CITY OF DULUTH
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

CONSTRUCTION PLANS FOR:
MAXWELL ST. WATERMAIN EXTENSION (2016)

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF D/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.

INDEX
1. TITLE SHEET
2. STATEMENT OF ESTIMATED QUANTITIES
3-5. CONSTRUCTION DETAILS
6. CONNECTION DETAIL
7. PLAN & PROFILE

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

PROJECT ENGINEER:

TOM M. PFEFFER, P.E.

PROJECT NUMBER:

1571

THIS PLAN CONTAINS 7 SHEETS

CITY OF DULUTH PROJECT NO. 1571
DRAWN BY: KLM SHEET NO. 1 OF 7

THOMAS M. PFEFFER, P.E.
## Statement of Estimated Quantities

<table>
<thead>
<tr>
<th>Line</th>
<th>Notes</th>
<th>Spec No.</th>
<th>Description</th>
<th>Unit</th>
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**Notes:**

1. INCLUDES EXCAVATION BACKFILL, AND ALL RESTORATION OF PAVEMENT AT EXISTING MAIN CONNECTION.
2. INCLUDES EXCAVATION BACKFILL, AND ALL RESTORATION OF ACCESS PIT AND HYDRANT ASSEMBLY LOCATION.
3. ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MN MUTC, INCLUDING THE FIELD MANUAL DATED FEBRUARY 2015.
NOTE: EXCISE 6' UNDER Pl-PLACE MAIN AND BACKFILL WITH COURSE FILTER
AGGREGATE VIRGIN SIZE # 3492.44. CONTRACTOR SHALL PROVIDE & PLACE A
REINFORCED BOX WHEN REQUIRED.

CONTRACTOR SUPPLIED MANUFACTURED TRACER BOX
NEW PIPE TOP OVER 1-1/2" ID. OLD IRON
PIPE WAS CONNECTED TO TRACER BOX TERMINAL

IRON PIPE WILL BE SUPPLIED BY CON-
TRACTOR AT CONFLICT SPOT AND INSTALLED BY
CONTRACTOR (INDEED).

1-1/2" ID. NEW IRON PIPE TOP
SECTION REAR TO 1-1/2" ID. OLD
IRON PIPE

2" ID. OLD IRON PIPE BOTTOM
SECTION SORINO AND 2" X
1-1/2" REDUCING DUMING

VARIOUS PAY MEASURE - ONE PIECE
CONCRETE PLUG ASS'N. NO. 3492.44 RECOMMENDED AROUND TAPPING
TEE AND CURB STOP

Hope Mainwater

CONCRETE SUPPORT

BRASS PLATED EXCHANGE FITTING OR
STAINLESS STEEL EXCHANGE FITTING
FASTENED TO PLATE ADAPTER TO CONNECT TO A TRACER MAIN
CURB STOP TRANSITION FITTING TO BE
BUTT WELD TO HOPE MAIN

INSERT LEAD OR PLASTIC SLUG &
TIGHTEN COUPLING TO SEAL END

NOTES:
1. PIPE VALVES SHALL BE CONNECTED DIRECTLY TO HOPE WITH HOPE TO MECHANICAL JOINT ADAPTERS.
2. USE EPOXY COATING ON EXTERIOR OF VALVES
3. ALL STEEL SHALL BE COVERED WITH 6 OUNCE ZINC ANODE CAPS CONFORMING TO ASTM B-483 FOR
ALL MECHANICAL JOINT FITTINGS
4. FOR OPEN EXIT PIPE INSTALLATIONS, ELECTRIC POWER SHOULDS NOT BE ALLOWED FOR CONNECTION
OF HOPE TO HOPE ADAPTERS, FOR ELECTRONIC SHOULDS INSTALLATIONS, THE ELECTRICAL SHOULDS
BE USED FOR POWER VALVE
5. GATE VALVES WITH HOPE STUBS MAY BE USED IN LEO OF WU VALVES. ANODE SHALL BE CONNECTED
DIRECTLY TO THE VALVE DOCKET.

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

WATER VALVE BOX - HOPE MAIN

W-5A

W-17A