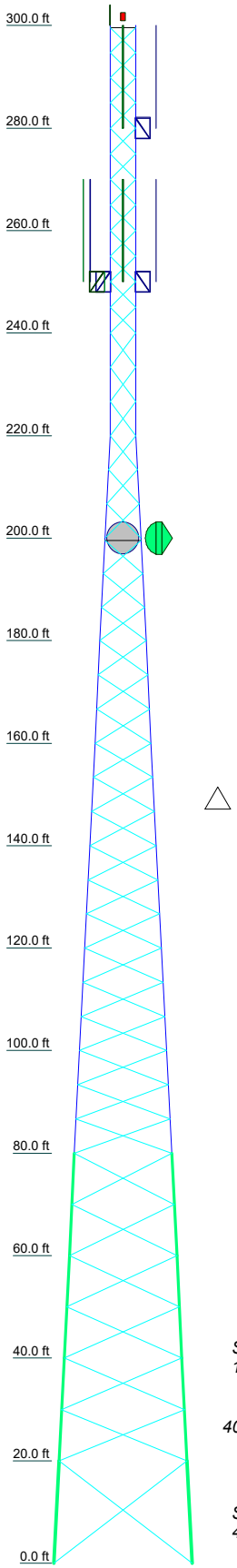
Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15
Legs	P- 2.50" - 0.75" conn.-20' -C-(Pirod 226160)			A	B	P- 5.00" - 0.75" conn.-20' -C-(Pirod 226192)			C		D	E	F	G	H
Leg Grade	A572-50											A572-58			
Diagonals	L2x2x1/8			L2x2x3/16					L3x3x3/16			L3x3x5/16		I	J
Diagonal Grade	A36														
Top Girts	L2x2x3/16		N.A.			L2x2x3/16	N.A.								
Face Width (ft)	5					7	9	11	13	15	17	19	21	23	25 / 27
# Panels @ (ft)	4 @ 4.89583		8 @ 5		6 @ 6.66667		3 @ 6.52778		15 @ 6.66667			6 @ 10			1 @ 20
Weight (K)	0.6	0.6	0.6	1.0	1.3	1.4	1.4	1.5	2.2	2.3	2.5	3.4	4.1	4.5	5.2 / 32.6



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
1/2" x 4' lightning rod	300	6' Bogner Mount Heavy Duty	250
Beacon	300	WHIP (3" X 20')	250
WHIP (3" X 20')	280	6' Bogner Mount Heavy Duty	250
6' Bogner Mount Heavy Duty	280	WHIP (3" X 20')	250
WHIP (3" X 20')	280	6' Bogner Mount Heavy Duty	250
6' Bogner Mount Heavy Duty	280	SP1 R5 (Includes 4.5"x72" Pipe)	200
WHIP (3" X 20')	250	SP1 R5 (Includes 4.5"x72" Pipe)	200
6' Bogner Mount Heavy Duty	250	PAR6-59 w/ Radome	200
WHIP (3" X 20')	250	PAR6-59 w/ Radome	200

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	P- 4.00"- 0.75" conn.-20' -C-Trans-6B-4B-(Pirod 226184)	F	#12ZG-58 - 1.75" - 1.00" conn.-TR1-(Pirod 195213)
B	P- 5.00"- 0.75" conn.-Trans-20' -C-(Pirod 226200)	G	#12ZG-58 - 1.75" - 1.00" conn. (Pirod 195217)
C	P- 6.00"- 0.75" conn.-20' -C-(Pirod 226206)	H	#12ZG-58 -2.00" - 0.875" conn.-TR3-(Pirod 195637)
D	P- 6.00"- 0.75" conn.-HBD-Trans-20' -C-(Pirod 229377)	I	L3 1/2x3 1/2x5/16
E	#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	J	2L3 1/2x3 1/2x1/4

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A572-58	58 ksi	75 ksi
A36	36 ksi	58 ksi			

TOWER DESIGN NOTES

1. Tower is located in Muskegon County, Michigan.
2. Tower designed for Exposure D to the TIA-222-G Standard.
3. Tower designed for a 90 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 40 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 95.1%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 303 K
SHEAR: 36 K

UPLIFT: -253 K
SHEAR: 30 K

AXIAL 119 K
SHEAR 11 K
MOMENT 1573 kip-ft

TORQUE 11 kip-ft
40 mph WIND - 0.7500 in ICE

AXIAL 44 K
SHEAR 49 K
MOMENT 6737 kip-ft

TORQUE 51 kip-ft
REACTIONS - 90 mph WIND

valmont STRUCTURES
Valmont Structures, Inc. - Specialty Structures Group
Valmont Structures
1545 Pidco Drive
Plymouth, IN 46563
Phone: (574) 936-4221
FAX: (574) 936-6458

Job: **Quotation 433083-01**			
Project: ***V-27 x 300' - Water Filtration Plant, MI***			
Client: City of Muskegon	Drawn by: CRF1	App'd:	
Code: TIA-222-G	Date: 11/21/18	Scale: NTS	
Path:		Dwg No. E-1	