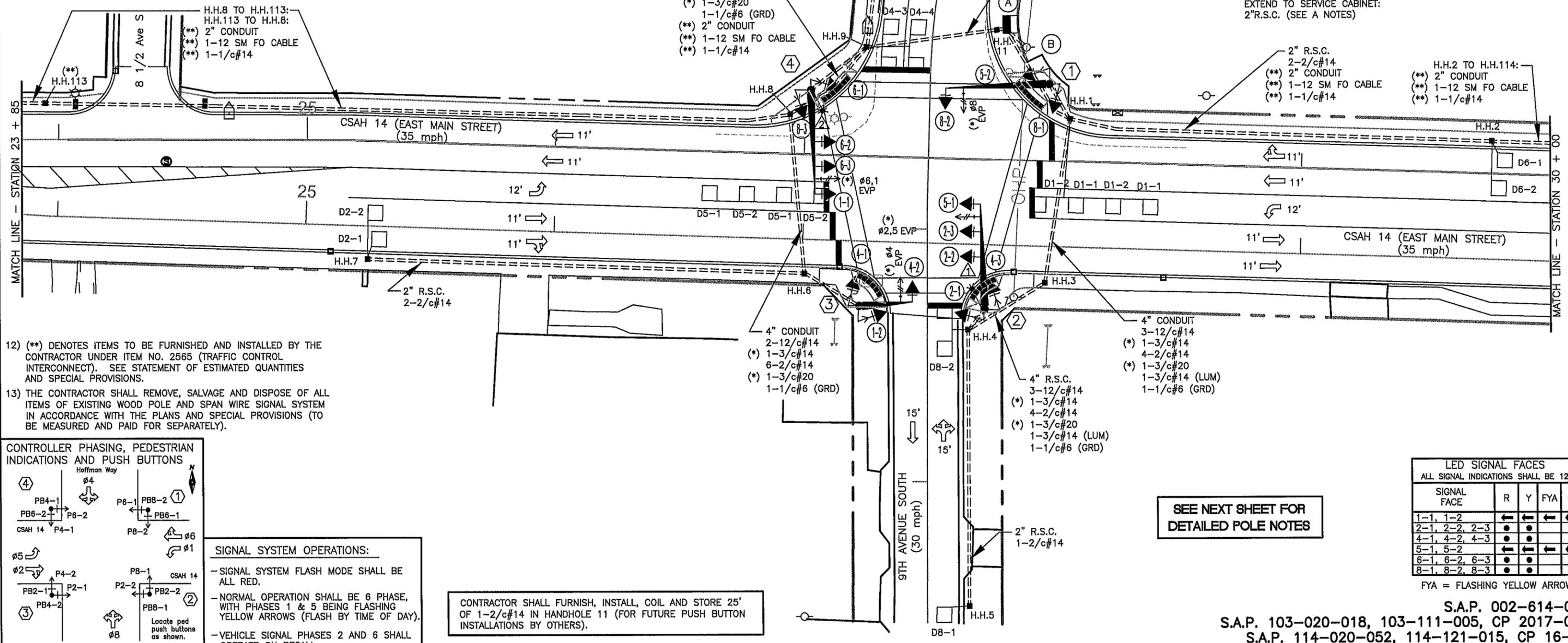
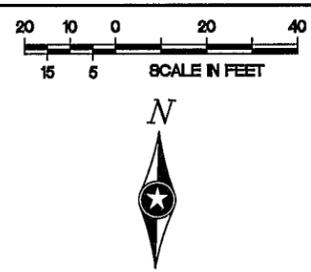


- NOTES:**
- 1) LOCATION OF FOUNDATIONS, LOOP DETECTORS, AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
 - 3) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
 - 4) A 3/4" HALF COUPLING, 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 (CITY OF ANOKA). 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 A").
 - 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) #12 AWG 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 "A"). SEE STATEMENT OF ESTIMATED AND SPECIAL PROVISIONS.

F & I N.M.C. LOOP DETECTORS			
NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D1-1	2-6x6	15' & 45'	1
D1-2	2-6x6	0' & 30'	1
D2-1	6x6	180'	1
D2-2	6x6	180'	1
D4-1	6x6	120'	3,8
D4-2	6x6	120'	3,8
D4-3	2-6x6	0' & 15'	7
D4-4	2-6x6	0' & 15'	7
D5-1	2-6x6	15' & 45'	1
D5-2	2-6x6	0' & 30'	1
D6-1	6x6	180'	1
D6-2	6x6	180'	1
D8-1	6x6	120'	3,8
D8-2	2-6x6	0' & 15'	7

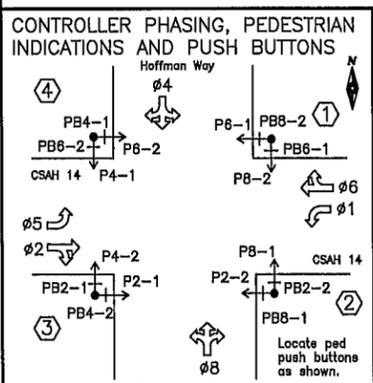
- LOOP DETECTORS FUNCTIONS:**
- 1) CALL AND EXTEND
 - 3) EXTEND ONLY
 - 7) DELAYED CALL, IMMEDIATE EXTEND
 - 8) CARRY OVER (STRETCH)

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. 4" R.S.C.
 2-12/c#14 3-12/c#14
 (*) 1-3/c#14 (*) 1-3/c#14
 6-2/c#14 4-2/c#14
 (*) 1-3/c#20 (*) 1-3/c#20
 1-1/c#6 (GRD)
 CONTROLLER CABINET TO H.H.11:
 4" R.S.C. 4" R.S.C.
 3-12/c#14 2-12/c#14
 (*) 1-3/c#14 (*) 1-3/c#14
 7-2/c#14 6-2/c#14
 (*) 1-3/c#20 (*) 1-3/c#20
 1-1/c#6 (GRD)
- (B) INPLACE WOOD POLE (CITY OF ANOKA (S.O.P.)) - MAY BE RELOCATED BY OTHERS**
 2" R.S.C. RISER AND WEATHERHEAD
 3-1/c#2
 EXTEND TO SERVICE CABINET:
 2" R.S.C. (SEE A NOTES)
- SERVICE CABINET TO H.H.1:**
 1 1/4" R.S.C.
 UNMETERED STREET LIGHT SERVICE
 1-3/c#14 (LUM)
SERVICE CABINET TO H.H.11:
 1 1/4" R.S.C.
 UNMETERED STREET LIGHT SERVICE
 1-3/c#14 (LUM)
SERVICE CABINET TO WOOD POLE:
 2" R.S.C.
 3-1/c#2
STUB OUT 3" R.S.C. FROM CONTROLLER CABINET TO SOUTH (THREAD AND CAP-FOR FUTURE USE)
STUB OUT 1" R.S.C. FROM CONTROLLER CABINET (FOR FUTURE PHONE LINE BY OTHERS)
CONTROLLER CABINET TO H.H.1:
 (**) 2" R.S.C.
 (**) 1-12 SM FIBER-OPTIC CABLE
 (**) 1-1/c#14
CONTROLLER CABINET TO H.H.11:
 (**) 2" R.S.C.
 (**) 1-12 SM FIBER-OPTIC CABLE
 (**) 1-1/c#14

- 12) (**) 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.
- 13) THE CONTRACTOR SHALL REMOVE, SALVAGE AND DISPOSE OF ALL ITEMS OF EXISTING WOOD POLE AND SPAN WIRE SIGNAL SYSTEM IN ACCORDANCE WITH THE PLANS AND SPECIAL PROVISIONS (TO BE MEASURED AND PAID FOR SEPARATELY).



SIGNAL SYSTEM OPERATIONS:

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

CONTRACTOR SHALL FURNISH, INSTALL, COIL AND STORE 25' OF 1-2/c#14 IN HANDHOLE 11 (FOR FUTURE PUSH BUTTON INSTALLATIONS BY OTHERS).

SEE NEXT SHEET FOR DETAILED POLE NOTES

LED SIGNAL FACES				
ALL SIGNAL INDICATIONS SHALL BE 12"				
SIGNAL FACE	R	Y	FYA	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	●	●	●	●

FYA = FLASHING YELLOW ARROW.

S.A.P. 002-614-040
 S.A.P. 103-020-018, 103-111-005, CP 2017-049
 S.A.P. 114-020-052, 114-121-015, CP 16-18

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 DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

John M. Gray
 Name: John M. Gray, PE
 Lic. No. 22457
 Date: June 12, 2017

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

ANOKA COUNTY, MN
 ANOKA, COON RAPIDS

TRAFFIC SIGNAL SYSTEM "A"
 INTERSECTION LAYOUT
 CSAH 14 AT 9TH AVE S/HOFFMAN WAY

FILE NO. ANOKC 141213
 SIGNAL SHEET 12 OF 34
109
159

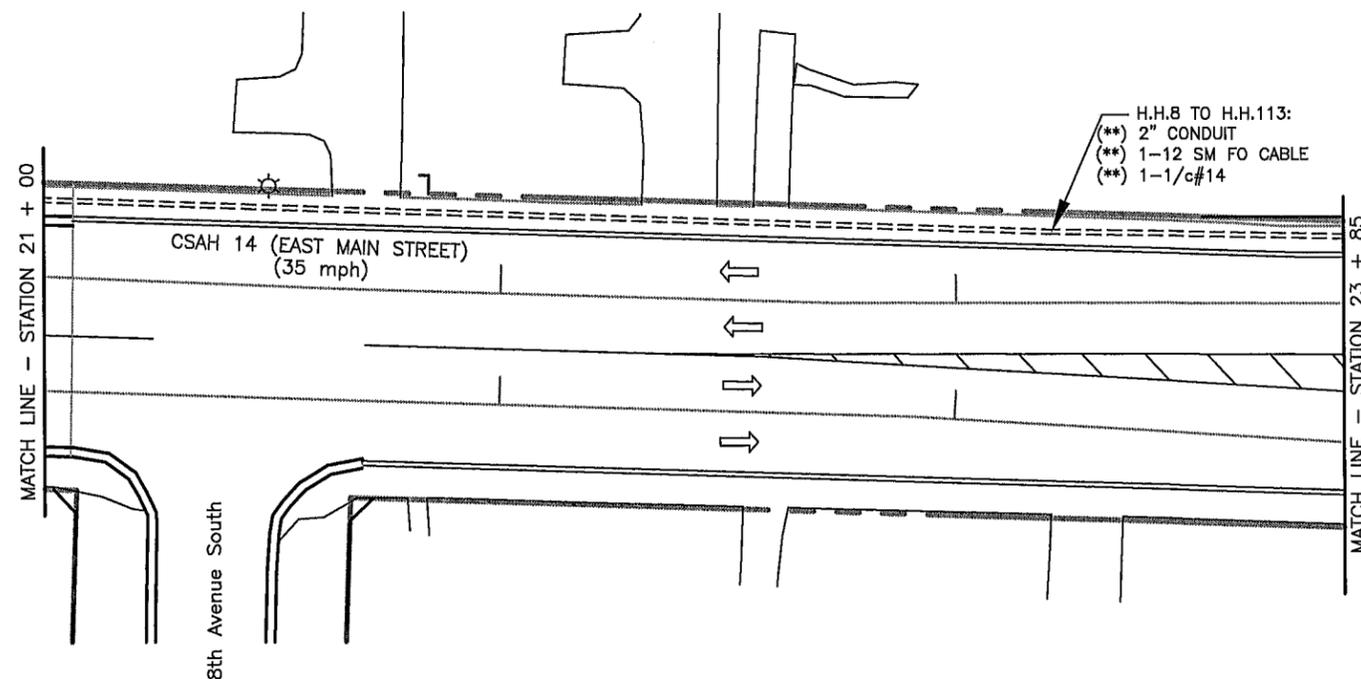
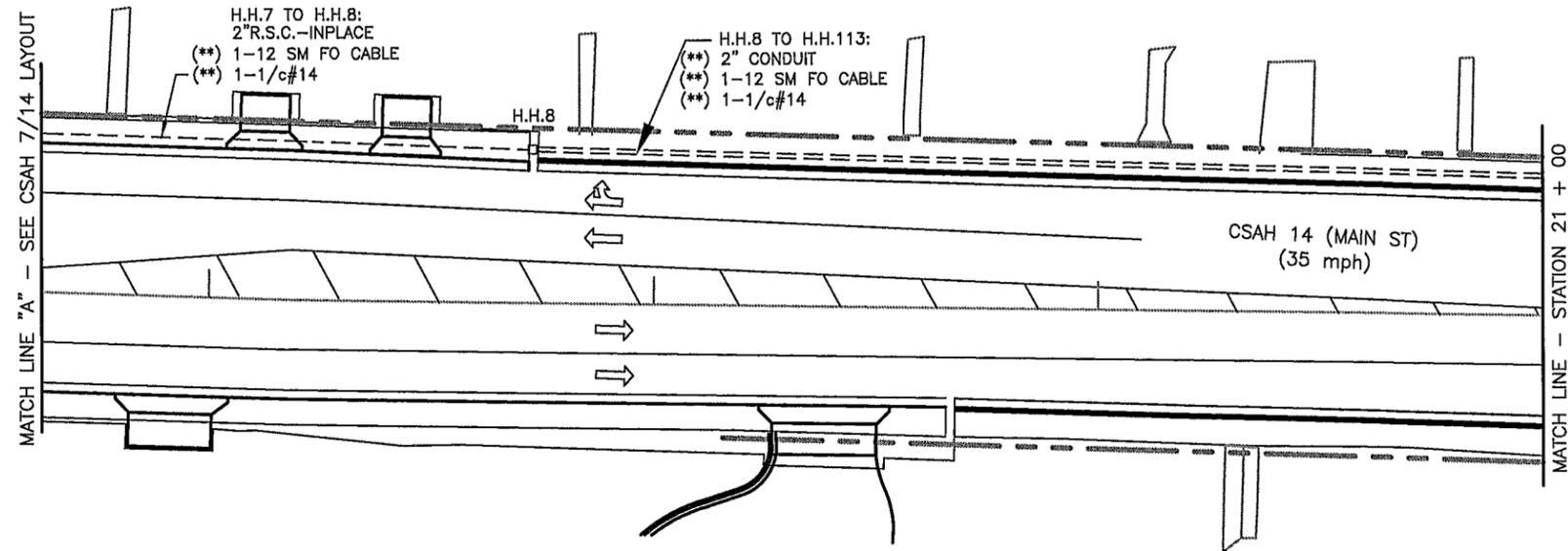


- ① PA100 POLE FOUNDATION
TYPE PA100-A-40
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90 DEG AND 180 DEG
2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90 DEG AND 180 DEG
2-PEDESTRIAN PUSH BUTTONS & SIGNS (R10-3e)
TYPE D SIGN PANEL-OVERHEAD (D-1)
- (*) INSTALL ONE WAY EVP DETECTOR & LED CONFIRMATION LIGHT (FURNISHED BY COUNTY (#8))
- (*) ONE WAY EVP MOUNTING HARDWARE (FOR COUNTY FURNISHED DETECTOR AND CONFIRMATION LIGHT)
EXTEND INTO H.H.1:
3"R.S.C.
2-12/c#14
- (*) 1-3/c#14
2-2/c#14
1-3/c#20
2-1/c#6 (GRD)

- ② PA100 POLE FOUNDATION
TYPE PA100-A-40-D30-9 (DAVIT AT 350 DEG)
LUMINAIRE-LED
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
2-STRAIGHT MOUNT SIGNALS-OVERHEAD AT 10' & 20'
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-2)
- (*) INSTALL ONE WAY EVP DETECTOR & LED CONFIRMATION LIGHT (FURNISHED BY COUNTY (#2,5))
- (*) ONE WAY EVP MOUNTING HARDWARE (FOR COUNTY FURNISHED DETECTOR AND CONFIRMATION LIGHT)
EXTEND INTO H.H.3:
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 PA90 POLE FOUNDATION
TYPE PA90-A-20
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
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)
TYPE D SIGN PANEL-OVERHEAD (D-3)
- (*) INSTALL ONE WAY EVP DETECTOR & LED CONFIRMATION LIGHT (FURNISHED BY COUNTY (#4))
- (*) ONE WAY EVP MOUNTING HARDWARE (FOR COUNTY FURNISHED DETECTOR AND CONFIRMATION LIGHT)
EXTEND INTO H.H.6:
3"R.S.C.
2-12/c#14
- (*) 1-3/c#14
2-2/c#14
1-3/c#20
1-1/c#6 (GRD)

- ④ PA100 POLE FOUNDATION
TYPE PA100-A-40-D30-9 (DAVIT AT 350 DEG)
LUMINAIRE-LED
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
2-STRAIGHT MOUNT SIGNALS-OVERHEAD AT 10' & 20'
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-4)
- (*) INSTALL ONE WAY EVP DETECTOR & LED CONFIRMATION LIGHT (FURNISHED BY COUNTY (#6,1))
- (*) 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)
2-1/c#6 (GRD)



S.A.P. 002-614-040
S.A.P. 103-020-018, 103-111-005, CP 2017-049
S.A.P. 114-020-052, 114-121-015, CP 16-18

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

NO.	BY	DATE	REVISIONS

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John M. Gray
Name: John M. Gray, PE
Date: June 12, 2017 Lic. No. 22457

SEH
PHONE: (651) 490-2000
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ST. PAUL, MN 55110

ANOKA COUNTY, MN
ANOKA, COON RAPIDS

TRAFFIC SIGNAL SYSTEM 'A'
INTERSECTION LAYOUT
CSAH 14 AT 9TH AVE S/HOFFMAN WAY

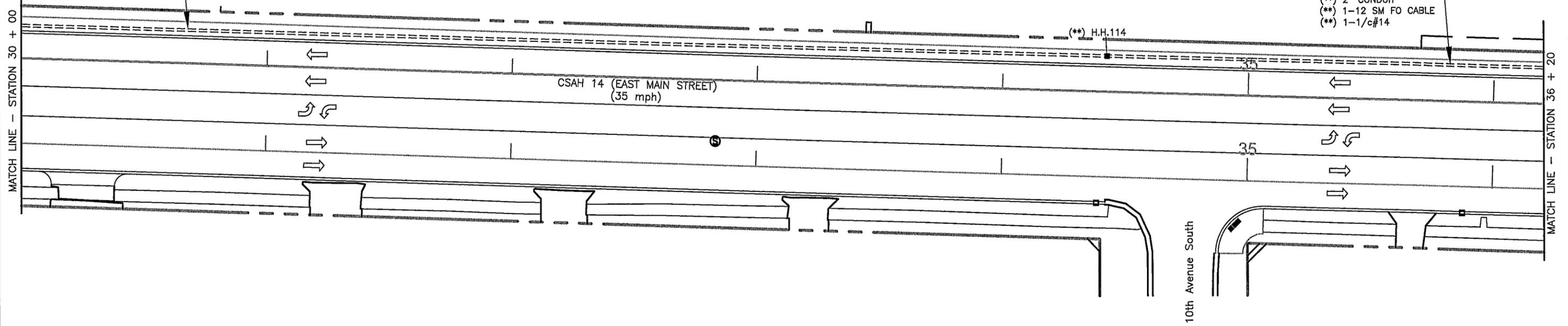
FILE NO.
ANOKC 141213
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13 OF 34

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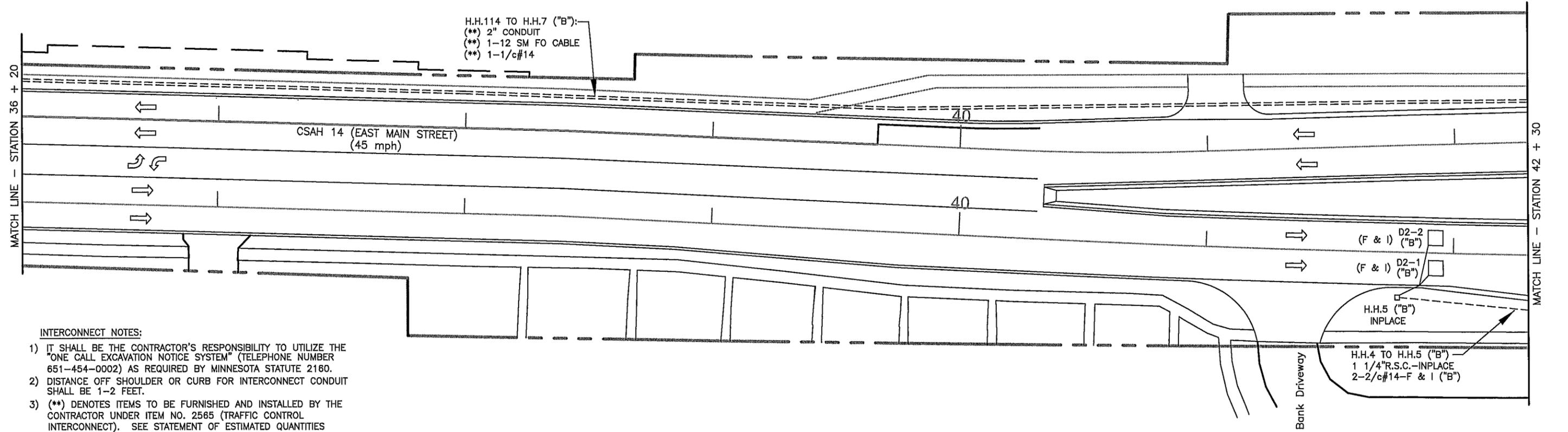


H.H.2 ("A") TO H.H.114:
 (**) 2" CONDUIT
 (**) 1-12 SM FO CABLE
 (**) 1-1/c#14

H.H.114 TO H.H.7 ("B"):
 (**) 2" CONDUIT
 (**) 1-12 SM FO CABLE
 (**) 1-1/c#14



H.H.114 TO H.H.7 ("B"):
 (**) 2" CONDUIT
 (**) 1-12 SM FO CABLE
 (**) 1-1/c#14



INTERCONNECT NOTES:

- 1) 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.
- 2) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE 1-2 FEET.
- 3) (**) 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.
- 4) NEW HANDHOLES TO BE FURNISHED AND INSTALLED BY CONTRACTOR SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
- 5) (F & I) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR AS PART OF THIS PROJECT.
- 6) ITEMS DENOTED BY "B" SHALL BE INCLUDED AS PART OF THE PAY ITEM FOR ITEM NO. 2565 (REVISE SIGNAL SYSTEM "B").

S.A.P. 002-614-040
 S.A.P. 103-020-018, 103-111-005, CP 2017-049
 S.A.P. 114-020-052, 114-121-015, CP 16-18

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 Date: June 12, 2017 Lic. No. 22457

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ANOKA COUNTY, MN
 ANOKA, COON RAPIDS

INTERCONNECT/REVISE SYSTEM 'B'
 INTERSECTION LAYOUT
 CSAH 14 (9TH AVE TO WEDGEWOOD DR)

FILE NO.
 ANOKC 141213
 SIGNAL SHEET
 17 OF 34

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