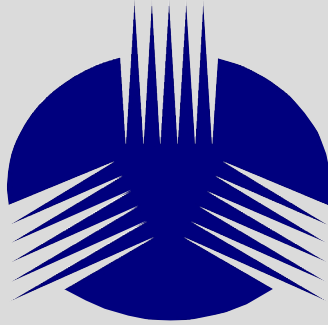


*Manufacturing Custom Fabricated
Structures since 1979*

Professional In-House Design Staff

Tower Delivery Service



World Tower Company, Inc.

70 / 90 / 110 MPH WIND (NO ICE)

W25G

VOLUME 1, ISSUE 1
EIA/TIA 222-F

WWW.WORLDTOWER.COM

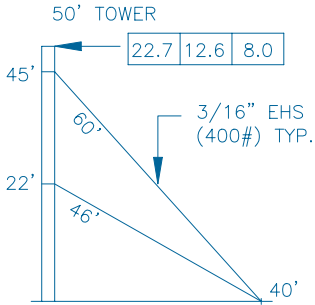
GUYING DETAILS (80% GUY RADIUS)

Equivalent Flat Plate Area CAAC/2

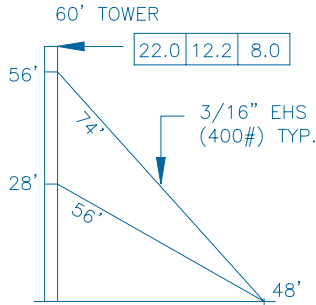
70 mph

90 mph

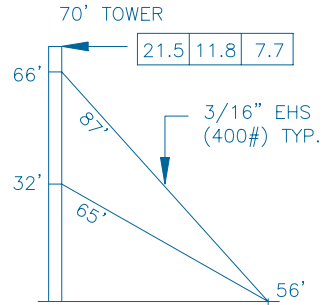
110 mph



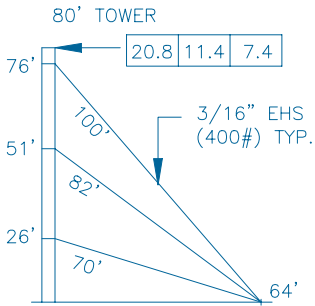
P/N W25G50



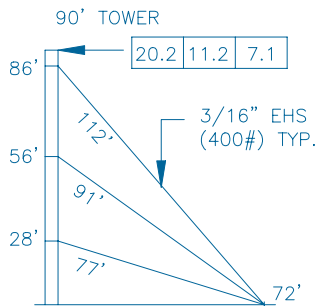
P/N W25G60



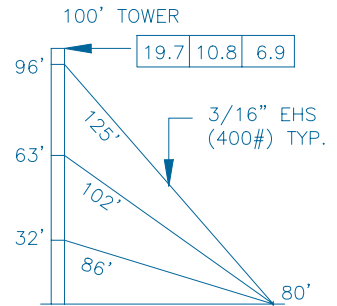
P/N W25G70



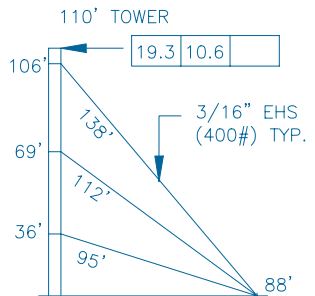
P/N W25G80



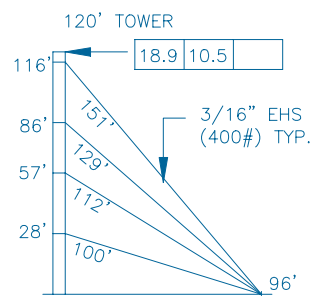
P/N W25G90



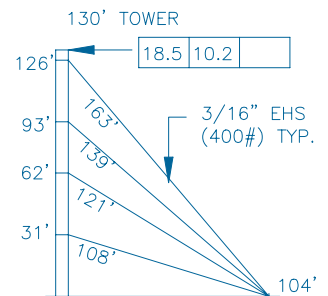
P/N W25G100



P/N W25G110



P/N W25G120

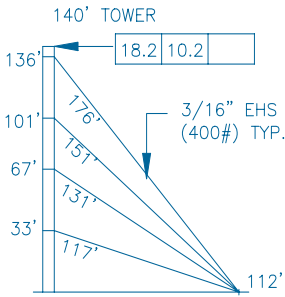


P/N W25G130

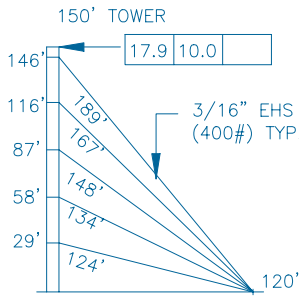
GUYING DETAILS (80% GUY RADIUS)

Equivalent Flat Plate Area CAAC/2

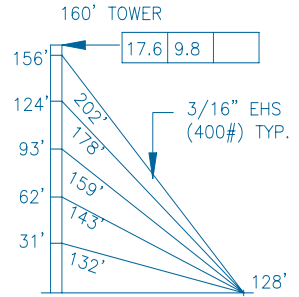
70 mph	90 mph	110 mph
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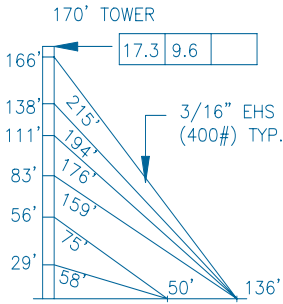
P/N W25G140



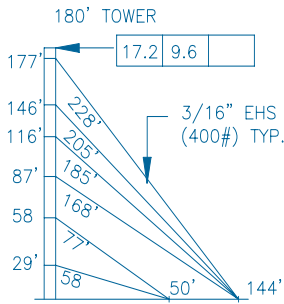
P/N W25G150



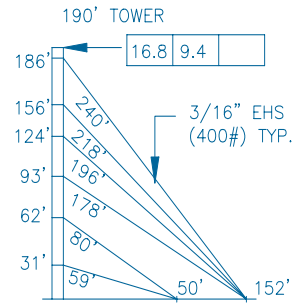
P/N W25G160



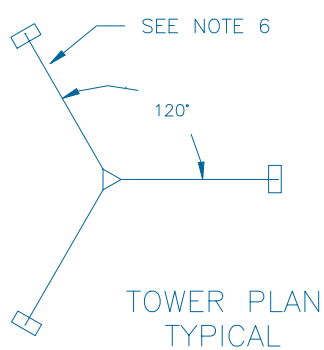
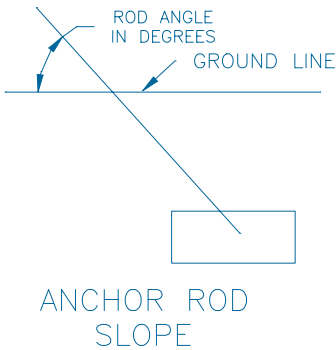
P/N W25G170



P/N W25G180



P/N W25G190



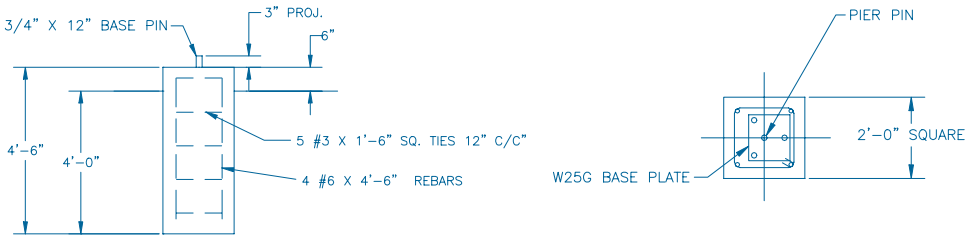
GENERAL INFORMATION

Tower Design

1. Tower designs are in accordance with approved national standard TIA/EIA-222F (NO ICE).
2. Allowable antenna areas (CAAC), Based on EIA-222F. Equivalent flat plate area—CAAC/2.
3. Maximum (CAAC), as shown on drawings.
4. Antenna and mounts are assumed symmetrically placed at the tower apex.
5. Design assumes one 5/8" diameter line on each tower face.
6. Anchor radius is from tower base to intersection of rod with ground.
7. Tower designs and guy chord lengths shown are based on level ground. Add 6% to chord lengths (for sag and connections) for final cut lengths. () indicates initial tension for guy wires in pounds at degrees Fahrenheit.
8. Do not install or dismantle towers within falling distance of electrical and / or telephone lines.
9. Temporary steel guys, when required during erection or dismantling, must be supplied and installed by erector.
10. It is the customer's responsibility to ensure that all types of antenna installations are installed and dismantled by qualified and experienced personnel and marked with hazard and warning labels.
11. All types of antenna installations should be thoroughly inspected by qualified personnel and re-marked, if required, with hazard and warning labels at least twice a year.
12. All antenna installations must be grounded in accordance with local and national codes.
13. Extra cable clamps are required for turnbuckle safety.
14. Anchor grounding and base grounding, as recommended by EIA, are required for each tower installation.
15. Items shown on parts list are necessary for complete "ground" guyed towers. (Note: local engineers must be consulted to determine adequate base and anchor details and wind loading criteria for all roof type installations.)
16. Tower designs do not include stresses due to erection since erection equipment and conditions are unknown. Design assumes competent and qualified personnel will erect (or dismantle) the tower in accordance with the TIA/EIA Standards.
17. These towers are not intended to be used as self supporting towers at any height.

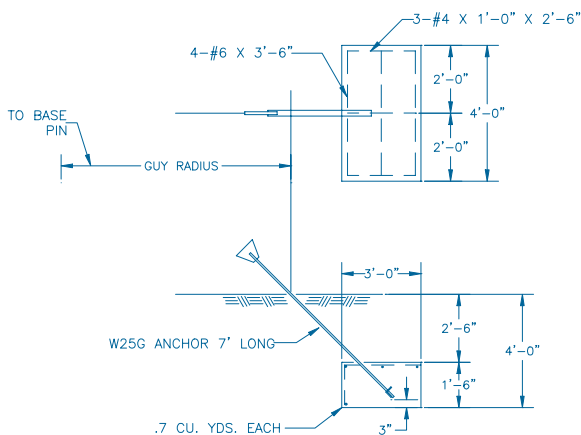
FOUNDATION

Reactions for All Towers



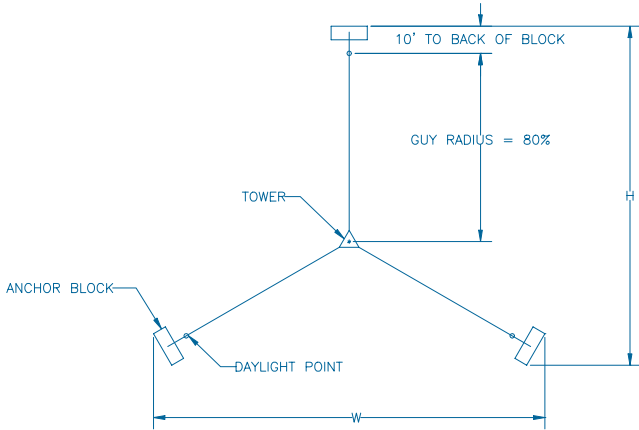
TOWER HT.	BASE PIER		
	REACTIONS (LBS.)		
	70 MPH	80 MPH	90 MPH
50'	2,090	2,550	2,590
60'	2,230	2,810	2,980
70'	2,420	3,040	3,310
80'	3,010	3,710	3,970
90'	3,130	3,940	4,290
100'	3,280	4,180	4,670
110'	3,440	4,430	
120'	4,130	4,990	
130'	4,300	5,260	
140'	4,460	5,550	
150'	5,240	6,500	
160'	5,420	6,800	
170'	7,100	8,750	
180'	7,300	9,070	
190'	7,590	9,510	

ANCHOR DETAILS



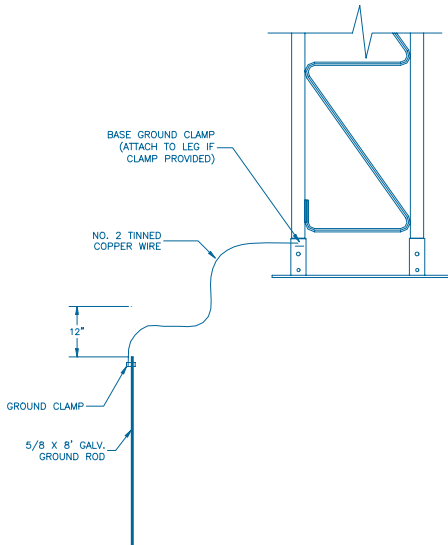
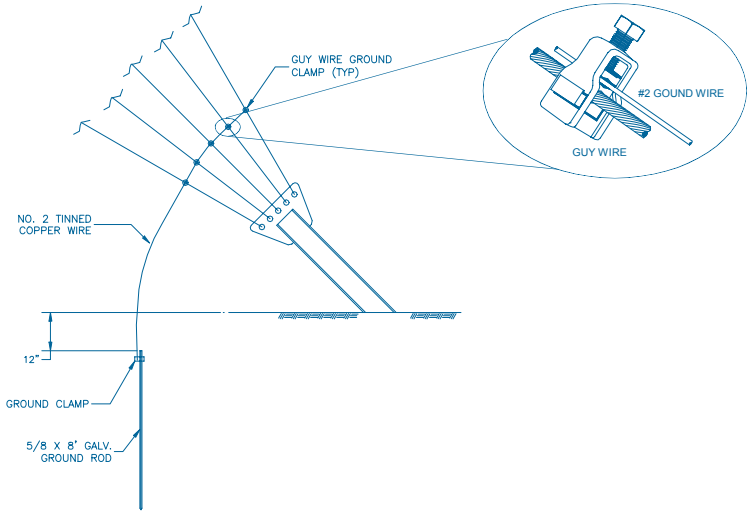
TOWER HT.	ROD ANGLE	INNER ANCHOR DATA						OUTER ANCHOR DATA				
		REACTIONS (LBS.)										
		70 MPH		90 MPH		110 MPH		70 MPH		90 MPH		
		HOR	VERT	HOR	VERT	HOR	VERT	HOR	VERT	HOR	VERT	
50'	40.3	1,170	1,010	1,370	1,160	1,620	1,350					
60'	40.9	1,220	1,080	1,490	1,260	1,810	1,530					
70'	40.7	1,320	1,180	1,610	1,380	2,010	1,680					
80'	38.9	1,710	1,410	2,130	1,710	2,630	2,080					
90'	38.5	1,810	1,470	2,300	1,830	2,870	2,240					
100'	38.6	1,890	1,550	2,450	1,950	3,110	2,430					
110'	38.9	1,980	1,620	2,620	2,090							
120'	37.3	2,470	1,900	3,250	2,460							
130'	37.4	2,580	1,990	3,440	2,600							
140'	37.3	2,690	2,070	3,650	2,760							
150'	36.5	3,220	2,390	4,340	3,190			ROD ANGLE	REACTION IN (LBS.)			
160'	36.5	3,340	2,480	4,560	3,350				70 MPH		90 MPH	
170'	38.9	940	760	1,240	1,000				HOR	VERT	HOR	VERT
180'	39.6	950	780	1,270	1,050			42.1	2,720	2,480	3,740	3,350
190'	41.4	960	850	1,310	1,150			42.0	2,840	2,570	3,940	3,510
								42.0	2,940	2,670	4,110	3,680

GUY SPACE REQUIREMENTS (80% GUY RADIUS)

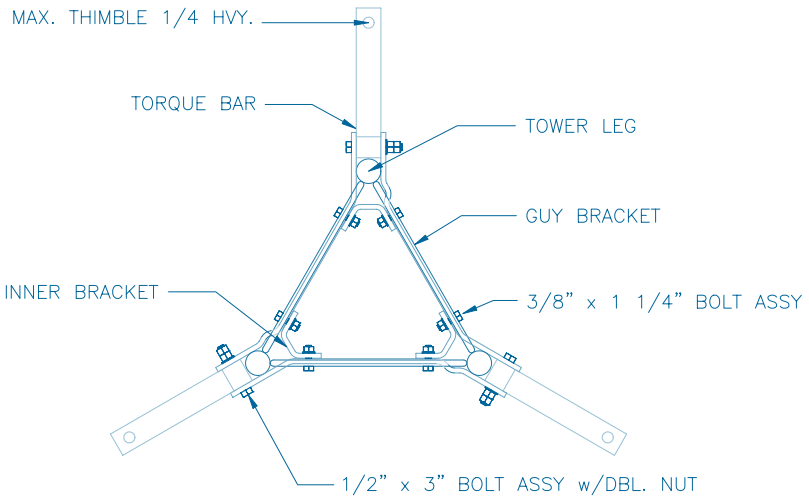
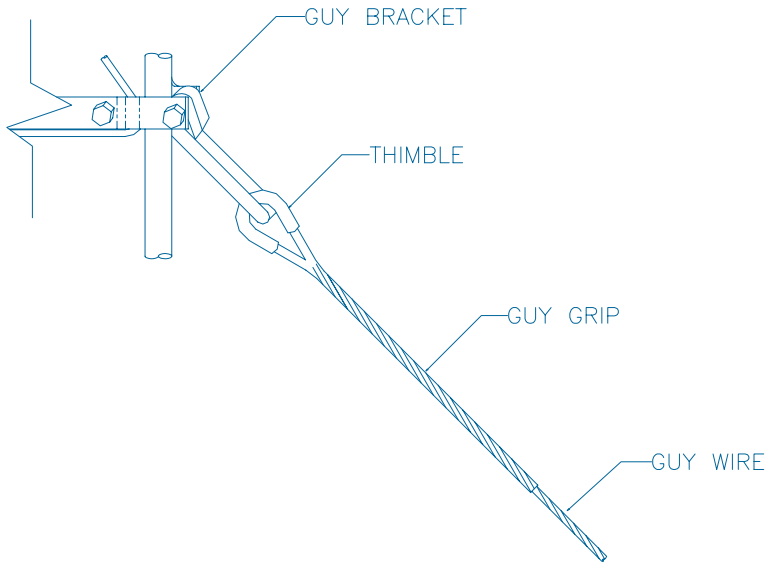


TOWER HEIGHT	80% GUY RADIUS	GUY RADIUS	H	W
50'	40'	50'	75'	87'
60'	48'	58'	87'	101'
70'	56'	66'	99'	114'
80'	64'	74'	111'	128'
90'	72'	82'	123'	142'
100'	80'	90'	135'	156'
110'	88'	98'	147'	170'
120'	96'	106'	159'	184'
130'	104'	114'	171'	198'
140'	112'	122'	183'	211'
150'	120'	130'	195'	225'
160'	128'	138'	207'	239'
170'	136'	146'	219'	253'
180'	144'	154'	231'	267'
190'	152'	162'	243'	281'

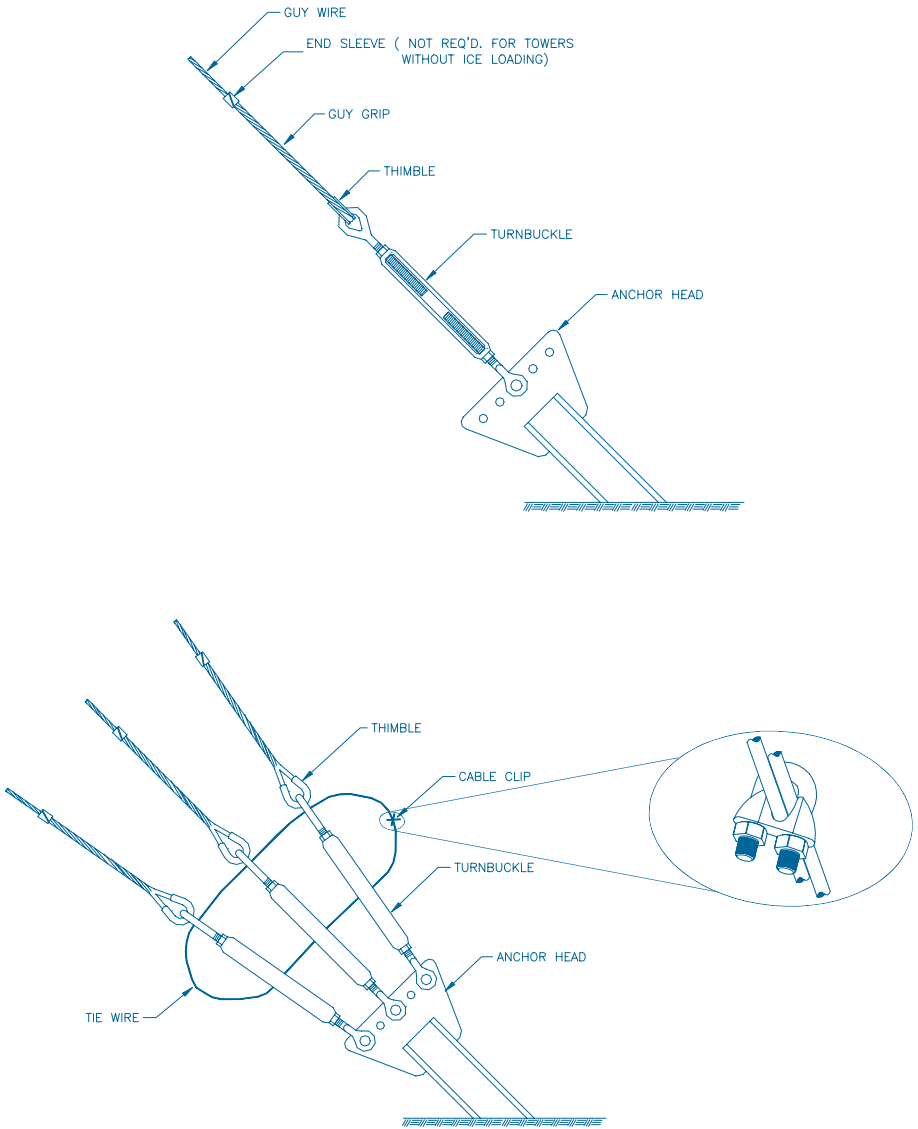
GROUNDING DETAILS



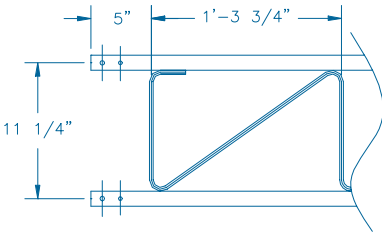
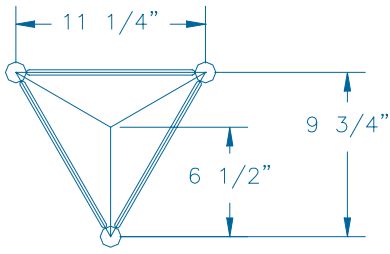
GUY WIRE STANDARD HARDWARE



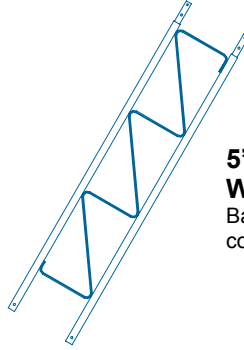
GUY WIRE STANDARD HARDWARE



TOWER SECTIONS



TS $1 \frac{1}{4}''$ O.D. x 16 GA (50KSI)
 $\varnothing 5/16''$ SOLID (36KSI)



5' Short Base WSB25G5

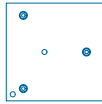
Base section for embedment in concrete.



Standard Section W25G

Standard 10' section with seven bays of bracing and swaged, double-bolted connections.

BASE PLATES



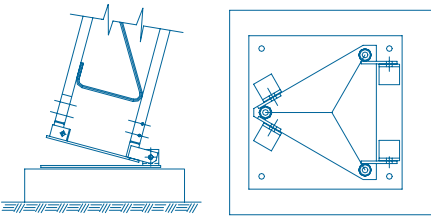
Concrete Base Plate BPCW25G

For use with pier pin embedded in concrete.



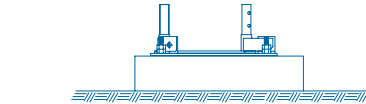
Pier Pin WPP3412

3/4" x 12" Pin
Must be ordered separately.



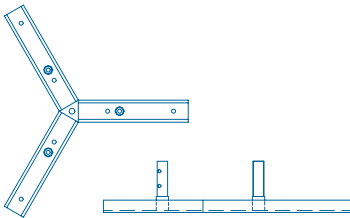
Hinged Base Plate BPHW25G

Bolts to concrete. Hinged to allow tower to be rotated up from base during installation.



Base Bolts WBB1212

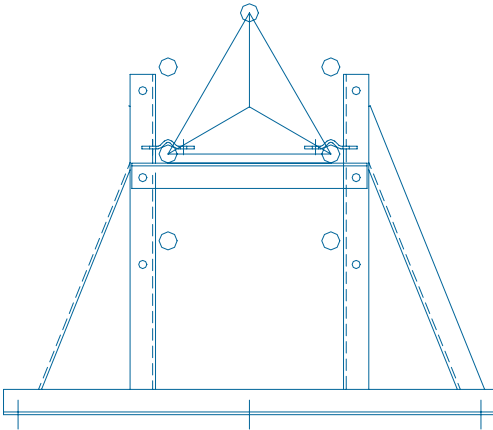
1/2" x 12" Bolts
Must be ordered separately.
(4 per plate)



Flat Roof Mount FRW25G

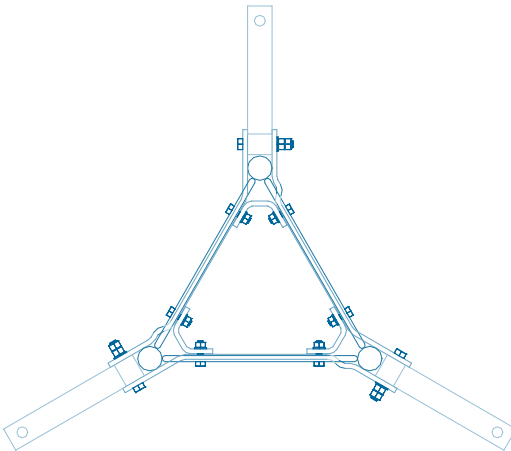
Bolts directly to flat roof surface.
Bolts sold separately.

BRACKETS



Heavy Duty House Bracket HDHBW25G

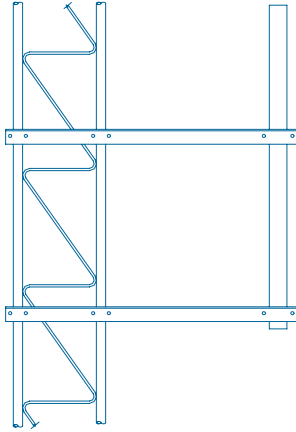
Adjustable to position tower from
18" to 36" from wall.



Guy Bracket GBW25G

Mounts to any tower at any
horizontal brace.

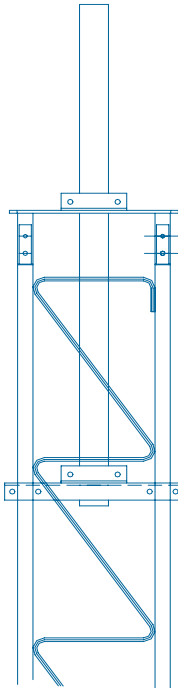
ANTENNA MOUNTS



Side Arm Bracket WSA253UA

Provides 3' stand off from tower. Distance from top to bottom bracket adjustable depending on length of antenna mounting tube. Mounting tube provided is 4' long, 2 3/8" O.D.

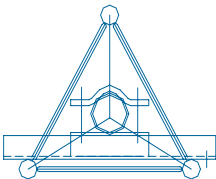
Optional pipes
4' by (1 7/8" or 1 5/8" O.D.)



Top Dish Mount TDMW25G

Top plate includes built in guy lugs. Bolts to swaged top of standard section. Lower plate connects with U-bolts. Secure mounting pipe with U-bolts. Mounting tube provided is 4' long, 2 3/8" O.D.

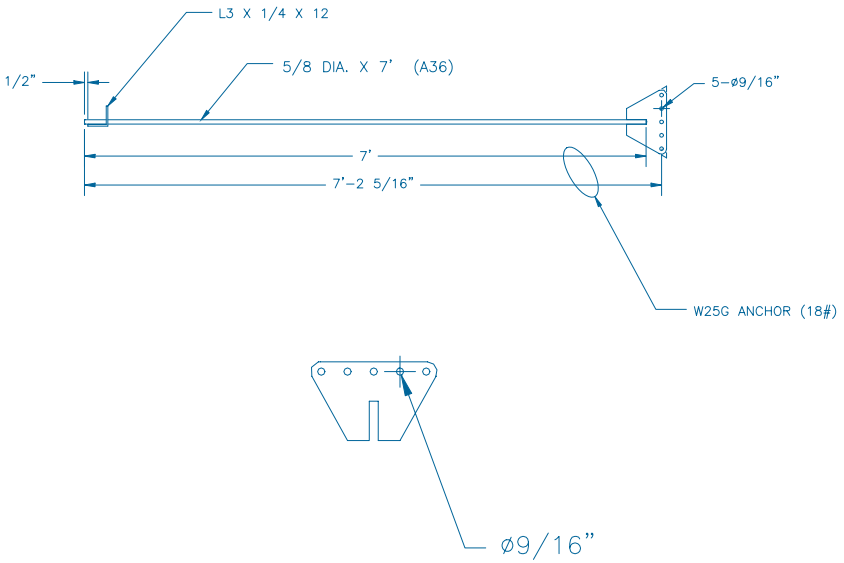
Optional pipes
4' by (1 7/8" or 1 5/8" O.D.)



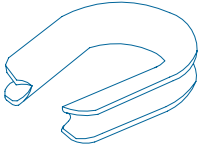
ANCHORS

Guy Anchors

Description	Part #
7' Guy Anchor (for towers over 60' to 190')	WGAC7

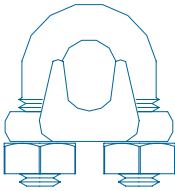


GUY HARDWARE



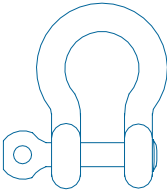
Thimbles—Hot Dip Galvanized

Description	Part #
1/4" Standard Wire Rope Thimble, Open (for 1/8" to 3/16" wire with cable clamps)	1/4WTH



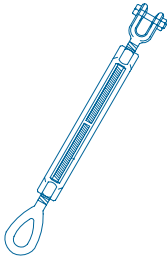
Cable Clamps—Hot Dip Galvanized

Description	Part #
3/16" Cable Clamp, Forged (3 per turnbuckle)	3/16WCCF



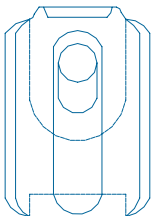
Anchor Shackles, Round Pin

Description	Part #
3/8" (1 ton safe working load)	3/8WAS



Turnbuckles—Hot Dip galvanized

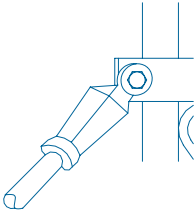
Description	Part #
3/8" x 6" Eye & Jaw Turnbuckle (6,000 lbs. ultimate strength)	3/8WTBE&J



Guy Strain Insulators, Porcelain

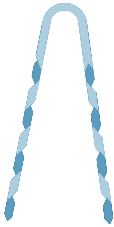
Description	Part #
Porcelain Guy Strain Insulator (10,000 lbs. ultimate strength)	W502
Porcelain Guy Strain Insulator (12,000 lbs. ultimate strength)	W504
Porcelain Guy Strain Insulator (20,000 lbs. ultimate strength)	W506

GUY HARDWARE



Insulators, 24 Inches Long

Description	Part #
24" Fiberglass Insulator (15,000 lbs. ultimate strength) for use with 3/16" to 1/2" EHS guy wire	W500200



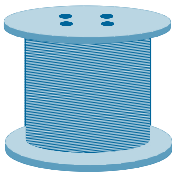
Big Grips—Hot Dip Galvanized

Description	Part #
3/16" Galvanized Big-Grip with end sleeve	WBG2142



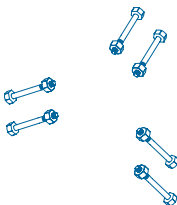
End Sleeves—Hot Dip Galvanized

Description	Part #
3/16"	WGC65303



Guy Wire—Hot Dip Galvanized

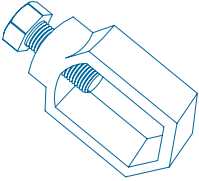
Description	Part #
3/16" EHS x 500' coil (3,990 lbs. breaking strength)	GW3/16EHS500
3/16" EHS x 1,000' coil (3,990 lbs. breaking strength)	GW3/16EHS1000



Hardware Assembly

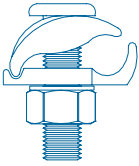
Description	Part #
(6) 5/16" x 1 1/2" NF Bolts w/Hardware (SAE Grade 5)	WHA5/16

GROUNDING HARDWARE



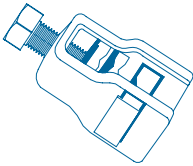
Grounding Clamp

Description	Part #
Bronze clam for 5/8" copper ground rod	WGCS/8



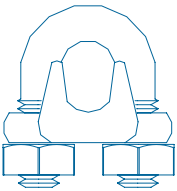
Base Grounding Clamp

Description	Part #
Bronze clam for 2/0 AWG to #4 AWG copper tinned wire	WBGC



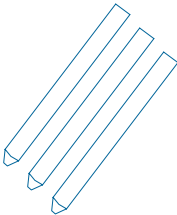
Guy Grounding Clamp

Description	Part #
Bronze clam for #10 AWG to #2 AWG copper tinned wire	WGGC



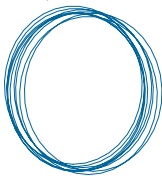
Cable Clamps—Hot Dip Galvanized

Description	Part #
3/16" Cable Clamp, Forged (1 per Anchor)	3/16WCCF



Ground Rod

Description	Part #
Copper 5/8" x 8'	WGR5/8x8
Copper 5/8" x 10'	WGR5/8x10



#2 AWG Copper Tinned Wire

Description	Part #
10' # 2 AWG Copper Tinned Wire	W2AWG10

W25G STANDARD KITS

	40'	50'	60'	70'	80'	90'	100'	110'	120'	130'	140'	150'	160'	170'	180'	190'
TOWER SECTION 10' LENGTH W25G	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
HARDWARE ASSY. 6 PER KIT WHA5/16	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
GUY ANCHOR 7' LONG WGAC7	3	3	3	3	3	3	3	3	3	3	3	3	3	6	6	6
GUY BRACKET WGB25G	2	2	2	2	3	3	3	3	4	4	4	5	5	6	6	6
GUY WIRE (500/1000' Spool) WGW3/16EHS	175'	350'	425'	500'	800'	900'	1000'	1100'	1575'	1750'	1825'	2425'	2650'	2825'	2925'	3175'
BIG GRIP 3/16" GUY WIRE WBG214Z	6	12	12	12	18	18	18	18	24	24	24	30	30	30	30	30
THIMBLE 1/4" W1/4TH	6	12	12	12	18	18	18	18	24	24	24	30	30	30	30	30
TURNBUCKLE 3/8 X 6 EYE & JAW 3/8WTBE&J	6	6	6	6	9	9	9	9	12	12	12	15	15	15	15	15
TB SAFETY KIT 1 @ 3/16WCCF 1 @ W2AWG10	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
GROUND ROD 5/8" X 8' WGR5/8X8	5	5	5	5	5	5	5	5	5	5	5	5	5	8	8	8
BASE GND CLAMP WBGC	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
GUY GND CLAMP WGCC	6	6	6	6	9	9	9	9	12	12	12	15	15	18	18	18
GROUND CLAMP WGC5/8	5	5	5	5	5	5	5	5	5	5	5	5	5	8	8	8

ADDITIONAL PRODUCTS REQUIRED

TOP DISH MOUNT	SIDE DISH MOUNT
BASE PLATE CONCRETE	SHORT SECTION 5'
BASE PLATE HINGED	GUY STRAIN INSULATORS
BASE PLATE ROOF MOUNT	GUY INSULATORS



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