

Michigan Department of Transportation Traffic and Safety



MACOMB COUNTY TRAFFIC SIGNAL DETAILS

MC-026A THROUGH MC-120A

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ENGLISH VERSION

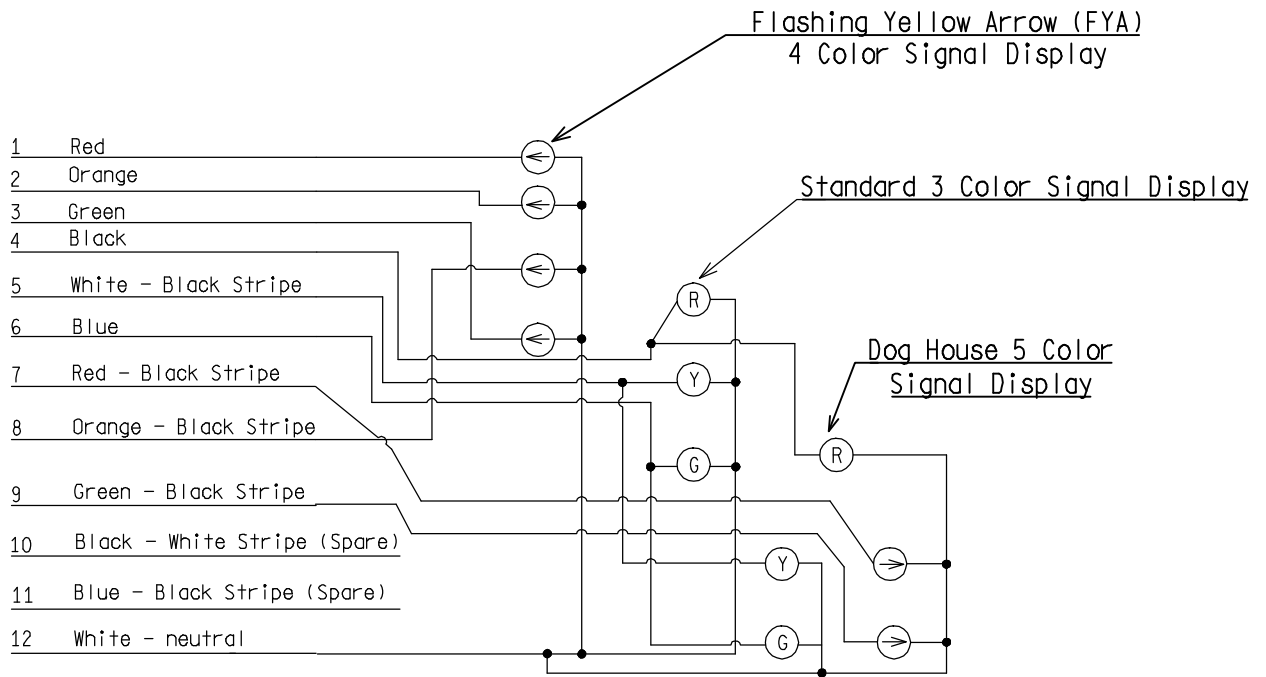


DEPARTMENT DIRECTOR
KIRK T. STEUDLE

PREPARED
BY
TRAFFIC AND SAFETY

ENGINEER OF TRAFFIC AND SAFETY

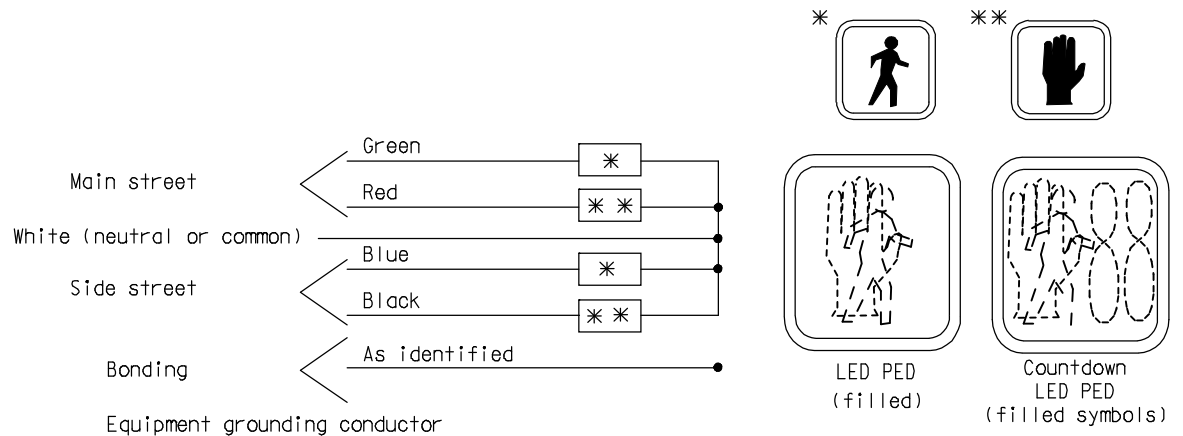
DRAWN BY: MTS
CHECKED BY: JAT



BOX SPAN

**COLOR CODE FOR WIRING CONNECTING TRAFFIC SIGNAL LAMPS
12 CONDUCTOR CABLE**

NOTE: Cable between splice box and controller cabinet.



**COLOR CODE FOR WIRING CONNECTING PEDESTRIAN SIGNAL LAMPS
(WALKING PERSON - HAND SYMBOL)**

NOT TO SCALE

File: PW:RD/TR/Standards/Signals/mdot sig026a.dgn

Rev. 11/16/10



PREPARED BY
TRAFFIC AND SAFETY

DRAWN BY: DJF

CHECKED BY:

ENGINEER OF DELIVERY

ENGINEER OF DEVELOPMENT

(SPECIAL DETAIL)

FHWA APPROVAL DATE

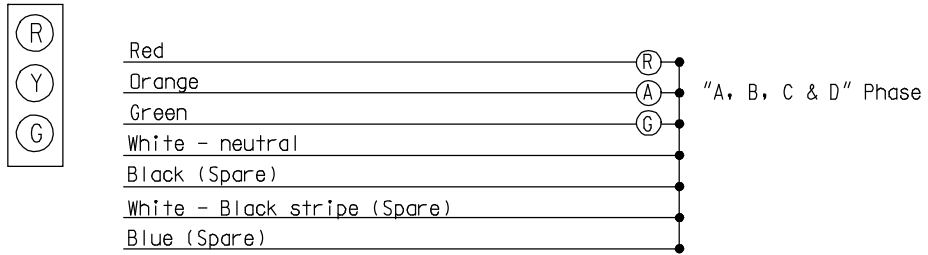
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR

**COLOR CODE WIRING/
EQUIPMENT GROUNDING**

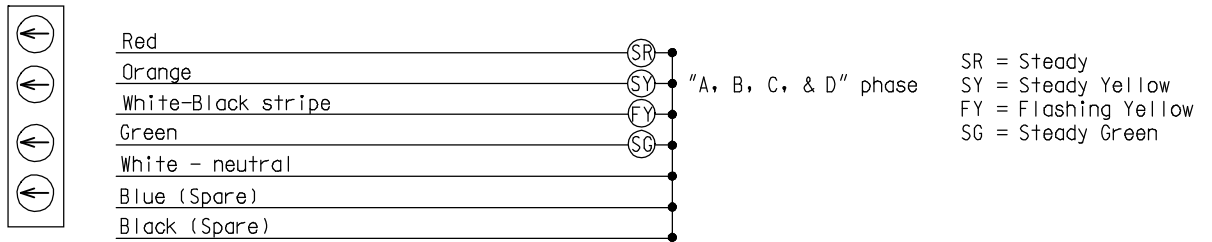
MC-026-A

PLAN DATE

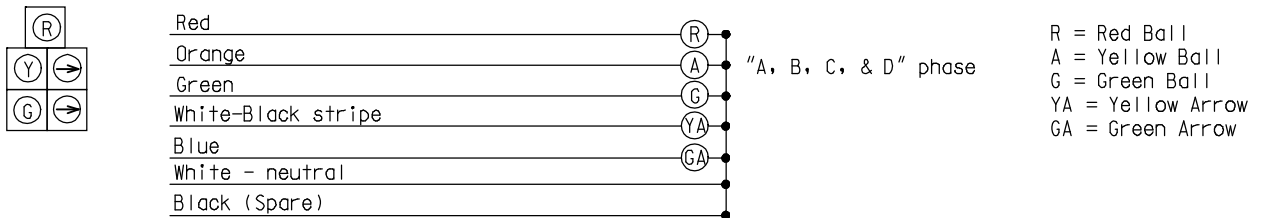
SHEET
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STANDARD - 3 COLOR SIGNAL DISPLAY
7 CONDUCTOR CABLE



FLASHING YELLOW ARROW (FYA) - 4 COLOR SIGNAL DISPLAY
7 CONDUCTOR CABLE



DOG HOUSE W/RIGHT TURNS - 5 COLOR SIGNAL DISPLAY
7 CONDUCTOR CABLE

COLOR CODE FOR WIRING CONNECTING TRAFFIC SIGNAL LAMPS

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

(SPECIAL DETAIL)
FHWA APPROVAL DATE

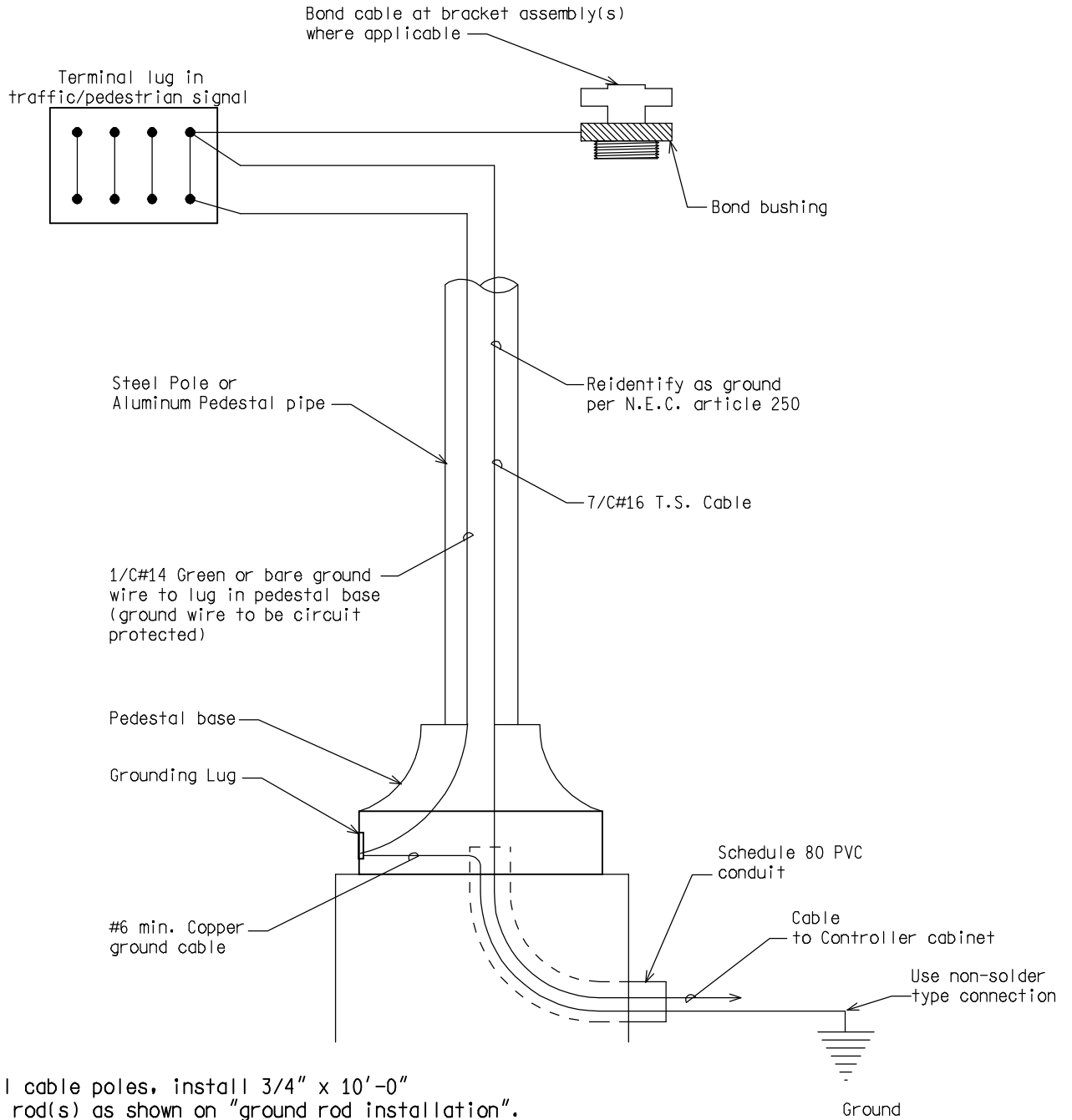
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NOTE:
 For all cable poles, install 3/4" x 10'-0"
 ground rod(s) as shown on "ground rod installation".
 Connect ground rod(s) with #6 min. copper wire to
 messenger wire with non-solder type connection.

STEEL POLE/PEDESTAL GROUNDING DETAIL

NOT TO SCALE

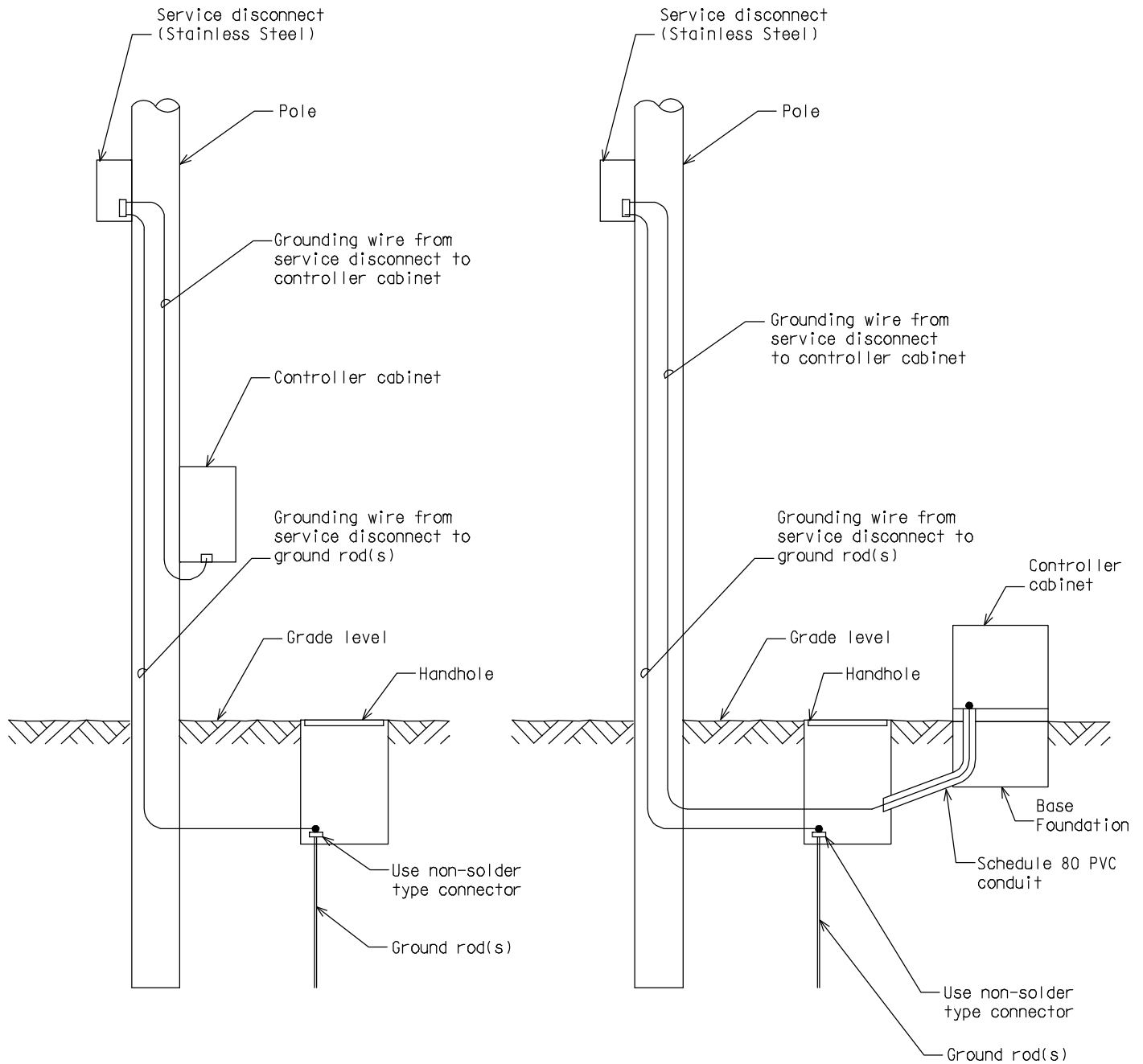
MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

(SPECIAL DETAIL)
 FHWA APPROVAL DATE

PLAN DATE

MC-026-A

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GROUNDING

Install 3/4 " x 10'-0" copper clad ground rod(s) as required to provide less than 10 OHM resistance to ground.

Grounding wire #6 AWG min. bare copper grounding wire shall be installed to meet N.E.C. and utility company specs.

Ground wire from disconnect to ground rod to be in moulding (wood pole or post) or inside the pole (steel). Ground wire from disconnect to controller cabinet to be in conduit (wood pole, wood post, and steel pole).

CONTROLLER CABINET GROUNDING DETAIL

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

(SPECIAL DETAIL)
FHWA APPROVAL DATE

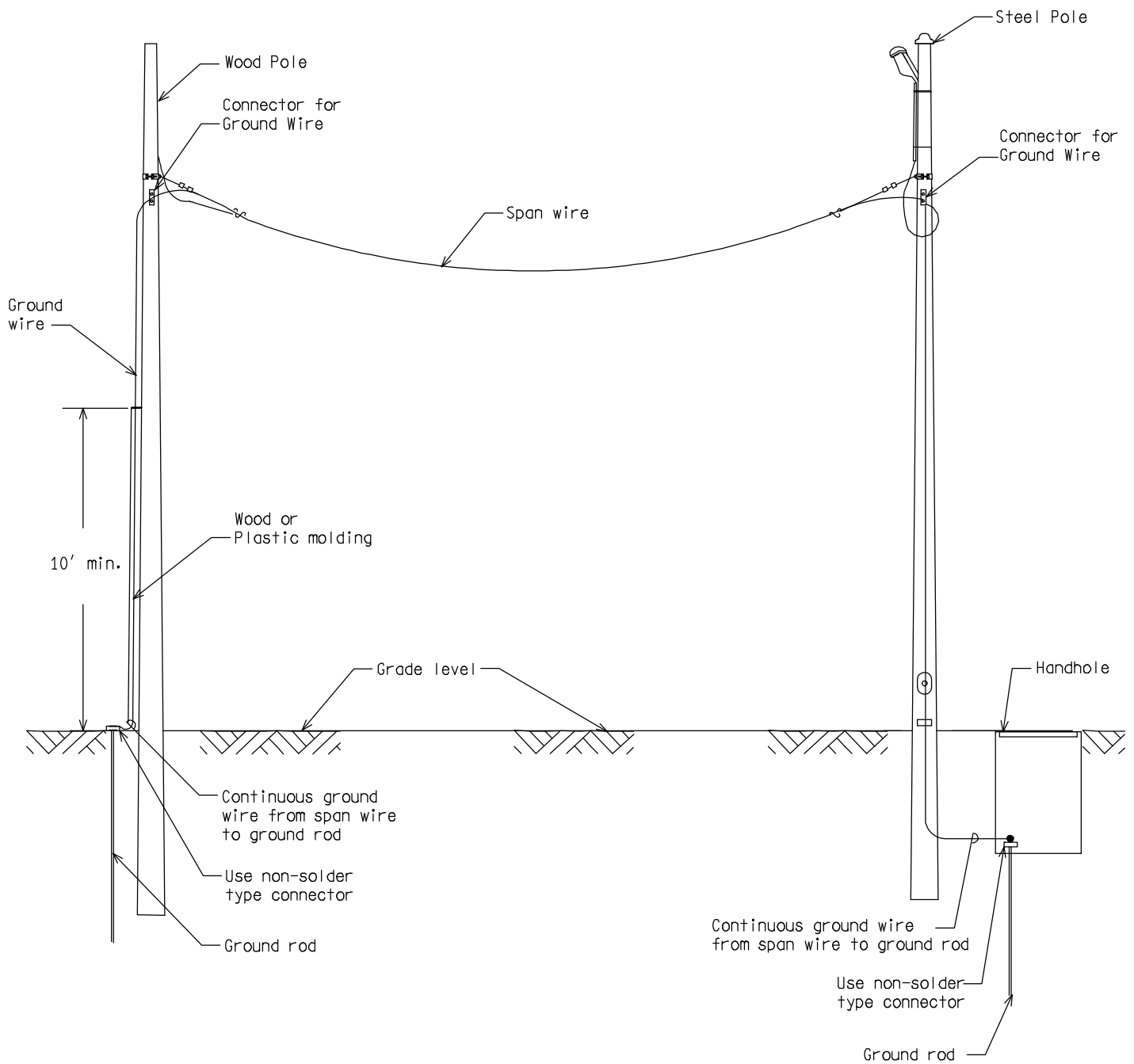
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SPAN WIRE GROUNDING DETAIL

NOT TO SCALE

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BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

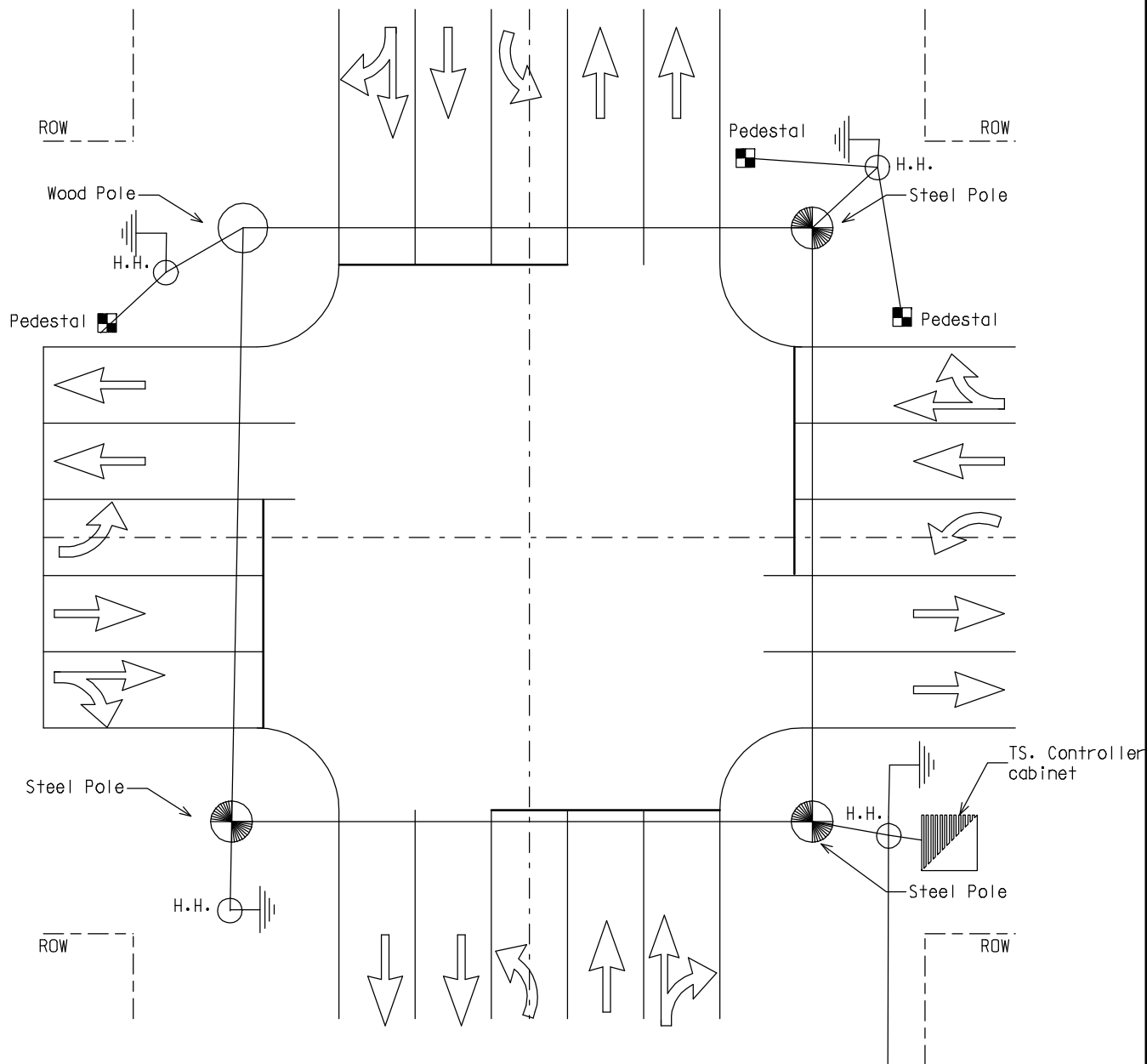
(SPECIAL DETAIL)
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- 1) All ground rods shall be 3/4" x 10' in length copper clad.
- 2) Ground rods shall be drive straight down, so that only the required portions of the ground rod is exposed to attach the ground wires.
- 3) All ground rods shall be connected to each other or to a span wire with a single #6 AWG copper conductor.
- 4) Each ground wire attaching to a ground rod shall have its own approved acorn type connector.
- 5) Do not install any ground rods within 10' of any other ground rods from other grounding.
- 6) The grounding system shall measure 10 ohms or less.
- 7) A separate #6 AWG copper ground is required from the service disconnect (safety switch) to the ground bussbar in the controller cabinet.
- 8) Ground rod for each steel pole, wood pole, pedestal and/or traffic signal controller cabinet shall be located in the adjacent handhole as indicated on the plans or as directed by the Engineer.
- 9) All metal bases must be connected to a ground rod with a #6 ground wire.

SYSTEM GROUNDING DETAIL

NOT TO SCALE

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BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

(SPECIAL DETAIL)
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File: PW:RD/TR/Standards/Signals/mdot_sig026a.dgn

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PLAN DATE

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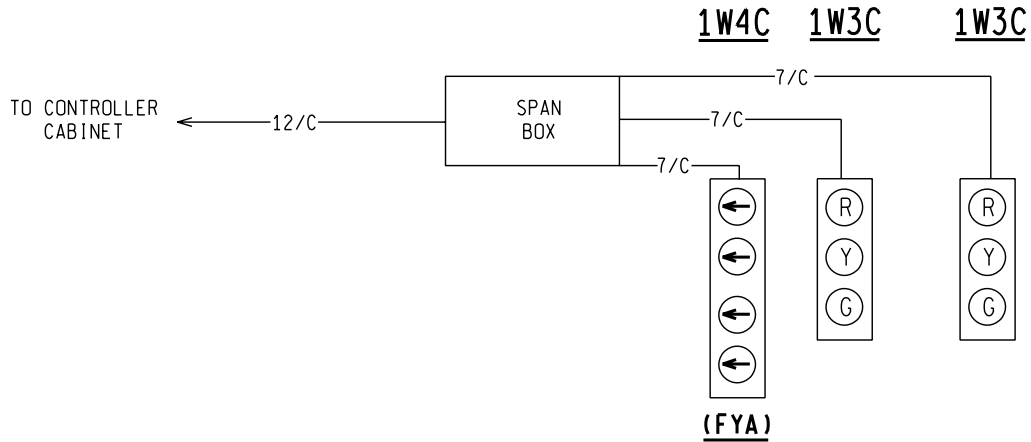
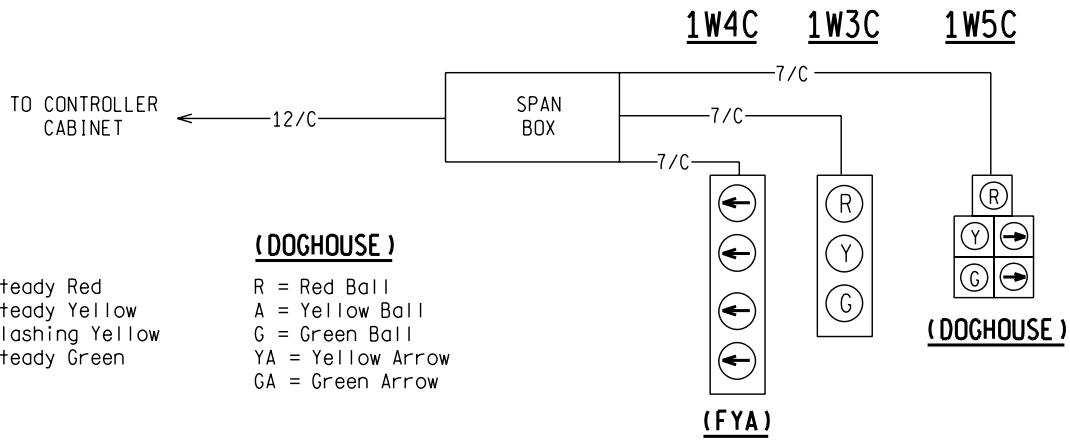
SHEET
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(FYA)

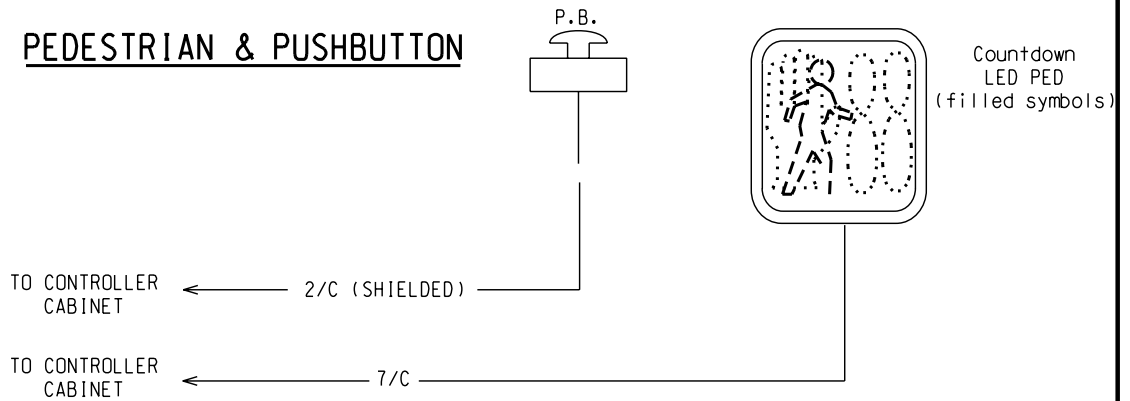
SR = Steady Red
 SY = Steady Yellow
 FY = Flashing Yellow
 SG = Steady Green

(DOGHOUSE)

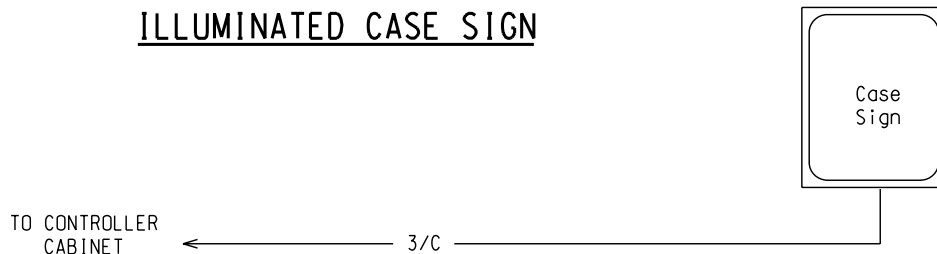
R = Red Ball
 A = Yellow Ball
 G = Green Ball
 YA = Yellow Arrow
 GA = Green Arrow



PEDESTRIAN & PUSHBUTTON



ILLUMINATED CASE SIGN



NOT TO SCALE

File: PW:RD/TR/Standards/Signals/mdot mc026b.dgn

Rev. 01/18/11



PREPARED BY
 TRAFFIC AND SAFETY

DRAWN BY: DJF

CHECKED BY:

ENGINEER OF DELIVERY

ENGINEER OF DEVELOPMENT

(SPECIAL DETAIL)
 FHWA APPROVAL DATE

MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR

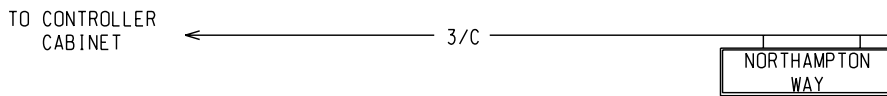
CABLING DIAGRAMS

MC-026-B

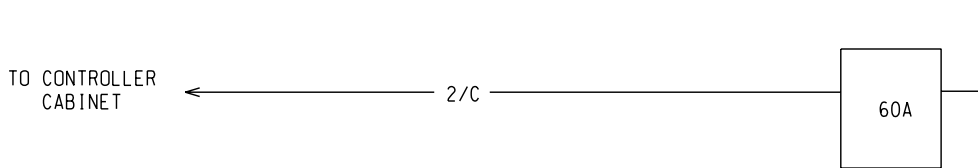
PLAN DATE

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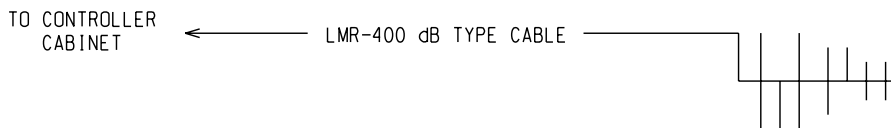
ILLUMINATED STREET NAME SIGN



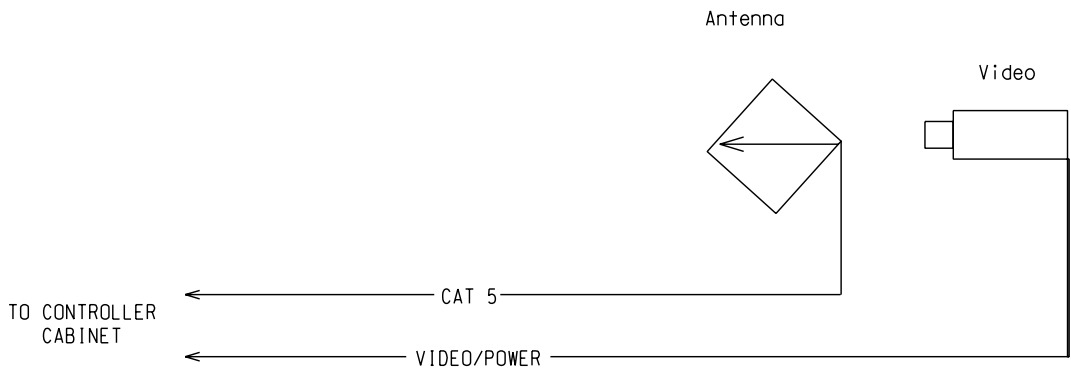
SERVICE DISCONNECT (NEMA 4X STAINLESS STEEL FUSED AT 60A)



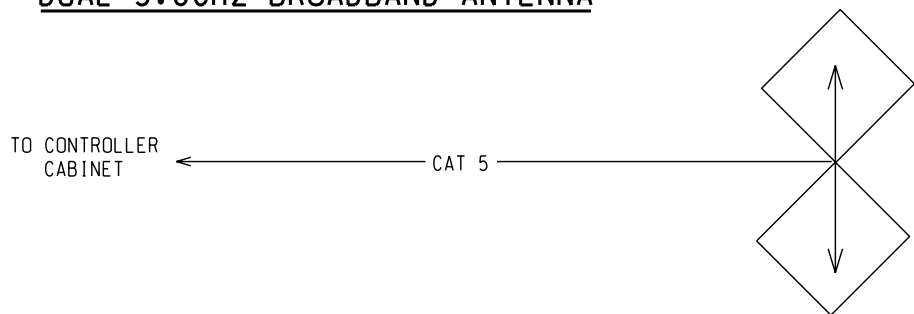
YAGI ANTENNA



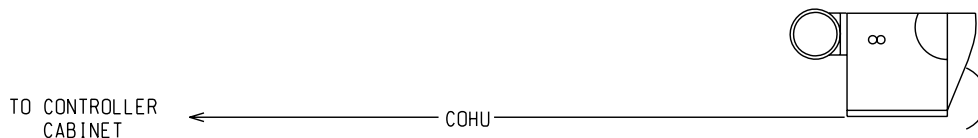
VIDEO DETECTION CAMERA & 5.8GHz BROADBAND ANTENNA



DUAL 5.8GHz BROADBAND ANTENNA



CCTV CAMERA



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MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

(SPECIAL DETAIL)
FHWA APPROVAL DATE

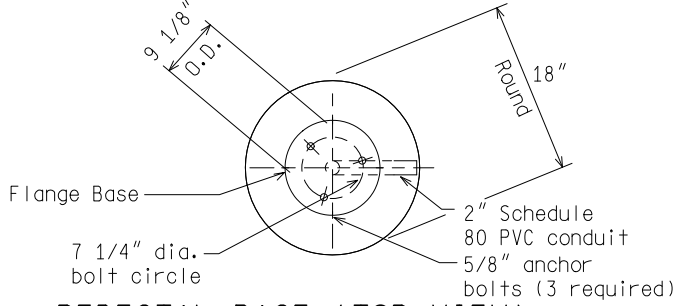
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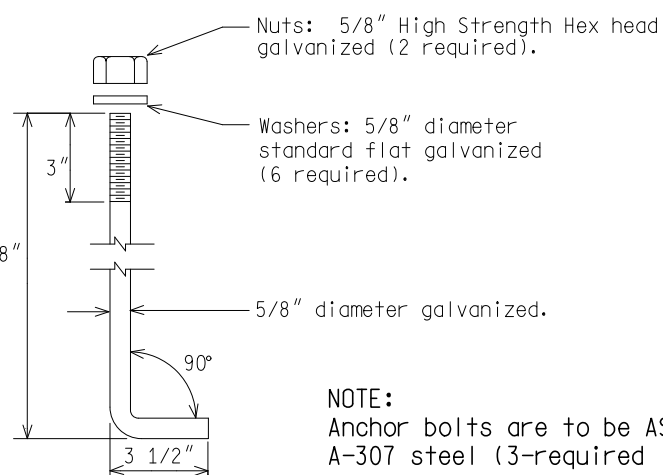
PLAN DATE

MC-026-B

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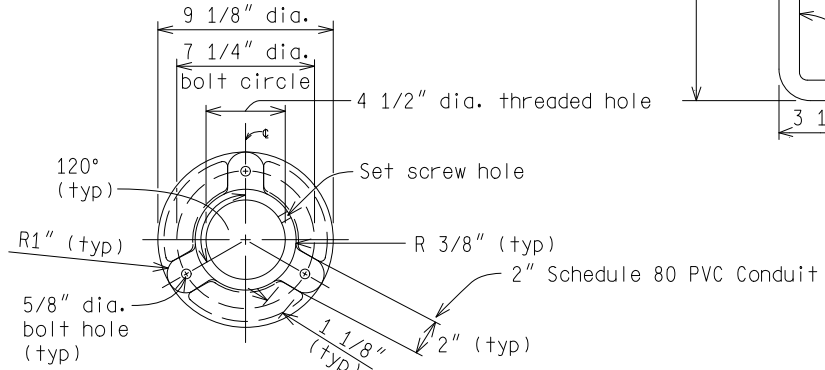


PEDESTAL BASE (TOP VIEW)

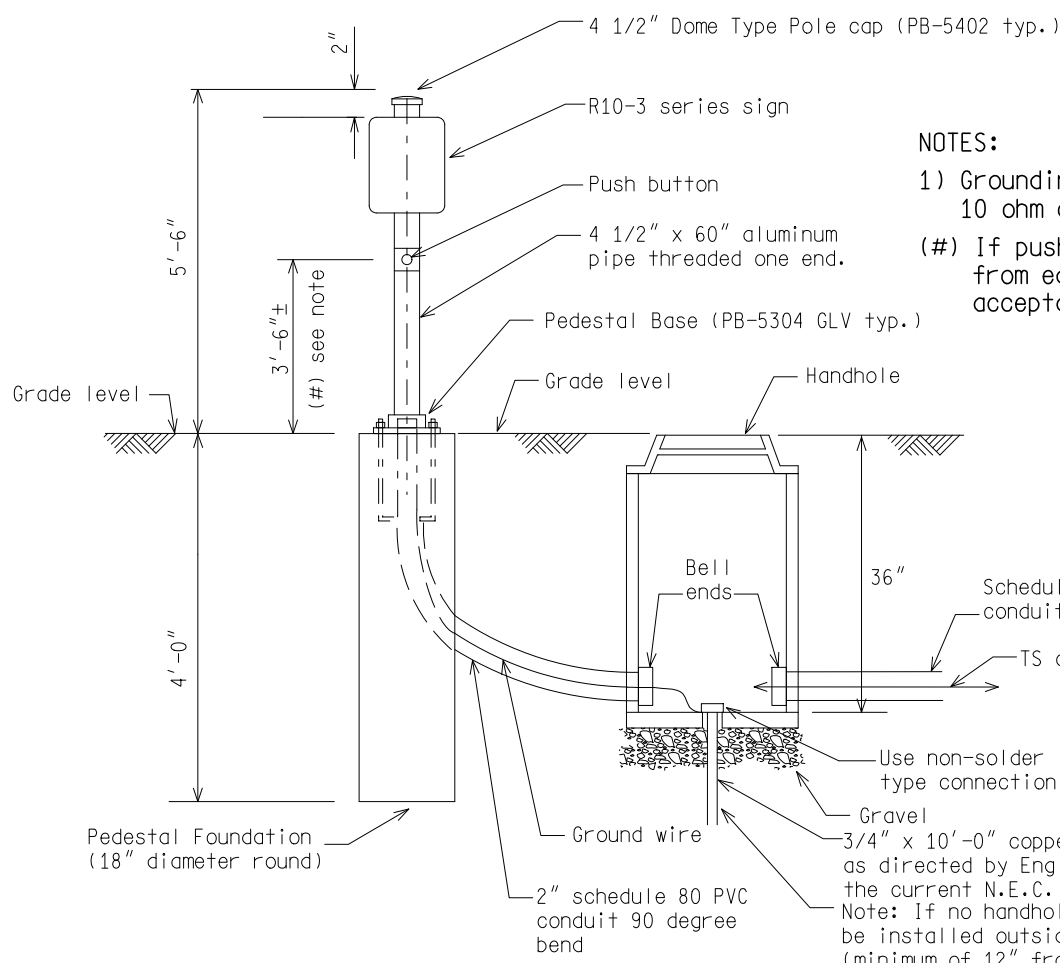


ANCHOR BOLT DETAIL

NOTE:
Anchor bolts are to be ASTM A-307 steel (3-required)



FLANGE BASE (TOP VIEW)



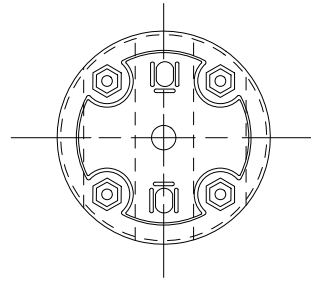
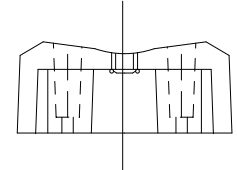
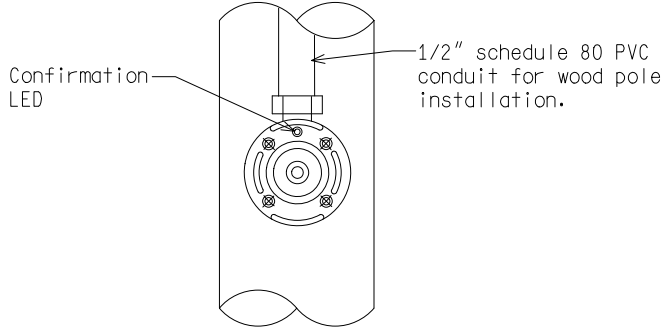
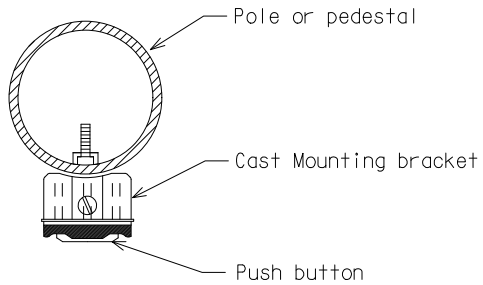
NOTES:
1) Grounding system shall measure 10 ohm or less to ground.
(#) If pushbutton is from 10" to 24" from edge of sidewalk an acceptable range is 38" to 46"

NOT TO SCALE

File: PW:RD/TR/Standards/Signals/mdot mc 120a.dgn Rev. 12/18/12

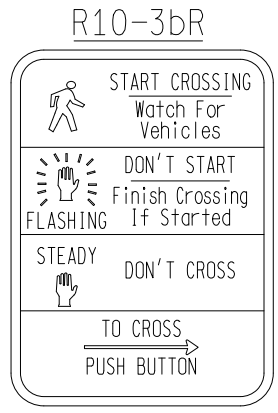
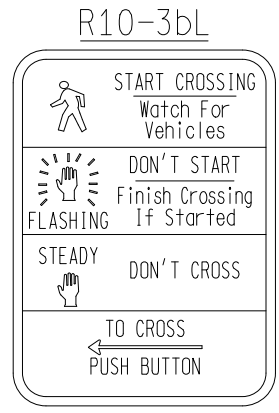
<p>PREPARED BY TRAFFIC AND SAFETY</p>	<p>_____ ENGINEER OF DELIVERY</p>
	<p>_____ ENGINEER OF DEVELOPMENT</p>
	<p>(SPECIAL DETAIL)</p>
	<p>_____ FHWA APPROVAL DATE</p>
<p>DRAWN BY:</p>	
<p>CHECKED BY:</p>	

<p>MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR</p>	
<p>PEDESTRIAN PUSHBUTTON PEDESTAL DETAILS</p>	
<p>_____ PLAN DATE</p>	<p>MC-120-A</p>
	<p>SHEET 1 of 2</p>

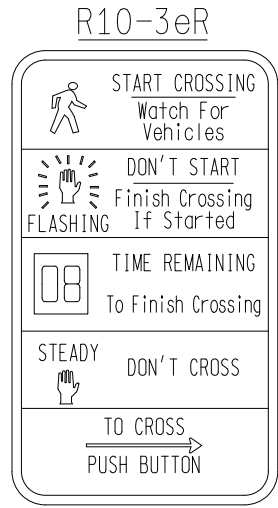
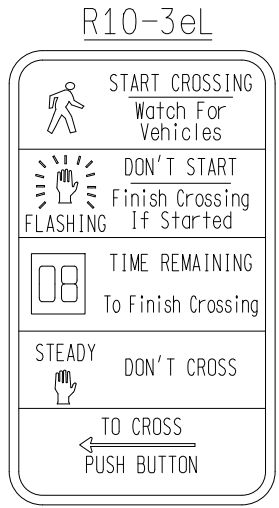


PEDESTRIAN PUSHBUTTON INSTALLATION ON STEEL POLE OR PEDESTAL

CAST MOUNTING BRACKET FOR PEDESTRIAN PUSHBUTTON



PUSHBUTTON SIGN



PUSHBUTTON SIGN COUNTDOWN

NOT TO SCALE