LED RETROFIT–SYSTEM "DDD" NOTES:

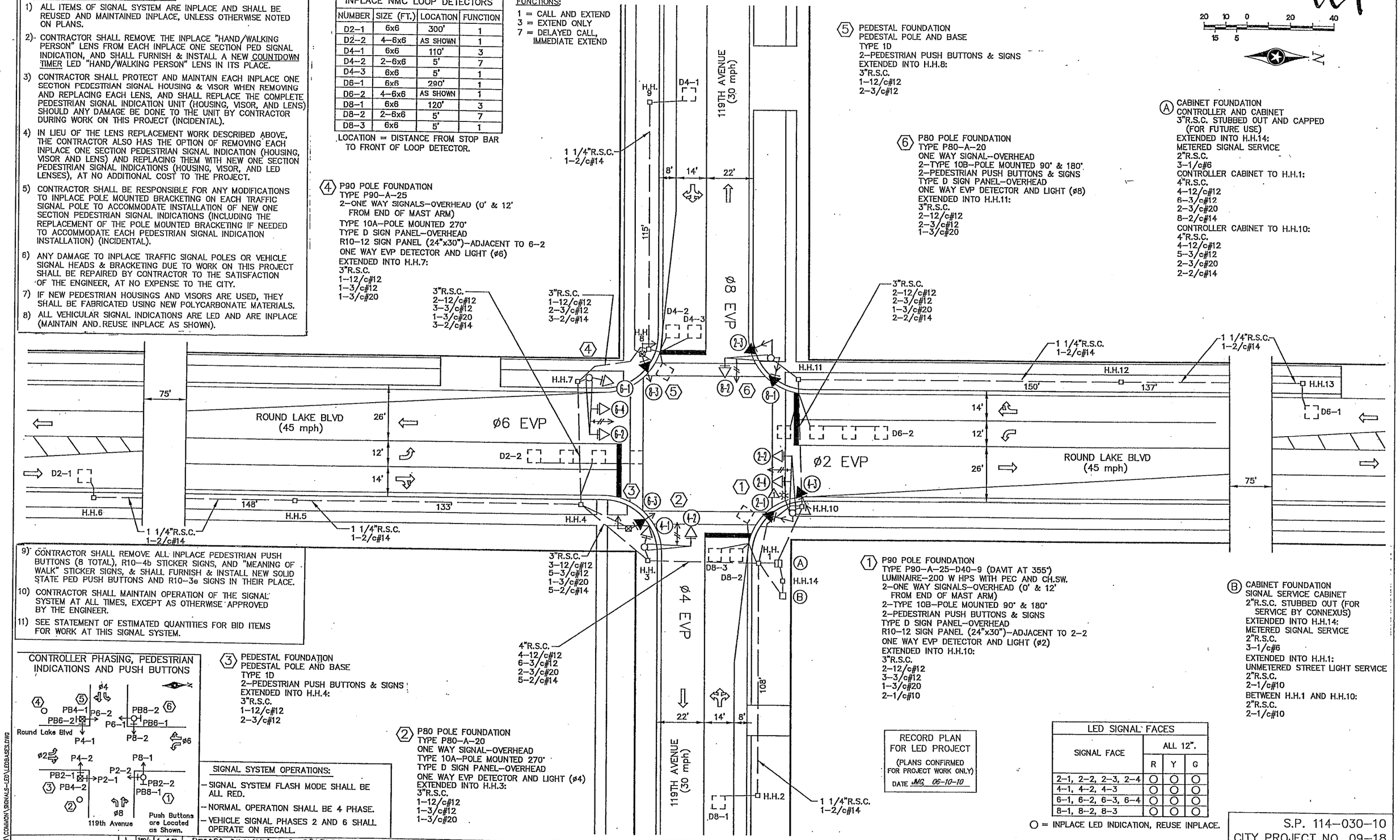
1) ALL ITEMS OF SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, UNLESS OTHERWISE NOTED ON PLANS.
2) CONTRACTOR SHALL REMOVE THE INPLACE "HAND/WALKING PERSON" LENS FROM EACH INPLACE ONE SECTION PED SIGNAL INDICATION, AND SHALL FURNISH & INSTALL A NEW COUNTDOWN TIMER LED "HAND/WALKING PERSON" LENS IN ITS PLACE.
3) CONTRACTOR SHALL PROTECT AND MAINTAIN EACH INPLACE ONE SECTION PEDESTRIAN SIGNAL HOUSING & VISOR WHEN REMOVING AND REPLACING EACH LENS, AND SHALL REPLACE THE COMPLETE PEDESTRIAN SIGNAL INDICATION UNIT (HOUSING, VISOR, AND LENS) SHOULD ANY DAMAGE BE DONE TO THE UNIT BY CONTRACTOR DURING WORK ON THIS PROJECT (INCIDENTAL).
4) IN LIEU OF THE LENS REPLACEMENT WORK DESCRIBED ABOVE, THE CONTRACTOR ALSO HAS THE OPTION OF REMOVING EACH INPLACE ONE SECTION PEDESTRIAN SIGNAL INDICATION (HOUSING, VISOR AND LENS) AND REPLACING THEM WITH NEW ONE SECTION PEDESTRIAN SIGNAL INDICATIONS (HOUSING, VISOR, AND LED LENSES), AT NO ADDITIONAL COST TO THE PROJECT.
5) CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MODIFICATIONS TO INPLACE POLE MOUNTED BRACKETING ON EACH TRAFFIC SIGNAL POLE TO ACCOMMODATE INSTALLATION OF NEW ONE SECTION PEDESTRIAN SIGNAL INDICATIONS (INCLUDING THE REPLACEMENT OF THE POLE MOUNTED BRACKETING IF NEEDED TO ACCOMMODATE EACH PEDESTRIAN SIGNAL INDICATION INSTALLATION) (INCIDENTAL).
6) ANY DAMAGE TO INPLACE TRAFFIC SIGNAL POLES OR VEHICLE SIGNAL HEADS & BRACKETING DUE TO WORK ON THIS PROJECT SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE ENGINEER, AT NO EXPENSE TO THE CITY.
7) IF NEW PEDESTRIAN HOUSINGS AND VISORS ARE USED, THEY SHALL BE FABRICATED USING NEW POLYCARBONATE MATERIALS.
8) ALL VEHICULAR SIGNAL INDICATIONS ARE LED AND ARE INPLACE (MAINTAIN AND REUSE INPLACE AS SHOWN).

INPLACE NMC LOOP DETECTORS

NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D2–1	6x6	300'	1
D2–2	4–6x6	AS SHOWN	1
D4–1	6x6	110'	3
D4–2	2–6x6	5'	7
D4–3	6x6	5'	1
D6–1	6x6	290'	1
D6–2	4–6x6	AS SHOWN	1
D8–1	6x6	120'	3
D8–2	2–6x6	5'	7
D8–3	6x6	5'	1

LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.

FUNCTIONS:
1 = CALL AND EXTEND
3 = EXTEND ONLY
7 = DELAYED CALL, IMMEDIATE EXTEND



④ P90 POLE FOUNDATION
TYPE P90–A–25
2–ONE WAY SIGNALS–OVERHEAD (0' & 12' FROM END OF MAST ARM)
TYPE 10A–POLE MOUNTED 270°
TYPE D SIGN PANEL–OVERHEAD
R10–12 SIGN PANEL (24"x30")–ADJACENT TO 6–2
ONE WAY EVP DETECTOR AND LIGHT (ø6)
EXTENDED INTO H.H.7:
3"R.S.C.
1–12/c#12
1–3/c#12
1–3/c#20

⑤ PEDESTAL FOUNDATION
PEDESTAL POLE AND BASE
TYPE 1D
2–PEDESTRIAN PUSH BUTTONS & SIGNS
EXTENDED INTO H.H.8:
3"R.S.C.
1–12/c#12
2–3/c#12

⑥ P80 POLE FOUNDATION
TYPE P80–A–20
ONE WAY SIGNAL–OVERHEAD
2–TYPE 10B–POLE MOUNTED 90° & 180°
2–PEDESTRIAN PUSH BUTTONS & SIGNS
TYPE D SIGN PANEL–OVERHEAD
ONE WAY EVP DETECTOR AND LIGHT (ø8)
EXTENDED INTO H.H.11:
3"R.S.C.
2–12/c#12
2–3/c#12
1–3/c#20

Ⓐ CABINET FOUNDATION
CONTROLLER AND CABINET
3"R.S.C. STUBBED OUT AND CAPPED (FOR FUTURE USE)
EXTENDED INTO H.H.14:
METERED SIGNAL SERVICE
2"R.S.C.
3–1/c#6
CONTROLLER CABINET TO H.H.1:
4"R.S.C.
4–12/c#12
6–3/c#12
2–3/c#20
8–2/c#14
CONTROLLER CABINET TO H.H.10:
4"R.S.C.
4–12/c#12
5–3/c#12
2–3/c#20
2–2/c#14

9) CONTRACTOR SHALL REMOVE ALL INPLACE PEDESTRIAN PUSH BUTTONS (8 TOTAL), R10–4b STICKER SIGNS, AND "MEANING OF WALK" STICKER SIGNS, & SHALL FURNISH & INSTALL NEW SOLID STATE PED PUSH BUTTONS AND R10–3e SIGNS IN THEIR PLACE.
10) CONTRACTOR SHALL MAINTAIN OPERATION OF THE SIGNAL SYSTEM AT ALL TIMES, EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER.
11) SEE STATEMENT OF ESTIMATED QUANTITIES FOR BID ITEMS FOR WORK AT THIS SIGNAL SYSTEM.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS

③ PEDESTAL FOUNDATION
PEDESTAL POLE AND BASE
TYPE 1D
2–PEDESTRIAN PUSH BUTTONS & SIGNS
EXTENDED INTO H.H.4:
3"R.S.C.
1–12/c#12
2–3/c#12

② P80 POLE FOUNDATION
TYPE P80–A–20
ONE WAY SIGNAL–OVERHEAD
TYPE 10A–POLE MOUNTED 270°
TYPE D SIGN PANEL–OVERHEAD
ONE WAY EVP DETECTOR AND LIGHT (ø4)
EXTENDED INTO H.H.3:
3"R.S.C.
1–12/c#12
1–3/c#12
1–3/c#20

SIGNAL SYSTEM OPERATIONS:

– SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
– NORMAL OPERATION SHALL BE 4 PHASE.
– VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

① P90 POLE FOUNDATION
TYPE P90–A–25–D40–9 (DAVIT AT 355°)
LUMINAIRE–200 W HPS WITH PEC AND CH.SW.
2–ONE WAY SIGNALS–OVERHEAD (0' & 12' FROM END OF MAST ARM)
2–TYPE 10B–POLE MOUNTED 90° & 180°
2–PEDESTRIAN PUSH BUTTONS & SIGNS
TYPE D SIGN PANEL–OVERHEAD
R10–12 SIGN PANEL (24"x30")–ADJACENT TO 2–2
ONE WAY EVP DETECTOR AND LIGHT (ø2)
EXTENDED INTO H.H.10:
3"R.S.C.
2–12/c#12
3–3/c#12
1–3/c#20
2–1/c#10

Ⓑ CABINET FOUNDATION
SIGNAL SERVICE CABINET
2"R.S.C. STUBBED OUT (FOR SERVICE BY CONNEXUS)
EXTENDED INTO H.H.14:
METERED SIGNAL SERVICE
2"R.S.C.
3–1/c#6
EXTENDED INTO H.H.1:
UNMETERED STREET LIGHT SERVICE
2"R.S.C.
2–1/c#10
BETWEEN H.H.1 AND H.H.10:
2"R.S.C.
2–1/c#10

RECORD PLAN FOR LED PROJECT
(PLANS CONFIRMED FOR PROJECT WORK ONLY)
DATE JMG 06-10-10

LED SIGNAL FACES

SIGNAL FACE	ALL 12". R	Y	G
2–1, 2–2, 2–3, 2–4	O	O	O
4–1, 4–2, 4–3	O	O	O
6–1, 6–2, 6–3, 6–4	O	O	O
8–1, 8–2, 8–3	O	O	O

O = INPLACE LED INDICATION, REUSE INPLACE.

S.P. 114–030–10
CITY PROJECT NO. 09–18

DRAWN BY: JMG	1	JMG	6/10	RECORD DRAWING FOR PROJECT
DESIGNER: JMG				
CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Date: May 18, 2009 Name: John M. Gray, PE Lic. No. 22457

SEH
PHONE: (651) 490–2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

COON RAPIDS, MINNESOTA

LED RETROFIT–SYSTEM "DDD"
INTERSECTION LAYOUT
ROUND LAKE BLVD AT 119TH AVENUE

FILE NO. 107418
DATE 05/18/2009
130/131

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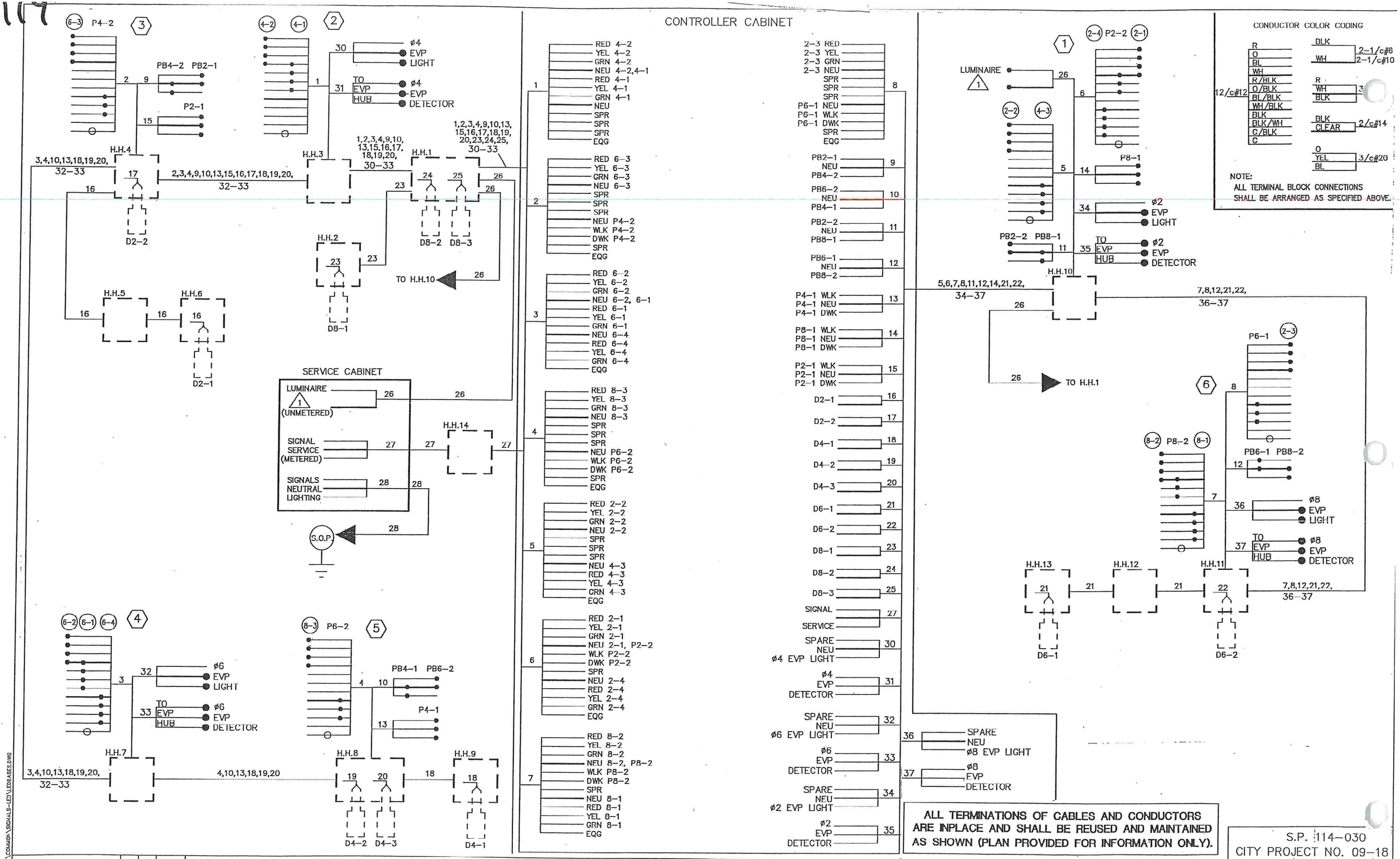

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DRAWN BY:	JMG
DESIGNER:	JMG
CHECKED BY:	JMG
DESIGN TEAM	

NO.	BY	DATE	REVISIONS

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SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

COON RAPIDS, MINNESOTA

LED RETROFIT-SYSTEM "DDD"
FIELD WIRING DIAGRAM
ROUND LAKE BLVD AT 119TH AVENUE

S.P. 114-030
CITY PROJECT NO. 09-18

FILE NO. 107418
DATE 05/18/2009
131
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