

INTERCONNECT NOTES:

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
- (*) DENOTES ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED, PROTECTED AND MAINTAINED INPLACE, EXCEPT WHERE BOXED IN AND DENOTED BY BOTH (*) AND BY F & I (ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR).
- EXISTING HANDHOLES WITH CONCRETE OR METAL COVERS IN THE BOULEVARD AREAS (USED WITH INTERCONNECT SYSTEM CABLES) SHALL BE ADJUSTED TO FINISHED SURROUNDING GRADE (INCIDENTAL).
- FOR EXISTING CONDUITS BEING REUSED AS PART OF THE COMPLETE INTERCONNECT SYSTEM, THE CONTRACTOR SHALL PULL A FISH TAPE THROUGH THESE CONDUITS TO CONFIRM THAT CONDUITS ARE ABLE TO BE REUSED WITH NEW CABLE INSTALLATIONS, PRIOR TO NEW INTERCONNECT CABLES BEING INSTALLED IN THESE CONDUITS.
- SEE SPECIAL PROVISIONS FOR INFORMATION REGARDING LABOR AND MATERIALS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN EACH INPLACE TRAFFIC SIGNAL CONTROLLER CABINET AS PART OF THE "TRAFFIC CONTROL INTERCONNECT" PAY ITEM.

N.M.C. LOOP DETECTORS				
NUMBER	SIZE (FT.)	LOCATION	FUNCTION	STATUS
D1-1	2-6x6	20' & 35'	1	INPLACE
D1-2	2-6x6	-10' & 5'	1	INPLACE
D2-1	6x6	250'	1	INPLACE
D2-2	6x6	250'	1	INPLACE
D4-1	6x6	200'	3,8	INPLACE
D4-2	6x6	200'	3,8	INPLACE
D4-3	2-6x6	-5' & 5'	7	INPLACE
D4-4	2-6x6	-5' & 5'	7	INPLACE
D5-1	2-6x6	20' & 35'	1	INPLACE
D5-2	2-6x6	-10' & 5'	1	INPLACE
D6-1	6x6	250'	1	INPLACE
D6-2	6x6	250'	1	INPLACE
D8-1	6x6	180'	3,8	INPLACE
D8-2	6x6	180'	3,8	INPLACE
D8-3	2-6x6	-5' & 5'	7	INPLACE
D8-4	2-6x6	-5' & 5'	7	INPLACE

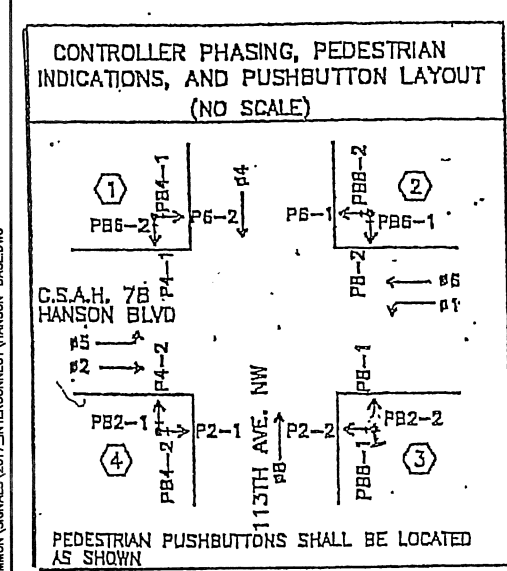
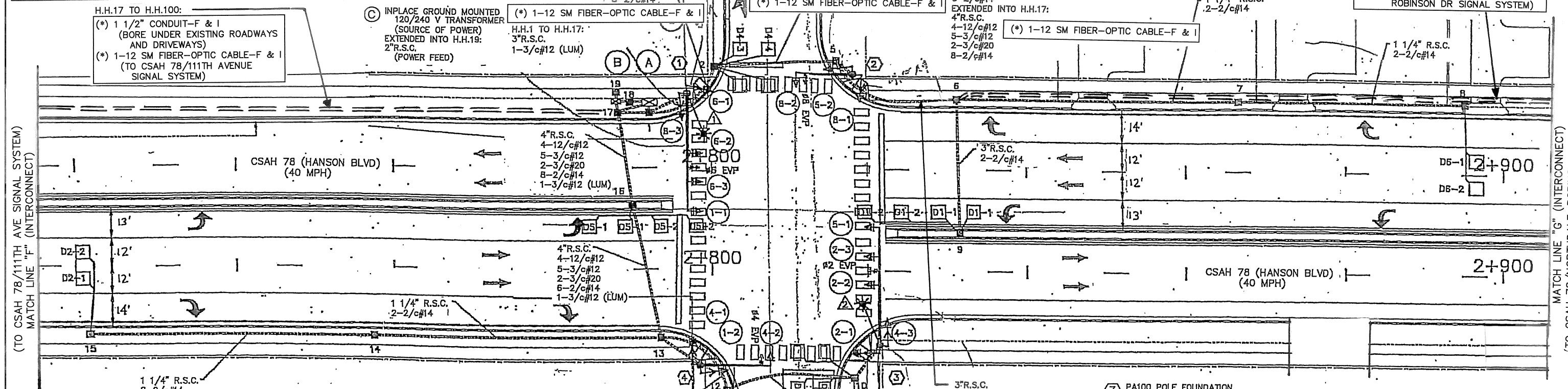
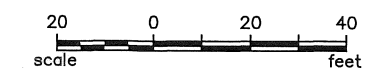
NOTE: LOCATION=DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.

- LOOP DETECTOR FUNCTION CODES:**
- CALL AND EXTEND
 - CALL ONLY
 - EXTEND ONLY
 - CALL ONLY DENSITY
 - DELAYED CALL ONLY
 - DELAYED CALL ONLY DENSITY
 - DELAYED CALL IMMEDIATE EXTEND
 - CARRY OVER (STRETCH)
 - ADVISORY DETECTOR
 - SAMPLING DETECTOR

- (B) SIGNAL SERVICE CABINET CABINET FOUNDATION**
 EXTENDED INTO H.H.18:
 METERED SIGNAL SERVICE
 1 1/4" R.S.C.
 3-1/c#6
 EXTENDED INTO H.H.1:
 UNMETERED STREET LIGHT SERVICE
 1 1/4" R.S.C.
 2-3/c#12 (LUM)
 EXTENDED INTO H.H.19:
 2" R.S.C.
 (POWER FEED)

- (2) PA90 POLE FOUNDATION**
 TYPE PA90-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 (#8)
 EXTENDED INTO H.H.5:
 3" R.S.C.
 2-12/c#12
 2-3/c#12
 1-3/c#20

- H.H.6 TO H.H.101:
 (*) 1 1/2" CONDUIT-F & I
 (BORE UNDER EXISTING ROADWAYS AND DRIVEWAYS)
 (*) 1-12 SM FIBER-OPTIC CABLE-F & I
 (TO CSAH 78/NORTHDALE BLVD-ROBINSON DR SIGNAL SYSTEM)



- (1) PA100 POLE FOUNDATION**
 TYPE PA100-A-50-D40-9 (DAVIT AT 350')
 LUMINAIRE-200 W HPS WITH PEC
 AND CHECK SWITCH
 3-ONE WAY SIGNALS-OVERHEAD (0', 11', AND 23' FROM END OF MAST ARM)
 2-TYPE 10B-POLE MOUNTED 90° & 180°
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 2-RB-1 SIGN PANELS-POLE MOUNTED 0° & 180°
 TYPE D SIGN PANEL-OVERHEAD
 ONE WAY EVP DETECTOR AND LIGHT (#6,1)
 EXTENDED INTO H.H.1:
 3" R.S.C.
 2-12/c#12
 3-3/c#12
 1-3/c#20
 1-3/c#12 (LUM)
- (3) PA100 POLE FOUNDATION**
 TYPE PA100-A-50-D40-9 (DAVIT AT 350')
 LUMINAIRE-200 W HPS WITH PEC
 AND CHECK SWITCH
 3-ONE WAY SIGNALS-OVERHEAD (0', 11', AND 23' FROM END OF MAST ARM)
 2-TYPE 10B-POLE MOUNTED 90° & 180°
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 2-RB-1 SIGN PANELS-POLE MOUNTED 0° & 180°
 TYPE D SIGN PANEL-OVERHEAD
 ONE WAY EVP DETECTOR AND LIGHT (#2,5)
 EXTENDED INTO H.H.10:
 3" R.S.C.
 2-12/c#12
 3-3/c#12
 1-3/c#20
 1-3/c#12 (LUM)
- (4) PA90 POLE FOUNDATION**
 TYPE PA90-A-25
 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 (#4)
 EXTENDED INTO H.H.13:
 3" R.S.C.
 2-12/c#12
 2-3/c#12
 1-3/c#20

LED SIGNAL FACES

SIGNAL FACE	ALL 12"		
	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	○	○	○
4-1, 4-2, 4-3	○	○	○
5-1, 5-2	←	←	←
6-1, 6-2, 6-3	○	○	○
8-1, 8-2, 8-3	○	○	○

○ ← = INPLACE LED INDICATION, REUSE INPLACE.

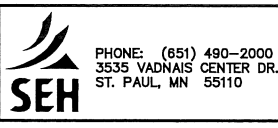
- SIGNAL SYSTEM OPERATION**
- SIGNAL SYSTEM FLASH MODE IS ALL RED
 - NORMAL OPERATION IS 5 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED ONLY LEFT TURNS.
 - PHASES 2 AND 6 SHALL BE ON RECALL TO VEHICLE MINIMUM.

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.

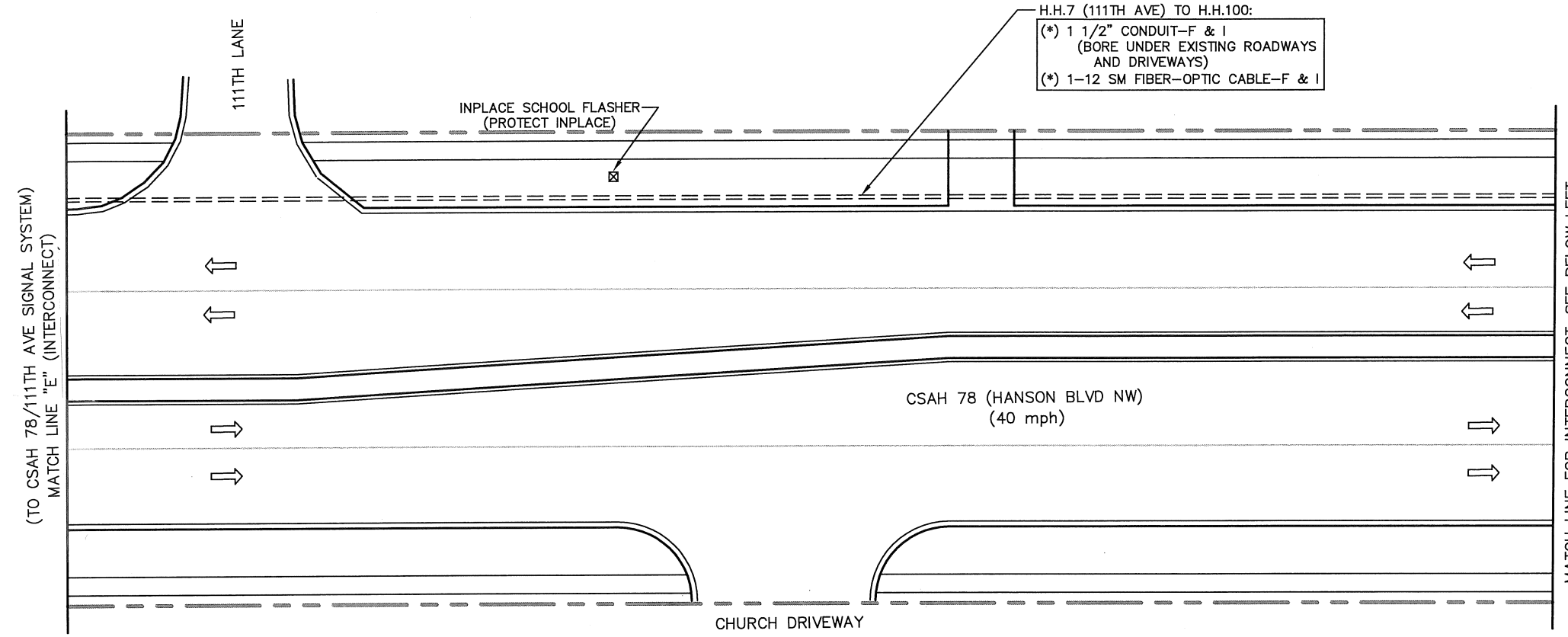
Date: May 29, 2018 Name: John M. Gray, PE Lic. No. 22457



ANOKA COUNTY, MN
CITY OF COON RAPIDS
 STATE PROJECT 002-678-021

TRAFFIC SIGNAL INTERCONNECT
INTERSECTION LAYOUT
CSAH 78 (HANSON BLVD) AT
113TH AVENUE NW

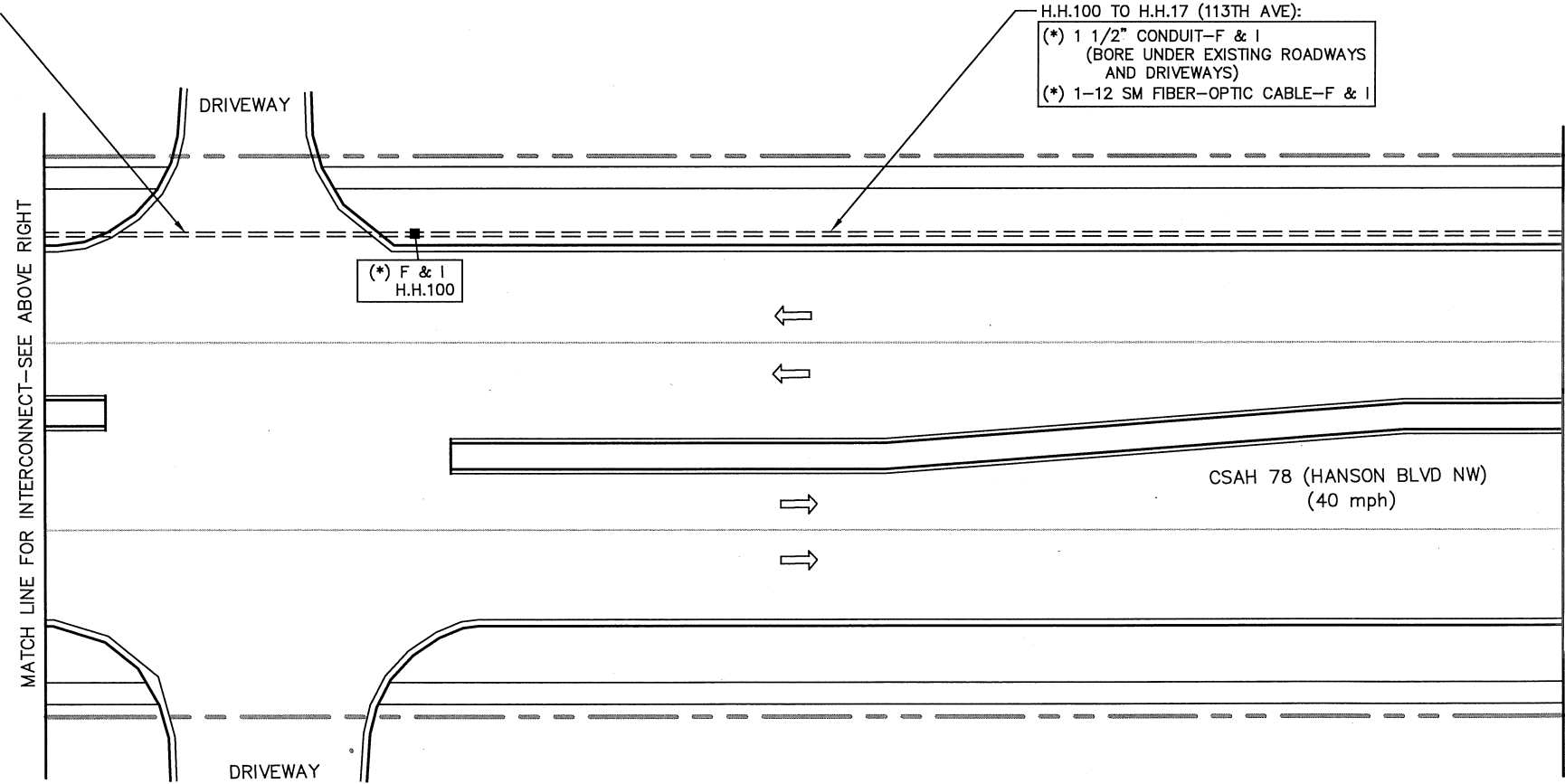
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H.H.7 (111TH AVE) TO H.H.100:
 (*) 1 1/2" CONDUIT-F & I
 (BORE UNDER EXISTING ROADWAYS
 AND DRIVEWAYS)
 (*) 1-12 SM FIBER-OPTIC CABLE-F & I

H.H.7 (111TH AVE) TO H.H.100:
 (*) 1 1/2" CONDUIT-F & I
 (BORE UNDER EXISTING ROADWAYS
 AND DRIVEWAYS)
 (*) 1-12 SM FIBER-OPTIC CABLE-F & I

H.H.100 TO H.H.17 (113TH AVE):
 (*) 1 1/2" CONDUIT-F & I
 (BORE UNDER EXISTING ROADWAYS
 AND DRIVEWAYS)
 (*) 1-12 SM FIBER-OPTIC CABLE-F & I



INTERCONNECT NOTES:

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- 2) (*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 3) NEW HANDHOLE 100 REQUIRED TO BE FURNISHED & INSTALLED BY CONTRACTOR AS PART OF PROJECT SHALL BE A PRE-CAST POLYMER CONCRETE STRUCTURE. SEE DETAILS/SPECIAL PROVISIONS.

S:\NEW ANOKA\COMMON SIGNALS\2017_INTERCONNECT\HANSON-BASE.DWG

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

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John M. Gray
 Name: John M. Gray, PE
 Lic. No. 22457
 Date: May 29, 2018

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

ANOKA COUNTY, MN
CITY OF COON RAPIDS
 STATE PROJECT 002-678-021

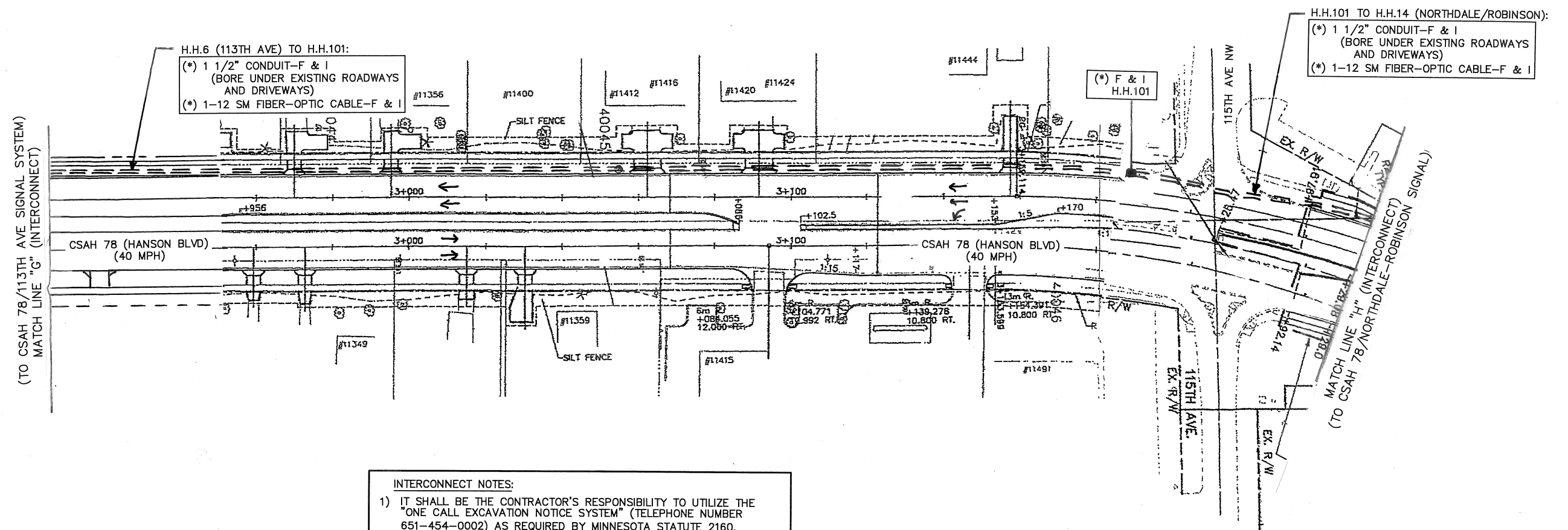
TRAFFIC SIGNAL INTERCONNECT
INTERSECTION LAYOUT
CSAH 78 (HANSON BLVD)
(111TH AVENUE TO 113TH AVENUE)

FILE NO.
 ANOKC 142312

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NOTE SCALE CHANGE ON THIS PLAN SHEET.



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- 3) NEW HANDHOLE 101 REQUIRED TO BE FURNISHED & INSTALLED BY CONTRACTOR AS PART OF PROJECT SHALL BE A PRE-CAST POLYMER CONCRETE STRUCTURE. SEE DETAILS/SPECIAL PROVISIONS.

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 DESIGNER: JMG
 CHECKED BY: JMG

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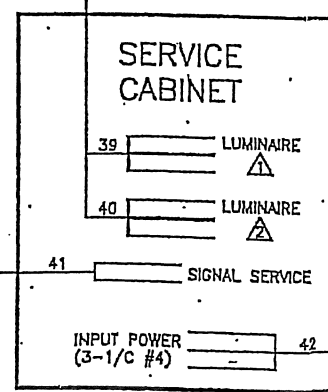
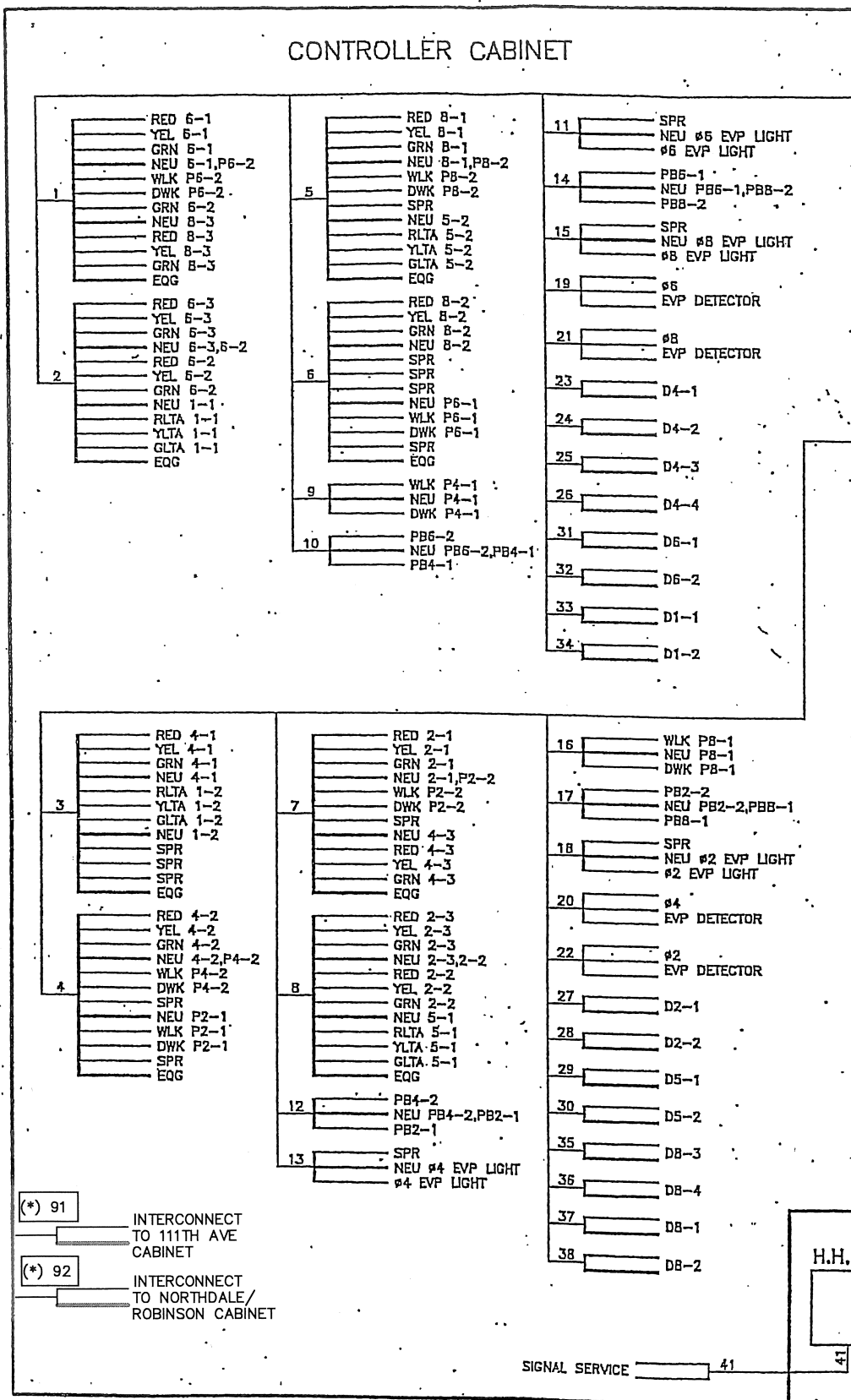
**ANOKA COUNTY, MN
 CITY OF COON RAPIDS**
 STATE PROJECT 002-678-021

**TRAFFIC SIGNAL INTERCONNECT
 INTERSECTION LAYOUT
 CSAH 78 (HANSON BLVD)
 (113TH AVE TO NORTHDALE/ROBINSON)**

FILE NO.
 ANOKC 122928

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CONTROLLER CABINET



INTERCONNECT TO 111TH AVENUE SIGNAL SYSTEM

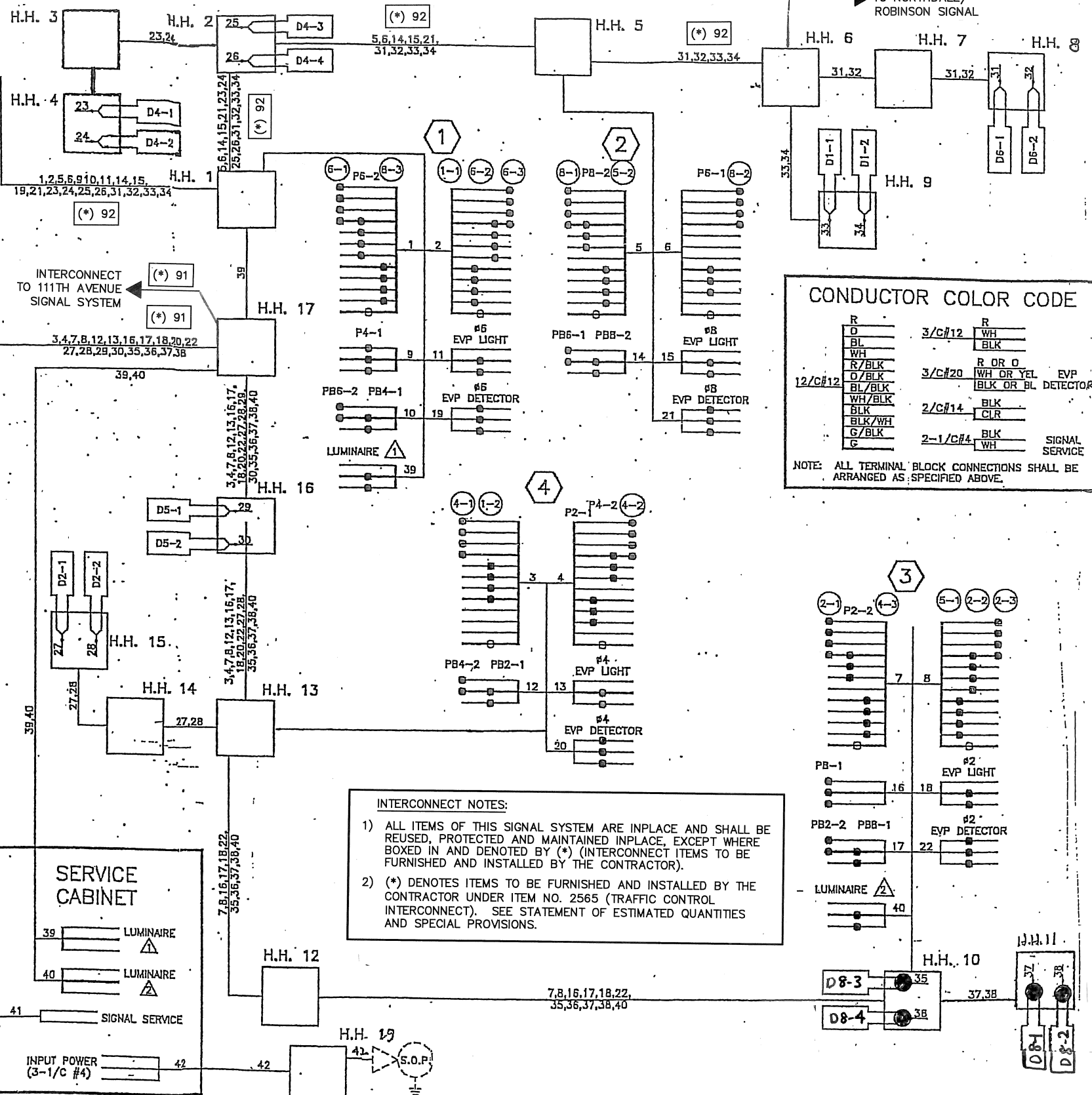
CONDUCTOR COLOR CODE

R	3/C#12	R	
O		WH	
BL		BLK	
WH		R OR O	
R/BLK	3/C#20	WH OR YEL	EVF
O/BLK		BLK OR BL	DETECTOR
BL/BLK		BLK	
WH/BLK	2/C#14	CLR	
BLK		BLK	
BLK/WH	2-1/C#4	WH	SIGNAL SERVICE
G/BLK			
G			

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

INTERCONNECT NOTES:

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- 2) (*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.



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

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Date: May 29, 2018 Name: John M. Gray, PE Lic. No. 22457

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

**ANOKA COUNTY, MN
CITY OF COON RAPIDS**
STATE PROJECT 002-678-021

**TRAFFIC SIGNAL INTERCONNECT
FIELD WIRING DIAGRAM
CSAH 78 (HANSON BLVD) AT
13TH AVENUE NW**

FILE NO.
ANOKC 122928

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