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.
TRANSFORMER ON THIS SIDE

6" CAST IN PLACE SLAB (SHOWN HATCHED)

DRILL 1" DIA. HOLE FOR 5/8" X 10' GROUND ROD
ALTERNATE LOCATION SEAL HOLE WITH REMOVABLE PLUG

WALL 1

3'-0"

WALL 4

4"

WALL 2

3'-1"

WALL 3

2'-0"

8" X 8" SUMP (EXACT LOCATION PER PROJECT SPECIFIC REQUIREMENTS)

PRIMARY CONDUITS ON THIS SIDE

OUTLINE FOR BUTTERFLY DETAIL (EXACT BUTTERFLY DETAIL PER SPECIFIC PROJECT REQUIREMENTS)

4" DUCTS
ADD DUCT TERMINATORS PER HECO SPEC CS9401-4

ALLOWANCE FOR SUMP

ALLOWANCE FOR GROUND ROD

MAXIMUM SECONDARY DUCT LAYOUT (WALLS 1, 2, 3)

NOTE:
AVOID PLACING DUCTS ON WALL 4 SINCE WALL 4 IS THE WALL CLOSEST TO PRIMARY DUCTS.

PRECAST CONCRETE BOX FOR LARGE 3 PHASE PADMOUNTED TSFS (500KVA - 2500/VA TSFS) UG DUCTS & STRUCTURES

ENGINEERING STANDARD
HAWAIIAN ELECTRIC CO., INC.

SUPERSEDES

REVISION

ORIGINAL 07-2018

DRAWN AP DESIGNED APPD REDRAWN

30-5023 REV 0

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ENGINEERING STANDARD
HAWAIIAN ELECTRIC CO., INC.
SECTION A-A

SPECIAL NOTE:
INSTALL WALL REINF.
AT C OF WALL
SECTION B-B

SPECIAL NOTE:
INSTALL WALL REINF. AT C OF WALL

PRECAST CONCRETE BOX FOR LARGE 3 PHASE PAD MOUNTED TSFS (500KVA - 2500KVA TSFS)
UG DUCTS & STRUCTURES

ENGINEERING STANDARD
HAWAIIAN ELECTRIC CO. INC.
WALL REINF. DETAIL

INSTALL 2 VERT. WALL REINF. AT EACH SIDE (MIN.)

ADD HORIZ. WALL REINF. AT TOP AND BOTTOM AS REQUIRED

1" CLR. TYP.

ELEVATION

4" DIA. DUCT., TYP.

SPECIAL NOTE:
CONDITION AT 3 AND 5-4" DIA.
DUCTS SIMILAR.
GENERAL NOTES:

A. SEE ALSO:
   I. SPECIAL NOTES ON DRAWINGS.
B. VERIFY ALL DIMENSIONS AND CONDITIONS AND REPORT ALL DISCREPANCIES TO THE PROJECT ENGINEER/PLANNER.
C. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE 2006 INTERNATIONAL BUILDING CODE AND ALL CODES REFERENCED.
D. DETAILS SHOWN ON DRAWINGS SHALL BE TYPICAL FOR ALL SIMILAR CONDITIONS.
E. PROJECT ENGINEER/PLANNER TO PROVIDE PROJECT SPECIFIC BUTTERFLY DRAWING INDICATING SECONDARY CONDUIT, SUMP, AND GROUND ROD PLACEMENT.
F. MAXIMUM OF SIX 4" DUCTS PER WALL FOR WALLS 1, 2, 3.
G. OBSERVE REQUIRED SPACING AROUND AND BETWEEN SECONDARY DUCTS. SPACING BASED ON UG STD 30-1035, SHEET 8.
H. DO NOT PLACE SECONDARY DUCTS ON WALL 4 (WALL NEAREST TO PRIMARY DUCTS).

CONCRETE NOTES:

A. ALL CONCRETE SHALL BE 5,000 PSI WITH A 28 DAY COMPRESSIVE STRENGTH.
B. USE OF ADMIXTURE AT CONTRACTOR'S OPTION, BUT SUBJECT TO ENGINEER'S APPROVAL.
C. CONTRACTOR SHALL PROVIDE CURING COMPOUND IN ACCORDANCE WITH ASTM C309.
D. THE USE OF ANY CALCIUM CHLORIDE IN ANY CONCRETE IS PROHIBITED.

REINFORCING STEEL NOTES:

A. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.
B. MINIMUM CONCRETE CLEAR COVER: AS NOTED IN THE SKETCHES.
C. BAR BENDS, HOOKS, AND OFFSETS SHALL BE IN ACCORDANCE WITH THE ACI RECOMMENDATIONS.