

PLOTTED/REVISED: 6/17/2014

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1	6x6	20
D1-1 ①②	6x6	50
D1-2	6x6	5
D1-2 ①②	6x6	35
D2-1, D2-2	6x6	180
D4-1, D4-2	6x6	120
D4-3	6x6	5
D4-4, D4-5	2-6x6	5 & 20
D6-1, D6-2 ①	6x6	180

-ALL LOOP DETECTORS SHALL BE PVC UNLESS NOTED OTHERWISE
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

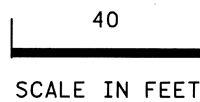
① CONDUITS SUSPENDED UNDER BRIDGE, (4) JUNCTION BOXES AND (6) 6'x6' PVC LOOP DETECTORS ON BRIDGE NO. 9053, SHALL BE FURNISHED, INSTALLED AND PAID FOR AS PART OF THE BRIDGE CONTRACT. (SEE BRIDGE PLAN)

② LOOP DETECTOR WIRES SHALL BE PULLED THROUGH JB1 TO HH 4.

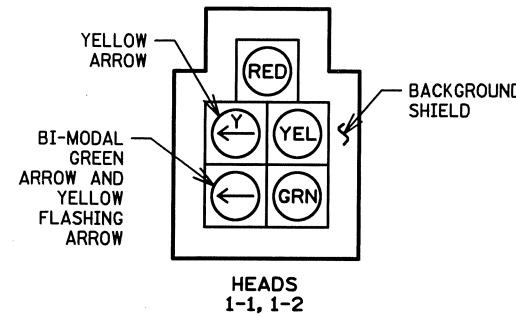
PED PB STATION
 1-APS PB AND SIGN (LT ARROW) (PB4-1)
 EXTEND INTO HH 9:
 1" CONDUIT
 1-2/C #14
 1-1/C #6 INS. GR.

PED PB STATION
 1-APS PB AND SIGN (RT ARROW) (PB6-2)
 EXTEND INTO HH 1:
 1" CONDUIT
 1-2/C #14
 2-1/C #6 INS. GR.

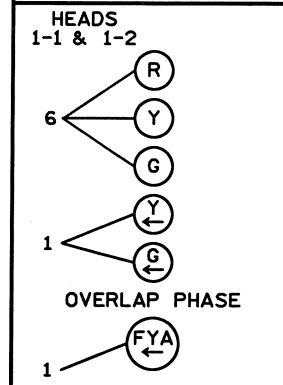
HH 1 TO HH 3:
 4" CONDUIT
 2-12/C #14
 2-4/C #14
 * 1-3/C #14
 1-3/C #14 (LUM)
 8-2/C #14
 * 1-3/C #20
 1-1/C #6 INS. GR.



5 SECTION FYA BI-MODAL HEAD DETAIL



SIGNAL HEAD PHASING



SIGNAL HEAD CHART

FACE	R	Y	FYA	G	Y	G
1-1, 1-2	●	●	←	●	←	←
2-1, 2-2	●	●		●		
4-1, 4-2, 4-3	●	●		●		
6-1, 6-2	●	●		●		

-ALL SIGNAL INDICATIONS SHALL BE 12" LED
 -ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONITE WITH BACKGROUND SHIELDS
 -FYA DENOTES FLASHING YELLOW ARROW

① INPLACE JB3 TO ABUTMENT 3" RSC SUSPENDED UNDER BRIDGE
 F & I: 2-2/C #14
 ** 1-6PR #19

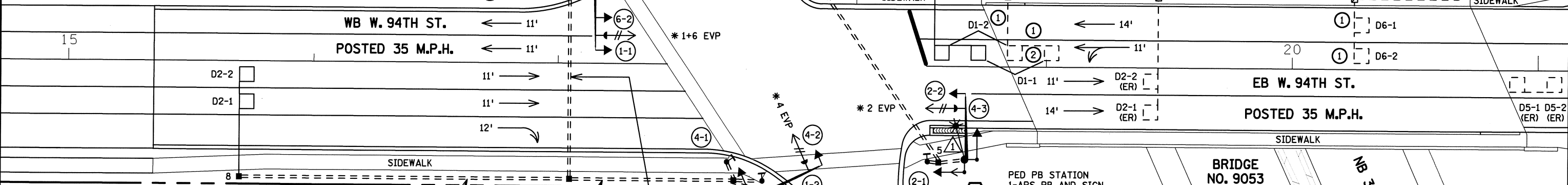
① INPLACE JB2 TO JB3 3" RSC SUSPENDED UNDER BRIDGE
 F & I: 4-2/C #14
 ** 1-6PR #19

① INPLACE 3" RSC STUBBED OUT OF ABUTMENT
 3" RSC 2-2/C #14
 ** 1-6PR #19

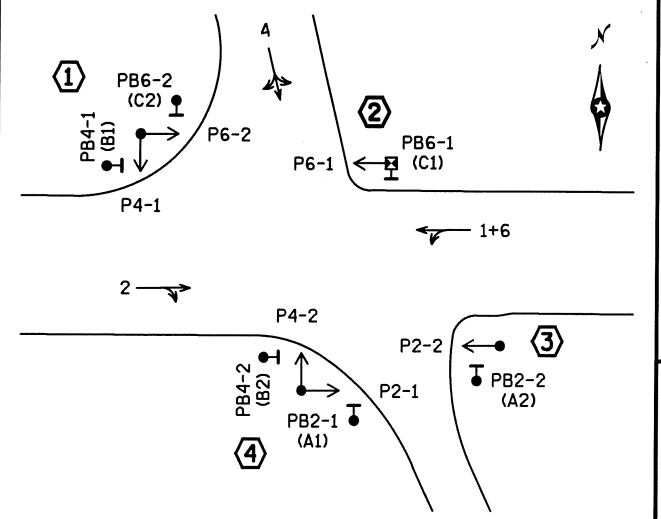
① INPLACE JB1 TO JB2 3" RSC SUSPENDED UNDER BRIDGE
 F & I: 2-2/C #14
 ** 1-6PR #19

INPLACE ① 3" RSC STUBBED OUT OF ABUTMENT

② 2" CONDUIT 4-2/C #14
 ** 1-6PR #19



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 4 PHASE, WITH PHASE 1 BEING A FLASHING YELLOW ARROW BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

NOTES:

- SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
- REFER TO "FOR INFORMATION ONLY" SHEETS FOR INPLACE SIGNAL COMPONENTS.
- THE EXACT LOCATION OF HANDHOLES, POLES, LOOP DETECTORS AND EQUIPMENT PAD SHALL BE VERIFIED IN THE FIELD BY MNDOT TRAFFIC OFFICE PERSONNEL.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF THE POWER FOR THE TRAFFIC SIGNAL SYSTEM.
- FOR TYPE D SIGNS SEE DETAIL SHEET. ALL SIGNS REQUIRED ARE INCIDENTAL.
- CROSSWALK PAVEMENT MARKINGS ARE PAID FOR AND ARE INCLUDED WITH THE STRIPING PLAN.
- CONSTRUCTION OF PEDESTRIAN CURB RAMPS AND CONCRETE WALK ARE PAID FOR AND ARE INCLUDED WITH THE ROADWAY PLAN.
- THIS PLAN SPECIFIES CONDUIT SIZES, TYPES, AND GENERAL LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD. CONDUITS UNDER THE ROADWAYS REQUIRE BORING.
- ALL NEW CONDUIT SHALL BE PVC - SCHEDULE 80 OR HDPE SCHEDULE 80 AND SHALL CARRY 1/C#6 GREEN INSULATED GROUNDING CONDUCTOR AS SHOWN IN THE PLAN. REMOVAL OF THE INPLACE SIGNAL SYSTEM IS INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL SIGNAL SYSTEM PAY ITEM.
- CONTROL SIGNAL SYSTEM PAY ITEM.
- (ER) INDICATES 35W (EAST RAMP).
- ITEMS DENOTED WITH AN * ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
- ITEMS DENOTED WITH AN ** ARE INCLUDED IN PAYMENT FOR THE INTERCONNECT SYSTEM PAY ITEM.

BY	DATE	REVISIONS

SYSTEM ID: 20581 T.E. 6006
 METER ADDRESS:
 MASTER ID: T.E.

INTERSECTION LAYOUT
 TRAFFIC CONTROL SIGNAL SYSTEM A
 T.H. 35W WEST RAMP AT W 94TH ST.
 IN BLOOMINGTON, HENNEPIN COUNTY

S.A.P. NO. 107-136-010 DRAWN BY:GDS CKD BY:EJA DATE:01-28-14
 CERTIFIED BY: *Michael P. Gubensky* L.C. NO. 19863 DATE: 02-06-14
 STATE PROJ. NO. 2782-320 (T.H. 35W) SHEET NO. SS6 OF SS20 SHEETS

DISTRICT #: METRO
 PLOT NAME: layout A
 PATH & FILENAME: IP_PWP:0801384T20581_sgl.dgn

① PA90 POLE FOUNDATION
 TYPE PA90-A-40
 ① (A 3/4" THREADED HALF COUPLING (FOR EVP MOUNTING), SHALL BE F&I 4.5' FROM THE END OF THE MAST ARM
 1-ANGLE MOUNT SIGNAL WITH CLUSTER ADAPTER OVERHEAD AT 0'
 ② 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 12'
 1-ANGLE MOUNT SIGNAL AT 180 DEG
 2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG
 * 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (LED) (PHASES 1+6)
 1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
 S & I: 1-TYPE D SIGN (D-101) (SALVAGED FROM INPLACE POLE 2)
 3" CONDUIT TO HH 9:
 2-12/C #14
 2-4/C #14
 * 1-3/C #14
 * 1-3/C #20
 1-1/C #6 INS. GR.

① THE MAST ARM FOR POLE NO. 1 HAS A NON-STANDARD EVP MOUNTING LOCATION DUE TO THE CONFLICT WITH MAST ARM SIGNING.
 ② THE MAST ARM FOR POLE NO. 1 REQUIRES A NON-STANDARD HUB AT 12'.

④ PA85 POLE FOUNDATION
 TYPE PA85-A-25
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-ANGLE MOUNT SIGNAL WITH CLUSTER ADAPTER AT 90 DEG
 1-ANGLE MOUNT SIGNAL AT 90 DEG
 2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG
 * 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (LED) (PHASE 4)
 S & I: 1-R6-1R SIGN (ONE WAY) (SALVAGED FROM INPLACE POLE 3)
 S & I: 1-R6-1L SIGN (ONE WAY) (SALVAGED FROM INPLACE POLE 3)
 S & I: 1-TYPE D SIGN (D-103) (SALVAGED FROM INPLACE POLE 3)
 3" CONDUIT TO HH 6:
 2-12/C #14
 2-4/C #14
 * 1-3/C #14
 * 1-3/C #20
 1-1/C #6 INS. GR.

② PEDESTAL FOUNDATION
 10' PEDESTAL POLE PLUS BASE
 1-STRAIGHT MOUNT C. D. PED HEAD AT 90 DEG
 1-APS PB AND SIGN (LT ARROW) (PB6-1)
 1-R9-3 SIGN (NO PEDS) FACING POLE 3
 3" CONDUIT TO HH 3:
 1-4/C #14
 1-2/C #14
 2-1/C #6 INS. GR.

③ PA85 POLE FOUNDATION
 TYPE PA85-A-25-D40-9 (DAVIT AT 350 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ANGLE MOUNT C. D. PED HEAD AT 180 DEG
 * 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (LED) (PHASE 2)
 LUMINAIRE-250W HPS
 1-R9-3 SIGN (NO PEDS) FACING POLE 2
 S & I: 1-TYPE D SIGN (D-102) (SALVAGED FROM INPLACE POLE 1)
 3" CONDUIT TO HH 5:
 2-12/C #14
 1-4/C #14
 * 1-3/C #14
 1-3/C #14 (LUM)
 * 1-3/C #20
 1-1/C #6 INS. GR.

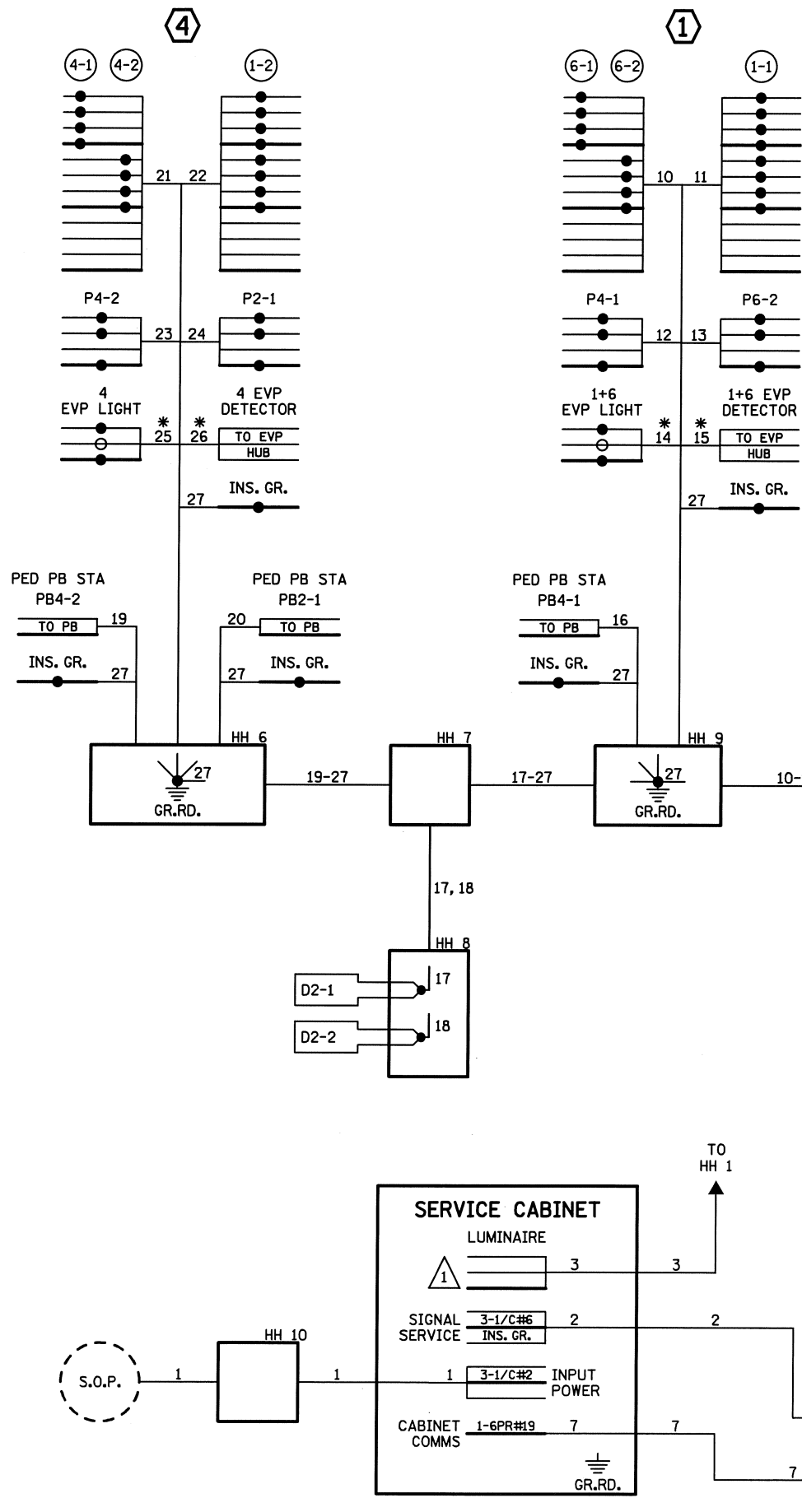
Ⓐ EQUIPMENT PAD (SEE DETAIL SHEET)
 SERVICE CABINET (SSB)
 CONTROLLER AND CABINET (STATE FURNISHED)
 4" CONDUIT TO HH 1: 4" CONDUIT TO HH 9:
 2-12/C #14 4-12/C #14
 2-4/C #14 4-4/C #14
 * 1-3/C #14 * 2-3/C #14
 12-2/C #14 5-2/C #14
 * 1-3/C #20 * 2-3/C #20
 ** 1-6PR #19 1-1/C #6 INS. GR.
 1-1/C #6 INS. GR.
 1-2" AND 1-3" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)
 3/4" CONDUIT STUBBED OUT (FOR TELEPHONE LINE)
 CONTROLLER CABINET TO SERVICE CABINET:
 2" CONDUIT
 2-1/C #6
 1-1/C #6 INS. GR.
 CONTROLLER CABINET TO SERVICE CABINET (COMMS):
 2" CONDUIT (FOR FUTURE USE)
 1-6PR #19
 SERVICE CABINET TO HH 10:
 2" CONDUIT
 3-1/C #2
 SERVICE CABINET TO HH 1:
 2" CONDUIT
 1-3/C #14 (LUM)

Ⓑ INPLACE SOP-WOOD POLE
 (BY XCEL ENERGY)
 2" CONDUIT RISER, WEATHERHEAD
 AND CONDUIT TO HH 10:
 3-1/C #2

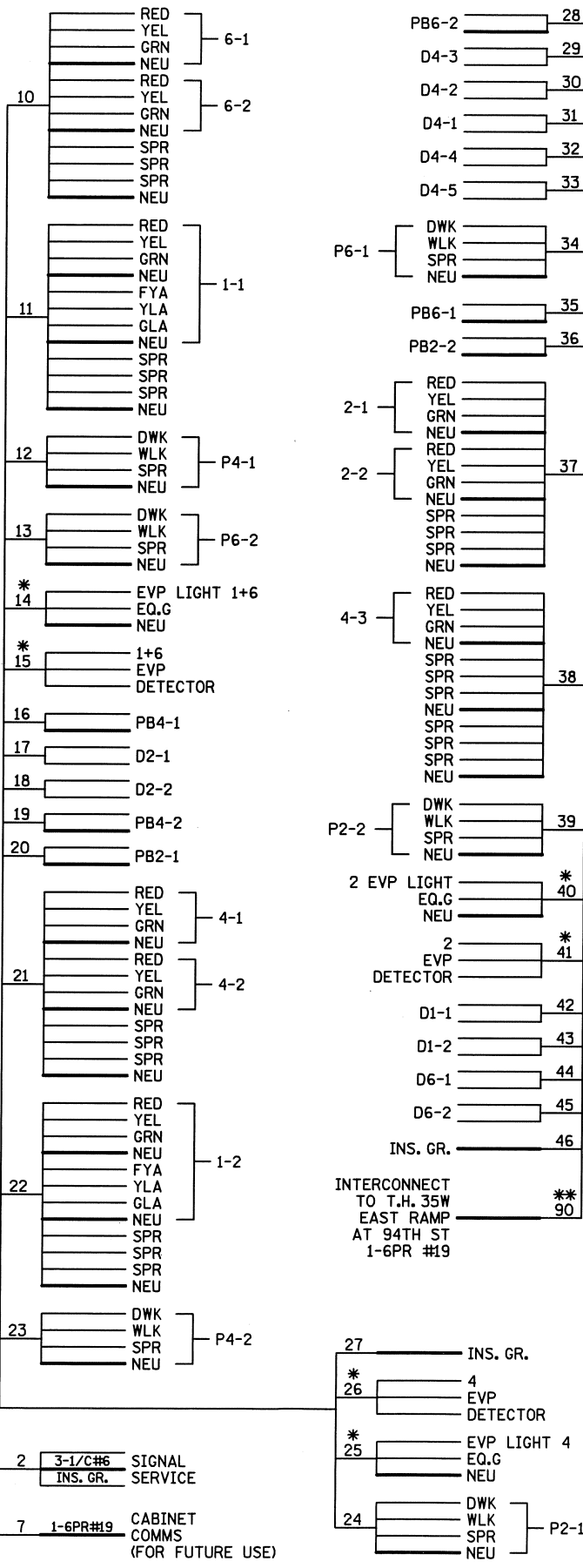
BY	DATE	REVISIONS	SYSTEM ID: 20581	T.E. 6006	INTERSECTION NOTES TRAFFIC CONTROL SIGNAL SYSTEM A T.H. 35W WEST RAMP AT W 94TH ST. IN BLOOMINGTON, HENNEPIN COUNTY	S.A.P. NO. 107-136-010	DRAWN BY: GDS	CKD BY: EJA	DATE: 01-28-14	
			METER ADDRESS:			CERTIFIED BY: <i>Michael P. Lubinsky</i>	LIC. NO. 19863	DATE: 02-06-14		
			MASTER ID:	T.E.		STATE PROJ. NO. 2782-320 (T.H. 35W)		SHEET NO. SS7 OF SS20 SHEETS		

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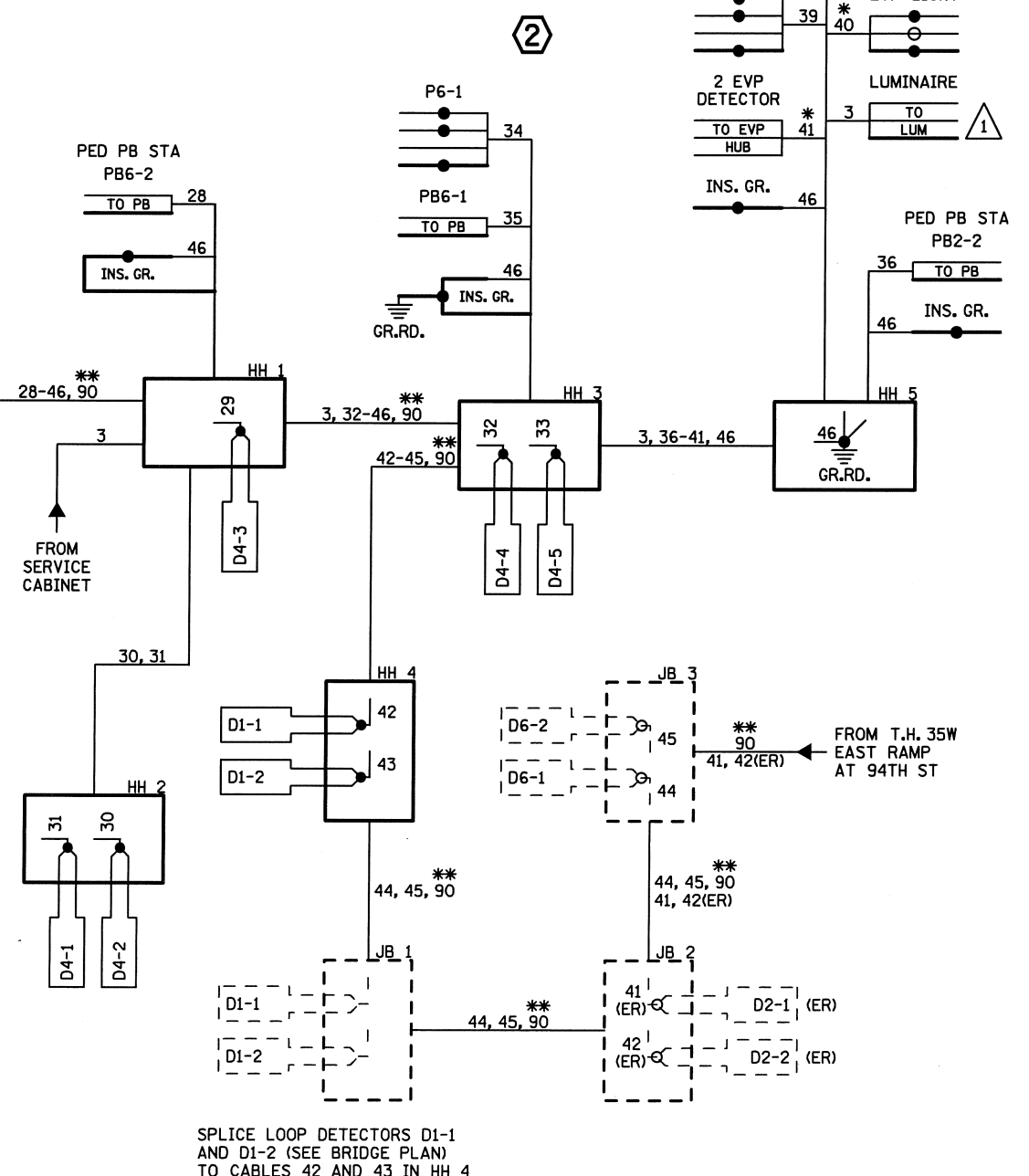
DISTRICT #: METRO
PLOT NAME: wiring A
PATH & FILENAME: IP_PWP_08001384T20581_sgl.dgn



CONTROLLER CABINET



- NOTES:**
1. SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).
 2. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.
 3. ITEMS DENOTED WITH AN * ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
 4. ITEMS DENOTED WITH AN ** ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.



BY	DATE	REVISIONS	SYSTEM ID: 20581	T.E. 6006	S.A.P. NO. 107-136-010	DRAWN BY:GDS	CKD BY:EJA	DATE:01-28-14
			METER ADDRESS:		CERTIFIED BY: <i>Michael P. Lubinsky</i>		LIC. NO. 19863	DATE: 02-06-14
			MASTER ID:	T.E.	STATE PROJ.NO. 2782-320 (T.H.35W)		SHEET NO. SS8 OF SS20 SHEETS	

FIELD WIRING DIAGRAM
TRAFFIC CONTROL SIGNAL SYSTEM A
T.H. 35W WEST RAMP AT W 94TH ST.
IN BLOOMINGTON, HENNEPIN COUNTY