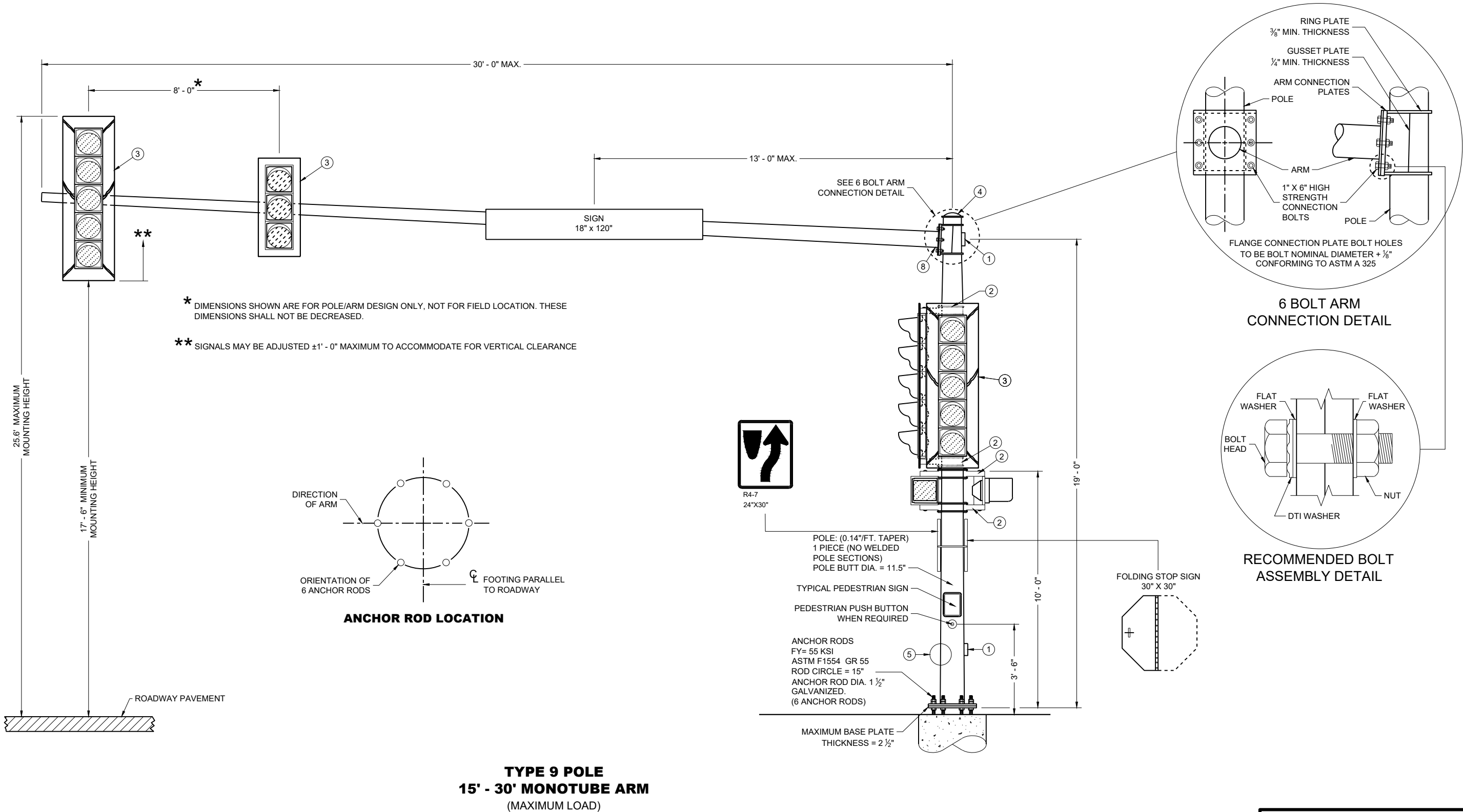
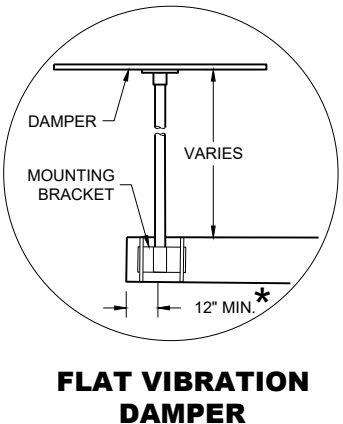
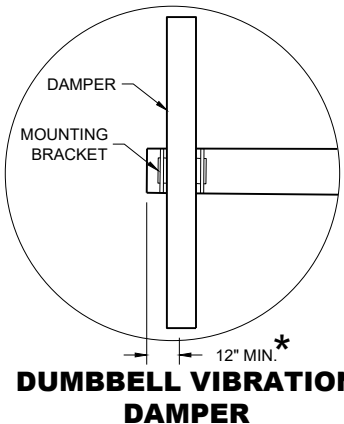
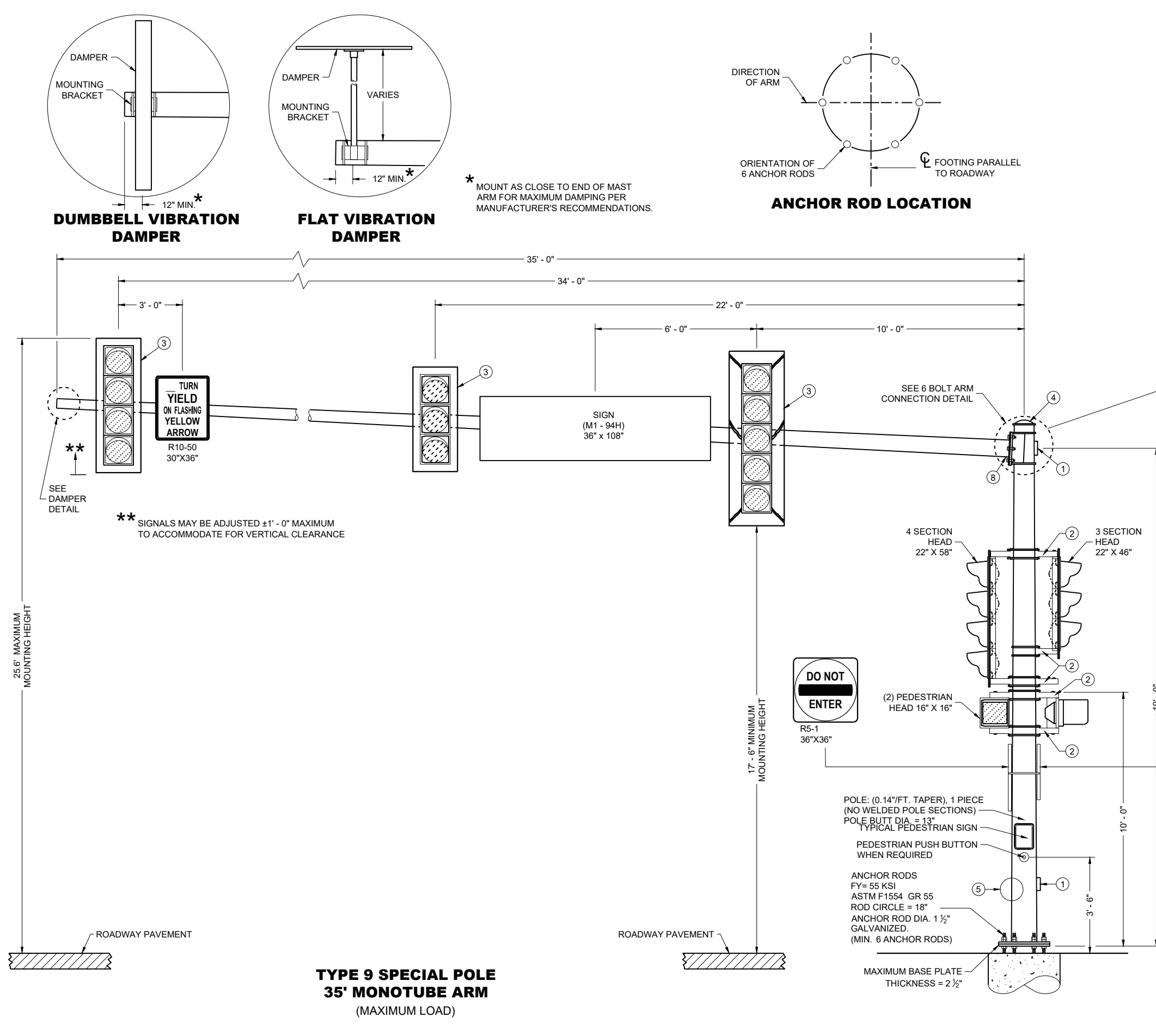
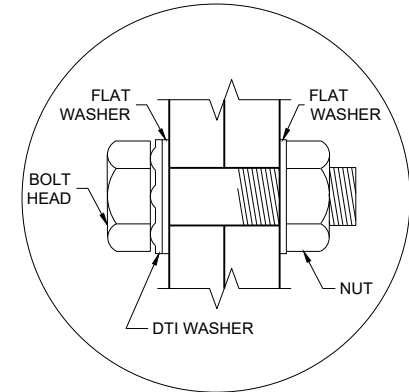
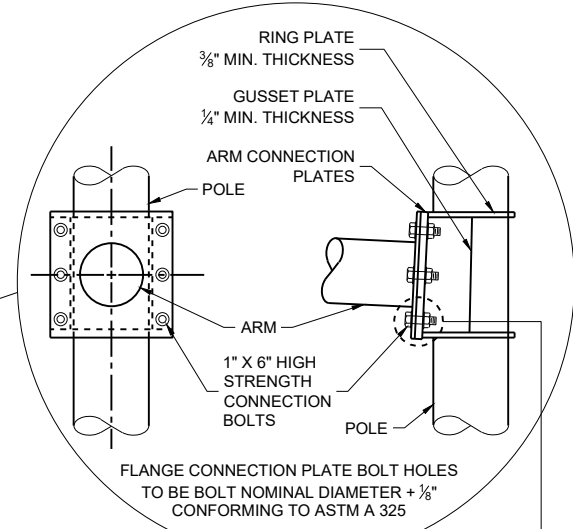
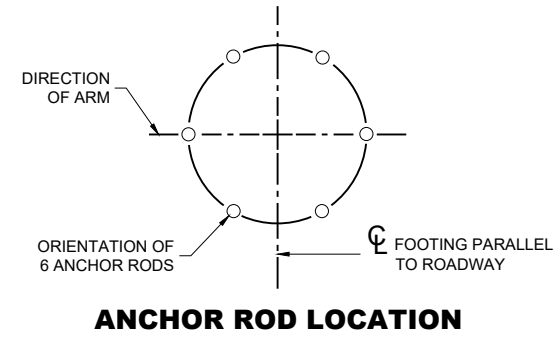




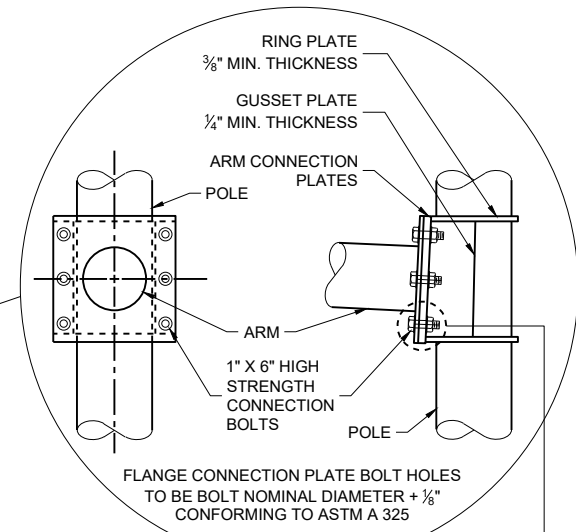
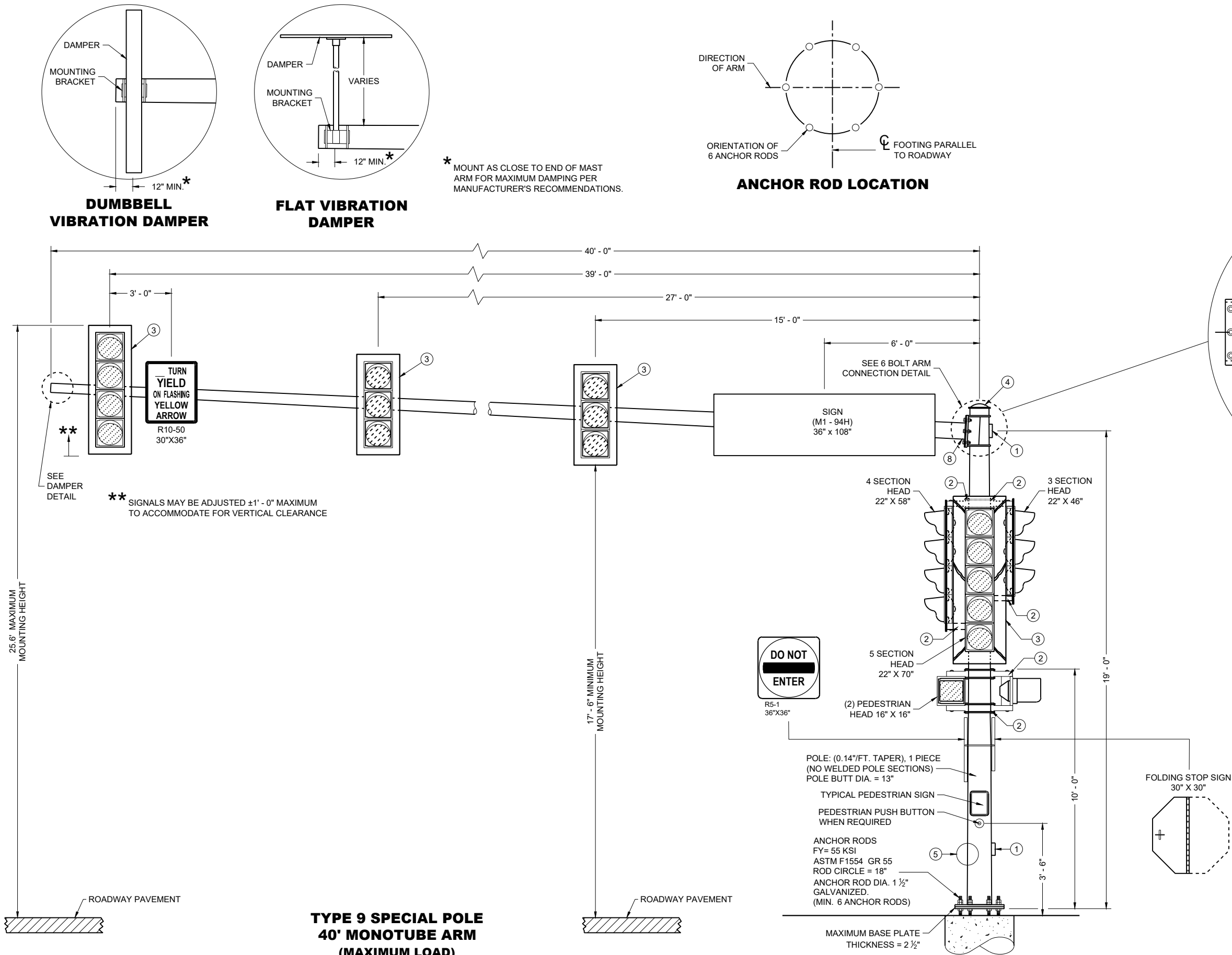


* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

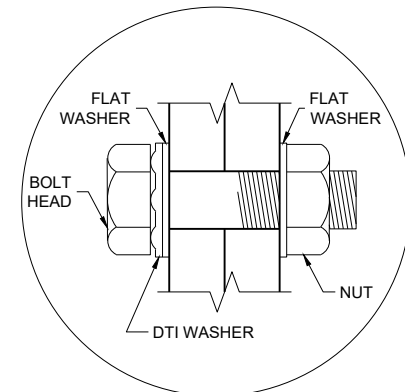


**TYPE 9 SPECIAL POLE
35' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



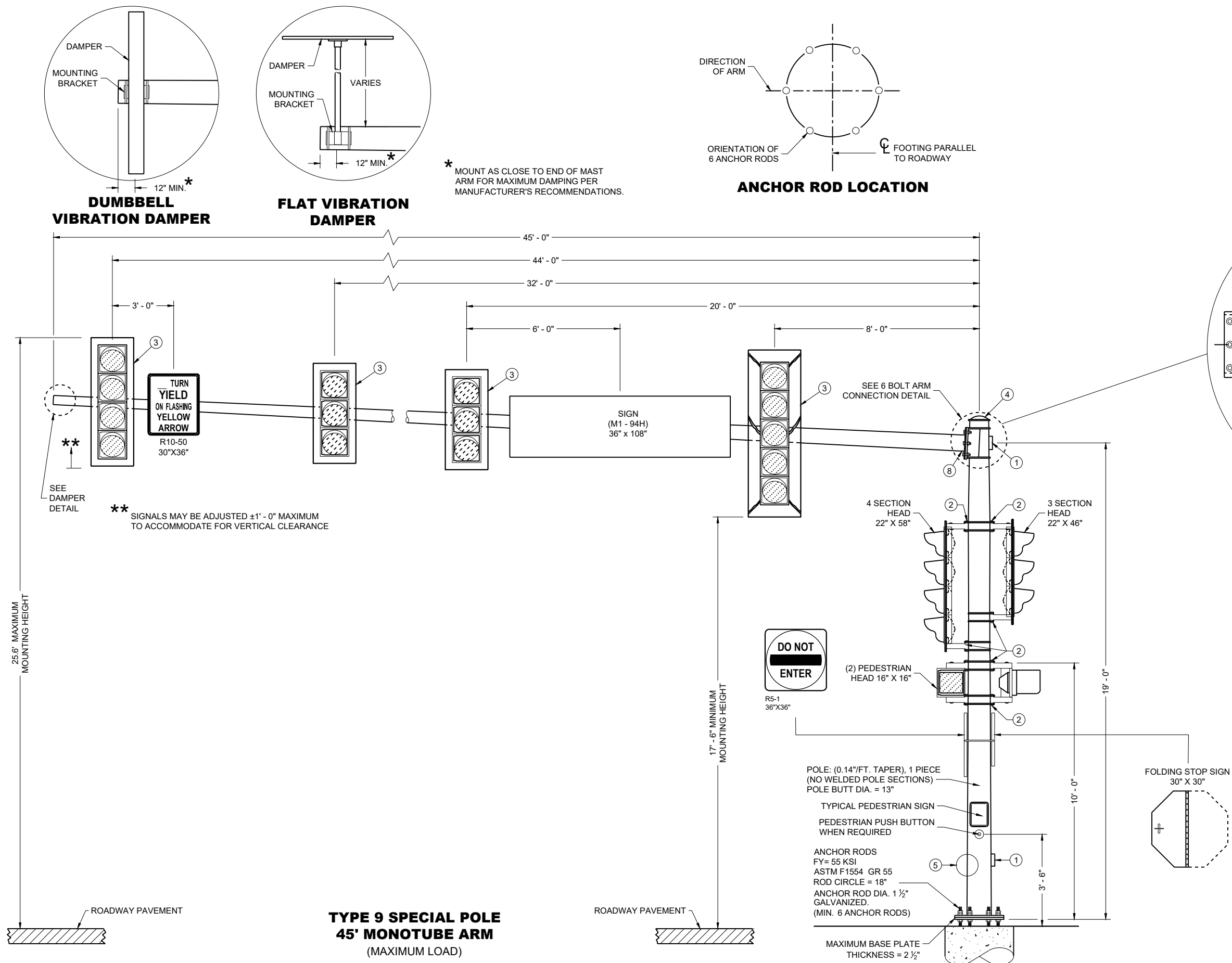
6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

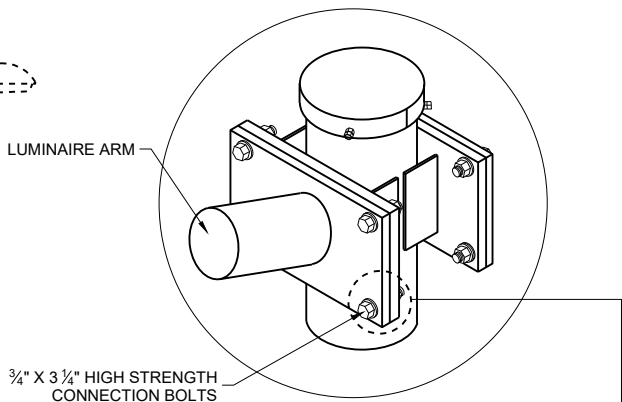
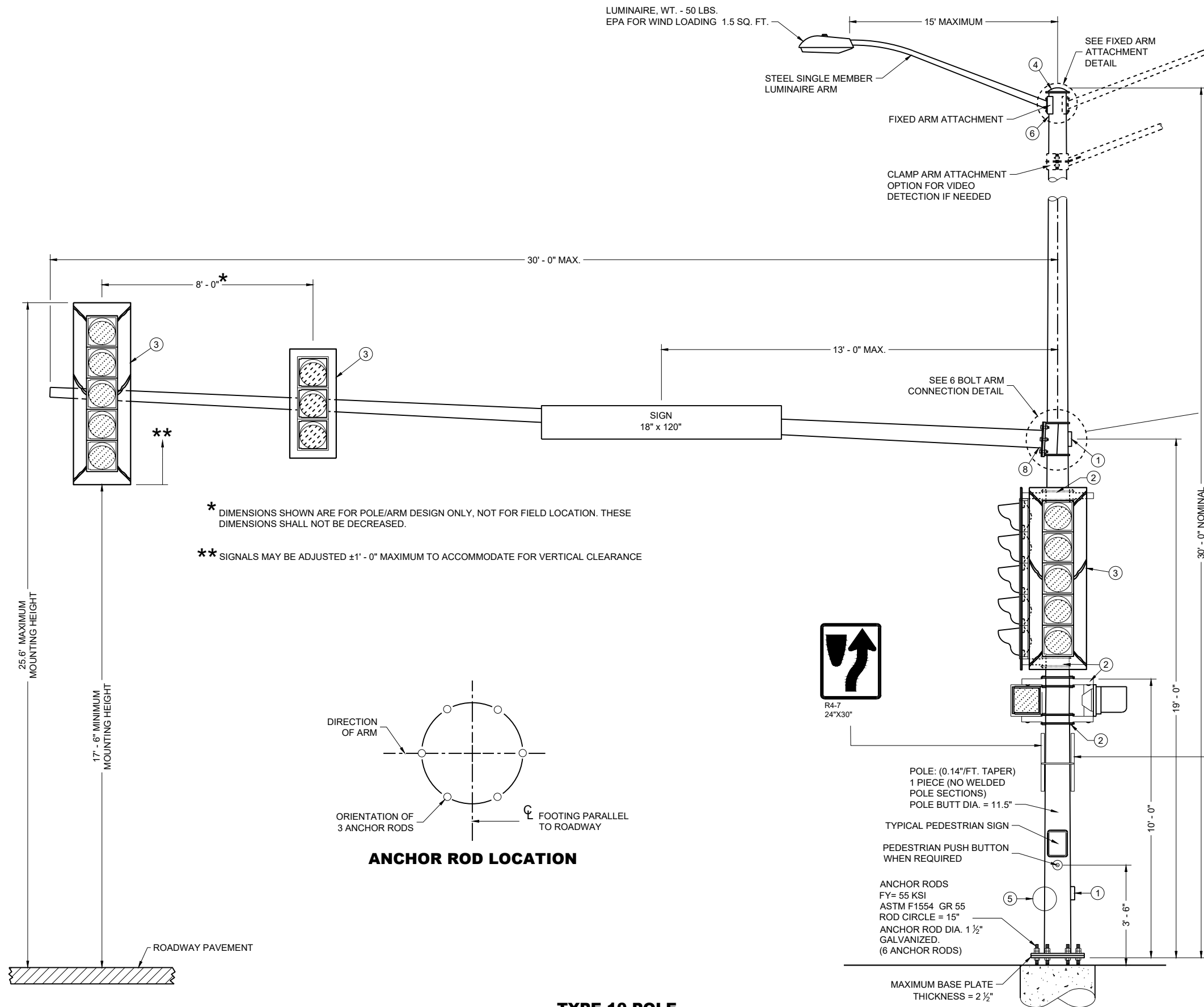
**TYPE 9 SPECIAL POLE
40' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

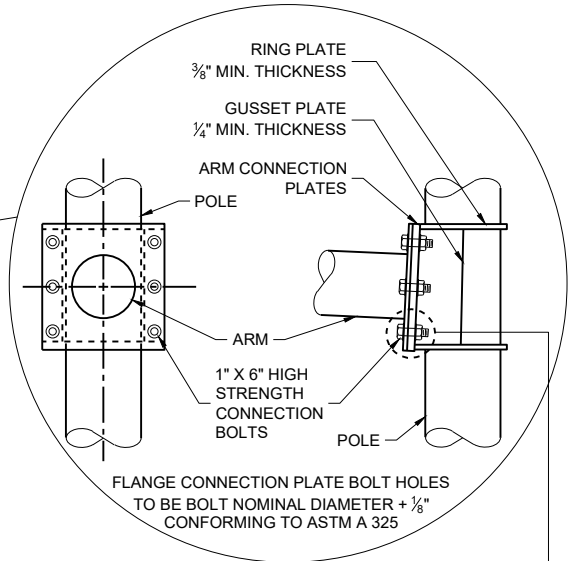


**TYPE 9 SPECIAL POLE
45' MONOTUBE ARM**

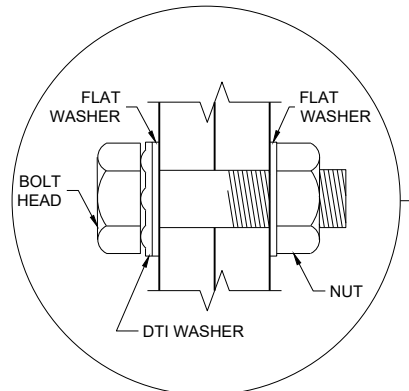
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



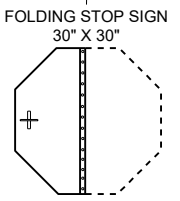
FIXED ARM ATTACHMENT DETAIL



6 BOLT ARM CONNECTION DETAIL

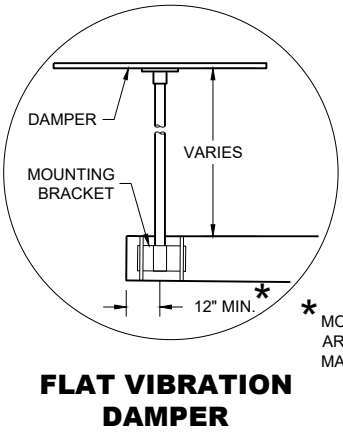
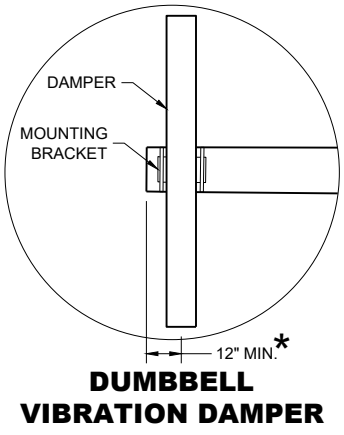
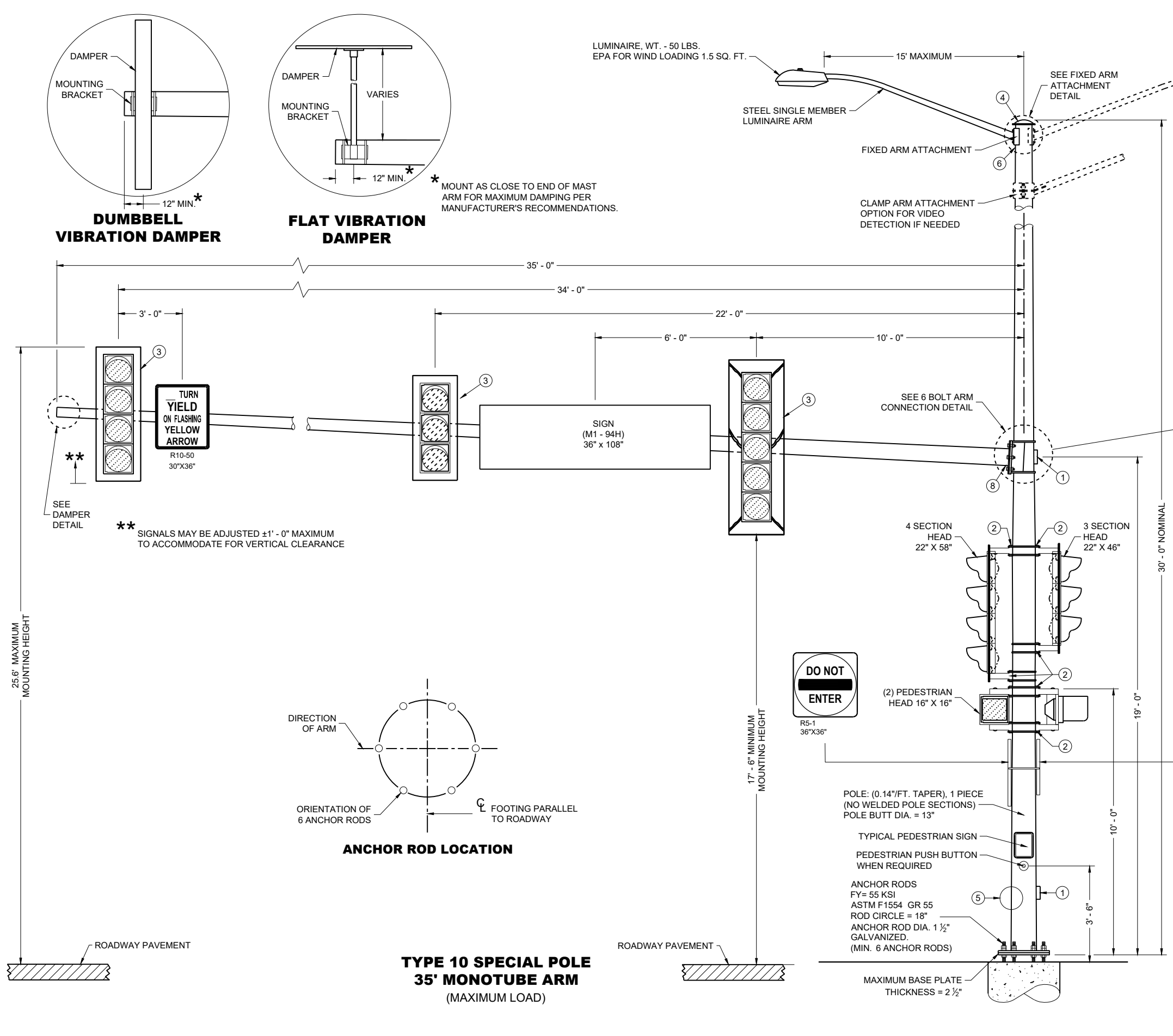


RECOMMENDED BOLT ASSEMBLY DETAIL

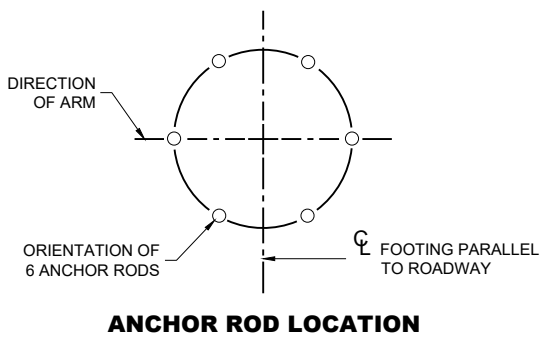
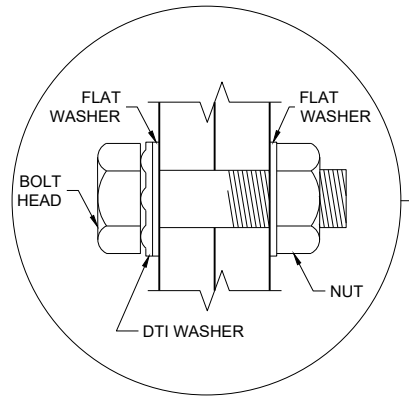
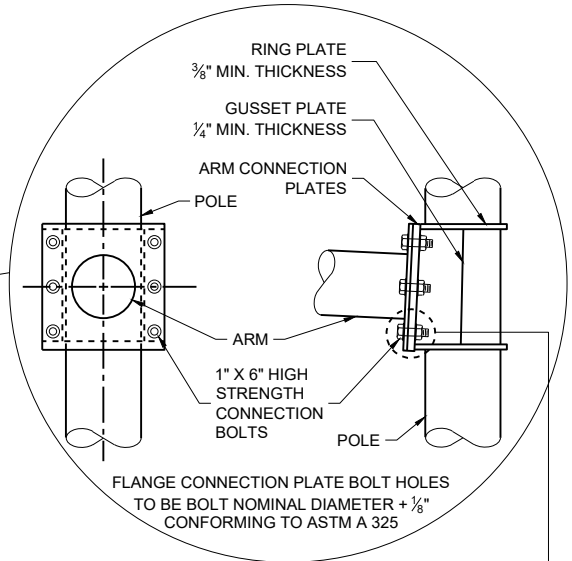
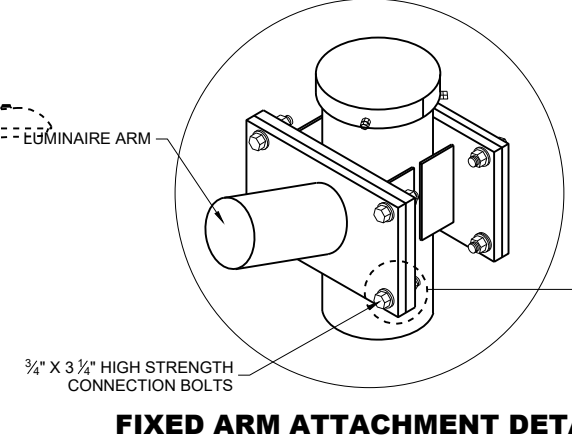


**TYPE 10 POLE
15' - 30' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



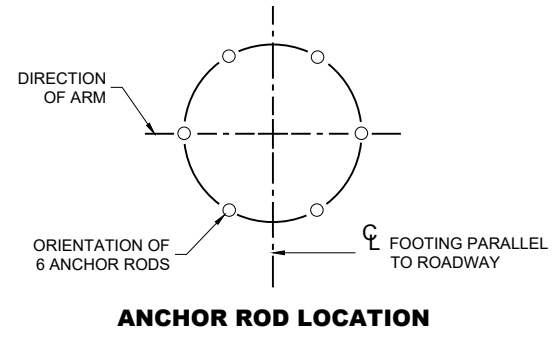
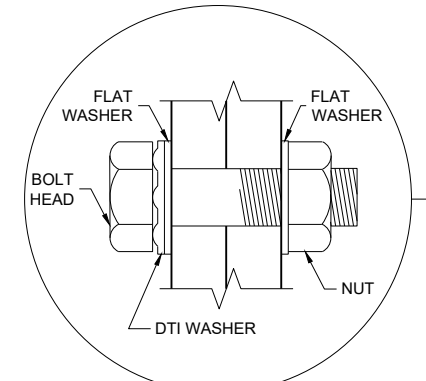
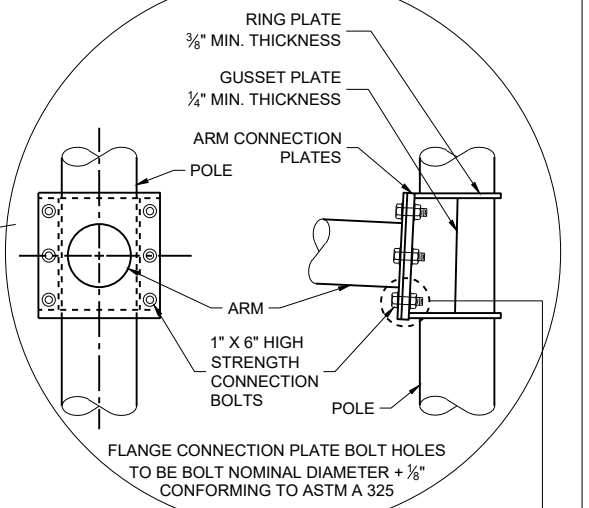
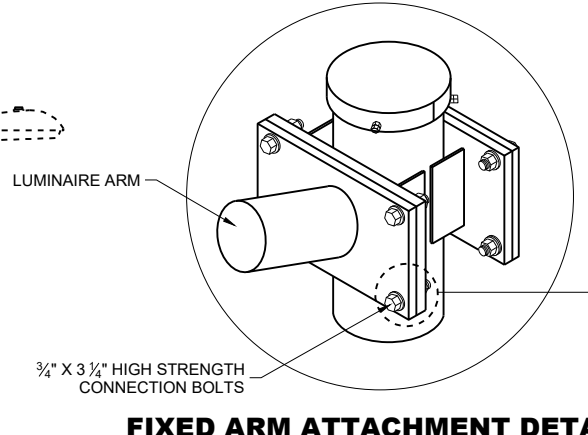
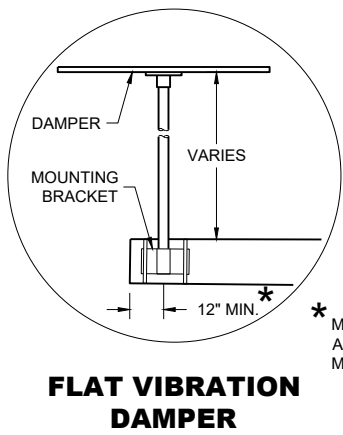
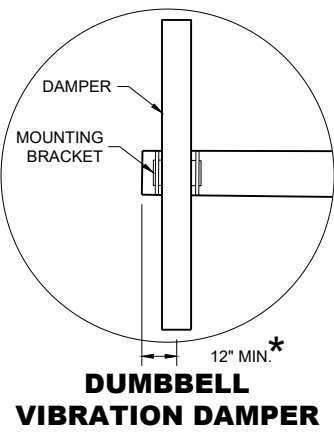
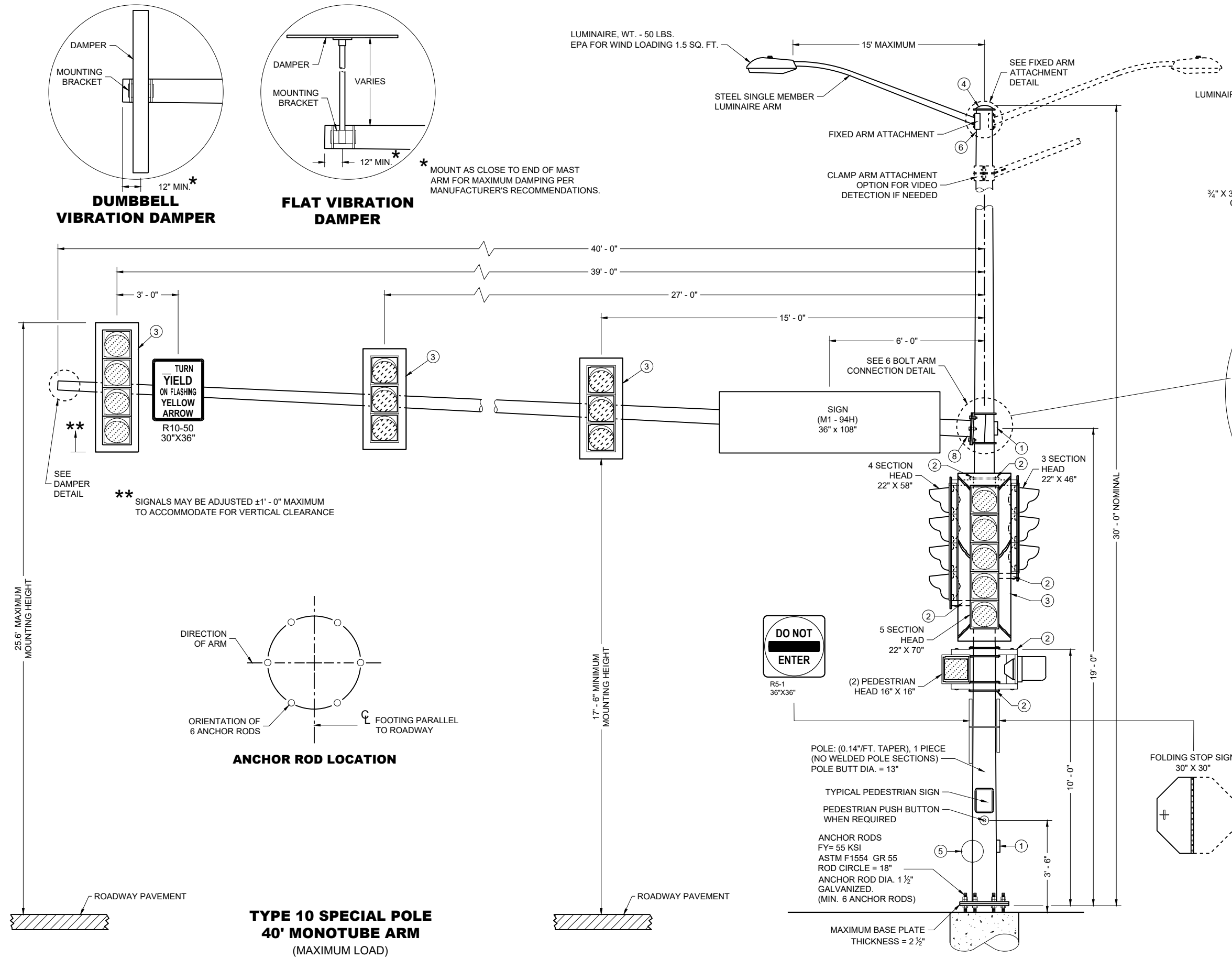
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



TYPE 10 SPECIAL POLE 35' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 10 SPECIAL POLE 35' MONOTUBE ARM

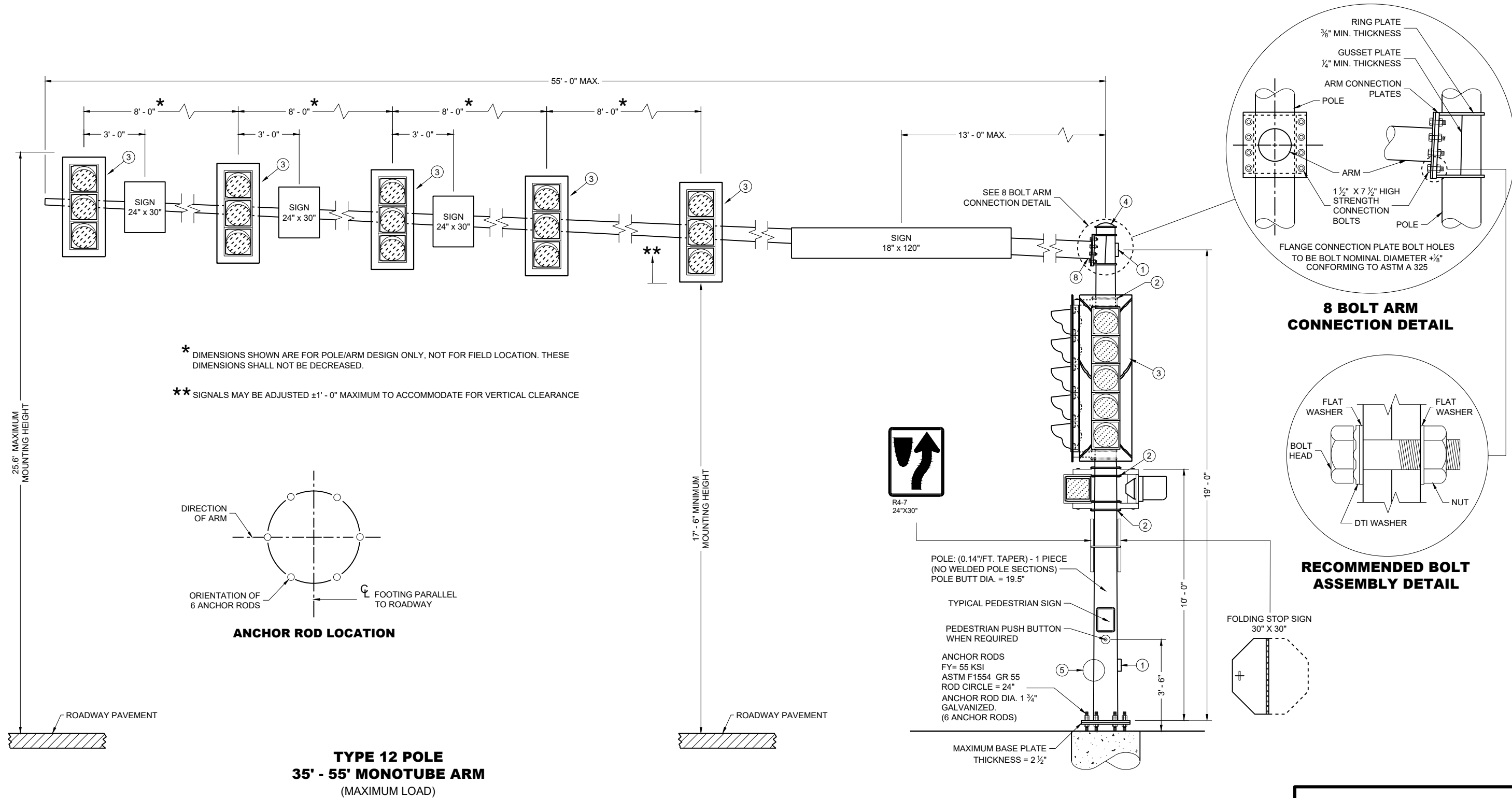
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

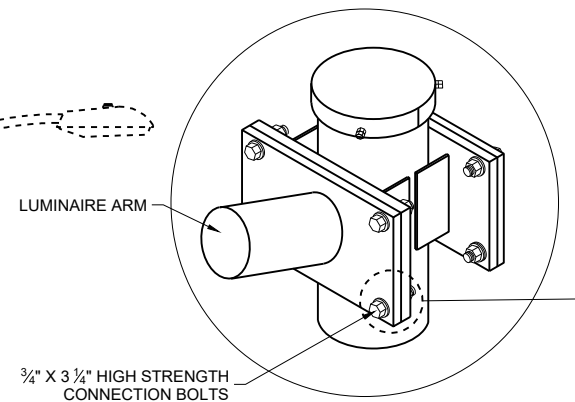
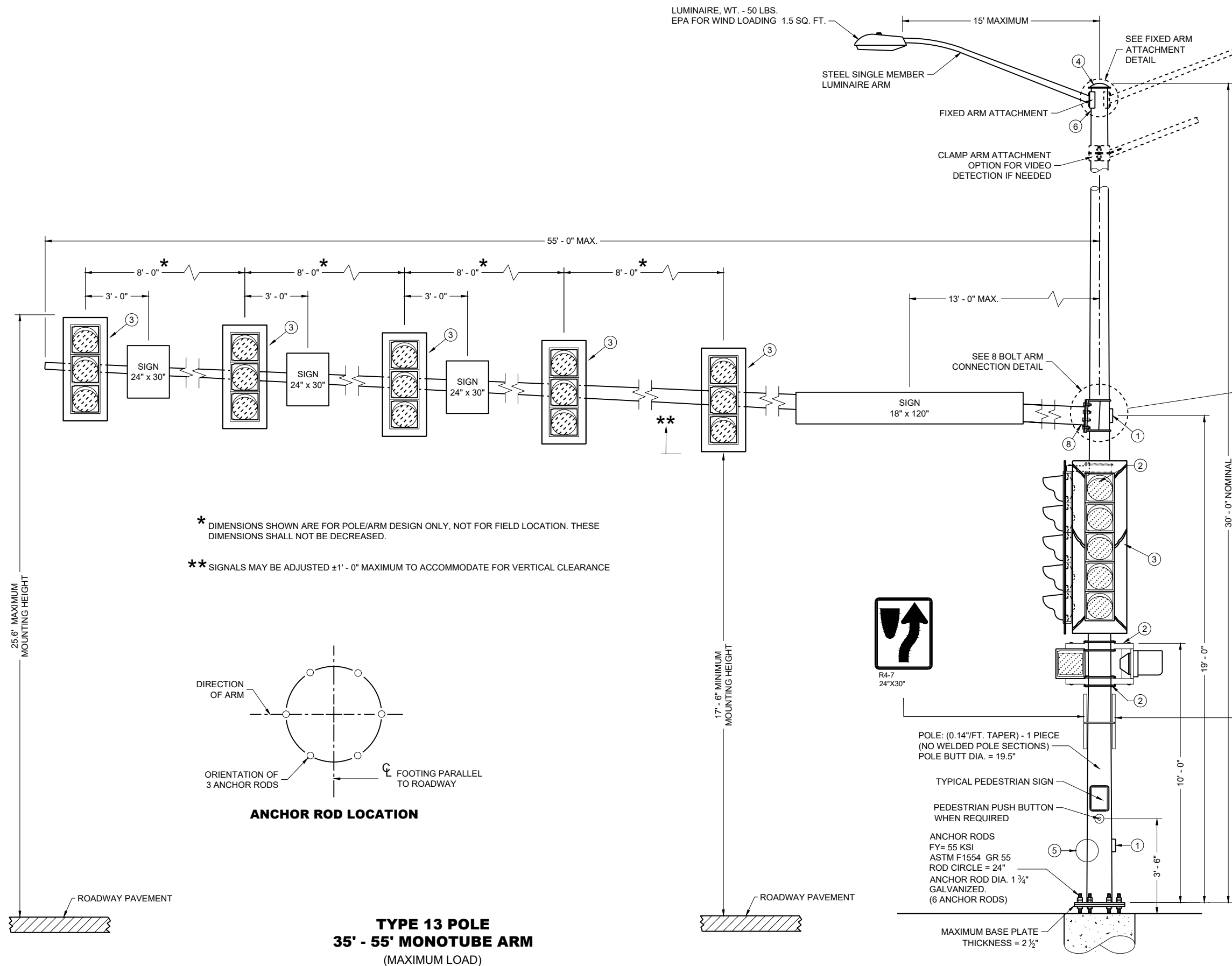
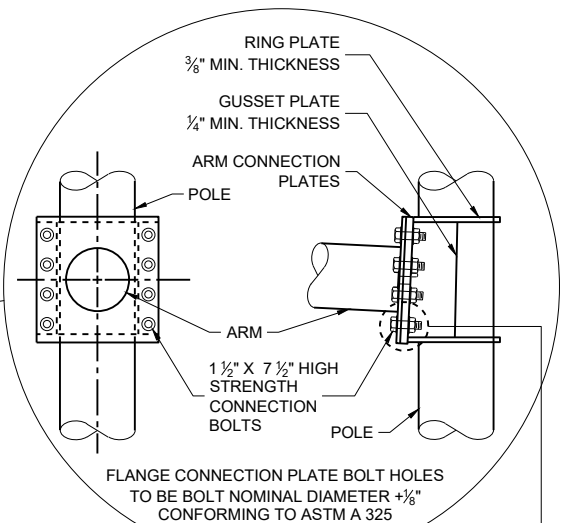
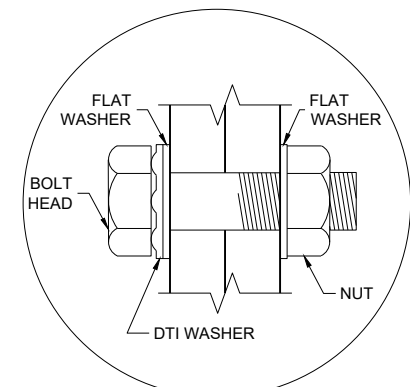


**TYPE 10 SPECIAL POLE
40' MONOTUBE ARM**
(MAXIMUM LOAD)

**TYPE 10 SPECIAL POLE
40' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**FIXED ARM ATTACHMENT DETAIL****8 BOLT ARM CONNECTION DETAIL****RECOMMENDED BOLT ASSEMBLY DETAIL**

**TYPE 13 POLE
35' - 55' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15 FOOT TO 30 FOOT.

POLE TYPES 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

RING STIFFENED BUILT UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATION SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES AS FOLLOWS:

CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.

CATEGORY II FATIGUE LOADS OF TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH 3/4" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL 1/2" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR A S DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD AT SAME ELEVATION.

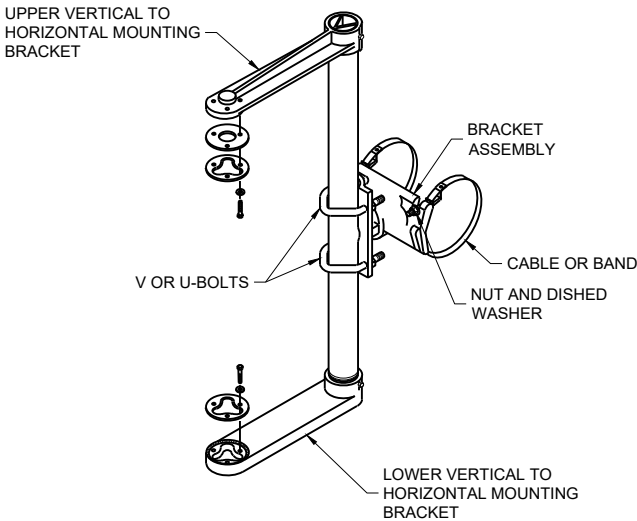
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

- ①
- DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- ②
- SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING (SEE SPECIFICATION SECTION 658).
- ③
- SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- ④
- THE TOP OF THE POLE SHAFT AND THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- ⑤
- FACTORY WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- ⑥
- FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- ⑦
- INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

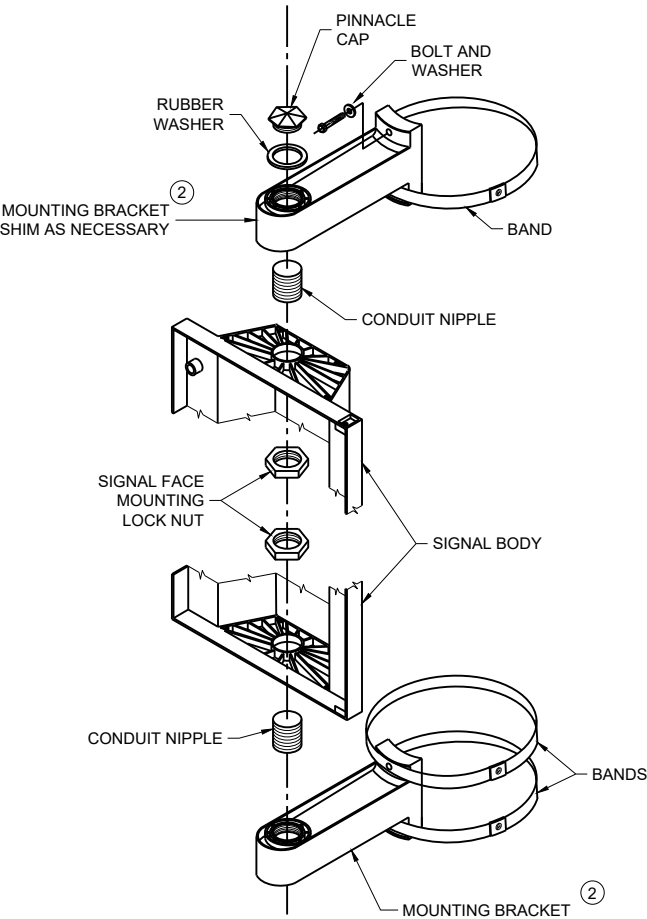
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

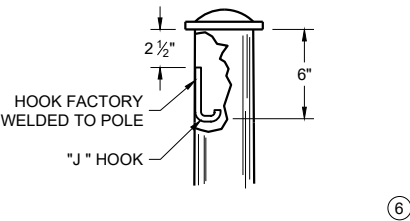
- ⑧
- FACTORY DRILLED 1/2" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.



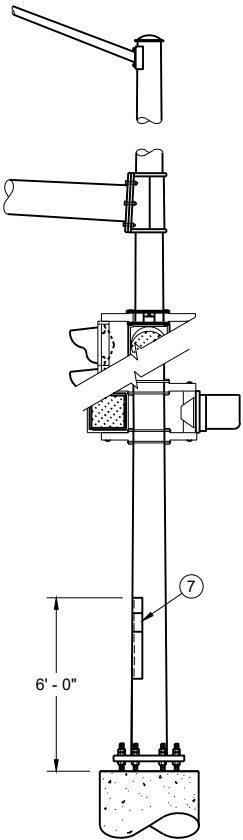
SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM
(MOUNT PER MANFACTURER'S RECOMMENDATION)



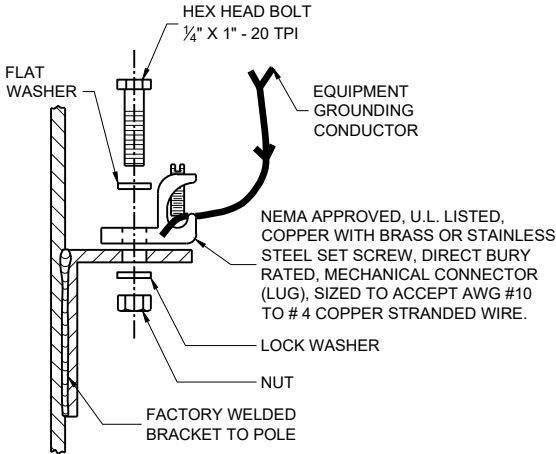
SIGNAL FACE VERTICAL
MOUNTING DETAIL



TYPICAL "J" HOOK
WIRE SUPPORT



STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT



TYPICAL GROUNDING
CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

GENERAL NOTES AND
HARDWARE FOR TYPES 9,10,
9/10 SPECIAL, 12 AND 13
POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER

FHWA

*Type 9 Pole 15'-30' Monotube Arm***References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols
[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening
[Standard Spec 657.3.3.2](#) for Bolts and Bolted Connections.
[Standard Spec 658](#) Traffic Signals
[TSDM 5-1-6](#) Determining Electrical Cable Quantities
 TSDM Monotube Signal Arm and Pole Structures 6-1-11
 TEOpS X-X-X Cable and Wire Measurement Lengths

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
531.8990	Anchor Assemblies Poles on Structures	EACH
654.0110	Concrete Bases Type 10.....	EACH
655.0200 - 0299	Cable Traffic Signal (# of conductors) (AWG)	LF
657.0345	Poles Type 9.....	EACH
657-0515 - 0530	Monotube Arms (size).....	EACH
658.0100 - 0199	Traffic Signal Face (section) (size).....	EACH
658.0400 - 0499	Pedestrian Signal Face (inch)	EACH
658.0500	Pedestrian Push Buttons	EACH
658.1100 - 1199	Programmable Traffic Signal Face (sections) (size).....	EACH
658.5070	Signal Mounting Hardware (location)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Vendor
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Department

Other SDDs associated with this drawing:

SDD 9C11	Concrete Base Type 10
SDD 9C13	Concrete Base Type 10 and Type 13 Extension
SDD 9E8	Type 9, Type 10, Type 9/10 Special, Type 12 and Type 13 Poles with Monotube Arms, sheet "k"
SDD 12A4	Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and Traffic Signals

Design Notes:**Contact Person:**

Ahmet Demirbilek (414) 220-6801
 (414) 322-9606 (Mobile)

Type 9 Special Pole 35' Monotube Arm**References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols
[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening
[Standard Spec 657.3.3.2](#) for Bolts and Bolted Connections.
[Standard Spec 658](#) Traffic Signals
[TSDM 5-1-6](#) Determining Electrical Cable Quantities
 TSDM Monotube Signal Arm and Pole Structures 6-1-11
 TEOpS X-X-X Cable and Wire Measurement Lengths

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
531.8990	Anchor Assemblies Poles on Structures	EACH
654.0120	Concrete Bases Type 10 Special.....	EACH
655.0200 - 0299	Cable Traffic Signal (# of conductors) (AWG)	LF
657-0347	Poles Type 9 Special	EACH
657-0536	Monotube Arms 35-FT-SpecialL	EACH
658.0100 - 0199	Traffic Signal Face (section) (size).....	EACH
658.0400 - 0499	Pedestrian Signal Face (inch)	EACH
658.0500	Pedestrian Push Buttons	EACH
658.1100 - 1199	Programmable Traffic Signal Face (sections) (size).....	EACH
658.5070	Signal Mounting Hardware (location)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Vendor
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Department

Other SDDs associated with this drawing:

SDD 9C15	Concrete Base Type 10 Special
SDD 9E8	Type 9, Type 10, Type 9/10 Special, Type 12 and Type 13 Poles with Monotube Arms, sheet "k"
SDD 12A4	Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and Traffic Signals

Design Notes:**Contact Person:**

Ahmet Demirbilek (414) 220-6801
 (414) 322-9606 (Mobile)

Type 9 Special Pole 40' Monotube Arm**References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols
[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening
[Standard Spec 657.3.3.2](#) for Bolts and Bolted Connections.
[Standard Spec 658](#) Traffic Signals
[TSDM 5-1-6](#) Determining Electrical Cable Quantities
 TSDM Monotube Signal Arm and Pole Structures 6-1-11
 TEOpS X-X-X Cable and Wire Measurement Lengths

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
531.8990	Anchor Assemblies Poles on Structures.....	EACH
654.0120	Concrete Bases Type 10 Special.....	EACH
655.0200 - 0299	Cable Traffic Signal (# of conductors) (AWG)	LF
657-0347	Poles Type 9 Special	EACH
657-0541	Monotube Arms 40-FT-SpecialL	EACH
658.0100 - 0199	Traffic Signal Face (section) (size).....	EACH
658.0400 - 0499	Pedestrian Signal Face (inch)	EACH
658.0500	Pedestrian Push Buttons	EACH
658.1100 - 1199	Programmable Traffic Signal Face (sections) (size).....	EACH
658.5070	Signal Mounting Hardware (location)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Vendor
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Department

Other SDDs associated with this drawing:

SDD 9C15	Concrete Base Type 10 Special
SDD 9E8	Type 9, Type 10, Type 9/10 Special, Type 12 and Type 13 Poles with Monotube Arms, sheet "k"
SDD 12A4	Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and Traffic Signals

Design Notes:**Contact Person:**

Ahmet Demirbilek (414) 220-6801
 (414) 322-9606 (Mobile)

Type 9 Special Pole 45' Monotube Arm**References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols
[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening
[Standard Spec 657.3.3.2](#) for Bolts and Bolted Connections.
[Standard Spec 658](#) Traffic Signals
[TSDM 5-1-6](#) Determining Electrical Cable Quantities
 TSDM Monotube Signal Arm and Pole Structures 6-1-11
 TEOpS X-X-X Cable and Wire Measurement Lengths

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
531.8990	Anchor Assemblies Poles on Structures	EACH
654.0120	Concrete Bases Type 10 Special.....	EACH
655.0200 - 0299	Cable Traffic Signal (# of conductors) (AWG)	LF
657-0347	Poles Type 9 Special	EACH
657-0546	Monotube Arms 45-FT-SpecialL	EACH
658.0100 - 0199	Traffic Signal Face (section) (size).....	EACH
658.0400 - 0499	Pedestrian Signal Face (inch)	EACH
658.0500	Pedestrian Push Buttons	EACH
658.1100 - 1199	Programmable Traffic Signal Face (sections) (size).....	EACH
658.5070	Signal Mounting Hardware (location)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Vendor
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Department

Other SDDs associated with this drawing:

SDD 9C15	Concrete Base Type 10 Special
SDD 9E8	Type 9, Type 10, Type 9/10 Special, Type 12 and Type 13 Poles with Monotube Arms, sheet "k"
SDD 12A4	Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and Traffic Signals

Design Notes:**Contact Person:**

Ahmet Demirbilek (414) 220-6801
 (414) 322-9606 (Mobile)

*Type 10 Pole 15'-30' Monotube Arm***References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols
[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening
[Standard Spec 657.3.3.2](#) for Bolts and Bolted Connections.
[Standard Spec 658](#) Traffic Signals
[Standard Spec 659](#) Lighting
[TSDM 5-1-6](#) Determining Electrical Cable Quantities
 TSDM Monotube Signal Arm and Pole Structures 6-1-11
 TEOpS X-X-X Cable and Wire Measurement Lengths

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
531.8990	Anchor Assemblies Poles on Structures	EACH
654.0110	Concrete Bases Type 10.....	EACH
655.0200 - 0299	Cable Traffic Signal (# of conductors) (AWG)	LF
655.0610	Electrical Wire Lighting 12 AWG	LF
657-0350	Poles Type 10.....	EACH
657-0515 - 0530	Monotube Arms (size).....	EACH
657-0806 - 0815	Luminaire Arms Steel (size)	EACH
657-0820	Luminaire Arms Steel Type 10 Pole Clamp 15-FT.....	EACH
658.0100 - 0199	Traffic Signal Face (section) (size).....	EACH
658.0400 - 0499	Pedestrian Signal Face (inch)	EACH
658.0500	Pedestrian Push Buttons.....	EACH
658.1100 - 1199	Programmable Traffic Signal Face (sections) (size).....	EACH
658.5070	Signal Mounting Hardware (location)	EACH
659.1100 - 1199	Luminaires Utility LED (Category)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Vendor
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Department

Other SDDs associated with this drawing:

[SDD 9C11](#) Concrete Base Type 10
[SDD 9C13](#) Concrete Base Type 10 and Type 13 Extension [SDD 9E8](#) Type 9, Type 10, Type 9/10
 Special, Type 12 and Type 13 Poles with Monotube Arms, sheet "k"
[SDD 12A4](#) Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports
 and Traffic Signals

Design Notes:

Contact Person:

Ahmet Demirbilek (414) 220-6801
 (414) 322-9606 (Mobile)

*Type 10 Special Pole 35' Monotube Arm***References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols
[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening
[Standard Spec 657.3.3.2](#) for Bolts and Bolted Connections.
[Standard Spec 658](#) Traffic Signals
[Standard Spec 659](#) Lighting
[TSDM 5-1-6](#) Determining Electrical Cable Quantities
 TSDM Monotube Signal Arm and Pole Structures 6-1-11
 TEOpS X-X-X Cable and Wire Measurement Lengths

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
531.8990	Anchor Assemblies Poles on Structures	EACH
654.0120	Concrete Bases Type 10 Special.....	EACH
655.0200 - 0299	Cable Traffic Signal (# of conductors) (AWG)	LF
655.0610	Electrical Wire Lighting 12 AWG	LF
657-0352	Poles Type 10 Special.....	EACH
657-0536	Monotube Arms 35-FT-SpecialL	EACH
657-0806 - 0815	Luminaire Arms Steel (size)	EACH
657-0820	Luminaire Arms Steel Type 10 Pole Clamp 15-FT	EACH
658.0100 - 0199	Traffic Signal Face (section) (size).....	EACH
658.0400 - 0499	Pedestrian Signal Face (inch)	EACH
658.0500	Pedestrian Push Buttons	EACH
658.1100 - 1199	Programmable Traffic Signal Face (sections) (size).....	EACH
658.5070	Signal Mounting Hardware (location)	EACH
659.1100 - 1199	Luminaires Utility LED (Category)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Vendor
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Department

Other SDDs associated with this drawing:

SDD 9C15	Concrete Base Type 10 Special
SDD 9E8	Type 9, Type 10, Type 9/10 Special, Type 12 and Type 13 Poles with Monotube Arms, sheet "k"
SDD 12A4	Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and Traffic Signals

Design Notes:**Contact Person:**

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*Type 10 Special Pole 40' Monotube Arm***References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols
[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening
[Standard Spec 657.3.3.2](#) for Bolts and Bolted Connections.
[Standard Spec 658](#) Traffic Signals
[Standard Spec 659](#) Lighting
[TSDM 5-1-6](#) Determining Electrical Cable Quantities
 TSDM Monotube Signal Arm and Pole Structures 6-1-11
 TEOpS X-X-X Cable and Wire Measurement Lengths

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
531.8990	Anchor Assemblies Poles on Structures	EACH
654.0120	Concrete Bases Type 10 Special.....	EACH
655.0200 - 0299	Cable Traffic Signal (# of conductors) (AWG)	LF
655.0610	Electrical Wire Lighting 12 AWG	LF
657-0352	Poles Type 10 Special.....	EACH
657-0541	Monotube Arms 40-FT-SpecialL	EACH
657-0806 - 0815	Luminaire Arms Steel (size)	EACH
657-0820	Luminaire Arms Steel Type 10 Pole Clamp 15-FT	EACH
658.0100 - 0199	Traffic Signal Face (section) (size).....	EACH
658.0400 - 0499	Pedestrian Signal Face (inch)	EACH
658.0500	Pedestrian Push Buttons	EACH
658.1100 - 1199	Programmable Traffic Signal Face (sections) (size).....	EACH
658.5070	Signal Mounting Hardware (location)	EACH
659.1100 - 1199	Luminaires Utility LED (Category)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Vendor
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Department

Other SDDs associated with this drawing:

SDD 9C15	Concrete Base Type 10 Special
SDD 9E8	Type 9, Type 10, Type 9/10 Special, Type 12 and Type 13 Poles with Monotube Arms, sheet "k"
SDD 12A4	Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and Traffic Signals

Design Notes:**Contact Person:**

Ahmet Demirbilek (414) 220-6801
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*Type 10 Special Pole 45' Monotube Arm***References:**

[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening [FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols

[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening

[Standard Spec 657.3.3.2](#) for Bolts and Bolted Connections.

[Standard Spec 658](#) Traffic Signals

[Standard Spec 659](#) Lighting

[TSDM 5-1-6](#) Determining Electrical Cable Quantities

TSDM Monotube Signal Arm and Pole Structures 6-1-11

TEOpS X-X-X Cable and Wire Measurement Lengths

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
531.8990	Anchor Assemblies Poles on Structures	EACH
654.0120	Concrete Bases Type 10 Special.....	EACH
655.0200 - 0299	Cable Traffic Signal (# of conductors) (AWG)	LF
655.0610	Electrical Wire Lighting 12 AWG	LF
657-0352	Poles Type 10 Special.....	EACH
657-0546	Monotube Arms 45-FT-Special.....	EACH
657-0806 - 0815	Luminaire Arms Steel (size)	EACH
657-0820	Luminaire Arms Steel Type 10 Pole Clamp 15-FT.....	EACH
658.0100 - 0199	Traffic Signal Face (section) (size).....	EACH
658.0400 - 0499	Pedestrian Signal Face (inch)	EACH
658.0500	Pedestrian Push Buttons	EACH
658.1100 - 1199	Programmable Traffic Signal Face (sections) (size).....	EACH
658.5070	Signal Mounting Hardware (location)	EACH
659.1100 - 1199	Luminaires Utility LED (Category)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Vendor
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Department

Other SDDs associated with this drawing:

[SDD 9C15](#) Concrete Base Type 10 Special

[SDD 9E8](#) Type 9, Type 10, Type 9/10 Special, Type 12 and Type 13 Poles with Monotube Arms, sheet "k"

[SDD 12A4](#) Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and Traffic Signals

Design Notes:**Contact Person:**

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*Type 12 Pole 35-55' Monotube Arm***References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols
[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening
[Standard Spec 657.3.3.2](#) for Bolts and Bolted Connections.
[Standard Spec 658](#) Traffic Signals
[TSDM 5-1-6](#) Determining Electrical Cable Quantities
 TSDM Monotube Signal Arm and Pole Structures 6-1-11
 TEOpS X-X-X Cable and Wire Measurement Lengths

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
531.8990	Anchor Assemblies Poles on Structures	EACH
654.0113	Concrete Bases Type 13.....	EACH
655.0200 - 0299	Cable Traffic Signal (# of conductors) (AWG)	LF
657-0355	Poles Type 12.....	EACH
657.0535 - 0555	Monotube Arms 35 to 55 FT	EACH
658.0100 - 0199	Traffic Signal Face (section) (size).....	EACH
658.0400 - 0499	Pedestrian Signal Face (inch)	EACH
658.0500	Pedestrian Push Buttons	EACH
658.1100 - 1199	Programmable Traffic Signal Face (sections) (size).....	EACH
658.5070	Signal Mounting Hardware (location)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Vendor
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Department

Other SDDs associated with this drawing:

[SDD 9C12](#) Concrete Base Type 13 sheets "a" and "b"
[SDD 9C13](#) Concrete Base Type 10 and Type 13 Extension [SDD 9E8](#) Type 9, Type 10, Type 9/10
 Special, Type 12 and Type 13 Poles with Monotube Arms, sheet "k"
[SDD 12A4](#) Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports
 and Traffic Signals

Design Notes:**Contact Person:**

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*Type 13 Pole 35-55' Monotube Arm***References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols
[Standard Spec 532.3.6.1](#) for Anchor Rod Tightening
[Standard Spec 657.3.3.2](#) for Bolts and Bolted Connections.
[Standard Spec 658](#) Traffic Signals
[Standard Spec 659](#) Lighting
[TSDM 5-1-6](#) Determining Electrical Cable Quantities
 TSDM Monotube Signal Arm and Pole Structures 6-1-11
 TEOpS X-X-X Cable and Wire Measurement Lengths

Bid items associated with this drawing:

531.8990	Anchor Assemblies Poles on Structures	EACH
654.0113	Concrete Bases Type 13	EACH
655.0200 - 0299	Cable Traffic Signal (# of conductors) (AWG)	LF
655.0610	Electrical Wire Lighting 12 AWG	LF
657-0360	Poles Type 13	EACH
657.0535 - 0555	Monotube Arms 35 to 55 FT	EACH
657-0806 - 0815	Luminaire Arms Steel (size)	EACH
657-0825	Luminaire Arms Steel Type 13 Pole Clamp 15-FT	EACH
658.0100 - 0199	Traffic Signal Face (section) (size)	EACH
658.0400 - 0499	Pedestrian Signal Face (inch)	EACH
658.0500	Pedestrian Push Buttons	EACH
658.1100 - 1199	Programmable Traffic Signal Face (sections) (size)	EACH
658.5070	Signal Mounting Hardware (location)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Vendor
659.XXXX.S	Lamp, Ballast, LED, Switch Disposal by Department

Other SDDs associated with this drawing:

SDD 9C12	Concrete Base Type 13 sheets "a" and "b"
SDD 9C13	Concrete Base Type 10 and Type 13 Extension SDD 9E8 Type 9, Type 10, Type 9/10 Special, Type 12 and Type 13 Poles with Monotube Arms, sheet "k"
SDD 12A4	Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and Traffic Signals

Design Notes:**Contact Person:**

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 (414) 322-9606 (Mobile)

*General Notes and Hardware Details for Types 9, 10, 9/10 Special, Type 12 and Type 13
Poles with Monotube Arms*

References:

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols
TSDM Monotube Signal Arm and Pole Structures 6-1-11

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>TITLE</u>	<u>UNIT</u>
NONE		

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
NONE	

Other SDDs associated with this drawing:

[SDD 12A4](#) Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports
and Traffic Signals

Design Notes:

Include this sheet with all pole and monotube combinations in this drawing series (SDD 9E8, Sheets a-j).

Contact Person:

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