LOCATION OF THE NEW CURB STOP MAY BE MOVED UP TO 4' TO AVOID DISTURBANCE OF EXISTING SANITARY SEWER SERVICE.
 3. WITHIN THE RIGHT OF WAY, ALL WATER SERVICE LINES SHALL BE INSTALLED PERPENDICULAR TO THE STREET RIGHT OF WAY.
 4. TRACER WIRE SHALL BE CONTINUOUS FROM ANODE TO TRACER BOX AND FROM TRACER BOX TO INSIDE HOUSE.
 5. ABANDONED LOW PRESSURE GAS PIPES MAY EXIST NEAR WATER SERVICE. CONTRACTOR MAY CHOOSE REMOVE ABANDONED LOW PRESSURE GAS SERVICE. REMAINING ENDS OF ABANDONED GAS SERVICE SHALL BE FITTED WITH WATER PROOF CAPS.
 6. UNLESS OTHERWISE INDICATED, ALL WORK SHOWN ON THIS DETAIL SHALL BE CONSIDERED AS INCLUDED FOR PAYMENT UNDER THE "REPLACE CURB STOP" PAY ITEM.

REPLACE CURB STOP

LSLR-10

REVISED/APPROVED 04/23/2024

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE

LEAD SERVICE LINE REPLACEMENT - CENTRAL HILLSIDE 1

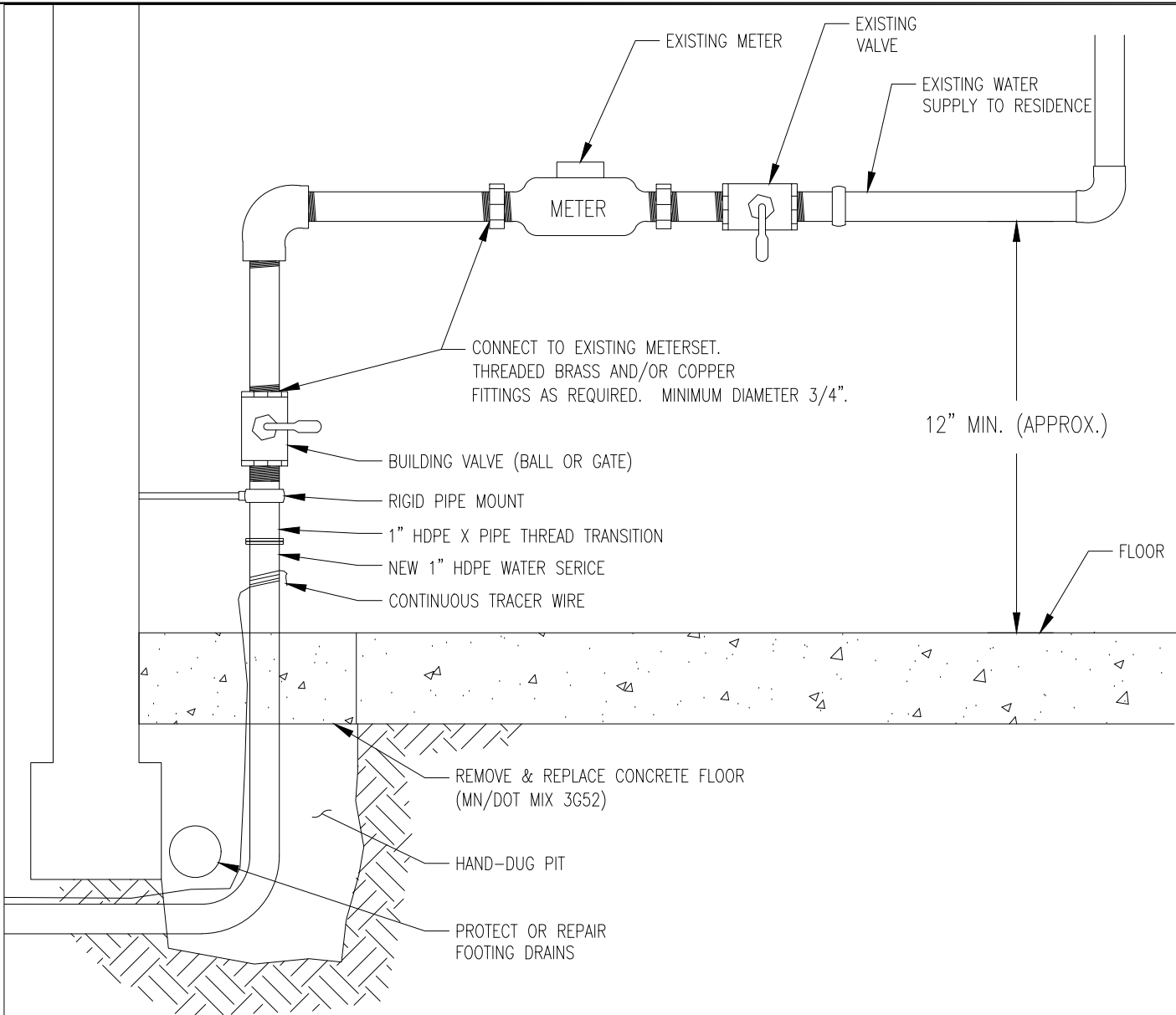
CITY PROJECT NO.:2215

MPFA PROJECT NO.: 1690011-20

DRAWN BY: WRT

CONSTRUCTION DETAILS

SHEET NO. D3



- NOTES:
1. BREAK AND REMOVE CONCRETE IN A CONTROLLED MANNER TO PREVENT WAYWARD CRACKING. REMOVE MINIMUM AMOUNT OF CONCRETE NECESSARY TO REPLACE THE WATER SERVICE. CONCRETE PATCHES SHALL MATCH EXISTING FLOOR THICKNESS, BE WATERTIGHT AND HAVE A SMOOTH TROWELED FINISH.
 2. THE WATER METER MAY NEED TO BE MOVED AND/OR RAISED TO ACCOMMODATE THE LOCATION OF REPLACED WATER SERVICE. IF NECESSARY, "CONNECT TO EXISTING INDOOR PLUMBING" ITEM INCLUDES RAISING THE METER, MOVING THE METER UP TO 5' HORIZONTALLY AND MODIFYING/REPLACING THE CONNECTION TO THE DOWNSTREAM HOUSE SUPPLY PIPE.
 3. PIPE AND FITTINGS BETWEEN BUILDING VALVE AND METER SHALL BE THREADED BRASS AND/OR COPPER OF NOT LESS THAN 3/4" DIAMETER.
 4. METERS SHALL ALWAYS BE INSTALLED IN A HORIZONTAL POSITION.
 7. WATER METER AND ADJACENT PIPING SHALL BE RIGIDLY MOUNTED. PIPE SHALL BE SUPPORTED TO COMPLY WITH PLUMBING CODES.
 8. VALVES SHALL BE GATE OR FULL PORT BALL VALVES.
 9. PRESSURE REDUCING VALVE, WHERE PRESENT, SHALL BE SALVAGED AND REINSTALLED.
 10. ANY REMAINING PORTIONS OF THE ORIGINAL LEAD WATER SERVICE SHALL BE CUT AND ABANDONED BELOW THE CONCRETE. IF THE NEW WATER SERVICE IS INSTALLED IN A DIFFERENT LOCATION, THE ABANDONED LEAD WATER SERVICE SHALL BE LEFT IN PLACE WITH THE BUILDING VALVE CLOSED AND DISCONNECTED FROM HOUSE PLUMBING.
 11. THE AREA AROUND THE WATER METER SHALL BE PROTECTED, CLEANED, AND RESTORED TO THE PREEXISTING CONDITION.
 6. UNLESS OTHERWISE INDICATED, ALL WORK SHOWN ON THIS DETAIL SHALL BE CONSIDERED AS INCLUDED FOR PAYMENT UNDER THE "CONNECT TO EXISTING INDOOR PLUMBING" PAY ITEM.

CONNECT TO EXISTING INDOOR PLUMBING


LSLR-13

REVISED/APPROVED 04/23/2024

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

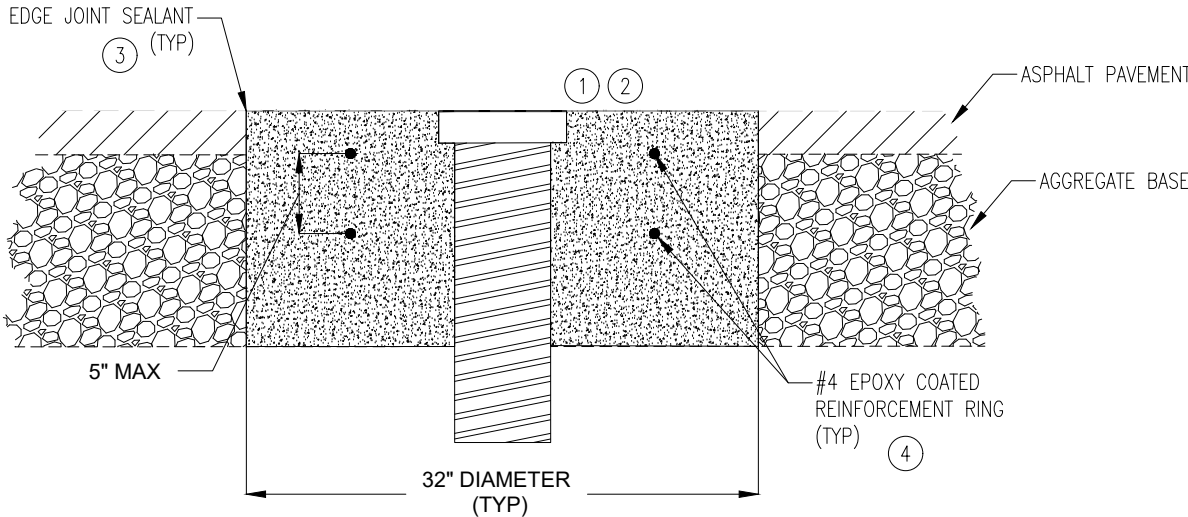
SIGNATURE: 

JON LOYE, P.E.
TYPE NAME

DATE: DECEMBER 6, 2024
LIC. NO: 52222

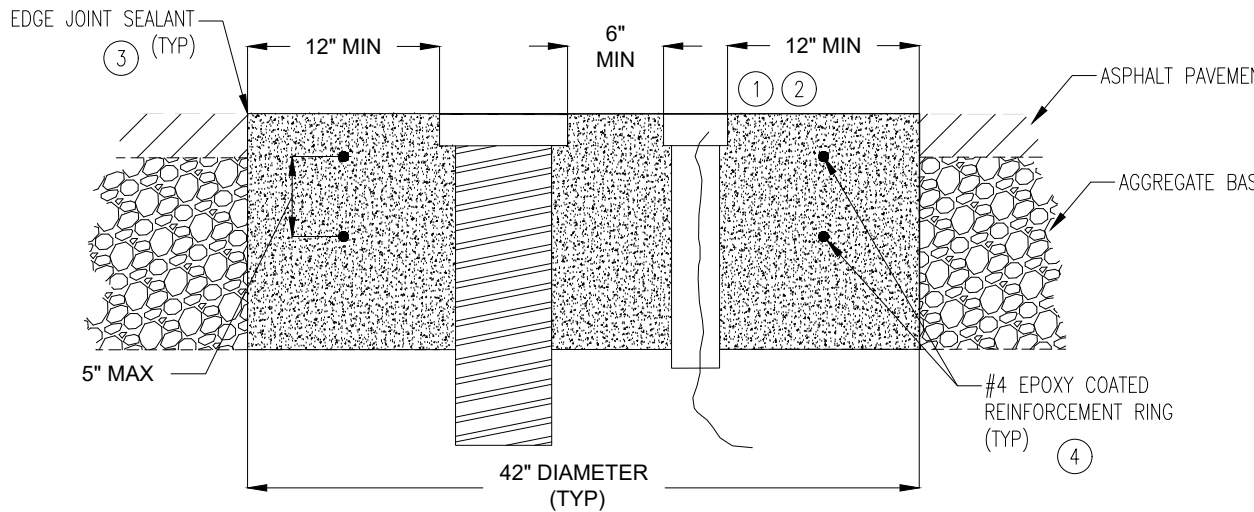


CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802



- NOTES:
1. CONCRETE (MIX NO. 3G52) COLLAR TO ENCASE VALVE BOX CASTING.
 2. CONCRETE COLLAR SHALL BE CIRCULAR LAYOUT. PAVEMENT AND BASE SHALL BE CUT OUT WITH ROTATING CUTTING DEVICE
 3. FINISH CONCRETE EDGE WITH 1/4" RADIUS. SEAL JOINT BETWEEN PAVEMENT AND COLLAR.
 4. MAINTAIN 3.5" COVER ON REINFORCEMENT.

CONCRETE ENCASED WATER VALVE BOX COLLAR



CONCRETE ENCASED WATER VALVE BOX COLLAR W/
TRACER BOX ALTERNATIVE

CONCRETE ENCASED VALVE BOX COLLAR IN ROADWAY

W-19

REVISED/APPROVED 01/20/2017

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE

LEAD SERVICE LINE REPLACEMENT - CENTRAL HILLSIDE 1

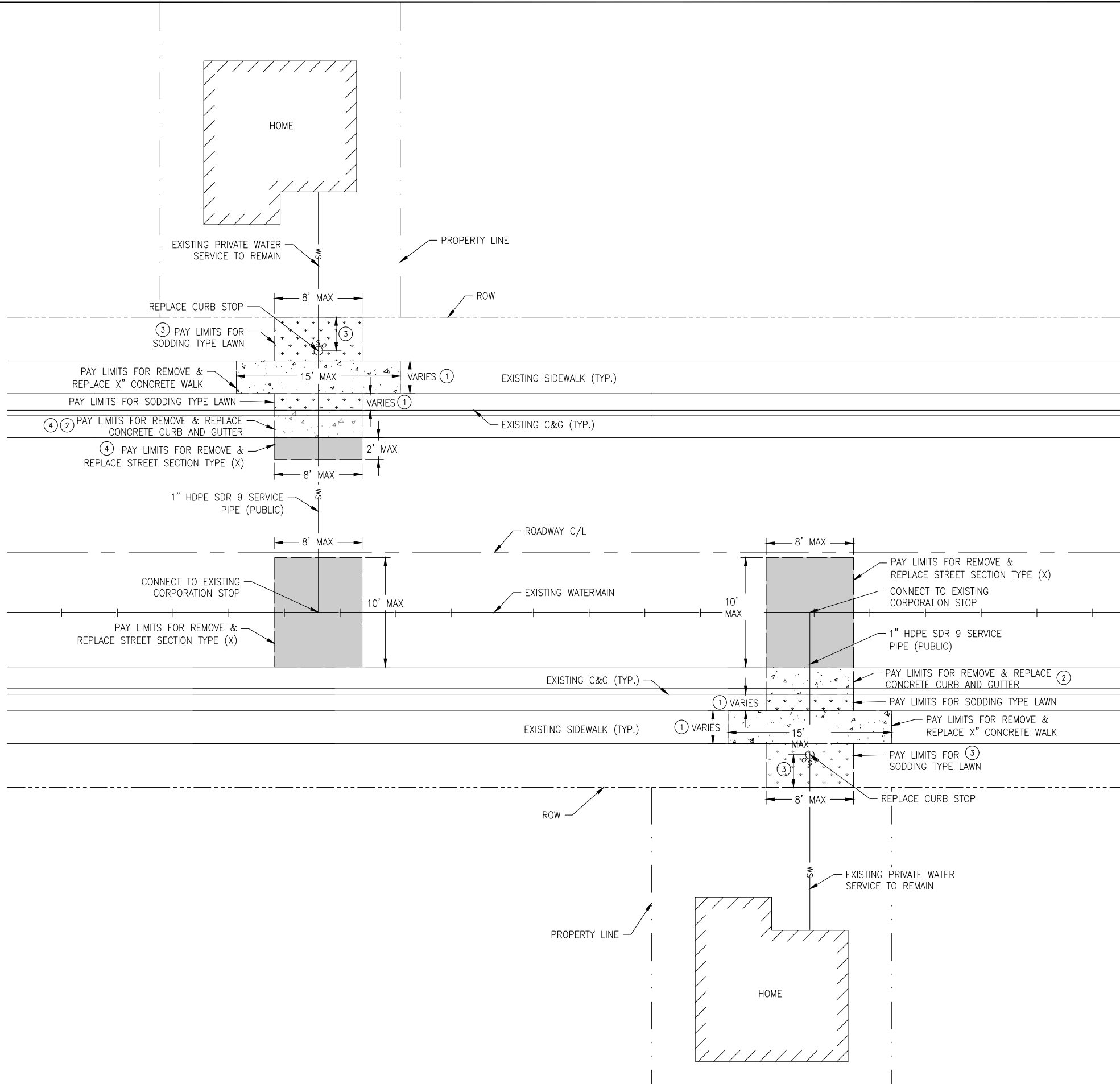
CITY PROJECT NO.:2215

MPFA PROJECT NO.: 1690011-20

DRAWN BY: WRT

CONSTRUCTION DETAILS

SHEET NO. D5



KEY NOTES:

- ① SHALL MATCH EXISTING WALK OR CURB TYPE GEOMETRY.
- ② LIMIT OF MEASUREMENT FOR REMOVE & REPLACE INTEGRANT CURB, WHERE PRESENT, SHALL BE LIMITED TO A 2-FT OFFSET MEASURED FROM EXISTING FACE OF CURB.
- ③ LIMITS OF PAYMENT FOR SODDING TYPE LAWN AREAS SHALL BE A MAXIMUM OF 6-FT BEHIND CURB STOP OR AS MEASURED TO THE RIGHT-OF-WAY, WHICHEVER IS LESS.
- ④ CURB AND GUTTER AND PAVEMENT REMOVALS SHALL ONLY BE PAID FOR WHERE THE LOCATION OF THE INPLACE CURB STOP IS LOCATED WITHIN 4-FT OF THE INPLACE BACK OF CURB.

NOTE:

NO SEPARATE MEASUREMENT OR ADDITIONAL PAYMENT SHALL BE MADE FOR ANY CONSTRUCTION IMPACTS BEYOND THE PAY LIMITS SHOWN AND ALL SUCH IMPACTS SHALL BE FULLY RESTORED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CITY.

TYPICAL WATER SERVICE REPLACEMENT
(PUBLIC SIDE LEAD SERVICE REPLACEMENT ONLY)

APPLIES: LEAD SERVICE REPLACEMENT FROM CURB
STOP TO CONNECTION TO INDOOR PLUMBING

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: _____

JON LOYE, P.E.
TYPE NAME

DATE: DECEMBER 6, 2024

LIC. NO: 52222



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

LEAD SERVICE LINE REPLACEMENT – CENTRAL HILLSIDE 1

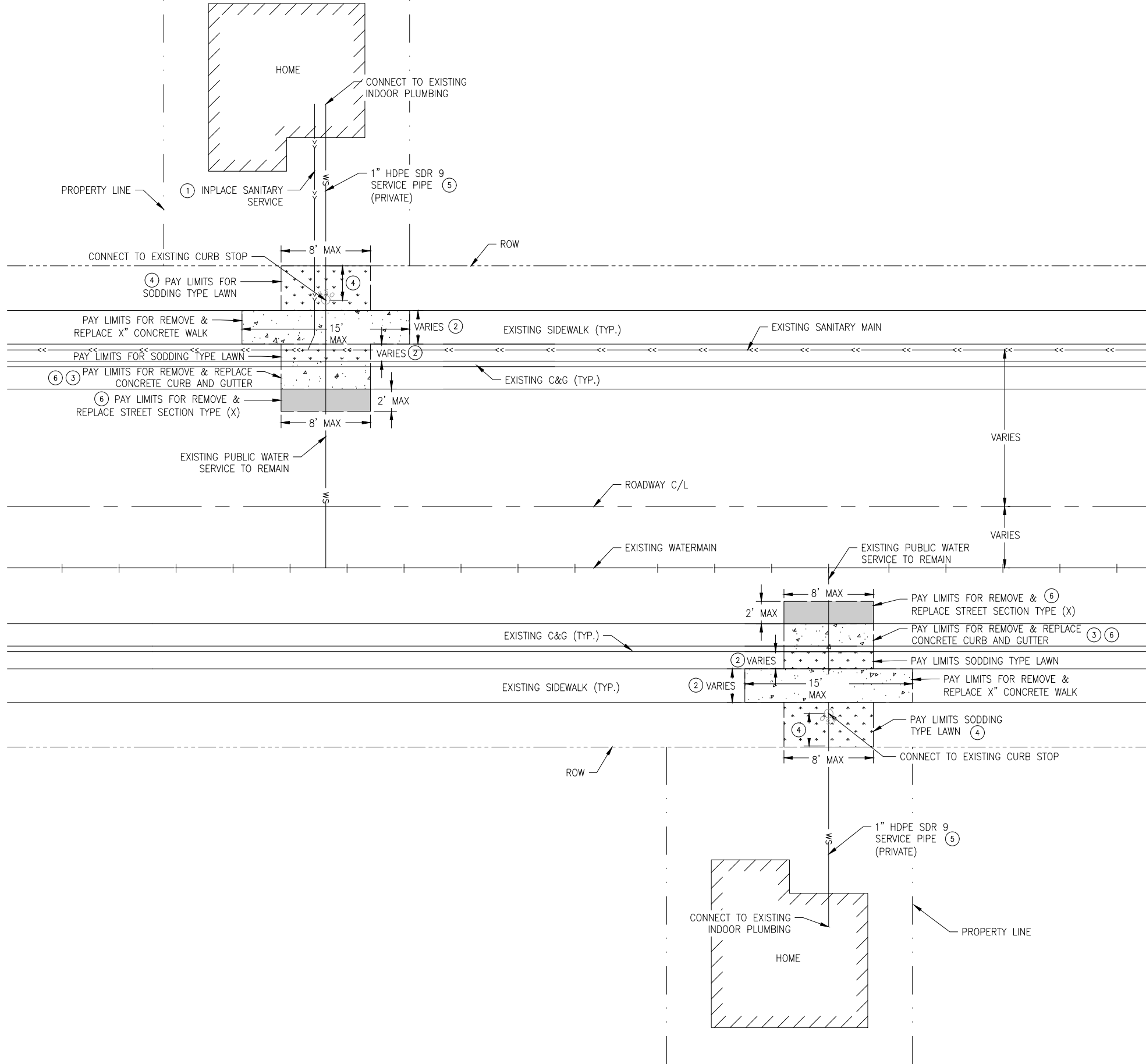
CITY PROJECT NO.:2215

MPFA PROJECT NO.: 1690011-20

DRAWN BY: LHB, INC.

CONSTRUCTION DETAILS

SHEET NO. D10



KEY NOTES:

- ① WHERE THE SUSPECTED PRESENCE OF BEDROCK IS INDICATED IN THE PLANS OR WHERE DIRECTED BY THE ENGINEER DUE TO FIELD CONDITIONS, THE CONTRACTOR SHALL BE PREPARED TO UTILIZE A TRENCHLESS METHOD UTILIZING THE INPLACE SANITARY SEWER SERVICE LINE TO COMPLETE THE WATER SERVICE REPLACEMENT. IN SUCH CASES, THE WORK SHALL INCLUDE FULLY REPLACING THE SANITARY SERVICE LINE. REFER TO SPECIAL PROVISIONS FOR REQUIREMENTS. UTILIZING THE SANITARY SERVICE TO PLACE THE WATER SERVICE LINE IS OTHERWISE NOT PERMITTED AND THE SANITARY SERVICE SHALL BE PROTECTED DURING THE WORK.
- ② SHALL MATCH EXISTING WALK OR CURB TYPE GEOMETRY.
- ③ LIMIT OF MEASUREMENT FOR REMOVE & REPLACE INTEGRANT CURB, WHERE PRESENT, SHALL BE LIMITED TO A 2-FT OFFSET MEASURED FROM EXISTING FACE OF CURB.
- ④ LIMITS OF PAYMENT FOR SODDING TYPE LAWN AREAS SHALL BE A MAXIMUM OF 6-FT BEHIND CURB STOP OR AS MEASURED TO THE RIGHT-OF-WAY, WHICHEVER IS LESS.
- ⑤ NO PAYMENT SHALL BE MADE FOR ANY REMOVALS OR RESTORATION ON A PRIVATE PROPERTY BUT ALL COSTS SHALL BE CONSIDERED INCLUDED FOR PAYMENT UNDER THE 1" HDPE SDR 9 SERVICE PIPE (PRIVATE) PAY ITEM. REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
- ⑥ CURB AND GUTTER AND PAVEMENT REMOVALS SHALL ONLY BE PAID FOR WHERE THE LOCATION OF THE INPLACE CURB STOP IS LOCATED WITHIN 4-FT OF THE INPLACE BACK OF CURB.

NOTE:

NO SEPARATE MEASUREMENT OR ADDITIONAL PAYMENT SHALL BE MADE FOR ANY CONSTRUCTION IMPACTS BEYOND THE PAY LIMITS SHOWN AND ALL SUCH IMPACTS SHALL BE FULLY RESTORED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CITY.

TYPICAL WATER SERVICE REPLACEMENT
(PRIVATE SIDE LEAD SERVICE REPLACEMENT ONLY)

APPLIES: LEAD SERVICE REPLACEMENT FROM CURB
STOP TO CONNECTION TO INDOOR PLUMBING

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: 

JON LOYE, P.E.
TYPE NAME

DATE: DECEMBER 6, 2024

LIC. NO: 52222



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

LEAD SERVICE LINE REPLACEMENT – CENTRAL HILLSIDE 1

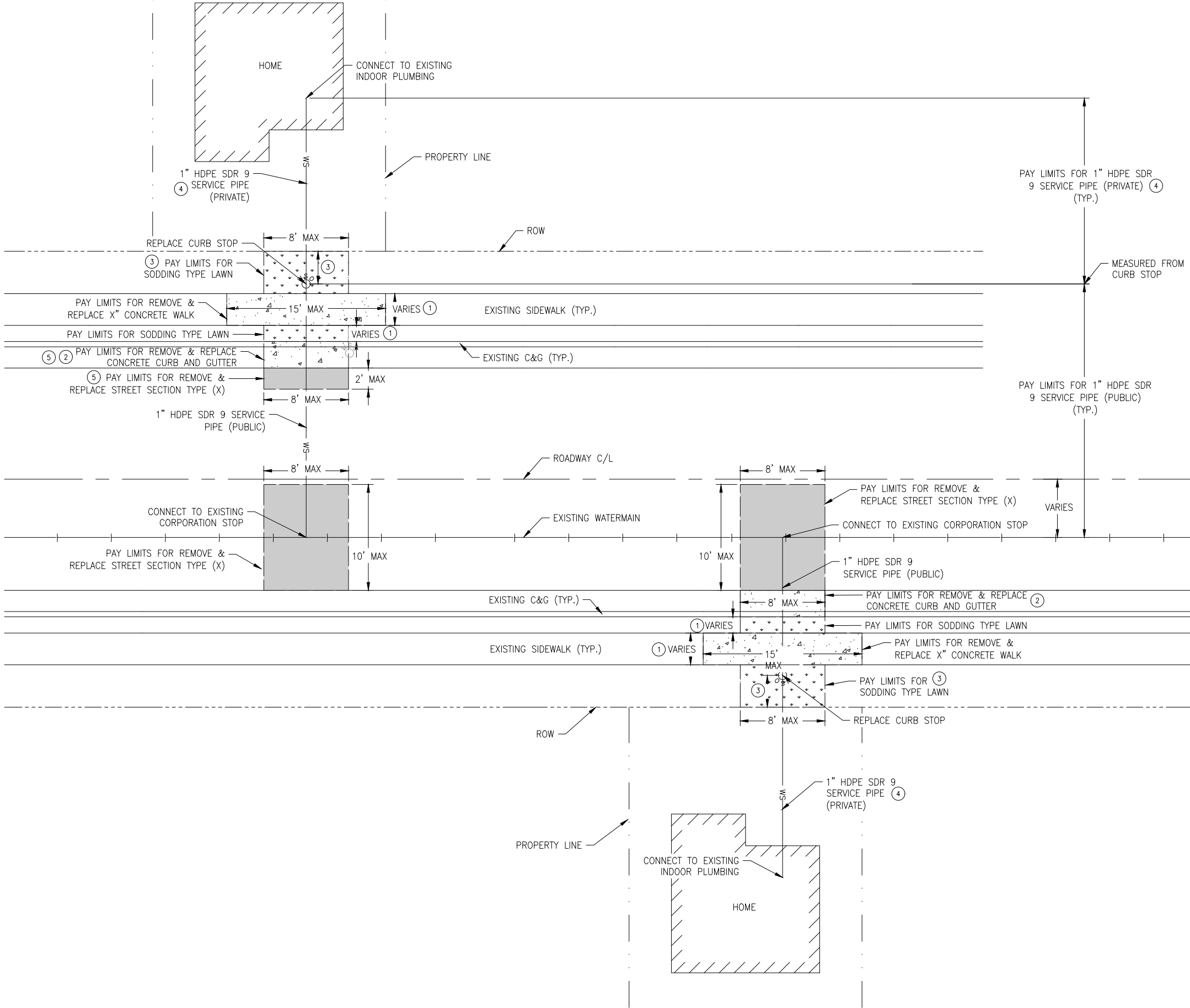
CITY PROJECT NO.:2215

MPFA PROJECT NO.: 1690011-20

DRAWN BY: LHB, INC.

CONSTRUCTION DETAILS

SHEET NO. D11



KEY NOTES:

- ① SHALL MATCH EXISTING WALK OR CURB TYPE GEOMETRY.
- ② LIMIT OF MEASUREMENT FOR REMOVE & REPLACE INTEGRANT CURB, WHERE PRESENT, SHALL BE LIMITED TO A 2-FT OFFSET MEASURED FROM EXISTING FACE OF CURB.
- ③ LIMITS OF PAYMENT FOR SODDING TYPE LAWN AREAS SHALL BE A MAXIMUM OF 6-FT BEHIND CURB STOP OR AS MEASURED TO THE RIGHT-OF-WAY, WHICHEVER IS LESS.
- ④ NO PAYMENT SHALL BE MADE FOR ANY REMOVALS OR RESTORATION ON A PRIVATE PROPERTY BUT ALL COSTS SHALL BE CONSIDERED INCLUDED FOR PAYMENT UNDER THE 1" HDPE SDR 9 SERVICE PIPE (PRIVATE) PAY ITEM. REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
- ⑤ CURB AND GUTTER AND PAVEMENT REMOVALS SHALL ONLY BE PAID FOR WHERE THE LOCATION OF THE INPLACE CURB STOP IS LOCATED WITHIN 4-FT OF THE INPLACE BACK OF CURB.

NOTE:

NO SEPARATE MEASUREMENT OR ADDITIONAL PAYMENT SHALL BE MADE FOR ANY CONSTRUCTION IMPACTS BEYOND THE PAY LIMITS SHOWN AND ALL SUCH IMPACTS SHALL BE FULLY RESTORED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CITY.

TYPICAL WATER SERVICE REPLACEMENT
(FULL LEAD WATER SERVICE REPLACEMENT)

APPLIES: LEAD SERVICE REPLACEMENT FROM WATER
MAIN TO CONNECTION TO INDOOR PLUMBING

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: 

JON LOYER, P.E.
TYPE NAME

DATE: DECEMBER 6, 2024

LIC. NO: 52222



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

LEAD SERVICE LINE REPLACEMENT – CENTRAL HILLSIDE 1

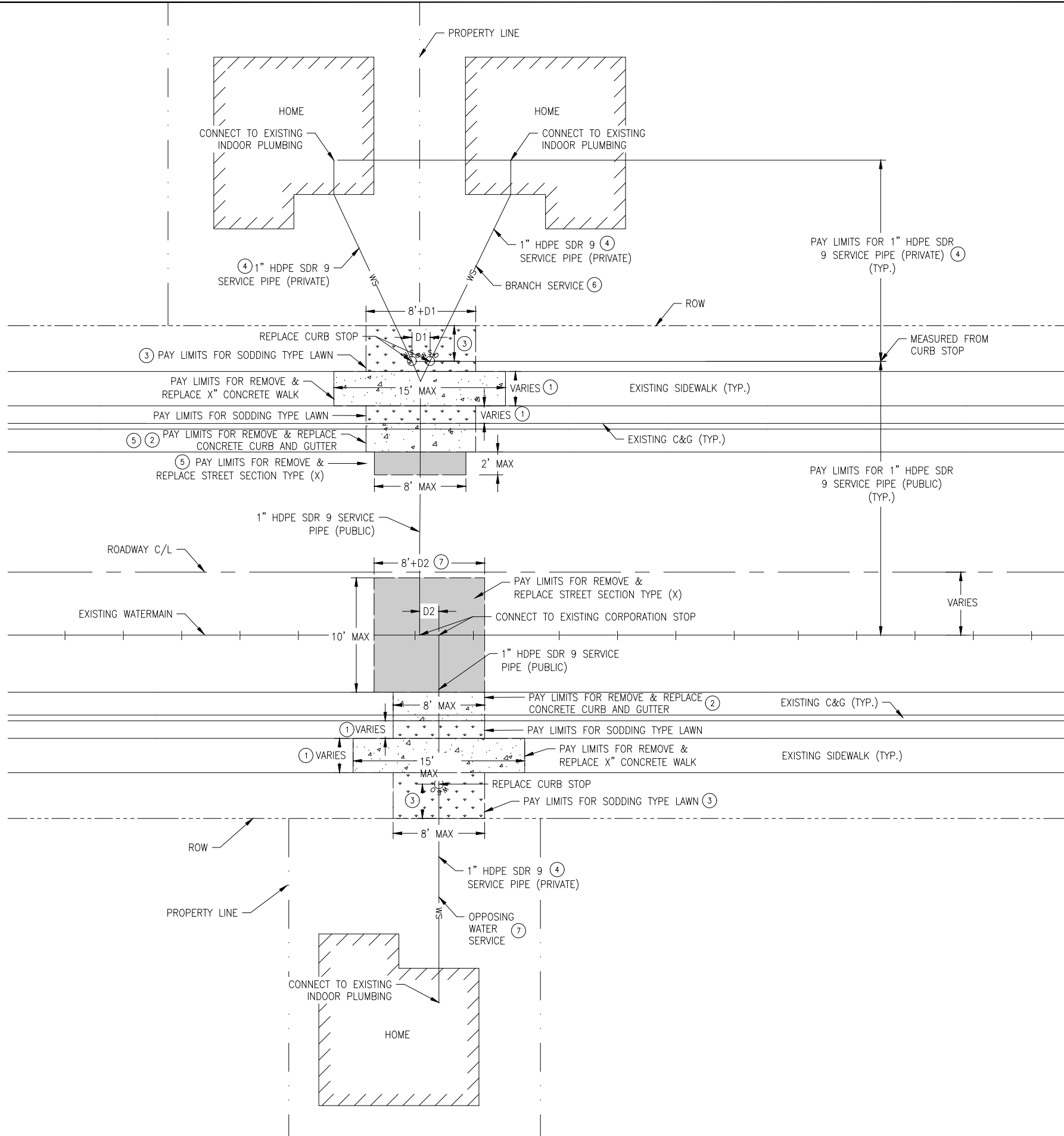
CITY PROJECT NO.:2215

MPFA PROJECT NO.: 1690011-20

DRAWN BY: LHB, INC.

CONSTRUCTION DETAILS

SHEET NO. D12



KEY NOTES:

- ① SHALL MATCH EXISTING WALK OR CURB TYPE GEOMETRY.
- ② LIMIT OF MEASUREMENT FOR REMOVE & REPLACE INTEGRANT CURB, WHERE PRESENT, SHALL BE LIMITED TO A 2-FT OFFSET MEASURED FROM EXISTING FACE OF CURB.
- ③ LIMITS OF PAYMENT FOR SODDING TYPE LAWN AREAS SHALL BE A MAXIMUM OF 6-FT BEHIND CURB STOP OR AS MEASURED TO THE RIGHT-OF-WAY, WHICHEVER IS LESS.
- ④ NO PAYMENT SHALL BE MADE FOR ANY REMOVALS OR RESTORATION ON A PRIVATE PROPERTY BUT ALL COSTS SHALL BE CONSIDERED INCLUDED FOR PAYMENT UNDER THE 1" HDPE SDR 9 SERVICE PIPE (PRIVATE) PAY ITEM. REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
- ⑤ CURB AND GUTTER AND PAVEMENT REMOVALS SHALL ONLY BE PAID FOR WHERE THE LOCATION OF THE INPLACE CURB STOP IS LOCATED WITHIN 4-FT OF THE INPLACE BACK OF CURB.
- ⑥ WHERE A BRANCH SERVICE IS PRESENT, THE WIDTH OF THE PAY LIMITS SHALL BE INCREASE BY THE DISTANCE BETWEEN THE CURB STOP "D1".
- ⑦ WHERE OPPOSING SERVICES ARE PRESENT AND LOCATED WITHIN 4-FT OF EACH OTHER, THE WIDTH OF THE PAY LIMITS SHALL BE INCREASE BY THE DISTANCE BETWEEN THE CORPORATION STOPS "D2".

NOTE:

NO SEPARATE MEASUREMENT OR ADDITIONAL PAYMENT SHALL BE MADE FOR ANY CONSTRUCTION IMPACTS BEYOND THE PAY LIMITS SHOWN AND ALL SUCH IMPACTS SHALL BE FULLY RESTORED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CITY.

TYPICAL WATER SERVICE REPLACEMENT
(BRANCH & OPPOSING WATER SERVICE REPLACEMENT)

APPLIES: LEAD SERVICE REPLACEMENT FROM WATER
MAIN TO CONNECTION TO INDOOR PLUMBING

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: _____

JON LOYE, P.E.
TYPE NAME

DATE: DECEMBER 6, 2024

LIC. NO: 52222



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

LEAD SERVICE LINE REPLACEMENT – CENTRAL HILLSIDE 1

CITY PROJECT NO.:2215

MPFA PROJECT NO.: 1690011-20

DRAWN BY: LHB, INC.

CONSTRUCTION DETAILS

SHEET NO. D13

SWPPP SUMMARY/OVERVIEW:
THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN DEVELOPED TO ADDRESS THE REQUIREMENTS OF NPDES PERMIT MN R100001. THIS SWPPP INCLUDES A COMBINATION OF NARRATIVE AND PLAN SHEETS THAT DESCRIBE THE TEMPORARY AND PERMANENT STORM WATER MANAGEMENT PLAN FOR THE PROJECT.

PROJECT INFORMATION:

LOCATION:	LINCOLN PARK NEIGHBORHOOD; LINCOLN PARK DR, N 24TH AVE W, DIAMOND AVE, N 22ND AVE W, W 6TH ST, W 5TH ST, N 26TH AVE W
LATITUDE/LONGITUDE:	46.767797, -92.138628 (APPROX. PRJ CENTRAL LOCATION)
PROJECT DESCRIPTION:	LEAD SERVICE LINE REPLACEMENT
SOIL DISTURBING ACTIVITIES:	LEAD WATER SERVICE LINE REPLACEMENT, GRADING, BASE, ROADWAY PAVEMENT, SIDEWALK, CURB & GUTTER, AND WATER MAIN EXTENSIONS

CONTACTS:

OWNER:	CITY OF DULUTH
CONTACT:	JON MARUSKA
ADDRESS:	411 WEST FIRST STREET DULUTH, MN 55802
PHONE:	218.269.9122
EMAIL:	JMARUSKA@DULUTHMN.GOV
ENGINEER:	SHORT ELLIOTT HENDRICKSON INC. (SEH)
CONTACT:	DAN HINZMANN
PHONE:	218.279.3034
EMAIL:	DHINZMANN@SEHINC.COM
PROJECT NO.:	DULUT 179911

KNOWLEDGEABLE PERSON/CHAIN OF RESPONSIBILITY
THE CONTRACTOR SHALL IDENTIFY A PERSON KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPs WHO WILL COORDINATE WITH ALL CONTRACTORS, SUBCONTRACTORS, AND OPERATORS ON-SITE TO OVERSEE THE IMPLEMENTATION OF THE SWPPP.

CONTRACTOR	X
CONTACT	X
PHONE	X
EMAIL	X

THE CONTRACTOR SHALL ESTABLISH A CHAIN OF RESPONSIBILITY FOR ALL CONTRACTORS AND SUB-CONTRACTORS ON SITE TO ENSURE THE SWPPP IS BEING PROPERLY IMPLEMENTED AND MAINTAINED. THE CONTRACTOR SHALL PROVIDE THE CHAIN OF RESPONSIBILITY TO THE OWNER AND ATTACH TO THE SWPPP PRIOR TO ANY CONSTRUCTION ACTIVITY.

GENERAL SWPPP RESPONSIBILITIES:

THE CONTRACTOR SHALL KEEP THE SWPPP ON-SITE, OR ELECTRONICALLY AVAILABLE ON SITE, DURING NORMAL WORKING HOURS WITH PERSONNEL WHO HAVE OPERATIONAL CONTROL OVER THE APPLICABLE PORTION OF THE SITE, INCLUDING ALL CHANGES TO THE SWPPP, INSPECTIONS, AND MAINTENANCE RECORDS.

THE SWPPP WILL BE AMENDED AS NEEDED AND/OR AS REQUIRED BY PROVISIONS OF THE PERMIT. PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPs AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER. AMENDMENTS WILL BE APPROVED BY BOTH THE OWNER AND CONTRACTOR AND WILL BE ATTACHED OR OTHERWISE INCLUDED WITH THE SWPPP DOCUMENTS. THE SWPPP AMENDMENTS SHALL BE INITIATED, FACILITATED, AND PROCESSED BY THE CONTRACTOR.

PERMITTEES MUST AMEND THE SWPPP WITHIN 7 DAYS TO INCLUDE ADDITIONAL OR MODIFIED BMPs WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER.

PERMITTEES MUST AMEND THE SWPPP WITHIN 7 DAYS TO INCLUDE ADDITIONAL OR MODIFIED BMPs AS NECESSARY TO CORRECT PROBLEMS IDENTIFIES OR ADDRESS SITUATIONS WHENEVER INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER OR OPERATOR, USEPA OR MPCA OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER OR THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES (E.G., NUISANCE CONDITIONS AS DEFINED IN MINN. R. 7050.0210, SUBP.2) OR THE SWPPP IS NOT CONSISTENT WITH THE OBJECTIVES OF A USEPA AAPROVED TMDL.

ALL SWPPP CHANGES MUST BE DONE BY AN INDIVIDUAL TRAINED IN ACCORDANCE WITH SECTION 21.2. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP MUST INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS.

BOTH THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER TERMINATION AND/OR TRANSFER OF THE PERMIT.

LONG TERM OPERATION AND MAINTENANCE

THE OWNER WILL BE RESPONSIBLE OR WILL OTHERWISE IDENTIFY WHO WILL BE RESPONSIBLE FOR THE LONG TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM(S).

THE OWNER WILL PREPARE AND IMPLEMENT A PERMANENT STORMWATER TREATMENT SYSTEM(S) MAINTENANCE PLAN.

TRAINING DOCUMENTATION:

PREPARER/DESIGNER OF SWPPP:	EMILY JENNINGS
EMPLOYER:	SHORT ELLIOTT HENDRICKSON INC. (SEH)
DATE OBTAINED / REFRESHED	REFRESHED 2023
INSTRUCTOR(S)/ENTITY PROVIDING TRAINING:	U OF M EROSION AND STORMWATER MANAGEMENT CERTIFICATION

CONTENT OF TRAINING AVAILABLE UPON REQUEST.

THE CONTRACTOR (OPERATOR) SHALL ADD TO THE SWPPP TRAINING RECORDS FOR THE FOLLOWING PERSONNEL:

-INDIVIDUALS OVERSEEING THE IMPLEMENTATION OF, REVISING, AND AMENDING THE SWPPP
-INDIVIDUALS PERFORMING INSPECTIONS
-INDIVIDUALS PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMPs

TRAINING MUST RELATE TO THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES AND SHALL INCLUDE:

- 1) DATES OF TRAINING
- 2) NAME OF INSTRUCTORS
- 3) CONTENT AND ENTITY PROVIDING TRAINING

THE CONTRACTOR SHALL ENSURE THAT THE INDIVIDUALS ARE TRAINED BY LOCAL, STATE, FEDERAL AGENCIES, PROFESSIONAL ORGANIZATIONS, OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, PERMANENT STORMWATER MANAGEMENT AND THE MINNESOTA NPDES/SDS CONSTRUCTION STORMWATER PERMIT.

PROJECT SUMMARY:

TOTAL DISTURBED AREA:	2.0 AC
PRE-CONSTRUCTION IMPERVIOUS AREA:	1.6 AC
POST-CONSTRUCTION IMPERVIOUS AREA:	1.6 AC
IMPERVIOUS AREA ADDED:	0.0 AC

RECEIVING WATER(S) WITHIN ONE MILE FROM PROJECT BOUNDARIES:
(<http://pca-gis02.pca.state.mn.us/CSW/index.html>)

ID	NAME	TYPE	SPECIAL WATER?	IMPAIRED WATER?	CONSTRUCTION RELATED IMPAIRMENT OR SPECIAL WATER CLASSIFICATION	TMDL
04010201-512	MILLER	CREEK	Y - TROUT STREAM	Y	AQUATIC BIOTA	NA
ADDITIONAL BMPs AND/OR ACTIONS REQUIRED: 23.9, 23.10, 23.11 AND 23.12						
SEE SECTION 23 OF THE PERMIT AND APPLICABLE TMDL WLA'S						

WATERBODY	NO WORK DURING	SEE DNR PERMIT FOR MORE INFORMATION (DELETE THIS SECTION IS NOT APPLICABLE. WORK MUST BE PHYSICALLY WITHIN WATER TO APPLY).
LAKES	APRIL 1 - JUNE 30	
NON-TROUT STREAMS	MARCH 15 - JUNE 15	
TROUT STREAMS	SEPTEMBER 1 - APRIL 1	

SITE SOIL INFORMATION: (<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>)
(SOIL INFORMATION PROVIDED IS FOR NPDES PERMIT INFORMATION ONLY. SOIL INFORMATION WAS OBTAINED FROM THE USGS WEBSITE. THE CONTRACTOR SHALL NOT RELY ON THIS SOIL INFORMATION FOR CONSTRUCTION PURPOSES.)

SOIL NAME:	HYDROLOGIC CLASSIFICATION:
URBAN LAND - CUTTRE-ROCK OUTCROP COMPLEX, AMNICON-ROCK OUTCROP COMPLEX, MESABA-ROCK OUTCROP COMPLEX	D

RELATED REVIEWS & PERMITS:

ENVIRONMENTAL, WETLAND, ENDANGERED OR THREATENED SPECIES, ARCHEOLOGICAL, LOCAL, STATE, AND/OF FEDERAL REVIEWS/PERMITS:
COVERAGE UNDER THIS PERMIT CANNOT BE ISSUED UNTIL THE REQUIREMENTS FOR WETLAND PERMITS, DECISIONS, OTHER DETERMINATIONS, OR THE MITIGATIVE SEQUENCE REQUIRED IN SECTION 22 OF THE NPDES PERMIT MNR100001 HAVE BEEN FINALIZED AND DOCUMENTED.

AGENCY:	TYPE OF PERMIT:
NA	NA

IMPLEMENTATION SEQUENCE:

THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING SEQUENCE.
THE ENGINEER MAY APPROVE ADJUSTMENTS TO THE SEQUENCE AS NEEDED.

1.	INSTALL ROCK CONSTRUCTION ENTRANCE(S)
2.	INSTALL PERIMETER CONTROL AND STABILIZE DOWN GRADIENT BOUNDARIES
3.	INSTALL INLET PROTECTION ON EXISTING CATCH BASINS
4.	COMPLETE SITE GRADING
5.	INSTALL UTILITIES, STORM SEWER, INLET PROTECTION, CURB & GUTTER, PAVING
6.	COMPLETE FINAL GRADING AND STABILIZE DISTURBED AREAS
7.	AFTER CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ACCUMULATED SEDIMENT, REMOVE BMPs, AND RE-STABILIZE ANY AREAS DISTURBED BY THEIR REMOVAL.

THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE SWPPP:
STATEMENT OF ESTIMATED QUANTITIES
CONSTRUCTION DETAIL PLAN SHEETS
EROSION AND SEDIMENT CONTROL PLAN SHEETS
SWPPP NOTE AND DETAIL SHEETS
PROJECT SPECIFICATIONS
PROJECT BID FORM

TEMPORARY BMP DESIGN FACTORS:
EROSION PREVENTION AND SEDIMENT CONTROL BMP'S MUST BE DESIGNED TO ACCOUNT FOR:

THE EXPECTED AMOUNT, FREQUENCY, INTENSITY, AND DURATION OF PRECIPITATION

THE NATURE OF STORMWATER RUNOFF AND RON-ON AT THE SITE, INCLUDING FACTORS SUCH AS EXPECTED FLOW FROM IMPERVIOUS SURFACES, SLOPES, AND SITE DRAINAGE FEATURES

THE STORMWATER VOLUME, VELOCITY, AND PEAK FLOW RATES TO MINIMIZE DISCHARGE OF POLLUTANTS IN STORMWATER AND TO MINIMIZE CHANNEL AND STREAMBANK EROSION AND SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS

THE RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT.

TEMPORARY SEDIMENT BASINS:
THE CONTRACTOR SHALL INSTALL TEMPORARY SEDIMENT BASIN(S) INDICATED ON PLANS AND REQUIRED BY THE NPDES CONSTRUCTION PERMIT.

THE TEMPORARY BASIN MUST PROVIDE LIVE STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A TWO (2)-YEAR, 24-HOUR STORM FROM EACH ACRE DRAINED TO THE BASIN OR 1,800 CUBIC FEET OF LIVE STORAGE PER ACRE DRAINED, WHICHEVER IS GREATER.

TEMPORARY SEDIMENT BASIN OUTLETS SHALL BE CONSTRUCTED TO PREVENT SHORT-CIRCUITING AND PREVENT THE DISCHARGE OF FLOATING DEBRIS.

OUTLET STRUCTURES MUST BE DESIGNED TO WITHDRAW WATER FROM THE SURFACE TO MINIMIZE THE DISCHARGE OF POLLUTANTS.

BASINS MUST INCLUDE A STABILIZED EMERGENCY OVERFLOW, WITHDRAW WATER FROM THE SURFACE, AND PROVIDE ENERGY DISSIPATION AT THE OUTLET.

TEMPORARY SEDIMENT BASINS SHALL BE PROVIDED WITH ENERGY DISSIPATION AT ANY BASIN OUTLET TO PREVENT SOIL EROSION.

SEDIMENT BASINS MUST BE SITUATED OUTSIDE OF SURFACE WATERS AND ANY BUFFER ZONES, AND MUST BE DESIGNED TO AVOID THE DRAINING WATER FROM WETLANDS.

DEWATERING AND BASIN DRAINING ACTIVITIES:

THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL DEWATERING AND SURFACE DRAINAGE REGULATIONS.

CONTRACTOR MUST NOT CAUSE NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) IN SURFACE WATERS FROM DEWATERING AND BASIN DRAINING (E.G., PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) DISCHARGES. CONTRACTOR MUST DISCHARGE TURBID OR SEDIMENT-LADEN WATERS RELATED TO DEWATERING OR BASIN DRAINING TO A SEDIMENT CONTROL (E.G., GRASSY OR WOODED), UPLAND AREAS OF THE SITE TO INFILTRATE DEWATERING WATER BEFORE DISCHARGE. CONTRACTOR ARE PROHIBITED FROM USING RECEIVING WATERS AS PART OF THE TREATMENT AREA. CONTRACTOR MUST VISUALLY CHECK AND PHOTOGRAPH THE DISCHARGE AT THE BEGINNING AND AT LEAST ONCE EVERY 24 HOURS OF OPERATION TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED AND NUISANCE CONDITIONS WILL NOT RESULT FROM THE DISCHARGE.

IF NUISANCE CONDITIONS RESULT FROM THE DISCHARGE, CONTRACTOR MUST CEASE DEWATERING IMMEDIATELY AND CORRECTIVE ACTIONS MUST OCCUR BEFORE DEWATERING IS RESUMED. NUISANCE CONDITIONS INCLUDES, BUT IS NOT LIMITED TO, A SEDIMENT PLUME IN THE DISCHARGE OR THE DISCHARGE APPEARS CLOUDY, OR OPAQUE, OR HAS A VISIBLE OIL FILM, OR HAS AQUATIC HABITAT DEGRADATION THAT CAN BE IDENTIFIES BY AN OBSERVER.

CONTRACTOR MUST INSPECT AND PHOTOGRAPH DEWATERING DISCHARGES AT THE BEGINNING AND AT LEAST ONCE EVERY 24 HOURS DURING OPERATION. DEWATERING DISCHARGES THAT ONLY LAST FOR MINUTES, AS OPPOSED TO HOURS AND DO NOT REACH A SURFACE WATER, DO NOT REQUIRE PHOTOGRAPHS OR DOCUMENTATION.

DISCHARGE THAT CONTAINS OIL OR GREASE MUST BE TREATED WITH AN OIL-WATER SEPARATOR OR SUITABLE FILTRATION DEVICE PRIOR TO DISCHARGE.

BACKWASH WATER USED FOR FILTERING SHALL BE HAULED AWAY FOR DISPOSAL, RETURNED TO THE BEGINNING OF TREATMENT PROCESS, OR INCORPORATED INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. THE CONTRACTOR SHALL REPLACE AND CLEAN FILTER MEDIAS USED IN DEWATERING DEVICES WHEN REQUIRED TO MAINTAIN ADEQUATE FUNCTION.

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EROSION PREVENTION BMP SUMMARY:
SEE EROSION AND SEDIMENT CONTROL PLAN SHEET AND BID FORM FOR TYPE, LOCATION, AND QUANTITY OF EROSION PREVENTION BMPS.

SEDIMENT CONTROL BMP SUMMARY:
SEE EROSION AND SEDIMENT CONTROL PLAN SHEETS AND BID FORM FOR TYPE, LOCATION, AND QUANTITY OF SEDIMENT CONTROL BMPS.

EROSION PREVENTION MEASURES AND TIMING:
THE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION PREVENTION MEASURES FOR THE PROJECT.

EROSION PREVENTION MEASURES SHOWN ON PLANS ARE THE ABSOLUTE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL EROSION PREVENTION MEASURES AS NECESSARY TO PROPERLY MANAGE THE PROJECT AREA AND TO MINIMIZE THE DISCHARGE OF POLLUTANTS IN STORMWATER FROM CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL PLAN AND IMPLEMENT APPROPRIATE CONSTRUCTION PRACTICES AND CONSTRUCTION PHASING TO MINIMIZE EROSION AND RETAIN VEGETATION WHENEVER POSSIBLE.

THE PERMITTEE SHALL DELINEATE AREAS NOT TO BE DISTURBED. PERMITTEE(S) MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT WITH STEEP SLOPES. WHEN STEEP SLOPES MUST BE DISTURBED, PERMITTEES MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES.

CONTRACTOR MUST PHASE AND INCORPORATE STORMWATER MANAGEMENT PRINCIPLES AS THE CONSTRUCTION PROGRESSES. UNLESS INFEASIBLE, TEMPORARY OR PERMANENT WET SEDIMENTATION BASINS (WHEN REQUIRED, SEE SECTION 14 AND 15) SHOULD BE CONSTRUCTED AS A FIRST STEP IN THE PROCESS AND STORMWATER ROUTED TO THESE.

CONTRACTOR MUST NOT EXCAVATE INFILTRATION SYSTEMS TO FINAL GRADE, OR WITHIN THREE (3) FEET OF FINAL GRADE, UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULL STABILIZED UNLESS THEY PROVIDE RIGOROUS ERSION PREVENTION AND SEDIMENT CONTROLS (E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREA. CONTRACTOR MUST NOT INSTALL FOLTER MEDIA UNTIL THEY CONSTRUCT AND FULLY STABILIZE THE CONTRIBUTING DRAINAGE AREA UNLESS THEY PROVIDE REGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS(E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE FILTRATION AREA.

THE CONTRACTOR SHALL STABILIZE OF ALL EXPOSED SOILS IMMEDIATELY TO LIMIT SOIL EROSION. IN NO CASE SHALL ANY EXPOSED AREAS, INCLUDING STOCK PILES, HAVE EXPOSED SOILS FOR MORE THAN 7 DAYS WITHOUT PROVIDING TEMPORARY OR PERMANENT STABILIZATION. STABILIZATION MUST BE COMPLETED WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT CLAY, SILT, OR ORGANIC COMPONENTS DO NOT REQUIRE STABILIZATION.

DRAINAGE PATHS, DITCHES, AND/OR SWALES SHALL HAVE TEMPORARY OR PERMANENT STABILIZATION WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER OR 24 HOURS AFTER CONSTRUCTION ACTIVITY IN THE DITCH/SWALE HAS TEMPORARILY OR PERMANENTLY CEASED.

THE CONTRACTOR SHALL COMPLETE THE STABILIZATION OF ALL EXPOSED SOILS WITHIN 24 HOURS THAT LIE WITHIN 200 FEET OF PUBLIC WATERS PROMULGATED "WORK IN WATER RESTRICTIONS" BY THE MN DNR DURING SPECIFIED FISH SPAWNING TIMES.

THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL BMPS AND VELOCITY DISSIPATION DEVICES ALONG CONSTRUCTED STORMWATER CONVEYANCE CHANNELS AND OUTLETS.

PERMITTEES MUST STABILIZE THE NORMAL WETTED PERIMETER OF THE LAST 200 LINEAR FEET OF TEMPORARY OR PERMANENT DRAINAGE DITCHES OR SWALES THAT DRAIN WATER FROM THE SITE WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE. PERMITTEES MUST COMPLETE STABILIZATION OF REMAINING PORTIONS OF TEMPORARY OR PERMANENT DITCHES OR SWALES WITHIN 14 CALENDAR DAYS (7 DAYS FOR SITES DISCHARGING TO SPECIAL OR IMPAIRED WATERS, SEE SECTION 24) AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH TEMPORARILY OR PERMANENTLY CEASES.

THE CONTRACTOR SHALL NOT UTILIZE HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES AS A FORM OF STABILIZATION FOR TEMPORARY OR PERMANENT DRAINAGE DITCHES OR SWALE SECTION WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT.

THE CONTRACTOR SHALL ENSURE PIPE OUTLETS HAVE TEMPORARY OR PERMANENT ENERGY DISSIPATION WITH IN 24 HOURS OF CONNECTION TO A SURFACE WATER.

THE CONTRACTOR SHALL DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORMWATER INFILTRATION. VELOCITY DISSIPATION DEVICES MUST BE USED TO PREVENT EROSION WHEN DIRECTING STORMWATER TO VEGETATED AREAS.

SEDIMENT CONTROL MEASURES AND TIMING:
THE CONTRACTOR IS RESPONSIBLE FOR ALL SEDIMENT CONTROL MEASURES FOR THE PROJECT.

SEDIMENT CONTROL MEASURES SHOWN ON PLANS ARE THE ABSOLUTE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL SEDIMENT CONTROL MEASURES AS NECESSARY TO PROPERLY MANAGE THE PROJECT AREA.

THE CONTRACTOR SHALL ENSURE SEDIMENT CONTROL MEASURES ARE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADIENT LAND DISTURBING ACTIVITIES BEGIN. THESE MEASURES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.

A FLOATING SILT CURTAIN PLACED IN THE WATER IS NOT A SEDIMENT CONTROL BMP EXCEPT WHEN WORKING ON A SHORELINE OR BELOW THE WATERLINE. IMMEDIATELY AFTER THE CONSTRUCTION ACTIVITY IS COMPLETE, PERMITTEE(S) MUST INSTALL AN UPLAND PERIMETER CONTROL PRACTICE IF EXPOSED SOILS STILL DRAIN TO A SURFACE WATER.

THE CONTRACTOR SHALL ENSURE SEDIMENT CONTROL PRACTICES REMOVED OR ADJUSTED FOR SHORT-TERM ACTIVITIES BE RE-INSTALLED IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY HAS BEEN COMPLETED. SEDIMENT CONTROL PRACTICES MUST BE REINSTALLED BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.

THE CONTRACTOR SHALL ENSURE STORM DRAIN INLETS ARE PROTECTED BY APPROPRIATE BMPS DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED.

THE CONTRACTOR MUST PROVIDE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROL AT THE BASE OF THE STOCKPILES ON THE DOWNGRADIENT PERIMETER PRIOR TO THE INITIATION OF STOCKPILING. SEDIMENT CONTROLS MUST BE MANAGED IN ACCORDANCE WITH SECTION 9.6 OF THE NPDES PERMIT MNR100001. CONTRACTOR SHALL INITIATE TEMPORARY OR PERMANENT STABILIZATION OF SEDIMENT CONTROL BMPS MADE OF SOIL WITHIN 24 HOURS.

THE CONTRACTOR SHALL INSTALL PERIMETER CONTROL AROUND ALL STAGING AREAS, BORROW PITS, AND AREAS CONSIDERED ENVIRONMENTALLY SENSITIVE.

THE CONTRACTOR SHALL ENSURE VEHICLE TRACKING BE MINIMIZED WITH EFFECTIVE BMPS. WHERE THE BMPS FAIL TO PREVENT SEDIMENT FROM TRACKING ONTO STREETS THE CONTRACTOR SHALL CONDUCT STREET SWEEPING, IN ADDITION TO VEHICLE TRACKING BMPS, TO REMOVE ALL TRACKED SEDIMENT.

THE CONTRACTOR SHALL IMPLEMENT CONSTRUCTION PRACTICES TO MINIMIZE SOIL COMPACTION.

THE CONTRACTOR SHALL ENSURE ALL CONSTRUCTION ACTIVITY REMAIN WITHIN PROJECT LIMITS AND THAT ALL IDENTIFIED RECEIVING WATER BUFFERS ARE MAINTAINED.

RECEIVING WATER	NATURAL BUFFER	IS THE BUFFER BEING ENCROACHED ON?	REASON FOR BUFFER ENCROACHMENT
MILLER CREEK	100 FT	NO	NA

A 100 FOOT NATURAL BUFFER MUST BE PRESERVED OR PROVIDE REDUNDANT (DOUBLE) PERIMETER SEDIMENT CONTROLS IF NATURAL BUFFER IS INFEASIBLE.

THE CONTRACTOR SHALL NOT UTILIZE SEDIMENT CONTROL CHEMICALS ON SITE.

POLLUTION PREVENTION MANAGEMENT MEASURES:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POLLUTION PREVENTION MANAGEMENT MEASURES.

ALL POLLUTION PREVENTION MEASURES ARE CONSIDERED INCIDENTAL TO THE MOBILIZATION BID ITEM, UNLESS OTHERWISE NOTED.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL, IN COMPLIANCE WITH MPCA DISPOSAL REQUIREMENTS, OF ALL HAZARDOUS MATERIALS, SOLID WASTE, AND PRODUCTS ON-SITE.

THE CONTRACTOR SHALL ENSURE CONSTRUCTION MATERIALS THAT HAVE THE POTENTIAL TO LEAK POLLUTANTS ARE KEPT UNDER COVER TO PREVENT THE DISCHARGE OF POLLUTANTS.

THE CONTRACTOR SHALL ENSURE PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS ARE COVERED TO PREVENT THE DISCHARGE OF POLLUTANTS.

THE CONTRACTOR SHALL ENSURE HAZARDOUS MATERIALS AND TOXIC WASTE IS PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGE. STORAGE AND DISPOSAL OF HAZARDOUS WASTE OR HAZARDOUS MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CH. 7045 INCLUDING SECONDARY CONTAINMENT AS APPLICABLE.

THE CONTRACTOR SHALL ENSURE ASPHALT SUBSTANCES USED ON-SITE SHALL ARE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

THE CONTRACTOR SHALL ENSURE PAINT CONTAINERS AND CURING COMPOUNDS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT AND/OR CURING COMPOUNDS SHALL NOT BE DISCHARGED INTO THE STORM SEWER SYSTEM AND SHALL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURE'S INSTRUCTION.

THE CONTRACTOR SHALL ENSURE SOLID WASTE BE STORED, COLLECTED AND DISPOSED OF PROPERLY IN COMPLIANCE WITH MINN. R. CH. 7035.

THE CONTRACTOR SHALL ENSURE POTABLE TOILETS ARE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CH. 7041.

THE CONTRACTOR SHALL MONITOR ALL VEHICLES ON-SITE FOR LEAKS AND RECEIVE REGULAR PREVENTION MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.

THE CONTRACTOR SHALL ENSURE WASHOUT WASTE MUST CONTACT THE GROUND AND BE PROPERLY DISPOSED OF IN COMPLIANCE WITH MPCA RULES.

THE CONTRACTOR SHALL INCLUDE SPILL KITS WITH ALL FUELING SOURCES AND MAINTENANCE ACTIVITIES. SECONDARY CONTAINMENT MEASURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR.

THE CONTRACTOR SHALL ENSURE SPILLS ARE CONTAINED AND CLEANED UP IMMEDIATELY UPON DISCOVERY. SPILLS LARGE ENOUGH TO REACH THE STORM WATER CONVEYANCE SYSTEM SHALL BE REPORTED TO THE MINNESOTA DUTY OFFICER AT 1.800.422.0798.

INSPECTION AND MAINTENANCE:
ALL INSPECTIONS, MAINTENANCE, REPAIRS, REPLACEMENTS, AND REMOVAL OF BMPS IS TO BE CONSIDERED INCIDENTAL TO THE BMP BID ITEMS.

THE PERMITTEE(S) IS RESPONSIBLE FOR COMPLETING SITE INSPECTIONS, AND BMP MAINTENANCE TO ENSURE COMPLIANCE WITH THE PERMIT REQUIREMENTS.

THE PERMITTEE(S) SHALL INSPECT THE CONSTRUCTION SITE ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS.

PERMITTEE MAY ADJUST THE INSPECTION SCHEDULE DESCRIBED AS FOLLOWS:

- A. INSPECTIONS OF AREAS WITH PERMANENT COVER CAN BE REDUCED TO ONCE PER MONTH, EVEN IF CONSTRUCTION ACTIVITY CONTINUES ON OTHER PORTIONS OF THE SITE; OR
- B. WHERE SITES HAVE PERMANENT COVER ON ALL EXPOSED SOIL AND NO CONSTRUCTION ACTIVITY IS OCCURRING ANYWHERE ON THE SITE, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH AND, AFTER 12 MONTHS, MAY BE SUSPENDED COMPLETELY UNTIL CONSTRUCTION ACTIVITY RESUMES. THE MPCA MAY REQUIRE INSPECTIONS TO RESUME IF CONDITIONS WARRANT; OR
- C. WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, INSPECTIONS MAY BE SUSPENDED. INSPECTIONS MUST RESUME WITHIN 24 HOURS OF RUNOFF OCCURRING, OR UPON RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.
- D. FOR PROJECTS WHERE A POLLINATOR HABITAT OR NATIVE PRAIRIE TYPE VEGETATED COVER IS BEING ESTABLISHED, INSPECTIONS MAY BE REDUCED TO ONCE PER MONTH IF THE SITE HAS TEMPORARY VEGETATION WITH A DENSITY OF 70% TEMPORARY UNIFORM COVER. IF AFTER 24 MONTHS NO SIGNIFICANT EROSION PROBLEMS ARE OBSERVED, INSPECTIONS MAY BE SUSPENDED COMPLETELY UNTIL THE TERMINATION REQUIREMENTS IN SECTION 13 OF THE NPDES PERMIT MNR100001 HAVE BEEN MET.

THE PERMITTEE(S) SHALL DOCUMENT A WRITTEN SUMMARY OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES CONDUCTED WITHIN 24 HOURS OF OCCURRENCE. RECORDS OF EACH ACTIVITY SHALL INCLUDE THE FOLLOWING:

- DATE AND TIME OF INSPECTIONS;
-NAME OF PERSON(S) CONDUCTING INSPECTION;
-FINDINGS AND RECOMMENDATIONS FOR CORRECTIVE ACTIONS IF NECESSARY;
-CORRECTIVE ACTIONS TAKEN;
-DATE AND AMOUNT OF RAINFALL EVENTS;
-IF PERMITTEES OBSERVE A DISCHARGE DURING THE INSPECTION, THEY MUST RECORD AND SHOULD PHOTOGRAPH AND DESCRIBE THE LOCATION OF THE DISCHARGE (I.E., COLOR, ODOR, SETTLES OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS); AND
-ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION MUST BE DOCUMENTED AS REQUIRED IN SECTION 6 OF THE NPDES PERMIT MNR100001 WITHIN SEVEN (7) CALENDAR DAYS; AND
-ALL PHOTOGRAPHS OF DEWATERING ACTIVITIES AND DOCUMENTATION OF NUISANCE CONDITIONS RESULTING FROM DEWATERING ACTIVITIES AS DESCRIBED IN SECTION 10 OF THE NPDES PERMIT MNR100001.

THE PERMITTEE(S) SHALL SUBMIT A COPY OF THE WRITTEN INSPECTIONS TO THE ENGINEER AND OWNER ON A MONTHLY BASIS. IF MONTHLY INSPECTION REPORTS ARE NOT SUBMITTED, MONTHLY PAYMENTS MAY BE HELD.

THE CONTRACTOR SHALL DOCUMENT AMENDMENTS TO THE SWPPP AS A RESULT OF INSPECTION(S) WITHIN 7 DAYS.

THE CONTRACTOR SHALL KEEP THE SWPPP, ALL INSPECTION REPORTS, AND AMENDMENTS ONSITE. THE CONTRACTOR SHALL DESIGNATE A SPECIFIC ONSITE LOCATION TO KEEP THE RECORDS

THE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY BMPS, AS WELL AS EROSION AND SEDIMENT CONTROL BMPS.

THE CONTRACTOR SHALL INSPECT EROSION PREVENTION AND SEDIMENTATION CONTROL BMPS TO ENSURE INTEGRITY AND EFFECTIVENESS. ALL NONFUNCTIONAL BMPS SHALL BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPS WITHIN 24 HOURS OF FINDING. THE CONTRACTOR SHALL INVESTIGATE AND COMPLY WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS:

PERIMETER CONTROL DEVICES, INCLUDING SILT FENCE SHALL BE REPAIRED, OR REPLACED, WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE DEVICE HEIGHT. THESE REPAIRS SHALL BE MADE WITHIN 24 HOURS OF DISCOVERY.

TEMPORARY AND PERMANENT SEDIMENT BASINS SHALL BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY.

DURING EACH INSPECTION, CONTRACTOR MUST INSPECT AREAS ADJACENT TO THE PROJECT, SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS BUT NOT CURB AND GUTTER SYSTEMS, FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. CONTRACTOR MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN AREAS ADJACENT TO THE PROJECT, SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. CONTRACTOR MUST COMPLETE REMOVAL AND STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. CONTRACTOR MUST USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF OBTAINING ACCESS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS.

CONSTRUCTION SITE VEHICLE EXIT LOCATIONS SHALL BE INSPECTED DAILY FOR EVIDENCE OF SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL PAVED SURFACES WITHIN 24 HOURS OF DISCOVERY.

IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANOR AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS.

PERMIT TERMINATION CONDITIONS:
THE CONTRACTOR IS RESPONSIBLE FOR ENSURING FINAL STABILIZATION OF THE ENTIRE SITE. PERMIT TERMINATION CONDITIONS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED.

ALL EXPOSED SOILS HAVE BEEN UNIFORMLY STABILIZED WITH AT LEAST 70% VEGETATION COVERAGE.

PERMANENT STORM WATER MANAGEMENT SYSTEM(S) ARE CONSTRUCTED AND ARE OPERATING AS DESIGNED.

ALL DRAINAGE DITCHES, PONDS, AND ALL STORM WATER CONVEYANCE SYSTEMS HAVE BEEN CLEARED OF SEDIMENT AND STABILIZED WITH PERMANENT COVER TO PRECLUDE EROSION.

ALL TEMPORARY SYNTHETIC BMPS HAVE BEEN REMOVED AND PROPERLY DISPOSED OF.

WHEN SUBMITTING THE NOT PERMITTEES MUST INCLUDE EITHER GROUND OR AERIAL PHOTOGRAPHS SHOWING THE REQUIREMENTS OF 13.2 HAVE BEEN MET. PERMITTEES ARE NOT REQUIRED TO TAKE PHOTOGRAPHS OF EVERY DISTINCT PART OF THE SITE, HOWEVER THE CONDITIONS PORTRAYED MUST BE SUBSTANTIALLY SIMILAR TO THOSE AREAS THAT ARE NOT PHOTOGRAPHED. PHOTOGRAPHS MUST BE CLEAR AND IN FOCUS AND MUST INCLUDE THE DATE THE PHOTO WAS TAKEN. [MINN. R. 7090]

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENCED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAN HINZMANN

PRINTED NAME



SIGNATURE

12/23/2024
DATE
49874
LIC. NO.

LINCOLN PARK LSLR

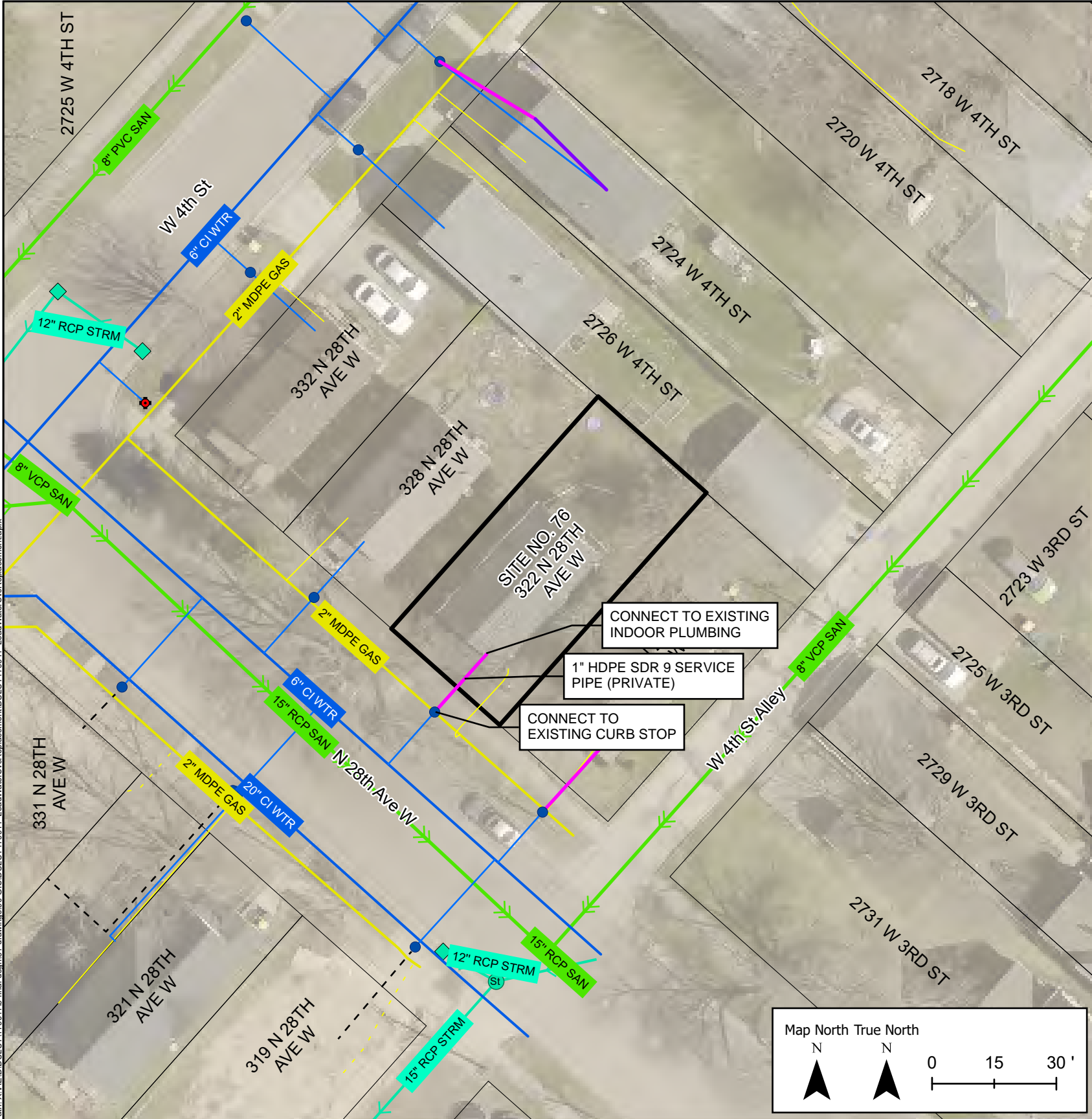
CITY PROJECT NO. 2249

2025 LEAD WATER SERVICE REPLACEMENTS

LINCOLN PARK

SWPPP

SHEET NO. E2



EXTERIOR SITE CONDITIONS



Photo of full extent of exterior work area

INTERIOR SITE CONDITIONS



Photo of interior work area





Photo close and clear enough to identify material

SITE INFORMATION	
TITLE HOLDER	JENNY ALEXANDER LEE
CONSTRUCTION CONTACT	ALEX JENNY - 210 349 8194 , ALEXANDER@YAHOO.COM
RENTAL PROPERTY?	NO
NUMBER OF RESIDENTIAL UNITS	1
PRIVATE SERVICE MATERIAL	LEAD
PUBLIC SERVICE MATERIAL	NOT LEAD
WORK AGREEMENT SIGNED	YES
MATERIAL CONFIRMATION NEEDED	NO
WATER METER LOCATION	FROM S/W CORNER, LOCATED 5' N AND 2' E
BASEMENT NOTES	UNFINISHED BASEMENT
SANITARY NOTES	SEWER LINE APPEARS TO EXIT NEAR WATER SERVICE. LOCATE SEWER LINE.
GROUND ROD NOTES	EXPECTED GROUND ROD OBSERVED.
GENERAL COMMENTS	

2026 Plans will not included contact phone numbers and emails on the plan sheet.

QUANTITIES:

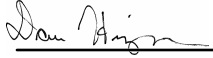
SPEC. NO.	DESCRIPTION	UNIT	QTY
2104.618	REMOVE & REPLACE 4" CONCRETE WALK	(P) SQ FT	75
2503.602	TELEWISE AND LOCATE SANITARY SERVICE	EACH	1
2504.602	CONNECT TO EXISTING CURB STOP	EACH	1
2504.602	CONNECT TO EXISTING INDOOR PLUMBING	EACH	1
2504.603	1" HDPE SDR 9 SERVICE PIPE (PRIVATE)	(P) LIN FT	24
2575.504	SODDING TYPE LAWN (PUBLIC)	(P) SQ YD	7



Project: DULUT179911
Print Date: 12/28/2024

Projection: NAD 1983 HARN
Adj MN St. Louis CS96
Source: St. Louis County,
City of Duluth, & SEH, Inc.

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

Daniel Hinzmann 

12/23/2024
DATE

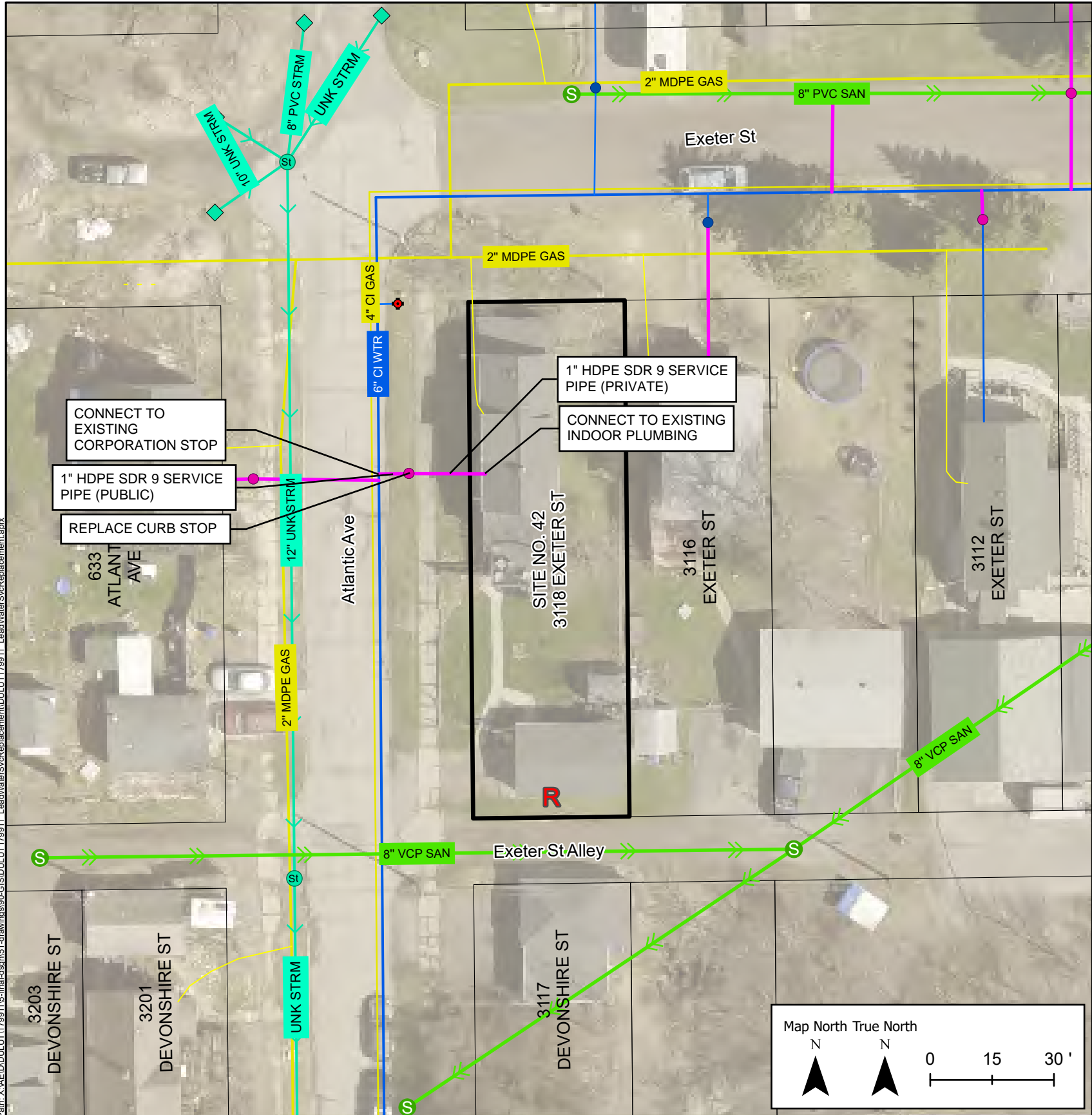
49874
LIC. NO.

CITY PROJECT NUMBER: 2249
2025 LEAD WATER SERVICE
REPLACEMENT
LINCOLN PARK 4

JENNY ALEXANDER LEE
322 N 28TH AVE W
DULUTH, MN 55808

PLANSET
PAGE
S76

Typical full service replacement



EXTERIOR SITE CONDITIONS





INTERIOR SITE CONDITIONS



SITE INFORMATION	
TITLE HOLDER	LOVAAS RYAN
CONSTRUCTION CONTACT	RYAN LOVAAS - 218-780-9841, DOJVIPER@YAHOO.COM
RENTAL PROPERTY?	NO
NUMBER OF RESIDENTIAL UNITS	1
PRIVATE SERVICE MATERIAL	LEAD
PUBLIC SERVICE MATERIAL	CONFIRMED LEAD
WORK AGREEMENT SIGNED	YES
MATERIAL CONFIRMATION NEEDED	NO
WATER METER LOCATION	FROM S/W CORNER, LOCATED 7'3" N AND LESS THAN 1' E
BASEMENT NOTES	UNFINISHED BASEMENT
SANITARY NOTES	NO SANITARY OBSERVED IN CLOSE PROXIMITY TO WATER SERVICE.
GROUND ROD NOTES	GROUND ROD NOT LOCATED. CONTRACTOR TO VERIFY AND PLAN TO INSTALL NEW ELECTRICAL SERVICE GROUND.
GENERAL COMMENTS	RESTORATION QUANTITY IS ON 633 ATLANTIC AVE.

QUANTITIES:

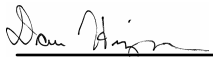
SPEC. NO.	DESCRIPTION	UNIT	QTY
2104.618	REMOVE & REPLACE 4" CONCRETE WALK	(P) SQ FT	75
2504.602	CONNECT TO EXISTING CORPORATION STOP	EACH	1
2504.602	REPLACE CURB STOP	EACH	1
2504.602	CONNECT TO EXISTING INDOOR PLUMBING	EACH	1
2504.603	1" HDPE SDR 9 SERVICE PIPE (PUBLIC)	(P) LIN FT	8
2504.603	1" HDPE SDR 9 SERVICE PIPE (PRIVATE)	(P) LIN FT	19
2545.602	ELECTRICAL SERVICE GROUND	EACH	1
2575.504	SODDING TYPE LAWN (PUBLIC)	(P) SQ YD	7



Project: DULUT179911
Print Date: 12/28/2024

Projection: NAD 1983 HARN
Adj MN St. Louis CS96
Source: St. Louis County,
City of Duluth, & SEH, Inc.

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

Daniel Hinzmann 

12/23/2024
DATE

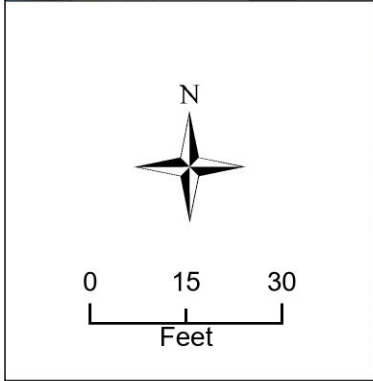
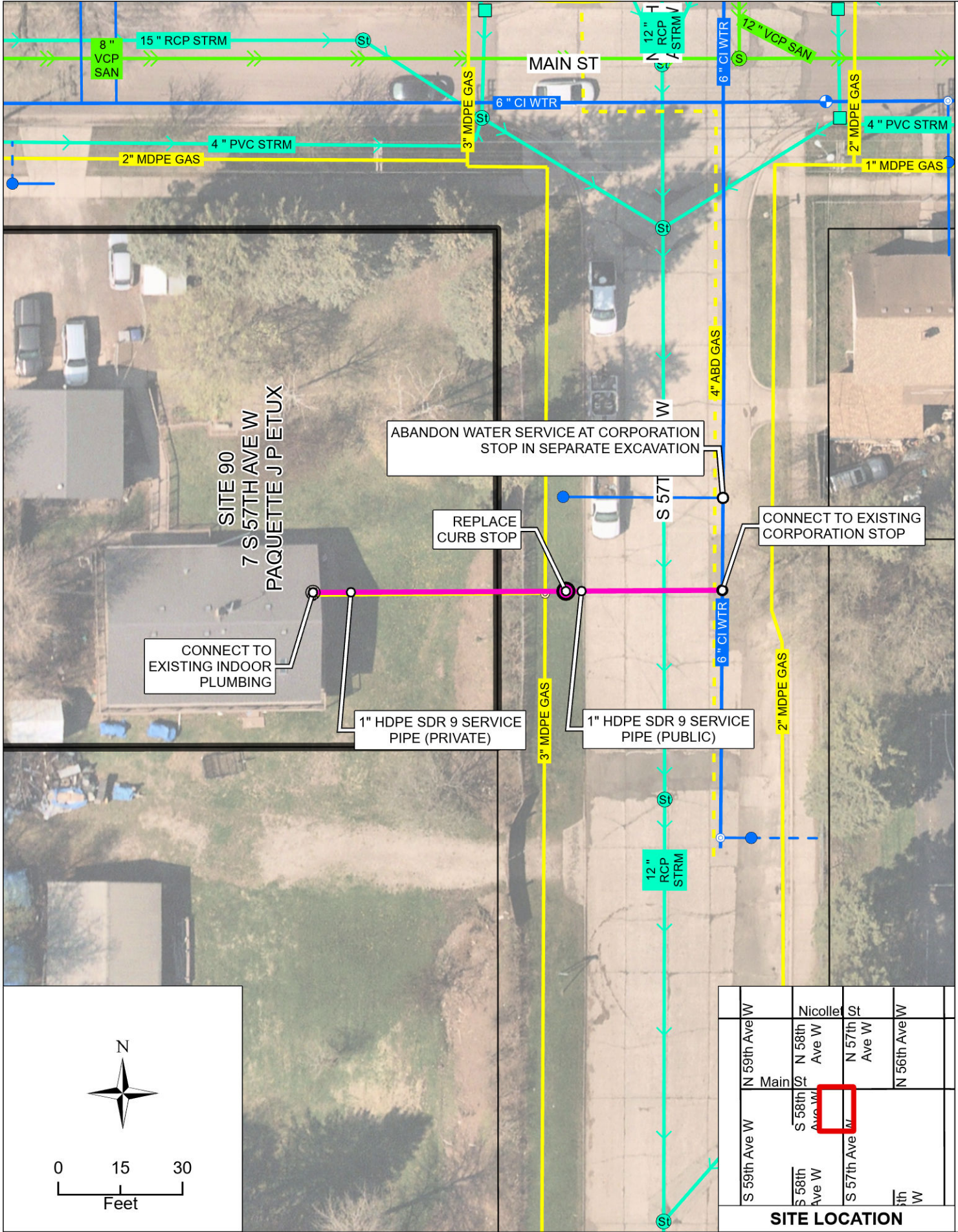
49874
LIC. NO.

CITY PROJECT NUMBER: 2249
2025 LEAD WATER SERVICE
REPLACEMENT
LINCOLN PARK 4

LOVAAS RYAN
3118 EXETER ST
DULUTH, MN 55808

PLANSET
PAGE
S42

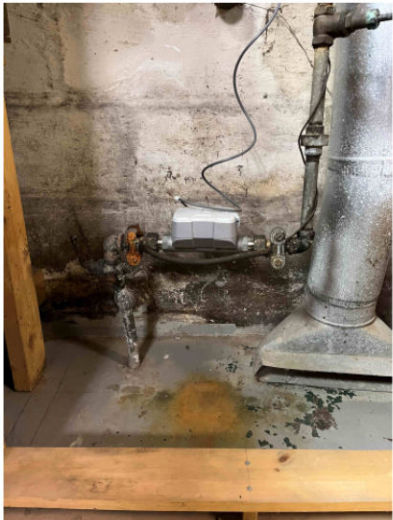
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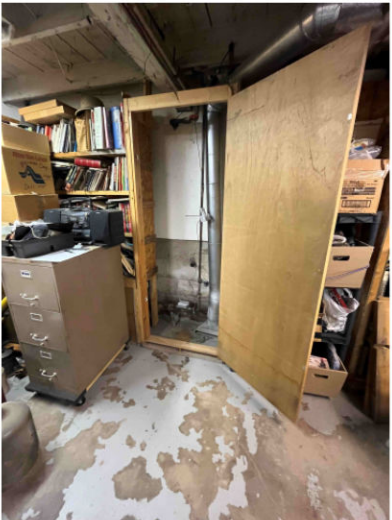
Typical full service replacement



EXTERIOR WORK AREA



INTERIOR WATER SERVICE



INTERIOR WORK AREA

CONTRACT DATES

REQUIRED START DATE:	6/9/2025
SUBSTANTIAL COMPLETION DATE:	6/27/2025
FINAL COMPLETION DATE:	6/27/2025

SITE INFORMATION

TITLE HOLDER	JOHN PAQUETTE
CONSTRUCTION CONTACT	JOHN PAQUETTE, OWNER, 218-624-2407
RENTAL PROPERTY	NO
WORK AGREEMENT	SIGNED
PUBLIC MATERIAL	LEAD
PRIVATE MATERIAL	LEAD
MATERIAL VERIFICATION	NO
METER LOCATION	6' SOUTH OF NORTH WALL ON EAST WALL
BASEMENT NOTES	UNFINISHED
SANITARY NOTES	ON WEST WALL RUNS TO ALLEY
ELECTRICAL GROUND NOTES	NO GROUNDING ELECTRODE OBSERVED
ROCK NOTES	NO ROCK OBSERVED AT TIME OF SEWER INSTALLATION
SITE NOTES	WATER METER IS IN AN ENCLOSURE

SITE QUANTITIES

NOTES	SPEC NUMBER	DESCRIPTION	UNIT	EST. QUANTITY
	2021.501	MOBILIZATION	LUMP SUM	0.25
	2104.603	REMOVE & REPLACE INTEGRANT CURB	(P) LIN FT	8
	2104.604	REMOVE & REPLACE STREET SECTION, TYPE D	(P) SQ YD	20
	2504.602	ABANDON WATER SERVICE AT CORPORATION STOP IN SEPARATE EXCAVATION	EACH	1
	2504.602	CONNECT TO EXISTING CORPORATION STOP	EACH	1
	2504.602	CONNECT TO EXISTING INDOOR PLUMBING	EACH	1
	2504.602	REPLACE CURB STOP	EACH	1
	2504.603	1" HDPE SDR 9 SERVICE PIPE (PRIVATE)	(P) LIN FT	62
	2504.603	1" HDPE SDR 9 SERVICE PIPE (PUBLIC)	(P) LIN FT	38
	2545.602	ELECTRICAL SERVICE GROUND	EACH	1
	2563.601	TRAFFIC CONTROL	LUMP SUM	0.25
	2573.601	EROSION CONTROL	LUMP SUM	0.25
	2575.504	SODDING TYPE LAWN (PUBLIC)	(P) SQ YD	9

2026 Plans will match the City of Duluth standard CAD title block

SITE NO: SITE 90	
LOCATION: 7 S 57TH AVE W	
DRAWN BY: KOS	
LEAD REPLACEMENT PLAN	
SHEET NO. 2 OF 5	

HIGH PRIORITY LEAD WATER SERVICE REPLACEMENTS – PHASE 1	
CITY PROJECT NO.: 2229	MN PFA PROJECT NO.: 1690011–17

LEGEND

CL

CONSTRUCTION LIMITS

W

2" IPS HDPE DR 9 WATER MAIN PIPE

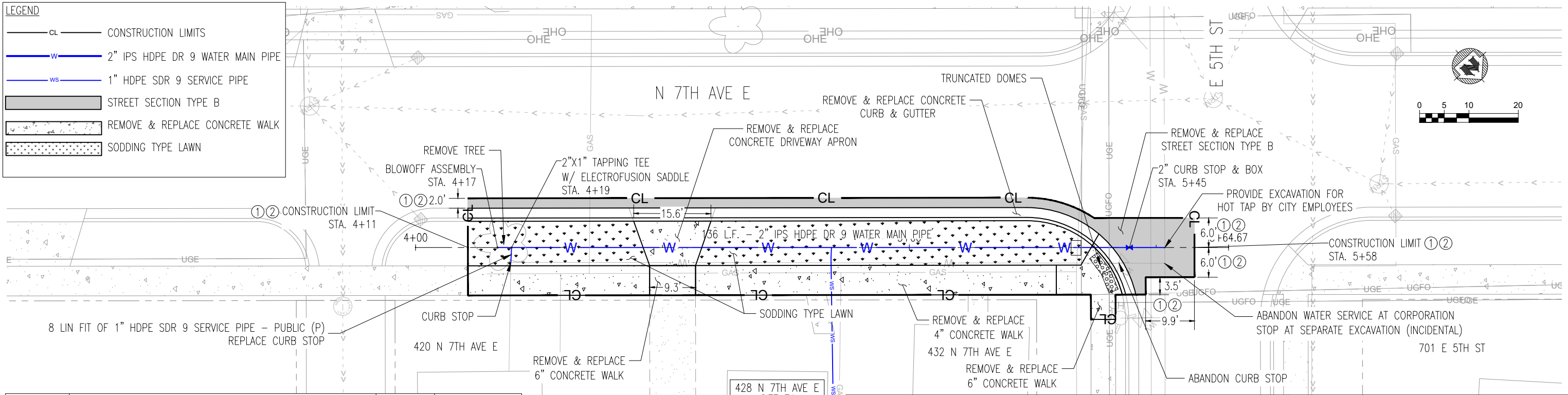
WS

1" HDPE SDR 9 SERVICE PIPE

STREET SECTION TYPE B

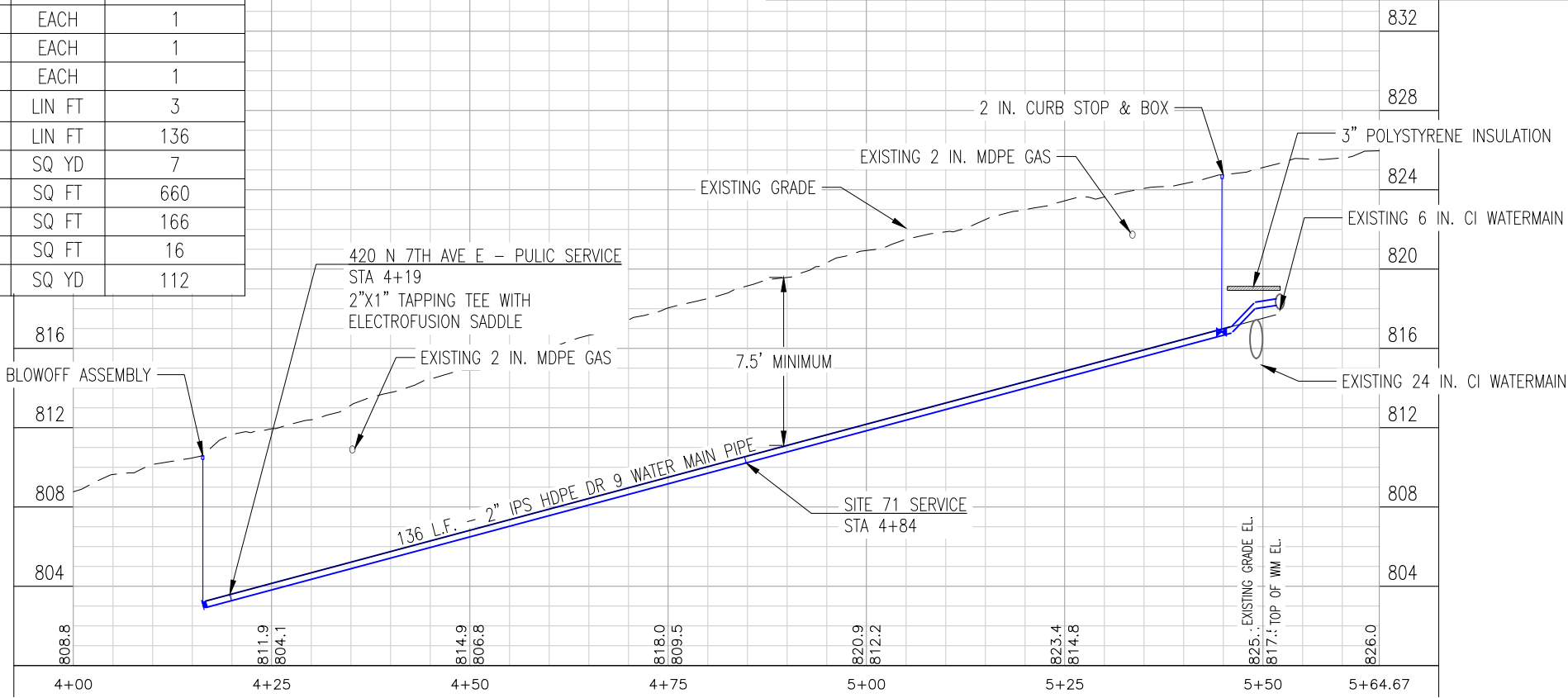
REMOVE & REPLACE CONCRETE WALK

SODDING TYPE LAWN



SPEC NO.	PAY ITEM	UNIT	WM EXTENSION 2 QUANTITY
2101.602	REMOVE TREE	EACH	1
2104.603	REMOVE & REPLACE CONCRETE CURB & GUTTER (P)	LIN FT	141
2104.604	REMOVE & REPLACE CONCRETE DRIVEWAY APRON	SQ FT	112
2104.604	REMOVE & REPLACE STREET SECTION TYPE B (P)	SQ YD	52
2451.602	PROVIDE EXCAVATION FOR HOT TAP BY CITY EMPLOYEES	EACH	1
2504.602	2"x1" TAPPING TEE WITH ELECTROFUSION SADDLE	EACH	1
2504.602	REPLACE CURB STOP	EACH	1
2504.602	BLOWOFF ASSEMBLY	EACH	1
2504.602	2" CURB STOP & BOX	EACH	1
2504.603	1" HDPE SDR 9 SERVICE PIPE - PUBLIC (P)	LIN FT	3
2504.603	2" IPS HDPE DR 9 WATER MAIN PIPE	LIN FT	136
2504.604	3" POLYSTYRENE INSULATION	SQ YD	7
2521.618	REMOVE & REPLACE 4" CONCRETE WALK	SQ FT	660
2521.618	REMOVE & REPLACE 6" CONCRETE WALK	SQ FT	166
2531.618	TRUNCATED DOMES	SQ FT	16
2575.504	SODDING TYPE LAWN (PUBLIC)	SQ YD	112

- KEYNOTES:
- 1 - PAY LIMITS FOR REMOVE & REPLACE STREET SECTION TYPE B.
 - 2 - THE CONTRACTOR SHALL NOT EXCEED THE PAY LIMITS SHOWN FOR REMOVAL AND REPLACEMENT LIMITS SHOWN AND IS RESPONSIBLE FOR PERFORMING THE WORK UTILIZING EXCAVATION AND TEMPORARY SHORING METHODS AS REQUIRED TO PREVENT DAMAGE TO OR UNDERMINING OF INPLACE FEATURES DESIGNATED TO REMAIN. ANY SUCH DAMAGE, UNDERMINING, OR IMPACTS BEYOND THE PAY LIMITS SHOWN SHALL BE REPAIRED AND RESTORED AT NO ADDITIONAL EXPENSE TO THE CITY.
 - 3 - REFER TO CONSTRUCTION DETAIL FOR PAY LIMITS FOR TURF, SIDEWALK AND CURB & GUTTER.
 - 4 - SEE LEAD SERVICE REPLACEMENT SITE PLAN S71 FOR SERVICE QUANTITIES.



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: _____

JON LOYE, PE
TYPE NAME

DATE: DECEMBER 6, 2024

LIC. NO: 52222



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

LEAD SERVICE LINE REPLACEMENT - CENTRAL HILLSIDE 1

CITY PROJECT NO.:2215

MPFA PROJECT NO.: 1690011-20

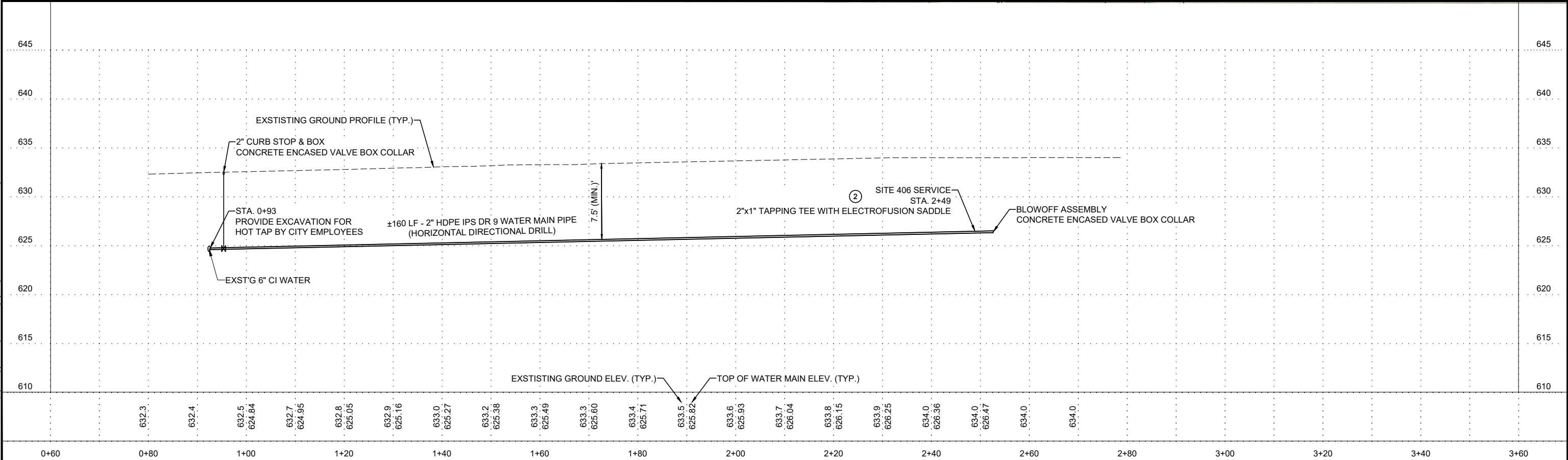
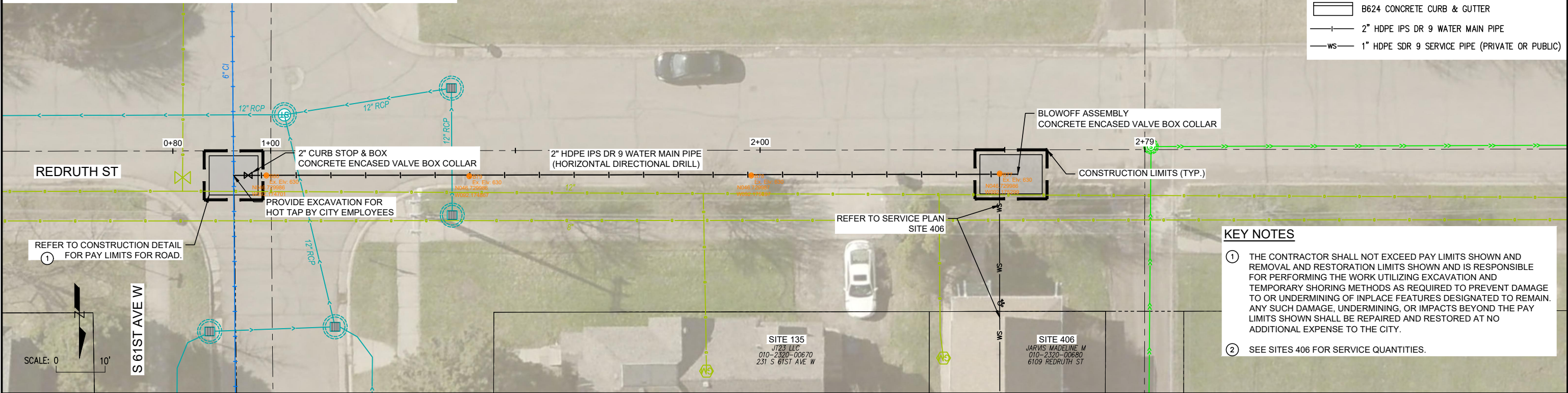
DRAWN BY:WRT

WATER MAIN EXTENSION 2

SHEET NO. W2

SPEC NO.	DESCRIPTION	UNIT	WM EXT
2120.602	PROVIDE EXCAVATION FOR HOT TAP BY CITY EMPLOYEES	EACH	1
2504.602	2" CURB STOP & BOX	EACH	1
2504.602	BLOWOFF ASSEMBLY	EACH	1
2504.602	CONCRETE ENCASED VALVE BOX COLLAR	EACH	2
2504.603	2" IPS HDPE SDR 9 WATER MAIN (HORIZONTAL DIRECTIONAL DRILL)	LIN FT	160
2575.604	REMOVE & REPLACE STREET SECTION, TYPE (B)	SQ YD	21

LEGEND	
	CONSTRUCTION LIMITS
	SODDING TYPE LAWN
	BITUMINOUS PAVEMENT
	CONCRETE WALK
	B624 CONCRETE CURB & GUTTER
	2" HDPE IPS DR 9 WATER MAIN PIPE
	1" HDPE SDR 9 SERVICE PIPE (PRIVATE OR PUBLIC)



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

ADAM F. BESSE
PRINTED NAME

SIGNATURE

03/19/2025
DATE
52597
LIC. NO.

FAIRMOUNT 1 LSLR

CITY PROJECT NO. 2248

LEAD SERVICE LINE REPLACEMENT
FAIRMOUNT 1

WATER MAIN EXTENSION PLAN & PROFILE

SHEET NO. W14