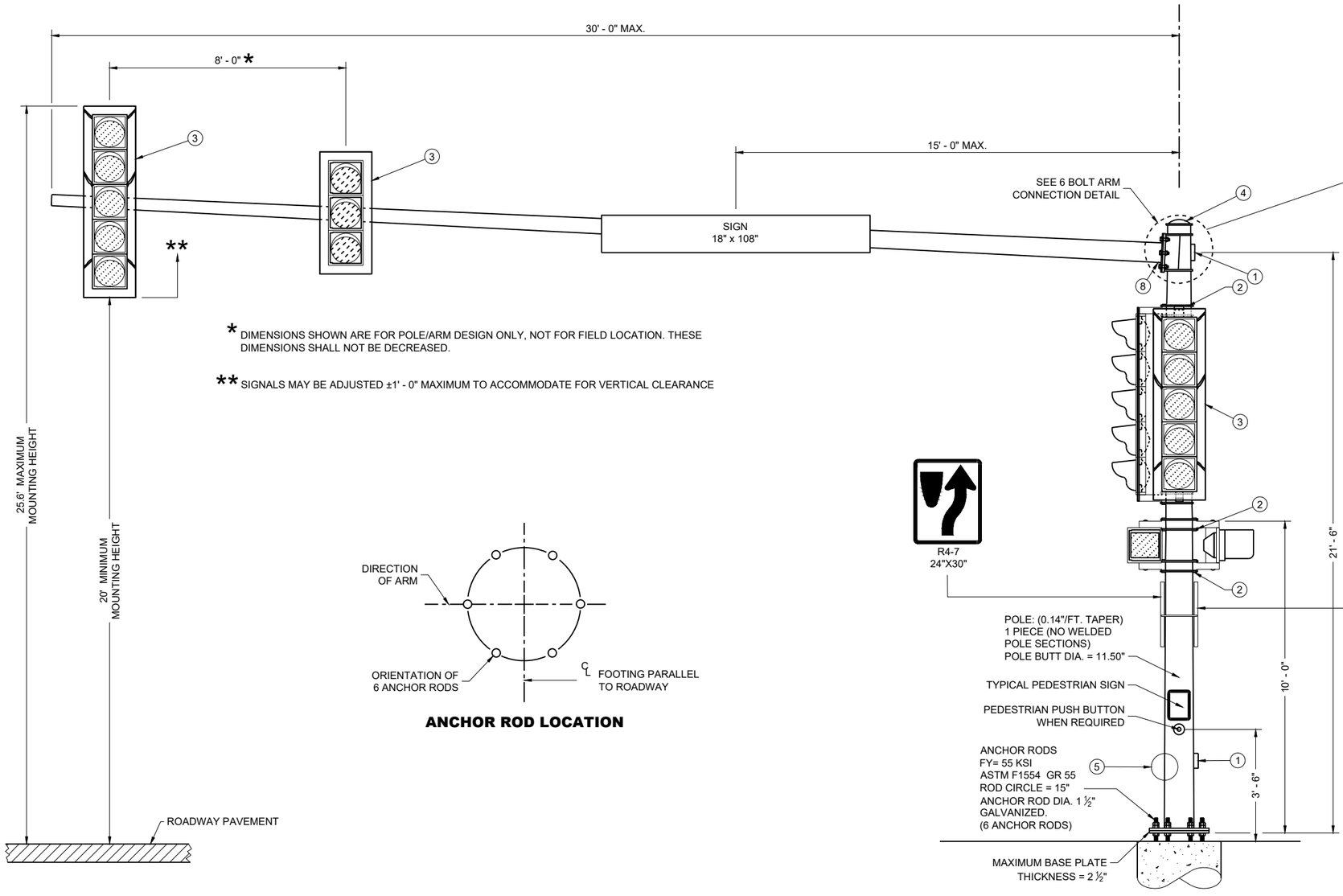
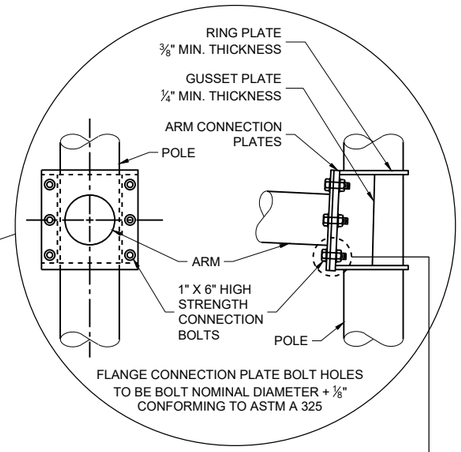


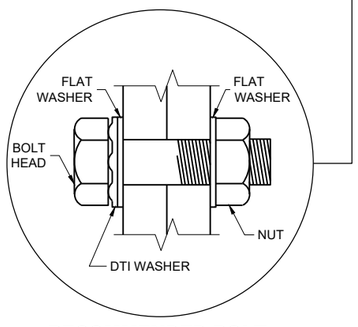
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

ANCHOR ROD LOCATION



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

OVER HEIGHT TYPE 9 POLE
15' - 30' MONOTUBE ARM
(MAXIMUM LOAD)

6

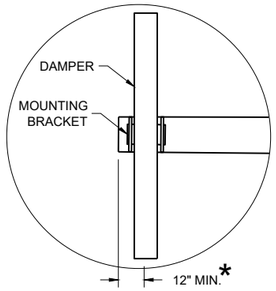
SDD 09E12-03a

OVER HEIGHT TYPE 9 POLE
15' - 30' MONOTUBE ARM

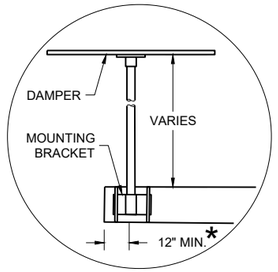
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 09E12-03a

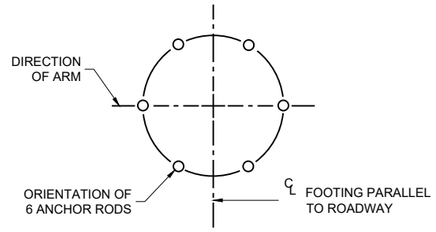


DUMBBELL VIBRATION DAMPER

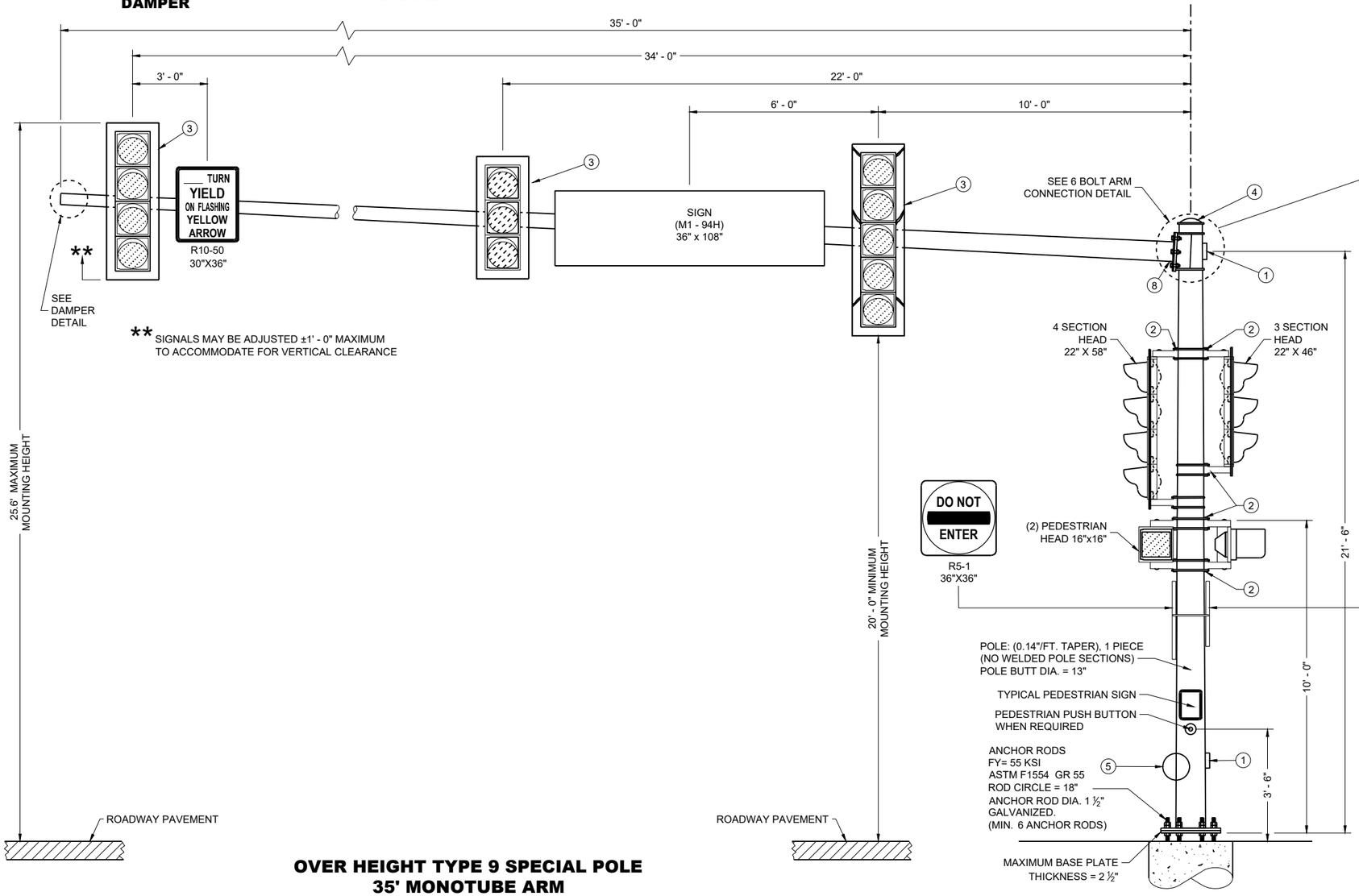


FLAT VIBRATION DAMPER

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

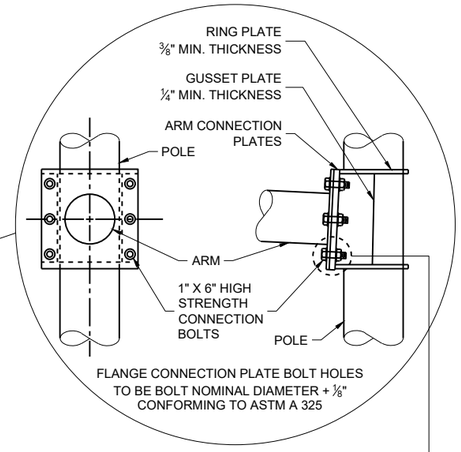


ANCHOR ROD LOCATION

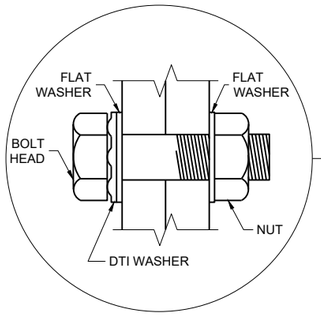


** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

OVER HEIGHT TYPE 9 SPECIAL POLE
35' MONOTUBE ARM
(MAXIMUM LOAD)



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

OVER HEIGHT TYPE 9
SPECIAL POLE
35' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 09E12-03b

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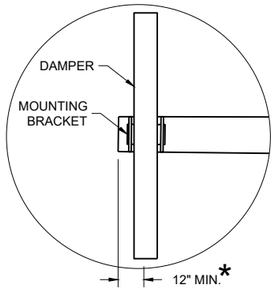
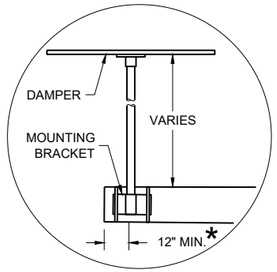
SDD 09E12-03b

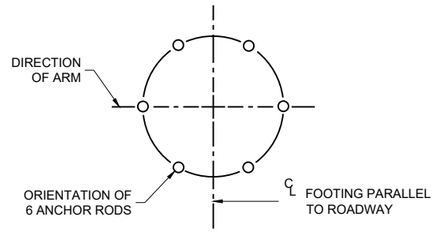


DUMBBELL VIBRATION DAMPER

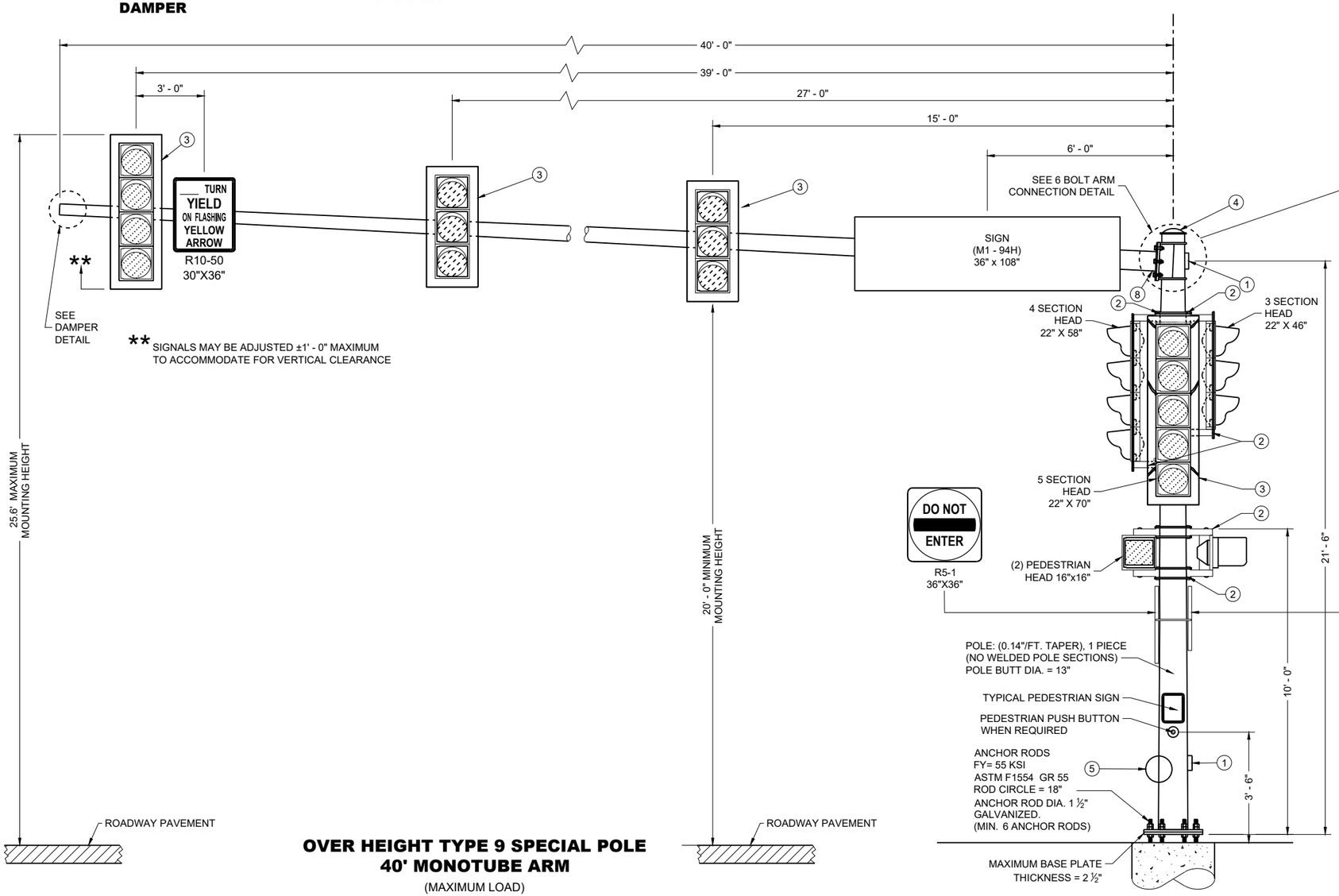


FLAT VIBRATION DAMPER

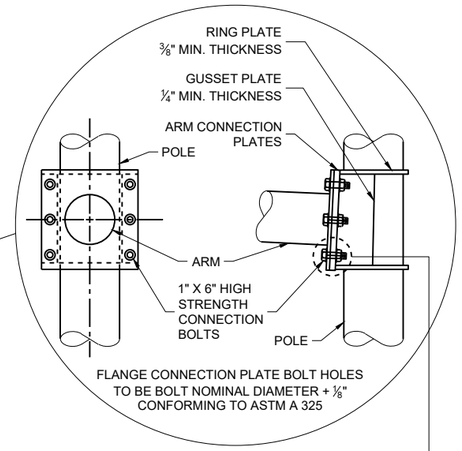
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



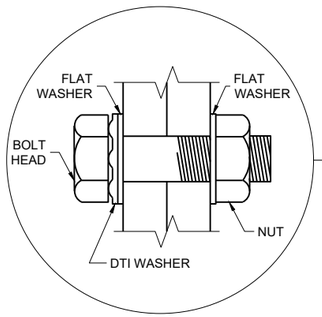
ANCHOR ROD LOCATION



OVER HEIGHT TYPE 9 SPECIAL POLE
40' MONOTUBE ARM
(MAXIMUM LOAD)



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

OVER HEIGHT TYPE 9
SPECIAL POLE
40' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 09E12-03c

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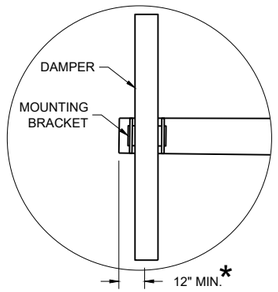
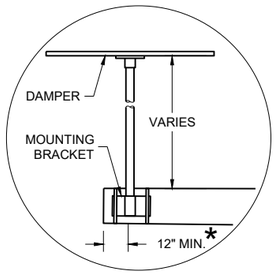
SDD 09E12-03c

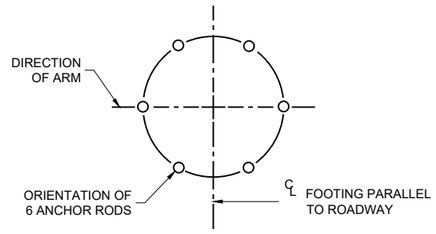


DUMBBELL VIBRATION DAMPER

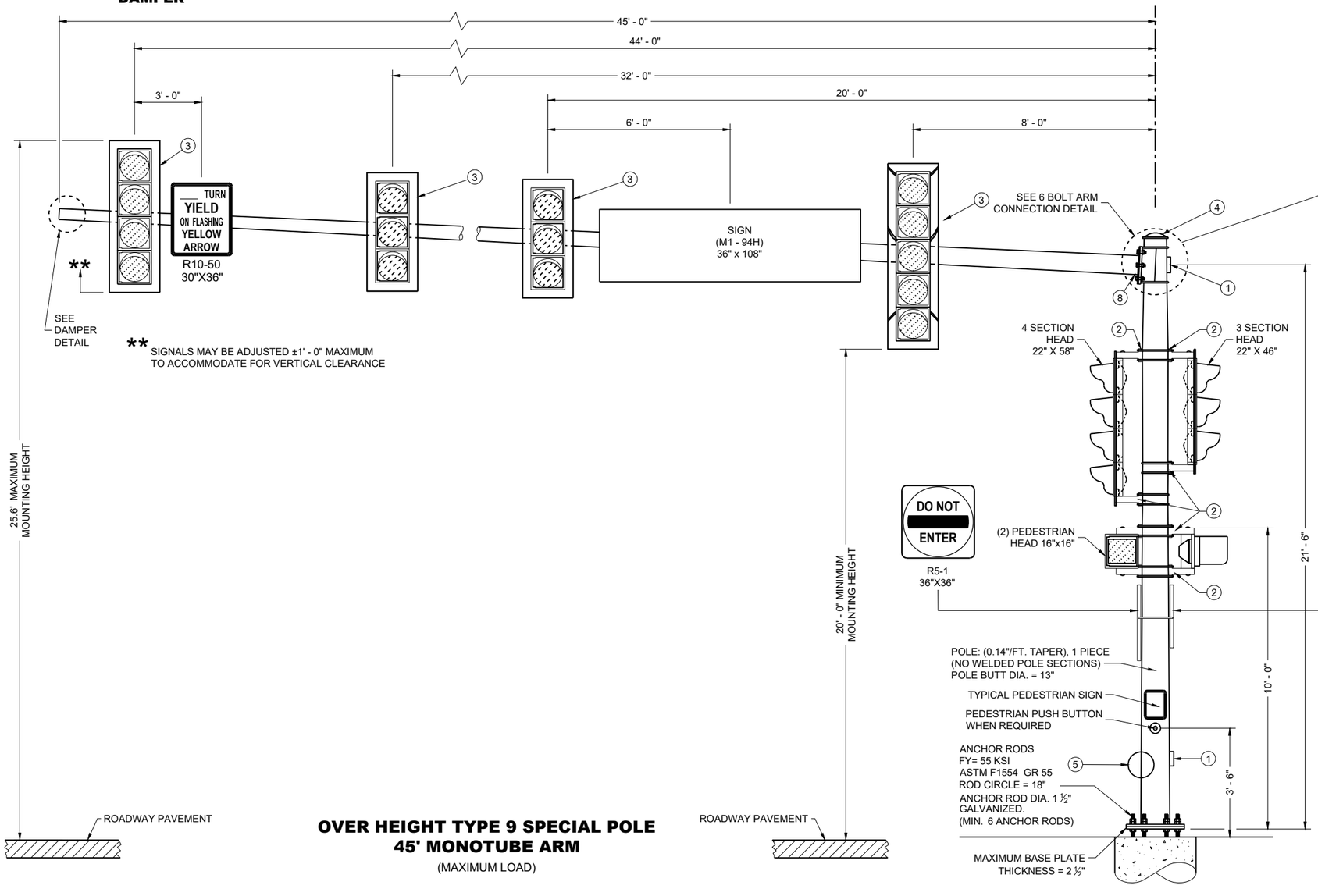


FLAT VIBRATION DAMPER

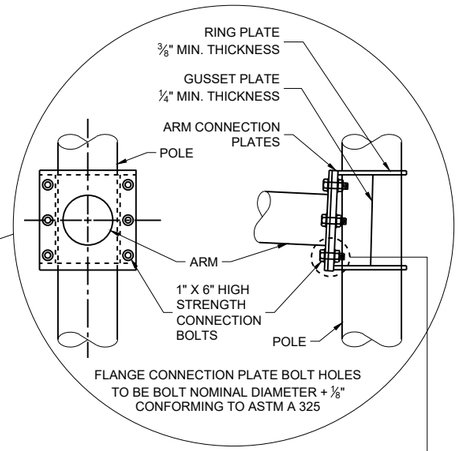
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



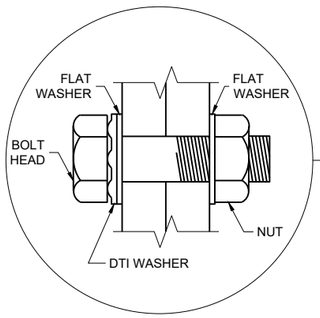
ANCHOR ROD LOCATION



OVER HEIGHT TYPE 9 SPECIAL POLE
45' MONOTUBE ARM
(MAXIMUM LOAD)



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

OVER HEIGHT TYPE 9
SPECIAL POLE
45' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 09E12-03d

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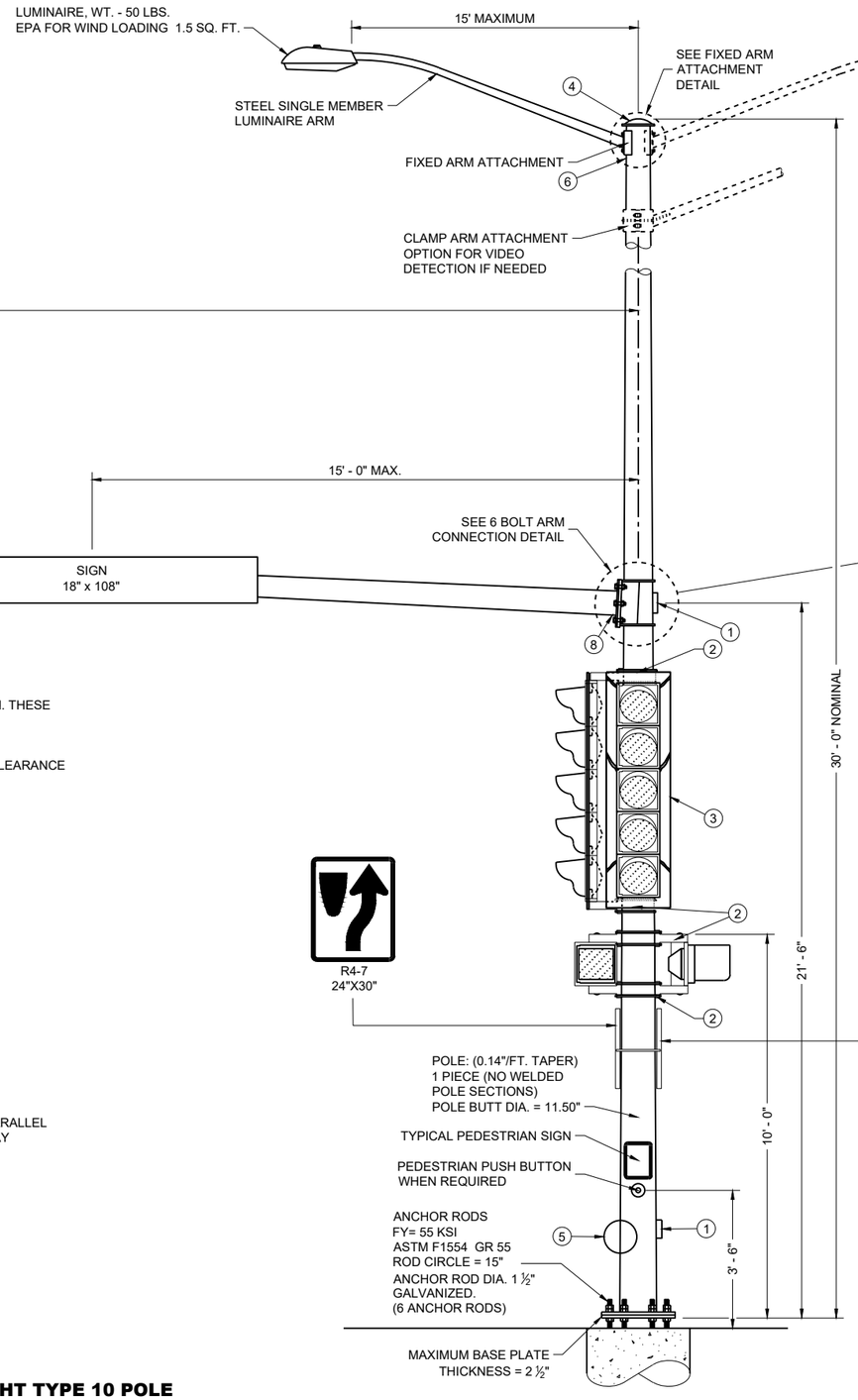
SDD 09E12-03d



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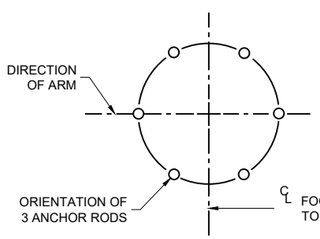
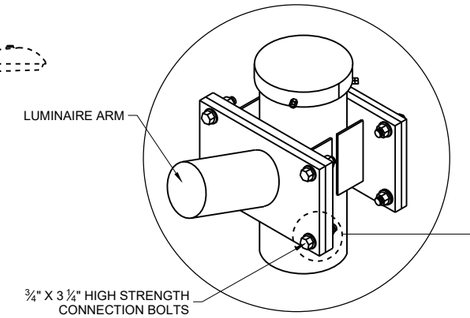
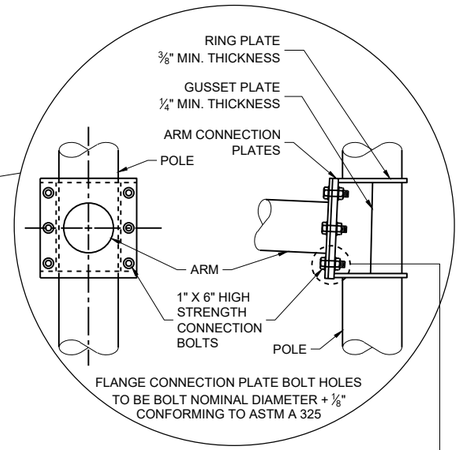


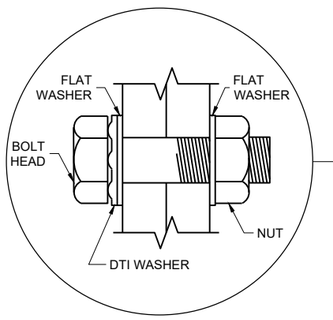
ANCHOR ROD LOCATION



FIXED ARM ATTACHMENT DETAIL



6 BOLT ARM CONNECTION DETAIL



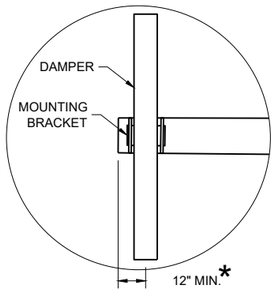
RECOMMENDED BOLT ASSEMBLY DETAIL

OVER HEIGHT TYPE 10 POLE
15' - 30' MONOTUBE ARM
(MAXIMUM LOAD)

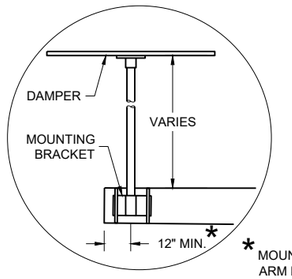
OVER HEIGHT TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 09E12-03e

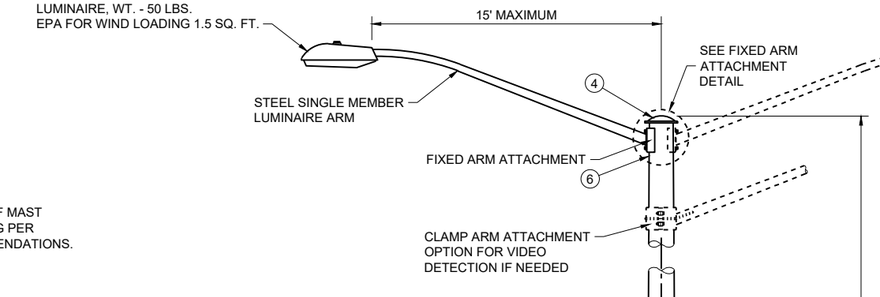


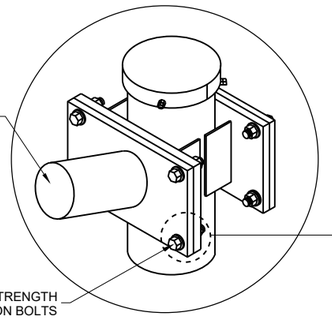
DUMBBELL VIBRATION DAMPER



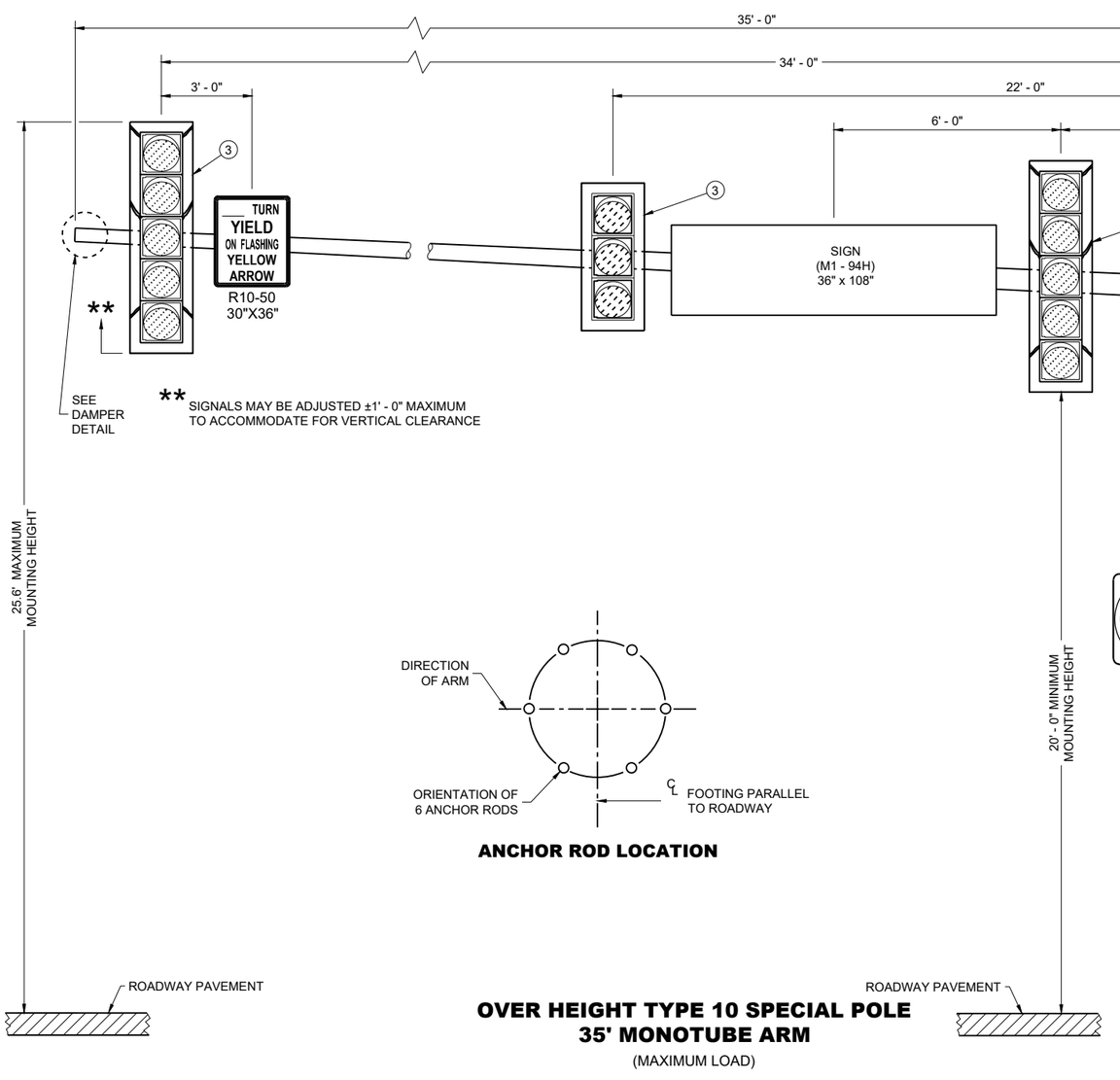
FLAT VIBRATION DAMPER

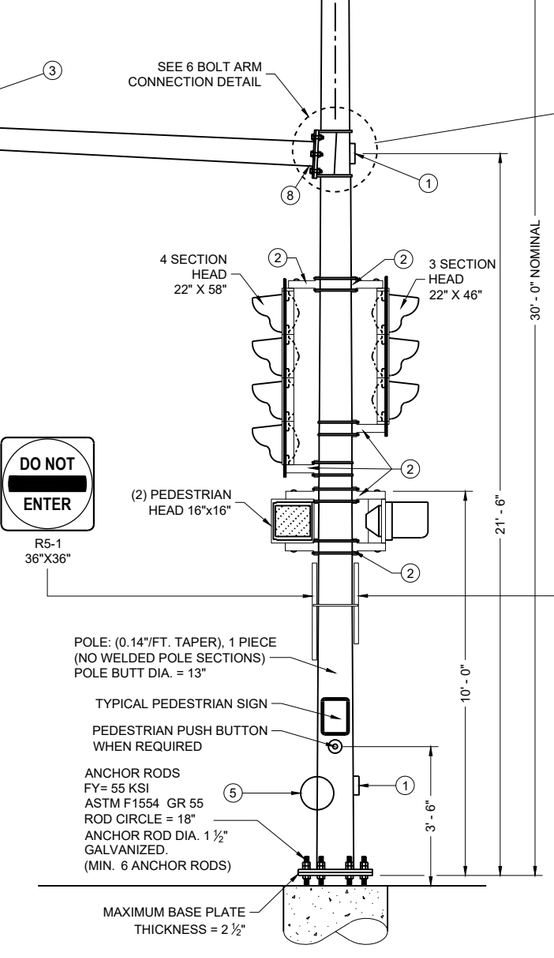
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

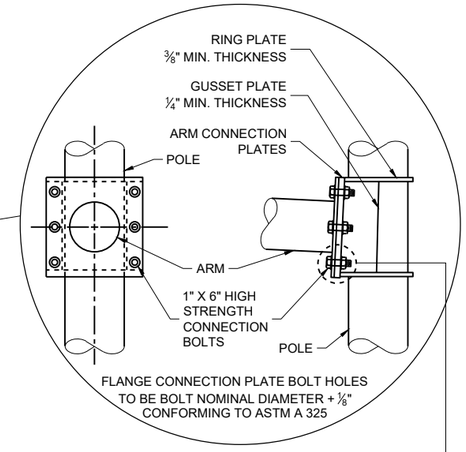




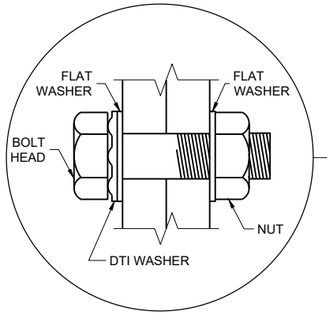
FIXED ARM ATTACHMENT DETAIL







6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

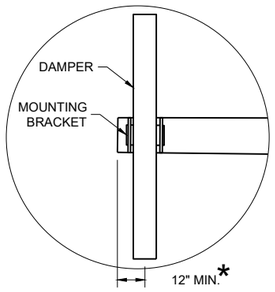
ANCHOR ROD LOCATION

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

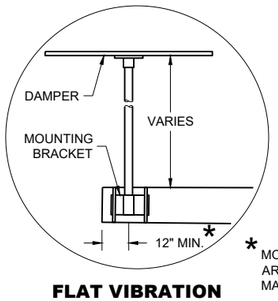
OVER HEIGHT TYPE 10
SPECIAL POLE
35' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 09E12-03f

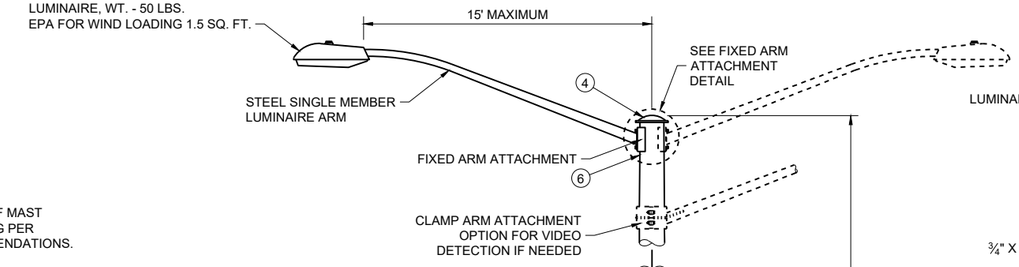


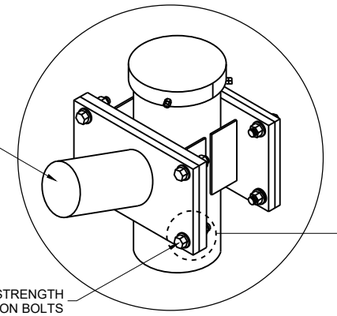
DUMBBELL VIBRATION DAMPER



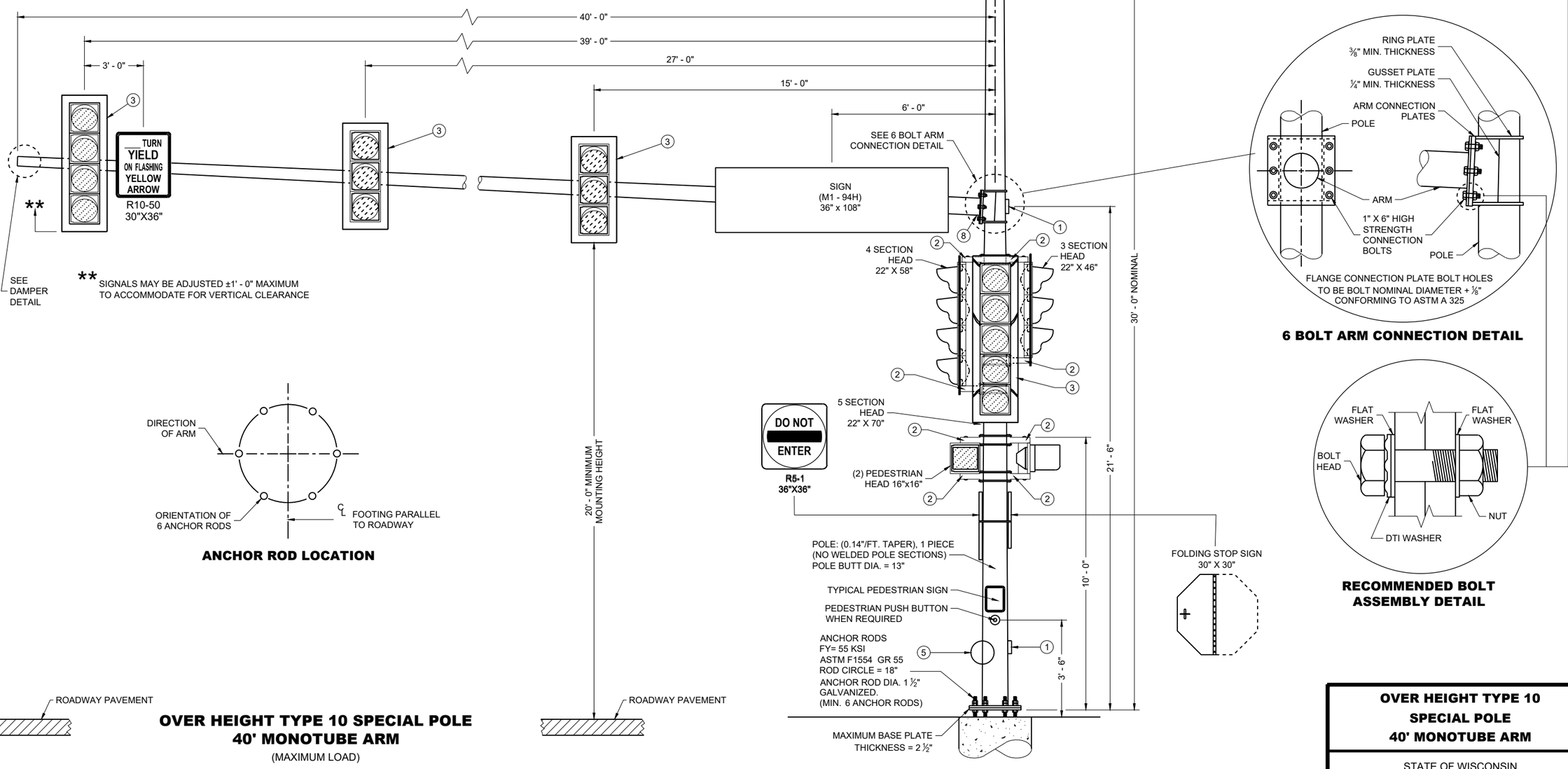
FLAT VIBRATION DAMPER

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





FIXED ARM ATTACHMENT DETAIL



** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

ANCHOR ROD LOCATION

6 BOLT ARM CONNECTION DETAIL

RECOMMENDED BOLT ASSEMBLY DETAIL

OVER HEIGHT TYPE 10 SPECIAL POLE 40' MONOTUBE ARM

(MAXIMUM LOAD)

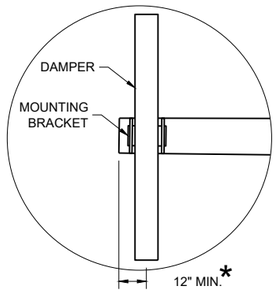
OVER HEIGHT TYPE 10 SPECIAL POLE 40' MONOTUBE ARM
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6

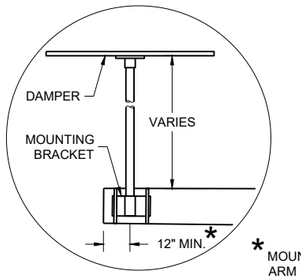
SDD 09E12-03g

6

SDD 09E12-03g

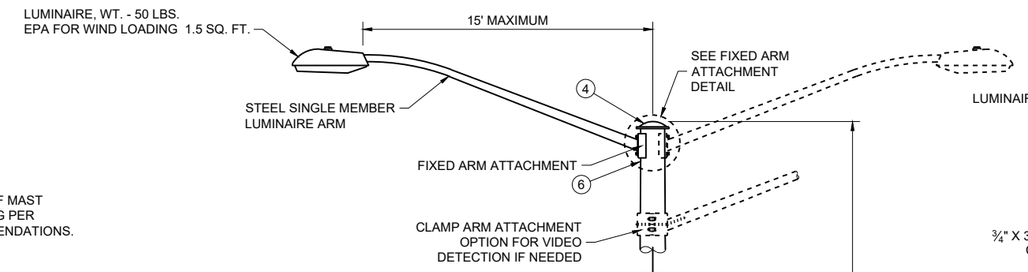


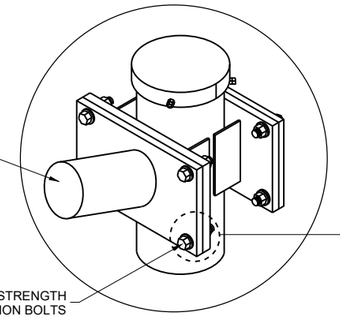
DUMBBELL VIBRATION DAMPER



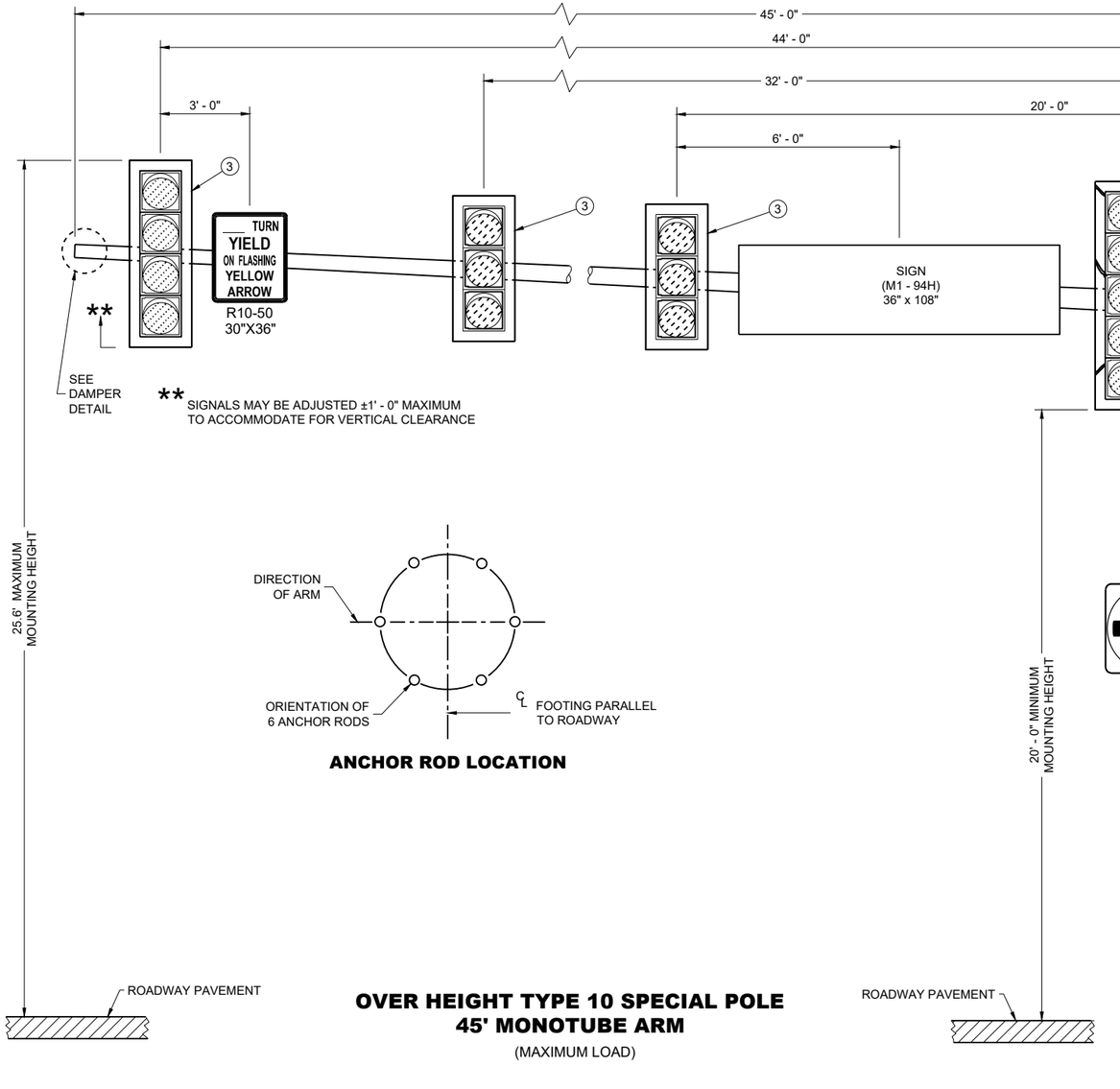
FLAT VIBRATION DAMPER

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





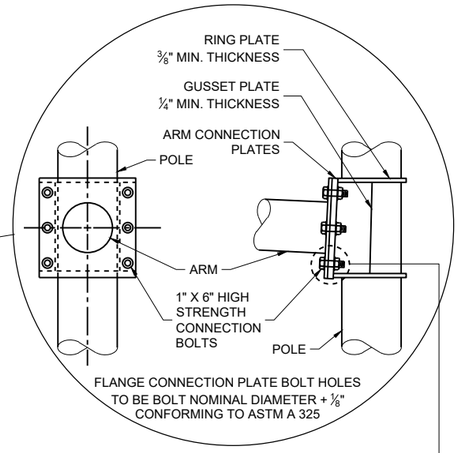
FIXED ARM ATTACHMENT DETAIL



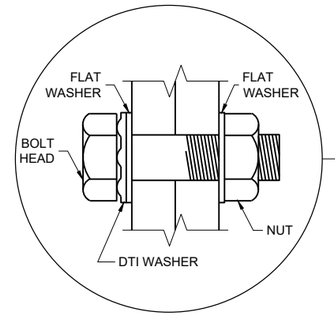
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

ANCHOR ROD LOCATION

OVER HEIGHT TYPE 10 SPECIAL POLE
45' MONOTUBE ARM
(MAXIMUM LOAD)



6 BOLT ARM CONNECTION DETAIL



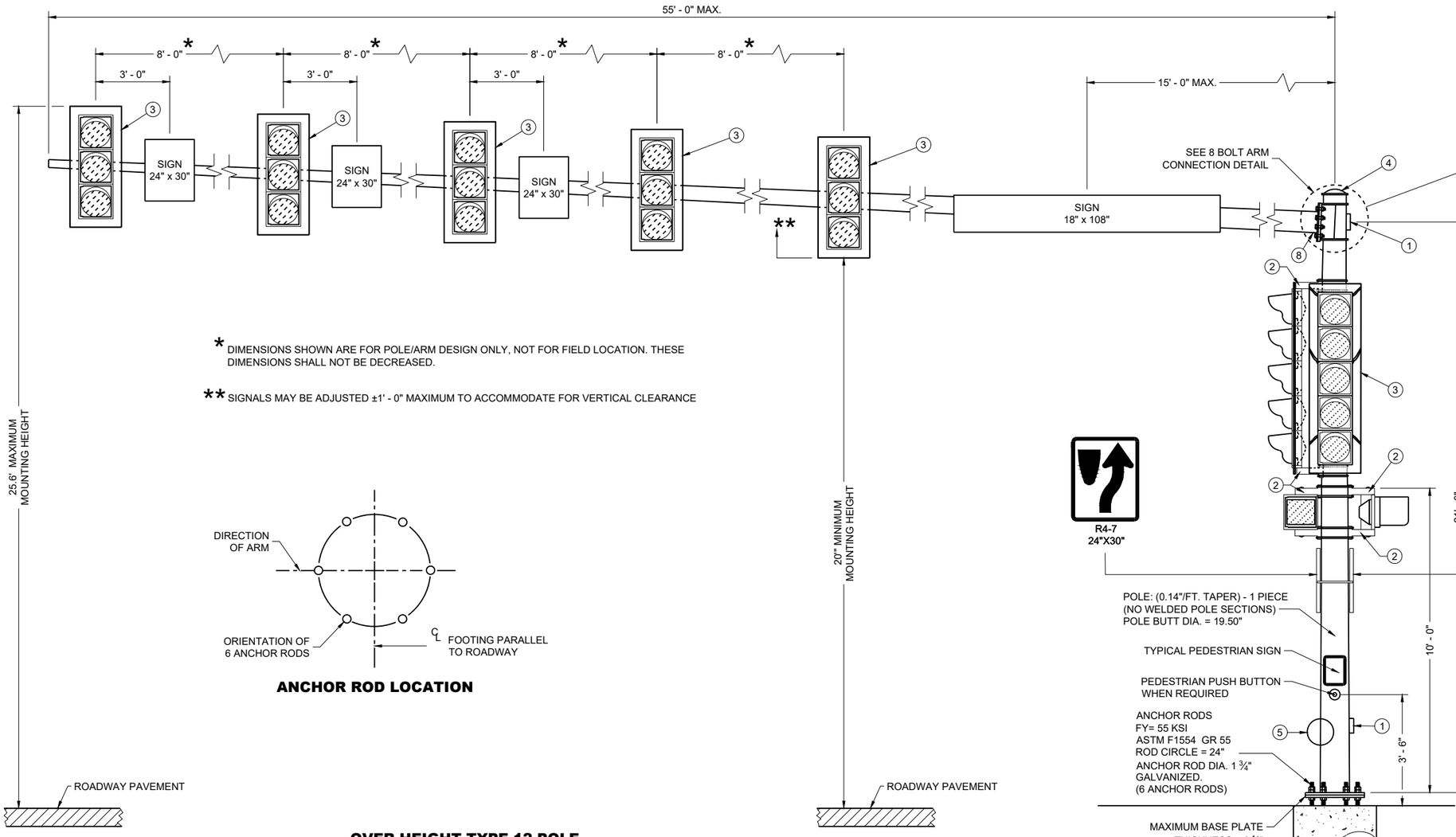
RECOMMENDED BOLT ASSEMBLY DETAIL

OVER HEIGHT TYPE 10
SPECIAL POLE
45' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 09E12-03h

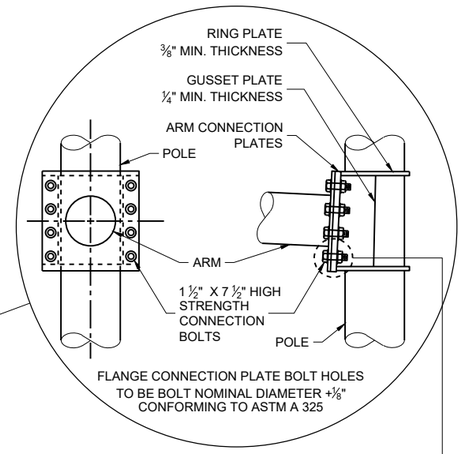


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

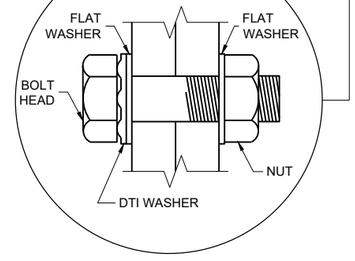
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

ANCHOR ROD LOCATION

OVER HEIGHT TYPE 12 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)



8 BOLT ARM
CONNECTION DETAIL



RECOMMENDED BOLT
ASSEMBLY DETAIL

6

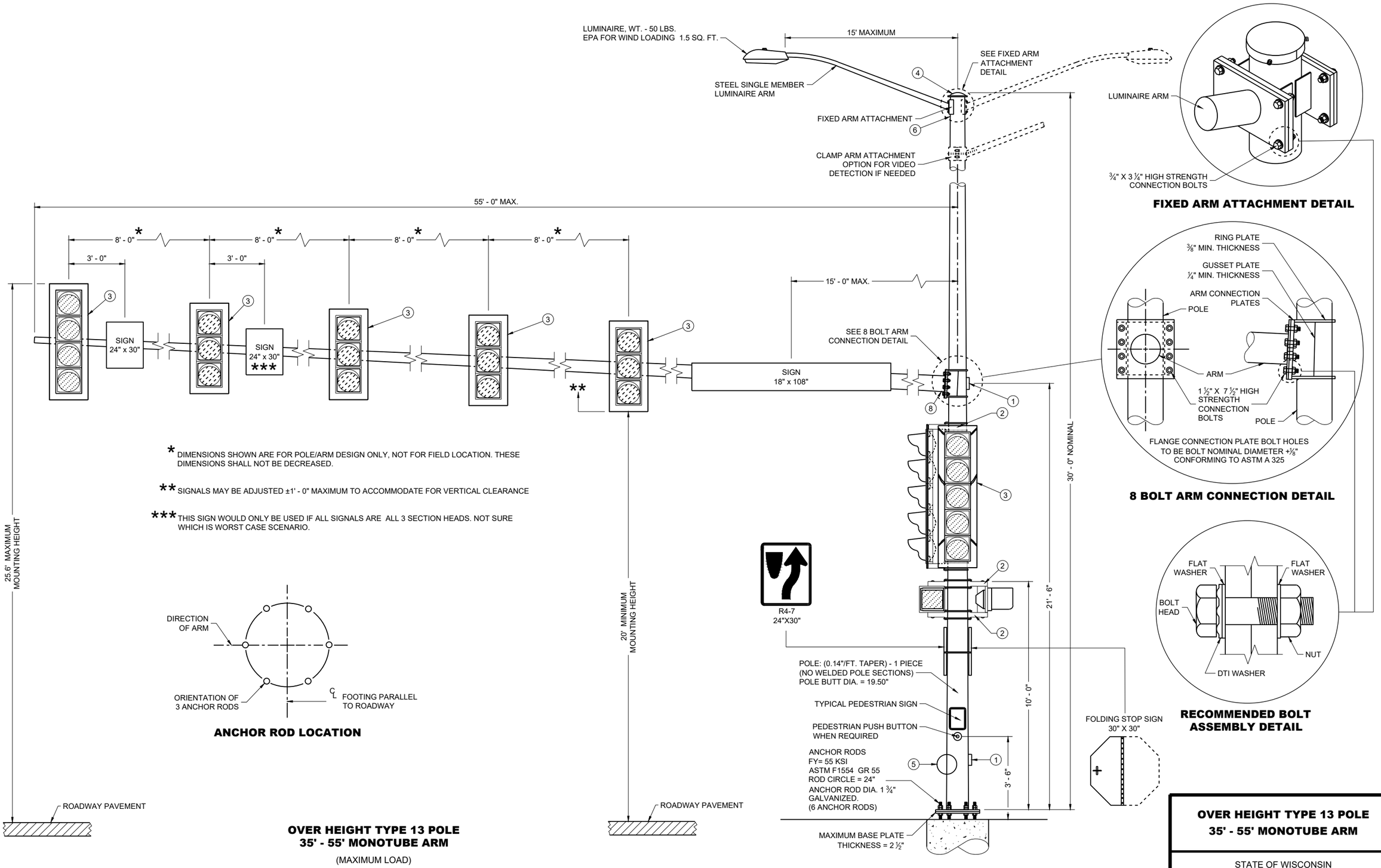
SDD 09E12-03i

OVER HEIGHT TYPE 12 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 09E12-03i



* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

*** THIS SIGN WOULD ONLY BE USED IF ALL SIGNALS ARE ALL 3 SECTION HEADS. NOT SURE WHICH IS WORST CASE SCENARIO.

ANCHOR ROD LOCATION

OVER HEIGHT TYPE 13 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)

FIXED ARM ATTACHMENT DETAIL

8 BOLT ARM CONNECTION DETAIL

RECOMMENDED BOLT ASSEMBLY DETAIL

OVER HEIGHT TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 09E12-03j

GENERAL NOTES

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

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

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

OVER HEIGHT 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 (1) 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 OVER HEIGHT 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 OVER HEIGHT 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 OVER HEIGHT TYPE 12 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 ¾" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" 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 AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS 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 ¼" X ¾" - 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 ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

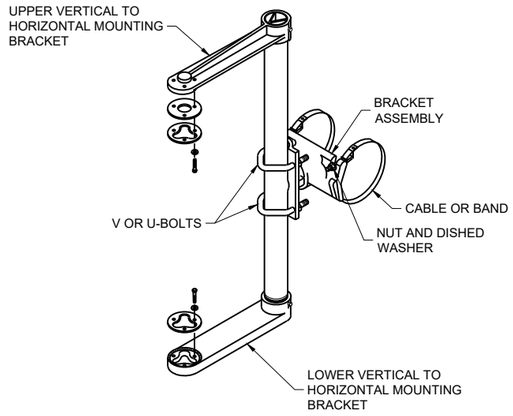
(6) FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

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

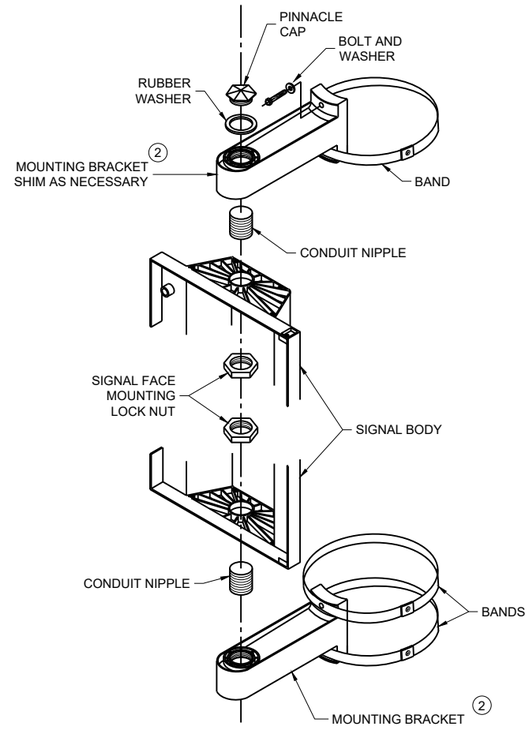
MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

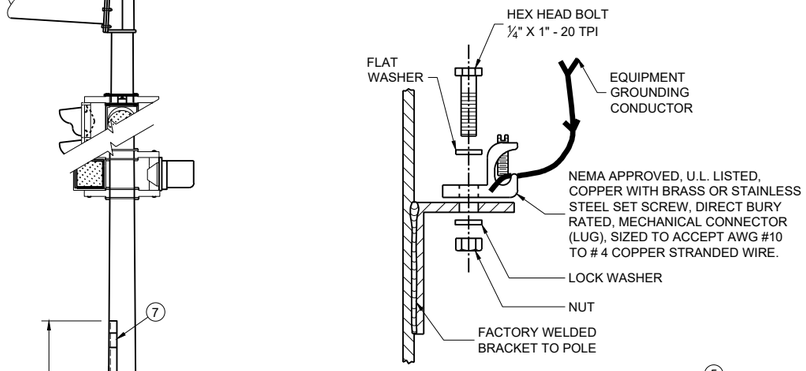


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANFACTURER'S RECOMMENDATION)



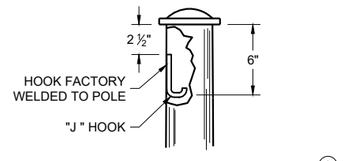
SIGNAL FACE VERTICAL MOUNTING DETAIL



TYPICAL GROUNDING CONNECTIONS

(5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



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TYPICAL "J" HOOK WIRE SUPPORT

STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2026
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA

SDD 09E12-03k

SDD 09E12-03k

Over Height 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:

ITEM NUMBER	TITLE	UNIT
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
657.0346	Poles Type 9-Over Height	EACH
657.0515 - 0530	Monotube Arms 15-FT to 30-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:

STSP NUMBER	TITLE
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)

Over Height 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:

ITEM NUMBER	TITLE	UNIT
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
657.0348	Poles Type 9-Over Height Special	EACH
657.0536	Monotube Arms 35-FT-Special	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:

STSP NUMBER	TITLE
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 9C16 Concrete Base Type 10 Special Extension
SDD 9E12 Over Height Poles and 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)

Over Height 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:

ITEM NUMBER	TITLE	UNIT
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
657.0348	Poles Type 9-Over Height Special	EACH
657.0541	Monotube Arms 40-FT-Special	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:

STSP NUMBER	TITLE
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 9C16 Concrete Base Type 10 Special Extension
SDD 9E12 Over Height Poles and 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)

Over Height 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:

ITEM NUMBER	TITLE	UNIT
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
657.0348	Poles Type 9-Over Height Special	EACH
657.0546	Monotube Arms 45-FT-Special	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:

STSP NUMBER	TITLE
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 9C16 Concrete Base Type 10 Special Extension
SDD 9E12 Over Height Poles and 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)

Over Height 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:

ITEM NUMBER	TITLE	UNIT
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
657.0351	Poles Type 10-Over Height	EACH
657.0515 - 0530	Monotube Arms 15-FT to 30-FT	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 (sections) (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	Luminaries Utility LED (Category)	EACH

Standardized Special Provisions associated with this drawing:

STSP NUMBER	TITLE
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)

Over Height 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:

ITEM NUMBER	TITLE	UNIT
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
657.0353	Poles Type 10-Over Height Special	EACH
657.0536	Monotube Arms 35-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 (sections) (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	Luminaries Utility LED (Category)	EACH

Standardized Special Provisions associated with this drawing:

STSP NUMBER	TITLE
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 9C16 Concrete Base Type 10 Special Extension
SDD 9E12 Over Height Poles and 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)

Over Height 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:

ITEM NUMBER	TITLE	UNIT
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
657.0353	Poles Type 10-Over Height Special	EACH
657.0541	Monotube Arms 40-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 (sections) (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	Luminaries Utility LED (Category)	EACH

Standardized Special Provisions associated with this drawing:

STSP NUMBER	TITLE
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 9C16 Concrete Base Type 10 Special Extension
SDD 9E12 Over Height Poles and 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)

Over Height Type 10 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
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:

ITEM NUMBER	TITLE	UNIT
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
657.0353	Poles Type 10-Over Height 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 (sections) (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	Luminaries Utility LED (Category)	EACH

Standardized Special Provisions associated with this drawing:

STSP NUMBER	TITLE
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 9C16 Concrete Base Type 10 Special Extension
SDD 9E12 Over Height Poles and 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)

Over Height 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:

ITEM NUMBER	TITLE	UNIT
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
657.0356	Poles Type 12-Over Height	EACH
657.0535 - 0555	Monotube Arms (size)	EACH
658.0100 - 0199	Traffic Signal Face (sections) (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:

STSP NUMBER	TITLE
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:

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

Over Height 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:

ITEM NUMBER	TITLE	UNIT
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
657.0361	Poles Type 13-Over Height	EACH
657.0535 - 0555	Monotube Arms (size)	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 (sections) (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:

STSP NUMBER	TITLE
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 sheet “k	Type 9, Type 10, Type 9/10 Special, Type 12 and Type 13 Poles with Monotube Arms,
SDD 12A4 Traffic Signals	Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and

Design Notes:

Contact Person:

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

General Notes and Hardware for Over Height Type 9, 10, 9/10 Special,12 and 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:

ITEM NUMBER	TITLE	UNIT
NONE		

Standardized Special Provisions associated with this drawing:

STSP NUMBER	TITLE
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 over height pole and monotube combinations in this drawing series (SDD 9E12 Sheets a-j).

Contact Person:

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