

SECTION 2000

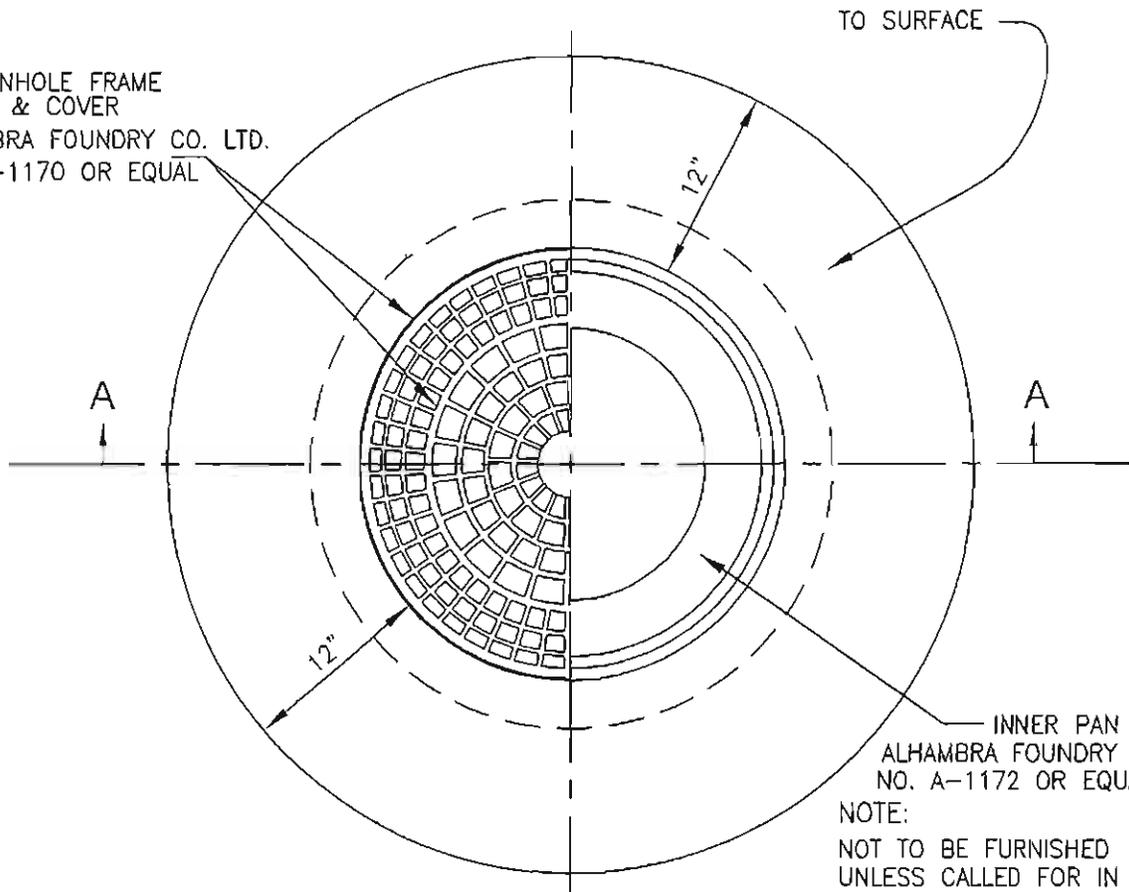
SEWER

CONSTRUCTION STANDARDS

SECTION 2000 – SEWER

2000	Standard Manhole Frame and Cover and Reinforced Concrete Collar
2001 (2 Sheets)	Standard Cast in Place Manhole for Sewer – Revised 12/03/07
2002	Standard Drop Manhole for 6” to 36” Pipe
2003	Typical Sewer Manhole Bases – Revised 5/12/16
2004	Sewer Terminal Cleanout
2005	Sewer Lateral House Cleanout – Revised 12/15/14
2006	Concrete Sewer Cleanout Box
2007	Plastic Sewer Cleanout Box
2008 (2 Sheets)	Sewer Saddle

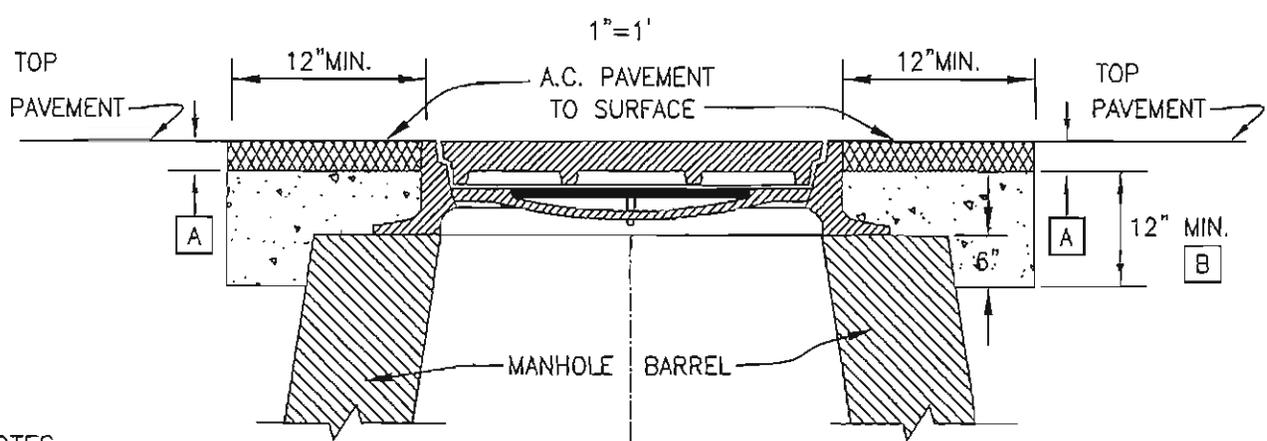
MANHOLE FRAME
& COVER
ALHAMBRA FOUNDRY CO. LTD.
NO. A-1170 OR EQUAL



INNER PAN
ALHAMBRA FOUNDRY CO. LTD.
NO. A-1172 OR EQUAL

NOTE:
NOT TO BE FURNISHED
UNLESS CALLED FOR IN
SPECIFICATIONS.

PLAN



SECTION A-A

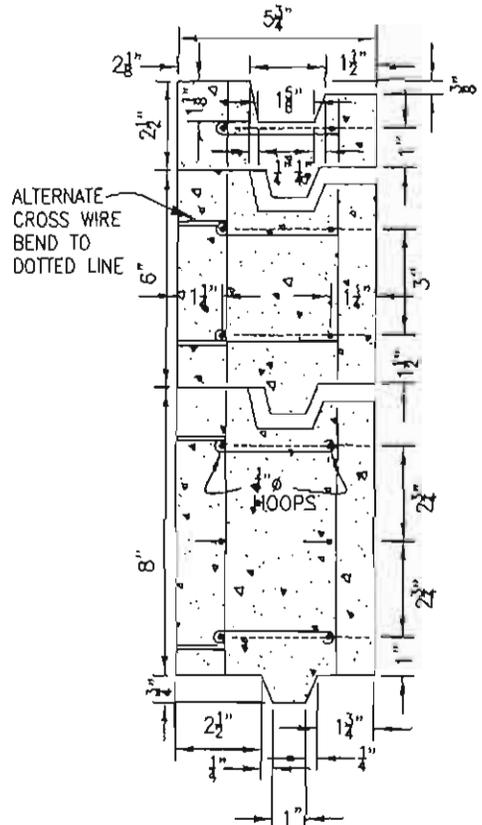
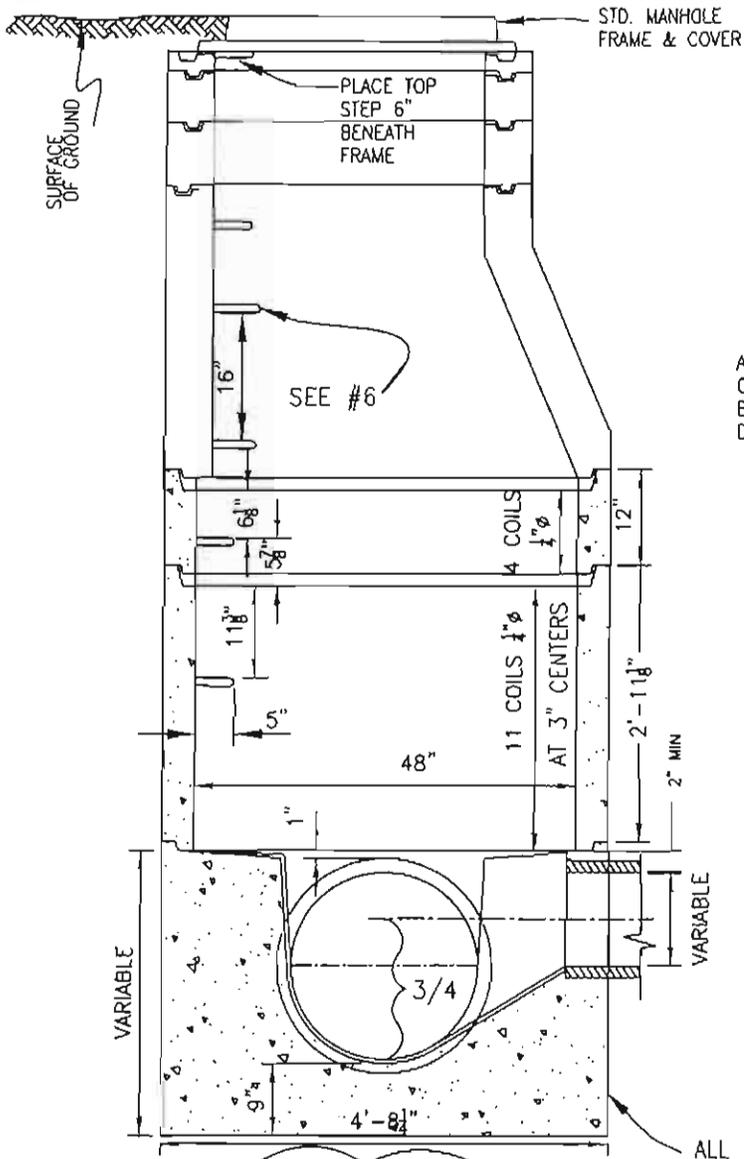
NOTES:

- [A] SAME AS EXISTING - 1" MIN.
- [B] NO MORE THAN 12" OF GRADE RINGS ALLOWED FOR A MAXIMUM OF 18" FROM TOP OF MANHOLE BARREL. CONCRETE SHALL BE PLACED FROM 2" BELOW GRADE RING TO 2" BELOW MANHOLE BARRELL AND SHALL ENCAPSULATE ALL GRADE RINGS.



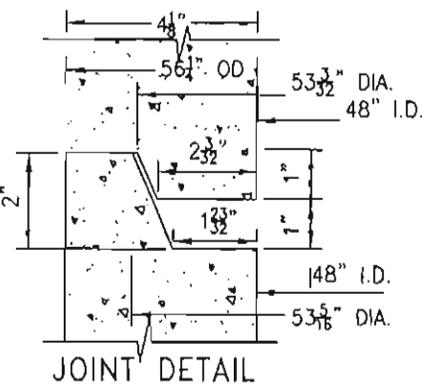
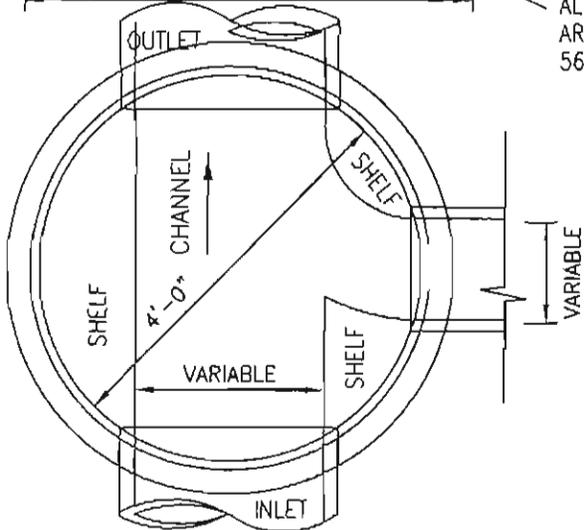
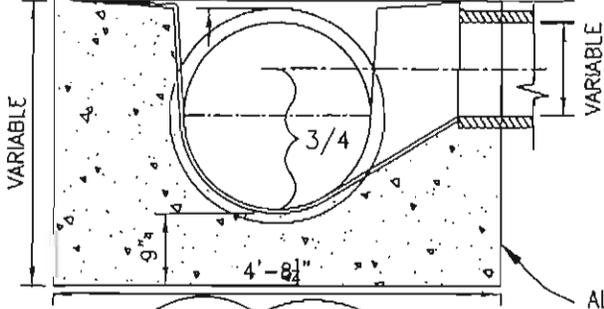
APPROVED BY: *[Signature]* 10-18-06
 CITY ENGINEER DATE
RICARDO SANDOVAL
 REVIEWED BY: *[Signature]*
 REVISION NUMBER: _____

CITY OF FONTANA
 STD. MANHOLE FRAME & COVER AND REINFORCED CONCRETE COLLAR
 07/10/06
 STD. PLAN NO. 2000 SHT 1 OF 1



SECTION OF TOP RINGS (PRE-CAST R.C.)

ALL MANHOLE BOTTOMS ARE POUR IN PLACE USING 560-C-3250 CONCRETE



APPROVED BY: *Ricardo Sandoval* 12/18/08
 CITY ENGINEER DATE
RICARDO SANDOVAL
 REVIEWED BY: *DG*
 DATE OF LAST REVISION: 12/03/07

CITY OF FONTANA
STANDARD CAST IN PLACE MANHOLE FOR SEWER
 07/10/06
 STD. PLAN NO. **2001** SHT 1 OF 2

NOTES:

1. SEE STANDARD DETAILS NOS. 2002 & 2003 FOR DROP & TYPICAL SEWER MANHOLE BASES DETAILS.
2. ECCENTRIC CONE MAY BE USED IN LIEU OF CONCENTRIC CONES.
3. THE LOWEST MANHOLE STEP SHALL BE PLACED NOT LESS THAN 16", NOT MORE THAN 24" ABOVE SHELF.
4. THE UPPER MANHOLE STEP SHALL BE PLACED BETWEEN THE TOP OF THE MANHOLE AND THE MANHOLE COVER FRAME AND SHALL PROJECT NOT MORE THAN 3" INSIDE MANHOLE.
4. ALL JOINTS SHALL BE MORTARED.
5. 3/4" DIAMETER GALVANIZED IRON STEP OR PLASTIC STEPS PER ASTM A-82, ASTM C-478, ASTM TYPE II GRADE 43758.



APPROVED BY:

Ricardo Sandoval 12/8/08
 CITY ENGINEER DATE

RICARDO SANDOVAL

REVIEWED BY: *[Signature]*

DATE OF LAST REVISION: 12/03/07

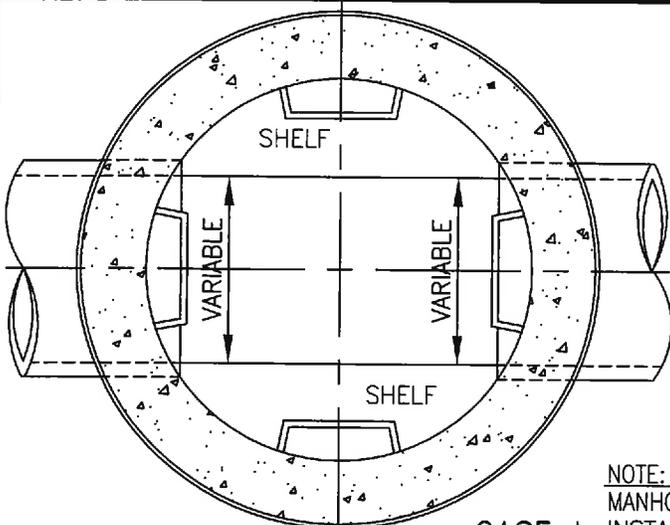
CITY OF FONTANA

**STANDARD CAST
 IN PLACE MANHOLE
 FOR SEWER**

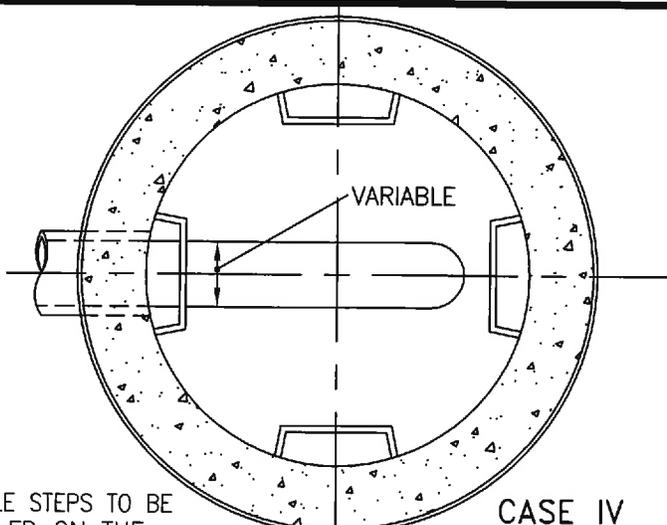
07/10/06

STD. PLAN NO. **2001**

SHT **2** OF **2**

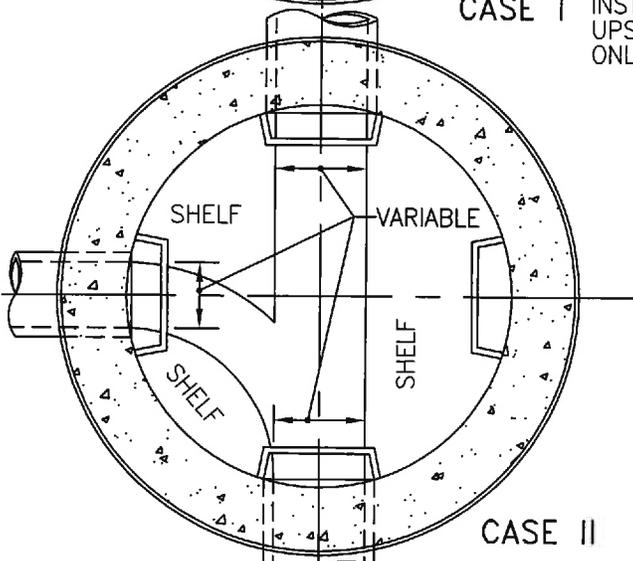


CASE I

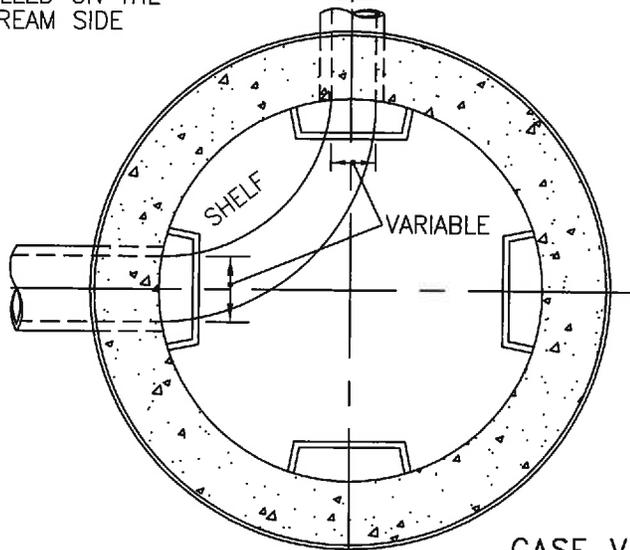


CASE IV

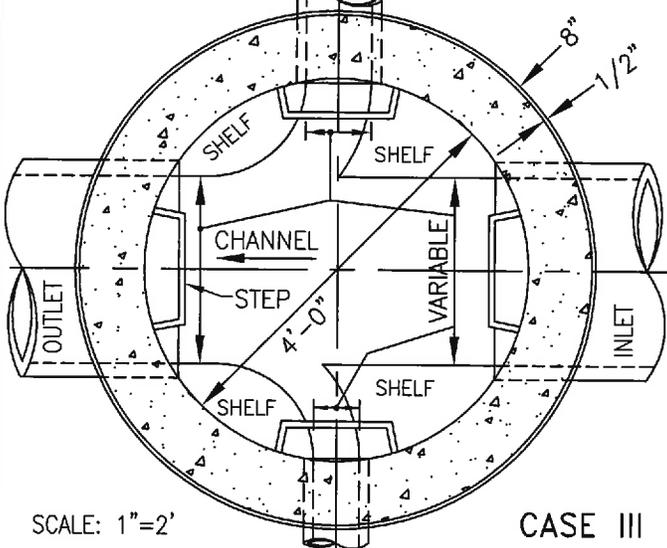
NOTE:
MANHOLE STEPS TO BE
INSTALLED ON THE
UPSTREAM SIDE
ONLY



CASE II



CASE V



CASE III

SCALE: 1"=2'



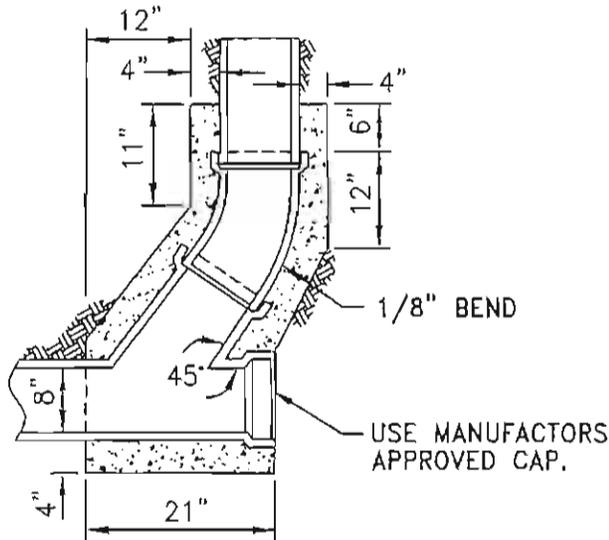
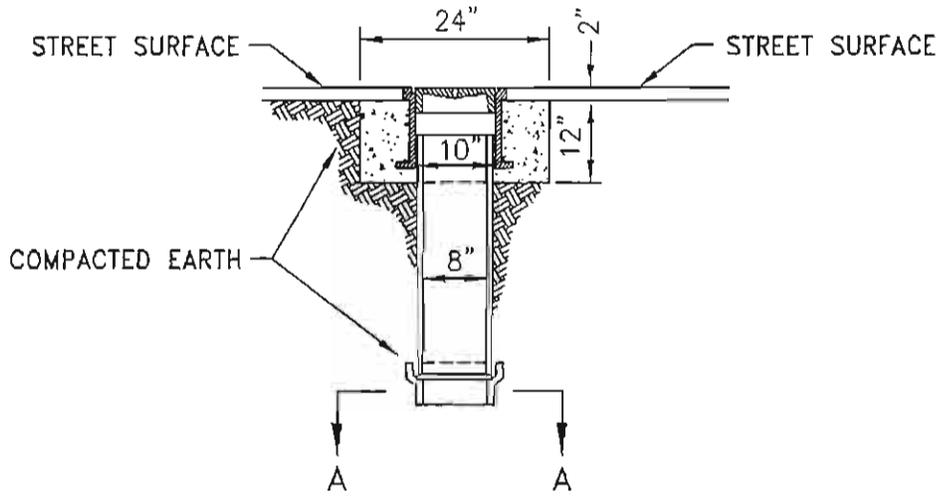
APPROVED BY:
Ricardo Sandoval 05.12.16
CITY ENGINEER DATE
RICARDO SANDOVAL
REVIEWED BY: *JK*
REVISION NUMBER: **05/12/16**

CITY OF FONTANA

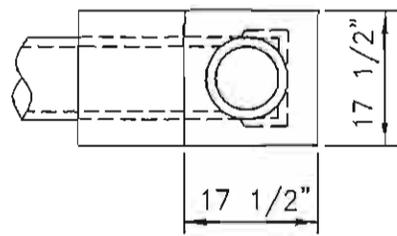
TYPICAL SEWER
MANHOLE BASES

07/10/06

STD. PLAN NO. **2003** SHT 1 OF 1



SECTIONAL ELEVATION



SECTION A-A

NOTES:

1. CLEANOUT FRAME & COVER, ALHAMBRA FOUNDRY NO. A-1240 OR EQUAL.
2. 3250 PSI P.C.C. TO BE USED IN ALL SEWER CONSTRUCTION.
3. THE MAXIMUM DISTANCE TO MANHOLE DOWNSTREAM SHALL BE 150'.

NOT TO SCALE

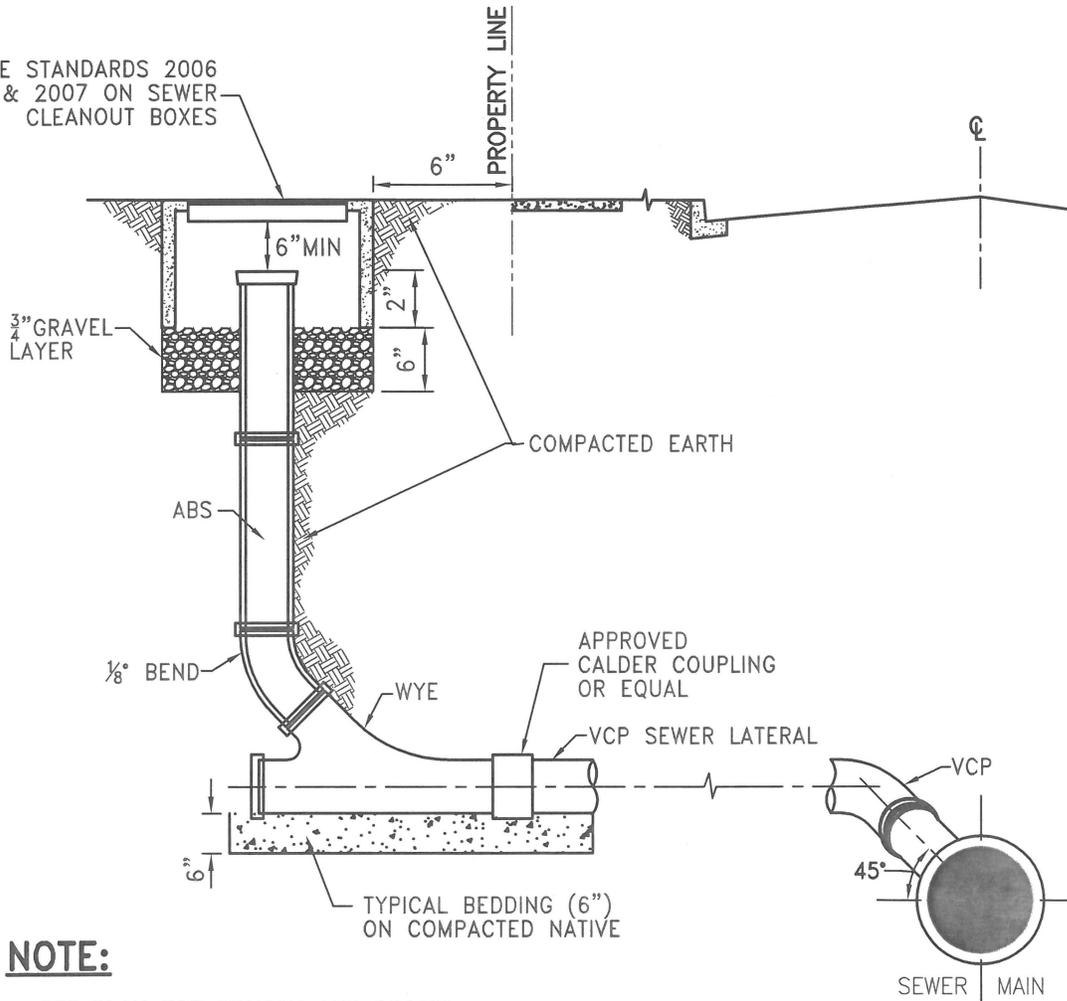


APPROVED BY: *Ricardo Sandoval* 10.18.06
 CITY ENGINEER DATE
RICARDO SANDOVAL
 REVIEWED BY: *DL*
 DATE OF LAST REVISION: _____

CITY OF FONTANA	
SEWER TERMINAL CLEANOUT	
STD. PLAN NO. 2004	SHT 1 OF 1

07/10/06

SEE STANDARDS 2006 & 2007 ON SEWER CLEANOUT BOXES



NOTE:

1. SEE PLAN FOR STATION AND INVERT ELEVATION.

CONSTRUCTION NOTES:

1. RESIDENTIAL SEWER SHALL BE 4" MINIMUM, ABS OR APPROVED EQUAL.
2. ALL APARTMENT, COMMERCIAL SEWER CONNECTIONS SHALL BE 6" V.C.P. SEWER LATERAL WITH ABS RISER.
3. BACKFILL SHOULD BE UNIFORMLY GRADED AND FREE OF ROCKS, STONES, ETC. GREATER THAN TWO (2) INCHES IN DIAMETER.
4. CONCRETE BOX SHALL BE INSTALLED WHENEVER LATERAL RISER WILL BE IN A CONCRETE AREA, ie, DRIVEWAY. SEE STANDARD 2006.
5. PLASTIC BOX SHALL BE INSTALLED WHENEVER LATERAL RISER WILL BE IN LANDSCAPE AREA. SEE STANDARD 2007.
6. JIM CAP BAND AND SEAL CAP. NO SCREW CAPS.
7. AFTER SEWER CONNECTION IS MADE VIDEO INSPECTION WILL BE REQUIRED FOR SUBMITTAL AND APPROVAL. VIDEO FOOTAGE SHALL PROVIDE CLEAR VIEW OF INSIDE DIAMETER OF PIPE, WITH THE ABILITY TO IDENTIFY CRACKS, OFFSETS, SAGS, OR IMPERFECTIONS.
8. BACKFILL WITH STD. 1008

NOT TO SCALE



APPROVED BY:

CITY ENGINEER
RICARDO SANDOVAL

REVIEWED BY: J.W.

REVISION NUMBER: 2

DATE

12.15.14

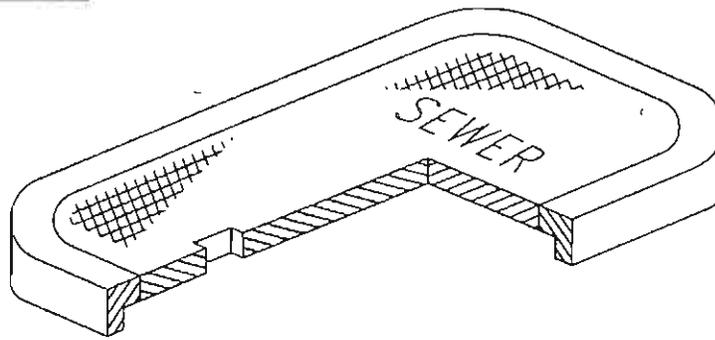
CITY OF FONTANA

**SEWER LATERAL
CLEANOUT**

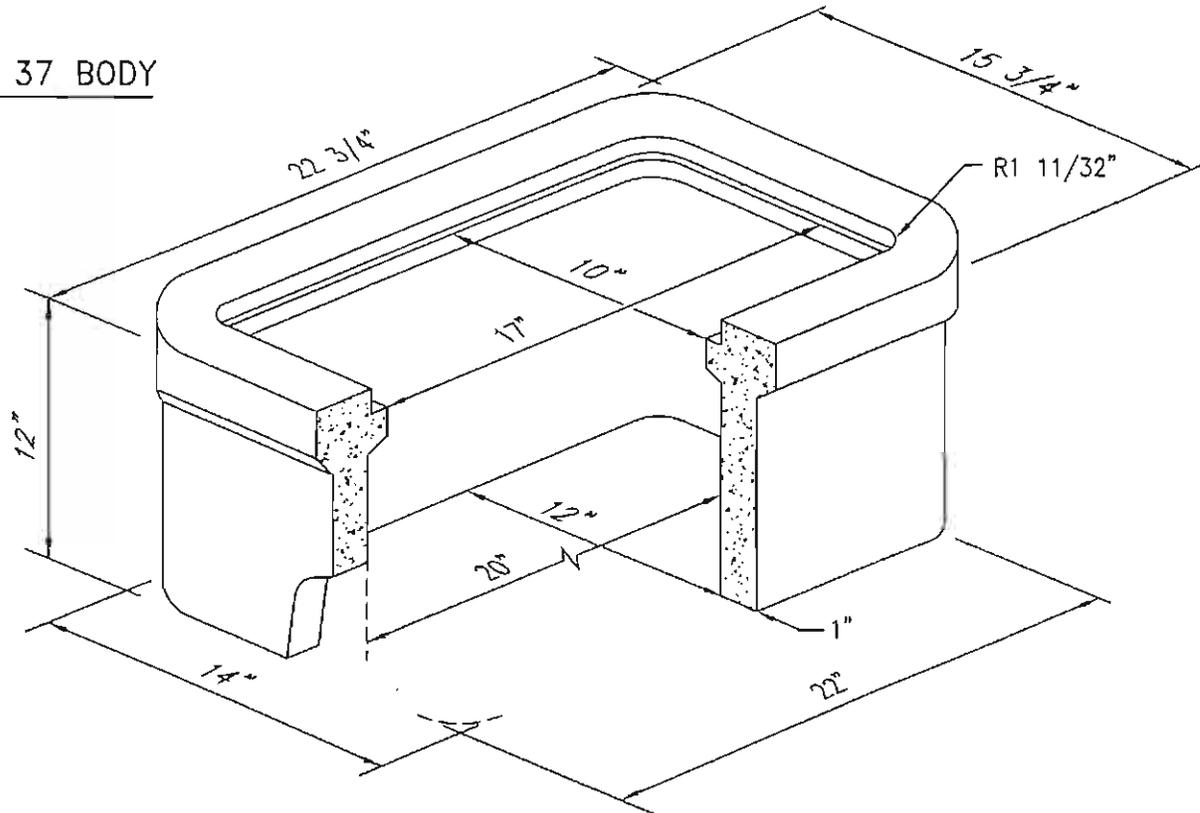
12/9/2014

STD. PLAN NO. 2005 SHT 1 OF 1

NO. 37-T CAST IRON
TRAFFIC COVER



NO. 37 BODY



1. THE CLEANOUT BOX TO BE A BROOKS NO. 37 WITH CAST IRON COVER OR EQUAL.
2. BOX TO BE INSTALLED TO ALLOW MAXIMUM ACCESS TO PROPERTY LINE CLEANOUT.
3. THIS CONCRETE BOX IS TO BE INSTALLED WHENEVER THE V.C.P. LATERAL RISER WILL BE IN A CONCRETE AREA, ie. DRIVEWAY, SIDEWALK.

NOT TO SCALE



APPROVED BY:

Ricardo Sandoval 10.18.06

CITY ENGINEER
RICARDO SANDOVAL

DATE

REVIEWED BY: DG

REVISION NUMBER: _____

CITY OF FONTANA

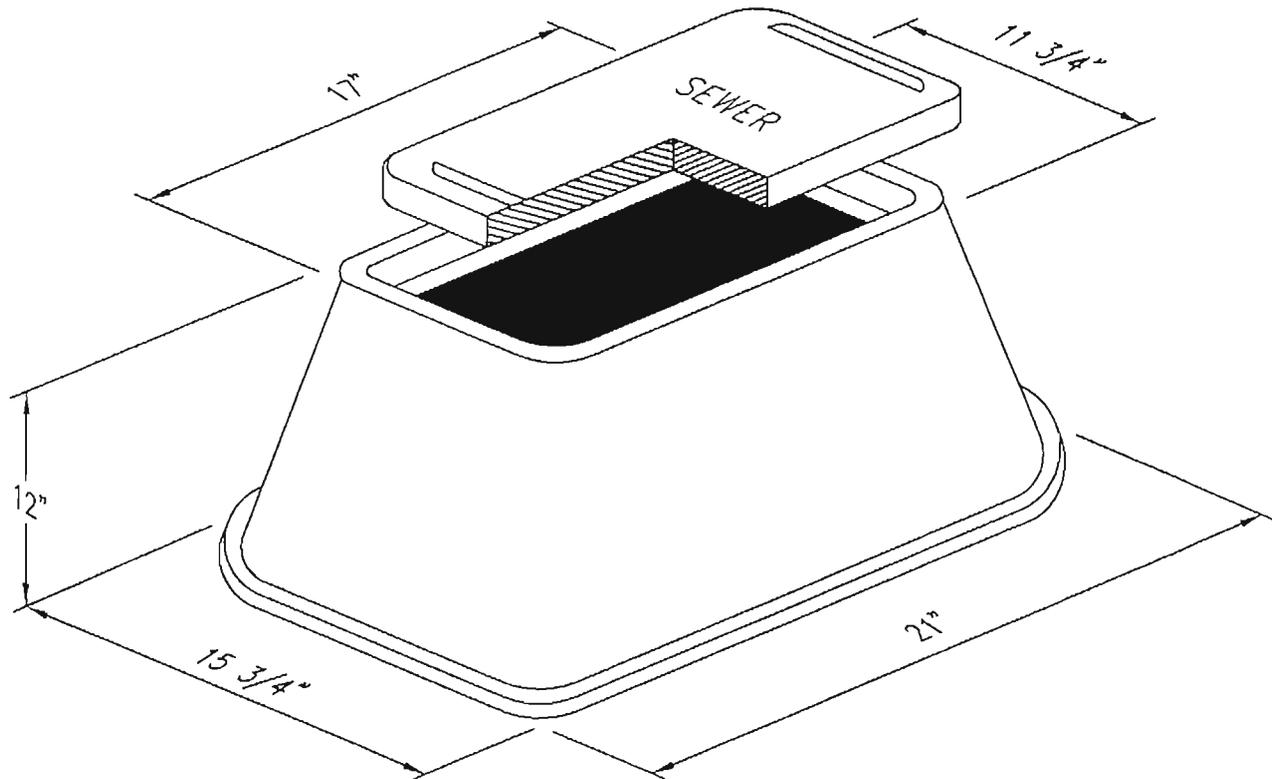
CONCRETE
SEWER CLEANOUT BOX

07/10/06

STD. PLAN NO. **2006**

SHT 1 OF 1

1419 OR 1419T SERIES COVER



1419 SERIES BODY

1. THE CLEANOUT BOX TO BE A BROOKS NO. 1419 SERIES WITH PLASTIC COVER OR EQUAL.
2. BOX TO BE INSTALLED TO ALLOW MAXIMUM ACCESS TO PROPERTY LINE CLEANOUT.
3. THIS PLASTIC BOX IS TO BE INSTALLED WHENEVER THE V.C.P. LATERAL RISER WILL BE IN A LANDSCAPE AREA.

NOT TO SCALE



APPROVED BY:

Ricardo Sandoval 10.18.06

CITY ENGINEER
RICARDO SANDOVAL

DATE

REVIEWED BY: *DL*

REVISION NUMBER: _____

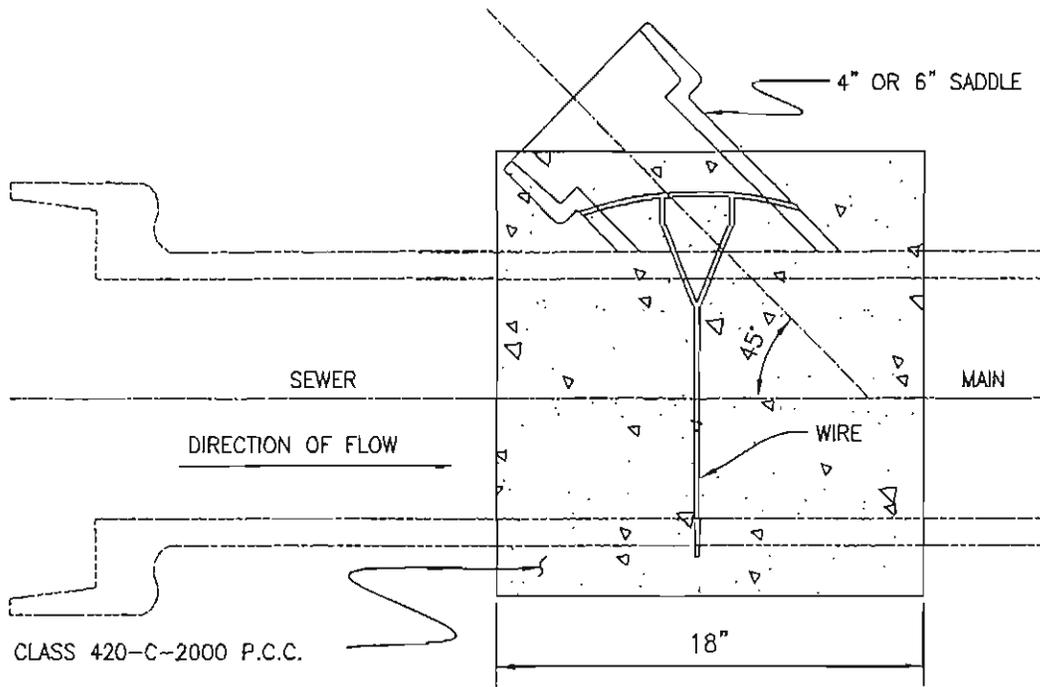
CITY OF FONTANA

**PLASTIC SEWER
CLEANOUT BOX**

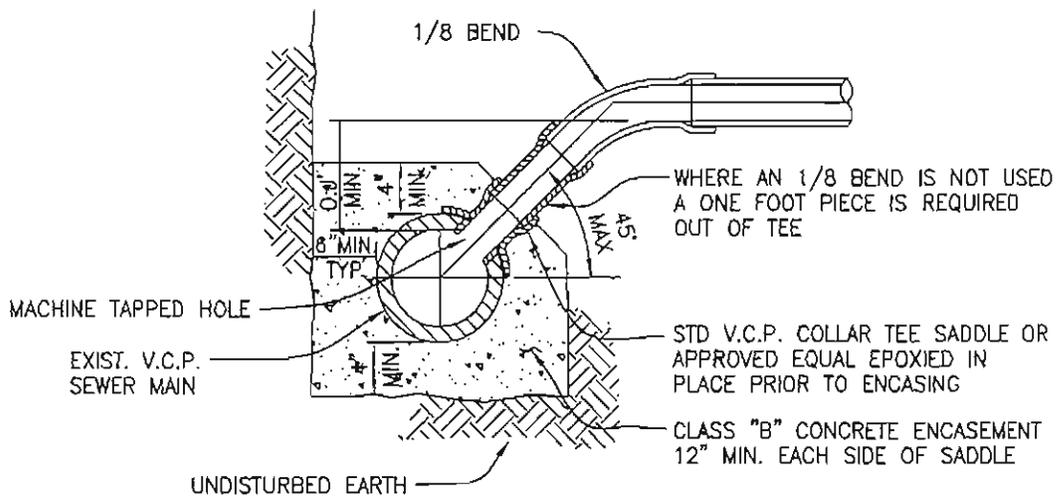
07/10/06

STD. PLAN NO. **2007**

SHT **1** OF **1**

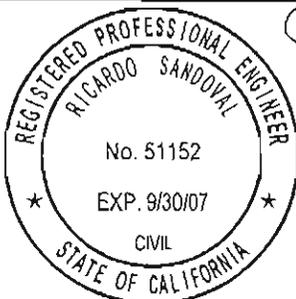


PLAN VIEW



V.C.P. SADDLE CONNECTION

NOT TO SCALE



APPROVED BY:

Ricardo Sandoval 10.18.06

CITY ENGINEER
RICARDO SANDOVAL

DATE

REVIEWED BY: *DG*

REVISION NUMBER: _____

CITY OF FONTANA

SEWER SADDLE

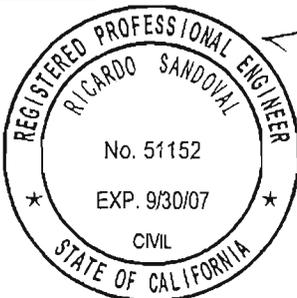
07/10/06

STD. PLAN NO. 2008

SHT 1 OF 2

NOTES:

1. A WYE OR TEE SADDLE SHALL BE INSTALLED BY CUTTING A NEAT HOLE CONFORMING TO THE INSIDE DIAMETER OF THE SADDLE WHEN USING A SADDLE WITHOUT COLLAR AS SHOWN IN EPOXY RESIN JOINT DETAIL. WHEN USING A SADDLE WITH COLLAR THE DIAMETER OF THE HOLE SHALL BE OUTSIDE DIAMETER PLUS 1/8" AS SHOWN IN CEMENT COLLAR JOINT DETAIL.
2. BROKEN PIECES FROM CUTTING OF THE MAIN LINE SEWER MUST BE EXTRACTED CAREFULLY PRIOR TO PLACEMENT OF THE SADDLE.
3. THE SADDLE SHALL BE CEMENTED INTO PLACE USING CLASS "D" CEMENT MORTAR OR OTHER CEMENTING AGENT APPROVED BY THE DEPARTMENT. THE SADDLE SHALL BE HELD SECURELY IN PLACE WHILE THE CEMENT OR OTHER APPROVED CEMENTING AGENT SETS. THE INSIDE OF THE JOINT BETWEEN PIPE AND SADDLE SHALL BE FILLED WITH CEMENTING MATERIAL AND NEATLY ROUNDED.



APPROVED BY:

Ricardo Sandoval 10.18.06

CITY ENGINEER DATE
RICARDO SANDOVAL

REVIEWED BY: DG

REVISION NUMBER: _____

CITY OF FONTANA

SEWER SADDLE

07/10/06

STD. PLAN NO. **2008**

SHT **2** OF **2**