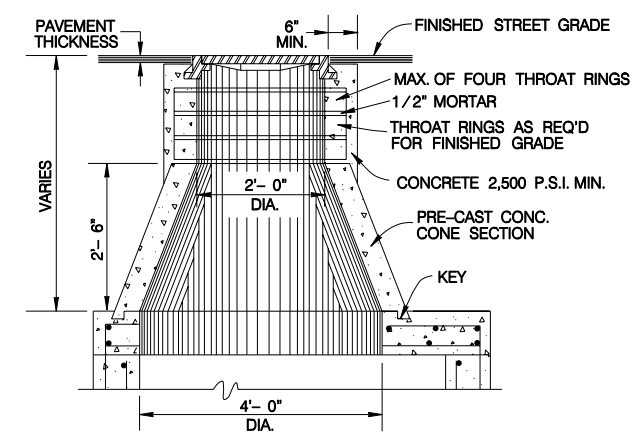
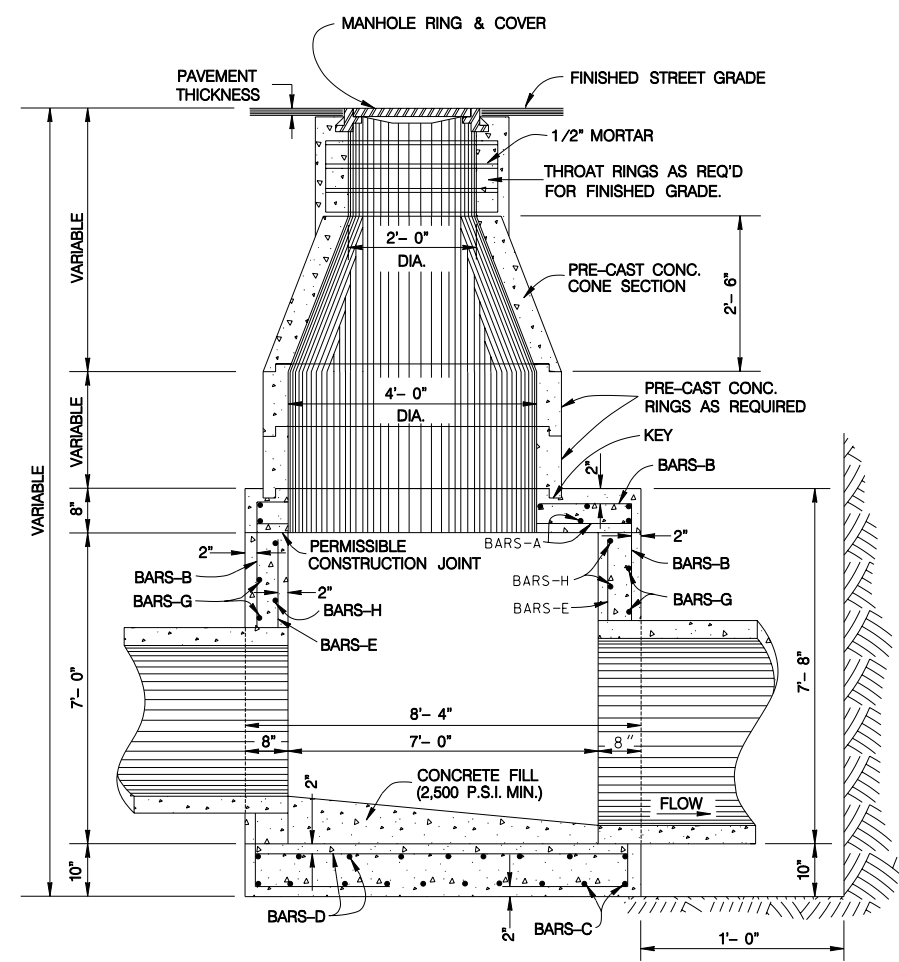


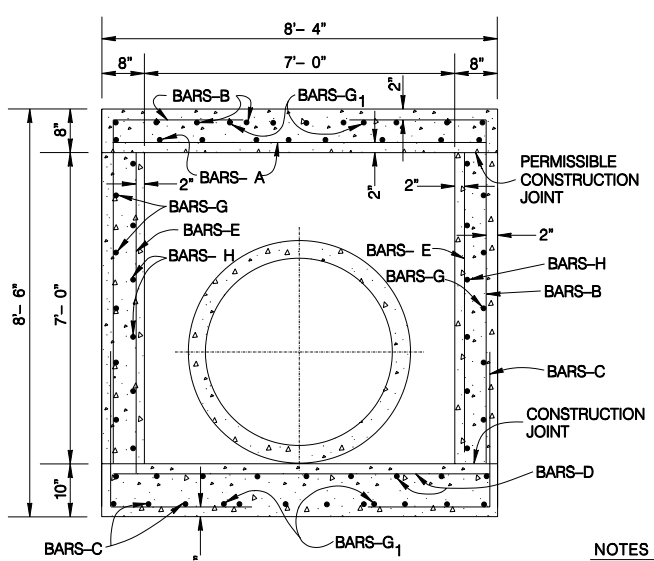
NOTE: SPLAY MOMENT STEEL OR USE 45° DIAG. STEEL TO COMPENSATE FOR MOMENT STEEL REQ'D. USE 8 NO. 6 BARS "J".

JUNCTION BOX TOP SLAB SHOWING STEEL



VARIATION OF VERTICAL STACK

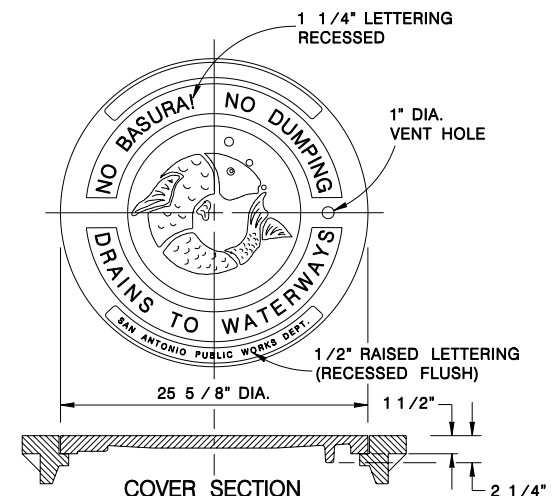
VERTICAL STACK DESIGN SHALL BE GOVERNED BY THE DEPTH OF THE TOP OF THE JUNCTION BOX BELOW THE FINISHED STREET GRADE.



SECTION B-B

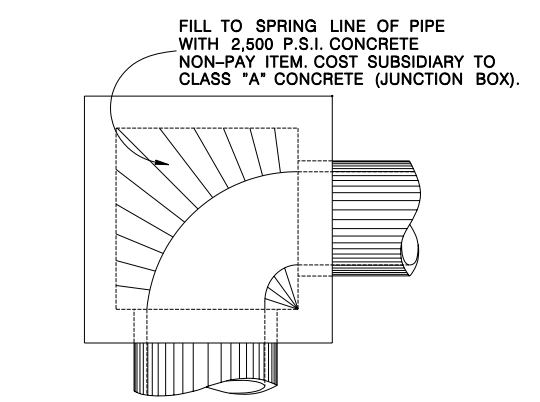
NOTES FOR MANHOLE LID AND RING

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



MANHOLE LID & RING DETAIL

SCALE: 1 : 16



CURVED DEFLECTOR DETAIL

SCHEDULE FOR REINFORCING STEEL

SHAPE	BAR	NO.	SIZE	SPACING	LENGTH	WEIGHT
STRAIGHT	A	24	4	9" O.C.	8'- 1"	130
	B	48	5	8" O.C.	9'- 6"	476
	C	48	5	8" O.C.	4'- 3"	213
STRAIGHT	D	24	4	9" O.C.	8'- 1"	130
STRAIGHT	E	28	3	12" O.C.	6'- 11"	73
STRAIGHT	G	28	4	12" O.C.	8'- 6"	151
STRAIGHT	G <sub>1</sub>	8	4	AS SHOWN	8'- 1"	43
STRAIGHT	H	32	3	12" O.C.	7'- 5"	89
STRAIGHT	J	8	6	3 1/2" O.C.	4'- 11"	59
TOTAL						1,364 LBS.

CLASS "A" CONCRETE - 9.16 C.U. 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.

1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM A-15. THE DEFORMATION SHALL CONFORM TO ASTM A-305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. 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).
8. 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".

FILL TO SPRING LINE OF PIPE WITH 2,500 P.S.I. CONCRETE NON-PAY ITEM. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOX).

JANUARY 2005

CITY OF SAN ANTONIO  
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

7'x7'x7' JUNCTION BOX STANDARDS

DRWN. BY:	DSGN. BY:	CHKD. BY:	DATE:
% SUBMITTAL	PROJECT NO.:		
			SHEET NO. OF