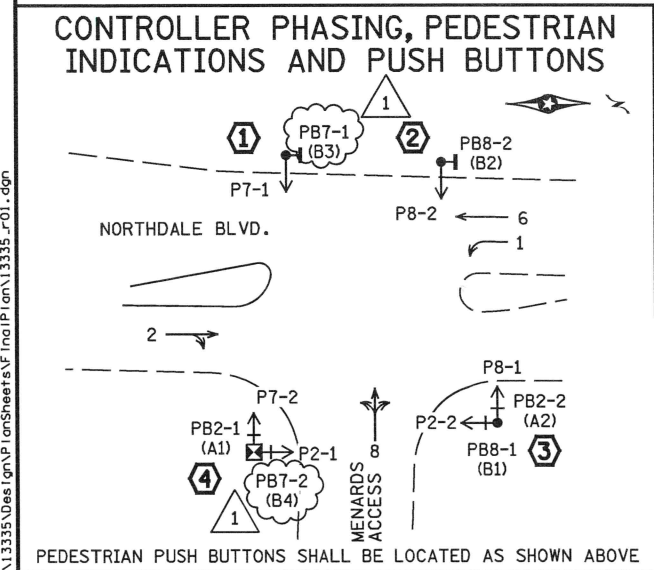
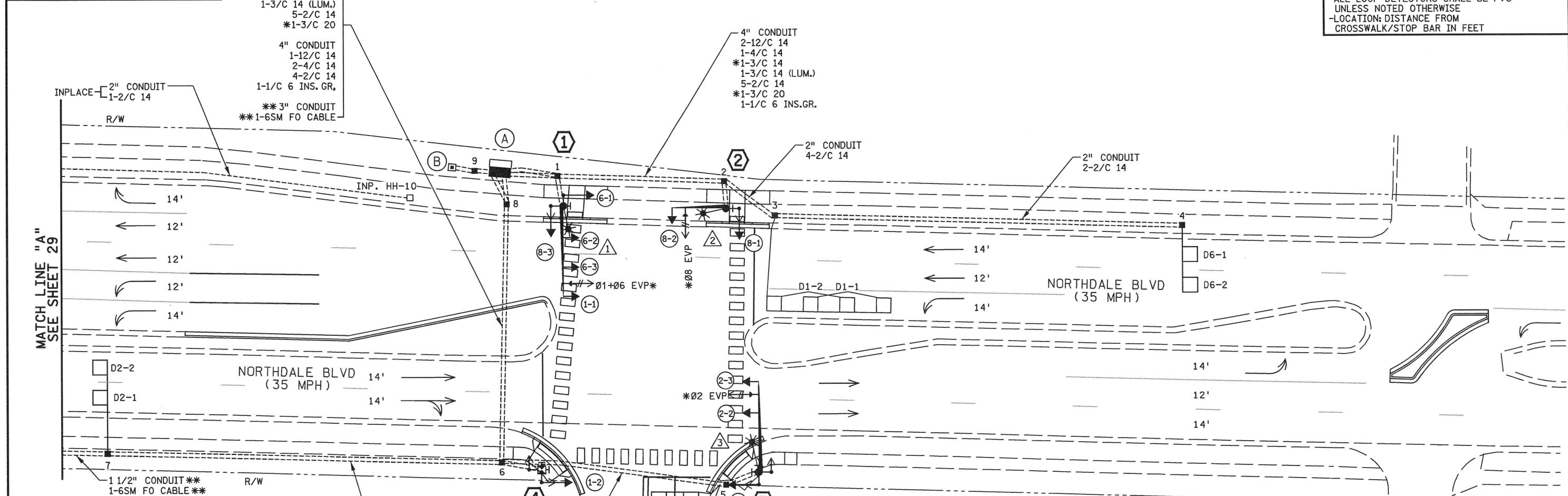
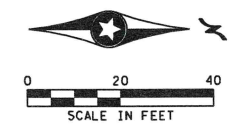


SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2	←	←	←	←
2-1, 2-2, 2-3	●	●		●
6-1, 6-2, 6-3	●	●		●
8-1, 8-2, 8-3	●	●		●

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

LOOP DETECTOR CHART			
NUMBER	TYPE	SIZE (FT)	LOCATION
D1-1	PVC	2-6x6	20 & 50
D1-2	PVC	2-6x6	5 & 35
D2-1, D2-2	PVC	6x6	180
D6-1, D6-2	PVC	6x6	180
D8-1	SAWCUT	6x6	20 & 50
D8-2, D8-3	SAWCUT	6x6	5
D8-2	SAWCUT	6x6	35
D8-1, D8-3	PVC	6x6	20

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



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 5 PHASE, WITH PHASE 1 BEING FLASHING YELLOW ARROW BY TIME OF DAY. (PHASE 7 IS AN EXCLUSIVE PED PHASE.)
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

- NOTES:
1. SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
 2. ENSURE THE EXACT LOCATION OF THE HANDHOLES, POLES, LOOP DETECTORS AND EQUIPMENT PAD ARE VERIFIED IN THE FIELD BY THE ENGINEER.
 3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF THE POWER FOR THE TRAFFIC SIGNAL SYSTEM.
 4. FOR TYPE D SIGNS SEE DETAIL SHEET. ALL SIGNS REQUIRED ON SIGNAL SYSTEM ARE INCIDENTAL.
 5. FOR PAVEMENT MARKINGS, SEE SIGNING AND PAVEMENT MARKING PLANS.
 6. FOR CONSTRUCTION OF PEDESTRIAN CURB RAMPS, CONCRETE WALK AND MEDIAN WORK SEE DETAIL SHEET.
 7. THIS PLAN SPECIFIES CONDUIT SIZES, TYPES, AND GENERAL LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD. CONDUITS UNDER THE ROADWAYS REQUIRE BORING.
 8. USE PVC FOR ALL NEW CONDUIT.
 9. CONDUIT SIZES ARE NOMINAL DIAMETER.
 10. ALL WIRES LISTED ARE AWG (AMERICAN WIRE GAUGE).
 11. ITEMS DENOTED WITH AN * ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
 12. ITEMS DENOTED WITH AN ** ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.
 13. SEE SHEET 25 FOR INTERSECTION NOTES.

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1	12/08/20	SHS	ASP	ASP	PED PHASING CHANGE PER ANOKA COUNTY DIRECTION

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Print Name: **ADRIAN S. ROTTER**
Adrian S. Rotter
 Date: 12/08/2020 License #: 42785

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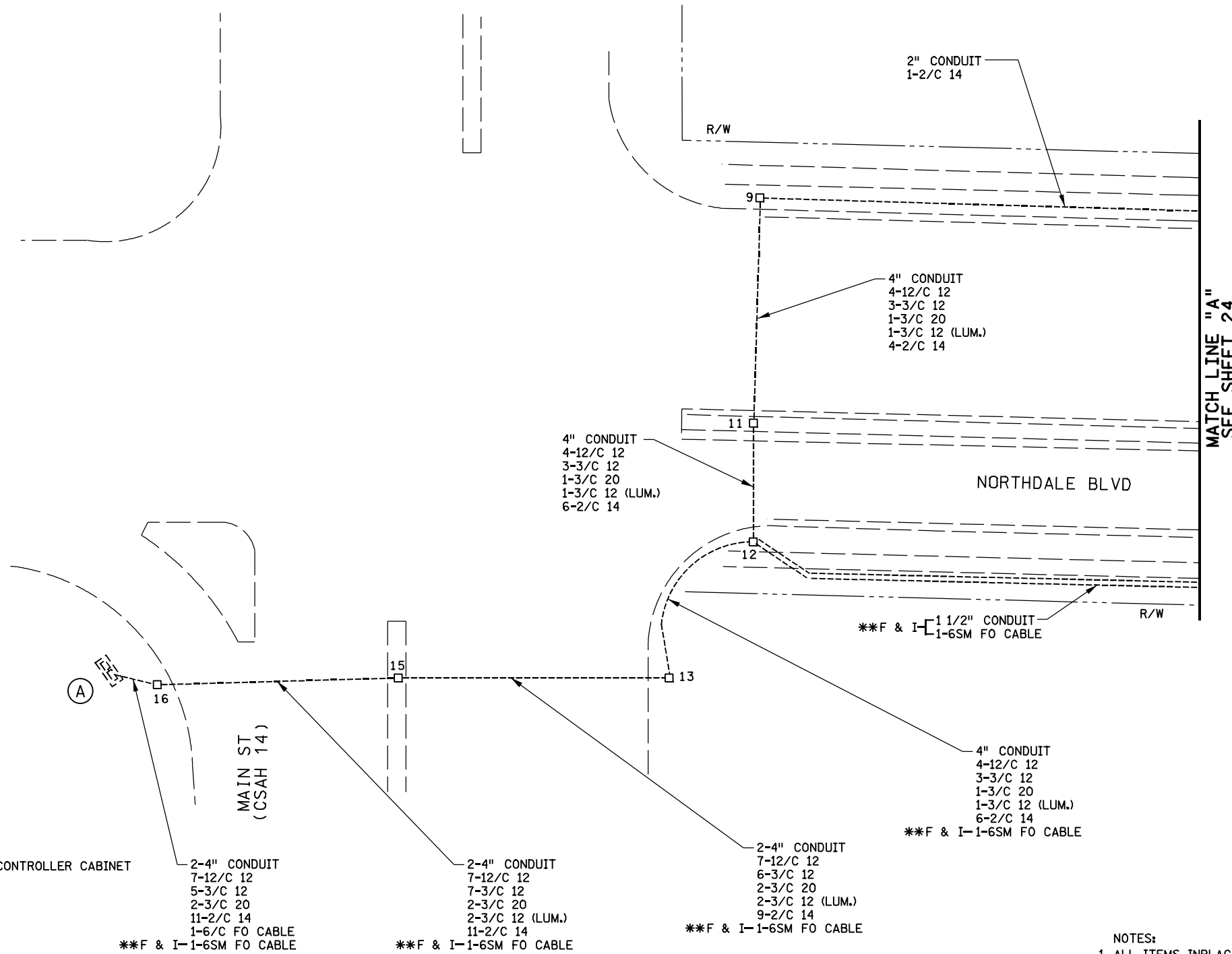
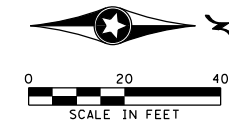
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 DESIGNED BY D. RASMUSSEN
 CHECKED BY S. SCHMIDT
 COMM. NO. 1913335



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CITY OF COON RAPIDS
 TRAFFIC SIGNAL PLANS
NORTHDALE BLVD. ACCESS IMPROVEMENTS
 INTERSECTION LAYOUT

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 OF
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MATCH LINE "A"
SEE SHEET 24

(A) EQUIPMENT PAD, SERVICE CABINET AND CONTROLLER CABINET
**F & I- 1-6SM FO CABLE

2-4" CONDUIT
7-12/C 12
5-3/C 12
2-3/C 20
11-2/C 14
1-6/C FO CABLE
**F & I- 1-6SM FO CABLE

2-4" CONDUIT
7-12/C 12
7-3/C 12
2-3/C 20
2-3/C 12 (LUM.)
11-2/C 14
**F & I- 1-6SM FO CABLE

2-4" CONDUIT
7-12/C 12
6-3/C 12
2-3/C 20
2-3/C 12 (LUM.)
9-2/C 14
**F & I- 1-6SM FO CABLE

**F & I- 1 1/2" CONDUIT
1-6SM FO CABLE

4" CONDUIT
4-12/C 12
3-3/C 12
1-3/C 20
1-3/C 12 (LUM.)
6-2/C 14
**F & I- 1-6SM FO CABLE

4" CONDUIT
4-12/C 12
3-3/C 12
1-3/C 20
1-3/C 12 (LUM.)
6-2/C 14

2" CONDUIT
1-2/C 14

- NOTES:
1. ALL ITEMS INPLACE UNLESS NOTED OTHERWISE.
 2. ITEMS DENOTED WITH AN ** ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.
 3. SEE SHEET 25 FOR INTERSECTION NOTES.

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NO	DATE	BY	CKD	APPR	REVISION

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Print Name: ADRIAN S. POTTER

Adrian S. Potter

Date: 07/30/2020 License #: 42785

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114-127-009

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CHECKED BY
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COMM. NO. 1913335




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CITY OF COON RAPIDS
TRAFFIC SIGNAL PLANS
NORTHDALE BLVD. ACCESS IMPROVEMENTS
INTERCONNECT LAYOUT


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INTERSECTION NOTES

① PA90 POLE FOUNDATION
 INSTALL—TYPE PA90-A-35-D30-9 (DAVIT AT 350 DEG) (CITY FURNISHED)
 1-ANGLE MOUNT SIGNALS OVERHEAD AT 0'
 2-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11' AND 23'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ANGLE MOUNT C. D. PED HEAD AT 90 DEG
 * 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 1+6)
 LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
 1-PED PB AND SIGN (R10-3e) (LT ARROW) (PB7-1) 
 1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
 3" CONDUIT TO HH 7:
 3-12/C 14
 1-4/C 14
 * 1-3/C 14
 1-3/C 14 (LUM.)
 * 1-3/C 20
 1-2/C 14
 1-1/C 6 INS. GR.

③ PA90 POLE FOUNDATION
 INSTALL—TYPE PA90-A-35-D30-9 (DAVIT AT 350 DEG) (CITY FURNISHED)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 12'
 2-ANGLE MOUNT SIGNALS AT 90 AND 270 DEG
 2-ANGLE MOUNT C.D. PED HEADS AT 90 AND 180 DEG
 * 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2)
 LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
 1-PED PB AND SIGN (R10-3e) (RT ARROW) (PB2-2)
 1-PED PB AND SIGN (R10-3e) (LT ARROW) (PB8-1)
 3" CONDUIT TO HH 5:
 2-12/C 14
 2-4/C 14
 * 1-3/C 14
 1-3/C 14 (LUM.)
 * 1-3/C 20
 2-2/C 14
 1-1/C 6 INS. GR.

② PA85 POLE FOUNDATION
 INSTALL—TYPE PA85-A-20-D30-9 (DAVIT AT 350 DEG) (CITY FURNISHED)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-ANGLE MOUNT SIGNAL AT DEG
 1-ANGLE MOUNT C. D. PED HEAD AT 180 DEG
 * 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 8)
 LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
 1-PED PB AND SIGN (R10-3e) (LT ARROW) (PB8-2)
 3" CONDUIT TO HH 2:
 2-12/C 14
 1-4/C 14
 * 1-3/C 14
 1-3/C 14 (LUM.)
 * 1-3/C 20
 1-2/C 14
 1-1/C 6 INS. GR.

④ PEDESTAL FOUNDATION
 13' PEDESTAL PLUS BASE
 1-ANGLE MOUNT SIGNAL AT 90 DEG
 2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG
 1-PED PB AND SIGN (R10-3e) (LT ARROW) (PB2-1) 
 1-PED PB AND SIGN (R10-3e) (RT ARROW) (PB7-2)
 3" CONDUIT TO HH 6:
 1-12/C 14
 2-4/C 14
 2-2/C 14
 2-1/C 6 INS. GR.

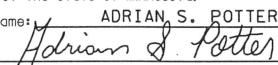
Ⓐ EQUIPMENT PAD (SEE DETAIL SHEET)
 SERVICE CABINET (SSB) WITH BATTERY BACK-UP SYSTEM AND BATTERIES
 INSTALL—CONTROLLER AND CABINET (COUNTY FURNISHED)
 4" CONDUIT TO HH 1:
 3-12/C 14
 1-4/C 14
 * 1-3/C 14
 * 1-3/C 20
 1-2/C 14
 4" CONDUIT TO HH 1:
 2-12/C 14
 1-4/C 14
 * 1-3/C 14
 * 1-3/C 20
 5-2/C 14
 1-1/C 6 INS. GR.
 4" CONDUIT TO HH 8:
 2-12/C 14
 2-4/C 14
 * 1-3/C 14
 * 1-3/C 20
 4-2/C 14
 1-1/C 6 INS. GR.
 ** 2" CONDUIT TO HH-8:
 1-6SM FO CABLE

GROUND WIRE AND GROUND ROD - MIN 8' OUT FROM PAD
 2-3" AND 1-1" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)
 CONTROLLER CABINET TO SERVICE CABINET:
 2" CONDUIT
 3-1/C 6
 CONTROLLER CABINET TO SERVICE CABINET (COMMS):
 2" CONDUIT
 1-4/C 14
 1-6PR 19
 SERVICE CABINET TO HH 9 TO GROUND MOUNTED TRANSFORMER:
 2" CONDUIT
 3-1/C 2
 SERVICE CABINET TO HH 1:
 1 1/4" CONDUIT
 2-3/C 14 (LUM)
 SERVICE CABINET TO HH 8:
 1 1/4" CONDUIT
 1-3/C 14 (LUM)
 SERVICE CABINET TO EXTERNAL GR. RD.:
 1" CONDUIT
 1-1/C 6 INS. GR.
 (SEE EQUIPMENT PAD LAYOUT)

Ⓑ SOP-GROUND MOUNTED TRANSFORMER (SEE NOTE 3)
 2" CONDUIT TO HH 9 TO SERVICE CABINET:
 3-1/C 2

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 Print Name: ADRIAN S. ROTTER

 Date 12/08/2020 License # 42785

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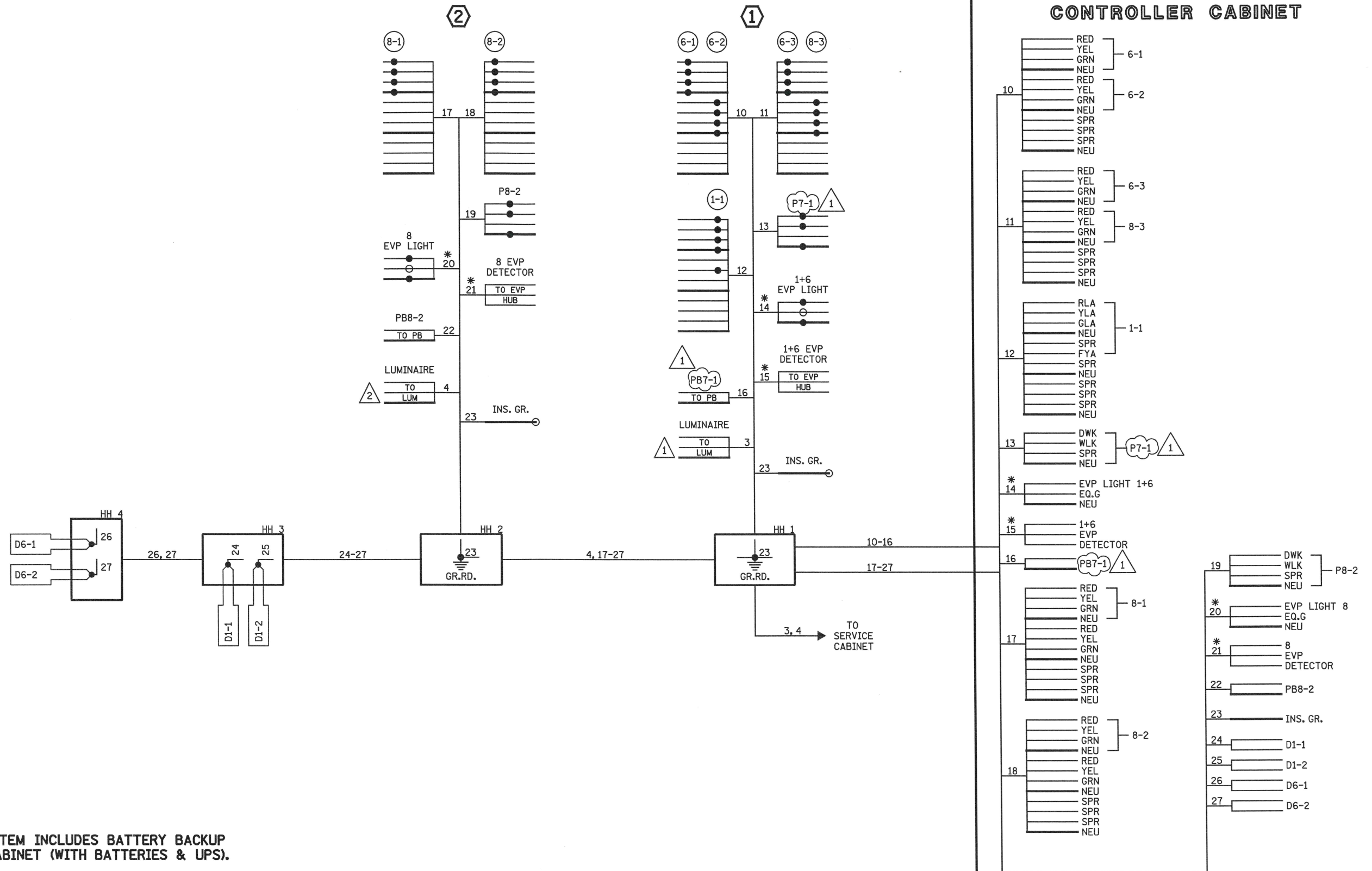
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 DESIGNED BY
 D. RASMUSSEN
 CHECKED BY
 S. SCHMIDT
 COMM. NO. 1913335



CITY OF COON RAPIDS
 TRAFFIC SIGNAL PLANS
NORTHDALE BLVD. ACCESS IMPROVEMENTS
 INTERSECTION NOTES

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CONTROLLER CABINET



NOTES:

1. SIGNAL SYSTEM INCLUDES BATTERY BACKUP SERVICE CABINET (WITH BATTERIES & UPS).
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.

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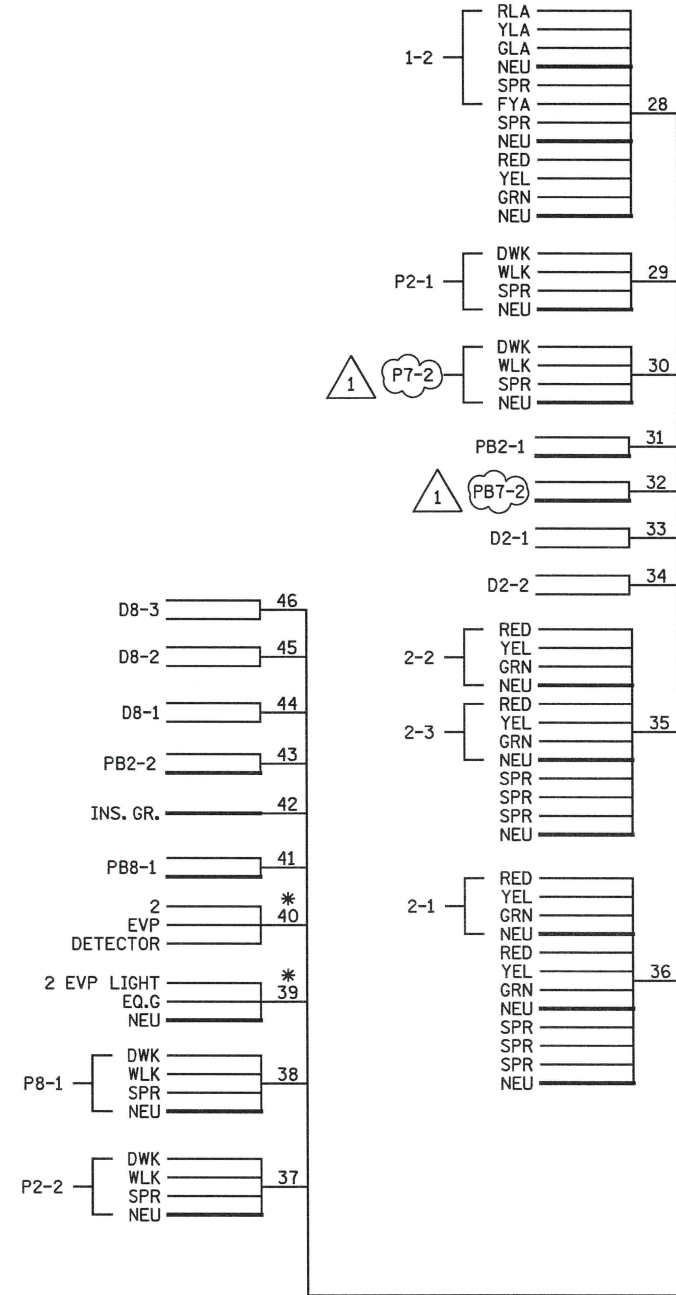


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CITY OF COON RAPIDS
 TRAFFIC SIGNAL PLANS
 NORTHDAL BLVD. ACCESS IMPROVEMENTS
 WIRING DIAGRAM (1 OF 2)

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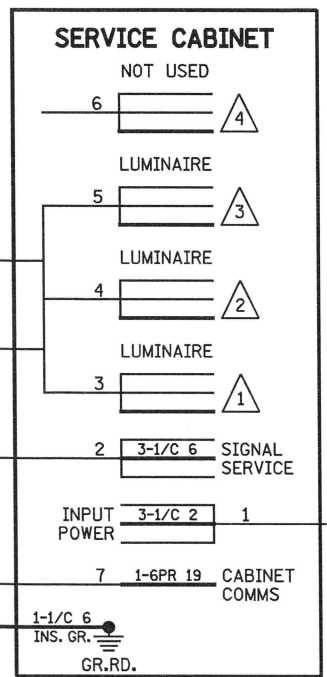
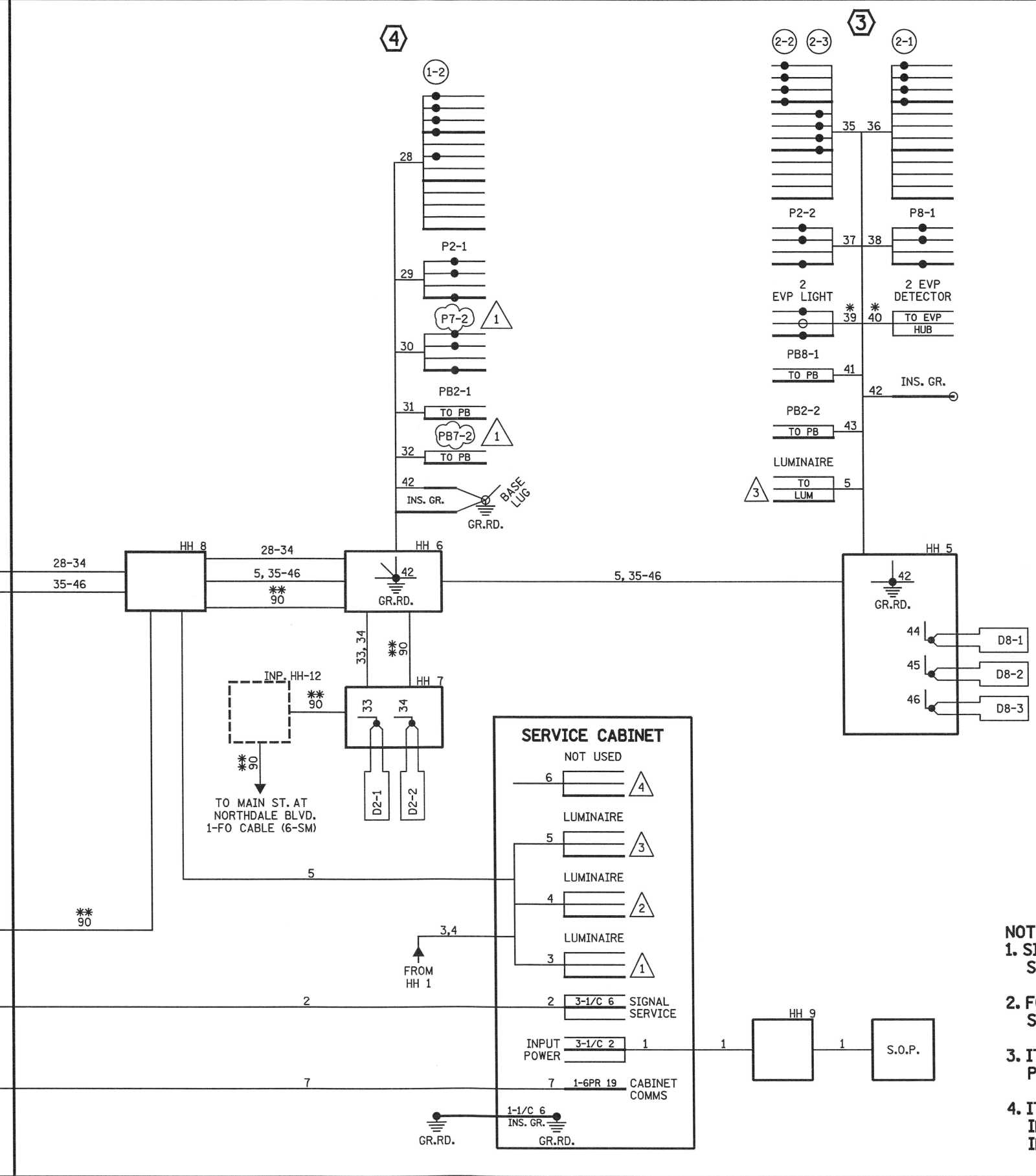
CONTROLLER CABINET



FIBER OPTIC INTERCONNECT ** 90

SIGNAL SERVICE 3-1/C 6 2

CABINET COMMS 1-6PR 19 7



- NOTES:**
1. SIGNAL SYSTEM INCLUDES BATTERY BACKUP SERVICE CABINET (WITH BATTERIES & UPS).
 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.

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 TRAFFIC SIGNAL PLANS
 NORTHDAL BLVD. ACCESS IMPROVEMENTS
 WIRING DIAGRAM (2 OF 2)

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 OF
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