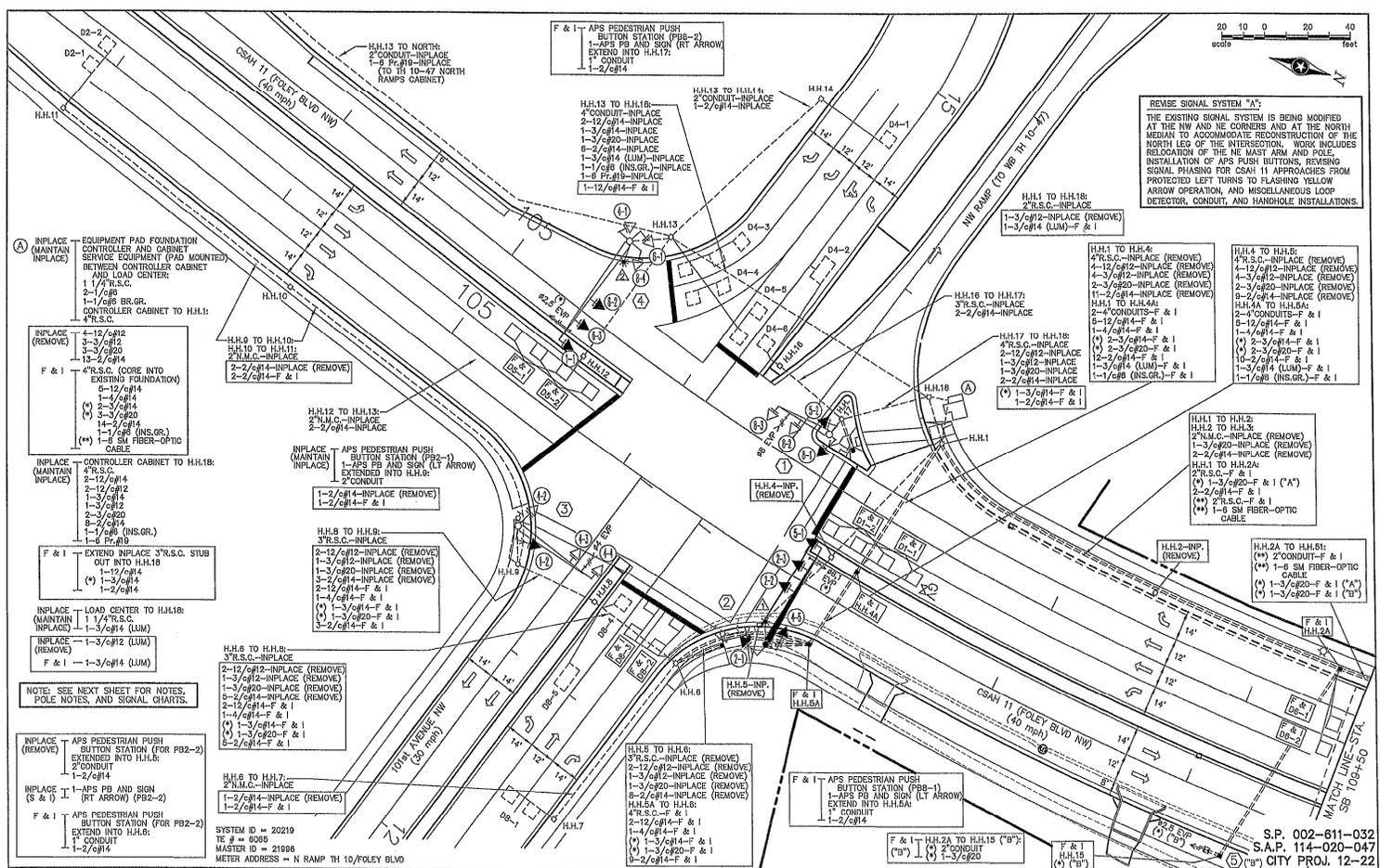
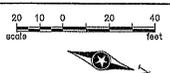


7116



REVISE SIGNAL SYSTEM 'A'
THE EXISTING SIGNAL SYSTEM IS BEING MODIFIED AT THE NW AND NE CORNERS AND AT THE NORTH BEGAN TO ACCOMMODATE RECONSTRUCTION OF THE NORTH LEG OF THE INTERSECTION. WORK INCLUDES RELOCATION OF THE NE MAST ARM AND POLE, INSTALLATION OF APS PUSH BUTTONS, REVERSING SIGNAL PHASING FOR CSAH 11 APPROACHES FROM PROTECTED LEFT TURNS TO FLASHING YELLOW ARROW OPERATION, AND MISCELLANEOUS LOOP DETECTOR, CONDUIT, AND HANDHOLE INSTALLATIONS.

NOTE: SEE NEXT SHEET FOR NOTES, POLE NOTES, AND SIGNAL CHARTS.

INPLACE - APS PEDESTRIAN PUSH BUTTON STATION (PBB-2) EXTENDED INTO H.H.18:
2' CONDUIT
1' CONDUIT
1-2/c#14

INPLACE - APS PEDESTRIAN PUSH BUTTON STATION (PBB-2) EXTENDED INTO H.H.18:
2' CONDUIT
1' CONDUIT
1-2/c#14

INPLACE - APS PEDESTRIAN PUSH BUTTON STATION (PBB-2) EXTENDED INTO H.H.18:
2' CONDUIT
1' CONDUIT
1-2/c#14

INPLACE - APS PEDESTRIAN PUSH BUTTON STATION (PBB-2) EXTENDED INTO H.H.18:
2' CONDUIT
1' CONDUIT
1-2/c#14

INPLACE - APS PEDESTRIAN PUSH BUTTON STATION (PBB-2) EXTENDED INTO H.H.18:
2' CONDUIT
1' CONDUIT
1-2/c#14

INPLACE - APS PEDESTRIAN PUSH BUTTON STATION (PBB-2) EXTENDED INTO H.H.18:
2' CONDUIT
1' CONDUIT
1-2/c#14

Table with columns: DESIGNER, CHECKED BY, REVISIONS, NO., BY, DATE.

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.



ANOKA COUNTY, MN
CITY OF COON RAPIDS

REVISE SIGNAL SYSTEM 'A'
INTERSECTION LAYOUT
TH 10-47 NORTH RAMP/LOIST AVE NW
AT CSAH 11 (FOLEY BLVD)

FILE NO. ANKO 12472
SIGNAL SHEET 196

7116

- NOTES:**
- 1) LOCATION OF FOUNDATIONS, PUSH BUTTON STATIONS, HANDHOLES, AND LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER AND MADOT METRO TRAFFIC OFFICE PERSONNEL.
 - 2) EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - 3) NEW LOOP DETECTORS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND CURRENT MADOT STANDARD PLATE NO. 8150.
 - 4) NEW HANDHOLES 2A, 4A, AND 5A (AND HANDHOLE 16 FOR SYSTEM "B") SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. REMOVE AND DISPOSE OF INFLATE HANDHOLES 2, 3, 4, 5, AND 6. ADJUST HANDHOLES 1, 6, 17, AND 18 TO FINISHED SURROUNDING GRADE AFTER ALL ROAD CONSTRUCTION WORK IS COMPLETED.
 - 5) SEE SPECIAL PROVISIONS REGARDING REMOVAL, SALVAGING AND INSTALLATION OF INFLATE SIGNAL EQUIPMENT.
 - 6) INFLATE ITEMS TO BE REUSED INFLATE AS PART OF REVERSE SIGNAL SYSTEM "A" SHALL BE PROTECTED AND MAINTAINED INFLATE. SEE SPECIAL PROVISIONS.
 - 7) CONTRACTOR SHALL MAINTAIN OPERATION OF A SIGNAL SYSTEM AT THIS INTERSECTION AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE ENGINEER FOR THE SIGNAL SYSTEM TO BE TURNED OFF.
 - 8) F & I = MATERIALS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS PART OF REVERSE SIGNAL SYSTEM "A".
 - 9) S & I = MATERIALS TO BE SALVAGED AND INSTALLED BY THE CONTRACTOR AS PART OF REVERSE SIGNAL SYSTEM "A".
 - 10) INFLATE ONE SECTION LED COUNTDOWN TIMER PEDESTRIAN SIGNAL INDICATIONS SHALL BE REUSED AS SHOWN AS PART OF REVERSE SIGNAL SYSTEM "A". THE CONTRACTOR SHALL FURNISH & INSTALL NEW ONE SECTION LED COUNTDOWN TIMER "HAND/WALKING PERSON" PEDESTRIAN SIGNAL INDICATIONS WHERE SHOWN IN THE PLANS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
 - 11) ALL INFLATE VEHICLE SIGNAL INDICATIONS ARE LED. NEW VEHICLE SIGNAL INDICATIONS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL ALSO BE LED. SEE SPECIAL PROVISIONS.
 - 12) SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGNS TO BE FURNISHED & INSTALLED (ON SALVAGED & REINSTALLED) BY THE CONTRACTOR (INCLUDED AS PART OF PAY ITEM FOR REVERSE SIGNAL SYSTEM "A").
 - 13) CONTRACTOR SHALL COORDINATE ALL WORK IN CONTROLLER CABINET WITH CONTROLLER AND CABINET MODIFICATION WORK TO BE COMPLETED BY THE STATE (AT NO EXPENSE TO THE CONTRACTOR).
 - 14) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
 - 15) ITEMS DENOTED BY "A" AND/OR (*) ALONE SHALL BE INCLUDED AS PART OF PAY ITEM FOR "REVERSE EMERGENCY VEHICLE PREEMPTION SYSTEM A". ITEMS DENOTED BY "B" AND/OR (*) TOGETHER SHALL BE INCLUDED AS PART OF PAY ITEM FOR "EMERGENCY VEHICLE PREEMPTION SYSTEM B".
 - 16) (**) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR UNDER ITEM NO. 2268 (TRAFFIC CONTROL, INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
 - 17) NEW APS PEDESTRIAN PUSH BUTTONS TO BE FURNISHED & INSTALLED BY THE CONTRACTOR SHALL BE MEASURED AND PAID FOR SEPARATELY FROM ITEM NO. 2269 (REVERSE SIGNAL SYSTEM "A"). SEE SPECIAL PROVISIONS AND STATEMENT OF ESTIMATED QUANTITIES.

NUMBER	SIZE (FT.)	LOCATION	STATUS
D1-1	2-6x8	17' & 47'	F & I
D1-2	2-6x8	2' & 32'	F & I
D2-1	6x6	350'	INFLATE
D2-2	6x6	300'	INFLATE
D4-1	6x6	120'	INFLATE
D4-2	6x12	50'	INFLATE
D4-3	3-6x6	51, 101, 151	INFLATE
D4-4	2-6x8	0' & 20'	INFLATE
D4-5	2-6x8	0' & 20'	INFLATE
D4-6	6x6	10'	INFLATE
D5-1	2-6x8	20' & 50'	F & I
D5-2	2-6x8	0' & 30'	F & I
D6-1	6x6	250'	F & I
D6-2	6x6	250'	F & I
D8-1	2-6x8	120'	INFLATE
D8-2	2-6x8	0' & 16'	F & I
D8-3	2-6x8	0' & 16'	F & I
D8-4	6x6	0'	INFLATE
D8-5	6x12	50'	INFLATE

NOTE: LOCATION-DISTANCE FROM CROSSWALK OR STOP BAR TO FRONT OF DETECTOR.

① INFLATE (MAINTAIN INFLATE) - PASS POLE FOUNDATION
 TYPE PA100-A-60-D40-9 (DAWT AT 350 DEG)
 2-ONE WAY SIGNALS-OVERHEAD (0' & 12' FROM END OF MAST ARM)
 1-R-3 SIGN PANEL (FACING POLE 4)
 TYPE D SIGN PANEL-OVERHEAD
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT-OVERHEAD (#8)
 EXTENDED INTO H.H.17:
 2-12/c#14
 1-3/c#12
 1-3/c#20

(REMOVE) - 2-TYPE 10A BRACKETING-POLE MOUNTED AT 0 DEG & 270 DEG
 1-3 SECTION SIGNAL-POLE MOUNTED 0 DEG
 1-R-3 SIGN PANEL (FACING POLE 2)
 INFLATE (S & I) - 1-3 SECTION SIGNAL (0-1)-POLE MOUNTED AT 180 DEG
 F & I - 1-TYPE 10A BRACKETING-POLE MOUNTED 90 DEG (FOR 0-2) (FOR #1, PB-2)
 1-TYPE 10B BRACKETING-POLE MOUNTED 180 DEG
 1-ONE WAY SIGNAL-POLE MOUNTED 90 DEG (0-2)
 OAP OPEN HUS ON 0/270 DEG SIDES OF POLE
 1-SET G.D. PED SIGNALS-POLE MOUNTED 180 DEG (PB-2)
 (*) 1-3/c#14

② INFLATE (S & I) - TYPE PA100-A-60-D40-9 (DAWT AT 350 DEG)
 1-ONE WAY SIGNAL-OVERHEAD AT 24' (P2-2) AND 180 DEG (2-1)
 1-SET G.D. PED SIGNALS-POLE MOUNTED 180 DEG (P2-2)
 LUMINAIRE CHECK SWITCH AT 180 DEG
 2-TYPE D SIGN PANELS-RELOCATE BOTH ON MAST ARM (SEE DETAILS FOR LOCATIONS) (0-5, 0-8)
 (*) ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT-OVERHEAD (RELOCATE FROM 2' TO 0' FROM END OF MAST ARM (#8.1 DETECTOR, #2.5 LIGHT))

(REMOVE) - PA100 POLE FOUNDATION LUMINAIRE-250 W HPS
 1-ONE WAY SIGNAL-OVERHEAD AT 0' (3-SECTION)
 1-TYPE 10A BRACKETING-POLE MOUNTED 90 DEG
 1-TYPE 10B BRACKETING-POLE MOUNTED 270 DEG
 1-R-3 SIGN PANEL (FACING POLE 1)
 EXTENDED INTO H.H.15:
 3'R.S.C.
 2-12/c#12
 3-3/c#12
 1-3/c#20

F & I - PA100 POLE FOUNDATION LUMINAIRE-LED COBRAHEAD
 1-ONE WAY SIGNAL-OVERHEAD AT 0' (0-1)
 1-ONE WAY SIGNAL-OVERHEAD AT 12' (0-2)
 STRAP-ON MID MAST ARM MOUNTS AT 12' AND 24'
 2-TYPE 10B BRACKETING-POLE MOUNTED 90 DEG (4-5, PB-1) AND 180 DEG (2-1, P2-2)
 OAP OPEN HUS ON 270 DEG SIDE OF POLE
 1-SET G.D. PED SIGNALS-POLE MOUNTED 90 DEG (PB-1)
 R10-X12 SIGN PANEL-ADJACENT TO 5-1
 EXTEND INTO H.H.14:
 3'R.S.C.
 3-12/c#14
 (*) 1-3/c#14
 (*) 1-3/c#14 (LUM)
 1-1/c#8 (INS. GR.)

③ INFLATE (MAINTAIN INFLATE) - PA100 POLE FOUNDATION
 TYPE PA100-A-60-D40-9 (DAWT AT 350 DEG)
 2-ONE WAY SIGNALS-OVERHEAD (0' & 12' FROM END OF MAST ARM)
 TYPE 10A-POLE MOUNTED 270 DEG (4-2)
 1-R-3 SIGN PANEL (FACING POLE 4)
 TYPE D SIGN PANEL-OVERHEAD
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT-OVERHEAD (#4)
 EXTENDED INTO H.H.15:
 3'R.S.C.
 2-12/c#14
 1-3/c#12
 1-3/c#20

(REMOVE) - 1-TYPE 10B BRACKETING-POLE MOUNTED 0 DEG
 1-SECTION SIGNAL-POLE MOUNTED 0 DEG
 INFLATE (S & I) - 1-SET G.D. PED SIGNALS-POLE MOUNTED AT 90 DEG (P2-1)
 F & I - 1-TYPE 10B BRACKETING-POLE MOUNTED 90 DEG (FOR 1-3, P2-1)
 1-ONE WAY SIGNAL-POLE MOUNTED 90 DEG (1-2)
 OAP OPEN HUS ON 0 DEG SIDE OF POLE
 2-12/c#14
 1-4/c#14
 (*) 1-3/c#14
 (*) 1-3/c#20

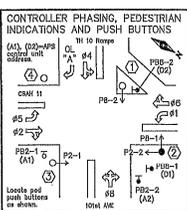
④ INFLATE (MAINTAIN INFLATE) - PA100 POLE FOUNDATION
 TYPE PA100-A-60-D40-9 (DAWT AT 350 DEG)
 3-TYPE 10A-POLE MOUNTED AT 90 DEG (4-1), 180 DEG (0-1), AND 270 DEG (0-4)
 2-R-3 SIGN PANELS (FACING POLES 1 AND 3)
 EXTENDED INTO H.H.15:
 3'R.S.C.
 2-12/c#14
 1-3/c#12
 1-3/c#20 (LUM)
 1-1/c#8 (INS. GR.)

(REMOVE) - LUMINAIRE-250 W HPS
 1-ONE WAY SIGNAL-OVERHEAD AT 0' (3-SECTION)
 INFLATE (S & I) - 1-ONE WAY SIGNAL-OVERHEAD AT 24' (0-2)
 180 DEG (0-1), AND 270 DEG (0-4)
 (*) ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT-OVERHEAD (RELOCATE FROM 2' TO 0' FROM END OF MAST ARM) (#2.5 DETECTOR, #6.1 LIGHT)
 F & I - LUMINAIRE-LED COBRAHEAD
 1-ONE WAY SIGNAL-OVERHEAD AT 0' (1-1)
 1-ONE WAY SIGNAL-OVERHEAD AT 12' (0-3)
 STRAP-ON MID MAST ARM MOUNTS AT 12' AND 24'
 R10-X12 SIGN PANEL-ADJACENT TO 1-1
 1-12/c#14

- SIGNAL FACE STATUS:**
- 1) INFLATE, REUSE INFLATE.
 - 2) INFLATE, SALVAGE & REINSTALL (POLE MTD).
 - 3) INFLATE, SALVAGE & REINSTALL (MAST ARM MOUNTED).
 - 4) FURNISH AND INSTALL.
 - 5) SALVAGE INFLATE 3-SECTION SIGNAL.

FYA = FLASHING YELLOW ARROW.
 O = INFLATE LED LENSES.
 F & I = F & I NEW LED LENSES.

ALL SIGNAL INDICATIONS SHALL BE 12"									
SIGNAL FACE	R	Y	FYA	O	Y	O	STATUS		
1-1, 1-2	○	○	○	○	○	○	4, 5		
2-1	○	○	○	○	○	○	4, 5		
2-2	○	○	○	○	○	○	4, 5		
2-3	○	○	○	○	○	○	4, 5		
4-1, 4-2	○	○	○	○	○	○	1		
4-3	○	○	○	○	○	○	1		
4-4	○	○	○	○	○	○	1		
6-1, 6-2	○	○	○	○	○	○	4, 5		
6-1	○	○	○	○	○	○	1		
6-2	○	○	○	○	○	○	1		
6-3	○	○	○	○	○	○	2		
6-4	○	○	○	○	○	○	2		
8-1	○	○	○	○	○	○	1		
8-2	○	○	○	○	○	○	1		
8-3	○	○	○	○	○	○	1		
8-4	○	○	○	○	○	○	1		



SIGNAL SYSTEM OPERATIONS:

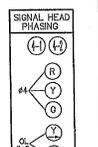
- SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 0 PHASE, WITH PHASES 4 & 8 BEING SEQUENTIAL (SPLIT) PHASING. PHASES 1 & 5 SHALL BE REVERSED FROM PROTECTED LEFT TURN PHASING TO FLASHING YELLOW ARROW (FLASH BY TIME OF DAY).
- 01 "A" = REVERSED OVERLAP PHASE TO ALLOW FOR CONCURRENT RIGHT TURN PHASE WITH NB LEFT TURN PHASE.
- VEHICLE SIGNAL PHASES 2 & 6 OPERATE ON VEHICLE RECALL.

SYSTEM ID = 202210
 TE # = 6085
 MASTER ID = 21996
 METER ADDRESS = W RAMP TH 10/POLEY BLVD

EVP SYSTEM "B" ITEM

⑤ INSTALL - (*) ONE WAY EVP DETECTOR (#2.5) (FURNISHED BY COUNTY)

F & I - (*) PEDESTAL FOUNDATION
 (*) 10' PEDESTAL POLE (INCLUDES BASE, WIND COLLAR)
 (*) MOUNTING HARDWARE FOR EVP DETECTOR (MOUNT ON TOP OF PEDESTAL POLE SPLITTER COLLAR)
 EXTEND INTO H.H.15:
 (*) 2'R.S.C.
 (*) 1-3/c#20



DESIGNED BY: .JMG	DATE: .	REVISIONS:
CHECKED BY: .JMG	DATE: .	
DESIGN TEAM:	NO. BY DATE:	

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY CLOSE SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SEH
 PHOENIX, (651) 485-2000
 800 VANDUSE CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY, MN
 CITY OF COON RAPIDS

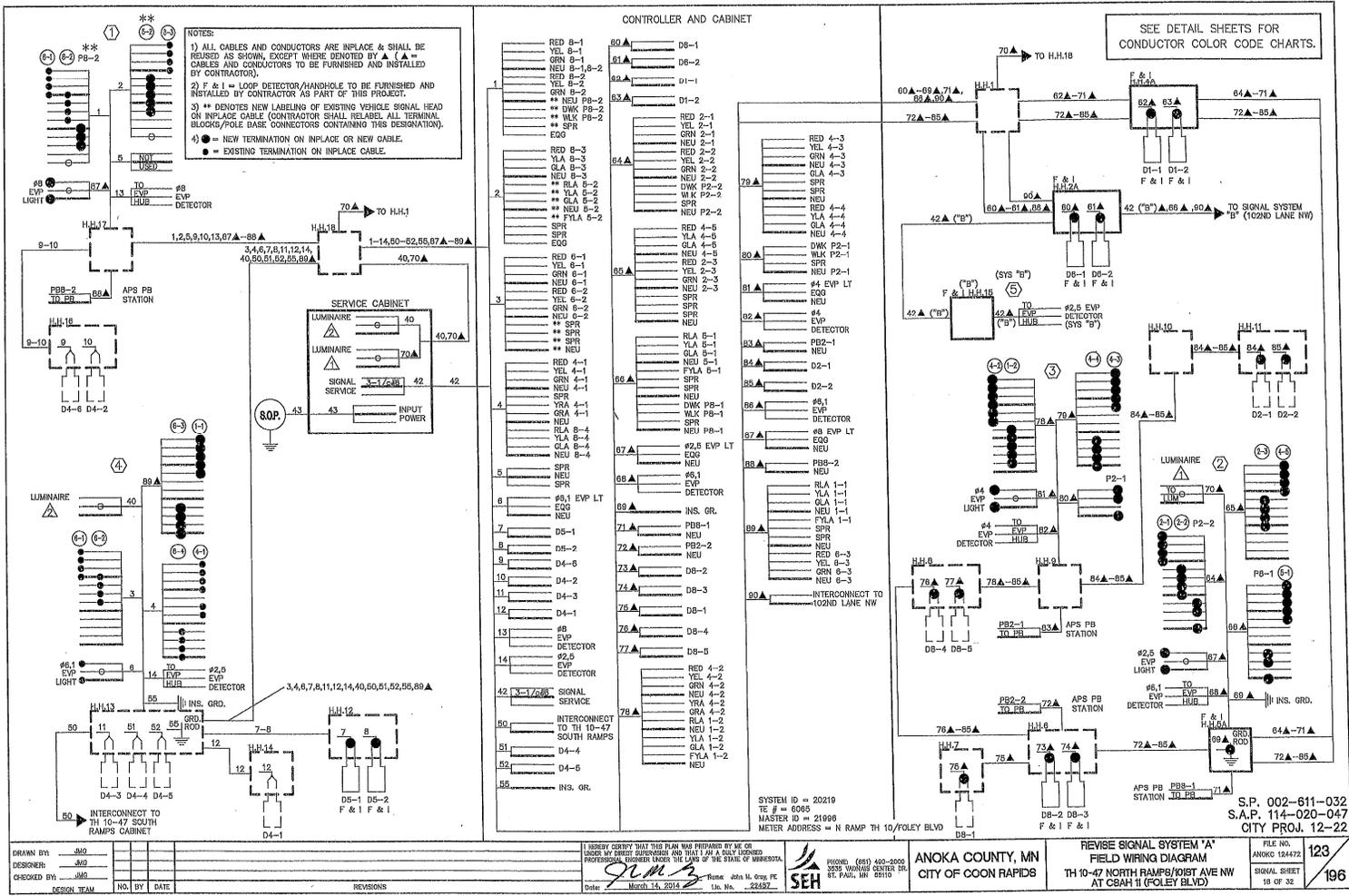
REVISE SIGNAL SYSTEM "A"
 INTERSECTION LAYOUT
 TH 10-47 NORTH RAMPS/TORBIT AVE NW
 AT CSAH 11 (POLEY BLVD)

FILE NO. ANOKA 124472
 SIGNAL SHEET 17 OF 32

S.P. 002-611-032
 S.A.P. 114-020-047
 CITY PROJ. 12-22

122
 196

746



NOTES:
 1) ALL CABLES AND CONDUCTORS ARE INPLACE & SHALL BE REUSED AS SHOWN, EXCEPT WHERE DENOTED BY (▲) CABLES AND CONDUCTORS TO BE FURNISHED AND INSTALLED BY CONTRACTOR.
 2) F & I = LOOP DETECTOR/HANDHOLE TO BE FURNISHED AND INSTALLED BY CONTRACTOR AS PART OF THIS PROJECT.
 3) ** DENOTES NEW LABELING OF EXISTING VEHICLE SIGNAL HEAD ON INPLACE CABLE (CONTRACTOR SHALL RELABEL ALL TERMINAL BLOCKS/POLE BASE CONNECTORS CONTAINING THIS DESIGNATION).
 4) ● = NEW TERMINATION ON INPLACE OR NEW CABLE.
 ○ = EXISTING TERMINATION ON INPLACE CABLE.

CONTROLLER AND CABINET

SEE DETAIL SHEETS FOR CONDUCTOR COLOR CODE CHARTS.

DRAWN BY: JMG 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 FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. Date: March 15, 2015 Signature: [] Title: []	PHONE: (952) 400-2000 3025 WINGATE CENTER DR. ST. PAUL, MN 55110	ANOKA COUNTY, MN CITY OF COON RAPIDS	REVISE SIGNAL SYSTEM 'A' FIELD WIRING DIAGRAM TH 10-47 NORTH RAMP/ROBT AVE NW AT CSBH II (FOLEY BLVD)	FILE NO.: ANOKG 124472 SIGNAL SHEET 18 OF 32	123 196
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