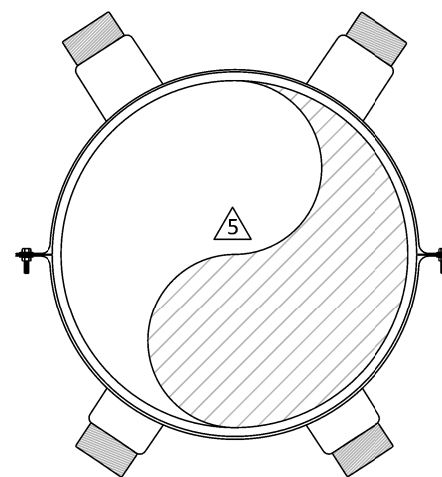


**NOTES:** <sup>△</sup>

1. THE STEEL CASING SHALL BE INSTALLED BY MEANS OF JACKING OR DRY BORING, EXCEPT WHERE SPECIFICALLY NOTED ON THE PLANS TO BE INSTALLED BY OPEN TRENCH CONSTRUCTION.
2. CASING DIAMETER SHALL BE A MINIMUM OF 4 INCHES GREATER THAN THE OUTSIDE BELL DIAMETER.
3. MINIMUM CASING THICKNESS SPECIFIED IN "TABLE A" IS REQUIRED FOR STEEL CASING IN PLACE, AND DOES NOT ACCOUNT FOR CONSTRUCTION LOADS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STRUCTURAL SUFFICIENCY OF THE CASING DURING CONSTRUCTION, AND ALSO THE METHOD OF INSTALLATION.
4. PRESSURE PIPELINES SHALL BE SUPPORTED ON PIPE SKIDS SUBJECT TO THE APPROVAL OF THE ENGINEER. CML&C PRESSURE PIPE MAY REST ON THE BOTTOM OF THE CASING, BUT SHALL NOT BE DRAGGED INTO POSITION WITHOUT PIPE SKIDS.
5. ALL SKIDS ARE TO BE SQUARE IN CROSS SECTION AND MAY BE MADE FROM REDWOOD, #2 OR BETTER DOUGLAS FIR, SOUND MATERIAL, TO BE WALMANIZED OR CREOSOTED (REDWOOD NEED NOT BE TREATED).
6. SKIDS SHALL BE ATTACHED TO PIPE BY STRAPPING WITH A STANDARD STRAPPING MACHINE TO HOLD SKIDS IN PLACE DURING PULLING OPERATIONS. USE STAINLESS STEEL BANDS, OR METHOD OF "CLEATING" SKIDS TOGETHER, AS APPROVED.
7. FLEXIBLE PIPE (PVC, ABS, ETC.) SHALL HAVE SPACER GUIDE ALONG ON THE TOP TO PREVENT PIPE FROM FLOATING. PIPE WITHIN CASING TO BE BONDED TOGETHER AT THE JOINTS FOR AN INTEGRAL UNIT PER MANUFACTURER'S RECOMMENDATIONS. TWO (2) APPROVED FLEXIBLE COUPLINGS SHALL BE USED AT EACH END OF CASING.
8. NOTICE AS REQUIRED BY THE DISTRICT SHALL BE GIVEN PRIOR TO CONSTRUCTION, FOR THE DISTRICT INSPECTION OF CASING PIPE AND CARRIER PIPE INSTALLATION. THE AS BUILT LOCATION AND GRADE OF CASING PIPE SHALL BE APPROVED BY THE DISTRICT PRIOR TO INSTALLATION OF THE CARRIER PIPE. DEPARTURES FROM PLANNED LOCATION OR GRADE OF THE CASING PIPE SHALL REQUIRE A FIELD SURVEY FOR CARRIER PIPE REDESIGN IF FEASIBLE, OR ABANDONMENT IN FAVOR OF A NEW INSTALLATION.
9. THE TOTAL ANNULAR SPACE SHALL BE GROUTED PER EMWD SPEC. SECT. 03604, UNLESS OTHERWISE SPECIFIED ON THE CONSTRUCTION DRAWINGS.
10. WOODEN SKIDS CAN BE REPLACED WITH ADVANCE PRODUCTS & SYSTEMS, INC. (APS) CASING SPACERS, SSI 8 MODEL FOR CARRIER PIPE 4" TO 36", AND SSI 12 MODEL FOR PIPE GREATER THAN 36" OR APPROVED EQUAL. THESE SPACERS SHALL BE INSTALLED 6 FEET ON CENTER.
11. IN LIEU OF MORTAR GROUTED BRICKS (TO SEAL STEEL CASING ENDS), ADVANCE PRODUCTS & SYSTEMS, INC. (APS) MOLDED END SEALS CAN BE USED, MODEL AM OR APPROVED EQUAL.



CASING O.D. "D"	STREETS & HWYS THICKNESS "T" MIN		RAILROADS
	DIAMETER (INCHES)	UP TO 150' LENGTH	OVER 150' LENGTH
4'-10" ID	1/4"	1/4"	4"-12":1/4"
12"-16" OD	1/4"	1/4"	14"-16":9/32"
18"-20" OD	1/4"	1/4"	18":5/16" 20":11/32"
22" OD	1/4"	1/4"	3/8"
24" OD	1/4"	1/4"	13/32"
26" OD	1/4"	1/4"	7/16"
28" OD	1/4"	1/4"	15/32"
30" OD	3/8"	1/2"	15/32"
32" OD	3/8"	1/2"	1/2"
34"-36" OD	3/8"	1/2"	17/32"
38" OD	3/8"	1/2"	9/16"
40" OD	1/2"	3/4"	9/16"
42" OD	1/2"	3/4"	9/16"
48"-60" OD	1/2"	3/4"	AS REQUIRED
62"-72" OD	3/4"	3/4"	AS REQUIRED

REVISIONS				APPROVALS		
NO.	DATE	INITIAL	DESCRIPTION	APP'D	DATE	DATE
<sup>△</sup> 5	9/11/20	GS	UPDATED TITLE BLOCK, FONT, LOGO, ADDED MOLDED END SEAL AND CASING SPACER	AGA	9/11/20	
<sup>△</sup> 4	4/14/10	RE	REVISED NOTE	SMM	4/14/10	
<sup>△</sup> 3	2/08/06	JJW	ADDED NOTE	JW	2/8/06	
<sup>△</sup> 2	9/04/03	CM	REVISE NOTES & ADDED TOP SKID	VJB	10/15/03	6/20/72

DESIGN	JUS	
CONSTRUCTION	BLM	
INSPECTION		
OPERATIONS	CAG	
SUBMITTED	LAM	6/20/72

EASTERN MUNICIPAL WATER DISTRICT  
**STANDARD DRAWING**

**STEEL PIPE CASING WATER PIPELINE**

REFERENCES:	SCALE: NONE
FILE I.D.: \kauai\eng\std dwgs\B-575.dgn	DRAWN BY: MCM

RECOMMENDED	DIRECTOR OF ENGINEERING	DATE
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APPROVED	Doyle J. Boen	DATE
	ASSISTANT GENERAL MANAGER	

**B-575**

