

SHOP DRAWING REVIEW

- ☐ Make Correction Noted ☒ No Exception Taken
☐ Not Acceptable (Revise & Resubmit) ☐ Rejected
☐ For Information Only (Review Waived) ☐ Resubmit for Record

The review of this submittal is only for general conformance with the design concepts for the project and general compliance with the information given in the contract documents as a functioning whole. CONTRACTOR is, and ENGINEER is NOT responsible for completeness of submittal; dimensions which shall be confirmed and correlated at this job site; fabrication processes and techniques of construction; coordination of his or her work with that of all other trades; and shipping, handling, storage, and the satisfactory performance of the work. Submittal review does not imply completeness or suitability for any purpose, does not constitute a change order, and does not alter any contract terms and conditions.

Milone & MacBroom, Inc.

By NIRDOSH PATEL Date 06-16-16

NOTES

1. MANUFACTURER DESIGN APPROVED.
2. CALCULATIONS SHALL BE REVIEWED BY THIRD PARTY PRIOR TO APPROVAL.
3. DCS SHALL CONFIRM ANTENNAS SHOWN ON SHOP DRAWINGS ARE CORRECT PRIOR TO APPROVAL.



Submittal Cover Sheet

416 Slater Road
PO Box 1466
New Britain, CT 06050

Date:

Project Name :

Scope Project Number :

Submittal Description :

Submittal Number :

Specification Section :

Specification Subparagraph :

Applicable Drawing Reference:

Subcontractor:

Vendor :

Scope Construction Review Stamp:

Scope Construction Co., Inc.
416 Slater Rd., P.O. Box 1466, New Britain, CT 06050

- () Reviewed
() Reviewed as Noted
() Correct and Re-submit

Date:

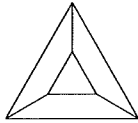
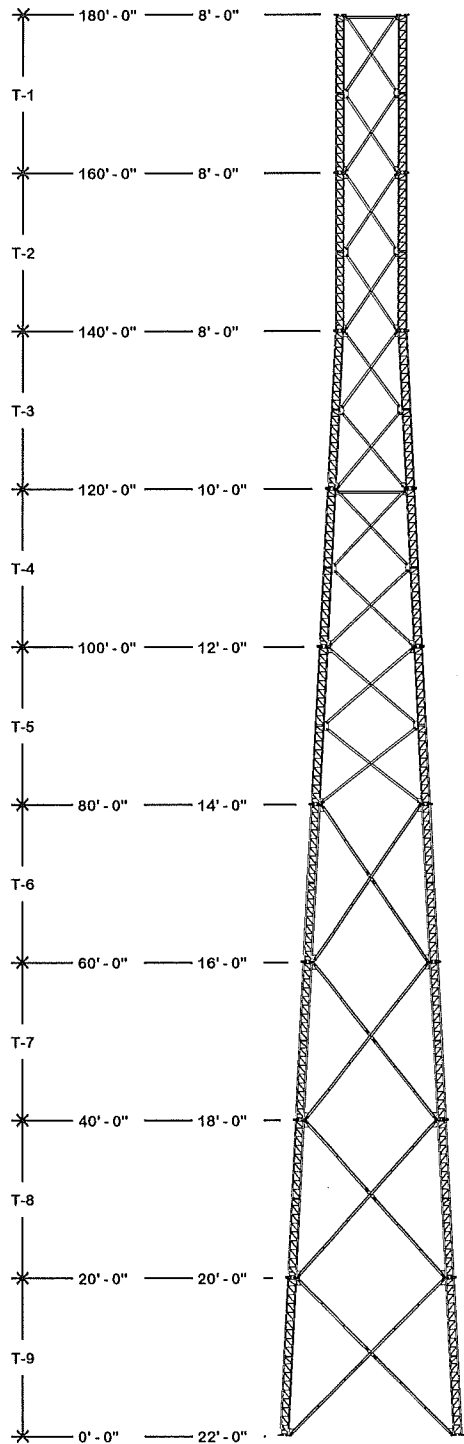
By:

A handwritten signature in blue ink, appearing to be "J. V. H.", is written over the "By:" field.

Review is for general arrangement and does not
release the supplier and/or trade contractor from
responsibilities for quantities, dimensions performance
or other requirements of the contract document.

Design Team Review Stamp:

Empty box for Design Team Review Stamp.



SEE PAGE 2 FOR
APPURTENANCES

BUILDING_CODE(S):2009 International Building Code

Design Standard: TIA-222-G

TOWER DESIGN CRITERIA

Basic Wind Speed: 111 mph (no ice)
90 mph (0.50" ice)
60 mph (deflection only)

Structure Class: III
Exposure: C
Topographic Category: 1
Crest Height: 0 ft.

MAPPED SEISMIC PARAMETERS:

$S_s = 17.3\%$
 $S_1 = 6.1\%$
 $S_{DS} = 11.5\%$
 $S_{D1} = 4.1\%$

SITE CLASS B

STRUCTURE CLASS (III) IMPORTANCE FACTORS

WIND (NO ICE) = 1.15
WIND (ICE) = 1.00
ICE THICKNESS = 1.25
EARTQUAKE = 1.50

MATERIAL STRENGTHS

Solid Rod A36 (rod dia. <3/4")
A572 Gr.50 (3/4" thru 1" dia.)
A572 Gr.58 (>1" dia. T1 - T9)
Pipe A500 Gr.B (antenna pipes)
A500 Gr.B/C (tower legs min. Fy 50 ksi)

Angle A36 Gr.36

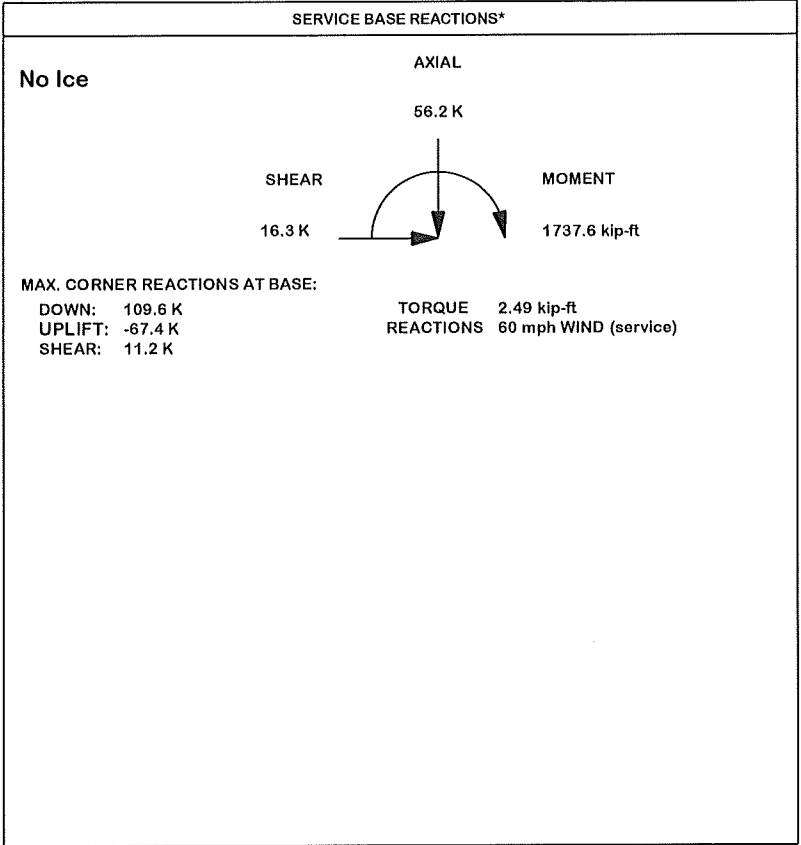
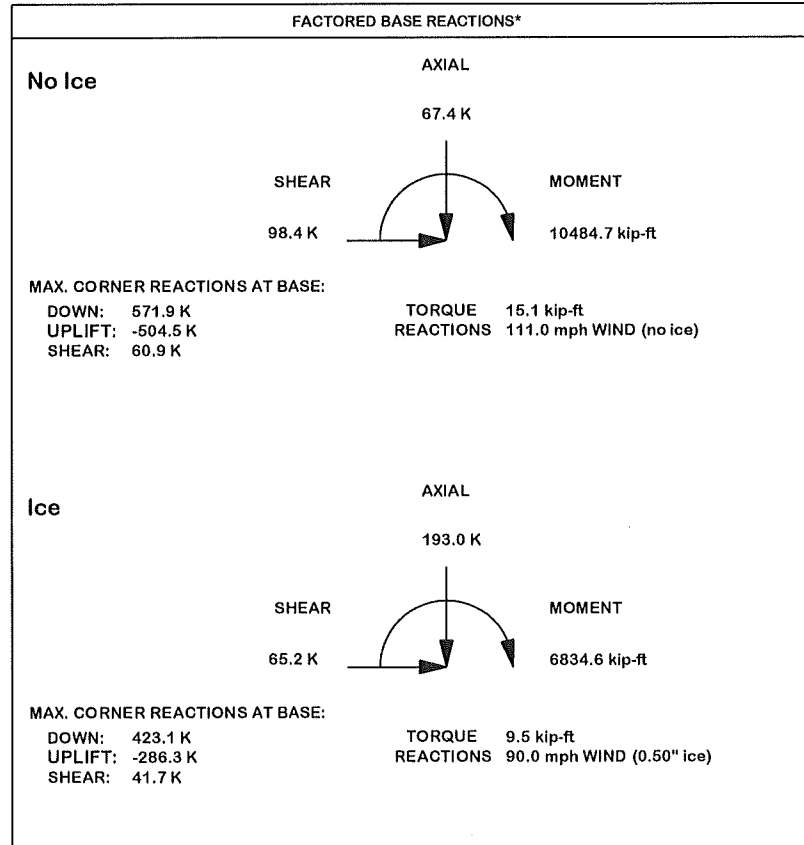
Plate A572 Gr.50

Bolts A-325/A-449 (leg & angle)

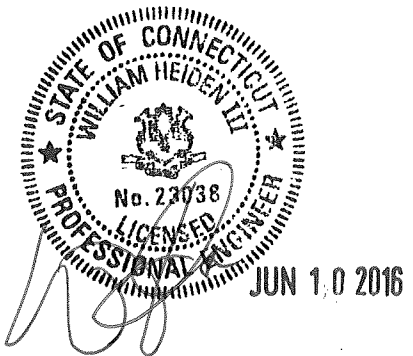
Anchor Bolt: F1554 grade 105 or A687

Finish: Tower & Hardware are hotdip galvanized

TOWER COLUMN										
SECTION	ELEVATION	FACE WIDTH	PANELS	LEG SIZE	LEG STYLE	LEG BOLT QTY & DIA	DIAGONAL BRACING SIZE	HORIZONTAL BRACING SIZE	BRACING BOLT QTY & DIA	SECTION WEIGHT
T1	160' - 180'	8.0'	2	1.25"	12BDFH	6 x 1"	5/16" x 3" x 3"	5/16" x 3" x 3"	1 x 1"	2630.13
T2	140' - 160'	8.0'	2	1.50"	12BDFH	6 x 1"	5/16" x 3" x 3"		1 x 1"	2714.13
T3	120' - 140'	10.0'	2	1.50"	12BDFH	6 x 1"	5/16" x 3" x 3"		1 x 1"	2781.24
T4	100' - 120'	12.0'	2	1.75"	12BDFH	6 x 1 1/4"	5/16" x 3" x 3"	3/16" x 3" x 3"	1 x 1"	3428.82
T5	80' - 100'	14.0'	2	1.75"	12BDFH	6 x 1 1/4"	5/16" x 3" x 3"		1 x 1"	3484.11
T6	60' - 80'	16.0'	1	2.00"	12BDH2	12 x 1"	1/4" x 3-1/2" x 3-1/2"		1 x 7/8"	4574.70
T7	40' - 60'	18.0'	1	2.25"	12BDH2	12 x 1"	1/4" x 3-1/2" x 3-1/2"		1 x 7/8"	5242.29
T8	20' - 40'	20.0'	1	2.25"	12BDH2	12 x 1"	1/4" x 3-1/2" x 3-1/2"		1 x 7/8"	5338.59
T9	0' - 20'	22.0'	1	2.50"	12BDH2	12 x 1 1/4"	1/4" x 3-1/2" x 3-1/2"		1 x 7/8"	6072.72



*NOTE: MAX. CORNER REACTIONS LISTED ARE WORST CASE FOR ALL LOAD COMBINATIONS



William R. Heiden III, CT Professional Engineer #23038

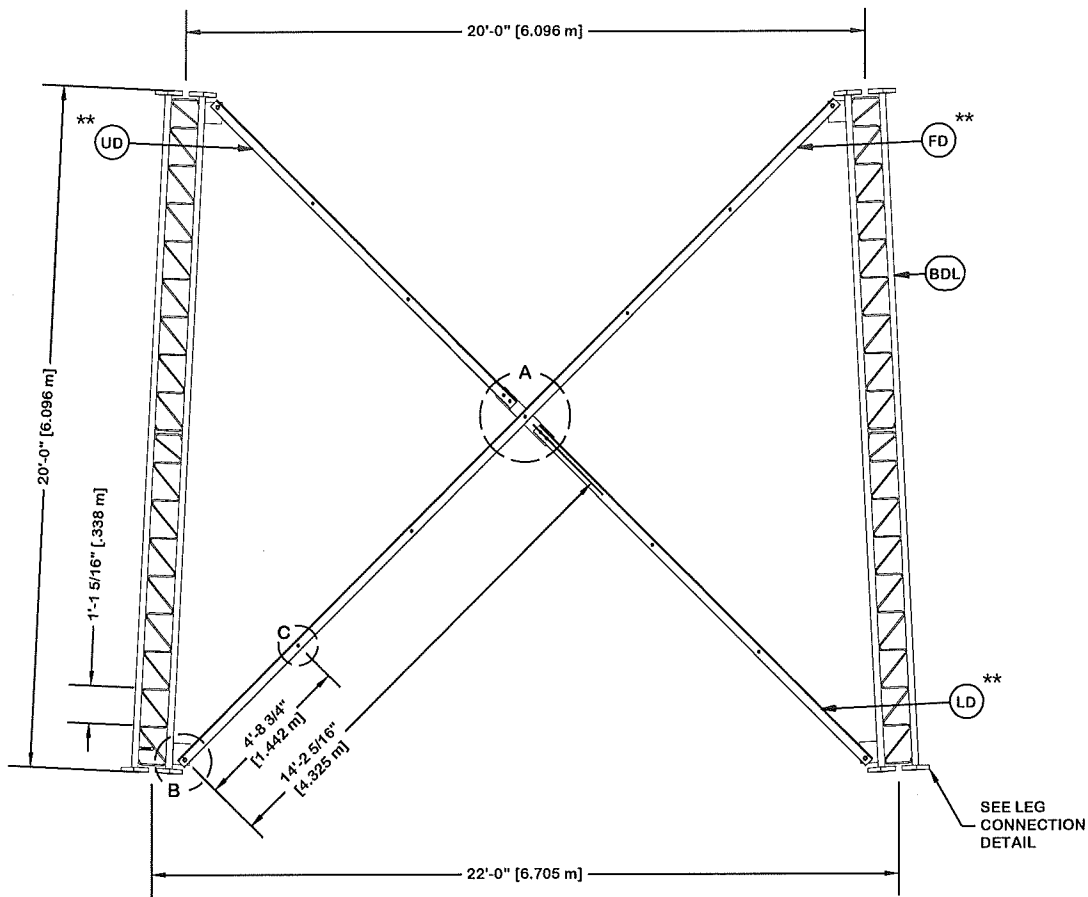
REVISION HISTORY					SITE		DESCRIPTION		valmont STRUCTURES	
REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE	EAST HADDAM, CT STATE OF CONNECTICUT U 22 X 180'		Tower View Page 1		1-877-467-4763 Plymouth, IN 1-800-547-2151 Salem, OR	
@A	ADDED SEISMIC PARAMETERS AND REACTIONS		JDE1	6/10/2016	COPYRIGHT 2013		STRUCTURE APPROVAL JDE1 6/10/2016		FOUNDATION APPROVAL	
					PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.				ENG. FILE NO. 265482	
									DWG. NO. 266040T	
									1 OF 11	

ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

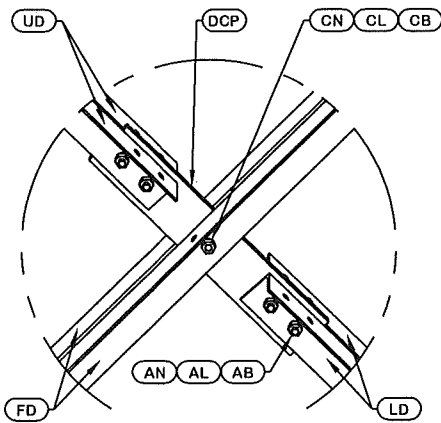
ORIENT ANGLES WITH STAMPED END TOWARD TOP OF SECTION

** DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP, 

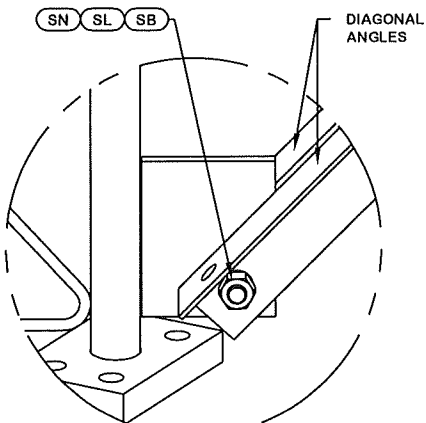
* STITCH BOLT SPACING SHOWN
IS MAX. FOR ALL ANGLES



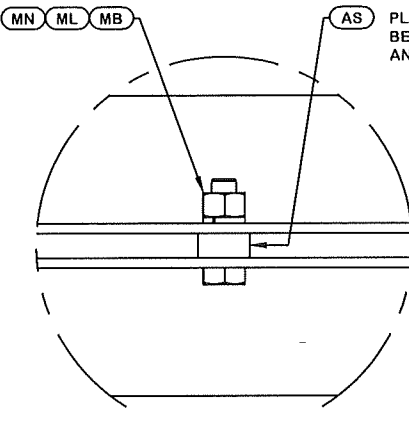
PARTS LIST				
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.
BDL	3	195962	#12 LEG SECT - 2-1/2" TO 2" TRANS LEG - 1/2" BRACE	1335.350
UD	6	211931	ANGLE U-22 UP 12'-6 9/32"	75.960
LD	6	211932	ANGLE U-22 LOW 13'-10 19/32"	84.230
FD	6	211957	ANGLE U-22 LONG 27'-4 3/8"	166.200
ML	24	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020
MN	24	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120
AS	24	104291	SPACER 1/2" THICK 13/16" HOLE	0.500
MB	24	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260
AB/CB	15	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260
AL / CL	15	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020
AN / CN	15	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120
DCP	3	211833	MID BRACE CONNECTION PLATE FOR #12 B/D LEG ANGLES	20.590
SL	12	312193	7/8" GALVANIZED LOCKWASHER	0.050
SN	12	312215	7/8"-9 HOT DIPPED GALVANIZED NUT	0.300
SB	12	172275	7/8"-9 X 2-1/2" A-325 BOLT WITH 1-1/2" THREAD	1.230
			Total Wt	6072.72 lb [2757.07 kg]



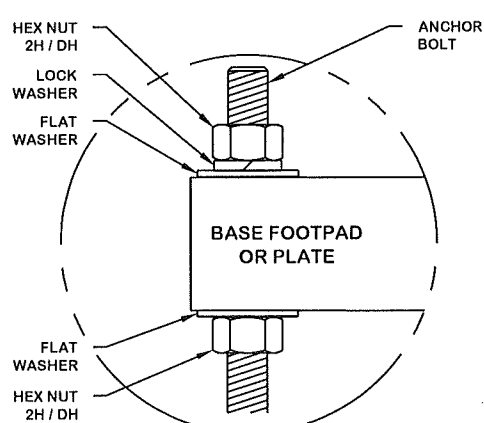
DETAIL A
ANGLE INTERSECTION CONNECTION



DETAIL B
END SIDE PLATE ANGLE CONNECTION



DETAIL C
STITCH BOLT CONNECTION



ANCHOR BOLT ASSY. (TYP)
SEE FOUNDATION DRAWING FOR DETAILS



William R. Heiden III, CT Professional Engineer #23038

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
@A	ADDED SEISMIC PARAMETERS AND REACTIONS		JDE1	6/10/2016
REVISION HISTORY				

SITE

EAST HADDAM, CT
STATE OF CONNECTICUT
U 22 X 180'

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PROPRIETARY NOTE:
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DESCRIPTION

SECTION U-22.0 (0' - 20' ELEVATION)

STRUCTURE APPROVAL
JDE1 6/10/2016

FOUNDATION APPROVAL

valmont 

1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

STRUCTURES

ENG. FILE NO. 265482

DWG. NO. 266040T

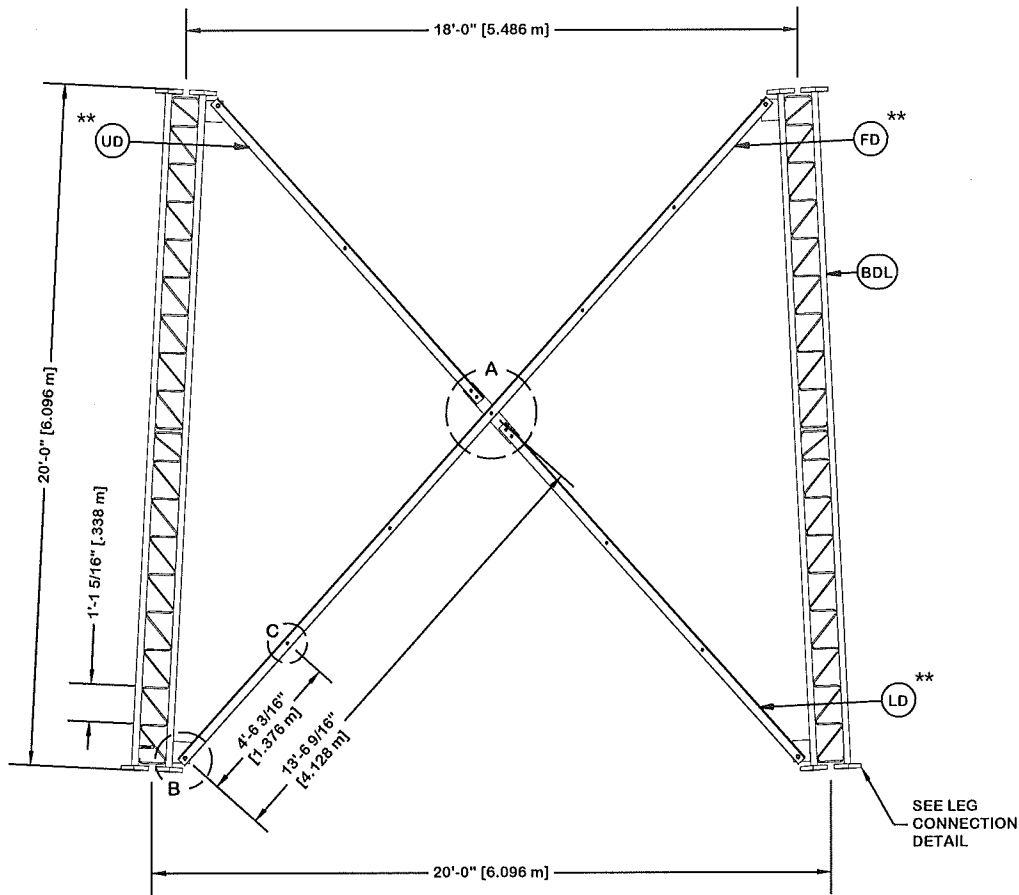
PAGE 3 OF 11

ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

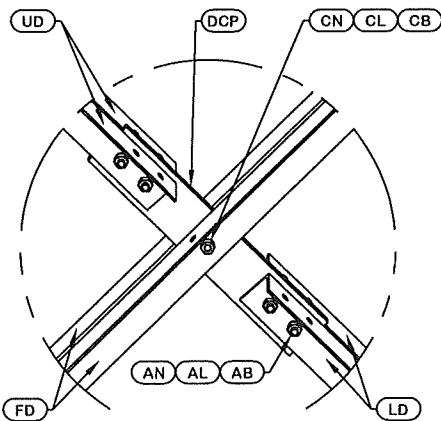
ORIENT ANGLES WITH STAMPED END TOWARD TOP OF SECTION

** DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP, 

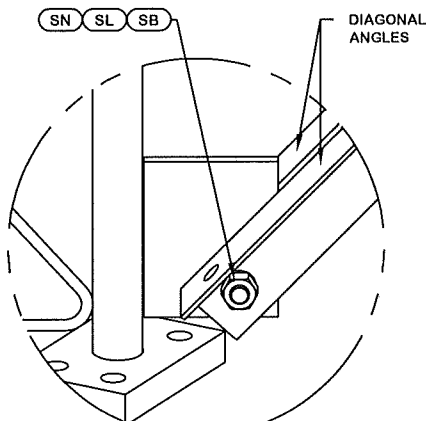
* STITCH BOLT SPACING SHOWN
IS MAX. FOR ALL ANGLES



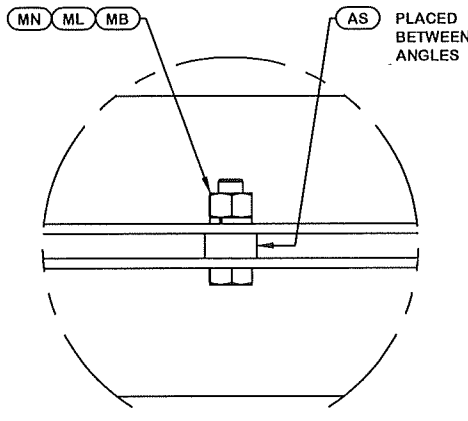
PARTS LIST					
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	195960	#12 LEG SECTION - 2-1/4" LEG - 1/2" BRACE - 7/8" B	1100.520	3301.560
UD	6	211929	ANGLE U-20 UP 11'-9 9/16"	71.590	429.540
LD	6	211930	ANGLE U-20 LOW 13'-2 27/32"	80.300	481.800
FD	6	211956	ANGLE U-20 LONG 25'-11 29/32"	157.830	946.980
ML	21	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.420
MN	21	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	2.520
AS	21	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	10.500
MB	21	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	5.460
AB/CB	15	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	3.900
AL / CL	15	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.300
AN / CN	15	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	1.800
DCP	3	211833	MID BRACE CONNECTION PLATE FOR #12 B/D LEG ANGLES	20.590	61.770
SL	12	312193	7/8" GALVANIZED LOCKWASHER	0.050	0.600
SN	12	312215	7/8"-9 HOT DIPPED GALVANIZED NUT	0.300	3.600
SB	12	172275	7/8"-9 X 2-1/2" A-325 BOLT WITH 1-1/2" THREAD	1.230	14.760
LCB	36	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	49.680
LCF	36	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	5.040
LCL	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
LCN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
				Total Wt	5338.59 lb [2423.77 kg]



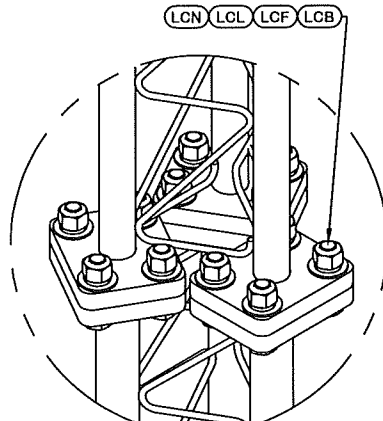
DETAIL A
ANGLE INTERSECTION CONNECTION



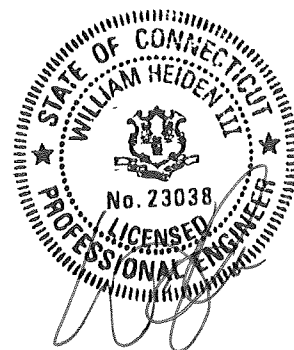
DETAIL B
END SIDE PLATE ANGLE CONNECTION



DETAIL C
STITCH BOLT CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



JUN 10 2016

William R. Heiden III, CT Professional Engineer #23038

SITE

EAST HADDAM, CT
STATE OF CONNECTICUT
U 22 X 180'

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PROPRIETARY NOTE:
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DESCRIPTION

SECTION U-20.0 (20' - 40' ELEVATION)

valmont 

1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR

STRUCTURES

ENG. FILE NO.

265482

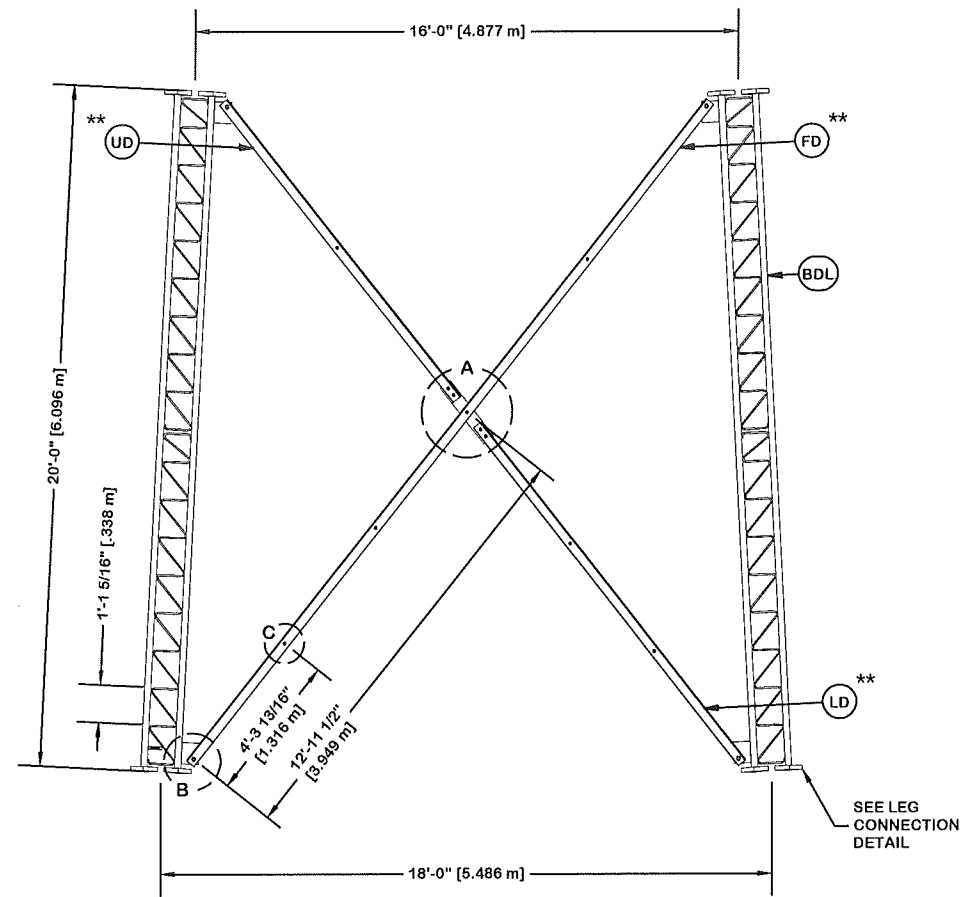
DWG. NO.

266040T

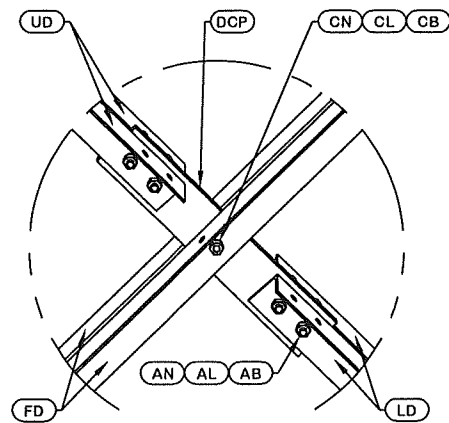
PAGE
4 OF 11

@A	ADDED SEISMIC PARAMETERS AND REACTIONS		JDE1	6/10/2016
REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
REVISION HISTORY				

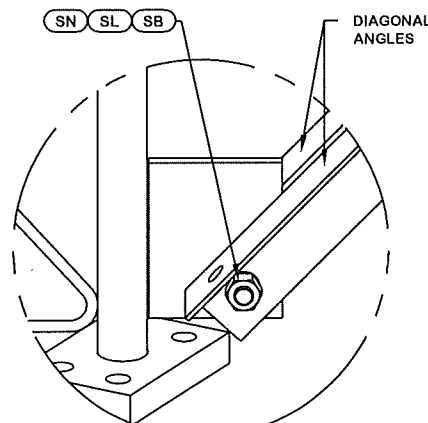
OREINT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION
ORIENT ANGLES WITH STAMPED END TOWARD TOP OF SECTION
** DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP, 
* STITCH BOLT SPACING SHOWN
IS MAX. FOR ALL ANGLES



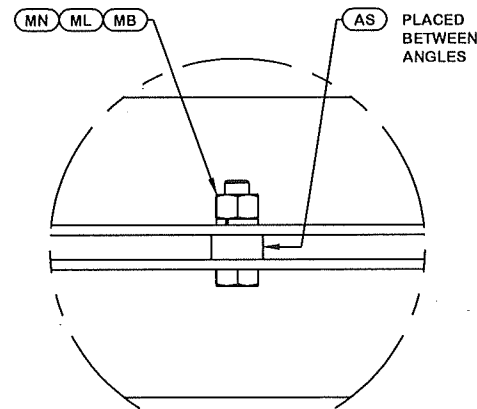
PARTS LIST					
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	195960	#12 LEG SECTION - 2-1/4" LEG - 1/2" BRACE - 7/8" B	1100.520	3301.560
UD	6	211927	ANGLE U-18 UP 11'-1 3/16"	67.340	404.040
LD	6	211928	ANGLE U-18 LOW 12'-7 25/32"	76.720	460.320
FD	6	211955	ANGLE U-18 LONG 24'-8 15/32"	150.060	900.360
ML	18	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.360
MN	18	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	2.160
AS	18	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	9.000
MB	18	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	4.680
AB/CB	15	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	3.900
AL / CL	15	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.300
AN / CN	15	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	1.800
DCP	3	211833	MID BRACE CONNECTION PLATE FOR #12 B/D LEG ANGLES	20.590	61.770
SL	12	312193	7/8" GALVANIZED LOCKWASHER	0.050	0.600
SN	12	312215	7/8"-9 HOT DIPPED GALVANIZED NUT	0.300	3.600
SB	12	172275	7/8"-9 X 2-1/2" A-325 BOLT WITH 1-1/2" THREAD	1.230	14.760
LCB	36	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	49.680
LCF	36	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	5.040
LCL	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
LCN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
				Total Wt	5242.29 lb [2380.05kg]



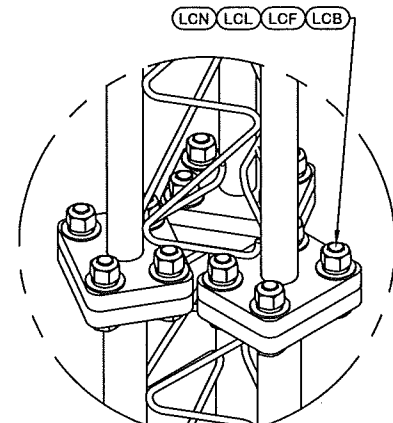
DETAIL A
ANGLE INTERSECTION CONNECTION



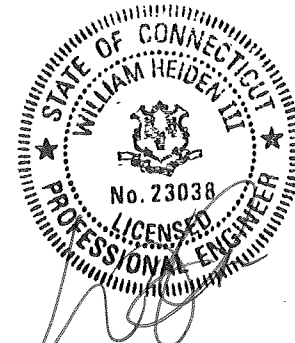
DETAIL B
END SIDE PLATE ANGLE CONNECTION



DETAIL C
STITCH BOLT CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



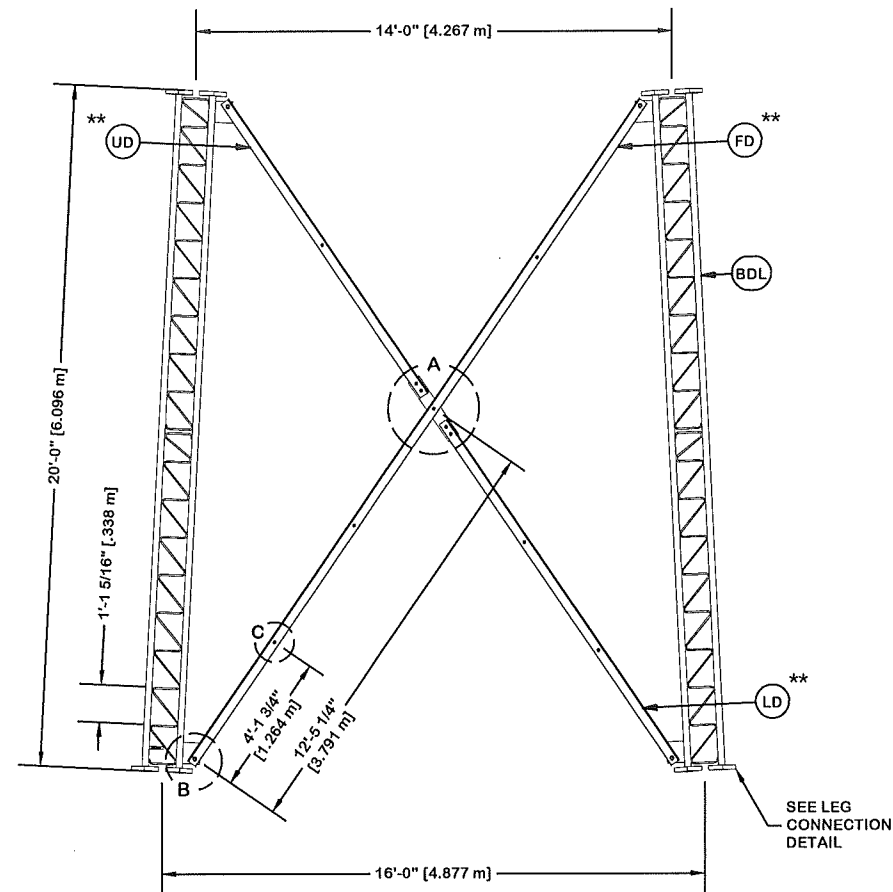
JUN 10 2016

William R. Heiden III, CT Professional Engineer #23038

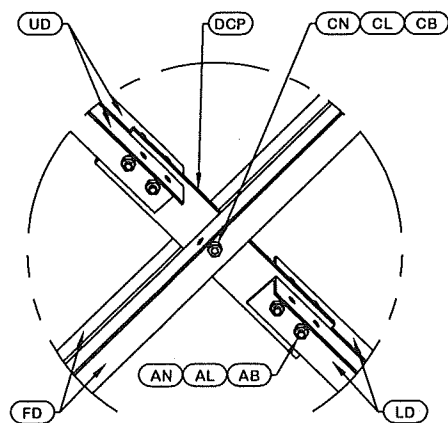
					SITE EAST HADDAM, CT STATE OF CONNECTICUT U 22 X 180' COPYRIGHT 2013		DESCRIPTION SECTION U-18.0 (40' - 60' ELEVATION)		valmont 1-877-467-4763 Plymouth, IN 1-800-547-2151 Salem, OR STRUCTURES		ENG. FILE NO. 265482		PAGE 5 OF 11
									DWG. NO. 266040T				
0A	ADDED SEISMIC PARAMETERS AND REACTIONS				JDE1	6/10/2016		STRUCTURE APPROVAL		FOUNDATION APPROVAL			
REV	DESCRIPTION OF REVISIONS				CPD	BY	DATE	JDE1	6/10/2016				
REVISION HISTORY													
					PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.								

ORIENT ANGLES WITH STAMPED END TOWARD TOP OF SECTION
 ** DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP, 

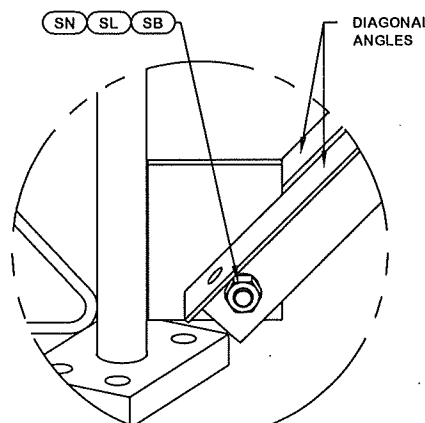
* STITCH BOLT SPACING SHOWN
 IS MAX. FOR ALL ANGLES



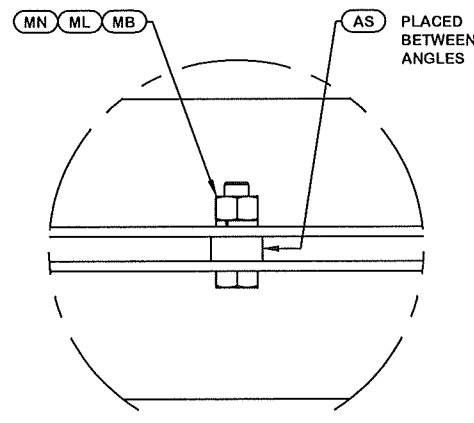
PARTS LIST					
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	195637	#12 LEG SECT - 2" TO 1-3/4" TRANS LEG - 1/2" BRACE	906.870	2720.610
UD	6	211925	ANGLE U-16 UP 10'-5 3/16"	63.280	379.680
LD	6	211926	ANGLE U-16 LOW 12'-1 9/16"	73.560	441.360
FD	6	211954	ANGLE U-16 LONG 23'-6 1/4"	142.840	857.040
ML	18	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.360
MN	18	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	2.160
AS	18	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	9.000
MB	18	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	4.680
AB/CB	15	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	3.900
AL / CL	15	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.300
AN / CN	15	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	1.800
DCP	3	211833	MID BRACE CONNECTION PLATE FOR #12 B/D LEG ANGLES	20.590	61.770
SL	12	312193	7/8" GALVANIZED LOCKWASHER	0.050	0.600
SN	12	312215	7/8"-9 HOT DIPPED GALVANIZED NUT	0.300	3.600
SB	12	172275	7/8"-9 X 2-1/2" A-325 BOLT WITH 1-1/2" THREAD	1.230	14.760
LCB	36	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	49.680
LCF	36	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	5.040
LCL	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
LCN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
Total Wt				4574.70 lb	[2076.95 kg]



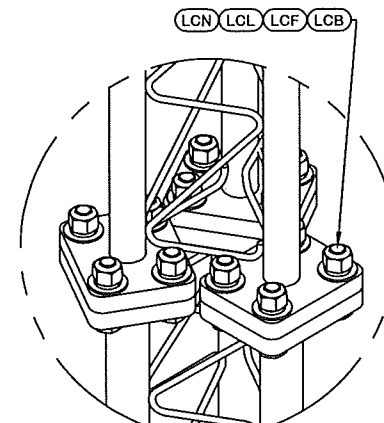
DETAIL A
ANGLE INTERSECTION CONNECTION



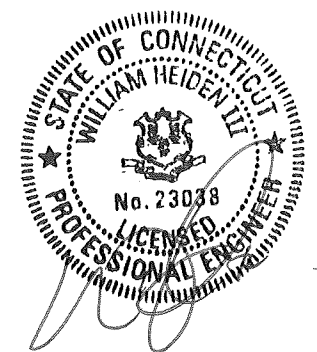
DETAIL B
END SIDE PLATE ANGLE CONNECTION



DETAIL C
STITCH BOLT CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



JUN 10 2016

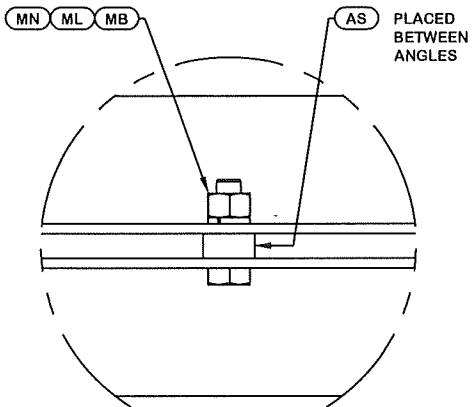
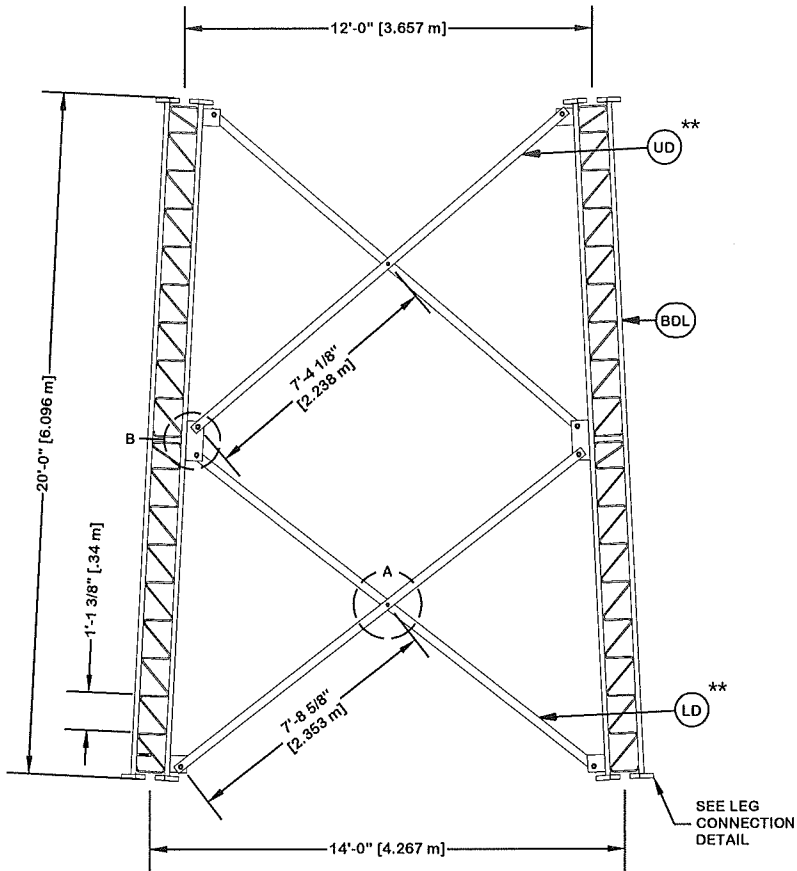
William R. Heiden III, CT Professional Engineer #23038

						SITE EAST HADDAM, CT STATE OF CONNECTICUT U 22 X 180' COPYRIGHT 2013		DESCRIPTION SECTION U-16.0 (60' - 80' ELEVATION)		valmont 1-877-467-4763 Plymouth, IN 1-800-547-2151 Salem, OR STRUCTURES		ENG. FILE NO. 265482		PAGE 6 OF 11
						PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.		STRUCTURE APPROVAL JDE16/10/2016		FOUNDATION APPROVAL		DWG. NO. 266040T		
@A	ADDED SEISMIC PARAMETERS AND REACTIONS					JDE1	6/10/2016							
REV	DESCRIPTION OF REVISIONS				CPD	BY	DATE							
REVISION HISTORY														

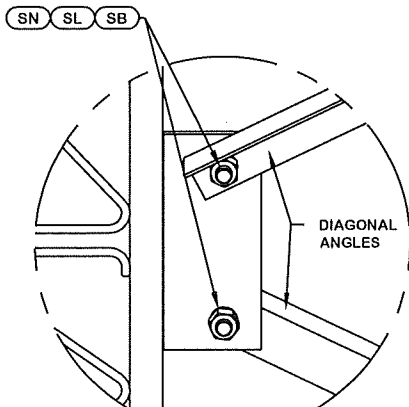
ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

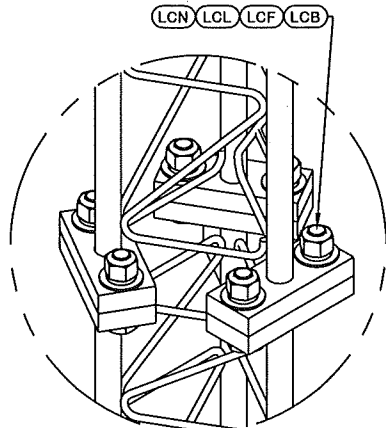
** DIAGONAL ANGLES MUST BE INSTALLED
WITH THE NON-BOLTED FACE UP,
THIS MAY BE ON THE OPPOSITE SIDE OF THE
SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL.



DETAIL A
ANGLE INTERSECTION CONNECTION

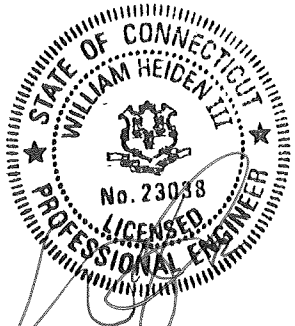


DETAIL B
MID SIDE PLATE ANGLE CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)

PARTS LIST					
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	195217	#12 LEG SECTION - 1-3/4" LEG - 1/2" BRACE - 1" BOL	746.710	2240.130
LD	6	105580	DIAG BRACE 5/16" X 3" X 3" 15'- 2-3/8" LONG (A-36)	97.340	584.040
AS	6	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	3.000
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172265	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	20.160
UD	6	105577	DIAG BRACE 5/16" X 3" X 3" 14'- 5-3/32" LONG (A-3)	92.390	554.340
LCB	18	222022	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	45.540
LCF	36	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	4.680
LCL	18	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	2.700
LCN	18	312507	1-1/4"-7 HOT DIPPED GALVANIZED NUT	0.730	13.140
Total Wt				3484.11 lb [1581.82kg]	



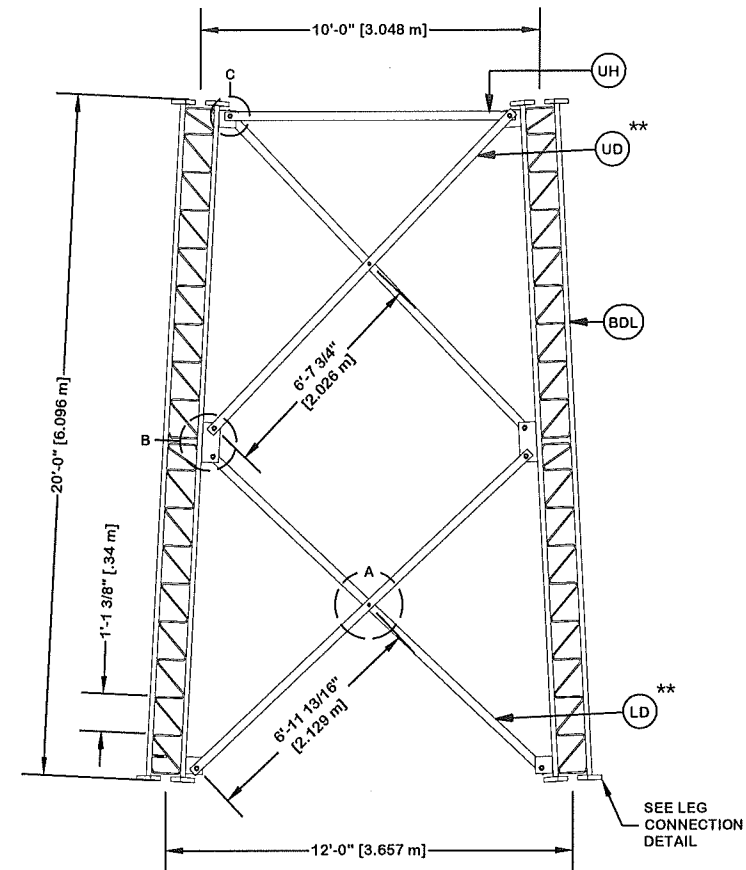
JUN 1 0 2016

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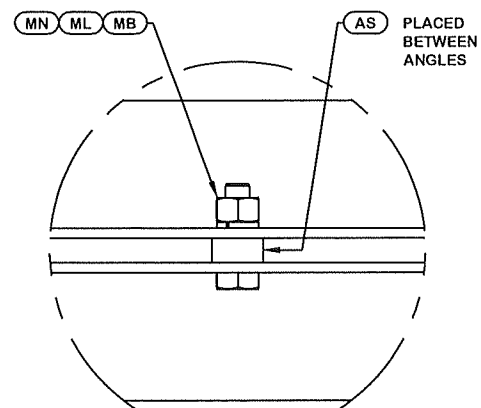
						SITE		DESCRIPTION		valmont 1-877-467-4763 Plymouth, IN 1-800-547-2151 Salem, OR STRUCTURES			
						EAST HADDAM, CT STATE OF CONNECTICUT U 22 X 180'		SECTION U-14.0 (80' - 100' ELEVATION)					
						COPYRIGHT 2013				ENG. FILE NO. 265482		PAGE 7 OF 11	
						PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.		STRUCTURE APPROVAL JDE1 6/10/2016		FOUNDATION APPROVAL			DWG. NO. 266040T
@A	ADDED SEISMIC PARAMETERS AND REACTIONS					JDE1	6/10/2016						
REV	DESCRIPTION OF REVISIONS				CPD	BY	DATE						
REVISION HISTORY													

ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

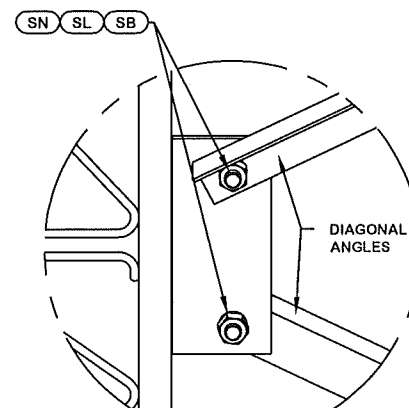
**** DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP,  THIS MAY BE ON THE OPPOSITE SIDE OF THE SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL.**



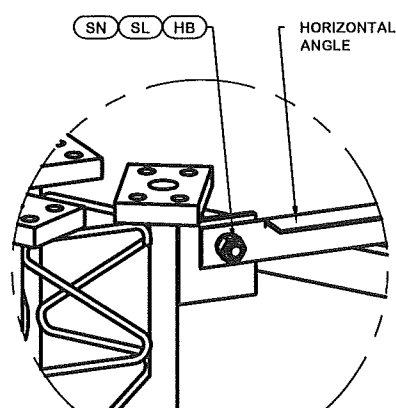
PARTS LIST					
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	195213	#12 LEG SECT - 1-3/4" TO 1-1/2" TRANS LEG - 1/2" B	739.890	2219.670
LD	6	105575	DIAG BRACE 5/16" X 3" X 3" 13'- 8-5/32" LONG (A-3	87.620	525.720
AS	6	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	3.000
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172265	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	20.160
UD	6	105572	ANGLE U-12 UP 12'-11 21/32"	82.030	492.180
UH	3	105944	HORIZONTAL BRACE 8'- 7- 1/32" LONG (A-36)	26.370	79.110
HB	6	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	6.540
LCB	18	222022	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	45.540
LCF	36	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	4.680
LCL	18	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	2.700
LCN	18	312507	1-1/4"-7 HOT DIPPED GALVANIZED NUT	0.730	13.140
				Total Wt	3428.82 lb [1556.71 kg]



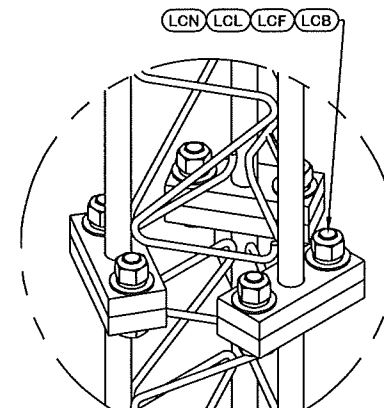
DETAIL A
ANGLE INTERSECTION CONNECTION



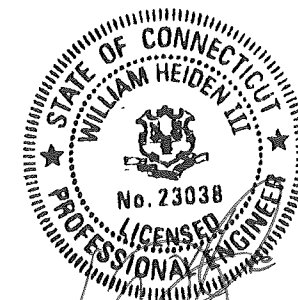
DETAIL B
MID SIDE PLATE ANGLE CONNECTION



DETAIL C
HORIZONTAL CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



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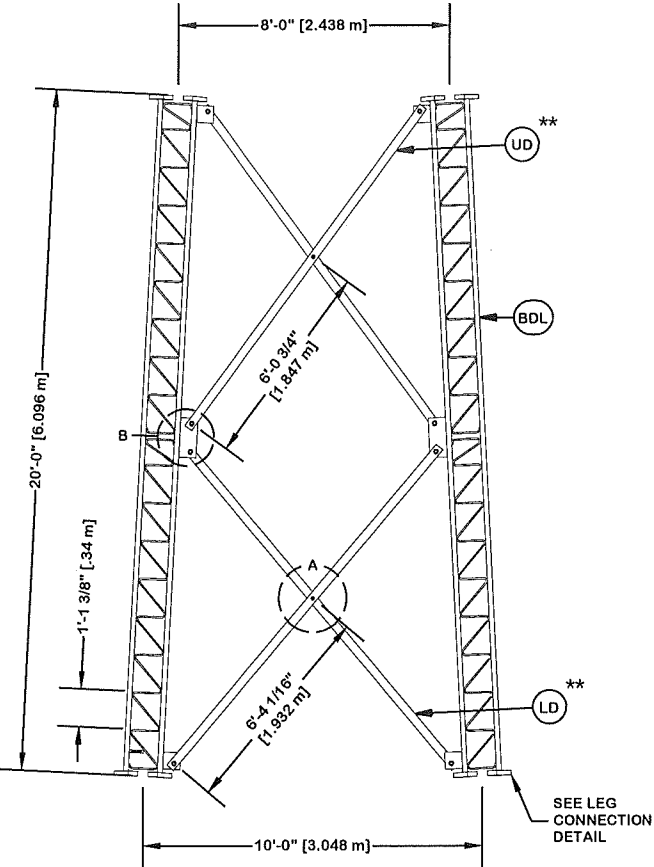
William R. Heiden III, CT Professional Engineer #23038

					SITE EAST HADDAM, CT STATE OF CONNECTICUT U 22 X 180' COPYRIGHT 2013		DESCRIPTION SECTION U-12.0 (100' - 120' ELEVATION)		valmont 1-877-467-4763 Plymouth, IN 1-800-547-2151 Salem, OR STRUCTURES		ENG. FILE NO. 265482		PAGE 8 OF 11
@A	ADDED SEISMIC PARAMETERS AND REACTIONS			JDE1	6/10/2016	STRUCTURE APPROVAL		FOUNDATION APPROVAL		DWG. NO. 266040T			
REV	DESCRIPTION OF REVISIONS			CPD	BY	DATE	JDE1	6/10/2016					
REVISION HISTORY													

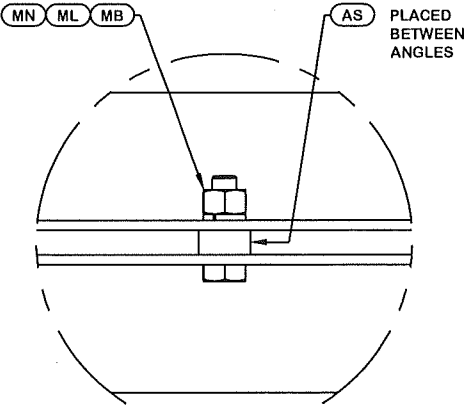
ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

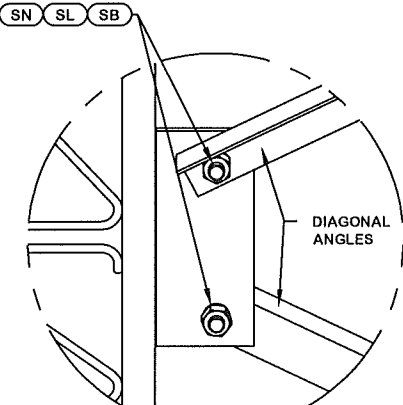
** DIAGONAL ANGLES MUST BE INSTALLED
WITH THE NON-BOLTED FACE UP, **71**
THIS MAY BE ON THE OPPOSITE SIDE OF THE
SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL.



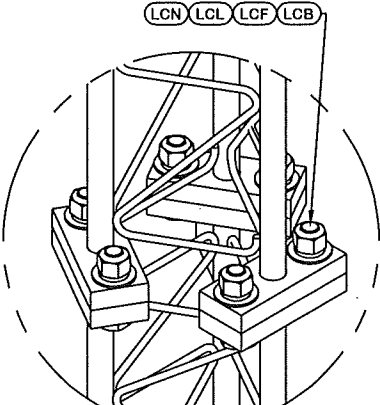
PARTS LIST					
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	161001	#12 T-V SECTION 1 1/2" LEG 1/2" BRACE 20'-0" LENGT	594.460	1783.380
LD	6	105569	ANGLE U-10 LOW 12'-3 5/8"	78.790	472.740
AS	6	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	3.000
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172265	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	20.160
UD	6	105566	ANGLE U-10 UP 11'-8 7/32"	74.840	449.040
LCB	18	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	24.840
LCF	18	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	2.520
LCL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
LCN	18	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	7.740
				Total Wt	2781.24 lb [1262.71 kg]



DETAIL A
ANGLE INTERSECTION CONNECTION



DETAIL B
MID SIDE PLATE ANGLE CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



JUN 10 2016

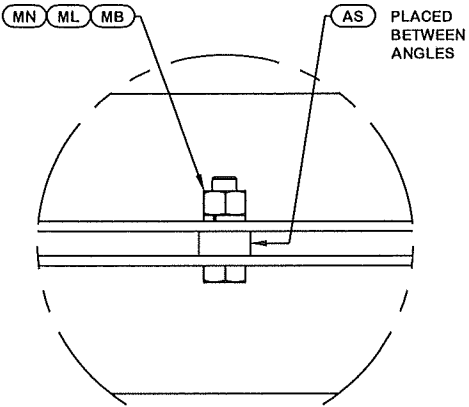
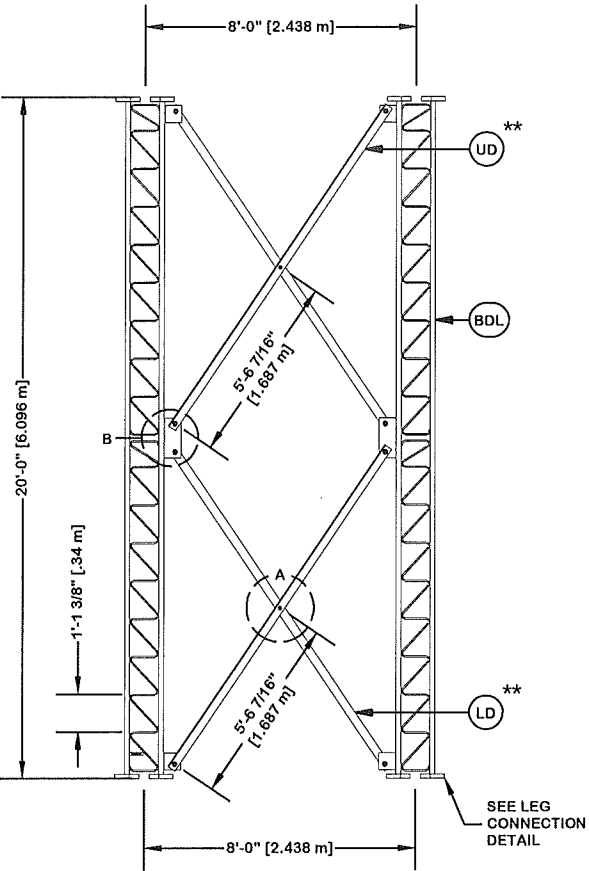
William R. Heiden III, CT Professional Engineer #23038

					SITE		DESCRIPTION		valmont 1-877-467-4763 Plymouth, IN 1-800-547-2151 Salem, OR STRUCTURES		9 OF 11 PAGE
					EAST HADDAM, CT STATE OF CONNECTICUT U 22 X 180'		SECTION U-10.0 (120' - 140' ELEVATION)				
					COPYRIGHT 2013				ENG. FILE NO.		265482
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									DWG. NO.		266040T

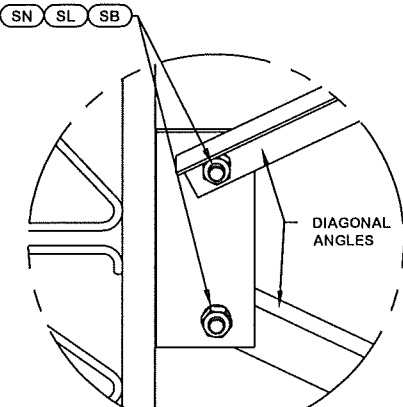
ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

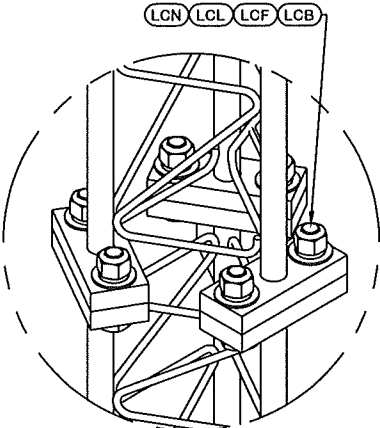
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SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL.



DETAIL A
ANGLE INTERSECTION CONNECTION

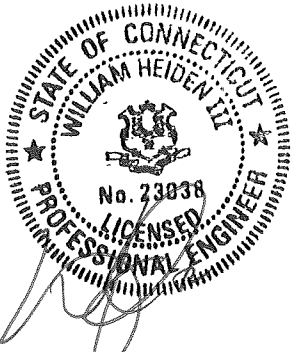


DETAIL B
MID SIDE PLATE ANGLE CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)

PARTS LIST					
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	194651	#12 LEG SECTION - 1-1/2" LEG - 1/2" BRACE - 1" BOL	602.830	1808.490
UD & LD	12	105813	DIAG BRACE 5/16" X 3" X 3" 11'- 4-27/32" LONG (A-	69.130	829.560
AS	6	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	3.000
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172265	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	20.160
LCB	18	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	24.840
LCF	18	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	2.520
LCL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
LCN	18	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	7.740
				Total Wt	2714.13 lb [1232.24kg]



JUN 10 2016

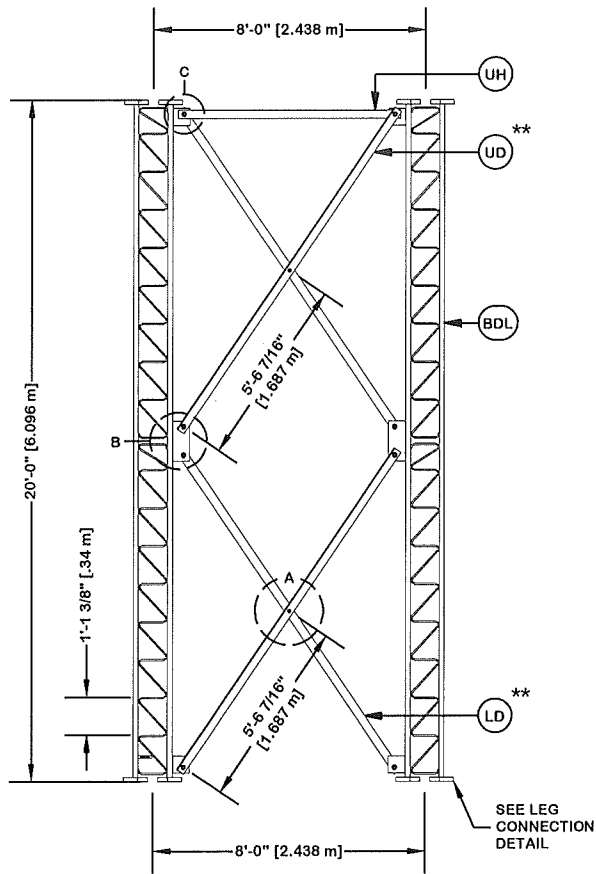
William R. Heiden III, CT Professional Engineer #23038

					SITE EAST HADDAM, CT STATE OF CONNECTICUT U 22 X 180' COPYRIGHT 2013		DESCRIPTION SECTION U-8.0 (140' - 160' ELEVATION)		valmont 1-877-467-4763 Plymouth, IN 1-800-547-2151 Salem, OR STRUCTURES	
									ENG. FILE NO. 265482	
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									DWG. NO. 266040T	

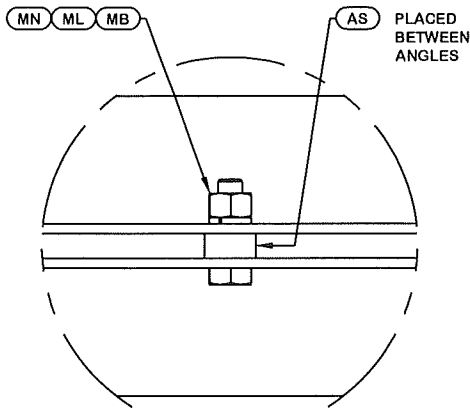
ORIENT LEGS WITH P/N STAMP
TOWARD BOTTOM OF SECTION

ORIENT ANGLES WITH STAMPED
END TOWARD TOP OF SECTION

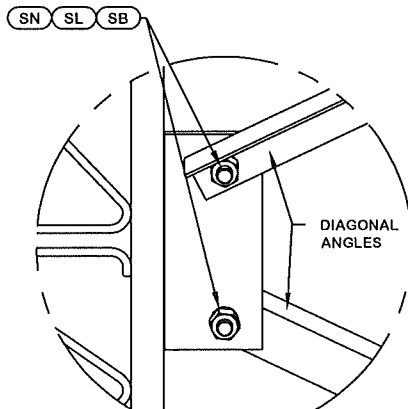
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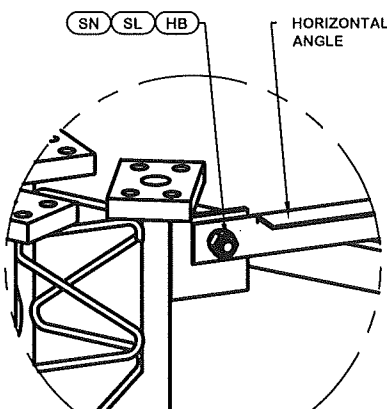
PARTS LIST					
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	194435	#12 LEG SECTION - 1-1/4" LEG - 5/8" BRACE - 1" BOL	538.750	1616.250
UD & LD	12	105813	DIAG BRACE 5/16" X 3" X 3" 11'-4-27/32" LONG (A-	69.130	829.560
AS	6	104291	SPACER 1/2" THICK 13/16" HOLE	0.500	3.000
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172265	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	20.160
UH	3	105789	HORIZONTAL BRACE 6'-5'-1/2" LONG	33.900	101.700
HB	6	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	6.540
LCB	18	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	24.840
LCF	18	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	2.520
LCL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
LCN	18	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	7.740
				Total Wt	2630.13 lb [1194.10kg]



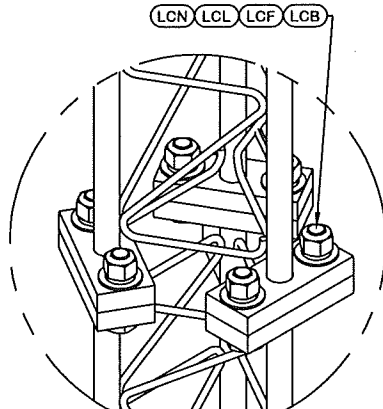
DETAIL A
ANGLE INTERSECTION CONNECTION



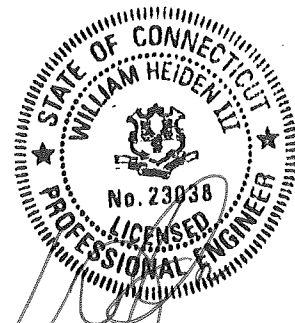
DETAIL B
MID SIDE PLATE ANGLE CONNECTION



DETAIL C
HORIZONTAL CONNECTION



LEG TO LEG CONNECTION
(SIDE PLATES NOT SHOWN FOR CLARITY)



JUN 10 2016
William R. Heiden III, CT Professional Engineer #23038

SITE

EAST HADDAM, CT
STATE OF CONNECTICUT
U 22 X 180'

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DESCRIPTION

SECTION U-8.0 (160' - 180' ELEVATION)

valmont 
1-877-467-4763 Plymouth, IN
1-800-547-2151 Salem, OR
STRUCTURES

ENG. FILE NO.

265482

DWG. NO.

266040T

STRUCTURE APPROVAL

JDE1

6/10/2016

FOUNDATION APPROVAL

@A ADDED SEISMIC PARAMETERS AND REACTIONS

JDE1 6/10/2016

REV DESCRIPTION OF REVISIONS

CPD

BY

DATE

REVISION HISTORY

PAGE
11 OF 11