

- NOTES:
- 1) LOCATION OF POLES, CONTROLLER CABINET, SERVICE CABINET, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - 2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
  - 3) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS.
  - 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS.
  - 5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
  - 6) EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION "FILLED" HAND/WALKING PERSON INDICATION.
  - 7) ALL VEHICLE SIGNAL INDICATIONS, AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED.
  - 8) SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGNS TO BE FURNISHED & INSTALLED BY CONTRACTOR.
  - 9) ALL MAST ARM POLE MOUNTED VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE MOUNTED USING ONE-WAY SIGNAL HEAD MOUNTS. SEE DETAILS & SPECIAL PROVISIONS.
  - 10) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED 6 FEET FROM THE END OF EACH MAST ARM (FOR EVP).
  - 11) CONTRACTOR SHALL COORDINATE ALL TRAFFIC SIGNAL INSTALLATION WORK WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS AS PART OF ENTIRE PROJECT.
  - 12) (INTERCONNECT) DENOTES ITEMS TO BE MEASURED AND PAID FOR AS NOTED IN ESTIMATED QUANTITIES AND SPECIAL PROVISIONS (+) DENOTES ITEMS INCLUDED UNDER THIS PAY ITEM.

**NMC LOOP DETECTORS**

NUMBER	SIZE (FEET)	LOCATION	FUNCTION
D1-1	6x6	40'	1
D1-2	6x6	10'	1
D2-1	6x6	180'	1
D2-2	6x6	180'	1
D4-1	6x6	120'	2
D4-2	6x6	120'	2
D4-3	6x6	120'	2
D4-4	2-6x6	0' & 15'	3
D4-5	2-6x6	0' & 15'	3
D4-6	2-6x6	0' & 15'	1
D6-1	6x6	180'	1

- LOOP DETECTOR FUNCTIONS:**
- 1) = CALL AND EXTEND.
  - 2) = EXTEND ONLY.
  - 3) = DELAYED CALL, IMMEDIATE EXTEND.

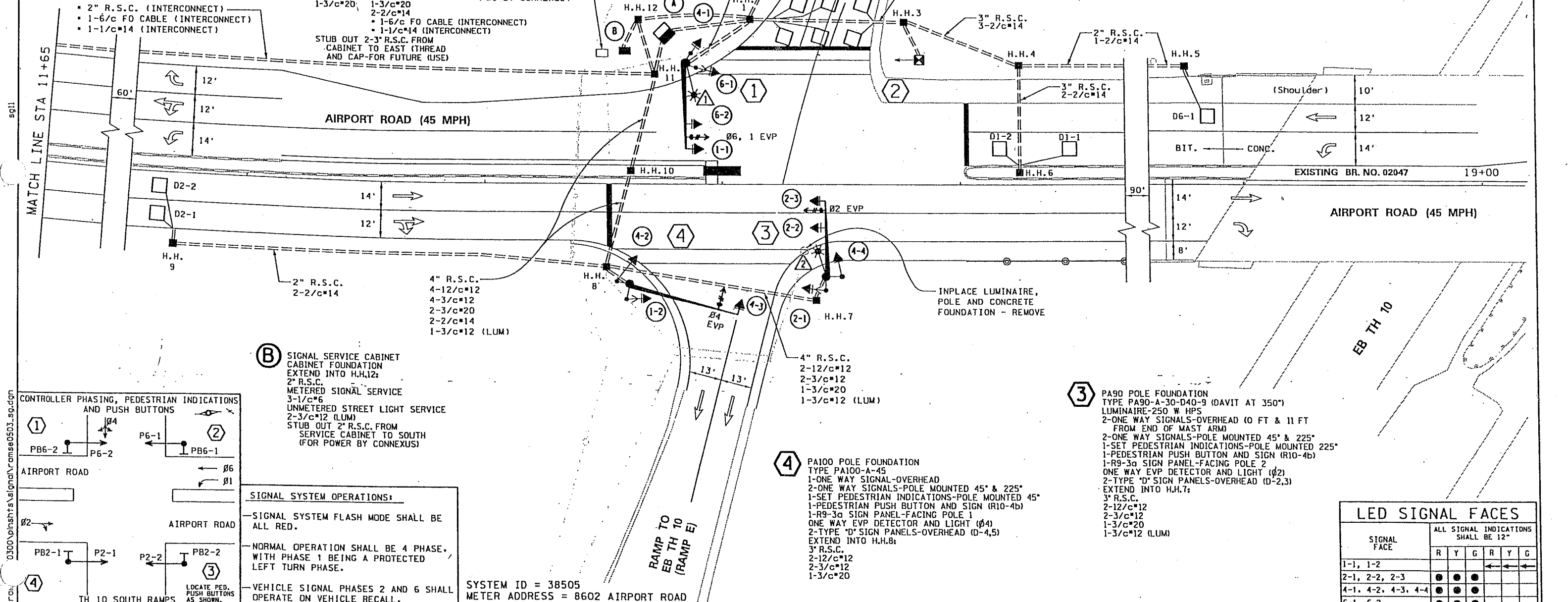
NOTE:  
LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.

- (A) INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)**  
CABINET FOUNDATION  
EXTEND INTO H.H.12:  
METERED SIGNAL SERVICE  
2" R.S.C.  
3-1/c\*6  
EXTEND INTO H.H.1:  
4" R.S.C.  
2-12/c\*12  
4-3/c\*12  
1-3/c\*20  
9-2/c\*14  
EXTEND INTO H.H.11:  
4" R.S.C.  
2-12/c\*12  
2-3/c\*12  
1-3/c\*20  
2-2/c\*14  
4" R.S.C.  
2-12/c\*12  
2-3/c\*12  
1-3/c\*20

GROUND MOUNTED TRANSFORMER (TO BE F&I BY CONNEXUS)

STUB OUT 2-3" R.S.C. FROM CABINET TO EAST (THREAD AND CAP-FOR FUTURE (USE))

- 2" R.S.C. (INTERCONNECT)
- 1-6/c FO CABLE (INTERCONNECT)
- 1-1/c\*14 (INTERCONNECT)

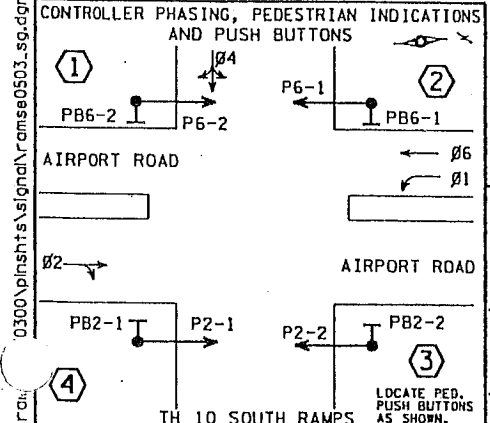


- (B) SIGNAL SERVICE CABINET**  
CABINET FOUNDATION  
EXTEND INTO H.H.12:  
2" R.S.C.  
METERED SIGNAL SERVICE  
3-1/c\*6  
UNMETERED STREET LIGHT SERVICE  
2-3/c\*12 (LUM)  
STUB OUT 2" R.S.C. FROM SERVICE CABINET TO SOUTH (FOR POWER BY CONNEXUS)

**SIGNAL SYSTEM OPERATIONS:**

- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 4 PHASE, WITH PHASE 1 BEING A PROTECTED LEFT TURN PHASE.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON VEHICLE RECALL.

SYSTEM ID = 38505  
METER ADDRESS = 8602 AIRPORT ROAD



DESIGN TEAM

DRAWN BY:	CIF
DESIGNER:	JMG
CHECKED BY:	JMG

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.  
Certified By: *John M. Gray* Lic. No. 22457  
Printed Name: JOHN M. GRAY Date: 02/11/2006

**SEH**  
PHONE: (651)90-2000  
3535 VADNAIS CENTER DR.  
ST. PAUL, MN 55110

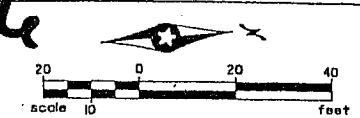
RAMSEY COUNTY  
**COUNTY ROAD J**  
S.A.P. 02-632-14. S.A.P. 62-601-11

**TRAFFIC SIGNAL SYSTEM "A"**  
**INTERSECTION LAYOUT**  
AIRPORT ROAD AT TH 10 SOUTH RAMPS

**LED SIGNAL FACES**

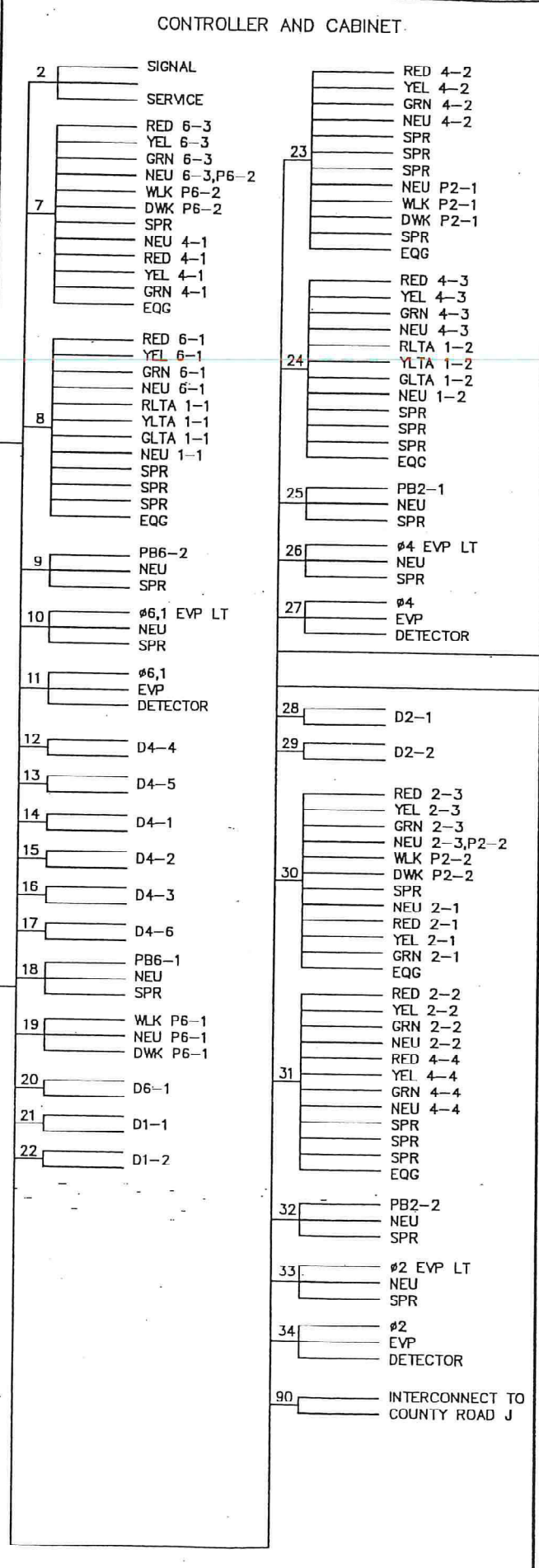
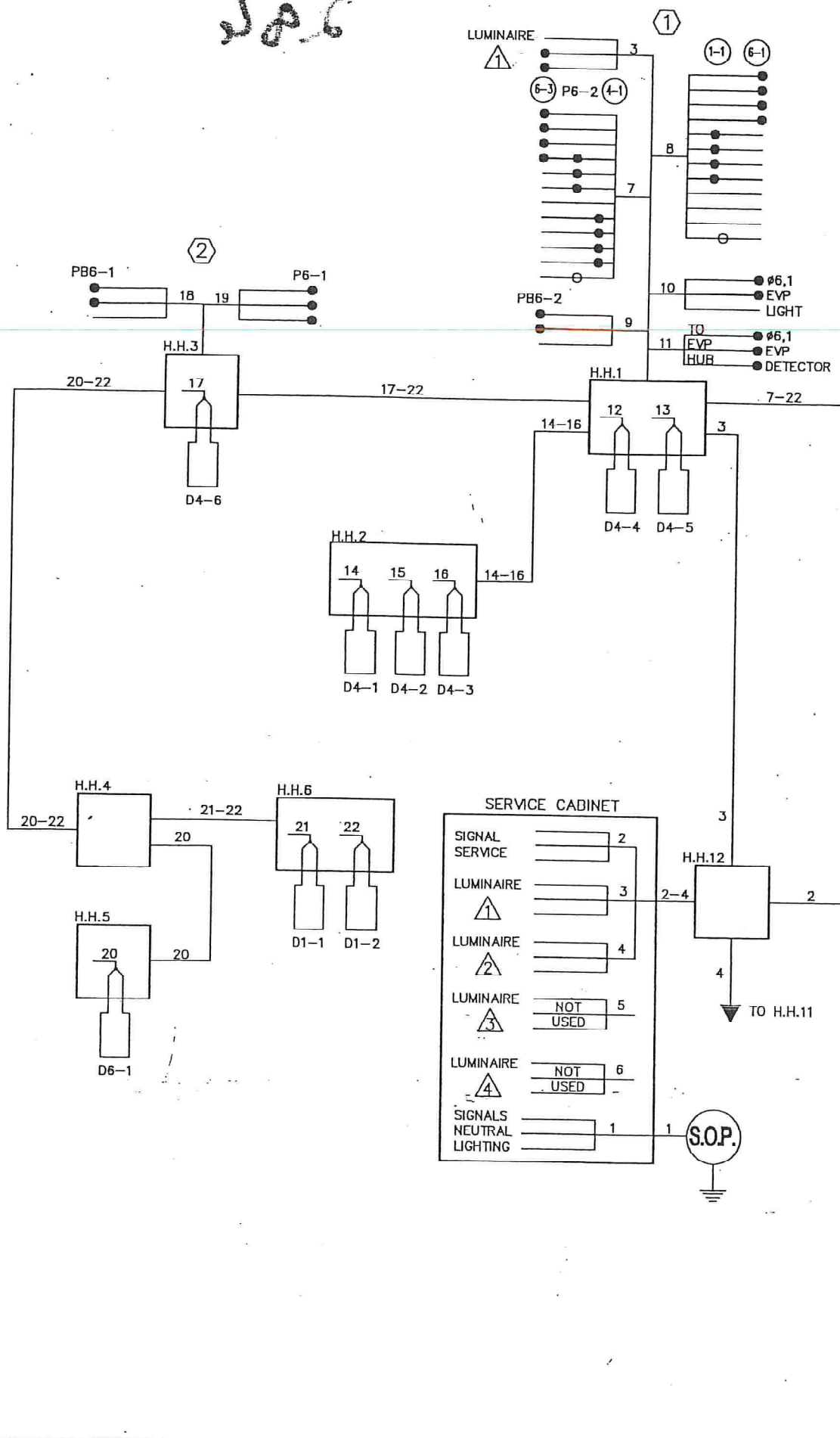
SIGNAL FACE	ALL SIGNAL INDICATIONS SHALL BE 12"					
	R	Y	G	R	Y	G
1-1, 1-2						
2-1, 2-2, 2-3	●	●	●			
4-1, 4-2, 4-3, 4-4	●	●	●			
6-1, 6-2	●	●	●			

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SG11 OF 5651  
297



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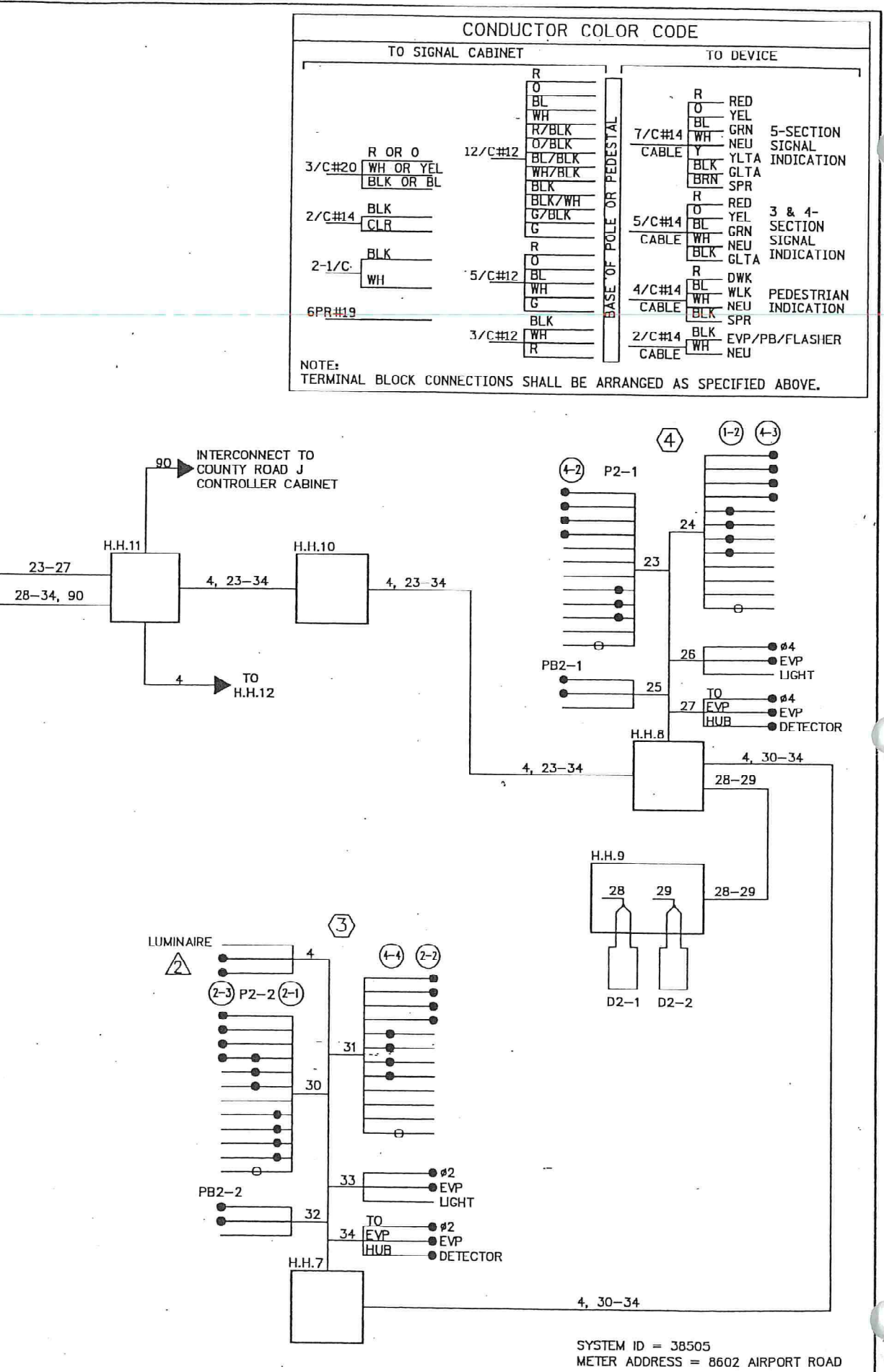
JMG



**CONDUCTOR COLOR CODE**

TO SIGNAL CABINET		TO DEVICE	
R OR O	R	R	RED
3/C#20 WH OR YEL	BL	BL	YEL
BLK OR BL	WH	GRN	GRN
	R/BLK	WH	NEU
	O/BLK	Y	YLTA
	BL/BLK	BLK	GLTA
	WH/BLK	BRN	SPR
	BLK	R	RED
	BLK/WH	BL	YEL
	G/BLK	WH	GRN
	G	BLK	NEU
		GLTA	GLTA
		R	DWK
		BL	WLK
		WH	NEU
		G	SPR
		BLK	EVP/PB/FLASHER
		WH	NEU
		R	

NOTE: TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.



X:\AD\RAISE\850300\...15\SIGNAL\WIRING.DWG

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

Certified By: *John M. Gray* Lic. No. 22457  
 Printed Name: JOHN M. GRAY Date: 12/15/05

**SEH**

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 ST. PAUL, MN 55110

**RAMSEY COUNTY**  
**COUNTY ROAD J**  
 S.A.P. 02-632-14, S.A.P. 62-601-11

**TRAFFIC SIGNAL SYSTEM "A"**  
**FIELD WIRING DIAGRAM**  
 AIRPORT ROAD AT TH 10 SOUTH RAMPS

FILE NO. ARAME0503	<b>258</b>
SG12 OF SG51	<b>297</b>

SYSTEM ID = 38505  
 METER ADDRESS = 8602 AIRPORT ROAD