CITY OF DULUTH
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

CONSTRUCTION PLANS FOR:
2017 DWSR SEDIMENT REDUCTION PROJECTS

SITE 1
SITE 2
SITE 3
SITE 4

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

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

THOMAS W. PEFFER
PROJECT ENGINEER

6-13-17
22442

CITY OF DULUTH PROJECT NO. 1638
DRAWN BY: JMM
SHEET NO. 1 OF 16

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

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<th>SITE 4 - EXTENSION STREET EST. QUANTITY</th>
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**NOTES**

1. ALL DERRIS SHALL BE DEFUSED OF DRT SITE.
2. INCLUDES REMOVAL & DISPOSAL OF EXISTING WOOD, WOODY SEED & GARBAGE IN THE PROJECT AREA TO INCLUDE THE ENTIRE MTH AND FIGURED POLICE AREAS OF ALL Sites. (WIP) INCLUDES REMOVAL & DISPOSAL OF DRT FERRED FOR SRR SUBMISSION AT SITE 1. (LIVING) DISPLAYED ON PLAN PAGES INCLUDES APPROVING LIVING FERRED. PAYMENT WILL BE BASED ON LENGTHS OF PIPE SECTIONS ONLY. WORKS WILL BE PAID FOR SEPARATELY.
3. ACTUAL LOCATION & QUANTITIES OF REMOVAL OF REBAR DEPENDS ON SITE CONDITIONS AS WELL WORKING METHODS & SEQUENCING CHosen BY THE CONTRACTOR.
4. PIPE RIPS & HOLDS SHALL BE STAKED WITHIN 48 HOURS OF INSTALLATION.
5. PLACED TO A DEPTH OF 4" IN GRADED AREAS & PLACED AT A DEPTH OF 12" IN AREAS OF SOIL ON OR DISTURBANCE.
6. APPLY (5) WORKABLE AREAS AT A RATE OF 120/400.
7. PLACED AT A RATE OF 200/400.
8. (50) FERRED WORK IS INCLUDED AT COSTS OF MATERIAL AND INSTALLATION & INCLUDES WASTED DRT FREE (LIVE) FERRED FOR VEGRATION.
9. ON STEPS, SLOPES, THE CONTRACTOR SHALL EMPLOY SPECIAL METHODS TO PREVENT REBAR AND GROUT FROM DRAGGING DOWNWARD BEYOND INTENDED PLACEMENT AREAS.
10. APPLY IN UNWORKED AREAS AT A RATE OF 60/400.

**SIGNATURES**

THOMAS W. PFEIFFER

**DULUTH ENGINEERING DIVISION**

**DULUTH, MN 55802**

**CITY OF DULUTH**

**ENGINEERING DEPARTMENT**

**411 E 2ND ST. DULUTH, MN 55802**

**PROJECT NO.**

**1638**

**STATE & PROJECT NO.**

**NA**

**SHEET #**

**2 OF 16**
CONCRETE ENCASED CASTING COLLAR FOR STORM MH IN ROADWAY, WALKS, & DRIVES

REVIEWED/APPROVED 01/20/2017
CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES
NO SCALE

CONCRETE COLLAR

COIL JOINT SEALANT

PEEP COAXIAL SEALANT

4" EPOXY COATED REINFORCEMENT RING

ASPHALT PAVEMENT

TRACER WIRE

SEALANT STOP STRIP

PACK PIPE ADJUSTMENT RING
ASTM D-3034, SDS 35

STRM—5A

CATCH BASIN CASTINGS

REVIEWED/APPROVED 1/8/2016
CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES
NO SCALE

CITY OF DULUTH ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

2017 EDWR SEDIMENT REDUCTION PROJECTS

DRAWN BY: JAM
DETAILED 2

CITY PROJECT NO.: 1638
STATE AID PROJECT NO.: NA
SHEET NO. 4 OF 16

NOTES:
1. COMPONENT NO'S: FRAME 5005, GRATE B16 (STD PLATE 41540).
2. MATERIAL: CAST CRAIN IRON ASTM A-48, CLASS 35B
3. WEIGHT: FRAME 26125, GRATE 137
4. ALL CUTTERS UPSTREAM OF CATCH BASINS SHALL BE STAPLED "NO DUMPING, LEADS TO LAKE" WITH A CITY SUPPLIED STAMP.
**Notes:**

1. **Cross Excavation Material** shall be disposed of off project R.O.W. (sidehill).
2. Pay Area for Rock Excavation shall be based on outside diameter of pipe plus 24".
3. A minimum of 1 cubic yard of structure excavation, class II, will. be paid for every 10' of pipe for every 10' of pipe, where rock removal is required.
4. Trench excavation boring material may be used in areas as determined by the Engineer.
5. Excavation zone material shall be compacted to 95% of maximum standard proctor density.
6. Backfill shall be placed to give material found on-site when defined as such by the engineer.
7. Backfill shall be placed to give material found on-site when defined as such by the engineer.

**Granular Bedding**

**MAGG 3149-2.1**

**Inclination to Pipe**

6" Min. from inside face

12" Min. from outside face

**Concrete Collar to Bottom of Excavation**

**Concrete Collar**

**FILL SUMP with CONCRETE**

**Steel Reinforcing Schedule**

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**Notes:**

1. **Epoxy Coated Rebar**
2. **Maintain 2" Clearance**

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**Ductile Iron, PE Watermain, Pressure Sewer, & Forecmain Bedding**

Revised/Approved 01/30/2017

City of Duluth Standard Detail
Dept. of Public Works and Utilities

No Scale

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**Anchored Storm Manhole**

Revised/Approved 5/1/2017

City of Duluth Standard Detail
Dept. of Public Works and Utilities

No Scale
GENERAL TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR SHALL FURNISH, INSTALL, ADJUST, MAINTAIN AND REMOVE ALL NECESSARY TRAFFIC CONTROL SIGNS AND DEVICES IN THIS TRAFFIC CONTROL PLAN.
2. ALL TRAFFIC CONTROL DEVICES AND SIGNS SHALL CONFORM TO THE CURRENT MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
3. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER.
4. ADDITIONAL SIGNS AND TRAFFIC CONTROL DEVICES OR ALTERNATE LAYOUTS MAY BE NECESSARY DEPENDING ON THE TYPE AND SEQUENCE OF THE CONTRACTOR'S OPERATION. ALL CHANGES TO THE TRAFFIC CONTROL PLAN MUST BE APPROVED BY THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE MADE FOR CHANGES RESULTING FROM THE CONTRACTOR'S OPERATIONS.
5. THE CONTRACTOR SHALL RECEIVE COMPENSATION FOR ALL NECESSARY TRAFFIC CONTROL WORK, WHETHER SHOWN IN THIS PLAN OR OTHERWISE, ON THE BASIS OF A LUMP SUM PAYMENT FOR ITEM TRAFFIC CONTROL (2583.601).
6. ALL DISTANCES AND SIGN PLACEMENT ARE APPROXIMATE AND SHALL BE FIELD ADJUSTED FOR SITE CONDITIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH MMUTCD.
8. ALL DEVICES SHALL BE MOVED OR COVERED AS SOON AS THEY ARE NO LONGER REQUIRED OR APPROPRIATE.
9. THE CONTRACTOR SHALL PLACE PEDESTRIAN TRAFFIC CONTROL DEVICES AND DETOURS IF SIDEWALKS MUST BE BLOCKED. THE CONTRACTOR SHALL BE MINDFUL OF AND ACCOMMODATE PEDESTRIANS USING OPEN SIDEWALKS DURING CONSTRUCTION ACTIVITIES.
REMOVE EXISTING MANHOLE C8520209

PLACE & COMPACT COMMON BORROW

PROPOSED GRADE

PLACE & GROUT CLASS 3 & 4 RIPRAP IN A MANNER TO PREVENT MATERIALS FROM WORKING DOWN SLOPE

129' OF PROPOSED 12" HDPE SDR17 @ 18.13%

128' OF EX 12" CWP @ 5.33%

127' OF EX 12" CWP @ 6.26%

123' OF EX 24" SCP

STA: 30+98.3 0.0'
R/W: 1072.79
F/L IN: 1066.65
F/L OUT: 1066.77

STA: 30+150.0 0.0'
R/W: 1071.78
F/L IN: 1065.55
F/L OUT: 1065.00

STA: 11+78.4 0.0'
R/W: 1074.78
F/L IN: 1071.76
F/L OUT: 1070.27