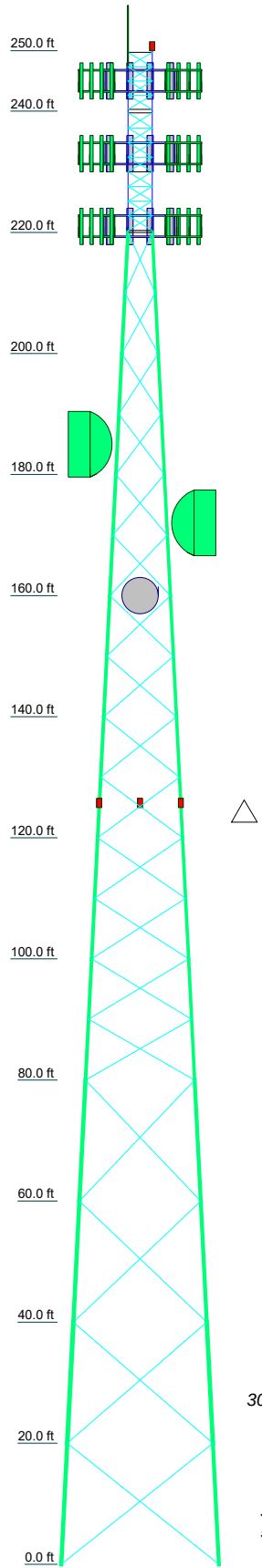


Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	
Legs	SR 1 1/2	SR 2	A	B		C					E	F	G	
Leg Grade	SR 3/4	SR 7/8												
Diagonals														
Diagonal Grade														
Top Girts														
Mid Girts														
Bottom Girts														
Horizontals														
Face Width (ft)	4	6	8	10	12	14	16	18	20	22	24	26	28	30
# Panels @ (ft)	8 @ 2.35417													
Weight (K)	0.4	1.3	1.9	2.3	2.3	2.9	3.1	3.1	3.2	4.2	4.3	4.9	4.7	38.5



ALL REACTIONS
ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 424 K
SHEAR: 37 K

UPLIFT: -377 K
SHEAR: 33 K

AXIAL
115 K
SHEAR
6 K
MOMENT
1040 kip-ft
TORQUE 3 kip-ft
30 mph WIND - 0.5000 in ICE

AXIAL
72 K
SHEAR
55 K
MOMENT
9038 kip-ft
TORQUE 41 kip-ft
REACTIONS - 106 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
5/8" x 10' Adjustable lightning rod	250	2-1/2" x 9' Sch. 40	172
Beacon	250	2-1/2" x 9' Sch. 40	172
40,000 sq.in.(277.8 sq.ft. EPA)	245	HP10-59	172
30,000 sq.in.(208.3 sq.ft. EPA)	233	SP1 R5 (Includes 4.5"x72" Pipe)	160
30,000 sq.in.(208.3 sq.ft. EPA)	221	2-1/2" x 10' Sch. 40	160
SP1 R5 (Includes 4.5"x72" Pipe)	185	2-1/2" x 10' Sch. 40	160
2-1/2" x 8' Sch. 40	185	6" HP	160
2-1/2" x 8' Sch. 40	185	OB light	125
HP10-59	185	OB light	125
SP1 R5 (Includes 4.5"x72" Pipe)	172	OB light	125

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	#12ZG-58 - 1.25" - 1.00" conn. (Pirod 194434)	E	#12ZG-58 -2.00" - 0.875" conn. (Pirod 195639)
B	#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	F	#12ZG-58 -2.25" - 0.875" conn. (Pirod 195960)
C	#12ZG-58 - 1.75" - 1.00" conn.-TR1-(Pirod 195213)	G	#12ZG-58 BASE - 2.25" - 0.875" conn.(Pirod 281172)
D	#12ZG-58 -2.00" - 0.875" conn.-TR3-(Pirod 195213)		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-58	58 ksi	75 ksi	A572-50	50 ksi	65 ksi

TOWER DESIGN NOTES

1. Tower is located in Skagit County, Washington.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 106 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 30 mph basic wind with 0.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category III.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 94.8%



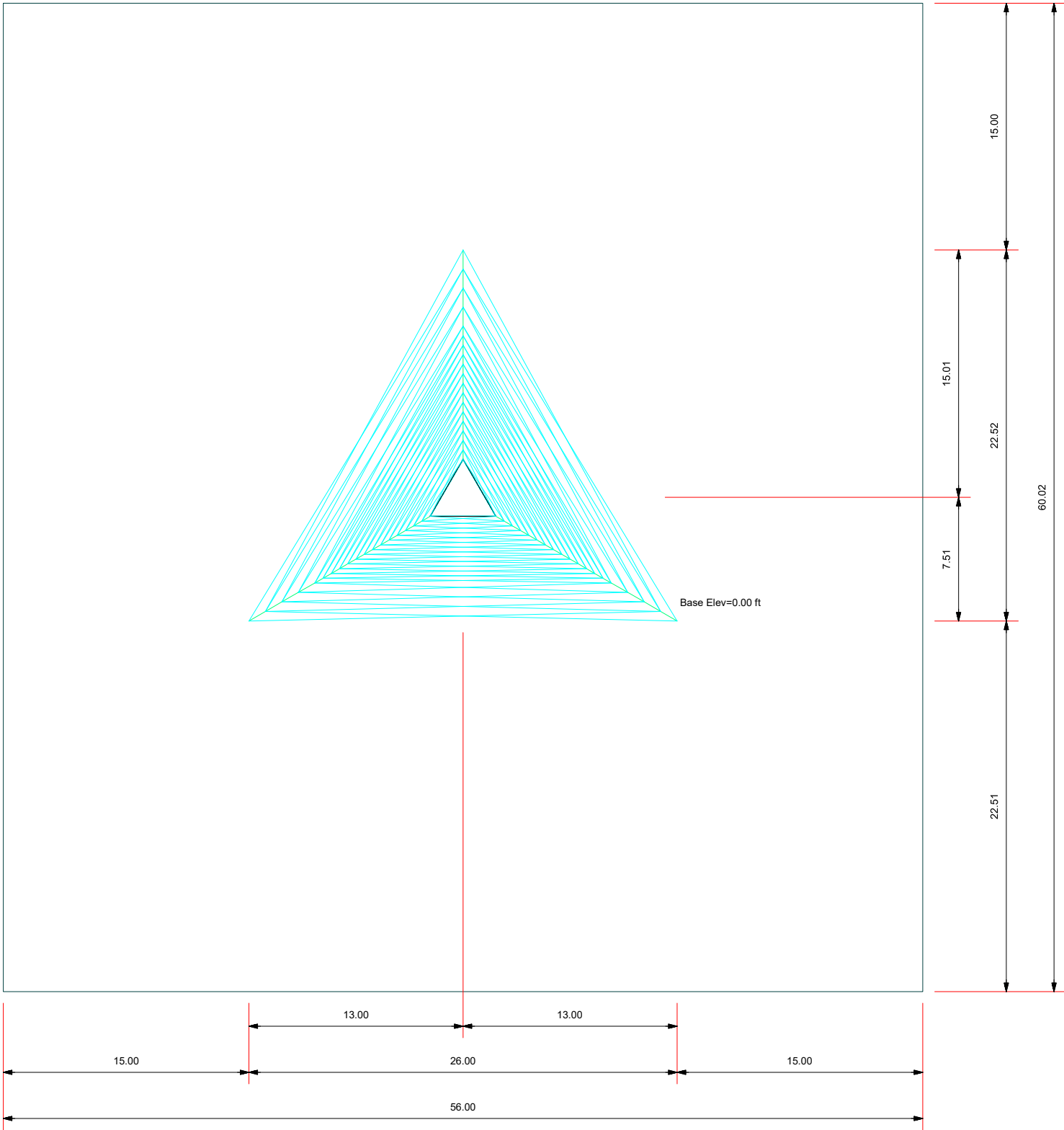
02/17/2022
VECTOR
ENGINEERS

651 W. GALENA PARK BLVD. STE. 101 DRAPER, UTAH 84020 PHONE (801) 990-1775 WWW.VECTORSE.COM

VECTOR PROJECT #: U2309-015-221

valmont STRUCTURES Valmont Industries, Inc. - Global Telecom		1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job: 540603 Project: U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road Client: Parallel Infrastructure Code: TIA-222-H Path:	Drawn by: JS Date: 02/11/22 Scale: NTS Dwg No. E-1
---	--	--	---	---

Plot Plan
Total Area - 0.08 Acres



1545 Pidco Drive
Plymouth, IN

Valmont Industries, Inc. - Global Telecom

Phone: (574) 936-4221
FAX: (574) 936-6458

Job: **540603**

Project: **U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road**

Client: Parallel Infrastructure

Drawn by: JS

App'd:

Code: TIA-222-H

Date: 02/11/22

Scale: NTS

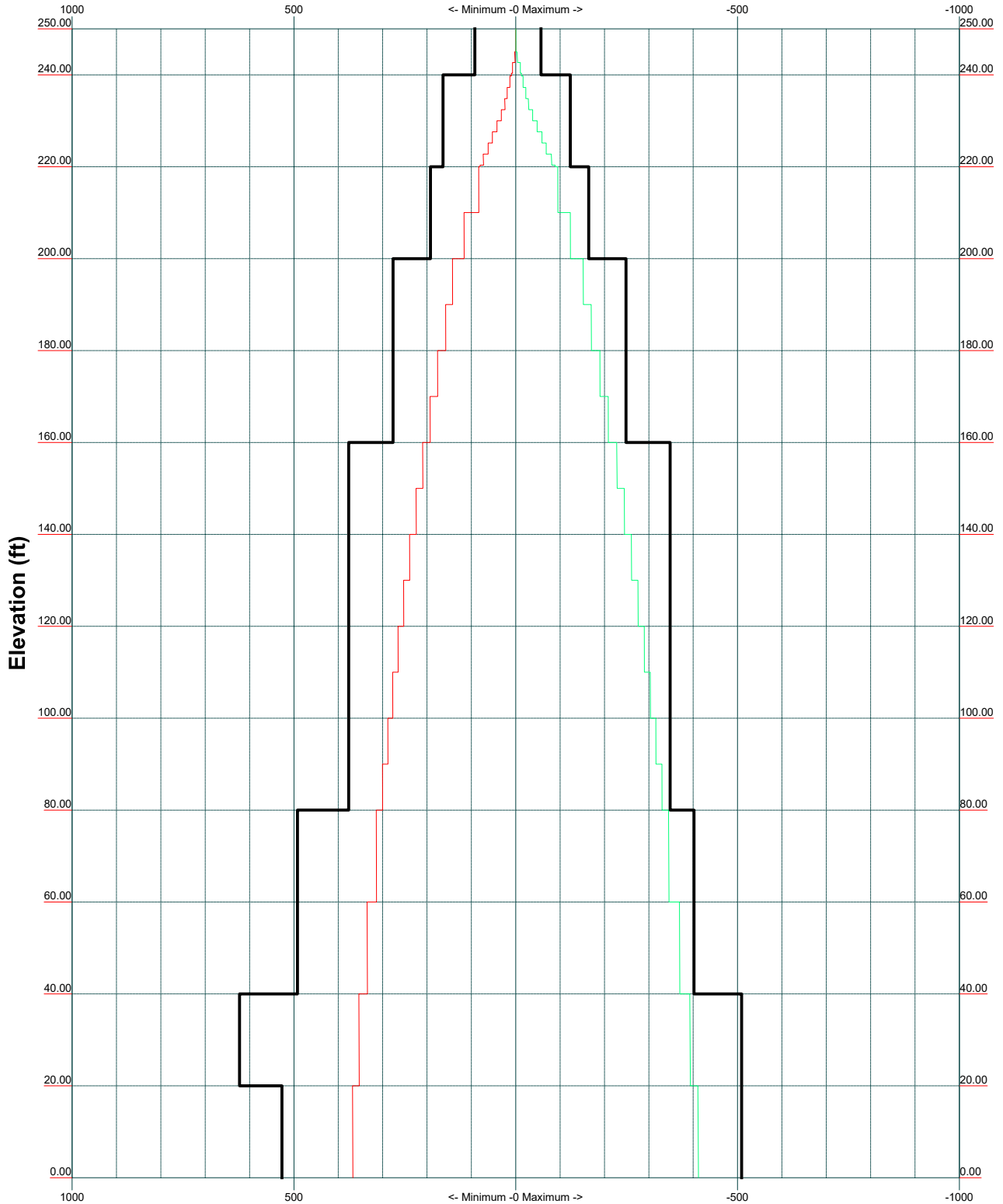
Path:

Dwg No. E-2

TIA-222-H - 106 mph/30 mph 0.5000 in Ice Exposure B

Leg Capacity ———

Leg Compression (K)



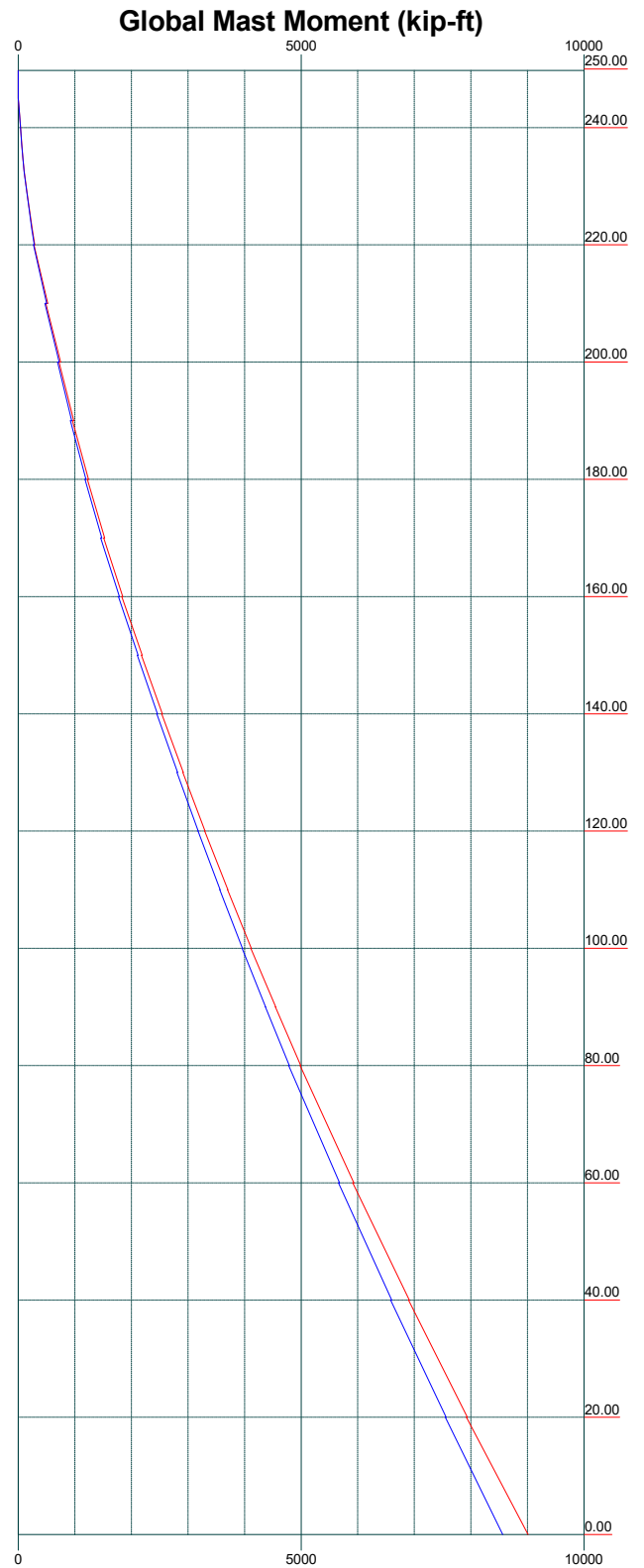
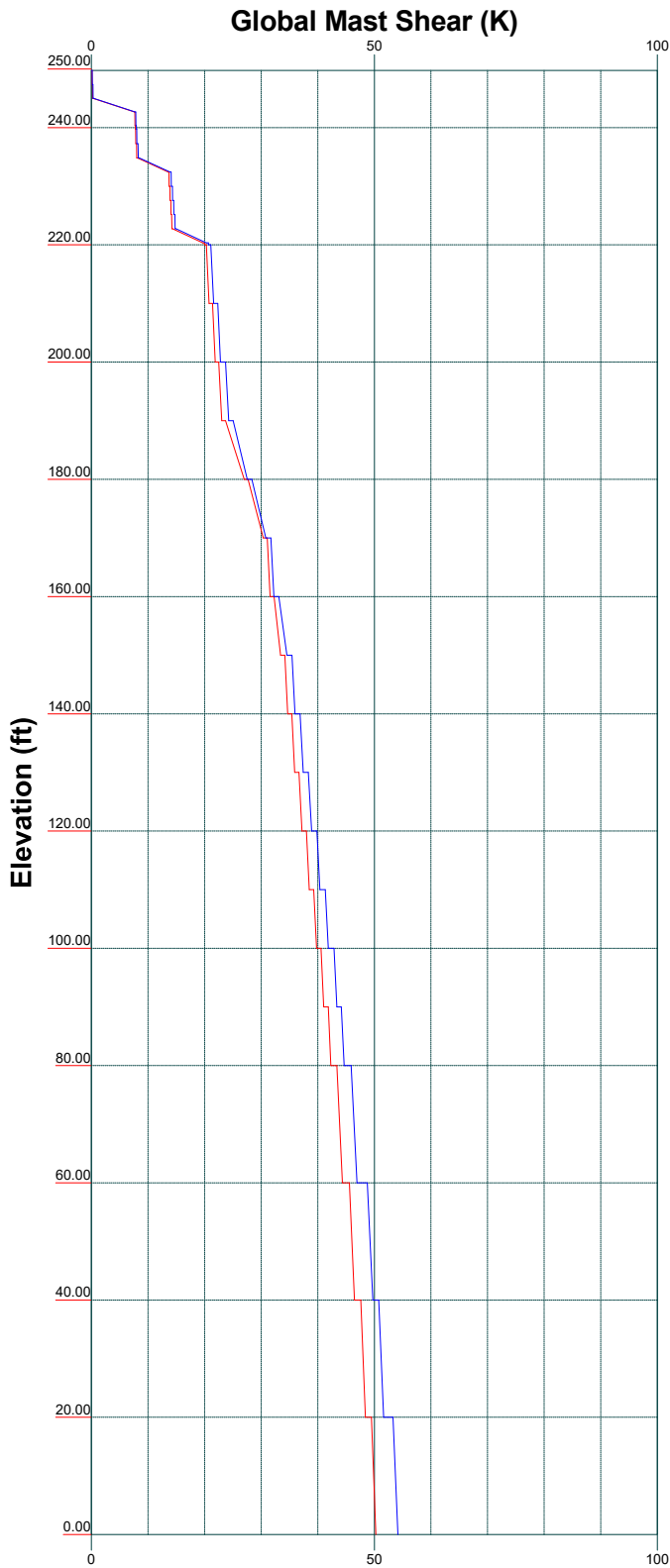
valmont STRUCTURES Valmont Industries, Inc. - Global Telecom	1545 Pidco Drive Plymouth, IN		Job: 540603	
	Phone: (574) 936-4221		Project: U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Client: Parallel Infrastructure
	FAX: (574) 936-6458		Code: TIA-222-H	Drawn by: JS
			Date: 02/11/22	App'd:
			Path:	Scale: NTS
			Dwg No. E-3	

Vx

Vz

Mx

Mz



1545 Pidco Drive
Plymouth, IN
Valmont Industries, Inc. - Global Telecom Phone: (574) 936-4221
FAX: (574) 936-6458

Job: **540603**

Project: **U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road**

Client: **Parallel Infrastructure**

Drawn by: **JS**

App'd:

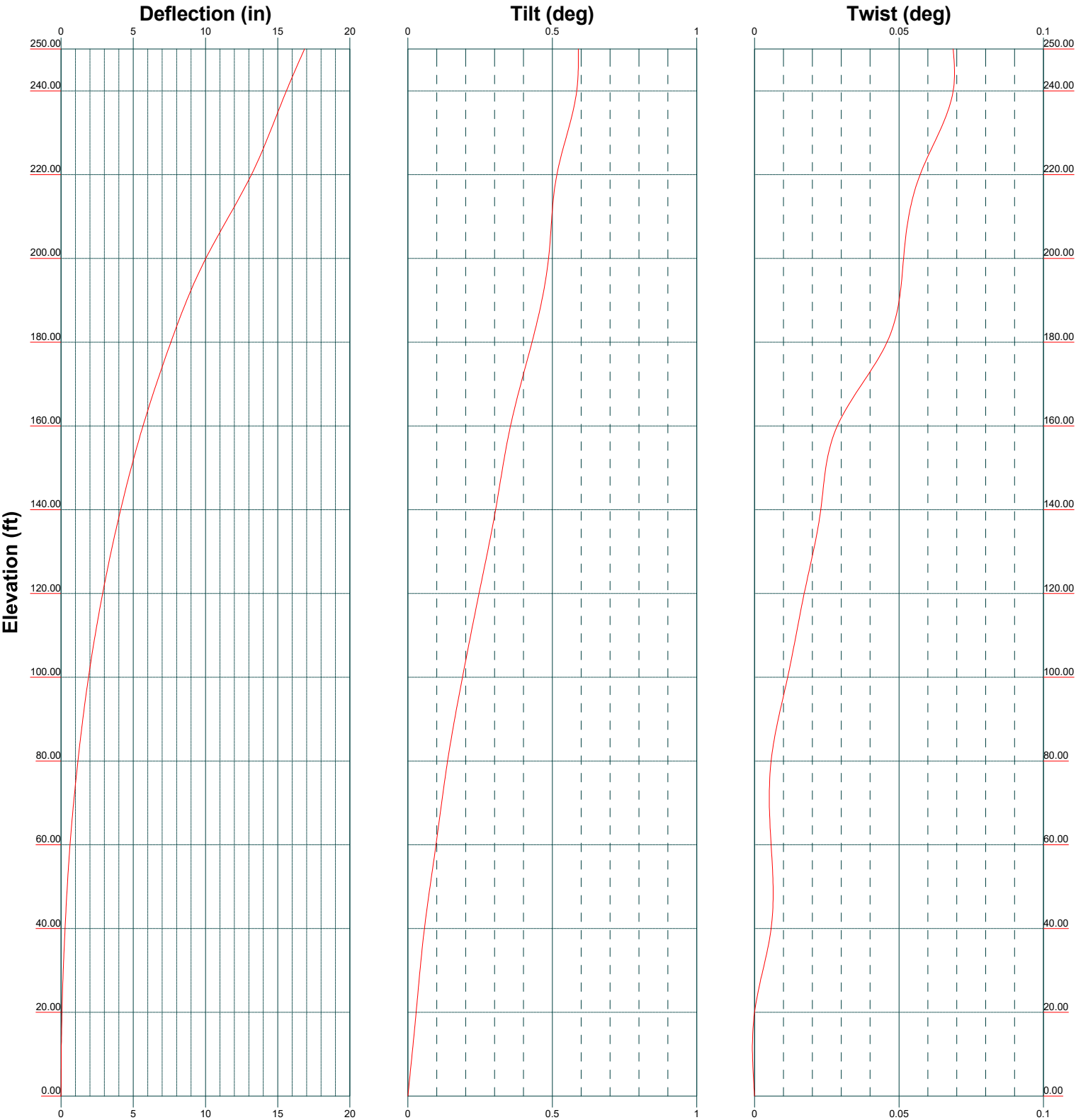
Code: **TIA-222-H**

Date: **02/11/22**

Scale: **NTS**

Path:

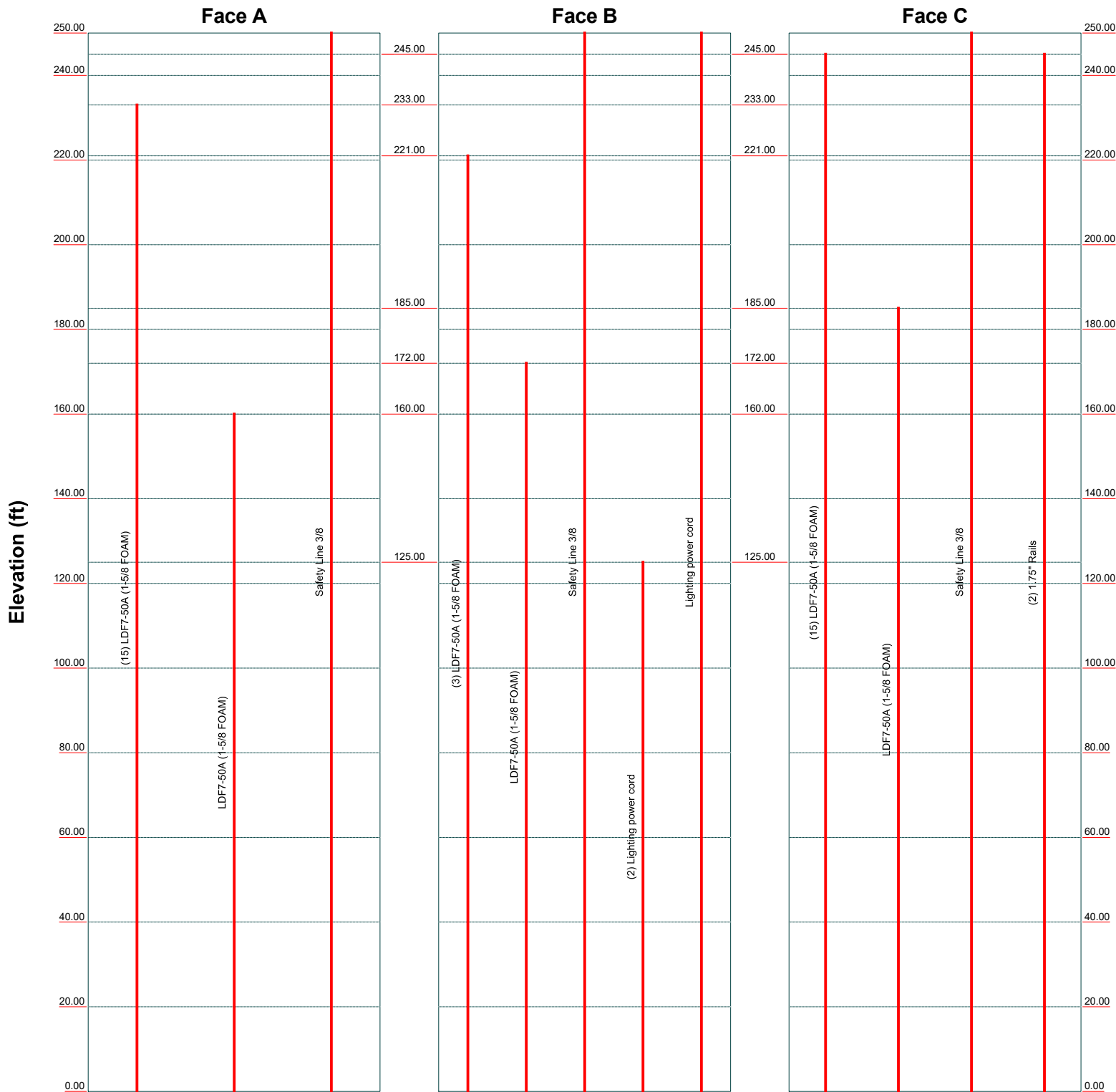
Dwg No. **E-4**



Feed Line Distribution Chart

0' - 250'

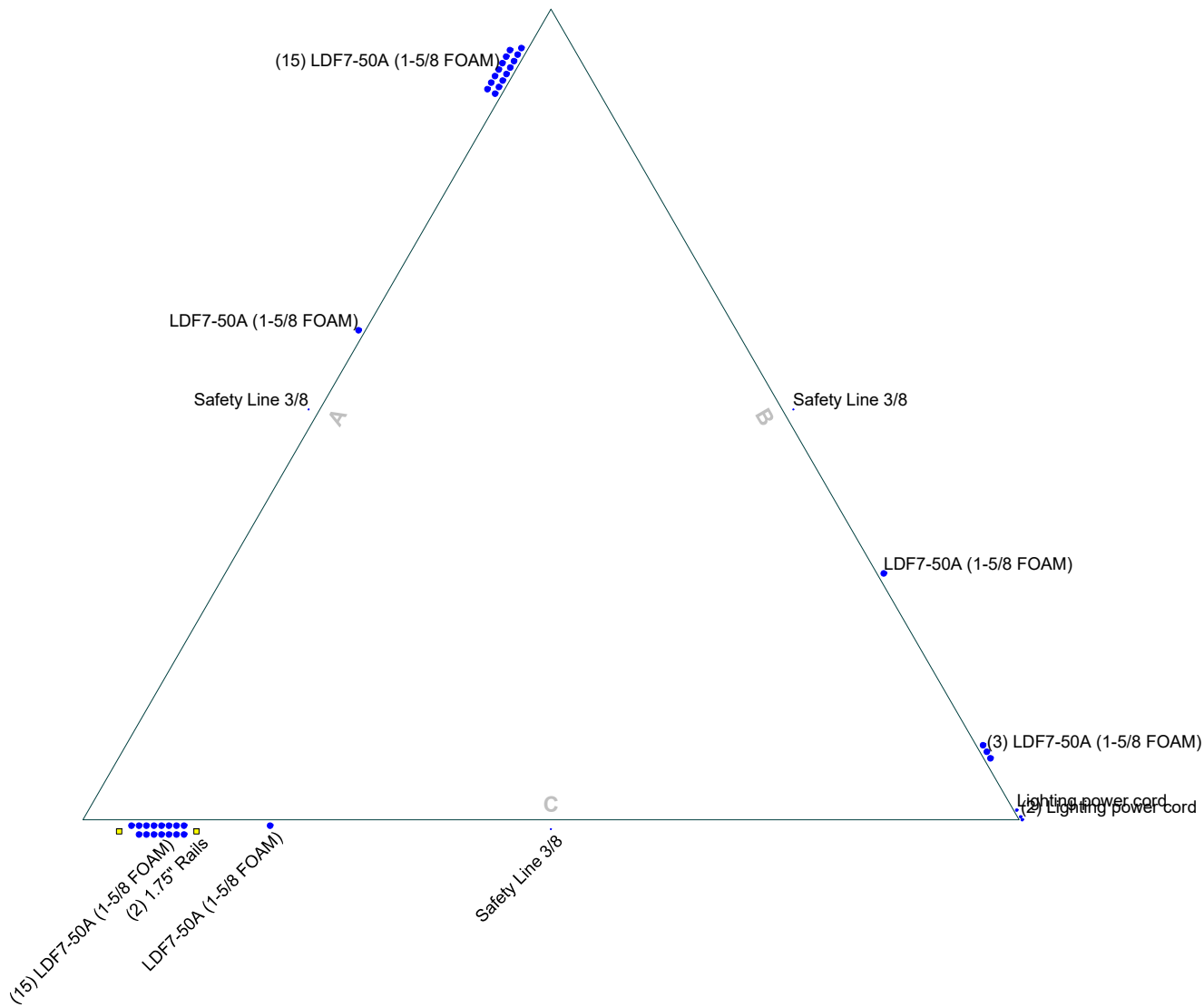
Round Flat App In Face App Out Face Truss Leg



valmont  STRUCTURES Valmont Industries, Inc. - Global Telecom		Job: 540603 Project: U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	
		Client: Parallel Infrastructure Code: TIA-222-H Path:	Drawn by: JS Date: 02/11/22 Scale: NTS Dwg No. E-7
1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458			

Feed Line Plan

Round Flat App In Face App Out Face Truss-Leg



1545 Pidco Drive
Plymouth, IN

Valmont Industries, Inc. - Global Telecom

Phone: (574) 936-4221
FAX: (574) 936-6458

Job: **540603**

Project: **U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road**

Client: **Parallel Infrastructure**

Drawn by: **JS**

App'd:

Code: **TIA-222-H**

Date: **02/11/22**

Scale: **NTS**

Path:

Dwg No. **E-7**

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job 540603	Page 1 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 250.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 4.00 ft at the top and 26.00 ft at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower is located in Skagit County, Washington.

Tower base elevation above sea level: 822.17 ft.

Basic wind speed of 106 mph.

Risk Category III.

Exposure Category B.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 0.5000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 30 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

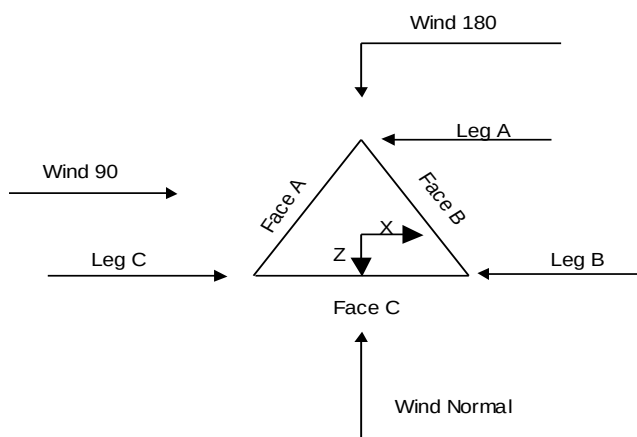
Stress ratio used in tower member design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Horizontals	Assume Legs Pinned	√ Calculate Redundant Bracing Forces
Consider Moments - Diagonals	√ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Use Moment Magnification	√ Use Clear Spans For Wind Area	√ SR Leg Bolts Resist Compression
√ Use Code Stress Ratios	√ Use Clear Spans For KL/r	√ All Leg Panels Have Same Allowable
√ Use Code Safety Factors - Guys	√ Retension Guys To Initial Tension	Offset Girt At Foundation
Escalate Ice	Bypass Mast Stability Checks	√ Consider Feed Line Torque
Always Use Max Kz	√ Use Azimuth Dish Coefficients	√ Include Angle Block Shear Check
Use Special Wind Profile	√ Project Wind Area of Appurt.	Use TIA-222-H Bracing Resist. Exemption
√ Include Bolts In Member Capacity	Autocalc Torque Arm Areas	Use TIA-222-H Tension Splice Exemption
Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	Poles
Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	Include Shear-Torsion Interaction
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Always Use Sub-Critical Flow
SR Members Have Cut Ends	√ Treat Feed Line Bundles As Cylinder	Use Top Mounted Sockets
SR Members Are Concentric	Ignore KL/ry For 60 Deg. Angle Legs	Pole Without Linear Attachments
		Pole With Shroud Or No Appurtenances
		Outside and Inside Corner Radii Are
		Known

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	2 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	250.00-240.00		#48 SST-58 1.50"Lx0.750"D-10'-FP-(2334 67)	4.00	1	10.00
T2	240.00-220.00		#48 SST-58 2.00"Lx0.875"D-20'-(246648)- TR2-FP	4.00	1	20.00
T3	220.00-200.00		PiRod 12BDFH Truss Leg	4.00	1	20.00
T4	200.00-180.00		PiRod 12BDFH Truss Leg	6.00	1	20.00
T5	180.00-160.00		PiRod 12BDFH Truss Leg	8.00	1	20.00
T6	160.00-140.00		PiRod 12BDFH Truss Leg	10.00	1	20.00
T7	140.00-120.00		PiRod 12BDFH Truss Leg	12.00	1	20.00
T8	120.00-100.00		PiRod 12BDFH Truss Leg	14.00	1	20.00
T9	100.00-80.00		PiRod 12BDFH Truss Leg	16.00	1	20.00
T10	80.00-60.00		PiRod 12BDH2 Truss Leg	18.00	1	20.00
T11	60.00-40.00		PiRod 12BDH2 Truss Leg	20.00	1	20.00
T12	40.00-20.00		PiRod 12BDH2 Truss Leg	22.00	1	20.00
T13	20.00-0.00		PiRod 12BDH2 Truss Leg	24.00	1	20.00

Tower Section Geometry (cont'd)

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	3 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	250.00-240.00	2.35	X Brace	No	Steps	3.5000	3.5000
T2	240.00-220.00	2.43	X Brace	No	Steps	3.5000	3.5000
T3	220.00-200.00	10.00	X Brace	No	No	0.0000	0.0000
T4	200.00-180.00	10.00	X Brace	No	No	0.0000	0.0000
T5	180.00-160.00	10.00	X Brace	No	No	0.0000	0.0000
T6	160.00-140.00	10.00	X Brace	No	No	0.0000	0.0000
T7	140.00-120.00	10.00	X Brace	No	No	0.0000	0.0000
T8	120.00-100.00	10.00	X Brace	No	No	0.0000	0.0000
T9	100.00-80.00	10.00	X Brace	No	No	0.0000	0.0000
T10	80.00-60.00	20.00	X Brace	No	No	0.0000	0.0000
T11	60.00-40.00	20.00	X Brace	No	No	0.0000	0.0000
T12	40.00-20.00	20.00	X Brace	No	No	0.0000	0.0000
T13	20.00-0.00	20.00	X Brace	No	No	0.0000	0.0000

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 250.00-240.00	Solid Round	1 1/2	A572-58 (58 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T2 240.00-220.00	Solid Round	2	A572-58 (58 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T3 220.00-200.00	Truss Leg	#12ZG-58 - 1.25" - 1.00" conn. (Pirod 194434)	A572-58 (58 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A572-50 (50 ksi)
T4 200.00-180.00	Truss Leg	#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	A572-58 (58 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A572-50 (50 ksi)
T5 180.00-160.00	Truss Leg	#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	A572-58 (58 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A572-50 (50 ksi)
T6 160.00-140.00	Truss Leg	#12ZG-58 - 1.75" - 1.00" conn.-TR1-(Pirod 195213)	A572-58 (58 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A572-50 (50 ksi)
T7 140.00-120.00	Truss Leg	#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	A572-58 (58 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A572-50 (50 ksi)
T8 120.00-100.00	Truss Leg	#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	A572-58 (58 ksi)	Equal Angle	L3x3x3/16	A572-50 (50 ksi)
T9 100.00-80.00	Truss Leg	#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	A572-58 (58 ksi)	Equal Angle	L3x3x3/16	A572-50 (50 ksi)
T10 80.00-60.00	Truss Leg	#12ZG-58 -2.00" - 0.875" conn.-TR3-(Pirod 195637)	A572-58 (58 ksi)	Double Equal Angle	2L3x3x3/16	A572-50 (50 ksi)
T11 60.00-40.00	Truss Leg	#12ZG-58 -2.00" - 0.875" conn. (Pirod 195639)	A572-58 (58 ksi)	Double Equal Angle	2L3x3x3/16	A572-50 (50 ksi)
T12 40.00-20.00	Truss Leg	#12ZG-58 -2.25" - 0.875" conn. (Pirod 195960)	A572-58 (58 ksi)	Double Equal Angle	2L3x3x3/16	A572-50 (50 ksi)
T13 20.00-0.00	Truss Leg	#12ZG-58 BASE - 2.25" - 0.875" conn.(Pirod 281172)	A572-58 (58 ksi)	Double Equal Angle	2L3x3x3/16	A572-50 (50 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 250.00-240.00	Solid Round	7/8	A572-50	Solid Round	7/8	A572-50

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	4 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T2 240.00-220.00	Solid Round	1	(50 ksi) A572-50	Solid Round	1	(50 ksi) A572-50
T3 220.00-200.00	Equal Angle	L3x3x3/16	(50 ksi) A572-50	Solid Round		(50 ksi) A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 250.00-240.00	None	Solid Round		A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T2 240.00-220.00	1	Solid Round	1	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1	0.00	0.0000	A36	1	1	1.05	36.0000	36.0000	36.0000
250.00-240.00			(36 ksi)						
T2	0.00	0.0000	A36	1	1	1.05	36.0000	36.0000	36.0000
240.00-220.00			(36 ksi)						
T3	0.00	0.5000	A36	1	1	1.05	36.0000	36.0000	36.0000
220.00-200.00			(36 ksi)						
T4	0.00	0.5000	A36	1	1	1.05	36.0000	36.0000	36.0000
200.00-180.00			(36 ksi)						
T5	0.00	0.5000	A36	1	1	1.05	36.0000	36.0000	36.0000
180.00-160.00			(36 ksi)						
T6	0.00	0.5000	A36	1	1	1.05	36.0000	36.0000	36.0000
160.00-140.00			(36 ksi)						
T7	0.00	0.5000	A36	1	1	1.05	36.0000	36.0000	36.0000
140.00-120.00			(36 ksi)						
T8	0.00	0.5000	A36	1	1	1.05	36.0000	36.0000	36.0000
120.00-100.00			(36 ksi)						
T9	0.00	0.5000	A36	1	1	1.05	36.0000	36.0000	36.0000
100.00-80.00			(36 ksi)						
T10	0.00	0.6250	A36	1	1	1.05	36.0000	36.0000	36.0000
80.00-60.00			(36 ksi)						
T11	0.00	0.6250	A36	1	1	1.05	36.0000	36.0000	36.0000
60.00-40.00			(36 ksi)						
T12	0.00	0.6250	A36	1	1	1.05	36.0000	36.0000	36.0000
40.00-20.00			(36 ksi)						
T13 20.00-0.00	0.00	0.6250	A36	1	1	1.05	36.0000	36.0000	36.0000
			(36 ksi)						

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	5 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Tower Section Geometry (cont'd)

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors ¹							
			Legs	X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
				X Y	X Y	X Y	X Y	X Y	X Y	X Y
T1	Yes	Yes	1	1	1	1	1	1	1	1
250.00-240.00				1	1	1	1	1	1	1
T2	Yes	Yes	1	1	1	1	1	1	1	1
240.00-220.00				1	1	1	1	1	1	1
T3	Yes	Yes	1	1	1	1	1	1	1	1
220.00-200.00				1	1	1	1	1	1	1
T4	Yes	Yes	1	1	1	1	1	1	1	1
200.00-180.00				1	1	1	1	1	1	1
T5	Yes	Yes	1	1	1	1	1	1	1	1
180.00-160.00				1	1	1	1	1	1	1
T6	Yes	Yes	1	1	1	1	1	1	1	1
160.00-140.00				1	1	1	1	1	1	1
T7	Yes	Yes	1	1	1	1	1	1	1	1
140.00-120.00				1	1	1	1	1	1	1
T8	Yes	Yes	1	1	1	1	1	1	1	1
120.00-100.00				1	1	1	1	1	1	1
T9	Yes	Yes	1	1	1	1	1	1	1	1
100.00-80.00				1	1	1	1	1	1	1
T10	Yes	Yes	1	1	1	1	1	1	1	1
80.00-60.00				1	1	1	1	1	1	1
T11	Yes	Yes	1	1	1	1	1	1	1	1
60.00-40.00				1	1	1	1	1	1	1
T12	Yes	Yes	1	1	1	1	1	1	1	1
40.00-20.00				1	1	1	1	1	1	1
T13	Yes	Yes	1	1	1	1	1	1	1	1
20.00-0.00				1	1	1	1	1	1	1

¹Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

Tower Section Geometry (cont'd)

Tower Elevation ft	Truss-Leg K Factors					
	Truss-Legs Used As Leg Members			Truss-Legs Used As Inner Members		
	Leg Panels	X Brace Diagonals	Z Brace Diagonals	Leg Panels	X Brace Diagonals	Z Brace Diagonals
T3	1	0.5	0.7	1	0.5	0.7
220.00-200.00						
T4	1	0.5	0.7	1	0.5	0.7
200.00-180.00						
T5	1	0.5	0.7	1	0.5	0.7
180.00-160.00						
T6	1	0.5	0.7	1	0.5	0.7
160.00-140.00						
T7	1	0.5	0.7	1	0.5	0.7
140.00-120.00						
T8	1	0.5	0.7	1	0.5	0.7
120.00-100.00						

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	7 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T3	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
220.00-200.00														
T4	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
200.00-180.00														
T5	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
180.00-160.00														
T6	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
160.00-140.00														
T7	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
140.00-120.00														
T8	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
120.00-100.00														
T9	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
100.00-80.00														
T10	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
80.00-60.00														
T11	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
60.00-40.00														
T12	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
40.00-20.00														
T13 20.00-0.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Section Geometry (cont'd)

Tower Elevation ft	Connection Offsets							
	Diagonal				K-Bracing			
	Vert. Top	Horiz. Top	Vert. Bot.	Horiz. Bot.	Vert. Top	Horiz. Top	Vert. Bot.	Horiz. Bot.
	in	in	in	in	in	in	in	in
T1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250.00-240.00								
T2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
240.00-220.00								
T3	5.0000	10.7500	5.0000	10.7500	0.0000	0.0000	0.0000	0.0000
220.00-200.00								
T4	5.0000	10.7500	5.0000	10.7500	0.0000	0.0000	0.0000	0.0000
200.00-180.00								
T5	5.0000	10.7500	5.0000	10.7500	0.0000	0.0000	0.0000	0.0000
180.00-160.00								
T6	5.0000	10.7500	5.0000	10.7500	0.0000	0.0000	0.0000	0.0000
160.00-140.00								
T7	5.0000	10.7500	5.0000	10.7500	0.0000	0.0000	0.0000	0.0000
140.00-120.00								
T8	5.0000	10.7500	5.0000	10.7500	0.0000	0.0000	0.0000	0.0000
120.00-100.00								
T9	5.0000	10.7500	5.0000	10.7500	0.0000	0.0000	0.0000	0.0000
100.00-80.00								
T10	5.0000	11.5000	5.0000	11.5000	0.0000	0.0000	0.0000	0.0000
80.00-60.00								

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	8 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Tower Elevation	Connection Offsets							
	Diagonal				K-Bracing			
	Vert. Top	Horiz. Top	Vert. Bot.	Horiz. Bot.	Vert. Top	Horiz. Top	Vert. Bot.	Horiz. Bot.
ft	in	in	in	in	in	in	in	in
T11 60.00-40.00	5.0000	11.5000	5.0000	11.5000	0.0000	0.0000	0.0000	0.0000
T12 40.00-20.00	5.0000	11.5000	5.0000	11.5000	0.0000	0.0000	0.0000	0.0000
T13 20.00-0.00	5.0000	11.5000	5.0000	11.5000	0.0000	0.0000	0.0000	0.0000

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 250.00-240.00	Flange	1.0000	2	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T2 240.00-220.00	Flange	1.0000	4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T3 220.00-200.00	Flange	1.0000	6	1.0000	1	1.0000	1	1.0000	0	1.0000	0	1.0000	0	1.0000	0
T4 200.00-180.00	Flange	1.0000	6	1.0000	1	0.0000	0	1.0000	0	1.0000	0	1.0000	0	1.0000	0
T5 180.00-160.00	Flange	1.0000	6	1.0000	1	0.0000	0	1.0000	0	1.0000	0	1.0000	0	1.0000	0
T6 160.00-140.00	Flange	1.2500	6	1.0000	1	0.0000	0	1.0000	0	1.0000	0	1.0000	0	1.0000	0
T7 140.00-120.00	Flange	1.2500	6	1.0000	1	0.0000	0	1.0000	0	1.0000	0	1.0000	0	1.0000	0
T8 120.00-100.00	Flange	1.2500	6	1.0000	1	0.0000	0	1.0000	0	1.0000	0	1.0000	0	1.0000	0
T9 100.00-80.00	Flange	1.2500	6	1.0000	1	0.0000	0	1.0000	0	1.0000	0	1.0000	0	1.0000	0
T10 80.00-60.00	Flange	1.0000	12	0.8750	1	0.0000	0	1.0000	0	1.0000	0	1.0000	0	1.0000	0
T11 60.00-40.00	Flange	1.0000	12	0.8750	1	0.0000	0	1.0000	0	1.0000	0	1.0000	0	1.0000	0
T12 40.00-20.00	Flange	1.0000	12	0.8750	1	0.0000	0	1.0000	0	1.0000	0	1.0000	0	1.0000	0
T13 20.00-0.00	Flange	1.5000	4	0.8750	1	0.0000	0	1.0000	0	1.0000	0	1.0000	0	1.0000	0
		F1554-105		A325N		A325N		A325N		A325N		A325N		A325N	

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
LDF7-50A (1-5/8 FOAM)	C	No	No	Ar (CaAa)	245.00 - 0.00	1.0000	0.42	15	8	0.5200 1.0000	1.9800		0.82

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	9 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
LDF7-50A (1-5/8 FOAM)	A	No	No	Ar (CaAa)	233.00 - 0.00	1.0000	0.42	15	8	0.5200 1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	B	No	No	Ar (CaAa)	221.00 - 0.00	1.0000	0.42	3	3	0.5200 1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	C	No	No	Ar (CaAa)	185.00 - 0.00	1.0000	0.3	1	1	0.5200 1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	B	No	No	Ar (CaAa)	172.00 - 0.00	1.0000	0.2	1	1	0.5200 1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	A	No	No	Ar (CaAa)	160.00 - 0.00	1.0000	0.1	1	1	0.5200 1.0000	1.9800		0.82
Safety Line 3/8	C	No	No	Ar (CaAa)	250.00 - 0.00	3.0000	0	1	1	0.3750	0.3750		0.22
Safety Line 3/8	B	No	No	Ar (CaAa)	250.00 - 0.00	3.0000	0	1	1	0.3750	0.3750		0.22
Safety Line 3/8	A	No	No	Ar (CaAa)	250.00 - 0.00	3.0000	0	1	1	0.3750	0.3750		0.22
Lighting power cord	B	No	No	Ar (CaAa)	125.00 - 0.00	0.5000	0.5	2	2	0.2000 0.0000	0.8700		0.15
Lighting power cord	B	No	No	Ar (CaAa)	250.00 - 0.00	0.5000	0.49	1	1	0.2000 0.0000	0.8700		0.15
1.75" Rails	C	No	No	Af (CaAa)	245.00 - 0.00	3.0000	0.42	2	2	24.0000 3.0000	1.7500		4.20

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	250.00-240.00	A	0.000	0.000	0.375	0.000	0.00
		B	0.000	0.000	1.245	0.000	0.00
		C	0.000	0.000	18.142	0.000	0.11
T2	240.00-220.00	A	0.000	0.000	39.360	0.000	0.16
		B	0.000	0.000	3.084	0.000	0.01
		C	0.000	0.000	71.817	0.000	0.42
T3	220.00-200.00	A	0.000	0.000	60.150	0.000	0.25
		B	0.000	0.000	14.370	0.000	0.06
		C	0.000	0.000	71.817	0.000	0.42
T4	200.00-180.00	A	0.000	0.000	60.150	0.000	0.25
		B	0.000	0.000	14.370	0.000	0.06
		C	0.000	0.000	72.807	0.000	0.42
T5	180.00-160.00	A	0.000	0.000	60.150	0.000	0.25
		B	0.000	0.000	16.746	0.000	0.07
		C	0.000	0.000	75.777	0.000	0.43
T6	160.00-140.00	A	0.000	0.000	64.110	0.000	0.27
		B	0.000	0.000	18.330	0.000	0.07
		C	0.000	0.000	75.777	0.000	0.43
T7	140.00-120.00	A	0.000	0.000	64.110	0.000	0.27
		B	0.000	0.000	19.200	0.000	0.07
		C	0.000	0.000	75.777	0.000	0.43
T8	120.00-100.00	A	0.000	0.000	64.110	0.000	0.27
		B	0.000	0.000	21.810	0.000	0.08
		C	0.000	0.000	75.777	0.000	0.43
T9	100.00-80.00	A	0.000	0.000	64.110	0.000	0.27
		B	0.000	0.000	21.810	0.000	0.08
		C	0.000	0.000	75.777	0.000	0.43
T10	80.00-60.00	A	0.000	0.000	64.110	0.000	0.27

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	10 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T11	60.00-40.00	B	0.000	0.000	21.810	0.000	0.08
		C	0.000	0.000	75.777	0.000	0.43
		A	0.000	0.000	64.110	0.000	0.27
T12	40.00-20.00	B	0.000	0.000	21.810	0.000	0.08
		C	0.000	0.000	75.777	0.000	0.43
		A	0.000	0.000	64.110	0.000	0.27
T13	20.00-0.00	B	0.000	0.000	21.810	0.000	0.08
		C	0.000	0.000	75.777	0.000	0.43
		A	0.000	0.000	64.110	0.000	0.27

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	250.00-240.00	A	0.703	0.000	0.000	1.780	0.000	0.01
		B		0.000	0.000	4.056	0.000	0.03
		C		0.000	0.000	19.748	0.000	0.31
T2	240.00-220.00	A	0.698	0.000	0.000	39.005	0.000	0.61
		B		0.000	0.000	9.205	0.000	0.06
		C		0.000	0.000	75.352	0.000	1.20
T3	220.00-200.00	A	0.692	0.000	0.000	58.035	0.000	0.92
		B		0.000	0.000	30.562	0.000	0.23
		C		0.000	0.000	75.237	0.000	1.20
T4	200.00-180.00	A	0.685	0.000	0.000	57.964	0.000	0.92
		B		0.000	0.000	30.462	0.000	0.23
		C		0.000	0.000	76.786	0.000	1.21
T5	180.00-160.00	A	0.677	0.000	0.000	57.887	0.000	0.92
		B		0.000	0.000	34.354	0.000	0.26
		C		0.000	0.000	81.643	0.000	1.25
T6	160.00-140.00	A	0.669	0.000	0.000	64.436	0.000	0.97
		B		0.000	0.000	36.866	0.000	0.28
		C		0.000	0.000	81.455	0.000	1.24
T7	140.00-120.00	A	0.659	0.000	0.000	64.301	0.000	0.97
		B		0.000	0.000	39.144	0.000	0.29
		C		0.000	0.000	81.244	0.000	1.23
T8	120.00-100.00	A	0.649	0.000	0.000	64.146	0.000	0.96
		B		0.000	0.000	46.227	0.000	0.32
		C		0.000	0.000	81.001	0.000	1.23
T9	100.00-80.00	A	0.636	0.000	0.000	63.962	0.000	0.96
		B		0.000	0.000	45.900	0.000	0.31
		C		0.000	0.000	80.715	0.000	1.22
T10	80.00-60.00	A	0.620	0.000	0.000	63.738	0.000	0.95
		B		0.000	0.000	45.499	0.000	0.31
		C		0.000	0.000	80.364	0.000	1.21
T11	60.00-40.00	A	0.599	0.000	0.000	63.446	0.000	0.94
		B		0.000	0.000	44.978	0.000	0.30
		C		0.000	0.000	79.908	0.000	1.19
T12	40.00-20.00	A	0.570	0.000	0.000	63.022	0.000	0.92
		B		0.000	0.000	44.220	0.000	0.29
		C		0.000	0.000	79.245	0.000	1.17
T13	20.00-0.00	A	0.510	0.000	0.000	62.180	0.000	0.89
		B		0.000	0.000	42.717	0.000	0.27
		C		0.000	0.000	77.929	0.000	1.13

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	11 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Feed Line Center of Pressure

Section	Elevation	CP _x	CP _z	CP _x Ice	CP _z Ice
	ft	in	in	in	in
T1	250.00-240.00	-8.5755	3.8221	-5.0646	2.8577
T2	240.00-220.00	-10.6978	-4.2074	-7.9348	-1.8221
T3	220.00-200.00	-7.4172	-4.8701	-4.9940	-2.3571
T4	200.00-180.00	-9.9113	-6.2118	-7.3773	-3.2424
T5	180.00-160.00	-11.8113	-6.8160	-8.7854	-3.2428
T6	160.00-140.00	-13.6340	-8.3640	-10.2780	-4.4550
T7	140.00-120.00	-15.1857	-9.2580	-11.2693	-4.7749
T8	120.00-100.00	-15.1971	-9.1045	-10.8775	-4.2342
T9	100.00-80.00	-16.5492	-9.9191	-11.9476	-4.6923
T10	80.00-60.00	-19.3321	-11.4874	-13.6948	-5.3904
T11	60.00-40.00	-20.9403	-12.4447	-14.9938	-5.9776
T12	40.00-20.00	-22.1580	-13.1413	-16.1190	-6.5340
T13	20.00-0.00	-23.7955	-14.1318	-17.8542	-7.4998

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T1	1	LDF7-50A (1-5/8 FOAM)	240.00 - 245.00	0.6000	0.6000
T1	9	Safety Line 3/8	240.00 - 250.00	0.6000	0.6000
T1	10	Safety Line 3/8	240.00 - 250.00	0.6000	0.6000
T1	11	Safety Line 3/8	240.00 - 250.00	0.6000	0.6000
T1	13	Lighting power cord	240.00 - 250.00	0.6000	0.6000
T1	14	1.75" Rails	240.00 - 245.00	0.6000	0.6000
T2	1	LDF7-50A (1-5/8 FOAM)	220.00 - 240.00	0.6000	0.6000
T2	3	LDF7-50A (1-5/8 FOAM)	220.00 - 233.00	0.6000	0.6000
T2	5	LDF7-50A (1-5/8 FOAM)	220.00 - 221.00	0.6000	0.6000
T2	9	Safety Line 3/8	220.00 - 240.00	0.6000	0.6000
T2	10	Safety Line 3/8	220.00 - 240.00	0.6000	0.6000
T2	11	Safety Line 3/8	220.00 - 240.00	0.6000	0.6000
T2	13	Lighting power cord	220.00 - 240.00	0.6000	0.6000
T2	14	1.75" Rails	220.00 - 240.00	0.6000	0.6000
T3	1	LDF7-50A (1-5/8 FOAM)	200.00 - 220.00	0.6000	0.5185
T3	3	LDF7-50A (1-5/8 FOAM)	200.00 - 220.00	0.6000	0.5185

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	12 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_o No Ice</i>	<i>K_o Ice</i>
T3	5	LDF7-50A (1-5/8 FOAM)	200.00 - 220.00	0.6000	0.5185
T3	9	Safety Line 3/8	200.00 - 220.00	0.6000	0.5185
T3	10	Safety Line 3/8	200.00 - 220.00	0.6000	0.5185
T3	11	Safety Line 3/8	200.00 - 220.00	0.6000	0.5185
T3	13	Lighting power cord	200.00 - 220.00	0.6000	0.5185
T3	14	1.75" Rails	200.00 - 220.00	0.6000	0.5185
T4	1	LDF7-50A (1-5/8 FOAM)	180.00 - 200.00	0.6000	0.6000
T4	3	LDF7-50A (1-5/8 FOAM)	180.00 - 200.00	0.6000	0.6000
T4	5	LDF7-50A (1-5/8 FOAM)	180.00 - 200.00	0.6000	0.6000
T4	6	LDF7-50A (1-5/8 FOAM)	180.00 - 185.00	0.6000	0.6000
T4	9	Safety Line 3/8	180.00 - 200.00	0.6000	0.6000
T4	10	Safety Line 3/8	180.00 - 200.00	0.6000	0.6000
T4	11	Safety Line 3/8	180.00 - 200.00	0.6000	0.6000
T4	13	Lighting power cord	180.00 - 200.00	0.6000	0.6000
T4	14	1.75" Rails	180.00 - 200.00	0.6000	0.6000
T5	1	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.6000
T5	3	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.6000
T5	5	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.6000
T5	6	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.6000
T5	7	LDF7-50A (1-5/8 FOAM)	160.00 - 172.00	0.6000	0.6000
T5	9	Safety Line 3/8	160.00 - 180.00	0.6000	0.6000
T5	10	Safety Line 3/8	160.00 - 180.00	0.6000	0.6000
T5	11	Safety Line 3/8	160.00 - 180.00	0.6000	0.6000
T5	13	Lighting power cord	160.00 - 180.00	0.6000	0.6000
T5	14	1.75" Rails	160.00 - 180.00	0.6000	0.6000
T6	1	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.6000
T6	3	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.6000
T6	5	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.6000
T6	6	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.6000
T6	7	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.6000
T6	8	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.6000

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page 13 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by JS

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_o No Ice</i>	<i>K_o Ice</i>
T6	9	Safety Line 3/8	140.00 - 160.00	0.6000	0.6000
T6	10	Safety Line 3/8	140.00 - 160.00	0.6000	0.6000
T6	11	Safety Line 3/8	140.00 - 160.00	0.6000	0.6000
T6	13	Lighting power cord	140.00 - 160.00	0.6000	0.6000
T6	14	1.75" Rails	140.00 - 160.00	0.6000	0.6000
T7	1	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T7	3	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T7	5	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T7	6	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T7	7	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T7	8	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T7	9	Safety Line 3/8	120.00 - 140.00	0.6000	0.6000
T7	10	Safety Line 3/8	120.00 - 140.00	0.6000	0.6000
T7	11	Safety Line 3/8	120.00 - 140.00	0.6000	0.6000
T7	12	Lighting power cord	120.00 - 125.00	0.6000	0.6000
T7	13	Lighting power cord	120.00 - 140.00	0.6000	0.6000
T7	14	1.75" Rails	120.00 - 140.00	0.6000	0.6000
T8	1	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T8	3	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T8	5	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T8	6	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T8	7	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T8	8	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T8	9	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T8	10	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T8	11	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T8	12	Lighting power cord	100.00 - 120.00	0.6000	0.6000
T8	13	Lighting power cord	100.00 - 120.00	0.6000	0.6000
T8	14	1.75" Rails	100.00 - 120.00	0.6000	0.6000
T9	1	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T9	3	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T9	5	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T9	6	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page 14 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by JS

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_o No Ice</i>	<i>K_o Ice</i>
T9	7	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T9	8	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T9	9	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T9	10	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T9	11	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T9	12	Lighting power cord	80.00 - 100.00	0.6000	0.6000
T9	13	Lighting power cord	80.00 - 100.00	0.6000	0.6000
T9	14	1.75" Rails	80.00 - 100.00	0.6000	0.6000
T10	1	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T10	3	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T10	5	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T10	6	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T10	7	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T10	8	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T10	9	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T10	10	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T10	11	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T10	12	Lighting power cord	60.00 - 80.00	0.6000	0.6000
T10	13	Lighting power cord	60.00 - 80.00	0.6000	0.6000
T10	14	1.75" Rails	60.00 - 80.00	0.6000	0.6000
T11	1	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T11	3	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T11	5	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T11	6	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T11	7	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T11	8	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T11	9	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T11	10	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T11	11	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T11	12	Lighting power cord	40.00 - 60.00	0.6000	0.6000
T11	13	Lighting power cord	40.00 - 60.00	0.6000	0.6000
T11	14	1.75" Rails	40.00 - 60.00	0.6000	0.6000
T12	1	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T12	3	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T12	5	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T12	6	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T12	7	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T12	8	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T12	9	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T12	10	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T12	11	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T12	12	Lighting power cord	20.00 - 40.00	0.6000	0.6000
T12	13	Lighting power cord	20.00 - 40.00	0.6000	0.6000
T12	14	1.75" Rails	20.00 - 40.00	0.6000	0.6000
T13	1	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
T13	3	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
T13	5	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
T13	6	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
T13	7	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
T13	8	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
T13	9	Safety Line 3/8	0.00 - 20.00	0.6000	0.6000
T13	10	Safety Line 3/8	0.00 - 20.00	0.6000	0.6000
T13	11	Safety Line 3/8	0.00 - 20.00	0.6000	0.6000
T13	12	Lighting power cord	0.00 - 20.00	0.6000	0.6000
T13	13	Lighting power cord	0.00 - 20.00	0.6000	0.6000
T13	14	1.75" Rails	0.00 - 20.00	0.6000	0.6000

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	15 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
5/8" x 10' Adjustable lightning rod	C	From Leg	0.00 0.00 2.50	0.0000	250.00	No Ice 1/2" Ice	0.63 1.63	0.63 1.63	0.02 0.03
Beacon	B	From Leg	0.00 0.00 0.00	0.0000	250.00	No Ice 1/2" Ice	2.40 2.67	2.40 2.67	0.07 0.10

OB light	C	From Leg	0.00 0.00 0.00	0.0000	125.00	No Ice 1/2" Ice	0.50 0.60	0.50 0.60	0.03 0.04
OB light	B	From Leg	0.00 0.00 0.00	0.0000	125.00	No Ice 1/2" Ice	0.50 0.60	0.50 0.60	0.03 0.04
OB light	A	From Leg	0.00 0.00 0.00	0.0000	125.00	No Ice 1/2" Ice	0.50 0.60	0.50 0.60	0.03 0.04

40,000 sq.in.(277.8 sq.ft. EPA)	C	None		0.0000	245.00	No Ice 1/2" Ice	277.80 347.13	277.70 347.13	4.00 5.00
* 30,000 sq.in.(208.3 sq.ft. EPA)	B	None		0.0000	233.00	No Ice 1/2" Ice	208.30 260.38	208.30 260.38	3.00 4.00
* 30,000 sq.in.(208.3 sq.ft. EPA)	A	None		0.0000	221.00	No Ice 1/2" Ice	208.30 260.38	208.30 260.38	3.00 4.00
SP1 R5 (Includes 4.5"x72" Pipe)	C	From Leg	0.50 0.00 0.00	0.0000	185.00	No Ice 1/2" Ice	2.85 3.36	3.15 3.69	0.14 0.17
SP1 R5 (Includes 4.5"x72" Pipe)	B	From Leg	0.50 0.00 0.00	0.0000	172.00	No Ice 1/2" Ice	2.85 3.36	3.15 3.69	0.14 0.17
SP1 R5 (Includes 4.5"x72" Pipe)	A	From Leg	0.50 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice	2.85 3.36	3.15 3.69	0.14 0.17
**									
2-1/2" x 8' Sch. 40	A	From Face	0.00 0.00 0.00	0.0000	185.00	No Ice 1/2" Ice	2.30 3.09	2.30 3.09	0.05 0.06
2-1/2" x 8' Sch. 40	B	From Face	0.00 0.00 0.00	0.0000	185.00	No Ice 1/2" Ice	2.30 3.09	2.30 3.09	0.05 0.06
2-1/2" x 9' Sch. 40	A	From Face	0.00 0.00 0.00	0.0000	172.00	No Ice 1/2" Ice	2.59 3.49	2.59 3.49	0.05 0.07
2-1/2" x 9' Sch. 40	C	From Face	0.00 0.00 0.00	0.0000	172.00	No Ice 1/2" Ice	2.59 3.49	2.59 3.49	0.05 0.07
2-1/2" x 10' Sch. 40	B	From Face	0.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice	2.88 3.88	2.88 3.88	0.06 0.08
2-1/2" x 10' Sch. 40	C	From Face	0.00	0.0000	160.00	No Ice	2.88	2.88	0.06

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	16 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
			0.00		1/2" Ice	3.88	3.88	0.08
			0.00					

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight K
HP10-59	C	Paraboloid w/Shroud (HP)	From Leg	1.00 0.00 0.00	0.0000		185.00	10.88	No Ice 1/2" Ice	92.89 94.31 1.27
HP10-59	B	Paraboloid w/Shroud (HP)	From Leg	1.00 0.00 0.00	0.0000		172.00	10.88	No Ice 1/2" Ice	92.89 94.31 1.27
6' HP	A	Paraboloid w/Shroud (HP)	From Leg	1.00 0.00 0.00	0.0000		160.00	6.00	No Ice 1/2" Ice	28.27 29.07 0.52

Truss-Leg Properties

Section Designation	Area	Area Ice	Self Weight	Ice Weight	Equiv. Diameter	Equiv. Diameter Ice	Leg Area
	in ²	in ²	K	K	in	in	in ²
#12ZG-58 - 1.25" - 1.00" conn. (Pirod 194434)	1884.8315	3986.7725	0.50	0.28	6.5446	13.8430	3.6816
#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	2010.3106	4165.3624	0.62	0.28	6.9802	14.4631	5.3014
#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	2010.3106	4129.1345	0.62	0.28	6.9802	14.3373	5.3014
#12ZG-58 - 1.75" - 1.00" conn.-TR1-(Pirod 195213)	2035.9652	4034.3428	0.79	0.31	7.0693	14.0081	7.2158
#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	2035.9652	3992.8416	0.79	0.31	7.0693	13.8640	7.2158
#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	2035.9652	3945.8042	0.79	0.30	7.0693	13.7007	7.2158
#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	2035.9652	3891.2299	0.79	0.29	7.0693	13.5112	7.2158

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	17 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Section Designation	Area	Area Ice	Self Weight	Ice Weight	Equiv. Diameter	Equiv. Diameter Ice	Leg Area
	in ²	in ²	K	K	in	in	in ²
#12ZG-58 -2.00" - 0.875" conn.-TR3-(Pirod 195637)	2339.7677	4361.9485	1.00	0.28	8.1242	15.1457	9.4248
#12ZG-58 -2.00" - 0.875" conn. (Pirod 195639)	2339.7677	4265.3396	1.00	0.27	8.1242	14.8102	9.4248
#12ZG-58 -2.25" - 0.875" conn. (Pirod 195960)	2475.7141	4347.0162	1.17	0.26	8.5962	15.0938	11.9282
#12ZG-58 BASE - 2.25" - 0.875" conn.(Pirod 281172)	2407.8943	4012.6062	1.09	0.21	8.3607	13.9327	11.9282

Tower Pressures - No Ice

$$G_H = 0.850$$

Section Elevation	z	K _Z	q _z	A _G	F _{a c e}	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face	C _A A _A Out Face
ft	ft		psf	ft ²	e	ft ²	ft ²	ft ²		ft ²	ft ²
T1 250.00-240.00	245.00	1.277	30	41.250	A	0.000	5.313	2.500	47.05	0.375	0.000
					B	0.000	5.313		47.05	1.245	0.000
					C	0.000	6.040		41.39	18.142	0.000
T2 240.00-220.00	230.00	1.254	30	83.333	A	0.000	12.856	6.667	51.86	39.360	0.000
					B	0.000	12.856		51.86	3.084	0.000
					C	0.000	14.294		46.64	71.817	0.000
T3 220.00-200.00	210.00	1.222	29	122.110	A	8.856	21.852	21.852	71.16	60.150	0.000
					B	8.856	21.852		71.16	14.370	0.000
					C	8.856	21.852		71.16	71.817	0.000
T4 200.00-180.00	190.00	1.187	28	162.527	A	8.796	23.306	23.306	72.60	60.150	0.000
					B	8.796	23.306		72.60	14.370	0.000
					C	8.796	23.306		72.60	72.807	0.000
T5 180.00-160.00	170.00	1.15	27	202.527	A	9.726	23.306	23.306	70.56	60.150	0.000
					B	9.726	23.306		70.56	16.746	0.000
					C	9.726	23.306		70.56	75.777	0.000
T6 160.00-140.00	150.00	1.11	26	242.944	A	10.834	23.604	23.604	68.54	64.110	0.000
					B	10.834	23.604		68.54	18.330	0.000
					C	10.834	23.604		68.54	75.777	0.000
T7 140.00-120.00	130.00	1.065	25	282.944	A	12.071	23.604	23.604	66.16	64.110	0.000
					B	12.071	23.604		66.16	19.200	0.000
					C	12.071	23.604		66.16	75.777	0.000
T8 120.00-100.00	110.00	1.016	24	322.944	A	16.082	23.604	23.604	59.48	64.110	0.000
					B	16.082	23.604		59.48	21.810	0.000
					C	16.082	23.604		59.48	75.777	0.000
T9 100.00-80.00	90.00	0.959	23	362.944	A	17.761	23.604	23.604	57.06	64.110	0.000
					B	17.761	23.604		57.06	21.810	0.000
					C	17.761	23.604		57.06	75.777	0.000
T10 80.00-60.00	70.00	0.892	21	403.361	A	12.841	27.126	27.126	67.87	64.110	0.000
					B	12.841	27.126		67.87	21.810	0.000
					C	12.841	27.126		67.87	75.777	0.000
T11 60.00-40.00	50.00	0.811	19	443.361	A	13.526	27.126	27.126	66.73	64.110	0.000
					B	13.526	27.126		66.73	21.810	0.000
					C	13.526	27.126		66.73	75.777	0.000
T12	30.00	0.701	17	483.778	A	14.249	28.702	28.702	66.82	64.110	0.000

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	18 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Section Elevation	z	K _Z	q _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
ft	ft		psf	ft ²		ft ²	ft ²	ft ²			
40.00-20.00					B	14.249	28.702		66.82	21.810	0.000
T13 20.00-0.00	10.00	0.7	17	523.778	C	14.249	28.702		66.82	75.777	0.000
					A	15.004	27.916	27.916	65.04	64.110	0.000
					B	15.004	27.916		65.04	21.810	0.000
					C	15.004	27.916		65.04	75.777	0.000

Tower Pressure - With Ice

$$G_H = 0.850$$

Section Elevation	z	K _Z	q _z	t _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
ft	ft		psf	in	ft ²		ft ²	ft ²	ft ²			
T1	245.00	1.277	2	0.7026	42.421	A	0.000	12.775	4.842	37.90	1.780	0.000
250.00-240.00						B	0.000	12.775		37.90	4.056	0.000
						C	0.000	14.863		32.58	19.748	0.000
T2	230.00	1.254	2	0.6982	85.661	A	0.000	27.198	11.321	41.63	39.005	0.000
240.00-220.00						B	0.000	27.198		41.63	9.205	0.000
						C	0.000	31.312		36.16	75.352	0.000
T3	210.00	1.222	2	0.6919	124.420	A	8.856	51.053	46.220	77.15	58.035	0.000
220.00-200.00						B	8.856	51.053		77.15	30.562	0.000
						C	8.856	51.053		77.15	75.237	0.000
T4	190.00	1.187	2	0.6850	164.813	A	8.796	53.111	48.290	78.00	57.964	0.000
200.00-180.00						B	8.796	53.111		78.00	30.462	0.000
						C	8.796	53.111		78.00	76.786	0.000
T5	170.00	1.15	2	0.6774	204.788	A	9.726	53.141	47.870	76.15	57.887	0.000
180.00-160.00						B	9.726	53.141		76.15	34.354	0.000
						C	9.726	53.141		76.15	81.643	0.000
T6	150.00	1.11	2	0.6690	245.177	A	10.834	52.570	46.772	73.77	64.436	0.000
160.00-140.00						B	10.834	52.570		73.77	36.866	0.000
						C	10.834	52.570		73.77	81.455	0.000
T7	130.00	1.065	2	0.6595	285.145	A	12.071	52.659	46.290	71.51	64.301	0.000
140.00-120.00						B	12.071	52.659		71.51	39.144	0.000
						C	12.071	52.659		71.51	81.244	0.000
T8	110.00	1.016	2	0.6486	325.109	A	16.082	52.699	45.745	66.51	64.146	0.000
120.00-100.00						B	16.082	52.699		66.51	46.227	0.000
						C	16.082	52.699		66.51	81.001	0.000
T9 100.00-80.00	90.00	0.959	2	0.6357	365.066	A	17.761	52.639	45.112	64.08	63.962	0.000
						B	17.761	52.639		64.08	45.900	0.000
						C	17.761	52.639		64.08	80.715	0.000
T10 80.00-60.00	70.00	0.892	2	0.6199	405.430	A	12.841	55.876	50.570	73.59	63.738	0.000
						B	12.841	55.876		73.59	45.499	0.000
						C	12.841	55.876		73.59	80.364	0.000
T11 60.00-40.00	50.00	0.811	2	0.5994	445.362	A	13.526	54.855	49.450	72.31	63.446	0.000
						B	13.526	54.855		72.31	44.978	0.000
						C	13.526	54.855		72.31	79.908	0.000
T12 40.00-20.00	30.00	0.701	1	0.5695	485.679	A	14.249	55.807	50.396	71.94	63.022	0.000
						B	14.249	55.807		71.94	44.220	0.000
						C	14.249	55.807		71.94	79.245	0.000
T13 20.00-0.00	10.00	0.7	1	0.5103	525.482	A	15.004	51.624	46.520	69.82	62.180	0.000
						B	15.004	51.624		69.82	42.717	0.000
						C	15.004	51.624		69.82	77.929	0.000

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	19 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Tower Pressure - Service

$$G_H = 0.850$$

Section Elevation	z	K _Z	q _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face	C _A A _A Out Face
ft	ft		psf	ft ²		ft ²	ft ²	ft ²		ft ²	ft ²
T1 250.00-240.00	245.00	1.277	10	41.250	A	0.000	5.313	2.500	47.05	0.375	0.000
					B	0.000	5.313		47.05	1.245	0.000
					C	0.000	6.040		41.39	18.142	0.000
T2 240.00-220.00	230.00	1.254	10	83.333	A	0.000	12.856	6.667	51.86	39.360	0.000
					B	0.000	12.856		51.86	3.084	0.000
					C	0.000	14.294		46.64	71.817	0.000
T3 220.00-200.00	210.00	1.222	9	122.110	A	8.856	21.852	21.852	71.16	60.150	0.000
					B	8.856	21.852		71.16	14.370	0.000
					C	8.856	21.852		71.16	71.817	0.000
T4 200.00-180.00	190.00	1.187	9	162.527	A	8.796	23.306	23.306	72.60	60.150	0.000
					B	8.796	23.306		72.60	14.370	0.000
					C	8.796	23.306		72.60	72.807	0.000
T5 180.00-160.00	170.00	1.15	9	202.527	A	9.726	23.306	23.306	70.56	60.150	0.000
					B	9.726	23.306		70.56	16.746	0.000
					C	9.726	23.306		70.56	75.777	0.000
T6 160.00-140.00	150.00	1.11	8	242.944	A	10.834	23.604	23.604	68.54	64.110	0.000
					B	10.834	23.604		68.54	18.330	0.000
					C	10.834	23.604		68.54	75.777	0.000
T7 140.00-120.00	130.00	1.065	8	282.944	A	12.071	23.604	23.604	66.16	64.110	0.000
					B	12.071	23.604		66.16	19.200	0.000
					C	12.071	23.604		66.16	75.777	0.000
T8 120.00-100.00	110.00	1.016	8	322.944	A	16.082	23.604	23.604	59.48	64.110	0.000
					B	16.082	23.604		59.48	21.810	0.000
					C	16.082	23.604		59.48	75.777	0.000
T9 100.00-80.00	90.00	0.959	7	362.944	A	17.761	23.604	23.604	57.06	64.110	0.000
					B	17.761	23.604		57.06	21.810	0.000
					C	17.761	23.604		57.06	75.777	0.000
T10 80.00-60.00	70.00	0.892	7	403.361	A	12.841	27.126	27.126	67.87	64.110	0.000
					B	12.841	27.126		67.87	21.810	0.000
					C	12.841	27.126		67.87	75.777	0.000
T11 60.00-40.00	50.00	0.811	6	443.361	A	13.526	27.126	27.126	66.73	64.110	0.000
					B	13.526	27.126		66.73	21.810	0.000
					C	13.526	27.126		66.73	75.777	0.000
T12 40.00-20.00	30.00	0.701	5	483.778	A	14.249	28.702	28.702	66.82	64.110	0.000
					B	14.249	28.702		66.82	21.810	0.000
					C	14.249	28.702		66.82	75.777	0.000
T13 20.00-0.00	10.00	0.7	5	523.778	A	15.004	27.916	27.916	65.04	64.110	0.000
					B	15.004	27.916		65.04	21.810	0.000
					C	15.004	27.916		65.04	75.777	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
T1 250.00-240.00	0.11	0.44	A	0.129	2.851	30	1	1	3.006	0.51	50.97	C
			B	0.129	2.851		1	1	3.006			
			C	0.146	2.785		1	1	3.426			
T2	0.59	1.29	A	0.154	2.756	30	1	1	7.302	1.75	87.49	C

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	20 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
240.00-220.00			B	0.154	2.756		1	1	7.302			
			C	0.172	2.694		1	1	8.148			
T3	0.73	1.94	A	0.251	2.433	29	1	1	21.647	2.69	134.32	C
220.00-200.00			B	0.251	2.433		1	1	21.647			
			C	0.251	2.433		1	1	21.647			
T4	0.73	2.26	A	0.198	2.604	28	1	1	22.175	2.75	137.33	C
200.00-180.00			B	0.198	2.604		1	1	22.175			
			C	0.198	2.604		1	1	22.175			
T5	0.75	2.31	A	0.163	2.724	27	1	1	22.987	2.85	142.39	C
180.00-160.00			B	0.163	2.724		1	1	22.987			
			C	0.163	2.724		1	1	22.987			
T6	0.77	2.87	A	0.142	2.802	26	1	1	24.211	2.94	146.97	C
160.00-140.00			B	0.142	2.802		1	1	24.211			
			C	0.142	2.802		1	1	24.211			
T7	0.78	3.11	A	0.126	2.861	25	1	1	25.420	2.94	146.80	C
140.00-120.00			B	0.126	2.861		1	1	25.420			
			C	0.126	2.861		1	1	25.420			
T8	0.78	3.12	A	0.123	2.874	24	1	1	29.426	3.07	153.38	C
120.00-100.00			B	0.123	2.874		1	1	29.426			
			C	0.123	2.874		1	1	29.426			
T9	0.78	3.20	A	0.114	2.909	23	1	1	31.094	3.01	150.51	C
100.00-80.00			B	0.114	2.909		1	1	31.094			
			C	0.114	2.909		1	1	31.094			
T10	0.78	4.19	A	0.099	2.968	21	1	1	28.149	2.68	133.87	C
80.00-60.00			B	0.099	2.968		1	1	28.149			
			C	0.099	2.968		1	1	28.149			
T11	0.78	4.25	A	0.092	2.998	19	1	1	28.831	2.48	123.96	C
60.00-40.00			B	0.092	2.998		1	1	28.831			
			C	0.092	2.998		1	1	28.831			
T12	0.78	4.86	A	0.089	3.01	17	1	1	30.442	2.22	110.80	C
40.00-20.00			B	0.089	3.01		1	1	30.442			
			C	0.089	3.01		1	1	30.442			
T13	0.78	4.67	A	0.082	3.038	17	1	1	30.753	2.24	111.98	C
20.00-0.00			B	0.082	3.038		1	1	30.753			
			C	0.082	3.038		1	1	30.753			
Sum Weight:	9.14	38.50						OTM	3928.61 kip-ft	32.11		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
T1	0.11	0.44	A	0.129	2.851	30	0.8	1	3.006	0.48	48.47	A
250.00-240.00			B	0.129	2.851		0.8	1	3.006			
			C	0.146	2.785		0.8	1	3.426			
T2	0.59	1.29	A	0.154	2.756	30	0.8	1	7.302	1.70	85.18	A
240.00-220.00			B	0.154	2.756		0.8	1	7.302			
			C	0.172	2.694		0.8	1	8.148			
T3	0.73	1.94	A	0.251	2.433	29	0.8	1	19.876	2.58	129.01	B
220.00-200.00			B	0.251	2.433		0.8	1	19.876			
			C	0.251	2.433		0.8	1	19.876			
T4	0.73	2.26	A	0.198	2.604	28	0.8	1	20.416	2.64	131.84	B

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	21 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road Client Parallel Infrastructure	Date 12:05:22 02/11/22 Designed by JS

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
200.00-180.00			B	0.198	2.604		0.8	1	20.416			
			C	0.198	2.604		0.8	1	20.416			
T5	0.75	2.31	A	0.163	2.724	27	0.8	1	21.042	2.72	136.25	B
180.00-160.00			B	0.163	2.724		0.8	1	21.042			
			C	0.163	2.724		0.8	1	21.042			
T6	0.77	2.87	A	0.142	2.802	26	0.8	1	22.045	2.80	140.17	B
160.00-140.00			B	0.142	2.802		0.8	1	22.045			
			C	0.142	2.802		0.8	1	22.045			
T7	0.78	3.11	A	0.126	2.861	25	0.8	1	23.006	2.79	139.37	B
140.00-120.00			B	0.126	2.861		0.8	1	23.006			
			C	0.126	2.861		0.8	1	23.006			
T8	0.78	3.12	A	0.123	2.874	24	0.8	1	26.210	2.88	143.91	B
120.00-100.00			B	0.123	2.874		0.8	1	26.210			
			C	0.123	2.874		0.8	1	26.210			
T9	0.78	3.20	A	0.114	2.909	23	0.8	1	27.542	2.81	140.52	B
100.00-80.00			B	0.114	2.909		0.8	1	27.542			
			C	0.114	2.909		0.8	1	27.542			
T10	0.78	4.19	A	0.099	2.968	21	0.8	1	25.581	2.54	127.01	B
80.00-60.00			B	0.099	2.968		0.8	1	25.581			
			C	0.099	2.968		0.8	1	25.581			
T11	0.78	4.25	A	0.092	2.998	19	0.8	1	26.126	2.35	117.33	B
60.00-40.00			B	0.092	2.998		0.8	1	26.126			
			C	0.092	2.998		0.8	1	26.126			
T12	0.78	4.86	A	0.089	3.01	17	0.8	1	27.593	2.09	104.74	B
40.00-20.00			B	0.089	3.01		0.8	1	27.593			
			C	0.089	3.01		0.8	1	27.593			
T13	0.78	4.67	A	0.082	3.038	17	0.8	1	27.753	2.11	105.54	B
20.00-0.00			B	0.082	3.038		0.8	1	27.753			
			C	0.082	3.038		0.8	1	27.753			
Sum Weight:	9.14	38.50						OTM	3748.16 kip-ft	30.50		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
T1	0.11	0.44	A	0.129	2.851	30	0.85	1	3.006	0.45	44.96	B
250.00-240.00			B	0.129	2.851		0.85	1	3.006			
			C	0.146	2.785		0.85	1	3.426			
T2	0.59	1.29	A	0.154	2.756	30	0.85	1	7.302	1.74	87.12	B
240.00-220.00			B	0.154	2.756		0.85	1	7.302			
			C	0.172	2.694		0.85	1	8.148			
T3	0.73	1.94	A	0.251	2.433	29	0.85	1	20.319	2.69	134.73	B
220.00-200.00			B	0.251	2.433		0.85	1	20.319			
			C	0.251	2.433		0.85	1	20.319			
T4	0.73	2.26	A	0.198	2.604	28	0.85	1	20.856	2.75	137.49	B
200.00-180.00			B	0.198	2.604		0.85	1	20.856			
			C	0.198	2.604		0.85	1	20.856			
T5	0.75	2.31	A	0.163	2.724	27	0.85	1	21.528	2.84	141.93	B
180.00-160.00			B	0.163	2.724		0.85	1	21.528			
			C	0.163	2.724		0.85	1	21.528			
T6	0.77	2.87	A	0.142	2.802	26	0.85	1	22.586	2.92	145.87	B

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	22 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
160.00-140.00			B	0.142	2.802		0.85	1	22.586			
			C	0.142	2.802		0.85	1	22.586			
T7	0.78	3.11	A	0.126	2.861	25	0.85	1	23.609	2.90	144.96	B
140.00-120.00			B	0.126	2.861		0.85	1	23.609			
			C	0.126	2.861		0.85	1	23.609			
T8	0.78	3.12	A	0.123	2.874	24	0.85	1	27.014	2.99	149.52	B
120.00-100.00			B	0.123	2.874		0.85	1	27.014			
			C	0.123	2.874		0.85	1	27.014			
T9	0.78	3.20	A	0.114	2.909	23	0.85	1	28.430	2.92	146.08	B
100.00-80.00			B	0.114	2.909		0.85	1	28.430			
			C	0.114	2.909		0.85	1	28.430			
T10	0.78	4.19	A	0.099	2.968	21	0.85	1	26.223	2.63	131.58	B
80.00-60.00			B	0.099	2.968		0.85	1	26.223			
			C	0.099	2.968		0.85	1	26.223			
T11	0.78	4.25	A	0.092	2.998	19	0.85	1	26.802	2.43	121.58	B
60.00-40.00			B	0.092	2.998		0.85	1	26.802			
			C	0.092	2.998		0.85	1	26.802			
T12	0.78	4.86	A	0.089	3.01	17	0.85	1	28.305	2.17	108.49	B
40.00-20.00			B	0.089	3.01		0.85	1	28.305			
			C	0.089	3.01		0.85	1	28.305			
T13	0.78	4.67	A	0.082	3.038	17	0.85	1	28.503	2.19	109.39	B
20.00-0.00			B	0.082	3.038		0.85	1	28.503			
			C	0.082	3.038		0.85	1	28.503			
Sum Weight:	9.14	38.50						OTM	3880.96 kip-ft	31.62		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
T1	0.34	0.68	A	0.301	2.293	2	1	1	7.656	0.07	7.19	C
250.00-240.00			B	0.301	2.293		1	1	7.656			
			C	0.35	2.171		1	1	9.159			
T2	1.87	1.82	A	0.318	2.25	2	1	1	16.443	0.21	10.38	C
240.00-220.00			B	0.318	2.25		1	1	16.443			
			C	0.366	2.136		1	1	19.476			
T3	2.35	3.23	A	0.482	1.925	2	1	1	43.326	0.29	14.42	C
220.00-200.00			B	0.482	1.925		1	1	43.326			
			C	0.482	1.925		1	1	43.326			
T4	2.35	3.56	A	0.376	2.114	2	1	1	42.045	0.31	15.56	C
200.00-180.00			B	0.376	2.114		1	1	42.045			
			C	0.376	2.114		1	1	42.045			
T5	2.43	3.63	A	0.307	2.278	2	1	1	41.671	0.32	16.12	C
180.00-160.00			B	0.307	2.278		1	1	41.671			
			C	0.307	2.278		1	1	41.671			
T6	2.50	4.35	A	0.259	2.412	2	1	1	41.701	0.33	16.54	C
160.00-140.00			B	0.259	2.412		1	1	41.701			
			C	0.259	2.412		1	1	41.701			
T7	2.49	4.62	A	0.227	2.508	2	1	1	42.599	0.33	16.47	C
140.00-120.00			B	0.227	2.508		1	1	42.599			
			C	0.227	2.508		1	1	42.599			
T8	2.51	4.77	A	0.212	2.558	2	1	1	46.469	0.34	16.89	C

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	23 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _s psf	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K							ft ²	K	plf	
120.00-100.00			B	0.212	2.558		1	1	46.469			
			C	0.212	2.558		1	1	46.469			
T9	2.49	4.88	A	0.193	2.62	2	1	1	47.938	0.33	16.43	C
100.00-80.00			B	0.193	2.62		1	1	47.938			
			C	0.193	2.62		1	1	47.938			
T10	2.46	5.80	A	0.169	2.701	2	1	1	44.679	0.30	14.90	C
80.00-60.00			B	0.169	2.701		1	1	44.679			
			C	0.169	2.701		1	1	44.679			
T11	2.43	5.84	A	0.154	2.759	2	1	1	44.679	0.27	13.66	C
60.00-40.00			B	0.154	2.759		1	1	44.679			
			C	0.154	2.759		1	1	44.679			
T12	2.38	6.41	A	0.144	2.793	1	1	1	45.891	0.24	12.03	C
40.00-20.00			B	0.144	2.793		1	1	45.891			
			C	0.144	2.793		1	1	45.891			
T13	2.29	6.03	A	0.127	2.859	1	1	1	44.202	0.24	11.80	C
20.00-0.00			B	0.127	2.859		1	1	44.202			
			C	0.127	2.859		1	1	44.202			
Sum Weight:	28.90	55.60						OTM	443.16 kip-ft	3.58		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _s psf	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K							ft ²	K	plf	
T1	0.34	0.68	A	0.301	2.293	2	0.8	1	7.656	0.07	6.71	A
250.00-240.00			B	0.301	2.293		0.8	1	7.656			
			C	0.35	2.171		0.8	1	9.159			
T2	1.87	1.82	A	0.318	2.25	2	0.8	1	16.443	0.20	9.91	A
240.00-220.00			B	0.318	2.25		0.8	1	16.443			
			C	0.366	2.136		0.8	1	19.476			
T3	2.35	3.23	A	0.482	1.925	2	0.8	1	41.555	0.28	14.08	B
220.00-200.00			B	0.482	1.925		0.8	1	41.555			
			C	0.482	1.925		0.8	1	41.555			
T4	2.35	3.56	A	0.376	2.114	2	0.8	1	40.286	0.30	15.21	B
200.00-180.00			B	0.376	2.114		0.8	1	40.286			
			C	0.376	2.114		0.8	1	40.286			
T5	2.43	3.63	A	0.307	2.278	2	0.8	1	39.726	0.31	15.71	B
180.00-160.00			B	0.307	2.278		0.8	1	39.726			
			C	0.307	2.278		0.8	1	39.726			
T6	2.50	4.35	A	0.259	2.412	2	0.8	1	39.534	0.32	16.07	B
160.00-140.00			B	0.259	2.412		0.8	1	39.534			
			C	0.259	2.412		0.8	1	39.534			
T7	2.49	4.62	A	0.227	2.508	2	0.8	1	40.185	0.32	15.95	B
140.00-120.00			B	0.227	2.508		0.8	1	40.185			
			C	0.227	2.508		0.8	1	40.185			
T8	2.51	4.77	A	0.212	2.558	2	0.8	1	43.252	0.32	16.21	B
120.00-100.00			B	0.212	2.558		0.8	1	43.252			
			C	0.212	2.558		0.8	1	43.252			
T9	2.49	4.88	A	0.193	2.62	2	0.8	1	44.385	0.31	15.71	B
100.00-80.00			B	0.193	2.62		0.8	1	44.385			
			C	0.193	2.62		0.8	1	44.385			
T10	2.46	5.80	A	0.169	2.701	2	0.8	1	42.111	0.29	14.40	B

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	24 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road Client Parallel Infrastructure	Date 12:05:22 02/11/22 Designed by JS

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
80.00-60.00			B	0.169	2.701		0.8	1	42.111			
			C	0.169	2.701		0.8	1	42.111			
T11	2.43	5.84	A	0.154	2.759	2	0.8	1	41.974	0.26	13.17	B
60.00-40.00			B	0.154	2.759		0.8	1	41.974			
			C	0.154	2.759		0.8	1	41.974			
T12	2.38	6.41	A	0.144	2.793	1	0.8	1	43.041	0.23	11.58	B
40.00-20.00			B	0.144	2.793		0.8	1	43.041			
			C	0.144	2.793		0.8	1	43.041			
T13	2.29	6.03	A	0.127	2.859	1	0.8	1	41.201	0.23	11.32	B
20.00-0.00			B	0.127	2.859		0.8	1	41.201			
			C	0.127	2.859		0.8	1	41.201			
Sum Weight:	28.90	55.60						OTM	428.58 kip-ft	3.45		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
T1	0.34	0.68	A	0.301	2.293	2	0.85	1	7.656	0.06	6.43	B
250.00-240.00			B	0.301	2.293		0.85	1	7.656			
			C	0.35	2.171		0.85	1	9.159			
T2	1.87	1.82	A	0.318	2.25	2	0.85	1	16.443	0.20	10.07	B
240.00-220.00			B	0.318	2.25		0.85	1	16.443			
			C	0.366	2.136		0.85	1	19.476			
T3	2.35	3.23	A	0.482	1.925	2	0.85	1	41.998	0.29	14.47	B
220.00-200.00			B	0.482	1.925		0.85	1	41.998			
			C	0.482	1.925		0.85	1	41.998			
T4	2.35	3.56	A	0.376	2.114	2	0.85	1	40.726	0.31	15.64	B
200.00-180.00			B	0.376	2.114		0.85	1	40.726			
			C	0.376	2.114		0.85	1	40.726			
T5	2.43	3.63	A	0.307	2.278	2	0.85	1	40.212	0.32	16.14	B
180.00-160.00			B	0.307	2.278		0.85	1	40.212			
			C	0.307	2.278		0.85	1	40.212			
T6	2.50	4.35	A	0.259	2.412	2	0.85	1	40.076	0.33	16.51	B
160.00-140.00			B	0.259	2.412		0.85	1	40.076			
			C	0.259	2.412		0.85	1	40.076			
T7	2.49	4.62	A	0.227	2.508	2	0.85	1	40.789	0.33	16.38	B
140.00-120.00			B	0.227	2.508		0.85	1	40.789			
			C	0.227	2.508		0.85	1	40.789			
T8	2.51	4.77	A	0.212	2.558	2	0.85	1	44.056	0.33	16.64	B
120.00-100.00			B	0.212	2.558		0.85	1	44.056			
			C	0.212	2.558		0.85	1	44.056			
T9	2.49	4.88	A	0.193	2.62	2	0.85	1	45.273	0.32	16.14	B
100.00-80.00			B	0.193	2.62		0.85	1	45.273			
			C	0.193	2.62		0.85	1	45.273			
T10	2.46	5.80	A	0.169	2.701	2	0.85	1	42.753	0.30	14.76	B
80.00-60.00			B	0.169	2.701		0.85	1	42.753			
			C	0.169	2.701		0.85	1	42.753			
T11	2.43	5.84	A	0.154	2.759	2	0.85	1	42.650	0.27	13.50	B
60.00-40.00			B	0.154	2.759		0.85	1	42.650			
			C	0.154	2.759		0.85	1	42.650			
T12	2.38	6.41	A	0.144	2.793	1	0.85	1	43.753	0.24	11.87	B

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	25 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
40.00-20.00			B	0.144	2.793		0.85	1	43.753			
			C	0.144	2.793		0.85	1	43.753			
T13	2.29	6.03	A	0.127	2.859	1	0.85	1	41.951	0.23	11.62	B
20.00-0.00			B	0.127	2.859		0.85	1	41.951			
			C	0.127	2.859		0.85	1	41.951			
Sum Weight:	28.90	55.60						OTM	438.55 kip-ft	3.54		

Tower Forces - Service - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1	0.11	0.44	A	0.129	2.851	10	1	1	3.006	0.16	16.33	C
250.00-240.00			B	0.129	2.851		1	1	3.006			
			C	0.146	2.785		1	1	3.426			
T2	0.59	1.29	A	0.154	2.756	10	1	1	7.302	0.56	28.03	C
240.00-220.00			B	0.154	2.756		1	1	7.302			
			C	0.172	2.694		1	1	8.148			
T3	0.73	1.94	A	0.251	2.433	9	1	1	21.647	0.86	43.04	C
220.00-200.00			B	0.251	2.433		1	1	21.647			
			C	0.251	2.433		1	1	21.647			
T4	0.73	2.26	A	0.198	2.604	9	1	1	22.175	0.88	44.00	C
200.00-180.00			B	0.198	2.604		1	1	22.175			
			C	0.198	2.604		1	1	22.175			
T5	0.75	2.31	A	0.163	2.724	9	1	1	22.987	0.91	45.62	C
180.00-160.00			B	0.163	2.724		1	1	22.987			
			C	0.163	2.724		1	1	22.987			
T6	0.77	2.87	A	0.142	2.802	8	1	1	24.211	0.94	47.09	C
160.00-140.00			B	0.142	2.802		1	1	24.211			
			C	0.142	2.802		1	1	24.211			
T7	0.78	3.11	A	0.126	2.861	8	1	1	25.420	0.94	47.03	C
140.00-120.00			B	0.126	2.861		1	1	25.420			
			C	0.126	2.861		1	1	25.420			
T8	0.78	3.12	A	0.123	2.874	8	1	1	29.426	0.98	49.14	C
120.00-100.00			B	0.123	2.874		1	1	29.426			
			C	0.123	2.874		1	1	29.426			
T9	0.78	3.20	A	0.114	2.909	7	1	1	31.094	0.96	48.22	C
100.00-80.00			B	0.114	2.909		1	1	31.094			
			C	0.114	2.909		1	1	31.094			
T10	0.78	4.19	A	0.099	2.968	7	1	1	28.149	0.86	42.89	C
80.00-60.00			B	0.099	2.968		1	1	28.149			
			C	0.099	2.968		1	1	28.149			
T11	0.78	4.25	A	0.092	2.998	6	1	1	28.831	0.79	39.72	C
60.00-40.00			B	0.092	2.998		1	1	28.831			
			C	0.092	2.998		1	1	28.831			
T12	0.78	4.86	A	0.089	3.01	5	1	1	30.442	0.71	35.50	C
40.00-20.00			B	0.089	3.01		1	1	30.442			
			C	0.089	3.01		1	1	30.442			
T13	0.78	4.67	A	0.082	3.038	5	1	1	30.753	0.72	35.88	C
20.00-0.00			B	0.082	3.038		1	1	30.753			
			C	0.082	3.038		1	1	30.753			
Sum Weight:	9.14	38.50						OTM	1258.72	10.29		

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	26 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road Client Parallel Infrastructure	Date 12:05:22 02/11/22 Designed by JS

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K							kip-ft			

Tower Forces - Service - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
T1 250.00-240.00	0.11	0.44	A	0.129	2.851	10	0.8	1	3.006	0.16	15.53	A
			B	0.129	2.851		0.8	1	3.006			
			C	0.146	2.785		0.8	1	3.426			
T2 240.00-220.00	0.59	1.29	A	0.154	2.756	10	0.8	1	7.302	0.55	27.29	A
			B	0.154	2.756		0.8	1	7.302			
			C	0.172	2.694		0.8	1	8.148			
T3 220.00-200.00	0.73	1.94	A	0.251	2.433	9	0.8	1	19.876	0.83	41.33	B
			B	0.251	2.433		0.8	1	19.876			
			C	0.251	2.433		0.8	1	19.876			
T4 200.00-180.00	0.73	2.26	A	0.198	2.604	9	0.8	1	20.416	0.84	42.24	B
			B	0.198	2.604		0.8	1	20.416			
			C	0.198	2.604		0.8	1	20.416			
T5 180.00-160.00	0.75	2.31	A	0.163	2.724	9	0.8	1	21.042	0.87	43.65	B
			B	0.163	2.724		0.8	1	21.042			
			C	0.163	2.724		0.8	1	21.042			
T6 160.00-140.00	0.77	2.87	A	0.142	2.802	8	0.8	1	22.045	0.90	44.91	B
			B	0.142	2.802		0.8	1	22.045			
			C	0.142	2.802		0.8	1	22.045			
T7 140.00-120.00	0.78	3.11	A	0.126	2.861	8	0.8	1	23.006	0.89	44.66	B
			B	0.126	2.861		0.8	1	23.006			
			C	0.126	2.861		0.8	1	23.006			
T8 120.00-100.00	0.78	3.12	A	0.123	2.874	8	0.8	1	26.210	0.92	46.11	B
			B	0.123	2.874		0.8	1	26.210			
			C	0.123	2.874		0.8	1	26.210			
T9 100.00-80.00	0.78	3.20	A	0.114	2.909	7	0.8	1	27.542	0.90	45.02	B
			B	0.114	2.909		0.8	1	27.542			
			C	0.114	2.909		0.8	1	27.542			
T10 80.00-60.00	0.78	4.19	A	0.099	2.968	7	0.8	1	25.581	0.81	40.69	B
			B	0.099	2.968		0.8	1	25.581			
			C	0.099	2.968		0.8	1	25.581			
T11 60.00-40.00	0.78	4.25	A	0.092	2.998	6	0.8	1	26.126	0.75	37.59	B
			B	0.092	2.998		0.8	1	26.126			
			C	0.092	2.998		0.8	1	26.126			
T12 40.00-20.00	0.78	4.86	A	0.089	3.01	5	0.8	1	27.593	0.67	33.56	B
			B	0.089	3.01		0.8	1	27.593			
			C	0.089	3.01		0.8	1	27.593			
T13 20.00-0.00	0.78	4.67	A	0.082	3.038	5	0.8	1	27.753	0.68	33.82	B
			B	0.082	3.038		0.8	1	27.753			
			C	0.082	3.038		0.8	1	27.753			
Sum Weight:	9.14	38.50						OTM	1200.90 kip-ft	9.77		

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	27 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 250.00-240.00	0.11	0.44	A	0.129	2.851	10	0.85	1	3.006	0.14	14.41	B
			B	0.129	2.851		0.85	1	3.006			
			C	0.146	2.785		0.85	1	3.426			
T2 240.00-220.00	0.59	1.29	A	0.154	2.756	10	0.85	1	7.302	0.56	27.91	B
			B	0.154	2.756		0.85	1	7.302			
			C	0.172	2.694		0.85	1	8.148			
T3 220.00-200.00	0.73	1.94	A	0.251	2.433	9	0.85	1	20.319	0.86	43.17	B
			B	0.251	2.433		0.85	1	20.319			
			C	0.251	2.433		0.85	1	20.319			
T4 200.00-180.00	0.73	2.26	A	0.198	2.604	9	0.85	1	20.856	0.88	44.05	B
			B	0.198	2.604		0.85	1	20.856			
			C	0.198	2.604		0.85	1	20.856			
T5 180.00-160.00	0.75	2.31	A	0.163	2.724	9	0.85	1	21.528	0.91	45.47	B
			B	0.163	2.724		0.85	1	21.528			
			C	0.163	2.724		0.85	1	21.528			
T6 160.00-140.00	0.77	2.87	A	0.142	2.802	8	0.85	1	22.586	0.93	46.73	B
			B	0.142	2.802		0.85	1	22.586			
			C	0.142	2.802		0.85	1	22.586			
T7 140.00-120.00	0.78	3.11	A	0.126	2.861	8	0.85	1	23.609	0.93	46.44	B
			B	0.126	2.861		0.85	1	23.609			
			C	0.126	2.861		0.85	1	23.609			
T8 120.00-100.00	0.78	3.12	A	0.123	2.874	8	0.85	1	27.014	0.96	47.91	B
			B	0.123	2.874		0.85	1	27.014			
			C	0.123	2.874		0.85	1	27.014			
T9 100.00-80.00	0.78	3.20	A	0.114	2.909	7	0.85	1	28.430	0.94	46.80	B
			B	0.114	2.909		0.85	1	28.430			
			C	0.114	2.909		0.85	1	28.430			
T10 80.00-60.00	0.78	4.19	A	0.099	2.968	7	0.85	1	26.223	0.84	42.16	B
			B	0.099	2.968		0.85	1	26.223			
			C	0.099	2.968		0.85	1	26.223			
T11 60.00-40.00	0.78	4.25	A	0.092	2.998	6	0.85	1	26.802	0.78	38.95	B
			B	0.092	2.998		0.85	1	26.802			
			C	0.092	2.998		0.85	1	26.802			
T12 40.00-20.00	0.78	4.86	A	0.089	3.01	5	0.85	1	28.305	0.70	34.76	B
			B	0.089	3.01		0.85	1	28.305			
			C	0.089	3.01		0.85	1	28.305			
T13 20.00-0.00	0.78	4.67	A	0.082	3.038	5	0.85	1	28.503	0.70	35.05	B
			B	0.082	3.038		0.85	1	28.503			
			C	0.082	3.038		0.85	1	28.503			
Sum Weight:	9.14	38.50						OTM	1243.45 kip-ft	10.13		

Mast Vectors - No Ice

Section No.	Section Elevation ft	Wind Azimuth °	Directionality	F K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
T1	250.00-240.00	0	Wind Normal	0.51	0.00	-0.51	-124.72	0.17	-0.36
		30	Wind 90	0.47	0.24	-0.41	-100.55	-57.97	-0.11
		60	Wind 60	0.40	0.35	-0.20	-49.40	-85.66	0.08
		90	Wind 90	0.34	0.34	0.00	0.15	-83.44	0.11

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	28 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road Client Parallel Infrastructure	Date 12:05:22 02/11/22 Designed by JS

Section No.	Section Elevation ft	Wind Azimuth °	Directionality	F K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
T2	240.00-220.00	120	Wind Normal	0.38	0.33	0.19	46.65	-80.36	0.27
		150	Wind 90	0.45	0.22	0.39	95.56	-54.91	0.42
		180	Wind 60	0.48	0.00	0.48	118.90	0.17	0.36
		210	Wind 90	0.45	-0.22	0.39	95.56	55.25	0.11
		240	Wind Normal	0.38	-0.33	0.19	46.65	80.70	-0.08
		270	Wind 90	0.32	-0.32	0.00	0.15	77.67	-0.11
		300	Wind 60	0.38	-0.33	-0.19	-46.34	80.70	-0.27
		330	Wind 90	0.45	-0.22	-0.39	-95.25	55.25	-0.42
		0	Wind Normal	1.75	0.00	-1.75	-402.18	0.75	-1.56
		30	Wind 90	1.53	0.76	-1.32	-303.57	-174.67	-0.66
		60	Wind 60	1.34	1.16	-0.67	-153.78	-266.05	-0.16
		90	Wind 90	1.27	1.27	0.00	0.26	-291.38	-0.45
T3	220.00-200.00	120	Wind Normal	1.56	1.35	0.78	179.53	-309.76	0.25
		150	Wind 90	1.74	0.87	1.51	347.33	-199.63	1.37
		180	Wind 60	1.70	0.00	1.70	392.07	0.75	1.56
		210	Wind 90	1.48	-0.74	1.28	294.89	170.85	0.66
		240	Wind Normal	1.29	-1.12	0.65	148.98	258.35	0.16
		270	Wind 90	1.22	-1.22	0.00	0.26	282.25	0.45
		300	Wind 60	1.56	-1.35	-0.78	-179.01	311.26	-0.25
		330	Wind 90	1.74	-0.87	-1.51	-346.81	201.13	-1.37
		0	Wind Normal	2.69	0.00	-2.69	-564.02	0.85	-1.66
		30	Wind 90	2.39	1.20	-2.07	-435.38	-250.58	-0.50
		60	Wind 60	2.23	1.93	-1.12	-234.44	-405.41	-0.15
		90	Wind 90	2.29	2.29	0.00	0.12	-479.38	-0.93
T4	200.00-180.00	120	Wind Normal	2.69	2.33	1.34	282.18	-487.70	-0.30
		150	Wind 90	2.69	1.35	2.33	490.19	-282.09	1.32
		180	Wind 60	2.58	0.00	2.58	541.95	0.85	1.66
		210	Wind 90	2.39	-1.20	2.07	435.61	252.29	0.50
		240	Wind Normal	2.34	-2.03	1.17	245.83	426.43	0.15
		270	Wind 90	2.29	-2.29	0.00	0.12	481.08	0.93
		300	Wind 60	2.58	-2.23	-1.29	-270.80	470.10	0.30
		330	Wind 90	2.69	-1.35	-2.33	-489.95	283.79	-1.32
		0	Wind Normal	2.75	0.00	-2.75	-521.71	1.18	-2.27
		30	Wind 90	2.46	1.23	-2.13	-404.34	-232.34	-0.72
		60	Wind 60	2.30	1.99	-1.15	-218.39	-377.32	-0.21
		90	Wind 90	2.35	2.35	0.00	0.14	-445.96	-1.22
T5	180.00-160.00	120	Wind Normal	2.75	2.38	1.37	261.06	-450.75	-0.41
		150	Wind 90	2.75	1.37	2.38	452.60	-260.05	1.78
		180	Wind 60	2.64	0.00	2.64	501.14	1.18	2.27
		210	Wind 90	2.46	-1.23	2.13	404.61	234.70	0.72
		240	Wind Normal	2.41	-2.09	1.21	229.09	397.74	0.21
		270	Wind 90	2.35	-2.35	0.00	0.14	448.32	1.22
		300	Wind 60	2.64	-2.28	-1.32	-250.36	435.06	0.41
		330	Wind 90	2.75	-1.37	-2.38	-452.32	262.41	-1.78
		0	Wind Normal	2.85	0.00	-2.85	-483.95	1.50	-2.80
		30	Wind 90	2.56	1.28	-2.21	-376.12	-215.76	-0.86
		60	Wind 60	2.40	2.08	-1.20	-203.72	-351.69	-0.17
		90	Wind 90	2.45	2.45	0.00	0.19	-415.77	-1.39
T6	160.00-140.00	120	Wind Normal	2.85	2.47	1.42	242.26	-417.78	-0.44
		150	Wind 90	2.84	1.42	2.46	418.09	-239.77	2.22
		180	Wind 60	2.72	0.00	2.72	463.43	1.50	2.80
		210	Wind 90	2.56	-1.28	2.21	376.50	218.76	0.86
		240	Wind Normal	2.52	-2.18	1.26	214.55	372.79	0.17
		270	Wind 90	2.45	-2.45	0.00	0.19	418.77	1.39
		300	Wind 60	2.72	-2.36	-1.36	-231.43	402.68	0.44
		330	Wind 90	2.84	-1.42	-2.46	-417.71	242.78	-2.22
		0	Wind Normal	2.94	0.00	-2.94	-440.73	1.84	-3.34
		30	Wind 90	2.64	1.32	-2.29	-343.39	-196.52	-1.14
		60	Wind 60	2.49	2.16	-1.24	-186.50	-321.48	-0.36
		90	Wind 90	2.55	2.55	0.00	0.17	-380.18	-1.78
		120	Wind Normal	2.94	2.55	1.47	220.62	-379.99	-0.63

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	29 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Section No.	Section Elevation ft	Wind Azimuth °	Directionality	F K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
T7	140.00-120.00	150	Wind 90	2.92	1.46	2.53	379.14	-216.96	2.55
		180	Wind 60	2.80	0.00	2.80	420.68	1.84	3.34
		210	Wind 90	2.64	-1.32	2.29	343.73	200.19	1.14
		240	Wind Normal	2.62	-2.27	1.31	197.03	342.81	0.36
		270	Wind 90	2.55	-2.55	0.00	0.17	383.86	1.78
		300	Wind 60	2.80	-2.43	-1.40	-210.09	366.01	0.63
		330	Wind 90	2.92	-1.46	-2.53	-378.80	220.63	-2.55
		0	Wind Normal	2.94	0.00	-2.94	-381.48	2.15	-3.72
		30	Wind 90	2.64	1.32	-2.29	-297.22	-169.56	-1.21
		60	Wind 60	2.49	2.15	-1.24	-161.50	-277.91	-0.34
		90	Wind 90	2.55	2.55	0.00	0.19	-329.05	-1.97
		120	Wind Normal	2.94	2.54	1.47	191.03	-328.39	-0.73
T8	120.00-100.00	150	Wind 90	2.90	1.45	2.51	326.59	-186.29	2.83
		180	Wind 60	2.79	0.00	2.79	362.56	2.15	3.72
		210	Wind 90	2.64	-1.32	2.29	297.60	173.86	1.21
		240	Wind Normal	2.64	-2.28	1.32	171.53	298.93	0.34
		270	Wind 90	2.55	-2.55	0.00	0.19	333.35	1.97
		300	Wind 60	2.79	-2.41	-1.39	-181.00	315.98	0.73
		330	Wind 90	2.90	-1.45	-2.51	-326.21	190.60	-2.83
		0	Wind Normal	3.07	0.00	-3.07	-337.21	2.44	-3.88
		30	Wind 90	2.76	1.38	-2.39	-262.42	-149.20	-1.07
		60	Wind 60	2.60	2.25	-1.30	-142.67	-245.07	-0.14
		90	Wind 90	2.67	2.67	0.00	0.23	-290.98	-2.02
		120	Wind Normal	3.07	2.66	1.53	168.94	-289.79	-0.82
T9	100.00-80.00	150	Wind 90	2.99	1.50	2.59	285.11	-162.04	3.01
		180	Wind 60	2.88	0.00	2.88	316.83	2.44	3.88
		210	Wind 90	2.76	-1.38	2.39	262.87	154.08	1.07
		240	Wind Normal	2.79	-2.41	1.39	153.54	267.99	0.14
		270	Wind 90	2.67	-2.67	0.00	0.23	295.86	2.02
		300	Wind 60	2.88	-2.49	-1.44	-158.08	276.63	0.82
		330	Wind 90	2.99	-1.50	-2.59	-284.66	166.92	-3.01
		0	Wind Normal	3.01	0.00	-3.01	-270.68	2.76	-4.15
		30	Wind 90	2.70	1.35	-2.34	-210.30	-118.80	-1.15
		60	Wind 60	2.55	2.20	-1.27	-114.32	-195.68	-0.15
		90	Wind 90	2.62	2.62	0.00	0.24	-232.74	-2.16
		120	Wind Normal	3.01	2.61	1.51	135.70	-231.87	-0.89
T10	80.00-60.00	150	Wind 90	2.92	1.46	2.53	227.96	-128.72	3.20
		180	Wind 60	2.81	0.00	2.81	253.18	2.76	4.15
		210	Wind 90	2.70	-1.35	2.34	210.78	124.31	1.15
		240	Wind Normal	2.75	-2.38	1.37	123.80	216.77	0.15
		270	Wind 90	2.62	-2.62	0.00	0.24	238.25	2.16
		300	Wind 60	2.81	-2.43	-1.41	-126.22	221.81	0.89
		330	Wind 90	2.92	-1.46	-2.53	-227.48	134.23	-3.20
		0	Wind Normal	2.68	0.00	-2.68	-187.16	3.08	-4.31
		30	Wind 90	2.43	1.21	-2.10	-146.83	-81.85	-1.20
		60	Wind 60	2.29	1.99	-1.15	-80.03	-136.00	-0.16
		90	Wind 90	2.35	2.35	0.00	0.26	-161.26	-2.25
		120	Wind Normal	2.68	2.32	1.34	93.97	-159.23	-0.94
T11	60.00-40.00	150	Wind 90	2.63	1.32	2.28	159.79	-89.03	3.31
		180	Wind 60	2.54	0.00	2.54	178.08	3.08	4.31
		210	Wind 90	2.43	-1.21	2.10	147.36	88.00	1.20
		240	Wind Normal	2.43	-2.11	1.22	85.36	150.47	0.16
		270	Wind 90	2.35	-2.35	0.00	0.26	167.41	2.25
		300	Wind 60	2.54	-2.20	-1.27	-88.65	157.07	0.94
		330	Wind 90	2.63	-1.32	-2.28	-159.27	95.18	-3.31
		0	Wind Normal	2.48	0.00	-2.48	-123.68	3.39	-4.33
		30	Wind 90	2.25	1.12	-1.94	-96.94	-52.74	-1.21
		60	Wind 60	2.12	1.84	-1.06	-52.80	-88.54	-0.17
		90	Wind 90	2.17	2.17	0.00	0.28	-105.29	-2.25
		120	Wind Normal	2.48	2.15	1.24	62.26	-103.96	-0.95
		150	Wind 90	2.43	1.22	2.11	105.57	-57.40	3.31

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	30 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Section Elevation ft	Wind Azimuth °	Directionality	F K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
T12	40.00-20.00	180	Wind 60	2.35	0.00	2.35	117.61	3.39	4.33
		210	Wind 90	2.25	-1.12	1.94	97.50	59.53	1.21
		240	Wind Normal	2.26	-1.95	1.13	56.67	101.07	0.17
		270	Wind 90	2.17	-2.17	0.00	0.28	112.08	2.25
		300	Wind 60	2.35	-2.03	-1.17	-58.38	105.01	0.95
		330	Wind 90	2.43	-1.22	-2.11	-105.01	64.18	-3.31
		0	Wind Normal	2.22	0.00	-2.22	-66.18	3.71	-4.09
		30	Wind 90	2.01	1.00	-1.74	-51.89	-26.42	-1.15
		60	Wind 60	1.90	1.65	-0.95	-28.22	-45.69	-0.16
		90	Wind 90	1.95	1.95	0.00	0.30	-54.70	-2.13
		120	Wind Normal	2.22	1.92	1.11	33.54	-53.86	-0.90
		150	Wind 90	2.17	1.08	1.88	56.67	-28.83	3.13
T13	20.00-0.00	180	Wind 60	2.09	0.00	2.09	63.14	3.71	4.09
		210	Wind 90	2.01	-1.00	1.74	52.49	33.84	1.15
		240	Wind Normal	2.02	-1.75	1.01	30.64	56.27	0.16
		270	Wind 90	1.95	-1.95	0.00	0.30	62.12	2.13
		300	Wind 60	2.09	-1.81	-1.05	-31.12	58.14	0.90
		330	Wind 90	2.17	-1.08	-1.88	-56.07	36.26	-3.13
		0	Wind Normal	2.24	0.00	-2.24	-22.08	4.03	-4.44
		30	Wind 90	2.03	1.01	-1.76	-17.23	-6.10	-1.26
		60	Wind 60	1.92	1.66	-0.96	-9.27	-12.58	-0.18
		90	Wind 90	1.97	1.97	0.00	0.32	-15.62	-2.31
		120	Wind Normal	2.24	1.94	1.12	11.52	-15.36	-0.99
		150	Wind 90	2.19	1.09	1.89	19.26	-6.91	3.39
		180	Wind 60	2.11	0.00	2.11	21.43	4.03	4.44
		210	Wind 90	2.03	-1.01	1.76	17.87	14.16	1.26
		240	Wind Normal	2.05	-1.77	1.02	10.55	21.75	0.18
		270	Wind 90	1.97	-1.97	0.00	0.32	23.68	2.31
		300	Wind 60	2.11	-1.83	-1.06	-10.24	22.31	0.99
		330	Wind 90	2.19	-1.09	-1.89	-18.63	14.97	-3.39

Mast Totals - No Ice

Wind Azimuth °	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.00	-32.11	-3925.76	27.86	-40.92
30	14.43	-24.99	-3046.19	-1732.51	-12.26
60	23.41	-13.52	-1635.06	-2809.08	-2.28
90	27.52	0.00	2.85	-3285.75	-20.75
120	27.53	15.89	1929.26	-3308.80	-7.49
150	15.81	27.39	3363.86	-1912.62	31.83
180	0.00	30.50	3751.00	27.86	40.92
210	-14.39	24.93	3037.38	1779.85	12.26
240	-24.68	14.25	1714.23	2992.05	2.28
270	-27.45	0.00	2.85	3324.71	20.75
300	-26.20	-15.13	-1841.72	3222.74	7.49
330	-15.81	-27.39	-3358.16	1968.34	-31.83

Mast Vectors - With Ice

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page 31 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by JS

Section No.	Section Elevation ft	Wind Azimuth °	Directionality	F K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
T1	250.00-240.00	0	Wind Normal	0.07	0.00	-0.07	-17.18	0.46	-0.03
		30	Wind 90	0.07	0.03	-0.06	-14.22	-8.00	-0.01
		60	Wind 60	0.06	0.06	-0.03	-7.34	-13.01	0.01
		90	Wind 90	0.06	0.06	0.00	0.44	-13.70	0.01
		120	Wind Normal	0.06	0.05	0.03	7.64	-11.99	0.03
		150	Wind 90	0.06	0.03	0.06	14.09	-7.42	0.04
		180	Wind 60	0.07	0.00	0.07	16.89	0.46	0.03
		210	Wind 90	0.06	-0.03	0.06	14.09	8.35	0.01
		240	Wind Normal	0.06	-0.05	0.03	7.64	12.92	-0.01
		270	Wind 90	0.05	-0.05	0.00	0.44	13.45	-0.01
		300	Wind 60	0.06	-0.05	-0.03	-6.75	12.92	-0.03
		330	Wind 90	0.06	-0.03	-0.06	-13.21	8.35	-0.04
T2	240.00-220.00	0	Wind Normal	0.21	0.00	-0.21	-47.27	2.14	-0.14
		30	Wind 90	0.19	0.09	-0.16	-37.32	-19.68	-0.06
		60	Wind 60	0.18	0.15	-0.09	-19.66	-32.72	-0.01
		90	Wind 90	0.17	0.17	0.00	0.47	-36.21	-0.03
		120	Wind Normal	0.19	0.16	0.09	21.93	-35.04	0.04
		150	Wind 90	0.20	0.10	0.17	40.57	-21.02	0.13
		180	Wind 60	0.20	0.00	0.20	46.06	2.14	0.14
		210	Wind 90	0.18	-0.09	0.16	36.40	22.89	0.06
		240	Wind Normal	0.17	-0.14	0.08	19.53	35.15	0.01
		270	Wind 90	0.16	-0.16	0.00	0.47	38.35	0.03
		300	Wind 60	0.19	-0.16	-0.09	-21.00	39.32	-0.04
		330	Wind 90	0.20	-0.10	-0.17	-39.64	25.29	-0.13
T3	220.00-200.00	0	Wind Normal	0.29	0.00	-0.29	-60.72	2.36	-0.12
		30	Wind 90	0.27	0.14	-0.23	-49.47	-26.11	-0.03
		60	Wind 60	0.26	0.23	-0.13	-27.81	-45.54	0.01
		90	Wind 90	0.26	0.26	0.00	-0.16	-52.56	-0.05
		120	Wind Normal	0.29	0.25	0.14	30.12	-50.08	-0.01
		150	Wind 90	0.29	0.14	0.25	52.47	-28.03	0.10
		180	Wind 60	0.28	0.00	0.28	58.98	2.36	0.12
		210	Wind 90	0.27	-0.14	0.23	49.15	30.83	0.03
		240	Wind Normal	0.27	-0.23	0.14	28.20	51.48	-0.01
		270	Wind 90	0.26	-0.26	0.00	-0.16	57.29	0.05
		300	Wind 60	0.28	-0.24	-0.14	-29.73	53.58	0.01
		330	Wind 90	0.29	-0.14	-0.25	-52.79	32.75	-0.10
T4	200.00-180.00	0	Wind Normal	0.31	0.00	-0.31	-59.41	3.25	-0.19
		30	Wind 90	0.29	0.15	-0.25	-48.35	-24.51	-0.04
		60	Wind 60	0.28	0.25	-0.14	-27.21	-43.41	0.02
		90	Wind 90	0.28	0.28	0.00	-0.27	-50.23	-0.08
		120	Wind Normal	0.31	0.27	0.16	29.30	-47.96	-0.01
		150	Wind 90	0.31	0.16	0.27	51.20	-26.46	0.16
		180	Wind 60	0.30	0.00	0.30	57.52	3.25	0.19
		210	Wind 90	0.29	-0.15	0.25	47.82	31.02	0.04
		240	Wind Normal	0.29	-0.25	0.15	27.35	51.09	-0.02
		270	Wind 90	0.28	-0.28	0.00	-0.27	56.73	0.08
		300	Wind 60	0.30	-0.26	-0.15	-29.16	53.30	0.01
		330	Wind 90	0.31	-0.16	-0.27	-51.73	32.97	-0.16
T5	180.00-160.00	0	Wind Normal	0.32	0.00	-0.32	-55.09	4.11	-0.24
		30	Wind 90	0.30	0.15	-0.26	-44.88	-21.64	-0.05
		60	Wind 60	0.29	0.25	-0.15	-25.29	-39.22	0.03
		90	Wind 90	0.29	0.29	0.00	-0.28	-45.63	-0.08
		120	Wind Normal	0.32	0.28	0.16	27.13	-43.36	0.00
		150	Wind 90	0.32	0.16	0.28	47.26	-23.34	0.20
		180	Wind 60	0.31	0.00	0.31	53.13	4.11	0.24
		210	Wind 90	0.30	-0.15	0.26	44.33	29.86	0.05
		240	Wind Normal	0.30	-0.26	0.15	25.44	48.65	-0.03
		270	Wind 90	0.29	-0.29	0.00	-0.28	53.85	0.08
		300	Wind 60	0.31	-0.27	-0.16	-26.98	50.36	-0.00
		330	Wind 90	0.32	-0.16	-0.28	-47.81	31.55	-0.20
T6	160.00-140.00	0	Wind Normal	0.33	0.00	-0.33	-50.17	5.01	-0.28

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	32 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Section Elevation ft	Wind Azimuth °	Directionality	F K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
T7	140.00-120.00	30	Wind 90	0.31	0.16	-0.27	-40.94	-18.31	-0.07
		60	Wind 60	0.30	0.26	-0.15	-23.21	-34.25	0.02
		90	Wind 90	0.30	0.30	0.00	-0.54	-40.14	-0.11
		120	Wind Normal	0.33	0.29	0.17	24.27	-37.96	-0.02
		150	Wind 90	0.33	0.17	0.29	42.35	-19.75	0.23
		180	Wind 60	0.32	0.00	0.32	47.68	5.01	0.28
		210	Wind 90	0.31	-0.16	0.27	39.86	28.34	0.07
		240	Wind Normal	0.31	-0.27	0.16	22.83	45.50	-0.02
		270	Wind 90	0.30	-0.30	0.00	-0.54	50.16	0.11
		300	Wind 60	0.32	-0.28	-0.16	-24.65	46.77	0.02
		330	Wind 90	0.33	-0.17	-0.29	-43.44	29.78	-0.23
		0	Wind Normal	0.33	0.00	-0.33	-43.47	5.79	-0.31
		30	Wind 90	0.31	0.15	-0.27	-35.51	-14.34	-0.07
		60	Wind 60	0.30	0.26	-0.15	-20.21	-28.11	0.03
		90	Wind 90	0.30	0.30	0.00	-0.64	-33.23	-0.12
		120	Wind Normal	0.33	0.29	0.16	20.78	-31.30	-0.02
T8	120.00-100.00	150	Wind 90	0.33	0.16	0.28	36.25	-15.50	0.26
		180	Wind 60	0.32	0.00	0.32	40.84	5.79	0.31
		210	Wind 90	0.31	-0.15	0.27	34.23	25.92	0.07
		240	Wind Normal	0.31	-0.27	0.16	19.61	40.87	-0.03
		270	Wind 90	0.30	-0.30	0.00	-0.64	44.81	0.12
		300	Wind 60	0.32	-0.28	-0.16	-21.38	41.71	0.02
		330	Wind 90	0.33	-0.16	-0.28	-37.52	27.09	-0.26
		0	Wind Normal	0.34	0.00	-0.34	-37.79	6.38	-0.31
		30	Wind 90	0.32	0.16	-0.27	-30.85	-11.07	-0.03
		60	Wind 60	0.31	0.27	-0.15	-17.61	-23.02	0.08
		90	Wind 90	0.31	0.31	0.00	-0.64	-27.51	-0.11
		120	Wind Normal	0.34	0.29	0.17	17.94	-25.79	-0.02
		150	Wind 90	0.33	0.17	0.29	31.07	-11.92	0.26
		180	Wind 60	0.32	0.00	0.32	35.03	6.38	0.31
		210	Wind 90	0.32	-0.16	0.27	29.58	23.83	0.03
		240	Wind Normal	0.32	-0.28	0.16	17.08	37.07	-0.08
T9	100.00-80.00	270	Wind 90	0.31	-0.31	0.00	-0.64	40.28	0.11
		300	Wind 60	0.32	-0.28	-0.16	-18.47	37.27	0.02
		330	Wind 90	0.33	-0.17	-0.29	-32.34	24.69	-0.26
		0	Wind Normal	0.33	0.00	-0.33	-30.34	7.18	-0.33
		30	Wind 90	0.31	0.15	-0.27	-24.77	-6.69	-0.03
		60	Wind 60	0.30	0.26	-0.15	-14.24	-16.17	0.08
		90	Wind 90	0.30	0.30	0.00	-0.76	-19.78	-0.12
		120	Wind Normal	0.33	0.28	0.16	14.03	-18.44	-0.03
		150	Wind 90	0.32	0.16	0.28	24.40	-7.35	0.28
		180	Wind 60	0.31	0.00	0.31	27.53	7.18	0.33
		210	Wind 90	0.31	-0.15	0.27	23.25	21.04	0.03
		240	Wind Normal	0.31	-0.27	0.16	13.37	31.65	-0.08
		270	Wind 90	0.30	-0.30	0.00	-0.76	34.13	0.12
		300	Wind 60	0.31	-0.27	-0.16	-14.90	31.67	0.03
		330	Wind 90	0.32	-0.16	-0.28	-25.92	21.70	-0.28
		0	Wind Normal	0.30	0.00	-0.30	-21.75	7.96	-0.34
T10	80.00-60.00	30	Wind 90	0.28	0.14	-0.24	-17.94	-1.89	-0.04
		60	Wind 60	0.27	0.24	-0.14	-10.49	-8.68	0.09
		90	Wind 90	0.27	0.27	0.00	-0.88	-11.19	-0.12
		120	Wind Normal	0.30	0.26	0.15	9.55	-10.11	-0.03
		150	Wind 90	0.30	0.15	0.26	17.01	-2.37	0.29
		180	Wind 60	0.29	0.00	0.29	19.28	7.96	0.34
		210	Wind 90	0.28	-0.14	0.24	16.18	17.81	0.04
		240	Wind Normal	0.28	-0.25	0.14	9.07	25.19	-0.09
		270	Wind 90	0.27	-0.27	0.00	-0.88	27.10	0.12
		300	Wind 60	0.29	-0.25	-0.14	-10.97	25.42	0.03
		330	Wind 90	0.30	-0.15	-0.26	-18.77	18.29	-0.29
		0	Wind Normal	0.27	0.00	-0.27	-14.68	8.71	-0.34
		30	Wind 90	0.26	0.13	-0.22	-12.17	2.27	-0.04
T11	60.00-40.00								

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	33 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Section Elevation ft	Wind Azimuth °	Directionality	F K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
T12	40.00-20.00	60	Wind 60	0.25	0.22	-0.13	-7.29	-2.15	0.08
		90	Wind 90	0.25	0.25	0.00	-1.02	-3.81	-0.12
		120	Wind Normal	0.27	0.24	0.14	5.81	-3.12	-0.03
		150	Wind 90	0.27	0.14	0.23	10.68	1.96	0.29
		180	Wind 60	0.26	0.00	0.26	12.16	8.71	0.34
		210	Wind 90	0.26	-0.13	0.22	10.14	15.15	0.04
		240	Wind Normal	0.26	-0.23	0.13	5.50	20.00	-0.08
		270	Wind 90	0.25	-0.25	0.00	-1.02	21.23	0.12
		300	Wind 60	0.26	-0.23	-0.13	-7.60	20.12	0.03
		330	Wind 90	0.27	-0.14	-0.23	-12.71	15.46	-0.29
		0	Wind Normal	0.24	0.00	-0.24	-8.38	9.43	-0.32
		30	Wind 90	0.23	0.11	-0.20	-7.05	6.03	-0.04
		60	Wind 60	0.22	0.19	-0.11	-4.47	3.69	0.08
		90	Wind 90	0.22	0.22	0.00	-1.16	2.81	-0.12
		120	Wind Normal	0.24	0.21	0.12	2.45	3.18	-0.03
		150	Wind 90	0.24	0.12	0.21	5.01	5.87	0.27
T13	20.00-0.00	180	Wind 60	0.23	0.00	0.23	5.78	9.43	0.32
		210	Wind 90	0.23	-0.11	0.20	4.73	12.83	0.04
		240	Wind Normal	0.23	-0.20	0.11	2.29	15.40	-0.08
		270	Wind 90	0.22	-0.22	0.00	-1.16	16.04	0.12
		300	Wind 60	0.23	-0.20	-0.12	-4.63	15.44	0.03
		330	Wind 90	0.24	-0.12	-0.21	-7.33	12.99	-0.27
		0	Wind Normal	0.24	0.00	-0.24	-3.70	10.03	-0.35
		30	Wind 90	0.22	0.11	-0.19	-3.26	8.92	-0.05
		60	Wind 60	0.22	0.19	-0.11	-2.42	8.16	0.08
		90	Wind 90	0.22	0.22	0.00	-1.34	7.87	-0.13
		120	Wind Normal	0.24	0.20	0.12	-0.16	7.98	-0.04
		150	Wind 90	0.23	0.12	0.20	0.67	8.86	0.29
		180	Wind 60	0.23	0.00	0.23	0.93	10.03	0.35
		210	Wind 90	0.22	-0.11	0.19	0.58	11.13	0.05
		240	Wind Normal	0.23	-0.20	0.11	-0.21	11.98	-0.08
		270	Wind 90	0.22	-0.22	0.00	-1.34	12.18	0.13
		300	Wind 60	0.23	-0.20	-0.11	-2.47	11.99	0.04
		330	Wind 90	0.23	-0.12	-0.20	-3.35	11.19	-0.29

Mast Totals - With Ice

Wind Azimuth °	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.00	-3.58	-449.92	72.81	-3.30
30	1.68	-2.91	-366.74	-135.02	-0.55
60	2.82	-1.63	-207.24	-274.43	0.61
90	3.23	0.00	-6.76	-323.29	-1.18
120	3.07	1.77	210.80	-304.01	-0.17
150	1.77	3.06	373.03	-146.46	2.80
180	0.00	3.45	421.81	72.81	3.30
210	-1.67	2.90	350.34	278.99	0.55
240	-2.90	1.67	197.70	426.94	-0.61
270	-3.21	0.00	-6.76	465.60	1.18
300	-2.97	-1.72	-218.69	439.88	0.17
330	-1.77	-3.06	-386.56	292.09	-2.80

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	34 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Mast Vectors - Service

Section No.	Section Elevation ft	Wind Azimuth °	Directionality	F K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
T1	250.00-240.00	0	Wind Normal	0.16	0.00	-0.16	-39.86	0.17	-0.12
		30	Wind 90	0.15	0.08	-0.13	-32.11	-18.46	-0.04
		60	Wind 60	0.13	0.11	-0.06	-15.72	-27.33	0.03
		90	Wind 90	0.11	0.11	0.00	0.15	-26.62	0.03
		120	Wind Normal	0.12	0.11	0.06	15.05	-25.63	0.09
		150	Wind 90	0.14	0.07	0.12	30.72	-17.48	0.13
		180	Wind 60	0.16	0.00	0.16	38.20	0.17	0.12
		210	Wind 90	0.14	-0.07	0.12	30.72	17.82	0.04
		240	Wind Normal	0.12	-0.11	0.06	15.05	25.97	-0.03
		270	Wind 90	0.10	-0.10	0.00	0.15	25.00	-0.03
		300	Wind 60	0.12	-0.11	-0.06	-14.74	25.97	-0.09
		330	Wind 90	0.14	-0.07	-0.12	-30.41	17.82	-0.13
T2	240.00-220.00	0	Wind Normal	0.56	0.00	-0.56	-128.68	0.75	-0.50
		30	Wind 90	0.49	0.24	-0.42	-97.09	-55.45	-0.21
		60	Wind 60	0.43	0.37	-0.21	-49.09	-84.73	-0.05
		90	Wind 90	0.41	0.41	0.00	0.26	-92.85	-0.14
		120	Wind Normal	0.50	0.43	0.25	57.70	-98.74	0.08
		150	Wind 90	0.56	0.28	0.48	111.46	-63.45	0.44
		180	Wind 60	0.55	0.00	0.55	125.79	0.75	0.50
		210	Wind 90	0.47	-0.24	0.41	94.66	55.25	0.21
		240	Wind Normal	0.41	-0.36	0.21	47.91	83.28	0.05
		270	Wind 90	0.39	-0.39	0.00	0.26	90.94	0.14
		300	Wind 60	0.50	-0.43	-0.25	-57.18	100.24	-0.08
		330	Wind 90	0.56	-0.28	-0.48	-110.94	64.95	-0.44
T3	220.00-200.00	0	Wind Normal	0.86	0.00	-0.86	-180.63	0.85	-0.53
		30	Wind 90	0.77	0.38	-0.66	-139.42	-79.71	-0.16
		60	Wind 60	0.72	0.62	-0.36	-75.04	-129.31	-0.05
		90	Wind 90	0.73	0.73	0.00	0.12	-153.01	-0.30
		120	Wind Normal	0.86	0.75	0.43	90.49	-155.68	-0.10
		150	Wind 90	0.86	0.43	0.75	157.13	-89.80	0.42
		180	Wind 60	0.83	0.00	0.83	173.72	0.85	0.53
		210	Wind 90	0.77	-0.38	0.66	139.65	81.41	0.16
		240	Wind Normal	0.75	-0.65	0.37	78.84	137.21	0.05
		270	Wind 90	0.73	-0.73	0.00	0.12	154.72	0.30
		300	Wind 60	0.83	-0.72	-0.41	-86.69	151.20	0.10
		330	Wind 90	0.86	-0.43	-0.75	-156.90	91.51	-0.42
T4	200.00-180.00	0	Wind Normal	0.88	0.00	-0.88	-167.06	1.18	-0.73
		30	Wind 90	0.79	0.39	-0.68	-129.45	-73.64	-0.23
		60	Wind 60	0.74	0.64	-0.37	-69.88	-120.09	-0.07
		90	Wind 90	0.75	0.75	0.00	0.14	-142.08	-0.39
		120	Wind Normal	0.88	0.76	0.44	83.74	-143.62	-0.13
		150	Wind 90	0.88	0.44	0.76	145.11	-82.52	0.57
		180	Wind 60	0.84	0.00	0.84	160.66	1.18	0.73
		210	Wind 90	0.79	-0.39	0.68	129.73	76.00	0.23
		240	Wind Normal	0.77	-0.67	0.39	73.50	128.24	0.07
		270	Wind 90	0.75	-0.75	0.00	0.14	144.44	0.39
		300	Wind 60	0.84	-0.73	-0.42	-80.12	140.19	0.13
		330	Wind 90	0.88	-0.44	-0.76	-144.83	84.88	-0.57
T5	180.00-160.00	0	Wind Normal	0.91	0.00	-0.91	-154.93	1.50	-0.90
		30	Wind 90	0.82	0.41	-0.71	-120.38	-68.11	-0.28
		60	Wind 60	0.77	0.67	-0.38	-65.15	-111.66	-0.06
		90	Wind 90	0.79	0.79	0.00	0.19	-132.19	-0.45
		120	Wind Normal	0.91	0.79	0.46	77.75	-132.83	-0.14
		150	Wind 90	0.91	0.45	0.79	134.08	-75.80	0.71
		180	Wind 60	0.87	0.00	0.87	148.61	1.50	0.90
		210	Wind 90	0.82	-0.41	0.71	120.76	71.11	0.28
		240	Wind Normal	0.81	-0.70	0.40	68.87	120.46	0.06
		270	Wind 90	0.79	-0.79	0.00	0.19	135.19	0.45

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	35 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road Client Parallel Infrastructure	Date 12:05:22 02/11/22 Designed by JS

Section No.	Section Elevation ft	Wind Azimuth °	Directionality	F K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
T6	160.00-140.00	300	Wind 60	0.87	-0.76	-0.44	-74.02	130.04	0.14
		330	Wind 90	0.91	-0.45	-0.79	-133.71	78.81	-0.71
		0	Wind Normal	0.94	0.00	-0.94	-141.09	1.84	-1.07
		30	Wind 90	0.85	0.42	-0.73	-109.91	-61.72	-0.36
		60	Wind 60	0.80	0.69	-0.40	-59.64	-101.75	-0.11
		90	Wind 90	0.82	0.82	0.00	0.17	-120.56	-0.57
		120	Wind Normal	0.94	0.82	0.47	70.80	-120.50	-0.20
		150	Wind 90	0.93	0.47	0.81	121.59	-68.27	0.82
		180	Wind 60	0.90	0.00	0.90	134.90	1.84	1.07
		210	Wind 90	0.85	-0.42	0.73	110.25	65.39	0.36
		240	Wind Normal	0.84	-0.73	0.42	63.24	111.08	0.11
		270	Wind 90	0.82	-0.82	0.00	0.17	124.24	0.57
T7	140.00-120.00	300	Wind 60	0.90	-0.78	-0.45	-67.20	118.52	0.20
		330	Wind 90	0.93	-0.47	-0.81	-121.25	71.94	-0.82
		0	Wind Normal	0.94	0.00	-0.94	-122.10	2.15	-1.19
		30	Wind 90	0.85	0.42	-0.73	-95.10	-52.87	-0.39
		60	Wind 60	0.80	0.69	-0.40	-51.62	-87.58	-0.11
		90	Wind 90	0.82	0.82	0.00	0.19	-103.97	-0.63
		120	Wind Normal	0.94	0.81	0.47	61.33	-103.75	-0.24
		150	Wind 90	0.93	0.46	0.80	104.77	-58.23	0.91
		180	Wind 60	0.89	0.00	0.89	116.29	2.15	1.19
		210	Wind 90	0.85	-0.42	0.73	95.48	57.17	0.39
		240	Wind Normal	0.84	-0.73	0.42	55.09	97.24	0.11
		270	Wind 90	0.82	-0.82	0.00	0.19	108.27	0.63
T8	120.00-100.00	300	Wind 60	0.89	-0.77	-0.45	-57.86	102.70	0.24
		330	Wind 90	0.93	-0.46	-0.80	-104.39	62.53	-0.91
		0	Wind Normal	0.98	0.00	-0.98	-107.89	2.44	-1.24
		30	Wind 90	0.88	0.44	-0.77	-83.93	-46.14	-0.34
		60	Wind 60	0.83	0.72	-0.42	-45.56	-76.86	-0.04
		90	Wind 90	0.85	0.85	0.00	0.23	-91.57	-0.65
		120	Wind Normal	0.98	0.85	0.49	54.28	-91.19	-0.26
		150	Wind 90	0.96	0.48	0.83	91.50	-50.26	0.96
		180	Wind 60	0.92	0.00	0.92	101.66	2.44	1.24
		210	Wind 90	0.88	-0.44	0.77	84.38	51.02	0.34
		240	Wind Normal	0.89	-0.77	0.45	49.35	87.52	0.04
		270	Wind 90	0.85	-0.85	0.00	0.23	96.45	0.65
T9	100.00-80.00	300	Wind 60	0.92	-0.80	-0.46	-50.49	90.29	0.26
		330	Wind 90	0.96	-0.48	-0.83	-91.05	55.14	-0.96
		0	Wind Normal	0.96	0.00	-0.96	-86.56	2.76	-1.33
		30	Wind 90	0.87	0.43	-0.75	-67.21	-36.19	-0.37
		60	Wind 60	0.82	0.71	-0.41	-36.46	-60.82	-0.05
		90	Wind 90	0.84	0.84	0.00	0.24	-72.69	-0.69
		120	Wind Normal	0.96	0.84	0.48	43.65	-72.42	-0.29
		150	Wind 90	0.94	0.47	0.81	73.20	-39.37	1.02
		180	Wind 60	0.90	0.00	0.90	81.28	2.76	1.33
		210	Wind 90	0.87	-0.43	0.75	67.70	41.70	0.37
		240	Wind Normal	0.88	-0.76	0.44	39.83	71.33	0.05
		270	Wind 90	0.84	-0.84	0.00	0.24	78.21	0.69
T10	80.00-60.00	300	Wind 60	0.90	-0.78	-0.45	-40.28	72.94	0.29
		330	Wind 90	0.94	-0.47	-0.81	-72.72	44.88	-1.02
		0	Wind Normal	0.86	0.00	-0.86	-59.79	3.08	-1.38
		30	Wind 90	0.78	0.39	-0.67	-46.87	-24.13	-0.39
		60	Wind 60	0.74	0.64	-0.37	-25.46	-41.48	-0.05
		90	Wind 90	0.75	0.75	0.00	0.26	-49.58	-0.72
		120	Wind Normal	0.86	0.74	0.43	30.29	-48.93	-0.30
		150	Wind 90	0.84	0.42	0.73	51.38	-26.43	1.06
		180	Wind 60	0.81	0.00	0.81	57.23	3.08	1.38
		210	Wind 90	0.78	-0.39	0.67	47.39	30.29	0.39
		240	Wind Normal	0.78	-0.67	0.39	27.53	50.30	0.05
		270	Wind 90	0.75	-0.75	0.00	0.26	55.73	0.72
		300	Wind 60	0.81	-0.70	-0.41	-28.22	52.42	0.30

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	36 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Section Elevation ft	Wind Azimuth °	Directionality	F K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
T11	60.00-40.00	330	Wind 90	0.84	-0.42	-0.73	-50.85	32.59	-1.06
		0	Wind Normal	0.79	0.00	-0.79	-39.44	3.39	-1.39
		30	Wind 90	0.72	0.36	-0.62	-30.87	-14.59	-0.39
		60	Wind 60	0.68	0.59	-0.34	-16.72	-26.06	-0.05
		90	Wind 90	0.70	0.70	0.00	0.28	-31.43	-0.72
		120	Wind Normal	0.79	0.69	0.40	20.14	-31.00	-0.30
		150	Wind 90	0.78	0.39	0.67	34.02	-16.08	1.06
		180	Wind 60	0.75	0.00	0.75	37.87	3.39	1.39
		210	Wind 90	0.72	-0.36	0.62	31.43	21.38	0.39
		240	Wind Normal	0.72	-0.63	0.36	18.35	34.69	0.05
		270	Wind 90	0.70	-0.70	0.00	0.28	38.22	0.72
		300	Wind 60	0.75	-0.65	-0.38	-18.52	35.95	0.30
T12	40.00-20.00	330	Wind 90	0.78	-0.39	-0.67	-33.45	22.87	-1.06
		0	Wind Normal	0.71	0.00	-0.71	-21.00	3.71	-1.31
		30	Wind 90	0.64	0.32	-0.56	-16.42	-5.94	-0.37
		60	Wind 60	0.61	0.53	-0.30	-8.84	-12.12	-0.05
		90	Wind 90	0.62	0.62	0.00	0.30	-15.00	-0.68
		120	Wind Normal	0.71	0.61	0.35	10.95	-14.73	-0.29
		150	Wind 90	0.70	0.35	0.60	18.36	-6.72	1.00
		180	Wind 60	0.67	0.00	0.67	20.43	3.71	1.31
		210	Wind 90	0.64	-0.32	0.56	17.02	13.37	0.37
		240	Wind Normal	0.65	-0.56	0.32	10.02	20.55	0.05
		270	Wind 90	0.62	-0.62	0.00	0.30	22.43	0.68
		300	Wind 60	0.67	-0.58	-0.34	-9.77	21.15	0.29
T13	20.00-0.00	330	Wind 90	0.70	-0.35	-0.60	-17.76	14.14	-1.00
		0	Wind Normal	0.72	0.00	-0.72	-6.86	4.03	-1.42
		30	Wind 90	0.65	0.32	-0.56	-5.31	0.78	-0.40
		60	Wind 60	0.61	0.53	-0.31	-2.75	-1.29	-0.06
		90	Wind 90	0.63	0.63	0.00	0.32	-2.27	-0.74
		120	Wind Normal	0.72	0.62	0.36	3.91	-2.18	-0.32
		150	Wind 90	0.70	0.35	0.61	6.39	0.53	1.08
		180	Wind 60	0.68	0.00	0.68	7.08	4.03	1.42
		210	Wind 90	0.65	-0.32	0.56	5.94	7.28	0.40
		240	Wind Normal	0.66	-0.57	0.33	3.60	9.71	0.06
		270	Wind 90	0.63	-0.63	0.00	0.32	10.33	0.74
		300	Wind 60	0.68	-0.59	-0.34	-3.06	9.89	0.32
		330	Wind 90	0.70	-0.35	-0.61	-5.75	7.54	-1.08

Mast Totals - Service

Wind Azimuth °	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.00	-10.29	-1255.87	27.86	-13.11
30	4.62	-8.01	-974.06	-536.16	-3.93
60	7.50	-4.33	-521.94	-881.09	-0.73
90	8.82	0.00	2.85	-1033.82	-6.65
120	8.82	5.09	620.07	-1041.20	-2.40
150	5.07	8.77	1079.71	-593.87	10.20
180	0.00	9.77	1203.75	27.86	13.11
210	-4.61	7.99	975.11	589.19	3.93
240	-7.91	4.56	551.17	977.58	0.73
270	-8.79	0.00	2.85	1084.16	6.65
300	-8.39	-4.85	-588.15	1051.49	2.40
330	-5.07	-8.77	-1074.02	649.58	-10.20

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	37 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Discrete Appurtenance Pressures - No Ice $G_H = 0.850$

Description	Aiming Azimuth °	Weight K	Offset _x ft	Offset _z ft	z ft	K _z	q _z psf	C _A A _C Front ft ²	C _A A _C Side ft ²
5/8" x 10' Adjustable lightning rod	240.0000	0.02	-2.00	1.15	252.50	1.288	31	0.63	0.63
Beacon	120.0000	0.07	2.00	1.15	250.00	1.284	30	2.40	2.40
OB light	240.0000	0.03	-6.75	3.90	125.00	1.053	25	0.50	0.50
OB light	120.0000	0.03	6.75	3.90	125.00	1.053	25	0.50	0.50
OB light	0.0000	0.03	0.00	-7.79	125.00	1.053	25	0.50	0.50
40,000 sq.in.(277.8 sq.ft. EPA)	0.0000	4.00	0.00	0.00	245.00	1.277	30	277.80	277.70
30,000 sq.in.(208.3 sq.ft. EPA)	0.0000	3.00	0.00	0.00	233.00	1.258	30	208.30	208.30
30,000 sq.in.(208.3 sq.ft. EPA)	0.0000	3.00	0.00	0.00	221.00	1.240	29	208.30	208.30
SP1 R5 (Includes 4.5"x72" Pipe)	240.0000	0.14	-4.18	2.42	185.00	1.178	28	2.85	3.15
SP1 R5 (Includes 4.5"x72" Pipe)	120.0000	0.14	4.83	2.79	172.00	1.154	27	2.85	3.15
SP1 R5 (Includes 4.5"x72" Pipe)	0.0000	0.14	0.00	-6.27	160.00	1.130	27	2.85	3.15
2-1/2" x 8' Sch. 40	300.0000	0.05	-1.87	-1.08	185.00	1.178	28	2.30	2.30
2-1/2" x 8' Sch. 40	60.0000	0.05	1.87	-1.08	185.00	1.178	28	2.30	2.30
2-1/2" x 9' Sch. 40	300.0000	0.05	-2.20	-1.27	172.00	1.154	27	2.59	2.59
2-1/2" x 9' Sch. 40	180.0000	0.05	0.00	2.54	172.00	1.154	27	2.59	2.59
2-1/2" x 10' Sch. 40	60.0000	0.06	2.50	-1.44	160.00	1.130	27	2.88	2.88
2-1/2" x 10' Sch. 40	180.0000	0.06	0.00	2.89	160.00	1.130	27	2.88	2.88
Sum Weight:		10.91							

Discrete Appurtenance Vectors - No Ice

5/8" x 10' Adjustable lightning rod - Elevation 252.5 - From Leg C							
Wind Azimuth °	F _a K	F _s K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.01	0.01	0.00	-0.02	-4.07	0.05	-0.03
30	0.01	0.01	0.01	-0.01	-3.52	-2.00	-0.02
60	0.02	0.00	0.01	-0.01	-2.02	-3.50	0.00
90	0.01	0.01	0.02	0.00	0.03	-4.05	0.02
120	0.01	0.01	0.01	0.01	2.08	-3.50	0.03
150	0.00	0.02	0.01	0.01	3.58	-2.00	0.04
180	0.01	0.01	0.00	0.02	4.13	0.05	0.03
210	0.01	0.01	-0.01	0.01	3.58	2.10	0.02
240	0.02	0.00	-0.01	0.01	2.08	3.60	0.00
270	0.01	0.01	-0.02	0.00	0.03	4.15	-0.02
300	0.01	0.01	-0.01	-0.01	-2.02	3.60	-0.03
330	0.00	0.02	-0.01	-0.01	-3.52	2.10	-0.04

Beacon - Elevation 250 - From Leg B							
Wind Azimuth °	F _a K	F _s K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.03	0.05	0.00	-0.06	-15.46	-0.15	0.12

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	38 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Beacon - Elevation 250 - From Leg B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
30	0.00	0.06	0.03	-0.05	-13.37	-7.92	0.14
60	0.03	0.05	0.05	-0.03	-7.69	-13.60	0.12
90	0.05	0.03	0.06	0.00	0.08	-15.69	0.07
120	0.06	0.00	0.05	0.03	7.85	-13.60	0.00
150	0.05	0.03	0.03	0.05	13.54	-7.92	-0.07
180	0.03	0.05	0.00	0.06	15.63	-0.15	-0.12
210	0.00	0.06	-0.03	0.05	13.54	7.62	-0.14
240	0.03	0.05	-0.05	0.03	7.85	13.31	-0.12
270	0.05	0.03	-0.06	0.00	0.08	15.39	-0.07
300	0.06	0.00	-0.05	-0.03	-7.69	13.31	0.00
330	0.05	0.03	-0.03	-0.05	-13.37	7.62	0.07

OB light - Elevation 125 - From Leg C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.01	0.00	-0.01	-1.21	0.20	-0.07
30	0.01	0.01	0.01	-0.01	-1.03	-0.46	-0.04
60	0.01	0.00	0.01	-0.01	-0.55	-0.95	0.00
90	0.01	0.01	0.01	0.00	0.12	-1.13	0.04
120	0.01	0.01	0.01	0.01	0.78	-0.95	0.07
150	0.00	0.01	0.01	0.01	1.27	-0.46	0.08
180	0.01	0.01	0.00	0.01	1.44	0.20	0.07
210	0.01	0.01	-0.01	0.01	1.27	0.87	0.04
240	0.01	0.00	-0.01	0.01	0.78	1.35	0.00
270	0.01	0.01	-0.01	0.00	0.12	1.53	-0.04
300	0.01	0.01	-0.01	-0.01	-0.55	1.35	-0.07
330	0.00	0.01	-0.01	-0.01	-1.03	0.87	-0.08

OB light - Elevation 125 - From Leg B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.01	0.00	-0.01	-1.21	-0.20	0.07
30	0.00	0.01	0.01	-0.01	-1.03	-0.87	0.08
60	0.01	0.01	0.01	-0.01	-0.55	-1.35	0.07
90	0.01	0.01	0.01	0.00	0.12	-1.53	0.04
120	0.01	0.00	0.01	0.01	0.78	-1.35	0.00
150	0.01	0.01	0.01	0.01	1.27	-0.87	-0.04
180	0.01	0.01	0.00	0.01	1.44	-0.20	-0.07
210	0.00	0.01	-0.01	0.01	1.27	0.46	-0.08
240	0.01	0.01	-0.01	0.01	0.78	0.95	-0.07
270	0.01	0.01	-0.01	0.00	0.12	1.13	-0.04
300	0.01	0.00	-0.01	-0.01	-0.55	0.95	0.00
330	0.01	0.01	-0.01	-0.01	-1.03	0.46	0.04

OB light - Elevation 125 - From Leg A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.00	0.00	-0.01	-1.56	0.00	0.00
30	0.01	0.01	0.01	-0.01	-1.38	-0.66	-0.04
60	0.01	0.01	0.01	-0.01	-0.90	-1.15	-0.07
90	0.00	0.01	0.01	0.00	-0.23	-1.33	-0.08

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page 39 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by JS

OB light - Elevation 125 - From Leg A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
120	0.01	0.01	0.01	0.01	0.43	-1.15	-0.07
150	0.01	0.01	0.01	0.01	0.92	-0.66	-0.04
180	0.01	0.00	0.00	0.01	1.09	0.00	0.00
210	0.01	0.01	-0.01	0.01	0.92	0.66	0.04
240	0.01	0.01	-0.01	0.01	0.43	1.15	0.07
270	0.00	0.01	-0.01	0.00	-0.23	1.33	0.08
300	0.01	0.01	-0.01	-0.01	-0.90	1.15	0.07
330	0.01	0.01	-0.01	-0.01	-1.38	0.66	0.04

40,000 sq.in.(277.8 sq.ft. EPA) - Elevation 245 - None C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	7.15	0.00	0.00	-7.15	-1752.71	0.00	0.00
30	7.15	0.00	3.58	-6.20	-1517.89	-876.36	0.00
60	7.15	0.00	6.20	-3.58	-876.36	-1517.89	0.00
90	7.15	0.00	7.15	0.00	0.00	-1752.71	0.00
120	7.15	0.00	6.20	3.58	876.36	-1517.89	0.00
150	7.15	0.00	3.58	6.20	1517.89	-876.36	0.00
180	7.15	0.00	0.00	7.15	1752.71	0.00	0.00
210	7.15	0.00	-3.58	6.20	1517.89	876.36	0.00
240	7.15	0.00	-6.20	3.58	876.36	1517.89	0.00
270	7.15	0.00	-7.15	0.00	0.00	1752.71	0.00
300	7.15	0.00	-6.20	-3.58	-876.36	1517.89	0.00
330	7.15	0.00	-3.58	-6.20	-1517.89	876.36	0.00

30,000 sq.in.(208.3 sq.ft. EPA) - Elevation 233 - None B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	5.29	0.00	0.00	-5.29	-1232.04	0.00	0.00
30	5.29	0.00	2.64	-4.58	-1066.98	-616.02	0.00
60	5.29	0.00	4.58	-2.64	-616.02	-1066.98	0.00
90	5.29	0.00	5.29	0.00	0.00	-1232.04	0.00
120	5.29	0.00	4.58	2.64	616.02	-1066.98	0.00
150	5.29	0.00	2.64	4.58	1066.98	-616.02	0.00
180	5.29	0.00	0.00	5.29	1232.04	0.00	0.00
210	5.29	0.00	-2.64	4.58	1066.98	616.02	0.00
240	5.29	0.00	-4.58	2.64	616.02	1066.98	0.00
270	5.29	0.00	-5.29	0.00	0.00	1232.04	0.00
300	5.29	0.00	-4.58	-2.64	-616.02	1066.98	0.00
330	5.29	0.00	-2.64	-4.58	-1066.98	616.02	0.00

30,000 sq.in.(208.3 sq.ft. EPA) - Elevation 221 - None A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	5.21	0.00	0.00	-5.21	-1151.07	0.00	0.00
30	5.21	0.00	2.60	-4.51	-996.86	-575.53	0.00
60	5.21	0.00	4.51	-2.60	-575.53	-996.86	0.00
90	5.21	0.00	5.21	0.00	0.00	-1151.07	0.00
120	5.21	0.00	4.51	2.60	575.53	-996.86	0.00
150	5.21	0.00	2.60	4.51	996.86	-575.53	0.00
180	5.21	0.00	0.00	5.21	1151.07	0.00	0.00

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page 40 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by JS

30,000 sq.in.(208.3 sq.ft. EPA) - Elevation 221 - None A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
210	5.21	0.00	-2.60	4.51	996.86	575.53	0.00
240	5.21	0.00	-4.51	2.60	575.53	996.86	0.00
270	5.21	0.00	-5.21	0.00	0.00	1151.07	0.00
300	5.21	0.00	-4.51	-2.60	-575.53	996.86	0.00
330	5.21	0.00	-2.60	-4.51	-996.86	575.53	0.00

SP1 R5 (Includes 4.5"x72" Pipe) - Elevation 185 - From Leg C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.03	0.06	-0.00	-0.07	-13.19	1.14	-0.31
30	0.06	0.04	0.03	-0.06	-11.09	-5.36	-0.18
60	0.07	0.00	0.06	-0.03	-5.93	-10.28	0.00
90	0.06	0.04	0.07	0.00	0.90	-12.29	0.18
120	0.03	0.06	0.06	0.04	7.59	-10.85	0.31
150	0.00	0.07	0.04	0.06	12.33	-6.35	0.36
180	0.03	0.06	0.00	0.07	13.85	0.00	0.31
210	0.06	0.04	-0.03	0.06	11.75	6.51	0.18
240	0.07	0.00	-0.06	0.03	6.60	11.42	0.00
270	0.06	0.04	-0.07	-0.00	-0.24	13.43	-0.18
300	0.03	0.06	-0.06	-0.04	-6.92	12.00	-0.31
330	0.00	0.07	-0.04	-0.06	-11.66	7.50	-0.36

SP1 R5 (Includes 4.5"x72" Pipe) - Elevation 172 - From Leg B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.03	0.06	0.00	-0.07	-11.93	-1.18	0.35
30	0.00	0.07	0.04	-0.06	-10.54	-6.97	0.41
60	0.03	0.06	0.06	-0.04	-6.22	-11.06	0.35
90	0.06	0.04	0.07	-0.00	-0.14	-12.37	0.20
120	0.07	0.00	0.06	0.03	6.09	-10.54	0.00
150	0.06	0.04	0.03	0.06	10.78	-6.07	-0.20
180	0.03	0.06	-0.00	0.07	12.69	-0.14	-0.35
210	0.00	0.07	-0.04	0.06	11.30	5.64	-0.41
240	0.03	0.06	-0.06	0.04	6.99	9.74	-0.35
270	0.06	0.04	-0.07	0.00	0.90	11.05	-0.20
300	0.07	0.00	-0.06	-0.03	-5.32	9.22	0.00
330	0.06	0.04	-0.03	-0.06	-10.02	4.74	0.20

SP1 R5 (Includes 4.5"x72" Pipe) - Elevation 160 - From Leg A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.06	0.00	0.00	-0.06	-11.26	0.00	0.00
30	0.06	0.04	0.04	-0.06	-9.86	-5.75	-0.23
60	0.03	0.06	0.06	-0.03	-6.06	-9.95	-0.39
90	0.00	0.07	0.07	0.00	-0.86	-11.49	-0.45
120	0.03	0.06	0.06	0.03	4.34	-9.95	-0.39
150	0.06	0.04	0.04	0.06	8.14	-5.75	-0.23
180	0.06	0.00	0.00	0.06	9.54	0.00	0.00
210	0.06	0.04	-0.04	0.06	8.14	5.75	0.23
240	0.03	0.06	-0.06	0.03	4.34	9.95	0.39
270	0.00	0.07	-0.07	0.00	-0.86	11.49	0.45

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	41 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

SP1 R5 (Includes 4.5"x72" Pipe) - Elevation 160 - From Leg A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
300	0.03	0.06	-0.06	-0.03	-6.06	9.95	0.39
330	0.06	0.04	-0.04	-0.06	-9.86	5.75	0.23

2-1/2" x 8' Sch. 40 - Elevation 185 - From Face A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.03	0.05	0.00	-0.05	-10.16	0.09	-0.10
30	0.00	0.05	0.03	-0.05	-8.81	-4.97	-0.12
60	0.03	0.05	0.05	-0.03	-5.11	-8.67	-0.10
90	0.05	0.03	0.05	0.00	-0.05	-10.03	-0.06
120	0.05	0.00	0.05	0.03	5.01	-8.67	0.00
150	0.05	0.03	0.03	0.05	8.71	-4.97	0.06
180	0.03	0.05	0.00	0.05	10.06	0.09	0.10
210	0.00	0.05	-0.03	0.05	8.71	5.14	0.12
240	0.03	0.05	-0.05	0.03	5.01	8.84	0.10
270	0.05	0.03	-0.05	0.00	-0.05	10.20	0.06
300	0.05	0.00	-0.05	-0.03	-5.11	8.84	0.00
330	0.05	0.03	-0.03	-0.05	-8.81	5.14	-0.06

2-1/2" x 8' Sch. 40 - Elevation 185 - From Face B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.03	0.05	0.00	-0.05	-10.16	-0.09	0.10
30	0.05	0.03	0.03	-0.05	-8.81	-5.14	0.06
60	0.05	0.00	0.05	-0.03	-5.11	-8.84	0.00
90	0.05	0.03	0.05	0.00	-0.05	-10.20	-0.06
120	0.03	0.05	0.05	0.03	5.01	-8.84	-0.10
150	0.00	0.05	0.03	0.05	8.71	-5.14	-0.12
180	0.03	0.05	0.00	0.05	10.06	-0.09	-0.10
210	0.05	0.03	-0.03	0.05	8.71	4.97	-0.06
240	0.05	0.00	-0.05	0.03	5.01	8.67	0.00
270	0.05	0.03	-0.05	0.00	-0.05	10.03	0.06
300	0.03	0.05	-0.05	-0.03	-5.11	8.67	0.10
330	0.00	0.05	-0.03	-0.05	-8.81	4.97	0.12

2-1/2" x 9' Sch. 40 - Elevation 172 - From Face A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.03	0.05	0.00	-0.06	-10.43	0.11	-0.13
30	0.00	0.06	0.03	-0.05	-9.04	-5.06	-0.15
60	0.03	0.05	0.05	-0.03	-5.25	-8.86	-0.13
90	0.05	0.03	0.06	0.00	-0.07	-10.24	-0.08
120	0.06	0.00	0.05	0.03	5.11	-8.86	0.00
150	0.05	0.03	0.03	0.05	8.91	-5.06	0.08
180	0.03	0.05	0.00	0.06	10.29	0.11	0.13
210	0.00	0.06	-0.03	0.05	8.91	5.29	0.15
240	0.03	0.05	-0.05	0.03	5.11	9.09	0.13
270	0.05	0.03	-0.06	0.00	-0.07	10.47	0.08
300	0.06	0.00	-0.05	-0.03	-5.25	9.09	0.00
330	0.05	0.03	-0.03	-0.05	-9.04	5.29	-0.08

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	42 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

2-1/2" x 9' Sch. 40 - Elevation 172 - From Face C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.06	0.00	0.00	-0.06	-10.23	0.00	0.00
30	0.05	0.03	0.03	-0.05	-8.84	-5.18	0.08
60	0.03	0.05	0.05	-0.03	-5.05	-8.97	0.13
90	0.00	0.06	0.06	0.00	0.13	-10.36	0.15
120	0.03	0.05	0.05	0.03	5.31	-8.97	0.13
150	0.05	0.03	0.03	0.05	9.10	-5.18	0.08
180	0.06	0.00	0.00	0.06	10.49	0.00	0.00
210	0.05	0.03	-0.03	0.05	9.10	5.18	-0.08
240	0.03	0.05	-0.05	0.03	5.31	8.97	-0.13
270	0.00	0.06	-0.06	0.00	0.13	10.36	-0.15
300	0.03	0.05	-0.05	-0.03	-5.05	8.97	-0.13
330	0.05	0.03	-0.03	-0.05	-8.84	5.18	-0.08

2-1/2" x 10' Sch. 40 - Elevation 160 - From Face B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.03	0.06	0.00	-0.07	-10.57	-0.14	0.16
30	0.06	0.03	0.03	-0.06	-9.17	-5.39	0.09
60	0.07	0.00	0.06	-0.03	-5.33	-9.23	0.00
90	0.06	0.03	0.07	0.00	-0.08	-10.63	-0.09
120	0.03	0.06	0.06	0.03	5.16	-9.23	-0.16
150	0.00	0.07	0.03	0.06	9.00	-5.39	-0.19
180	0.03	0.06	0.00	0.07	10.40	-0.14	-0.16
210	0.06	0.03	-0.03	0.06	9.00	5.10	-0.09
240	0.07	0.00	-0.06	0.03	5.16	8.94	0.00
270	0.06	0.03	-0.07	0.00	-0.08	10.34	0.09
300	0.03	0.06	-0.06	-0.03	-5.33	8.94	0.16
330	0.00	0.07	-0.03	-0.06	-9.17	5.10	0.19

2-1/2" x 10' Sch. 40 - Elevation 160 - From Face C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.07	0.00	0.00	-0.07	-10.32	0.00	0.00
30	0.06	0.03	0.03	-0.06	-8.92	-5.24	0.09
60	0.03	0.06	0.06	-0.03	-5.08	-9.08	0.16
90	0.00	0.07	0.07	0.00	0.17	-10.49	0.19
120	0.03	0.06	0.06	0.03	5.41	-9.08	0.16
150	0.06	0.03	0.03	0.06	9.25	-5.24	0.09
180	0.07	0.00	0.00	0.07	10.66	0.00	0.00
210	0.06	0.03	-0.03	0.06	9.25	5.24	-0.09
240	0.03	0.06	-0.06	0.03	5.41	9.08	-0.16
270	0.00	0.07	-0.07	0.00	0.17	10.49	-0.19
300	0.03	0.06	-0.06	-0.03	-5.08	9.08	-0.16
330	0.06	0.03	-0.03	-0.06	-8.92	5.24	-0.09

Discrete Appurtenance Totals - No Ice

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	43 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Wind Azimuth °	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	-0.00	-18.33	-4257.59	-0.17	0.16
30	9.17	-15.88	-3687.15	-2128.89	0.18
60	15.87	-9.17	-2128.74	-3687.24	0.15
90	18.33	0.00	0.07	-4257.65	0.08
120	15.87	9.17	2128.86	-3687.29	-0.01
150	9.17	15.88	3687.23	-2128.98	-0.10
180	0.00	18.33	4257.61	-0.27	-0.16
210	-9.17	15.88	3687.18	2128.45	-0.18
240	-15.87	9.17	2128.77	3686.80	-0.15
270	-18.33	-0.00	-0.04	4257.21	-0.08
300	-15.87	-9.17	-2128.83	3686.85	0.01
330	-9.17	-15.88	-3687.20	2128.54	0.10

Discrete Appurtenance Pressures - With Ice $G_H = 0.850$

Description	Aiming Azimuth °	Weight K	Offset _x ft	Offset _z ft	z ft	K _z	q _z psf	C _A A _C Front ft ²	C _A A _C Side ft ²	t _z in
5/8" x 10' Adjustable lightning rod	240.0000	0.04	-2.00	1.15	252.50	1.288	2	2.03	2.03	0.7048
Beacon	120.0000	0.11	2.00	1.15	250.00	1.284	2	2.79	2.79	0.7041
OB light	240.0000	0.04	-6.75	3.90	125.00	1.053	2	0.63	0.63	0.6569
OB light	120.0000	0.04	6.75	3.90	125.00	1.053	2	0.63	0.63	0.6569
OB light	0.0000	0.04	0.00	-7.79	125.00	1.053	2	0.63	0.63	0.6569
40,000 sq.in.(277.8 sq.ft. EPA)	0.0000	5.00	0.00	0.00	245.00	1.277	2	375.27	375.27	0.7026
30,000 sq.in.(208.3 sq.ft. EPA)	0.0000	4.40	0.00	0.00	233.00	1.258	2	281.12	281.12	0.6991
30,000 sq.in.(208.3 sq.ft. EPA)	0.0000	4.39	0.00	0.00	221.00	1.240	2	280.74	280.74	0.6954
SP1 R5 (Includes 4.5"x72" Pipe)	240.0000	0.18	-4.18	2.42	185.00	1.178	2	3.56	3.90	0.6832
SP1 R5 (Includes 4.5"x72" Pipe)	120.0000	0.18	4.83	2.79	172.00	1.154	2	3.55	3.89	0.6782
SP1 R5 (Includes 4.5"x72" Pipe)	0.0000	0.18	0.00	-6.27	160.00	1.130	2	3.55	3.89	0.6733
2-1/2" x 8' Sch. 40	300.0000	0.07	-1.87	-1.08	185.00	1.178	2	3.24	3.24	0.6832
2-1/2" x 8' Sch. 40	60.0000	0.07	1.87	-1.08	185.00	1.178	2	3.24	3.24	0.6832
2-1/2" x 9' Sch. 40	300.0000	0.08	-2.20	-1.27	172.00	1.154	2	3.73	3.73	0.6782
2-1/2" x 9' Sch. 40	180.0000	0.08	0.00	2.54	172.00	1.154	2	3.73	3.73	0.6782
2-1/2" x 10' Sch. 40	60.0000	0.09	2.50	-1.44	160.00	1.130	2	4.21	4.21	0.6733
2-1/2" x 10' Sch. 40	180.0000	0.09	0.00	2.89	160.00	1.130	2	4.21	4.21	0.6733
Sum Weight:		15.06								

Discrete Appurtenance Vectors - With Ice

5/8" x 10' Adjustable lightning rod - Elevation 252.5 - From Leg C							
Wind Azimuth °	F _a K	F _s K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.00	0.00	0.00	-0.00	-1.03	0.07	-0.01
30	0.00	0.00	0.00	-0.00	-0.88	-0.46	-0.00
60	0.00	0.00	0.00	-0.00	-0.49	-0.85	0.00

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	44 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

5/8" x 10' Adjustable lightning rod - Elevation 252.5 - From Leg C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
90	0.00	0.00	0.00	0.00	0.04	-1.00	0.00
120	0.00	0.00	0.00	0.00	0.58	-0.85	0.01
150	0.00	0.00	0.00	0.00	0.97	-0.46	0.01
180	0.00	0.00	0.00	0.00	1.11	0.07	0.01
210	0.00	0.00	-0.00	0.00	0.97	0.61	0.00
240	0.00	0.00	-0.00	0.00	0.58	1.00	0.00
270	0.00	0.00	-0.00	0.00	0.04	1.14	-0.00
300	0.00	0.00	-0.00	-0.00	-0.49	1.00	-0.01
330	0.00	0.00	-0.00	-0.00	-0.88	0.61	-0.01

Beacon - Elevation 250 - From Leg B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.01	0.00	-0.01	-1.32	-0.22	0.01
30	0.00	0.01	0.00	-0.01	-1.13	-0.94	0.01
60	0.00	0.01	0.01	-0.00	-0.60	-1.47	0.01
90	0.01	0.00	0.01	0.00	0.12	-1.66	0.01
120	0.01	0.00	0.01	0.00	0.85	-1.47	0.00
150	0.01	0.00	0.00	0.01	1.38	-0.94	-0.01
180	0.00	0.01	0.00	0.01	1.57	-0.22	-0.01
210	0.00	0.01	-0.00	0.01	1.38	0.51	-0.01
240	0.00	0.01	-0.01	0.00	0.85	1.04	-0.01
270	0.01	0.00	-0.01	0.00	0.12	1.23	-0.01
300	0.01	0.00	-0.01	-0.00	-0.60	1.04	0.00
330	0.01	0.00	-0.00	-0.01	-1.13	0.51	0.01

OB light - Elevation 125 - From Leg C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.00	0.00	-0.00	0.01	0.25	-0.01
30	0.00	0.00	0.00	-0.00	0.03	0.18	-0.00
60	0.00	0.00	0.00	-0.00	0.08	0.13	0.00
90	0.00	0.00	0.00	0.00	0.14	0.11	0.00
120	0.00	0.00	0.00	0.00	0.21	0.13	0.01
150	0.00	0.00	0.00	0.00	0.26	0.18	0.01
180	0.00	0.00	0.00	0.00	0.28	0.25	0.01
210	0.00	0.00	-0.00	0.00	0.26	0.31	0.00
240	0.00	0.00	-0.00	0.00	0.21	0.36	0.00
270	0.00	0.00	-0.00	0.00	0.14	0.38	-0.00
300	0.00	0.00	-0.00	-0.00	0.08	0.36	-0.01
330	0.00	0.00	-0.00	-0.00	0.03	0.31	-0.01

OB light - Elevation 125 - From Leg B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.00	0.00	-0.00	0.01	-0.25	0.01
30	0.00	0.00	0.00	-0.00	0.03	-0.31	0.01
60	0.00	0.00	0.00	-0.00	0.08	-0.36	0.01
90	0.00	0.00	0.00	0.00	0.14	-0.38	0.00
120	0.00	0.00	0.00	0.00	0.21	-0.36	0.00
150	0.00	0.00	0.00	0.00	0.26	-0.31	-0.00

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	45 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road Client Parallel Infrastructure	Date 12:05:22 02/11/22 Designed by JS

OB light - Elevation 125 - From Leg B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
180	0.00	0.00	0.00	0.00	0.28	-0.25	-0.01
210	0.00	0.00	-0.00	0.00	0.26	-0.18	-0.01
240	0.00	0.00	-0.00	0.00	0.21	-0.13	-0.01
270	0.00	0.00	-0.00	0.00	0.14	-0.11	-0.00
300	0.00	0.00	-0.00	-0.00	0.08	-0.13	0.00
330	0.00	0.00	-0.00	-0.00	0.03	-0.18	0.00

OB light - Elevation 125 - From Leg A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.00	0.00	-0.00	-0.42	0.00	0.00
30	0.00	0.00	0.00	-0.00	-0.40	-0.07	-0.00
60	0.00	0.00	0.00	-0.00	-0.35	-0.12	-0.01
90	0.00	0.00	0.00	0.00	-0.29	-0.13	-0.01
120	0.00	0.00	0.00	0.00	-0.22	-0.12	-0.01
150	0.00	0.00	0.00	0.00	-0.17	-0.07	-0.00
180	0.00	0.00	0.00	0.00	-0.15	0.00	0.00
210	0.00	0.00	-0.00	0.00	-0.17	0.07	0.00
240	0.00	0.00	-0.00	0.00	-0.22	0.12	0.01
270	0.00	0.00	-0.00	0.00	-0.29	0.13	0.01
300	0.00	0.00	-0.00	-0.00	-0.35	0.12	0.01
330	0.00	0.00	-0.00	-0.00	-0.40	0.07	0.00

40,000 sq.in.(277.8 sq.ft. EPA) - Elevation 245 - None C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.77	0.00	0.00	-0.77	-189.65	0.00	0.00
30	0.77	0.00	0.39	-0.67	-164.24	-94.82	0.00
60	0.77	0.00	0.67	-0.39	-94.82	-164.24	0.00
90	0.77	0.00	0.77	0.00	0.00	-189.65	0.00
120	0.77	0.00	0.67	0.39	94.82	-164.24	0.00
150	0.77	0.00	0.39	0.67	164.24	-94.82	0.00
180	0.77	0.00	0.00	0.77	189.65	0.00	0.00
210	0.77	0.00	-0.39	0.67	164.24	94.82	0.00
240	0.77	0.00	-0.67	0.39	94.82	164.24	0.00
270	0.77	0.00	-0.77	0.00	0.00	189.65	0.00
300	0.77	0.00	-0.67	-0.39	-94.82	164.24	0.00
330	0.77	0.00	-0.39	-0.67	-164.24	94.82	0.00

30,000 sq.in.(208.3 sq.ft. EPA) - Elevation 233 - None B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.57	0.00	0.00	-0.57	-133.19	0.00	0.00
30	0.57	0.00	0.29	-0.50	-115.34	-66.59	0.00
60	0.57	0.00	0.50	-0.29	-66.59	-115.34	0.00
90	0.57	0.00	0.57	0.00	0.00	-133.19	0.00
120	0.57	0.00	0.50	0.29	66.59	-115.34	0.00
150	0.57	0.00	0.29	0.50	115.34	-66.59	0.00
180	0.57	0.00	0.00	0.57	133.19	0.00	0.00
210	0.57	0.00	-0.29	0.50	115.34	66.59	0.00
240	0.57	0.00	-0.50	0.29	66.59	115.34	0.00

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	46 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

30,000 sq.in.(208.3 sq.ft. EPA) - Elevation 233 - None B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
270	0.57	0.00	-0.57	0.00	0.00	133.19	0.00
300	0.57	0.00	-0.50	-0.29	-66.59	115.34	0.00
330	0.57	0.00	-0.29	-0.50	-115.34	66.59	0.00

30,000 sq.in.(208.3 sq.ft. EPA) - Elevation 221 - None A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.56	0.00	0.00	-0.56	-124.26	0.00	0.00
30	0.56	0.00	0.28	-0.49	-107.61	-62.13	0.00
60	0.56	0.00	0.49	-0.28	-62.13	-107.61	0.00
90	0.56	0.00	0.56	0.00	0.00	-124.26	0.00
120	0.56	0.00	0.49	0.28	62.13	-107.61	0.00
150	0.56	0.00	0.28	0.49	107.61	-62.13	0.00
180	0.56	0.00	0.00	0.56	124.26	0.00	0.00
210	0.56	0.00	-0.28	0.49	107.61	62.13	0.00
240	0.56	0.00	-0.49	0.28	62.13	107.61	0.00
270	0.56	0.00	-0.56	0.00	0.00	124.26	0.00
300	0.56	0.00	-0.49	-0.28	-62.13	107.61	0.00
330	0.56	0.00	-0.28	-0.49	-107.61	62.13	0.00

SP1 R5 (Includes 4.5"x72" Pipe) - Elevation 185 - From Leg C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.01	-0.00	-0.01	-0.91	0.81	-0.03
30	0.01	0.00	0.00	-0.01	-0.70	0.16	-0.02
60	0.01	0.00	0.01	-0.00	-0.19	-0.33	0.00
90	0.01	0.00	0.01	0.00	0.49	-0.52	0.02
120	0.00	0.01	0.01	0.00	1.15	-0.38	0.03
150	0.00	0.01	0.00	0.01	1.63	0.07	0.04
180	0.00	0.01	0.00	0.01	1.78	0.71	0.03
210	0.01	0.00	-0.00	0.01	1.57	1.35	0.02
240	0.01	0.00	-0.01	0.00	1.06	1.84	0.00
270	0.01	0.00	-0.01	-0.00	0.39	2.04	-0.02
300	0.00	0.01	-0.01	-0.00	-0.28	1.90	-0.03
330	0.00	0.01	-0.00	-0.01	-0.75	1.44	-0.04

SP1 R5 (Includes 4.5"x72" Pipe) - Elevation 172 - From Leg B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.01	0.00	-0.01	-0.72	-0.92	0.04
30	0.00	0.01	0.00	-0.01	-0.58	-1.50	0.04
60	0.00	0.01	0.01	-0.00	-0.15	-1.91	0.04
90	0.01	0.00	0.01	-0.00	0.46	-2.04	0.02
120	0.01	0.00	0.01	0.00	1.07	-1.86	0.00
150	0.01	0.00	0.00	0.01	1.54	-1.42	-0.02
180	0.00	0.01	-0.00	0.01	1.73	-0.83	-0.04
210	0.00	0.01	-0.00	0.01	1.59	-0.25	-0.04
240	0.00	0.01	-0.01	0.00	1.16	0.16	-0.04
270	0.01	0.00	-0.01	0.00	0.55	0.29	-0.02
300	0.01	0.00	-0.01	-0.00	-0.06	0.11	0.00
330	0.01	0.00	-0.00	-0.01	-0.53	-0.33	0.02

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	47 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

SP1 R5 (Includes 4.5"x72" Pipe) - Elevation 160 - From Leg A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.00	0.00	-0.01	-2.17	0.00	0.00
30	0.01	0.00	0.00	-0.01	-2.03	-0.57	-0.02
60	0.00	0.01	0.01	-0.00	-1.65	-0.98	-0.04
90	0.00	0.01	0.01	0.00	-1.13	-1.14	-0.04
120	0.00	0.01	0.01	0.00	-0.61	-0.98	-0.04
150	0.01	0.00	0.00	0.01	-0.23	-0.57	-0.02
180	0.01	0.00	0.00	0.01	-0.10	0.00	0.00
210	0.01	0.00	-0.00	0.01	-0.23	0.57	0.02
240	0.00	0.01	-0.01	0.00	-0.61	0.98	0.04
270	0.00	0.01	-0.01	0.00	-1.13	1.14	0.04
300	0.00	0.01	-0.01	-0.00	-1.65	0.98	0.04
330	0.01	0.00	-0.00	-0.01	-2.03	0.57	0.02

2-1/2" x 8' Sch. 40 - Elevation 185 - From Face A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.01	0.00	-0.01	-1.22	0.13	-0.01
30	0.00	0.01	0.00	-0.01	-1.07	-0.44	-0.01
60	0.00	0.01	0.01	-0.00	-0.65	-0.86	-0.01
90	0.01	0.00	0.01	0.00	-0.08	-1.01	-0.01
120	0.01	0.00	0.01	0.00	0.49	-0.86	0.00
150	0.01	0.00	0.00	0.01	0.91	-0.44	0.01
180	0.00	0.01	0.00	0.01	1.07	0.13	0.01
210	0.00	0.01	-0.00	0.01	0.91	0.70	0.01
240	0.00	0.01	-0.01	0.00	0.49	1.12	0.01
270	0.01	0.00	-0.01	0.00	-0.08	1.28	0.01
300	0.01	0.00	-0.01	-0.00	-0.65	1.12	0.00
330	0.01	0.00	-0.00	-0.01	-1.07	0.70	-0.01

2-1/2" x 8' Sch. 40 - Elevation 185 - From Face B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.01	0.00	-0.01	-1.22	-0.13	0.01
30	0.01	0.00	0.00	-0.01	-1.07	-0.70	0.01
60	0.01	0.00	0.01	-0.00	-0.65	-1.12	0.00
90	0.01	0.00	0.01	0.00	-0.08	-1.28	-0.01
120	0.00	0.01	0.01	0.00	0.49	-1.12	-0.01
150	0.00	0.01	0.00	0.01	0.91	-0.70	-0.01
180	0.00	0.01	0.00	0.01	1.07	-0.13	-0.01
210	0.01	0.00	-0.00	0.01	0.91	0.44	-0.01
240	0.01	0.00	-0.01	0.00	0.49	0.86	0.00
270	0.01	0.00	-0.01	0.00	-0.08	1.01	0.01
300	0.00	0.01	-0.01	-0.00	-0.65	0.86	0.01
330	0.00	0.01	-0.00	-0.01	-1.07	0.44	0.01

2-1/2" x 9' Sch. 40 - Elevation 172 - From Face A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.01	0.00	-0.01	-1.30	0.18	-0.02

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	48 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

2-1/2" x 9' Sch. 40 - Elevation 172 - From Face A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
30	0.00	0.01	0.00	-0.01	-1.14	-0.42	-0.02
60	0.00	0.01	0.01	-0.00	-0.70	-0.86	-0.02
90	0.01	0.00	0.01	0.00	-0.10	-1.02	-0.01
120	0.01	0.00	0.01	0.00	0.50	-0.86	0.00
150	0.01	0.00	0.00	0.01	0.93	-0.42	0.01
180	0.00	0.01	0.00	0.01	1.09	0.18	0.02
210	0.00	0.01	-0.00	0.01	0.93	0.77	0.02
240	0.00	0.01	-0.01	0.00	0.50	1.21	0.02
270	0.01	0.00	-0.01	0.00	-0.10	1.37	0.01
300	0.01	0.00	-0.01	-0.00	-0.70	1.21	0.00
330	0.01	0.00	-0.00	-0.01	-1.14	0.77	-0.01

2-1/2" x 9' Sch. 40 - Elevation 172 - From Face C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.00	0.00	-0.01	-0.99	0.00	0.00
30	0.01	0.00	0.00	-0.01	-0.83	-0.60	0.01
60	0.00	0.01	0.01	-0.00	-0.39	-1.03	0.02
90	0.00	0.01	0.01	0.00	0.20	-1.19	0.02
120	0.00	0.01	0.01	0.00	0.80	-1.03	0.02
150	0.01	0.00	0.00	0.01	1.24	-0.60	0.01
180	0.01	0.00	0.00	0.01	1.40	0.00	0.00
210	0.01	0.00	-0.00	0.01	1.24	0.60	-0.01
240	0.00	0.01	-0.01	0.00	0.80	1.03	-0.02
270	0.00	0.01	-0.01	0.00	0.20	1.19	-0.02
300	0.00	0.01	-0.01	-0.00	-0.39	1.03	-0.02
330	0.01	0.00	-0.00	-0.01	-0.83	0.60	-0.01

2-1/2" x 10' Sch. 40 - Elevation 160 - From Face B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.01	0.00	-0.01	-1.36	-0.22	0.02
30	0.01	0.00	0.00	-0.01	-1.19	-0.84	0.01
60	0.01	0.00	0.01	-0.00	-0.74	-1.29	0.00
90	0.01	0.00	0.01	0.00	-0.13	-1.45	-0.01
120	0.00	0.01	0.01	0.00	0.49	-1.29	-0.02
150	0.00	0.01	0.00	0.01	0.94	-0.84	-0.02
180	0.00	0.01	0.00	0.01	1.10	-0.22	-0.02
210	0.01	0.00	-0.00	0.01	0.94	0.39	-0.01
240	0.01	0.00	-0.01	0.00	0.49	0.84	0.00
270	0.01	0.00	-0.01	0.00	-0.13	1.01	0.01
300	0.00	0.01	-0.01	-0.00	-0.74	0.84	0.02
330	0.00	0.01	-0.00	-0.01	-1.19	0.39	0.02

2-1/2" x 10' Sch. 40 - Elevation 160 - From Face C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.00	0.00	-0.01	-0.98	0.00	0.00
30	0.01	0.00	0.00	-0.01	-0.81	-0.62	0.01
60	0.00	0.01	0.01	-0.00	-0.36	-1.07	0.02
90	0.00	0.01	0.01	0.00	0.25	-1.23	0.02

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	49 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

2-1/2" x 10' Sch. 40 - Elevation 160 - From Face C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
120	0.00	0.01	0.01	0.00	0.87	-1.07	0.02
150	0.01	0.00	0.00	0.01	1.32	-0.62	0.01
180	0.01	0.00	0.00	0.01	1.48	0.00	0.00
210	0.01	0.00	-0.00	0.01	1.32	0.62	-0.01
240	0.00	0.01	-0.01	0.00	0.87	1.07	-0.02
270	0.00	0.01	-0.01	0.00	0.25	1.23	-0.02
300	0.00	0.01	-0.01	-0.00	-0.36	1.07	-0.02
330	0.01	0.00	-0.00	-0.01	-0.81	0.62	-0.01

Discrete Appurtenance Totals - With Ice

Wind Azimuth °	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	-0.00	-1.98	-460.70	-0.30	0.01
30	0.99	-1.72	-398.97	-230.67	0.02
60	1.72	-0.99	-230.32	-399.31	0.02
90	1.98	0.00	0.05	-461.04	0.01
120	1.72	0.99	230.43	-399.32	0.00
150	0.99	1.72	399.08	-230.68	-0.00
180	0.00	1.98	460.80	-0.31	-0.01
210	-0.99	1.72	399.07	230.06	-0.02
240	-1.72	0.99	230.42	398.70	-0.02
270	-1.98	-0.00	0.05	460.43	-0.01
300	-1.72	-0.99	-230.33	398.71	-0.00
330	-0.99	-1.72	-398.98	230.07	0.00

Discrete Appurtenance Pressures - Service $G_H = 0.850$

Description	Aiming Azimuth °	Weight K	Offset _x ft	Offset _z ft	z ft	K_z	q_z psf	$C_A A_C$ Front ft ²	$C_A A_C$ Side ft ²
5/8" x 10' Adjustable lightning rod	240.0000	0.02	-2.00	1.15	252.50	1.288	10	0.63	0.63
Beacon	120.0000	0.07	2.00	1.15	250.00	1.284	10	2.40	2.40
OB light	240.0000	0.03	-6.75	3.90	125.00	1.053	8	0.50	0.50
OB light	120.0000	0.03	6.75	3.90	125.00	1.053	8	0.50	0.50
OB light	0.0000	0.03	0.00	-7.79	125.00	1.053	8	0.50	0.50
40,000 sq.in.(277.8 sq.ft. EPA)	0.0000	4.00	0.00	0.00	245.00	1.277	10	277.80	277.70
30,000 sq.in.(208.3 sq.ft. EPA)	0.0000	3.00	0.00	0.00	233.00	1.258	10	208.30	208.30
30,000 sq.in.(208.3 sq.ft. EPA)	0.0000	3.00	0.00	0.00	221.00	1.240	9	208.30	208.30
SP1 R5 (Includes 4.5"x72" Pipe)	240.0000	0.14	-4.18	2.42	185.00	1.178	9	2.85	3.15
SP1 R5 (Includes 4.5"x72" Pipe)	120.0000	0.14	4.83	2.79	172.00	1.154	9	2.85	3.15
SP1 R5 (Includes 4.5"x72" Pipe)	0.0000	0.14	0.00	-6.27	160.00	1.130	9	2.85	3.15
2-1/2" x 8' Sch. 40	300.0000	0.05	-1.87	-1.08	185.00	1.178	9	2.30	2.30

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	50 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Description	Aiming Azimuth °	Weight K	Offset _x ft	Offset _z ft	z ft	K _z	q _z psf	C _A A _C Front ft ²	C _A A _C Side ft ²
2-1/2" x 8' Sch. 40	60.0000	0.05	1.87	-1.08	185.00	1.178	9	2.30	2.30
2-1/2" x 9' Sch. 40	300.0000	0.05	-2.20	-1.27	172.00	1.154	9	2.59	2.59
2-1/2" x 9' Sch. 40	180.0000	0.05	0.00	2.54	172.00	1.154	9	2.59	2.59
2-1/2" x 10' Sch. 40	60.0000	0.06	2.50	-1.44	160.00	1.130	9	2.88	2.88
2-1/2" x 10' Sch. 40	180.0000	0.06	0.00	2.89	160.00	1.130	9	2.88	2.88
Sum Weight:		10.91							

Discrete Appurtenance Vectors - Service

5/8" x 10' Adjustable lightning rod - Elevation 252.5 - From Leg C								
Wind Azimuth °	F _a K	F _s K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft	
0	0.00	0.00	0.00	-0.01	-1.29	0.05	-0.01	-0.01
30	0.00	0.00	0.00	-0.00	-1.11	-0.61	-0.01	-0.01
60	0.01	0.00	0.00	-0.00	-0.63	-1.09	0.00	0.00
90	0.00	0.00	0.01	0.00	0.03	-1.27	0.01	0.01
120	0.00	0.00	0.00	0.00	0.68	-1.09	0.01	0.01
150	0.00	0.01	0.00	0.00	1.16	-0.61	0.01	0.01
180	0.00	0.00	0.00	0.01	1.34	0.05	0.01	0.01
210	0.00	0.00	-0.00	0.00	1.16	0.70	0.01	0.01
240	0.01	0.00	-0.00	0.00	0.68	1.18	0.00	0.00
270	0.00	0.00	-0.01	0.00	0.03	1.36	-0.01	-0.01
300	0.00	0.00	-0.00	-0.00	-0.63	1.18	-0.01	-0.01
330	0.00	0.01	-0.00	-0.00	-1.11	0.70	-0.01	-0.01

Beacon - Elevation 250 - From Leg B							
Wind Azimuth °	F _a K	F _s K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.01	0.02	0.00	-0.02	-4.89	-0.15	0.04
30	0.00	0.02	0.01	-0.02	-4.23	-2.64	0.05
60	0.01	0.02	0.02	-0.01	-2.41	-4.46	0.04
90	0.02	0.01	0.02	0.00	0.08	-5.13	0.02
120	0.02	0.00	0.02	0.01	2.57	-4.46	0.00
150	0.02	0.01	0.01	0.02	4.40	-2.64	-0.02
180	0.01	0.02	0.00	0.02	5.06	-0.15	-0.04
210	0.00	0.02	-0.01	0.02	4.40	2.34	-0.05
240	0.01	0.02	-0.02	0.01	2.57	4.17	-0.04
270	0.02	0.01	-0.02	0.00	0.08	4.83	-0.02
300	0.02	0.00	-0.02	-0.01	-2.41	4.17	0.00
330	0.02	0.01	-0.01	-0.02	-4.23	2.34	0.02

OB light - Elevation 125 - From Leg C							
Wind Azimuth °	F _a K	F _s K	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.00	0.00	0.00	-0.00	-0.31	0.20	-0.02
30	0.00	0.00	0.00	-0.00	-0.25	-0.01	-0.01
60	0.00	0.00	0.00	-0.00	-0.10	-0.17	0.00
90	0.00	0.00	0.00	0.00	0.12	-0.22	0.01
120	0.00	0.00	0.00	0.00	0.33	-0.17	0.02
150	0.00	0.00	0.00	0.00	0.49	-0.01	0.03

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	51 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

OB light - Elevation 125 - From Leg C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
180	0.00	0.00	0.00	0.00	0.54	0.20	0.02
210	0.00	0.00	-0.00	0.00	0.49	0.42	0.01
240	0.00	0.00	-0.00	0.00	0.33	0.57	0.00
270	0.00	0.00	-0.00	0.00	0.12	0.63	-0.01
300	0.00	0.00	-0.00	-0.00	-0.10	0.57	-0.02
330	0.00	0.00	-0.00	-0.00	-0.25	0.42	-0.03

OB light - Elevation 125 - From Leg B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.00	0.00	-0.00	-0.31	-0.20	0.02
30	0.00	0.00	0.00	-0.00	-0.25	-0.42	0.03
60	0.00	0.00	0.00	-0.00	-0.10	-0.57	0.02
90	0.00	0.00	0.00	0.00	0.12	-0.63	0.01
120	0.00	0.00	0.00	0.00	0.33	-0.57	0.00
150	0.00	0.00	0.00	0.00	0.49	-0.42	-0.01
180	0.00	0.00	0.00	0.00	0.54	-0.20	-0.02
210	0.00	0.00	-0.00	0.00	0.49	0.01	-0.03
240	0.00	0.00	-0.00	0.00	0.33	0.17	-0.02
270	0.00	0.00	-0.00	0.00	0.12	0.22	-0.01
300	0.00	0.00	-0.00	-0.00	-0.10	0.17	0.00
330	0.00	0.00	-0.00	-0.00	-0.25	0.01	0.01

OB light - Elevation 125 - From Leg A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.00	0.00	0.00	-0.00	-0.66	0.00	0.00
30	0.00	0.00	0.00	-0.00	-0.60	-0.21	-0.01
60	0.00	0.00	0.00	-0.00	-0.45	-0.37	-0.02
90	0.00	0.00	0.00	0.00	-0.23	-0.43	-0.03
120	0.00	0.00	0.00	0.00	-0.02	-0.37	-0.02
150	0.00	0.00	0.00	0.00	0.13	-0.21	-0.01
180	0.00	0.00	0.00	0.00	0.19	0.00	0.00
210	0.00	0.00	-0.00	0.00	0.13	0.21	0.01
240	0.00	0.00	-0.00	0.00	-0.02	0.37	0.02
270	0.00	0.00	-0.00	0.00	-0.23	0.43	0.03
300	0.00	0.00	-0.00	-0.00	-0.45	0.37	0.02
330	0.00	0.00	-0.00	-0.00	-0.60	0.21	0.01

40,000 sq.in.(277.8 sq.ft. EPA) - Elevation 245 - None C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	2.29	0.00	0.00	-2.29	-561.57	0.00	0.00
30	2.29	0.00	1.15	-1.99	-486.33	-280.78	0.00
60	2.29	0.00	1.99	-1.15	-280.78	-486.33	0.00
90	2.29	0.00	2.29	0.00	0.00	-561.57	0.00
120	2.29	0.00	1.99	1.15	280.78	-486.33	0.00
150	2.29	0.00	1.15	1.99	486.33	-280.78	0.00
180	2.29	0.00	0.00	2.29	561.57	0.00	0.00
210	2.29	0.00	-1.15	1.99	486.33	280.78	0.00
240	2.29	0.00	-1.99	1.15	280.78	486.33	0.00

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	52 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

40,000 sq.in.(277.8 sq.ft. EPA) - Elevation 245 - None C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
270	2.29	0.00	-2.29	0.00	0.00	561.57	0.00
300	2.29	0.00	-1.99	-1.15	-280.78	486.33	0.00
330	2.29	0.00	-1.15	-1.99	-486.33	280.78	0.00

30,000 sq.in.(208.3 sq.ft. EPA) - Elevation 233 - None B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	1.69	0.00	0.00	-1.69	-394.75	0.00	0.00
30	1.69	0.00	0.85	-1.47	-341.86	-197.37	0.00
60	1.69	0.00	1.47	-0.85	-197.37	-341.86	0.00
90	1.69	0.00	1.69	0.00	0.00	-394.75	0.00
120	1.69	0.00	1.47	0.85	197.37	-341.86	0.00
150	1.69	0.00	0.85	1.47	341.86	-197.37	0.00
180	1.69	0.00	0.00	1.69	394.75	0.00	0.00
210	1.69	0.00	-0.85	1.47	341.86	197.37	0.00
240	1.69	0.00	-1.47	0.85	197.37	341.86	0.00
270	1.69	0.00	-1.69	0.00	0.00	394.75	0.00
300	1.69	0.00	-1.47	-0.85	-197.37	341.86	0.00
330	1.69	0.00	-0.85	-1.47	-341.86	197.37	0.00

30,000 sq.in.(208.3 sq.ft. EPA) - Elevation 221 - None A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	1.67	0.00	0.00	-1.67	-368.80	0.00	0.00
30	1.67	0.00	0.83	-1.45	-319.39	-184.40	0.00
60	1.67	0.00	1.45	-0.83	-184.40	-319.39	0.00
90	1.67	0.00	1.67	0.00	0.00	-368.80	0.00
120	1.67	0.00	1.45	0.83	184.40	-319.39	0.00
150	1.67	0.00	0.83	1.45	319.39	-184.40	0.00
180	1.67	0.00	0.00	1.67	368.80	0.00	0.00
210	1.67	0.00	-0.83	1.45	319.39	184.40	0.00
240	1.67	0.00	-1.45	0.83	184.40	319.39	0.00
270	1.67	0.00	-1.67	0.00	0.00	368.80	0.00
300	1.67	0.00	-1.45	-0.83	-184.40	319.39	0.00
330	1.67	0.00	-0.83	-1.45	-319.39	184.40	0.00

SP1 R5 (Includes 4.5"x72" Pipe) - Elevation 185 - From Leg C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.02	-0.00	-0.02	-4.00	0.76	-0.10
30	0.02	0.01	0.01	-0.02	-3.33	-1.33	-0.06
60	0.02	0.00	0.02	-0.01	-1.68	-2.90	0.00
90	0.02	0.01	0.02	0.00	0.51	-3.55	0.06
120	0.01	0.02	0.02	0.01	2.66	-3.09	0.10
150	0.00	0.02	0.01	0.02	4.17	-1.65	0.12
180	0.01	0.02	0.00	0.02	4.66	0.39	0.10
210	0.02	0.01	-0.01	0.02	3.99	2.47	0.06
240	0.02	0.00	-0.02	0.01	2.34	4.05	0.00
270	0.02	0.01	-0.02	-0.00	0.15	4.69	-0.06
300	0.01	0.02	-0.02	-0.01	-1.99	4.23	-0.10
330	0.00	0.02	-0.01	-0.02	-3.51	2.79	-0.12

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	53 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

SP1 R5 (Includes 4.5"x72" Pipe) - Elevation 172 - From Leg B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.02	0.00	-0.02	-3.56	-0.83	0.11
30	0.00	0.02	0.01	-0.02	-3.12	-2.68	0.13
60	0.01	0.02	0.02	-0.01	-1.73	-3.99	0.11
90	0.02	0.01	0.02	-0.00	0.22	-4.41	0.07
120	0.02	0.00	0.02	0.01	2.21	-3.83	0.00
150	0.02	0.01	0.01	0.02	3.71	-2.39	-0.07
180	0.01	0.02	-0.00	0.02	4.33	-0.50	-0.11
210	0.00	0.02	-0.01	0.02	3.88	1.36	-0.13
240	0.01	0.02	-0.02	0.01	2.50	2.67	-0.11
270	0.02	0.01	-0.02	0.00	0.55	3.09	-0.07
300	0.02	0.00	-0.02	-0.01	-1.45	2.50	0.00
330	0.02	0.01	-0.01	-0.02	-2.95	1.07	0.07

SP1 R5 (Includes 4.5"x72" Pipe) - Elevation 160 - From Leg A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.02	0.00	0.00	-0.02	-4.19	0.00	0.00
30	0.02	0.01	0.01	-0.02	-3.74	-1.84	-0.07
60	0.01	0.02	0.02	-0.01	-2.53	-3.19	-0.13
90	0.00	0.02	0.02	0.00	-0.86	-3.68	-0.14
120	0.01	0.02	0.02	0.01	0.81	-3.19	-0.13
150	0.02	0.01	0.01	0.02	2.03	-1.84	-0.07
180	0.02	0.00	0.00	0.02	2.47	0.00	0.00
210	0.02	0.01	-0.01	0.02	2.03	1.84	0.07
240	0.01	0.02	-0.02	0.01	0.81	3.19	0.13
270	0.00	0.02	-0.02	0.00	-0.86	3.68	0.14
300	0.01	0.02	-0.02	-0.01	-2.53	3.19	0.13
330	0.02	0.01	-0.01	-0.02	-3.74	1.84	0.07

2-1/2" x 8' Sch. 40 - Elevation 185 - From Face A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.02	0.00	-0.02	-3.29	0.09	-0.03
30	0.00	0.02	0.01	-0.02	-2.86	-1.53	-0.04
60	0.01	0.02	0.02	-0.01	-1.67	-2.72	-0.03
90	0.02	0.01	0.02	0.00	-0.05	-3.15	-0.02
120	0.02	0.00	0.02	0.01	1.57	-2.72	0.00
150	0.02	0.01	0.01	0.02	2.76	-1.53	0.02
180	0.01	0.02	0.00	0.02	3.19	0.09	0.03
210	0.00	0.02	-0.01	0.02	2.76	1.71	0.04
240	0.01	0.02	-0.02	0.01	1.57	2.89	0.03
270	0.02	0.01	-0.02	0.00	-0.05	3.33	0.02
300	0.02	0.00	-0.02	-0.01	-1.67	2.89	0.00
330	0.02	0.01	-0.01	-0.02	-2.86	1.71	-0.02

2-1/2" x 8' Sch. 40 - Elevation 185 - From Face B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.02	0.00	-0.02	-3.29	-0.09	0.03

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	54 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

2-1/2" x 8' Sch. 40 - Elevation 185 - From Face B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
30	0.02	0.01	0.01	-0.02	-2.86	-1.71	0.02
60	0.02	0.00	0.02	-0.01	-1.67	-2.89	0.00
90	0.02	0.01	0.02	0.00	-0.05	-3.33	-0.02
120	0.01	0.02	0.02	0.01	1.57	-2.89	-0.03
150	0.00	0.02	0.01	0.02	2.76	-1.71	-0.04
180	0.01	0.02	0.00	0.02	3.19	-0.09	-0.03
210	0.02	0.01	-0.01	0.02	2.76	1.53	-0.02
240	0.02	0.00	-0.02	0.01	1.57	2.72	0.00
270	0.02	0.01	-0.02	0.00	-0.05	3.15	0.02
300	0.01	0.02	-0.02	-0.01	-1.67	2.72	0.03
330	0.00	0.02	-0.01	-0.02	-2.86	1.53	0.04

2-1/2" x 9' Sch. 40 - Elevation 172 - From Face A							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.02	0.00	-0.02	-3.39	0.11	-0.04
30	0.00	0.02	0.01	-0.02	-2.94	-1.54	-0.05
60	0.01	0.02	0.02	-0.01	-1.73	-2.76	-0.04
90	0.02	0.01	0.02	0.00	-0.07	-3.20	-0.02
120	0.02	0.00	0.02	0.01	1.59	-2.76	0.00
150	0.02	0.01	0.01	0.02	2.81	-1.54	0.02
180	0.01	0.02	0.00	0.02	3.25	0.11	0.04
210	0.00	0.02	-0.01	0.02	2.81	1.77	0.05
240	0.01	0.02	-0.02	0.01	1.59	2.99	0.04
270	0.02	0.01	-0.02	0.00	-0.07	3.43	0.02
300	0.02	0.00	-0.02	-0.01	-1.73	2.99	0.00
330	0.02	0.01	-0.01	-0.02	-2.94	1.77	-0.02

2-1/2" x 9' Sch. 40 - Elevation 172 - From Face C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.02	0.00	0.00	-0.02	-3.19	0.00	0.00
30	0.02	0.01	0.01	-0.02	-2.74	-1.66	0.02
60	0.01	0.02	0.02	-0.01	-1.53	-2.87	0.04
90	0.00	0.02	0.02	0.00	0.13	-3.32	0.05
120	0.01	0.02	0.02	0.01	1.79	-2.87	0.04
150	0.02	0.01	0.01	0.02	3.01	-1.66	0.02
180	0.02	0.00	0.00	0.02	3.45	0.00	0.00
210	0.02	0.01	-0.01	0.02	3.01	1.66	-0.02
240	0.01	0.02	-0.02	0.01	1.79	2.87	-0.04
270	0.00	0.02	-0.02	0.00	0.13	3.32	-0.05
300	0.01	0.02	-0.02	-0.01	-1.53	2.87	-0.04
330	0.02	0.01	-0.01	-0.02	-2.74	1.66	-0.02

2-1/2" x 10' Sch. 40 - Elevation 160 - From Face B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.01	0.02	0.00	-0.02	-3.44	-0.14	0.05
30	0.02	0.01	0.01	-0.02	-2.99	-1.83	0.03
60	0.02	0.00	0.02	-0.01	-1.76	-3.06	0.00
90	0.02	0.01	0.02	0.00	-0.08	-3.51	-0.03

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	55 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

2-1/2" x 10' Sch. 40 - Elevation 160 - From Face B							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
120	0.01	0.02	0.02	0.01	1.60	-3.06	-0.05
150	0.00	0.02	0.01	0.02	2.83	-1.83	-0.06
180	0.01	0.02	0.00	0.02	3.28	-0.14	-0.05
210	0.02	0.01	-0.01	0.02	2.83	1.54	-0.03
240	0.02	0.00	-0.02	0.01	1.60	2.77	0.00
270	0.02	0.01	-0.02	0.00	-0.08	3.22	0.03
300	0.01	0.02	-0.02	-0.01	-1.76	2.77	0.05
330	0.00	0.02	-0.01	-0.02	-2.99	1.54	0.06

2-1/2" x 10' Sch. 40 - Elevation 160 - From Face C							
Wind Azimuth °	F_a K	F_s K	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	0.02	0.00	0.00	-0.02	-3.19	0.00	0.00
30	0.02	0.01	0.01	-0.02	-2.74	-1.68	0.03
60	0.01	0.02	0.02	-0.01	-1.51	-2.91	0.05
90	0.00	0.02	0.02	0.00	0.17	-3.36	0.06
120	0.01	0.02	0.02	0.01	1.85	-2.91	0.05
150	0.02	0.01	0.01	0.02	3.08	-1.68	0.03
180	0.02	0.00	0.00	0.02	3.53	0.00	0.00
210	0.02	0.01	-0.01	0.02	3.08	1.68	-0.03
240	0.01	0.02	-0.02	0.01	1.85	2.91	-0.05
270	0.00	0.02	-0.02	0.00	0.17	3.36	-0.06
300	0.01	0.02	-0.02	-0.01	-1.51	2.91	-0.05
330	0.02	0.01	-0.01	-0.02	-2.74	1.68	-0.03

Discrete Appurtenance Totals - Service

Wind Azimuth °	V_x K	V_z K	OTM_x kip-ft	OTM_z kip-ft	Torque kip-ft
0	-0.00	-5.87	-1364.12	-0.20	0.05
30	2.94	-5.09	-1181.35	-682.24	0.06
60	5.09	-2.94	-682.04	-1181.54	0.05
90	5.87	0.00	0.03	-1364.30	0.03
120	5.09	2.94	682.09	-1181.55	-0.00
150	2.94	5.09	1181.39	-682.27	-0.03
180	0.00	5.87	1364.14	-0.24	-0.05
210	-2.94	5.09	1181.38	681.80	-0.06
240	-5.09	2.94	682.06	1181.10	-0.05
270	-5.87	-0.00	-0.00	1363.86	-0.03
300	-5.09	-2.94	-682.06	1181.11	0.00
330	-2.94	-5.09	-1181.36	681.83	0.03

Dish Pressures - No Ice

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	Offset _x ft	Offset _z ft	K_z	A_A ft ²	q_z psf
185.00	HP10-59	240.0000	0.58	-4.62	2.67	1.178	92.89	28

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page 56 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by JS

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	Offset _x ft	Offset _z ft	K _z	A _A ft ²	q _z psf
172.00	HP10-59	120.0000	0.58	5.27	3.04	1.154	92.89	27
160.00	6' HP	0.0000	0.30	0.00	-6.77	1.130	28.27	27
		Sum	1.46					
		Weight:						

Dish Vectors - No Ice

HP10-59 - Elevation 185 - From Leg C											
Wind Azimuth °	C _A	C _S	C _M	F _A	F _S	F _M	V _x	V _z	OTM _x	OTM _z	Torque
				K	K	kip-ft	K	K	kip-ft	kip-ft	kip-ft
0	0.002420	-0.000940	0.000022	2.09	-0.81	0.21	1.40	-1.75	-321.36	-256.69	-4.11
30	0.003100	-0.000600	0.000133	2.67	-0.52	1.25	2.06	-1.78	-328.63	-377.76	-1.51
60	0.003230	0.000000	0.000000	2.79	0.00	0.00	2.41	-1.39	-256.10	-443.59	0.00
90	0.003100	0.000600	-0.000133	2.67	0.52	-1.25	2.57	-0.89	-162.84	-473.49	1.51
120	0.002420	0.000940	-0.000022	2.09	0.81	-0.21	2.21	-0.34	-61.62	-406.66	4.11
150	-0.000280	0.001600	0.000251	-0.24	1.38	2.35	0.48	1.32	244.94	-86.27	9.71
180	-0.001820	0.001120	0.000266	-1.57	0.97	2.49	-0.88	1.62	301.46	164.79	7.64
210	-0.002450	0.000450	0.000158	-2.11	0.39	1.48	-1.64	1.39	259.15	305.28	3.55
240	-0.002600	0.000000	0.000000	-2.24	0.00	0.00	-1.94	1.12	208.94	361.90	0.00
270	-0.002450	-0.000450	-0.000158	-2.11	-0.39	-1.48	-2.02	0.72	134.80	377.07	-3.55
300	-0.001820	-0.001120	-0.000266	-1.57	-0.97	-2.49	-1.84	-0.05	-8.02	343.47	-7.64
330	-0.000280	-0.001600	-0.000251	-0.24	-1.38	-2.35	-0.90	-1.07	-197.18	168.99	-9.71

HP10-59 - Elevation 172 - From Leg B											
Wind Azimuth °	C _A	C _S	C _M	F _A	F _S	F _M	V _x	V _z	OTM _x	OTM _z	Torque
				K	K	kip-ft	K	K	kip-ft	kip-ft	kip-ft
0	0.002420	0.000940	-0.000022	2.04	0.79	-0.20	-1.37	-1.71	-292.27	233.12	4.63
30	-0.000280	0.001600	0.000251	-0.24	1.35	2.31	0.88	-1.05	-179.19	-154.50	10.52
60	-0.001820	0.001120	0.000266	-1.54	0.95	2.44	1.80	-0.05	-6.95	-313.37	8.20
90	-0.002450	0.000450	0.000158	-2.07	0.38	1.45	1.98	0.71	123.11	-343.97	3.76
120	-0.002600	0.000000	0.000000	-2.20	0.00	0.00	1.90	1.10	190.61	-330.15	0.00
150	-0.002450	-0.000450	-0.000158	-2.07	-0.38	-1.45	1.60	1.36	236.33	-278.60	-3.76
180	-0.001820	-0.001120	-0.000266	-1.54	-0.95	-2.44	0.86	1.59	274.86	-150.67	-8.20
210	-0.000280	-0.001600	-0.000251	-0.24	-1.35	-2.31	-0.47	1.29	223.39	77.94	-10.52
240	0.002420	-0.000940	0.000022	2.04	-0.79	0.20	-2.17	-0.33	-55.75	369.67	-4.63
270	0.003100	-0.000600	0.000133	2.62	-0.51	1.22	-2.52	-0.87	-147.92	430.53	-1.86
300	0.003230	0.000000	0.000000	2.73	0.00	0.00	-2.36	-1.36	-232.85	403.30	0.00
330	0.003100	0.000600	-0.000133	2.62	0.51	-1.22	-2.01	-1.75	-298.89	343.37	1.86

6' HP - Elevation 160 - From Leg A											
Wind Azimuth °	C _A	C _S	C _M	F _A	F _S	F _M	V _x	V _z	OTM _x	OTM _z	Torque
				K	K	kip-ft	K	K	kip-ft	kip-ft	kip-ft
0	-0.002600	0.000000	0.000000	-0.65	0.00	0.00	0.00	-0.65	-106.77	0.00	0.00
30	-0.002450	-0.000450	-0.000158	-0.62	-0.11	-0.24	0.11	-0.62	-100.73	-18.13	-1.01
60	-0.001820	-0.001120	-0.000266	-0.46	-0.28	-0.40	0.28	-0.46	-75.35	-45.12	-2.31
90	-0.000280	-0.001600	-0.000251	-0.07	-0.40	-0.38	0.40	-0.07	-13.31	-64.46	-3.11
120	0.002420	-0.000940	0.000022	0.61	-0.24	0.03	0.24	0.61	95.46	-37.87	-1.57
150	0.003100	-0.000600	0.000133	0.78	-0.15	0.20	0.15	0.78	122.85	-24.17	-0.82
180	0.003230	0.000000	0.000000	0.81	0.00	0.00	0.00	0.81	128.09	0.00	0.00
210	0.003100	0.000600	-0.000133	0.78	0.15	-0.20	-0.15	0.78	122.85	24.17	0.82
240	0.002420	0.000940	-0.000022	0.61	0.24	-0.03	-0.24	0.61	95.46	37.87	1.57
270	-0.000280	0.001600	0.000251	-0.07	0.40	0.38	-0.40	-0.07	-13.31	64.46	3.11
300	-0.001820	0.001120	0.000266	-0.46	0.28	0.40	-0.28	-0.46	-75.35	45.12	2.31
330	-0.002450	0.000450	0.000158	-0.62	0.11	0.24	-0.11	-0.62	-100.73	18.13	1.01

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	57 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Dish Totals - No Ice

Wind Azimuth °	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.03	-4.11	-720.41	-23.57	0.51
30	3.05	-3.45	-608.55	-550.39	8.01
60	4.50	-1.90	-338.40	-802.08	5.88
90	4.96	-0.25	-53.04	-881.91	2.16
120	4.35	1.37	224.45	-774.68	2.54
150	2.23	3.46	604.12	-389.03	5.12
180	-0.02	4.02	704.42	14.12	-0.55
210	-2.26	3.46	605.39	407.39	-6.15
240	-4.35	1.40	248.65	769.44	-3.06
270	-4.95	-0.22	-26.43	872.05	-2.30
300	-4.49	-1.87	-316.22	791.89	-5.33
330	-3.03	-3.44	-596.80	530.49	-6.84

Dish Pressures - With Ice

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	Offset _x ft	Offset _z ft	K _z	A _A ft ²	q _z psf	t _z in
185.00	HP10-59	240.0000	1.40	-4.62	2.67	1.178	94.58	2	0.5941
172.00	HP10-59	120.0000	1.40	5.27	3.04	1.154	94.57	2	0.5898
160.00	6' HP	0.0000	0.56	0.00	-6.77	1.130	29.21	2	0.5855
		Sum	3.35						
		Weight:							

Dish Vectors - With Ice

HP10-59 - Elevation 185 - From Leg C											
Wind Azimuth °	C _A	C _S	C _M	F _A	F _S	F _M	V _x	V _z	OTM _x	OTM _z	Torque
				K	K	kip-ft	K	K	kip-ft	kip-ft	kip-ft
0	0.002420	-0.000940	0.000022	0.17	-0.07	0.02	0.11	-0.14	-22.60	-14.68	-0.34
30	0.003100	-0.000600	0.000133	0.22	-0.04	0.10	0.17	-0.15	-23.19	-24.56	-0.12
60	0.003230	0.000000	0.000000	0.23	0.00	0.00	0.20	-0.11	-17.28	-29.93	0.00
90	0.003100	0.000600	-0.000133	0.22	0.04	-0.10	0.21	-0.07	-9.67	-32.36	0.12
120	0.002420	0.000940	-0.000022	0.17	0.07	-0.02	0.18	-0.03	-1.42	-26.91	0.34
150	-0.000280	0.001600	0.000251	-0.02	0.11	0.19	0.04	0.11	23.59	-0.78	0.79
180	-0.001820	0.001120	0.000266	-0.13	0.08	0.20	-0.07	0.13	28.20	19.69	0.62
210	-0.002450	0.000450	0.000158	-0.17	0.03	0.12	-0.13	0.11	24.74	31.15	0.29
240	-0.002600	0.000000	0.000000	-0.18	0.00	0.00	-0.16	0.09	20.65	35.77	0.00
270	-0.002450	-0.000450	-0.000158	-0.17	-0.03	-0.12	-0.17	0.06	14.60	37.00	-0.29
300	-0.001820	-0.001120	-0.000266	-0.13	-0.08	-0.20	-0.15	-0.00	2.96	34.26	-0.62
330	-0.000280	-0.001600	-0.000251	-0.02	-0.11	-0.19	-0.07	-0.09	-12.47	20.03	-0.79

HP10-59 - Elevation 172 - From Leg B											
Wind Azimuth °	C _A	C _S	C _M	F _A	F _S	F _M	V _x	V _z	OTM _x	OTM _z	Torque
				K	K	kip-ft	K	K	kip-ft	kip-ft	kip-ft
0	0.002420	0.000940	-0.000022	0.17	0.06	-0.02	-0.11	-0.14	-19.73	11.91	0.38
30	-0.000280	0.001600	0.000251	-0.02	0.11	0.19	0.07	-0.09	-10.51	-19.70	0.86
60	-0.001820	0.001120	0.000266	-0.13	0.08	0.20	0.15	-0.00	3.53	-32.65	0.67
90	-0.002450	0.000450	0.000158	-0.17	0.03	0.12	0.16	0.06	14.14	-35.15	0.31
120	-0.002600	0.000000	0.000000	-0.18	0.00	0.00	0.16	0.09	19.64	-34.02	0.00
150	-0.002450	-0.000450	-0.000158	-0.17	-0.03	-0.12	0.13	0.11	23.37	-29.82	-0.31

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page 58 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by JS

HP10-59 - Elevation 172 - From Leg B											
Wind Azimuth °	C _A	C _S	C _M	F _A K	F _S K	F _M kip-ft	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
180	-0.001820	-0.001120	-0.000266	-0.13	-0.08	-0.20	0.07	0.13	26.51	-19.39	-0.67
210	-0.000280	-0.001600	-0.000251	-0.02	-0.11	-0.19	-0.04	0.11	22.32	-0.75	-0.86
240	0.002420	-0.000940	0.000022	0.17	-0.06	0.02	-0.18	-0.03	-0.45	23.04	-0.38
270	0.003100	-0.000600	0.000133	0.21	-0.04	0.10	-0.21	-0.07	-7.96	28.01	-0.15
300	0.003230	0.000000	0.000000	0.22	0.00	0.00	-0.19	-0.11	-14.89	25.79	0.00
330	0.003100	0.000600	-0.000133	0.21	0.04	-0.10	-0.16	-0.14	-20.27	20.90	0.15

6' HP - Elevation 160 - From Leg A											
Wind Azimuth °	C _A	C _S	C _M	F _A K	F _S K	F _M kip-ft	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	-0.002600	0.000000	0.000000	-0.05	0.00	0.00	0.00	-0.05	-12.44	0.00	0.00
30	-0.002450	-0.000450	-0.000158	-0.05	-0.01	-0.02	0.01	-0.05	-11.94	-1.50	-0.08
60	-0.001820	-0.001120	-0.000266	-0.04	-0.02	-0.03	0.02	-0.04	-9.84	-3.73	-0.19
90	-0.000280	-0.001600	-0.000251	-0.01	-0.03	-0.03	0.03	-0.01	-4.71	-5.33	-0.26
120	0.002420	-0.000940	0.000022	0.05	-0.02	0.00	0.02	0.05	4.29	-3.13	-0.13
150	0.003100	-0.000600	0.000133	0.06	-0.01	0.02	0.01	0.06	6.56	-2.00	-0.07
180	0.003230	0.000000	0.000000	0.07	0.00	0.00	0.00	0.07	6.99	0.00	0.00
210	0.003100	0.000600	-0.000133	0.06	0.01	-0.02	-0.01	0.06	6.56	2.00	0.07
240	0.002420	0.000940	-0.000022	0.05	0.02	-0.00	-0.02	0.05	4.29	3.13	0.13
270	-0.000280	0.001600	0.000251	-0.01	0.03	0.03	-0.03	-0.01	-4.71	5.33	0.26
300	-0.001820	0.001120	0.000266	-0.04	0.02	0.03	-0.02	-0.04	-9.84	3.73	0.19
330	-0.002450	0.000450	0.000158	-0.05	0.01	0.02	-0.01	-0.05	-11.94	1.50	0.08

Dish Totals - With Ice

Wind Azimuth °	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.00	-0.34	-54.78	-2.77	0.04
30	0.25	-0.28	-45.65	-45.76	0.65
60	0.37	-0.16	-23.59	-66.31	0.48
90	0.40	-0.02	-0.24	-72.85	0.17
120	0.36	0.11	22.52	-64.07	0.21
150	0.18	0.28	53.51	-32.60	0.42
180	-0.00	0.33	61.70	0.30	-0.04
210	-0.18	0.28	53.62	32.40	-0.50
240	-0.35	0.11	24.49	61.95	-0.25
270	-0.40	-0.02	1.93	70.35	-0.18
300	-0.37	-0.15	-21.78	63.78	-0.43
330	-0.25	-0.28	-44.69	42.43	-0.56

Dish Pressures - Service

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	Offset _x ft	Offset _z ft	K _z	A _A ft ²	q _z psf
185.00	HP10-59	240.0000	0.58	-4.62	2.67	1.178	92.89	9
172.00	HP10-59	120.0000	0.58	5.27	3.04	1.154	92.89	9
160.00	6' HP	0.0000	0.30	0.00	-6.77	1.130	28.27	9
		Sum	1.46					
		Weight:						

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page 59 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by JS

Dish Vectors - Service

HP10-59 - Elevation 185 - From Leg C											
Wind Azimuth °	C _A	C _S	C _M	F _A K	F _S K	F _M kip-ft	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.002420	-0.000940	0.000022	0.67	-0.26	0.07	0.45	-0.56	-101.91	-80.42	-1.32
30	0.003100	-0.000600	0.000133	0.86	-0.17	0.40	0.66	-0.57	-104.24	-119.22	-0.48
60	0.003230	0.000000	0.000000	0.89	0.00	0.00	0.77	-0.45	-81.01	-140.30	0.00
90	0.003100	0.000600	-0.000133	0.86	0.17	-0.40	0.82	-0.28	-51.12	-149.88	0.48
120	0.002420	0.000940	-0.000022	0.67	0.26	-0.07	0.71	-0.11	-18.69	-128.47	1.32
150	-0.000280	0.001600	0.000251	-0.08	0.44	0.75	0.15	0.42	79.53	-25.82	3.11
180	-0.001820	0.001120	0.000266	-0.50	0.31	0.80	-0.28	0.52	97.64	54.62	2.45
210	-0.002450	0.000450	0.000158	-0.68	0.12	0.47	-0.52	0.45	84.08	99.63	1.14
240	-0.002600	0.000000	0.000000	-0.72	0.00	0.00	-0.62	0.36	68.00	117.77	0.00
270	-0.002450	-0.000450	-0.000158	-0.68	-0.12	-0.47	-0.65	0.23	44.24	122.63	-1.14
300	-0.001820	-0.001120	-0.000266	-0.50	-0.31	-0.80	-0.59	-0.02	-1.52	111.87	-2.45
330	-0.000280	-0.001600	-0.000251	-0.08	-0.44	-0.75	-0.29	-0.34	-62.13	55.96	-3.11

HP10-59 - Elevation 172 - From Leg B											
Wind Azimuth °	C _A	C _S	C _M	F _A K	F _S K	F _M kip-ft	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.002420	0.000940	-0.000022	0.65	0.25	-0.06	-0.44	-0.55	-92.44	72.62	1.48
30	-0.000280	0.001600	0.000251	-0.08	0.43	0.74	0.28	-0.34	-56.21	-51.58	3.37
60	-0.001820	0.001120	0.000266	-0.49	0.30	0.78	0.58	-0.02	-1.03	-102.48	2.63
90	-0.002450	0.000450	0.000158	-0.66	0.12	0.46	0.64	0.23	40.64	-112.28	1.21
120	-0.002600	0.000000	0.000000	-0.70	0.00	0.00	0.61	0.35	62.27	-107.86	0.00
150	-0.002450	-0.000450	-0.000158	-0.66	-0.12	-0.46	0.51	0.44	76.92	-91.34	-1.21
180	-0.001820	-0.001120	-0.000266	-0.49	-0.30	-0.78	0.27	0.51	89.26	-50.35	-2.63
210	-0.000280	-0.001600	-0.000251	-0.08	-0.43	-0.74	-0.15	0.41	72.77	22.89	-3.37
240	0.002420	-0.000940	0.000022	0.65	-0.25	0.06	-0.69	-0.11	-16.67	116.37	-1.48
270	0.003100	-0.000600	0.000133	0.84	-0.16	0.39	-0.81	-0.28	-46.19	135.86	-0.60
300	0.003230	0.000000	0.000000	0.87	0.00	0.00	-0.76	-0.44	-73.41	127.14	0.00
330	0.003100	0.000600	-0.000133	0.84	0.16	-0.39	-0.65	-0.56	-94.56	107.94	0.60

6' HP - Elevation 160 - From Leg A											
Wind Azimuth °	C _A	C _S	C _M	F _A K	F _S K	F _M kip-ft	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	-0.002600	0.000000	0.000000	-0.21	0.00	0.00	0.00	-0.21	-35.59	0.00	0.00
30	-0.002450	-0.000450	-0.000158	-0.20	-0.04	-0.08	0.04	-0.20	-33.66	-5.81	-0.32
60	-0.001820	-0.001120	-0.000266	-0.15	-0.09	-0.13	0.09	-0.15	-25.52	-14.46	-0.74
90	-0.000280	-0.001600	-0.000251	-0.02	-0.13	-0.12	0.13	-0.02	-5.65	-20.65	-1.00
120	0.002420	-0.000940	0.000022	0.20	-0.08	0.01	0.08	0.20	29.20	-12.13	-0.50
150	0.003100	-0.000600	0.000133	0.25	-0.05	0.06	0.05	0.25	37.98	-7.74	-0.26
180	0.003230	0.000000	0.000000	0.26	0.00	0.00	0.00	0.26	39.66	0.00	0.00
210	0.003100	0.000600	-0.000133	0.25	0.05	-0.06	-0.05	0.25	37.98	7.74	0.26
240	0.002420	0.000940	-0.000022	0.20	0.08	-0.01	-0.08	0.20	29.20	12.13	0.50
270	-0.000280	0.001600	0.000251	-0.02	0.13	0.12	-0.13	-0.02	-5.65	20.65	1.00
300	-0.001820	0.001120	0.000266	-0.15	0.09	0.13	-0.09	-0.15	-25.52	14.46	0.74
330	-0.002450	0.000450	0.000158	-0.20	0.04	0.08	-0.04	-0.20	-33.66	5.81	0.32

Dish Totals - Service

Wind Azimuth °	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
0	0.01	-1.32	-229.95	-7.81	0.16
30	0.98	-1.11	-194.11	-176.60	2.57

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page 60 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by JS

Wind Azimuth °	V _x K	V _z K	OTM _x kip-ft	OTM _z kip-ft	Torque kip-ft
60	1.44	-0.61	-107.56	-257.24	1.88
90	1.59	-0.08	-16.13	-282.82	0.69
120	1.39	0.44	72.78	-248.46	0.82
150	0.72	1.11	194.43	-124.90	1.64
180	-0.01	1.29	226.56	4.27	-0.18
210	-0.72	1.11	194.84	130.27	-1.97
240	-1.39	0.45	80.53	246.27	-0.98
270	-1.59	-0.07	-7.60	279.15	-0.74
300	-1.44	-0.60	-100.45	253.47	-1.71
330	-0.97	-1.10	-190.35	169.71	-2.19

Force Totals

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M _x kip-ft	Sum of Overturning Moments, M _z kip-ft	Sum of Torques kip-ft
Leg Weight	28.33					
Bracing Weight	10.17					
Total Member Self-Weight	38.50			4.14	27.26	
Total Weight	60.02			4.14	27.26	
Wind 0 deg - No Ice		0.03	-54.55	-8903.76	4.12	-40.24
Wind 30 deg - No Ice		26.65	-44.32	-7341.90	-4411.79	-4.07
Wind 60 deg - No Ice		43.79	-24.58	-4102.20	-7298.39	3.75
Wind 90 deg - No Ice		50.81	-0.25	-50.13	-8425.31	-18.51
Wind 120 deg - No Ice		47.75	26.42	4282.57	-7770.77	-4.96
Wind 150 deg - No Ice		27.21	46.72	7655.21	-4430.64	36.85
Wind 180 deg - No Ice		-0.02	52.86	8713.03	41.71	40.20
Wind 210 deg - No Ice		-25.82	44.27	7329.95	4315.68	5.92
Wind 240 deg - No Ice		-44.90	24.81	4091.64	7448.30	-0.93
Wind 270 deg - No Ice		-50.73	-0.22	-23.62	8453.98	18.37
Wind 300 deg - No Ice		-46.56	-26.17	-4286.77	7701.49	2.17
Wind 330 deg - No Ice		-28.00	-46.70	-7642.16	4627.36	-38.57
Member Ice	17.10					
Total Weight Ice	102.92			-2.51	71.63	
Wind 0 deg - Ice		0.00	-5.90	-965.41	69.74	-3.24
Wind 30 deg - Ice		2.92	-4.91	-811.36	-411.45	0.12
Wind 60 deg - Ice		4.90	-2.77	-461.15	-740.06	1.11
Wind 90 deg - Ice		5.62	-0.02	-6.95	-857.18	-0.99
Wind 120 deg - Ice		5.14	2.87	463.74	-767.40	0.04
Wind 150 deg - Ice		2.94	5.07	825.62	-409.74	3.21
Wind 180 deg - Ice		-0.00	5.77	944.32	72.81	3.24
Wind 210 deg - Ice		-2.85	4.90	803.03	541.45	0.04
Wind 240 deg - Ice		-4.97	2.78	452.61	887.59	-0.88
Wind 270 deg - Ice		-5.60	-0.02	-4.79	996.38	0.98
Wind 300 deg - Ice		-5.06	-2.86	-470.79	902.37	-0.26
Wind 330 deg - Ice		-3.01	-5.06	-830.22	564.59	-3.35
Total Weight	60.02			4.14	27.26	
Wind 0 deg - Service		0.01	-17.48	-2852.79	-8.01	-12.89
Wind 30 deg - Service		8.54	-14.20	-2352.37	-1422.86	-1.30
Wind 60 deg - Service		14.03	-7.88	-1314.37	-2347.73	1.20
Wind 90 deg - Service		16.28	-0.08	-16.10	-2708.79	-5.93
Wind 120 deg - Service		15.30	8.47	1372.10	-2499.07	-1.59
Wind 150 deg - Service		8.72	14.97	2452.68	-1428.90	11.81
Wind 180 deg - Service		-0.01	16.93	2791.61	4.03	12.88
Wind 210 deg - Service		-8.27	14.18	2348.47	1373.41	1.90
Wind 240 deg - Service		-14.39	7.95	1310.92	2377.09	-0.30

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job 540603	Page 61 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Wind 270 deg - Service		-16.25	-0.07	-7.60	2699.31	5.89
Wind 300 deg - Service		-14.92	-8.38	-1373.51	2458.22	0.70
Wind 330 deg - Service		-8.97	-14.96	-2448.57	1473.27	-12.36

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	62 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Comb. No.	Description
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	250 - 240	Leg	Max Tension	15	9.95	-0.00	0.45
			Max. Compression	2	-12.92	-0.01	0.40
			Max. Mx	8	-11.33	0.44	0.01
			Max. My	2	-12.92	0.01	-0.46
			Max. Vy	8	2.75	-0.36	-0.05
		Diagonal	Max. Vx	2	-2.93	-0.01	0.40
			Max Tension	4	3.32	0.00	0.00
			Max. Compression	8	-3.35	0.00	0.00
			Max. Mx	22	-0.65	-0.00	-0.00
			Max. My	8	-2.93	-0.00	0.00
		Horizontal	Max. Vy	35	0.00	-0.00	0.00
			Max. Vx	8	0.00	0.00	0.00
			Max Tension	2	0.85	0.00	0.00
			Max. Compression	15	-0.77	0.00	0.00
			Max. Mx	27	0.13	0.01	0.00
		Top Girt	Max. My	12	-0.66	0.00	0.00
			Max. Vy	27	-0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
			Max Tension	18	0.49	0.00	0.00
			Max. Compression	22	-0.50	0.00	0.00
		Bottom Girt	Max. Mx	26	-0.01	0.01	0.00
			Max. My	24	-0.02	0.00	-0.00
			Max. Vy	26	-0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	14	1.28	0.00	0.00
T2	240 - 220	Leg	Max. Compression	3	-1.19	0.00	0.00
			Max. Mx	26	0.01	0.01	0.00
			Max. My	24	0.03	0.00	-0.00
			Max. Vy	26	-0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Diagonal	Max Tension	15	80.41	0.01	2.31
			Max. Compression	2	-88.90	-0.10	0.47
			Max. Mx	20	-75.56	-2.25	0.08
			Max. My	2	-88.90	-0.01	-2.39
			Max. Vy	10	8.41	-0.40	-0.23
		Horizontal	Max. Vx	2	-9.81	-0.10	0.47
			Max Tension	4	8.03	0.00	0.00
			Max. Compression	4	-7.87	0.00	0.00
			Max. Mx	12	5.27	-0.01	-0.00
			Max. My	12	-5.00	0.00	0.00
		Top Girt	Max. Vy	35	0.01	-0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
			Max Tension	14	1.38	0.00	0.00
			Max. Compression	3	-1.18	0.00	0.00
			Max. Mx	27	0.15	0.01	0.00
		Bottom Girt	Max. My	12	0.22	0.00	0.00
			Max. Vy	27	-0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
			Max Tension	10	1.51	0.00	0.00
			Max. Compression	6	-1.51	0.00	0.00
		Leg	Max. Mx	26	0.00	0.01	0.00

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	63 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T3	220 - 200	Bottom Girt	Max. My	24	-0.05	0.00	-0.00
			Max. Vy	26	0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	14	1.72	0.00	0.00
			Max. Compression	3	-2.44	0.00	0.00
			Max. Mx	26	0.16	0.01	0.00
		Mid Girt	Max. My	24	0.65	0.00	-0.00
			Max. Vy	26	0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	14	1.15	0.00	0.00
			Max. Compression	3	-0.92	0.00	0.00
			Max. Mx	26	0.06	0.01	0.00
		Leg	Max. My	24	0.02	0.00	-0.00
			Max. Vy	26	0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	15	116.63	0.98	0.33
			Max. Compression	2	-123.19	17.88	0.56
			Max. Mx	14	82.76	-20.91	-0.61
		Diagonal	Max. My	24	-7.19	0.01	17.60
			Max. Vy	2	-2.42	20.52	0.51
			Max. Vx	24	-2.71	0.01	17.60
			Max Tension	13	11.07	0.00	0.00
			Max. Compression	2	-10.40	0.00	0.00
			Max. Mx	13	-3.47	-0.15	-0.00
		Top Girt	Max. My	4	-6.50	0.02	0.06
			Max. Vy	12	0.04	0.00	0.00
			Max. Vx	14	0.01	0.00	0.00
			Max Tension	14	0.95	0.00	0.00
			Max. Compression	10	-1.43	0.00	0.00
			Max. Mx	26	0.11	-0.02	0.00
T4	200 - 180	Leg	Max. My	38	0.11	0.00	0.00
			Max. Vy	26	0.02	0.00	0.00
			Max. Vx	38	-0.00	0.00	0.00
			Max Tension	15	157.96	-6.88	0.22
			Max. Compression	2	-170.54	14.15	0.67
			Max. Mx	2	-152.35	16.26	0.74
		Diagonal	Max. My	24	-9.18	0.22	11.70
			Max. Vy	2	-1.69	16.26	0.74
			Max. Vx	24	-1.44	0.22	11.70
			Max Tension	14	6.80	0.09	0.00
			Max. Compression	14	-7.51	0.00	0.00
			Max. Mx	13	-5.17	-0.14	0.01
		Leg	Max. My	13	-6.71	-0.08	-0.03
			Max. Vy	12	0.03	0.00	0.00
			Max. Vx	12	0.01	-0.07	-0.03
			Max Tension	15	192.98	-3.88	0.22
			Max. Compression	2	-208.76	11.49	0.19
T5	180 - 160	Leg	Max. Mx	22	172.60	-12.66	0.53
			Max. My	24	-9.98	0.27	11.17
			Max. Vy	22	1.81	-12.66	0.53
			Max. Vx	4	1.33	0.26	-10.43
			Max Tension	22	7.05	0.00	0.00
			Max. Compression	2	-7.62	0.00	0.00
		Diagonal	Max. Mx	2	4.84	0.10	0.00
			Max. My	12	-4.35	0.02	-0.02
			Max. Vy	2	-0.02	0.10	0.00
			Max. Vx	12	-0.00	0.00	0.00
			Max Tension	23	224.58	-4.40	-0.07
			Max. Compression	2	-245.06	10.37	0.39
T6	160 - 140	Leg	Max. Mx	2	-228.64	11.02	0.31
			Max. My	24	-14.75	0.23	9.00

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	64 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T7	140 - 120	Diagonal	Max. Vy	10	-0.90	11.01	-0.19
			Max. Vx	24	-0.50	0.23	9.00
			Max Tension	2	6.39	0.00	0.00
			Max. Compression	2	-6.69	0.00	0.00
			Max. Mx	2	5.03	0.07	0.00
			Max. My	25	-6.07	-0.04	0.01
		Leg	Max. Vy	37	0.02	0.03	-0.00
			Max. Vx	25	-0.00	-0.04	0.01
			Max Tension	23	252.79	-4.25	0.04
			Max. Compression	2	-276.03	8.27	0.17
			Max. Mx	2	-260.99	9.01	0.22
			Max. My	24	-16.17	0.21	7.76
		Diagonal	Max. Vy	10	-0.53	8.99	-0.18
			Max. Vx	24	-0.24	0.17	6.90
			Max Tension	14	6.06	0.00	0.00
			Max. Compression	2	-6.71	0.00	0.00
			Max. Mx	2	4.61	0.09	0.00
			Max. My	24	-4.38	0.03	0.01
T8	120 - 100	Leg	Max. Vy	37	0.03	0.05	-0.01
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	23	277.38	-4.64	0.06
			Max. Compression	2	-303.61	6.48	0.15
			Max. Mx	2	-290.09	8.00	0.18
			Max. My	24	-20.03	0.02	7.84
		Diagonal	Max. Vy	10	-0.46	7.98	-0.14
			Max. Vx	24	-0.38	0.02	7.84
			Max Tension	2	6.19	0.00	0.00
			Max. Compression	2	-6.59	0.00	0.00
			Max. Mx	2	4.48	0.11	0.00
			Max. My	24	-4.31	0.03	0.01
		Leg	Max. Vy	37	0.04	0.07	-0.01
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	23	300.45	-5.25	0.03
			Max. Compression	2	-329.93	7.28	0.56
			Max. Mx	2	-316.13	7.90	0.04
			Max. My	24	-20.51	-0.08	6.58
T9	100 - 80	Leg	Max. Vy	10	-0.48	7.86	-0.07
			Max. Vx	24	0.46	-0.08	6.58
			Max Tension	2	6.90	0.00	0.00
			Max. Compression	2	-7.37	0.00	0.00
			Max. Mx	22	4.61	0.11	0.01
			Max. My	14	-6.92	0.02	-0.03
		Diagonal	Max. Vy	37	0.04	0.08	0.01
			Max. Vx	14	0.00	0.00	0.00
			Max Tension	23	314.41	-1.68	0.01
			Max. Compression	2	-345.46	9.27	0.62
			Max. Mx	22	311.05	-9.89	0.15
			Max. My	24	-24.63	-0.45	13.24
		Leg	Max. Vy	22	0.60	-9.89	0.15
			Max. Vx	24	-0.77	-0.45	13.24
			Max Tension	15	8.62	0.00	0.00
			Max. Compression	2	-9.81	0.00	0.00
			Max. Mx	22	7.43	-0.27	-0.01
			Max. My	14	-7.66	-0.08	0.08
T10	80 - 60	Diagonal	Max. Vy	37	-0.08	-0.22	-0.04
			Max. Vx	14	-0.01	0.00	0.00
			Max Tension	23	334.98	0.74	0.09
			Max. Compression	2	-370.14	12.77	0.58
			Max. Mx	10	-368.45	12.79	0.08
			Max. My	4	-24.22	-0.88	-9.41
		Leg	Max. Vy	10	-0.88	12.79	0.08
T11	60 - 40	Leg					
		Diagonal					

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	65 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T12	40 - 20	Diagonal	Max. Vx	24	0.61	-0.86	9.36
			Max Tension	2	8.22	0.00	0.00
			Max. Compression	2	-9.42	0.00	0.00
			Max. Mx	2	5.90	-0.28	-0.04
			Max. My	25	-8.00	-0.01	-0.04
			Max. Vy	37	-0.09	-0.25	0.04
		Leg	Max. Vx	38	-0.01	0.00	0.00
			Max Tension	23	353.58	-2.60	-0.04
			Max. Compression	2	-393.75	7.38	0.54
			Max. Mx	22	348.87	-8.30	0.15
			Max. My	24	-29.86	-0.56	14.66
			Max. Vy	14	0.46	-8.24	-0.60
		Diagonal	Max. Vx	24	-1.02	-0.56	14.66
			Max Tension	2	8.55	0.00	0.00
			Max. Compression	15	-8.60	0.00	0.00
			Max. Mx	37	-0.61	-0.30	-0.05
			Max. My	14	-8.51	-0.15	0.08
			Max. Vy	37	-0.10	-0.30	-0.05
T13	20 - 0	Leg	Max. Vx	14	-0.01	0.00	0.00
			Max Tension	23	367.81	-1.83	0.13
			Max. Compression	2	-411.84	5.03	0.34
			Max. Mx	10	-410.14	5.05	0.02
			Max. My	24	-30.67	-0.86	10.26
			Max. Vy	10	-0.34	5.05	0.02
			Max. Vx	24	0.64	-0.86	10.26
		Diagonal	Max Tension	15	9.42	0.00	0.00
			Max. Compression	2	-10.94	0.00	0.00
			Max. Mx	38	1.71	-0.29	-0.04
			Max. My	14	-4.06	-0.22	0.05
			Max. Vy	38	-0.10	-0.29	-0.04
			Max. Vx	27	-0.01	0.00	0.00

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	18	405.90	30.32	-17.48
	Max. H _x	18	405.90	30.32	-17.48
	Max. H _z	7	-357.10	-27.02	15.49
	Min. Vert	7	-357.10	-27.02	15.49
	Min. H _x	7	-357.10	-27.02	15.49
	Min. H _z	18	405.90	30.32	-17.48
Leg B	Max. Vert	10	422.26	-31.96	-18.54
	Max. H _x	23	-376.61	28.66	16.62
	Max. H _z	23	-376.61	28.66	16.62
	Min. Vert	23	-376.61	28.66	16.62
	Min. H _x	10	422.26	-31.96	-18.54
	Min. H _z	10	422.26	-31.96	-18.54
Leg A	Max. Vert	2	423.89	-0.90	36.97
	Max. H _x	21	19.12	1.40	1.26
	Max. H _z	2	423.89	-0.90	36.97
	Min. Vert	15	-372.23	0.88	-32.77
	Min. H _x	9	20.32	-1.44	1.30
	Min. H _z	15	-372.23	0.88	-32.77

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	66 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Tower Mast Reaction Summary

<i>Load Combination</i>	<i>Vertical</i>	<i>Shear_x</i>	<i>Shear_z</i>	<i>Overturning Moment, M_x</i>	<i>Overturning Moment, M_z</i>	<i>Torque</i>
	K	K	K	kip-ft	kip-ft	kip-ft
Dead Only	60.02	0.00	-0.00	4.20	27.25	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	72.02	0.03	-54.54	-9004.07	9.92	-40.67
0.9 Dead+1.0 Wind 0 deg - No Ice	54.02	0.03	-54.54	-8979.28	1.71	-40.57
1.2 Dead+1.0 Wind 30 deg - No Ice	72.02	26.64	-44.32	-7424.89	-4458.05	-4.13
0.9 Dead+1.0 Wind 30 deg - No Ice	54.02	26.64	-44.32	-7404.39	-4453.17	-4.06
1.2 Dead+1.0 Wind 60 deg - No Ice	72.02	43.78	-24.58	-4149.07	-7377.75	3.68
0.9 Dead+1.0 Wind 60 deg - No Ice	54.02	43.78	-24.58	-4137.83	-7363.82	3.70
1.2 Dead+1.0 Wind 90 deg - No Ice	72.02	50.80	-0.25	-51.09	-8516.82	-18.57
0.9 Dead+1.0 Wind 90 deg - No Ice	54.02	50.80	-0.25	-52.15	-8500.05	-18.60
1.2 Dead+1.0 Wind 120 deg - No Ice	72.02	47.75	26.42	4332.16	-7853.32	-4.65
0.9 Dead+1.0 Wind 120 deg - No Ice	54.02	47.75	26.42	4318.34	-7838.90	-4.72
1.2 Dead+1.0 Wind 150 deg - No Ice	72.02	27.21	46.72	7744.41	-4473.91	37.42
0.9 Dead+1.0 Wind 150 deg - No Ice	54.02	27.21	46.72	7720.56	-4469.23	37.33
1.2 Dead+1.0 Wind 180 deg - No Ice	72.02	-0.02	52.85	8814.44	48.22	40.51
0.9 Dead+1.0 Wind 180 deg - No Ice	54.02	-0.02	52.85	8786.85	39.81	40.42
1.2 Dead+1.0 Wind 210 deg - No Ice	72.02	-25.82	44.27	7415.89	4369.83	5.94
0.9 Dead+1.0 Wind 210 deg - No Ice	54.02	-25.82	44.27	7392.80	4348.83	5.88
1.2 Dead+1.0 Wind 240 deg - No Ice	72.02	-44.89	24.81	4139.83	7539.02	-0.82
0.9 Dead+1.0 Wind 240 deg - No Ice	54.02	-44.89	24.81	4126.38	7508.83	-0.84
1.2 Dead+1.0 Wind 270 deg - No Ice	72.02	-50.72	-0.22	-23.99	8556.62	18.50
0.9 Dead+1.0 Wind 270 deg - No Ice	54.02	-50.72	-0.22	-25.20	8523.33	18.52
1.2 Dead+1.0 Wind 300 deg - No Ice	72.02	-46.56	-26.16	-4334.99	7795.31	1.93
0.9 Dead+1.0 Wind 300 deg - No Ice	54.02	-46.56	-26.16	-4323.39	7763.95	2.00
1.2 Dead+1.0 Wind 330 deg - No Ice	72.02	-28.00	-46.70	-7727.29	4686.96	-39.17
0.9 Dead+1.0 Wind 330 deg - No Ice	54.02	-28.00	-46.70	-7706.15	4665.12	-39.07
1.2 Dead+1.0 Ice+1.0 Temp	114.92	0.00	-0.00	-1.43	78.00	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	114.92	0.00	-5.90	-981.70	76.38	-3.34
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	114.92	2.92	-4.91	-824.97	-413.52	0.04
1.2 Dead+1.0 Wind 60 deg+1.0	114.92	4.90	-2.77	-468.42	-748.14	1.07

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	67 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Ice+1.0 Temp						
1.2 Dead+1.0 Wind 90 deg+1.0	114.92	5.62	-0.02	-5.92	-867.38	-0.98
Ice+1.0 Temp						
1.2 Dead+1.0 Wind 120	114.92	5.14	2.87	473.28	-775.81	0.10
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 150	114.92	2.94	5.07	841.72	-411.73	3.31
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 180	114.92	-0.00	5.77	962.63	79.56	3.34
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 210	114.92	-2.85	4.90	818.79	556.70	0.11
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 240	114.92	-4.97	2.78	462.02	909.06	-0.84
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 270	114.92	-5.60	-0.02	-3.68	1019.88	0.97
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300	114.92	-5.06	-2.86	-478.15	924.09	-0.32
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330	114.92	-3.01	-5.06	-844.07	580.16	-3.45
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	60.02	0.01	-17.48	-2877.08	19.97	-13.00
Dead+Wind 30 deg - Service	60.02	8.54	-14.20	-2372.14	-1408.48	-1.37
Dead+Wind 60 deg - Service	60.02	14.03	-7.88	-1324.20	-2342.38	1.18
Dead+Wind 90 deg - Service	60.02	16.28	-0.08	-13.32	-2706.85	-5.91
Dead+Wind 120 deg - Service	60.02	15.30	8.47	1388.16	-2494.77	-1.51
Dead+Wind 150 deg - Service	60.02	8.72	14.97	2479.15	-1414.42	11.91
Dead+Wind 180 deg - Service	60.02	-0.01	16.93	2821.43	32.22	12.97
Dead+Wind 210 deg - Service	60.02	-8.27	14.18	2374.12	1414.76	1.96
Dead+Wind 240 deg - Service	60.02	-14.38	7.95	1326.60	2428.03	-0.27
Dead+Wind 270 deg - Service	60.02	-16.25	-0.07	-4.67	2753.43	5.87
Dead+Wind 300 deg - Service	60.02	-14.92	-8.38	-1383.70	2509.83	0.62
Dead+Wind 330 deg - Service	60.02	-8.97	-14.96	-2469.01	1515.41	-12.47

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-60.02	0.00	-0.00	60.02	0.00	0.000%
2	0.03	-72.02	-54.55	-0.03	72.02	54.54	0.005%
3	0.03	-54.02	-54.55	-0.03	54.02	54.54	0.005%
4	26.65	-72.02	-44.32	-26.64	72.02	44.32	0.005%
5	26.65	-54.02	-44.32	-26.64	54.02	44.32	0.005%
6	43.79	-72.02	-24.58	-43.78	72.02	24.58	0.003%
7	43.79	-54.02	-24.58	-43.78	54.02	24.58	0.005%
8	50.81	-72.02	-0.25	-50.80	72.02	0.25	0.005%
9	50.81	-54.02	-0.25	-50.80	54.02	0.25	0.005%
10	47.75	-72.02	26.42	-47.75	72.02	-26.42	0.005%
11	47.75	-54.02	26.42	-47.75	54.02	-26.42	0.005%
12	27.21	-72.02	46.72	-27.21	72.02	-46.72	0.005%
13	27.21	-54.02	46.72	-27.21	54.02	-46.72	0.005%
14	-0.02	-72.02	52.86	0.02	72.02	-52.85	0.003%
15	-0.02	-54.02	52.86	0.02	54.02	-52.85	0.005%
16	-25.82	-72.02	44.27	25.82	72.02	-44.27	0.005%
17	-25.82	-54.02	44.27	25.82	54.02	-44.27	0.005%
18	-44.90	-72.02	24.81	44.89	72.02	-24.81	0.005%
19	-44.90	-54.02	24.81	44.89	54.02	-24.81	0.005%
20	-50.73	-72.02	-0.22	50.72	72.02	0.22	0.005%
21	-50.73	-54.02	-0.22	50.72	54.02	0.22	0.005%

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	68 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
22	-46.56	-72.02	-26.17	46.56	72.02	26.16	0.003%
23	-46.56	-54.02	-26.17	46.56	54.02	26.16	0.005%
24	-28.00	-72.02	-46.70	28.00	72.02	46.70	0.005%
25	-28.00	-54.02	-46.70	28.00	54.02	46.70	0.005%
26	0.00	-114.92	0.00	-0.00	114.92	0.00	0.000%
27	0.00	-114.92	-5.90	-0.00	114.92	5.90	0.000%
28	2.92	-114.92	-4.91	-2.92	114.92	4.91	0.000%
29	4.90	-114.92	-2.77	-4.90	114.92	2.77	0.000%
30	5.62	-114.92	-0.02	-5.62	114.92	0.02	0.000%
31	5.14	-114.92	2.87	-5.14	114.92	-2.87	0.000%
32	2.94	-114.92	5.07	-2.94	114.92	-5.07	0.000%
33	-0.00	-114.92	5.77	0.00	114.92	-5.77	0.001%
34	-2.85	-114.92	4.90	2.85	114.92	-4.90	0.001%
35	-4.97	-114.92	2.78	4.97	114.92	-2.78	0.001%
36	-5.60	-114.92	-0.02	5.60	114.92	0.02	0.001%
37	-5.06	-114.92	-2.86	5.06	114.92	2.86	0.001%
38	-3.01	-114.92	-5.06	3.01	114.92	5.06	0.001%
39	0.01	-60.02	-17.48	-0.01	60.02	17.48	0.002%
40	8.54	-60.02	-14.20	-8.54	60.02	14.20	0.002%
41	14.03	-60.02	-7.88	-14.03	60.02	7.88	0.002%
42	16.28	-60.02	-0.08	-16.28	60.02	0.08	0.002%
43	15.30	-60.02	8.47	-15.30	60.02	-8.47	0.002%
44	8.72	-60.02	14.97	-8.72	60.02	-14.97	0.002%
45	-0.01	-60.02	16.93	0.01	60.02	-16.93	0.002%
46	-8.27	-60.02	14.18	8.27	60.02	-14.18	0.002%
47	-14.39	-60.02	7.95	14.38	60.02	-7.95	0.002%
48	-16.25	-60.02	-0.07	16.25	60.02	0.07	0.002%
49	-14.92	-60.02	-8.38	14.92	60.02	8.38	0.002%
50	-8.97	-60.02	-14.96	8.97	60.02	14.96	0.002%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	12	0.00000001	0.00011089
2	Yes	17	0.00006621	0.00013797
3	Yes	17	0.00005950	0.00012495
4	Yes	17	0.00007090	0.00014662
5	Yes	17	0.00006386	0.00013310
6	Yes	18	0.00003843	0.00008051
7	Yes	17	0.00006742	0.00013968
8	Yes	17	0.00007083	0.00014636
9	Yes	17	0.00006380	0.00013285
10	Yes	17	0.00006630	0.00013789
11	Yes	17	0.00005958	0.00012487
12	Yes	17	0.00007072	0.00014623
13	Yes	17	0.00006368	0.00013268
14	Yes	18	0.00003839	0.00008058
15	Yes	17	0.00006737	0.00013979
16	Yes	17	0.00007077	0.00014647
17	Yes	17	0.00006374	0.00013294
18	Yes	17	0.00006662	0.00013865
19	Yes	17	0.00005987	0.00012558
20	Yes	17	0.00007076	0.00014622
21	Yes	17	0.00006373	0.00013271
22	Yes	18	0.00003836	0.00008028

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	Page
	540603	69 of 79
	Project U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date 12:05:22 02/11/22
	Client Parallel Infrastructure	Designed by JS

23	Yes	17	0.00006728	0.00013923
24	Yes	17	0.00007078	0.00014624
25	Yes	17	0.00006374	0.00013271
26	Yes	13	0.00000001	0.00013239
27	Yes	17	0.00000001	0.00012021
28	Yes	17	0.00000001	0.00011742
29	Yes	17	0.00000001	0.00011585
30	Yes	17	0.00000001	0.00011471
31	Yes	17	0.00000001	0.00011681
32	Yes	17	0.00000001	0.00012031
33	Yes	17	0.00000001	0.00012324
34	Yes	17	0.00000001	0.00012394
35	Yes	17	0.00000001	0.00012429
36	Yes	17	0.00000001	0.00012454
37	Yes	17	0.00000001	0.00012543
38	Yes	17	0.00000001	0.00012341
39	Yes	17	0.00000001	0.00013194
40	Yes	17	0.00000001	0.00013455
41	Yes	17	0.00000001	0.00013671
42	Yes	17	0.00000001	0.00013432
43	Yes	17	0.00000001	0.00013171
44	Yes	17	0.00000001	0.00013444
45	Yes	17	0.00006690	0.00013697
46	Yes	17	0.00000001	0.00013476
47	Yes	17	0.00000001	0.00013231
48	Yes	17	0.00000001	0.00013440
49	Yes	17	0.00006668	0.00013643
50	Yes	17	0.00000001	0.00013430

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	250 - 240	16.856	50	0.5909	0.0684
T2	240 - 220	15.601	50	0.5866	0.0674
T3	220 - 200	13.180	50	0.5131	0.0599
T4	200 - 180	10.022	50	0.4880	0.0518
T5	180 - 160	7.603	50	0.4308	0.0437
T6	160 - 140	5.675	50	0.3579	0.0303
T7	140 - 120	4.126	50	0.3024	0.0224
T8	120 - 100	2.880	50	0.2456	0.0173
T9	100 - 80	1.901	50	0.1899	0.0125
T10	80 - 60	1.167	50	0.1357	0.0080
T11	60 - 40	0.622	50	0.0960	0.0056
T12	40 - 20	0.277	50	0.0578	0.0036
T13	20 - 0	0.064	39	0.0281	0.0018

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
250.00	5/8" x 10' Adjustable lightning rod	50	16.856	0.5909	0.0684	13217
245.00	40,000 sq.in.(277.8 sq.ft. EPA)	50	16.217	0.5915	0.0681	13217
233.00	30,000 sq.in.(208.3 sq.ft. EPA)	50	14.793	0.5648	0.0654	45515

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	70 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
221.00	30,000 sq.in.(208.3 sq.ft. EPA)	50	13.321	0.5161	0.0604	3394
185.00	HP10-59	50	8.137	0.4488	0.0462	8511
172.00	HP10-59	50	6.791	0.4006	0.0384	14371
160.00	6' HP	50	5.675	0.3579	0.0303	11422
125.00	OB light	50	3.166	0.2599	0.0186	17818

Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
T1	250 - 240	52.721	24	1.8512	0.2142
T2	240 - 220	48.792	24	1.8371	0.2110
T3	220 - 200	41.211	24	1.6067	0.1877
T4	200 - 180	31.327	24	1.5270	0.1637
T5	180 - 160	23.759	24	1.3476	0.1375
T6	160 - 140	17.728	24	1.1187	0.0955
T7	140 - 120	12.886	24	0.9449	0.0705
T8	120 - 100	8.992	24	0.7674	0.0546
T9	100 - 80	5.935	24	0.5931	0.0393
T10	80 - 60	3.643	24	0.4237	0.0253
T11	60 - 40	1.940	24	0.2997	0.0177
T12	40 - 20	0.864	24	0.1804	0.0113
T13	20 - 0	0.201	2	0.0877	0.0055

Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
250.00	5/8" x 10' Adjustable lightning rod	24	52.721	1.8512	0.2142	4223
245.00	40,000 sq.in.(277.8 sq.ft. EPA)	24	50.721	1.8527	0.2132	4223
233.00	30,000 sq.in.(208.3 sq.ft. EPA)	24	46.261	1.7689	0.2048	14675
221.00	30,000 sq.in.(208.3 sq.ft. EPA)	24	41.651	1.6162	0.1890	1087
185.00	HP10-59	24	25.428	1.4042	0.1457	2722
172.00	HP10-59	24	21.218	1.2529	0.1209	4598
160.00	6' HP	24	17.728	1.1187	0.0955	3648
125.00	OB light	24	9.886	0.8122	0.0584	5699

Bolt Design Data

Section No.	Elevation	Component Type	Bolt Grade	Bolt Size	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
	ft			in						
T1	250	Leg	A325N	1.0000	2	4.97	54.52	0.091 	1	Bolt Tension
T2	240	Leg	A325N	1.0000	4	20.10	54.52	0.369 	1	Bolt Tension

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	71 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T3	220	Leg	A325N	1.0000	6	19.44	54.52	0.357 ✓	1	Bolt Tension
		Diagonal	A325N	1.0000	1	11.07	13.03	0.850 ✓	1	Member Block Shear
		Top Girt	A325N	1.0000	1	2.14	13.06	0.164 ✓	1	Member Block Shear
T4	200	Leg	A325N	1.0000	6	26.33	54.52	0.483 ✓	1	Bolt Tension
		Diagonal	A325N	1.0000	1	6.80	13.03	0.522 ✓	1	Member Block Shear
T5	180	Leg	A325N	1.0000	6	32.16	54.52	0.590 ✓	1	Bolt Tension
		Diagonal	A325N	1.0000	1	7.05	13.03	0.541 ✓	1	Member Block Shear
T6	160	Leg	A325N	1.2500	6	37.43	87.22	0.429 ✓	1	Bolt Tension
		Diagonal	A325N	1.0000	1	6.39	13.03	0.491 ✓	1	Member Block Shear
T7	140	Leg	A325N	1.2500	6	42.13	87.22	0.483 ✓	1	Bolt Tension
		Diagonal	A325N	1.0000	1	6.06	17.37	0.349 ✓	1	Member Block Shear
T8	120	Leg	A325N	1.2500	6	46.23	87.22	0.530 ✓	1	Bolt Tension
		Diagonal	A325N	1.0000	1	6.19	14.17	0.437 ✓	1	Member Block Shear
T9	100	Leg	A325N	1.2500	6	50.08	87.22	0.574 ✓	1	Bolt Tension
		Diagonal	A325N	1.0000	1	6.90	14.17	0.487 ✓	1	Member Block Shear
T10	80	Leg	A325N	1.0000	12	26.20	54.52	0.481 ✓	1	Bolt Tension
		Diagonal	A325N	0.8750	1	8.62	24.68	0.349 ✓	1	Member Block Shear
T11	60	Leg	A325N	1.0000	12	27.91	54.52	0.512 ✓	1	Bolt Tension
		Diagonal	A325N	0.8750	1	8.22	24.68	0.333 ✓	1	Member Block Shear
T12	40	Leg	A325N	1.0000	12	29.47	54.52	0.540 ✓	1	Bolt Tension
		Diagonal	A325N	0.8750	1	8.55	24.68	0.347 ✓	1	Member Block Shear
T13	20	Leg	F1554-10 5	1.5000	4	91.95	131.74	0.698 ✓	1	Bolt Tension
		Diagonal	A325N	0.8750	1	9.42	24.68	0.382 ✓	1	Member Block Shear

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	250 - 240	1 1/2	10.00	2.35	75.3 K=1.00	1.7672	-12.92	57.00	0.227 ¹ ✓
T2	240 - 220	2	20.00	2.43	58.3	3.1416	-88.90	122.98	0.723 ¹

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	72 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
					K=1.00				
T3	220 - 200	#12ZG-58 - 1.25" - 1.00" conn. (Pirod 194434)	20.03	10.02	42.8	3.6816	-123.19	164.52	0.749 ¹
T4	200 - 180	#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	20.03	10.02	35.7	5.3014	-170.54	248.43	0.686 ¹
T5	180 - 160	#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	20.03	10.02	35.7	5.3014	-208.76	248.43	0.840 ¹
T6	160 - 140	#12ZG-58 - 1.75" - 1.00" conn.-TR1-(Pirod 195213)	20.03	10.02	30.6	7.2158	-245.07	347.96	0.704 ¹
T7	140 - 120	#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	20.03	10.02	30.6	7.2158	-276.03	347.96	0.793 ¹
T8	120 - 100	#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	20.03	10.02	30.6	7.2158	-303.61	347.96	0.873 ¹
T9	100 - 80	#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	20.03	10.02	30.6	7.2158	-329.93	347.96	0.948 ¹
T10	80 - 60	#12ZG-58 -2.00" - 0.875" conn.-TR3-(Pirod 195637)	20.03	20.03	48.8	9.4248	-345.46	401.94	0.859 ¹
T11	60 - 40	#12ZG-58 -2.00" - 0.875" conn. (Pirod 195639)	20.03	20.03	48.8	9.4248	-370.14	401.94	0.921 ¹
T12	40 - 20	#12ZG-58 -2.25" - 0.875" conn. (Pirod 195960)	20.03	20.03	48.8	11.9282	-393.75	508.98	0.774 ¹
T13	20 - 0	#12ZG-58 BASE - 2.25" - 0.875" conn.(Pirod 281172)	20.03	20.03	48.8	11.9282	-411.84	508.98	0.809 ¹

¹ P_u / φP_n controls

Truss-Leg Diagonal Data

Section No.	Elevation ft	Diagonal Size	L _d ft	Kl/r	φP _n K	A in ²	V _u K	φV _n K	Stress Ratio
T3	220 - 200	0.5	1.43	96.1	192.18	0.1963	2.71	4.53	0.599
T4	200 - 180	0.5	1.42	95.2	276.74	0.1963	1.70	4.57	0.372
T5	180 - 160	0.5	1.42	95.2	276.74	0.1963	1.81	4.57	0.397
T6	160 - 140	0.5	1.40	94.4	376.67	0.1963	0.94	4.61	0.203
T7	140 - 120	0.5	1.40	94.4	376.67	0.1963	0.52	4.61	0.114
T8	120 - 100	0.5	1.40	94.4	376.67	0.1963	0.45	4.61	0.100
T9	100 - 80	0.5	1.40	94.4	376.67	0.1963	0.46	4.61	0.107
T10	80 - 60	0.5	1.39	93.2	491.97	0.1963	0.77	4.67	0.170
T11	60 - 40	0.5	1.39	93.2	491.97	0.1963	0.88	4.67	0.190
T12	40 - 20	0.5	1.38	92.4	622.65	0.1963	1.03	4.71	0.218

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	73 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Elevation ft	Diagonal Size	L_d ft	Kl/r	ϕP_n K	A in ²	V_u K	ϕV_n K	Stress Ratio
T13	20 - 0	0.5	1.35	91.0	622.65	0.1963	0.65	4.84	0.134

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in ²	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	250 - 240	3/4	4.64	2.25	129.5 K=0.90	0.4418	-3.35	5.95	0.562 ¹
T2	240 - 220	7/8	4.68	2.24	110.7 K=0.90	0.6013	-7.87	11.05	0.713 ¹
T3	220 - 200	L2 1/2x2 1/2x3/16	9.89	5.19	125.8 K=1.00	0.9020	-10.40	16.32	0.637 ¹
T4	200 - 180	L2 1/2x2 1/2x3/16	10.80	5.55	134.6 K=1.00	0.9020	-7.29	14.25	0.512 ¹
T5	180 - 160	L2 1/2x2 1/2x3/16	11.98	6.10	147.8 K=1.00	0.9020	-7.60	11.82	0.643 ¹
T6	160 - 140	L2 1/2x2 1/2x3/16	13.35	6.76	163.9 K=1.00	0.9020	-6.69	9.61	0.696 ¹
T7	140 - 120	L2 1/2x2 1/2x1/4	14.87	7.50	183.4 K=1.00	1.1900	-6.58	10.13	0.650 ¹
T8	120 - 100	L3x3x3/16	16.49	8.30	167.2 K=1.00	1.0900	-6.54	11.16	0.586 ¹
T9	100 - 80	L3x3x3/16	18.19	9.15	184.2 K=1.00	1.0900	-6.94	9.20	0.755 ¹
T10	80 - 60	2L3x3x3/16	25.68	13.35	170.6 K=1.00	2.1800	-9.81	21.44	0.458 ¹
T11	60 - 40	2L3x3x3/16	27.05	14.00	179.0 K=1.00	2.1800	-9.42	19.48	0.484 ¹
T12	40 - 20	2L3x3x3/16	28.50	14.70	187.9 K=1.00	2.1800	-8.60	17.67	0.487 ¹
T13	20 - 0	2L3x3x3/16	30.01	15.44	197.3 K=1.00	2.1800	-10.94	16.03	0.682 ¹

¹ $P_u / \phi P_n$ controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in ²	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	250 - 240	3/4	4.00	3.88	173.6 K=0.70	0.4418	-0.77	3.31	0.233 ¹
T2	240 - 220	3/4	4.00	3.83	171.7 K=0.70	0.4418	-1.51	3.38	0.448 ¹

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	74 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

¹ $P_u / \phi P_n$ controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	250 - 240	7/8	4.00	3.88	148.8 K=0.70	0.6013	-0.50	6.14	0.081 ¹ ✓
T2	240 - 220	1	4.00	3.83	128.8 K=0.70	0.7854	-1.54	10.70	0.144 ¹ ✓
T3	220 - 200	L3x3x3/16	4.00	2.62	86.3 K=1.64	1.0900	-2.14	33.24	0.064 ¹ ✓

¹ $P_u / \phi P_n$ controls

Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	250 - 240	7/8	4.00	3.88	148.8 K=0.70	0.6013	-1.19	6.14	0.195 ¹ ✓
T2	240 - 220	1	4.00	3.83	128.8 K=0.70	0.7854	-2.44	10.70	0.228 ¹ ✓

¹ $P_u / \phi P_n$ controls

Mid Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T2	240 - 220	1	4.00	3.83	128.8 K=0.70	0.7854	-0.92	10.70	0.086 ¹ ✓

¹ $P_u / \phi P_n$ controls

Tension Checks

Leg Design Data (Tension)

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	75 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	250 - 240	1 1/2	10.00	2.35	75.3	1.7672	9.95	92.25	0.108 ¹
T2	240 - 220	2	20.00	2.43	58.3	3.1416	80.41	163.99	0.490 ¹
T3	220 - 200	#12ZG-58 - 1.25" - 1.00" conn. (Pirod 194434)	20.03	10.02	42.8	3.6816	116.63	192.18	0.607 ¹
T4	200 - 180	#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	20.03	10.02	35.7	5.3014	157.96	276.74	0.571 ¹
T5	180 - 160	#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	20.03	10.02	35.7	5.3014	192.98	276.74	0.697 ¹
T6	160 - 140	#12ZG-58 - 1.75" - 1.00" conn.-TR1-(Pirod 195213)	20.03	10.02	30.6	7.2158	224.58	376.67	0.596 ¹
T7	140 - 120	#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	20.03	10.02	30.6	7.2158	252.79	376.67	0.671 ¹
T8	120 - 100	#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	20.03	10.02	30.6	7.2158	277.38	376.67	0.736 ¹
T9	100 - 80	#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)	20.03	10.02	30.6	7.2158	300.45	376.67	0.798 ¹
T10	80 - 60	#12ZG-58 -2.00" - 0.875" conn.-TR3-(Pirod 195637)	20.03	20.03	48.8	9.4248	314.40	491.97	0.639 ¹
T11	60 - 40	#12ZG-58 -2.00" - 0.875" conn. (Pirod 195639)	20.03	20.03	48.8	9.4248	334.98	491.97	0.681 ¹
T12	40 - 20	#12ZG-58 -2.25" - 0.875" conn. (Pirod 195960)	20.03	20.03	48.8	11.9282	353.58	622.65	0.568 ¹
T13	20 - 0	#12ZG-58 BASE - 2.25" - 0.875" conn.(Pirod 281172)	20.03	20.03	48.8	11.9282	367.81	622.65	0.591 ¹

¹ P_u / φP_n controls

Truss-Leg Diagonal Data

Section No.	Elevation ft	Diagonal Size	L _d ft	Kl/r	φP _n K	A in ²	V _u K	φV _n K	Stress Ratio
T3	220 - 200	0.5	1.43	96.1	192.18	0.1963	2.71	4.53	0.599
T4	200 - 180	0.5	1.42	95.2	276.74	0.1963	1.70	4.57	0.372
T5	180 - 160	0.5	1.42	95.2	276.74	0.1963	1.81	4.57	0.397
T6	160 - 140	0.5	1.40	94.4	376.67	0.1963	0.94	4.61	0.203
T7	140 - 120	0.5	1.40	94.4	376.67	0.1963	0.52	4.61	0.114
T8	120 - 100	0.5	1.40	94.4	376.67	0.1963	0.45	4.61	0.100
T9	100 - 80	0.5	1.40	94.4	376.67	0.1963	0.46	4.61	0.107
T10	80 - 60	0.5	1.39	93.2	491.97	0.1963	0.77	4.67	0.170
T11	60 - 40	0.5	1.39	93.2	491.97	0.1963	0.88	4.67	0.190

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	76 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Elevation ft	Diagonal Size	L_d ft	Kl/r	ϕP_n K	A in^2	V_u K	ϕV_n K	Stress Ratio
T12	40 - 20	0.5	1.38	92.4	622.65	0.1963	1.03	4.71	0.218
T13	20 - 0	0.5	1.35	91.0	622.65	0.1963	0.65	4.84	0.134

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	250 - 240	3/4	4.64	2.25	143.9	0.4418	3.32	19.88	0.167 ¹
T2	240 - 220	7/8	4.68	2.24	123.0	0.6013	8.03	27.06	0.297 ¹
T3	220 - 200	L2 1/2x2 1/2x3/16	9.56	5.10	81.9	0.5183	11.07	25.27	0.438 ¹
T4	200 - 180	L2 1/2x2 1/2x3/16	10.80	5.55	88.9	0.5183	6.80	25.27	0.269 ¹
T5	180 - 160	L2 1/2x2 1/2x3/16	11.98	6.10	97.3	0.5183	7.05	25.27	0.279 ¹
T6	160 - 140	L2 1/2x2 1/2x3/16	12.65	6.42	102.2	0.5183	6.39	25.27	0.253 ¹
T7	140 - 120	L2 1/2x2 1/2x1/4	14.10	7.12	114.4	0.6816	6.06	33.23	0.182 ¹
T8	120 - 100	L3x3x3/16	16.49	8.30	108.8	0.6593	6.19	32.14	0.193 ¹
T9	100 - 80	L3x3x3/16	18.19	9.15	119.5	0.6593	6.90	32.14	0.215 ¹
T10	80 - 60	2L3x3x3/16	25.68	13.35	172.7	1.3537	8.62	66.00	0.131 ¹
T11	60 - 40	2L3x3x3/16	27.05	14.00	181.1	1.3537	8.22	66.00	0.125 ¹
T12	40 - 20	2L3x3x3/16	28.50	14.70	190.0	1.3537	8.55	66.00	0.130 ¹
T13	20 - 0	2L3x3x3/16	30.01	15.44	199.4	1.3537	9.42	66.00	0.143 ¹

¹ $P_u / \phi P_n$ controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	250 - 240	3/4	4.00	3.88	248.0	0.4418	0.85	19.88	0.043 ¹
T2	240 - 220	3/4	4.00	3.83	245.3	0.4418	1.51	19.88	0.076 ¹

Valmont 1545 Pidco Drive Plymouth, IN Phone: (574) 936-4221 FAX: (574) 936-6458	Job	540603	Page	77 of 79
	Project	U-26 x 250' - PIWA513- WA-Darrington-Christian Camp Road	Date	12:05:22 02/11/22
	Client	Parallel Infrastructure	Designed by	JS

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
									✓

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	250 - 240	7/8	4.00	3.88	212.6	0.6013	0.49	27.06	0.018 ¹ ✓
T2	240 - 220	1	4.00	3.83	184.0	0.7854	1.54	35.34	0.044 ¹ ✓
T3	220 - 200	L3x3x3/16	4.00	2.62	38.3	0.6593	2.14	32.14	0.066 ¹ ✓

¹ P_u / φP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	250 - 240	7/8	4.00	3.88	212.6	0.6013	1.28	27.06	0.047 ¹ ✓
T2	240 - 220	1	4.00	3.83	184.0	0.7854	1.72	35.34	0.049 ¹ ✓

¹ P_u / φP_n controls

Mid Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T2	240 - 220	1	4.00	3.83	184.0	0.7854	1.15	35.34	0.033 ¹ ✓

¹ P_u / φP_n controls

