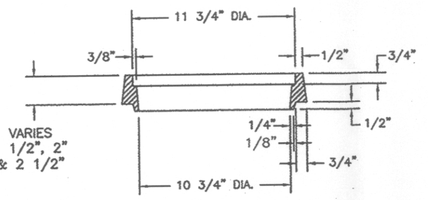
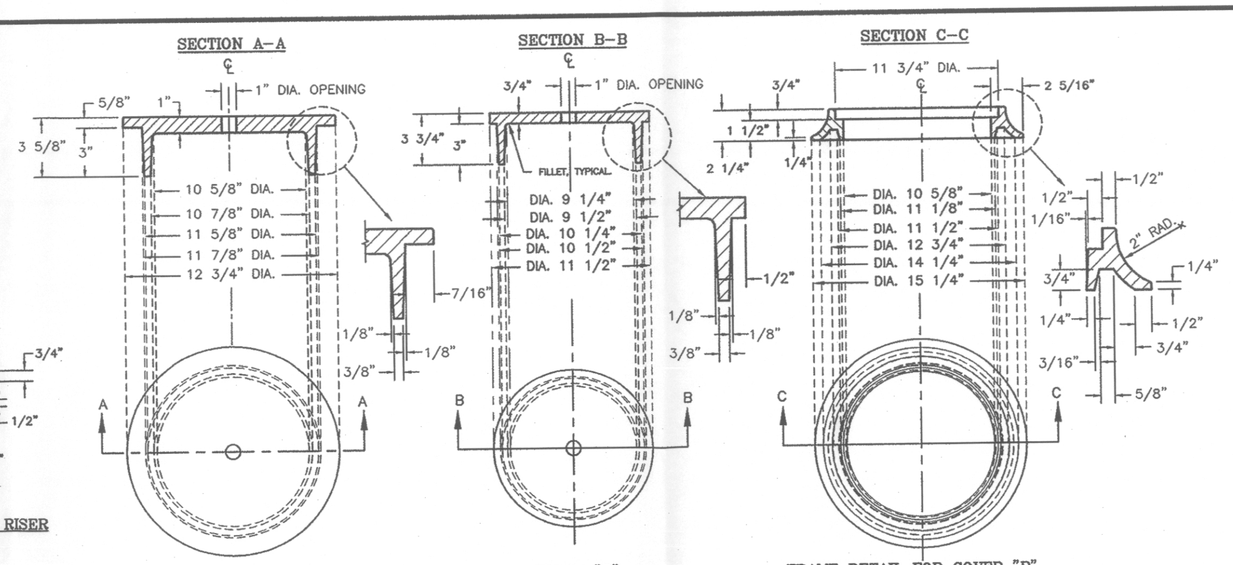
Ep.08-966-3

NOTE:

1. FRAME, COVER AND CASING EXTENSIONS TO BE OF GOOD QUALITY DOMESTIC CAST IRON, FREE FROM FLAWS AND BLOW HOLES, AND OF SUFFICIENT STRENGTH TO RESIST BREAKAGE BY STREET TRAFFIC.
2. CASTINGS TO BE TRUE, AND IF NECESSARY TO BE TRIMMED ON EMERY WHEEL TO PREVENT ROCKING OF COVER IN ANY POSITION IN THE FRAME.
3. SEE DRAWING CW 439 FOR VALVE COVER, CASING, AND FRAME INSTALLATION DETAILS.
4. COVER "A" DOES NOT HAVE A MATCHING CAST FRAME.



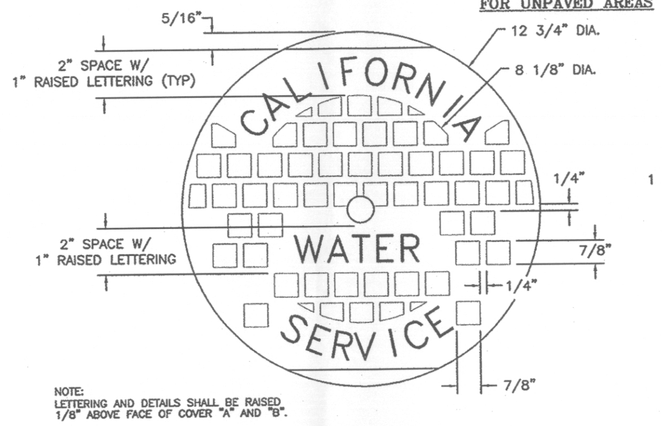
TYPICAL CENTER SECTION OF FRAME RISER FOR PAVED AREAS



COVER "A" FOR UNPAVED AREAS

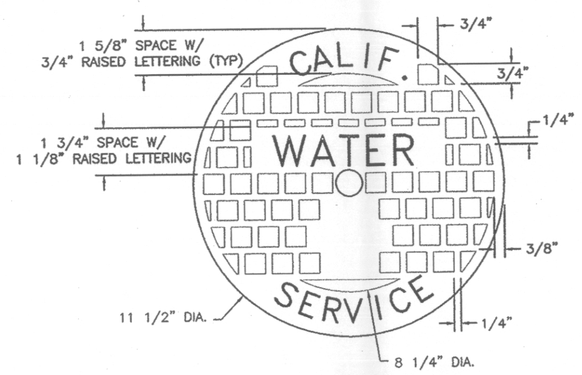
COVER "B" FOR PAVED AREAS

FRAME DETAIL FOR COVER "B" IN PAVED AREAS.



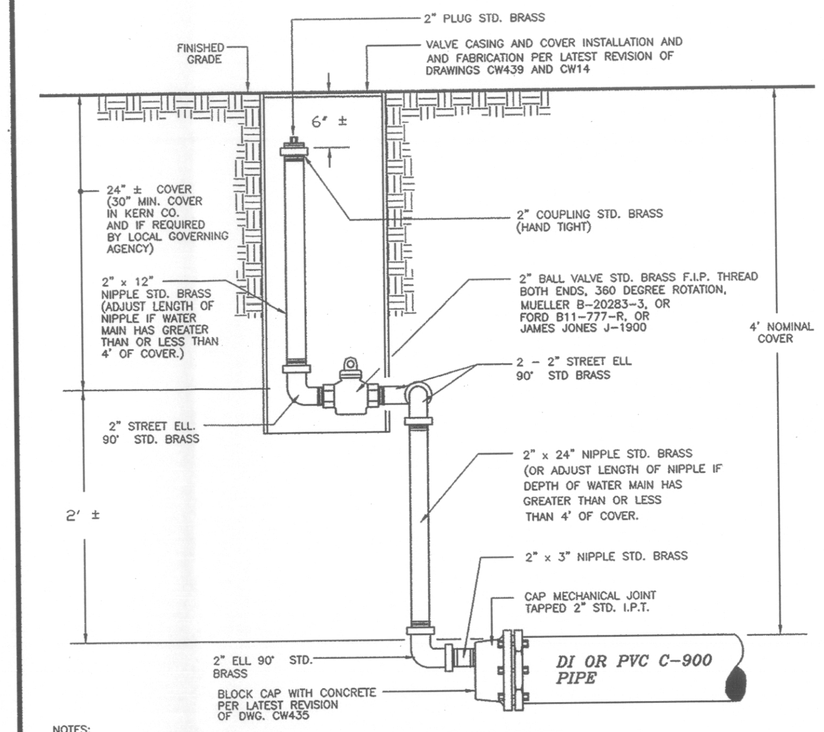
NOTE:
LETTERING AND DETAILS SHALL BE RAISED 1/8" ABOVE FACE OF COVER "A" AND "B".

TOP VIEW OF COVER "A"



TOP VIEW OF COVER "B"

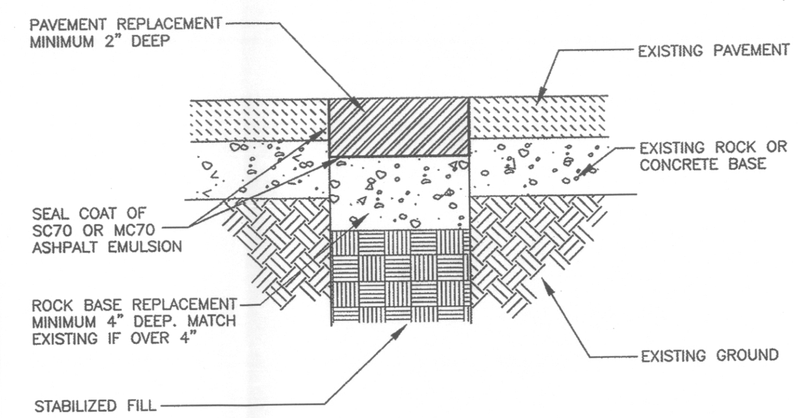
CW 14R4 — VALVE COVER AND FRAME FABRICATION DETAILS FOR PAVED AND UNPAVED AREAS



NOTES:
1. FOR PERMANENT BLOW-OFFS ON MAINS 12" OR LARGER OR ON 8" MAINS WITH LESS THAN 70 PSI, A LARGER BLOW-OFF ASSEMBLY SHOULD BE INSTALLED.

OPTIONS:
THESE OPTIONS MAY BE REQUIRED BY CWS CO. AT THEIR DISCRETION.
1. MATERIALS WITHIN VALVE CAN MAY BE GALVANIZED (STREET ELL, RISER, COUPLING, PLUG.)
2. FOR BLOW-OFFS LOCATED OUTSIDE TRAVELED WAYS OR WHERE STREET RECONSTRUCTION IS NOT A CONCERN, THE BALL VALVE MAY BE PLACED CLOSER TO FINISHED GRADE (+/-12") WITH SHORTER OR NO PERMANENT RISER. SWING JOINT (ONE 90 STREET ELL) MAY ALSO BE ELIMINATED.
3. IN LIEU OF NOTCHING VALVE CASING FOR 2" PIPE, CASING MAY BE SET ON BRICKS OR PRESSURE TREATED LUMBER SO CASING IS JUST ABOVE 2" PIPE.

CW 122R3 — STANDARD 2" BLOW OFF ASSEMBLY



NOTES

1. Place seal coat as shown on base in all cases before placing top pavement.
2. If the paving being replaced is A.C., then the replacement paving and rock base shall match the existing pavement section, or with a minimum of four inches of rock base and two inches of A.C., whichever is the greater.
3. Pavement base shall be replaced as concrete to match existing when concrete has been removed.
4. If the paving being replaced is oil and screenings, then the replacement paving and rock base shall match the existing pavement section.

CW 236R2 — RECOMMENDED PLAN AND SPECIFICATIONS FOR REPLACING PAVEMENT

ENGINEERING DEPARTMENT

CALIFORNIA WATER SERVICE CO.

REVISIONS:
R1 Revised details. 1/19/96 AIG

	DATE:	INIT.
DISTRIBUTION MAP		
PLAT SHEET		
SYSTEM SCHEMATIC		
STATION SCHEMATIC		
ZONE MAP		
WATER REQUIRED		

PLAT SHEET NO.:

SCALE: NONE

DRAWN BY: A. GALINDO

DESIGNED BY:

CHECKED BY: DATE:

APPROVED BY: DATE:

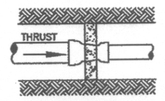
THRUST BLOCK SCHEDULE

PIPE SIZE	FITTING	TYPE OF SOIL: SOFT CLAY (1000 P.S.F.) MIN. BEARING AREA (SQ. FT.)	DIMENSION (FEET) A	DIMENSION (FEET) B	SAND (2000 P.S.F.) MIN. BEARING AREA (SQ. FT.)	DIMENSION (FEET) A	DIMENSION (FEET) B	ROCK (3000 P.S.F.) MIN. BEARING AREA (SQ. FT.)	DIMENSION (FEET) A	DIMENSION (FEET) B
6"	PLUG, CAP	6	3	2	3	2	1.5	2	2	1
	90° ELL	8	3.2	2.5	4.1	2.7	1.5	3	2	1.5
	45° ELL	4.4	2.2	2	2.3	1.5	1.5	1.5	1.5	1
	22 1/2° ELL	2.3	1.5	1.5	1	1	1	1	1	1
	TEE W/ 6"OUTLET	6	3	2	3	2	1.5	2	2	1
8"	PLUG, CAP	10	4	2.5	5	2.5	2	3.3	2.2	1.5
	90° ELL	14	4	3.5	7	2.6	2.5	5	2.5	2
	45° ELL	7.5	3	2.5	3.8	2	1.9	2.6	1.7	1.5
	22 1/2°ELL	4	2	2	2	2	1	1.5	1.5	1
	TEE W/8"OUTLET	10	4	2.5	5	2.5	2	3.3	2.2	1.5
12"	PLUG, CAP	24	6	4	12	4	3	7.5	3	2.5
	90° ELL	32.5	6.5	5	16.1	4.6	3.5	10.8	3.6	3
	45° ELL	17.5	5	3.5	8.8	3.5	2.5	6	3	2
	22 1/2° ELL	9	3.6	2.5	4.6	2.3	2	3	2	1.5
	TEE W/12"OUTLET	24	6	4	12	4	3	7.5	3	2.5
14"	PLUG, CAP	31.5	6.3	5	15.8	4.5	3.5	10.5	3.5	3
	90° ELL	44.4	7.4	6	22	5.5	4	14.7	4.2	3.5
	45° ELL	24	6	4	12	4	3	8.1	3	2.7
	22 1/2° ELL	12	4	3	6	3	2	4	2	2
	TEE W/ 14"OUTLET	31.5	6.3	5	15.8	4.5	3.5	10.5	3.5	3
16"	PLUG, CAP	40.7	7.4	5.5	20	5	4	13.5	4.5	3
	90° ELL	56	8	7	28.8	6.4	4.5	20	5	4
	45° ELL	31	6.2	5	15.8	4.5	3.5	10.5	3.5	3
	22 1/2° ELL	15.8	4.5	3.5	7.8	3	2.6	5.2	2.6	2
	TEE W/ 16"OUTLET	40.7	7.4	5.5	20	5	4	13.5	4.5	3
18"	PLUG, CAP	52	8	6.5	26.4	6.6	4	17.5	5	3.5
	90° ELL	75	10	7.5	37	7.4	5	24.8	6.2	4
	45° ELL	40.7	7.4	5.5	20	5	4	14	4	3.5
	22 1/2 ELL	20	5	4	10.5	3.5	3	6.9	3	2.3
	TEE W/ 18"OUTLET	52	8	6.5	26.4	6.6	4	17.5	5	3.5

NOTE:
1. THRUST BLOCKS DESIGNED FOR A MAXIMUM OF 150 PSI WATER PRESSURE
2. ALL CONCRETE SHALL CONTAIN 6 SACKS OF CEMENT PER CUBIC YARD.
3. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED SOIL.
4. KEEP ALL CONCRETE CLEAR OF THE JOINTS ON ALL FITTINGS.
5. FORMS ARE REQUIRED ON ALL THRUST BLOCKS AND TO BE SUPPLIED BY CONTRACTOR. ALL FITTINGS TO BE WRAPPED WITH POLYETHELENE PRIOR TO POURING THRUST BLOCKS.

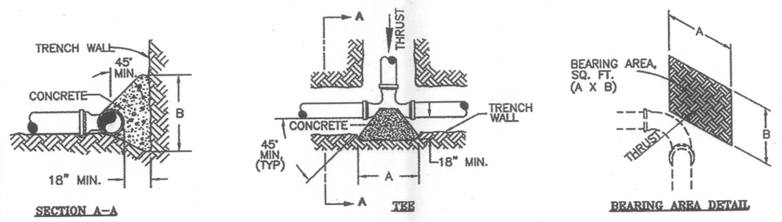
TEE & SOLID PLUG

NOTE:
SEE PLANS FOR SIZE & DETAIL OF CONCRETE BLOCK WHEN REQUIRED FOR REDUCER.



REDUCER

90° ELL

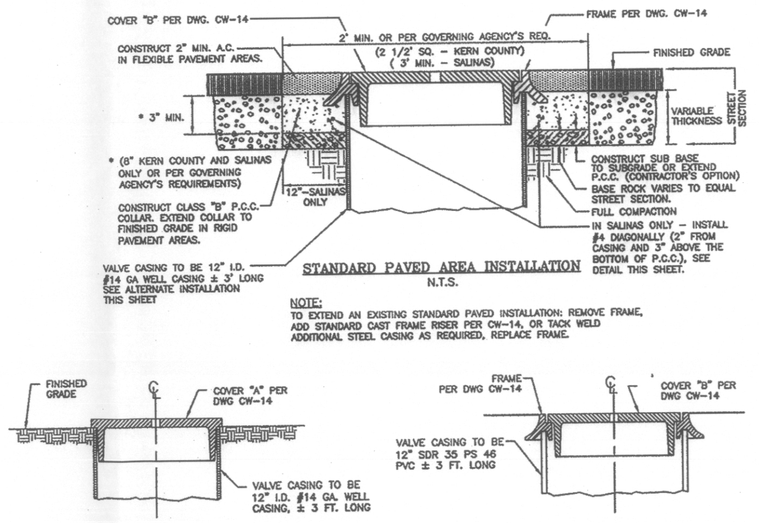


SECTION A-A

TEE

BEARING AREA DETAIL

CW 435R4 — TYPICAL THRUST BLOCK INSTALLATION



STANDARD PAVED AREA INSTALLATION
N.T.S.

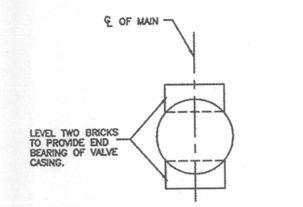
NOTE:
TO EXTEND AN EXISTING STANDARD PAVED INSTALLATION: REMOVE FRAME, ADD STANDARD CAST FRAME RISER PER CW-14, OR TACK WELD ADDITIONAL STEEL CASING AS REQUIRED, REPLACE FRAME.

STANDARD INSTALLATION IN UNPAVED AREAS

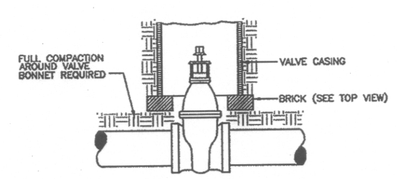
NOTE:
TO EXTEND AN EXISTING STANDARD UNPAVED INSTALLATION: REMOVE COVER, TACK WELD ADDITIONAL STEEL CASING AS REQUIRED, AND REPLACE COVER.

ALTERNATE INSTALLATION IN PAVED AREAS

NOTE:
TO EXTEND PVC CASING IN PAVED AREA SEE SLIP SLEEVE EXTENSION DETAILS THIS SHEET

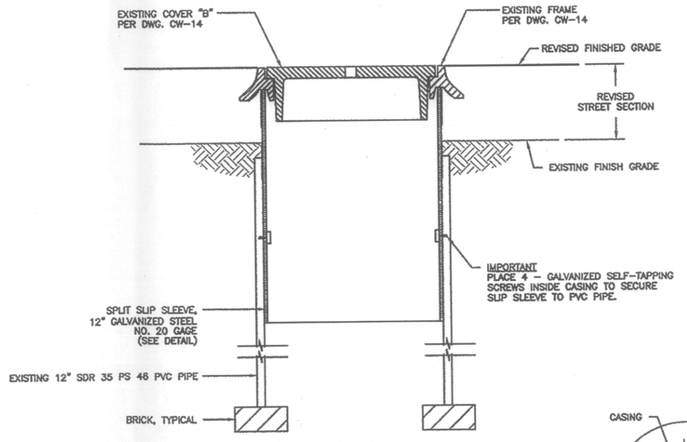


VALVE CASING FOOTING - TOP VIEW
N.T.S.

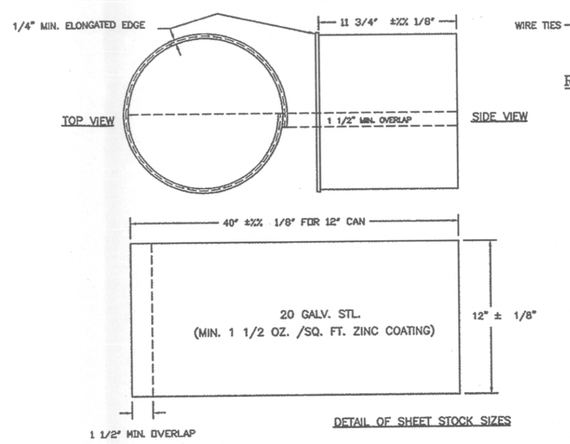


VALVE CASING FOOTING - SIDE VIEW
N.T.S.

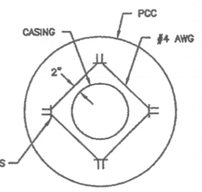
CW 439R4 — VALVE CASING, COVER, AND FRAME INSTALLATION DETAILS



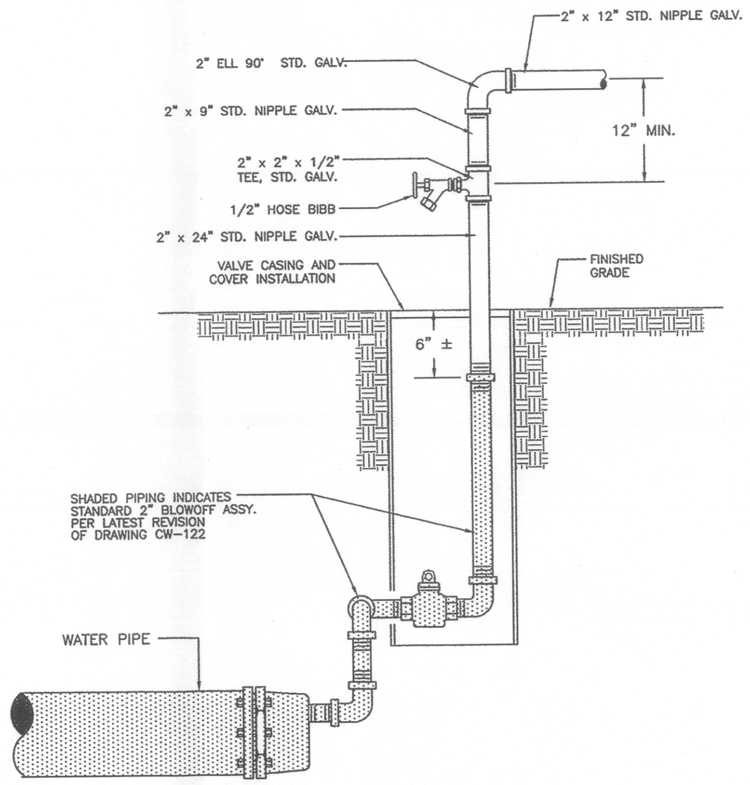
EXISTING PAVED AREA PVC CASING AND SLIP SLEEVE EXTENSION
N.T.S.



DETAIL OF GALVANIZED SLIP SLEEVE
N.T.S.



PCC COLLAR REINFORCEMENT DETAIL: SALINAS ONLY
N.T.S.



CW 638R1 — SAMPLING DEVICE FOR 2" BLOW-OFF

TITLE: CALIFORNIA WATER SERVICE CO. STANDARD DRAWINGS

DISTRICT: ALL

DATE: 6/02

ESTIMATE NO.:

DRAWING NO.: CWDWGS

SHT 1 OF 2

CADD FILE NUMBER: CWDWGS1.DWG