# Index 18111 Steel CCTV Pole (Rev. 07/15)

## Design Criteria

***AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals***, 6th Edition (LTS-6); ***Structures Manual*** Volume 3, FDOT Modifications to LTS-6; ***Structures Manual*** Introduction, I.6 References.

## Design Assumptions and Limitations

See notes on the ***Design Standard*** and ***Structures Manual*** Volume 3.

The steel CCTV poles are designed for:

1. 150 mph wind speed with a 50 year structure design life,
2. A one inch maximum deflection in a 40 mph wind speed (3 second gust), and
3. A maximum camera effective projected area (EPA) of 5.6 square feet total with a maximum camera weight of 240 pounds total.

Foundations are assumed to be in level ground. For foundation within slopes 5H:1V and greater, increase the foundation depth in accordance with the table below. For values in-between those shown in the table, use the higher value.

## Additional Shaft Depth Due to Ground Slope (feet)

| Ground Slope | Drilled Shaft Diameter (feet) | | | |
|---|---|---|---|---|
| | 3 | 4 | 5 | 6 |
| 5H:1V | 1 | 2 | 2 | 2 |
| 4H:1V | 2 | 2 | 3 | 3 |
| 3H:1V | 2 | 3 | 3 | 4 |
| 2H:1V | 4 | 5 | 6 | 7 |

Wind load is calculated assuming a maximum fill height of 5 feet. Do not use the design tables for fill heights more than 5 feet.

Foundations and base plates are designed based on the following soil criteria:

Classification: Cohesionless (Fine Sand)
Friction Angle: 30 Degrees
Unit Weight: 50 lbs/cubic foot (assumed submerged)

When the designer considers soil types at the specific site location to be of lesser strength properties than shown above, an analysis is required. Auger borings, SPT borings, or CPT soundings may be used as needed to verify the assumed soil properties, and at sites confirmed to be uniform, a single boring or sounding may cover several foundations. Borings in the area that were performed for other purposes may be used to confirm the assumed soil properties.

## Plan Content Requirements

See ***PPM***, Volume 1, Chapters 7 and 29.

## Payment

The cost of providing the foundation and any incidental items incurred in furnishing and installing this CCTV structure shall be included in the pay item for providing the complete CCTV structure.

| Item number | Item description | Unit Measure |
|---|---|---|
| 785-1-12 | ITS Pole, F&I, Steel - With Lowering Device | EA |
| 785-1-14 | ITS Pole, F&I, Steel - Without Lowering Device | EA |