



NOTE:
 ... = ONLY ONE OF EACH OF THESE DEVICES
 WILL BE USED AT ONE TIME.

Design Criteria Notes

1. Reference the following signal pole standard sheets for more information:

- Traffic Signal Support Structures Signal Pole and Mast Arm Details - PMAP1-1 (Latest Rev.)
- Traffic Signal Support Structures Pole Assembly Details - MAD1-1 (Latest Rev.)
- Traffic Signal Support Structures Mast Arm Assembly Details - MAD2-1 (Latest Rev.)
- Traffic Signal Pole Fabrication and Installation Data - PFID1-1 (Latest Rev.)
- Traffic Signal Pole Fabrication and Installation Data - PFID2-1 (Latest Rev.)
- Traffic Signal Mast Arm Pole and Pedestal Pole Footing Details - CFD1-1 (Latest Rev.)
- Traffic Signal Pole Wiring and Cable Termination Details - PWD1-1 (Latest Rev.)

2. For mast arm assemblies up to 25 LF per arm, designed loads for various equipment are as follows:

- Qty = 2 - 3-Section Signal Head w/ Backplate (50 LBS/EA and EPA = 9.81 sq. ft.)
- Qty = 1 - 5-Section (Type S-19) Signal Head w/ Backplate (90 LBS/EA and EPA = 14.56 sq. ft.)
- Qty = 2 - Pedestrian Signal Head - 1 Section (30 LBS/EA and EPA = 2.64 sq. ft.)
- Qty = 2 - Push Button Housing (10 LBS/EA and EPA = 1.20 sq. ft.)
- Qty = 1 - Luminaire (50 LBS/EA and EPA = 2.00 sq. ft.)
- Qty = 2 - Typical Regulatory Sign (18 LBS/EA and EPA = 10.08 sq. ft.)
- Qty = 1 - Typical Street Name Blade (20 LBS/EA and EPA = 16.15 sq. ft.)
- Qty = 1 - Opticom (5 LBS/EA and EPA = 1.0 sq. ft.)
- Qty = 1 - Video (VIVDS) (10 LBS/EA and EPA = 1.60 sq. ft.)

3. For mast arm assemblies between 30 and 40 LF per arm, maximum design loads accommodate up to the following equipment per assembly:

- Qty = 2 - 3-Sect. Signal Head w/ Backplate (50 LBS/EA and EPA = 9.81 sq. ft.)
- Qty = 1 - 5-Sect. (Type S-19) Signal Head w/ Backplate (90 LBS/EA and EPA = 14.56 sq. ft.)
- Qty = 2 - 5-Sect. (Type S-17) Signal Head w/ Backplate (90 LBS/EA and EPA = 15.18 sq. ft.)
- Qty = 2 - Pedestrian Signal Head - 1 Sect. (30 LBS/EA and EPA = 2.64 sq. ft.)
- Qty = 2 - Push Button Housing (10 LBS/EA and EPA = 1.20 sq. ft.)
- Qty = 1 - Luminaire (50 LBS/EA and EPA = 2.00 sq. ft.)
- Qty = 2 - Typical Regulatory Sign (18 LBS/EA and EPA = 10.08 sq. ft.)
- Qty = 1 - Typical Illuminated Street Name Signs (100 LBS/EA and EPA = 29.52 sq. ft.)
- Qty = 1 - Opticom (5 LBS/EA and EPA = 1.0 sq. ft.) (If required)
- Qty = 1 - Video (VIVDS) (10 LBS/EA and EPA = 1.60 sq. ft.)
- Qty = 1 - Surveillance Camera (10 LBS/EA and EPA = 1.60 sq. ft.)
- Qty = 1 - Radar Detector (10 LBS/EA and EPA = 1.60 sq. ft.)

4. A 40' mast arm assembly configuration is shown above as an example.

5. For a dual mast arm configuration, loading criteria identified herein also applies to the second mast arm.

6. The typical mast arm rise is 2° from the nominal mast arm mounting height. The minimum rise per AASHTO is S1/1000.

Approved By: *St Jai* Date: 3-24-16
 Bridge Engineer

Approved By: *Hand Smith* Date: 3/14/2016
 Traffic Engineer

DOT

Traffic Standard
 Traffic Signal
 20 FT to 40 FT
 Maximum Design Loads

2009 Specifications

MDL1-1	00
T-216	