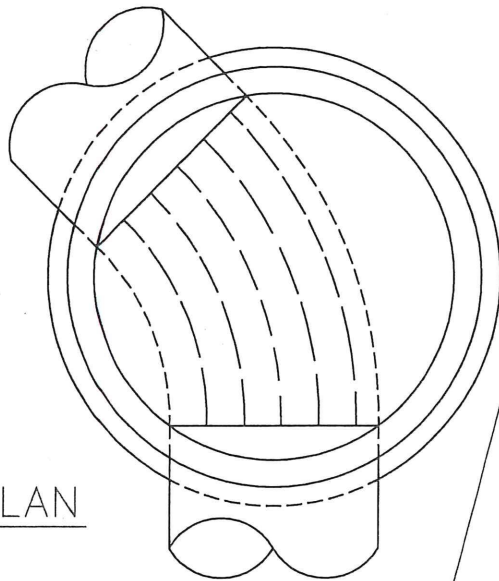


PLAN



CASTINGS A & B
(UNLESS NOTED OTHERWISE)
STD. PLATES 2201E & 2202D

ADJUST TO GRADE
AS PER STANDARD
PLATE 2321B

ECCENTRIC CONE

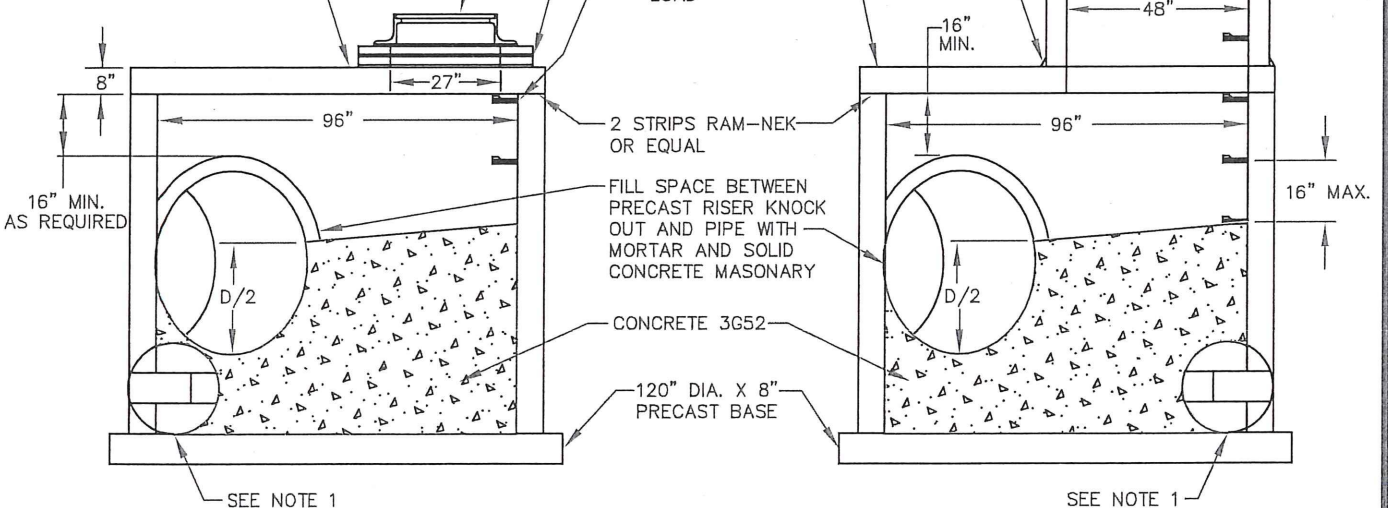
POLYPROPYLENE (ASTM 2146)
ENCASED MANHOLE STEPS
CONFORMING TO ASTM C-478,
(M.A. INDUSTRIES PS-I-PF
OR EQUAL)

48" DIA. PRECAST
RISER SECTIONS
AS REQUIRED

PRECAST SLAB
WITH ECCENTRIC
48" OPENING DESIGN
HS-25 PLUS EARTH
LOAD

MORTAR-
FILLET

PRECAST COVER SLAB
MN/DOT STANDARD PLATE
4020J OR CURRENT



TYPE V

FOR USE WHEN MANHOLE DEPTH IS 12' OR LESS

TYPE V-S

FOR USE WHEN MANHOLE DEPTH EXCEEDS 12 FEET

NOTES:

1. THIS PORTION OF MANHOLE MAY BE CONSTRUCTED OF 8" X 8" X 16" OR 6" X 8" X 16" SOLID CONCRETE BLOCKS (SEE SPECIFICATIONS) ALL JOINTS TO BE COMPLETELY FILLED WITH MORTAR 3/8" THICK
2. PRECAST RISER TO MEET ASTM C-478
3. TONGUE AND GROVE PRECAST RISER SECTION JOINTS TO USE O-RING RUBBER GASKET CONFORMING TO ASTM C-443
4. SAW CUT PIPES FLUSH WITH INTERIOR WALL OF MANHOLE

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

Aaron D. Hass
AARON D. HASS

Date 01-24-2017 Lic. No. 26424

APPROVED *2-2-2017*
Paul Kutz
CITY ENGINEER

CITY OF ST. PAUL
DEPARTMENT OF PUBLIC WORKS

MANHOLE, TYPE V & V-S

Date of Revision
JAN 2017

Standard Plate No.
2105F