

NOTE:
 MANHOLE OR CATCH BASIN ADJUSTING RINGS—ADJUSTING RINGS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) PRODUCED BY LADTECH OR AN APPROVED EQUAL. THE RINGS SHALL PROVIDE A MINIMUM ADJUSTMENT OF 4" USING MINIMUM OF 2 - 2" IMMEDIATELY UNDER THE CASTING RINGS AND USE A COMBINATION OF 2", 6" QND 12" RINGS TO ACHIEVE NEEDED HEIGHT. JOINTS BETWEEN STRUCTURE, RINGS AND CASTING SHALL BE SEALED WITH A CONTINUOUS BEAD OF BUTYL CAULK. SOLID REINFORCED CONCRETE ADJUSTING RINGS MAY BE USED IN SPECIAL SITUATIONS ONLY WITH PRIOR WRITTEN APPROVAL BY THE CITY ENGINEER.

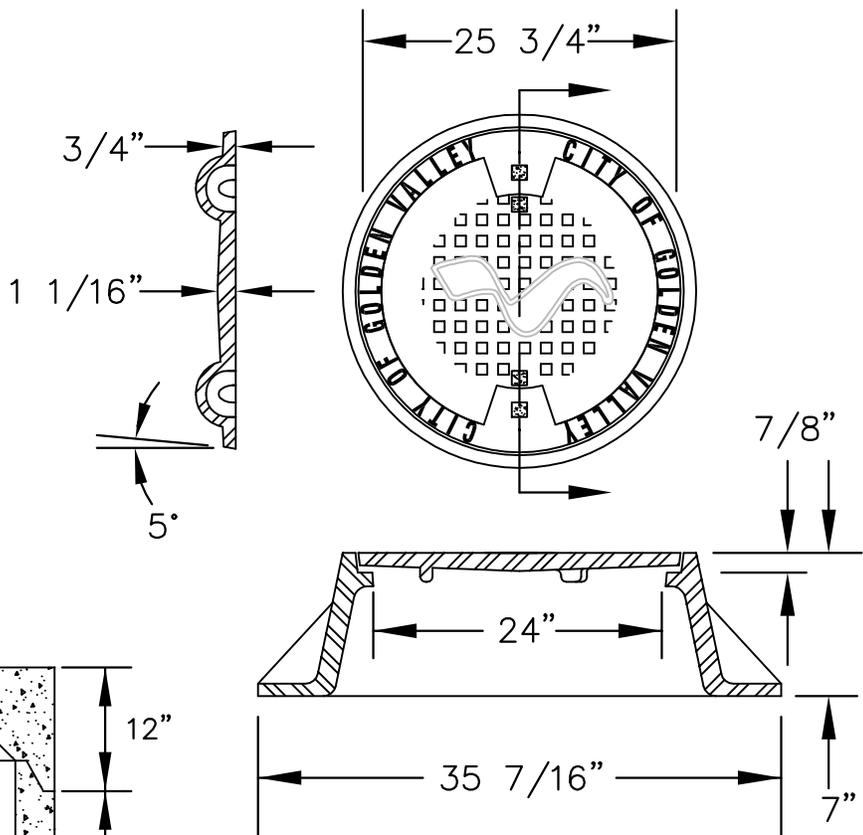
APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

**MANHOLE OR
 CATCH BASIN
 DETAIL**

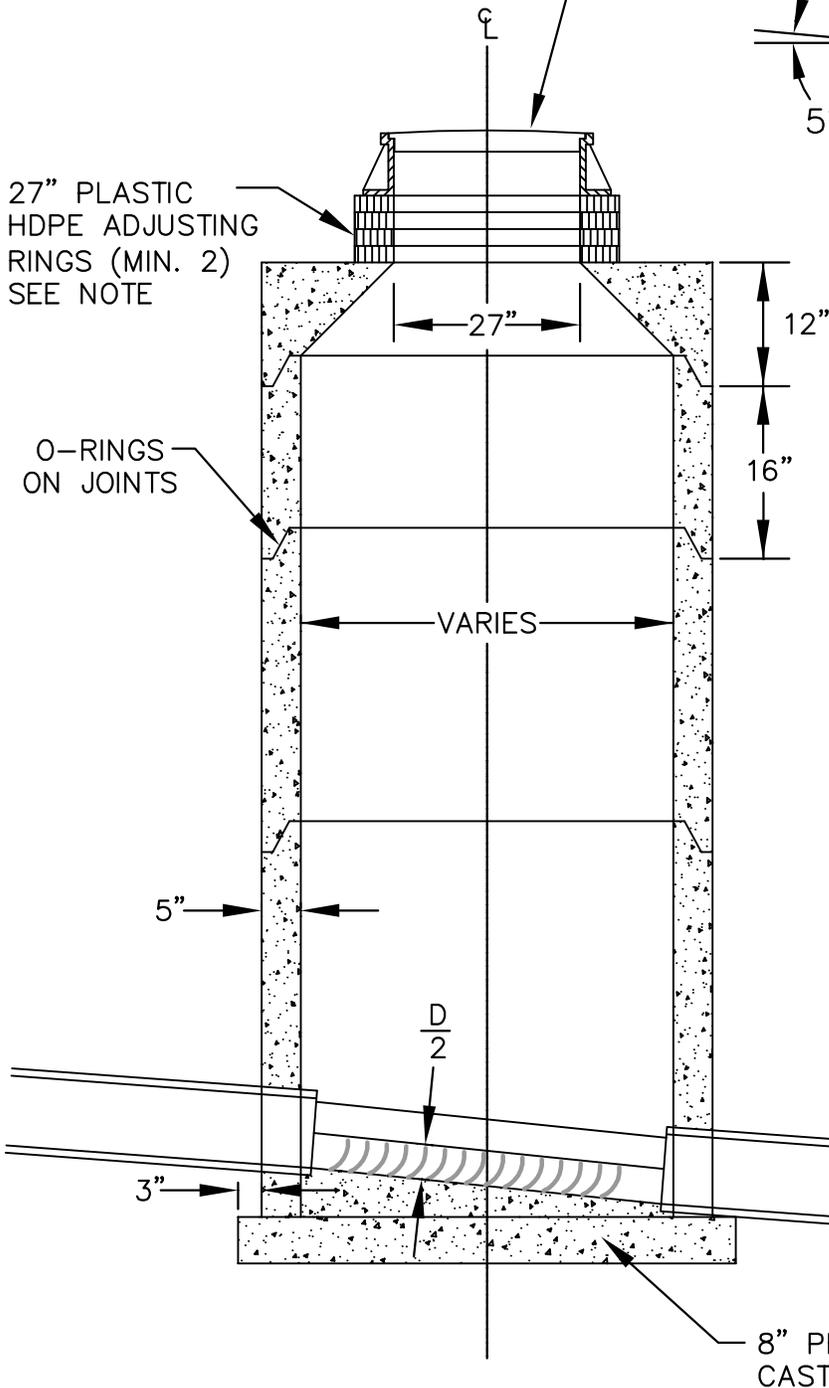
City of
Golden Valley
GV-SS-010

NEENAH R-1733 SERIES SOLID COVER (SEE RIGHT), ESS BROS. 301, OR APPROVED EQUAL



27" PLASTIC HDPE ADJUSTING RINGS (MIN. 2) SEE NOTE

O-RINGS ON JOINTS



NOTE:

WHERE PVC PIPE IS USED THE MANHOLE SHALL BE FURNISHED WITH WATER TIGHT BOOT.

NO STEPS SHALL BE INSTALLED ON MANHOLES LESS THAN 15 FT. DEEP. OVER 15 FT. NON-CORROSIVE STEPS SHALL BE INSTALLED.

PLASTIC HDPE ADJUSTING RINGS (MIN. 2) USE A COMBINATION OF 2", 6" AND 12" RINGS TO ACHIEVE NEEDED HEIGHT. INCLUDE MIN. 2-2" RING IMMEDIATELY UNDER THE CASTING. RINGS SEALED W/BUTYL CAULK. SEE GV-SS-010

APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

**STANDARD SANITARY
SEWER MANHOLE WITH
CASTING & COVER**

City of **Golden Valley**

GV-SS-020

NEENAH R-1733 SERIES
SOLID COVER, ESS BROS.
301, OR APPROVED EQUAL
(SEE DETAIL GV-SS-020)

PLASTIC HDPE ADJUSTING
RINGS (MIN. 2)
USE A COMBINATION OF 2", 6"
AND 12" RINGS TO ACHIEVE
NEEDED HEIGHT. INCLUDE MIN.
2-2" RING IMMEDIATELY UNDER
THE CASTING. RINGS SEALED
W/BUTYL CAULK. SEE
GV-SS-010

ADAPT TO NEXT
LENGTH PIPE MATERIAL

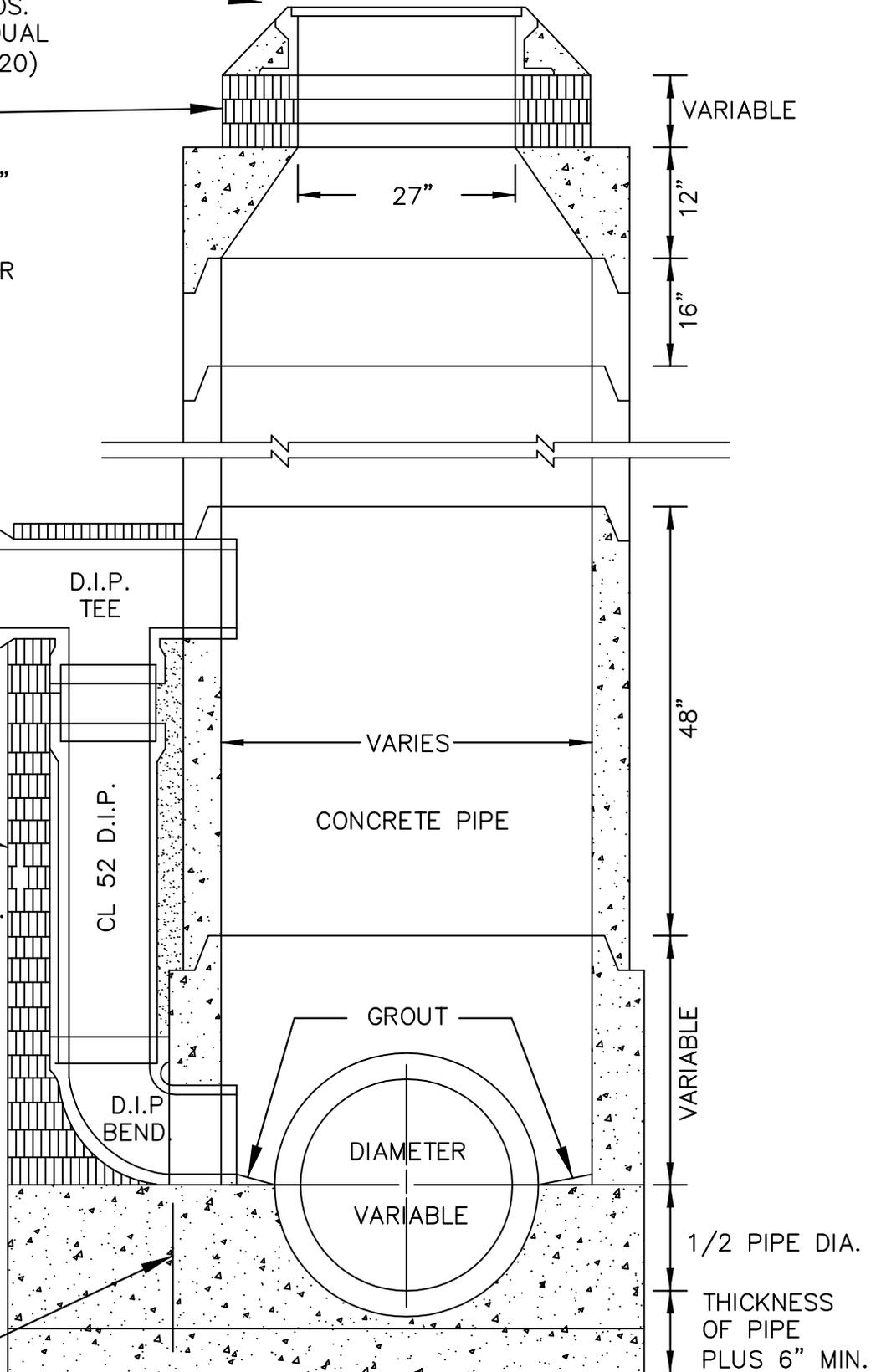
1ST 20 FT. OF PIPE
TO BE MIN. CL 52 D.I.P.

MINIMUM OF 4" OF BRICK,
CONCRETE HORSESHOE, OR
OTHER APPROVED MATERIAL;
AND CONCRETE ON ALL SIDES.

NOTE:
WHERE PVC PIPE IS USED
THE MANHOLE SHALL BE
FURNISHED WITH INTERPACE
BOOT OR APPROVED EQUAL.

NO STEPS SHALL BE
INSTALLED ON MANHOLES
LESS THAN 15 FT. DEEP.
OVER 15 FT. NON-CORROSIVE
STEPS SHALL BE INSTALLED.

CONCRETE BLOCK MAY BE
USED FOR FILLER OUTSIDE
OF MANHOLE LINE.



APPROVED JANUARY 1, 2018

J. B. Cairns

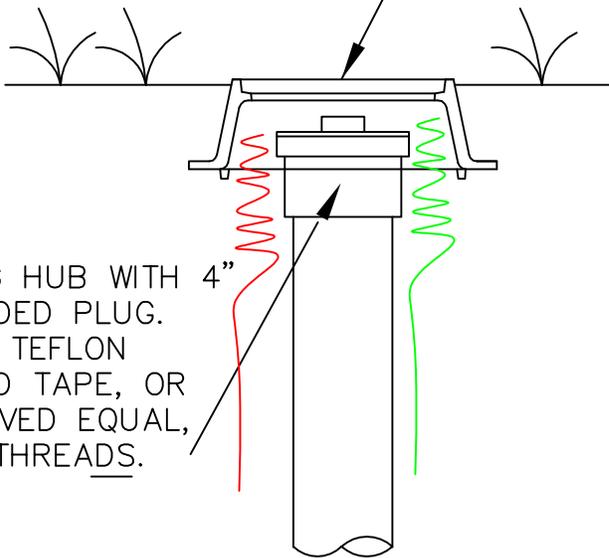
CITY ENGINEER REG 23110

**STANDARD MANHOLE
WITH DROP SECTION**

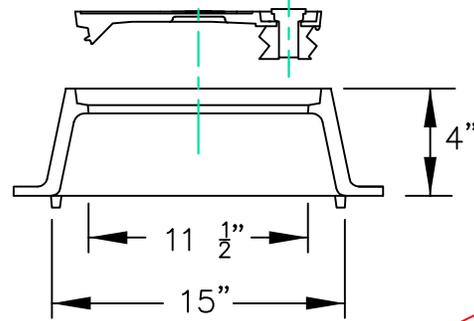
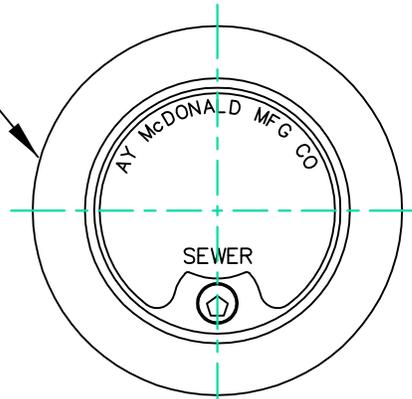
City of
Golden Valley

GV-SS-030

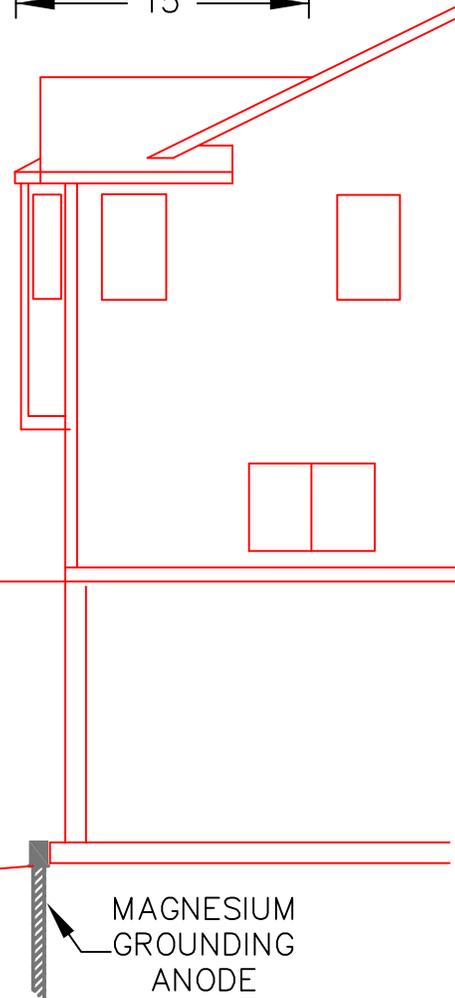
MCDONALD 74M "A"
 SERIES CAST IRON
 METER PIT
 FRAME AND COVER



FITTING HUB WITH 4"
 THREADED PLUG.
 APPLY TEFLON
 THREAD TAPE, OR
 APPROVED EQUAL,
 OVER THREADS.

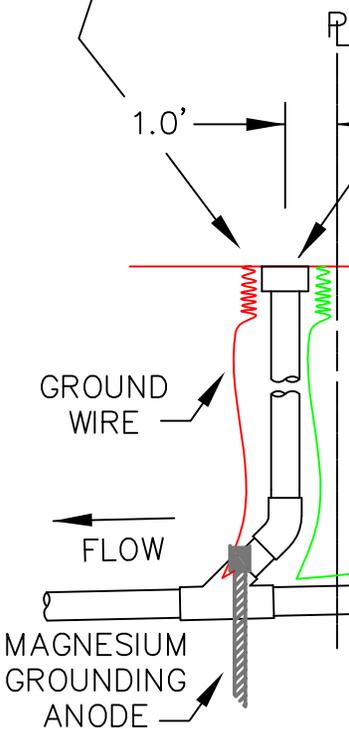


INSTALL APPROVED
 FERROUS METAL CAP



CAST IRON
 FRAME & COVER
 (SEE ABOVE)

NOTE:
 FOR TRACER WIRE INSTALLATION
 REQUIREMENTS, REFER TO THE
 MINNESOTA RURAL WATER
 ASSOCIATION STANDARD
 DETAILS.



PIPE MATERIAL AND SLOPE
 PER STATE PLUMBING CODE

APPROVED JANUARY 1, 2018

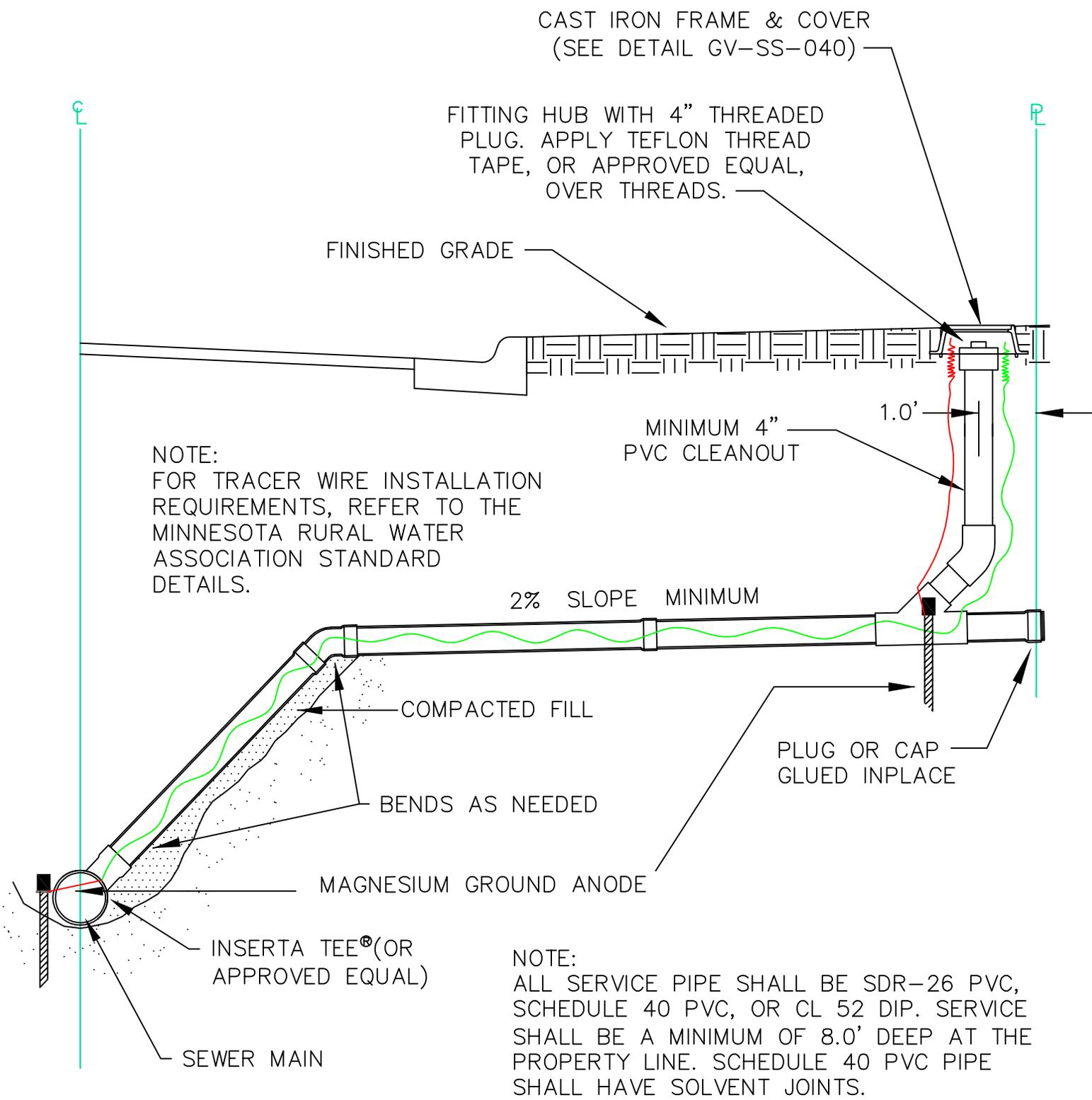
J. B. Cain

CITY ENGINEER REG 23110

SANITARY SEWER
 SERVICE
 PROPERTY LINE TO HOUSE

Golden Valley

GV-SS-040



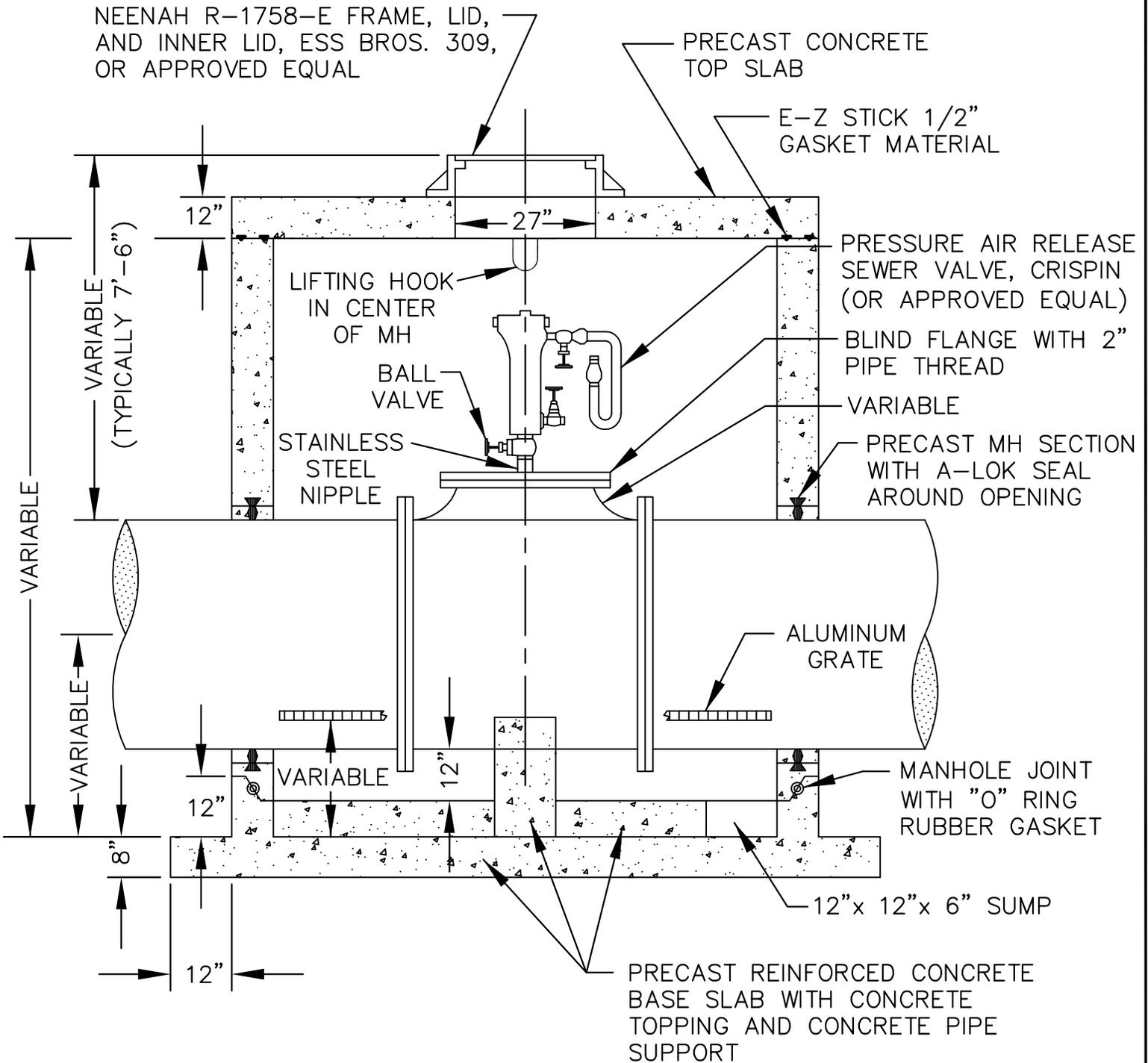
NOTE:
ALL SERVICE PIPE SHALL BE SDR-26 PVC,
SCHEDULE 40 PVC, OR CL 52 DIP. SERVICE
SHALL BE A MINIMUM OF 8.0' DEEP AT THE
PROPERTY LINE. SCHEDULE 40 PVC PIPE
SHALL HAVE SOLVENT JOINTS.

APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

**SANITARY SEWER
SERVICE WITH RISER
(DEEP SERVICE)**

Golden Valley
GV-SS-050



APPROVED JANUARY 1, 2018

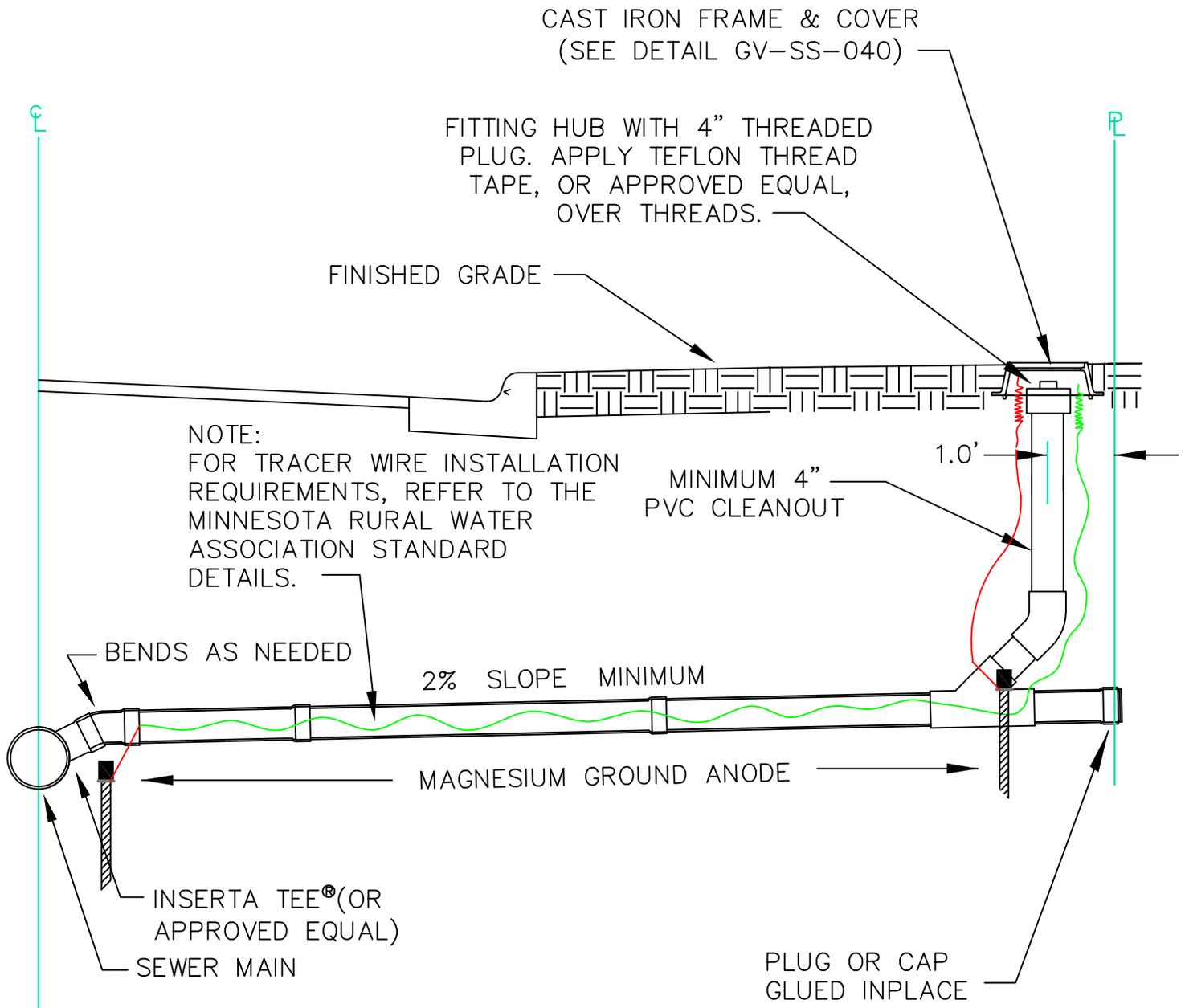
J. B. Cairns

CITY ENGINEER REG 23110

**ACCESS/AIR RELEASE
MANHOLE**

City of **Golden Valley**

GV-SS-060



NOTE:
ALL SERVICE PIPE SHALL BE SDR-26 PVC, SCHEDULE
40 PVC, OR CL 52 DIP. SERVICE SHALL BE A MINIMUM
OF 8.0' DEEP AT THE PROPERTY LINE. SCHEDULE 40
PVC PIPE SHALL HAVE SOLVENT JOINTS.

APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

SANITARY SEWER
SERVICE (MAIN TO
PROPERTY LINE)

GV-SS-070

CAST IRON FRAME & COVER
(SEE DETAIL GV-SS-040)

FITTING HUB WITH 4" THREADED PLUG.
APPLY TEFLON THREAD TAPE, OR
APPROVED EQUAL, OVER THREADS.

FINISHED GRADE

MINIMUM 4" PVC CLEANOUT (SEE
DETAIL GV-ST-050) PLACED AT
SERVICE PIPE TRANSITION OR 1'
BEYOND PROPERTY LINE,
WHICHEVER IS FARTHER
FROM STREET.

1.0'

EXISTING
SEWER
PIPE

TO HOUSE
→

6" X 4"
INCREASER

6" PVC

SHIELDED COUPLING
OR APPROVED EQUAL

SERVICE PIPE (6" TYP.)

LINER

MAIN

NOTE:
AT EACH TRANSITION WHERE PIPES CHANGE SIZE, THE CONTRACTOR
SHALL USE A MANUFACTURED TRANSITION ADAPTER APPROVED BY
THE MANUFACTURER OR THE ENGINEER.

APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

**SANITARY SEWER
SERVICE (CIPP) LINER
(MAIN TO PROPERTY LINE)**

City of
Golden Valley

GV-SS-080

● GRADE LEVEL /
IN-GROUND ACCESS BOX

--- HDPE INSULATED
#12 AWG COPPER CLAD
STEEL - GREEN
(TYP)

× DRIVE-IN MAGNESIUM
GROUNDING ANODE (SEE
SEWER SERVICE DETAIL)

#12 AWG COPPER CLAD
STEEL - GREEN
(TYP)

TRACE WIRE SHALL BE
ROUTED AROUND
MANHOLES ON THE NORTH
AND/OR EAST SIDE

MAINLINE TO LATERAL
LUG CONNECTOR
(TYP)

GRADE LEVEL /
IN-GROUND ACCESS BOX
AND DRIVE-IN MAGNESIUM
GROUNDING ANODE (SEE
SEWER SERVICE DETAIL)

SEWER SERVICE (TYP)

DRIVE-IN MAGNESIUM
GROUNDING ANODE (TYP)

4-WAY CONNECTOR OR
TWO 3-WAY CONNECTORS
WITH SHORT JUMPER WIRE

MANHOLE (TYP)

NOTES:

1. WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. THE WIRE SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS.

TRACE WIRE PLAN
(SEWER)

NO SCALE

APPROVED JANUARY 1, 2018



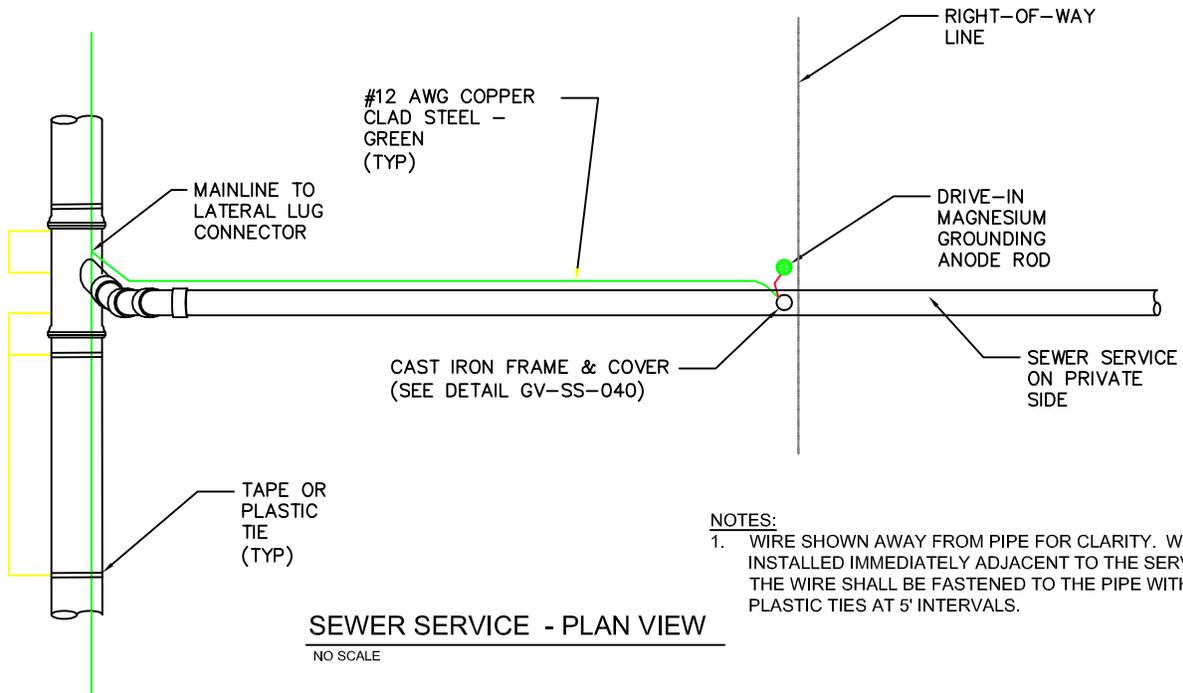
CITY ENGINEER REG 23110

TRACE WIRE PLAN (SEWER)

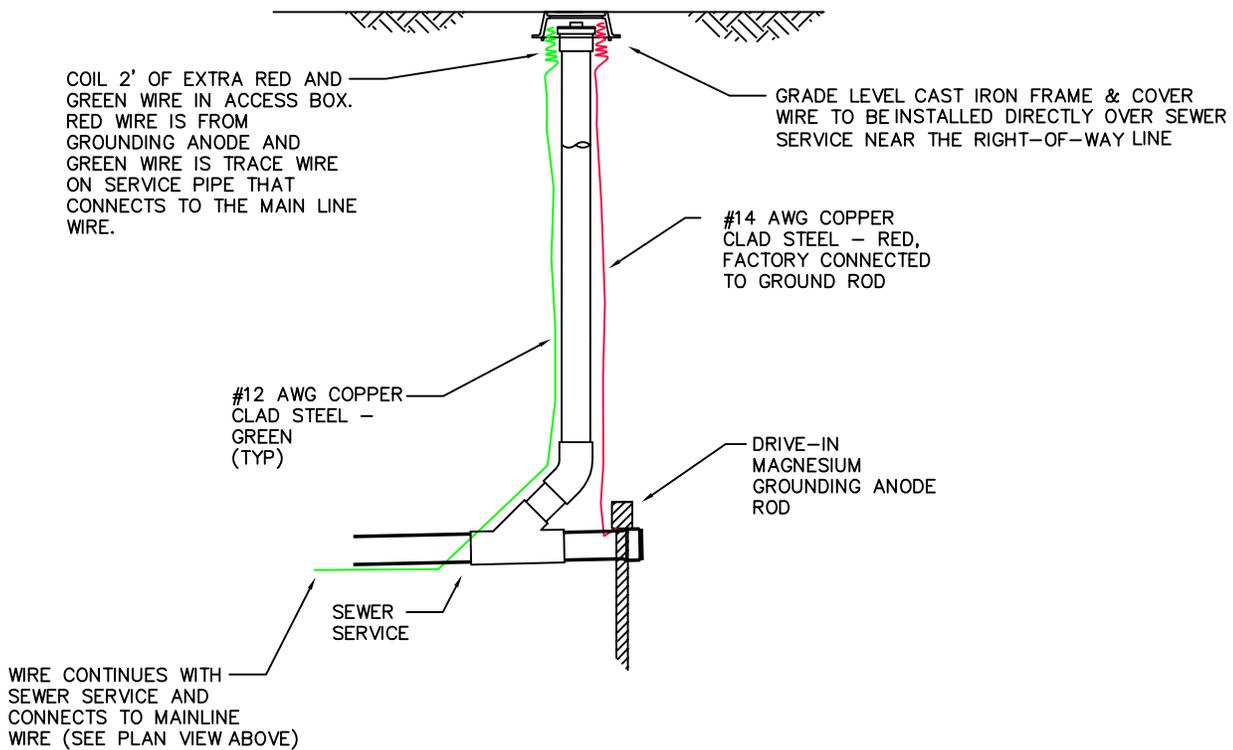
MINNESOTA RURAL WATER
ASSOCIATION STANDARD DETAIL



GV-SS-090



- NOTES:**
1. WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED IMMEDIATELY ADJACENT TO THE SERVICE PIPE. THE WIRE SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS.



APPROVED DECEMBER 31, 2015

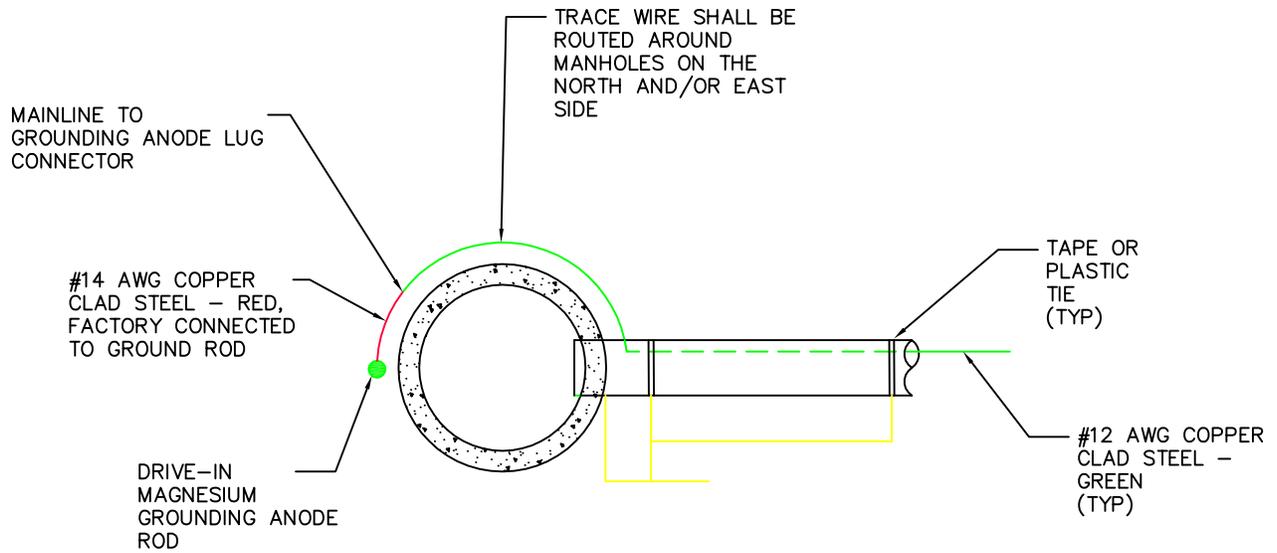
CITY ENGINEER REG 23110

**TRACE WIRE PLAN
(SEWER SERVICE)**

MINNESOTA RURAL WATER
ASSOCIATION STANDARD DETAIL

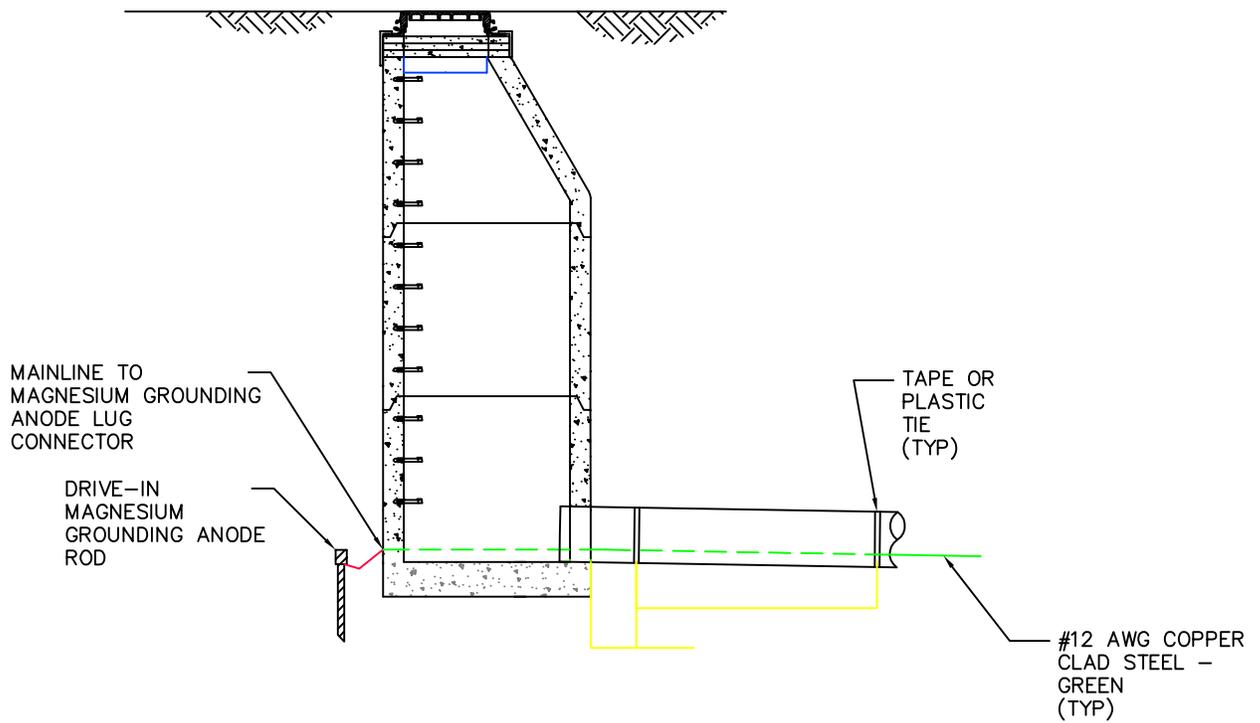


GV-SS-100



SEWER MANHOLE - PLAN VIEW

NO SCALE



SEWER MANHOLE - SECTION VIEW

NO SCALE

APPROVED DECEMBER 31, 2015

CITY ENGINEER REG 23110

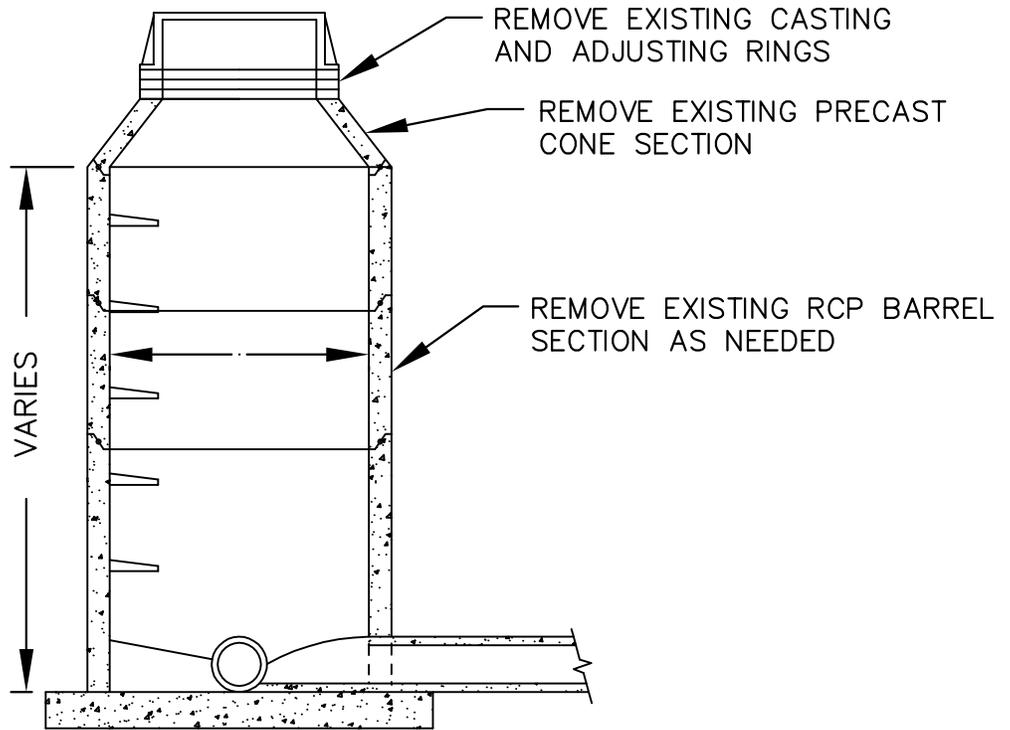
**TRACE WIRE PLAN
(SEWER MANHOLE)**

MINNESOTA RURAL WATER
ASSOCIATION STANDARD DETAIL



GV-SS-110

(EXISTING)



REMOVE EXISTING CASTING AND ADJUSTING RINGS

REMOVE EXISTING PRECAST CONE SECTION

REMOVE EXISTING RCP BARREL SECTION AS NEEDED

VARIES

FINISHED GRADE

RE-INSTALL EXISTING CASTING

REPLACE COVER WITH NEENAH 1733 SERIES SOLID COVER, ESS BROS. 301, WITH GOLDEN VALLEY LOGO, OR APPROVED EQUAL. SEE GV-SS-020

(RECONSTRUCTED)

PLASTIC HDPE ADJUSTING RINGS (MIN. 2) SEE NOTE:

PRE-CAST CONCRETE SLAB REINFORCED FOR STREET LOADING WITH, 27" OPENING

PLACE SLAB ON 1/2" MORTAR BED AND TROWEL JOINT SMOOTH

EACH NEW BARREL JOINT SHALL BE SEALED WITH INFI-SHIELD 6" EXTERNAL RUBBER SEAL WRAP OR APPROVED EQUAL.

RCP PIPE SAWED TO LENGTH

RUBBER GASKET AT ALL JOINTS

PLASTIC HDPE ADJUSTING RINGS (MIN. 2)
USE A COMBINATION OF 2", 6" AND 12" RINGS TO ACHIEVE NEEDED HEIGHT. INCLUDE MIN. 2-2" RING IMMEDIATELY UNDER THE CASTING. RINGS SEALED W/BUTYL CAULK. SEE GV-SS-010

EXISTING RCP BARREL SECTION

VARIES

NOTE:
MANHOLES SHOULD NOT HAVE STEPS UNLESS THEY EXCEED 15' IN DEPTH.

APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

SANITARY SEWER MANHOLE RECONSTRUCTION

City of
Golden Valley

GV-SS-120