

# SELF-SUPPORTING TOWERS





## STANDARD G-SERIES SELF-SUPPORTING



# G-SERIES SELF-SUPPORTING

### GENERAL USE

The self-supporting G-Series towers offer an easy, low-cost solution to get light weight antennas in the air quickly. By using the G-Series tower as a self-supporting structure, you minimize land area usage. They are functional in a wide variety of wind speeds. See ROHN's standard designs to help identify the right structure for your project. These are the same sturdy, robust tower sections that ROHN has fabricated for years. Each larger model allows for more loading capacity.

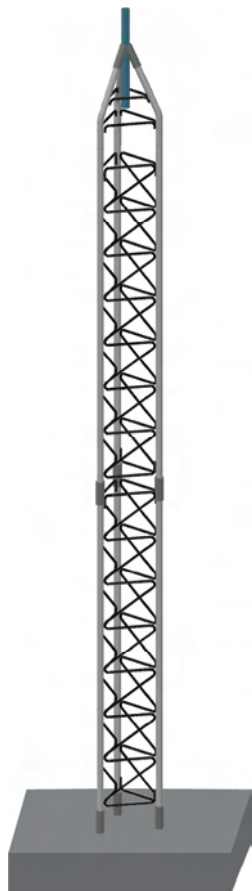
### FEATURES

- Completely hot-dip galvanized after fabrication
- Cross bracing is formed by a continuous solid rod bracing fashioned into a zig-zag pattern for strength
- Pre-engineered loading charts meet varying individual specs and site conditions
- Typical uses include: small dishes, broadband, security and two-way communication
- All towers have 'fixed' bases

### KITS

The kit part numbers for ROHN Self-Supporting G-Series towers include:

- Short base for embedment in concrete
- Rev F ground kit
- All tower sections and connection hardware
- Tapered top (25G and 45G towers)
- Top plate (55G towers)
- Cap plate kit (65G towers)



Typical Self-Supporting  
25G, 45G and 55G Tower



Typical Self-Supporting  
45GSR and 65G Tower

*Per Rev G requirements, any structure greater than 10' requires a climber safety device. Please see page 209 for ordering information.*



**G SERIES**  
**REV. F ALLOWABLE ANTENNA AREAS (SQ. FT.)**

**70 MPH**  
 Fastest Mile

70 MPH Fastest Mile Wind Speed - No Ice								
Height	25G		45G		55G		65G	
	FT <sup>2</sup>	Part No.	FT <sup>2</sup>	Part No.	FT <sup>2</sup>	Part No.	FT <sup>2</sup>	Part No.
10'	19.7	<b>25SS010</b>	42.5	<b>45SS010</b>	75.0	<b>55SS010</b>	95.0	<b>65SS010</b>
20'	14.2	<b>25SS020</b>	22.0	<b>45SS020</b>	43.0	<b>55SS020</b>	95.0	<b>65SS020</b>
30'	6.4	<b>25SS030</b>	12.0	<b>45SS030</b>	26.0	<b>55SS030</b>	76.2	<b>65SS030</b>
35'	3.6	<b>25SS035</b>	8.7	<b>45SS035</b>	21.9	<b>55SS035</b>	61.2	<b>65SS035</b>
40'	1.5	<b>25SS040</b>	5.1	<b>45SS040</b>	15.0	<b>55SS040</b>	48.8	<b>65SS040</b>
45'			2.3	<b>45SS045</b>	11.4	<b>55SS045</b>	39.0	<b>65SS045</b>
50'					6.5	<b>55SS050</b>	29.3	<b>65SS050</b>
55'					4.0	<b>55SS055</b>	24.4	<b>65SS055</b>
60'					0.8	<b>55SS060</b>	18.4	<b>65SS060</b>
70'							8.7	<b>65SS070</b>
80'							0.9	<b>65SS080</b>

**80 MPH**  
 Fastest Mile

80 MPH Fastest Mile Wind Speed - No Ice								
Height	25G		45G		55G		65G	
	FT <sup>2</sup>	Part No.	FT <sup>2</sup>	Part No.	FT <sup>2</sup>	Part No.	FT <sup>2</sup>	Part No.
10'	14.3	<b>25SS010</b>	30.0	<b>45SS010</b>	57.0	<b>55SS010</b>	95.0	<b>65SS010</b>
20'	9.0	<b>25SS020</b>	16.0	<b>45SS020</b>	30.0	<b>55SS020</b>	85.0	<b>65SS020</b>
30'	3.7	<b>25SS030</b>	7.5	<b>45SS030</b>	17.0	<b>55SS030</b>	55.8	<b>65SS030</b>
35'	1.4	<b>25SS035</b>	4.7	<b>45SS035</b>	14.5	<b>55SS035</b>	44.0	<b>65SS035</b>
40'			1.4	<b>45SS040</b>	8.0	<b>55SS040</b>	34.1	<b>65SS040</b>
45'					5.9	<b>55SS045</b>	26.2	<b>65SS045</b>
50'					1.5	<b>55SS050</b>	19.7	<b>65SS050</b>
55'							14.5	<b>65SS055</b>
60'							9.4	<b>65SS060</b>
70'							1.3	<b>65SS070</b>

**90 MPH**  
 Fastest Mile

90 MPH Fastest Mile Wind Speed - No Ice								
Height	25G		45G		55G		65G	
	FT <sup>2</sup>	Part No.	FT <sup>2</sup>	Part No.	FT <sup>2</sup>	Part No.	FT <sup>2</sup>	Part No.
10'	10.5	<b>25SS010</b>	25.0	<b>45SS010</b>	45.0	<b>55SS010</b>	95.0	<b>65SS010</b>
20'	6.9	<b>25SS020</b>	11.0	<b>45SS020</b>	23.0	<b>55SS020</b>	65.0	<b>65SS020</b>
30'	1.7	<b>25SS030</b>	4.0	<b>45SS030</b>	12.0	<b>55SS030</b>	40.0	<b>65SS030</b>
35'			1.9	<b>45SS035</b>	9.4	<b>55SS035</b>	32.2	<b>65SS035</b>
40'					4.0	<b>55SS040</b>	24.1	<b>65SS040</b>
45'					2.2	<b>55SS045</b>	17.7	<b>65SS045</b>
50'							14.5	<b>65SS050</b>
55'							7.7	<b>65SS055</b>
60'							3.3	<b>65SS060</b>

Note: Antenna areas, ft.<sup>2</sup>, assume all round antenna members.

**NO ICE**



G SERIES

REV. G EFFECTIVE PROJECTED AREA (SQ. FT.)

90 MPH  
3-Second Gust

90 MPH 3-Second Gust Wind Speed															
Height	25G			45G			45GSR			55G			65G		
	EPA		Part No.	EPA		Part No.	EPA		Part No.	EPA		Part No.	EPA		Part No.
	Exp.B	Exp.C		Exp.B	Exp.C		Exp.B	Exp.C		Exp.B	Exp.C		Exp.B	Exp.C	
10'	26.8	21.3	25SS010	60.0	47.5	45SS010	95	84	45SR010	80	79	55SS010	95	95	65SS010
20'	18.5	13.4	25SS020	31.3	22.7	45SS020	95	71	45SR020	56	42	55SS020	95	95	65SS020
30'	7.9	4.1	25SS030	16.1	8.4	45SS030	87	58	45SR030	34	21	55SS030	95	71	65SS030
35'	4.4	1.2	25SS035	9.8	3.8	45SS035	76	52	45SR035	25	14	55SS035	80	54	65SS035
40'	1.3	-	25SS040	4.9	-	45SS040	60	40	45SR040	17	8	55SS040	62	41	65SS040
45'				0.7	-	45SS045	48	31	45SR045	11	3	55SS045	48	30	65SS045
50'							38	23	45SR050	5	-	55SS050	37	21	65SS050
55'							29	16	45SR055				28	14	65SS055
60'							22	11	45SR060				20	7	65SS060

100 MPH  
3-Second Gust

100 MPH 3-Second Gust Wind Speed															
Height	25G			45G			45GSR			55G			65G		
	EPA		Part No.	EPA		Part No.	EPA		Part No.	EPA		Part No.	EPA		Part No.
	Exp.B	Exp.C		Exp.B	Exp.C		Exp.B	Exp.C		Exp.B	Exp.C		Exp.B	Exp.C	
10'	20.7	16.4	25SS010	47.4	39.5	45SS010	82	66	45SR010	78	63	55SS010	95	95	65SS010
20'	14.0	9.9	25SS020	23.2	16.9	45SS020	74	55	45SR020	43	32	55SS020	95	95	65SS020
30'	5.3	2.2	25SS030	9.7	4.8	45SS030	66	43	45SR030	24	14	55SS030	81	55	65SS030
35'	2.1	-	25SS035	5.1	0.7	45SS035	59	38	45SR035	17	8	55SS035	61	40	65SS035
40'				1.2	-	45SS040	46	30	45SR040	10	3	55SS040	47	29	65SS040
45'							35	22	45SR045	5	-	55SS045	35	20	65SS045
50'							27	15	45SR050				26	13	65SS050
55'							20	9	45SR055				17	6	65SS055
60'							13	4	45SR060				11	1	65SS060

110 MPH  
3-Second Gust

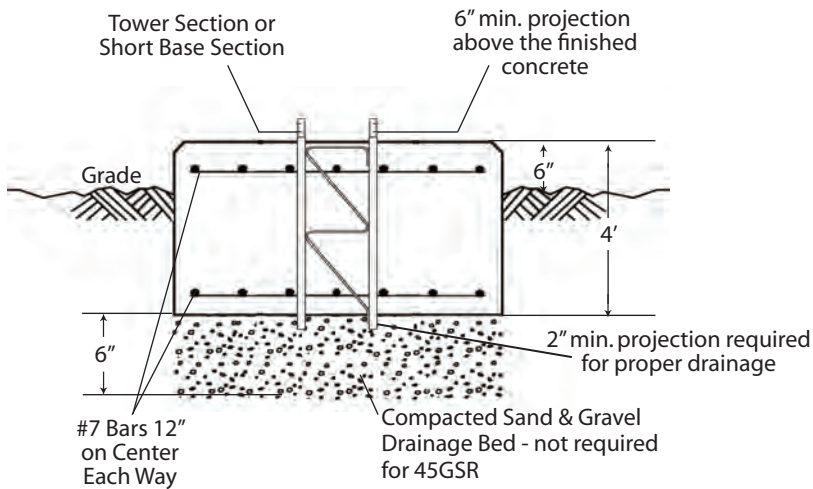
110 MPH 3-Second Gust Wind Speed															
Height	25G			45G			45GSR			55G			65G		
	EPA		Part No.	EPA		Part No.	EPA		Part No.	EPA		Part No.	EPA		Part No.
	Exp.B	Exp.C		Exp.B	Exp.C		Exp.B	Exp.C		Exp.B	Exp.C		Exp.B	Exp.C	
10'	16.5	12.7	25SS010	39.4	31.9	45SS010	67	53	45SR010	63	51	55SS010	95	95	65SS010
20'	10.6	7.2	25SS020	18.3	12.3	45SS020	59	43	45SR020	34	25	55SS020	95	81	65SS020
30'	3.1	0.4	25SS030	6.5	1.9	45SS030	51	32	45SR030	17	9	55SS030	65	43	65SS030
35'				1.7	-	45SS035	45	27	45SR035	11	4	55SS035	48	30	65SS035
40'							35	22	45SR040	5	-	55SS040	35	21	65SS040
45'							26	15	45SR045				25	13	65SS045
50'							19	9	45SR050				17	7	65SS050
55'							13	4	45SR055				10	-	65SS055
60'							7	-	45SR060				4	-	65SS060

Note: Antenna areas, ft.<sup>2</sup>, assume all round antenna members.

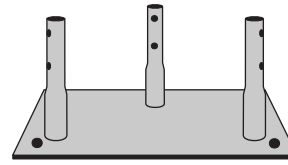
NOICE



# SELF-SUPPORTING G-SERIES FOUNDATIONS

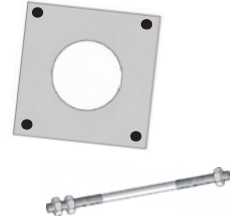


**ELEVATION VIEW**  
25G (shown), 45G & 55G  
SELF-SUPPORTING TOWER FOUNDATION



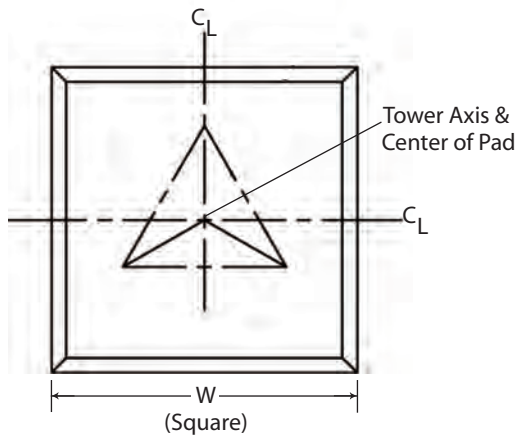
**CONCRETE BASE PLATE WITH ANCHORS**  
25GSSB  
FOR USE WITH SELF-SUPPORTING 25G TOWERS.

ALTERNATIVE TO USING SHORT BASE. BASE BOLTS & TEMPLATE MUST BE ORDERED SEPARATELY.



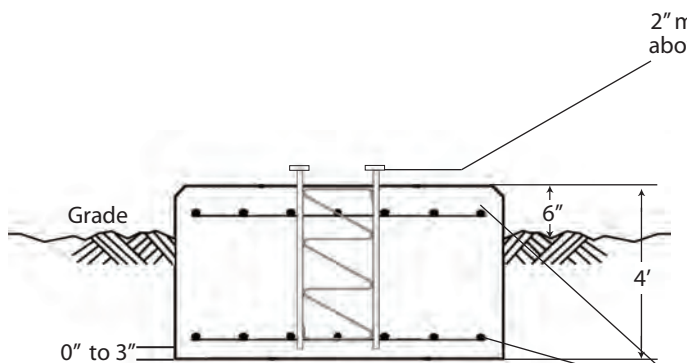
**BASE BOLTS & TEMPLATE**  
KH8175A

FOR USE WITH 25GSSB IN SELF-SUPPORTING 25G TOWER APPLICATIONS. KIT INCLUDES (1) TEMPLATE & (4) BASE BOLTS.

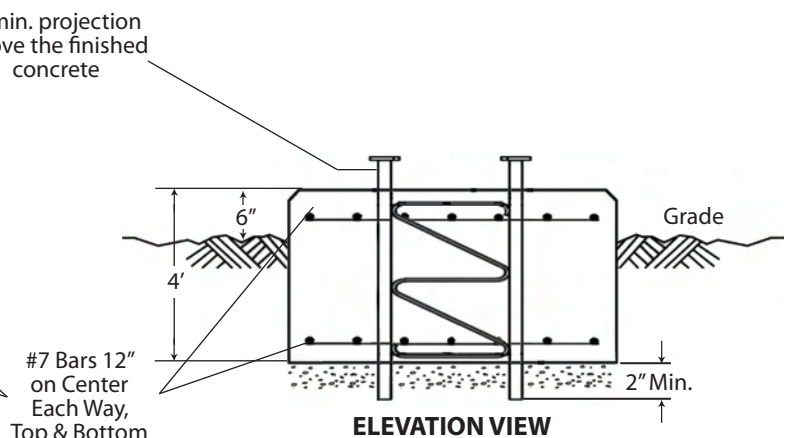


**PLAN VIEW**

Tower	Mat Width (W)	Concrete Volume (Cu. Yds.)
25G	4' - 0"	2.4
45G	5' - 3"	4.1
55G	6' - 0"	5.3
45GSR 65G	7' - 9"	8.9



**ELEVATION VIEW**  
45GSR  
SELF-SUPPORTING TOWER FOUNDATION



**ELEVATION VIEW**  
65G  
SELF-SUPPORTING TOWER FOUNDATION

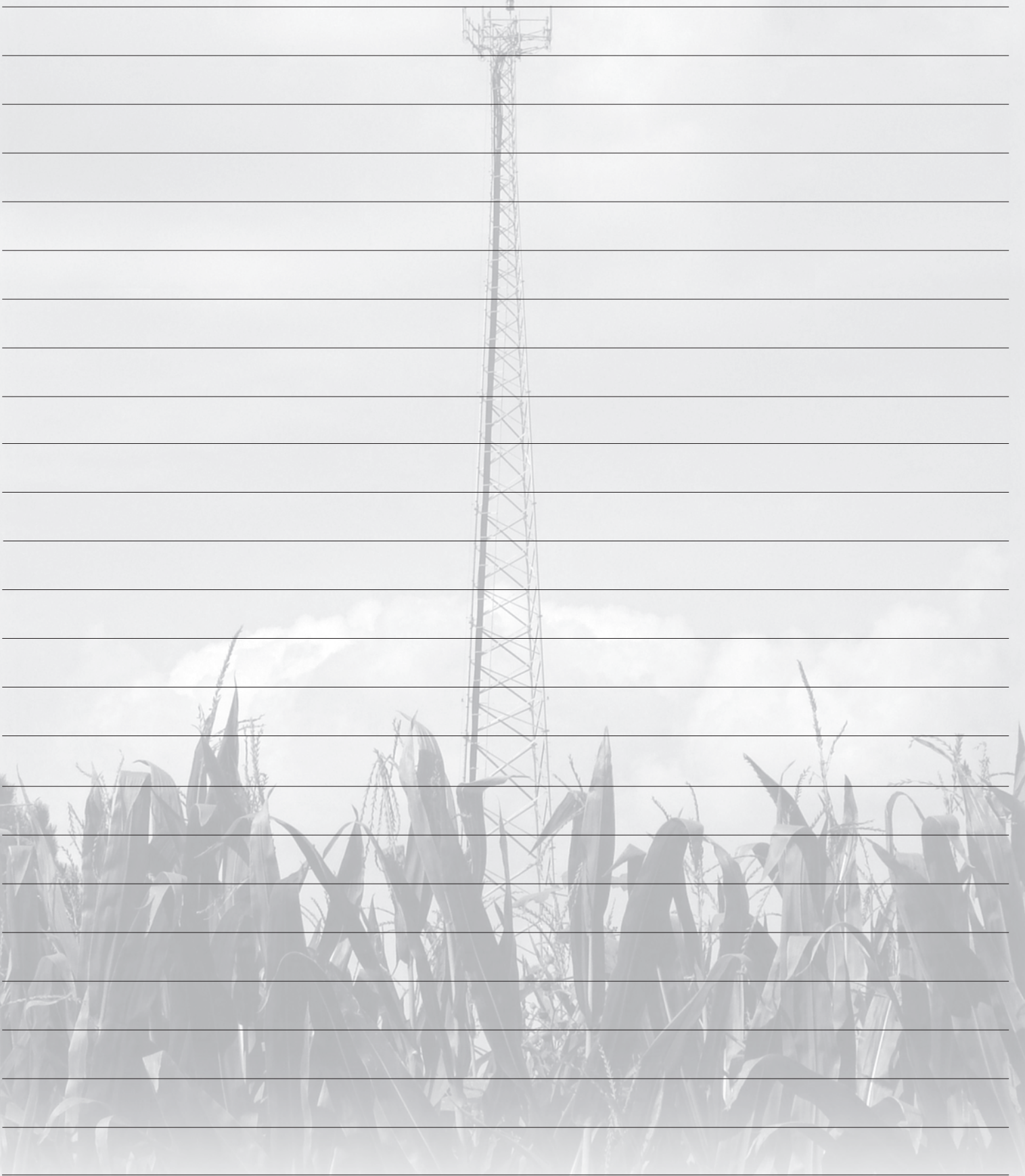


## SELF-SUPPORTING G-SERIES DESIGN NOTES

1. Tower designs are in accordance with approved national standard ANSI/EIA-222-F and ANSI/TIA-222G, Structure Class I, Exposures B and C, Topographic Category I.
2. All towers must have "fixed" bases. Pinned bases may not be used.
3. Designs assume transmission lines symmetrically placed as follows:
  - 25G Tower - One 5/8" Line on each face (Total =3)
  - 45G Tower - One 7/8" Line and one 1/2" line on each face (Total = 3 @ 7/8" & 3 @ 1/2")
  - 55G & 65G Towers - Two 7/8" Lines on each face (Total =6)
4. Antennas and mounts assumed symmetrically placed at tower apex.
5. Rev F tabulated allowable antenna areas assume all round antenna members.
6. Allowable flat-plate antenna areas, based on EIA RS-222-C, may be obtained by multiplying Rev. F Antenna areas shown by 0.6.
7. Standard foundation designs are based on Rev. F normal soil and Rev. G presumptive clay soil parameters.

Refer to pages 147-153 for General Installation and Foundation Notes.

# NOTES

A tall, slender lattice tower stands in the center of a cornfield. The tower is composed of a series of vertical and diagonal cross-braces, forming a lattice structure. At the top, there is a platform with various antennas and equipment. The foreground is filled with rows of corn plants, their leaves and tassels visible. The background shows a cloudy sky. Overlaid on the entire image are horizontal lines, providing a space for notes.



# STANDARD 65G SELF-SUPPORTING CAMERA TOWERS (all-welded)

REV. G: 110 MPH 3-SEC GUST WIND SPEED (NO ICE),  
40 MPH 3-SEC GUST WIND SPEED (3/4" ICE),  
CLASS II, EXPOSURE C, TOPO CATEGORY 1  
SEISMIC COEFFICIENT  $S_s \leq 1.0$

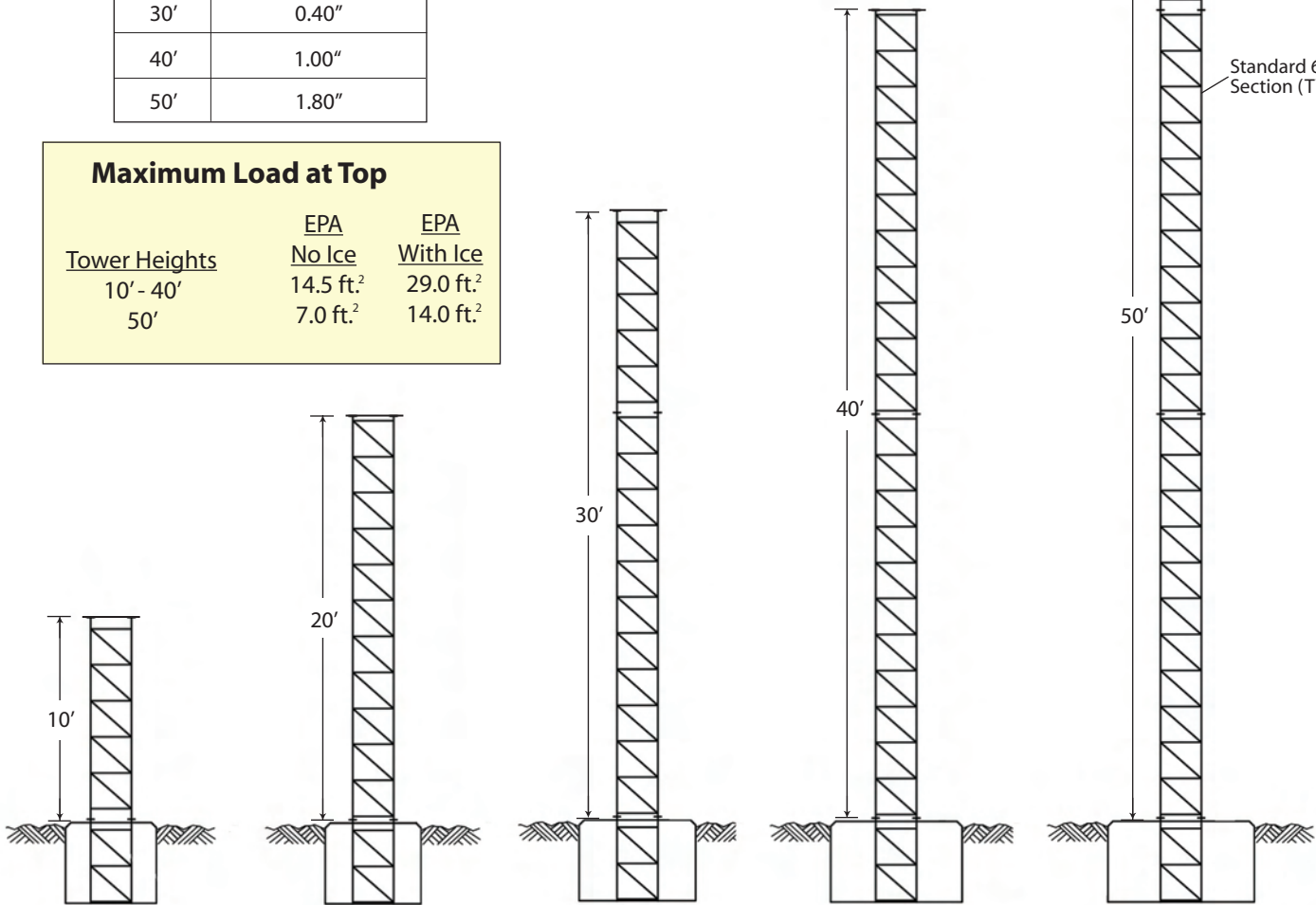
Tower Height	Max. Tip Deflection at 60 MPH
10'	0.10"
20'	0.10"
30'	0.40"
40'	1.00"
50'	1.80"

Maximum Load at Top		
Tower Heights	EPA No Ice	EPA With Ice
10' - 40'	14.5 ft. <sup>2</sup>	29.0 ft. <sup>2</sup>
50'	7.0 ft. <sup>2</sup>	14.0 ft. <sup>2</sup>

ALL WELDED

24 1/4" Face Width (TYP)

Standard 65G Section (TYP)



**65SS010CT**  
328 lbs.\*  
\* Tower Weight



4'-9" Square

3.3 cu. yds. concrete

**65SS020CT**  
502 lbs.\*



5'-0" Square

3.7 cu. yds. concrete

**65SS030CT**  
695 lbs.\*



6'-0" Square

5.3 cu. yds. concrete

**65SS040CT**  
868 lbs.\*



7'-3" Square

7.8 cu. yds. concrete

**65SS050CT**  
1061 lbs.\*



8'-0" Square

9.5 cu. yds. concrete

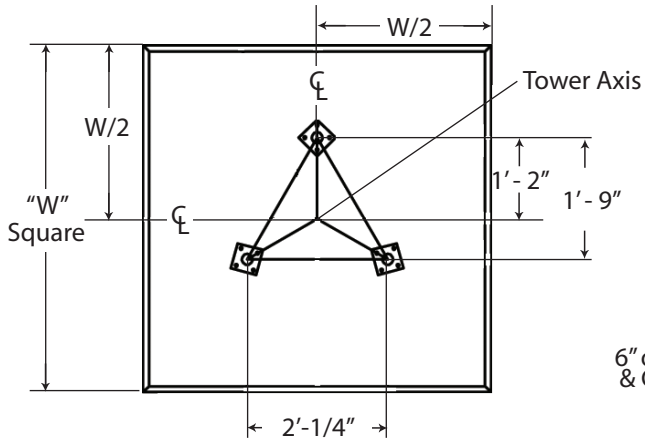
Includes short base section, tower sections, Rev G grounding material and 3/16" top mounting plate with attachment hardware.

Per Rev. G requirements, any structure greater than 10' requires a climber safety device.

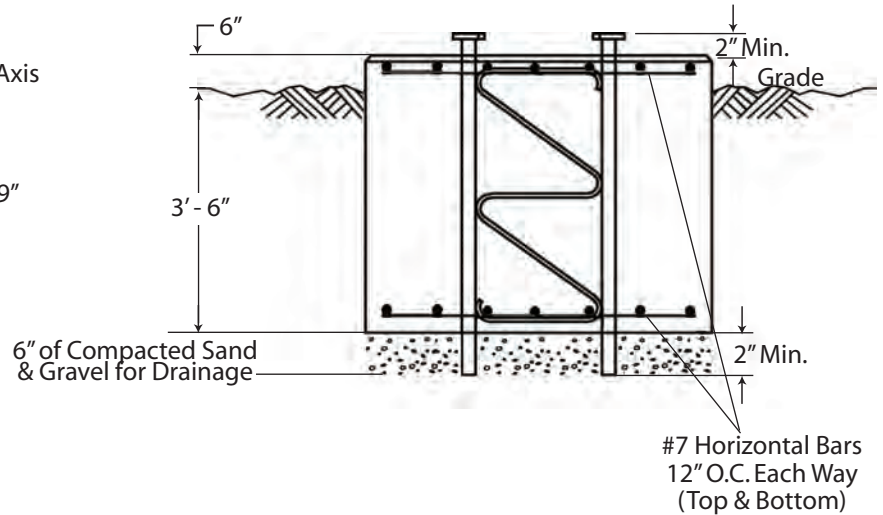
Please see page 173 for ordering information.



## 65G CAMERA TOWERS STANDARD FOUNDATION DETAILS



See tower elevation page for "W" dimension.



#7 Horizontal Bars  
12" O.C. Each Way  
(Top & Bottom)

## ACCESSORIES

 <p><b>ANTI-CLIMB PANELS</b> VW915A ORDERED SEPARATELY</p>	 <p><b>CLIMBING HARNESS</b> TTFBH-4D JOURNEYMAN HARNESS TTFBH-C/P PROFESSIONAL HARNESS</p>	 <p><b>SAFETY CABLE SLIDER WITH CARABINEER</b> TT-WG-500-W/SMC</p>	<p><b>SAFETY CABLE SYSTEM</b> TT05065 FITS ALL TOWER HEIGHTS</p>
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## GENERAL NOTES

1. Tower designs are in accordance with ANSI/TIA/222-G.
2. Camera and mount assumed symmetrically placed at tower top.
3. Tower design assumes one 7/8" line on each tower face.
4. Assembly drawings and standard foundation details are provided with the tower.
5. Standard foundation illustrated is for general information only and is based on Rev G presumptive clay soil parameters.



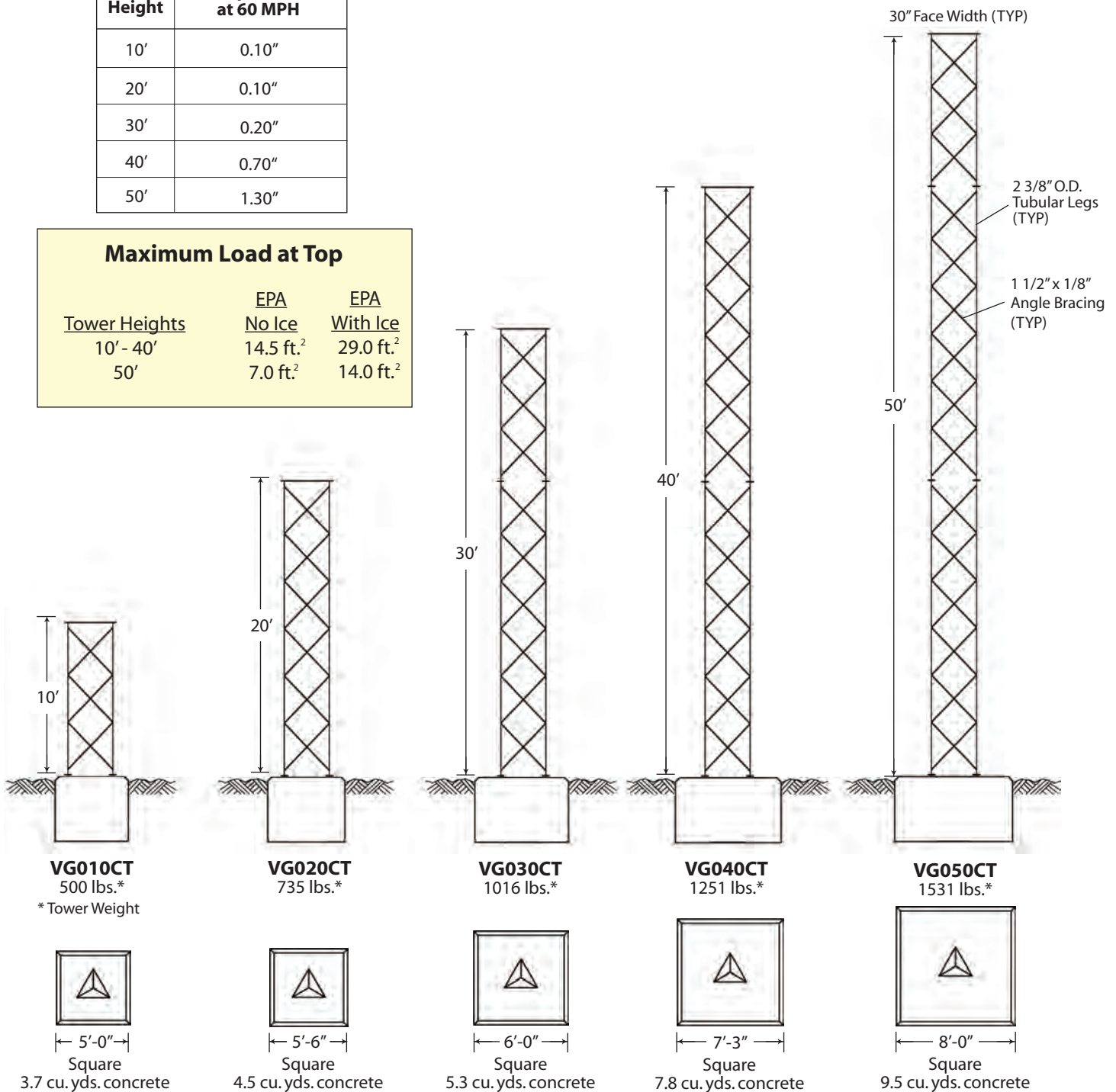
# STANDARD VG SELF-SUPPORTING CAMERA TOWERS (field bolted)

REV. G: 110 MPH 3-SEC GUST WIND SPEED (NO ICE),  
40 MPH 3-SEC GUST WIND SPEED (3/4" ICE),  
CLASS II, EXPOSURE C, TOPO CATEGORY 1  
SEISMIC COEFFICIENT  $S_s \leq 1.0$

Tower Height	Max. Tip Deflection at 60 MPH
10'	0.10"
20'	0.10"
30'	0.20"
40'	0.70"
50'	1.30"

Maximum Load at Top		
Tower Heights	EPA No Ice	EPA With Ice
10' - 40'	14.5 ft. <sup>2</sup>	29.0 ft. <sup>2</sup>
50'	7.0 ft. <sup>2</sup>	14.0 ft. <sup>2</sup>

KNOCKED DOWN

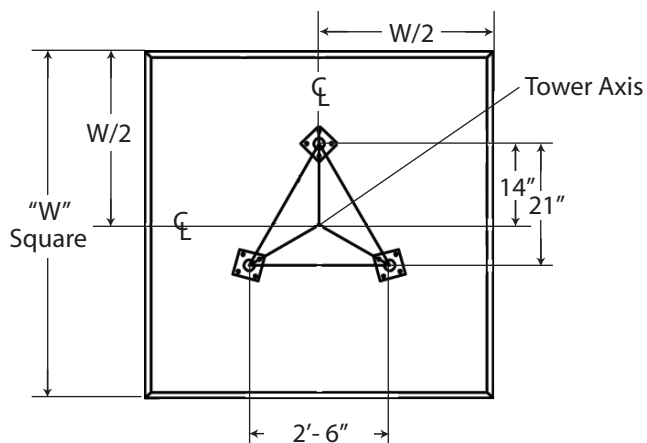


Includes anchor bolts, templates, tower sections, Rev G grounding material, 1/2" top mounting plate with attachment hardware and step bolts.

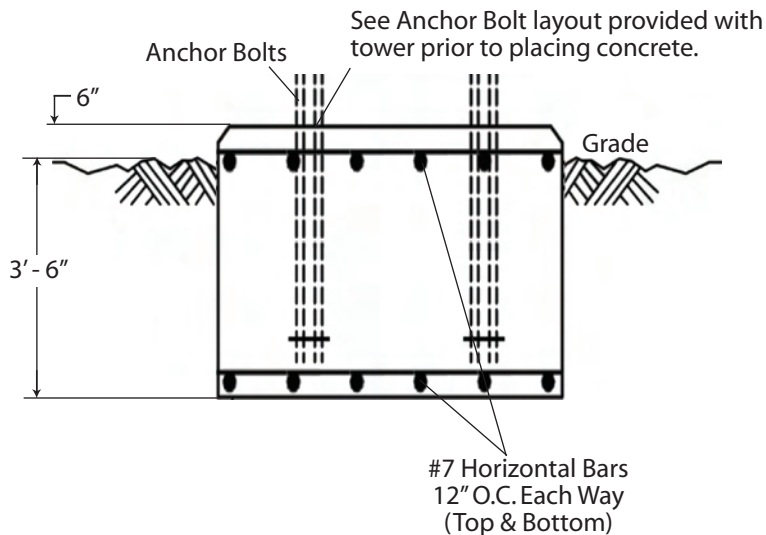
Per Rev. G requirements, any structure greater than 10' requires a climber safety device.

See page 175 for ordering information.

## VG CAMERA TOWERS STANDARD FOUNDATION DETAILS



See tower elevation page for "W" dimensions.



#7 Horizontal Bars  
12" O.C. Each Way  
(Top & Bottom)

## ACCESSORIES

 <p><b>ANTI-CLIMB PANELS</b> VW917A ORDERED SEPARATELY</p>	 <p><b>CLIMBING HARNESS</b> TTFBH-4D JOURNEYMAN HARNESS TTFBH-C/P PROFESSIONAL HARNESS</p>	 <p><b>SAFETY CABLE SLIDER WITH CARABINEER</b> TT-WG-500-W/SMC</p>	<p><b>SAFETY CABLE SYSTEM</b> TT050SSL FITS ALL TOWER HEIGHTS</p>
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## GENERAL NOTES

1. Tower designs are in accordance with ANSI/TIA/222-G.
2. Camera and mount assumed symmetrically placed at tower top.
3. Tower design assumes one 7/8" line on each tower face.
4. Assembly drawings and standard foundation details are provided with the tower.
5. Standard foundation illustrated is for general information only and is based on Rev G presumptive clay soil parameters.

Refer to pages 147-153 for Foundation General Notes.