

**ELECTRICAL GENERAL NOTES**

1. ALL VEHICLE AND PEDESTRIAN SIGNAL HEADS SHALL HAVE 12" SECTIONS. MOUNTING HARDWARE SHALL BE UNPAINTED ALUMINUM. ALL BOLTS, SCREWS, NUTS AND WASHERS SHALL BE STAINLESS STEEL. ANTI -SEIZE PASTE COMPOUND SHALL BE USED ON ALL MOUNTING HARDWARE FIELD CONNECTIONS.
2. BACK PLATES SHALL BE ABS PLASTIC.
3. THE CONTROLLER CABINET SHALL BE UNPAINTED ALUMINUM.
4. THE LOCATION OF MAST ARM SUPPORTS SHALL BE APPROVED BY THE ENGINEER BEFORE FOUNDATIONS ARE CONSTRUCTED. MAST ARM POLES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM THE EDGE OF PAVEMENT OR 2 FEET FROM THE EDGE OF SHOULDER, WHICHEVER DISTANCE IS GREATER. IN CURBED SECTIONS, THE MAST ARM POLES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM THE FACE OF THE CURB. THESE DISTANCES ARE TO THE NEAR FACE OF THE MAST ARM POLE.
5. ALL TRAFFIC SIGNAL CABLES SHALL BE #14 A.W.G. STRANDED COPPER UNLESS OTHERWISE SPECIFIED. TERMINAL ENDS SHALL HAVE CRIMPED- ON RING TONGUE CONNECTORS.
6. THE LOCATION OF ALL DETECTOR LOOPS SHALL BE APPROVED BY THE ENGINEER BEFORE ANY SLOTS ARE SAWED IN THE PAVEMENT.
7. DETECTOR LOOP LEAD-IN SPLICES SHALL BE MADE IN A HANDHOLE PER SECTION 873 OF THE STANDARD SPECIFICATIONS. CONDUCTORS SHALL BE SPLICED IN A RIGID MOLD FILLED WITH NON -HARDENING EPOXY FILLER. ROSIN-CORE SOLDER SHALL BE USED.
8. CALL DELAY SHALL NOT FUNCTION WHEN THE RELATED PHASES ARE IN THE GREEN MODE.
9. CALL CARRYOVER SHALL FUNCTION ONLY WHEN THE RELATED PHASES ARE IN THE GREEN MODE.
10. ALL INDUCTIVE LOOP DETECTORS SUPPLIED FOR THIS PROJECT SHALL HAVE THE CAPACITY OF OPERATING WITH BOTH DELAY AND EXTENSION MODES ACTIVE, IF A TIME SETTING IS PROGRAMMED. THEY SHALL BE RACK MOUNTED.
11. ALL HANDHOLES SHALL BE CAST-IN-PLACE PORTLAND CEMENT CONCRETE (PER ARTICLE 814.03(b)). THE CAST IN PLACE LEGEND IN THE COVER SHALL BE "TRAFFIC SIGNALS".
12. ACTUAL DEPTHS OF THE CONCRETE FOUNDATIONS FOR THE MAST ARM SUPPORT POLES ARE AS FOLLOWS:
 

<u>MAIN STREET</u>	<u>CLAY STREET</u>
NE CORNER, 52' M.A.: 17'-6" DEEP, 36" DIA. (TS14)	NE CORNER, 52' M.A.: 18'-6" DEEP, 36" DIA. (TS10)
NW CORNER, 26' M.A.: 13'-6" DEEP, 30" DIA. (TS13)	NW CORNER, 36' M.A.: 16'-0" DEEP, 30" DIA. (TS9)
SE CORNER, 52' M.A.: 15' DEEP, 36" DIA.	SE CORNER, 26' M.A.: 12'-6" DEEP, 30" DIA (TS8)
SW CORNER, 40' M.A.: 14'-0" DEEP, 36" DIA. (TS11)	SW CORNER, 52' M.A.: 18'-6" DEEP, 36" DIA. (TS7)

THESE DEPTHS HAVE BEEN DETERMINED BY THE DEPARTMENT FROM THE SOIL BORING DATA.
13. CENTER TO CENTER DISTANCE BETWEEN THE CONDUITS, WHERE TWO OR MORE LOOP LEAD -IN CONDUITS ARE INSTALLED FROM THE EDGE OF THE PAVEMENT TO THE NEAREST HANDHOLE, SHALL BE SIX INCHES MINIMUM AT THE EDGE OF PAVEMENT.
14. ABANDON EXISTING CONDUIT AND CABLES IN PLACE.
15. THE BOTTOM OF THE HOUSING OF A VEHICLE FACE SHALL BE AT LEAST 8' ABOVE THE SIDEWALK.
16. ANCHOR BOLTS, NUTS, AND WASHERS REQUIRED WITH TYPE D FOUNDATION SHALL BE INCLUDED IN THE PAY ITEM, "FULL -ACTUATED CONTROLLER AND TYPE IV CABINET".
17. THE CONTRACTOR SHALL INSTALL FOUR (4) GROUND RODS (3/4" X 12') AND #6 A.W.G. BARE COPPER GROUND CONDUCTOR IN THE CONTROLLER FOUNDATION AS PER SPECIAL PROVISION, "CONCRETE FOUNDATION TYPE D".
18. THE CONDUIT QUANTITIES SHOWN ON THE PLANS ARE PRIOR TO CONSTRUCTION OF PROPOSED PAVEMENT AND SHOULDER. THE CONTRACTOR AT HIS/HER OPTION MAY UTILIZE CONDUIT PUSHED AND/OR DIRECTIONAL BORING INSTEAD OF TRENCH AND BACK FILL FOR PROPOSED CONDUIT INSTALLATION AT NO ADDITIONAL COST TO THE DEPARTMENT.
19. AN UNDERGROUND CABLE MARKING TAPE SHALL BE INSTALLED WITH ALL TRENCH AND BACK FILL FOR ELECTRICAL WORK IN ACCORDANCE WITH THE ARTICLES 815.03 (d) AND 1066.05 OF THE STANDARD SPECIFICATIONS.
20. ALL DETECTOR LOOPS SHALL BE INSTALLED IN THE BINDER COURSE.
21. GROUNDING CONDUCTOR SHALL BE TYPE XLP, NO.6 A.W.G., STRANDED COPPER, GREEN COLOR CODED AND IN ACCORDANCE WITH STANDARD 873001 AND SECTION 873 OF THE STANDARD SPECIFICATIONS.

**TRAFFIC SIGNALS LEGEND**

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| GSC  | GALVANIZED STEEL CONDUIT                               |
| PVCC | POLYVINYL CHLORIDE CONDUIT                             |
|      | EXISTING SIGNAL POST                                   |
|      | EXISTING SIGNAL POST WITH BACK PLATE                   |
|      | EXISTING TRAFFIC SIGNAL MAST ARM                       |
|      | EXISTING HANDHOLE                                      |
|      | EXISTING DOUBLE HANDHOLE                               |
|      | EXISTING DETECTOR LOOP                                 |
|      | EXISTING CONTROLLER                                    |
|      | EXISTING STREET NAME SIGN/TRAFFIC SIGN                 |
|      | EXISTING SERVICE INSTALLATION                          |
|      | EXISTING SIGNAL HEAD, PEDESTRIAN                       |
|      | EXISTING PEDESTRIAN PUSH BUTTON DETECTOR               |
|      | EXISTING UNDER GROUND CONDUIT                          |
|      | PROPOSED SIGNAL HEAD WITH BACK PLATE, MAST ARM MOUNTED |
|      | PROPOSED HANDHOLE                                      |
|      | PROPOSED DOUBLE HANDHOLE                               |
|      | PROPOSED DETECTOR LOOP                                 |
|      | PROPOSED CONTROLLER                                    |
|      | PROPOSED PEDESTRIAN PUSH BUTTON DETECTOR               |
|      | PROPOSED SIGNAL HEAD, PEDESTRIAN                       |
|      | PROPOSED CONDUIT: "T" TRENCH, "P" PUSH, SIZE SPECIFIED |
|      | PROPOSED STREET NAME SIGN/TRAFFIC SIGN                 |
|      | PROPOSED SERVICE INSTALLATION                          |
|      | PROPOSED SIGNAL POST                                   |
|      | PROPOSED SIGNAL HEAD W/O BACK PLATE                    |
|      | PROPOSED SIGNAL HEAD W/ WITH BACK PLATE                |

FILE NAME =	USER NAME = default	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ELECTRICAL GENERAL NOTES AND LEGEND</b>	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
P:\Projects\513581\CADD\DCN\0876054-shr	ts.dgn	DRAWN -	REVISED -			600	60-(30,31,128) -N-1	MADISON	152	91	
	PLOT SCALE = 20.0000' / IN.	CHECKED -	REVISED -			CONTRACT NO. 76D54					
	PLOT DATE = 6/16/2010	DATE -	REVISED -			SCALE: NONE	SHEET NO. 2 OF 9 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT