

**CHANGE LIST for:  
MDOT Traffic and Safety, Traffic Signals - Statewide Special Details**

Located at <https://mdotjboss.state.mi.us/TSSD/tssdHome.htm>

**April 09, 2019:**

**SIG-305-B Span Wire Tether Details**

- a. Changed name to SIG-305-C.
- b. Changed hex nut to nut with nylon lock washer on sheet 3 of 5.
- c. Removed split lock washer on page 3 of 5.

**November 05, 2018:**

**SIG-231-A** Created new detail "Lightning Protection Detail."

**SIG-020-A 6 Anchor Bolt Strain Pole and Foundation**

- d. Changed name to SIG-020-B.
- e. Added note for "Pre drilled and tapped holes fitted with 1/2" stainless steel bolts 180 degrees from weatherhead" to top of strain pole.
- f. Changed ID tag to stainless steel for clarity.
- g. Changed line weights to a general standard for uniformity.
- h. Dimensions were updated and added to provide clarity for fabrication.
- i. Weld call outs were changed to be in conformance American Welding Society (AWS) D1.1:2010, Structural Welding Code-Steel.
- j. General note section was edited to give clarification and conform to the current standards.
- k. Some details were relocated and redrafted to give clarification and conform to the current standards.
- l. All font was capitalized on each sheet for uniformity.

**SIG-030-A Traffic Signal Mast Arm pole and Mast Arm Details- Category I**

- a. Changed name to SIG-030-B.
- b. Changed ID tag to stainless steel for clarity.
- c. Changed line weights to a general standard for uniformity.
- d. Dimensions were updated and added to provide clarity for fabrication.
- e. Weld call outs were changed to be in conformance American Welding Society (AWS) D1.1:2010, Structural Welding Code-Steel.
- f. General note section was edited to give clarification and conform to the current standards.
- g. Some details were relocated and redrafted to give clarification and conform to the current standards.
- h. The 10" diameter hole in the base plate was changed to inner diameter of pole minus 1".
- i. A 4 1/2" diameter, and two 1" diameter holes were added to the mast arm plate for drainage during the galvanizing process.
- j. A 1" diameter hole was added to the steel clamp half shell for drainage during the galvanizing process.

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- k. Detail notes pertaining to details were updated to conform to the current standards.
- l. All font was capitalized on each sheet for uniformity.

**SIG-031-A Traffic Signal Mast Arm pole and Mast Arm Details- Category II**

- a. Changed name to SIG-031-B.
- b. Changed ID tag to stainless steel for clarity.
- c. Changed line weights to a general standard for uniformity.
- d. Dimensions were updated and added to provide clarity for fabrication.
- e. Weld call outs were changed to be in conformance American Welding Society (AWS) D1.1:2010, Structural Welding Code-Steel.
- f. General note section was edited to give clarification and conform to the current standards.
- g. Some details were relocated and redrafted to give clarification and conform to the current standards.
- h. The 10" diameter hole in the base plate was changed to inner diameter of pole minus 1".
- i. A 4 ½" diameter, and two 1" diameter holes were added to the mast arm plate for drainage during the galvanizing process.
- j. A 1" diameter hole was added to the steel clamp half shell for drainage during the galvanizing process.
- k. Detail notes pertaining to details were updated to conform to the current standards.
- l. All font was capitalized on each sheet for uniformity.

**SIG-032-A Traffic Signal Mast Arm pole and Mast Arm Details- Category III**

- a. Changed name to SIG-032-B.
- b. Changed ID tag to stainless steel for clarity.
- c. Changed line weights to a general standard for uniformity.
- d. Dimensions were updated and added to provide clarity for fabrication.
- e. Weld call outs were changed to be in conformance American Welding Society (AWS) D1.1:2010, Structural Welding Code-Steel.
- f. General note section was edited to give clarification and conform to the current standards.
- g. Some details were relocated and redrafted to give clarification and conform to the current standards.
- h. The 10" diameter hole in the base plate was changed to inner diameter of pole minus 1".
- i. A 4 ½" diameter, and two 1" diameter holes were added to the mast arm plate for drainage during the galvanizing process.
- j. A 1" diameter hole was added to the steel clamp half shell for drainage during the galvanizing process.
- k. Detail notes pertaining to details were updated to conform to the current standards.
- l. All font was capitalized on each sheet for uniformity.

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**February 06, 2018:**

**SIG-130-A Antenna Attachment Detail**

- m. Changed name to SIG-130-B.
- n. Removed sheet 2 of 8.
- o. Removed sheet 4 of 8.
- p. Removed sheet 6 of 8.
- q. Changed sheet 3 of 8 to sheet 2 of 6.
- r. Changed sheet 5 of 8 to sheet 3 of 6.
- s. Changed sheet 7 of 8 to sheet 4 of 6.
- t. Changed sheet 8 of 8 to sheet 6 of 6.
- u. Added sheet 5 of 6 to show Mast arm and Truss arm attachments.
- v. Added note to Sheets 1 of 6, 2 of 6, 3 of 6, and 4 of 6 to state: "See pages 4 and 5 for Alternate attachments".

**SIG-131-A Created new detail "Cell Modem and RSU Attachment Detail."**

**SIG-210-A Underground Service Metered and Unmetered**

- a. Changed name to SIG-210-B.
- b. Changed note on sheet 1 of 3 to accept only Stainless Steel anchor bolts and drop ins.
- c. Added Stainless Steel washers to provide a minimum of ¼" clearance to all bolts.
- d. Changed Anchor Bolt Detail on sheet 2 of 3 to 5/8" Stainless Steel.
- e. Added customer and utility designations for Bolt Layout Pattern.

**SIG-305-A Span Wire Tether Details**

- a. Changed name to SIG-305-B.
- b. Added anchor Guy's to wood poles for top tether scenarios.
- c. Removed "6" min 12" max (typical) from Elevation Views for both top and bottom tether.
- d. Detail "B" changed to new Breakaway Tether Assembly.
- e. Added new top tether span assembly details on sheet 2 of 5 for wood and steel poles.
- f. Changed Detail "C" break away tether assembly for bottom of signal heads to a Tri-stud bracket, moved to page 3 of 5.
- g. Changed Span Wire to ¼" galvanized steel strand with armor rod.
- h. Changed Detail "D" to "Detail "C" Tether assembly bracket to show new tri-stud bottom tether break-a-way assembly.
- i. Created new Detail "D" to show new bottom tether breakaway link assembly.
- j. Removed Lockwire from turnbuckle.
- k. Removed Breakaway S hook assemblies from sheet 3 of 4.
- l. Removed Safety ties to be replaced with #6 copper wire to grounding rod.

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- m. Added Split bolts to tether assembly to attach #6 copper wire to grounding rod.
- n. Added new bottom tether span assembly details on sheet 4 of 5 for wood and steel poles.
- o. Changed extender options sizes to: "8", 11", 19", 24" and 72".
- p. Removed all notes on sheet 4 of 4 and replaced them with notes 1-7 on sheet 5 of 5.

**February 16, 2017:**

**SIG-010-A Controller Span Wire TS on Steel and Wood Poles**

- a. Sheet 7 of 7 Changed metal service cap to weatherhead.

**SIG-011-A Controller Cabinet Mounted on Steel or Wood Poles** Renamed Detail to SIG-100-A Controller Cabinet Mounted on Steel or Wood Poles.

- a. Sheet 1 of 3 add entrance LB to conduit.
- b. Sheet 2 of 3 add entrance LB to conduit.

**SIG-012-A Secondary Service/Disconnect for Wood Poles** Renamed Detail to SIG-200-A Secondary Service/Disconnect for Wood Poles.

- a. Sheet 1 through 4 Change dimension to read "Mount at 11' or as directed by engineer."
- b. Sheet 2 of 4 and Sheet 4 of 4 Change "Handhole" to "Utility Handhole."

**SIG-012-B Underground Service/Disconnect Wood Post** Renamed Detail to SIG-211-A Underground Service/Disconnect Wood Post.

- a. Sheet 1 of 1 and 2 of 2 Change "120V to 120/240V

**SIG-013-A Secondary Service/Disconnect for Steel Poles** Renamed Detail to SIG-201-A Secondary Service/Disconnect for Steel Poles.

- a. Sheet 2 of 2 remove Underground Electric Service detail.

**SIG-019-A Wood Pole Guys and Setting Depth** Renamed Detail to SIG-050-A Wood Pole Guys and Setting Depth.

**SIG-021-A Handhole- Precast, Polymer Concrete** Renamed Detail to SIG-240-A Handhole- Precast, Polymer Concrete.

- a. Sheet 1 of 6 Added 2' to "Precast Round Handhole With Floor"
- b. Sheet 1 of 6 Removed Precast concrete Handhole detail.
- c. Sheet 1 of 6 Removed bottom of Handhole detail.
- d. Sheet 2 of 6 Changed 36" to 3' to precast Handhole.
- e. Sheet 3 of 6 Removed note 2 and 10.

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**SIG-023-A Conduit (Direct Burial/Encased)** Renamed Detail to SIG-250-A Conduit (Direct Burial/Encased).

**SIG-025-A Conduit Under Railroad Tracks** Renamed Detail to SIG-251-A Conduit Under Railroad Tracks.

**SIG-026-A Color Code Wiring/Equipment Grounding** Renamed Detail to SIG-230-A Color Code Wiring/Equipment Grounding.

**SIG-027-A Sign Mounted Beacon** Renamed Detail to SIG-320-A Sign Mounted Beacon.

**SIG-027-B Rectangular Rapid Flashing Beacon** Renamed Detail to SIG-321-A Rectangular Rapid Flashing Beacon.

**SIG-028-A Pedestal Mounted Signal Displays** Renamed Detail to SIG-330-A Pedestal Mounted Signal Displays.

**SIG-028-B Pedestal Foundation and Signal Mounting Details** Renamed Detail to SIG-070-A.

**SIG-028-B Pedestal Foundation and Signal Mounting Details Sheet 3 of 3** Removed sheet to newly created SIG-331-A Pedestal Foundation.

**SIG-029-A Back Bracket Signal Displays** Renamed Detail to SIG-342-A Back Bracket Signal Displays.

**SIG-029-B Pole Mounted Signal Displays** Renamed Detail to SIG-340-A Pole Mounted Signal Displays.

**SIG-29-C Pole Mounting Details for Signals** Renamed Detail to SIG-341-A Pole Mounting Details for Signals.

**SIG-030-A Span Wire Mounted TS Bracket Assembly** Renamed Detail to SIG-300-A Span Wire Mounted TS Bracket Assembly.

**SIG-030-B Bracketing for 5- Section Heads** Renamed Detail to SIG-302-A Bracketing for 5- Section Heads.

**SIG-030-C Bracketing for Signal Head/Case Sign Combinations (Diagonal)** Renamed Detail to SIG-311-A Bracketing for Signal Head/Case Sign Combinations (Diagonal).

**SIG-030-D Bracketing for Flashing Beacon/Case Sign Combinations** Renamed Detail to SIG-312-A Bracketing for Flashing Beacon/Case Sign Combinations.

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**SIG-030-E Alignment of Traffic Signal Heads (Diagonal)** Renamed Detail to SIG-310-A Alignment of Traffic Signal Heads (Diagonal).

**SIG-030-F Bracketing for HAWK Signal Displays** Renamed Detail to SIG-303-A Bracketing for HAWK Signal Displays.

**SIG-030-G Traffic Signal Backplates** Renamed Detail to SIG-304-A Traffic Signal Backplates.

**SIG-030-H Span Wire Tether Details** Renamed Detail to SIG-305-A Span Wire Tether Details.

**SIG-031-A School Speed Limit Sign (LED)** Renamed Detail to SIG-350-A School Speed Limit Sign (LED).

**SIG-045-A Base Mounted TS Controller Cabinet/Foundations** Renamed Detail to SIG-110-A Base Mounted TS Controller Cabinet/Foundations.

**SIG-045-B Pole Mounted TS Controller Cabinet** Renamed Detail to SIG-111-A Pole Mounted TS Controller Cabinet.

**SIG-050-A Typical Temporary Street Lighting Electrical Detail** Renamed Detail to SIG-270-A Typical Temporary Street Lighting Electrical Detail.

**SIG-051-A Global Positioning System (GPS) Module** Renamed Detail to SIG-120-A Global Positioning System (GPS) Module.

**SIG-103-A Pedestal Base Alternate Anchorage Details** Renamed Detail to SIG-071-A Pedestal Base Alternate Anchorage Details.

**SIG-104-A Helix Pedestal Foundation** Renamed Detail to SIG-072-A Helix Pedestal Foundation.

**SIG-120-A Pedestrian Push Button Details** Renamed Detail to SIG-400-A Pedestrian Push Button Details.

**SIG-126-A Installation of Integral Messenger Cable** Renamed Detail to SIG-011-A Installation of Integral Messenger Cable.

**SIG-132-A Underground Service Metered and Unmetered** Renamed Detail to SIG-210-A Underground Service Metered and Unmetered.

**SIG-153-A 6 Anchor Bolt Strain Pole and Foundation** Renamed Detail to SIG-020-A 6 Anchor Bolt Strain Pole and Foundation.



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**SIG-170-A Traffic Loops** Renamed Detail to SIG-410-A Traffic Loops.

**SIG-220-A** Created new Detail "Service for Street Name Signs and Street Lighting."

**SIG-270-A LED Changeable Message "Open-Closed" Sign** Renamed Detail to SIG-360-A LED Changeable Message "Open-Closed" Sign.

**SIG-281-A TS Mast Arm Pole/Mast Arm Details - Category I** Renamed Detail to SIG-030-A TS Mast Arm Pole/Mast Arm Details - Category I.

**SIG-282-A TS Mast Arm Pole/Mast Arm Details - Category II** Renamed Detail to SIG-031-A TS Mast Arm Pole/Mast Arm Details - Category II.

**SIG-283-A TS Mast Arm Pole/Mast Arm Details - Category III** Renamed Detail to SIG-032-A.

**SIG-284-A TS Mast Arm Standard Foundations** Renamed Detail to SIG-040-A TS Mast Arm Standard Foundations.

**SIG-331-A** Created new detail "Pedestal Mounting Details for Signals" From SIG-028-B Sheet 3 of 3.

**SIG-359-A Mast Arm Mounted TS Bracket Assembly** Renamed Detail to SIG-301-A Mast Arm Mounted TS Bracket Assembly.

**SIG-360-A Clamp On Bracket Arm Assembly (Street Light)** Renamed Detail to SIG-061-A Clamp On Bracket Arm Assembly (Street Light).

**SIG-371-A Yagi Antenna Attachment Detail** Renamed Detail to SIG-130-A Antenna Attachment Detail (Yagi/Broadband).

- a. Sheet 1 through 7 Removed Yagi Antenna from bracket.
- b. Sheet 8 of 8 Added bracketing detail for Broadband Radio.

**SIG-374-A Steel Truss Brackets** Renamed Detail to SIG-060-A Steel Truss Brackets.

**SIG-380-A Video Detection Camera** Renamed Detail to SIG-430-A Video Detection Camera.

**SIG-390-A Hemispherical Video Detection** Renamed Detail to SIG-431-A Hemispherical Video Detection.

- a. Sheet 1 of 2 remove "Weights: 7 lbs"
- b. Sheet 1 of 2 remove duplicate note'
- c. Sheet 2 of 2 add "Or as specified on the plans" to note 1.
- d. Sheet 2 of 2 add "of the intersection" to note 2.

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**SIG-401-A Traffic Signal Uninterruptible Power System** Renamed Detail to SIG-140-A Traffic Signal Uninterruptible Power System.

**SIG-408-A Splice Box** Renamed Detail to SIG-260-A Splice Box.

**SIG-500-A Microwave Vehicle Detector** Renamed Detail to SIG-440-A Microwave Vehicle Detector.

**SIG-432-A** Created new detail "Span Wire Mounted Video Detection Camera."

**SIG-460-A** Created new detail "Radar Stop Bar Detection."

**November 17, 2015:**

**SIG-153-A Sheet 6 of 7** Add a note that reads "The 36 inch diameter foundation should only be used in areas with utilities in close proximity to the foundation which restricts the construction of a 42 inch diameter foundation."

**July 21, 2015:**

**SIG-028-B Sheet 2 of 3** Changed the note that reads "6" Below Grade" to read "24" Below Grade".

**SIG-360-A Sheet 1 of 1** Changed the bracket arm nominal size from 6' to 8'.

**April 21, 2015:**

**SIG-010-A Sheet 3 of 6** Changed the dimensions on the thimble detail.

**SIG-030-H Sheet 1 of 4** Changed text " Attach tether assembly so that tether span wire runs straight across the bottom of signals and signs and clamps to the pole 6" to 12" below the extended horizontal plane." To read "Attach tether assembly so that tether span wire runs straight across the top of signals and signs and clamps to the pole 6" to 12" below the extended horizontal plane."

**February 17, 2015:**

**SIG-010-A Sheet 1 of 6** Added "ALL" to the title name. Added text to note 4, "Preformed lashing rod to be installed where signal wire is installed with span wire." it now reads, "Preformed lashing rod to be installed the full length where signal wire is installed with span wire."

**SIG-010-A Sheet 2 of 6** Added text to note 4, "Preformed lashing rod to be installed where signal wire is installed with span wire." it now reads, "Preformed lashing rod to be installed the full length where signal wire is installed with span wire."



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**SIG-011-A Sheet 1 of 3** Removed the metal bushing text and added an arrow to the text “Metal bond bushing (inside cabinet) see detail “A” sheet 3 of 3” on all control cabinet details on steel poles. Removed the metal bushing text and added an arrow to the text “Metal bond bushing (inside cabinet) see detail “b” sheet 3 of 3” on all control cabinet details on wood poles.

**SIG-011-A Sheet 2 of 3** Removed the metal bushing text and added an arrow to the text “Metal bond bushing (inside cabinet) see detail “A” sheet 3 of 3” on all control cabinet details on steel poles. Removed the metal bushing text and added an arrow to the text “Metal bond bushing (inside cabinet) see detail “b” sheet 3 of 3” on all control cabinet details on wood poles.

**SIG-026-A Sheet 5 of 6** Extended the wood or plastic moulding below the grade. Also moved the ground rod below grade. Added the dimension of 8” minimum for the ground rod to be below grade.

**SIG-030-F Sheet 1 of 2** Changed the span wire display mounting to match the assembly shown on the mast arm detail. Added Isometric and Side views.

**SIG-045-A Sheet 1 of 7** Changed “Type M-30” to read “Type NEMA 3R Size M-30”

**SIG-045-A Sheet 2 of 7** Changed “Type M-36” to read “Type NEMA 3R Size M-36”

**SIG-045-A Sheet 3 of 7** Changed “Type NEMA 6” to read “Type NEMA 3R Size 6”

**SIG-045-A Sheet 4 of 7** Changed “Type NEMA 6 stretch” to read “Type NEMA 3R Size 6 STRETCH”

**SIG-045-A Sheet 5 of 7** Added an expansion joint between the controller pad and the controller foundation.

**SIG-045-A Sheet 7 of 7** Changed “Type NEMA 6” to read “NEMA 3R Size 6”. Type NEMA 6 stretch” to read “Type NEMA 3R Size 6 STRETCH”. Added ITS to top of left side of controller for ITS applications. Added 1-2” Raceway to controller for ITS application.

**SIG-045-B Sheet 1 of 1** Changed “Type NEMA 5” to read “ Type NEMA 3R Size 5”. Changed “Type NEMA 5 Stretch” to read “Type NEMA 3R Size 5 STRETCH”.

**SIG-050-A Sheet 1 of 1** Deleted.

**SIG-050-B Sheet 1 of 2** Changed to SIG-050-A sheet 1 of 1. Changed text “Luminaire” to read “Luminaire with photo cell”. Changed text “Cable hanger or preforms” to read “Cable hanger or preforms wired to spare breaker controller”.

**SIG-050-C Sheet 1 of 1** Deleted.

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**SIG-120-A Sheet 2 of 4** Changed the Cast Mounting Bracket for Pedestrian Pushbutton to show two ½" threaded hubs, topside plugged, bottom side a drain.

**SIG-132-A Sheet 2 of 4** Added hand hole to section A-A for the ground rod. Also removed the ground rod from within the pedestal underground.

**SIG-132-A Sheet 3 of 4** Removed ground rod near foundation, to show it going to the hand hole.

**SIG-132-A Sheet 4 of 4** Changed text "NOTE: Lugs to accept 14-2/0 aluminum" to read "NOTE: Lugs to accept 14-2/0 AWG"

**SIG-153-A Sheet 1 of 7** Changed text "Weatherhead Optional Shop" to read "3" Coupling Manufacturer". Changed text in WEATHERHEAD TO POLE SHOP WELD JOINT from "Weatherhead" to read "Coupling"

**December 16, 2014:**

**LEGEND** Removed this file. The current LEGEND SHEET can be found under MicroStation Files in the dgn format

**SIG-051-A Sheet 1 of 3** Changed cable type "600V. 5/C #16 Cable to Controller Cabinet" to read "Foil Shielded, 8/C #28 Cable to Controller"

**SIG-051-A Sheet 2 of 3** Changed cable type "600V. 5/C #16 Cable to Controller Cabinet" to read "Foil Shielded, 8/C #28 Cable to Controller"

**November 18, 2014:**

**SIG-010-A Sheet 1 of 6** Added note 4 to read "Preformed lashing rod to be installed where signal wire is installed with span wire."

**SIG-010-A Sheet 2 of 6** Added note 1 to read "Preformed lashing rod to be installed where signal wire is installed with span wire."

**SIG-045-A Sheet 2 of 7** Changed Controller "Type M-30" to read "Type M-36"

**SIG-045-A Sheet 4 of 7** Changed Controller "Type NEMA 4R" to read "Type NEMA 6 STRETCH"

**SIG-045-B Sheet 1 of 1** Created a pole mounted controller detail

**SIG-045-B Sheet 1 of 1** Created a pole mounted ITS combo controller detail

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**SIG-050-A Sheet 1 of 3** Deleted page 1

**SIG-050-A Sheet 2 of 3** Deleted page 2

**SIG-050-A Sheet 3 of 3** Changed to page 1

**October 21, 2014:**

**SIG-027-A Sheet 1 of 9** Revised mounting detail to show 2 middle bolts going through the wood posts.

**SIG-027-A Sheet 4 of 9** Revised mounting detail to show 2 middle bolts going through the wood posts.

**SIG-027-A Sheet 5 of 9** Revised mounting detail to show 2 middle bolts going through the wood posts.

**SIG-153-A Sheet 1 of 7** Added text to read "Oriented 90° or 270° to pole HH". Also added text "12" from the top of the pole".

**SIG-374-A Sheet 1 of 3** Added bonding information for the truss arms.

**SIG-374-A Sheet 2 of 3** Added bonding information for the truss arms.

**SIG-374-A Sheet 3 of 3** Added bonding information for the truss arms.

**April 15, 2014:**

**SIG-021-A Sheet 2 of 6** Frame Section Detail. Changed dimension "29 1/2" dia" to read "29 11/16 dia.", "31 5/8" dia" to read "33 1/8" dia.", and "45" dia." To read "44 7/8" dia." Also added the dimensions "34 1/4" and "31 5/8"

**SIG-030-h Sheet 4 of 4** Changed text in note 1 "Typical tension is 600 to 800 lbs." to read "Typical tension is 300 lbs."

**SIG-281-A Sheet 3 of 4** Base Detail D. Changed text "(6) 1 13/16" dia. Holes" to read "(6) 2 1/16" dia. Holes"

**SIG-282-A Sheet 3 of 4** Base Detail D. Changed text "(6) 1 13/16" dia. Holes" to read "(6) 2 1/16" dia. Holes"

**SIG-283-A Sheet 3 of 4** Base Detail D. Changed text "(6) 1 13/16" dia. Holes" to read "(6) 2 1/16" dia. Holes"

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**SIG-030-A Sheet 1 of 2** Changed text “Steel Coupling” to read “1 ½” Galvanized Locknut”.  
Revised lock nut detail to show 1 set screw instead of 2.  
Added 1 ½” Galvanized Rigid Conduit Drop Pipe (painted per spec) to Hanger Attachment.  
Added a second note to read “Tolerance within +/- 1/8” for all bracketing  
Added a blow up detail of the inside of the multi signal hub.  
Moved Hanger Attachment detail to page 1 and Multiple-Way Traffic Signal Head Detail to page 2  
Added a Lock Nut detail.

**SIG-030-A Sheet 2 of 2** Removed serrated washer above hub on the typical inside hub connection detail. Also in that detail text added to read, “ Back down to Cotter Key”. On the Multiple-Way Traffic Signal Head(s) detail we removed “SS” from the text “SS Washer” and removed the cotter key.

**SIG-030-B Sheet 1 of 1** Deleted the bolt and nut shown below the bracket in Combination 5 Section Cluster & 1-Way T.S. (Aluminum) detail

**SIG-030-C Sheet 1 of 5** Added a lock nut below the hub on the “Preferred Method 2-Way T.S./Case Sign Combination Below Hub”. Remove Set Screws from all nipples.

**SIG-030-C Sheet 2 of 5** Remove Set Screws from all nipples. Replaced text “1 ½” close nipple” with “Signal Joiner” on 1-Way T.S. /Case Sign Combination Below Hub.  
Replaced “1/4” set screw (typical) (see note #4 on sheet 3 of 3) with “Signal Joiner” on 1-Way (Aluminum) & 1-Way T.S./Case Sign Combination Below Hub.

**SIG-030-C Sheet 3 of 5** Replaced “21/32” stainless steel set screw with cone point” to “1/4” stainless steel set screw with cup point”.  
Replaced “1 ½” abrasive bushing” with “1 ½” Chase Nipple”

**SIG-030-C Sheet 4 of 5** Replaced the “Heavy Duty Lock Nut” with the “Signal Joiner”  
Added a detail to show the bottom of the Case Sign. Added Alternate Signal Joiner Detail.

**SIG-030-C Sheet 5 of 5** Added sheet 5 of 5 to show the “Signal Joiner” Detail

**SIG-030-D Sheet 1 of 3** Deleted

**SIG-030-D Sheet 2 of 3** changed to sheet 1 of 2.  
Changed text “5/16” stainless steel set screw with cone point” to read “1/4” stainless steel set screw with cup point” on T.S. Mounted on Case Sign Detail  
Removed one set screw from the Steel Lock Nut on T.S. Mounted on Case Sign Detail  
Replaced the heavy duty lock nut with a signal joiner between the signal head and case sign  
Changed text to read “Stainless steel hex bolt 10-32 with flat washer & hex head nut (field drilled 4 required). Added label “Alternate Signal Joiner Detail” to detail. Changed text “Alum Serrated Ring” to read “Alum serrated washer”.

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**SIG-030-D Sheet 3 of 3** changed to sheet 2 of 2. set screw with cone point” to read “1/4” stainless steel set screw with cup point”

Added a lock nut to the hub. Added text to read “1-Way, 1-section 12” T.S. (Alum.)”

Revised to show a hub and set screw inside the case sign. Added Serrated Washer (Alum.) to the top and bottom of the signal housing. Added a lock nut above the hub plate above the case sign.

**SIG-030-F Sheet 1 of 2** Changed text from “5/16” stainless steel set screw with cone point” to read “1/4” stainless steel set screw with cup point”. Added Serrated Washer (Alum.) to the top and bottom of the signal housing in the Span Wire Display

**SIG-030-G Sheet 1 of 1** turned the fill on for the MDOT logo in the title blocks. Removed text “Use two inch border with black signal heads and visors.” From note 4.

**SIG-030-H Sheet 1 of 6** deleted

**SIG-030-H Sheet 2 of 6** changed to sheet 1 of 4. Changed text “Tether span wire (3/16” galv. Steel strand)” to read “Tether span wire (3/16” galv. Steel strand min.)” Removed SS from the washer on the Span Wire Installation with Top Tether Span Wire detail.

**SIG-030-H Sheet 3 of 6** changed to sheet 2 of 4. Added a safety tie detail to the span wire installation with bottom tether. Changed text “Turnbuckle See pole attachment Detail “D” and alternates on sheet 4 of 6” to read “Turnbuckle See pole attachment Detail “D” and alternates on sheet 4 of 4.”

**SIG-030-H Sheet 4 of 6** changed to sheet 3 of 4. Added cable clamp, lock wire, safety tie & thimble, and dead end bail & thimble to the Pole Attachment Alternate. Also changed text “1/4” Tether span wire (galvanized steel strand)” to read “3/16” Tether span wire (galvanized steel strand min.)” Revised the Tether Wire S-Hook. Adjusted signal heads to have all the reds aligned horizontally.

**SIG-030-H Sheet 5 of 6** deleted.

**SIG-030-H Sheet 6 of 6** changed to sheet 4 of 4. Change note 5 to read “Tether wire shall be 7-strand ASTM A475 HS 3/16”. On all spans, install tether horizontally. Maintain clearance of 17’ over roadway.” Removed note 7. Added a Tether Assembly, Single Stud Break-a way detail.

**SIG-010-A Sheet 4 of 6** Changed picture to show the loop span going behind the pole.”

**SIG-010-A Sheet 6 of 6** Added note 2 to read “ All red indications should align horizontally.”

**SIG-021-A Sheet 5 of 6** Removed “AND LIGHTING” from the Manhole Cover detail and added “MDOT TRAFFIC” to read MDOT TRAFFIC SIGNAL

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**SIG-026-A Sheet 2 of 6** Changed wire for FYA to white w/black stripe

**SIG-026-A Sheet 3 of 6** Added a set screw and bonding lock nut to grounding detail

**SIG-026-A Sheet 4 of 6** Added "Insulated" to Grounding wire from service disconnect to controller cabinet

**SIG-026-A Sheet 6 of 6** Added "insulated green" to not 7 for the #6 AWG cooper ground

**SIG-028-A Sheet 1 of 2** Added note 5 to read "Tolerance within +/- 1/8" for bracketing"

**SIG-028-B Sheet 1 of 3** Removed text 1 1/2" female PVC adapter or 1 1/2"

**SIG-028-B Sheet 2 of 3** Changed pedestal foundation detail to show walking and non-walking grade. Removed 4" from the 2"-4" fdn above grade. Added text to read "3/4"x10'-0" copper clad ground rod(s). (Ground rod(s) must be installed in hand hole outside of fdn. (a min. of 12" from fdn. -6" below grade or as directed by the Engineer.)" Added "if used" to the Square foundation detail

**SIG-029-A Sheet 2 of 2** Added note 6 to read "Tolerance within +/- 1/8" for bracketing"

**SIG-029-B Sheet 2 of 2** Added note 7 to read "Tolerance within +/- 1/8" for bracketing"

**SIG-029-C Sheet 1 of 3** Removed conduit going underground from the Overhead Feed detail. Removed text "(No glue top side of joint.)"

**SIG-029-C Sheet 2 of 3** Removed text "wood or plastic moulding" from Steel Street Light Pole or Concrete Pole detail

**SIG-120-A Sheet 1 of 4** Changed all 3/4" to 1/2" for PVC and parts on wood pole

**SIG-120-A Sheet 2 of 4** Moved the grade level below the top of foundation in the push button pedestal detail. Removed text "1/2" x 2" Nipple & bushing" with "Grommit". Removed the "1/2" schedule 80 PVC for wood pole installation" text from the pedestrian pushbutton installation on steel pole or pedestal. Changed text "4" Standard pipe cap" to read "4" Dome with 1/4" Stainless Steel Set Screw."

**SIG-120-A Sheet 4 of 4** Removed text "(no glue top side of joint)"

**SIG-401-A Sheet 1 of 2** changed text to read "#6 insulated or larger stranded copper ground white with 48" slack above foundation"

**SIG-401-A Sheet 2 of 2** changed text to read "#6 insulated or larger stranded copper ground white with 48" slack above foundation"



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**SIG-045-A Sheet 1 of 7** Removed ground wire from the conduit detail. Revised text to read “#6 insulated or larger stranded copper ground wire with 48” slack above foundation.” Added note 2 to read “All insulated jackets are to remain on cable entering controller” Added note 3 to read “Keep 1-3” conduit on left side open for ITS.”

**SIG-045-A Sheet 2 of 7** Removed ground wire from the conduit detail. Revised text to read “#6 insulated or larger stranded copper ground wire with 48” slack above foundation.” Added note 2 to read “All insulated jackets are to remain on cable entering controller” Added note 3 to read “Keep 1-3” conduit on left side open for ITS.”

**SIG-045-A Sheet 3 of 7** Removed ground wire from the conduit detail. Revised text to read “#6 insulated or larger stranded copper ground wire with 48” slack above foundation.” Added note 2 to read “All insulated jackets are to remain on cable entering controller” Added note 3 to read “Keep 1-3” conduit on left side open for ITS.” Changed foundation detail to show (4) nuts & (4) washers, instead of (8).

**SIG-045-A Sheet 4 of 7** Removed ground wire from the conduit detail. Revised text to read “#6 insulated or larger stranded copper ground wire with 48” slack above foundation.” Added note 2 to read “All insulated jackets are to remain on cable entering controller” Revised ITS controller cabinet to show the separate door for the ITS equipment. Added note 3 to read “Keep 1-3” conduit on left side open for ITS.” Changed foundation detail to show (4) nuts & (4) washers, instead of (8).

**SIG-045-A Sheet 7 of 7** Added “ITS” to the 20” space on the left panel of the controller. Added “ITS” to the 12” space on the left of the controller for both controller layouts.

**November 19, 2013:**

**SIG-153-A Sheet 3 of 7** Remove text from note: “(Exposed threaded and must be by hot-dip galvanized after fabrication a minimum of 20 inches.)”

**SIG-281-A Sheet 2 of 4** Revised Anchor bolts. Added text to read as: “Anchor bolts, Nuts and Washers”

**SIG-281-A Sheet 2 of 4** Revised 908.15a &b. Added text to read as: “908.14.a &b”

**SIG-281-A Sheet 2 of 4** Remove text from Material list “(Anchor bolts nuts)( ASTM A563 GR.DH)”

**SIG-281-A Sheet 3 of 4** Remove text from note: “(by others)”

**SIG-282-A Sheet 2 of 4** Revised Anchor bolts. Added text to read as: “Anchor bolts, Nuts and Washers”

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**SIG-282-A Sheet 2 of 4** Remove text from Material list “(Anchor bolt, Flg Bolt, stub nuts.)( ASTM A563 GR.DH)”

**SIG-282-A Sheet 2 of 4** Revised 908.15a &b. Added text to read as:  
“908.14.a &b”

**SIG-282-A Sheet 3 of 4** Remove text from note: “(by others)”

**SIG-283-A Sheet 2 of 4** Revised Anchor bolts. Added text to read as:  
“Anchor bolts, Nuts and Washers”

**SIG-283-A Sheet 2 of 4** Revised 908.15a &b. Added text to read as:  
“908.14.a &b”

**SIG-283-A Sheet 2 of 4** Remove text from Material list “(Anchor bolts nuts)( ASTM A563 GR.DH)”

**SIG-283-A Sheet 3 of 4** Remove text from note: “(by others)”

**SIG-284-A Sheet 2 of 4** Remove text from note: “(Exposed threaded and must be by hot-dip galvanized after fabrication a minimum of 20 inches.)”

**SIG-284-A Sheet 3 of 4** Remove text from note: “(with exposed treaded and galvanized a minimum of 20” per ASTM A153)”

**October 15, 2013:**

**SIG-045-A Sheet 1 of 5**

**September 16, 2013:**

**SIG-010-A Sheet 3 of 6** Changed text in the thimble detail “Groove Dia. Min. 3/8” ” to read “Groove Dia. Min. 15/16” “

**SIG-027-B Sheet 3 of 5** Changed text “RRFB (LED) (two-sided) Approx. 4”H x 24”W x 8”D to read as “RRFB (LED) (one-sided mounted back to back) Approx. 4”H x 24”W”

**SIG-027-B Sheet 5 of 5** Changed Front View Detail to show 1 1/2” approx. depth

**SIG-027-B Sheet 5 of 5** Changed Top View Detail to show 1 1/2” approx. depth

**SIG-027-B Sheet 5 of 5** Added Side and Top Views

**SIG-027-B Sheet 5 of 5** added “Two One Way mounted back to back” to TWO-WAY RRFB also changed (5 LED’s) to (8 LED’s)

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**SIG-027-B Sheet 5 of 5** changed (2 LED's) to (4 LED's)

**SIG-027-B Sheet 5 of 5** Deleted Note: Mounting brackets are internal to enclosure for two-sided RRFB.

**June 18, 2013:**

**SIG-010-A Sheet 3 of 6** Revised Thimble Detail to show the back side. Added text to read as: "Seat Dia. Min. 1 1/2" Max. 2 1/2". Groove Dia. Min. 3/8"

**SIG-030-A Sheet 1 of 2** Remove text regarding "Bottom nut backed-off tight against cotter-key with recess down & cotter key bent"

**SIG-030-A Sheet 1 of 2** Remove text from note: "(Nut backed down tight against cotter key.)"

**SIG-030-A Sheet 1 of 2** Remove lock nuts which are shown from the iron cross to the pipe

**SIG-030-A Sheet 1 of 2** Changed cotter key to show the head inside the pipe

**SIG-030-A Sheet 1 of 2** Removed Steel Coupling with Set Screw from Typical Bracket Connection

**SIG-030-A Sheet 2 of 2** Changed cotter key to show the head inside the pipe

**SIG-030-A Sheet 2 of 2** Changed Drip loop (18" dia.) to show full circle and read: "Drip loop (approx. 16" dia.)"

**SIG-030-A Sheet 2 of 2** Removed text "(no ear tabs for 1-way signals only)" from Alum Serrated Ring

**SIG-030-A Sheet 2 of 2** Changed text from Steel Coupling with Set Screw to read: "Lock nut with Set Screw."

**SIG-030-H Sheet 4 of 6** Removed text "state furnished" from Pole Attachment Alternate

**SIG-030-H Sheet 4 of 6** Added "S" Hook detail

**SIG-030-H Sheet 5 of 6** Added page

**SIG-030-H Sheet 6 of 6** Added page

**SIG-281-A Sheet 1 of 4** Changed text to read "24" x 96" street name sign 90 lbs 14.67 S.F. and hangers (by others)"

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**SIG-281-A Sheet 3 of 4** On Base Detail D changed text from (6) 2 1/16" dia. holes to read (6) 1 1 13/16" dia. holes

**SIG-282-A Sheet 1 of 4** Changed text to read "24" x 96" street name sign 90 lbs 14.67 S.F. and hangers (by others)"

**SIG-282-A Sheet 3 of 4** On Base Detail D changed text from (6) 2 1/16" dia. holes to read (6) 1 1 13/16" dia. holes

**SIG-283-A Sheet 1 of 4** Changed text to read "24" x 96" street name sign 90 lbs 14.67 S.F. and hangers (by others)"

**SIG-283-A Sheet 3 of 4** On Base Detail D changed text from (6) 2 1/16" dia. holes to read (6) 1 1 13/16" dia. holes

**SIG-420-A Sheet 7 of 10** Added text to read as: "For a two phase (Non-Coordinated) approach with (Non-Locking) permissive or permissive-protected left turn phasing"

**SIG-420-A Sheet 1 of 10** Changed text from "330' max cable length" to "2000' max. cable length with Isolator module"

**SIG-420-A Sheet 2 of 10** Changed text from "330' max cable length" to "2000' max. cable length with Isolator module"

**SIG-420-A Sheet 3 of 10** Changed text from "330' max cable length" to "2000' max. cable length with Isolator module"

**SIG-420-A Sheet 4 of 10** Changed text from "330' max cable length" to "2000' max. cable length with Isolator module"

**SIG-420-A Sheet 9 of 10** Added text to read as: "For a two phase (Coordinated) approach with (Non-Locking) permissive or permissive-protected left turn phasing"

**March 19, 2013:**

**SIG-010-A Sheet 1 of 6** Added text to read as: "(#) See notes on sheet 2 of 6." following the statement "Coil up 10' of traffic signal cable for future adjustment, etc."

**SIG-010-A Sheet 2 of 6** Added text to read as: "(#) See notes" following the statement "Coil up 10' of traffic signal cable for future adjustment, etc." Added Note (#) to read as: "For projects maintained by the Road Commission for Oakland County (RCOC), use drip loop (without coil) for future adjustment of signal span." Changed Note to read as: "Notes".

**SIG-010-A Sheet 4 of 6** Removed the ground wire from Detail D.

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**SIG-010-A Sheet 6 of 6** Added a new detail sheet for Box Span Wire T.S. on Steel or Wood Poles. For use on Oakland County roads only.

**SIG-011-A Sheet 2 of 3** On detail for Flashing Beacon Controller Cabinet (EL 240 Type or Equivalent) Mounted on Wood Poles, added lower mounting bracket detail near the bottom of the cabinet.

**SIG-013-A Sheet 1 of 2** added text to read as: "Orientation on backside facing away from curb." following the statement 60 A Service disconnect (NEMA 4-X stainless steel) fused at 60A.

**SIG-013-A Sheet 2 of 3** added text to read as: "Orientation on backside facing away from curb." following the statement 60 A Service disconnect (NEMA 4-X stainless steel) fused at 60A.

**SIG-021-A Sheet 5 of 6** On detail for Frame Section changed the location for the inside of hole opening diameter dimension to the top of the detail.

**SIG-021-A Sheet 6 of 6** Added a new detail sheet for 2' X 2' Square X 3' Handhole. For use on Oakland County roads only.

**SIG-026-A Sheet 6 of 6** showed a separate Insulated Ground Wire from the Controller Cabinet to the Service Disconnect.

**SIG-027-A Sheet 1 of 9** added a note to call out a SS Washer (Max  $\frac{3}{4}$ " Min  $\frac{1}{2}$ ") to the front of the warning sign.

**SIG-027-A Sheet 4 of 9** added a note to call out a SS Washer (Max  $\frac{3}{4}$ " Min  $\frac{1}{2}$ ") to the front of the warning sign.

**SIG-027-A Sheet 5 of 9** added a note to call out a SS Washer (Max  $\frac{3}{4}$ " Min  $\frac{1}{2}$ ") to the front of the warning sign.

**SIG-028-B Sheet 1 of 3** For Octagonal Base detail, added text to read as: "See note 5) on sheet 3 of 3 for RCOC preference."

**SIG-028-B Sheet 2 of 3** For Pedestal Foundation detail, added text following reference to 5/8 inch anchor bolts (4 required) to read as: "See Sheet 3 of 3 for RCOC preference."

**SIG-028-B Sheet 3 of 3** Added new detail information for Anchor Bolt Detail using 5/8 inch diameter bolts "For use on Oakland County roads only." Added note number 5) to read as: "Use Octagonal Base as a preference by the Road Commission for Oakland County (RCOC), for use on Oakland County roads only."

**SIG-029-B Sheet 2 of 2** added text for note number 6) to read as: For poles located 6' or less from face of curb, contact Engineer for traffic and/or pedestrian bracket type and orientation if field installation requires a change from information shown on plans.

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**SIG-029-C Sheet 1 of 3** On detail for Wood Pole, added text to read as: "shown, applies to all conduit sizes." following statement 1 1/4" schedule 80 PVC or rigid metal conduit.

**SIG-030-A Sheet 1 of 2** changed Entry Head Detail to match Sig-030-D.

**SIG-030-A Sheet 2 of 2** changed Entry Head Detail to match Sig-030-D.

**SIG-030-C Sheet 1 of 4** renumbered sheet 1 of 3 to sheet 1 of 4 and deleted the text "(Diagonal)" from the title.

**SIG-030-C Sheet 2 of 4** renumbered sheet 2 of 3 to sheet 2 of 4.

**SIG-030-C Sheet 3 of 4** renumbered sheet 3 of 3 to sheet 3 of 4.

**SIG-030-C Sheet 4 of 4** added a new detail sheet for T.S. Mounted Below Case Sign shown a 1-Way, 3 section 12" T.S. mounted directly to 1-Way, 12" X 27" Case Sign.

**SIG-030-C Sheet 4 of 4** removed threaded pipe, heavy duty lock nut, & cotter key inside the case sign assembly.

**SIG-030-D Sheet 1 of 3** added Entry Detail aluminum reinforcing plate detail to the hanger attachment

**SIG-030-D Sheet 2 of 3** added Entry Detail with serrated aluminum rings to the attachment detail for T.S. Mounted on Case Sign

**SIG-030-H Sheet 2 of 4** added Entry Detail with aluminum reinforcing plate to Span Wire Installation With Top Tether Span Wire.

**SIG-030-H Sheet 4 of 4** Removed Detail "D".

**SIG-045-A Sheet 1 of 7** renumbered sheet 1 of 6 to sheet 1 of 7 and showed cabinet ground wire going thru the handhole to the service disconnect. Added system grounding from service disconnect to ground rod(s) located in handhole.

**SIG-045-A Sheet 2 of 7** renumbered sheet 2 of 6 to sheet 2 of 7 and showed cabinet ground wire going thru the handhole to service disconnect. Added system grounding from service disconnect to ground rod(s) located in handhole.

**SIG-045-A Sheet 3 of 7** renumbered sheet 3 of 6 to sheet 3 of 7 and showed cabinet ground wire going thru the handhole to service disconnect. Added system grounding from service disconnect to ground rod(s) located in handhole.

**SIG-045-A Sheet 4 of 7** added a new detail sheet for a Type NEMA 4R vented aluminum base mounted cabinet for Use for ITS Applications.



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**SIG-045-A Sheet 5 of 7** Renumbered sheet 4 of 6 to sheet 5 of 7.

**SIG-045-A Sheet 6 of 7** renumbered sheet 5 of 6 to sheet 6 of 7.

**SIG-045-A Sheet 6 of 7** changed Detail "A" to an alternative

**SIG-045-A Sheet 7 of 7** renumbered sheet 6 of 6 to sheet 7 of 7. Changed the detail description to read as: "Traffic Signal NEMA 6 Cabinet Requirements" and deleted the ITS references. Added a new detail information for "Traffic Signal NEMA 4R Cabinet Requirements for ITS Applications."

**SIG-050-A Sheet 1 of 3** updated the detail for Figure 1 to match Detail "A" from SIG-010-A on Sheet 1 of 5. On Detail "A" added text to read as: "(2" dia.)" following Thimble. Changed the dimension from 2' to 5' tail for adjustment. Added text: "Curved" to Washer for 3/4 inch machine bolt and nut. Added text to read as: "(TC 1 Barron Bethea or approved equal)" following the text for Clevis thimble (typ.). On Detail "B" added text to read as: "Armor rod" under span wire and added text to read as: "Apply silicone to seal top of signal head" on Heavy Duty lock nut for signal bracket. Added updated entry detail to match SIG-030-H.

**SIG-050-A Sheet 2 of 3** On Detail "C" changed the text "(120V. A.C. single phase)" to read as: "(120/240 V.A.C. single phase)" for secondary service. Relocated the statement "To grounding rod" following the text for "#6 copper min." Changed the controller cabinet bottom height distance from 3" - 0" to 2'- 6" to grade.

**SIG-050-A Sheet 3 of 3** relocated the statement "To grounding rod" following the text "#6 copper min." Changed the controller cabinet bottom height distance from 3" - 0" to 2'-6" to grade.

**SIG-050-B Sheet 2 of 2** relocated the position of the 60 AMP. service entrance box from below to above the Meter to be shown similar to the 60 A service disconnect (NEMA 4-X stainless steel) as shown on SIG-012-A Sheet 1 of 4. Changed the bottom height distance from 4' - 0" to 11' to grade.

**SIG-050-C Sheet 1 of 1** relocated the position of the 60 AMP. service entrance box from below to above the Meter to be shown similar to the 60 A service disconnect (NEMA 4-X stainless steel) as shown on SIG-012-A Sheet 3 of 4. Showed the bottom height distance as 11' to grade.

**SIG-103-A Sheet 1 of 2** On detail for Isometric View, added details for an Aluminum pipe with a grounding provision nut retainer with a requirement to Allow sufficient space between weld and nut to accommodate the attachment of #6 ground wires.

**SIG-103-A Sheet 2 of 2** On detail for Front View (assembled), added a #6 or larger standard ground wire to ground rod(s) located within the conduit.

**SIG-103-A Sheet 1 of 2** Changed the reference from stainless to galvanized steel for the washers, lock washers, couplers and base plate bolts. Change Note 1) to read as: Anchor bolts, MDOT Traffic and Safety

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couplers and base plate bolts shall conform to ASTM F1554, Grade 36 (hot dipped galvanized). Changed Note 2) to read as: All flat washers, lock washers and hex nuts shall be (hot dipped) galvanized.

**SIG-104-A Sheets 1 & 2** Added new detail sheets for a Helix Pedestal Foundation.

**SIG-153-A Sheet 1 of 7** On detail for Access Hand Hole, added the text to read as: “(Allow sufficient space between the weld and nut to accommodate the attachment of (2) #4 wires.)” following the statement: Grounding provision nut retainer.

**SIG-281-A Sheet 3 of 4** On 6” X 10” Bar Handhole Detail, added the text to read as: “(Allow sufficient space between the weld and nut to accommodate the attachment of (2) #4 wires.)” following the statement: Grounding provision nut retainer etc.

**SIG-282-A Sheet 3 of 4** On 6” X 10” Bar Handhole Detail, added the text to read as: “(Allow sufficient space between the weld and nut to accommodate the attachment of (2) #4 wires.)” following the statement: Grounding provision nut retainer etc.

**SIG-283-A Sheet 3 of 4** On 6” X 10” Bar Handhole Detail, added the text to read as: “(Allow sufficient space between the weld and nut to accommodate the attachment of (2) #4 wires.)” following the statement: Grounding provision nut retainer etc.

**SIG-401-A Sheets 1 & 2** added new detail sheets for a Traffic Signal Uninterruptible Power System.

**SIG-420-A Sheets 7, 9 & 10** corrected the text VNS to read as VSN.

**SIG-420-A Sheet 1 of 10** Renumbered sheet from 1 of 9 to sheet 1 of 10.

**SIG-420-A Sheet 2 of 10** Renumbered sheet from 2 of 9 to sheet 2 of 10.

**SIG-420-A Sheet 3 of 10** Renumbered sheet from 3 of 9 to sheet 3 of 10.

**SIG-420-A Sheet 4 of 10** Renumbered sheet from 4 of 9 to sheet 4 of 10.

**MDOT Signal Index checklist updates:**

**SIG-030-C** Added new details, 1 page.

**SIG-045-A** Added new details, 1 page.

**SIG-401-A** Added new details, 2 pages.

**December 18, 2012:**

**SIG-420-A Sheet 5 of 10** Renumbered sheet from 5 of 9 to sheet 5 of 10.

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**SIG-420-A Sheet 6 of 10** Renumbered sheet from 6 of 9 to sheet 6 of 10. Deleted the Stop Bar and 3' typical dimensions from the Typical 6' X 20' and 6' X 30' Detection Zones.

**SIG-420-A Sheet 7 of 10** Renumbered sheet from 7 of 9 to sheet 7 of 10. Repositioned the VSN in the thru & right-turn combination lane. Added text to read as: Place VSN Based on Right Turn Traffic Flow Patterns. Added two additional VSN's in the left turn lane. Added a Tangent Line with 10' dimension for VSN's in advance of the Stop Bar. Changed the text description to read as: Typical Vehicle Sensor Node (Non-Locking) Installation Diagram For a Two Phase Approach with (Non-Locking) Permissive or Permissive-Protected Left Turn Phasing.

**SIG-420-A Sheet 8 of 10** Renumbered sheet from 8 of 9 to sheet 8 of 10. Deleted two VSN's located near the Stop Bar in the thru & right-turn combination lane. Changed the text description to read as: Typical Vehicle Sensor Node (Locking) Installation Diagram For a Two Phase Approach with (Locking) Protected Only Left Turn Phasing.

**SIG-420-A Sheet 9 of 9** Deleted sheet from 9 of 9.

**SIG-420-A Sheet 9 of 10** Added new sheet number 9 of 10 for a Typical Vehicle Sensor Node (Non-Locking) Installation Diagram For a Two Phase Approach with (Non-Locking) Permissive-Protected Left Turn Phasing. The diagram includes an exclusive right turn lane operation.

**SIG-420-A Sheet 10 of 10** Added new sheet number 10 of 10 for a Typical Vehicle Sensor Node (Locking) Installation Diagram For a Two Phase Approach with (Locking) Protected Only Left Turn Phasing. The diagram includes an exclusive right turn lane operation where right turns may be Non-Locking or Locking with right turn delays.

#### **MDOT Signal Index checklist updates:**

**SIG-010-A** Changed the number of pages from 5 to 6.

**SIG-021-A** Changed the number of pages from 5 to 6.

**SIG-104-A** Added new details, 2 pages.

**SIG-420-A** Changed the number of pages from 9 to 10.

#### **September 18, 2012:**

**SIG-019-A Sheet 1 of 2** Added text "Yellow Safety Guy Guard" for Double Helix Anchor detail.

**SIG-027-B Sheet 1 of 5** For aluminum pedestal on Front View, changed text to read: "4" x Var. aluminum pedestal (pipe threaded on bottom end) 6063-T-6 Alloy, 4" x 0.237" wall schedule 40-3.73 #/ft. spun finish."

**SIG-027-B Sheet 5 of 5** Changed size of LED array from 2" X 5" min. to 3" X 7" min. on RRFB. Added text "Class 1 LED Array (1 1/2" X 3 1/2" min.)" for End LED indications.

**SIG-028-A Sheet 1 of 2** Added text: (\*) Refer to Note 4 on sheet 2 of 2. Added text: "(\*) 10'-0" (RCOC typical)" adjacent to applicable dimension details.

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**SIG-028-A Sheet 2 of 2** Added Note 4) to read as: For projects maintained by the Road Commission for Oakland County (RCOC), use the bottom heights and bracket assemblies as shown for the RCOC mounting detail (\*). Added the (\*) RCOC Mounting Detail.

**SIG-028-B Sheet 1 of 3** Modified the text for the Aluminum Pedestal shaft description to read as "6063-T6 alloy, 4" x .237" wall schedule 40-3.73 #/ft. spun finish".

**SIG-028-B Sheet 3 of 3** Added text to Note to read as: Anchor bolts are to be ASTM - A307 steel (4 required)

**SIG-029-A Sheet 1 of 2** Added text: (\*) Refer to Note 5 on sheet 2 of 2. Added text: "(\*) 10'-0" (RCOC typical)" adjacent to applicable dimension details.

**SIG-029-A Sheet 2 of 2** Added Note 5) to read as: For projects maintained by the Road Commission for Oakland County (RCOC), use the bottom heights and bracket assemblies as shown for the RCOC mounting detail (\*). Added text: "(\*) 10'-0" (RCOC typical)" adjacent to applicable dimension details. Added the (\*) RCOC Mounting Detail.

**SIG-029-B Sheet 1 of 2** Added text: (\*) Refer to Note 5 on sheet 2 of 2. Added text: "(\*) 10'-0" (RCOC typical)" adjacent to applicable dimension details.

**SIG-029-B Sheet 2 of 2** Added Note 5) to read as: For projects maintained by the Road Commission for Oakland County (RCOC), use the bottom heights and bracket assemblies as shown for the RCOC mounting detail (\*). Added text: "(\*) 10'-0" (RCOC typical)" adjacent to applicable dimension details. Added the (\*) RCOC Mounting Detail.

**SIG-029-C Sheet 1 of 3** For the overhead feed detail, changed Note to read as Notes and added Note 2) to read as: (\*) For projects maintained by the Road Commission for Oakland County (RCOC), use the bottom heights and bracket assemblies as shown on SIG-028-A, SIG-029-A or SIG-029-B for the for the RCOC Mounting Detail. Added the symbol (\*) adjacent to the 9'-0" dimension.

**SIG-029-C Sheet 2 of 3** Added text: (\*) Refer to Note 2 on sheet 1 of 3. Added the symbol (\*) adjacent to the 9'-0" dimensions to Grade level.

**SIG-030-A Sheet 1 of 2** For the One-Way Traffic Signal Head detail, added text to Note to read as: \* Cotter key required as shown. (Nut backed down tight against cotter key.) Added text to the following statement "Install serrated metal washer etc." to read as: (Use rubber washer for projects maintained by the Road Commission for Oakland County (RCOC)).

**SIG-030-G Sheet 1 of 1** Added Note 4) to read as: Use one inch border with yellow signal heads and visors. Use two inch border with black signal heads and visors. Also added text "ASTM TYPE IV Reflective yellow tape border." for the three signal sections displayed.

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**SIG-030-H Sheet 1 of 4** Changed description to read as: Span Wire Tether Details. Switched the position and identification of the Span wire and the Tether span wire. Added text below Detail "A" to read as: Span Wire Installation with Aluminum Extension and Top Tether Span Wire.

**SIG-030-H Sheet 2 of 4** Added new construction details for span wire installation with top tether span wire and break-away tether assembly for top of signal head.

**SIG-030-H Sheet 3 of 4** Added new construction details for span wire installation with bottom tether span wire and break-away tether assembly for bottom of signal head.

**SIG-030-H Sheet 4 of 4** Added new construction details for span wire installation with bottom tether span wire for mounting height details and pole attachment details.

**SIG-031-A Sheet 1 of 3** Modified the text for the Aluminum Pedestal shaft description to read as "6063-T6 alloy, 4" x .237" wall schedule 40-3.73 #/ft. spun finish".

**SIG-045-A Sheet 1 of 6** Added text to the following statement "3/4 inch X 42 inch galvanized foundation bolts, nuts & washers etc." to read as: (Refer to Detail "A" on sheet 5 of 6 for use of Drop In type bolts and anchors.)

**SIG-045-A Sheet 2 of 6** Added text to the following statement "3/4 inch X 42 inch galvanized foundation bolts, nuts & washers etc." to read as: (Refer to Detail "A" on sheet 5 of 6 for use of Drop In type bolts and anchors.)

**SIG-045-A Sheet 3 of 6** Added text to the following statement "3/4 inch X 42 inch galvanized foundation bolts, nuts & washers etc." to read as: (Refer to Detail "A" on sheet 5 of 6 for use of Drop In type bolts and anchors.)

**SIG-045-A Added Sheet 5 of 6** for the Detail "A": Drop In Foundation Bolts & Anchors

**SIG-045-A Added Sheet 6 of 6** for the "Traffic Signal Cabinet Requirements for ITS Applications".

**SIG-120-A Sheet 2 of 4** For the Pedestrian Pushbutton Installation on Steel Pole or Pedestal detail, added text "Cast" for mounting bracket and "1/2" x 2" nipple & bushing" on top view. Added text: 1/4" - 20 x 3 / 4" stainless steel screws (4 required) on the Front View. Added text to label the Top View. Changed the view and text from Octagonal to Square aluminum base on the Push Button Pedestal Detail.

**SIG-120-A Sheet 3 of 4** For the Pedestrian Pushbutton Installation on Wood Post detail, added text "Cast" for mounting bracket on Top View. Added text: 1/4" - 20 x 3 / 4" stainless steel screws (4 required) on the Front View.

**Added SIG-270-A Sheets 1 thru 4** New construction details for an LED Changeable Message (Open-Closed) Sign mounted on steel 8WFX13 I Beam supports to be used for weigh station applications.

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**SIG-284-A Sheet 3 of 4** Deleted “and lock washers (12)” for anchor bolt cage assembly on the Elevation detail.

**Added SIG-374-A Sheets 1 thru 3** New construction details for Steel Truss Brackets mounted on either steel or wood poles.

**Added SIG-500-A Sheets 1 thru 4** New construction details for Microwave Vehicle Detector mounted on either steel or wood poles.

**0-SIGNAL INDEX/CHECKLIST: Updated**

**SIG-030-H** Changed the description & number of pages from 1 to 4.

**SIG-045-A** Changed the number of pages from 4 to 6.

**SIG-270-A** Added new details, 4 pages.

**SIG-374-A** Added new details, 3 pages.

**SIG-500-A** Added new details, 4 pages.

**June 19, 2012:**

**SIG-010-A Sheet 3 of 5** On detail “C” for Cabling on Steel Pole, relocated the Power Co. sec service above the span wire attachment.

**SIG-010-A Sheet 5 of 5** Switched the standard and alternate pull-off connection details for 3-way suspension: The detail showing three TC1 type connectors is now the preferred detail. The detail showing one TC1 type connector is now the alternate detail. Added text to read “120 degrees minimum” for the angle on the span wire.

**SIG-011-A Sheets 1 thru 3** Removed the text “bond” so the statement reads “Metal bushing (inside pole)” for the controller cabinet mounted on steel poles detail shown on each of the three sheets.

**SIG-012-A Sheets 1 thru 4** Added a text statement to read “Orientation on backside facing away from curb.” following the 60A service disconnect description detail shown on each of the four sheets.

**SIG-012-B Sheets 1 & 2** Added a text statement to read “Orientation on backside facing away from curb.” following the 60A service disconnect description detail shown on each sheet.

**SIG-026-A Sheet 5 of 6** Added text so the statement reads “Tinned copper type Connector for Ground Wire” on the span wire ground detail and modified the wiring.

**SIG-028-B Sheet 1 of 3** Modified the text for the pedestal shaft description to read as “6063-T6 alloy, 4” x .237” wall schedule 40-3.73 #/ft. spun finish”.

**SIG-030-D Sheet 2 of 3** Added new sheet for T.S. mounted on Case Sign Detail.



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**SIG-030-D Sheet 3 of 3** Old Sheet 2 of 2 became Sheet 3.

**SIG-051-A Sheet 1 of 3** Added text so the statement reads "Cast Aluminum Terminal Compartment (See detail on Sheet 3 of 3)".

**SIG-051-A Sheet 2 of 3** Added text so the statement reads "Cast Aluminum Terminal Compartment (See detail on Sheet 3 of 3)".

**SIG-051-A Sheet 3 of 3** Added new sheet for Cast Aluminum Terminal Compartment Detail.

**SIG-120-A Sheets 1, 2 and 4 of 4:** Revised pushbutton height from 3'-0± to 3'-6±

**SIG-120-A Sheet 1 of 4** Revised note indicating acceptable range for pushbutton height is now 38" to 46" (was 28" to 46"). Added a statement: "Place sign hardware not to interfere with wording on sign" following the R10-3 series sign (R10-3b shown) description on the detail sheet.

**SIG-120-A Sheet 3 of 4** Deleted text "3' - 0" +/- to grade (#) see note on sheet 1 of 4" on Pedestrian Pushbutton installation on wood post detail.

**SIG-126-A Sheet 4 of 4** Corrected the spelling of "Figure" for Figure 8 bracket detail shown at top of sheet.

**SIG-420-A Sheet 1 thru 4 of 9** Remove reference to Access Point (AP) and replace with Serial Point Protocol (SPP) radio as appropriate. Remove reference to repeater (RP) and replace with (SPP) at pole location in lower left corner of sheet. Change statement "1000' max range - access point to repeater" to read: "330' max cable length - SPP to controller". Change statement "150' max range - access point to sensor" to read: "150' max range SPP to sensor".

**SIG-420-A Sheet 5 of 9** Remove reference to Access Point (AP) and replace with Serial Point Protocol (SPP) radio as appropriate. Change statement "1000' max range - access point to repeater" to read: "1000' max range - SPP to Repeater".

**0-SIGNAL INDEX/CHECKLIST: Updated**

**SIG-030-D** Changed the number of pages from 2 to 3.

**SIG-051-A** Changed the number of pages from 2 to 3.

**March 20, 2012:**

**Renamed SIG-028-C to SIG-031-A:** School speed limit sign (LED)

**SIG-120-A: Sheet 2 of 4:** Removed duplicate reference to push button height

**Removed SIG-150-A:** 4 anchor bolt strain pole and foundation detail

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**SIG-153-A: Sheet 3 of 7: Revised Standoff distance to 1" Max** (distance from the top of foundation to the bottom of the leveling nut):

- Deleted '1 1/2" max for 1 1/2" dia. bolt'
- Deleted '1 3/4" max for 1 3/4" dia. bolt'
- Added '1" max'

**SIG-284-A: Sheet 2 of 4: Revised Standoff distance to 1" Max** (distance from the top of foundation to the bottom of the leveling nut):

- Changed text from '1 3/4" max' to '1" max'

**February 21, 2012:**

**0-SIGNAL INDEX/CHECKLIST: Reposted as an excel spreadsheet with updated details**

**SIG-010-A: Sheet 4 of 5: Added text 5/16" Guy strand (typ) on Details "D" & "E".**

**SIG-027-A: Revised to incorporate permanent and solar powered sign mounted beacons:**

- **Sheet 1 of 5:** Replaced the detail information with details from SIG-073-A sheet 1 of 7. **Sheet number reassigned as 1 of 9.** Changed the detail description to read as: Single Sign Mounted Flashing Beacon Installed on One Wood Post.
- **Sheet 2 of 5:** Replaced the detail information with details from SIG-073-A sheet 3 of 7. **Sheet number reassigned as 2 of 9.** Changed the detail description to read as: Single Sign Mounted Flashing Beacon Installed on Two Wood Posts.
- **Sheet 3 of 5:** Replaced the detail information with details from SIG-073-A sheet 4 of 7. **Sheet number reassigned as 3 of 9.** Changed the detail description to read as: Single Sign Mounted Flashing Beacon Installed on Two Steel Posts (Perforated Steel Square Tube Breakaway System).
- **Sheet 4 of 5:** Replaced the detail information with details from SIG-073-A sheet 3 of 7. **Sheet number reassigned as 4 of 9.** Changed the detail description to read as: Single Sign Mounted Flashing Beacon Mounted on Two Wood Posts.
- **Sheet 5 of 5:** Replaced the detail information with details from SIG-073-A sheet 3 of 7. **Sheet number reassigned as 5 of 9.** Changed the detail description to read as: Sign Mounted Dual Flashing Beacons Installed on Two Steel Posts (Perforated Steel Square Tube Breakaway System).
- **Sheet 6 of 9:** Replaced the detail information with details from SIG-073-A sheet 3 of 7 and renumbered as 6 of 9.
- **Sheet 7 of 9:** Used the detail information from SIG-073-A sheet 5 of 7 and **renumbered as sheet 7 of 9.**
- **Sheet 8 of 9:** Used the detail information from SIG-073-A sheet 6 of 7 and **renumbered as sheet 8 of 9.**
- **Sheet 9 of 9:** Used the detail information from SIG-073-A sheet 7 of 7 and **renumbered as sheet 9 of 9.** Changed the detail description to read as: Solar Engine Mounted on Pedestal.

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**Added SIG-027-B: Sheets 1 thru 5:** Added new details for Rectangular Rapid Flashing Beacon (RRFB) installations using either Solar Power or Permanent Power Sources using pedestal mounted supports.

**SIG-028-B: Revised as follows:**

- **Sheet 1 of 3:** Moved “Post Top” detail to top of sheet. Moved both “Octagonal Base & Bottom Plan” details down to middle of sheet. Inserted “Collar” details from SIG-073-A sheet 7 of 7 to bottom of sheet. Moved “Signal Mounting Hardware – Standard Bracket” detail to sheet 2 of 3 in place of “Notes”.
- **Sheet 2 of 3:** Moved “Notes:” from sheet 2 to sheet 3 of 3. Added text **See notes 1, 2 & 3 on sheet 3 of 3** under description Pedestal Foundation.
- **Sheet 3 of 3** Added Notes: 1) thru 4) from sheet 2 of 3.

**Added SIG-028-C: Sheets 1 thru 3:** New details for changeable message School Speed Limit Sign with (LED) sign optical installations using pedestal mounted supports.

**SIG-030-B: Sheet 1 of 1:** Added text “**See (\*) notes**” following the 1-Way, 1-section 12” T.S. (aluminum) displays and the 1-Way, 3-section 12” T.S. (aluminum) displays. Added the following text: **(\*) Notes:**

- 1) Traffic signals must conform to the requirements of the current ITE publication “Vehicle Traffic Control Signal Heads”.
- 2) Provide cast aluminum alloy housings with a two inch diameter hole top and bottom to receive 1 ½ inch supporting pipe.
- 3) Provide a detachable, sheet aluminum visor (min. 0.057 inches thick), for each signal indication.
- 4) Provide twist on slots for visor mounting that are either in the visor or on the tabs formed on the visor.

**SIG-030-C: Revised to specify aluminum head requirements:**

- **Sheet 1 of 3:** Following description (see note #4), added text **on sheet 3 of 3** for each T.S./Case Sign Combination display.
- **Sheet 2 of 3:** Following description (see note #4), added text **on sheet 3 of 3** for each T.S./Case Sign Combination display. Added text “**See \*Aluminum Head Notes\***” following the 1-Way, 3-section 12” T.S. (aluminum) displays the 1-Way (Aluminum) above and below Hub. For 1-Way (Aluminum) above Hub, changed 1 Way, 3-section, 12” T.S from non-illuminated to non-aluminum. Added the following text: **\*Aluminum Head Notes\*:**
  - 6) Traffic signals must conform to the requirements of the current ITE publication “Vehicle Traffic Control Signal Heads”.
  - 7) Provide cast aluminum alloy housings with a two inch diameter hole top and bottom to receive 1 ½ inch supporting pipe.
  - 8) Provide a detachable, sheet aluminum visor (min. 0.057 inches thick), for each signal indication.
  - 9) Provide twist on slots for visor mounting that are either in the visor or on the tabs formed on the visor.

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**Added SIG-030-H: Sheet 1 of 1:** New details for Top Tether Span Wire Mounting for traffic signal installations.

**SIG-050-A: Revised to indicate 5/16” for all span and guy wires:**

- **Sheet 1 of 3:** Changed span wire size from 11.5k (3/8”) to 11.2k (5/16”) on Details “A” & “B”. Changed guy strand size from 18k (3/8”) to 11.2k (5/16”) on Detail “A”.
- **Sheet 2 of 3** Added text **5/16” Guy strand (typ)** to Detail “C”.
- **Sheet 3 of 3** Changed Detail “C” to read as “D” and added text **5/16” Guy strand (typ)**.

**Deleted SIG-073-A: Sheets 1 thru 7:** Information combined with SIG-027-A:

- **Sheet 1 of 7:** Combined SIG-073-A sheet 1 to become SIG-027-A sheet 1 of 9. Deleted the details associated with the 20 Watt Solar Engine Assembly and Tilt Mount Top Plate Base Bracket. Modified the sign optical brackets and added an Aluminum Cap on top of the sign optical head.
- **Sheet 2 of 7:** Moved Details “A”, “B” & “C” to the new combined sheet no. SIG-027-A sheet 2 of 9. **Deleted the remaining information on this sheet.**
- **Sheet 3 of 7:** Combined SIG-073-A sheet 3 to become SIG-027-A sheet 4 of 9. Added Details “A”, “B” & “C” from SIG-073-A sheet 2 of 7. Removed the Orientation Site Diagram.
- **Sheet 4 of 7:** Combined SIG-073-A sheet 4 to become SIG-027-A sheet 3 of 9. Deleted the details associated with the 20 Watt Solar Engine Assembly and Tilt Mount Top Plate Base Bracket. Added an Aluminum Cap on top of the sign optical head. Showed 1 ½ inch schedule 80 PVC or rigid metal conduit (\*) fastened to steel square tube. Added expansion joint.
- **Sheet 5 of 7:** Copied detail info on SIG-073-A to become SIG-027-A sheet number 7 of 9. Deleted the details associated with the 20 Watt Solar Engine Assembly and Tilt Mount Top Plate Base Bracket.
- **Sheet 6 of 7:** Copied detail info on SIG-073-A to become SIG-027-A sheet number 8 of 9. Deleted the details associated with the 20 Watt Solar Engine Assembly and Tilt Mount Top Plate Base Bracket.
- **Sheet 7 of 7:** Copied some detail info on SIG-073-A to become SIG-027-A sheet number 9 of 9. Deleted the following details: Post Top, Octagonal Aluminum Base, Collars for both Octagonal & Base. Deleted the “Note: Use pedestal collar etc.” Moved the Square Aluminum Base to be placed under the pedestal detail. Deleted the dimensions on the Square Aluminum Base. Deleted the statement “60363-T6 Alloy etc.” associated with the Aluminum Pedestal.

**SIG-120-A: Revised to highlight acceptable range for pushbutton height:**

- **Sheet 1 of 4:** Added text **(#) see note** to 3’ dimension for pushbutton height to grade.
- **Sheet 2 of 4:** Added text **(#) see note on sheet 1 of 4** to 3’ dimension for pushbutton height to grade.
- **Sheet 3 of 4:** Added text **(#) see note on sheet 1 of 4** to 3’ dimension for pushbutton height to grade.

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- **Sheet 4 of 4:** Added text (#) see note on sheet 1 of 4 to 3' dimension for pushbutton height to grade.

**November 15, 2011:**

**SIG-028-B: Sheets 1 and 2:** Added note 4) specifying that pedestal base must meet NCHRP 350, or MASH and have FHWA acceptance. Pedestal base must also be certified to have 4 inch maximum stub height after a crash test.

**Added SIG-030-G:** Traffic Signal Backplates

**Revised Signal Index/Checklist:** Added SIG-030-G: Traffic Signal Backplates

**SIG-153-A: Sheets 1, 2, 3 and 5:** Revised bottom ring plate from 12 to 6 holes. Clarified galvanizing of hardware: Only exposed end of anchor bolts must be galvanized. Only exposed nuts and washers must be galvanized. Embedded ring plate, nuts, and washers need not be galvanized.

**SIG-284-A: Sheets 2 and 3:** Revised bottom ring plate from 12 to 6 holes. Clarified galvanizing of hardware: Only exposed end of anchor bolts must be galvanized. Only exposed nuts and washers must be galvanized. Embedded ring plate, nuts, and washers need not be galvanized.

**August 16, 2011:**

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**SIG-010-A: Sheets 1, 2, and 3:** Changed pole band bolt designation to 4" long A449. **Sheets 1, 3, 4, and 5:** Changed connector to tinned brass split bolt connector for ground wire. **Sheet 1:** Added Note 3). **Sheet 2 of 5** For Note: (\*) deleted statement "installed below grade." and replaced with statement "from grade level to 10' (min.) above grade or as directed by the Engineer."

**SIG-012-A Sheet 2 of 4** For Note: (\*) deleted statement "installed below grade." and replaced with statement "from grade level to 10' (min.) above grade or as directed by the Engineer."

**SIG-012-A Sheet 4 of 4** For Note: (\*) deleted statement "installed below grade." and replaced with statement "from grade level to 10' (min.) above grade or as directed by the Engineer."

**SIG-012-B Sheet 1 of 2** For Note number 4), deleted statement "installed below grade." and replaced with statement "from grade level to 10' (min.) above grade or as directed by the Engineer."

**SIG-027-A Sheet 1 of 5** For Note: (\*) deleted statement "installed below grade." and replaced with statement "from grade level to 10' (min.) above grade or as directed by the Engineer."

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**Added SIG-030-F, Sheets 1 & 2: “Bracketing for HAWK Signal Display” (High-Intensity Actuated CrossWalk).** The detail shows HAWK signal head bracket details for span wire and mast arm mounting.

**SIG-051-A Sheet 1 of 2** For Note: (\*) deleted statement “installed below grade.” and replaced with statement “from grade level to 10’ (min.) above grade or as directed by the Engineer.”

**SIG-073-A Sheet 1 of 7** For Note: (\*) deleted statement “installed below grade.” and replaced with statement “from grade level to 10’ (min.) above grade or as directed by the Engineer.”

**SIG-120-A Sheet 1 of 4** For Note: (\*) deleted statement “installed below grade.” and replaced with statement “from grade level to 10’ (min.) above grade or as directed by the Engineer.”

**Reinstated SIG-150-A** with the following revisions: **Sheets 3 of 7:** Specified 90 degree conduit elbows in foundation. **Sheet 6 of 7:** Modified foundation notes and updated spec. book references to match 2012 spec. book. **Sheet 1 of 7:** Changed name to reflect the use of this detail for 4 anchor bolt strain poles

**SIG-153-A Sheet 1 of 7:** Added base ID tag detail. **Sheet 2 of 7, Note 2e:** Modified anchor bolt nut designation. **Sheets 3, 4, and 7 of 7:** Changed to (3) 3” and (1) 1 ½” conduits in foundation. Specified 90 degree conduit elbows in foundation.

**Sheet 6 of 7:** Modified foundation notes and updated spec. book references to match 2012 spec. book. **Sheet 1 of 7:** Changed name to reflect the use of this detail for 6 anchor bolt strain poles.

**SIG-284-A Sheet 1 of 4:** Changed to (3) 3” and (1) 1 ½” conduits in foundation. Specified 90 degree conduit elbows in foundation. **Sheet 4 of 4:** Modified foundation notes and updated spec. book references to match 2012 spec. book. **Sheet 1 of 4:** Changed name to reflect the use of this detail for 6 anchor mast arm poles.

**Added SIG-359-A Sheets 1 thru 7: “Mast Arm Mounted T.S. Bracket Assembly”** Shows bracketing requirements for mast arm mounted traffic signals, case signs, and street name signs.

**February 15, 2011:**

**Changed 0-SIGNAL INDEX to 0-SIGNAL INDEX/CHECKLIST:** The special details index was replaced with the contract checklist and renamed to index/checklist. The index in 0-SIG-ALL was similarly modified.

**SIG-010-A Sheet 1 of 5** Added references for steel pole “Top of foundation” and for wood pole “Top of proposed grade”.

**SIG-010-A Sheet 2 of 5** Added references for steel pole “Top of foundation” and for wood pole “Top of proposed grade”.



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**SIG-010-A Sheet 3 of 5** For Detail "B", changed description to read "Pole Band Clamp on Steel Pole", and added additional statement "All bend radii to be a minimum of 1.5 times pole band thickness." Showed dimension 3/8" minimum bend radius. Added "min." next to 1 5/8" dimension. Showed enlarged radii adjacent to oval eye nut connection.

**SIG-028-B Sheet 1 of 3** Added the description "Frangible" for both Octagonal & Square aluminum bases.

**SIG-028-B Sheet 2 of 3** Changed conduit size from 3" to 1 1/2" in pedestal foundation detail and showed ground rod depth to 6" below grade. Deleted the (1) 1 3/4" schedule 80 PVC conduit for grounding shown in the Handhole detail and added Bell end.

**SIG-073-A Sheet 1 of 7** Changed bracketing system securing the vertical conduit to show a galvanized slotted channel with parallel conduit clamps.

**SIG-073-A Sheet 2 of 7** Changed size of Wood Posts from 4"X6" to 6"X8". Changed bolt length from 4 1/2" min. to 6 1/2" min. and wood post dimension from 4" min. to 6" min. in Detail "B". Changed wood post dimension from 6" min. to 8" min. in Detail "C".

**SIG-073-A Sheet 3 of 7** Deleted pedestrian type bracketing in Side View and showed Sign Optical placed over vertical galvanized rigid conduit. Changed Iron Cross (slip fit) to (Typ). Deleted Iron Cross (Typ) on top and replaced with "Aluminum cap" on top of Sign Optical.

**SIG-073-A Sheet 7 of 7** Added a Sign Optical detail with bracketing on Aluminum Pedestal. Added Warning Sign and mounting details on Aluminum Pedestal. Added reference statement to read as " \* Refer to Standard Plans for Miscellaneous Sign Connection Details" for warning sign. Added the description "Frangible" for both Octagonal & Square aluminum bases.

**February 15, 2011:**

**Added special detail: SIG-103-A "Pedestal Base Alternate Anchorage Details"** This detail provides for a flush mounted pedestal base secured by a three anchor bolt foundation.

**SIG-120-A Sheet 2 of 4** On Pushbutton Pedestal detail, changed conduit size from 3" to 1 1/2" schedule 80 PVC conduit.

**Removed special detail: SIG-150-A "Anchor Base Steel Strain Pole and Foundation".**

**Added special detail: SIG-153-A "Anchor Base Steel Strain Pole and Foundation".** Changed the pole and foundation requirements and changed from a four bolt to a six anchor bolt foundation. Added an additional statement that multi-ply "Allowed" on sheet number 1 of 7.

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Added grounding requirements from the strain pole to be secured to the foundation reinforcement on sheet number 5 of 7. Changed the number and size of schedule 80 PVC conduits to be used in strain pole foundations on sheet numbers 3, 4, & 7. Changed the special detail number **from** SIG-150-A **to** SIG-153-A to match the new pay item code number.

**Removed special detail: SIG-280-A “Traffic Signal Mast Arm Standard Foundations”.**

**Added special detail: SIG-284-A “Traffic Signal Mast Arm Standard Foundations”.** Changed the mast arm standard foundation requirements and changed from a four bolt to a six anchor bolt system. Changed the number and size of schedule 80 PVC conduits to be used in mast arm standard foundations on sheet number 1. Added grounding requirements (note #5) from the mast arm standard to be secured to the foundation reinforcement. The foundation depth table was revised and removed from the special detail. The new Mast Arm Foundation Chart can be found in the Correspondence/Guidelines area of the website as SIG-DESIGN-284-A. Changed the special detail number **from** SIG-280-A **to** SIG-284-A to match the new pay item code number.

**SIG-281-A Sheets 1 thru 4 Category I** Changed to accommodate the six anchor bolt foundation.

**SIG-282-A Sheets 1 thru 4 Category II** Changed to accommodate the six anchor bolt foundation.

**SIG-283-A Sheets 1 thru 4 Category III** Changed to accommodate the six anchor bolt foundation.

**January 18, 2011:** The following updates were made to the site:

**SIG-012-A Sheet 1 of 4** Changed statement “1/2” round molding for ground rod etc.” to read as “Half round molding for grounding etc.” and changed “Electrozinc Diamond” to “galvanized.” Showed molding and added “10’ to grade” dimension. Added Expansion joint above LB’s.

**SIG-012-A Sheet 2 of 4 Relocated** the Expansion joint and added “1’ maximum to grade” dimension. Deleted the Galvanized 2 hole strap located closest to grade level.

**SIG-012-A Sheet 3 of 4** Changed statement “1/2” round molding for ground rod etc.” to read as “Half round molding for grounding etc.” and changed “Electrozinc Diamond” to “galvanized”. Showed molding and added “10’ to grade” dimension. Added “Galvanized Steel 2 hole straps” between the LB’s located below the meter.

**SIG-012-A Sheet 4 of 4** Added an Expansion joint below meter and added “1’ maximum to grade” dimension. Relocated Galvanized 2 hole strap closer to meter.

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**SIG-012-B Sheet 1 of 2** Added Expansion joints below meter and service disconnect and added "1' to grade maximum" dimension. Reworded statements to read as "Galvanized steel 2 hole strap" and deleted "3' spacing (min)".

**SIG-012-B Sheet 2 of 2** Added Expansion joints below meter and service disconnect and added "1' to grade maximum" dimension. Reworded statements to read as "Galvanized steel 2 hole strap" and deleted "3' spacing (min)".

**SIG-027-A Sheet 3 of 5** Added Expansion joint and "1' to grade maximum" dimension. Deleted the stainless steel banding located closest to grade level.

**SIG-027-A Sheet 5 of 5** Added Expansion joint and "1' to grade maximum" dimension. Deleted the stainless steel banding located closest to grade level.

**SIG-028-B Sheet 2 of 3** Changed alternate foundation dimensions from 20 inches Square to 22 inches Square. Changed Note number 1) to read: 22" X 22" square – 48" deep.

**SIG-029-C Sheet 1 of 3** Added Expansion joint and dimension "1' to grade maximum". Changed statement "Coupling with hanger" to read as "Reducer" and adjusted the height above grade level. Added Detail "E" showing the Expansion joint and Reducer and dimensions to grade.

**SIG-029-C Sheet 2 of 3** Added Expansion joint and dimension "1' to grade maximum" to Outside of Pole (Alternate) detail. Changed statement "Coupling with hanger" to read as "Reducer" and showed height above grade level, added "See detail "E" sheet 1 of 3 to Outside of Pole & Concrete Pole details.

**SIG-050-A Sheet 2 of 3** Added an Expansion joint above LB on pole near controller cabinet.

**SIG-050-A Sheet 3 of 3** Added an Expansion joint above LB on pole near controller cabinet.

**SIG-051-A Sheet 1 of 2** Added the statement "Continuous flexible non-metallic tubing (innerduct) to controller cabinet. Innerduct is not required if communication cable is 600 V rated." and showed on detail. Reworded statement to read as "600 V. 5/C 16 Cable to Controller Cabinet"

**SIG-051-A Sheet 2 of 2** Added the statement "Continuous flexible non-metallic tubing (innerduct) to controller cabinet. Innerduct is not required if communication cable is 600 V rated." and showed on detail. Reworded statement to read as "600 V. 5/C 16 Cable to Controller Cabinet"

**SIG-120-A Sheet 1 of 4** Added an Expansion joint below the pushbutton and "1' to grade Maximum" dimension. Adjusted placement of the bottom Galvanized steel 2

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hole strap to be located above the expansion joint. Deleted "3' spacing (min)" from the statement "Galvanized steel 2 hole strap".

**SIG-120-A Sheet 2 of 4** Added statement ""construction joints not permitted" next to 4' depth dimension for pedestal foundation.

**SIG-120-A Sheet 4 of 4** Added an Expansion joint below the pushbutton and "1' to grade Maximum" dimension. Adjusted placement above grade and changed "Coupling w/hanger" to read as "Reducer", and added "6" to grade Maximum" dimension. Added detail "A" showing Expansion joint and Reducer and dimensions to grade. Adjusted placement of the bottom Galvanized steel 2 hole strap to be located above the expansion joint. Deleted "3' spacing (min)" from the statement "Galvanized steel 2 hole strap".

**SIG-371-A Sheet 7 of 7** Added new detail sheet (#7) showing the requirement of using a "Continuous flexible non-metallic tubing (innerduct) to the controller cabinet. Innerduct is not required if communication cable is 600 V rated." on Yagi antenna details for steel and wood poles. Showed and included statement "LMR 400 dB type cable to controller cabinet".

**SIG-371-A Sheets 1 thru 6** Renumbered sheets from 1 thru 6 to 1 thru 7 accordingly.

**SIG-380-A Sheet 1 of 2** Changed the statement to read as "Combination power/coaxial cable (RG 59-3 conductor 16 AWG or approved equal) to controller cabinet". Deleted reference to "Power cable". Changed reference to read as: "Power/coaxial cable" at camera location.

**SIG-380-A Sheet 2 of 2** Changed the statement to read as "Combination power/coaxial cable (RG 59-3 conductor 16 AWG or approved equal) to controller cabinet". Deleted reference to "Power cable". Changed reference to read as: "Power/coaxial cable" at camera location.

**November 16, 2010:** The following updates were made to the site.

**SIG-28-B** Sheet 2 of 3 Handhole detail note, changed rod to rod(s), and eliminated the phrase "a variable distance from foundation".

**SIG-120-A** Sheet 2 of 4 Pushbutton Pedestal note "3/4" x 10'-0.." moved the sentence "Ground rod(s) must be installed outside the foundation (minimum of 12" from foundation)" to a separate note for the scenario where no handhole is available.

**SIG-132-A** Detail added to the website

**SIG-150-A** Sheet 1 of 7 Typical Cross Section Circular dimension changed from 4 1/2" to 6 1/2". Section "A-A" dimension of 6 1/2" changed to 10 1/2". Access hand hole 7" dimension changed to 11" and 4" dimension changed to 6". 4 1/2" dimension changed to 6 1/2" and 6" dimension changed to 8".

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Sheet 3 of 7 Anchor Base Steel Strain Pole Foundation, eliminated phrase “ a variable distance from foundation”

**SIG-420-A** Sheet 1 of 9 Reduced the number of Vehicle Sensor Nodes (VSN) required from 4 to 2 per lane per cross street approach. Added text “(Non-locking)” following cross road activated.

Sheet 2 of 9 New sheet 2 which is similar to sheet 1. Showed the number of VSN’s required as 2 per thru / right lane, and one per thru / left-lane on cross street approach. Added text “(Locking)” following cross road activated.

Sheet 3 of 9 Sheet 2 which became sheet 3. Reduced the number of VSN’s on each center left-turn lane approach from 4 to 3. Added text “Permissive Protected (Non-locking)”.

Sheet 4 of 9 New sheet 4 which is similar to sheet 3. Showed one VSN on each center left-turn lane approach. Added text “Protected Only (Locking)”.

Sheet 5 of 9 Sheet 3 became sheet 5. Unchanged.

Sheet 6 of 9 Sheet 4 became sheet 6. Added Typical 6’ X 20’ and 6’ X 30’ Detection Zone schemes.

Sheet 7 of 9 Sheet 5 became sheet 7. Reduced the number of VSN’s required for the center left-turn lane from 3 to one. Changed the VSN spacing requirements for all lanes. Deleted text “6’ X 20’ Detection Zone” and added text “ Two-Phase Operation (Non-locking)”.

Sheet 8 of 9 New sheet 8 which is similar to sheet 7. Showed one VSN required for both the thru and center left-turn lanes. Changed the VSN spacing requirements for all lanes. Deleted text “6’ X 20’ Detection Zone” and added text “ Two-Phase Operation (Locking)”. Added text “ \* with right-turn delays” for the right turn lane.

Sheet 9 of 9 Revised sheet 6 which became sheet 9 to show VSN lane placement diagrams for left-turn operations only. Deleted the VSN lane placement diagrams for both the right turn and thru lanes. Deleted text “ 6’ X 30’ Detection Zone”. Added placement diagram and text to show typical VSN placement diagram for “Left-Turn Operation Permissive Protected (Non-locking). Added placement diagram and text to show typical VSN placement diagram for “Left-Turn Operation Protected Only (Locking)”.

**August 17, 2010:** The following updates were made to the site.

**SIG-026-A** Sheet 2 of 6 For the Dog House - 5 color display, Green Ball indication, change the wire color from Red to Green.

**SIG-150-A** Sheet 6 of 7 1<sup>st</sup> paragraph “Dewatering of wet shafts if” changed to “Dewatering of wet shafts is”. 3<sup>rd</sup> paragraph sentence added “Even though the steel casing stops at the conduit entrance, the entire length of the foundation will be paid for as a cased foundation.”

**SIG-280-A** Sheet 4 of 5 On the “ Electrical Conduit and Grounding without Handhole” details, change ground rod to rod(s). Sheet 5 of 5 On the “ Electrical Conduit and



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Grounding with Handhole” details, show ground rod flush to bottom of handhole.

**SIG-281-A** Sheet 3 of 4 In reference to anchor bolts by others, Remove “(See Standard SIG-350-A)” and replace with “(Refer to Traffic Signal Mast Arm Standard Foundation detail)”.

**SIG-282-A** Sheet 3 of 4 In reference to anchor bolts by others, Remove “(See Standard SIG-350-A)” and replace with “(Refer to Traffic Signal Mast Arm Standard Foundation detail)”.

**SIG-283-A** Sheet 3 of 4 In reference to anchor bolts by others, Remove “(See Standard SIG-350-A)” and replace with “(Refer to Traffic Signal Mast Arm Standard Foundation detail)”

**SIG-420-A** Sheet 1 of 9 Reduced the number of Vehicle Sensor Nodes (VSN) required from 4 to 2 per lane per cross street approach. Added text “(Non-locking)” following cross road activated.

**SIG-420-A** Sheet 2 of 9 New sheet 2 which is similar to sheet 1. Showed the number of VSN’s required as 2 per thru / right lane, and one per thru / left-lane on cross street approach. Added text “(Locking)” following cross road activated.

**SIG-420-A** Sheet 3 of 9 Sheet 2 which became sheet 3. Reduced the number of VSN’s on each center left-turn lane approach from 4 to 3. Added text “Permissive Protected (Non-locking)”.

**SIG-420-A** Sheet 4 of 9 New sheet 4 which is similar to sheet 3. Showed one VSN on each center left-turn lane approach. Added text “Protected Only (Locking)”.

**SIG-420-A** Sheet 5 of 9 Sheet 3 became sheet 5. Unchanged.

**SIG-420-A** Sheet 6 of 9 Sheet 4 became sheet 6. Added Typical 6’ X 20’ and 6’ X 30’ Detection Zone schemes.

**SIG-420-A** Sheet 7 of 9 Sheet 5 became sheet 7. Reduced the number of VSN’s required for the center left-turn lane from 3 to one. Changed the VSN spacing requirements for all lanes. Deleted text “6’ X 20’ Detection Zone” and added text “Two-Phase Operation (Non-locking)”.

**SIG-420-A** Sheet 8 of 9 New sheet 8 which is similar to sheet 7. Showed one VSN required for both the thru and center left-turn lanes. Changed the VSN spacing requirements for all lanes. Deleted text “6’ X 20’ Detection Zone” and added text “Two-Phase Operation (Locking)”. Added text “ \* with right-turn delays” for the right turn lane.

**SIG-420-A** Sheet 9 of 9 Revised sheet 6 which became sheet 9 to show VSN lane placement diagrams for left-turn operations only. Deleted the VSN lane placement diagrams for both the right turn and thru lanes. Deleted text “6’ X 30’ Detection Zone”.

**SIG-420-A** Sheet 9 of 9 – continued: Added placement diagram and text to show typical VSN placement diagram for “Left-Turn Operation Permissive Protected (Non-locking). Added placement diagram and text to show typical VSN placement diagram for “Left-Turn Operation Protected Only (Locking)”.

**June 22, 2010:** The following updates were made to the site.

**SIG 010-A** Sheet 1 item #14 correct spelling “metal”, add (\*) See note on sheet 2 of 5.

Sheet 1 adjust display, add note # 2 “Align red indication at same height per approach.”

Sheet 1 adjust displays to show 4-color head on left side & 3-color display on right side.

Sheet 2 item #14 correct spelling “metal”, add (\*) See note. Sheet 2 adjust displays to show



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bottom of beacon displays to be at same bottom height as case sign. Sheet 2 add Note: (\*)  
“For projects maintained by the Wayne Co. Dept. of Public Service (WCDPS),  
use rigid metal for conduits(s) which extend below grade.” Sheet 2 move Pull-off  
Connection detail to new sheet # 5 Add Pull-off Connection (alternate) on new sheet # 5  
Add Detail Copper Jumper (alternate) on new sheet # 5 Sheet 3 add note to details “C”  
(Plug all un-used holes in weatherhead.) Sheet 3 delete Detail “B” (Alternate) Eye Bolt on  
Steel Pole Sheet 4 change 2” PVC to 3” PVC Sheet 4 details “D” & “E” to show “loop span  
wire with 5’ tail for adjustment” on span side of wood poles. Sheet 5 new sheet added  
pull-off details & jumper details.

**SIG 011-A** Sheet 1 change controller bottom height to 2’ -6”. Sheet 1, 2, 3 add expansion joints  
(detail “C”), and label “close” nipples. Sheet 1, 2, 3 add expansion joints (detail “C”), and label  
“close” nipples.

**SIG 012-A** Sheet 1 copy & paste detail “ E” from SIG-010-A sht # 4. Sheet 1 add expansion  
joints, modify text, label LB’s (metal). Sheet 2 add expansion joints, label LB’s (metal). Sheet  
2 add see Note: (\*) “For projects maintained by the Wayne Co. Dept. of Public Service  
(WCDPS), use rigid metal for conduits(s) which extend below grade.” Sheet 3 copy & paste  
detail “ E” from SIG-010-A sht # 4. Sheet 3 add expansion joints, modify text, label LB’s  
(metal). Sheet 4 add (\*) See note, add expansion joints, label LB’s (metal). Sheet 4 add Note:  
(\*) “For projects maintained by the Wayne Co. Dept. of Public Service (WCDPS), use rigid  
metal for conduits(s) which extend below grade.” Sheets 1,2,3,4 show ground rod flush with  
bottom of handhole.

**SIG 012-B** Sheet 1 add (\*) See note 4 and correct spelling “or”. Sheet 1 for  
Underground Metered Service use larger font Size, underline & bold. Sheet 1 add Note 4:  
(\*) “For projects maintained by the Wayne Co. Dept. of Public Service (WCDPS), use rigid  
metal for conduits(s) which extend below grade.” Sheet 2 add (\*) See note 4 (sheet 1 of 2),  
correct spelling “or”. Sheet 2 for Underground Non-Metered Service use larger font size,  
underline & bold.

**SIG 013-A** Sheet 1 add pole band & insulator on side view. Sheet 1 add expansion joint,  
modify text, label LB’s (metal). Sheet 2 add Note: Porcelain strain insulator (if required)  
shall meet the codes & placement requirements etc. Sheet 2 add expansion joint & modify text

**SIG 019-A** Sheet 1 change Strut to 10’ long max. Sheet 1 change distance to grade to 10’  
for fallen strain etc. Sheet 1 Note A delete “but in no case less than 8’ to grade”.

**SIG 026-A** Sheet 1 add Countdown LED Ped display. Sheet 2 add white-neutral wire for FYA  
& Dog House wiring schemes. Sheet 2 adjust the order of the display descriptions. Sheets  
3, 4 & 6 add “cabinet” following controller. Sheets 5 add “min.” following 10’ dimension.

**SIG 027-A** Sheet 1 revise Notes to read “Refer to Standard Plan etc. and delete references  
to SIGN 120-A, 150-A, 210-A. Sheet 1 add (\*) See note & modify text. Sheet 1 add Note: (\*)  
“For projects maintained by the Wayne Co. Dept. of Public Service (WCDPS), use rigid  
metal for conduits(s) which extend below grade.” Sheet 2,3,4,5 add (\*) See note 1 of 5 &  
modify text. Sheets 2,3,4,5 delete Notes “Refer to Standard Plan etc.” Sheet 3 show  
“U-bolt” detail on bottom strap (back view). Sheets 3,5 delete “Existing” change to  
“Steel Posts”. Sheets 3,5 delete “Existing” change to Two Sign Posts.

**SIG 028-B** Sheet 1 show collars for octagonal & square bases. Sheet 1 add Note: Use pedestal  
collar for pedestal length = or > 14’ (typical for 3 color traffic signals with pedestrian signals).  
Sheet 1 relocate post top (slip fitter) detail on same page. Sheet 2 update pedestal foundation  
to show dimensions to grade level & sidewalk, update bottom view to match top. Sheet 2 revise

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handhole detail to delete 3 / 4 “ conduit for ground wire, adjust ground rod heights. Sheet 3 insert “ASTM” in front of A-307 steel.

**SIG 030-A** Sheet 1 revise one-way head detail to show the red signals for the FYA & 3-color displays to be at same height. Sheet 1 add text C/C distance (typ) 10 3 / 4” to the multiple-way traffic signal heads display. Sheet 2 Hanger Attachment : add note near HD lock nut “Bottom nut backed-off tight against cotter-key with recess down and cotter-key bent”.

**SIG 045-A** Sheets 1,2,3 delete “Special Provision 03TC820(A010)” & insert “ contract documents”. Sheets 1,2,3,4 show ground rod flush with bottom of handhole. Sheet 4 modify detail to show pad 1” above grade level. Sheet 4 revise Note to read as follows: “Payment for the controller pad to be included in the controller foundation pay item. Controller cabinet door to open toward pad.”

**SIG 051-A** Sheet 1 add (\*) See note, label “offset”. Sheet 1 add Note (\*) “For projects maintained by the Wayne Co. Dept. of Public Service (WCDPS), use rigid metal for conduits(s) which extend below grade.”

**SIG 071-A** Sheets 1-4 (updated by Access Engr.) to be archived. Single solar power beacon details were added to SIG-073-A revised to include both Signal & Dual alternatives.

**SIG 073-A** Sheet 1 title revised to delete “Dual” since SIG-071-A was combined with SIG-073-A to include both applications. Sheet 1 add (\*) See note and “or rigid metal”.

Sheet 1 add Note: “For projects maintained by the Wayne Co. Dept. of Public Service (WCDPS), use rigid metal for conduits(s) which extend below grade.” Sheet 1,2,3

Changed method of supporting the sign optical and solar engine assembly, with hardware modifications. Sheet 2 add (\*) See note sheet 1 of 7 & “or rigid metal”. Sheet 2 added Details B & C & for changed method of attachments using galvanized solid strut channel. Sheet 3 add (\*) See note sheet 1 of 7 & “or rigid metal”. Sheet 4 added new details for mounting solar power on Perforated Steel Square Tube Breakaway System. Sheet renumber 4 to 5 of 7, modify text to hex. head. Sheet renumber 5 to 6 of 7, modify test to hex. head. Sheet renumber 6 to 7 of 7, modify test to hex. head. Sheet 7 show square base and add collars for both. Sheet 7 show square base and add collars for both = or > 14’ . Similar to SIG-028-B.

**SIG 120-A** Sheet 1 add (\*) See note & (#) See note. Sheet 1 add Notes: (\*) “For projects maintained by the Wayne Co. Dept. of Public Service (WCDPS), use rigid metal for conduits(s) which extend below grade.” Sheet 1 add Notes: (#) “Acceptable range for placement of pushbutton from 28” to 46”.

Sheet 1 revise “tee” to read “C” following PVC. Sheet 1,2,3,4 change pushbutton dimension from 3’ - 9” to 3’ - 0” to grade level. Sheet 2 show new Pushbutton & mounting bracket details. Sheet 2 show ground rod flush with bottom of handhole. Sheet 3 show new Pushbutton & mounting bracket details. Sheet 3 Top View –show lag screw in center, delete Others. Sheet 3 insert “ASTM” in front of A-307 steel. Sheet 4 show ground rod flush with bottom of handhole. Sheet 4 show \*\* by Sleeve. Sheet 4 revise statement under

Pushbutton & Wood Post to read \*\* “Refer to Standard Plan for Wood Posts” and delete reference to SIGN 210-A “and foundation details”. Sheet 4 add “or rigid metal” & (\*) See note sheet 1 of 4. Sheet 1, 2, 3 & 4 re-number and delete sheets 5 thru 9.

**SIG 150-A** Sheet 1 add text “Typical Cross Section (Circular)” and locate by Section “A-A”. Sheet 3 show ground rod flush with bottom of handhole. Sheet 3 change the diagonal span orientation direction from the upward (12 o’clock) to the downward (6 o’clock) position. Sheet 5 show “break lines” in the foundation detail. Sheet 6 **change references from section 810.03 to 705 to match paragraphs in 2010 Spec Book.**

**SIG 170-A** Sheet 1 delete “ See Special Provision 03TC820(A010)” & insert “ Refer

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to contract documents” for high pressure etc. Change Note to “Notes:”

**SIG 408-A** Sheet 1 – revise title to read “Splice Box” only & delete “Junction Box”. Sheet 2 re-number existing sheet 2 to Sheet 1 of 3 with changes. Sheet 1 (new) add Top View and Front view, change to 18” for height; for item “B” add “on left side for door opening.” Show holes as dashed lines ---. Sheet 2 (new) renumber to Sheet 2 of 3. Sheet 3 (new) renumber to Sheet 3 of 3. Sheet 3 delete “format” and change statement to read as: use 3 / 4 “ X 0.30” min. stainless steel bands. Sheet 3 change Note to “Notes:” Sheet 3 add Note 1. to read as: Splice Box to be constructed to provide a weather-tight enclosure. Sheet 3 modify Note 2. to read as: All cables shall enter TS Splice Box through bottom of enclosure with a water tight fitting. Sheet 3 add Note 3. to read as: Bushings for cable entrance into enclosure to be liquid tight and sized per cable(s) used.

**November 17, 2009:** The following updates were made to the site.

**SIG 028-B** Removed 12” dimension for ground rod on page 2 of 3 because the ground rod should be driven 10’ in the ground to be effective. Aligned square top view with bottom view of page 2 of 3. Changed 2”-4” above ground height to 0”-4” on page 2 of 3 this was done to eliminate the gap between the ground and the pedestal.

**SIG 029-A** Removed P-3 on page 2 of 2 because it was not used.

**June 23, 2009:** The following updates were made to the web site:

**SIG 045-A** Changed Controller Pad or Sidewalk to Controller Pad in sheet 4 of 4.

**SIG 150-A** Change added cut line to anchor bolts sheet 5 of 7. Changed position of Diagonal Span on sheet 4 of 7.

**April 21, 2009:** The following updates were made to the web site:

**SIG 028-A** Revised hand-hole detail from 1 ¾” schedule 80 PVC conduit for grounding to ¾” schedule 80 PVC conduit in sheet 2 of 3.

**SIG 280-A** Added note regarding different bolt circle diameters for the different category mast arms. Removed all references to beveled washers

**SIG 282-A** Changed diameter of anchor bolt hole in base plate from 2-1/8" to 2-1/4"

**SIG 283-A** Changed material specification for Luminaire Arm Clamp from A108 to ASTM A36. Changed diameter of anchor bolt hole in base plate from 2-1/8" to 2-1/4"

**March 17, 2009:** The following updates were made to the web site:

Revised the sheet number for SIG-070-A and SIG-150-A in the Statewide Traffic Signal Details Index.

Statewide special detail SIG-071-A (dated 03/06/09) in sheets 2 and 3 wood posts were removed. Removed sheet 4 of 4.

Statewide special detail SIG-150-A dated (03/05/09) was revised to show foundation details including:

- Requirement for reinforcing steel.
- Added sheets 5, 6 and 7.

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- Foundation notes referencing:
  - Wet construction method (dewatering of wet shafts is not allowed)
  - Grade T concrete for wet construction and S2 concrete for dry construction
  - Slump requirements for grade T and S2 concrete

**Dec. 9, 2008:** The following updates were made to the web site:  
Statewide special details ST-01 to ST-42 were removed. New statewide special details SIG-010-A to SIG-420-A (dated November 25, 2008) were placed on the web  
The statewide traffic signal special details index was revised.  
The full set statewide special details was replaced with the new details.

**April 22, 2008:** The following updates were made to the web site.

Under the subcategory MAST ARM TRAFFIC SIGNALS: The documents ST-32, ST-33 & ST-34 were updated as follows:

ST-32: on sheet 2 of 4: Deleted columns on the small chart indicating “Qty” & “Design No.” The quantity column was not used and the design numbers listed were incorrect or irrelevant.

ST-33: on sheet 2 of 4:

1. On the large specification chart: a text change was made to the column header from “ARM SIZE” to read “DIMENSIONS”.
2. On the smallest specification chart, text changes were made in the pole size column.
  - a. “OE” was replaced with 0.3125
  - b. “7+7E” was replaced with 0.3580
  - c. “3+3E was replaced with 0.5000

The previous designations were invalid and had no corresponding size associated with them in our standards specs book or elsewhere.

St-34: on sheet 2 of 4: Simple text change on the chart titled “Material Specification” The existing text “ANCO’ LOCK NUTS” was changed to read “ANCO’ LOCK NUTS OR EQUIVALENT” This change will allow the use of non-proprietary hardware.

**February 19, 2008:** The following updates were made to the web site.

Under the subcategory STATEWIDE SPECIAL DETAILS: The documents ST-32, ST-33, ST-34 & ST- 35 were updated. As these updates are actually of unapproved “standards” and have the new standards border, these are listed as “special details” in the F.H.W.A. signature line. Additionally, the original detail names (ST-32, 33, 34, 35) were used instead of the newer “standards” naming convention. The original dates (9/24/07 or 9/28/07) that the revisions were made by Access Engineering to become “standards” were replaced by the web update date of 2/19/08. This will keep all related documents dated the same.

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These revised special details are meant to be interim documents until all of the standards created by Access Engineering can be approved and uploaded to the web. Future standards dates will be changed to reflect the newest web update dates.

**October 4, 2007:** The following updates were made to the web site.

ST-21: added new 36" round pre-cast concrete handhole with metal frame and cover details. This information resulted in an additional 8 1/2" x 11" page being added to the ST-21 detail; which now numbers pages 1-4 of 4.

**March 15, 2007:** The following updates were made to the web site.

State wide Signal Special Details 17 Inch: Added text fields to the Date, Scale, Cont. Sec., Job No., T&S, and Construction boxes.\*

Signal Legend Statewide: Added text fields to the Date, Scale, Cont. Sec., Job No., T&S, and Construction boxes.\*

\*[http://mdotwas1.mdot.state.mi.us/public/tands/Details\\_Web/mdot\\_spdet\\_17x11\\_instructions.pdf](http://mdotwas1.mdot.state.mi.us/public/tands/Details_Web/mdot_spdet_17x11_instructions.pdf) For instructions entering Control Section, Job No. etc. fields.

**August 31, 2006:** The following updates were made to the web site.

ST-32, ST-33, ST-34: Revised/added to web site. These documents are to be used by any agency interested in having mast arm supported traffic signals on trunkline roadways.

The document titled Criteria for Selection of Traffic Signal Mast Arm Poles and Mast Arms For Local Agencies should be reviewed first since it describes the different category mast arms available and the costs associated with each (including any applicable inspection fees)."

See also Traffic and Safety Note 261, and special provision for "Traffic Signal Mast Arm Pole and Mast Arm (Trunkline).

**May 15, 2006:**

ST-1, Plan 0-ST-ALL, Full Set Statewide 36": Added sheet one (this sheet was missing)

**July 20, 2005:** The following updates were made to the web site.

Statewide Traffic Signal Details:

ST-32: Revised to meet AASHTO requirements. Please contact Doug Adelman at 517.373.2363 or [adelmand@michigan.gov](mailto:adelmand@michigan.gov) with further questions.

**April 19, 2005:** The following updates were made to the web site.

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ST-18: Removed from web site.  
ST-32: Removed from web site.  
ST-33: Removed from web site.  
ST-33OLD: Removed from web site.  
ST-34OLD: Removed from web site.

**December 29, 2004:** The following updates were made to the web site.

Index Sheet: Updated to reflect the following changes.

ST-27: Revised to include parts of previous typicals ST-27, ST-27a, ST-27b, ST-27c, ST-28, and ST-28a.

Revised purpose is to provide information for installing electrical devices and conduit only.

ST-27a: Deleted. See revised ST-27.

ST-27b: Deleted. See revised ST-27.

ST-27c: Deleted. See revised ST-27.

ST-28: Deleted. See revised ST-27.

ST-28a: Deleted. See revised ST-27.

ST-30: Deleted. Refer to the Standard Highway Sign Manual and/or the MMUTCD.

ST-31: Deleted. Refer to the Standard Highway Sign Manual and/or the MMUTCD.

**Late November 2003:** The following drawing was updated on the web site.

ST-04A Updated to include new signs and new LED pedestrian signals.