LUMINAIRE ARM TYPE 'T'

| Luminaire Arm Reach 'C' (Ft.) | AFB* (In.) | AFT* (In.) | THK (In.) (Min.) 1 | Shaft Length (Ft.) |
|---|---|---|---|---|
| 6.00 | 4.11 | 3.45 | .1345 | 5.84 |
| 8.00 | 4.11 | 3.23 | .1345 | 7.84 |
| 10.0 | 4.11 | 3.00 | .1345 | 9.84 |
| 12.0 | 4.57 | 3.38 | .1345 | 12.49 |
| 14.0 | 4.57 | 3.19 | .1345 | 14.49 |
| 16.0 | 4.57 | 3.00 | .1345 | 16.49 |

MAIN SHAFT DATA

| Mast Arm Length 'B' (Ft.) | AFB* (In.) | AFT* (In.) | THK (In.) | Shaft Length (Ft.) |
|---|---|---|---|---|
| 15.0 to 45.0 | 13.0 | 12.0 | .250 | 22.0 |
| 46.0 to 65.0 | 16.0 | 15.0 | .250 | 22.0 |

LUMINAIRE ARM EXTENSION SHAFT DATA
(6, 8 & 10–FT. LUMINAIRE ARMS)

| Luminaire Arm Mounting Ht. 'A2' (Ft.) | AFB* (In.) | AFT* (In.) | Shaft Length (Ft.) | THK (In.) (Min.) 1 |
|---|---|---|---|---|
| 30.0 | 3.92 | 3.55 | 3.27 | .1345 |
| 35.0 | 4.48 | 3.55 | 8.27 | .1345 |
| 40.0 | 5.05 | 3.55 | 13.27 | .1345 |
| 45.0 | 5.61 | 3.55 | 18.27 | .1345 |
| 50.0 | 6.18 | 3.55 | 23.27 | .1345 |

NOTES:

Mast Arms: Mast Arms With Lengths From 0 to 25 Ft. Are Designed To Support (2) Traffic Signals And (2) Sign Panels. Mast Arms With Lengths From 26 to 55 Ft. Are Designed To Support (3) Traffic Signals And (3) Sign Panels. Mast Arms With Lengths From 56 to 65 Ft. Are Designed To Support (4) Traffic Signals And (4) Sign Panels.

Finish: All Components To Be Hot Dip Galvanized As Per ASTM A123 & A153. All Tapered Tubes Are 12 Sided.

2 Welding: Welding of structures shall be in accordance with the latest edition of the AWS Structural Welding Code D1.1–STEEL. Longitudinal seam weld is 60% minimum penetration except for 6 inches from end of section at flange, base plate and slip joint is 100% penetration.

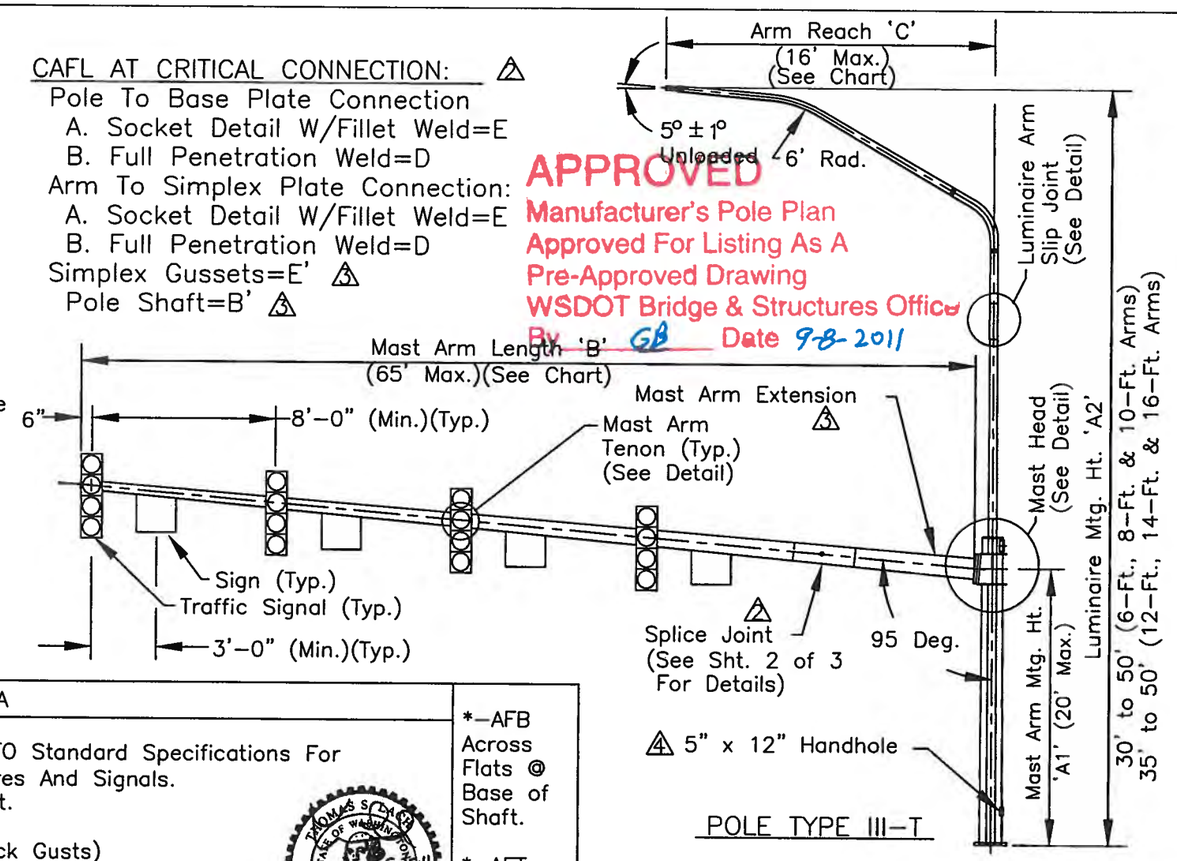
LUMINAIRE ARM EXTENSION SHAFT DATA
(12, 14 & 16–FT. LUMINAIRE ARMS)

| Luminaire Arm Mounting Ht. 'A2' (Ft.) | AFB* (In.) | AFT* (In.) | Shaft Length (Ft.) | THK (In.) (Min.) 1 |
|---|---|---|---|---|
| 35.0 | 4.53 | 4.10 | 4.52 | .1345 |
| 40.0 | 5.00 | 4.10 | 9.52 | .1345 |
| 45.0 | 5.48 | 4.10 | 14.52 | .1345 |
| 50.0 | 5.95 | 4.10 | 19.52 | .1345 |

CAFL AT CRITICAL CONNECTION: 2

Pole To Base Plate Connection
A. Socket Detail W/Fillet Weld=E
B. Full Penetration Weld=D
Arm To Simplex Plate Connection:
A. Socket Detail W/Fillet Weld=E
B. Full Penetration Weld=D
Simplex Gussets=E' 3
Pole Shaft=B' 3

APPROVED
Manufacturer's Pole Plan
Approved For Listing As A
Pre-Approved Drawing
WSDOT Bridge & Structures Office
By GB Date 9-8-2011




POLE TYPE III–T

MATERIAL DATA (UNLESS OTHERWISE NOTED)

| COMPONENT | GRADE |
|---|---|
| HANDHOLE RING 4 | ASTM A36 |
| TAPERED TUBES 1 | ASTM A572, A1011 A606, GR 50 (MIN.) |
| BASE PLATE | ASTM A36 |
| FLANGE PLATES | ASTM A36 |
| PIPE TENONS | ASTM A53, GR B ASTM A500, GR B |
| ANCHOR BOLTS | ASTM F1554, GR 105 |
| CONNECTOR BOLTS | ASTM A325,TYPE 1 |
| NUTS | ASTM A563–DH |
| FLAT WASHERS | ASTM F436 |

LOADING DATA

DESIGN: All Standards are Designed to the 2009 AASHTO 2 Standard Specifications For Structural Supports For Highway Signs, Luninaires And Signals.
Design Wind Speed–90 MPH W/3 Second Gust.
Design Life/Recurrence Interval–50 Years.
Fatigue Category–III (Galloping, Natural & Truck Gusts)
Maximum Truck Gust Wind Speed–65 MPH.
Structures Have Load Capacity As Shown In Chart Below.
Design Areas Of Signs & Signals As Follows:
Signal: Face Area=9.2 Sq. Ft. Weight=60 Lb. Ice Area=30 Sq. Ft.
Sign: Face Area=5.0 Sq. Ft. Weight=60 Lb. Ice Area=5.0 Sq. Ft.

THOMAS S. LAGA, STATE OF WASHINGTON, 42082, REGISTERED PROFESSIONAL ENGINEER, 11-17-11, EXPIRES 11-17-12

*–AFB Across Flats @ Base of Shaft.

*–AFT Across Flats @ Top of Shaft.

MAST ARM

| Mast Arm Length 'B' (Max.) (Ft.) | MAST ARM AFB* (In.) | MAST ARM AFT* (In.) | MAST ARM THK (In.) (Min.) 1 | MAST ARM Shaft Length (Ft.) | MAST ARM EXTENSION AFB (In.) | MAST ARM EXTENSION AFT (In.) | MAST ARM EXTENSION THK (In.) | MAST ARM EXTENSION Shaft Length (Ft.) | Connector Bolts Dia. (In.) | Connector Bolts Length (In.) | MAST ARM FLANGE PLATE POLE FLANGE PLATE 'D' (In.) | 'E' (In.) | 'F' (In.) | 'G' (In.) | 'H' (In.) | 'J' (In.) | Sign & Signal Maximum Loading XYZ | Base Plate 'K' (In.) | 'L' (In.) | 'M' (In.) | 'N' (In.) | Anchor Bolts Length (In.) | Dia. (In.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.0 | 7.34 | 5.00 | .1345 | 15.0 | — | — | — | — | 1.25 | 5.00 | 21.5 | 17.0 | 17.0 | 12.0 | 1.38 | 1.50 | 321 | 18.5 | 18.0 | 1.75 | 1.50 | 54.0 | 1.50 |
| 20.0 | 8.12 | 5.00 | .1345 | 20.0 | — | — | — | — | 1.25 | 5.00 | 21.5 | 17.0 | 17.0 | 12.0 | 1.38 | 1.50 | 463 | 18.5 | 18.0 | 1.75 | 1.50 | 54.0 | 1.50 |
| 25.0 | 8.90 | 5.00 | .1345 | 25.0 | — | — | — | — | 1.25 | 5.00 | 21.5 | 17.0 | 17.0 | 12.0 | 1.38 | 1.50 | 605 | 18.5 | 18.0 | 1.75 | 1.50 | 54.0 | 1.50 |
| 30.0 | 9.68 | 5.00 | .1793 | 30.0 | — | — | — | — | 1.25 | 5.00 | 21.5 | 17.0 | 17.0 | 12.0 | 1.38 | 1.50 | 924 | 18.5 | 18.0 | 1.75 | 1.50 | 54.0 | 1.50 |
| 35.0 | 10.5 | 5.00 | .1793 | 35.0 | — | — | — | — | 1.25 | 5.00 | 21.5 | 17.0 | 17.0 | 12.0 | 1.38 | 1.50 | 1117 | 18.5 | 18.0 | 1.75 | 1.50 | 54.0 | 1.50 |
| 40.0 | 11.25 | 5.00 | .1793 | 40.0 | — | — | — | — | 1.25 | 5.00 | 21.5 | 17.0 | 17.0 | 12.0 | 1.38 | 1.50 | 1350 | 18.5 | 18.0 | 1.75 | 1.50 | 54.0 | 1.50 |
| 45.0 | 12.0 | 5.00 | .1793 | 45.0 | — | — | — | — | 1.25 | 5.00 | 21.5 | 17.0 | 17.0 | 12.0 | 1.38 | 1.50 | 1563 | 18.5 | 18.0 | 1.75 | 1.50 | 54.0 | 1.50 |
| 50.0 | 11.25 | 5.00 | .1793 | 40.0 | 12.42 | 10.44 | .250 | 12.5 | 1.50 | 6.50 | 25.0 | 20.0 | 20.0 | 15.0 | 1.63 | 2.00 | 1776 | 22.5 | 22.0 | 2.25 | 2.00 | 60.0 | 2.00 |
| 55.0 | 11.25 | 5.00 | .1793 | 40.0 | 13.19 | 10.44 | .250 | 17.5 | 1.50 | 6.50 | 25.0 | 20.0 | 20.0 | 15.0 | 1.63 | 2.00 | 1989 | 22.5 | 22.0 | 2.25 | 2.00 | 60.0 | 2.00 |
| 60.0 | 11.25 | 5.00 | .1793 | 40.0 | 13.94 | 10.44 | .250 | 22.5 | 1.50 | 6.50 | 25.0 | 20.0 | 20.0 | 15.0 | 1.63 | 2.00 | 2691 | 22.5 | 22.0 | 2.25 | 2.00 | 60.0 | 2.00 |
| 65.0 | 11.25 | 5.00 | .1793 | 40.0 | 14.75 | 10.44 | .250 | 27.5 | 1.50 | 6.50 | 25.0 | 20.0 | 20.0 | 15.0 | 1.63 | 2.00 | 2975 | 22.5 | 22.0 | 2.25 | 2.00 | 60.0 | 2.00 |

| REV: | DESCRIPTION: | BY: | DATE: |
|---|---|---|---|
| 5 | REVISED PER MARKUPS ON ERF# 8512 | IF | 3/23/2011 |
| 4 | REVISED PER RETURNED MARKED–UP SUBMITTAL DRAWINGS. | JHG | 11/17/2009 |
| 3 | REVISED PER RETURNED MARKED–UP SUBMITTAL DRAWINGS. | JHG | 9/17/2009 |
| 2 | REVISED PER RETURNED MARKED–UP SUBMITTAL DRAWINGS. | JHG | 8/24/2009 |
| 1 | REVISED AS REQUIRED. A606 WAS A607. CHANGED WORDING OF THICKNESS OF LUMINAIRE ARM, EXTENSION AND MAST ARM SHAFTS–ADDED MINIMUM. | JHG | 2/19/2009 |

KW
909 INDUSTRIAL BLVD. •SUGAR LAND, TEXAS 77478

STATE OF WASHINGTON
TYPE III–T TRAFFIC SIGNAL STRUCTURES

SHT. 1 OF 3

| DRAWN BY: | DATE: | DRAWING NO: | REV: |
|---|---|---|---|
| JHG | 1/12/2009 | 10–200–TSP–3 | 5 |
| APPROVED BY: | DATE: | | |