Index 18113 Concrete CCTV Pole (Rev. 11/16)

Design Criteria

AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (LRFDLTS-1); ***Structures Manual*** Volume 3, FDOT Modifications to LRFDLTS-1; ***Structures Manual*** Introduction, I.6 References.

Design Assumptions and Limitations

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

The concrete CCTV poles are designed for:

1. 170 mph wind speed with a 700 year Mean Recurrence Interval (MRI),
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.

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.

Poles are assumed to be on level ground. For poles within slopes, increase the burial 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	Additional Burial Depth due to Ground Slope (feet)
5H:1V	3
4H:1V	4
3H:1V	5
2H:1V	7

Foundations 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 2, Chapter 29.

Payment

Item number	Item description	Unit Measure
785-1-11	ITS Pole, F&I, Concrete - With Lowering Device	EA
785-1-13	ITS Pole, F&I, Concrete - Without Lowering Device	EA