



January 27, 2016

DEPARTMENT OF ENTERPRISE SERVICES
Attn: Neva Peckham, Procurement Coordinator
1500 Jefferson Street SE
Olympia, WA 98504-1411

Dear Ms. Peckham:

Per your recent request, please find following our quotation for a 60' Sabre Model 2400SRWD freestanding guyed tower.

If you have any questions or require further information, please feel free to contact me at (800) 369-6690, ext. 11610.

Sincerely,
SABRE COMMUNICATIONS

A handwritten signature in blue ink that reads "Heath G. Peterson".

Heath G. Peterson
Government/Utility Sales Manager

Enclosure: Per Above

MEG: rr



PROPOSAL

Prepared for: DEPARTMENT OF ENTERPRISE SERVICES
 1500 Jefferson Street SE
 Olympia, WA 98504-1411
 Attn: Ms. Neva Peckham

Proposal No.: 16-3631-MEG
Date: 01/27/16 **Page 2 of 3**
Reference: 60' 2400SRWD Freestanding/
 60' Freestanding, OR Appendix G (Category 31)
Freight: Prepaid added to Invoice

SABRE MODEL FREESTANDING 2400SRWD TOWER

Quantity of one (1) 60' Sabre Model 2400SRWD freestanding guyed tower.

The tower will be triangular in design, 2' - 0" on a face, and consist of all solid welded 10' sections.

The tower will be designed for a basic wind speed of 94 mph with 0" of radial ice, and 30 mph with 1/2" of radial ice, in accordance with ANSI/TIA-222-G, and a crest height of 3000'.

This structure also meets or exceed the 2014 Oregon Structural Specialty Code.

Revision G Parameters:

- Structure Class III
 - Exposure Category C
 - Topographic Category 3
- **Refer to Notes section for definitions of Revision G parameters.*

The tower will be designed to support the following equipment:

	ANTENNA MODEL NUMBER (QTY)	RADOME		ELEVATION C.O.R.	TX. LINE SIZE & TYPE	FREQUENCY	AZIMUTH TO NORTH	ANTENNA MOUNT	MOUNT PROVIDED	
		YES	NO						YES	NO
1	(3) Base Radio Antenna's		X	50' At Base	(3) 7/8"	N/A	Unknown	Three (3) 4' Sidearms-60' Three (3) 4' Sidearms-50'		X
2	(1) 36.6" x 19.7" x 2.4" Panel Antenna's		X	40'	(1) 7/8"	N/A	Unknown	One (1) Flush Mount 2-3/8" O.D. Pipe		X
3	(2) Enclosed Yagi Antenna's		X	40'	(2) 1/2"	N/A	Unknown	Two (2) Flush Mounts 2-3/8" O.D. Pipe		X

**This tower has been designed with a rest platform at the 50' elevation*

ITEM 1 TOWER MATERIALS (List Price \$12,823.00).....w/ NASPO 5% Discount \$12,182.00

Materials to be provided include:

- Complete tower steel and hardware
- Anchor bolts and templates
- Climbing ladder incorporated into one (1) face
- Waveguide support ladder incorporated into three (3) faces
- Safety cable kit without harness (100')
- One (1) rest platform at 50' elevation
- One (1) set of anti-climb panels
- EIA standard grounding kit
- One (1) 13' x 3/4" lightning rod copper and stiffener
- P.E. certified tower profile and foundation drawings
- Final erection drawings



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TOWER FREIGHT TO MARION COUNTY, OREGON..... (Freight Prepaid and added to invoice)
ANCHOR BOLT FREIGHT TO MARION COUNTY, OREGON..... (Freight Prepaid and added to invoice)

- OPTIONS:**
- Three (3) 4' Sidearms each with one (1) Tieback Kit for the 60' Elevation \$ 835.00
 - Three (3) 4' Sidearms each with one (1) Tieback Kit for the 50' Elevation \$ 835.00
 - Flush Mount with 2-3/8" O.D. Pipe for the 40' Elevation (each)..... \$ 121.00
 - Waveguide Bridge 2-Leg 2' x 10' (15' Direct Burial) with Three (3) 1 Level Trapeze Kits (each).... \$ 573.00

NOTES: **Terms will be reviewed upon receipt of order.**

Classification of Structure:

- Class Three
Structures used primarily for essential communications such as: civil or national defense, emergency, rescue or other disaster operations, military and navigation facilities.

Exposure Categories:

- Exposure C
Open terrain with scattered obstructions having heights generally less than 30 feet. This category includes flat, open country, grasslands and shorelines in hurricane prone regions. **Exposure C is the standard default for exposure categories.**

Topographic Categories:

- Category 3
Structures located in the upper half of a hill. Wind speed-up shall be considered to occur in all directions. Structures located in the lower half of a hill shall be permitted to be considered as Topographic Category 1.

The permit package includes a profile drawing of the structure with member sizes; anchor bolt details; descriptive notes; structural calculations; a table of supported antennas, mounts and feedlines; and a foundation sketch and calculations (if applicable).

This quotation is based on ANSI/TIA-222-G and Customer provided specifications. Any information not provided by ANSI/TIA-222-G or the Customer has not been considered.

Foundation and anchor bolt designs are based strictly on ANSI/TIA-222-G. Any additional requirements may result in increased foundation size and price.

Dimensional information is preliminary only; it may change based on final engineering.

All Sabre mounts are quoted with support pipes of appropriate length for most applications if not otherwise specified. If different support pipe lengths are required at the time of the order, additional costs may be incurred.

Cable type safety climbing device provided does not include harness.



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Freight charges quoted are for provided materials only. Additional freight charges may be incurred with the order of additional items.

All antennas, transmission lines, jumpers, ground kits, hangers, and hardware are to be provided and installed by others.

All tower materials will be hot dip galvanized as outlined in ASTM A-123.

This proposal does not include any sales, use, excise, contractors or any other taxes not specifically detailed in this proposal.

If a Customer requests to pick up a tower, a \$300.00 per truck charge may apply for dunnage and loading.

Storage charges of \$350.00 per month may apply starting sixty (60) days after original scheduled ship date.

Title, ownership, risk of loss, risk of material obsolescence and risk of material market value decline shall pass to the Customer upon invoicing or shipment to Customer, whichever occurs earlier in time.

Delivery will be approximately 4 to 6 weeks after receipt of required information and contingent upon backlog at the time of order.

Submitted By: Sabre Communications Corporation

Heath Peterson
Government / Utility Sales Manager

Acceptance of Customer:

Please enter our order for the above items in accordance with this proposal.

Signature _____

Name (print) _____

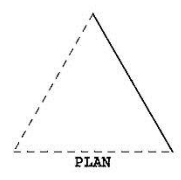
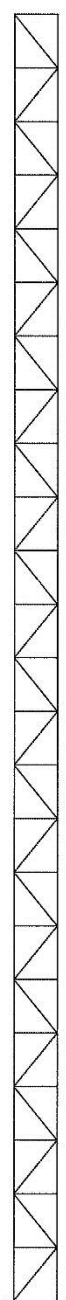
Title _____ Date _____

Purchase Order No. _____

Draw Tower (c) Guymast Inc. 2012 Phone: (416) 736-7453

Leg	50 ksi	SR 3" Φ	SR 1-1/4" Φ	SR 2-1/4" Φ	SR 1-1/2" Φ
Diagonal	36 ksi				SR 1" Φ
Horizontal	36 ksi		SR 1-1/4" Φ	SR 3/4" Φ	
Brace Bolts	A325X				
Face Width				2.0'	
Panel Height # Panels				24 @ 2.5'	

60.0'
40.0'
20.0'
0.0'



- NOTES:**
- The tower model is a 2400SRWD Frstdg.
 - Azimuths are relative (not based on true north).
 - Foundation loads shown are maximums.
 - (6) 1" dia. F1554 grade 105 anchor bolts per leg. Minimum 34.5" embedment from top of concrete to top of nut.
 - 10' sections are used in the tower construction as requested.
 - This tower was designed for Structure Class III, Exposure Category C and Topographic Category 3, with a Crest Height of 3000'.
 - The foundation loads shown below are factored loads.
 - Tower designed for 130 mph Ultimate Wind for Risk III per the 2014 Oregon Structural Specialty Code.

ANTENNA LIST

NO	ELEV	ANTIENNA	TX-LINE
1	60'	(1) Lightning Rod	
2	60'	(3) 4ft Sidearms	
3	60'	(3) Base Radio Antennas	
4	50'	(3) 4ft Sidearms	(3) 7/8
5	50'	(1) Rest Platform	
6	40'	(1) 36.6" x 19.7" x 2.4" on Flush Mount	(1) 7/8
7	40'	(1) Enclosed Yagi	
8	40'	(1) Enclosed Yagi	
9	40'	(1) Flush Mount	(1) 1/2
10	40'	(1) Flush Mount	(1) 1/2
11	4'	(1) Set of Anti-Climb Panels	

TOTAL FOUNDATION LOADS

H=12.23 k
V=14.58 k
M=437.69 k-ft
T=-1.03 k-ft

INDIVIDUAL FOOTING LOADS

H=8.47 k
V=255.24 k
U=-250.76 k

Sabre Towers and Poles

Sabre Industries
Towers and Poles

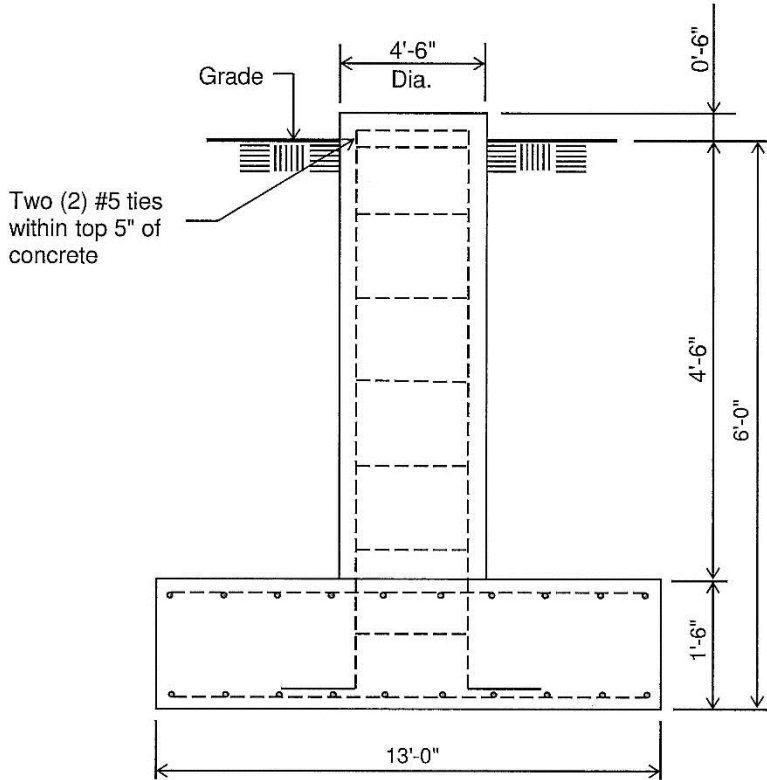
7101 Southbridge Drive, PO Box 658, Sioux City, IA 51102-0658
Phone: (712) 258-6690 Fax: (712) 279-0814

Client: DEPARTMENT OF ENTERPRISE SERVICES Job No: 16-3631-ME Date: 23 nov 2015
Location: 60' Freestanding, OR Total Height: 60.00' Tower Height: 60.00'
Standard: TIA 222-G Design Wind & Ice: 94mph 0" ice & 30mph 0.5" ice

Customer: DEPARTMENT OF ENTERPRISE SERVICES
Site: 60' Self-Support, OR Appendix G (Category 26)

60' 2400 SRWD Freestanding Tower at
94 mph Wind with no ice and 30 mph Wind with 0.5 in. Ice per ANSI/TIA-222-G.
Antenna Loading per Page 1

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW
(12.33 Cu. Yds. each)
(1 REQUIRED; NOT TO SCALE)

Notes:

- 1). Concrete shall have a minimum 28-day compressive strength of 4000 PSI, in accordance with ACI 318-05
- 2). Rebar to conform to ASTM specification A615 Grade 60.
- 3). All rebar to have a minimum of 3" concrete cover.
- 4). All exposed concrete corners to be chamfered 3/4".
- 5). The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-G-2005. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
- 6). The foundation is based on the following factored loads:
Moment (kip-ft) = 437.69
Axial (kips) = 7.61
Shear (kips) = 12.23

Rebar Schedule per Pad and Pier	
Pier	(20) #7 vertical rebar w/hooks at bottom w/#5 ties, two within top 5" of top of pier then 12" C/C
Pad	(14) #8 horizontal rebar evenly spaced each way top and bottom (56 Total)

7). This is a design drawing only. Please see final construction drawings for all installation details.

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