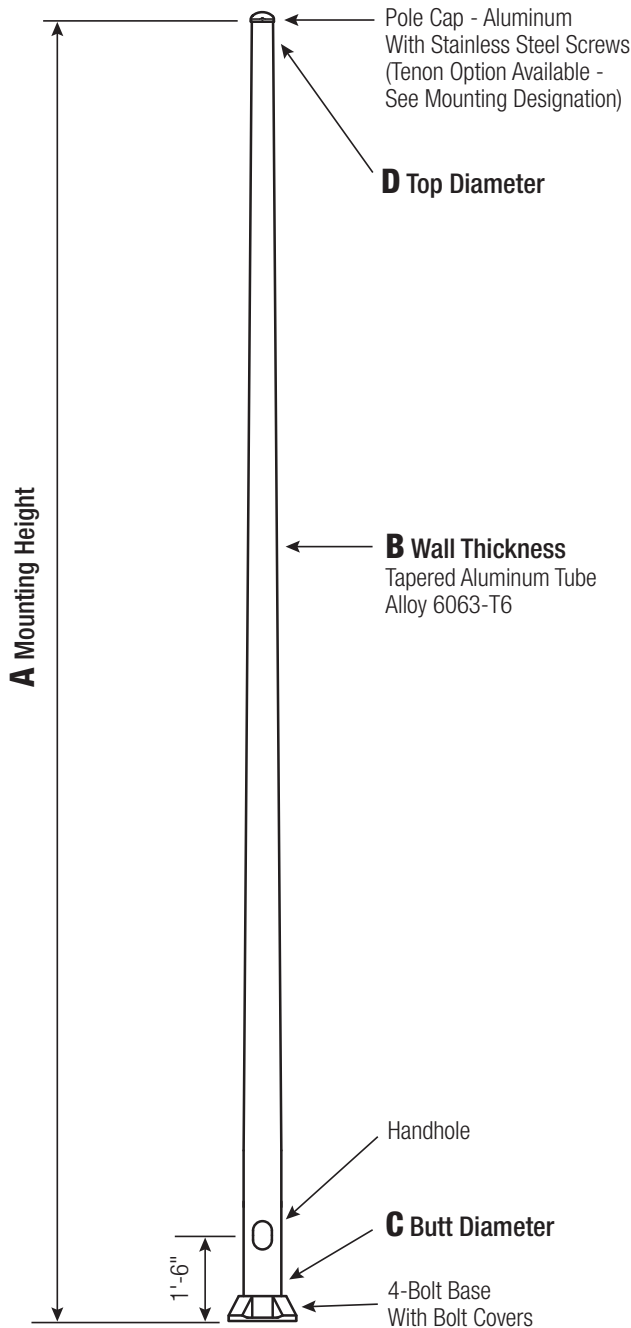


RTA

Round Tapered Aluminum Pole No Arm — 4-Bolt Base



Satin Aluminum or Powder Coated Finish per Customer Specification.

C BUTT DIA.	D TOP DIA.	F BOLT CIR. DIA.	G BASE SQ.	H BOLT PROJ.	I BOLT SIZE
4	3	6.5 - 8	7.5	2	.75 x 17 x 3
5	3	7.5 - 8	7.5	2	.75 x 17 x 3
6	4.5	9 - 10	9.75	2.75	.75 x 30 x 3*
7	4.5	10 - 11	10.5	2.75	1 x 36 x 4
8	4.5	11 - 12	11.25	2.75	1 x 36 x 4
9	4.5	12.5 - 14	12.75	2.75	1 x 36 x 4
10 Up To .250"	6	14 - 15	14	3.25	1 x 48 x 4
10 .312"	6	14 - 15	14	3.25	1.25 x 48 x 6

*1" x 36" x 4" Anchor Bolts can be specified for 6" butt diameter poles.

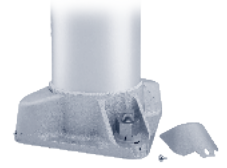
Dimensions in Inches

Pole

The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Style

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.



Handhole

4"-5" Butt Diameters - 2" x 4" Handhole with curved Lap Style Aluminum Door and two (2) SS Self-Tapping Attaching Screws. A Grounding Provision incorporating a tapped 1/4"-20NC hole is provided.

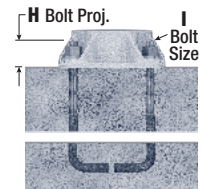
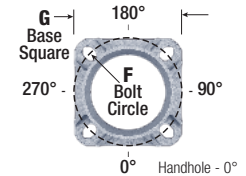
6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

Anchorage

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.

Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.



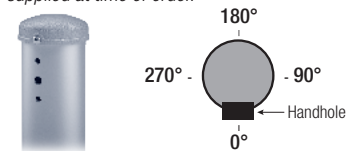
Vibration Damper

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

Mounting Designation

Side Drill Mount

For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.



Tenon Mount - Welded or Spun

For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3", 4", etc.). Tenon style is factory option. Welded Tenon can be specified.



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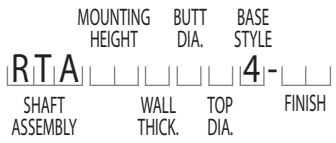
FLORIDA BUILDING CODE GUIDE
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WARNING: Do not install light pole without luminaire.

A Mtg. Hgt.	B Wall Thickness	C Butt Dia.	TOTAL LUM. WEIGHT	MAXIMUM EPA								OLD CATALOG NUMBER	CATALOG NUMBER
				120	130	140	150	160	170	180			
06	0.125	4	125	11.1	9.3	8.0	6.9	6.0	5.2	4.6	78-001	RTA06B4A4-**-	
08	0.125	4	90	7.9	6.6	5.6	4.7	4.0	3.5	3.0	78-002	RTA08B4A4-**-	
08	0.188	4	130	11.6	9.7	8.3	7.1	6.1	5.3	4.7	78-015	RTA08D4A4-**-	
10	0.125	4	65	5.8	4.8	4.0	3.3	2.8	2.3	2.0	78-003	RTA10B4A4-**-	
10	0.188	4	100	8.8	7.3	6.1	5.2	4.4	3.8	3.3		RTA10D4A4-**-	
10	0.125	5	130	11.5	9.6	8.1	6.9	6.0	5.2	4.5	78-012	RTA10B5A4-**-	
10	0.188	5	200	17.1	14.4	12.3	10.5	9.1	8.0	7.1		RTA10D5A4-**-	
12	0.125	4	50	4.4	3.5	2.8	2.2	1.8	1.4	1.2	78-004	RTA12B4A4-**-	
12	0.188	4	75	6.8	5.6	4.6	3.8	3.2	2.7	2.2	78-018	RTA12D4A4-**-	
12	0.125	5	105	9.0	7.4	6.2	5.2	4.4	3.8	3.3	78-009	RTA12B5A4-**-	
12	0.156	5	130	11.4	9.5	8.0	6.8	5.8	5.0	4.4	78-009W3	RTA12C5A4-**-	
12	0.188	5	160	13.7	11.5	9.7	8.2	7.1	6.2	5.4	78-009W4	RTA12D5A4-**-	
14	0.125	4	40	3.2	2.4	1.8	1.4	1.0	0.7	-	78-005	RTA14B4A4-**-	
14	0.188	4	60	5.3	4.2	3.4	2.7	2.2	1.7	1.4	78-019	RTA14D4A4-**-	
14	0.125	5	80	7.2	5.8	4.8	3.9	3.3	2.8	2.3	78-010	RTA14B5A4-**-	
14	0.156	5	105	9.2	7.5	6.2	5.2	4.4	3.8	3.2	78-021	RTA14C5A4-**-	
14	0.188	5	130	11.2	9.2	7.7	6.5	5.5	4.8	4.1	78-022	RTA14D5A4-**-	
16	0.188	4	45	4.0	3.1	2.4	1.8	1.3	1.0	0.7	78-027	RTA16D4A4-**-	
16	0.125	5	65	5.6	4.4	3.5	2.8	2.3	1.9	1.5	78-011	RTA16B5A4-**-	
16	0.156	5	85	7.3	5.9	4.8	3.9	3.3	2.7	2.3	78-029	RTA16C5A4-**-	
16	0.188	5	105	9.1	7.4	6.1	5.1	4.2	3.6	3.1	78-030	RTA16D5A4-**-	
16	0.156	6	170	14.5	12.1	10.3	8.8	7.7	6.7	5.9	51-002S48	RTA16C6B4-**-	
16	0.188	6	215	17.8	14.9	12.7	10.9	9.5	8.3	7.3		RTA16D6B4-**-	
18	0.125	5	50	4.2	3.2	2.5	1.9	1.4	1.1	0.8	78-007	RTA18B5A4-**-	
18	0.156	5	65	5.7	4.5	3.6	2.9	2.3	1.9	1.5	78-031	RTA18C5A4-**-	
18	0.188	5	85	7.2	5.8	4.7	3.8	3.1	2.6	2.2	78-032	RTA18D5A4-**-	
18	0.156	6	140	11.9	9.8	8.3	7.1	6.1	5.3	4.7		RTA18C6B4-**-	
18	0.188	6	175	14.7	12.3	10.4	8.9	7.7	6.8	5.9		RTA18D6B4-**-	
18	0.156	7	215	17.8	14.8	12.6	10.9	9.4	8.3	7.3		RTA18C7B4-**-	
20	0.125	5	40	3.0	2.2	1.5	1.0	0.7	-	-	78-008	RTA20B5A4-**-	
20	0.156	5	50	4.4	3.3	2.5	1.9	1.5	1.1	0.8	78-033	RTA20C5A4-**-	
20	0.188	5	65	5.7	4.4	3.5	2.8	2.2	1.8	1.4		RTA20D5A4-**-	
20	0.125	6	85	7.2	5.8	4.8	4.1	3.4	2.9	2.5	51-001	RTA20B6B4-**-	
20	0.156	6	115	9.7	8.0	6.7	5.7	4.9	4.2	3.6	51-002	RTA20C6B4-**-	
20	0.188	6	145	12.3	10.1	8.5	7.3	6.3	5.4	4.8	51-003	RTA20D6B4-**-	
20	0.156	7	180	15.0	12.4	10.5	9.0	7.8	6.8	5.9	51-004	RTA20C7B4-**-	
20	0.188	7	225	18.5	15.4	13.1	11.3	9.8	8.5	7.5	51-005	RTA20D7B4-**-	
20	0.156	8	255	21.0	17.6	15.0	12.9	11.2	9.8	8.6	51-006	RTA20C8B4-**-	
20	0.188	8	300	25.8	21.6	18.5	15.9	13.9	12.2	10.7	51-007	RTA20D8B4-**-	
25	0.156	6	65	5.7	4.4	3.6	2.9	2.4	2.0	1.7	51-062	RTA25C6B4-**-	
25	0.188	6	90	7.6	6.0	5.0	4.1	3.5	2.9	2.5	51-063	RTA25D6B4-**-	
25	0.156	7	115	9.7	7.8	6.5	5.5	4.7	4.0	3.4	51-064	RTA25C7B4-**-	
25	0.188	7	150	12.4	10.1	8.5	7.2	6.2	5.3	4.6	51-065	RTA25D7B4-**-	
25	0.156	8	170	14.4	11.8	10.0	8.5	7.3	6.3	5.5	51-066	RTA25C8B4-**-	
25	0.188	8	215	18.0	14.9	12.6	10.8	9.4	8.1	7.1	51-067	RTA25D8B4-**-	
25	0.219	8	260	21.4	17.8	15.2	13.0	11.3	9.8	8.6	51-068	RTA25E8B4-**-	
25	0.250	8	300	24.8	20.7	17.6	15.2	13.2	11.5	10.1	51-069	RTA25F8B4-**-	
25	0.156	9	235	19.6	16.3	13.9	11.9	10.3	8.9	7.8		RTA25C9B4-**-	
25	0.156	10	300	25.9	21.8	18.6	16.0	13.8	12.1	10.5		RTA25C1C4-**-	
30	0.156	7	70	6.0	4.5	3.6	2.9	2.4	2.0	1.6	51-124	RTA30C7B4-**-	
30	0.188	7	95	8.1	6.4	5.2	4.3	3.6	3.0	2.6	51-125	RTA30D7B4-**-	
30	0.156	8	115	9.7	7.8	6.4	5.4	4.5	3.9	3.3	51-126	RTA30C8B4-**-	
30	0.188	8	150	12.6	10.3	8.6	7.3	6.2	5.3	4.6	51-127	RTA30D8B4-**-	
30	0.219	8	185	15.4	12.6	10.6	9.0	7.7	6.7	5.8	51-128	RTA30E8B4-**-	
30	0.250	8	220	18.0	14.9	12.5	10.7	9.2	8.0	7.0	51-129	RTA30F8B4-**-	
30	0.188	9	215	17.6	14.6	12.4	10.5	9.1	7.8	6.8	51-131	RTA30D9B4-**-	
30	0.250	9	300	24.7	20.6	17.5	15.0	13.0	11.3	9.9	51-133	RTA30F9B4-**-	
30	0.188	10	285	23.7	19.9	16.9	14.5	12.5	10.8	9.4	51-139	RTA30D1C4-**-	
30	0.250	10	300	32.8	27.7	23.6	20.3	17.6	15.4	13.5	51-141	RTA30F1C4-**-	
35	0.156	8	75	6.1	4.7	3.7	3.0	2.4	1.9	1.5	51-186	RTA35C8B4-**-	
35	0.188	8	105	8.5	6.7	5.5	4.5	3.7	3.1	2.6	51-187	RTA35D8B4-**-	
35	0.219	8	130	10.8	8.6	7.1	6.0	5.0	4.2	3.6	51-188	RTA35E8B4-**-	
35	0.250	8	160	13.0	10.5	8.7	7.4	6.3	5.3	4.6	51-189	RTA35F8B4-**-	
35	0.188	9	155	12.7	10.4	8.6	7.3	6.1	5.2	4.4	51-191	RTA35D9B4-**-	
35	0.250	9	225	18.5	15.3	12.9	11.0	9.4	8.1	7.0	51-193	RTA35F9B4-**-	
35	0.188	10	215	17.8	14.9	12.5	10.6	9.1	7.7	6.6	51-199	RTA35D1C4-**-	
35	0.219	10	260	21.5	18.0	15.2	13.0	11.1	9.6	8.3	51-200	RTA35E1C4-**-	
35	0.250	10	300	25.2	21.1	17.9	15.3	13.2	11.4	9.9	51-201	RTA35F1C4-**-	
35	0.312	10	300	32.5	27.4	23.3	20.0	17.3	15.1	13.1	51-202	RTA35G1C4-**-	
40	0.188	8	65	5.3	3.9	3.0	2.3	1.8	1.3	1.0	51-247	RTA40D8B4-**-	
40	0.219	8	90	7.3	5.5	4.4	3.5	2.9	2.3	1.8	51-248	RTA40E8B4-**-	
40	0.250	8	110	9.1	7.1	5.8	4.7	3.9	3.2	2.7	51-249	RTA40F8B4-**-	
40	0.188	9	105	8.9	7.1	5.7	4.7	3.9	3.2	2.6	51-251	RTA40D9B4-**-	
40	0.250	9	170	13.8	11.2	9.3	7.8	6.6	5.6	4.7	51-253	RTA40F9B4-**-	
40	0.188	10	155	13.3	11.0	9.1	7.6	6.4	5.3	4.4	51-259	RTA40D1C4-**-	
40	0.219	10	195	16.4	13.6	11.4	9.6	8.2	6.9	5.8	51-260	RTA40E1C4-**-	
40	0.250	10	235	19.5	16.3	13.7	11.6	9.9	8.4	7.2	51-261	RTA40F1C4-**-	
40	0.312	10	300	25.5	21.4	18.1	15.5	13.3	11.4	9.9	51-262	RTA40G1C4-**-	

Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.



Catalog Number Example -

RTA 30 D 8 B 4 - 01

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Satin Aluminum Finish

Wall Thickness

- B = .125"
- C = .156"
- D = .188"
- E = .219"
- F = .250"
- G = .312"

Butt Diameter

- 4 = 4"
- 5 = 5"
- 6 = 6"
- 7 = 7"
- 8 = 8"
- 9 = 9"
- 1 = 10"

Top Diameter

- A = 3"
- B = 4.5"
- C = 6"

Base Style

4 = 4-Bolt Base

Finish

- O1 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

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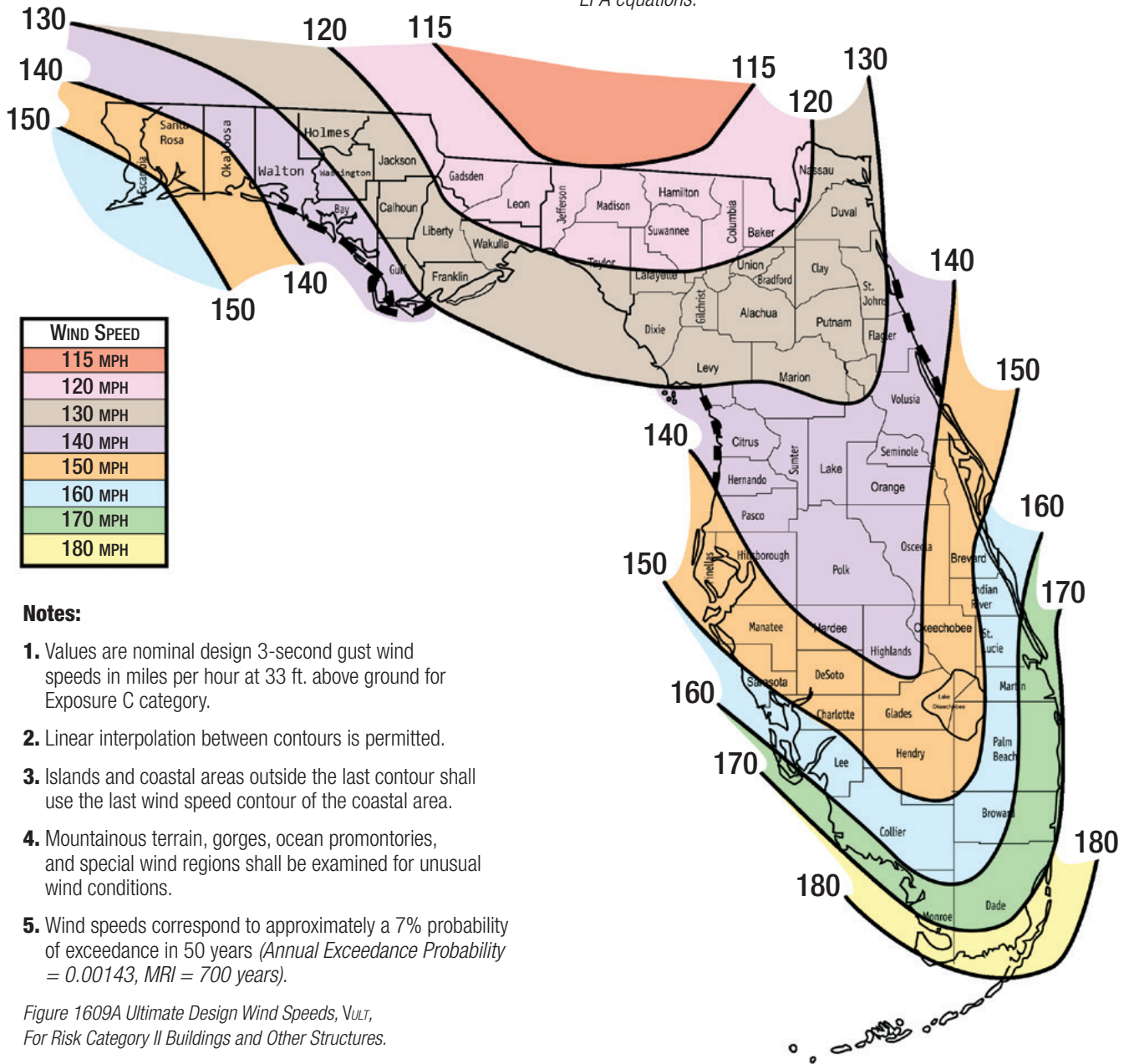
EPA Note:
EPA's based on symmetrically placed side mounted fixture(s) not exceeding height of the pole.



This Hapco Florida Building Code Guide has been developed to provide a quick reference for EPAs (Effective Projected Areas) meeting the 2017 FBC.

The EPA's in this publication are based on the 3-second gust wind map taken from the 2017 Florida Building Code (Figure 1609A Wind Map shown below). These EPA's cannot be used with older or newer maps.

This Wind Map is to be used in conjunction with ASCE 7-16 Wind Pressure and 2009 AASHTO Design Equations. Wind regions from maps other than the one shown below may not represent the EPA values listed in this catalog. Please contact Hapco for more detailed information about EPA equations.



Notes:

1. Values are nominal design 3-second gust wind speeds in miles per hour at 33 ft. above ground for Exposure C category.
2. Linear interpolation between contours is permitted.
3. Islands and coastal areas outside the last contour shall use the last wind speed contour of the coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
5. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (Annual Exceedance Probability = 0.00143, MRI = 700 years).

Figure 1609A Ultimate Design Wind Speeds, V_{ULT} , For Risk Category II Buildings and Other Structures.

Shielding Factor

The table shown at right will assist you in calculating the total EPA for many of the popular luminaire configurations. Using the shielding factor to calculate total EPA prevents an over-designed pole being used, resulting in cost savings.

LUMINAIRE CONFIGURATION	EPA	SHIELDING FACTOR	TOTAL EPA
2 @ 180°	1.5	X 2.0	= 3.0
3 @ 180°	1.5	X 3.0	= 4.5
4 @ 180°	1.5	X 4.0	= 6.0
3 @ 120°	1.5	X 2.3	= 3.45 (Shielded)
4 @ 90°	1.5	X 3.2	= 4.8 (Shielded)

Example assumes a single luminaire EPA of 1.5.

ASCE 7-16 Wind Load Design Assumptions:

- Risk Cat. II, MRI = 700 yrs., Exp. and Surface Roughness Cat. "C"
- $K_{zt} = 1.0, K_d = 1.0, G = 1.14, V_{ASD} = \sqrt{0.6} V_{ULT}$ (FBC 2017 1609.3.1)
- C_f = drag coefficients calculated per AASHTO LTS-6 (ASCE 7-16 C29.4)
- Strength Equations per AASHTO LTS-6 Allowable Stress Increase = 1.33

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