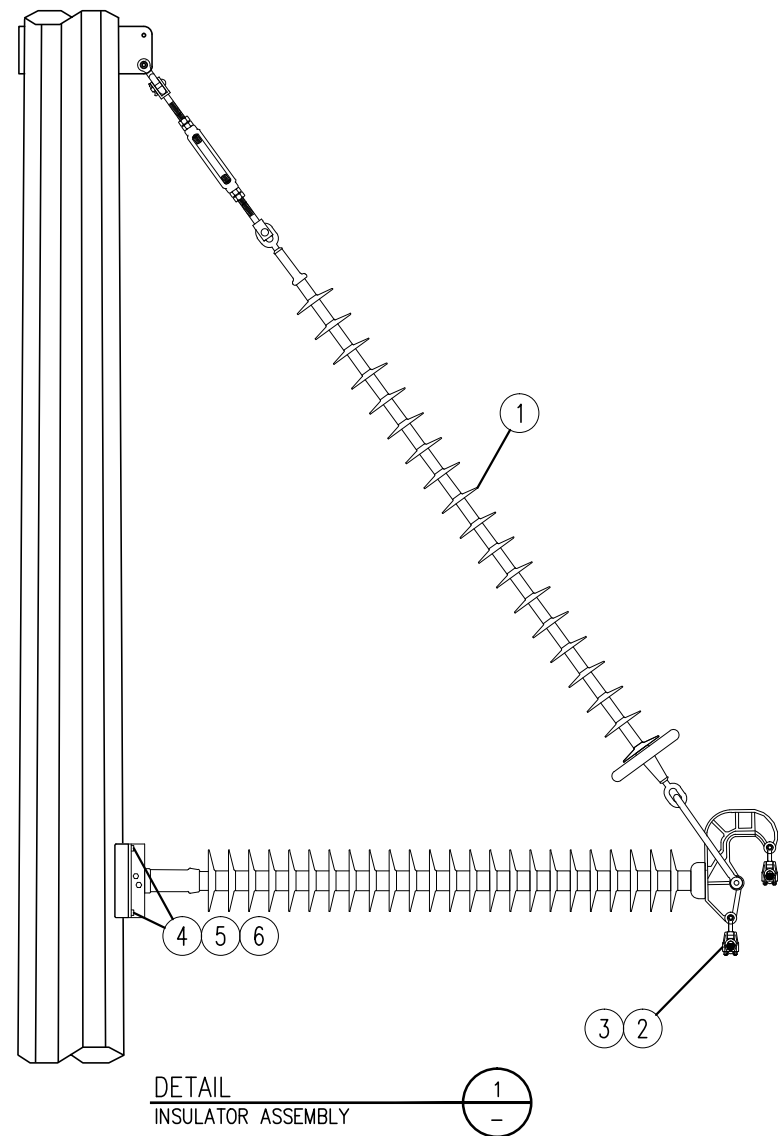
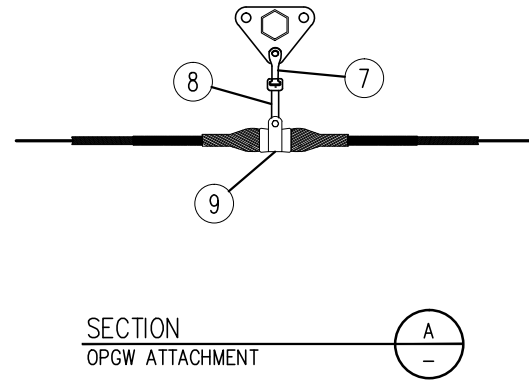
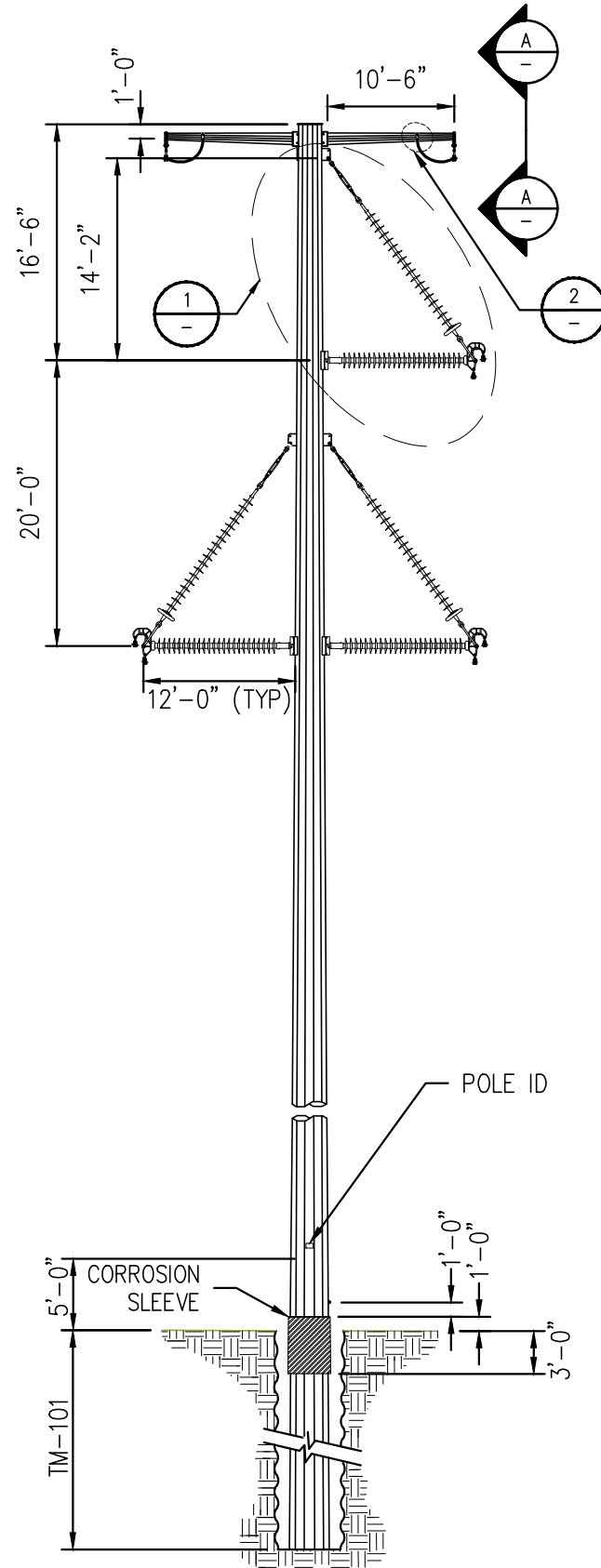


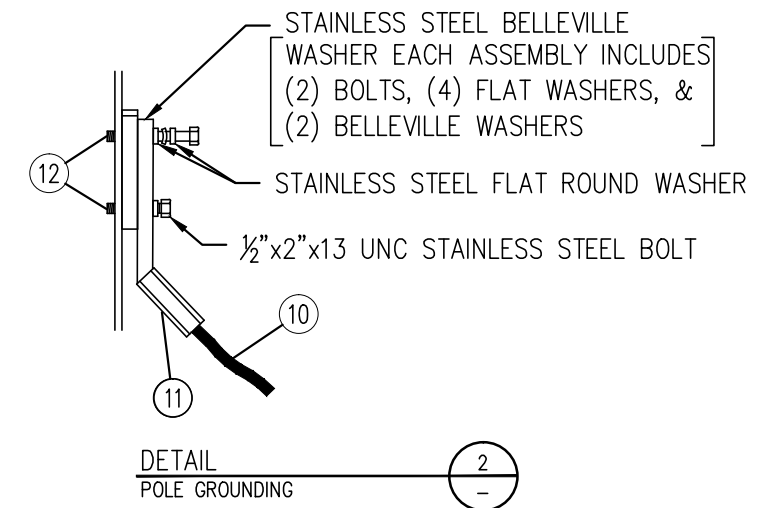
PLEASANT RIDGE EXHIBIT
98



ITEM	QTY	MATERIAL DESCRIPTION FOR TSP-345S-2
1	3	BRACED POST INSULATOR ASSEMBLY, 18" "RAM" bundle assembly
2	6	SUSPENSION CLAMP for 795 26/7 ACSR, MPS #LS-7-N
3	6	ARMOR ROD, for 795 KCMIL 26/7 ACSR "DRAKE"
4	12	5/8" X 2-1/4" MACHINE BOLT, galvanized
5	12	5/8" LOCK WASHER, galvanized
6	12	5/8" ROUND WASHER, galvanized
7	2	Y-CLEVIS-BALL, 30 kips
8	2	SOCKET EYE, 25 kips
9	2	SUSPENSION ASSEMBLY, for OPGW, fiberlign w/ground strap, 20 kips
10	40	GROUND WIRE, #4 copper stranded, bare, in feet, AWG #STC-03
11	2	COMPRESSION TERMINAL, 2-hole for #4 cu, BURNDY# YA4C2N
12	2	STAINLESS STEEL BOLT ASSEMBLY, CMC #SBA20-50 or equal

GENERAL NOTES

- REFER TO DRAWING INV-B-T003-9 FOR FOUNDATION TYPE AND DEPTH.
- REFER TO DRAWING INV-B-T003-11 FOR POLE GROUNDING DETAIL.



ISSUED FOR REVIEW

FILE LOCATION: I:\INVENERGY WIND, LLC\INV-121 PLEASANT RIDGE TRANSMISSION\CADD\WORKING\STRUCTURE\INV-B-T003-1.DWG LAST SAVED BY: mdcottet 11/11/2014 9:54 AM PLOTTED BY: Michael D. Cottet 11/11/2014 9:55 AM Tab: TSP-345S-2

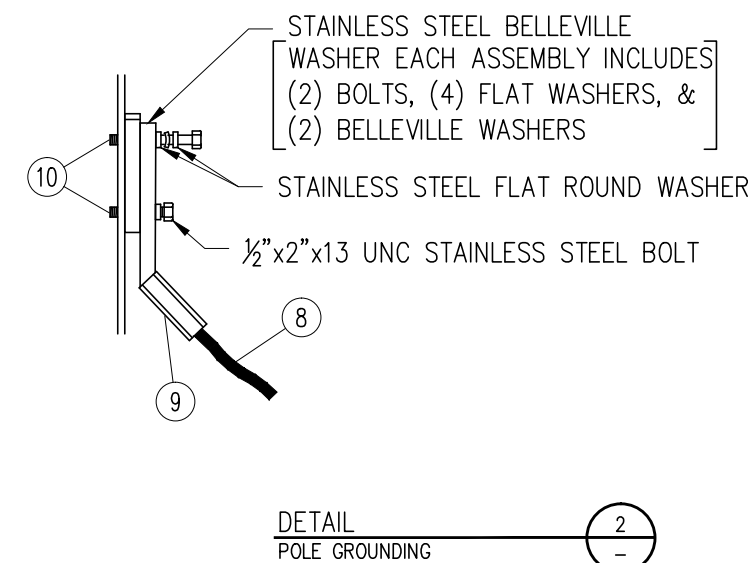
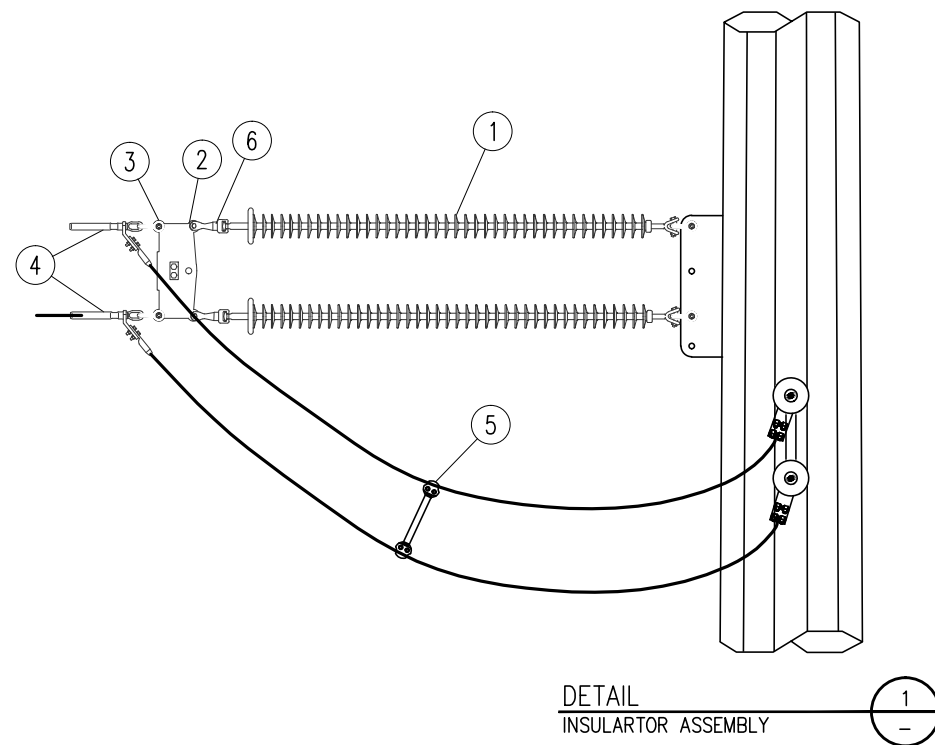
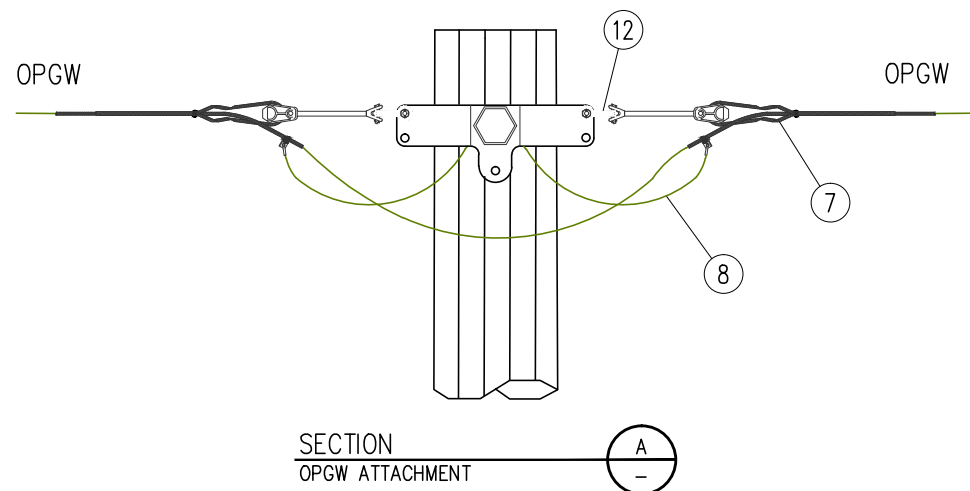
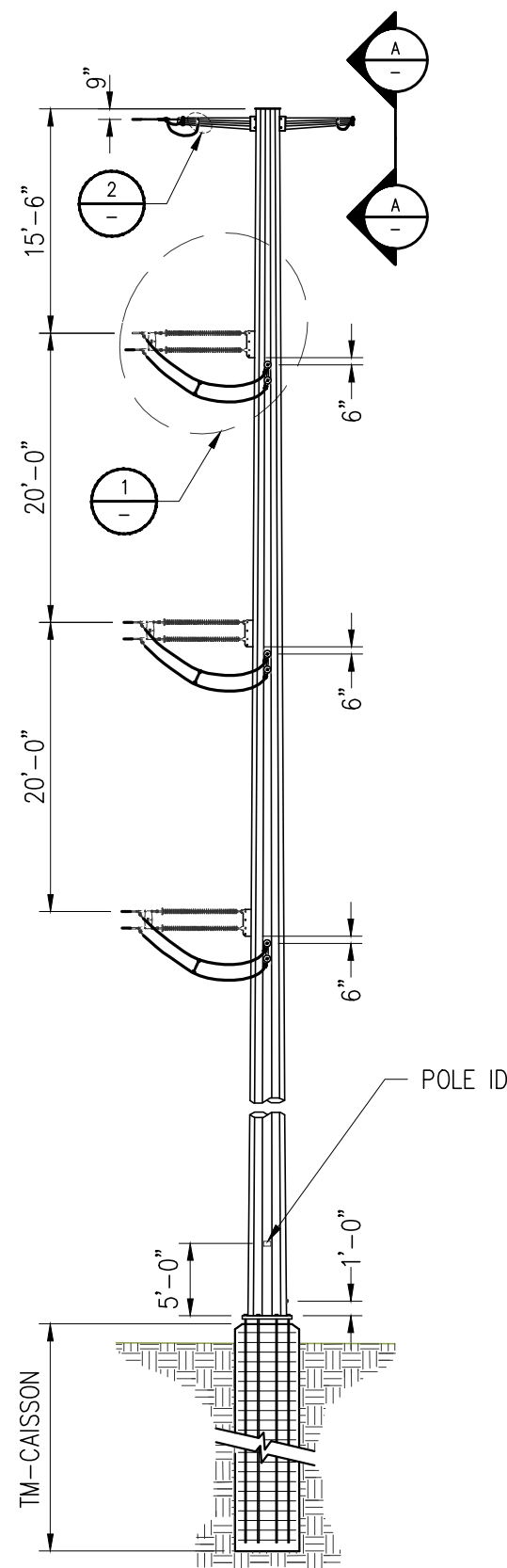
Engineering with Distinction
ECI ELECTRICAL CONSULTANTS, INC.
ILLINOIS • MISSOURI • IOWA

NO	REVISION	DATE	BY	APR
A	ISSUED FOR 30% REVIEW	10/31/14	MDC	MCH

Invenergy

ENGINEERING RECORD		DATE
DRAWN	MDC	7/30/14
DESIGNED	MCH	7/30/14
CHECKED		
APPROVED		
DWG SCALE: NONE	PLT SCALE:	

PLEASANT RIDGE 345 kV TRANSMISSION LINE
SINGLE CIRCUIT STEEL TANGENT STRUCTURE
TSP-345S-2
DWG. NAME: INV-B-T003-1 REVISION NO: A



ITEM	QTY	MATERIAL DESCRIPTION FOR TDE-345S-90
1	12	INSULATOR, polymer suspension 50 kips, y-clevis-ball fitting, MPS# S248129VB04
2	6	YOKE PLATE, rectangular, 60 kips, HPS# YPR6011706
3	24	ANCHOR SHACKLE, w/corona nut, 60 kips, HPS# AS50WBKN
4	12	COMPRESSION DEADEND, for 795 kcmil 26/7 ACSR "DRAKE", HPS# A0312451
5	6	SPACER, 18" bundle, PLP # CGTS-0112
6	12	SOCKET-CLEVIS, w/corona nut, 50 kips, HPS# SC501BNKSN
7	2	DEADEND ASSEMBLY, for OPGW, w/extension link, shackle and ground PLP# 2890002C4E2S2G
8	40	GROUND WIRE, #4 copper stranded, bare, in feet, AWG #STC-03
9	3	COMPRESSION TERMINAL, 2-hole for #4 cu, BURNDY# YA4C2N
10	3	STAINLESS STEEL BOLT ASSEMBLY, CMC #SBA20-50 or equal
11	1	ANCHOR SHACKLE, 30 kips, HPS# AS25BNK

GENERAL NOTES

- REFER TO DRAWING INV-B-T003-12 FOR FOUNDATION TYPE AND DEPTH.
- REFER TO DRAWING INV-B-T003-11 FOR POLE GROUNDING DETAIL.

ISSUED FOR REVIEW

FILE LOCATION: I:\INVENERGY WIND, LLC\INV-121 PLEASANT RIDGE TRANSMISSION\CADD\WORKING\STRUCTURE\INV-B-T003-3.DWG LAST SAVED BY: mdcottet 10/31/2014 2:13 PM PLOTTED BY: Michelle L. Schoof 10/31/2014 3:07 PM Tab: TDE-345-90

ECI ELECTRICAL CONSULTANTS, INC.

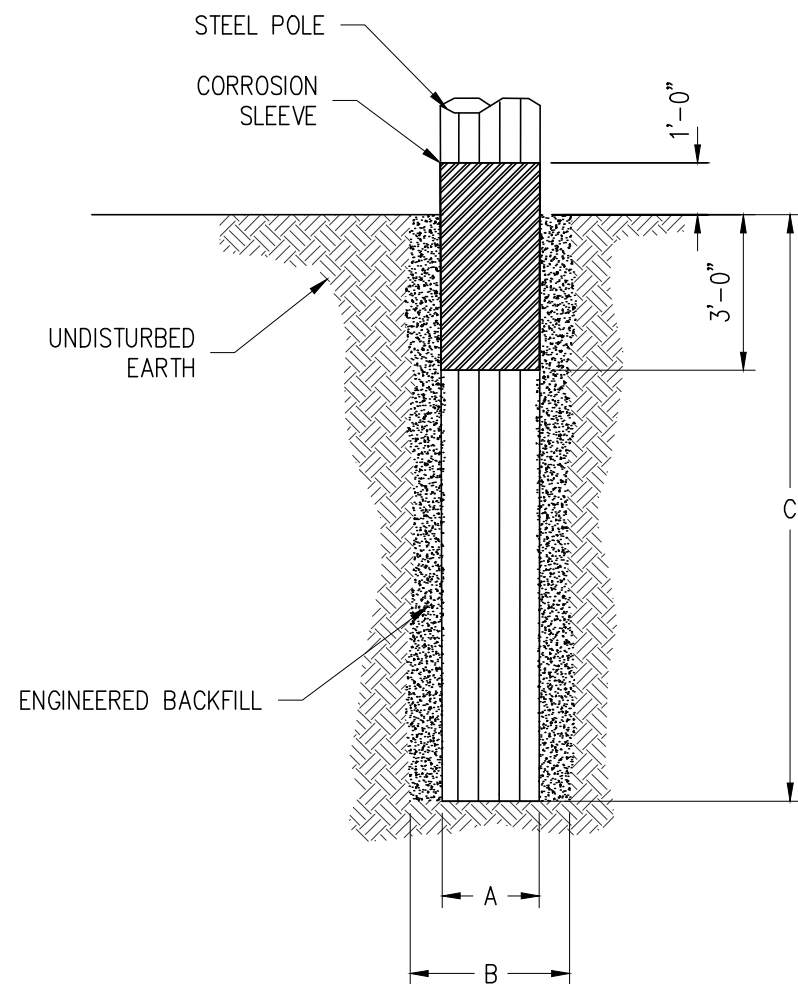
Engineering with Distinction

NO	REVISION	DATE	BY	APR
A	ISSUED FOR 30% REVIEW	10/31/14	MDC	MCH

Invenergy

ENGINEERING RECORD		DATE
DRAWN	MDC	7/30/14
DESIGNED	MCH	7/30/14
CHECKED		
APPROVED		
DWG SCALE: NONE	PLT SCALE:	

PLEASANT RIDGE 345 kV TRANSMISSION LINE	
SINGLE CIRCUIT STEEL DEADEND STRUCTURE	
TDE-345S-90	
DWG. NAME: INV-B-T003-3	REVISION NO: A



STRUCTURE TYPE	DIAMETER OF POLE BUTT (IN FEET)	MINIMUM HOLE WIDTH (IN FEET)	DEPTH OF BURIAL (IN FEET)
	A	B	C
XX' TSP-138S	X.X'	4'-0"	15'-0"

ECI ELECTRICAL CONSULTANTS, INC.
 BILLOREKS BOSTATA

NO	REVISION	DATE	BY	APR
A	ISSUED FOR 30% REVIEW	3/12	MDC	MCH

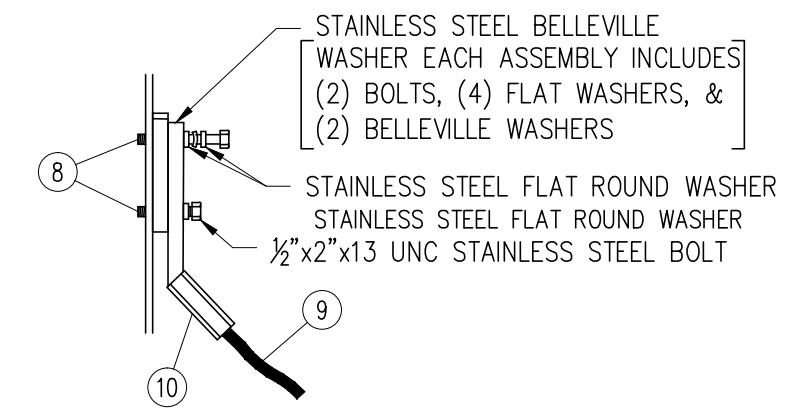
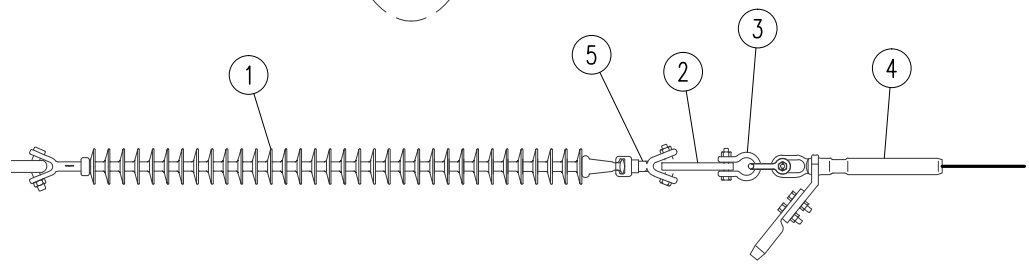
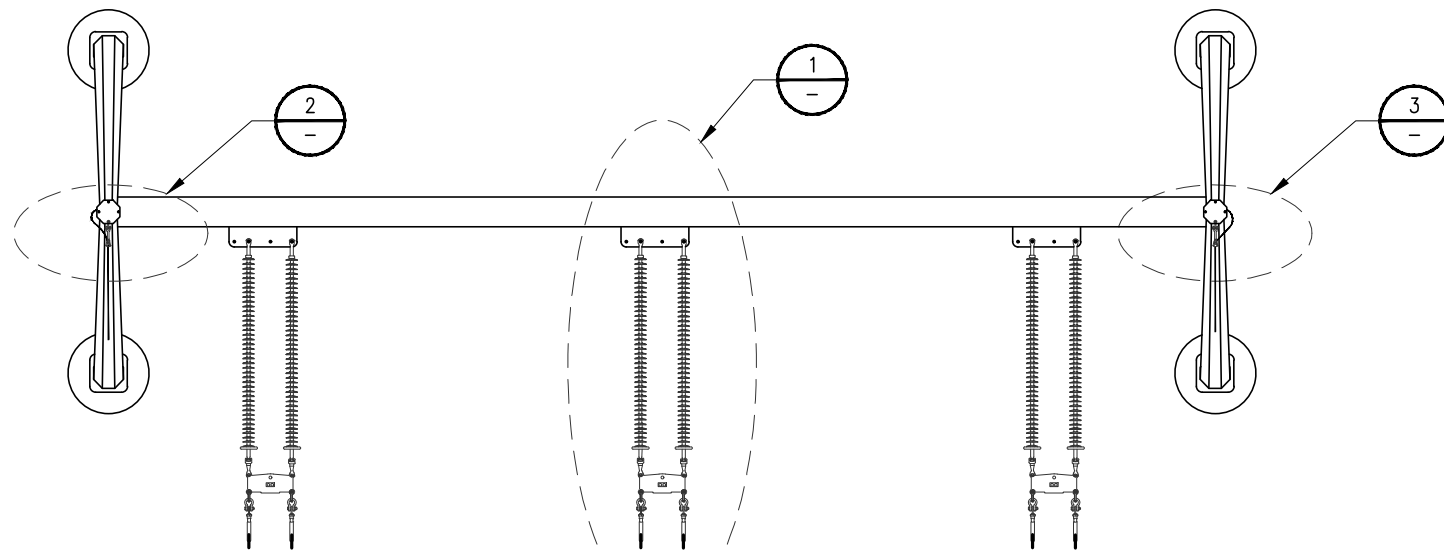
Invenergy

ENGINEERING RECORD		DATE
DRAWN	MDC	9/15/14
DESIGNED	MCH	9/15/14
CHECKED		
APPROVED		
DWG SCALE: NONE	PLT SCALE: 1:1	

PLEASANT RIDGE 345 kV TRANSMISSION LINE
FOUNDATION DETAIL DIRECT BURIAL
TM-101

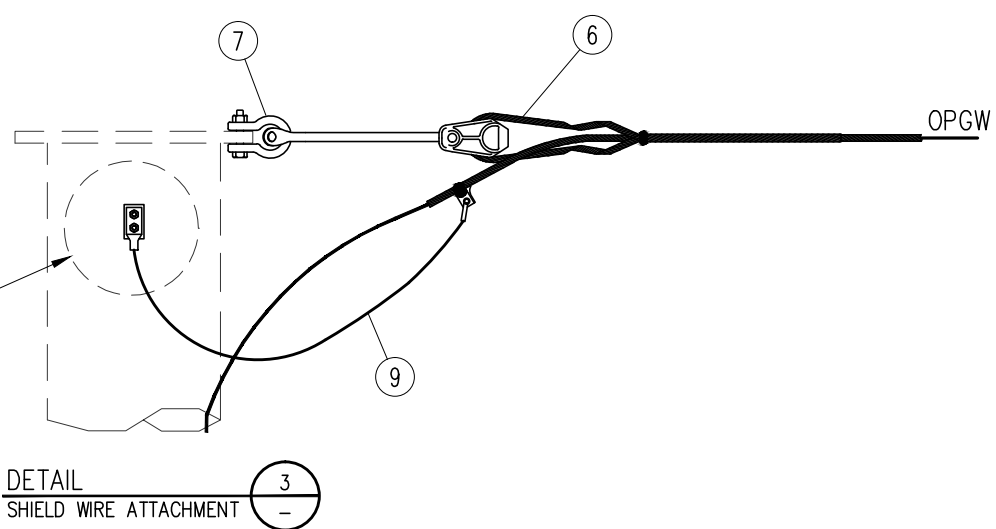
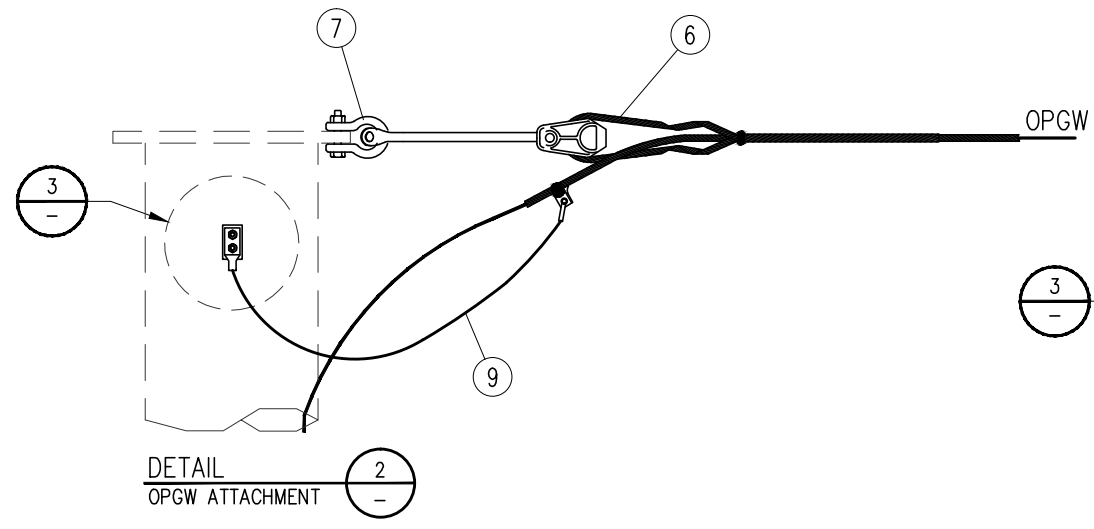
DWG. NAME: INV-B-T003-9 REVISION NO : A

ITEM	QTY	MATERIAL DESCRIPTION FOR TM-DEA
1	6	INSULATOR, polymer suspension 50 kips, y-clevis-ball fitting, MPS# S248129VB04
2	3	YOKE PLATE, rectangular, 60 kips, HPS# YPR6011706
3	6	ANCHOR SHACKLE, w/corona nut, 60 kips, HPS# AS50WBNK
4	6	COMPRESSION DEADEND, for 795 komil 26/7 ACSR "DRAKE", HPS# A0312451
5	6	SOCKET-CLEVIS, w/corona nut, 50 kips, HPS# SC501BNKSN
6	2	DEADEND ASSEMBLY, for OPGW, w/extension link, shackle and ground PLP# 2890002C4E2S2G
7	2	ANCHOR SHACKLE, 30 kips, HPS# AS25BNK
8	2	STAINLESS STEEL BOLT ASSEMBLY, CMC #SBA20-50 or equal
9	20	GROUND WIRE, #4 copper stranded, bare, in feet, AWG #STC-03
10	2	CONNECTOR, #4 copper compression to NEMA 2-hole pad, HPS # VAUL412BN or equal



DETAIL
PHASE ATTACHMENT 1

DETAIL
POLE GROUNDING 3



DETAIL
OPGW ATTACHMENT 2

DETAIL
SHIELD WIRE ATTACHMENT 3

ISSUED FOR REVIEW

FILE LOCATION: I:\INVENERGY WIND, LLC\INV-121 PLEASANT RIDGE TRANSMISSION\CADD\WORKING\STRUCTURE\INV-B-T003-10.DWG LAST SAVED BY: mlburteill 11/11/2014 7:48 AM PLOTTED BY: Michelle L. Schoof 11/11/2014 7:50 AM Tab: TM-DEA



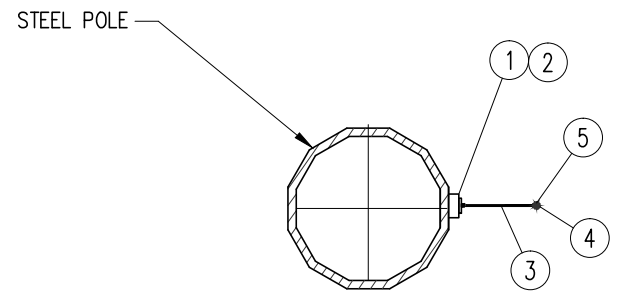
NO	REVISION	DATE	BY	APR
A	ISSUED FOR 30% REVIEW	9/15/14	MDC	MCH

Invenergy

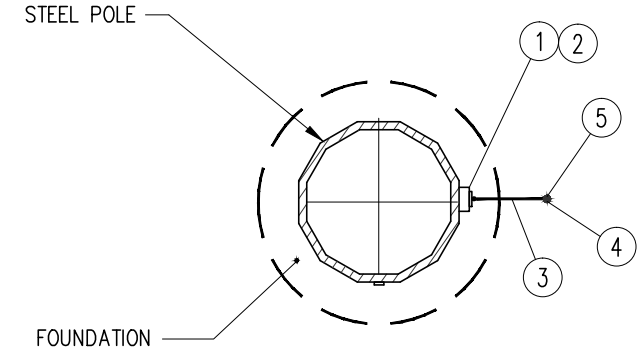
ENGINEERING RECORD		DATE
DRAWN	MDC	9/11/14
DESIGNED	MCH	9/11/14
CHECKED		
APPROVED		
DWG SCALE: NONE	PLT SCALE:	

PLEASANT RIDGE 345 kV TRANSMISSION LINE	
SUBSTATION DEADEND DETAILS	
TM-DEA	
DWG. NAME: INV-B-T003-10	REVISION NO: A

ITEM	QTY	MATERIAL DESCRIPTION FOR TM-SPG
1	1	CONNECTOR, #4 copper compression to NEMA 2-hole pad, HPS # VAUL412BN or equal
2	1	STAINLESS STEEL BOLT ASSEMBLY, CMC #SBA20-50 or equal
3	20	GROUND WIRE, #4 copper stranded, bare, in feet, AWG #STC-03
4	1	GROUND ROD, copper clad, 3/4" x 8'-0", HPS# C613480 or equal
5	1	CONNECTOR, 3/4" rod to #4 copper stranded, bare, MPS# J8493 or equal

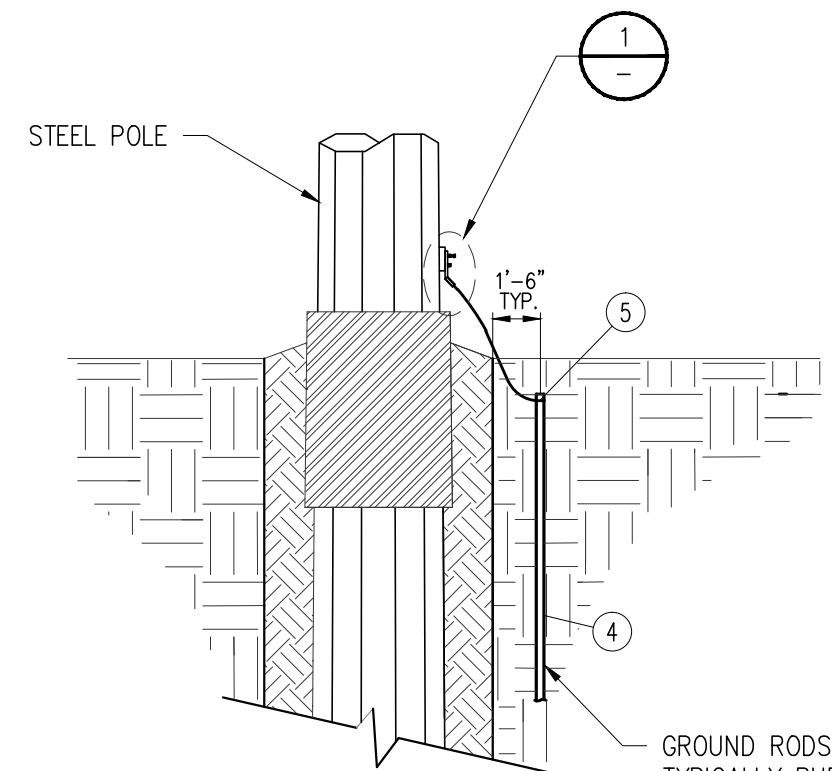


PLAN



PLAN

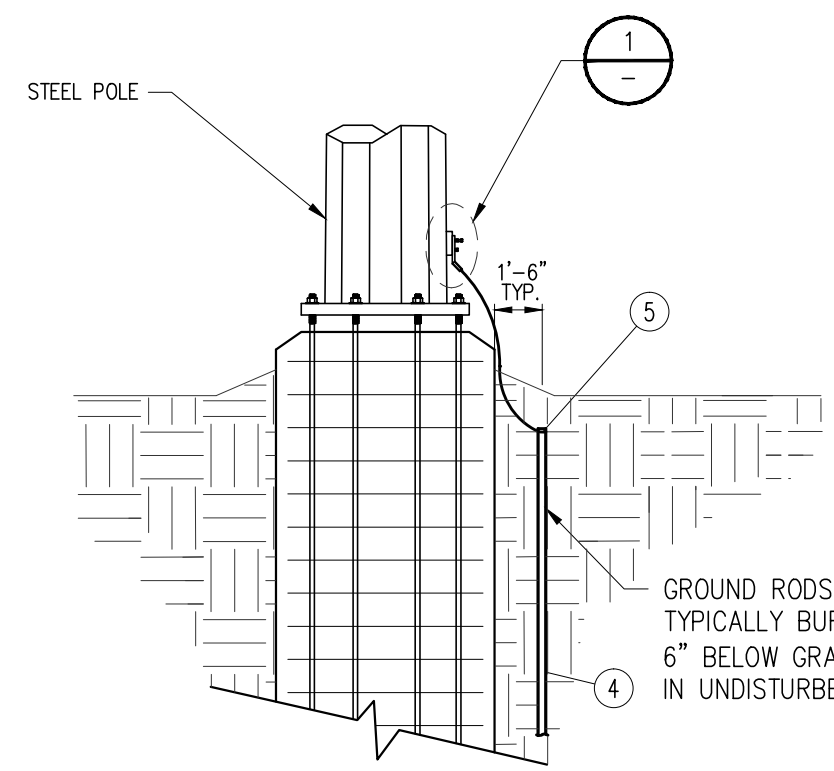
DETAIL SCALE:



ELEVATION

DIRECT EARTH SET

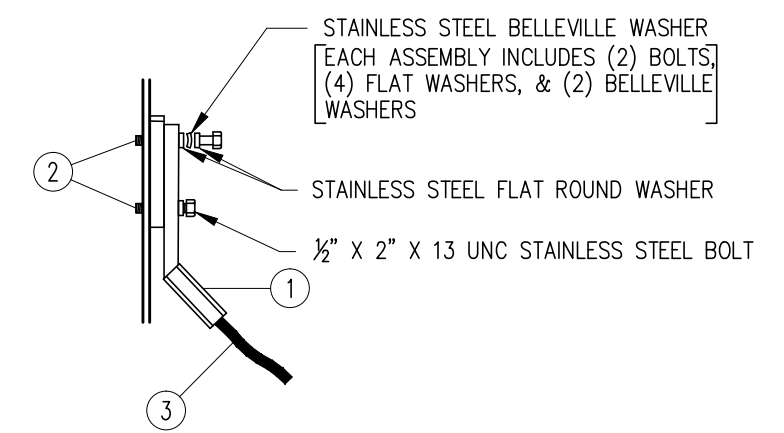
GROUND RODS TYPICALLY BURIED 6" BELOW GRADE IN UNDISTURBED SOIL



ELEVATION

CAISSON FOUNDATION

GROUND RODS TYPICALLY BURIED 6" BELOW GRADE IN UNDISTURBED SOIL



STAINLESS STEEL BELLEVILLE WASHER
EACH ASSEMBLY INCLUDES (2) BOLTS, (4) FLAT WASHERS, & (2) BELLEVILLE WASHERS

STAINLESS STEEL FLAT ROUND WASHER
1/2" X 2" X 13 UNC STAINLESS STEEL BOLT

ISSUED FOR REVIEW

FILE LOCATION: I:\INVENERGY WIND, LLC\INV-121 PLEASANT RIDGE TRANSMISSION\CADD\WORKING\STRUCTURE\INV-B-T003-11.DWG LAST SAVED BY: mdcottet 9/15/2014 5:26 PM PLOTTED BY: Michelle L. Schoof 10/31/2014 3:07 PM Tab:TM-SPG

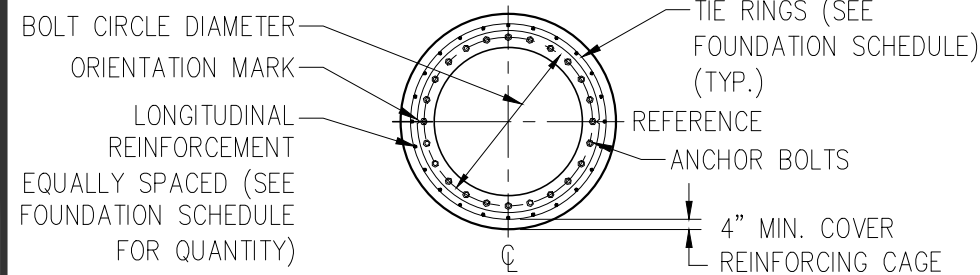
ECI ELECTRICAL CONSULTANTS, INC.
Engineering with Distinction
WILLIAMS, MONTANA

NO	REVISION	DATE	BY	APR
A	ISSUED FOR 30% REVIEW	9/15/14	MDC	MCH

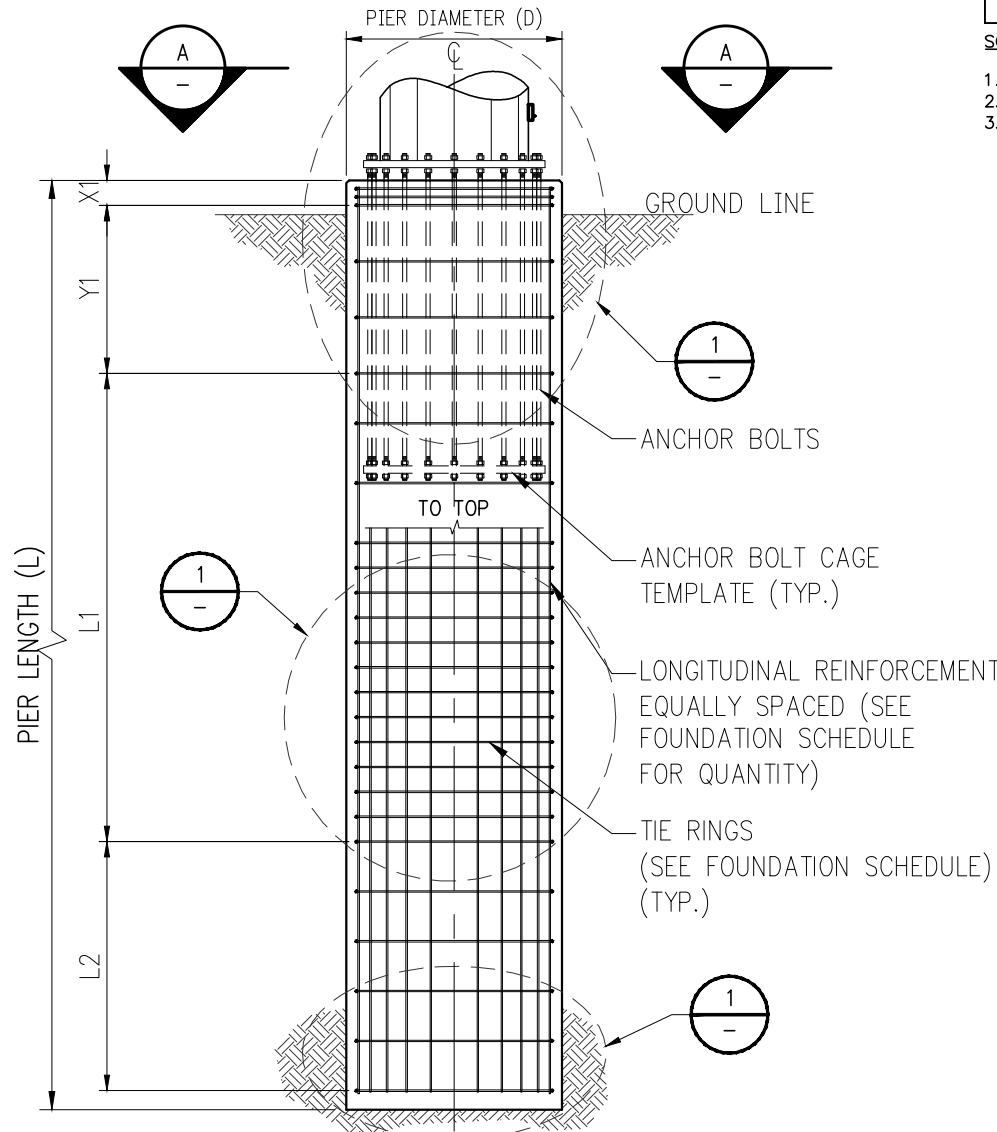
Invenergy

ENGINEERING RECORD		DATE
DRAWN	MDC	9/11/14
DESIGNED	MCH	9/11/14
CHECKED		
APPROVED		
DWG SCALE: NONE	PLT SCALE:	

PLEASANT RIDGE 345 kV TRANSMISSION LINE	
STEEL POLE GROUND ASSEMBLY	
TM-SPG	
DWG. NAME: INV-B-T003-11	REVISION NO : A



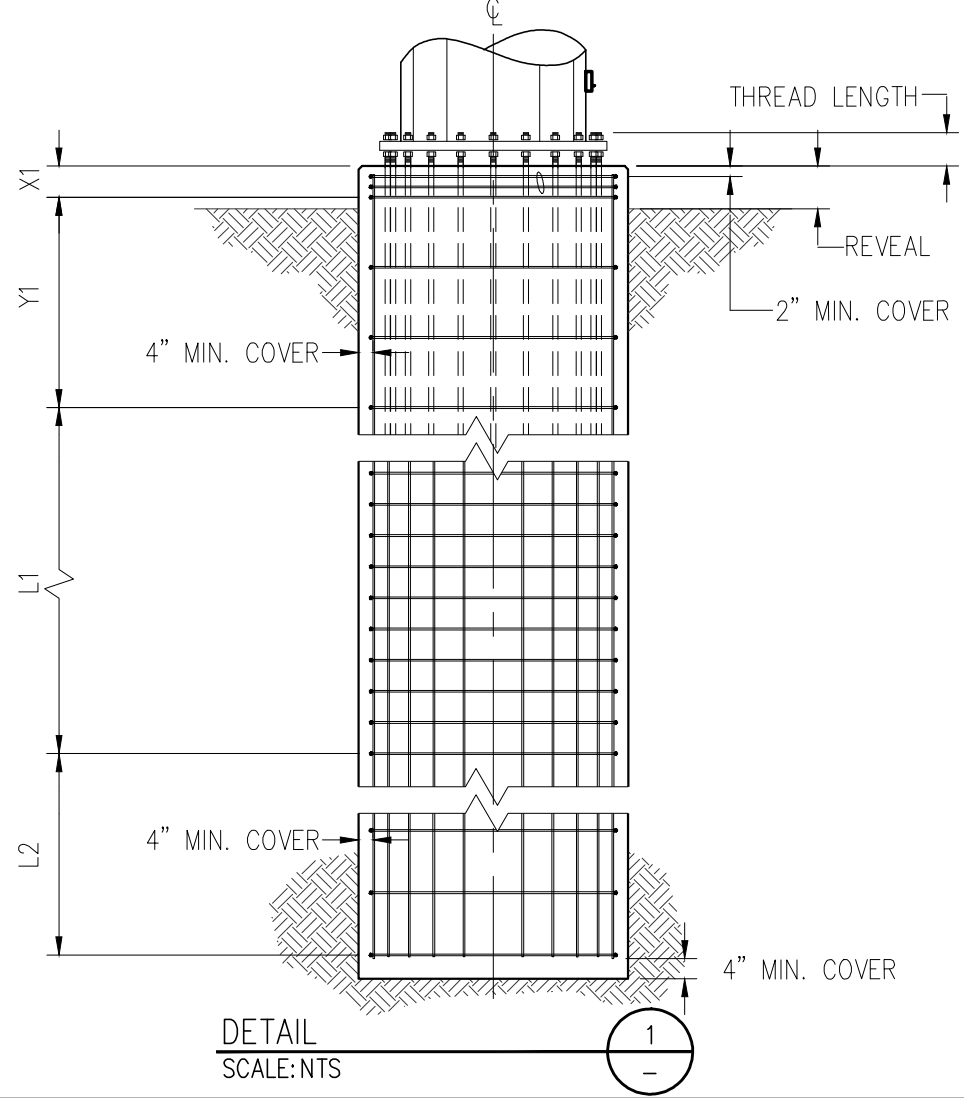
SECTION A-A
SCALE: NTS



ELEVATION
SCALE: NTS

Foundation Schedule																										
Structure			Borehole	Pier Dimensions			Concrete Volume (cu-yd)	Anchor Bolts				Longitudinal Bars			Tie Rings						Tie Length (in)					
STR#	Type	Height (ft)		Dia. (ft)	Overall Length (ft) (L)	Reveal (ft)		Length (in)	Qty & Bar Size	Bolt Circle Dia. (in)	Reveal (in)	Length (in)	Qty & Bar Size	Dia. (in)	X1			Y1				L1				
1/1	TDE-345S-90	100	TBD	8	35	1	65.16	117	20 #18	67.25	12	412	24 #14	86	0.5	2 #4	3	12.5	25 #4	6	22	22 #4	12	303		
2/6	TDE-345S-90	105	TBD	9	35	1	82.47	120	32 #18	84.5	12	412	36 #14	98	0.5	2 #4	3	12.5	25 #4	6	22	42 #4	6	341		
2/8	TDE-345S-90	105	TBD	9	35	1	82.47	132	28 #18	82	12	412	36 #14	98	0.5	2 #4	3	12.5	25 #4	6	22	42 #4	6	341		
3/6	TDE-345S-90	105	TBD	9	35	1	82.47	120	30 #18	80	12	412	36 #14	98	0.5	2 #4	3	12.5	25 #4	6	22	42 #4	6	341		
5/1	TDE-345S-45	110	TBD	9	35	1	82.47	132	32 #18	84.5	12	412	36 #14	98	0.5	2 #4	3	12.5	25 #4	6	22	22 #4	12	341		
5/2	TDE-345S-45	110	TBD	9	36	1	84.82	126	20 #18	80.875	12	424	36 #14	98	0.5	2 #4	3	12.5	25 #4	6	23	44 #4	6	341		
6/3	TDE-345S-90	105	TBD	9	36	2	84.82	129	24 #18	80	12	424	36 #14	98	0.5	2 #4	3	12.5	25 #4	6	23	23 #4	12	341		
6/4	TDE-345S-90	105	TBD	9	34	2	80.11	108	32 #18	84.5	12	400	40 #14	98	0.5	2 #4	3	12.5	25 #4	6	21	21 #4	12	341		
7/7	TDE-345S-90	110	TBD	9	35	1	82.47	114	32 #18	80	12	412	36 #14	98	0.5	2 #4	3	12.5	25 #4	6	22	22 #4	12	341		
7/8	TDE-345S-90	110	TBD	9	35	1	82.47	132	32 #18	80	12	412	36 #14	98	0.5	2 #4	3	12.5	25 #4	6	22	22 #4	12	341		
9/5	TDE-345S-90	110	TBD	6	35	1	36.65	129	32 #18	45.125	12	412	18 #14	62	0.5	2 #4	3	12.5	25 #4	6	22	22 #4	12	228		
9/6	TDE-345S-45	110	TBD	6	38	1	39.79	129	32 #18	46.375	12	448	18 #14	62	0.5	2 #4	3	13.5	27 #4	6	24	24 #4	12	228		
9/7	TDE-345S-45	110	TBD	8	35	1	65.16	129	32 #18	70.375	12	412	24 #14	86	0.5	2 #4	3	12.5	25 #4	6	22	22 #4	12	303		
10/3	TDE-345S-90	105	TBD	8	35	1	65.16	129	32 #18	70.375	12	412	24 #14	86	0.5	2 #4	3	12.5	25 #4	6	22	42 #4	6	303		
10/4	TDE-345S-90	100	TBD	8.5	34	1	71.46	117	32 #18	78.375	12	400	32 #14	92	0.5	2 #4	3	12.5	25 #4	6	21	40 #4	6	322		

- SCHEDULE NOTES:
- CAISSON LENGTH = EMBEDMENT + REVEAL
 - LONG BAR LENGTH = CAISSON LENGTH - 6" (COVER TOP AND BOTTOM)
 - TIE RINGS SHALL BE PLACED ACCORDING TO FOUNDATION SCHEDULE, (Q) #A @ "B"



DETAIL
SCALE: NTS

ISSUED FOR REVIEW

- NOTES:
- FOUNDATION MATERIALS SHALL BE IN ACCORDANCE WITH THE FOUNDATION CONSTRUCTION SPECIFICATIONS. MATERIAL PROPERTIES CONSIDERED IN THE FOUNDATION DESIGN FOLLOW:
 - A. CONCRETE 28 DAY COMPRESSIVE STRENGTH: 4000 PSI
 - B. REINFORCING BARS: 60 KSI YIELD, CONFORMING TO ASTM A615
 - FOUNDATION INSTALLATION SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS. IN ADDITION OR TO CLARIFY:
 - A. ALL PIERS SHALL BE PLACED IN UNDISTURBED SOIL.
 - B. THE BOTTOM OF ALL EXCAVATIONS SHALL BE CLEANED OF ALL LOOSE MATERIAL.
 - C. MINIMUM LAP LENGTH OF TIE RINGS SHALL BE 24".
 - D. CAGES MUST BE SUFFICIENTLY TIED TO MAINTAIN ALIGNMENT DURING HANDLING AND INSTALLATION.
 - E. ALL BOLT CAGES SHALL BE INSTALLED LEVEL TO WITHIN 1/4" IN ALL DIRECTIONS ACROSS BOLT CIRCLE.
 - F. MEASURES SHALL BE TAKEN TO ENSURE THAT THE THREADED PORTION OF THE ANCHOR BOLTS ARE CLEAN AND FREE OF CONCRETE SPLATTER OR OTHER OBSTRUCTIONS.
 - G. THE TREMIE METHOD MUST BE USED FOR PLACING ALL CONCRETE UNDER WATER.
 - H. CONCRETE SHALL BE PLACED IN SUCH A MANNER SO THAT IT DOES NOT STRIKE THE SIDES OF THE EXCAVATION OR REBAR AS IT IS PLACED.
 - I. THE TOP SURFACE OF THE PIER SHALL BE STEEL TROWEL FINISHED AND SLOPED TO SHED WATER. ALL CORNERS SHALL BE FINISHED WITH A 1" CHAMFER.
 - J. TEMPORARY CASINGS MAY BE UTILIZED FOR SOIL STABILIZATION; HOWEVER, ALL CASINGS MUST BE REMOVED AFTER CONCRETE PLACEMENT.
 - K. CONCRETE BY THE ANCHOR BOLTS SHALL BE VIBRATED. CONCRETE BELOW ANCHOR BOLTS NEED NOT BE VIBRATED. CONCRETE PLACED UNDER WATER SHALL NOT BE VIBRATED.
 - L. IF SOIL CONDITIONS OTHER THAN ASSUMED FOR SITES ARE ENCOUNTERED, CONTACT THE ENGINEER BEFORE PROCEEDING WITH THE EXCAVATION.
 - SEE THE MANUFACTURE DRAWINGS FOR INFORMATION ON ANCHOR BOLT CAGE ASSEMBLIES. THE CONTRACTOR IS RESPONSIBLE FOR CROSS-CHECKING ANCHOR BOLT DIMENSIONS WITH MANUFACTURE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT THE CORRECT ANCHOR BOLT CAGE IS BEING INSTALLED IN THE CORRECT HOLE. CONTACT THE ENGINEER OR OWNER'S REPRESENTATIVE IF THERE IS ANY UNCERTAINTY.
 - OFFSETS, REFERENCE/ALIGNMENT POINTS (R.P.'S) AND ELEVATION BENCH MARKS (B.M.'S) ARE FIELD STAKED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALIGNMENT OF THE ANCHOR BOLT CAGE (ORIENTATION MARK, V-NOTCH) PRIOR TO CONCRETE POURING. CONTACT THE ENGINEER OR OWNER'S REPRESENTATIVE IF THERE IS ANY UNCERTAINTY AND/OR THE STAKES ARE DISTURBED OR MISSING.

FILE LOCATION: L:\INVENERGY WIND, LLC\INV-121 PLEASANT RIDGE TRANSMISSION\CADD\WORKING\STRUCTURE\INV-B-T003-12.DWG LAST SAVED BY: mburtell 11/11/2014 10:53 AM PLOTTED BY: Michelle L. Schoaf 11/11/2014 1:48 PM Tab: TM-CAISSON

ECI ELECTRICAL CONSULTANTS, INC.
ILLINOIS, MISSOURI, INDIANA, OHIO, WISCONSIN

A	ISSUED FOR 30% REVIEW	10/31/14	MDC	MCH
NO	REVISION	DATE	BY	APR

Invenergy

ENGINEERING RECORD		DATE
DRAWN	MDC	9/11/14
DESIGNED	MCH	9/11/14
CHECKED		
APPROVED		
DWG SCALE: NONE	PLT SCALE: 1:1	

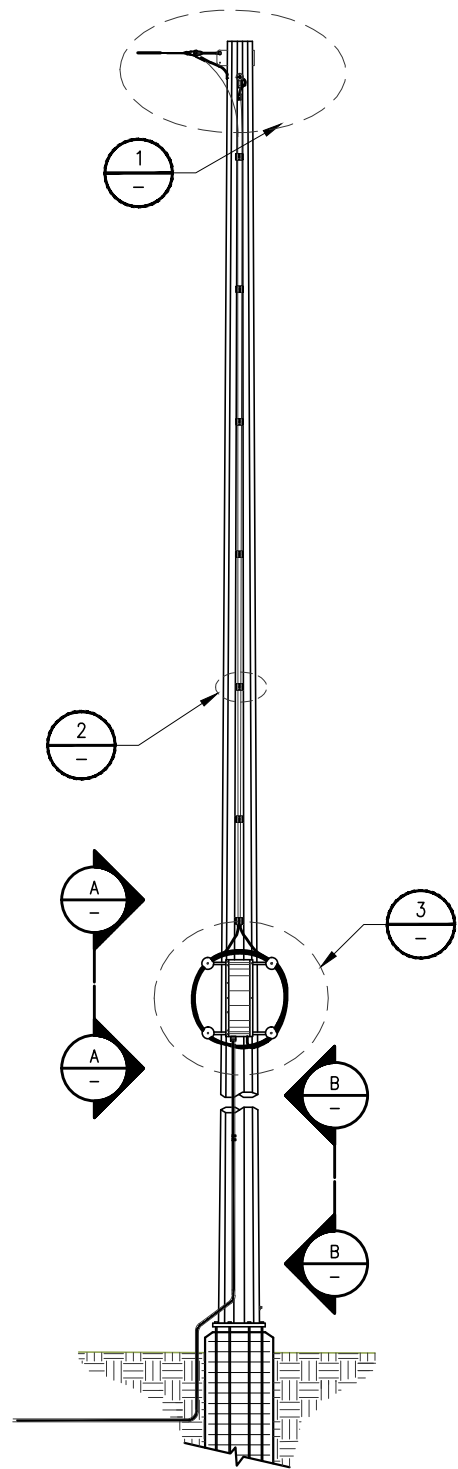
PLEASANT RIDGE 345 kV TRANSMISSION LINE
FOUNDATION DETAIL
TM-CAISSON

DWG. NAME: INV-B-T003-12 REVISION NO : A

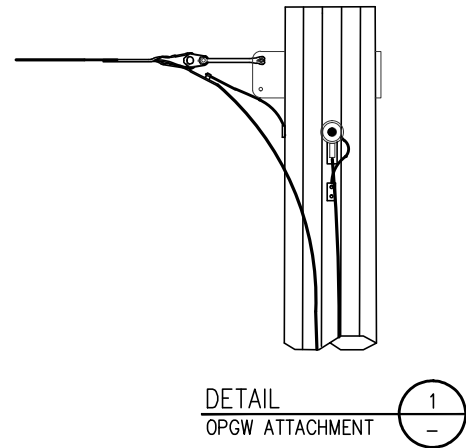
ITEM	QTY	MATERIAL DESCRIPTION FOR TM-FS
1	1	COYOTE SPLICE CASE, w/ 36-count splice tray, 6.5"x28", PLP# 8006654
2	21	DOWNLEAD CLAMP, for 24-fiber OPGW, PLP# 8003042 and MOUNTING ACC. PLP# 710011655
3	1	CABLE STORAGE SYSTEM, Double Arm, PLP# 8003569
4	1	SPLICE BOX, Coyote Defender, PLP# 8003491 or equal
5	2	MACHINE BOLT, 5/8" x 2" w/ 1-1/2" thread, w/nut, HPS# PSHB580200
6	1	SPLICE TRAY, 36 splice count, w/elastomer splice block, PLP# 80805514
7	15	CONDUIT, 1" liquidtight, flexible, metallic, in feet, T&B# ATX100-TB or equal
8	1	CONNECTOR, 1" flex to jct box for liquidtight conduit, CH# LTB-100 or equal
9	5	MOUNTING BRACKET, Aluma-Form# HDBB-1511-H3H or equal
10	5	TIE-WRAP, stainless steel, self-locking, T&B #TYS12-280 or equal

GENERAL NOTES

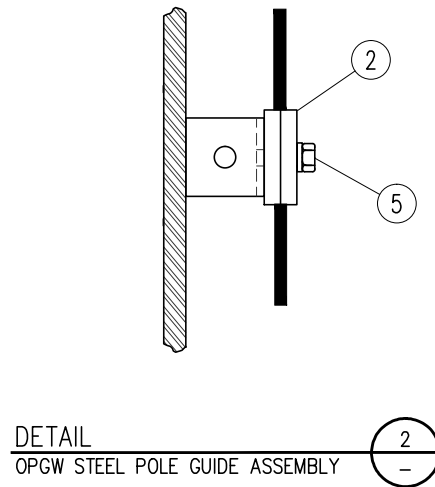
- 24 FUSION SPLICES REQUIRED AT EACH FIBER SPLICE LOCATION.
- SEE PLAN & PROFILE AND STAKING SHEETS FOR MATERIAL UNIT SPLICE LOCATIONS.
- OPGW DOWNLEADS SHALL BE INSTALLED AND ATTACHED TO THE POLE FROM THE FIBERLIGN DEADEND TO WITHIN 5 FEET ABOVE THE SPLICE BOX AND APPROXIMATELY 52 FEET OF OPGW SHALL BE COILED AT THE CABLE STORAGE ASSEMBLY.



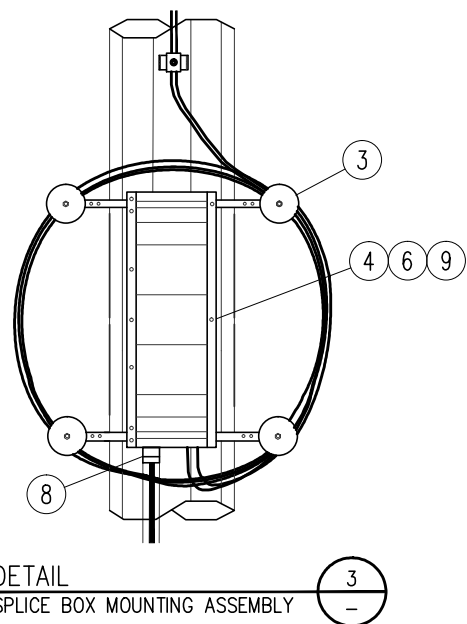
TYPICAL ELEVATION



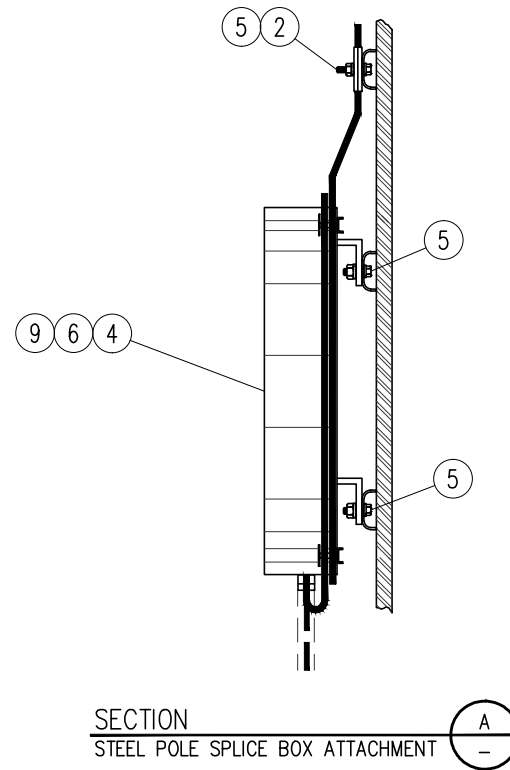
DETAIL
OPGW ATTACHMENT 1



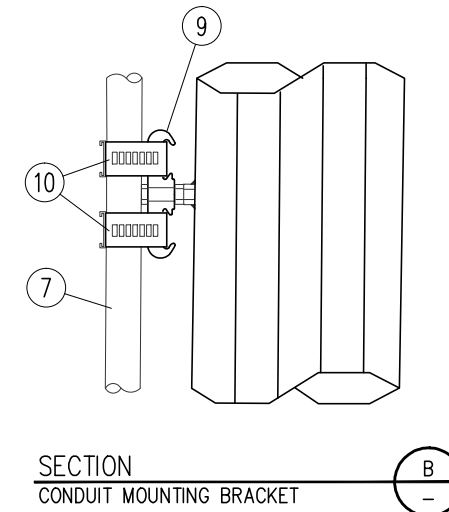
DETAIL
OPGW STEEL POLE GUIDE ASSEMBLY 2



DETAIL
SPLICE BOX MOUNTING ASSEMBLY 3



SECTION
STEEL POLE SPLICE BOX ATTACHMENT A



SECTION
CONDUIT MOUNTING BRACKET B

ISSUED FOR REVIEW

FILE LOCATION: I:\INVENERGY MIND, LLC\INV-121 PLEASANT RIDGE TRANSMISSION\CADD\WORKING\STRUCTURE\INV-B-T003-13.DWG LAST SAVED BY: mdcottet 9/16/2014 4:48 PM PLOTTED BY: Michelle L. Schoof 10/31/2014 3:08 PM Tab: TM-FS2

ECI ELECTRICAL CONSULTANTS, INC.
ILLINOIS, MISSOURI, IOWA

NO	REVISION	DATE	BY	APR
A	ISSUED FOR 30% REVIEW	9/15/14	MDC	MCH

Invenergy

ENGINEERING RECORD		DATE
DRAWN	MDC	9/11/14
DESIGNED	MCH	9/11/14
CHECKED		
APPROVED		
DWG SCALE: NONE	PLT SCALE:	

PLEASANT RIDGE 345 kV TRANSMISSION LINE	
FIBER SPLICE DETAIL TM-FS	
DWG. NAME: INV-B-T003-13	REVISION NO: A