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**Addendum 3**  
**Solicitation 22-99574**  
**RFP for Engineering Services for City-Wide Lead Water Service Replacement**

This addendum serves to notify all bidders of the following changes to the solicitation documents:

1. The Federal Supplementary Provisions identified as Appendix B, and the Byrd Anti-Lobbying Certificate identified as Appendix C, have been uploaded to the City website (<https://www.duluthmn.gov/purchasing/bids-request-for-proposals>).
2. Attached for Consultant review, are sample plans produced by the City of Duluth for a current lead service replacement project. It's anticipated that the selected consultant(s) will prepare similar plans for proposed project(s).

Please acknowledge receipt of this Addendum by including a copy of it with your proposal. The pages included will not count toward any page limitation, if any, identified in the RFP.

Posted: **August 3, 2022**

# **SPECIAL PROVISIONS**

**2022 Lead Service Replacement Project - Phase 2**

**City Project # 2064**

**City of Duluth, Minnesota**

**411 West 1<sup>st</sup> Street**

**Duluth, MN 55802**

**SPECIAL PROVISIONS**  
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**2022 Lead Service Replacement Project - Phase 2**  
**May 4, 2022**

**CERTIFICATION**

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.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
License

\_\_\_\_\_  
Exp.

**SAMPLE**

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**SAMPLE**

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The following forms and regulations/rules/statutes and interpretations, which are incorporated by reference in this contract, are available on the World Wide Web at the sites listed below. The City of Duluth will use its best efforts to ensure that the most recent, applicable forms and regulations/rules/statutes and interpretations are included on the web sites provided; however, if you are the successful bidder, prior to signing the contract, you are responsible for comparing the versions of the forms and regulations/rules/statutes and interpretations attached to the contract which you are signing with the versions on the web to ensure conformity.

**THE VERSIONS OF THE FORMS AND REGULATIONS/RULES/STATUTES and INTERPRETATION ATTACHED TO THE CONTRACT WILL BE CONTROLLING.**

FORM	FUND	WEB SITE
Certified Payroll Form WH347	All	<a href="http://www.dol.gov/whd/forms/">http://www.dol.gov/whd/forms/</a>
IC-134 Contractor Affidavit – Online	All	<a href="https://www.mndor.state.mn.us/tp/contractoraffidavit/">https://www.mndor.state.mn.us/tp/contractoraffidavit/</a>
Request to Sublet TP-21834	All	<a href="http://www.dot.state.mn.us/const/labor/forms.html">http://www.dot.state.mn.us/const/labor/forms.html</a>
Request to Sublet Summary	All	<a href="http://www.dot.state.mn.us/const/labor/forms.html">http://www.dot.state.mn.us/const/labor/forms.html</a>
Statement of Compliance Form (8-2013)	All	<a href="http://www.dot.state.mn.us/const/labor/forms.html">http://www.dot.state.mn.us/const/labor/forms.html</a>
MNOPS Intrastate Anti-Drug/Alcohol Misuse Prevention - Self Assessment	Gas	<a href="http://www.duluthmn.gov/engineering/standard-construction-specifications/construction-documents/">http://www.duluthmn.gov/engineering/standard-construction-specifications/construction-documents/</a>
Operator Qualification Contractor Covered Tasks	Gas	<a href="http://www.duluthmn.gov/engineering/standard-construction-specifications/construction-documents/">http://www.duluthmn.gov/engineering/standard-construction-specifications/construction-documents/</a>
Truck Rental Rates	State	<a href="http://www.doli.state.mn.us/LS/PrevWageTR1.asp">http://www.doli.state.mn.us/LS/PrevWageTR1.asp</a>
Contractor/Vendor Form	State	<a href="http://www.dot.state.mn.us/const/labor/forms.html">http://www.dot.state.mn.us/const/labor/forms.html</a>
Trucking Com/Vendor Form	State	<a href="http://www.dot.state.mn.us/const/labor/forms.html">http://www.dot.state.mn.us/const/labor/forms.html</a>
Month End Trucking Report Form A & B (12-10)	State	<a href="http://www.dot.state.mn.us/const/labor/forms.html">http://www.dot.state.mn.us/const/labor/forms.html</a>
Month-End Trucking Report Statement of Compliance (12-10)	State	<a href="http://www.dot.state.mn.us/const/labor/forms.html">http://www.dot.state.mn.us/const/labor/forms.html</a>
Notice to Bidders - Prompt Payment to Subs – STATE & FED (MS 16A.1245)	State & Federal	<a href="http://www.duluthmn.gov/engineering/standard-construction-specifications/construction-documents/">http://www.duluthmn.gov/engineering/standard-construction-specifications/construction-documents/</a>
Notice to Bidders - Traffic Control Prevailing Wage - FED	Federal	<a href="http://www.duluthmn.gov/engineering/standard-construction-specifications/construction-documents/">http://www.duluthmn.gov/engineering/standard-construction-specifications/construction-documents/</a>
Statement of Compliance Form – 2 <sup>nd</sup> page of WH347	Federal	<a href="http://www.dol.gov/whd/forms/">http://www.dol.gov/whd/forms/</a>

Revised 02-03-2021

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**SP-1 NOTICE TO ALL BIDDERS**

The 2019 Edition of the City of Duluth Public Works & Utilities Department/Engineering Division "Construction Standards" book and any addendums or supplements is incorporated by reference and is deemed to be a part hereof as if fully incorporated and set forth herein. The 'Construction Standards' is available on the City website at: <https://www.duluthmn.gov/engineering/standard-construction-specifications/>.

**SP-2 SCOPE OF WORK**

This project will include the replacement of existing lead water services while installing approximately 75 new 1" HDPE service using a trenchless method, preferably direction drill whenever possible. Additional excavation pits may be required to install HDPE water service. Back fill and restoration.

**SP-3 CONTACT INFORMATION**

Questions regarding this project should be directed to: Tim Sanders, PE, Project Engineer, 218-730-5066

**SP-4 PRE-BID CONFERENCE**

A Pre-Bid Conference will be held on July 21, 2022 at 2:00 PM in Room 155 City Hall, 411 West First Street, Duluth, MN. Potential bidders are strongly encouraged to attend.

**SP-5 COMMUNITY BENEFITS POLICY**

Revised 02-19-2022

For Contracts that include a Project Labor Agreement, the contractor shall comply with the City of Duluth's Community Benefits Policy. This policy requires a plan and good faith effort by contractors to recruit/hire/employ Eligible Workers to perform the work. Eligible Workers shall refer to women, people of color, and other individuals who are considered socially disadvantaged, and whose work hours on a covered project shall count toward the Community Benefits Goal set forth in the policy. A copy of the Community Benefits Program Contract Specification is available on the City of Duluth Purchasing web site.

**SP-6 COVID-19 PROJECT SHUTDOWN PLAN**

Revised 04-03-2020

In the event that employee illness or a governmental agency requires that the project cease due to the Covid-19 Virus, prior to suspension, the contractor shall provide a written plan to the architect/engineer on the project and the City for their prior approval and, upon such approval, shall be implemented by the contractor as part of this contract. The plan shall include the following requirements which shall apply to the status of the work at the time of interruption:

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1. Time, if any, between the determination of the necessity of suspension and the actual suspension of work will be allocated in this order of priority; Life Safety Issues, Asset Integrity, Environmental Impacts, & Economic Impacts.
2. Excavations will be completed or temporarily filled.
3. Equipment will be removed from the site or secured by the contractor.
4. Physical barricades shall be installed as necessary to protect the work from damage or destruction and the public from injury in the event of trespass on the site.
5. Warning signs shall be installed where reasonably necessary to warn the public of any hazardous condition on the site.
6. Erosion control necessary to protect the site shall be in place and functioning and vegetation shall be in place and properly protected; all exposed and/or erodible soil surfaces shall be fully stabilized per the SWPPP/NPDES permit requirements.
7. Onsite materials shall be removed from the site to safe storage or protected on site from damage or theft.

**SP-7 (1203) ACCESS TO PROPOSAL PACKAGE**

Revised 02-03-2021

MN/DOT 1203 is hereby deleted from the MN/DOT Standard Specifications and replaced with the following:

Bidders shall access the proposal package electronically through Bid Express® at their website <https://www.bidexpress.com>. There is no charge to view proposal packages. However, Bidders must register with Bid Express® and login to the website. Bidders may search for 'City of Duluth' or the specific bid number to locate the proposal package.

**SP-8 (1206) PREPARATION OF PROPOSAL**

Revised 02-03-2021

The provisions of MN/DOT 1206 are supplemented and/or modified with the following:

1206.1. "Preparation and Delivery", is modified as follows:

The **first paragraph** shall be deleted and replaced with the following:

All bids must be submitted electronically through Bid Express® at [www.bidexpress.com](https://www.bidexpress.com).

The **third paragraph** shall be deleted and replaced with the following:

The Bidder shall submit the Proposal Guaranty electronically through Bid Express®, or a copy of the Proposal Guaranty may be submitted by email to [purchasing@duluthmn.gov](mailto:purchasing@duluthmn.gov) prior to the bid opening. If submitting a certified check or bank draft, bidder must contact Purchasing seven days prior to bid opening to make arrangements.

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1206.2 "Allowable Substitutions", is modified as follows:

The **subsection 1206.2** shall be deleted

**SP-9 (1213) DISQUALIFICATION OF BIDDERS**

Contractors who are debarred or suspended under Minnesota Statutes 161.315 Protection of Public Contracts will not be eligible for award of this contract or to act as a subcontractor to any contractor under this contract.

**SP-10 (1701) LAWS TO BE OBSERVED (PROMPT PAY AND RETAINAGE)**

Revised 02-03-2021

Section 1701 Laws to Be Observed (Prompt Pay and Retainage) of the City of Duluth Construction Standard is hereby deleted and replaced with the following:

REVISED 10/09/19

SP2018-33.1: The provisions of MN/Duluth 1701 are supplemented with the following:

Prompt payment of subcontractors is required by Minnesota Statutes §16A.1245.

The Contractor must pay a subcontractor no later than ten days after receiving payment from the Department for undisputed work provided by that subcontractor. If the Contractor fails to pay a subcontractor on time, then the Contractor must pay interest, at the rate of 1.5% per month, to the subcontractor on the undisputed amount not paid on time. For an unpaid amount under \$100, the Contractor must pay the actual interest penalty (calculated at 1.5% per month). For an unpaid amount over \$100, the Contractor must pay the actual interest penalty (calculated at 1.5% per month) or \$10, whichever is greater.

Minnesota Statutes §16A.1245 also provides that a subcontractor who prevails in a civil action to collect interest penalties from a prime contractor must be awarded its costs and disbursements, including attorney's fees, incurred in bringing the action.

Payment of retainage for federal-aid projects is governed by Minnesota Statutes §§337.10, 15.72, and 49 C.F.R. 49 §26.29.

State law does not require retainage to be withheld. The contractor may not withhold more than 5% in retainage from a subcontractor, as provided by Minnesota Statutes §337.10 subd. 4 (b). If the Contractor holds retainage from a subcontractor, the Contractor must fully pay out that retainage no later than 30 days after the subcontractor's work is satisfactorily completed, or 10 days after the Contractor receives payment of retainage from the Department, whichever is earlier, unless there is a dispute about the work under a subcontract. If there is a dispute about the work under a subcontract, the contractor must pay out retainage to any subcontractor whose work is not involved in the dispute, and must provide a written statement detailing the amount and reason for the withholding to the affected subcontractor.

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For purposes of paying out retainage, a subcontractor's work is satisfactorily completed when all of the tasks called for in the subcontract have been accomplished and documented as required by the Contract. When the Department has made an incremental acceptance of a portion of the prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

Payment of retainage for state and local projects is governed by Minnesota Statutes §337.10 and Minnesota Statutes §15.72.

State law does not require retainage to be withheld. The contractor may not withhold more than 5% in retainage from a subcontractor, as provided by Minnesota Statutes §337.10 subd. 4 (b). The contractor must pay any retainage no later than 10 days after the Contractor receives payment of retainage from the Department, unless there is a dispute about the work under a subcontract. If there is a dispute about the work under a subcontract, the contractor must pay out retainage to any subcontractor whose work is not involved in the dispute, and must provide a written statement detailing the amount and reason for the withholding to the affected subcontractor.

**SP-11 (1806) DETERMINATION AND EXTENSION OF CONTRACT TIME**

The Contract Time will be determined in accordance with the provisions of MN/DOT 1806 and the following:

1. Construction operations shall be started on or before September 1, 2022 or within ten (10) calendar days after the date of **Notice to Proceed**, whichever is later. The contractor is required to finish a minimum of 15 services before the end of the calendar year.
2. Substantial Completion: All work under this Contract shall be substantially complete on or before July 1, 2023. For this project, Substantial Completion shall be deemed to include ALL work in the contract, except the following items: Turf Establishment
3. Final Completion: ALL work required under this Contract shall be complete on or before August 1, 2023
4. The third exemption listed under the second paragraph of the provisions of MN/DOT 1806.3 is modified to the extent that the phrase "(3) During the inclusive period from November 15 through April 15, except as specified in 1806.1..." is deleted.
5. No work which will restrict or interfere with traffic shall be performed between 12:00 noon on the day preceding and 6:30 a.m. on the day following any consecutive combination of a Saturday, Sunday, and legal holiday without written permission from the Engineer.
  - (A) If the Contractor chooses not to work at all on the day preceding the holiday period, no working day charges will be assessed.
  - (B) If the Contractor chooses to work prior to 12:00 noon on the day preceding the holiday period or if the Contractor obtains written permission to work after 12:00 noon on the day preceding the holiday period, working day charges will be assessed only for the actual hours worked.

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6. When all, or a portion, of the Contract Time is specified as a calendar completion date, the time is presumed to have been determined by considering the Proposal quantities, normal weather for the locality and season of the year, and the necessity of having the work completed by the specified date. The time may be extended by the Engineer only if the delay is considered "Excusable" in accordance with MN/DOT 1806.2 Types of Delays.

**SP-12 (1807) FAILURE TO COMPLETE WORK ON TIME**

The provisions of MN/DOT 1807 shall apply in full to both the Substantial Completion Date and the Final Completion Date.

**SP-13 (1906) PARTIAL PAYMENTS**

Section 1906 Partial Payments of the City of Duluth Construction Standard is hereby deleted and replaced with the following:

Partial Payments shall be made in accordance with the provisions of MN/DOT 1906 and the following:

- A. Prior to Substantial Completion: The first sentence of Paragraph Three shall be amended to read as follows: "From the total of the amounts ascertained as payable, five percent (5%) will be deducted and retained by the City for the protection of its interests as hereinafter provided. The balance, less all previous payments, will be certified for payment." The City will withhold eight percent (8%) from out of state contractors unless a waiver has been granted from the State of Minnesota, Department of Revenue by submitting Form SDE, Exemption from Surety Deposits for Non-Minnesota Contractors.
- B. All provisions for partial payments shall apply to domestic materials only. No payments shall be made to the Contractor for materials manufactured outside of the United States until such materials have been delivered to the job site.
- C. After 'Substantial Completion', the City may withhold no more than: (1) 250 percent of the cost to correct or complete work known at the time of substantial completion; and (2) one percent of the value of the contract or \$500, whichever is greater, pending completion and submission of all final paperwork by the contractor or subcontractor.

**SP-14 (1908) FINAL PAYMENTS**

Section 1908 Final Payments of the City of Duluth Construction Standard is hereby deleted and replaced with the following:

Final Payment shall be made in accordance with the provisions of MN/DOT 1908 and the following:

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- 1) The final estimate will show the balance due the Contractor after making all legal and specified forfeitures and deductions. This balance will then be paid by the City to the Contractor within thirty (30) days after such estimate is presented to and accepted by the Contractor or within forty-five (45) days after such estimate is presented to and not acted upon by the Contractor, less allowable retainage per Minnesota Statutes 15.72 subdivision 2. At such time, the paid final estimate shall be considered valid with no further compensation due the Contractor.
- 2) The City will withhold and retain up to the allowable retainage per Minnesota Statutes 15.72 subdivision 2 of the final estimate for a period of up to the date of Final Contract Acceptance (MN/DOT 1516.4).
- 3) Where the provisions of MN/DOT 2571.3.K Plant Establishment Period pertain to the contract, the City will withhold and retain an amount equal to the final value of planting bid items or one percent (1%) of the final estimate, whichever is greater, for a period of up to two calendar years after the initial planting operations are complete.
- 4) State Law provides that the final estimate will be made within 90 days after completion of all work required under this Contract. If, however, the total value of the Contract exceeds \$2,000,000.00, the 90-day requirement will not apply and the time allowed for making such final estimate shall be 180 days after the work under this Contract has been, in all things, completed to the satisfaction of the Commissioner.
- 5) If this Contract contains a "Disadvantaged Business Enterprise or Targeted Group Business" goal, the following requirement shall apply:

"Before final payment is made, the Contractor shall also complete an affidavit showing the total dollar amounts of work performed by disadvantaged business enterprise (DBE) and targeted group business (TGB) and/or veteran-owned small business."

**SP-15 (2123) EXPLORATORY EXCAVATION/POTHOLE**

Exploratory Excavation/Potholing may be required to verify location of other utilities or the material of lead service that is being replaced. All costs for exploratory excavations/potholing will be paid for by the hour after engineer's approval.

**SP-16 (2301/2521/2531) CONCRETE PLACEMENT RESTRICTION (EXPOSURE TO SALT)**

In addition to the pertinent provisions of MN/DOT and the City of Duluth Construction Standards, the following restriction applies to all concrete "flatwork" (i.e. curb, curb and gutter, sidewalk, driveways, pavement) that is typically exposed to road salt and/or deicing chemicals:

The Contractor shall not place concrete flatwork **after October 15<sup>th</sup>** without the written approval of the City's Chief Engineer of Transportation.

**SP-17 (2451) EXCAVATION, BACKFILL AND COMPACTION FOR UTILITIES – TRENCH BACKFILL**

The provisions of section 2451 of the City of Duluth 'Construction Standards' are supplemented



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with the following:

Trench backfill above the top of encasement zone and below the subgrade shall be accomplished entirely with suitable salvaged on-site select grading materials meeting the City's Construction Standards.

The Engineer will determine if any material is suitable for use as trench backfill.

Where the Engineer determines that acceptable select grading material is not available within the site, the Contractor shall provide imported or common backfill which will be considered Extra Work and the Contractor will be compensated under the provisions of MN/DOT 1904. Any Extra Work payments made for imported backfill shall be considered compensation in full for furnishing backfill materials to the site and disposing of waste excavation. No separate payment will be made for placing and compacting imported backfill materials.

All costs for placing and compacting backfill (regardless of type select grading material, common or granular) shall be considered incidental to relevant Contract bid items.

**SP-18 (2504) TEMPORARY WATER SERVICE**

The Contractor shall provide temporary water service for any service to be left off overnight. Temporary water service shall consist of a hose service from an adjacent building. The contractor is responsible for any required coordination with the homeowners. A RV style garden hose designed for potable water use must be used for temporary water. All costs for temporary water are incidental.

**SP-19 (2504) CONNECT TO EXISTING INDOOR PLUMBING UNFINISHED BASEMENT**

Connect to existing indoor plumbing unfinished basement includes all work within the basement of a residence to install a new water service and connect to existing plumbing. This item includes, but is not limited to concrete removal and repair, removal and disposal of existing pipe, connecting to and/or salvaging, moving and reconnecting the meter set & any existing pressure reducing valve, and reinstallation, repair or replacement of any floor, carpet and wall coverings, furnishings, and drywall moved or damaged during installation. The original lead line shall be fitted with a waterproof cap and a minimum of 10' left in the ground to serve as an electrical ground. Should the lead pipe be entirely removed, the contractor shall ensure the house has a secondary electrical ground if supply one if necessary, according to state electrical code. Pipe work within the existing home is considered plumbing. A plumbing permit from the City of Duluth and plumbing inspection will be required for each building. Basements considered unfinished are those that have concrete floors and concrete/stone/block walls. Floors and walls may be painted and some attached furnishings, such as storage shelving, may be present. The work area shall be protected, kept clean and repaired to original condition.

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**SP-20 (2504) CONNECT TO EXISTING INDOOR PLUMBING FINISHED BASEMENT**

Connect to existing indoor plumbing finished basement includes all work within the basement of a residence to install a new water service and connect to existing plumbing. This item includes, but is not limited to concrete removal and repair, removal and disposal of existing pipe, connecting to and/or salvaging, moving and reconnecting the meter set & any existing pressure reducing valve, and reinstallation, repair or replacement of any floor, carpet and wall coverings, furnishings, and drywall moved or damaged during installation. The original lead line shall be fitted with a waterproof cap and a minimum of 10' left in the ground to serve as an electrical ground. Should the lead pipe be entirely removed, the contractor shall ensure the house has a secondary electrical ground if supply one if necessary, according to state electrical code. Pipe work within the existing home is considered plumbing. A plumbing permit from the City of Duluth and plumbing inspection will be required for each building. Basements considered finished are those that have additional floor coverings and wall coverings on top of the masonry floor and wall materials. The work are shall be protected, kept clean and repaired to original condition.

**SP-21 (2504) REPLACE WATER SERVICE SPECIAL**

Water service installation special includes excavation, backfill, curb stop removal and replacement, removal and disposal of lead water line, connection of new HDPE water line to the existing corporation stop and the new curb stop and removal and replacement of concrete and bituminous paving, concrete curb, concrete sidewalk. This bid includes the tracer wire, tracer box and 1" HDPE service pipe from the main to the curbstop, which will typically be approximately 16' in length. If the private water service is expected to be lead but is found to be another material at the curbstop, an additional 3' of pipe shall be exposed to confirm material type.

**SP-22 (2504) CONNECT TO EXISTING CORPORATION STOP SPECIAL**

Connect to existing corporation stop special includes excavation, backfill, connection to existing corporation stop and cutting, removal and replacement of concrete pavement with bituminous overlay and removal and replacement of concrete curb and concrete sidewalk where necessary. Existing corporation stops are expected to have 5/8" male thread. This bid item includes all pipe fittings, reducers, bends and transition to connect the new 1" HDPE SDR 9 pipe to existing corporation stop. If the existing water service material is found to be not lead at the corporation stop, an additional 3' of pipe shall be exposed to confirm material type.

**SP-23 (2504) REPLACE CURBSTOP SPECIAL**

Replace curb stop special includes all work and materials to remove and replace curbstop and connect to new and/or existing public and private water service pipe. This item includes but is not limited to excavation, backfill, removal and replacement of 5' public concrete sidewalk. The contractor shall ensure all new curbstops are placed within the right of way. If the material of the existing water services are expected to be lead but found to be a different material on either side of the curbstop, an additional 3' of pipe shall be exposed to confirm material type.

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**SP-24 (2504) CONNECT TO EXISTING CURBSTOP SPECIAL**

Connect to curb stop special includes all work and materials to connect a new water service to an existing curbstop. This item includes but is not limited to excavation, backfill and connection to new 1" HDPE service and removal and replacement 5' public concrete sidewalk. If the material of the existing water services are expected to be lead but found to be a different material on either side of the curbstop, an additional 3' of pipe shall be exposed to confirm material type.

**SP-25 (2504) 1" HDPE SDR 9 SERVICE PIPE INSTALLED BY TRENCHLESS METHOD**

1" HDPE SDR 9 service pipe installed by trenchless method includes all work necessary to install new 1" HDPE water services, through trenchless method. The City anticipates the contractor to use a trench-launch directional drill. The contractor may use alternative trenchless technologies at no additional cost to the City. Existing lead services are nominally 5/8" inside diameter and have been measure to be 1/2" in places; pulling by cable insertions has proven to be impractical for service lengths greater than 12'. The contractor shall install the service pipe in a location and manner to avoid damage to any existing utilities including private sewer services. Quantity as measured by the lineal foot in the horizontal plan.

**SP-26 (2504) 1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, YARD AREA**

1" HDPE SDR 9 service pipe installed by open cut includes all cost for excavation and backfill for the installation of HDPE water service by open cut construction. This methodology of installation will only be used where specified in the plan or otherwise approved by the engineer after installation by trenchless method has failed. Quantity as measured by the lineal foot in the horizontal plane.

**SP-27 (2504) 1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, STREET AREA**

1" HDPE SDR 9 service pipe installed by open cut includes all cost for excavation and backfill for the installation of HDPE water service by open cut construction. This methodology of installation will only be used where specified in the plan or otherwise approved by the engineer after installation by trenchless method has failed. Quantity as measured by the lineal foot in the horizontal plane. This item included the sawcutting, removal and replacement of concrete curb, concrete street with bituminous overlay and road base materials.

**SP-28 (2504) 1" HDPE SDR 9 SERVICE PIPE INSTALLED IN EXISTING TRENCH**

1" HDPE SDR 9 service pipe installed in existing trench includes all cost for the installation of HDPE water service in a trench where the costs for excavation are incorporated into another bid item. The City of Duluth will provide the corporation and perform the tap on the existing main for the service to be installed in existing trench. Quantity as measured by the lineal foot in the horizontal plan.

**SPECIAL PROVISIONS**  
**City Job Number: 2064**  
**2022 Lead Service Replacement Project - Phase 2**  
**May 4, 2022**

**SP-29 (2504) CURBSTOP ASSEMBLY IN EXISTING TRENCH**

Curbstop assembly in existing trench includes all costs for the installation of a curbstop in a trench where the costs for excavation are incorporated into another bid item.

**SP-30 (2504) 3" POLYSTYRENE INSULATION**

Insulation is an estimated quantity under the assumption that some installation may require insulation. Any water services with less than 7 feet of cover shall require insulation as called out in the details.

**SP-31 (2521) REMOVE & REPLACE CONCRETE WALK**

Remove & Replace Concrete Walk shall consist of removing and replacing concrete walk on the private side when having to remove concrete to complete install of new services. Replacing sidewalk in the public right of way when installing "Replace Curbstop Special" and "Replace Water Service Special" items is considered incidental.

**SP-32 (2575) SALVAGE AND REINSTALL LANDSCAPE GARDEN**

Salvage and Reinstall Landscape Garden shall consist of removing garden material and salvaging during installation of the water service as necessary. The contractor will replace landscape garden materials and plants to original status. Any additional material, such as landscape fabric, garden soil, or backfill shall be incidental.

**SP-33 (2575) SALVAGE AND REINSTALL ROCK RETAINING WALL**

Salvage and Reinstall Rock Retaining Wall shall consist of salvaging and reinstalling a decorative rock retaining wall/rock step stabilization during installation of the water service as necessary. The contractor will remove, store and replace rock retaining wall materials to original status. Any additional material required, such as geotextile fabric, backfill or base materials shall be incidental. This item is expected to be necessary at Site 41C.

**SP-34 (2575) SALVAGE AND REINSTALL WOOD STEPS/WALKWAY**

Salvage and Reinstall Wood Steps/Walkway shall consist of removing wood steps/walkway material and salvaging during installation of the water service as necessary. The contractor will replace wood steps/walkway materials to original status. Any additional material required to backfill or new deck material shall be incidental. It is expected the wooden structure(s) will be movable as a unit and minimal disassembly and reassembly will be needed. This item is expected to be necessary at Site 25.

**- END -**

PLAN LEGEND	
RIGHT OF WAY LINE	----
DITCH CENTERLINE	----
FENCE LINE	----
RETAINING WALL	----
GRAVEL LINE	----
GUARD RAIL LINE	----
RAILROAD TRACK LINE	+++++
ROAD CENTERLINE	----
TREE LINE	~~~~~
STREAM LINE	~~~~~
WETLAND LINE	----
EX SANITARY LINE	---
PR SANITARY LINE	---
AB SANITARY LINE	---
EX FORCEMAIN LINE	---
PR FORCEMAIN LINE	---
AB FORCEMAIN LINE	---
EX STORM LINE	---
PR STORM LINE	---
AB STORM LINE	---
EX WATER LINE	---
PR WATER LINE	---
AB WATER LINE	---
EX GAS LINE	---
PR GAS LINE	---
AB GAS LINE	---
EX STEAM LINE	---
PR STEAM LINE	---
AB STEAM LINE	---
UG CABLE TV LINE	---
PR CABLE TV LINE	---
AB CABLE TV LINE	---
UG ELECTRIC LINE	---
PR ELECTRIC LINE	---
AB ELECTRIC LINE	---
UG FIBEROPTIC LINE	---
PR FIBEROPTIC LINE	---
AB FIBEROPTIC LINE	---
UG TELEPHONE LINE	---
PR TELEPHONE LINE	---
AB TELEPHONE LINE	---
OH ELECTRIC LINE	---
PR ELECTRIC LINE	---
AB ELECTRIC LINE	---
OH CABLE TV LINE	---

SYMBOLS	
EX SANITARY MANHOLE	(SAN)
EX SANITARY CLEANOUT	(STRM)
EX STORM MANHOLE	(W)
EX STORM CATCHBASIN	(W&G)
EX. WATER MANHOLE	(W)
EX. WATER VALVE	(W)
EX. WATER HYDRANT	(W)
EX. WATER SHUTOFF	(W)
EX. WATER & GAS MH	(W&G)
EX. GAS MANHOLE	(GAS)
EX. GAS VALVE	(GAS)
EX. GAS SHUTOFF	(GAS)
EX. STEAM MANHOLE	(STEAM)
EX. TELEPHONE MANHOLE	(T)
EX. ELECTRIC MANHOLE	(E)
EX. POWERPOLE	(P)
EX. LIGHT POLE	(L)
EX. ELECTRIC VAULT	(V)
EX. ANCHOR	(A)
EX. ELECTRIC TRANSFORMER	(ET)
EX. STREET LIGHT	(SL)
EX. SIGNAL W/ STREET LIGHT	(SL)
EX. HANDHOLE	(H.H.)
EX. HANDHOLE	(H.H.)
EX. TELEPHONE PEDESTAL	(P)
EX. WELL	(W)
BENCHMARK	(B)
FOUND CI MONUMENT	(M)
EX. SIGN	(S)
CONTROL POINT	(C)
EX DECIDUOUS TREE	(D)
EX CONIFEROUS TREE	(C)
EX. PARKING METER	(P)
EX. SOIL BORING	(SB#)

# CITY OF DULUTH

## DEPARTMENT OF PUBLIC WORKS AND UTILITIES

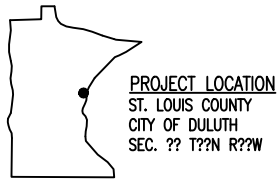
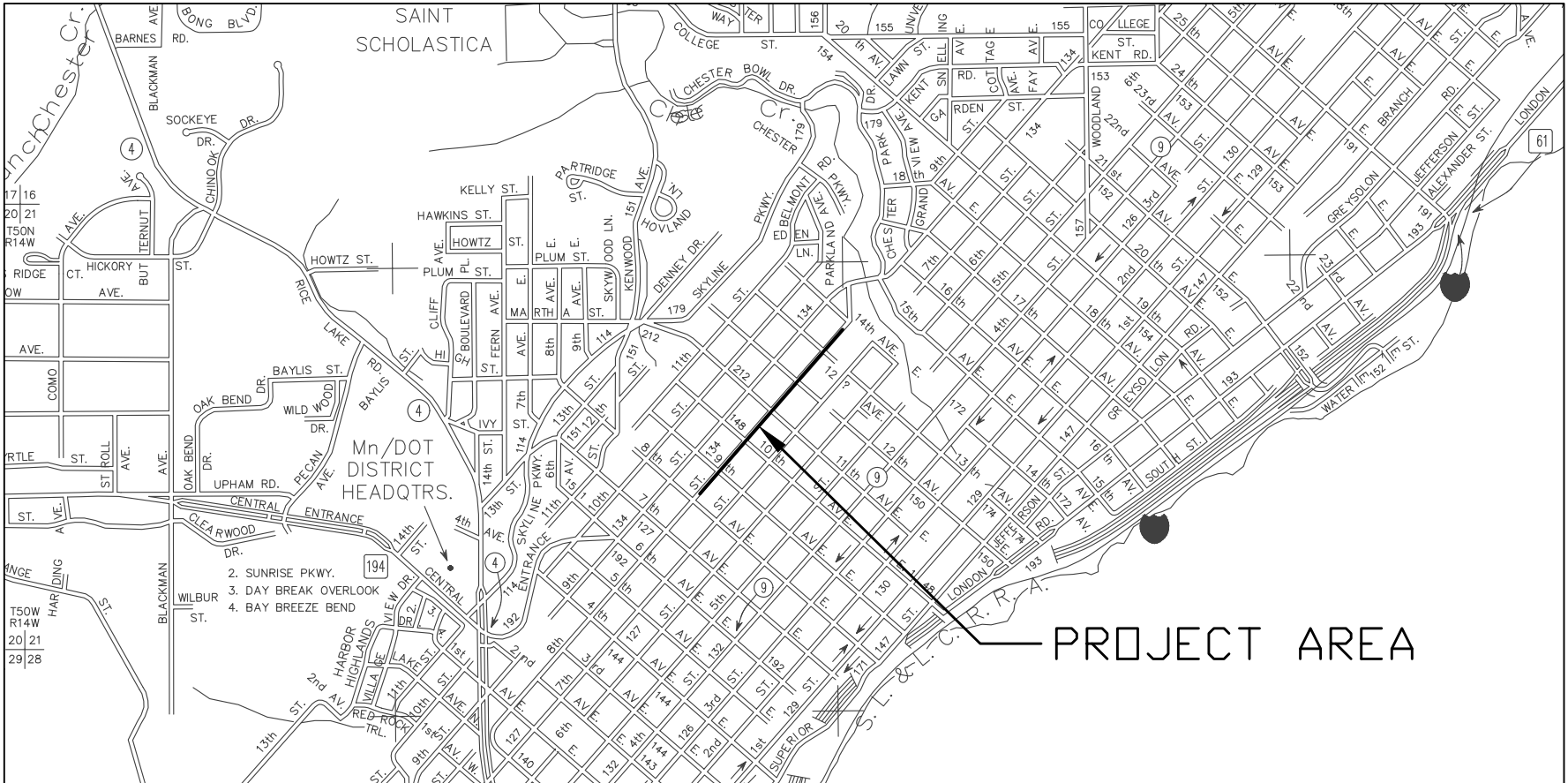
### ENGINEERING DIVISION

CONSTRUCTION PLANS FOR:

2022 WATER SERVICE REPLACEMENTS PHASE II

**INFORMATION ONLY**

CITY PROJECT NO. 2064



THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THIS 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".

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

CITY OF DULUTH PROJECT NO. 2064

#### GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. AVAILABLE AT: <http://www.dot.state.mn.us/pre-letting/spec/index.html>

THE 2019 EDITION OF THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES DEPARTMENT CONSTRUCTION STANDARDS AND SUPPLEMENTS OR ADDENDUMS SHALL APPLY.

AVAILABLE AT:  
<http://www.duluthmn.gov/engineering/standard-construction-specifications/>

#### INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SEQ
3-6	CHART A
7	EROSION CONTROL REQUIREMENTS
8	TRAFFIC CONTROL REQUIREMENTS
9-15	DETAILS
16-80	PLAN PAGES

THIS PLAN CONTAINS 80 SHEETS

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.

TIM A. SANDERS  
PROJECT ENGINEER (TYPED OR PRINTED NAME)

PROJECT ENGINEER DATE 50401 LIC. NO.

CITY APPROVAL

APPROVED CHIEF ENGINEER OF TRANSPORTATION DATE

APPROVED CHIEF ENGINEER OF UTILITIES DATE

APPROVED CITY ENGINEER DATE

DRAWN BY: JJM

SHEET NO. 1 OF 80



SEQ

NOTES	LINE NUMBER	SPEC NUMBER	DESCRIPTION	UNIT	TOTAL EST. QUANTITY
	1	2021.501	MOBILIZATION	LUMP SUM	1
	2	2118.507	AGGREGATE SURFACING, LIMESTONE DRIVEWAY	CU YD	5
1	3	2123.610	EXPLORATORY EXCAVATION/POTHOLE	HOURL	22
1	4	2503.602	LOCATE SANITARY SEWER SERVICE	EACH	10
1	5	2503.602	SANITARY SEWER PATCH	EACH	15
	6	2331.504	REMOVE & REPLACE CONCRETE DRIVEWAY APRON	SQ FT	171
	7	2411.607	REMOVE & REPLACE CONCRETE STEPS	CU YD	6.7
	8	2504.602	ABANDON WATER SERVICE AT CORPORATION STOP	EACH	3
	9	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, UNFINISHED BASEMENT	EACH	52
	10	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, FINISHED BASEMENT	EACH	6
	11	2504.602	REPLACE WATER SERVICE SPECIAL	EACH	10
	12	2504.602	CURBSTOP ASSEMBLY IN EXISTING TRENCH	EACH	18
	13	2504.602	REPLACE CURBSTOP SPECIAL	EACH	30
	14	2504.602	CONNECT TO EXISTING CORPORATION STOP SPECIAL	EACH	31
	15	2504.602	CONNECT TO EXISTING CURBSTOP SPECIAL	EACH	16
	16	2504.602	CONNECT TO 2" HDPE WATER MAIN	EACH	11
	17	2504.602	CONNECT TO EXISTING MAIN	EACH	3
	18	2504.602	BLOWOFF ASSEMBLY	EACH	2
	19	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED IN EXISTING TRENCH	LIN FT	138
	20	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, YARD AREA	LIN FT	150
	21	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, STREET AREA	LIN FT	230
	22	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY TRENCHLESS METHOD	LIN FT	3127
	23	2504.603	2" HDPE SDR 9 WATER MAIN PIPE INSTALLED BY DIRECTIONAL DRILLING	LIN FT	448
1	24	2504.604	3" POLYSTYRENE INSULATION	SQ YD	150
1	25	2504.610	PLUMBING TO RELOCATE WATER METER IN BASEMENT	HOURL	20
	26	2521.618	REMOVE & REPLACE CONCRETE WALK	SQ FT	1027
	27	263.601	TRAFFIC CONTROL	LUMP SUM	1
	28	2573.502	STORM DRAIN INLET PROTECTION	EACH	14
	29	2573.503	SEDIMENT CONTROL LOG TYPE ROCK	LIN FT	48
	30	2573.503	SEDIMENT CONTROL LOG TYPE WOOD FIBER	LIN FT	100
1,2	31	2575.504	SODDING TYPE LAWN	SQ YD	1525
1	32	2575.602	SALVAGE & REINSTALL PLANTING (BUSH, SHRUB, SMALL TREE)	EACH	8
1	33	2575.604	SALVAGE & REINSTALL LANDSCAPE GARDEN	SQ FT	500
1	34	2575.618	SALVAGE & REINSTALL ROCK RETAINING WALL	SQ FT	100
	35	2540.602	SALVAGE & REINSTALL WOOD STEPS/WALKWAY	EACH	1
1	36	2557.603	SALAGE & REINSTALL FENCE	LIN FT	42

NOTES

1)	QUANTITES ARE AN ESTIMATE. NECESSARY QUANTITIES WILL BE DETERMINED BY FIELD CONDITIONS.
2)	INCLUDES SALVAGED OR IMPORTED TOPSOIL

INFORMATION ONLY

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: Tim A. Sanders

TIM A. SANDERS  
TYPE NAME

DATE: 7/13/2022

LIC. NO.: 50401



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

2022 LEAD WATER SERVICE REPLACEMENTS PHASE II

CITY PROJECT NO.: 2064

STATE AID PROJECT NO.: NA

DRAWN BY: JJM

SEQ

SHEET NO. 2 OF 80

INFORMATION ONLY

CHART A

				SITE 1	SITE 2	SITE 3	SITE 4	SITE 5	SITE 6	SITE 7	SITE 8	SITE 9	SITE 10	SITE 11	SITE 12	SITE 13	SITE 14	SITE 15	SITE16	SITE 17	SITE 18
LINE	SPEC NUMBER	DESCRIPTION	UNIT	704 E 8TH ST	705 E 8TH ST	710 & 712 E 8TH ST	711 E 8TH ST	714 E 8TH ST	715 E 8TH ST	718 E 8TH ST	721 E 8TH ST	808 N 8TH AVE E	804 N 8TH AVE E	807 E 8TH ST	810 E 8TH ST	818 & 820 E 8TH ST	822 E 8TH ST	821 E 8TH ST	827 E 8TH ST	901 & 903 E 8TH ST	906 E 8TH ST
1	2021.501	MOBILIZATION	LUMP SUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	2118.507	AGGREGATE SURFACING, LIMESTONE DRIVEWAY	CU YD	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-
3	2123.610	EXPLORATORY EXCAVATION/POTHOLE	HOURL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	2503.602	LOCATE SANITARY SEWER SERVICE	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	2503.602	SANITARY SEWER PATCH	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	2331.504	REMOVE & REPLACE CONCRETE DRIVEWAY APRON	SQ FT	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-
26	2411.607	REMOVE & REPLACE CONCRETE STEPS	CU YD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	2504.602	ABANDON WATER SERVICE AT CORPORATION STOP	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, UNFINISHED BASEMENT	EACH	1	-	-	1	-	1	-	-	1	-	1	-	1	1	1	1	2	1
8	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, FINISHED BASEMENT	EACH	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
9	2504.602	REPLACE WATER SERVICE SPECIAL	EACH	1	-	1	-	1	-	1	-	-	-	-	1	1	-	-	-	-	-
10	2504.602	CURBSTOP ASSEMBLY IN EXISTING TRENCH	EACH	-	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
11	2504.602	REPLACE CURBSTOP SPECIAL	EACH	-	1	-	1	-	1	-	1	-	1	-	-	-	-	-	1	-	-
12	2504.602	CONNECT TO EXISTING CORPORATION STOP SPECIAL	EACH	-	1	-	1	-	1	-	1	-	1	-	-	-	-	-	1	-	-
13	2504.602	CONNECT TO EXISTING CURBSTOP SPECIAL	EACH	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	2	1
14	2504.602	CONNECT TO 2" HDPE WATER MAIN	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	2504.602	CONNECT TO EXISTING MAIN	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	2504.602	BLOWOFF ASSEMBLY	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED IN EXISTING TRENCH	LIN FT	-	-	16	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-
18	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, YARD AREA	LIN FT	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-
19	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, STREET AREA	LIN FT	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-
20	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY TRENCHLESS METHOD	LIN FT	33	33	-	67	-	74	-	66	18	64	62	-	37	108	30	70	72	36
21	2504.603	2" HDPE SDR 9 WATER MAIN PIPE INSTALLED BY DIRECTIONALLY DRILLING	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	2504.604	3" POLYSTYRENE INSULATION	SQ YD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	2504.610	PLUMBING TO RELOCATE WATER METER IN BASEMENT	HOURL	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
24	2521.618	REMOVE & REPLACE CONCRETE WALK	SQ FT	-	-	-	-	-	20	28	-	50	-	-	30	40	-	50	-	-	20
25	2563.601	TRAFFIC CONTROL	LUMP SUM																		
26	2573.502	STORM DRAIN INLET PROTECTION	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	2573.503	SEDIMENT CONTROL LOG TYPE ROCK	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	2573.503	SEDIMENT CONTROL LOG TYPE WOOD FIBER	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	2575.504	SODDING TYPE LAWN	SQ YD	10	10	10	20	10	20	10	20	20	10	20	10	20	20	20	20	25	20
30	2575.602	SALVAGE & REINSTALL PLANTING (BUSH, SHRUB, SMALL TREE)	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	2575.604	SALVAGE & REINSTALL LANDSCAPE GARDEN	SQ FT	-	-	100	-	-	-	-	-	-	-	-	-	150	-	-	-	-	-
32	2575.618	SALVAGE & REINSTALL ROCK RETAINING WALL	SQ FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	2540.602	SALVAGE & REINSTALL WOOD STEPS/WALKWAY	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	2557.603	SALAGE & REINSTALL FENCE	LIN FT	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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: 

TIM A. SANDERS  
TYPE NAME

DATE: 7/13/2022

LIC. NO: 50401



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

2022 LEAD WATER SERVICE REPLACEMENTS PHASE II

CITY PROJECT NO.: 2064

STATE AID PROJECT NO.: NA

DRAWN BY: JJM

CHARTS 1

SHEET NO. 3 OF 80

INFORMATION ONLY

CHART A

				SITE 19	SITE 20	SITE 21	SITE 22	SITE 23	SITE 24	SITE 25	SITE 26	SITE 27	SITE 28	SITE 29	SITE 30	SITE 31	SITE 32	SITE 33	SITE 34	SITE 35	SITE 36
LINE	SPEC NUMBER	DESCRIPTION	UNIT	907 E 8TH ST	908 E 8TH ST	911 E 8TH ST	913 E 8TH ST	916 & 918 E 8TH ST	917 E 8TH ST	919 E 8TH ST	923 E 8TH ST	924 E 8TH ST	929 E 8TH ST & 725 N 10TH AVE E	1003/1005 E 8TH ST	1008 E 8TH ST	1009 & 1014 E 8TH ST	1017 E 8TH ST	1019 & 1021 E 8TH ST	1025 E 8TH ST	1109 & 1111 E 8TH ST	1113 E 8TH ST
1	2021.501	MOBILIZATION	LUMP SUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	2118.507	AGGREGATE SURFACING, LIMESTONE DRIVEWAY	CU YD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	2123.610	EXPLORATORY EXCAVATION/POTHOLE	HOURL	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
4	2503.602	LOCATE SANITARY SEWER SERVICE	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	2503.602	SANITARY SEWER PATCH	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	2331.504	REMOVE & REPLACE CONCRETE DRIVEWAY APRON	SQ FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	2411.607	REMOVE & REPLACE CONCRETE STEPS	CU YD	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	3	-	-
6	2504.602	ABANDON WATER SERVICE AT CORPORATION STOP	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, UNFINISHED BASEMENT	EACH	1	1	1	1	2	1	1	1	1	-	1	1	1	1	2	1	1	-
8	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, FINISHED BASEMENT	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
9	2504.602	REPLACE WATER SERVICE SPECIAL	EACH	-	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-
10	2504.602	CURBSTOP ASSEMBLY IN EXISTING TRENCH	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
11	2504.602	REPLACE CURBSTOP SPECIAL	EACH	-	-	-	-	-	1	-	1	-	1	1	-	1	1	1	-	1	1
12	2504.602	CONNECT TO EXISTING CORPORATION STOP SPECIAL	EACH	-	-	-	-	-	1	-	1	-	1	1	-	1	1	1	-	1	1
13	2504.602	CONNECT TO EXISTING CURBSTOP SPECIAL	EACH	1	-	1	1	2	-	1	-	1	-	-	1	-	-	-	1	-	-
14	2504.602	CONNECT TO 2" HDPE WATER MAIN	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	2504.602	CONNECT TO EXISTING MAIN	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	2504.602	BLOWOFF ASSEMBLY	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED IN EXISTING TRENCH	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	30	-
18	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, YARD AREA	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, STREET AREA	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	-	34	-
20	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY TRENCHLESS METHOD	LIN FT	36	42	50	47	80	69	39	72	34	34	72	37	70	76	90	40	72	30
21	2504.603	2" HDPE SDR 9 WATER MAIN PIPE INSTALLED BY DIRECTIONALLY DRILLING	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	2504.604	3" POLYSTYRENE INSULATION	SQ YD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	2504.610	PLUMBING TO RELOCATE WATER METER IN BASEMENT	HOURL	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	6	-	-
24	2521.618	REMOVE & REPLACE CONCRETE WALK	SQ FT	30	30	-	-	-	30	-	-	-	-	10	-	-	-	-	24	-	-
25	2563.601	TRAFFIC CONTROL	LUMP SUM																		
26	2573.502	STORM DRAIN INLET PROTECTION	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	2573.503	SEDIMENT CONTROL LOG TYPE ROCK	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	2573.503	SEDIMENT CONTROL LOG TYPE WOOD FIBER	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	2575.504	SODDING TYPE LAWN	SQ YD	20	20	20	20	20	20	20	20	20	30	20	20	40	20	40	30	40	20
30	2575.602	SALVAGE & REINSTALL PLANTING (BUSH, SHRUB, SMALL TREE)	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
31	2575.604	SALVAGE & REINSTALL LANDSCAPE GARDEN	SQ FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	2575.618	SALVAGE & REINSTALL ROCK RETAINING WALL	SQ FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	2540.602	SALVAGE & REINSTALL WOOD STEPS/WALKWAY	EACH	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
34	2557.603	SALAGE & REINSTALL FENCE	LIN FT	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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: TIM A SANDERS

TIM A. SANDERS  
TYPE NAME

DATE: 7/13/2022

LIC. NO.: 50401



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

2022 LEAD WATER SERVICE REPLACEMENTS PHASE II

CITY PROJECT NO.: 2064

STATE AID PROJECT NO.: NA

DRAWN BY: JJM

CHARTS 2

SHEET NO. 4 OF 80



INFORMATION ONLY

CHART A

				SITE 37	SITE 38	SITE 39	SITE 40A	SITE 40B	SITE 40C	SITE 40D	SITE 41A	SITE 41B	SITE 41C	SITE 42	SITE 43	SITE 44	SITE 45	SITE 46	SITE 47	SITE 48	SITE 49
LINE	SPEC NUMBER	DESCRIPTION	UNIT	1119 E 8TH ST	1121 E 8TH ST	1125 E 8TH ST	800 BLOCK 12TH AVE E	803 & 807 N 12TH AVE E	811 & 815 N 12TH AVE E	814 N 12TH AVE E	700 BLOCK 12TH AVE E	722 & 730 N 12TH AVE E	718 & 720 N 12TH AVE E	1201 E 8TH ST	1205 E 8TH ST	1211 E 8TH ST	1212 & 1216 E 8TH ST	1213 & 1215 E 8TH ST	1219 E 8TH ST	1223 E 8TH ST	1227 E 8TH ST
1	2021.501	MOBILIZATION	LUMP SUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	2118.507	AGGREGATE SURFACING, LIMESTONE DRIVEWAY	CU YD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	2123.610	EXPLORATORY EXCAVATION/POTHOLE	HOURL	-	-	-	10	-	-	-	4	-	-	-	-	-	-	-	-	-	-
4	2503.602	LOCATE SANITARY SEWER SERVICE	EACH	-	-	-	-	2	2	1	-	2	2	-	-	-	-	-	-	-	-
5	2503.602	SANITARY SEWER PATCH	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	2331.504	REMOVE & REPLACE CONCRETE DRIVEWAY APRON	SQ FT	-	-	-	-	-	-	-	-	-	-	-	-	-	70	-	-	-	-
26	2411.607	REMOVE & REPLACE CONCRETE STEPS	CU YD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	2504.602	ABANDON WATER SERVICE AT CORPORATION STOP	EACH	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-
7	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, UNFINISHED BASEMENT	EACH	-	-	1	-	2	2	1	-	2	2	-	-	-	-	-	-	-	-
8	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, FINISHED BASEMENT	EACH	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-
9	2504.602	REPLACE WATER SERVICE SPECIAL	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
10	2504.602	CURBSTOP ASSEMBLY IN EXISTING TRENCH	EACH	-	-	-	-	2	2	1	-	2	2	-	-	-	1	1	-	-	-
11	2504.602	REPLACE CURBSTOP SPECIAL	EACH	1	1	1	-	-	-	-	-	-	-	1	1	1	-	1	1	1	1
12	2504.602	CONNECT TO EXISTING CORPORATION STOP SPECIAL	EACH	1	1	1	-	-	-	-	-	-	-	1	1	1	-	1	1	1	1
13	2504.602	CONNECT TO EXISTING CURBSTOP SPECIAL	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	2504.602	CONNECT TO 2" HDPE WATER MAIN	EACH	-	-	-	-	2	2	1	-	2	2	-	-	-	-	-	-	-	-
15	2504.602	CONNECT TO EXISTING MAIN	EACH	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-
16	2504.602	BLOWOFF ASSEMBLY	EACH	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED IN EXISTING TRENCH	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	16	30	-	-	-
18	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, YARD AREA	LIN FT	-	-	-	-	18	18	10	-	34	34	-	-	-	-	-	-	-	-
19	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, STREET AREA	LIN FT	-	-	-	-	18	18	20	-	18	18	-	-	-	-	30	-	-	-
20	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY TRENCHLESS METHOD	LIN FT	34	34	64	-	80	80	40	-	50	50	25	25	74	85	92	66	71	71
21	2504.603	2" HDPE SDR 9 WATER MAIN PIPE INSTALLED BY DIRECTIONALLY DRILLING	LIN FT	-	-	-	153	-	-	-	135	-	-	-	-	-	-	-	-	-	-
22	2504.604	3" POLYSTYRENE INSULATION	SQ YD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	2504.610	PLUMBING TO RELOCATE WATER METER IN BASEMENT	HOURL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	2521.618	REMOVE & REPLACE CONCRETE WALK	SQ FT	-	-	20	-	80	80	80	-	50	50	-	-	40	-	75	-	15	15
25	2563.601	TRAFFIC CONTROL	LUMP SUM								-	-	-	-	-	-	-	-	-	-	-
26	2573.502	STORM DRAIN INLET PROTECTION	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	2573.503	SEDIMENT CONTROL LOG TYPE ROCK	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	2573.503	SEDIMENT CONTROL LOG TYPE WOOD FIBER	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	2575.504	SODDING TYPE LAWN	SQ YD	20	20	20	-	60	60	40	-	60	60	10	10	20	80	80	20	20	20
30	2575.602	SALVAGE & REINSTALL PLANTING (BUSH, SHRUB, SMALL TREE)	EACH	-	-	-	-	2	2	-	-	-	2	-	-	1	-	-	-	-	-
31	2575.604	SALVAGE & REINSTALL LANDSCAPE GARDEN	SQ FT	-	-	-	-	-	-	-	-	-	250	-	-	-	-	-	-	-	-
32	2575.618	SALVAGE & REINSTALL ROCK RETAINING WALL	SQ FT	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-
33	2540.602	SALVAGE & REINSTALL WOOD STEPS/WALKWAY	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	2557.603	SALAGE & REINSTALL FENCE	LIN FT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CHART A

				SITE 50	SITE 51A	SITE 51B	SITE 51C	SITE 52	SITE 53	SITE 54	SITE 55	SITE 56	SITE 57		EST. TOTAL
LINE	SPEC NUMBER	DESCRIPTION	UNIT	1231 E 8TH ST	800 BLOCK N 13TH AVE E	815 N 13TH AVE E	804 N 13TH AVE E	802 N 13TH AVE E	1304 E 8TH ST	1305 E 8TH ST	1309 E 8TH ST	1315 E 8TH ST	1317 E 8TH ST	NOT SITE SPECIFIC	QUANTITY
1	2021.501	MOBILIZATION	LUMP SUM	-	-	-	-	-	-	-	-	-	-	1	1
2	2118.507	AGGREGATE SURFACING, LIMESTONE DRIVEWAY	CU YD	-	-	-	-	-	-	-	-	-	-	-	5
3	2123.610	EXPLORATORY EXCAVATION/POTHOLE	HOURL	-	-	-	-	-	-	-	-	-	-	4	22
4	2503.602	LOCATE SANITARY SEWER SERVICE	EACH	-	-	1	-	-	-	-	-	-	-	-	10
5	2503.602	SANITARY SEWER PATCH	EACH	-	-	-	-	-	-	-	-	-	-	15	15
25	2331.504	REMOVE & REPLACE CONCRETE DRIVEWAY APRON	SQ FT	-	-	-	-	75	-	-	-	-	-	-	171
26	2411.607	REMOVE & REPLACE CONCRETE STEPS	CU YD	-	-	-	-	-	-	-	-	-	3	-	6.7
6	2504.602	ABANDON WATER SERVICE AT CORPORATION STOP	EACH	-	1	-	-	-	-	-	-	-	-	-	3
7	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, UNFINISHED BASEMENT	EACH	-	-	1	1	1	1	-	1	1	-	-	46
8	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, FINISHED BASEMENT	EACH	-	-	-	-	-	-	-	-	-	-	-	6
9	2504.602	REPLACE WATER SERVICE SPECIAL	EACH	-	-	-	-	-	-	-	-	-	-	-	10
10	2504.602	CURBSTOP ASSEMBLY IN EXISTING TRENCH	EACH	-	-	1	1	-	-	-	-	-	-	-	18
11	2504.602	REPLACE CURBSTOP SPECIAL	EACH	1	-	-	-	1	-	1	1	1	-	-	30
12	2504.602	CONNECT TO EXISTING CORPORATION STOP SPECIAL	EACH	1	-	-	-	1	-	1	1	1	1	-	31
13	2504.602	CONNECT TO EXISTING CURBSTOP SPECIAL	EACH	-	-	-	-	-	1	-	-	-	1	-	16
14	2504.602	CONNECT TO 2" HDPE WATER MAIN	EACH	-	-	1	1	-	-	-	-	-	-	-	11
15	2504.602	CONNECT TO EXISTING MAIN	EACH	-	1	-	-	-	-	-	-	-	-	-	3
16	2504.602	BLOWOFF ASSEMBLY	EACH	-	1	-	-	-	-	-	-	-	-	-	2
17	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED IN EXISTING TRENCH	LIN FT	-	-	-	-	-	-	-	-	-	-	-	138
18	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, YARD AREA	LIN FT	-	-	12	12	-	-	-	-	-	-	-	150
19	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY OPEN CUT, STREET AREA	LIN FT	-	-	7	21	-	-	-	-	-	-	-	230
20	2504.603	1" HDPE SDR 9 SERVICE PIPE INSTALLED BY TRENCHLESS METHOD	LIN FT	71	-	22	23	74	30	34	73	69	30	-	3127
21	2504.603	2" HDPE SDR 9 WATER MAIN PIPE INSTALLED BY DIRECTIONALLY DRILLING	LIN FT	-	160	-	-	-	-	-	-	-	-	-	448
22	2504.604	3" POLYSTYRENE INSULATION	SQ YD	-	-	-	-	-	-	-	-	-	-	-	150
23	2504.610	PLUMBING TO RELOCATE WATER METER IN BASEMENT	HOURL	-	-	-	6	-	-	-	-	-	-	-	20
24	2521.618	REMOVE & REPLACE CONCRETE WALK	SQ FT	-	-	75	75	-	-	-	-	-	10	-	1027
25	2563.601	TRAFFIC CONTROL	LUMP SUM	-	-	-	-	-	-	-	-	-	-	1	1
26	2573.502	STORM DRAIN INLET PROTECTION	EACH	-	-	-	-	-	-	-	-	-	-	14	14
27	2573.503	SEDIMENT CONTROL LOG TYPE ROCK	LIN FT	-	-	-	-	-	-	-	-	-	-	48	48
28	2573.503	SEDIMENT CONTROL LOG TYPE WOOD FIBER	LIN FT	-	-	-	-	-	-	-	-	-	-	100	100
29	2575.504	SODDING TYPE LAWN	SQ YD	20	-	40	40	-	20	20	20	20	10	-	1525
30	2575.602	SALVAGE & REINSTALL PLANTING (BUSH, SHRUB, SMALL TREE)	EACH	-	-	-	-	-	-	-	-	-	-	-	8
31	2575.604	SALVAGE & REINSTALL LANDSCAPE GARDEN	SQ FT	-	-	-	-	-	-	-	-	-	-	-	500
32	2575.618	SALVAGE & REINSTALL ROCK RETAINING WALL	SQ FT	-	-	-	-	-	-	-	-	-	-	-	100
33	2540.602	SALVAGE & REINSTALL WOOD STEPS/WALKWAY	EACH	-	-	-	-	-	-	-	-	-	-	-	1
34	2557.603	SALAGE & REINSTALL FENCE	LIN FT	-	-	12	12	-	-	-	-	-	-	-	42

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: 

TIM A. SANDERS  
TYPE NAME

DATE: 7/13/2022

LIC. NO: 50401



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

2022 LEAD WATER SERVICE REPLACEMENTS PHASE II

CITY PROJECT NO.: 2064

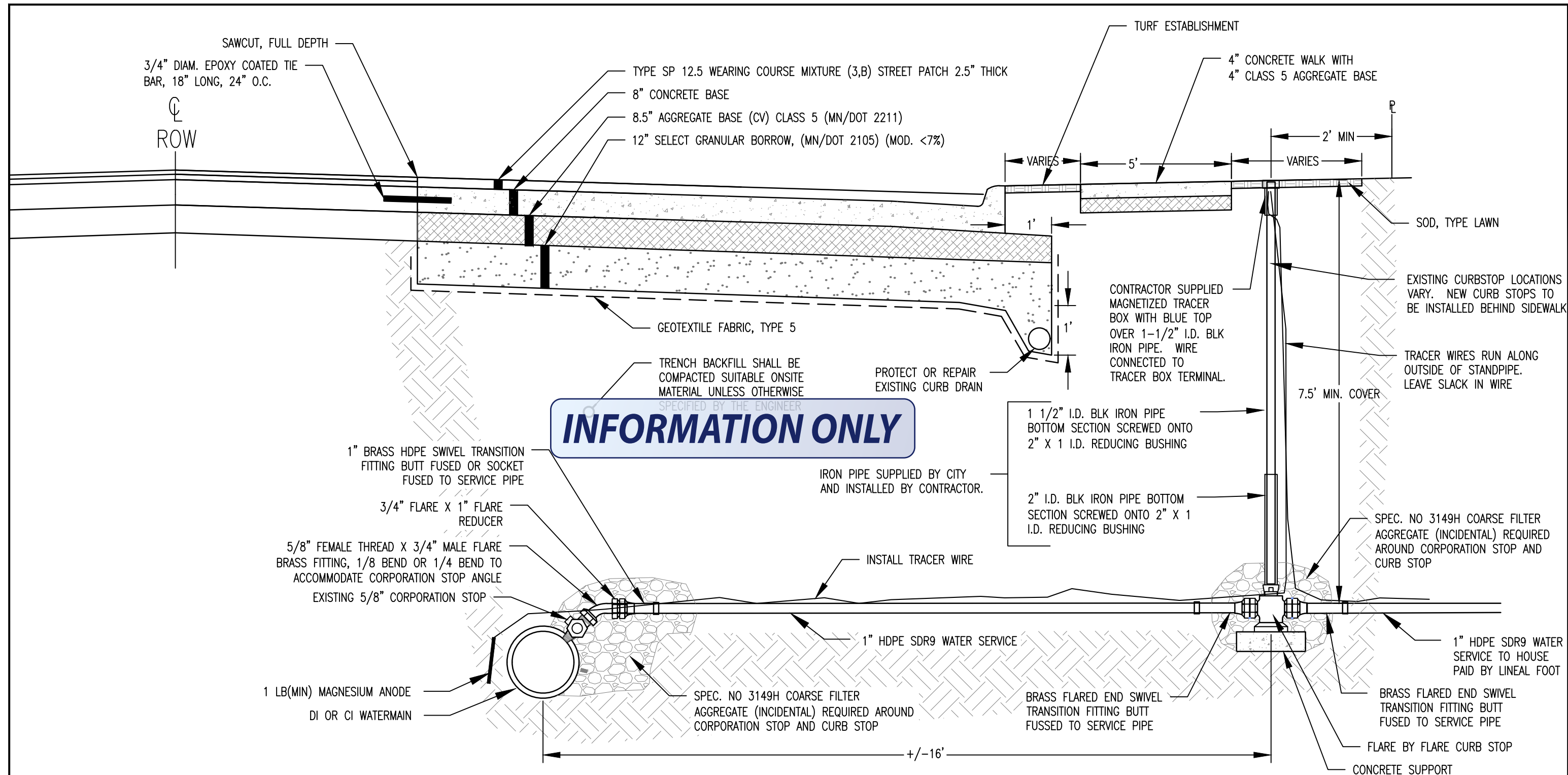
STATE AID PROJECT NO.: NA

DRAWN BY: JJM

CHARTS 4

SHEET NO. 6 OF 80

INFORMATION ONLY



**NOTES:**

- BID ITEM INCLUDES ALL MATERIALS, WORK, EXCAVATION, BACKFILL, COMPACTION AND STREET AND PUBLIC SIDEWALK RESTORATION TO REPLACE AN EXISTING WATER SERVICE & CURBSTOP. AND CONNECT TO AN EXISTING CORPORATION STOP. RESTORATION OF PRIVATE SIDEWALKS, LANDSCAPING, SOD, ETC. WILL BE PAID UNDER INDIVIDUAL BID ITEMS
- THE LOCATION OF THE NEW CURBSTOP MAY BE MOVED UP TO 4' TO AVOID DISTURBANCE OF AN EXISTING SEWER SERVICE.
- ALL WATER SERVICE LINES SHALL BE INSTALLED PERPENDICULAR TO THE STREET RIGHT OF WAY FROM THE HOUSE TO THE WATER MAIN.
- IF A WATER SERVICE ALIGNMENT IS SHIFTED, THE OFFSET SHALL BE ACCOUNTED FOR WITH 90 DEGREE BENDS AT THE MAIN TO KEEP THE SERVICE ORIENTED PERPENDICULAR TO THE MAIN.
- BACKFILL SHALL BE SUITABLE ONSITE MATERIAL UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- PROVIDE 1 LB ANODE FOR TRACER WIRE AT WATER MAIN. TRACER WIRE SHALL BE CONTINUOUS FROM ANODE TO TRACER BOX AND FROM TRACER BOX TO INSIDE HOUSE.

## WATER SERVICE REPLACEMENT SPECIAL

### 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: *Tim A. Sanders*

TIM A. SANDERS  
TYPE NAME

DATE: 7/13/2022

LIC. NO: 50401



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

2022 LEAD WATER SERVICE REPLACEMENTS PHASE II

CITY PROJECT NO.: 2064

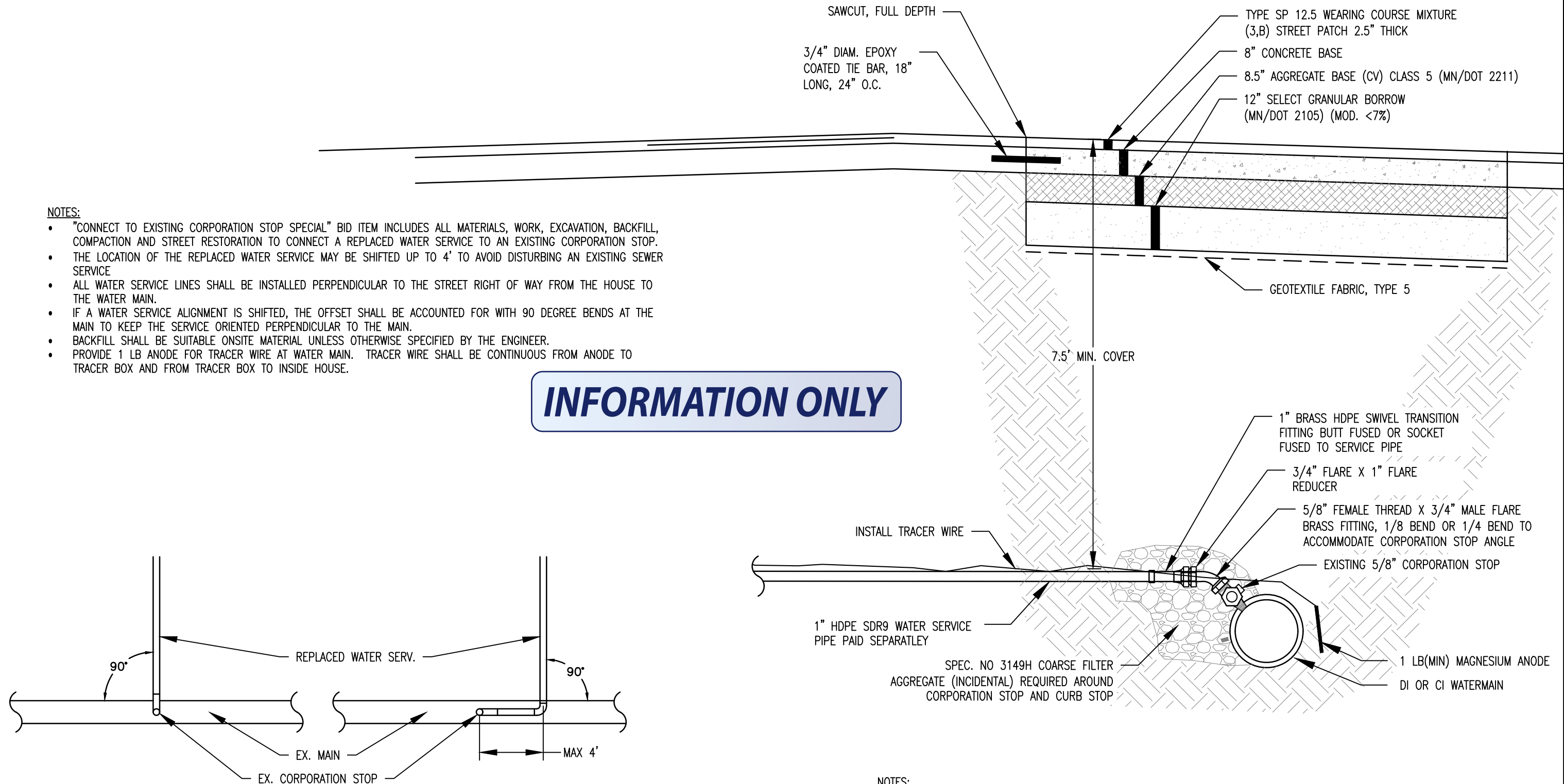
STATE AID PROJECT NO.: NA

DRAWN BY: JJM

DETAILS 1

SHEET NO. 9 OF 80





NOTES:

- "CONNECT TO EXISTING CORPORATION STOP SPECIAL" BID ITEM INCLUDES ALL MATERIALS, WORK, EXCAVATION, BACKFILL, COMPACTION AND STREET RESTORATION TO CONNECT A REPLACED WATER SERVICE TO AN EXISTING CORPORATION STOP.
- THE LOCATION OF THE REPLACED WATER SERVICE MAY BE SHIFTED UP TO 4' TO AVOID DISTURBING AN EXISTING SEWER SERVICE
- ALL WATER SERVICE LINES SHALL BE INSTALLED PERPENDICULAR TO THE STREET RIGHT OF WAY FROM THE HOUSE TO THE WATER MAIN.
- IF A WATER SERVICE ALIGNMENT IS SHIFTED, THE OFFSET SHALL BE ACCOUNTED FOR WITH 90 DEGREE BENDS AT THE MAIN TO KEEP THE SERVICE ORIENTED PERPENDICULAR TO THE MAIN.
- BACKFILL SHALL BE SUITABLE ONSITE MATERIAL UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- PROVIDE 1 LB ANODE FOR TRACER WIRE AT WATER MAIN. TRACER WIRE SHALL BE CONTINUOUS FROM ANODE TO TRACER BOX AND FROM TRACER BOX TO INSIDE HOUSE.

INFORMATION ONLY

ACCEPTABLE SERVICE LAYOUTS  
NO SCALE

CONNECT TO EXISTING CORPORATION STOP SPECIAL  
NO SCALE

NOTES:

- PROVIDE 1 LB ANODE FOR TRACER WIRE AT WATER MAIN. TRACER WIRE SHALL BE CONTINUOUS FROM ANODE TO TRACER BOX AND FROM TRACER BOX TO INSIDE HOUSE.
- BACKFILL SHALL BE SUITABLE ONSITE MATERIAL UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

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:

*Tim A. Sanders*

TIM A. SANDERS  
TYPE NAME

DATE: 7/13/2022

LIC. NO: 50401



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

2022 LEAD WATER SERVICE REPLACEMENTS PHASE II

CITY PROJECT NO.: 2064

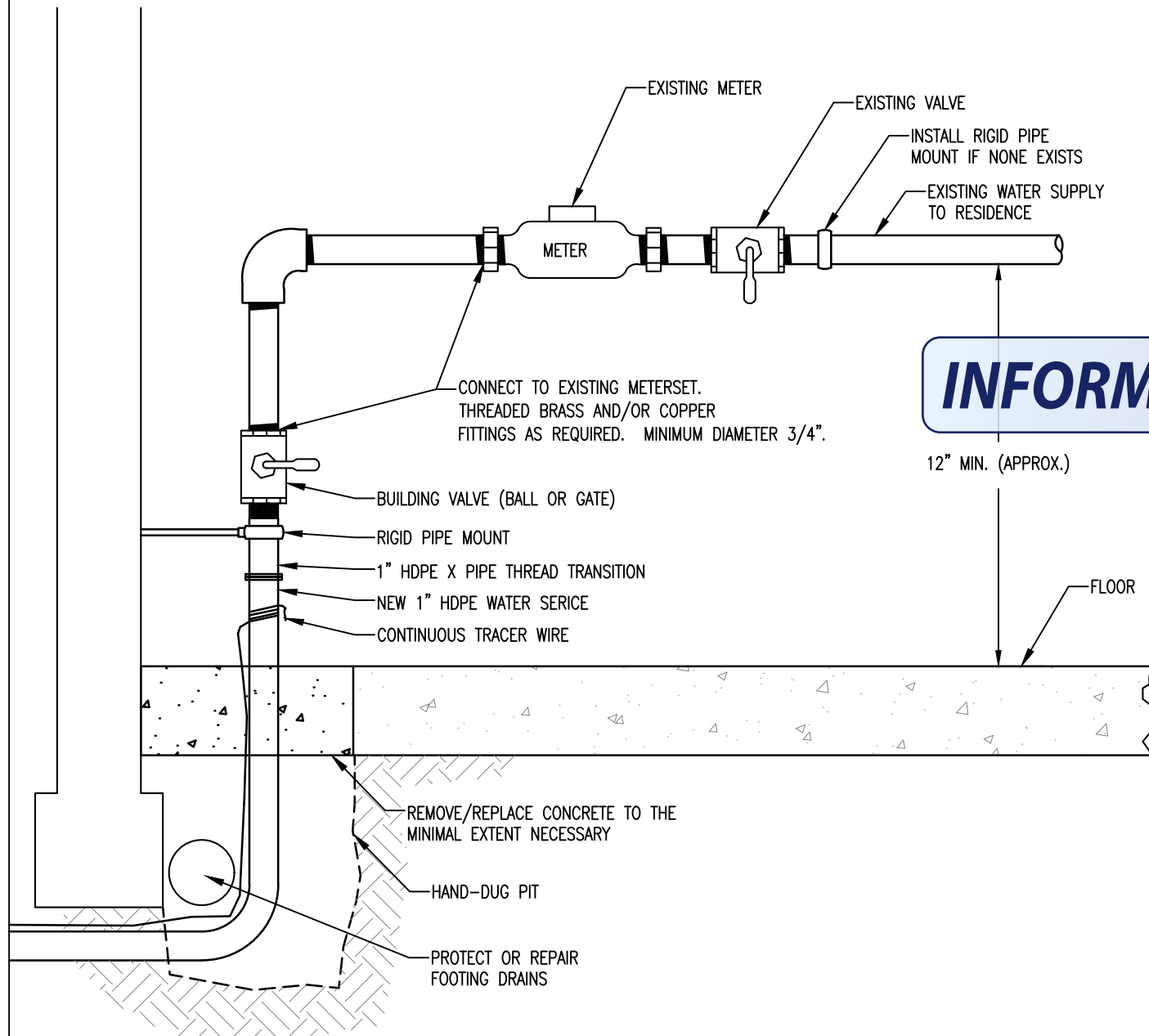
STATE AID PROJECT NO.: NA

DRAWN BY: JJM

DETAILS 3

SHEET NO. 11 OF 80





NOTES:

1. BREAK A REMOVE CONCRETE IN A CONTROLLED MANOR TO PREVENT WAYWARD CRACKING. REMOVE MINIMUM AMOUNT NECESSARY TO REPLACE WATER SERVICE.
2. PIPE AND FITTINGS BETWEEN BUILDING VALVE AND METER SHALL BE THREADED BRASS AND/OR COPPER OF NOT LESS THAN 3/4" DIAMETER.
3. METERS SHALL ALWAYS BE INSTALLED IN A HORIZONTAL POSITION.
4. WATER METER AND ADJACENT PIPING SHALL BE RIGIDLY MOUNTED.
5. VALVES SHALL BE GATE OR FULL-WAY BALL VALVES.
6. PRESSURE REDUCING VALVE, WHERE PRESENT, TO BE SALVAGED AND REINSTALLED.
7. PIPE SHALL BE SUPPORTED TO COMPLY WITH PLUMBING CODES.
8. EXISTING LEAD WATER SERVICE PIPE SHALL BE FITTED WITH A WATERPROOF CAP AND A MINIMUM OF 10' SHALL REMAIN IN PLACE TO SERVE AS AN ELECTRICAL SERVICE GROUND. IF THE LEAD PIPE IS ENTIRELY REMOVED THE CONTRACTOR SHALL VERIFY A SECONDARY GROUNDING ELECTRODE EXISTS AND INSTALL ONE IF NECESSARY, TO COMPLY WITH STATE ELECTRICAL CODES.
9. WATER METER AREA SHALL BE CLEANED AND RESTORE TO PREEXISTING CONDITION.

INDOOR PLUMBING RECONNECTION

CITY OF DULUTH  
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: *Tim A. Sanders*

TIM A. SANDERS  
TYPE NAME

DATE: 7/13/2022

LIC. NO: 50401



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

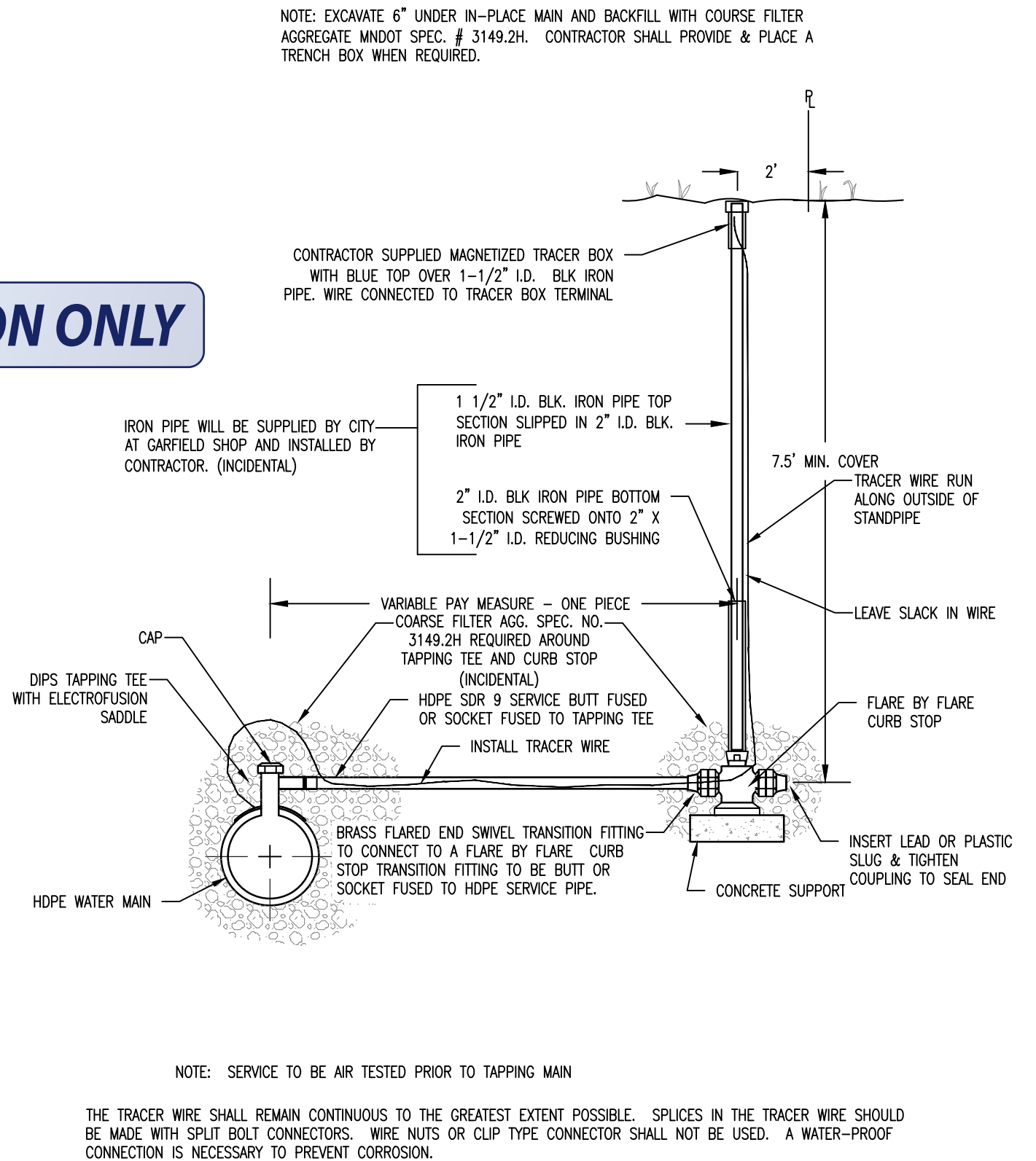
TYPICAL HDPE WATER SERVICE - 1", 1-1/4", AND 2"

REVISED/APPROVED 04/05/2019

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

W-5A

NO SCALE



NOTE: SERVICE TO BE AIR TESTED PRIOR TO TAPPING MAIN

THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS OR CLIP TYPE CONNECTOR SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

2022 LEAD WATER SERVICE REPLACEMENTS PHASE II

CITY PROJECT NO.: 2064

STATE AID PROJECT NO.: NA

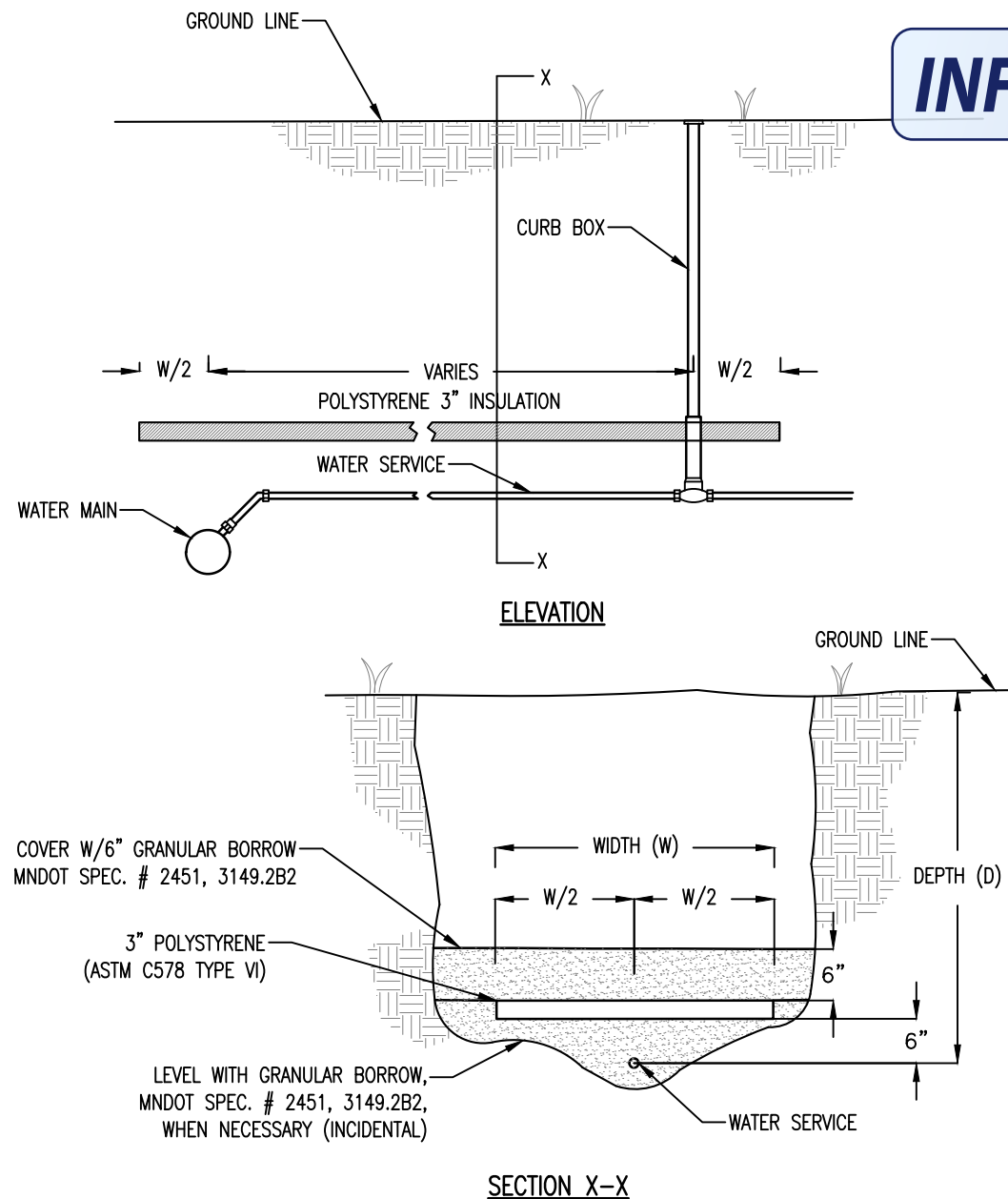
DRAWN BY: JJM

DETAILS 4

SHEET NO. 12 OF 80



INFORMATION ONLY



NOTES:

1. LAYERING OF 2 OR 3 SHEETS TO ARRIVE AT 3" IS REQUIRED WITH JOINTS OFFSET A MINIMUM OF 6".
2. POLYSTYRENE SHALL BE AS SPECIFIED IN THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES STANDARD CONSTRUCTION SPECIFICATIONS.
3. INSULATION SHALL ONLY BE USED WHERE APPROVED BY THE ENGINEER.

DEPTH (D)	WIDTH (W)
7' OR MORE	NONE
5.2' TO 6.9'	4'-0"
4.3' TO 5.1'	6'-0"
3.0' TO 4.2'	8'-0"

WATER SERVICE INSULATION

W-13

REVISED/APPROVED 04/05/2019

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:

*Tim A. Sanders*

TIM A. SANDERS  
TYPE NAME

DATE: 7/13/2022

LIC. NO: 50401



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

2022 LEAD WATER SERVICE REPLACEMENTS PHASE II

CITY PROJECT NO.: 2064

STATE AID PROJECT NO.: NA

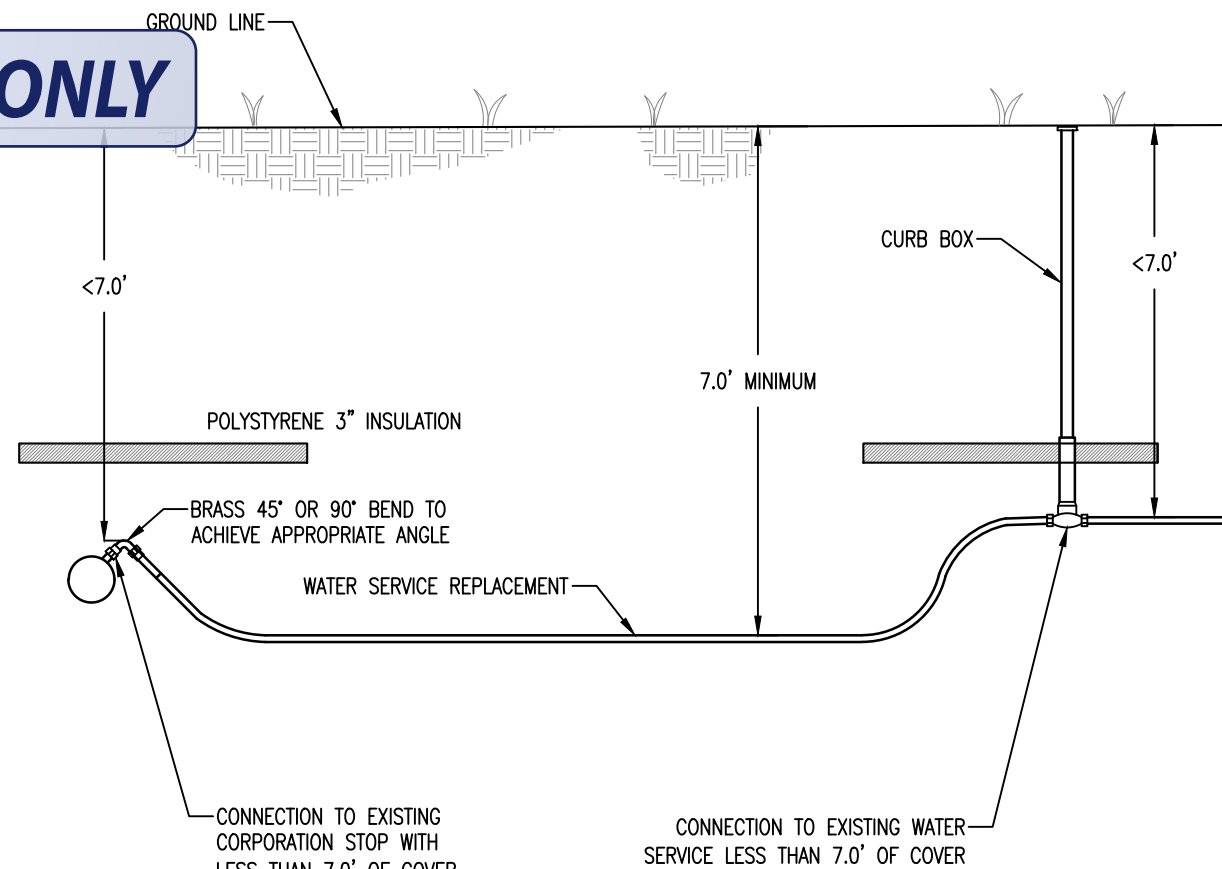
DRAWN BY: JJM

DETAILS 6

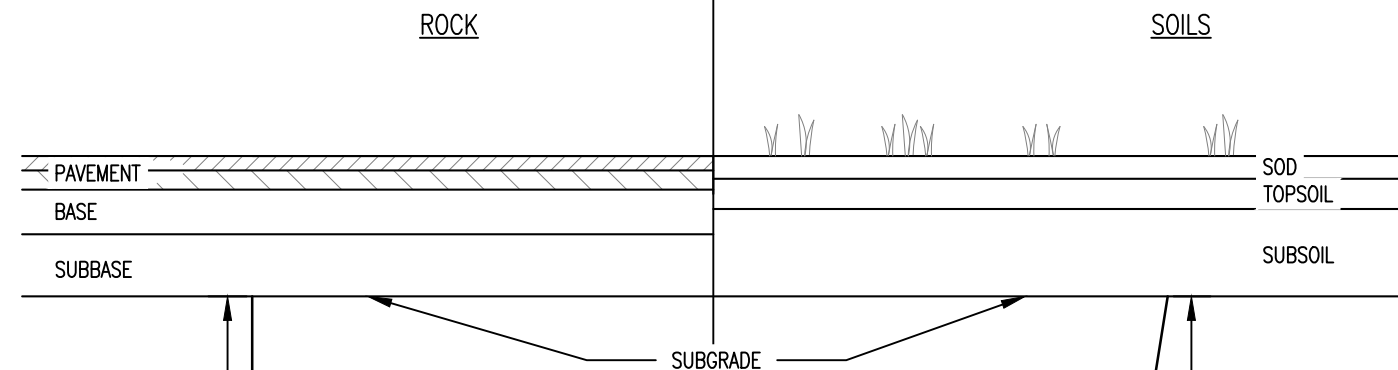
SHEET NO. 14 OF 80

NOTES:

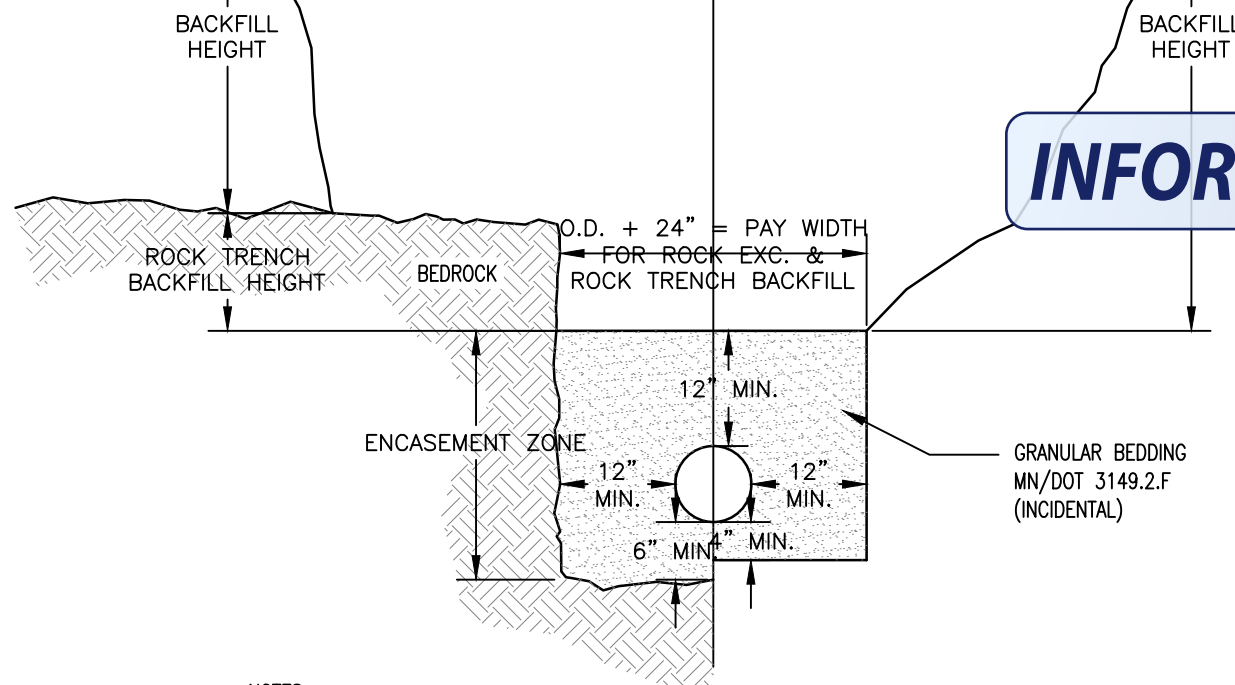
1. WATER SERVICES SHALL HAVE A MINIMUM COVER DEPTH OF 7.0'
2. WHERE 7.0' OF COVER IS UNACHIEVABLE DUE TO A FIXED OR IMMOVABLE OBJECT (SHALLOW WATER MAIN, CONNECTION TO EXISTING SHALLOW SERVICE OR BEDROCK) THE WATER SERVICE SHALL BE INSULATED ACCORDING TO DETAIL W-13. IN THESE CASES, THE REPLACED WATER SERVICE SHALL BE INSTALLED IN DOWNWARD SLOPING MANOR AS TO ACHIEVE 7.0' OF COVER AS CLOSE TO THE FIXED OBJECT AS POSSIBLE AND MINIMIZE THE EXTENT OF INSULATION.
3. WHERE 7.0' OF COVER IS ACHIEVABLE BUT THE CONTRACTOR FAILS TO DO SO, THE CONTRACTOR SHALL LOWER THE WATER SERVICE. IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY CHOOSE TO INSULATE SUCH A SERVICE AT NO COST TO THE CITY.
4. AT ANY TIME DURING CONSTRUCTION THE CONTRACTOR SHALL BE PREPARED TO PROVE COVER DEPTH BY STRING LINE OR OTHER APPROVED METHOD.
5. ALL USE OF INSULATION SHALL BE APPROVED, MEASURED, RECORDED AND WITNESSED BY THE ENGINEER.







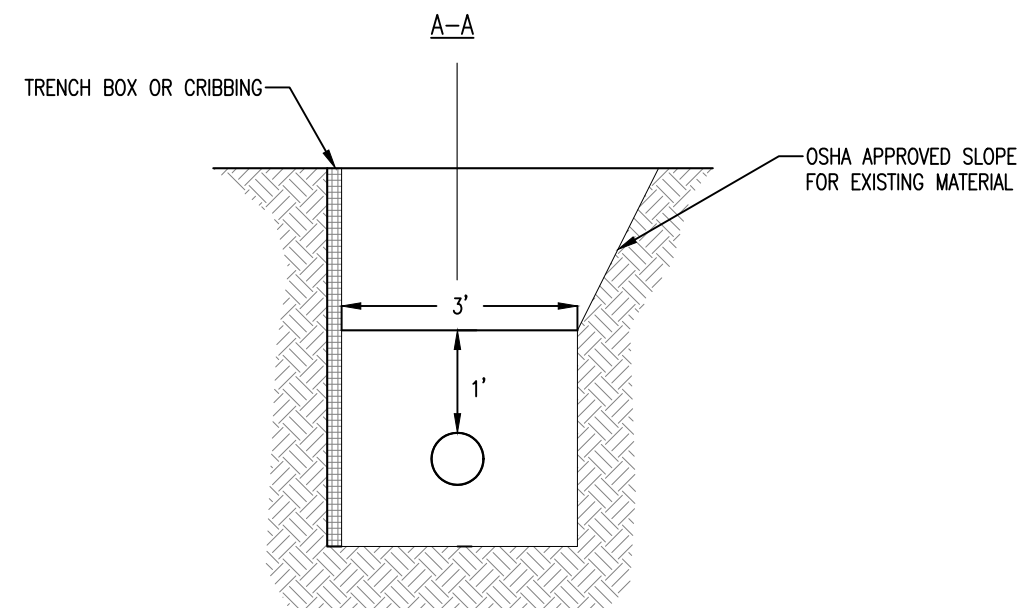
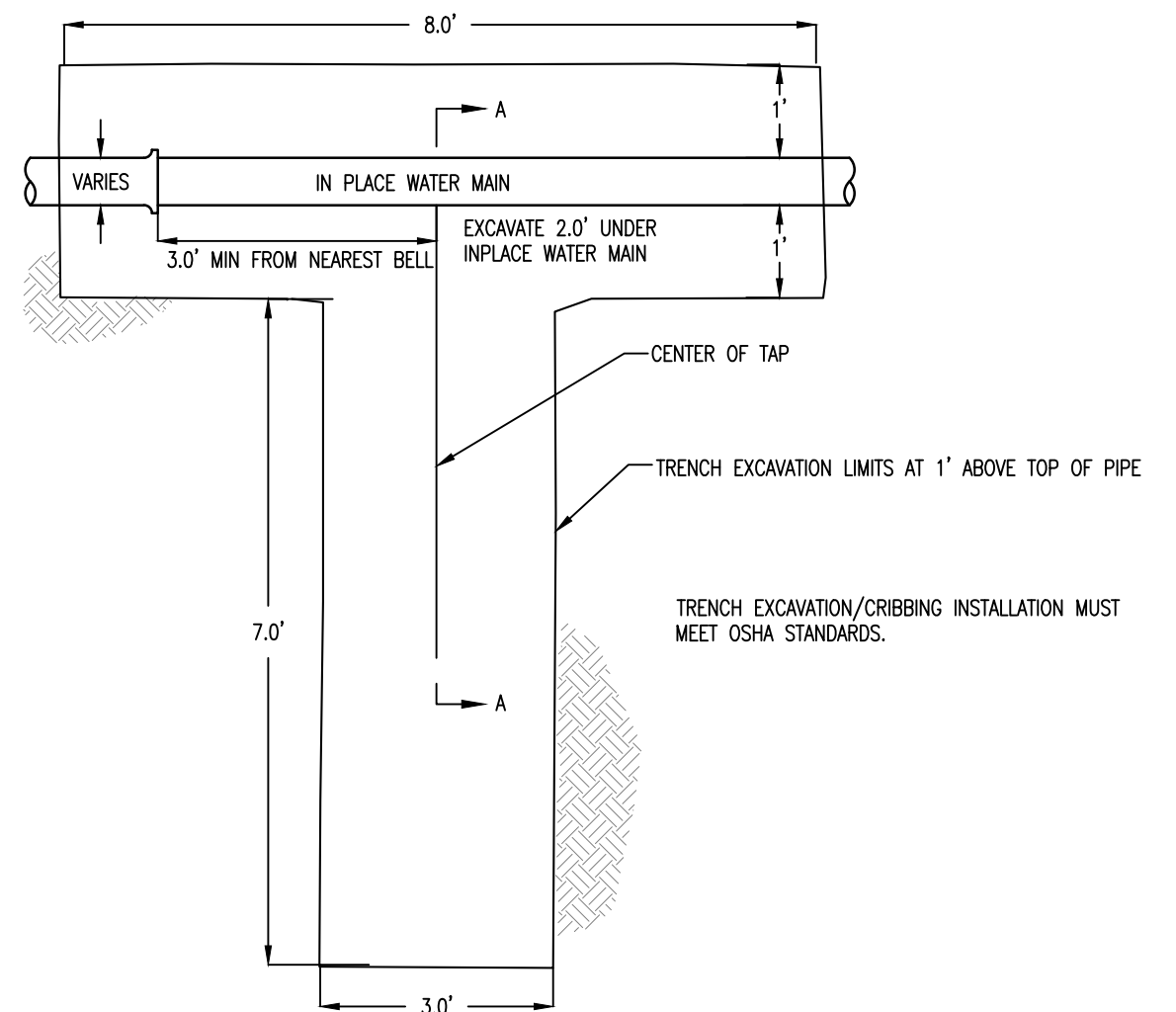
FOR PAYMENT OF IMPORTED BACKFILL, MEASUREMENT WILL BE MADE BASED ON A TYPICAL TRENCH WIDTH OF 8 FEET. NO COMPENSATION WILL BE MADE FOR IMPORTED BACKFILL BEYOND THE TYPICAL WIDTH LIMIT.



NOTES:

1. EXCESS EXCAVATION MATERIAL SHALL BE DISPOSED OF OFF PROJECT R.O.W. (INCIDENTAL)
2. PAY WIDTH FOR ROCK EXCAVATION SHALL BE BASED ON OUTSIDE DIAMETER OF PIPE PLUS 24".
3. A MINIMUM OF 1 CUBIC YARD OF STRUCTURE EXCAVATION, CLASS R, WILL BE PAID FOR EVERY 10' OF PIPE WHERE ROCK REMOVAL IS REQUIRED.
4. TRENCH STABILIZATION BEDDING MATERIAL MAY BE USED IN AREAS AS DETERMINED BY THE ENGINEER.
5. ENCASEMENT ZONE MATERIAL SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.
6. BACKFILL SHALL BE SELECT GRADING MATERIAL FOUND ON-SITE WHEN DEEMED SUITABLE BY THE ENGINEER OR AS OTHERWISE DEFINED IN THE PROJECT SPECIAL PROVISIONS. WHEN ON-SITE MATERIAL IS NOT SUITABLE AND WHEN BACKFILL MATERIAL IS NOT SPECIFIED, IMPORTED MATERIAL MEETING MN/DOT 3149.2.D.1 GRANULAR BACKFILL SHALL BE PROVIDED. USE OF NATIVE ON-SITE MATERIAL IS INCIDENTAL.
7. COMPACT BACKFILL MATERIALS TO 100% OF MAXIMUM STANDARD PROCTOR DENSITY FOR THE UPPER 3' BELOW THE SUBGRADE, AND TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY BELOW THE UPPER 3'.

**INFORMATION ONLY**



DUCTILE IRON, PE WATERMAIN, PRESSURE SEWER, & FORCEMAIN BEDDING

EX-1

REVISED/APPROVED 04/05/2019

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

NO SCALE

EXCAVATION FOR TAPPING SLEEVE AND VALVE

W-11

REVISED/APPROVED 02/01/2013

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.

DATE: 7/13/2022

LIC. NO: 50401



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

2022 LEAD WATER SERVICE REPLACEMENTS PHASE II

CITY PROJECT NO.: 2064

STATE AID PROJECT NO.: NA

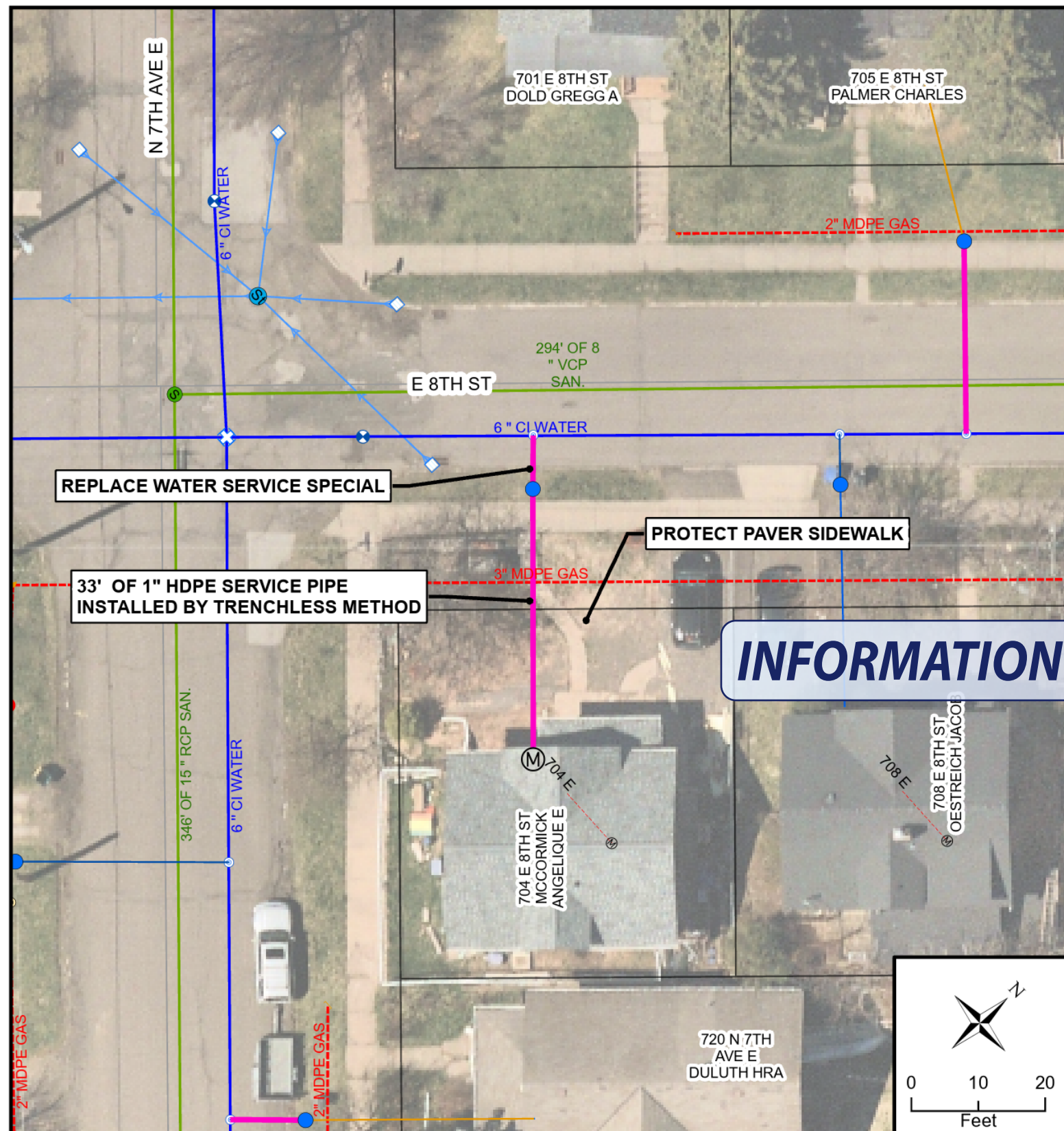
DRAWN BY: JJM

DETAILS 7

SHEET NO. 15 OF 80

SIGNATURE: *Tim A. Sanders*

TIM A. SANDERS  
TYPE NAME



#### METER LOCATION

- ON FRONT WALL, 11.0' TO INSIDE WEST WALL
- METER IN PANELED CLOSET IN UNFINISHED WORKSHOP SPACE

## INFORMATION ONLY

#### NOTES

- SEWER LATERAL EXPECTED ADJACENT TO WATER SERVICE
- PUBLIC WATER SERVICE IS LEAD, PRIVATE WATER SERVICE IS EXPECTED TO BE GALVANIZED IRON PIPE

#### ADDITIONAL ESTIMATED QUANTITIES

- CONNECT TO INDOOR PLUMBING, UNFINISHED BASEMENT 1 EA
- SALVAGE & REINSTALL FENCE 8 LF
- SODDING TYPE LAWN 10 SY

#### CONTACT

- OWNERS - JONATHAN & ANGELIQUE MCCORMICK 218-464-6465

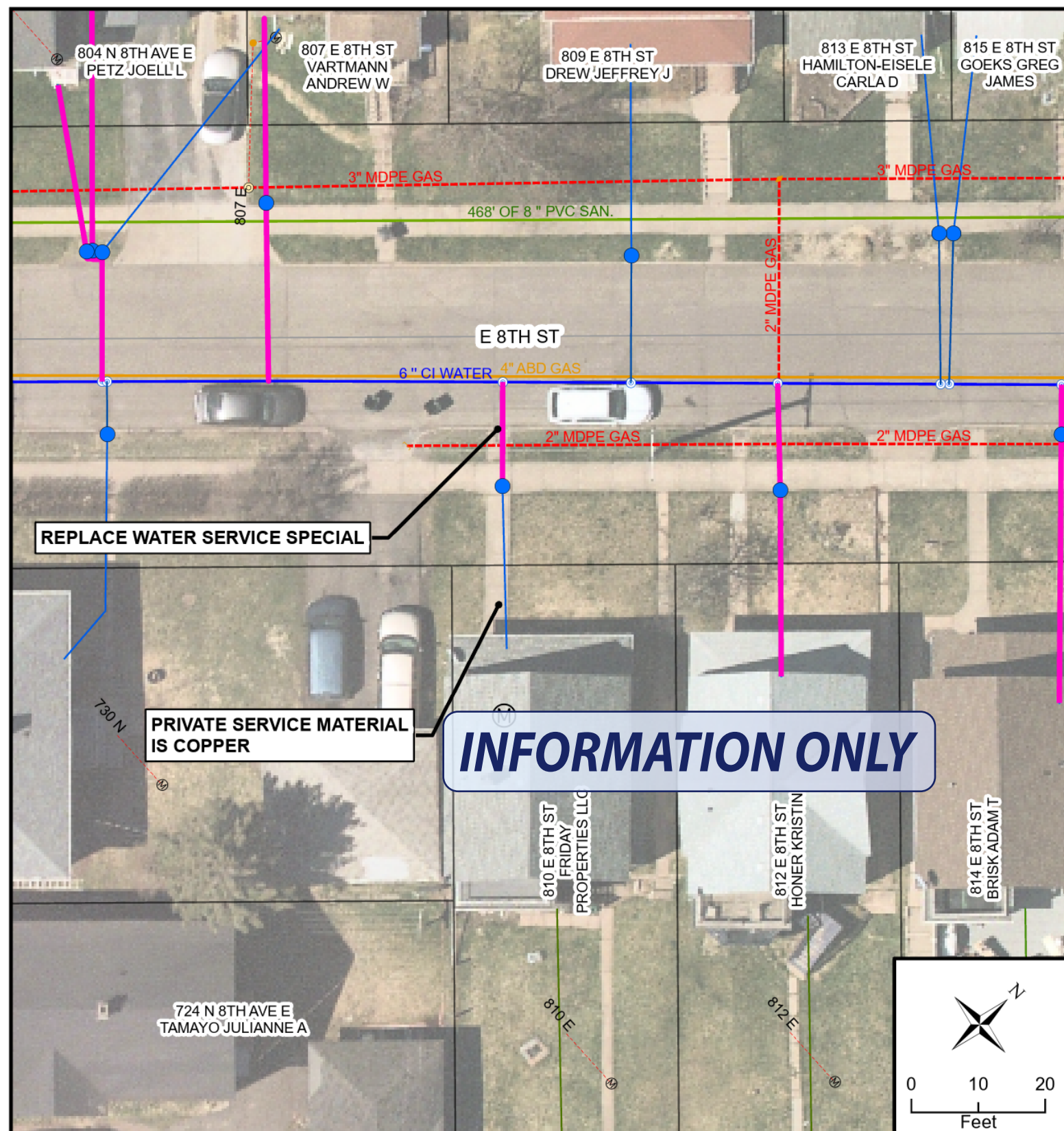


CITY OF DULUTH  
ENGINEERING DIVISION  
411 W 1ST ST RM 240  
DULUTH, MN 5580

PROJECT NO: 2064  
PROJECT NAME: 2022 WATER SERVICE REPLACEMENTS - PHASE II  
SITE NO: SITE 1  
LOCATION: 704 E 8TH ST  
PROPOSED WORK: REPLACE ENTIRE WATER SERVICE

ENGINEER: TIM SANDERS LIC: 50401  
DRAWN BY: JJM  
DATE: 7/5/2022





#### METER LOCATION

-N/A

#### NOTES

-PRIVATE WATER SERVICE IS COPPER, PUBLIC WATER SERVICE IS LEAD

#### ADDITIONAL ESTIMATED QUANTITIES

-SODDING TYPE LAWN	10 SY
-REMOVE & REPLACE CONCRETE WALK	30 SF

#### CONTACT

-OWNER/MANAGER - - BRIDGET FRIDAY 218-591-0515

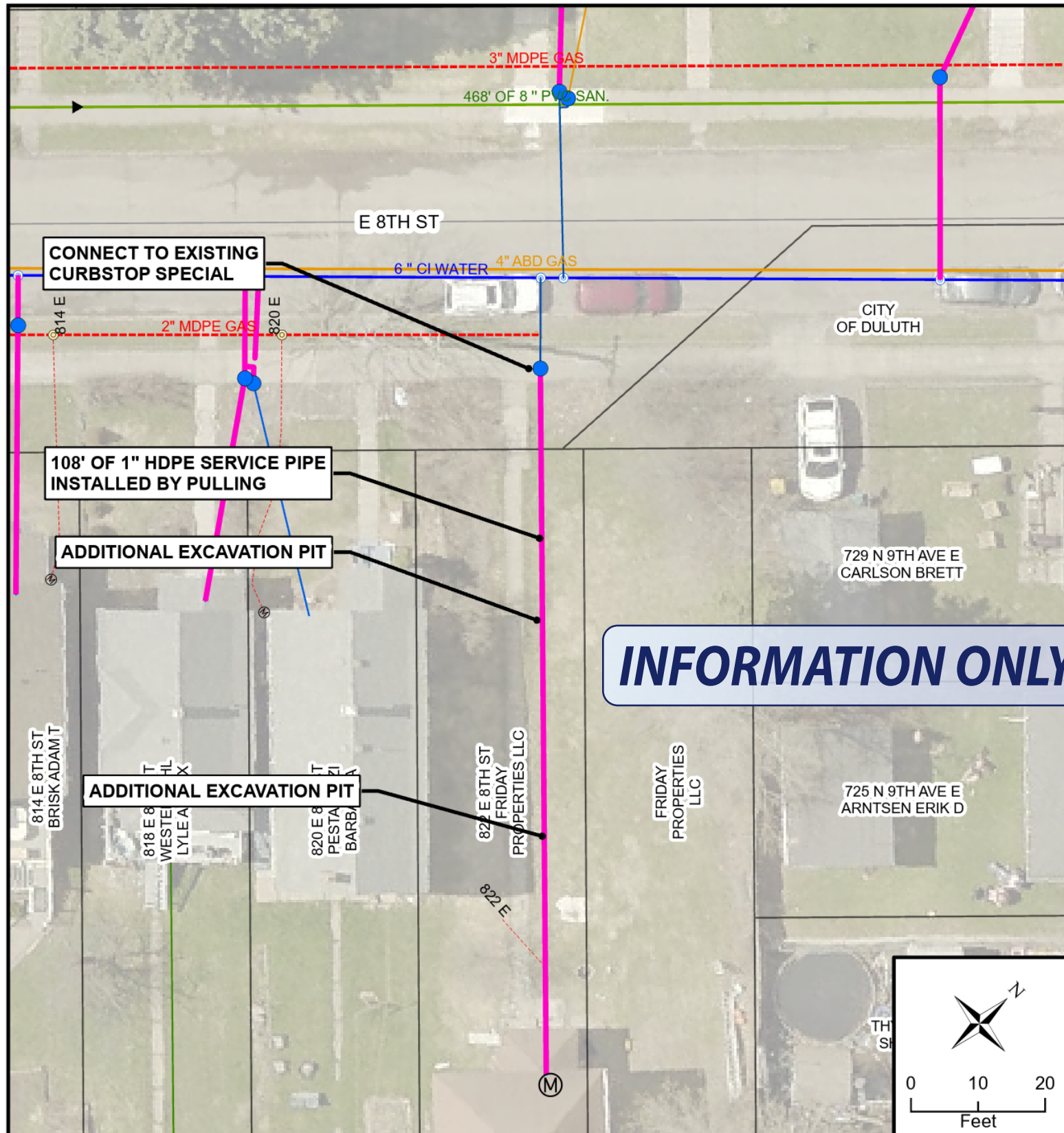


CITY OF DULUTH  
ENGINEERING DIVISION  
411 W 1ST ST RM 240  
DULUTH, MN 5580

PROJECT NO: 2064  
PROJECT NAME: 2022 WATER SERVICE REPLACEMENTS - PHASE II  
SITE NO: SITE 12  
LOCATION: 810 E 8TH ST  
PROPOSED WORK: REPLACE PUBLIC WATER SERVICE

ENGINEER: TIM SANDERS LIC: 50401  
DRAWN BY: JJM  
DATE: 7/5/2022





#### METER LOCATION

- ON FRONT WALL, 6.7' TO EAST WALL
- 6.7' FROM BASEMENT FLOOR TO FIRST FLOOR ELEVATION

#### NOTES

- PUBLIC SERVICE IS COPPER, PRIVATE SERVICE IS LEAD

#### ADDITIONAL ESTIMATED QUANTITIES

- CONNECT TO INDOOR PLUMBING, UNFINISHED BASEMENT 1 EA
- TURF ESTABLISHMENT 120 SY
- REMOVE & REPLACE CONCRETE WALK 130 SF

#### CONTACT

- OWNER/MANAGER - BRIDGET FRIDAY 218-591-0515



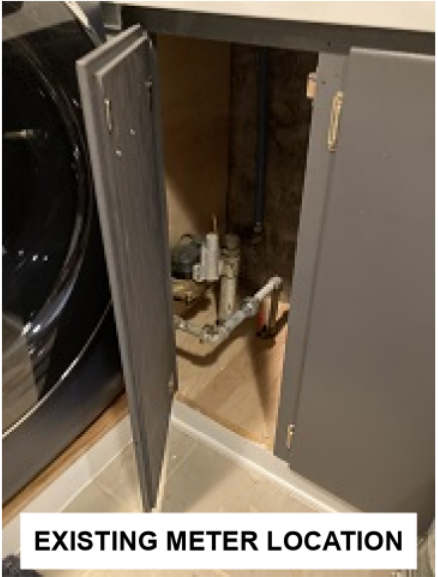
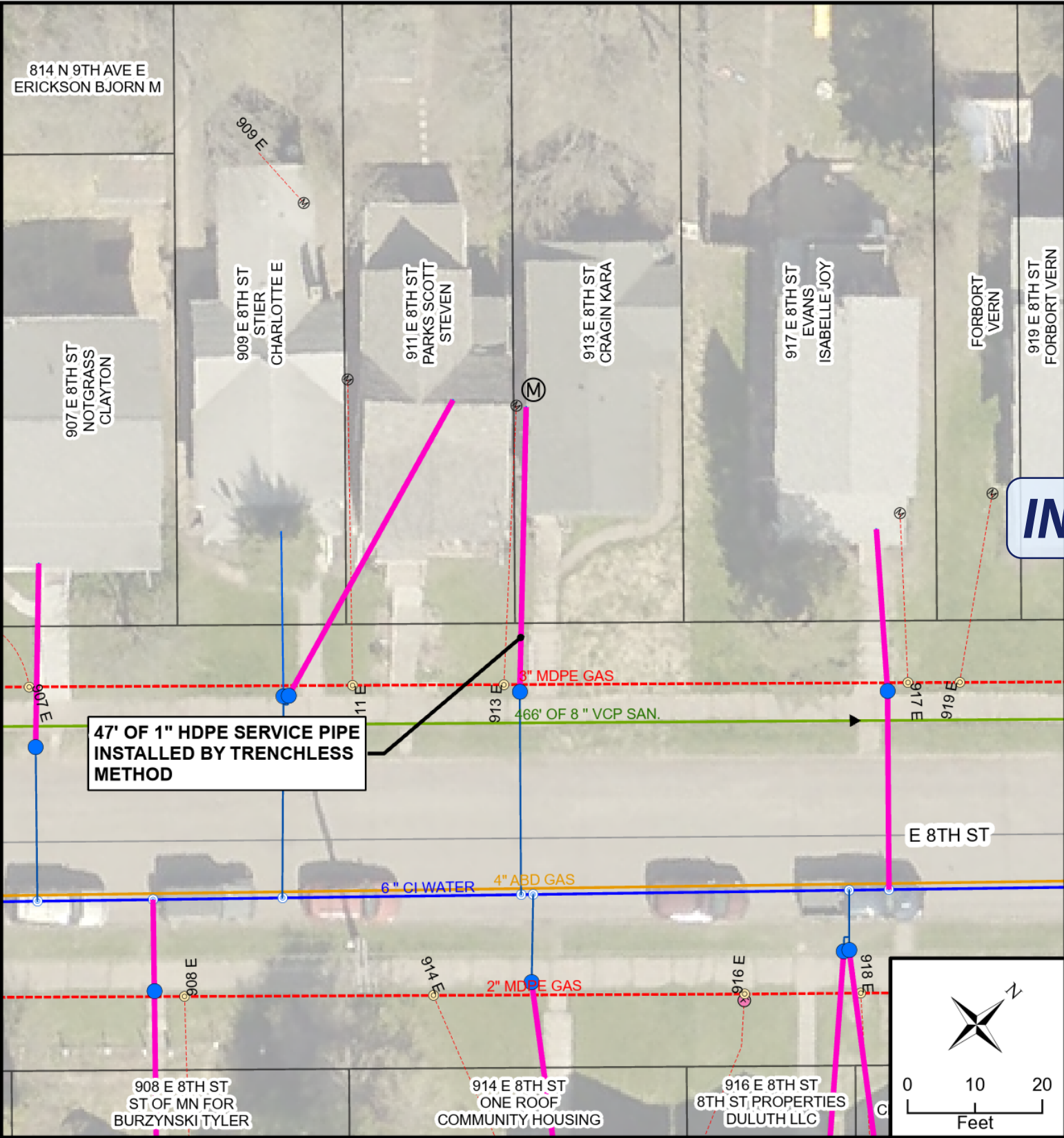
CITY OF DULUTH  
ENGINEERING DIVISION  
411 W 1ST ST RM 240  
DULUTH, MN 5580

PROJECT NO:  
PROJECT NAME:  
SITE NO:  
LOCATION  
PROPOSED WORK:

2064  
2022 WATER SERVICE REPLACEMENTS - PHASE II  
SITE 14  
822 E 8TH ST  
REPLACE PRIVATE WATER SERVICE

ENGINEER: TIM SANDERS LIC: 50401  
DRAWN BY: JJM  
DATE: 5/27/2022





EXISTING METER LOCATION



EXISTING METER LOCATION



POTENTIAL METER LOCATION

INFORMATION ONLY

**METER LOCATION**  
-ON WEST WALL, 13' SOUTH OF THE NORTH WALL  
-7.0' FROM BASEMENT FLOOR TO FIRST FLOOR ELEVATION

**NOTES**  
-PUBLIC WATER SERVICE MATERIAL IS COPPER, PRIVATE WATER SERVICE MATERIAL IS GALVANIZED IRON  
-RELOCATE METER INTO UNFINISHED AREA OF BASEMENT  
-SANITARY SERVICE IS EXPECTED ADJACENT TO WATER SERVICE

**ADDITIONAL ESTIMATED QUANTITIES**  
-CONNECT TO INDOOR PLUMBING, UNFINISHED BASEMENT 1 EA  
-SODDING TYPE LAWN 20 SY  
-PLUMBING TO RELOCATE METER IN BASEMENT 4 HR

**CONTACT**  
-OWNER - MASON WILLIAMS 218-428-5621

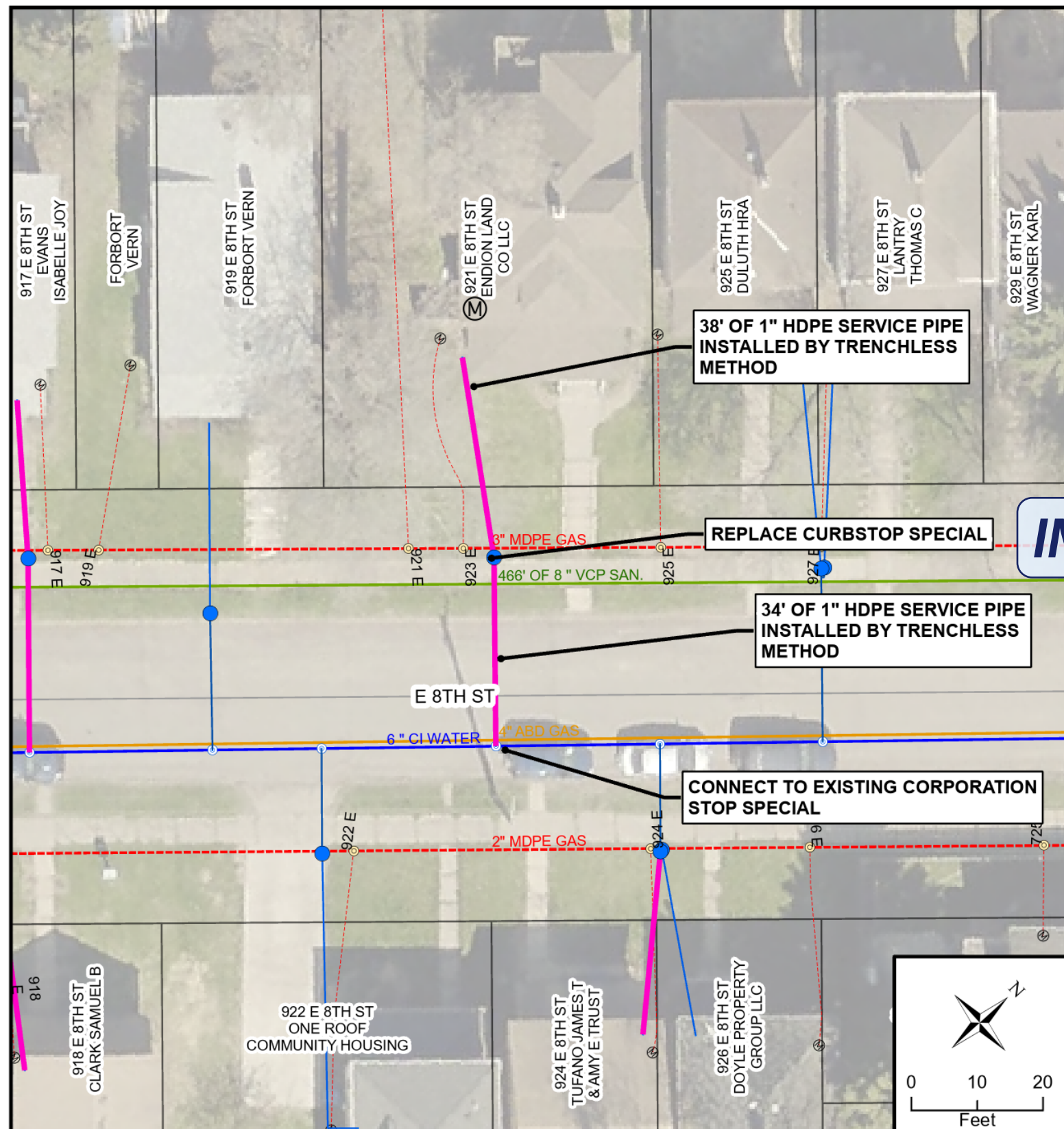


CITY OF DULUTH  
ENGINEERING DIVISION  
411 W 1ST ST RM 240  
DULUTH, MN 5580

PROJECT NO: 2064  
PROJECT NAME: 2022 WATER SERVICE REPLACEMENTS - PHASE II  
SITE NO: SITE 22  
LOCATION: 913 E 8TH ST  
PROPOSED WORK: REPLACE PRIVATE WATER SERVICE

ENGINEER: TIM SANDERS LIC: 50401  
DRAWN BY: JJM  
DATE: 7/5/2022





## INFORMATION ONLY

### METER LOCATION

- ON FRONT WALL, 2.0' EAST OF WEST WALL
- BASEMENT FLOOR IS 7.5' BELOW FIRST FLOOR ELEVATION

### NOTES

- PUBLIC WATER SERVICE IS LEAD, PRIVATE WATER SERVICE IS LEAD
- SANITARY SERVICE IS EXPECTED ADJACENT TO WATER SERVICE

### ADDITIONAL ESTIMATED QUANTITIES

- CONNECT TO INDOOR PLUMBING, UNFINISHED BASEMENT 1 EA
- SODDING TYPE LAWN 20 SY

### CONTACT

- OWNER - MIKE SCHRAEPFER 218-269-9691



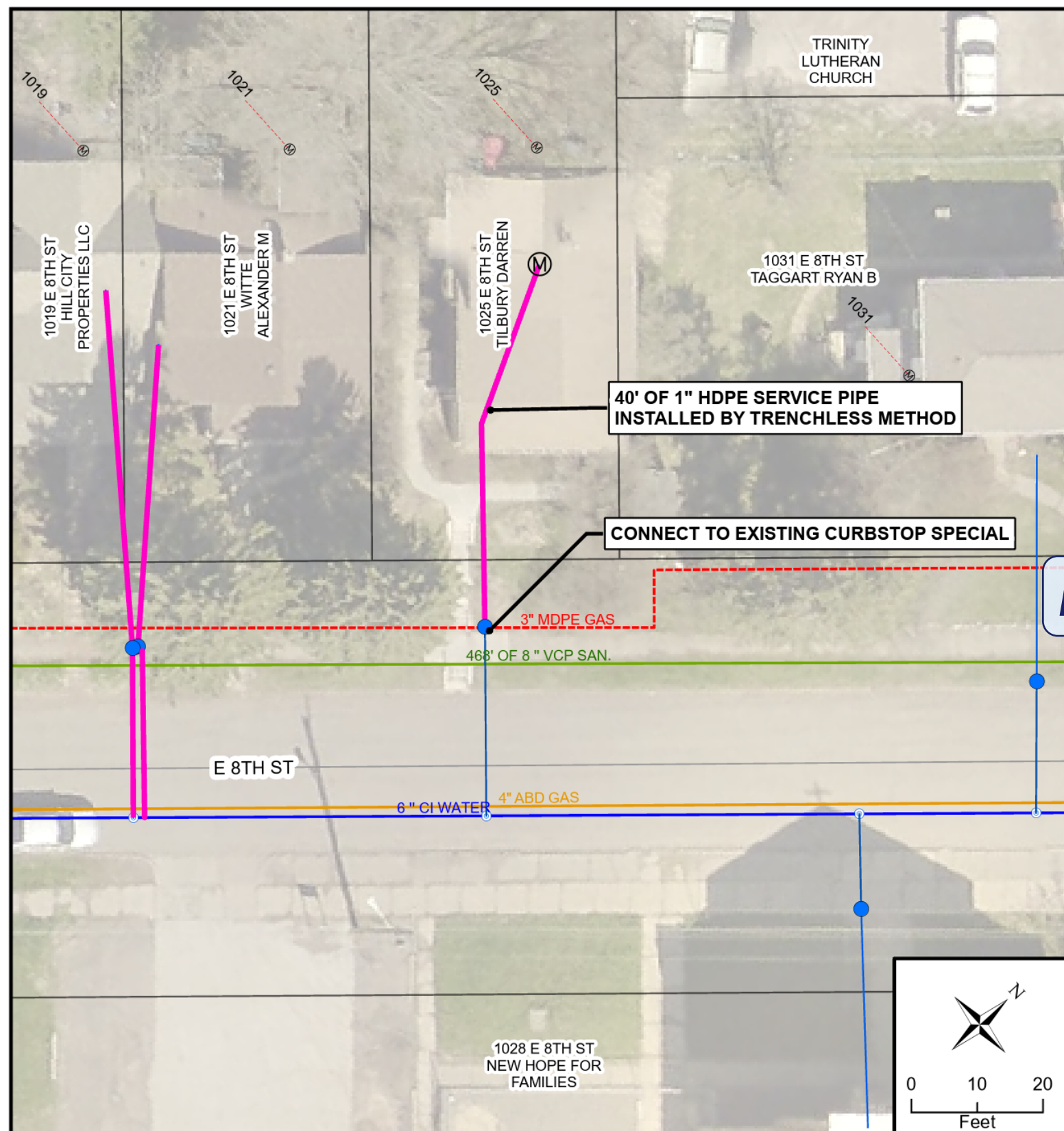
CITY OF DULUTH  
ENGINEERING DIVISION  
411 W 1ST ST RM 240  
DULUTH, MN 5580

PROJECT NO:  
PROJECT NAME:  
SITE NO:  
LOCATION  
PROPOSED WORK:

2064  
2022 WATER SERVICE REPLACEMENTS - PHASE II  
SITE 26  
923 E 8TH ST  
REPLACE ENTIRE WATER SERVICE

ENGINEER: TIM SANDERS LIC: 50401  
DRAWN BY: JJM  
DATE: 7/5/2022

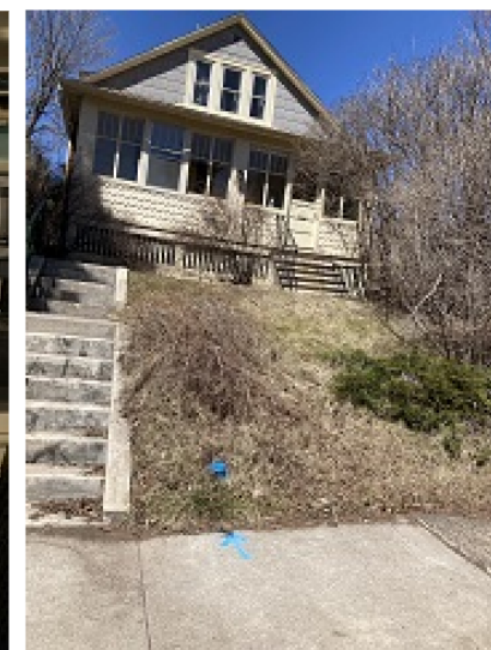




EXISTING METER LOCATION



POTENTIAL METER LOCATION



## INFORMATION ONLY

### METER LOCATION

- EXISTING LOCATION - 11' EAST OF WEST WALL, 7' SOUTH OF NORTH WALL
- PROPOSED LOCATION - ON SOUTH WALL, ~4' EAST OF WEST WALL

### NOTES

- PUBLIC WATER SERVICE IS COPPER, PRIVATE WATER SERVICE IS LEAD
- SANITARY SERVICES IS EXPECTED TO BE ADJACENT TO WATER SERVICES
- POTENTIAL TO RELOCATE WATER METER LOCATION

### ADDITIONAL ESTIMATED QUANTITIES

- |  |        |
|--|--------|
| -CONNECT TO INDOOR PLUMBING, UNFINISHED BASEMENT | 1 EA   |
| -SODDING TYPE LAWN                               | 30 SY  |
| -REMOVE & REPLACE CONCRETE STEPS                 | 2.5 CY |
| -REMOVE & REPLACE CONCRETE WALK                  | 24 SF  |

### CONTACT

- OWNER - DARREN TILBURY 218-341-9682



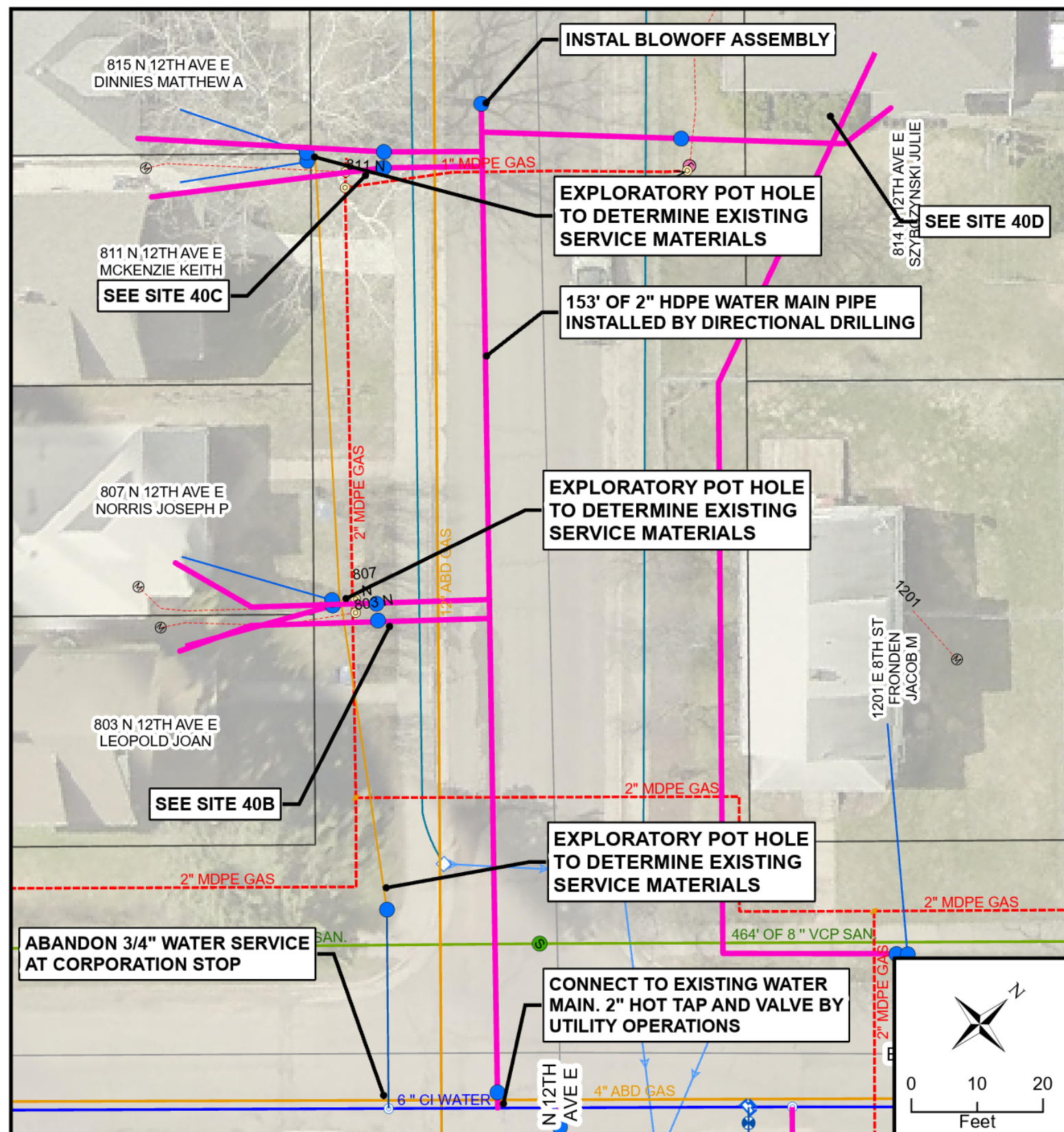
CITY OF DULUTH  
ENGINEERING DIVISION  
411 W 1ST ST RM 240  
DULUTH, MN 5580

PROJECT NO:  
PROJECT NAME:  
SITE NO:  
LOCATION  
PROPOSED WORK:

2064  
2022 WATER SERVICE REPLACEMENTS - PHASE II  
SITE 34  
1025 E 8TH ST  
REPLACE PUBLIC WATER SERVICE

ENGINEER: TIM SANDERS LIC: 50401  
DRAWN BY: JJM  
DATE: 7/5/2022





## INFORMATION ONLY

**METER LOCATION**  
-N/A

**NOTES**  
-N/A

**ADDITIONAL ESTIMATED QUANTITIES**  
-N/A

**CONTACT**  
-N/A

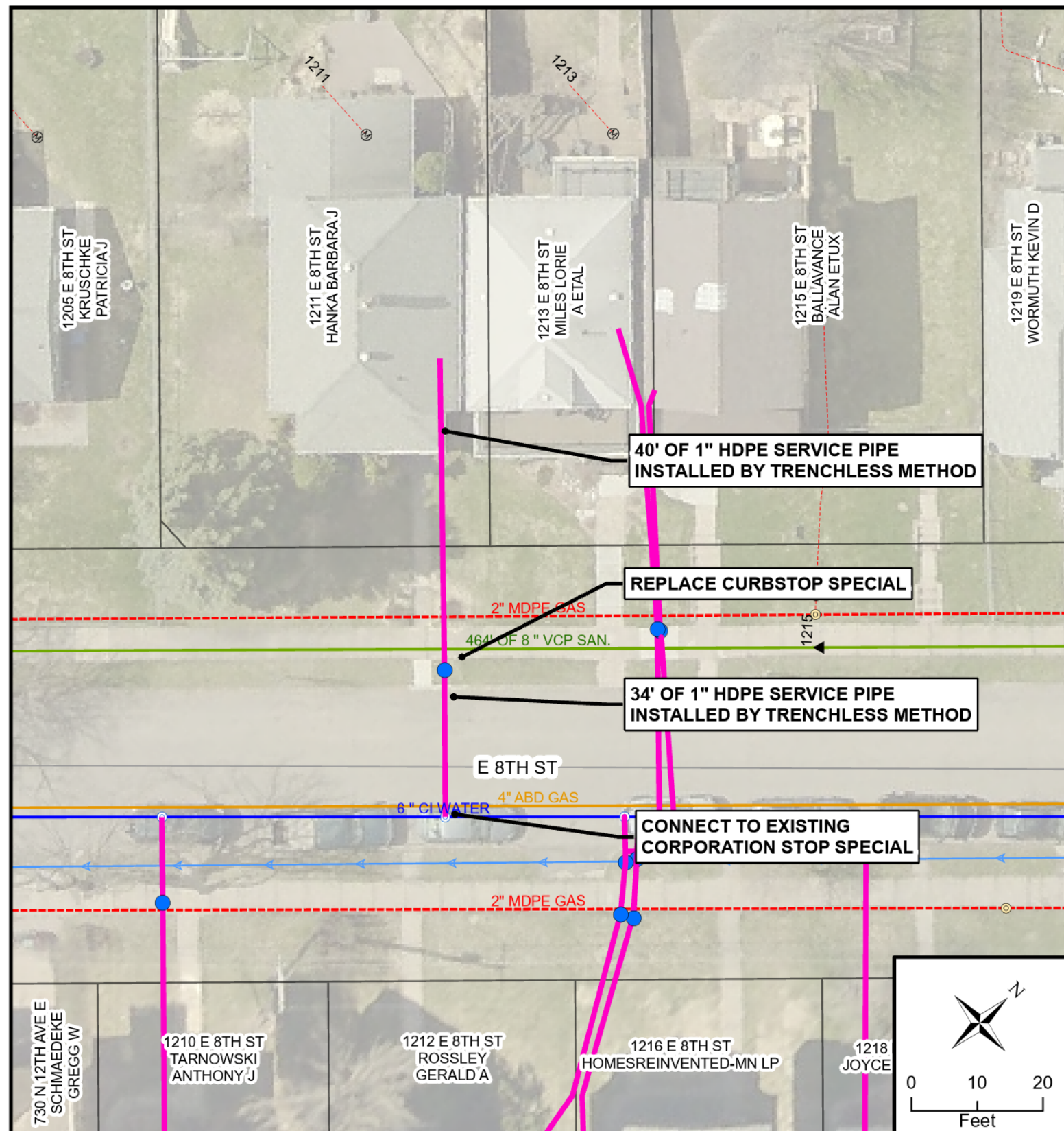


CITY OF DULUTH  
ENGINEERING DIVISION  
411 W 1ST ST RM 240  
DULUTH, MN 5580

PROJECT NO: 2064  
PROJECT NAME: 2022 WATER SERVICE REPLACEMENTS - PHASE II  
SITE NO: SITE 40A  
LOCATION: N 12TH AVE E, NORTH OF E 8TH ST  
PROPOSED WORK: INSTALL WATERMAIN EXTENSION

ENGINEER: TIM SANDERS LIC: 50401  
DRAWN BY: JJM  
DATE: 7/7/2022





## INFORMATION ONLY

### METER LOCATION

- ON FRONT WALL, 4.5' WEST OF EAST WALL
- BASEMENT FLOOR IS 7.0' BELOW FIRST FLOOR ELEVATION

### NOTES

- PUBLIC WATER SERVICE IS LEAD, PRIVATE WATER SERVICE IS LEAD
- SANITARY SERVICE IS EXPECTED TO BE ADJACENT TO WATER SERVICE

### ADDITIONAL ESTIMATED QUANTITIES

- CONNECT TO INDOOR PLUMBING, FINISHED BASEMENT 1 EA
- SODDING TYPE LAWN 20 SY
- REMOVE & REPLACE CONCRETE WALK 40 SF

### CONTACT

- OWNER - BABARA HANKA 218-340-4849



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

PROJECT NO:  
PROJECT NAME:  
SITE NO:  
LOCATION  
PROPOSED WORK:

2064  
2022 WATER SERVICE REPLACEMENTS - PHASE II  
SITE 44  
1211 E 8TH ST  
REPLACE ENTIRE WATER SERVICE

ENGINEER: TIM SANDERS LIC: 50401  
DRAWN BY: JJM  
DATE: 7/6/2022