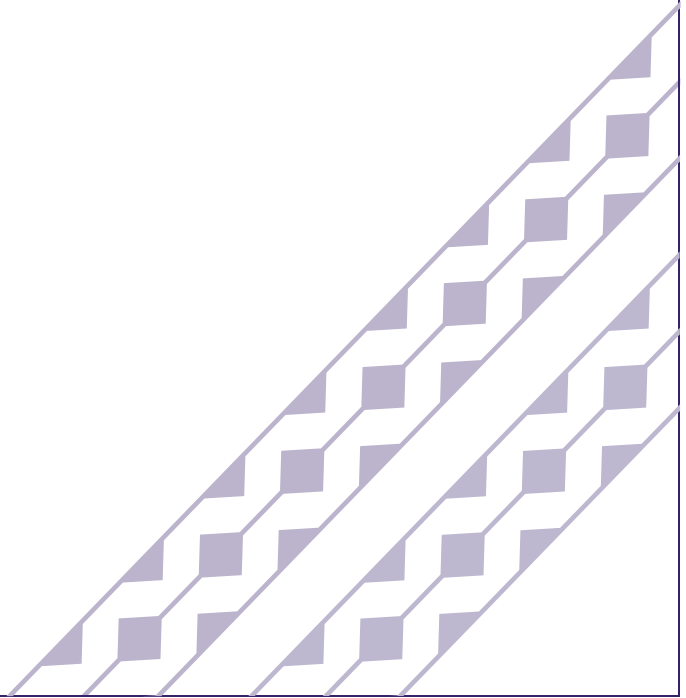
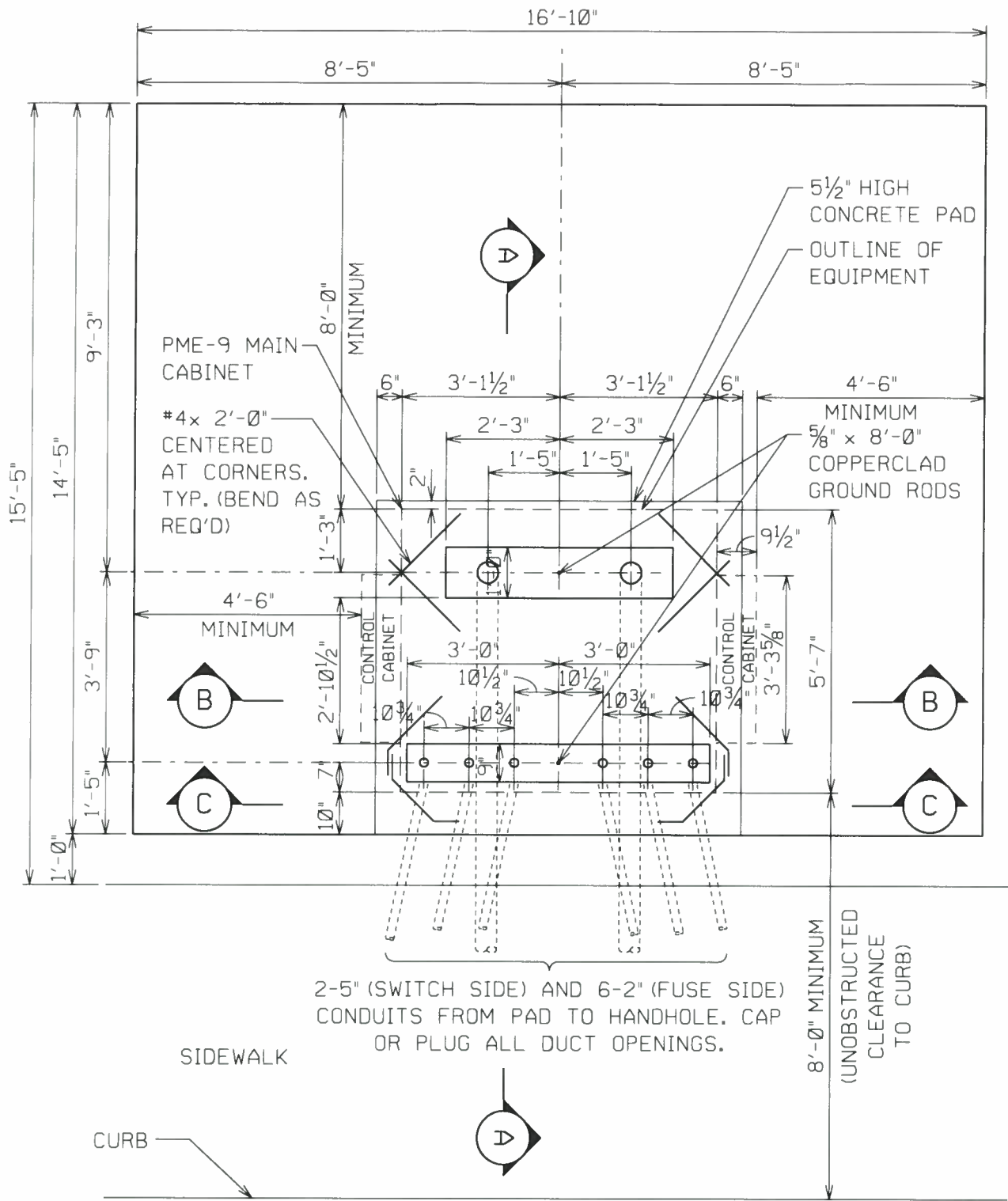




**Hawaiian
Electric**

The information found in this document are general guidelines that may be used to aid in the preparation of your service request proposal. Please be advised that depending on the specific needs and actual conditions of your project, Hawaiian Electric may require your design to comply with different specifications including specifications that include more stringent requirements than those included in these design specification guidelines. For further guidance and clarification on the actual specifications that will apply to your particular project, please refer to instructions issued by Hawaiian Electric's Planner or Engineer who is assigned to your particular (Project/Review Request/...). Additionally, please be advised that Hawaiian Electric reserves the right to require additional modifications to any approved design if it is determined during actual construction that additional modifications must be made to address certain field conditions that were not detected or Hawaiian Electric was unaware of during the design review process.





PLAN

SEE SHEET 3 FOR NOTES

DATE
INITIAL

REVISION

DRAWN AP

DESIGNED AH for

APPD HH Rev WJH

REDRAWN

SUPERSEDES

ENGINEERING STANDARD
HAWAIIAN ELECTRIC CO. INC.

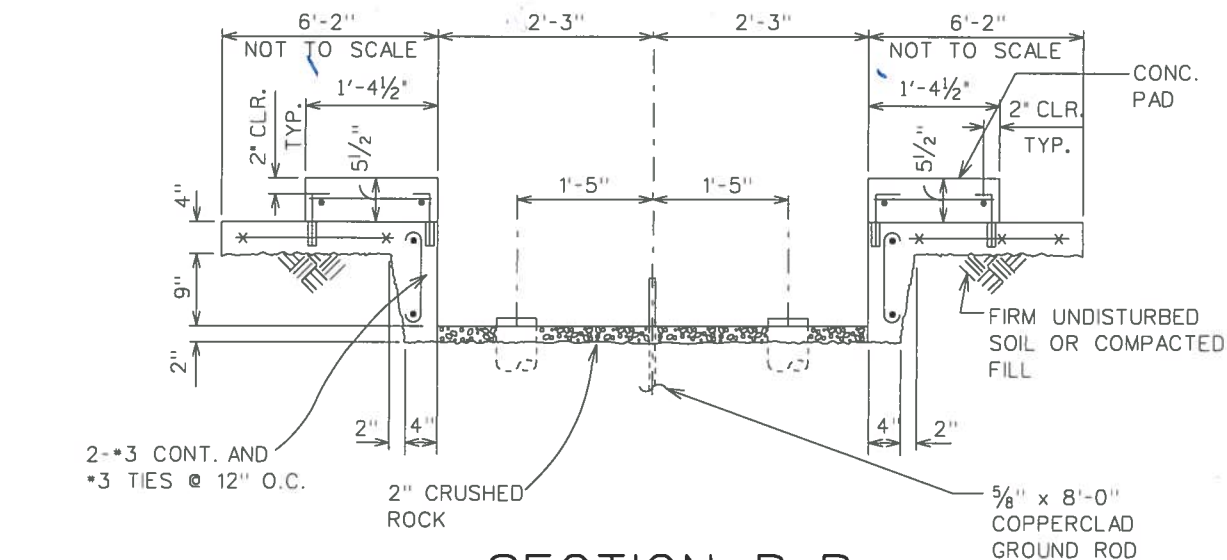
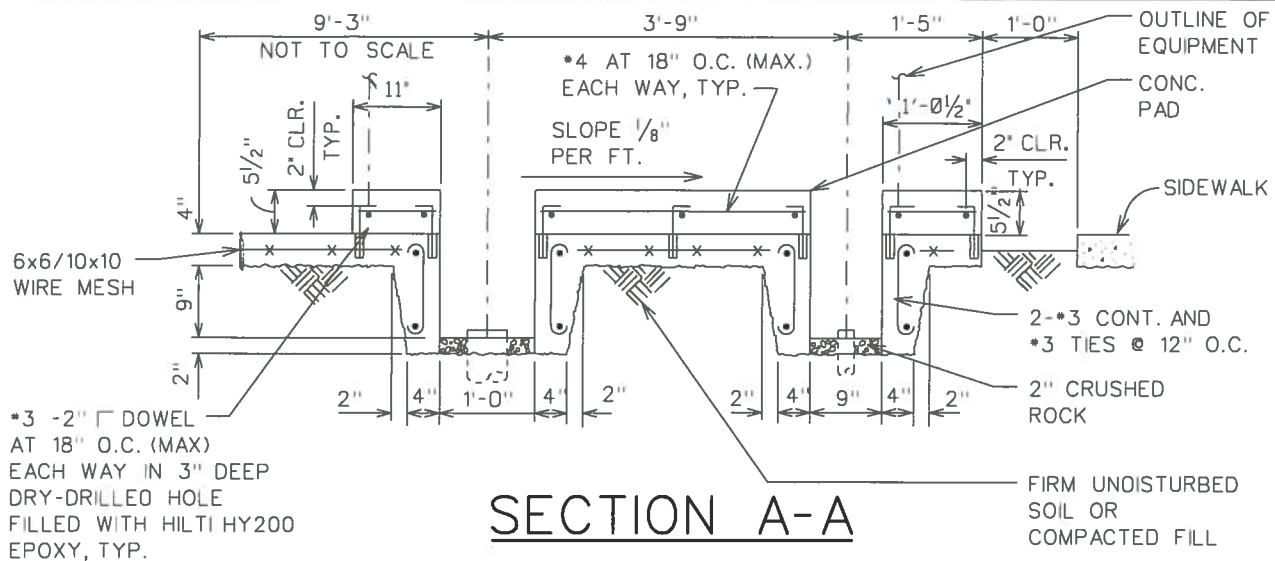
CONCRETE PAD INSTALLATION
(WITH SIDEWALK)
PME-9 AUTO TRANS. SWGR. ENCLOSURE
UG DUCTS & STRUCTURES 15KV

ORIGINAL 03-15

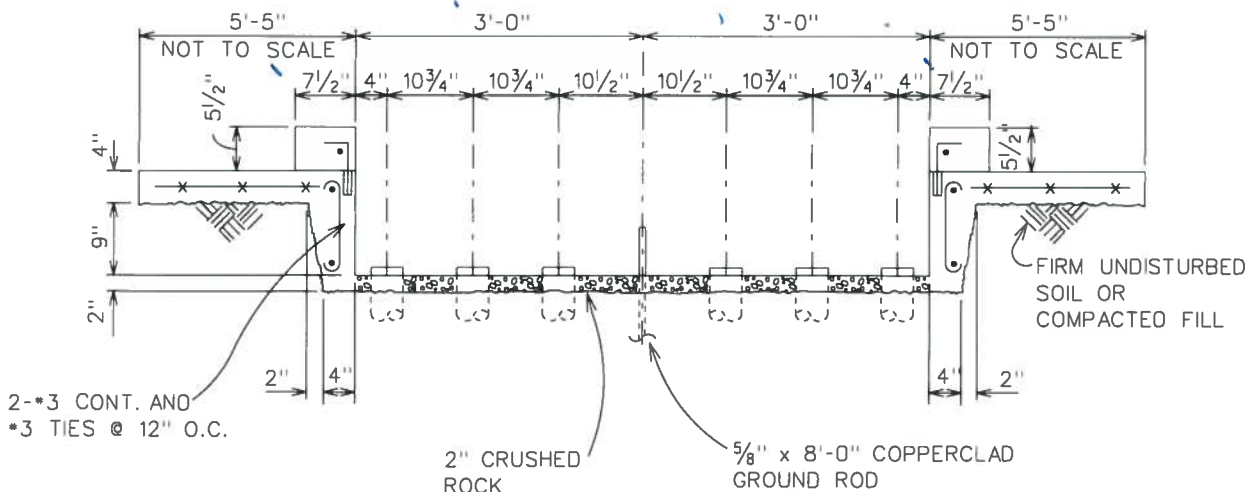
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SHEET 1 of 3



SEE SECTION A-A FOR DETAILS NOT SHOWN AND SPECIFIED



SEE SECTION A-A FOR DETAILS NOT SHOWN AND SPECIFIED

DATE INITIAL

REVISION

DRAWN AP

DESIGNED HH for

APPD HH for NHA

REDRAWN

SUPERSEDES

ENGINEERING STANDARD
HAWAIIAN ELECTRIC CO. INC.

CONCRETE PAD INSTALLATION
(WITH SIDEWALK)
PME-9 AUTO TRANS. SWGR. ENCLOSURE
UG DUCTS AND STRUCTURES 15KV

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SHEET 2 of 3

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NOTES:

1. CONCRETE COMPRESSIVE STRENGTH: 3000 P.S.I. IN 28 DAYS.
2. REINFORCING: CLEAN AND NEW ROUND DEFORMED BARS AND 6x6/10x10 WIRE MESH. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.
3. TOP OF CONCRETE PAD TO BE SMOOTH AND TRUE. OTHER EXPOSED SURFACES TO BE SMOOTH AND FREE FROM DEFECTS. SIDEWALK FINISH AS PER CITY AND COUNTY SPECIFICATIONS.
4. CONSTRUCTION TO COMPLY WITH AMERICAN CONCRETE INSTITUTE (ACI 318) AS AMENDED.
5. WEIGHT OF SWITCHGEAR EQUALS 2650 POUNDS.
6. IF FRONT OF PAD FACES SIDEWALK WITH UNOBSTRUCTED 8'-0" MINIMUM CLEARANCE TO CURB, PAD CAN BE 14'-5" IN LENGTH BUT WIDTH MUST COVER ENTIRE EASEMENT/ CLEARANCE WIDTH (16'-10"). (INCLUDES 8'-0" MINIMUM CLEARANCE IN BACK AND 4'-6" MINIMUM CLEARANCE ON EACH SIDE OF PME-9)
7. THIS ASSUMES SIDEWALK IN FRONT OF PAD.
8. CONDUITS FOR FUSE SIDE ASSUME 3-1/C CABLES, IF 1-3/C CABLE USED, MAKE PROVISIONS FOR 2-5" CONDUIT INSTEAD (SEE FIGURE 1)
9. CONSULT WITH TELECOMMUNICATIONS SECTION (SUBSTATION AND TELECOMMUNICATIONS DIV., ENGINEERING DEPT.) REGARDING PROVISIONS FOR COMMUNICATIONS CONDUITS.

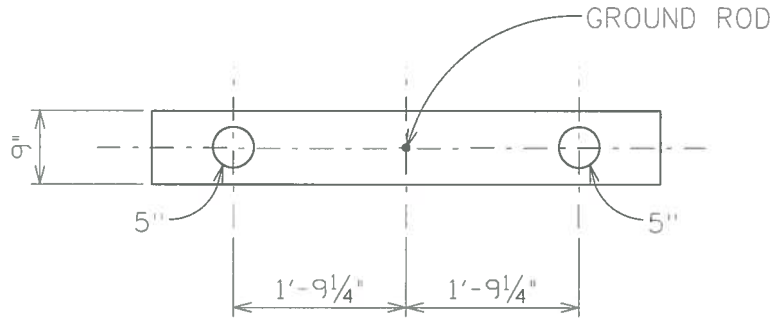


FIGURE 1.

DATE
INITIAL

REVISION

DRAWN AP	DESIGNED <i>HA</i>	APPD <i>HA for WPA</i>	REDRAWN
SUPERSEDES	CONCRETE PAD INSTALLATION (WITH SIDEWALK) PME-9 AUTO TRANS. SWGR. ENCLOSURE UG DUCTS AND STRUCTURES 15KV		ORIGINAL <i>03-15</i>
ENGINEERING STANDARD HAWAIIAN ELECTRIC CO. INC.			REV 0
			SHEET 3 of 3