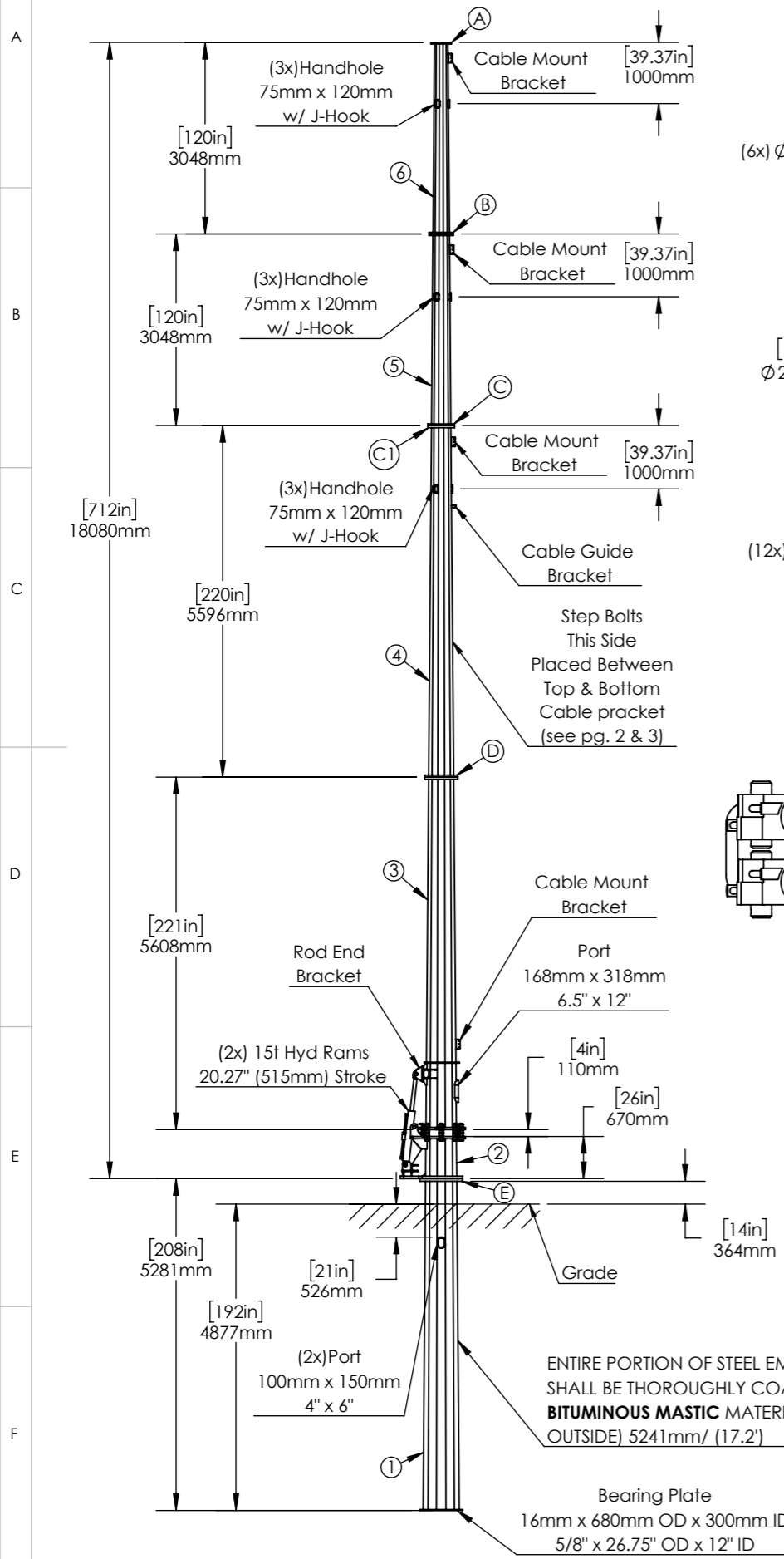


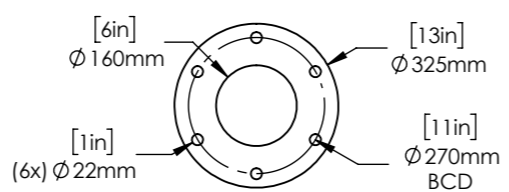
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REVISIONS

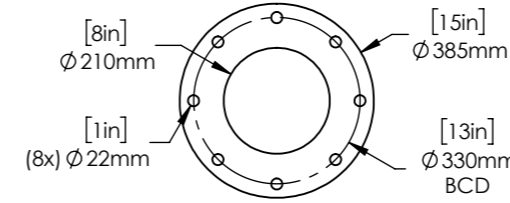
REV.	DESCRIPTION	DATE	APPROVED
A	initial release	2/2/22	MGC
B			



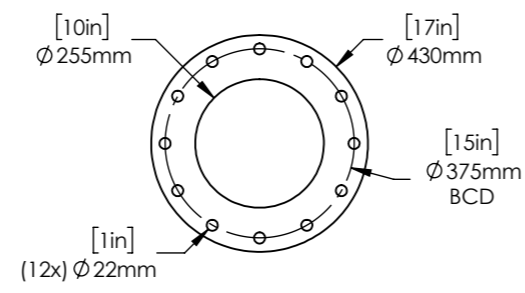
**A Flange (25mm)**



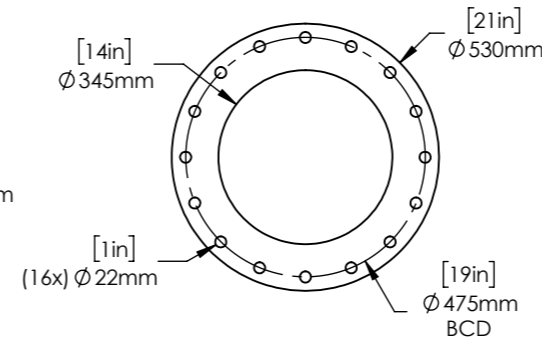
**B Flange (25mm)**



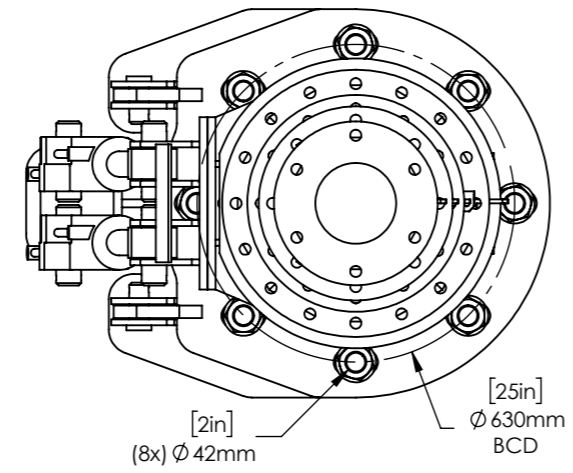
**C Flange (25mm)  
C1 Flange (35mm)**



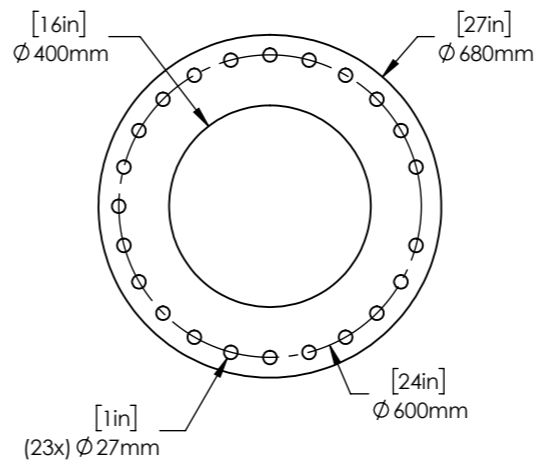
**D Flange (35mm)**



**Top View**



**E Flange (40mm)**



- Survival Wind Speed: Per Local Code
  - Structure Class - Per Local Code
  - Topographic - Per Local Code
  - Exposure - Per Local Code
- Design and Welding Codes:
  - TIA-222-G (DS1)
  - AWS D1.1
- Material
  - Pole: ASTM A572 GR50 (or Q355 equivalent)
  - Baseplate: ASTM A572 GR50 (or Q355 equivalent)
  - Top/ Hinge Flange: ASTM A572 GR50 (or Q355 equivalent)
- Pole has 12 sides
- Finish: Hot dip Galvanizing per ASTM A123
- Flange (A & B) Bolts: (14x) 3/4-10 x 3.5in - A325 (full thread)
  - Optional (M20x2.5 x 90mm GR 8.8)
  - Galv. per ASTM F2329
  - (1x) Nut, (2x) Washer (ea.)
- Flange (C & D) Bolts: (28x) 3/4-10 x 4in - A325 (full thread)
  - Optional (M20x2.5 x 100mm GR 8.8)
  - Galv. per ASTM F2329
  - (1x) Nut, (2x) Washer (ea.)
- Flange (E) Bolts: (23x) 1-8 x 5in - A325 (full thread)
  - Optional (M24x3) 125mm GR 8.8)
  - Galv. per ASTM F2329
  - (1x) Nut, (2x) Washer (ea.)
- Rod End Bracket Bolts: (8x) 5/8-11 x 2.5in - A325 (full thread)
  - Optional (M16x2) 65mm GR 8.8)
  - Galv. per ASTM F2329
  - (1x) Nut, (2x) Washer (ea.)
- Anchor Bolts: (8x) 1.75-6 x 10in - ASTM F1554 GR55
  - Optional (M42x4.5 x 250mm GR 8.8)
  - Galv. per ASTM F2329

11. Pole Section Details

Pole Section	#1	#2	#3	#4	#5	#6
Thickness - (in)/ (mm)	0.236/ 6	0.236/ 6	0.236/ 6	0.197/ 5	0.197/ 5	0.197/ 5
Length - (in)/ (m)	208/ 5281	26.4/ 670	220.8/ 5.608	220.3/ 5.596	120/ 3.048	120/ 3.048
Top Dia. - (in)/ (mm)	19.5/ 495	19.1/ 485	15.7/ 398	12.2/ 310	10.3/ 262	8.4/ 214
Bottom Dia. - (in)/ (mm)	22.76/ 578	19.45/494	19.1/ 485	15.63/ 397	12.2/ 309	10.3/ 261
Weight - (lb)/ (kg)	1173/ 533	689/ 313	1179.2/ 536	671/ 305	314.6/ 143	261.8/ 119
Max (design) Slip - (in)/ (mm)		NA	NA	NA	NA	NA

CAD-generated drawing do not manually update

Steel Weight (18.3m) 60ft Pole - 2466.5 lb/ (1121 kg)  
 Direct Burial Base - 1859 lb/ (845 kg)  
 Total Weight - 4324 lb/ (1966 kg)  
 Does not include fasteners

APPROVALS DATE  
 DRAWN MGC 2/2/22  
 CHECKED  
 RESP ENG  
 MFG ENG  
 QUAL ENG

**18.3m 6SF 2x15T Hyd Direct Burial**

CAD file:  
 Details and dimensions not shown on this drawing can be found in CAD file.

scale NA rev. A-1 size NA sheet 1 of 3

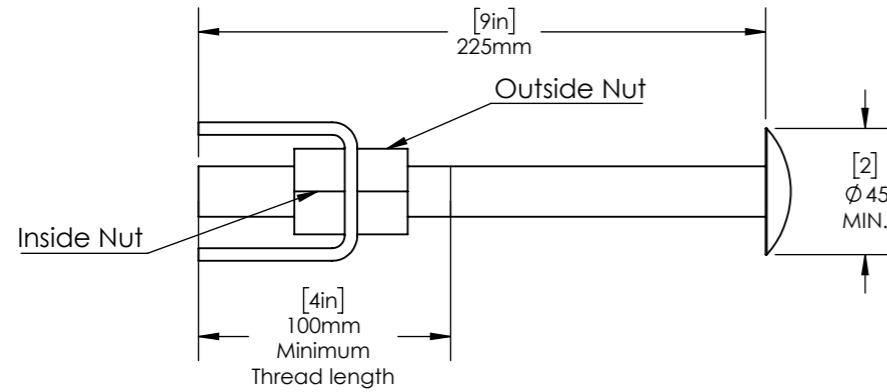
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 St. Paul, MN 55105  
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#	DESCRIPTION (Optional Grade)	QTY	Weight (lb/ kg)
1	Clip - ASTM A572 GR 50 (Q345 or Q355)	*1	1.2/ 0.54
2	Step Bolt - M20x2.5 x 225mm - A449 (GR 8.8) HDG	*1	0.88/ 0.64
3	Heavy Hex Nut, M20x2.5 - A563 GR DH (GR 8.8) HDG	*2	0.224/ 0.11

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	initial release	10/12/20	MGC
B	Revised BOM bolt length to 225mm	11/2/20	MGC

## CLIP-STEP BOLT

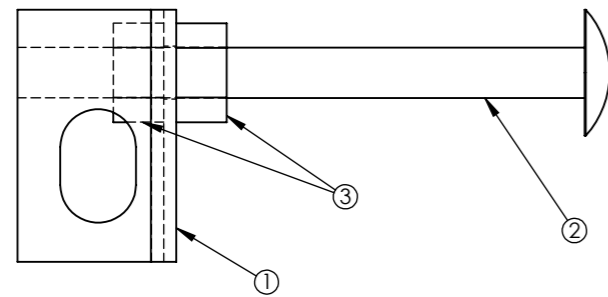


### Fabrication Notes:

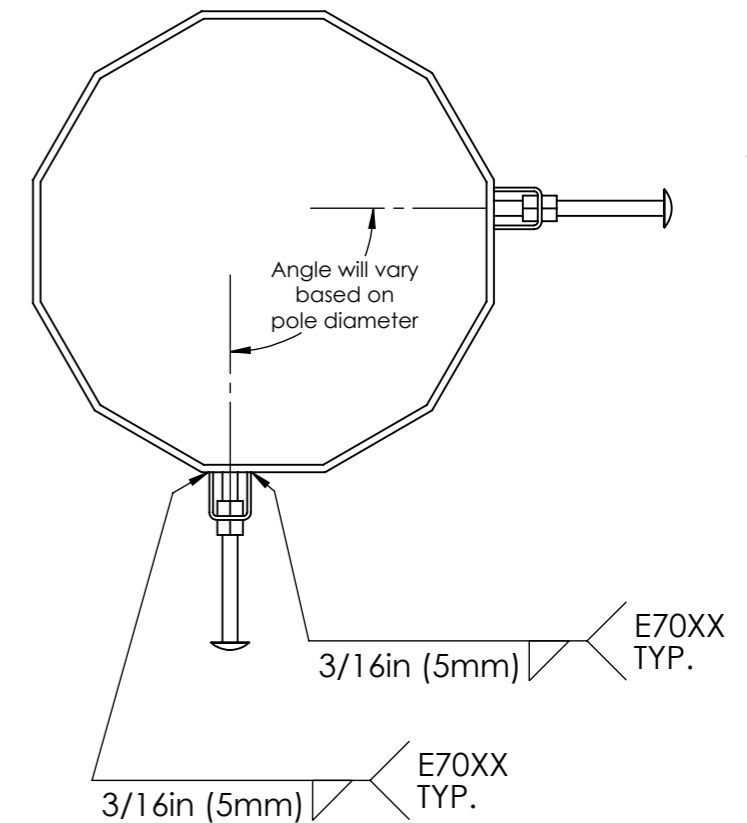
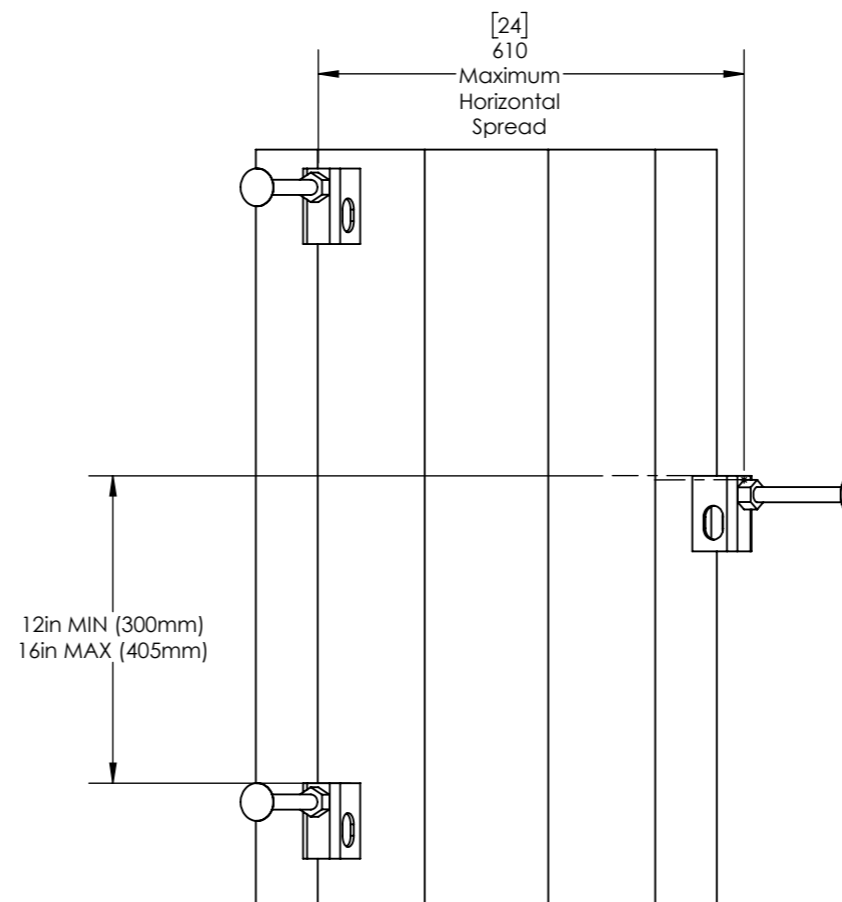
- \*The number of Clips/ Step Bolts will vary based on height of pole and shall be equally spaced between the upper and lower cable mount brackets (see pg. 2).
- All plate material shall have a minimum yield strength of 345 MPa (50 ksi)
- All welding shall conform to the minimum requirements of AWS D1.1
- All welding shall be done by welders qualified under AWS specifications, using E70XX, low hydrogen electrodes
- Hot Dip Galvanized in accordance with ASTM A123
- Debur all sharp edges

### Installation Steps:

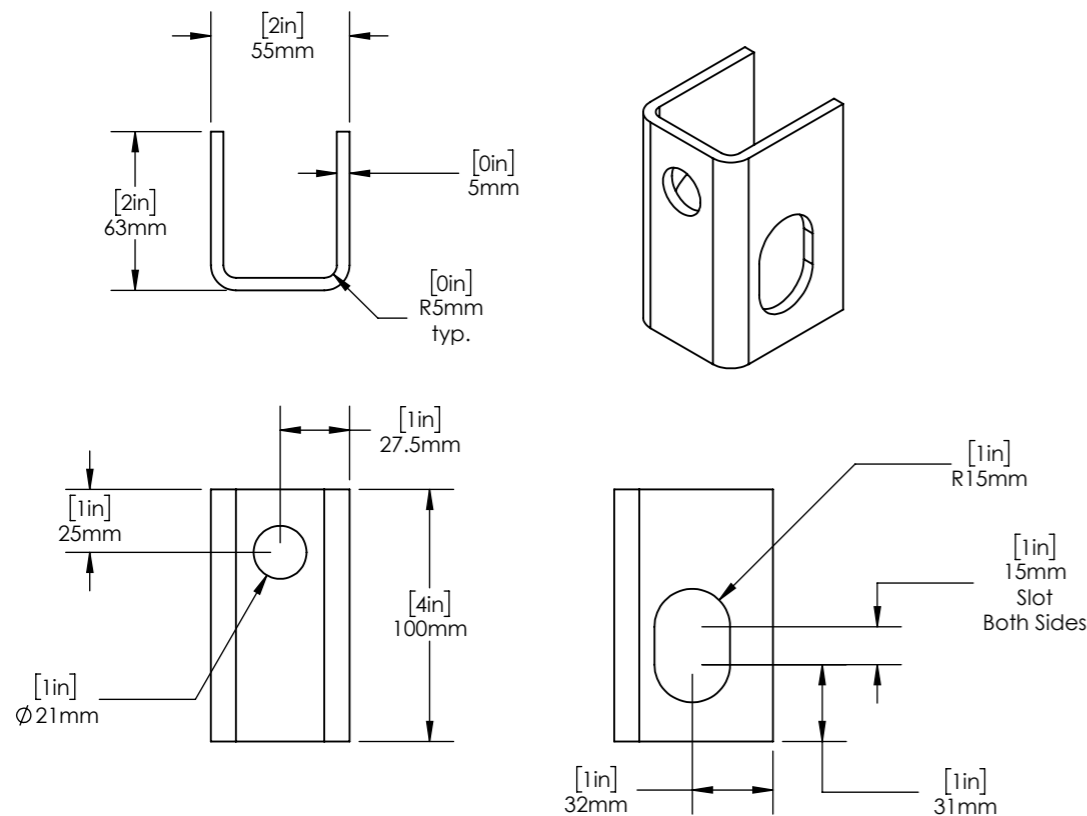
- Outside nut shall be turned to end of step bolt threads prior to installation.
- Step bolt shall be turned through inside nut until bolt makes snug contact with pole.
- Outside nut shall be snugged against clip then tightened 1/4 to 1/2 turn to achieve proper step bolt preload.



## CLIP-STEP BOLT SPACING



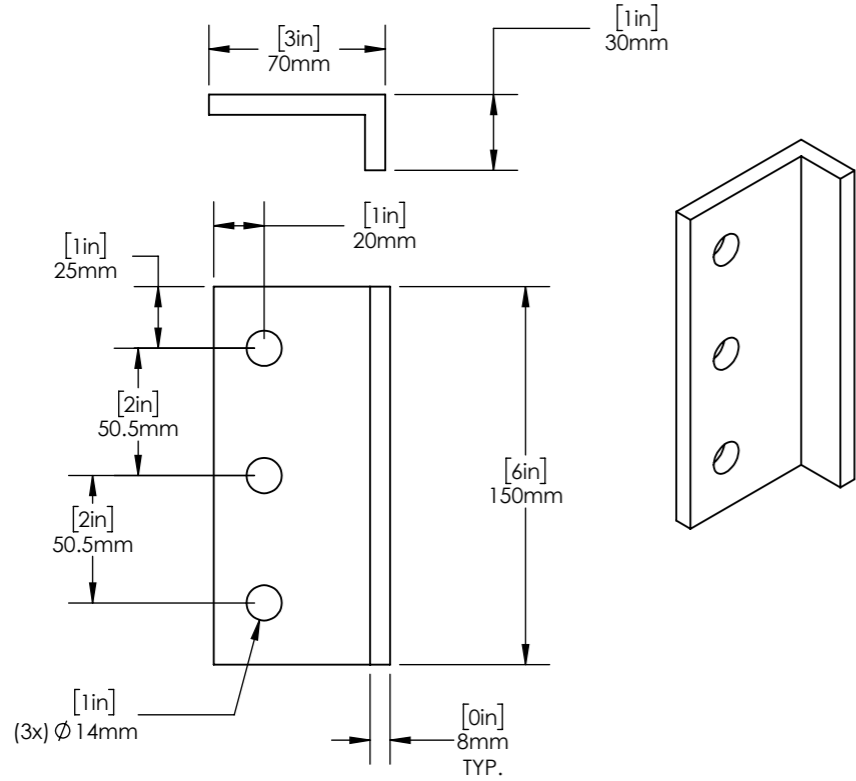
## CLIP



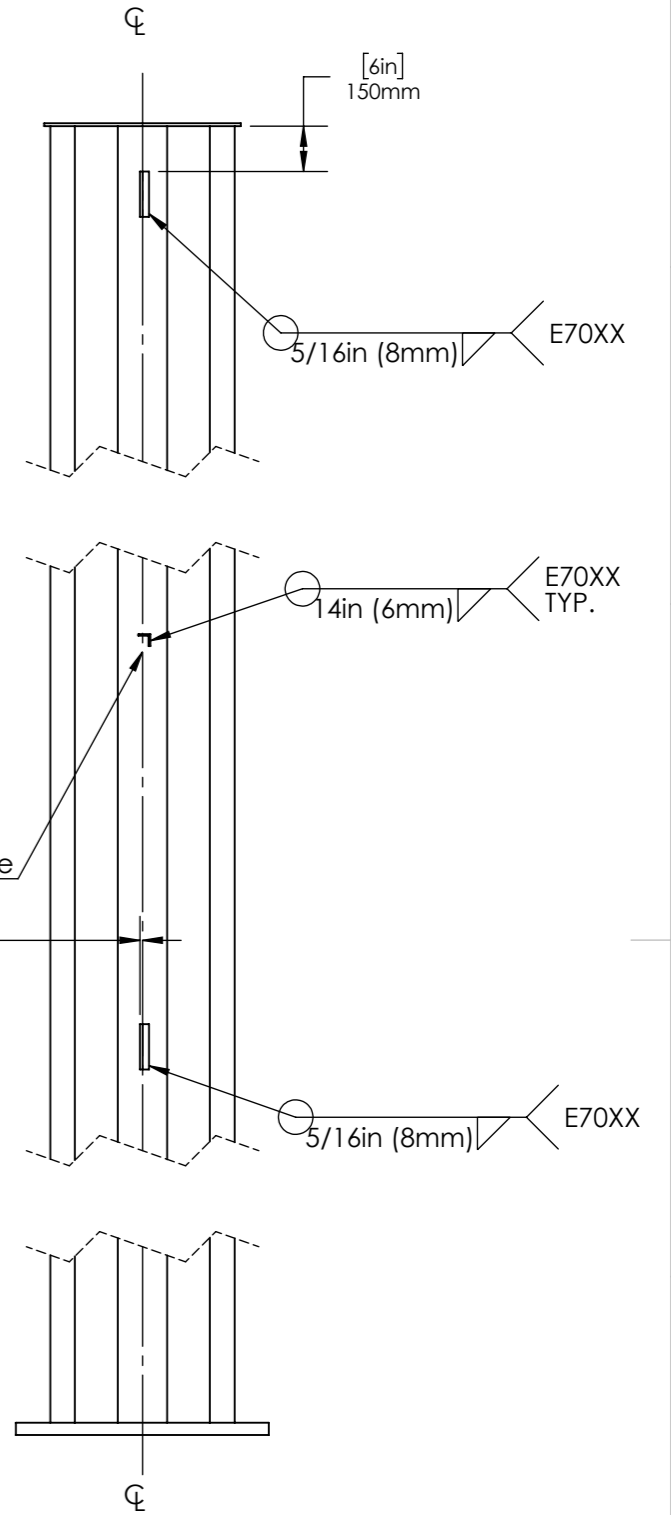
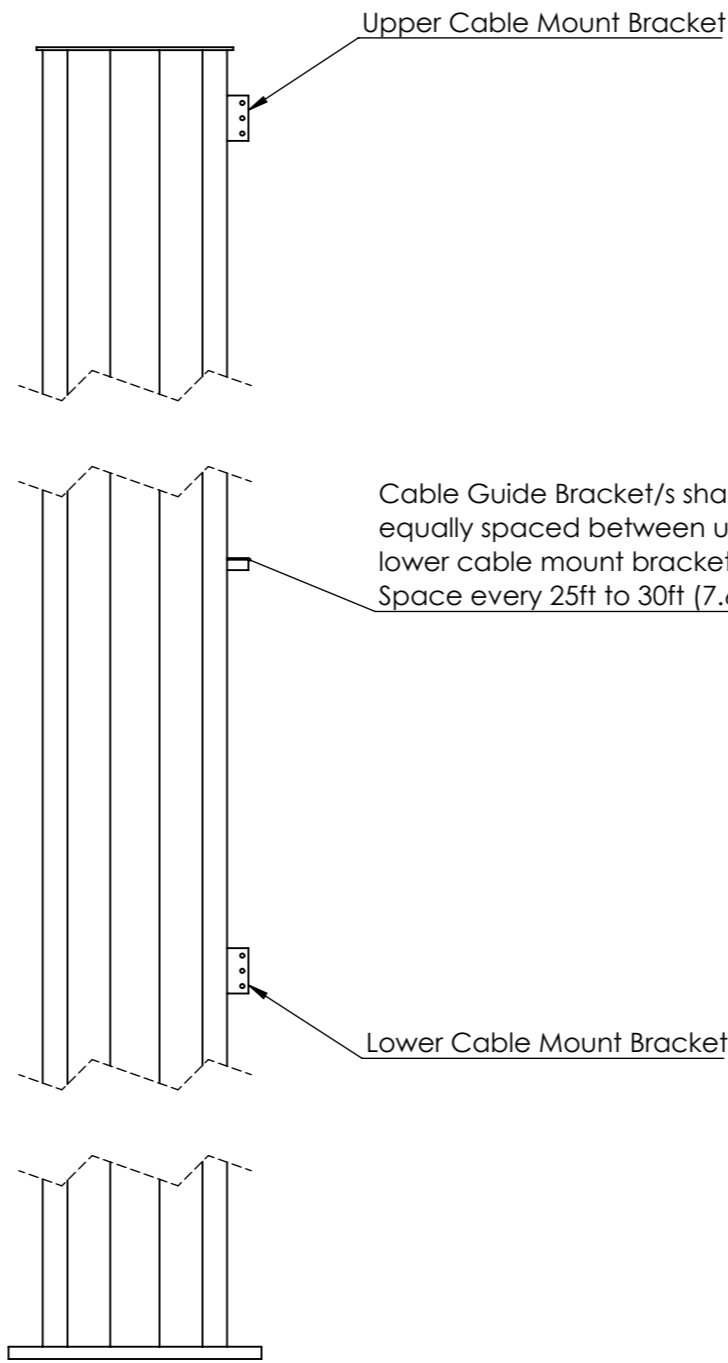
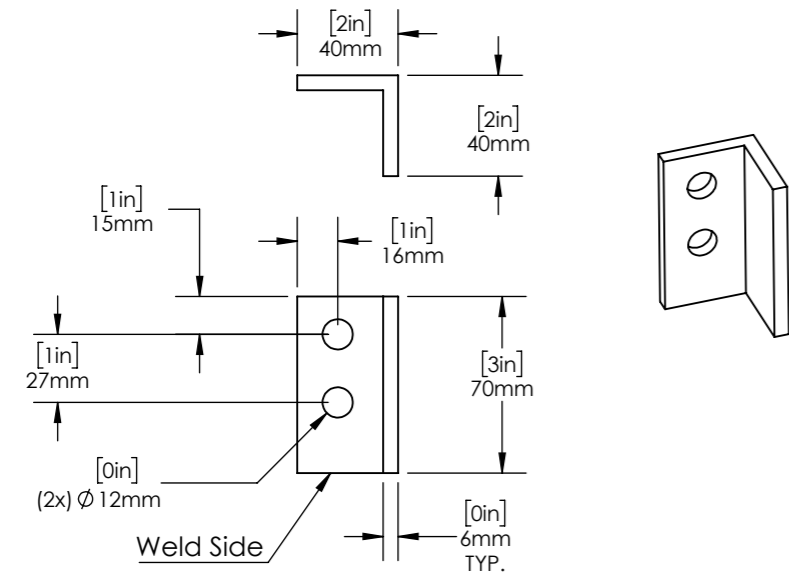
CAD-generated drawing do not manually update				1041 Grand Ave., #213 St. Paul, MN 55105 (651) 330-1263 www.aretelcom.com
Total Weight 3.1 lbs (1.41 kg)		APPROVALS	DATE	<b>Step Bolt/ Clip</b>
MATERIAL See Notes		DRAWN MGC	10/12/20	
FINISH See Notes		CHECKED		CAD file: Details and dimensions not shown on this drawing can be found in CAD file.
DO NOT SCALE DRAWING		RESP ENG		
		MFG ENG		scale NA rev. B size NA sheet 2 of 3
		QUAL ENG		

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### Cable Mount Bracket



### Cable Guide Bracket



**Fabrication Notes:**

- \*The number of cable guides will vary based on height of pole and shall be equally spaced between the upper and lower cable mount brackets.
- All plate material shall have a minimum yield strength of 345 MPa (50 ksi)
- All welding shall conform to the minimum requirements of AWS D1.1
- All welding shall be done by welders qualified under AWS specifications, using E70XX, low hydrogen electrodes
- Hot Dip Galvanized in accordance with ASTM A123
- Debur all sharp edges

#	DESCRIPTION (Optional Grade)	QTY	Weight lb/ kg
1	Cable Mount Bracket-ASTM A572 GR 50 (Q345 or Q355)	2	1.85/ 0.84
2	Cable Guide Bracket-ASTM A572 GR 50 (Q345 or Q355)	*1 or more	0.51/ 0.23

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### Cable Mount/ Guide Brackets

Part #  
 scale NA rev. B size NA sheet 3 of 3