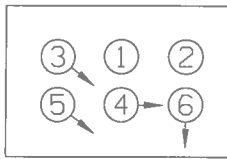


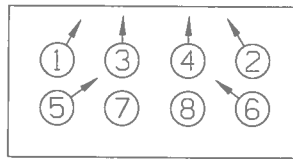
**Hawaiian
Electric**

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.

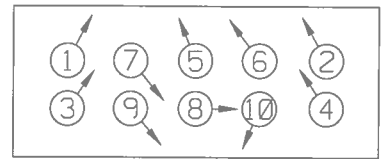




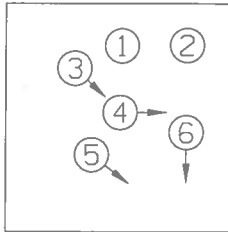
HORIZONTAL



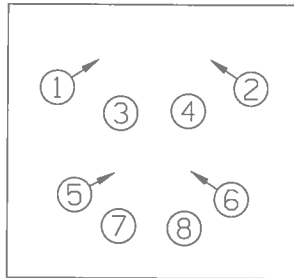
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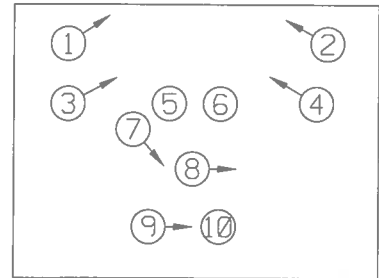
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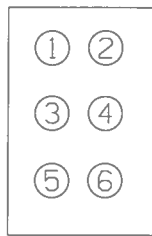
MID-POINT



MID-POINT

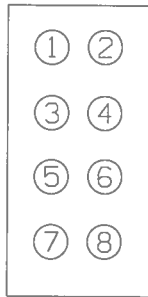


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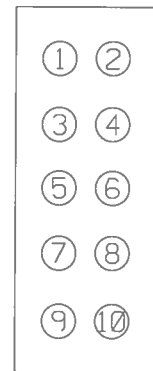
VERTICAL

SIX DUCTS
FIGURE 1



VERTICAL

EIGHT DUCTS
FIGURE 2



VERTICAL

TEN DUCTS
FIGURE 3

NOTE:

A MINIMUM OF FIFTY FEET BETWEEN A HORIZONTAL CONFIGURATION AND A VERTICAL CONFIGURATION SHALL BE REQUIRED FOR THE ROLLS.

REVISION
DATE INITIAL
07-12 TH2 CTG/MA

DRAWN JH DESIGNED RM APPD TN RDL VEC

REDRAWN

SUPERSEDES

ORIGINAL 9-14-70

ENGINEERING STANDARD
HAWAIIAN ELECTRIC CO. INC.

DUCT ROLL
SECTIONS
UG DUCTS & STRUCTURES

30-1020

REV
1

SHEET 1 OF 1