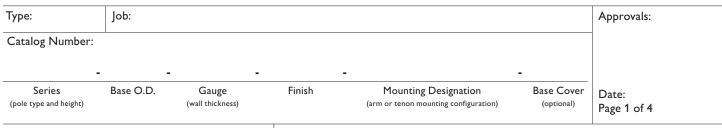
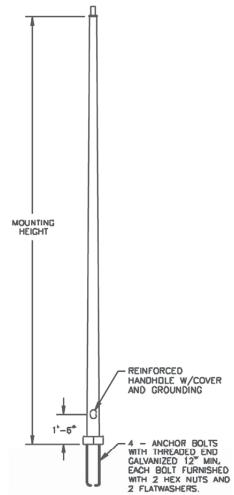
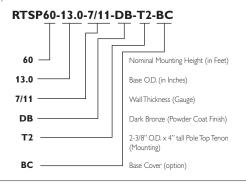
### Round Tapered Steel Pole





#### Round Tapered Steel Pole (RTSP)

See below for ordering example to specify a 60' Round Tapered Tapered Pole, having a 13.00" O.D. Base dimension, 7 gauge wall thickness (bottom section), 11 gauge wall thickness (upper section), Dark Bronze powder coat Finish, with a 2-3/8" O.D. x 4" tall pole top tenon, and the optional base cover.



### **Specifications**

#### Anchor Bolts

Anchor bolts are fabricated from carbon steel conforming to AASHTO M314 Grade-55 or ASTM F1554 Grade-55. Bolts have an "L" bend on one end and are galvanized a minimum of 12 inches on the threaded end. Four anchor bolts are provided per pole. Each anchor bolt is furnished with two hex nuts and two flat washers.

#### Anchor Base

The anchor base (base plate) is fabricated from structural quality hot rolled carbon steel plate conforming to ASTM A36. The base plate telescopes the pole shaft and is circumferentially welded top and bottom. The base is provided with a slotted anchor bolt opening that enables a range of bolt circles to be utilized. Corresponding bolt circles for each pole type are listed in the Pole Information Chart. See Pole Base Detail.

#### Pole Shaft

The pole shaft conforms to ASTM A595 Grade-A and is supplied in 11 gauge (0.1196"), 7 gauge (0.1793"), 5 gauge (0.20292"), or 3 gauge (0.2391") thickness. Shafts are of either one-piece or two-piece construction, with a full length longitudinal high frequency electric resistance weld. The shaft is round in cross section having a uniform taper of approximately 0.14 inches per foot of length.

#### Handhole

The reinforcing handhole rim shall consist of either a nominal  $3" \times 5"$  rectangular shaped tubing, or  $4" \times 6.5"$  oval shaped pipe material. The  $3" \times 5"$  handhole is provided witht a steel attachment bar, steel cover, and one round head machine screw. The  $4" \times 6.5"$  handhole includes two tabs for mounting a steel cover with hex head attachment screws. Both handhole types are welded in the pole shaft and are located 1'-6" above the base.

#### **Electrical Ground**

A nut holder is provided near the handhole and includes a 0.5"-13 UNC hex head bolt and nut.

#### Nut Covers

Nut covers for anchor bolts are standard and are zinc die cast. Each cover is fastened to the shaft by a 0.25" stainless steel, self-tapping, hex head screw.

#### Pole Top Tenon

Pole top tenons are standard and are fabricated from structural quality hot rolled carbon steel with a guaranteed minimum yield strength of 30,000 psi. A pole top plate and tenon of weldable grade hot rolled commercial quality carbon steel is circumferentially welded to the top of the pole shaft. This plate provides an internal weather resistant wiring raceway into the pole top tenon. Standard tenon sizes are 2-3/8" O.D.  $\times$  4" tall (T2), 3.0" O.D.  $\times$  5-5/8" tall (T3), or 4" O.D.  $\times$  5-5/8" tall (T4) vertical pipe tenon.

#### Pole Top Cap and Arm Mounting

An optional removeable top cap is available to be used in conjunction with drilled pole shafts for accommodation of a direct mounted luminaire arm attachment. Specify choice of drill mounting (D1 through D6) for luminaire arm mounting configuration required.

#### Finish

Standard available finishes are hot-dip galvanized (GV) and polyester powder coat, electrostatically applied and oven cured, in the colors listed.

#### Fastening Hardware

All structural fasteners are galvanized high strength carbon steel. All other fasteners are galvanized or zinc plated carbon steel or stainless steel.

### Design

#### Consult Wind Velocity Map to ensure suitability for location and application.

Standards (poles) are designed to withstand dead loads and theoretical dynamic loads developed by variable wind speeds, as charted, with an appropriate gust factor under the following conditions:

### Wind velocities are based on 10 mph increments from 80 mph through 100 mph.

**Note:** Standards (poles) to be located in areas of known abnormal conditions require special consideration. For example: coastal areas, airports, and areas of special winds such as the Chinook Winds along the eastern slope of the Rocky Mountains.

Standards (poles) are designed for ground mounted applications. Consult factory for special consideration for mounting on structures (such as bridges and buildings). Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated into the standard.



### Round Tapered Steel Pole

Туре:	Job:					Page 2 of 4
Series/Pole Height	(1) Base (2)		Gauge (3)	Finish	Mounting Designation Options	Base Cover
□ RTSP20       20' pol         □ RTSP25       25' pol         □ RTSP30       30' pol         □ RTSP35       35' pol         □ RTSP39       39' pol         □ RTSP45       45' pol         □ RTSP50       50' pol         □ RTSP60       60' pol         □ RTSP65       65' pol	le	□ 10.0 □ 11.0 □ 12.0 □ 12.5 □ 13.0	11 7 3 3 7/11 (4) 5/7 (4) 7/7 (4)	GV Galvanize GR (5) Gray SA (5) Satin Aluminum DB (5) Dark Bronze BLK (5) Black WHT (5) White	Tenon Mount Configurations (6)  □ T2 2.375" (2-3/8") O.D. x 4.0" tall tenon (7)  □ T3 3.0" O.D. x 5.625" (5-5/8") tall tenon  □ T4 4.0" O.D. x 5.625" (5-5/8") tall tenon  □ PL 2.375" (2-3/8") O.D. plain top  Arm Mount Configurations (8)  □ D1-DT(Y) 1 @ 90°, specify drill template (Y)  □ D2-DT(Y) 2 @ 180°, specify drill template (Y)  □ D3-DT(Y) 3 @ 120°, specify drill template (Y)  □ D4-DT(Y) 4 @ 90°, specify drill template (Y)  □ D5-DT(Y) 2 @ 90°, specify drill template (Y)	BC optional base cover
☐ RTSP70 70' pol  (1) Round Tapered Steel Pole S	le				D6-DT(Y) 3 @ 90°, specify drill template (Y)  idl colors or finishes. (7) 4-1/2" tall tenon available as special order. C	

<sup>(1)</sup> Round Tapered Steel Pole Series. Consult Pole Information Chart for available base-to-top taper and gauge.

- (6) 17 suitable for use with all poles.
  13 suitable for poles with pole top O.D. of 4" or more.
  14 suitable for use with 6" pole top O.D. only. Standard pole top pipe tenon options listed. Consult factory to specify custom size.
- (7) 4-1/2" tall tenon available as special order. Consult factory when specifying with PTRD or PTSQ (EAL post top mounting options).
- (8) Drill Mounting patterns for Round Pole. Specify appropriate Drill Template (Y) for intended luminaire to be arm mounted.

### Pole Information Chart (1,2)

Nominal	Pole	Shaft					Po	le Base		Anchor Bolts		MPH 3 Gust		MPH 3 Gust		MPH 3 Gust
Mounting Height (ft)	Catalog Number	Base O.D. (in)	Top O.D. (in)	Wall Thickness (ga)	Struct. Weight (lbs)	Bolt C Dia. (in)	ircle ± (in)	Square (in)	Thk. (in)	Dia. x Lngth x Hk. (in)	Max. EPA (ff²)	Max. Weight (lbs)	Max. EPA (ft²)	Max. Weight (lbs)	Max. EPA (ff²)	Max. Weight (lbs)
20	RTSP20- 5.9-11 -XXX-XX-XX <sup>(4)</sup> RTSP20- 6.5-11 -XXX-XX-XX	5.9 6.5	3.1 3.7	11 11	140 160	9.0 9.5	0.5 0.5	10.00 10.50	0.88 0.88	1.00 x 36 x 4 1.00 x 36 x 4	19.3 24.2	482 605	15.1 19.3	377 482	12.2 15.6	305 390
25	RTSP25- 5.9-11 -XXX-XX-XX <sup>(4)</sup> RTSP25- 7.0-11 -XXX-XX-XX	7.0	2.4 3.5	11 11	155 200		0.5 0.5	10.00 10.88	0.88 0.88	1.00 x 36 x 4 1.00 x 36 x 4	12.5 20.3	312 507	9.9 16.2	247 405	8.0 13.1	200 327
30	RTSP30- 6.6-11 -XXX-XX-XX RTSP30- 8.0-11 -XXX-XX-XX	6.5 6.6 8.0	3.5 2.4 3.8	7 11 11	280 200 265		0.5 0.5	10.88 10.50 11.50	0.88 0.88	1.00 x 36 x 4 1.00 x 36 x 4 1.00 x 36 x 4	30.5 11.7 18.9	760 292 473	9.3 14.9	625 232 373	7.5 12.0	495 187 300
35	RTSP30- 8.0- 7 -XXX-XX-XX RTSP35- 7.3- 11 -XXX-XX-XX RTSP35- 8.5- 11 -XXX-XX-XX	7.3 8.5	3.8 2.4 3.6	7 11 11	380 250 315	11.0 10.5 11.5	0.5 0.5	11.50 11.25 12.00	0.88 1.00	1.25 x 42 x 6 1.00 x 36 x 4 1.00 x 36 x 4	33.5 11.2 18.9	838 280 472	8.9 15.1	675 222 377	7.1 12.2	550 177 305
39	RTSP35- 9.5- 11 -XXX-XX-XX RTSP39- 7.8- 11 -XXX-XX-XX RTSP39- 9.0- 11 -XXX-XX-XX	7.8 9.0	2.4 3.6	11 11 11	370 285 355	13.0 11.0 12.5	0.5 0.5	13.00 11.50 12.38	1.00 0.88 1.00	1.00 x 36 x 4 1.00 x 36 x 4 1.00 x 36 x 4	10.7 17.2	267 430	8.5 13.5	455 212 338	6.6 10.8	363 165 270
45	RTSP39- 9.0- 7 -XXX-XX-XX RTSP45-10.0- 11 -XXX-XX-XX RTSP45-10.0- 11 -XXX-XX-XX RTSP45-11.0- 7 -XXX-XX-XX	9.0 10.0 10.0 11.0	3.6 3.7 3.7 4.7	7 11 7 7	515 450 650 780	12.5 13.5 13.5 15.0	0.5 0.5	12.38 14.00 14.00 16.50	1.25 1.00 1.25 1.50	1.25 x 42 x 6 1.00 x 36 x 4 1.25 x 42 x 6 1.25 x 42 x 6	28.5 17.4 28.5 35.7	715 435 715 893	23.0 13.5 23.0 28.0	575 338 575 700	19.0 10.6 19.0 22.3	475 265 475 558
50	RTSP50-10.0- 11 -XXX-XX-XX RTSP50-10.0- 7 -XXX-XX-XX RTSP50-11.0- 7 -XXX-XX-XX	10.0 10.0 11.0	3.0 3.0 4.0	11 7 7	475 680 812	13.5 13.5 15.0	0.5 0.5	14.00 14.00 16.50	1.00 1.25 1.50	1.00 x 36 x 4 1.25 x 42 x 6 1.25 x 42 x 6	13.2 20.5 29.9	330 512 748	10.6 16.5 23.5	265 412 588	8.3 13.6 18.6	208 340 465
	RTSP50-13.0- 7 -XXX-XX-XX RTSP50-13.0- 3 -XXX-XX-XX	13.0 13.0	6.0	7 3	1020 1335	17.0 17.5	N/A	18.00 18.50	1.50 1.75	1.50 x 54 x 6 1.75 x 84 x 6	50.4 69.2	1260 1730	39.7 55.0	992 1375	31.4 44.2	785 1105
55	RTSP55-11.0-7/11-XXX-XX-XX RTSP55-12.0-7/11-XXX-XX-XX RTSP55-12.5-5/7-XXX-XX-XX	11.0 12.0 12.5	3.5 4.5 5.2	7/11 7/11 5/7	890 975 1225	15.0 16.0 16.5	N/A	16.50 17.00 17.50	1.50 1.50 1.50	1.25 x 42 x 6 1.50 x 54 x 6 1.50 x 54 x 6	21.6 32.2 43.8	540 805 1095	17.7 25.9 35.0	442 647 875	14.7 21.1 28.6	367 527 715
60	RTSP60-12.0-7/7-XXX-XX-XX RTSP55-13.0-7/11-XXX-XX-XX RTSP55-12.5-5/7-XXX-XX-XX	12.0 13.0 12.5	4.0 4.8 4.5	7/7 7/11 5/7	1060 1075 1275	16.0 17.0 16.5	N/A	17.00 18.00 17.50	1.50 1.50 1.50	1.50 x 54 x 6 1.50 x 54 x 6 1.50 x 54 x 6	25.9 30.1 34.0	647 752 850	20.7 24.5 27.6	517 612 690	16.8 20.2 22.6	420 505 565
65	RTSP65-13.0-7/7-XXX-XX-XX RTSP65-13.0-5/7-XXX-XX-XX	13.0 13.0	4.3 4.3	7/7 5/7	1200 1400	17.0 17.0	N/A	18.00 18.00	1.50 1.50	1.50 x 54 x 6 1.50 x 54 x 6	27.3 30.8	682 770	22.0 24.8	550 620	17.9 20.4	447 510
70	RTSP70-13.0-7/7-XXX-XX-XX RTSP70-13.0-5/7-XXX-XX-XX	13.0 13.0	3.6 3.6	7/7 5/7	1270 1440	17.0 17.0		18.00 18.00	1.50 1.50	1.50 x 54 x 6 1.50 x 54 x 6	20.6 23.6	515 590	16.7 19.2	417 480	13.7 15.8	342 395

Pole Information Chart Notes:

<sup>(4)</sup> Poles provided with 3" x 5" nominal handhole; all others 4" x 6.5" nominal.



<sup>(2)</sup> Pole base O.D. in inches. See chart for top O.D.

<sup>(3)</sup> See chart for availability with desired pole height.

<sup>(4)</sup> Two section pole. Bottom section is the heavier gauge material.

<sup>(5)</sup> Powder coat finish. Consult factory for special colors or finishes.

<sup>(1)</sup> Structure weight is a nominal value which includes the pole shaft and base plate only.

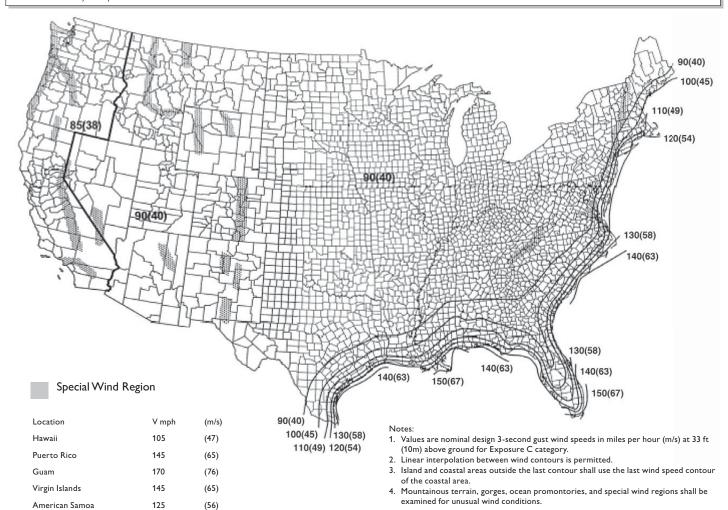
<sup>[2]</sup> Designs showing two shaft gauges indicates structure is provided as a two-piece, field-assembled unit. Heavier gauge is the bottom section.

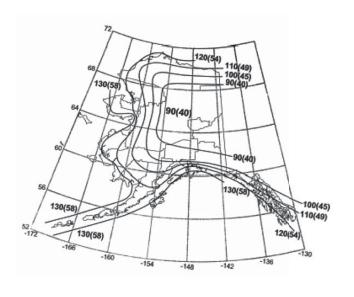
<sup>(3)</sup> Maximum weight and EPA values are based on pole top tenon mounted fixtures and/or brackets having a centroid 2'-6" above the nominal mounting height. Consult factory regarding loading criteria for side mounted luminaires.

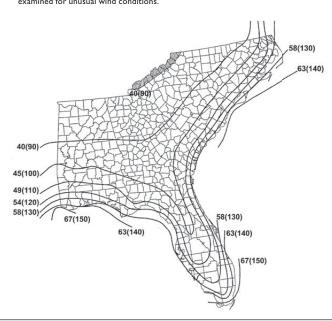
## Round Tapered Steel Pole

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Wind Velocity Map









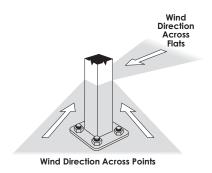
## Round Tapered Steel Pole

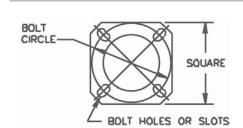
Type: Job: Page 4 of 4

### Wind Direction detail

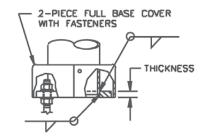
Maximum weight and EPA values are determined by analyzing stress from two wind directions as shown.

Due to the increased area and reduced section properties, stress levels across the points generally control the allowable loads

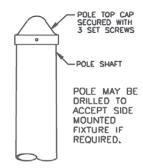




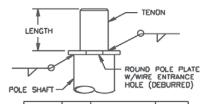
Pole Base and Bolt Circle detail



optional Pole Top Cap detail







DESIGN NUMBER	D.D. (in)	PIPE SIZE	LENGTH (in)
T2	2,375	2,0° SCHED 80	4
T4	4,000	3.5° SCHED 40	5.625
PL	2,400	POLE TOP	N,A,

Notes

