PROJECT SPECIFIC TECHNICAL SPECIFICATIONS
FOR THE PURCHASE OF
STEEL TRANSMISSION POLES FOR THE
CIRCUIT 666 STRUCTURES #31 THRU #38 POLE REPLACEMENT
STR #32, 33, 34, 35, 36, 37, 38A, AND 38B

JEA PROJECT NO: 8003720
TR NO: TR 1313
BID DUE DATE: March 24th, 2017
REQUESTED BY: Sebastian Chmist
UPDATED: February 24th, 2017

Table of Contents

1. SCOPE

1.1 This specification outlines the required information needed for the purchase, fabrication, and delivery of steel transmission poles and steel caisson foundations for the "CIRCUIT 666 STRUCTURES 31 THRU 38 POLE REPLACEMENT, STR #32, 33, 34, 35, 36, 37, 38A, AND 38B". This specification complements the "General Technical Specifications for the Purchase of Steel Transmission Poles", Rev 1.3.

1.2 This specification includes the following attachments:

a) Pole/Caisson Drawings, containing the configuration and hole drilling details of the pole(s)

b) Pole Attachment Details

c) A PLS-POLE backup file for the pole(s), containing loading data and geometry

1.3 The Project Engineer (JEA) for this purchase is:

Sebastian Chmist

21 West Church Street, T-09

Jacksonville, FL, 32202

Office: (904) 665-7016

Cell: (860) 995-0075

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2. DESIGN

Structures shall be designed for the configuration, drilling details, loadings and limitations contained in these and the "General Technical Specifications for the Purchase of Steel Transmission Poles", Rev 1.3.

2.1 Pole/Caisson Configuration: The configuration of each pole/caisson to be provided is shown in the "Pole/Caisson Drawings" attachment of these specifications. The Drawings specify the dimensions of the poles/caissons, the orientation, drilling details, and attachment locations for insulators, brackets, vangs, etc.

2.2 Pole/Caisson Attachment Details: Details of all attachments are shown in the "Attachment Details" attachment of these specifications. These details illustrate and identify required dimensions on all the insulator attachments, brackets, and vangs that are to be provided with each pole. Attachments that support any equipment if any (transformers, streetlights, etc. modeled in PLS-POLE) need to be analyzed to determine if they can withstand the dead loads of that equipment. It is the responsibility of the fabricator to ensure that the attachments are fabricated and can withstand the loads placed on them as specified in these specifications and attachments.

2.3 Pole Load Data: All of the loading data for which the poles are to be designed to are included as a separate electronic attachment in the form of a PLS-POLE backup file. The poles are all being subjected to a NESC Light 60 mph wind loading and the NESC Extreme 120 mph wind loading criteria.

2.3.1 There is one (1) PLS-POLE backup file provided for structure #32, one (1) for structures #33/#36, one (1) for structures #34/ #35, one (1) for structure #37, and one (1) for structures #38A/#38B for a total of five (5). Each backup file references a Vector Loads File (.lca) which contains all the loading data on the pole and the pole attachments.

2.3.2 The PLS-POLE backup file also contains all the geometrical data necessary to analyze the pole with the specific loads.

2.3.3 The loads shown in the Vector Loads files (.lca) include the wind loads acting on the conductors/wires, attachments, and the theoretical pole that was modeled. A wind pressure is identified for each load case within the Vecor Loads file (.lca). It is the manufacturer's responsibility to apply these wind pressures onto the poles and components that it will be providing.

2.4 Pre-cambering: Poles will not be pre-cambered for this project.

2.5 Joints: Steel pole sections shall be designed by the slip-joint method.

2.6 Deflection: In addition to the eight (8) % deflection limit described in the General Technical Specifications (section 5.1), the poles shall be checked for:

2.6.1 The "60 DEG F" loading condition identified within the PLS-POLE backup and loading file (.bak/.lca) of each structure. The" 60 DEG" loading condition is at final wire tension, at 60 degrees Fahrenheit, with no wind, and no OLF. The pole shaft shall have a calculated deflection at the pole tip that does not exceed one (1) % of the pole height above ground under this loading condition.

2.6.2 The "NESC BLOW OUT" loading conduction(s) identified within the PLS-POLE backup and loading file (.bak/.lca) of each structure (for dead-end structures only). The" NESC BLOW OUT" loading condition(s) is at final wire tension, at 60 degrees Fahrenheit, with a 6psf wind, and no OLF. The pole shaft shall have a calculated deflection at the pole tip that does not exceed one (2) % of the pole height above ground under this loading condition. These conditions apply to structures #38A, and #38B only.

3. DIMENSION RESTRICTIONS

3.1 Poles #32, #33, #34, #35, and #36 shall be installed on Steel Caissons (to be provided by the pole manufacturer). Poles #37, #38A, and #38B shall be directly embedded. The pole manufacturer is responsible for designing, manufacturing, and delivering the steel caissons for each pole. The steel caissons are to be designed to meet the loadings and dimensions indicated on the "Pole/Caisson Drawings" attachment of these specifications. The poles are to be attached by the flange joint method to the steel caissons. It is the manufacturer's responsibility for designing the flange joints so that the flanges are compatible with the poles/ caissons.

3.2 Top Diameter: The top/tip diameter of all poles must be large enough to allow for the climbing provisions to be installed on four faces of the pole simultaneously without the bail steps touching each other. Please see the "Pole Attachment Details" to locate the "Step Lugs / Clips / Bail Steps attachment details". The Bail Steps are 14 inches in width. The poles have to be more than 14 inches in diameter at the locations of the bail steps, which occur at 3'-2" below the pole tip.

3.3 Bottom Diameter: The butt diameters of all poles must be no larger than the specified diameters of their respective steel caissons. The maximum butt diameter for steel poles #32, #33, and #36 shall be 39 inches. The maximum but diameter for steel poles #34 and #35 shall be 42 inches. The minimum butt diameters for steel poles #37, #38A, and #38B shall be 36 inches, and the maximum shall be 42 inches.

3.4 Caisson Diameters: The minimum diameters of the steel caissons shall be 39 inches and 42 inches respectively as shown on the drawings. There shall be no taper on the steel caissons.

3.5 Steel Pole Shaft Thickness: The minimum allowed steel thickness for use on any steel pole shafts shall be 0.1875 inches.

3.6 Steel Caisson Thickness: The minimum allowed steel thickness for use on any steel caisson shall be 0.3750 inches.

3.7 Other restrictions: To ensure proper alignment of steel caisson and pole's base plate, the steel caisson must have a v-notch that indicates the center line of one of the pole's vangs as noted in the "Pole/Caisson Drawings" attachment of these specifications. During assembly of the entire structure, the poles shafts must have some sort of marking that will allow the contractor to properly align the pole shafts with the steel caisson.

4. POLE ATTACHMENT HARDWARE

4.1 The pole manufacturer shall provide all brackets, vangs, step bolts, step clips, step lugs, grounding attachments, and holes on each pole as shown in the "POLE/CAISSON DRAWINGS" and "POLE ATTACHMENT DETAILS" of these specifications.

4.1.1 Bail Steps and their clips (the clips are to be welded to the poles) are required as part of this bid. A total of seven hundred and seventy-six (776) bail steps are required for this project. The "Pole/Caisson Drawings" detail the locations of the bail steps/clips.

4.2 Bolts, nuts, washers and other hardware required for attaching insulators, cross-arms, transformers, and miscellaneous cables to pole brackets / vangs / holes, will be supplied by JEA and are not to be provided by the manufacturer.

4.3 Bolts, nuts, washers and other hardware required for assembling the pole sections together at the splice locations and for attaching the steel poles to their respective caissons are to be provided by the pole manufacturer.

5. MINIMUM QUALIFICATIONS

5.1 To be considered for this specific project, the manufacturer must meet the following minimum qualifications in addition to those listed in the RFQ:

5.1.1 The Company must be capable of manufacturing Steel Transmission poles at least 120' in final length (assembled onsite).

5.1.2 The Company must be capable of manufacturing poles that can withstand a minimum moment ground line of at least 1,000 kip-ft.

5.1.3 The company must be able to submit all the necessary bid drawings and calculations from the drawing(s) and PLS-POLE backup file(s) provided by JEA.

6. DELIVERY LOCATION AND DATE

Delivery of all poles, caissons, and hardware will be to storage areas near the job site within the JEA service area. The jobsite is located approximately twelve (12) miles southeast of downtown Jacksonville. Poles, caissons, and associated hardware for structures #32, #33, and #34 shall be delivered to a JEA Transmission Line corridor, accessible near the intersection of Seaboard Avenue and Guana Park Court. The closest address to this location is 6919 Seaboard Avenue, Jacksonville FL, 32244. Poles, caissons, and associated hardware for structures #35, #36, #37, #38A, and #38B shall be delivered to a JEA Transmission Line corridor, accessible near 4640 Subchaser Court, Jacksonville FL, 32244. Specific directions for delivery will be provided by the construction contractor. The unloading will be done by the owner's forces and equipment or by a contractor representing the owner. The owner also reserves the right to allow a contractor representing the owner to coordinate delivery with the supplier. The supplier shall allow four (4) hours "turn around" time for unloading each pole/caisson. Untimely delivery, either ahead of or behind agreed upon delivery schedules, shall not be a cause for claim to the owner for any costs incurred by the Manufacturer. Freight will be pre-paid and added. Freight is not to be included in the bid price. All communications regarding the delivery date/time are to be verified and approved by email with the JEA Project Engineer even if verified and coordinated verbally with the contractor representing JEA. JEA will not be responsible for any extra costs incurred by the manufacturer for delivery that was not approved by the JEA Project Engineer.

The poles, caissons, and all associated hardware/attachments for structures #32, #33, and #34 shall be delivered between: Monday, October 2nd and Friday, October 6th, 2017.

The poles, caissons, and all associated hardware/attachments for structures #35, #36, #37, #38A and #38B shall be delivered between: Saturday, October 7th, and Sunday, October 8th, 2017.

7. POLE/CAISSON DRAWINGS

1) Pole Drawings:

   Structure Type A1321 – Single Post, Tangent Shield, 3-Phase, W/ Fiber For Future Use

   Structures #32, 33, 34, 35, & 36

2) Caisson Drawings:

   For Structure Type A1321 – Single Post, Tangent Shield, 3-Phase, W/ Fiber For Future Use

   Structures #32, 33 & 36

3) Caisson Drawings:

   For Structure Type A1321 – Single Post, Tangent Shield, 3-Phase, W/ Fiber For Future Use

   Structures #34 & 35

4) Pole Drawings:

   Structure Type A1321 – Single Post, Tangent Shield, 3-Phase, W/ Fiber For Future Use

   Structures #37

5) Pole Drawings:

   Structure Type A1356 – Single Dead-End 180^0, Full Tension To Post, 3-Phase, W/ Fiber For Future Use

   Structure(s) #38A & 38B

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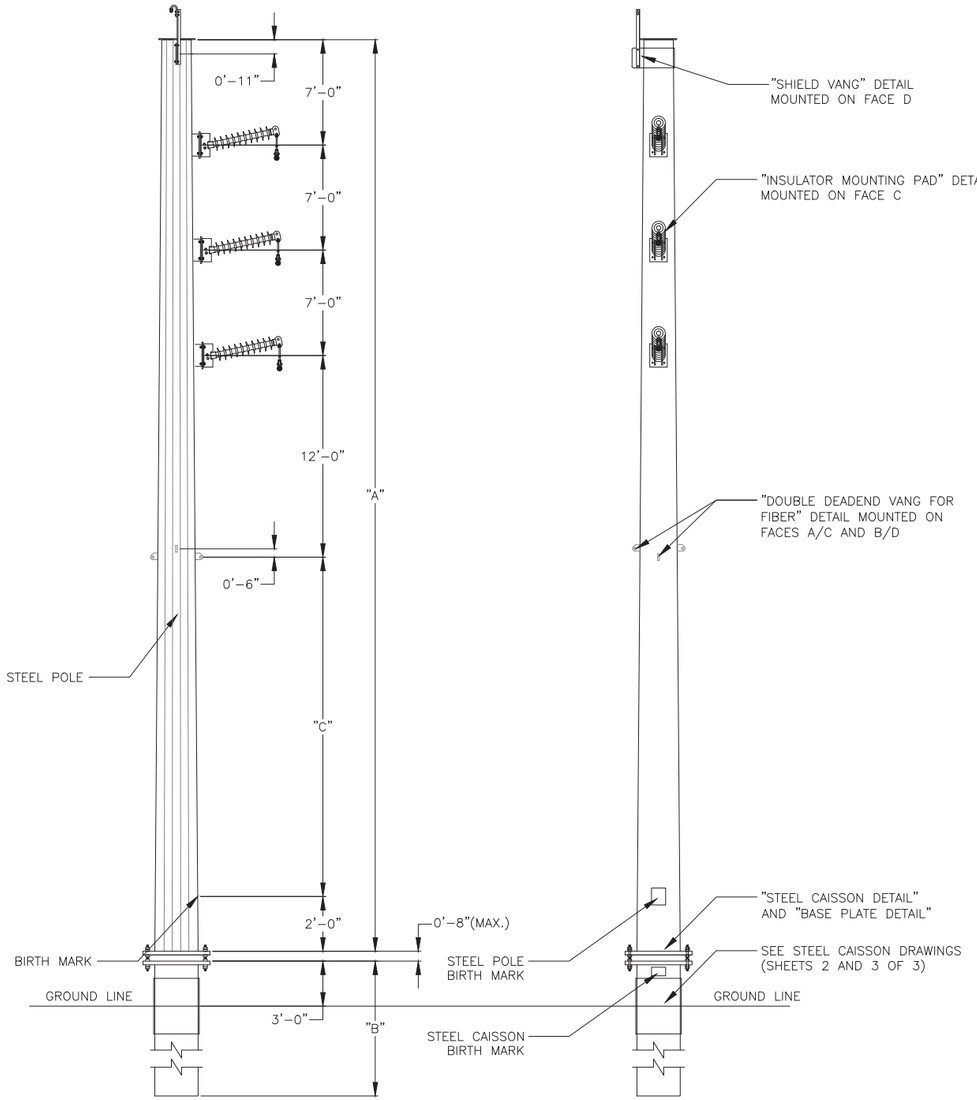
STEEL POLE DRAWINGS
FOR STRUCTURE TYPE A1321 SINGLE POST, TANGENT SHIELD, 3-PHASE W/ FIBER FOR FUTURE USE
STRUCTURES #32, 33, 34, 35, & 36

ELEVATION VIEW

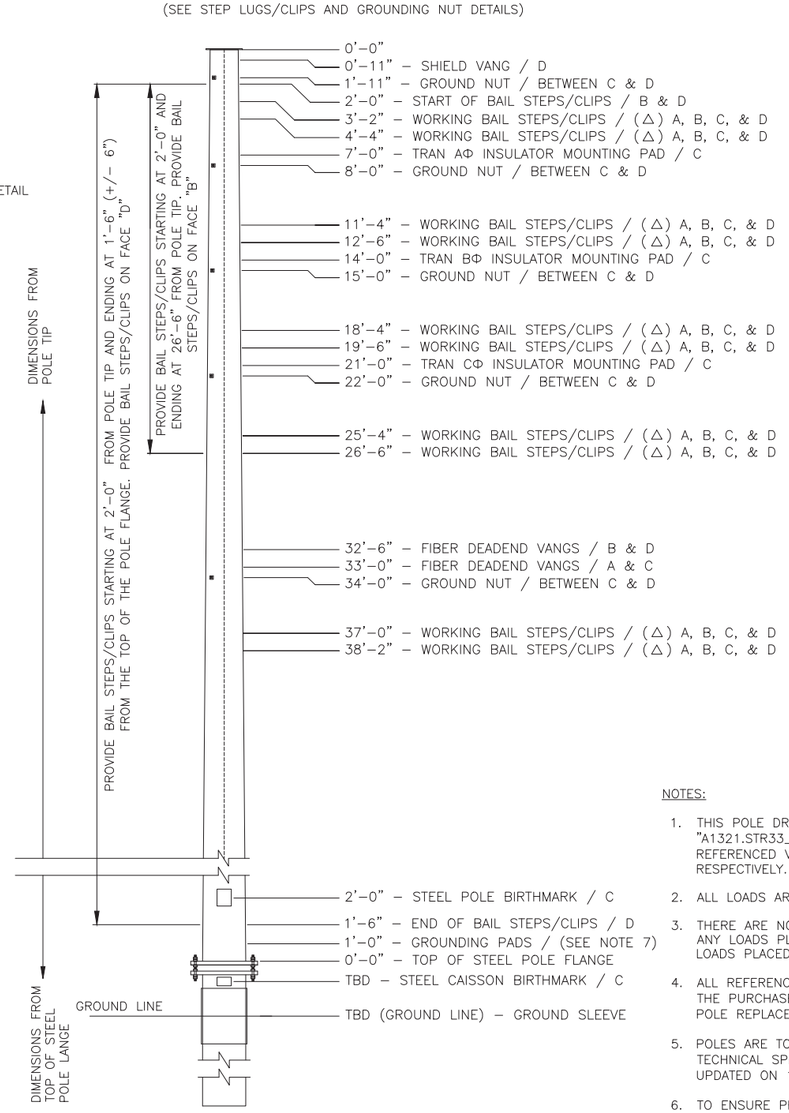


IN–LINE FACE D
(LOOKING EAST DIRECTION)
(NOT TO SCALE)

TRANSVERSE FACE C
(LOOKING NORTH DIRECTION)
(NOT TO SCALE)

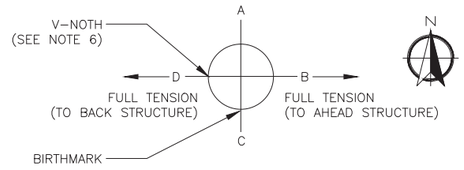
DRILLING DETAIL

(SEE STEP LUGS/CLIPS AND GROUNDING NUT DETAILS)



TRANSVERSE FACE C
(LOOKING NORTH DIRECTION)
(NOT TO SCALE)

POLE TIP VIEW



STRUCTURE LIST

STR. NO. & POLE TYPE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"
#32, A1321–70'	70'–0"	42'–9"	35'
#33, A1321–75'	75'–0"	43'–6"	40'
#34, A1321–85'	85'–0"	43'–6"	50'
#35, A1321–85'	85'–0"	43'–6"	50'
#36, A1321–75'	75'–0"	42'–9"	40'

NOTES:

1. THIS POLE DRAWING IS ACCOMPANIED BY PLS–POLE BACKUP FILES "A1321.STR32.BAK", "A1321.STR33_36.BAK", AND "A1321.STR34_35.BAK" CONTAINING ALL THE LOADS SPECIFIED IN REFERENCED VECTOR LOADS (.LCA) FILES FOR STRUCTURES #32, #33/#36. AND #34/#35 RESPECTIVELY.
2. ALL LOADS ARE ULTIMATE LOADS AND INCLUDE APPROPRIATE OLF.
3. THERE ARE NO LOADS PLACED ON SOME DEAD–END FIBER VANGS. ALL VANGS THAT DO NOT HAVE ANY LOADS PLACED ON THEM SHOULD BE DESIGNED TO BE THE SAME AS THOSE THAT DO HAVE LOADS PLACED ON THEM.
4. ALL REFERENCED DETAILS ARE PROVIDED IN THE "PROJECT SPECIFIC TECHNICAL SPECIFICATIONS FOR THE PURCHASE OF STEEL TRANSMISSION POLES FOR THE CIRCUIT 666 STRUCTURE #31 THRU #38 POLE REPLACEMENT STR #32, 33, 34, 35, 36, 37, 38A, AND 38B".
5. POLES ARE TO BE DESIGNED TO MEET ALL OF THE REQUIREMENTS FOUND IN THE "GENERAL TECHNICAL SPECIFICATIONS FOR THE PURCHASE OF STEEL TRANSMISSION POLES", REVISION 1.3, UPDATED ON 12/30/2016.
6. TO ENSURE PROPER ALIGNMENT OF THE STEEL CAISSON AND THE POLE'S BASE PLATE, THE CAISSON AND THE POLE MUST HAVE A V–NOTCH THAT INDICATES THE CENTERLINE OF THE POLE'S VANGS IN THE POINTED OUT DIRECTION (FACE "D").
7. TWO (2) GROUNDING PADS ARE TO BE PROVIDED. ONE PAD IS TO BE PLACED BETWEEN FACES C AND D, AND THE OTHER PAD IS TO BE PLACED BETWEEN FACES A AND B. SEE SPECS FOR DETAIL.

NO.	REVISION	DATE	BY	CH'D	APP'D
1.	REVISED DIMMENSION "B" IN STRUCTURE LIST	12/30/16	SMC	LJG	LJG
2.	RENUMBERED SHEET AND ADDED SHEETS 4 THRU 5	2/24/17	SMC	EV	EV
3.	CORRECTED NOTES 4 & 5, ADDED FIBER VANGS AT 32'-6"	2/24/17	SMC	EV	EV
4.	CORRECTED LOCATION OF BAIL STEPS, ADDED GROUND NUT	2/24/17	SMC	EV	EV

REVISION	DATE	BY	CH'D	APP'D

ENGINEERING RECORD	BY	DATE
STATUS	BY	DATE
ASSIGNED	O&M	10/20/15
DESIGNED	SMC	8/11/16
DRAWN	SMC	9/06/16
CHECKED	LJG	9/09/16
APP'D	JAR	9/16/16

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STEEL POLE DRAWINGS
FOR
CIRCUIT 666 STRUCUTRE 31 THRU 38 REPLACEMENT
STR #32, 33, 34, 35, AND 36

SCALE: N/A

PROJECT DESIGN SEGMENT 20410

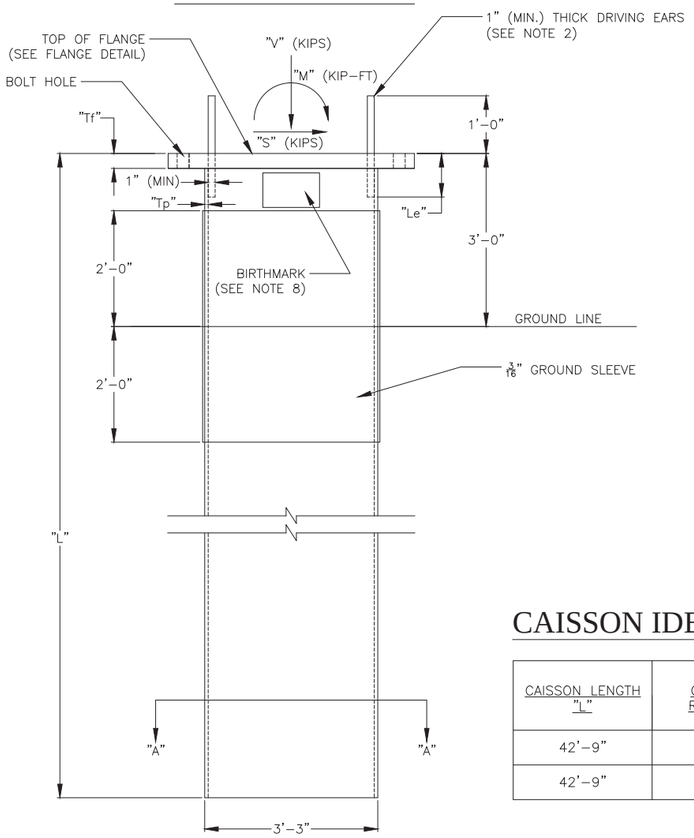
PROJECT NO. 8003720

DRAWING NO. TR1313-1

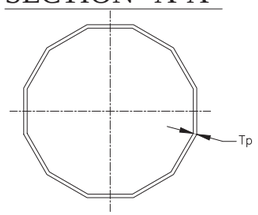
SHEET NO. SHEET 1 OF 5

STEEL CAISSON DRAWINGS
FOR STRUCTURE TYPE A1321 SINGLE POST, TANGENT SHIELD, 3-PHASE W/ FIBER FOR FUTURE USE
STRUCTURES #32 & 36

VERTICAL VIEW



SECTION "A-A"



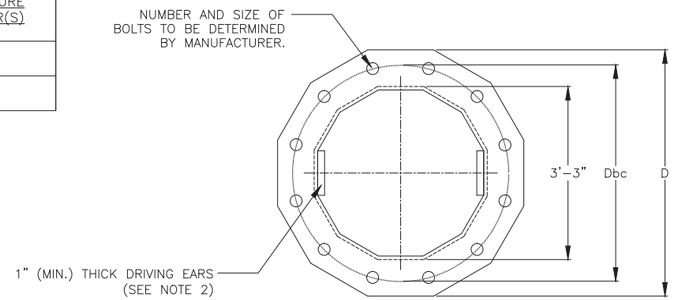
LOADING TABLE

DISTANCE FROM TOP OF FLANGE (FT)	POLE TYPE A1321-70'/75' ULTIMATE MOMENT "M" (KIP-FT)	POLE TYPE A1321-70'/75' ULTIMATE SHEAR "S" (KIPS)	POLE TYPE A1321-70'/75' ULTIMATE LOAD "V" (KIPS)
0.00	872.1	16.6	11.0
4.28	943.1	16.6	N/A
8.55	1,014.0	16.6	N/A
12.83	1,085.0	16.6	N/A
17.10	1,155.9	16.6	N/A
21.38	1,226.9	16.6	N/A
25.65	1,297.8	16.6	N/A
29.93	1,332.9	-21.3	N/A
34.20	1,040.3	-118.7	N/A
38.48	337.3	-154.0	N/A
42.75	0.0	0.0	N/A

CAISSON IDENTIFICATION

CAISSON LENGTH "L"	QUANTITY REQUIRED	POLE TYPE	STRUCTURE NUMBER(S)
42'-9"	1	A1321-70'	#32
42'-9"	1	A1321-75'	#36

FLANGE DETAIL



DESIGN & MANUFACTURING NOTES

1. VIBRATORY STEEL CAISSON TO BE INSTALLED USING VIBRATORY HAMMER. THE FREQUENCY AND STROKE AMPLITUDE RANGES FOR INSTALLATION OF THE STEEL CAISSON TO BE PER MANUFACTURER'S RECOMMENDATIONS.
2. MANUFACTURER TO DETERMINE APPROPRIATE DRIVING EARS FOR INSTALLATION. THE INDICATED THICKNESS DIMENSION OF THE EARS IS THE MINIMUM. POLE MANUFACTURER TO ENSURE SIZE AND CONNECTION OF DRIVING EARS WILL BE ADEQUATE FOR INSTALLATION BY VIBRATORY HAMMER. "Le" IS TO BE DESIGNED BY THE MANUFACTURER.
3. "Dbc" AND "D" ARE TO BE DESIGNED BY THE MANUFACTURER. FLANGE SIZE AND BOLT PATTERN ARE ALSO TO BE DETERMINED BY THE MANUFACTURER. BOLT PATTERN OF POLES (SEE SHEET 1) MUST MATCH BOLT PATTERN OF EACH STEEL CAISSON FOUNDATION FLANGE PROVIDED FOR EACH POLE TYPE.
4. "Tf" AND "Tp" ARE TO BE DESIGNED, BUT THEIR MINIMUM VALUES MUST BE: Tf = 2.5" AND Tp = 0.375". MANUFACTURER IS TO VERIFY THAT THE SPECIFIED STEEL CAISSON DIAMETERS ARE ADEQUATE FOR THE DESIGN LOADS AND FOR A VIBRATORY HAMMER TYPE INSTALLATION.
5. ALL LOADS ARE ULTIMATE LOADS AND INCLUDE APPROPRIATE OLF.
6. CORROCOTE SHALL BE APPLIED TO THE STEEL CAISSON (25 MILS MINIMUM THICKNESS) FROM 2'0" ABOVE THE GROUND LINE TO THE BOTTOM OF THE CAISSON.
7. STEEL CAISSONS ARE TO BE DESIGNED TO MEET ALL OF THE REQUIREMENTS FOUND IN THE "GENERAL TECHNICAL SPECIFICATIONS FOR THE PURCHASE OF STEEL TRANSMISSION POLES", REVISION 1.3, UPDATED ON 12/30/2016.
8. A STEEL CAISSON BIRTHMARK SHALL BE PLACED BELOW THE FLANGE, AND ABOVE THE CORROCOTE A SHOWN.

NO.	REVISION	DATE	BY	CH'D	APP'D
1.	REVISED LOAIDNG TABLES DUE TO POLE RELOCATION	12/30/16	SMC	LJG	LJG
2.	RENUMBERED SHEET AND ADDED SHEETS 4 THRU 5	2/24/17	SMC	EV	EV
3.	CORRECTED NOTE 7	2/24/17	SMC	EV	EV

ENGINEERING RECORD		
STATUS	BY	DATE
ASSIGNED	O&M	10/20/15
DESIGNED	SMC	9/06/16
DRAWN	SMC	9/06/16
CHECKED	LJG	9/09/16
APP'D	JAR	9/16/16

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STEEL CAISSON DRAWINGS
FOR
CIRCUIT 666 STRUCUTRE 31 THRU 38 REPLACEMENT
STR #32 AND 36

SCALE: N/A

PROJECT DESIGN SEGMENT 20410

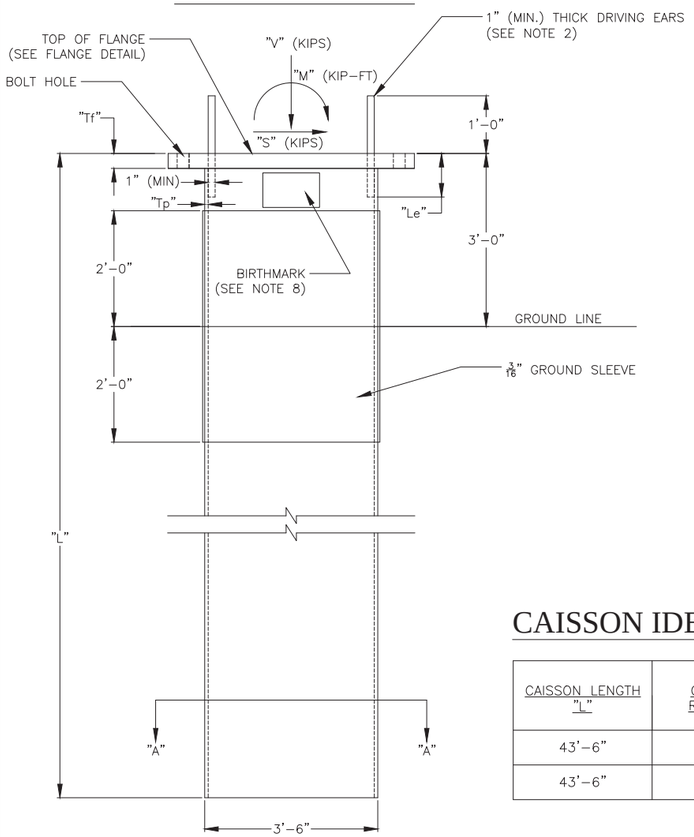
PROJECT NO. 8003720

DRAWING NO. TR1313-1

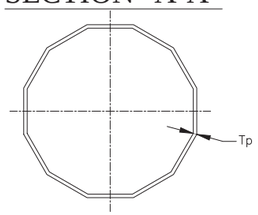
SHEET NO. SHEET 2 OF 5

STEEL CAISSON DRAWINGS
FOR STRUCTURE TYPE A1321 SINGLE POST, TANGENT SHIELD, 3-PHASE W/ FIBER FOR FUTURE USE
STRUCTURES #33, 34, & 35

VERTICAL VIEW



SECTION "A-A"



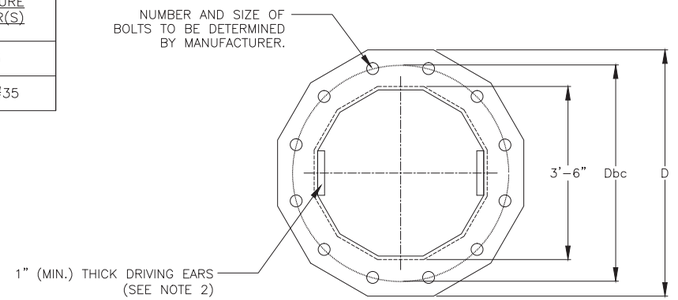
LOADING TABLE

DISTANCE FROM TOP OF FLANGE (FT)	POLE TYPE A1321-75'/85' ULTIMATE MOMENT "M" (KIP-FT)	POLE TYPE A1321-75'/85' ULTIMATE SHEAR "S" (KIPS)	POLE TYPE A1321-75'/85' ULTIMATE LOAD "V" (KIPS)
0.00	1,078.9	19.1	12.0
4.35	1,162.0	19.1	N/A
8.70	1,245.0	19.1	N/A
13.05	1,328.0	19.1	N/A
17.40	1,411.1	19.1	N/A
21.75	1,494.1	19.1	N/A
26.10	1,577.2	19.1	N/A
30.45	1,597.1	-33.5	N/A
34.80	1,220.8	-142.9	N/A
39.15	385.5	-172.9	N/A
43.50	0.0	0.0	N/A

CAISSON IDENTIFICATION

CAISSON LENGTH "L"	QUANTITY REQUIRED	POLE TYPE	STRUCTURE NUMBER(S)
43'-6"	1	A1321-75'	#33
43'-6"	2	A1321-85'	#34, #35

FLANGE DETAIL



DESIGN & MANUFACTURING NOTES

1. VIBRATORY STEEL CAISSON TO BE INSTALLED USING VIBRATORY HAMMER. THE FREQUENCY AND STROKE AMPLITUDE RANGES FOR INSTALLATION OF THE STEEL CAISSON TO BE PER MANUFACTURER'S RECOMMENDATIONS.
2. MANUFACTURER TO DETERMINE APPROPRIATE DRIVING EARS FOR INSTALLATION. THE INDICATED THICKNESS DIMENSION OF THE EARS IS THE MINIMUM. POLE MANUFACTURER TO ENSURE SIZE AND CONNECTION OF DRIVING EARS WILL BE ADEQUATE FOR INSTALLATION BY VIBRATORY HAMMER. "Le" IS TO BE DESIGNED BY THE MANUFACTURER.
3. "Dbc" AND "D" ARE TO BE DESIGNED BY THE MANUFACTURER. FLANGE SIZE AND BOLT PATTERN ARE ALSO TO BE DETERMINED BY THE MANUFACTURER. BOLT PATTERN OF POLES (SEE SHEET 1) MUST MATCH BOLT PATTERN OF EACH STEEL CAISSON FOUNDATION FLANGE PROVIDED FOR EACH POLE TYPE.
4. "Tf" AND "Tp" ARE TO BE DESIGNED, BUT THEIR MINIMUM VALUES MUST BE: Tf = 2.5" AND Tp = 0.375". MANUFACTURER IS TO VERIFY THAT THE SPECIFIED STEEL CAISSON DIAMETERS ARE ADEQUATE FOR THE DESIGN LOADS AND FOR A VIBRATORY HAMMER TYPE INSTALLATION.
5. ALL LOADS ARE ULTIMATE LOADS AND INCLUDE APPROPRIATE OLF.
6. CORROCOTE SHALL BE APPLIED TO THE STEEL CAISSON (25 MILS MINIMUM THICKNESS) FROM 2'0" ABOVE THE GROUND LINE TO THE BOTTOM OF THE CAISSON.
7. STEEL CAISSONS ARE TO BE DESIGNED TO MEET ALL OF THE REQUIREMENTS FOUND IN THE "GENERAL TECHNICAL SPECIFICATIONS FOR THE PURCHASE OF STEEL TRANSMISSION POLES", REVISION 1.3, UPDATED ON 12/30/2016.
8. A STEEL CAISSON BIRTHMARK SHALL BE PLACED BELOW THE FLANGE, AND ABOVE THE CORROCOTE A SHOWN.

NO.	REVISION	DATE	BY	CH'D	APP'D
1.	REVISED LOAIDNG TABLES DUE TO POLE RELOCATION	12/30/16	SMC	LJG	LJG
2.	RENUMBERED SHEET AND ADDED SHEETS 4 THRU 5	2/24/17	SMC	EV	EV
3.	CORRECTED NOTE 7	2/24/17	SMC	EV	EV

ENGINEERING RECORD	BY	DATE
STATUS	BY	DATE
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DESIGNED	SMC	9/06/16
DRAWN	SMC	9/06/16
CHECKED	LJG	9/09/16
APP'D	JAR	9/16/16

BUILDING COMMUNITY

STEEL CAISSON DRAWINGS
FOR
CIRCUIT 666 STRUCUTRE 31 THRU 38 REPLACEMENT
STR #33, 34, AND 35

SCALE: N/A

PROJECT DESIGN SEGMENT 20410

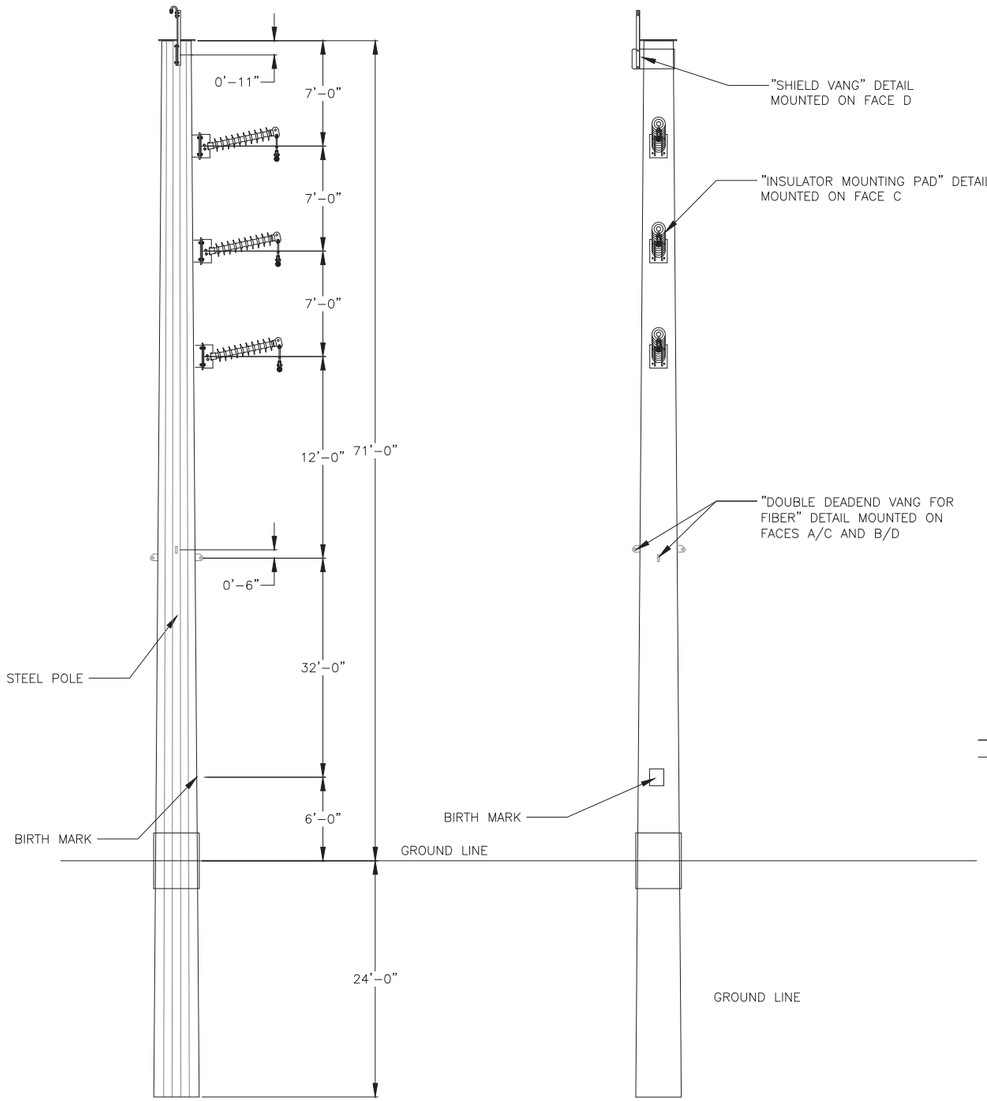
PROJECT NO. 8003720

DRAWING NO. TR1313-1

SHEET NO. SHEET 3 OF 5

STEEL POLE DRAWINGS
FOR STRUCTURE TYPE A1321 SINGLE POST, TANGENT SHIELD, 3-PHASE W/ FIBER FOR FUTURE USE
STRUCTURE #37

ELEVATION VIEW

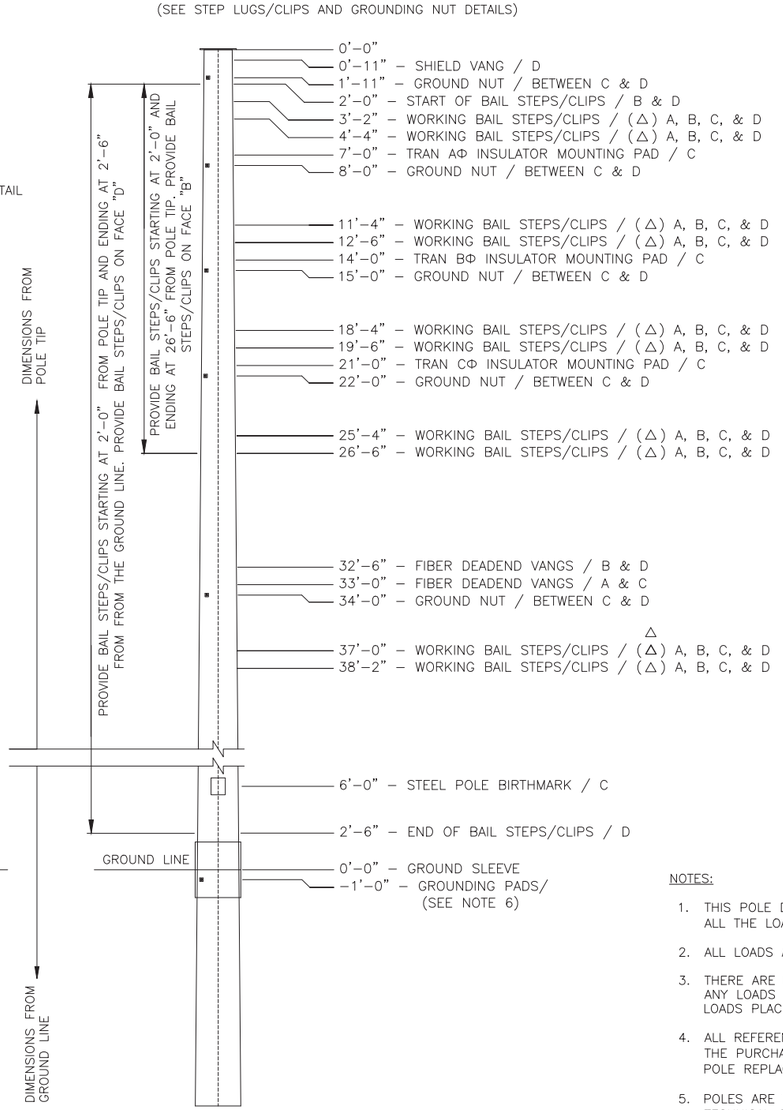


IN–LINE FACE D
(LOOKING EAST DIRECTION)
(NOT TO SCALE)

TRANSVERSE FACE C
(LOOKING NORTH DIRECTION)
(NOT TO SCALE)

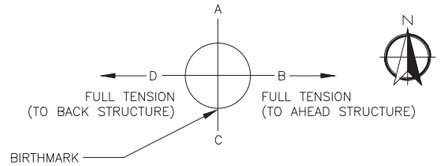
DRILLING DETAIL

(SEE STEP LUGS/CLIPS AND GROUNDING NUT DETAILS)



TRANSVERSE FACE C
(LOOKING NORTH DIRECTION)
(NOT TO SCALE)

POLE TIP VIEW



NOTES:

1. THIS POLE DRAWING IS ACCOMPANIED BY PLS–POLE BACKUP FILES "A1321.STR37.BAK", CONTAINING ALL THE LOADS SPECIFIED IN REFERENCED VECTOR LOADS (.LCA) FILES FOR STRUCTURE #37.
2. ALL LOADS ARE ULTIMATE LOADS AND INCLUDE APPROPRIATE OLF.
3. THERE ARE NO LOADS PLACED ON SOME DEAD–END FIBER VANGS. ALL VANGS THAT DO NOT HAVE ANY LOADS PLACED ON THEM SHOULD BE DESIGNED TO BE THE SAME AS THOSE THAT DO HAVE LOADS PLACED ON THEM.
4. ALL REFERENCED DETAILS ARE PROVIDED IN THE "PROJECT SPECIFIC TECHNICAL SPECIFICATIONS FOR THE PURCHASE OF STEEL TRANSMISSION POLES FOR THE CIRCUIT 666 STRUCTURE #31 THRU #38 POLE REPLACEMENT STR #32, 33, 34, 35, 36, 37, 38A, AND 38B".
5. POLES ARE TO BE DESIGNED TO MEET ALL OF THE REQUIREMENTS FOUND IN THE "GENERAL TECHNICAL SPECIFICATIONS FOR THE PURCHASE OF STEEL TRANSMISSION POLES", REVISION 1.3, UPDATED ON 12/30/2016.
6. TWO (2) GROUNDING PADS ARE TO BE PROVIDED. ONE PAD IS TO BE PLACED BETWEEN FACES C AND D, AND THE OTHER PAD IS TO BE PLACED BETWEEN FACES A AND B. SEE SPECS FOR DETAIL.

NO.	REVISION	DATE	BY	CH'D	APP'D

REVISION	DATE	BY	CH'D	APP'D

ENGINEERING RECORD	BY	DATE
STATUS	BY	DATE
ASSIGNED	O&M	10/20/15
DESIGNED	SMC	2/21/17
DRAWN	SMC	2/22/17
CHECKED	EV	2/24/17
APP'D	EV	2/24/17

JEA
BUILDING COMMUNITY

STEEL POLE DRAWINGS
FOR
CIRCUIT 666 STRUCUTRE 31 THRU 38 REPLACEMENT
STR #37

SCALE: N/A

PROJECT DESIGN SEGMENT 20410

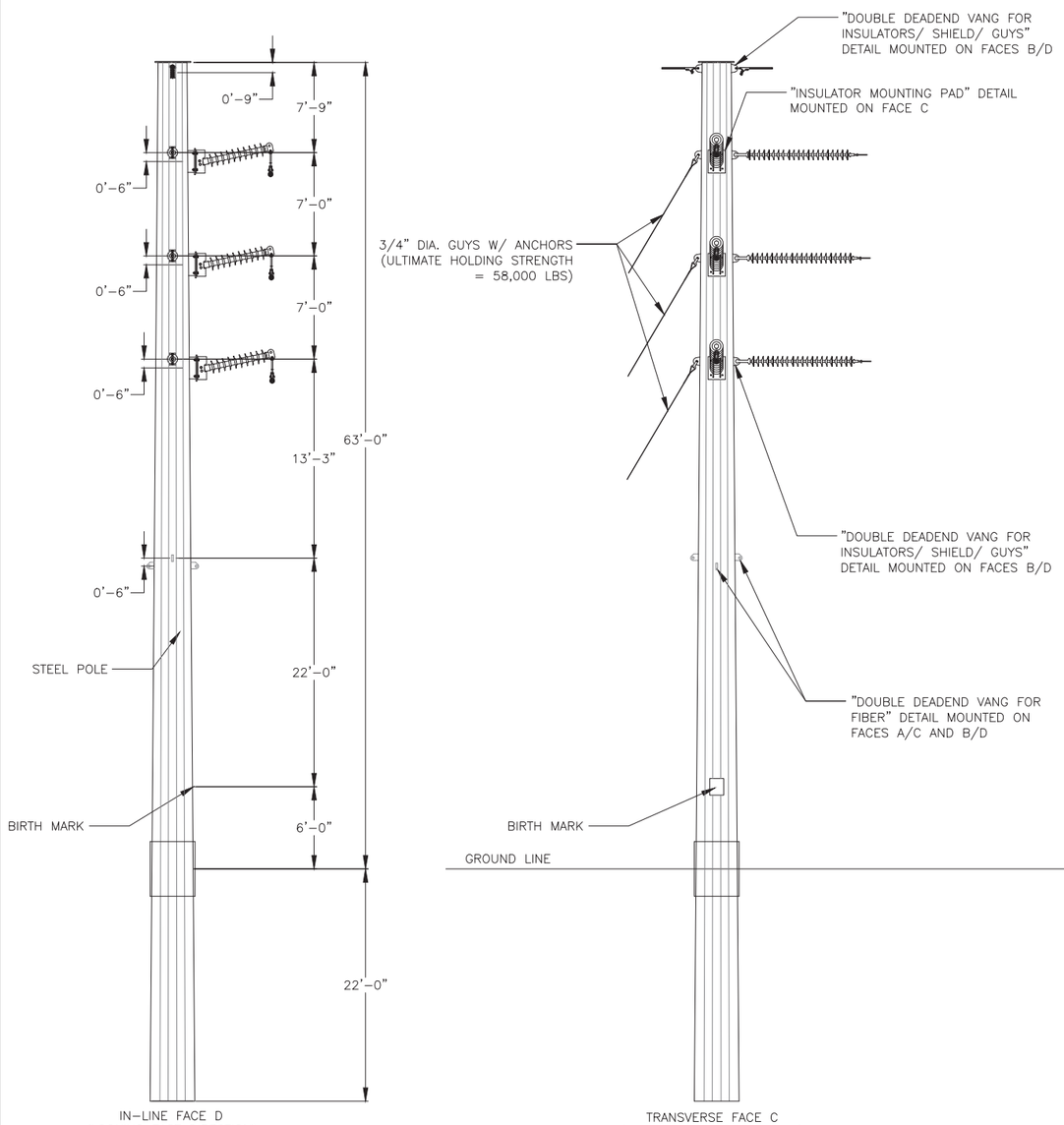
PROJECT NO. 8003720

DRAWING NO. TR1313-1

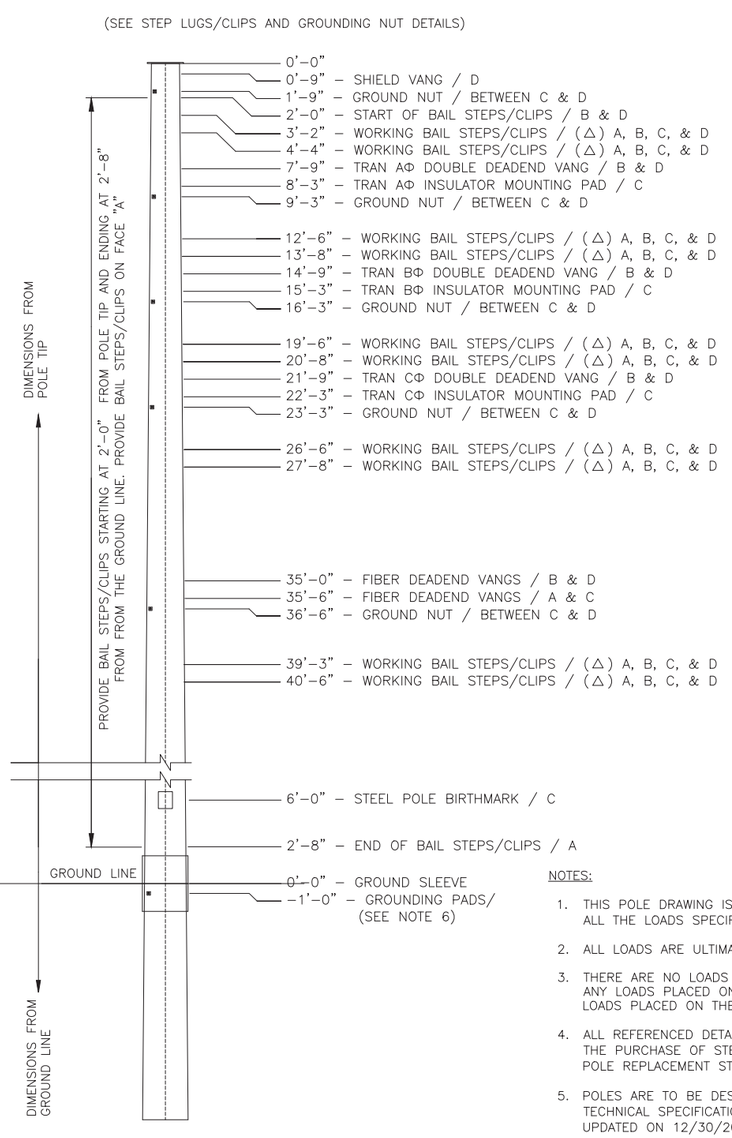
SHEET NO. SHEET 4 OF 5

STEEL POLE DRAWINGS
FOR STRUCTURE TYPE A1356 SINGLE DEAD-END 180°, FULL TENSION TO POST, 3-PHASE W/ FIBER FOR FUTURE USE
STRUCTURE #38A & 38B

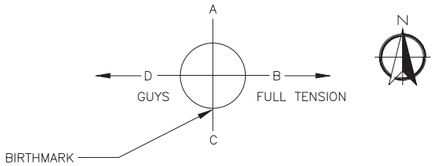
ELEVATION VIEW



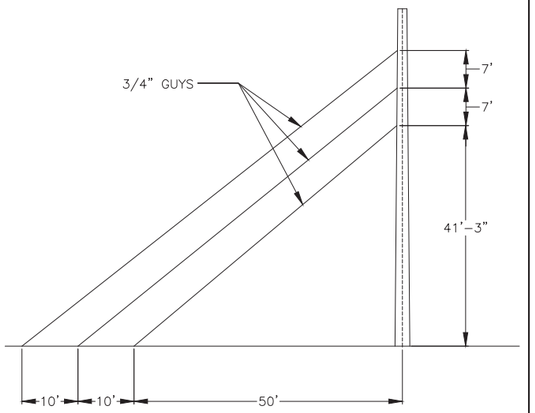
DRILLING DETAIL



POLE TIP VIEW



GUY ARRANGEMENT



NOTES:

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NO.	REVISION	DATE	BY	CH'D	APP'D

REVISION	DATE	BY	CH'D	APP'D

ENGINEERING RECORD	BY	DATE
STATUS		
ASSIGNED	O&M	10/20/15
DESIGNED	SMC	2/21/17
DRAWN	SMC	2/27/17
CHECKED	EV	2/28/17
APP'D	EV	2/28/17

JEA
BUILDING COMMUNITY

STEEL POLE DRAWINGS
FOR
CIRCUIT 666 STRUCUTRE 31 THRU 38 REPLACEMENT
STR #38A & #38B

SCALE: N/A

PROJECT DESIGN SEGMENT 20410

PROJECT NO. 8003720

DRAWING NO. TR1313-1

SHEET NO. SHEET 5 OF 5

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8. POLE/CAISSON ATTACHMENT DETAILS

1) Shield Vang Attachment Details
2) Transmission Insulator Mounting Pad Attachment Details
3) Double Dead-end Vang for Insulators/Shield/Guys Attachment Details
4) Double Dead-end Vang for Fiber Attachment Details
5) Step Lugs/Clips/ Bail Steps Attachment Details
6) Grounding Attachment Details
7) Steel Caisson Details

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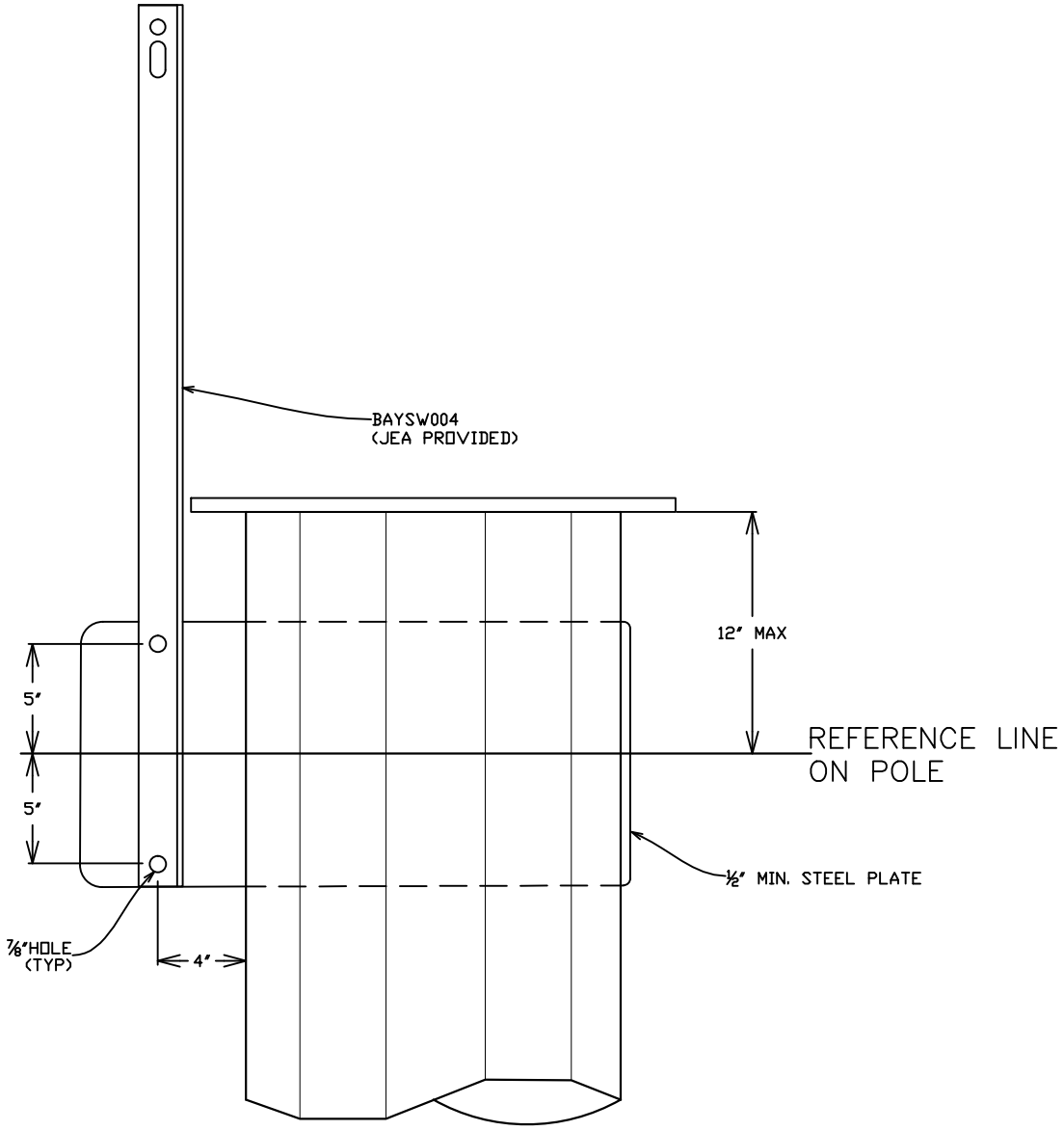
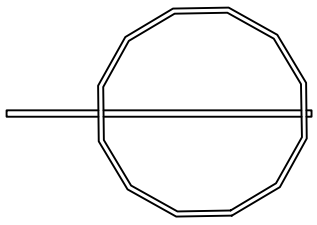




NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED

TRANSMISSION STANDARDS

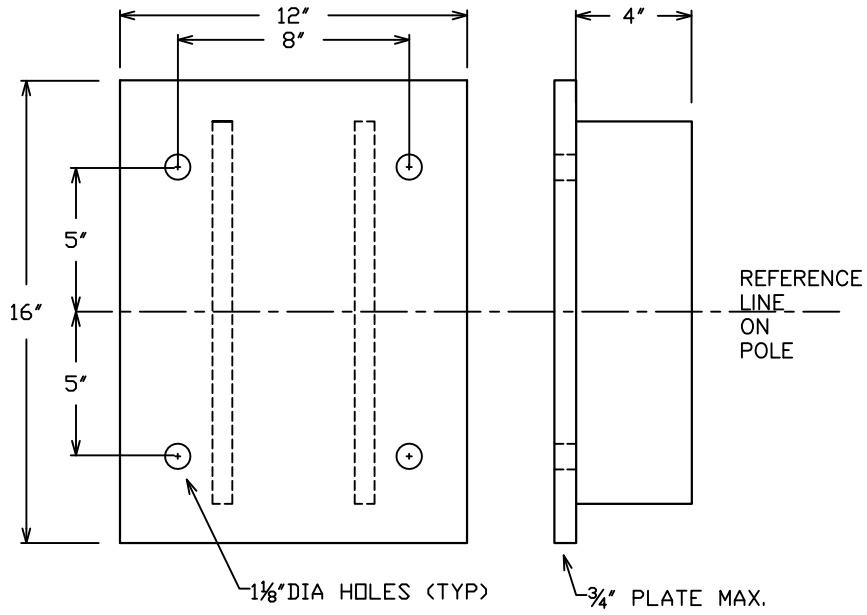
SHIELD VANG

SCALE: NOT TO SCALE

STEEL POLE

JEA BUILDING COMMUNITY

INSULATOR MOUNTING PAD



NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED

TRANSMISSION STANDARDS

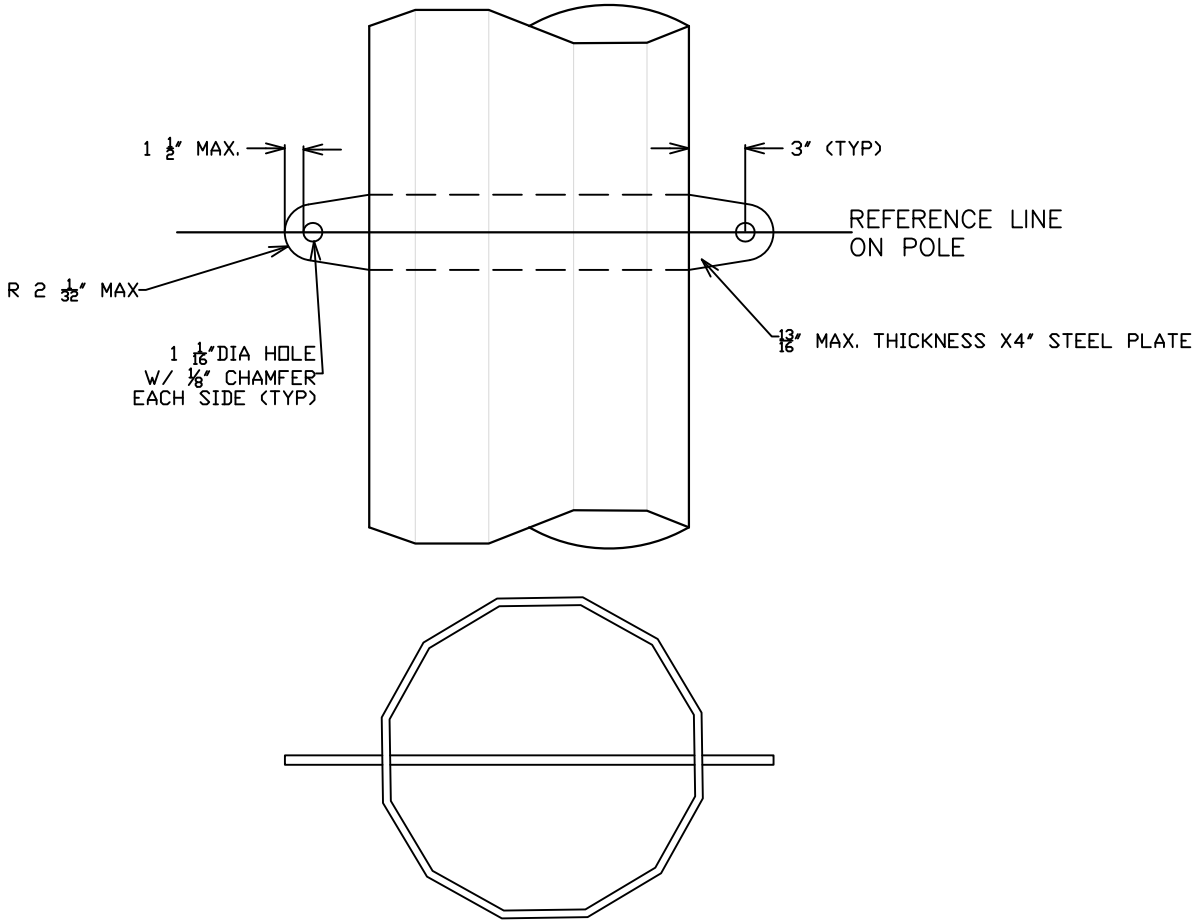
INSULATOR MOUNTING PAD

SCALE: NOT TO SCALE

STEEL POLE

JEA BUILDING COMMUNITY

DOUBLE DEADEND VANG FOR INSULATORS/SHIELD/GUYS



NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED

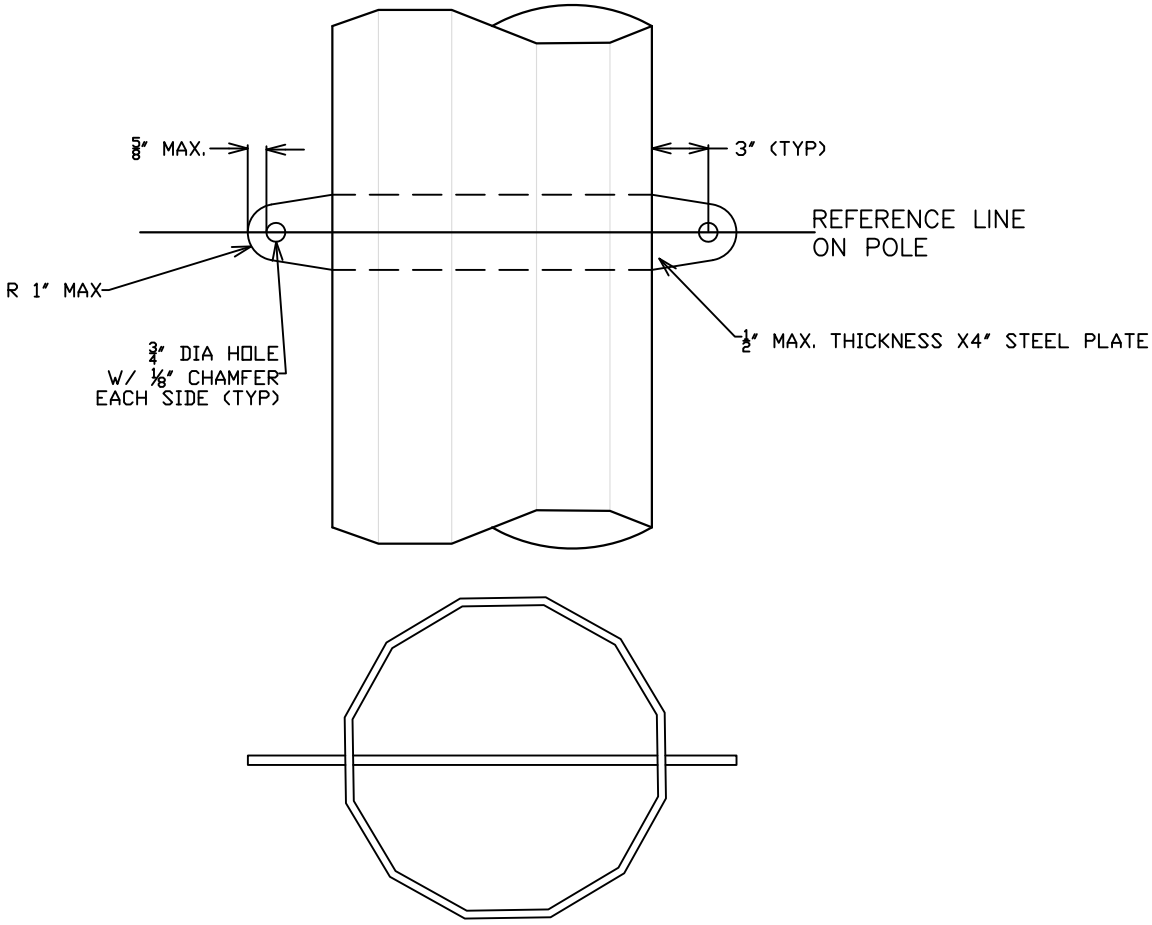
TRANSMISSION STANDARDS

SCALE: NOT TO SCALE

DEADEND VANG
STEEL POLE

JEA BUILDING COMMUNITY

DOUBLE DEADEND VANG FOR FIBER



NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED

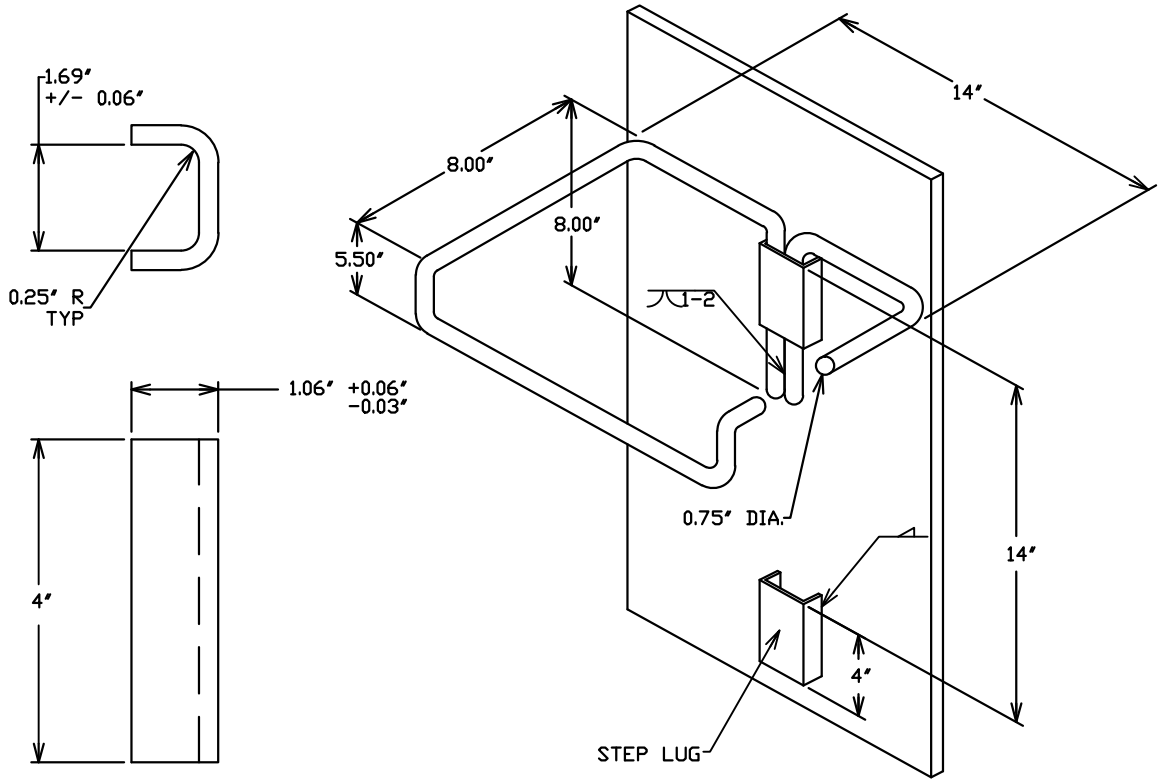
TRANSMISSION STANDARDS

SCALE: NOT TO SCALE

DEADEND VANG

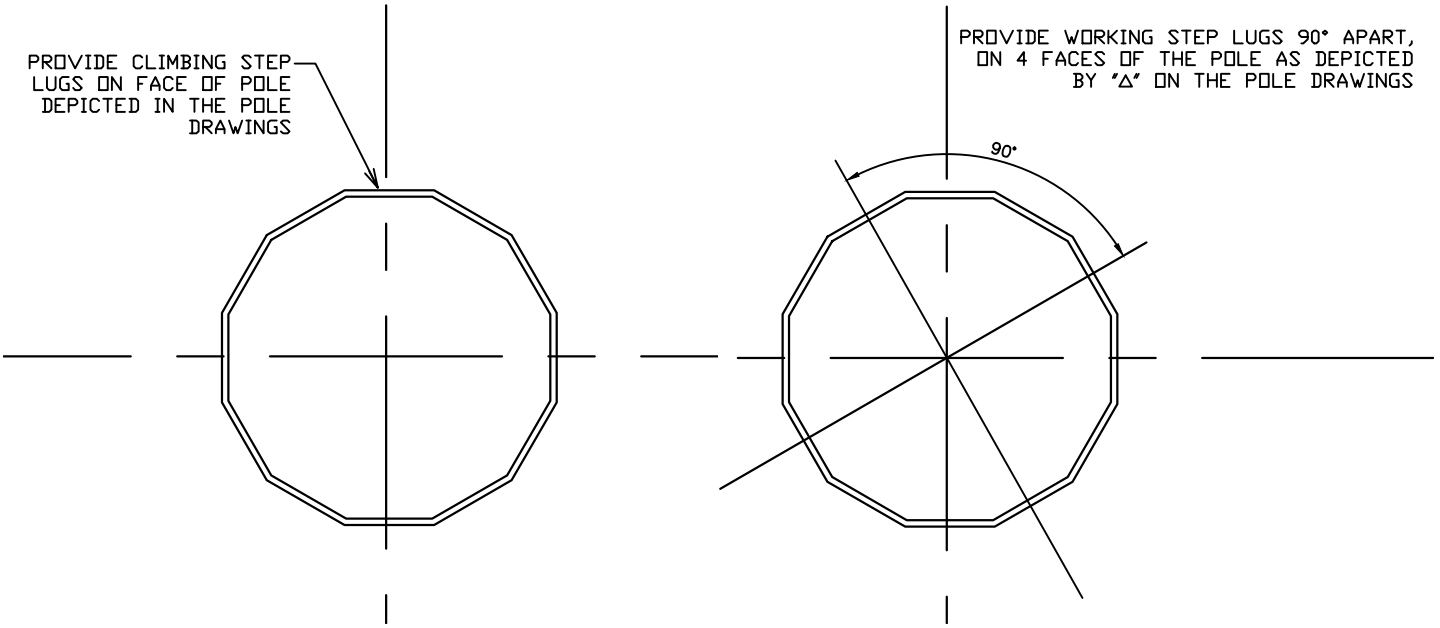
STEEL POLE

JEA BUILDING COMMUNITY



LUG DETAIL

STEP DETAIL



CLIMBING STEPS

WORKING STEPS

NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED

TRANSMISSION STANDARDS

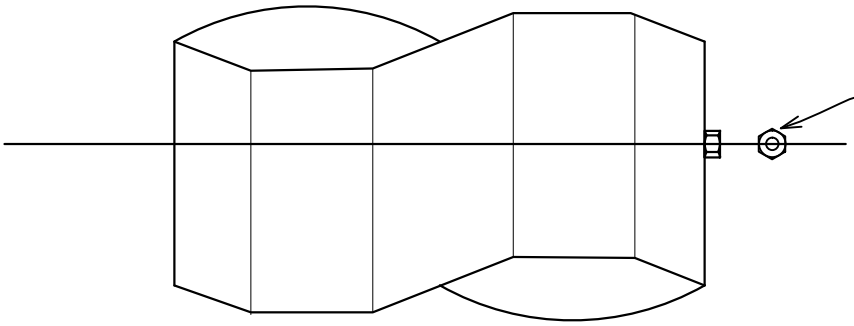
STEP DETAILS

SCALE: NOT TO SCALE

STEEL POLE

JEA BUILDING COMMUNITY

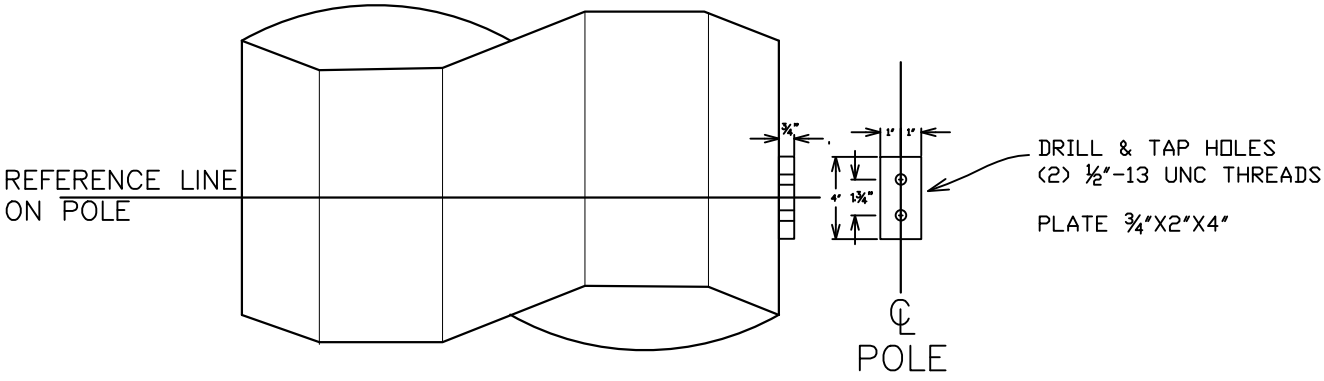
GROUNDING NUT DETAIL



½"-13 UNC NUT WELDED TO POLE. THREADS SHALL BE PROTECTED DURING GALVANIZING PROCESS.

QUANTITY AND LOCATIONS AS SHOWN ON POLE DETAIL DRAWING

GROUNDING PAD DETAIL



NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED

TRANSMISSION STANDARDS

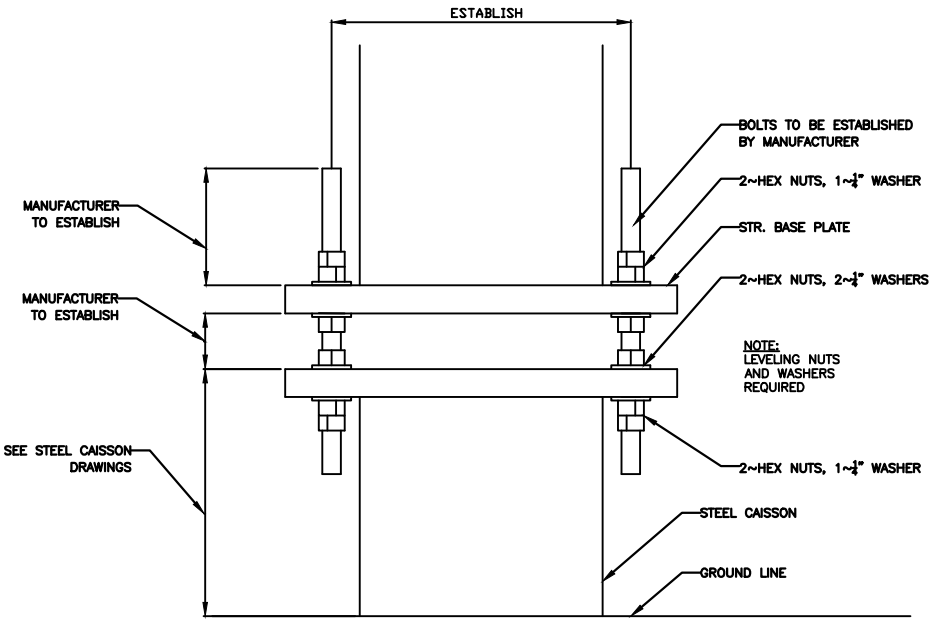
GROUNDING

SCALE: NOT TO SCALE

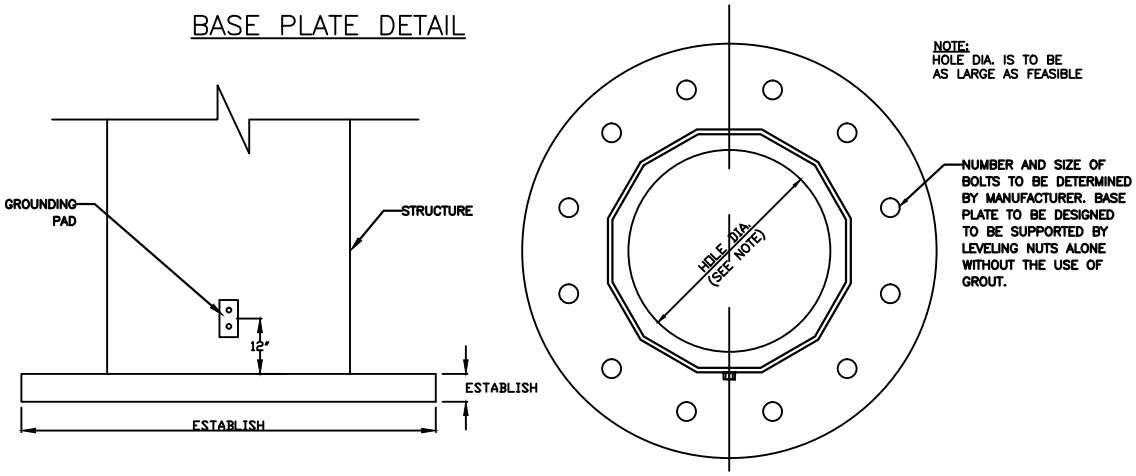
STEEL POLE

JEA BUILDING COMMUNITY

STEEL CAISSON DETAIL



BASE PLATE DETAIL



NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED

TRANSMISSION STANDARDS

ANCHOR BOLTS & BASE PLATE

SCALE: NOT TO SCALE

STEEL POLE

JEA BUILDING COMMUNITY

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9. PLS-POLE BACKUP FILES

1) Structure Type A1321 – 70 – Single Post, Tangent Shield, 3-Phase, W/ Fiber For Future Use

   Structure #32

   a. See electronically attached PLS-POLE back up file “a1321.str32.bak”

2) Structure Type A1321 – 75 – Single Post, Tangent Shield, 3-Phase, W/ Fiber For Future Use

   Structure(s) #33 & 36

   a. See electronically attached PLS-POLE back up file “a1321.str33_36.bak”

3) Structure Type A1321 – 85 – Single Post, Tangent Shield, 3-Phase, W/ Fiber For Future Use

   Structure(s) #34 & 35

   a. See electronically attached PLS-POLE back up file “a1321.str34_35.bak”

4) Structure Type A1321 – 95 – Single Post, Tangent Shield, 3-Phase, W/ Fiber For Future Use

   Structure #37

   a. See electronically attached PLS-POLE back up file “a1321.str37.bak”

5) Structure Type A1356 – 85 – Single Dead-End 180^0, Full Tension To Post, 3-Phase, W/ Fiber For Future Use

   Structure(s) #38A & 38B

   a. See electronically attached PLS-POLE back up file “a1356.str38a_38b.bak”