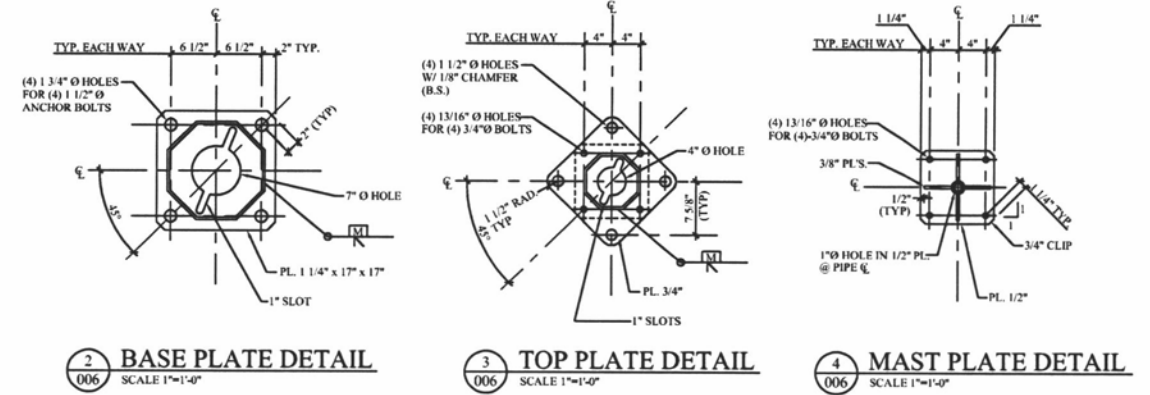


69 kV DEADEND H-FRAME STRUCTURE
SCALE 1/4"=1'-0"

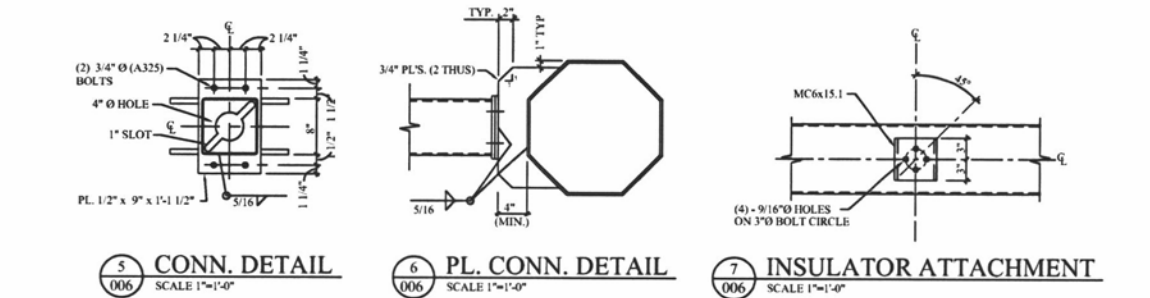
SECTION
SCALE 1/4"=1'-0"



2 BASE PLATE DETAIL
SCALE 1"=1'-0"

3 TOP PLATE DETAIL
SCALE 1"=1'-0"

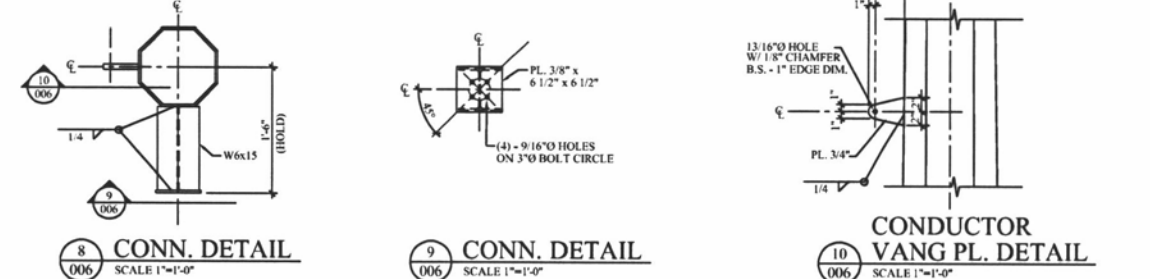
4 MAST PLATE DETAIL
SCALE 1"=1'-0"



5 CONN. DETAIL
SCALE 1"=1'-0"

6 PL. CONN. DETAIL
SCALE 1"=1'-0"

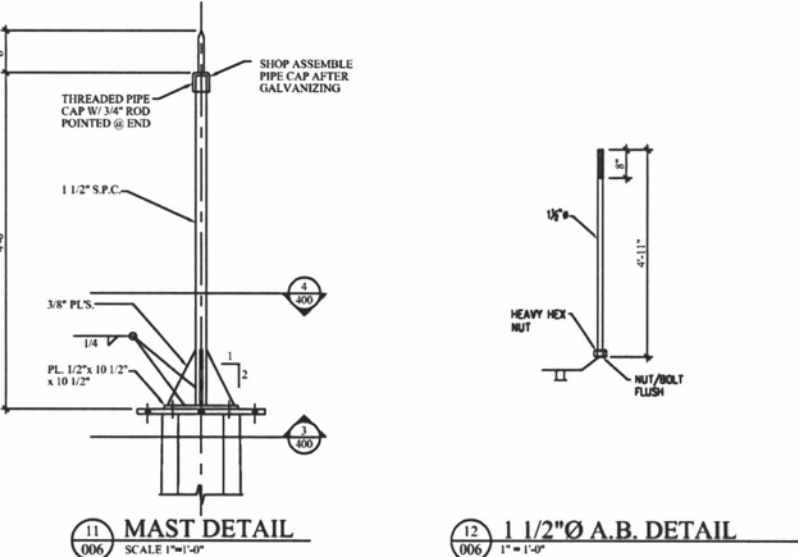
7 INSULATOR ATTACHMENT
SCALE 1"=1'-0"



8 CONN. DETAIL
SCALE 1"=1'-0"

9 CONN. DETAIL
SCALE 1"=1'-0"

10 CONDUCTOR VANG PL. DETAIL
SCALE 1"=1'-0"



11 MAST DETAIL
SCALE 1"=1'-0"

12 1 1/2" A.B. DETAIL
SCALE 1"=1'-0"

Sheet Notes:

- Galvanizer to provide venting holes or slots (not shown) as required.

Structural Steel Notes:

- Structural steel work shall be per American Institute of Steel Construction (AISC) specification, ninth edition, material:

ASTM A992	W, S, and M shapes	Fy = 50 ksi
ASTM A53	Grade B - standard pipes	Fy = 35 ksi
ASTM A500	Grade B - HSS pipes	Fy = 42 ksi
ASTM A500	Grade B - HSS tubes	Fy = 46 ksi
ASTM A36	Plates, bars, misc. shapes (angles), channels, and rods	Fy = 36 ksi
ASTM F1554	Grade 55 - anchor bolts	Fy = 55 ksi
ASTM A401	Connection bolts	Ft = 44 ksi
ASTM A490	Connection bolts	Ft = 54 ksi
ASTM A563	Connection nuts	
ASTM F436	Washers	
E70XX	Electrodes	Fy = 36 ksi
- Welded connections shall be made in accordance w/ the latest recommendations of:
 - AISC - American Institute of Steel Construction
 - AWS - American Welding Society
- Column base and cap plates to be welded around all sides.
- Bolt steel connections shall be tightened snug tight. Provide palnut lock nuts on all bolted connections.
- Steel shall be galvanized, after fabrication, per ATSM A123

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				BLACK HILLS POWER	
				5TH STREET SUBSTATION	
				H-FRAME STRUCTURE	
				DETAILS	
5-25	RKO	0	JN	SUBSTATION CONSTRUCTION	
DATE	BY	NO.	APPROVED BY	REVISION	DESCRIPTION
				5-25	FIF-C-006

