# POLE INTRODUCTION

## POLE SELECTION GUIDE

Poles should initially be selected, according to lighting application needs, and second, but equally important, according to the structural requirements imposed on the pole by the required lighting fixtures and bracketry. Before attempting to make this selection, it would be helpful to have an understanding of the terminology, such as steady wind velocity, gust velocity, EPA, special wind region, and maximum weight. Then a step-by-step procedure can be followed to select the proper pole for your particular requirements.

### Steady Wind Velocity

This is the maximum steady wind velocity expressed in MPH likely to occur in a specific location. Refer to Iso-Tach wind map on the next page for the wind velocity in your location.

### Gust Velocity

Gust velocity is a momentary increase in wind causing a whipping action. In all cases, Hubbell and Spaulding pole calculations include a 1.3 gust factor over steady wind velocity. This means that poles designed to withstand winds of 80 MPH will withstand gusts to 104 MPH.

### Effective Projected Area

Effective Projected Area (EPA) is the exposed surface area of a fixture or bracket multiplied by a shape factor which varies depending on the shape of the fixture or bracket. For example, a large rectangular fixture will present more resistance to the wind than will a round or cylindrical shape.

### Special Wind Regions

Some locations such as mountainous areas and areas surrounding the Great Lakes exhibit wind velocities considerably higher than the surrounding areas. Consult local authorities to determine maximum wind velocities and select equipment accordingly.

### Maximum Weight

This is the maximum allowable total weight the pole is capable of supporting. Its value is determined by the total weight of the lighting fixtures and bracketry for your application requirements.

### Pole Selection Procedure

With an understanding of the parameters for pole selection, you can follow this simple step-by-step procedure and, with confidence, select a pole to meet your particular requirements.

1. Determine the site location and steady wind velocity by referring to the Iso-Tach map. If the location falls between Iso-Tach bars, or on the 70 or 90 MPH bar, use the next highest wind velocity; i.e., 80 or 100 MPH. If the steady wind exceeds 100 MPH, consult factory.

2. Total the EPA for the required luminaires and bracketry.

3. Total the weight of the luminaires and bracketry.

4. Compare steps 2 and 3 with the maximum allowable EPA and weight as shown for the style, material, and height pole required. The maximum allowable must be equal or exceed the totals from steps 2 and 3.

### Pole Selection Concerns

Reference the Pole Selection Guide and Installation & Maintenance Concerns on every pole catalog page.

Caution: These selection methods are guidelines only. Hubbell Lighting assumes no responsibility for selection and recommends you consult qualified professionals for verification of overall system design, site suitability, foundation considerations and applicable code and regulatory conformances.

Maintenance: The facility owner's/manager's regular scheduled maintenance program must include initial and regular follow-up inspections for structural damage, broken welds, tampering, nut loosening, missing wire covers, dangling electrical wiring, internal or external corrosion, foundation settlement, excessive shaft deflection and vibration for all lighting poles. Immediate repair or replacement may be necessary.

Overloading: Do not overload poles by attaching flags, banners, or any items that can add excessive wind or mechanical load to designed pole assemblies.

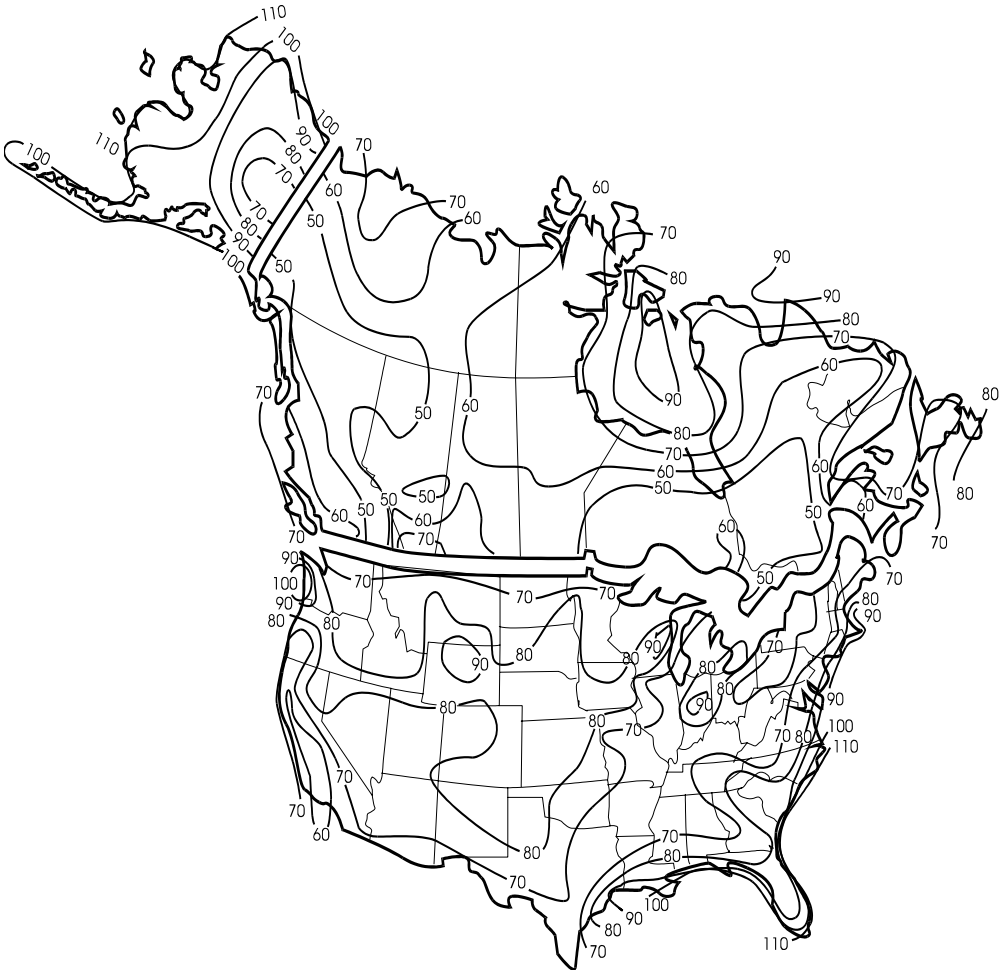
Observation: Installation and local area conditions can dramatically affect lighting pole performance. Excessive vibration may result from some wind and mounting conditions. Only individuals with local knowledge, who have observed or inspected the site can effectively evaluate site specific issues. Consult the factory for information on vibration dampers, special corrosion, foundation settlement, excessive shaft deflection and vibration for all lighting poles. Immediate repair or replacement may be necessary.

# WIND SPEEDS

Basic Wind Velocity (Miles Per Hour) (KM/HR - Multiply Values by 1.61)

- United States values are based on annual extreme-mile 30 feet (9.14 meters) above the ground, 50 year mean recurrence interval.
- Canadian values are based on peak mean hourly wind speeds for a 30 year return period, 30 feet (9.14 meters) above ground.
- Hawaii has an 80 MPH wind velocity.
- Puerto Rico has a 95 MPH wind velocity.
- Use caution in determining wind velocities in special wind areas such as mountainous areas and areas surrounding the Great Lakes.
- This map is intended as a general guide. Consult local authorities to determine maximum wind velocities & unique wind conditions which may vary substantially from those values listed here.

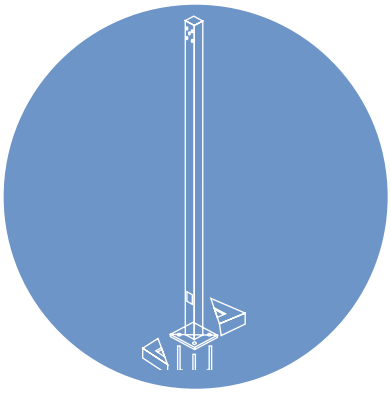
Note The maximum allowable EPA and weights are listed for each pole. The EPA and weights are listed in this Selection Guide for each luminaire and bracket.



For information on AASHTO Standards for Lighting Equipment contact:
American Association of State Highway and Transportation Officials
444 N. Capitol Street, NW, Suite 249
(202) 624-5800
www.aashto.org

AASHTO standards used are found in the following publications:
I-LTS-3 "*Standard Specification For Structural Support For Highway Signs, Luminaires And Traffic Signals*", (1994)
I-LPH "*A Guide for Standardizing Highway Lighting Pole Hardware*", (1980)
I-GL-5 "*An Informational Guide for Roadway Lighting*", (1984)

# POLES



## Features

Spaulding's complete line of poles offer simple solutions for all your lighting needs from 8 to 60 feet in height. Pole applications include general floodlighting, sports lighting, auto dealerships, commercial site lighting, and roadways. Mounting configurations include tenon top, side mount, pad mount, or open top models to match any luminiare style.

Constructed with exacting standards, both our aluminum and steel poles meet strict guidelines for quality, strength, and finish. Protecting your investment is our Lektrocote paint or galvanized finish. Both guarantee your investment for years. From shaft cutting through painting, quality control inspections are conducted throughout a highly automated process.

Lastly, to ensure the finish in not damaged during shipment, all poles are protected with either cardboard or double wrapped foam/plastic.

## Ordering Information

Example: S - S - S - 10 - 40 - 1 - A1 - DB

| Cross Sect. | Style | Mat. | Nom. Length | Nom. Shaft Dia. | Shaft Thick. | Mount Type | Finish |
|---|---|---|---|---|---|---|---|

This pole logic is for reference use only. The appropriate pole table should be used when sizing and ordering poles.

**Cross Section**
- **S** Square
- **R** Round

**Style**
- **S** Straight
- **T** Tapered
- **H** Hinged (Square Steel Only)

**Material**
- **S** Steel
- **A** Aluminum

**Nominal Length**
- **08** 8 Feet
- **10** 10 Feet
- **12** 12 Feet
- **14** 14 Feet
- **15** 15 Feet
- **16** 16 Feet
- **18** 18 Feet
- **20** 20 Feet
- **25** 25 Feet
- **27** 27 Feet
- **30** 30 Feet
- **35** 35 Feet
- **39** 39 Feet[1]
- **40** 40 Feet
- **45** 45 Feet
- **50** 50 Feet
- **60** 60 Feet

**Nominal Shaft Dimension**
- **30** 3 Inch[2]
- **40** 4 Inch
- **45** 4.5 Inch[2]
- **50** 5 Inch
- **55** 5.5 Inch[2]
- **60** 6 Inch
- **65** 6.5 Inch[3]
- **70** 7 Inch[3]
- **80** 8 Inch[3]
- **85** 8.5 Inch[3]
- **90** 9 Inch[3]
- **95** 9.5 Inch[3]
- **10** 10 Inch[3]
- **11** 11 Inch[3]
- **12** 12 Inch[3]

**Shaft Thickness**
- **1** Steel - Standard (11 GA / .119)
- **7** Steel - Heavy (7 GA / .179)
- **3** Steel - Extra Heavy (3 GA / .226 - .250)
- **A** Aluminum - Standard (.125)
- **B** Aluminum - Heavy (.188)
- **C** Aluminum - Extra Heavy (.220 - .250)

**Luminaire Mounting Type**
- **AX** Side - Single[4]
- **BX** Side - Double at 90°[4]
- **CX** Side - Double at 180°[4]
- **DX** Side - Triple at 90°[4]
- **EX** Side - Triple at 120°[4]
- **FX** Side - Quad at 90°[4]
- **P1** Pad Mount - Spider Type
- **P2** Pad Mount - Yoke Type
- **P3** Pad Mount - Yoke Type (Proformer XL only)
- **TR** Removable Tenon (2 3/8 x 4 1/4)[9]
- **TA** Tenon (2 3/8" OD)
- **TB** Tenon (2 7/8" OD)
- **OT** Open Top (for post top luminaires)
- **CD** Concord Top (use with Concord luminaires only)

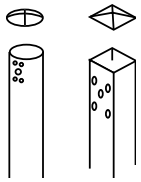
**Finish**
- **DB** Dark Bronze
- **BL** Black
- **WH** White
- **GR** Gray
- **PS** Platinum Silver
- **RD** Red (Premium Color)
- **FG** Forest Green (Premium Color)
- **CC** Custom Color (Consult Factory)
- **PR** Primer Only
- **GL** Hot Dip Galvanized
- **NA** Natural Aluminum (aluminum poles only)

**Options**
- **Q55** Internal Coating (Hubbell Seal)
- **Q18** 15 Amp GFCI Receptacle and Cover[5]
- **Q22** Extra Handhole[5]
- **Q26** 1/2" Coupling[5]
- **Q27** 3/4" Coupling[5]
- **Q30** 2" Coupling[5]
- **Q32** Mid-pole Luminaire Bracket[5]
- **Q40** Vibration Damper
- **Q45** Square Base Cover[6]
- **Q46** Round Base Cover[7]
- **LAB** Less Anchor Bolts
- **CSA** CSA Certified (Consult Factory)[8]

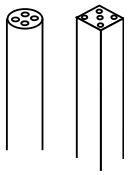
1 Round Tapered Steel Poles Only
2 Round Straight Poles Only
3 Tapered Poles Only
4 DRILL PATTERNS: Replace X with the following: 1 = Luminaires with a straight pole (4-bolt), 2 = Spaulding luminaires for tapered poles (2-bolt) plus Cimarron CR1 and Raven Series, 4 = DS and MSS luminaires, 5 = Detroit III 4-bolt design (square poles only), 6 = MSV, RCS, RCL & DM luminaires (including tapered poles), 9 = Devine luminaires.
5 Specify option location using logic found in pole introduction pages.
6 Optional base cover only needed when not provided as standard.
7 Optional round base cover.
8 SSS Poles Only
9 Removable tenon used in conjunction with side arm mounting. First specify desired arm configuration followed by "TR" notation. Example: SSS-25-40-7-C6-TR-DB

## Luminaire Mounting

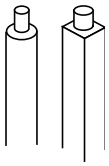
### Side Mount



### Pad Mount

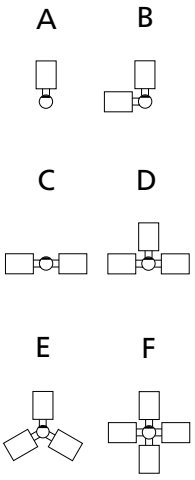


### Tenon Top



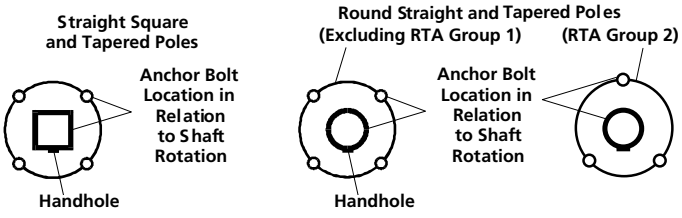
### Open Top

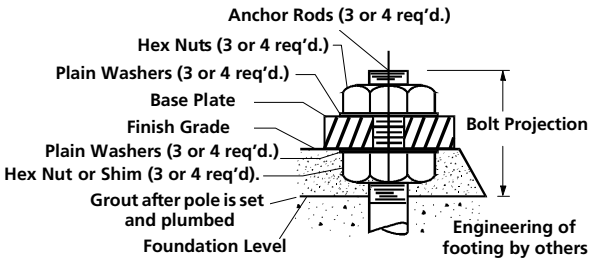
## Side Mounting Locations

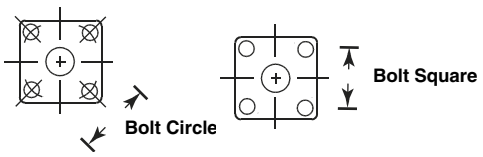



Denotes handhole location

## Anchor Bolt Detail Base Diagram




### Standard Anchor Bolts and Template

(Included with pole purchase)

| | |
|---|---|
| **TAB-15** | 1/2 x 15 x 3" (Non-Galvanized) |
| **TAB-30-M38** | 3/4 x 30 x 3" (Galvanized) |
| **TAB-36-M38** | 1 x 36 x 4" (Galvanized) |
| **TAB-42-M38** | 1 1/4 x 42 x 6" (Galvanized) |

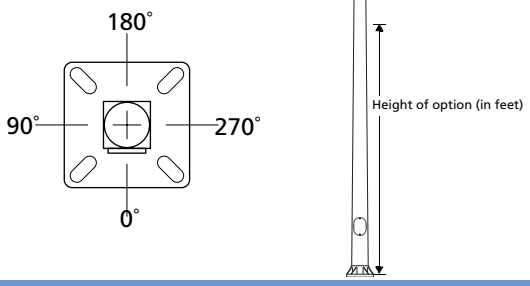
Note Fabricated from high tensile steel, each anchor bolt has two nuts and two washers. Galvanized anchor bolts are hot dipped. (Galvanizing includes threaded portion plus six inches.)

## Option Orientation

Follow the logic below when ordering location specific options.

For each option, include its orientation (in degrees) and its height (in feet). Example: Option Q26 should be ordered as:

SSS-20-40-1-A1-DB-Q26-0-15
(1/2" coupling on the handhole/arm side of pole, 15 feet up from the pole base)




## Pole Base Covers

| Catalog Number | Description |
|---|---|
| | **Pole Base Covers for Square Poles** |
| **SBC-4-XX** | 10 1/2" Sq x 5" Deep (use on 4" Sq Poles) |
| **SBC-4L-XX** | 12 1/4" Sq x 5" Deep (use 4" Sq Poles) |
| **SBC-5-XX** | 12 1/4" Sq x 5" Deep (use on 5" Sq Poles) |
| **SBC-6-XX** | 12 1/4" Sq x 5" Deep (use on 6" Sq Poles) |
| | **Pole Base Covers for Round Poles** |
| **SBC-3R-XX** | 9" Sq x 5" Deep (use on 3" Round Poles) |
| **SBC-4R-XX** | 10 1/2" Sq x 5" Deep (use on 4" Round Poles) |
| **SBC-45R-XX** | 10 1/2" Sq x 5" Deep (use on 4 1/2" Round Poles) |
| **SBC-5R-XX** | 10 1/2" Sq x 5" Deep (use on 5" Round Poles) |
| **SBC-6R-XX** | 10 1/2" Sq x 5" Deep (use on 6" Round Poles) |
| **RBC-4R-XX** | 10.91" Dia. x 5" Deep (use on 4" Round Poles) |
| **RBC-4RL-XX** | 14.35" Dia. x 5" Deep (use on 4" Round Poles) |
| **RBC-45R-XX** | 10.91" Dia. x 5" Deep (use on 4 1/2" Round Poles) |
| **RBC-45RL-XX** | 14.35" Dia. x 5" Deep (use on 4 1/2" Round Poles) |
| **RBC-5R-XX** | 11.91" Dia. x 5" Deep (use on 5" Round Poles) |
| **RBC-5RL-XX** | 14.35" Dia. x 5" Deep (use on 5" Round Poles) |
| **RBC-6R-XX** | 11.91" Dia. x 5" Deep (use on 6" Round Poles) |
| **RBC-6RL-XX** | 14.35" Dia. x 5" Deep (use on 6" Round Poles) |