

MANHOLE FRAME & COVER SEE 302, SHEET 3 OF 3

3" MAX. CLASS B' MORTAR

ONE 3" ADJUSTING RING (OPTIONAL).

REDUCER RING

12" MIN. TO 24" MAX. IF DEPTH OF M.H. PERMITS

TAPERED CONE 24" MIN.

STRAIGHT SECTION TO ACCOMMODATE TV CAMERA AND SKID

TYPICAL SECTIONS 12" - 48" 24" MIN.

6"

48"

6"

SHELF 2"

24"

FLOW

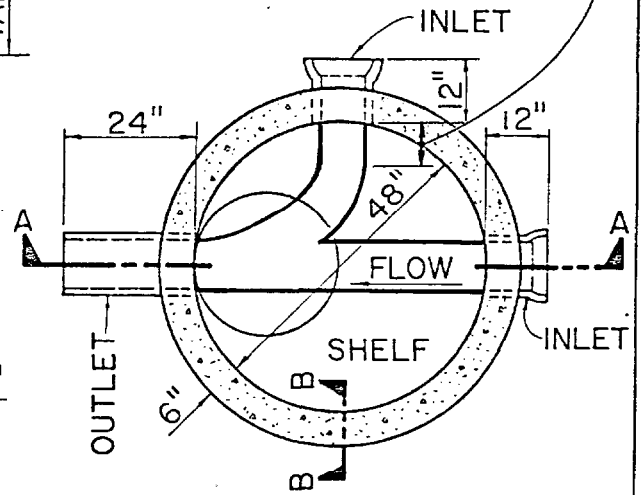
12"

9"

3250 P.S.I. P.C.C.

5'-0" MIN.

SECTION A - A

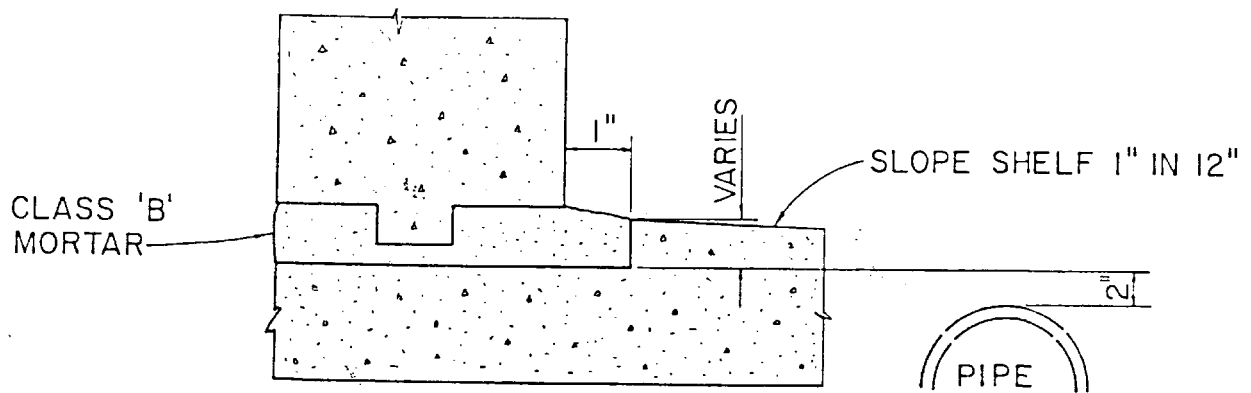


PLAN

NOTE:

SEE SHEET 2 OF 3 FOR NOTES AND ADDITIONAL DETAILS.

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SECTION B - B

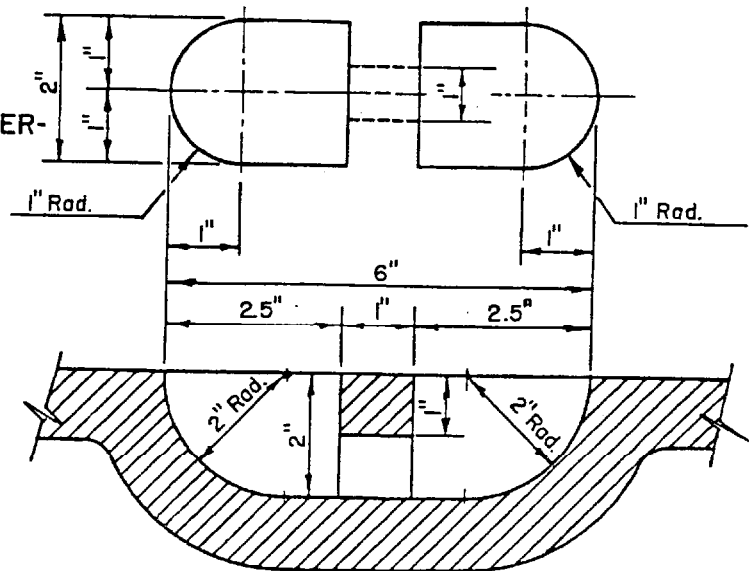
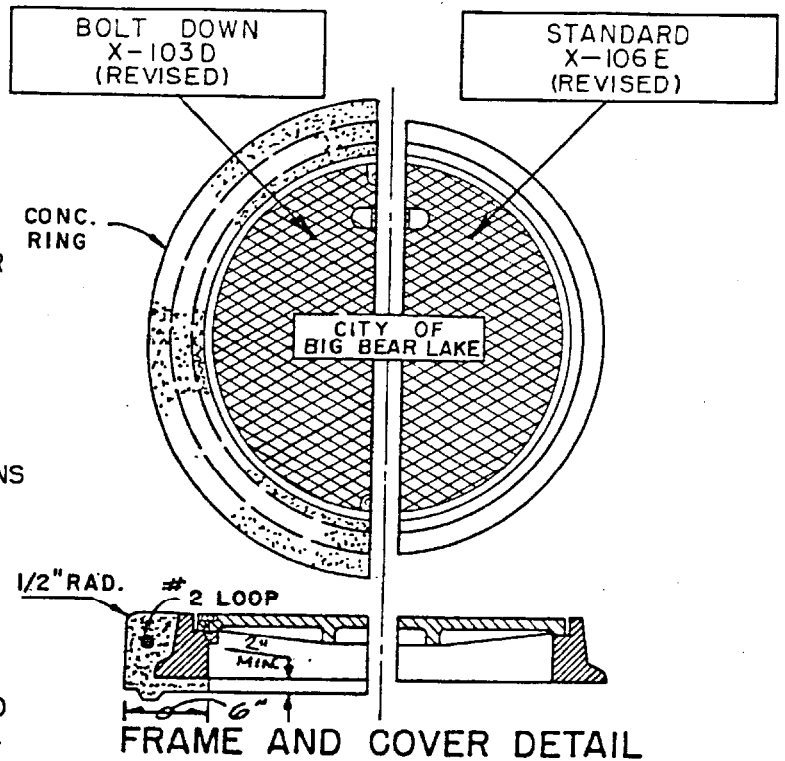
NOTES:

1. CONCRETE BASE AND STUB WALLS SHALL BE POURED IN ONE OPERATION TO A POINT 2" ABOVE INLET AND OUTLET PIPES. ALL PIPES SHALL BE RIGIDLY SUPPORTED DURING THIS OPERATION. CONCRETE SHALL BE SET 24 HOURS BEFORE PLACING PRECAST UNITS.
2. CONCRETE FOR PRECAST UNITS SHALL BE VIBRATED IN THE FORMS. IT SHALL BE CURED BY STEAM, SPRINKLING, MEMBRANE SOLUTION, OR A COMBINATION OF THESE. IT SHALL DEVELOP 3250 P.S.I. OR GREATER IN 28 DAYS.
3. JOINTS MAY BE THE TYPE SHOWN OR TONGUE AND GROOVE AND SHALL CONFORM WITH ASTM C 478, SECTION 14
4. THE DEPTH OF THE CHANNEL SHALL EQUAL THE PIPE DIAMETER FOR ALL SIZES OF PIPE.
5. THE TOP OF THE MANHOLE AND THE STEPS SHALL BE PLACED DIRECTLY OVER THE OUTLET OF THE STRUCTURE EXCEPT WHEN NOTED ON THE PLANS.
6. 60" I.D. MANHOLE WITH A 36" FRAME AND COVER SHALL BE USED ON SEWERS WITH A DIAMETER OF 24" OR MORE, OR WITH A DEPTH GREATER THAN 12' UNLESS OTHERWISE INDICATED ON THE PLANS.
7. SIDES AND BOTTOM OF CONCRETE CHANNEL AT PIPE ENTRANCES SHALL BE FORMED SO AS NOT TO RESTRICT THE PLACEMENT OF MECHANICAL PLUGS OR INSERTION OF TV CAMERA AND SKID.
8. BRICK MANHOLES NOT PERMITTED.

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NOTES:

1. FRAME AND COVER SHALL BE LONG BEACH IRON WORKS INC. X-106E AND X-103D OR APPROVED EQUAL WITH LIFTING DEVICE CAST COVER AS PER DETAIL SHOWN BELOW. COVER SHALL BE DIAMOND TREAD WITH NAME LETTERED AS SHOWN.
2. BOLT-DOWN COVERS ARE REQUIRED IN SOME LOCATIONS AND ARE DENOTED THUSLY  ON THE PLANS OR AS DIRECTED BY THE ENGINEER
3. IRON IN CASTINGS SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A-48, CLASS 30
4. TWO ONE-HALF INCH STAINLESS STEEL OR MONEL STEEL HEX. HEAD BOLTS REQUIRED FOR EACH BOLT-DOWN COVER. BOLT HOLES SHALL BE DRILLED COMPLETELY THROUGH THE FRAME AND SHALL BE AMERICAN NATIONAL COURSE THREAD. COVER SHALL BE COUNTER-BORED TO ALLOW BOLTS TO FINISH FLUSH WITH TOP OF COVER.
5. FRAME OF EASEMENT MANHOLES (BOLT-DOWN TYPE) SHALL BE CAST IN CONCRETE PER DETAIL ABOVE
6. BOLT DOWN COVERS REQUIRED ON ALL MANHOLES LOCATED IN EASEMENTS.



LIFTING RECEPTACLE DETAIL

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