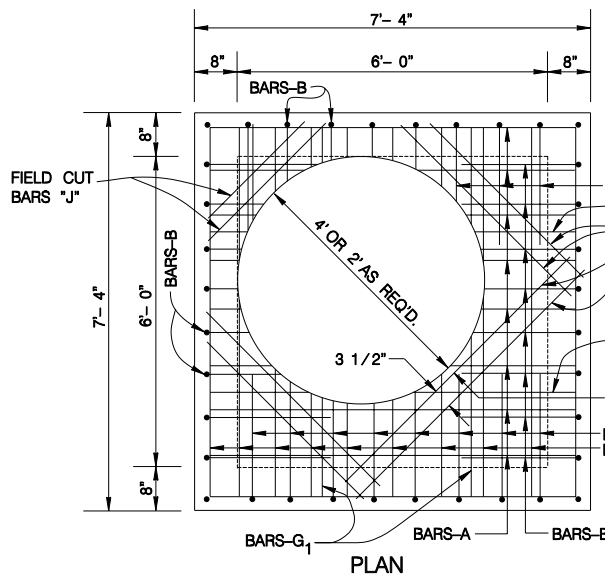
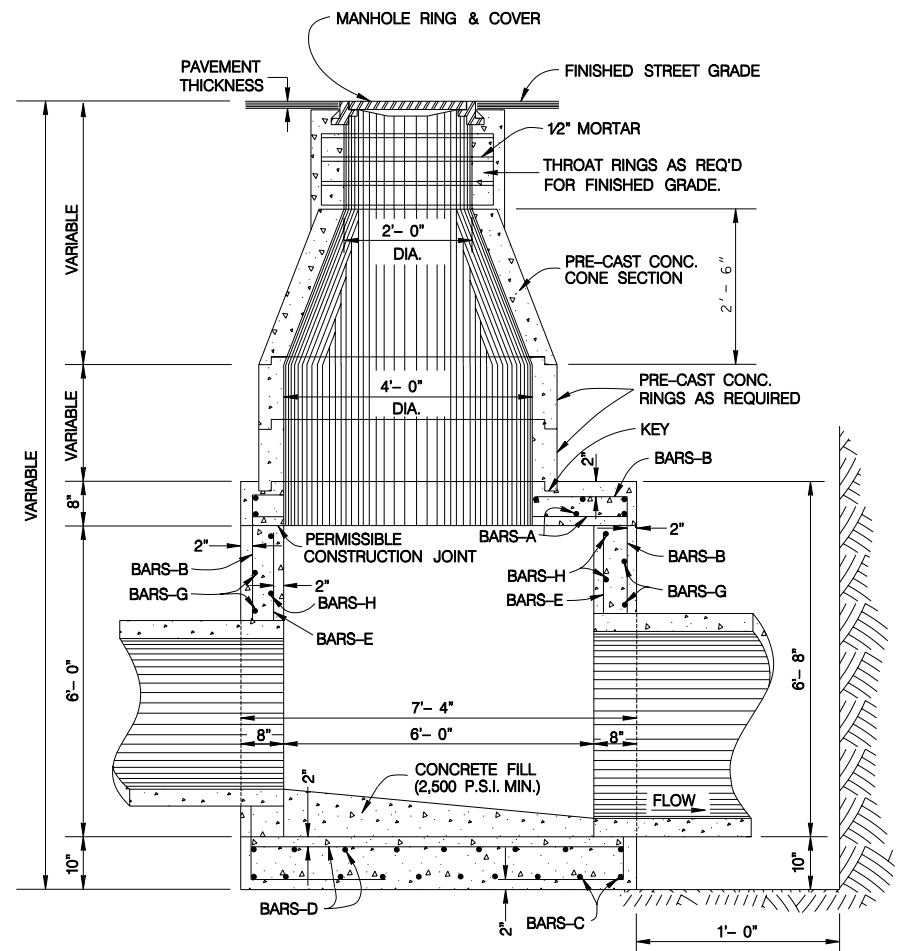


PLAN

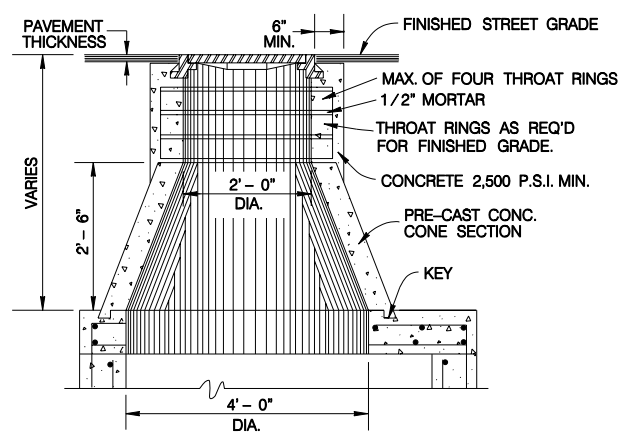


PLAN

JUNCTION BOX TOP SLAB SHOWING STEEL

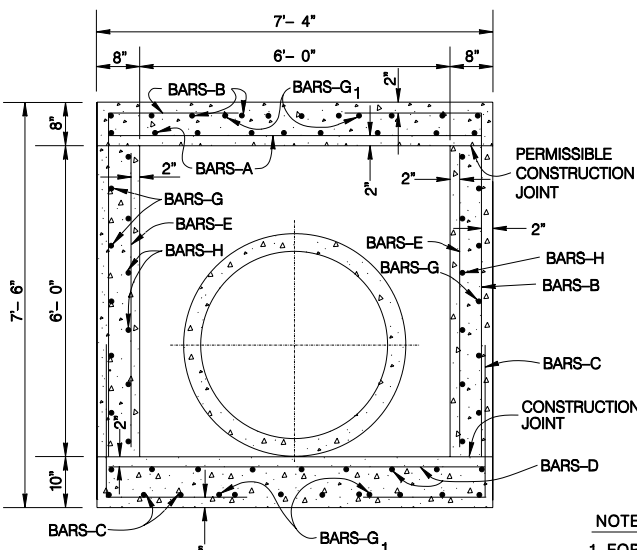


SECTION A-A

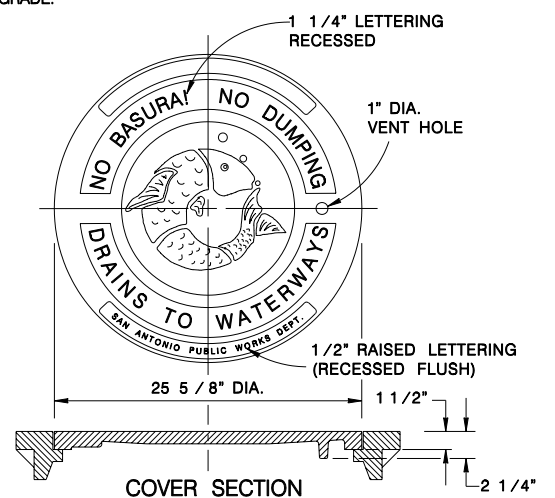


VARIATION OF VERTICAL STACK

VERTICAL STACK DESIGN SHALL BE GOVERNED BY THE DEPTH OF THE TOP OF THE JUNCTION BOX BELOW THE FINISHED STREET GRADE.



SECTION B-B



MANHOLE LID & RING DETAIL
SCALE: 1:16

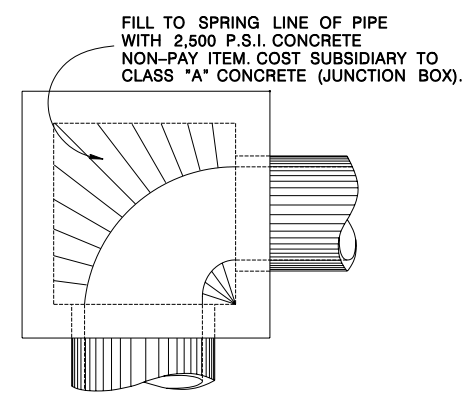
- NOTES FOR MANHOLE LID AND RING
- FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT."
 - CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.
 - LOAD BEARING CAPABILITY OF HS-20 MINIMUM.
 - THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
 - THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.

SCHEDULE FOR REINFORCING STEEL						
SHAPE	BAR	NO.	SIZE	SPACING	LENGTH	WEIGHT
STRAIGHT	A	21	4	9" O.C.	7'- 1"	99
	B	46	5	8" O.C.	8'- 6"	408
	C	46	5	8" O.C.	5'- 3"	252
STRAIGHT	D	21	4	9" O.C.	7'- 1"	99
STRAIGHT	E	28	3	12" O.C.	5'- 11"	62
STRAIGHT	G	20	4	12" O.C.	7'- 1"	95
STRAIGHT	G ₁	8	4	AS SHOWN	6'- 1"	33
STRAIGHT	H	27	3	12" O.C.	7'- 1"	72
STRAIGHT	J	8	6	3 1/2" O.C.	4'- 11"	59
TOTAL						1,179 LBS.

CLASS "A" CONCRETE - 6.94 CU. YDS.
(DOES NOT EXCLUDE MANHOLE OPENINGS OR PIPE OPENING)

* NOTE: BAR SIZE AND SPACING BASED ON SPANS AS SHOWN - ANY REVISIONS TO THESE SPANS SHALL INCLUDE A RE-DESIGN ON STEEL REQ'D.

- CONCRETE FOR STRUCTURE SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
- ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
- REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM A-15. THE DEFORMATION SHALL CONFORM TO ASTM A-305.
- ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
- ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
- WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
- INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (2,500 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).
- PAYMENT FOR ALL EXCAVATION, BACKFILLING, CONCRETE, REINFORCING STEEL, VERTICAL STACK, RING AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 - "STORM SEWER JUNCTION BOXES AND INLETS".



CURVED DEFLECTOR DETAIL

JANUARY 2005

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

6'x6'x6' JUNCTION BOX
STANDARDS

DRWN. BY:	DSGN. BY:	CHKD. BY:	DATE:
			SHEET NO. OF