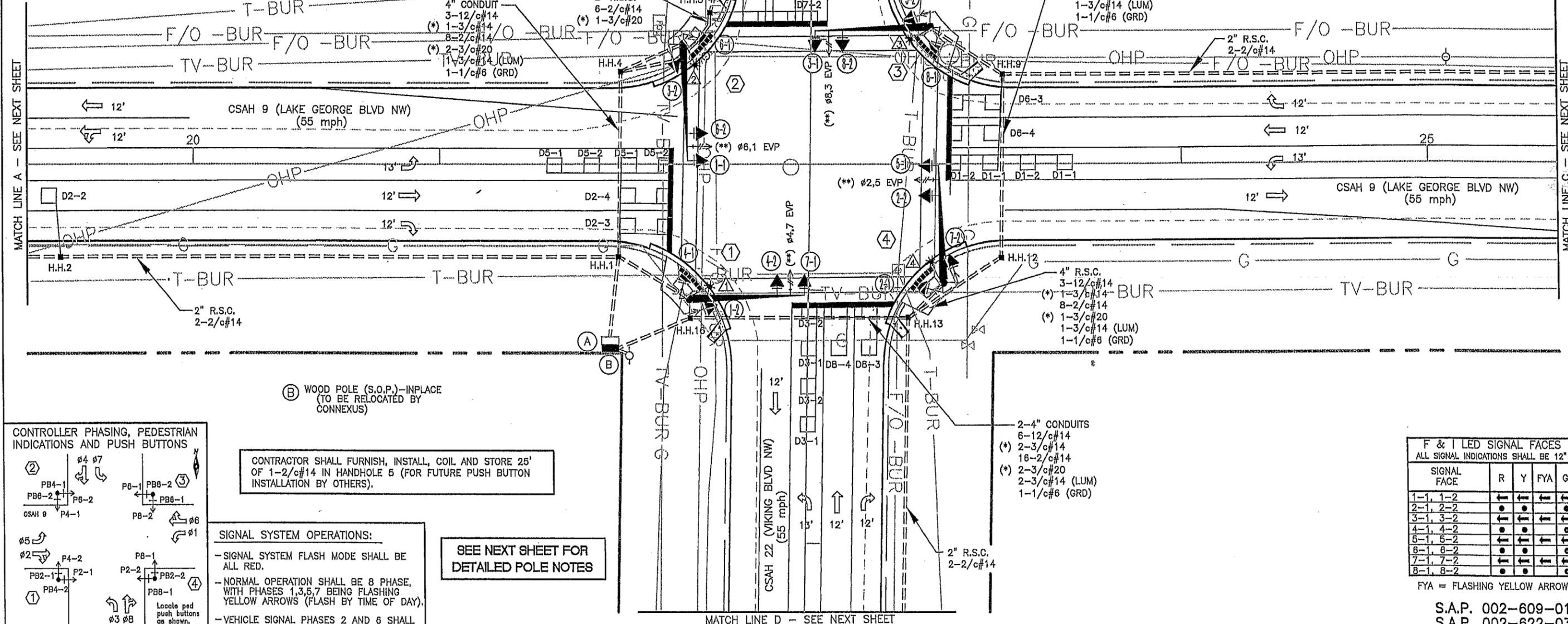
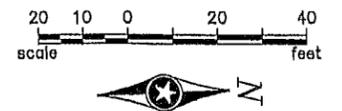


- NOTES:**
- 1) LOCATION OF FOUNDATIONS, LOOP DETECTORS, AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
 - 3) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
 - 4) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE & CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED 6 FEET FROM END OF EACH MAST ARM (FOR EVP).
 - 5) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY TO ARRANGE FOR THE POWER CONNECTION (CONNEXUS). SEE SPECIAL PROVISIONS.
 - 6) SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGNS TO BE FURNISHED AND INSTALLED BY CONTRACTOR (INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM").
 - 7) EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION LED FILLED COUNTDOWN TIMER "HAND/WALKING PERSON" INDICATION.
 - 8) EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - 9) SEE DETAILS, SPECIAL PROVISIONS & STATEMENT OF ESTIMATED QUANTITIES REGARDING BATTERY BACK-UP SIGNAL SERVICE CABINET TO BE FURNISHED AND INSTALLED BY CONTRACTOR (SEPARATE FROM ITEM NO. 2565 FOR THIS SIGNAL SYSTEM).
 - 10) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS.
 - 11) (*) DENOTES ITEMS TO BE INCLUDED AS PART OF THE PAY ITEM FOR ITEM NO. 2565 (EMERGENCY VEHICLE PREEMPTION SYSTEM). SEE STATEMENT OF ESTIMATED AND SPECIAL PROVISIONS.
 - 12) ALL ITEMS OF THE COMPLETE SIGNAL AND EVP SYSTEM SHALL BE CONTRACTOR FURNISHED AND INSTALLED UNLESS SPECIFICALLY DENOTED OTHERWISE.

F & I	N.M.C.	LOOP DETECTORS	FUNCTION
NUMBER	SIZE (FT.)	LOCATION	
D1-1	2-8x6	15' & 45'	1
D1-2	2-8x6	0' & 30'	1
D2-1	8x6	475'	1
D2-2	6x6	250'	1
D2-3	2-8x6	0' & 15'	7
D2-4	2-8x6	0' & 15'	1
D3-1	2-8x6	15' & 45'	1
D3-2	2-8x6	0' & 30'	1
D4-1	8x6	475'	1
D4-2	2-8x6	0' & 15'	7
D4-3	2-8x6	0' & 15'	1
D5-1	2-8x6	15' & 45'	1
D5-2	2-8x6	0' & 30'	1
D6-1	8x6	475'	1
D6-2	8x6	250'	1
D6-3	2-8x6	0' & 15'	7
D6-4	2-8x6	0' & 15'	1
D7-1	2-8x6	15' & 45'	1
D7-2	2-8x6	0' & 30'	1
D8-1	8x6	475'	1
D8-2	8x6	250'	1
D8-3	2-8x6	0' & 15'	7
D8-4	2-8x6	0' & 15'	1

- LOOP DETECTORS FUNCTIONS:**
- 1) CALL AND EXTEND
 - 7) DELAYED CALL, IMMEDIATE EXTEND



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

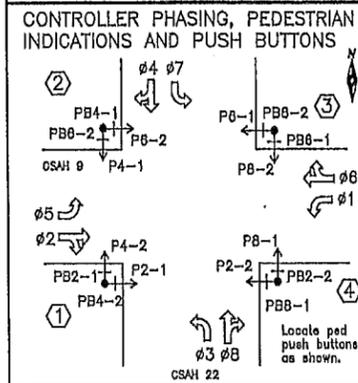
(A) INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)

EQUIPMENT PAD FOUNDATION
BBU SIGNAL SERVICE CABINET
BETWEEN CONTROLLER CABINET AND SERVICE CABINET;
METERED SIGNAL SERVICE
2" R.S.C.
3-1/c#6

CONTROLLER CABINET TO H.H.1:
4" R.S.C.
3-12/c#14
(*) 1-3/c#14
8-2/c#14
(*) 1-3/c#20
1-1/c#6 (GRD)

CONTROLLER CABINET TO H.H.16:
4" R.S.C.
3-12/c#14
(*) 1-3/c#14
8-2/c#14
(*) 1-3/c#20
1-1/c#6 (GRD)

F & I SERVICE CABINET TO H.H.1:
1 1/4" R.S.C.
METERED STREET LIGHT SERVICE
2-3/c#14 (LUM)
SERVICE CABINET TO H.H.16:
1 1/4" R.S.C.
METERED STREET LIGHT SERVICE
2-3/c#14 (LUM)
STUB OUT 1-2" R.S.C. FROM SERVICE CABINET TO EAST (FOR POWER CABLES BY CONNEXUS)
STUB OUT 3" R.S.C. FROM CONTROLLER CABINET TO WEST (THREAD AND CAP-FOR FUTURE USE)
STUB OUT 1" R.S.C. FROM CONTROLLER CABINET (FOR FUTURE PHONE LINE BY OTHERS)



CONTRACTOR SHALL FURNISH, INSTALL, COIL AND STORE 25' OF 1-2/c#14 IN HANDHOLE 5 (FOR FUTURE PUSH BUTTON INSTALLATION BY OTHERS).

SIGNAL SYSTEM OPERATIONS:

- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1,3,5,7 BEING FLASHING YELLOW ARROWS (FLASH BY TIME OF DAY).
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

SEE NEXT SHEET FOR DETAILED POLE NOTES

F & I LED SIGNAL FACES
ALL SIGNAL INDICATIONS SHALL BE 12"

SIGNAL FACE	R	Y	FYA	G
1-1, 1-2	←	←	←	←
2-1, 2-2	←	←	←	←
3-1, 3-2	←	←	←	←
4-1, 4-2	←	←	←	←
5-1, 5-2	←	←	←	←
6-1, 6-2	←	←	←	←
7-1, 7-2	←	←	←	←
8-1, 8-2	←	←	←	←

FYA = FLASHING YELLOW ARROW.

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.

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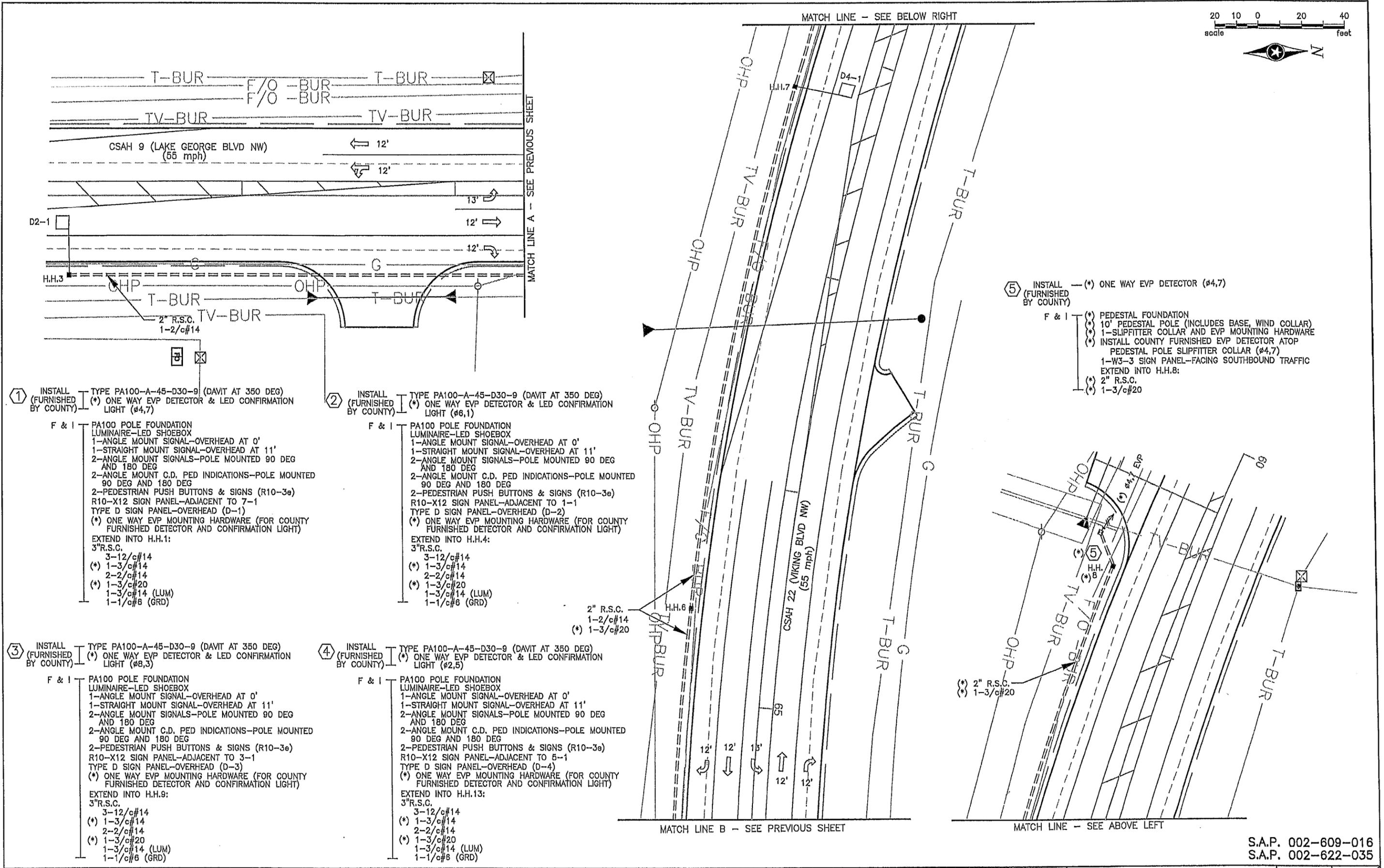
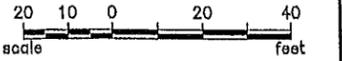
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ANOKA COUNTY, MINNESOTA
CITY OF OAK GROVE

TRAFFIC CONTROL SIGNAL SYSTEM INTERSECTION LAYOUT
CSAH 22 (VIKING BLVD NW) AT CSAH 9 (LAKE GEORGE BLVD NW)

FILE NO. ANOKG 136736
SIGNAL SHEET 6 OF 9

85
119



① INSTALL (FURNISHED BY COUNTY) TYPE PA100-A-45-D30-9 (DAVIT AT 350 DEG) (*) ONE WAY EVP DETECTOR & LED CONFIRMATION LIGHT (#4,7)

- F & I PA100 POLE FOUNDATION
- LUMINAIRE-LED SHOEBOX
- 1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
- 1-STRAIGHT MOUNT SIGNAL-OVERHEAD AT 11'
- 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90 DEG AND 180 DEG
- 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90 DEG AND 180 DEG
- 2-PEDESTRIAN PUSH BUTTONS & SIGNS (R10-3e)
- R10-X12 SIGN PANEL-ADJACENT TO 7-1
- TYPE D SIGN PANEL-OVERHEAD (D-1)
- (*) ONE WAY EVP MOUNTING HARDWARE (FOR COUNTY FURNISHED DETECTOR AND CONFIRMATION LIGHT)
- EXTEND INTO H.H.1:
- 3"R.S.C.
- 3-12/c#14
- (*) 1-3/c#14
- 2-2/c#14
- (*) 1-3/c#20
- 1-3/c#14 (LUM)
- 1-1/c#6 (GRD)

② INSTALL (FURNISHED BY COUNTY) TYPE PA100-A-45-D30-9 (DAVIT AT 350 DEG) (*) ONE WAY EVP DETECTOR & LED CONFIRMATION LIGHT (#6,1)

- F & I PA100 POLE FOUNDATION
- LUMINAIRE-LED SHOEBOX
- 1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
- 1-STRAIGHT MOUNT SIGNAL-OVERHEAD AT 11'
- 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90 DEG AND 180 DEG
- 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90 DEG AND 180 DEG
- 2-PEDESTRIAN PUSH BUTTONS & SIGNS (R10-3e)
- R10-X12 SIGN PANEL-ADJACENT TO 1-1
- TYPE D SIGN PANEL-OVERHEAD (D-2)
- (*) ONE WAY EVP MOUNTING HARDWARE (FOR COUNTY FURNISHED DETECTOR AND CONFIRMATION LIGHT)
- EXTEND INTO H.H.4:
- 3"R.S.C.
- 3-12/c#14
- (*) 1-3/c#14
- 2-2/c#14
- (*) 1-3/c#20
- 1-3/c#14 (LUM)
- 1-1/c#6 (GRD)

③ INSTALL (FURNISHED BY COUNTY) TYPE PA100-A-45-D30-9 (DAVIT AT 350 DEG) (*) ONE WAY EVP DETECTOR & LED CONFIRMATION LIGHT (#8,3)

- F & I PA100 POLE FOUNDATION
- LUMINAIRE-LED SHOEBOX
- 1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
- 1-STRAIGHT MOUNT SIGNAL-OVERHEAD AT 11'
- 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90 DEG AND 180 DEG
- 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90 DEG AND 180 DEG
- 2-PEDESTRIAN PUSH BUTTONS & SIGNS (R10-3e)
- R10-X12 SIGN PANEL-ADJACENT TO 3-1
- TYPE D SIGN PANEL-OVERHEAD (D-3)
- (*) ONE WAY EVP MOUNTING HARDWARE (FOR COUNTY FURNISHED DETECTOR AND CONFIRMATION LIGHT)
- EXTEND INTO H.H.9:
- 3"R.S.C.
- 3-12/c#14
- (*) 1-3/c#14
- 2-2/c#14
- (*) 1-3/c#20
- 1-3/c#14 (LUM)
- 1-1/c#6 (GRD)

④ INSTALL (FURNISHED BY COUNTY) TYPE PA100-A-45-D30-9 (DAVIT AT 350 DEG) (*) ONE WAY EVP DETECTOR & LED CONFIRMATION LIGHT (#2,5)

- F & I PA100 POLE FOUNDATION
- LUMINAIRE-LED SHOEBOX
- 1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
- 1-STRAIGHT MOUNT SIGNAL-OVERHEAD AT 11'
- 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90 DEG AND 180 DEG
- 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90 DEG AND 180 DEG
- 2-PEDESTRIAN PUSH BUTTONS & SIGNS (R10-3e)
- R10-X12 SIGN PANEL-ADJACENT TO 5-1
- TYPE D SIGN PANEL-OVERHEAD (D-4)
- (*) ONE WAY EVP MOUNTING HARDWARE (FOR COUNTY FURNISHED DETECTOR AND CONFIRMATION LIGHT)
- EXTEND INTO H.H.13:
- 3"R.S.C.
- 3-12/c#14
- (*) 1-3/c#14
- 2-2/c#14
- (*) 1-3/c#20
- 1-3/c#14 (LUM)
- 1-1/c#6 (GRD)

⑤ INSTALL (FURNISHED BY COUNTY) (*) ONE WAY EVP DETECTOR (#4,7)

- F & I (*) PEDESTAL FOUNDATION
- (*) 10" PEDESTAL POLE (INCLUDES BASE, WIND COLLAR)
- (*) 1-SLIPFITTER COLLAR AND EVP MOUNTING HARDWARE
- (*) INSTALL COUNTY FURNISHED EVP DETECTOR ATOP PEDESTAL POLE SLIPFITTER COLLAR (#4,7)
- 1-W3-3 SIGN PANEL-FACING SOUTHBOUND TRAFFIC EXTEND INTO H.H.8:
- (*) 2" R.S.C.
- (*) 1-3/c#20

DRAWN BY: JMG				
DESIGNER: JMG				
CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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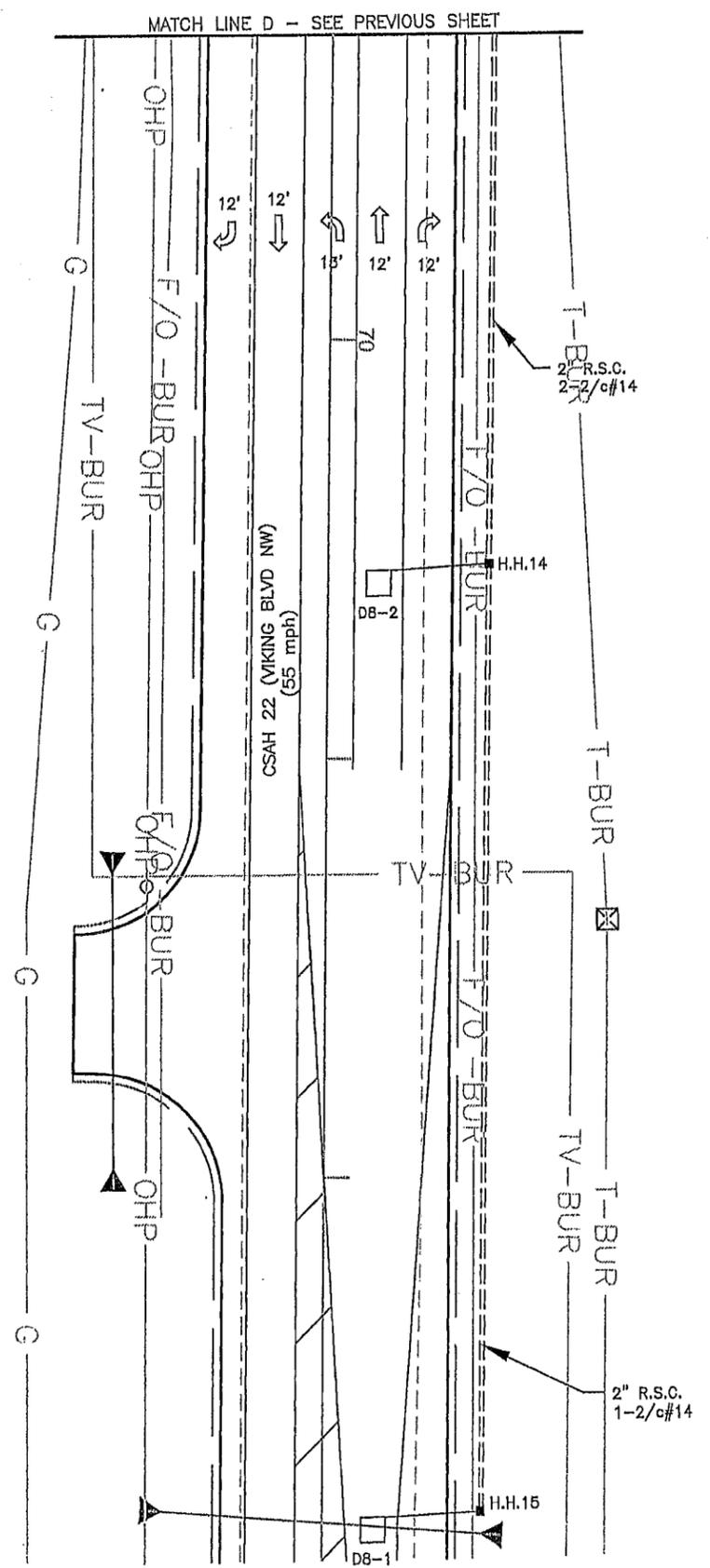
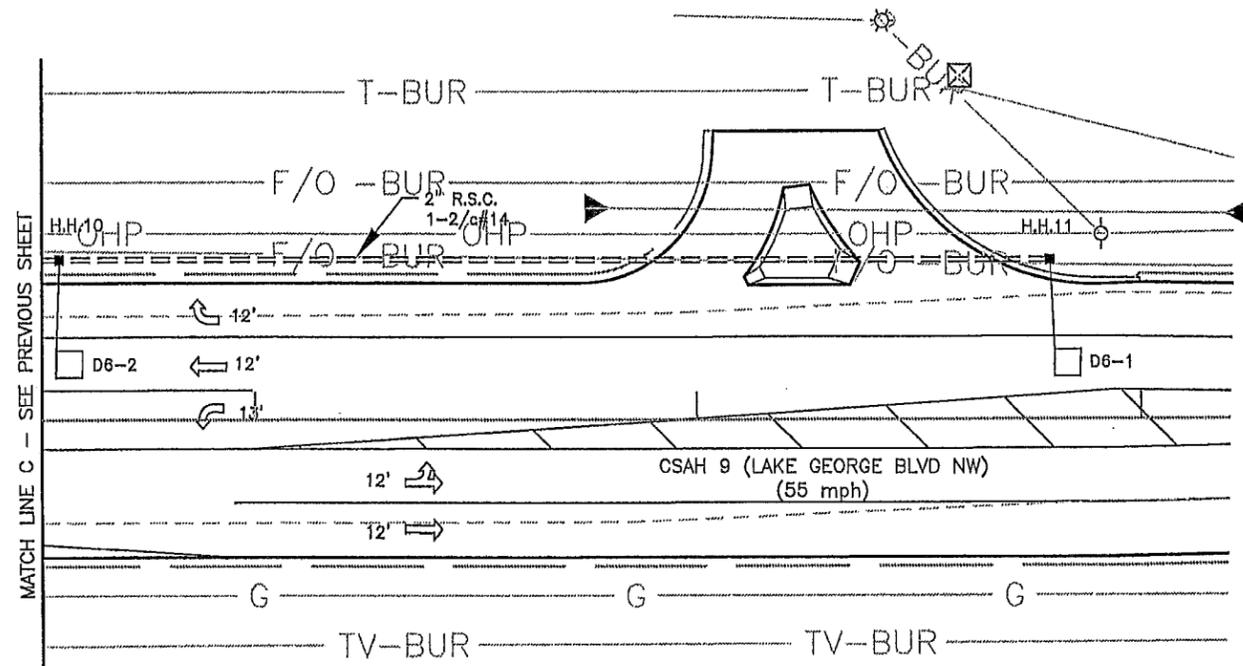
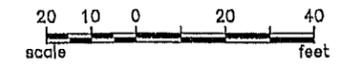
ANOKA COUNTY, MINNESOTA
CITY OF OAK GROVE

TRAFFIC CONTROL SIGNAL SYSTEM
MATCH LINES AND NOTES
CSAH 22 (VIKING BLVD NW)
AT CSAH 9 (LAKE GEORGE BLVD NW)

FILE NO. ANOKC 136736
SIGNAL SHEET 7 OF 9
86
119

S.A.P. 002-609-016
S.A.P. 002-622-035

7100



S.A.P. 002-609-016
S.A.P. 002-622-035

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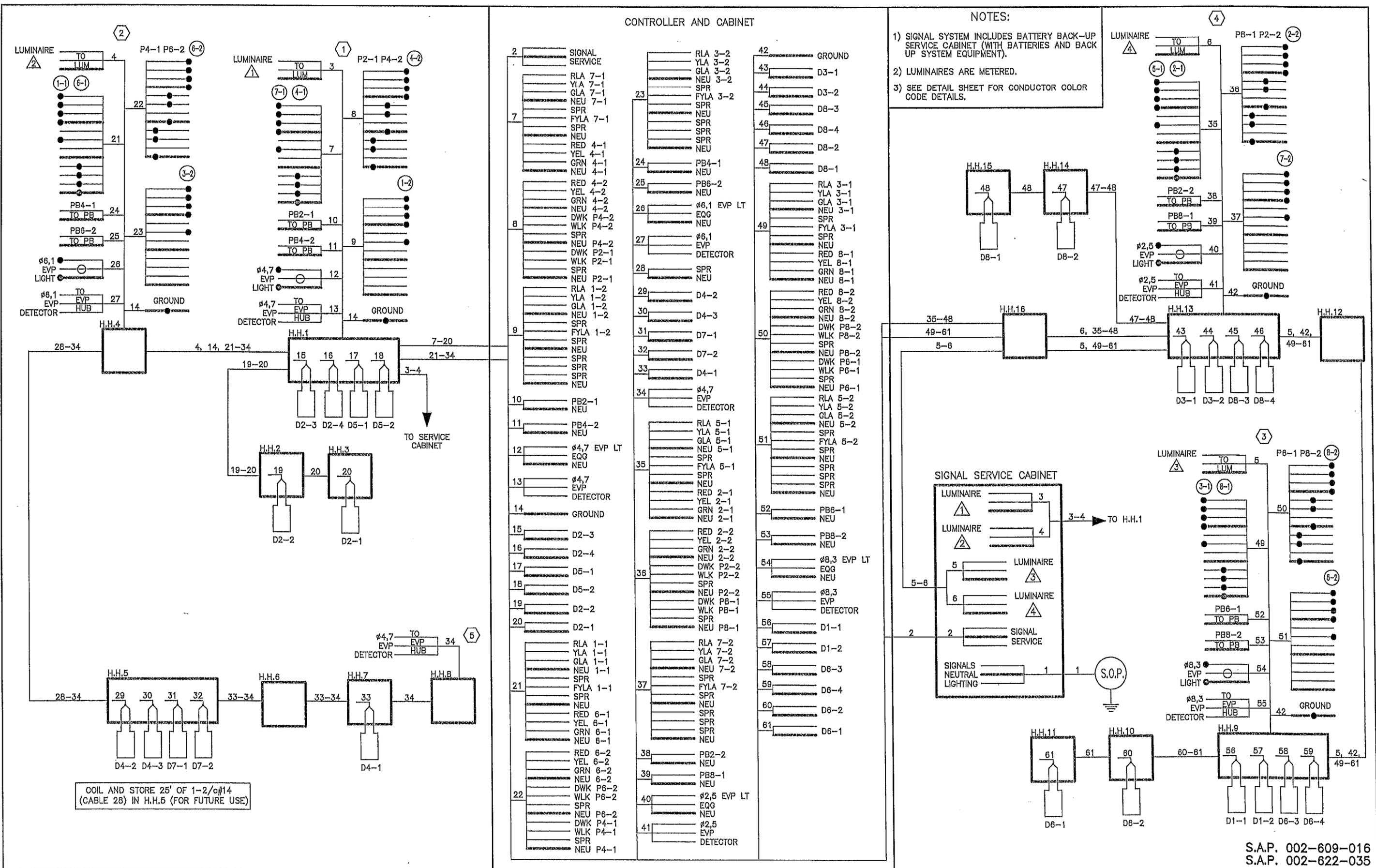
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ANOKA COUNTY, MINNESOTA
CITY OF OAK GROVE

TRAFFIC CONTROL SIGNAL SYSTEM
MATCH LINES
CSAH 22 (VIKING BLVD NW)
AT CSAH 9 (LAKE GEORGE BLVD NW)

FILE NO. ANOKC 136736	87 119
SIGNAL SHEET 8 OF 9	



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 DESIGNER: JMG
 CHECKED BY: JMG
 DESIGN TEAM

NO.	BY	DATE	REVISIONS

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ANOKA COUNTY,
 MINNESOTA
 CITY OF OAK GROVE

TRAFFIC CONTROL SIGNAL SYSTEM
 FIELD WIRING DIAGRAM
 CSAH 22 (VIKING BLVD NW)
 AT CSAH 9 (LAKE GEORGE BLVD NW)

FILE NO. ANOKG 136736
 SIGNAL SHEET 9 OF 9

88
 119

S.A.P. 002-609-016
 S.A.P. 002-622-035