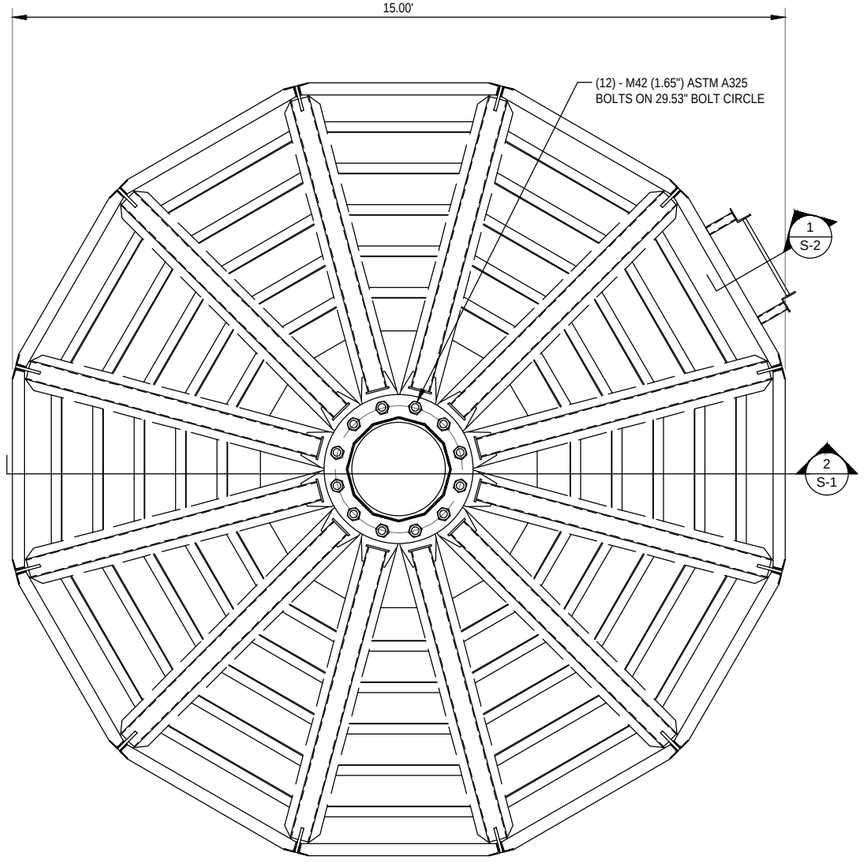
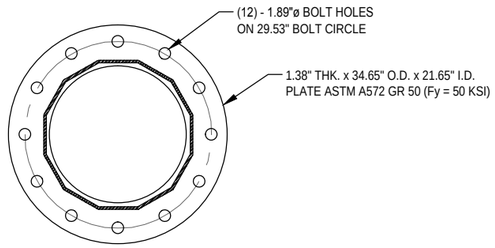


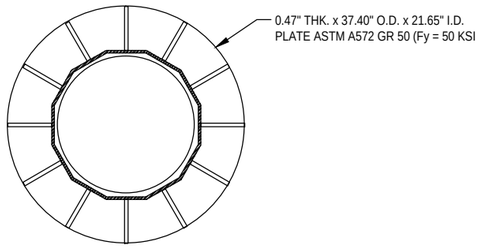
PLAN VIEW 1 / S-1

MEMBER SCHEDULE			
MEMBER	DESCRIPTION	MATERIAL SPECIFICATION *	LENGTH
A	0.39" THK WALL x 23.62" Df (12 SIDES) POLE SHAFT	Q345B	63"
B	4.02"ø x 0.16" THK WALL PIPE	20#	86.2"
C	L 2.5 x 2.5 x 0.2	Q345B	55.1"
D	0.24" THK x 2.36" PLATE	Q345B	37.6"
E	0.24" THK x 2.36" PLATE	Q345B	31.5"
F	L 2.5 x 2.5 x 0.2	Q345B	43.6"
G	L 2.5 x 2.5 x 0.2	Q345B	25.6"
H	L 3.9 x 3.9 x 0.3	Q345B	78.7"
I	L 3.9 x 3.9 x 0.3	Q345B	46.5"
J	L 2.5 x 2.5 x 0.2	Q345B	VARIES
K	0.2" TRAPEZOIDAL TRAY PLATE	Q345B	-
* MATERIAL EQUIVALENTS	Q345B = ASTM A572 GR 50 (Fy = 50)		
	20# = ASTM A53 GR B (FY = 35 KSI)		
	Q235B = ASTM A36 (FY = 36 KSI)		

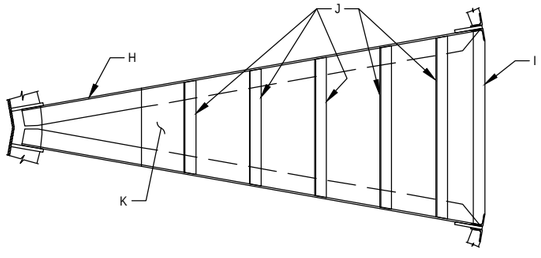
ALL STRUCTURAL BOLTS SHALL CONFORM TO ASTM A325 BOLTS, OR EQUIVALENT. CONSULT ARE FABRICATION DRAWINGS FOR BOLT QUANTITIES AND SIZES.



SECTION 3 / S-1



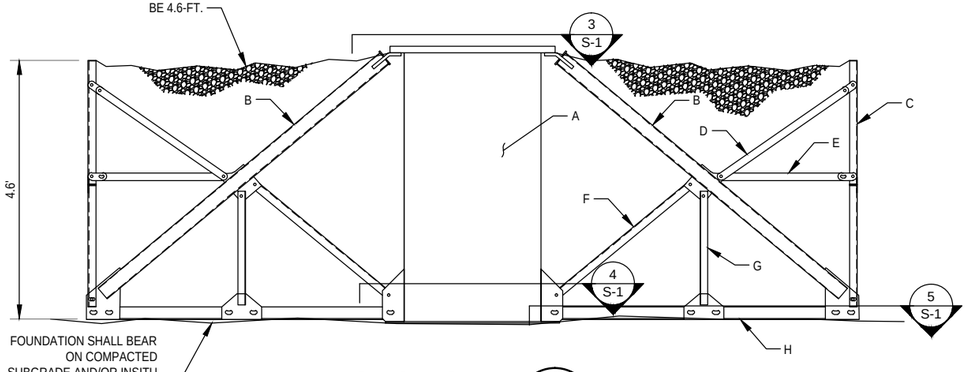
SECTION 4 / S-1



SECTION 5 / S-1

BACKFILL AFS-1100 FOUNDATION WITH GRANULAR SOILS (GRAVEL / SAND MIX) HAVING A UNIT WEIGHT OF 100 PCF. ESTIMATED VOLUME OF FILL = 26 CY. MINIMUM DEPTH OF BACKFILL SHALL BE 4.6-FT.

HYDRAULIC JACK SUPPORT STRUCTURE NOT SHOWN. ANALYSIS AND DESIGN OF THE HYDRAULIC JACK SYSTEM, HYDRAULIC JACK SUPPORT AND HINGE COMPLETED BY OTHERS.



SECTION 2 / S-1

AMERICAN RESOURCE & ENERGY: PALO ALTO, CA

1. **GENERAL NOTES**

1.1. CONTRACTOR SHALL REFER TO AMERICAN RESOURCE & ENERGY'S (ARE) "ASSEMBLED FOUNDATION SYSTEMS (1100-AFS) TELECOM-SMALL WIND (ABOVE AND BELOW GRADE)" ASSEMBLY AND INSTALALTION INSTRUCTIONS.

1.2. IF MATERIALS, QUANTITIES, STRENGTHS OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES, THE BETTER QUALITY AND/OR GREATER QUANTITY, STRENGTH OR SIZE INDICATED, SPECIFIED OR NOTED SHALL BE PROVIDED.

1.3. DESIGN HAS BEEN COMPLETED IN CONFORMANCE WITH THE 2016 CALIFORNIA BUILDING CODE AND THE ANSI/TIA-222-G-2005 STANDARD, "STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS", WITH ANSI/TIA-222-G-1-2007 AND ANSI/TIA-222-G-2-2009 ADDENDA.

1.4. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE SAFETY AND STABILITY OF THE MONOPOLE, FOUNDATION AND ITS COMPONENT PARTS DURING INSTALLATION.

2. **STRUCTURAL STEEL**

2.1. STRUCTURAL STEEL MATERIALS, FABRICATION, DETAILING, AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING REFERENCE STANDARDS:

2.1.1. BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC):

2.1.1.1. "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS."

2.1.1.2. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM HIGH STRENGTH BOLTS," AS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS.

2.1.1.3. "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"

2.1.2. BY THE AMERICAN WELDING SOCIETY (AWS):

2.1.2.1. "STRUCTURAL WELDING CODE - STEEL D1.1."

2.1.2.2. "STANDARD SYMBOLS FOR WELDING, BRAZING, AND NONDESTRUCTIVE EXAMINATION"

2.2. ALL STRUCTURAL BOLTS SHALL BE INSTALLED AND TIGHTENED TO THE PRETENSIONED CONDITION ACCORDING TO THE REQUIREMENTS OF THE AISC 'SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS', DEC. 31, 2009. REFER PAGE 6 OF THE ARE ASSEMBLY AND INSTALLATION INSTRUCTIONS (SEE NOTE 1.1).

2.3. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISED CODE OF THE AMERICAN WELDING SOCIETY, AWS D1.1. ALL WELD ELECTRODES SHALL BE E70XX UNLESS NOTED OTHERWISE ON THE DRAWINGS.

2.4. ALL WELDED CONNECTIONS SHALL BE MADE BY WELDERS CERTIFIED BY AWS. CONTRACTOR SHALL SUBMIT WELDERS' CERTIFICATION AND QUALIFICATION DOCUMENTATION TO CROWN CASTLE'S TESTING AGENCY FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

2.5. STRUCTURAL STEEL PLATES SHALL CONFORM TO ASTM A36 GRADE 36 (FY = 36 KSI MIN.) UNLESS NOTED OTHERWISE ON THE DRAWINGS.

3. **FOUNDATION WORK**

3.1. THE FOUNDATION SHALL BEAR ON COMPACTED SUBGRADE AND/OR IN-SITU SOILS MEETING WITH A MINIMUM ULTIMATE BEARING PRESSURE OF 15625 POUNDS PER SQUARE FOOT (PSF). GEOTECHNICAL VALUES PROVIDED BY THE MARCH 13, 2017 "SUBSURFACE EXPLORATION REPORT" PREPARED BY TOWER ENGINEERING PROFESSIONALS, INC.

3.2. BACKFILL / BALLAST MATERIAL SHALL HAVE A MINIMUM UNIT WEIGHT OF 100 POUNDS PER CUBIC FOOT (PCF).

4. **TOUCH UP OF GALVANIZING**

4.1. THE CONTRACTOR SHALL TOUCH UP ANY AND ALL AREAS OF GALVANIZING THAT ARE DAMAGED OR ABRADED DURING CONSTRUCTION. GALVANIZED SURFACES DAMAGED DURING TRANSPORTATION OR ERECTION AND ASSEMBLY AS WELL AS ANY AND ALL ABRASIONS, CUTS, FIELD DRILLING, AND ALL FIELD WELDING SHALL BE TOUCHED UP WITH TWO (2) COATS OF ZRC COLD GALVANIZING COMPOUND. FILM THICKNESS PER COAT SHALL BE: WET 3.0 MILS; DRY 1.5 MILS. APPLY PER ZRC (MANUFACTURER) RECOMMENDED PROCEDURES. CONTACT ZRC AT 1-800-831-3275 FOR PRODUCT INFORMATION.

5. **HOT-DIP GALVANIZING**

5.1. REFER TO PAGE 6 OF THE ARE ASSEMBLY AND INSTALLATION INSTRUCTIONS (SEE NOTE 1.1) FOR INSTRUCTIONS TO MASK ALL FAYING SERVICES PRIOR TO APPLICATION OF BITUMEN PAINT.

5.2. HOT-DIP GALVANIZE ALL STRUCTURAL STEEL MEMBERS AND ALL STEEL ACCESSORIES, BOLTS, WASHERS, ETC. PER ASTM A123 OR PER ASTM A153, AS APPROPRIATE.

5.3. PROPERLY PREPARE STEEL ITEMS FOR GALVANIZING. DRILL OR PUNCH WEEP AND/OR DRAINAGE HOLES WITH EOR APPROVAL OF LOCATIONS.

5.4. ALL GALVANIZING SHALL BE DONE AFTER FABRICATION IS COMPLETED AND PRIOR TO FIELD INSTALLATION.

42' POLE BASE FACTORED REACTIONS

M = 207 FT. K

V = 6 KIPS

A = 8 KIPS

1	3-14-2017
2	4-25-2017

PJF PAUL J. FORD & COMPANY
250 E Broad St, Ste 600 - Columbus, OH 43215
Phone 614.221.6679 www.pauljford.com

ARE TELECOM INCORPORATED
413 WACOUTA ST, SUITE 440, ST PAUL, MN 55101
PH: (651) 330-1263

AFS - 1100 POLE FOR 42' MONOPOLE

PALO ALTO, CALIFORNIA

PROJECT No:	A00016-T395.001.7805 R2
DRAWN BY:	B.M.S.
DESIGNED BY:	K.J.S.
CHECKED BY:	
DATE:	9-23-2016

BASE LAYOUT DETAILS

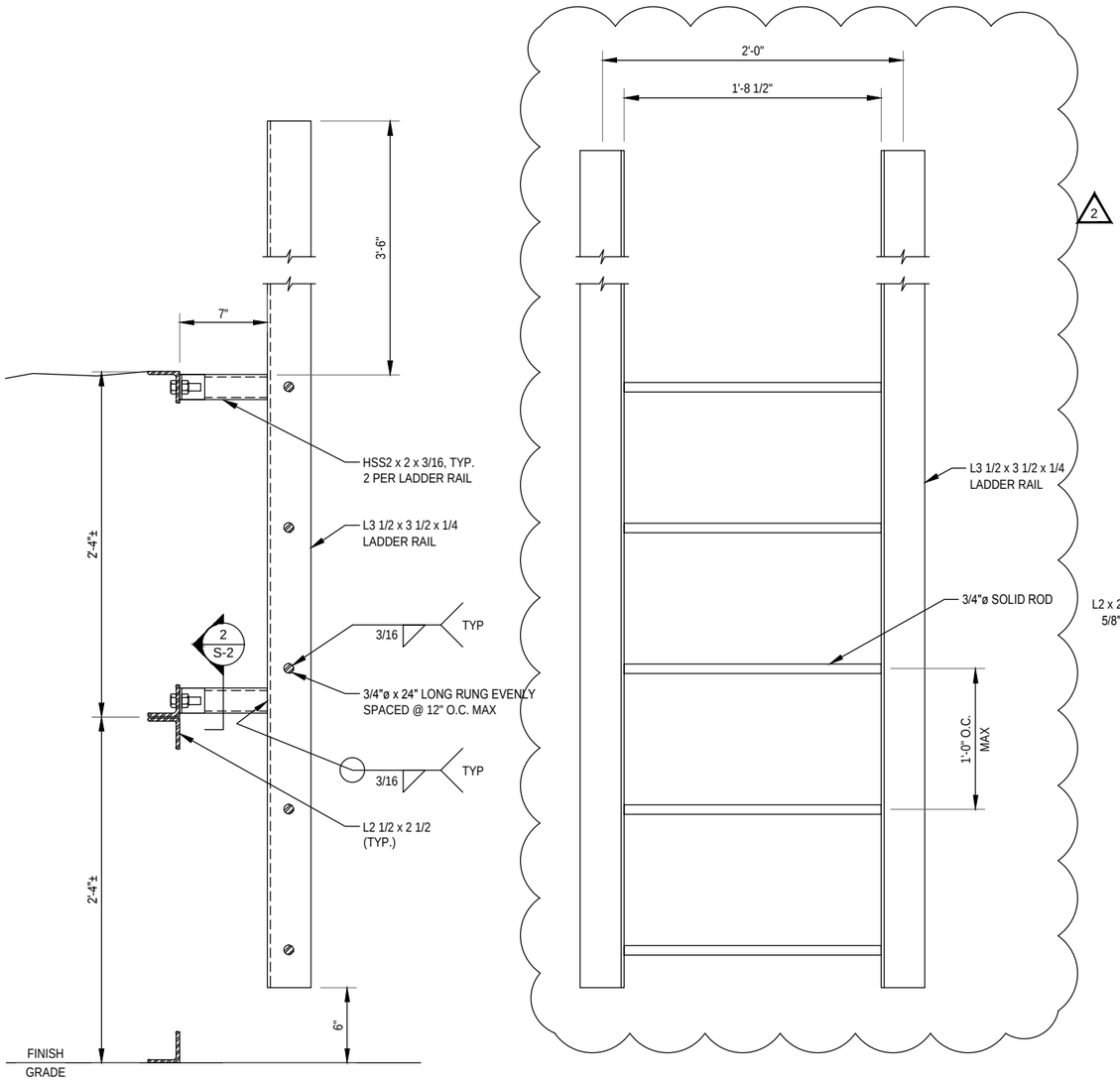
S-1

A00016-T395.001 R2.DWG

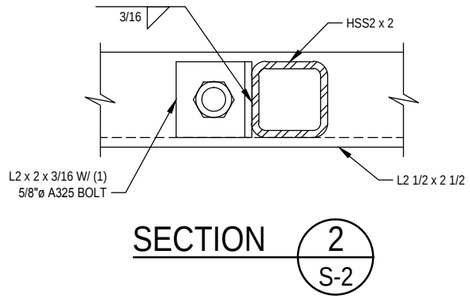
PJF PAUL J. FORD & COMPANY
250 E Broad St, Ste 600 - Columbus, OH 43215
Phone 614.221.6679 www.pauljford.com

ARE TELECOM INCORPORATED
413 WACOUTA ST, SUITE 440, ST PAUL, MN 55101
PH: (651) 330-1263

AFS - 1100 POLE FOR 42' MONOPOLE
PALO ALTO, CALIFORNIA



SECTION 1 / S-2



SECTION 2 / S-2

PROJECT No:	A00016-T395.001.7805 R2
DRAWN BY:	B.M.S.
DESIGNED BY:	K.J.S.
CHECKED BY:	
DATE:	9-23-2016

LADDER DETAILS

S-2

1 3-14-2017
2 4-25-2017: ADDED VIEW

A00016-T395.001 R2.DWG