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10/21/2015  
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sg12

- 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, AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED 6 FEET FROM THE 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 B").
  - 7) EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION FILLED COUNTDOWN TIMER "HAND/WALKING PERSON" INDICATION.
  - 8) ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED.
  - 9) EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.

- 10) SEE DETAILS, SPECIAL PROVISIONS, AND 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).
- 11) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS.
- 12) (\*) DENOTES ITEMS TO BE INCLUDED AS PART OF THE PAY ITEM FOR ITEM NO. 2565 (EMERGENCY VEHICLE PREEMPTION SYSTEM "B"). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 13) (\*\*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.

- 2) PA90 POLE FOUNDATION  
TYPE PA90-A-30  
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0°  
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 0 DEG/270 DEG  
1-R9-3 SIGN PANEL-FACING POLE 3  
TYPE D SIGN PANEL-OVERHEAD (D-2)  
(\*) INSTALL ONE WAY EVP DETECTOR AND LED CONFIRMATION LIGHT (FURNISHED BY COUNTY) (ø8)  
(\*) ONE WAY EVP MOUNTING BRACKET (ø8)  
EXTEND INTO H.H.2:  
3"R.S.C.  
1-12/c#14  
1-4/c#14  
1-1/c#6 (INS.GR.)

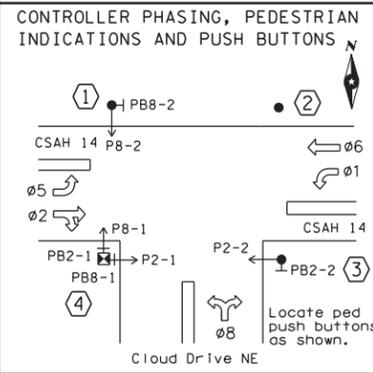
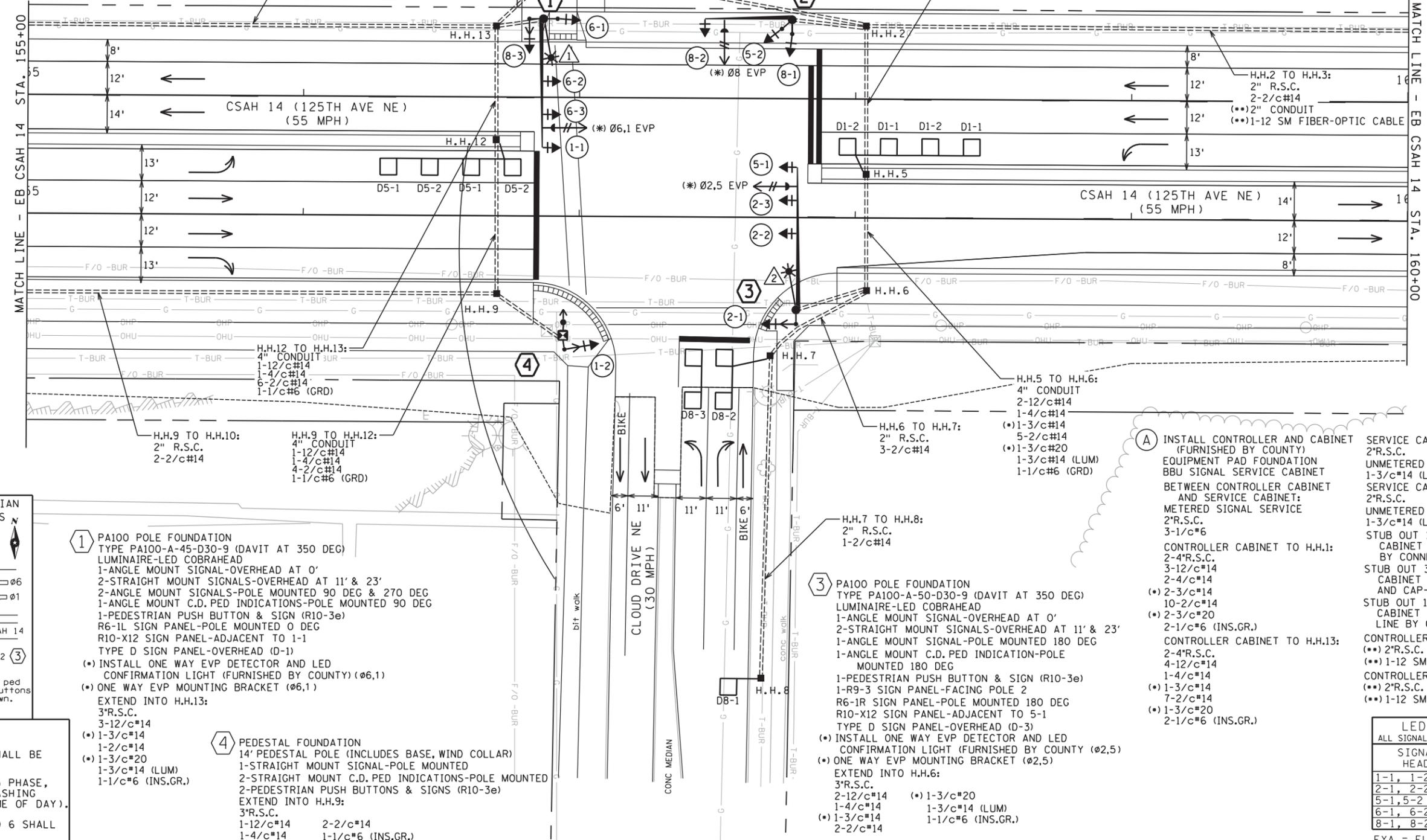
F & I PVC LOOP DETECTORS			
NUMBER	SIZE (FT)	LOCATION	FUNCTION
D1-1	2-6x6	20' & 50'	1
D1-2	2-6x6	5' & 35'	1
D2-1	6x6	475'	1
D2-2	6x6	475'	1
D5-1	2-6x6	20' & 50'	1
D5-2	2-6x6	5' & 35'	1
D6-1	6x6	475'	1
D6-2	6x6	475'	1
D8-1	6x6	120'	3,8
D8-2	2-6x6	5' & 20'	7
D8-3	2-6x6	5' & 20'	7

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

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



(B) WOOD POLE (S.O.P.)-TO BE PROVIDED BY CONNEXUS ENERGY



**SIGNAL SYSTEM OPERATIONS:**

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

- 1) PA100 POLE FOUNDATION  
TYPE PA100-A-45-D30-9 (DAVIT AT 350 DEG)  
LUMINAIRE-LED COBRAHEAD  
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0°  
2-STRAIGHT MOUNT SIGNALS-OVERHEAD AT 11° & 23°  
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90 DEG & 270 DEG  
1-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90 DEG  
1-PEDESTRIAN PUSH BUTTON & SIGN (R10-3e)  
R6-1L SIGN PANEL-POLE MOUNTED 0 DEG  
R10-X12 SIGN PANEL-ADJACENT TO 1-1  
TYPE D SIGN PANEL-OVERHEAD (D-1)  
(\*) INSTALL ONE WAY EVP DETECTOR AND LED CONFIRMATION LIGHT (FURNISHED BY COUNTY) (ø6,1)  
(\*) ONE WAY EVP MOUNTING BRACKET (ø6,1)  
EXTEND INTO H.H.13:  
3"R.S.C.  
3-12/c#14  
(\*) 1-3/c#14  
1-2/c#14  
(\*) 1-3/c#20  
1-3/c#14 (LUM)  
1-1/c#6 (INS.GR.)

- 4) PEDESTAL FOUNDATION  
14' PEDESTAL POLE (INCLUDES BASE, WIND COLLAR)  
1-STRAIGHT MOUNT SIGNAL-POLE MOUNTED  
2-STRAIGHT MOUNT C.D. PED INDICATIONS-POLE MOUNTED  
2-PEDESTRIAN PUSH BUTTONS & SIGNS (R10-3e)  
EXTEND INTO H.H.9:  
3"R.S.C.  
1-12/c#14  
2-2/c#14  
1-4/c#14  
1-1/c#6 (INS.GR.)

- 3) PA100 POLE FOUNDATION  
TYPE PA100-A-50-D30-9 (DAVIT AT 350 DEG)  
LUMINAIRE-LED COBRAHEAD  
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0°  
2-STRAIGHT MOUNT SIGNALS-OVERHEAD AT 11° & 23°  
1-ANGLE MOUNT SIGNAL-POLE MOUNTED 180 DEG  
1-ANGLE MOUNT C.D. PED INDICATION-POLE MOUNTED 180 DEG  
1-PEDESTRIAN PUSH BUTTON & SIGN (R10-3e)  
1-R9-3 SIGN PANEL-FACING POLE 2  
R6-1R SIGN PANEL-POLE MOUNTED 180 DEG  
R10-X12 SIGN PANEL-ADJACENT TO 5-1  
TYPE D SIGN PANEL-OVERHEAD (D-3)  
(\*) INSTALL ONE WAY EVP DETECTOR AND LED CONFIRMATION LIGHT (FURNISHED BY COUNTY) (ø2,5)  
(\*) ONE WAY EVP MOUNTING BRACKET (ø2,5)  
EXTEND INTO H.H.6:  
3"R.S.C.  
2-12/c#14  
1-4/c#14  
1-3/c#14 (LUM)  
(\*) 1-3/c#14  
2-2/c#14

- (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:  
2-4"R.S.C.  
3-12/c#14  
2-4/c#14  
(\*) 2-3/c#14  
(\*) 10-2/c#14  
(\*) 2-3/c#20  
2-1/c#6 (INS.GR.)  
CONTROLLER CABINET TO H.H.13:  
2-4"R.S.C.  
4-12/c#14  
(\*) 1-3/c#14  
(\*) 1-3/c#14  
(\*) 7-2/c#14  
(\*) 1-3/c#20  
2-1/c#6 (INS.GR.)
- SERVICE CABINET TO H.H.1:  
2"R.S.C.  
UNMETERED STREET LIGHT SERVICE  
1-3/c#14 (LUM)  
SERVICE CABINET TO H.H.13:  
2"R.S.C.  
UNMETERED STREET LIGHT SERVICE  
1-3/c#14 (LUM)  
STUB OUT 1-2"R.S.C. FROM SERVICE CABINET (FOR POWER CABLES BY CONNEXUS ENERGY)  
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  
CONTROLLER CABINET TO H.H.13:  
(\*\*) 2"R.S.C.  
(\*\*) 1-12 SM FIBER-OPTIC CABLE

**LED SIGNAL HEADS**  
ALL SIGNAL INDICATIONS SHALL BE 12"

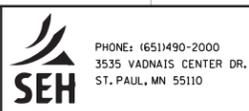
SIGNAL HEAD	R	Y	FYA	G
1-1, 1-2	◀	◀	◀	▶
2-1, 2-2, 2-3	◀	◀	◀	▶
5-1, 5-2	◀	◀	◀	▶
6-1, 6-2, 6-3	◀	◀	◀	▶
8-1, 8-2, 8-3	◀	◀	◀	▶

FYA = FLASHING YELLOW ARROW.

DESIGN TEAM			
DRAWN BY:	BDY		
DESIGNER:	JMG		
CHECKED BY:	JEO		
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, PE* Lic. No. 22457  
Printed Name: JOHN M. GRAY, PE Date: 10/21/2015



CITY OF BLAINE, MN.  
**CSAH 14**  
S.A.P. 002-614-039, S.A.P. 106-020-032,  
S.A.P. 106-137-001

**TRAFFIC SIGNAL SYSTEM "B"**  
**INTERSECTION LAYOUT**  
CSAH 14 (125TH AVE NE) AT CLOUD DRIVE NE

FILE NO. 143  
126669  
SG12 OF SG25  
196

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sg10

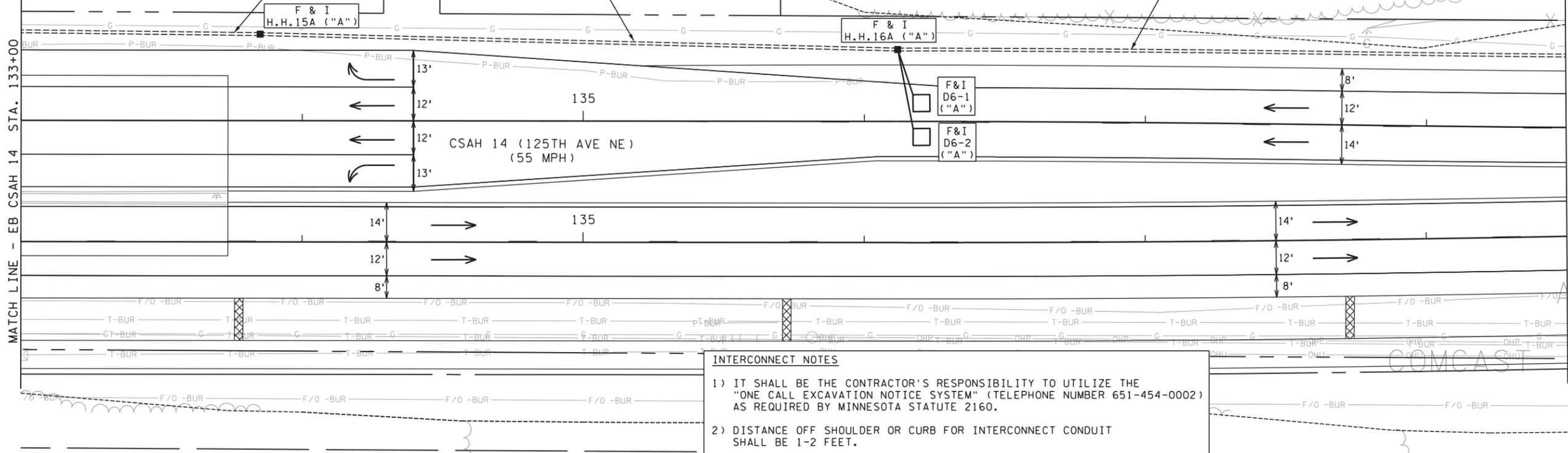
H.H.14 TO EAST:  
INPLACE CONDUIT - REMOVE ("A")  
1-2/c#14 - INPLACE - REMOVE ("A")

H.H.14 TO H.H.15A:  
H.H.15A TO H.H.16A:  
2-2/c#14 - F&I ("A")  
(\*\*) 2' CONDUIT - F&I  
(\*\*) 1-12 SM FIBER-OPTIC CABLE - F&I

H.H.16A TO H.H.50:  
(\*\*) 2' CONDUIT - F&I  
(\*\*) 1-12 SM FIBER-OPTIC CABLE - F&I  
(\*\*) 1-1/c#14 (TRACER) - F&I

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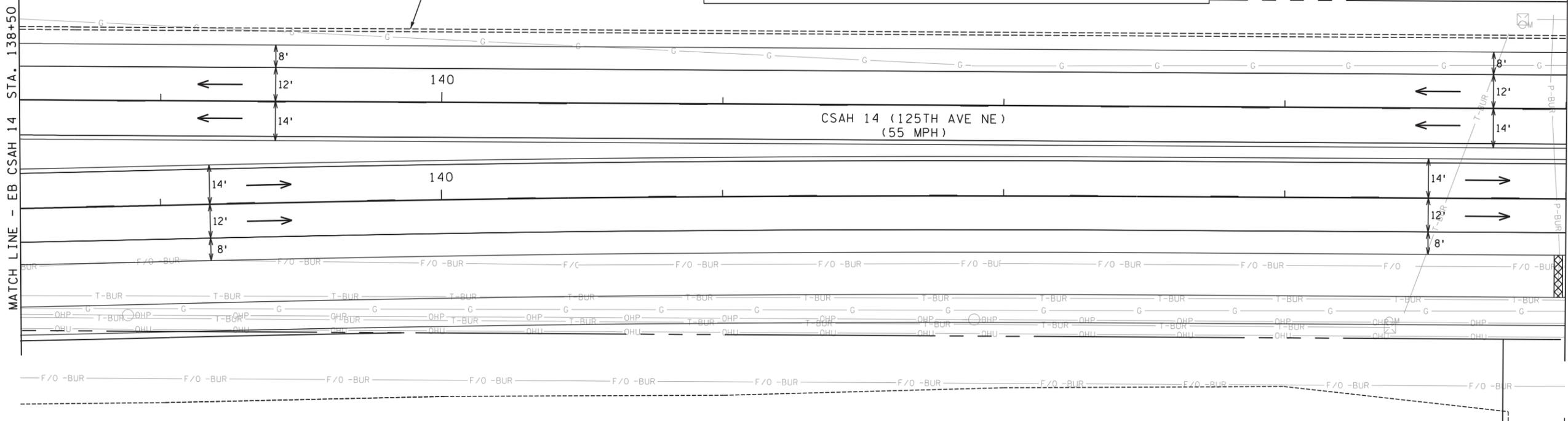
**INTERCONNECT NOTES**

- 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 INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
- 5) ITEMS DENOTED BY "A" SHALL BE INCLUDED AS PART OF PAY ITEM FOR "REVISE SIGNAL SYSTEM "A"". SEE SPECIAL PROVISIONS.
- 6) F&I = MATERIALS TO BE FURNISHED & INSTALLED BY CONTRACTOR.

H.H.16A TO H.H.50:  
(\*\*) 2' CONDUIT - F&I  
(\*\*) 1-12 SM FIBER-OPTIC CABLE - F&I  
(\*\*) 1-1/c#14 (TRACER) - F&I

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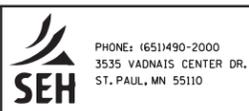
SCALE IN FEET



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

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Printed Name: JOHN M. GRAY, PE Date: 10/21/2015

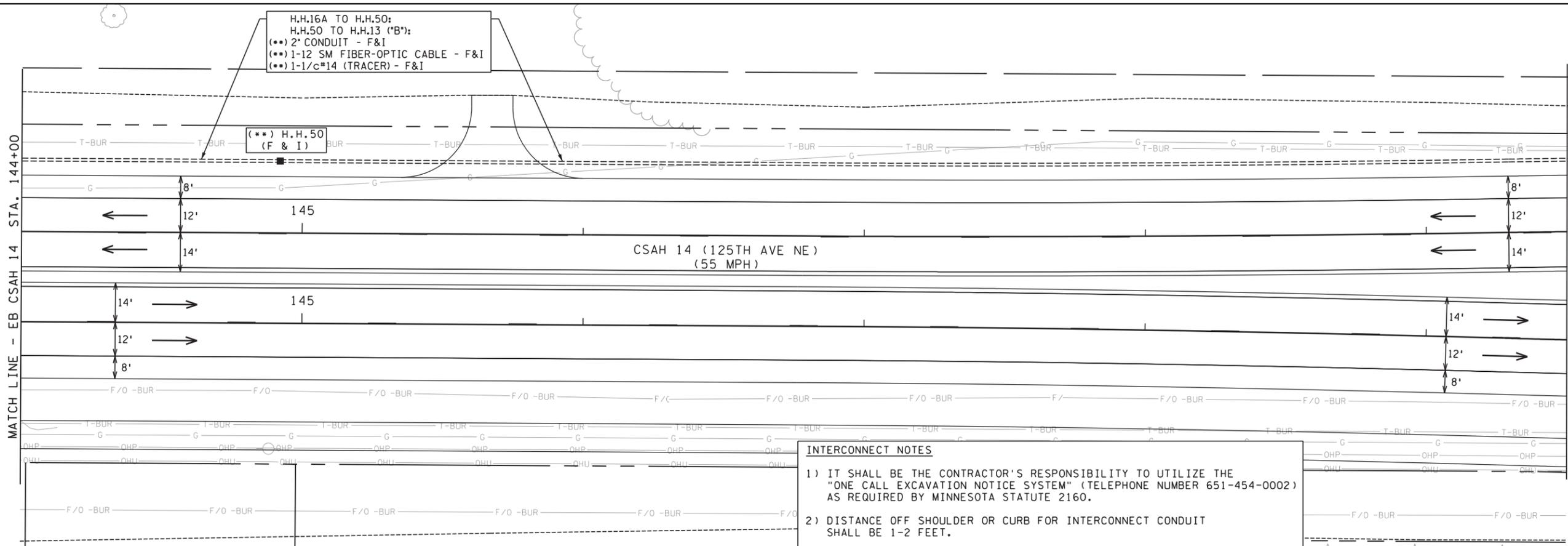


CITY OF BLAINE, MN.  
**CSAH 14**  
S.A.P. 002-614-039, S.A.P. 106-020-032,  
S.A.P. 106-137-001

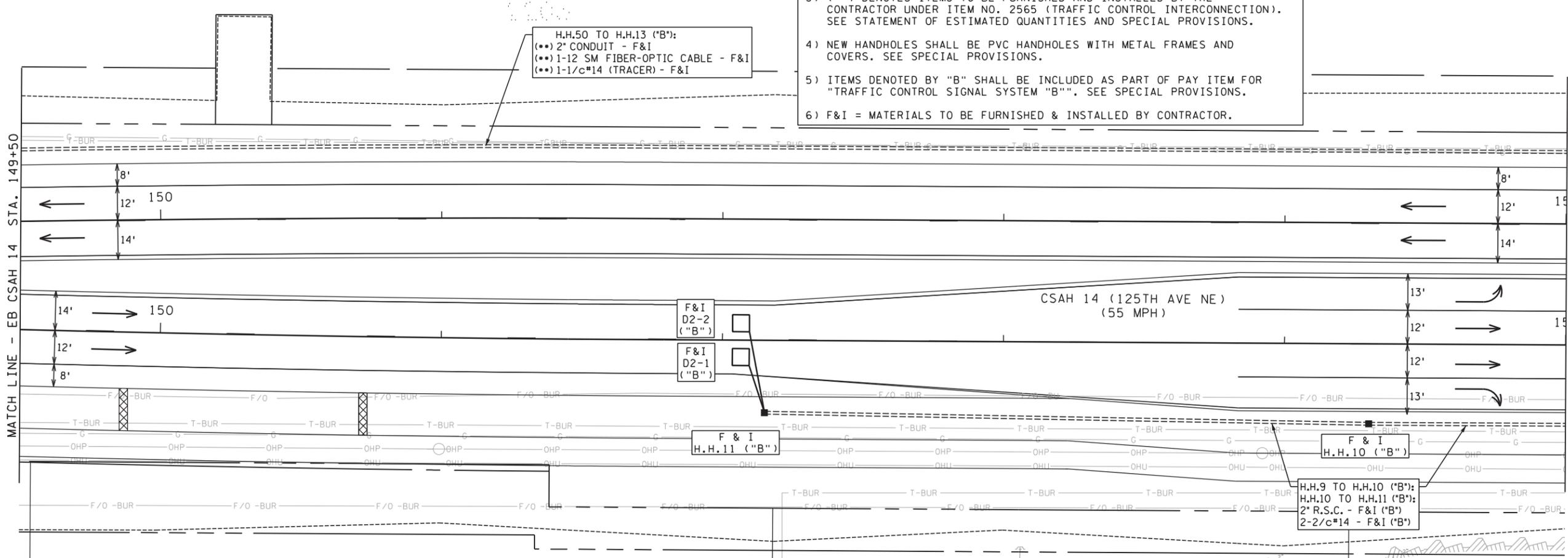
**REVISE SIGNAL SYSTEM "A" / INTERCONNECT INTERSECTION LAYOUT**  
CSAH 14 (125TH AVE NE) - CSAH 52 TO CLOUD DRIVE

FILE NO. 141  
126669  
SG10 OF SG25  
196

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sg1



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SCALE IN FEET



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SCALE IN FEET

**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 INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
- 5) ITEMS DENOTED BY "B" SHALL BE INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM "B"". SEE SPECIAL PROVISIONS.
- 6) F&I = MATERIALS TO BE FURNISHED & INSTALLED BY CONTRACTOR.

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

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Certified By: *John M. Gray* Lic. No. 22457  
Printed Name: JOHN M. GRAY, PE Date: 10/21/2015

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

CITY OF BLAINE, MN.  
**CSAH 14**  
S.A.P. 002-614-039, S.A.P. 106-020-032,  
S.A.P. 106-137-001

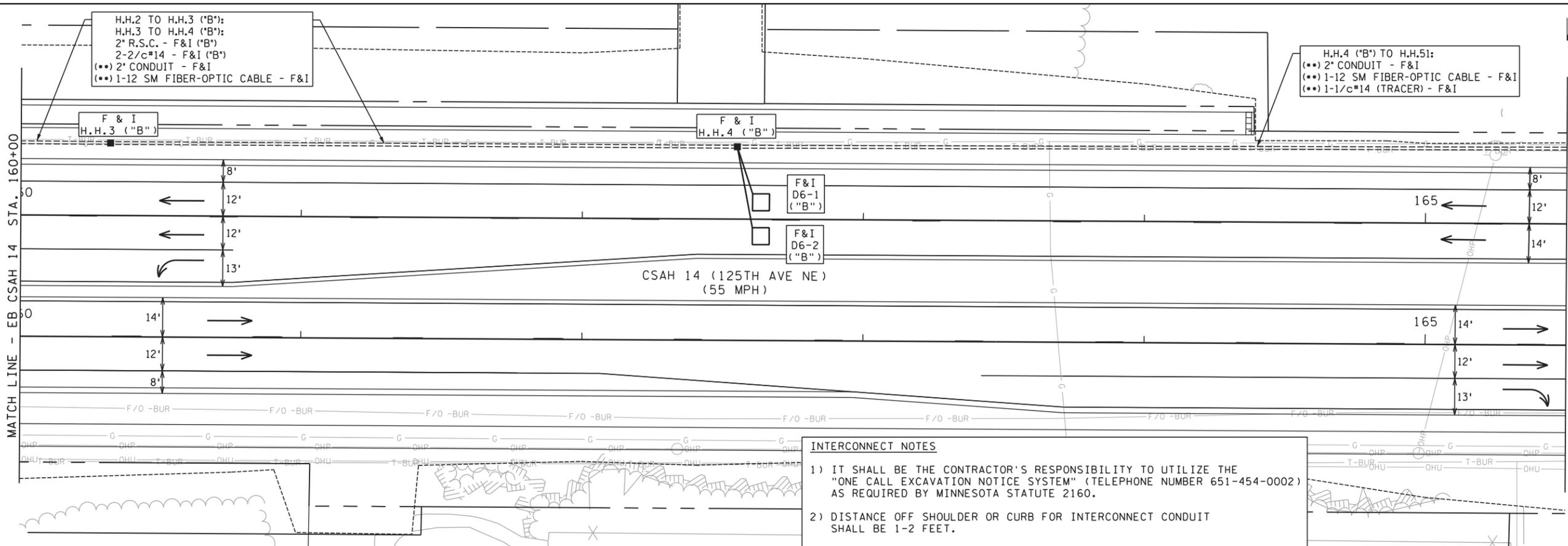
**SIGNAL SYSTEM "B"/INTERCONNECT INTERSECTION LAYOUT**  
CSAH 14 (125TH AVE NE) - CSAH 52 TO CLOUD DRIVE

FILE NO. 126669	142
SG11 OF SG25	196

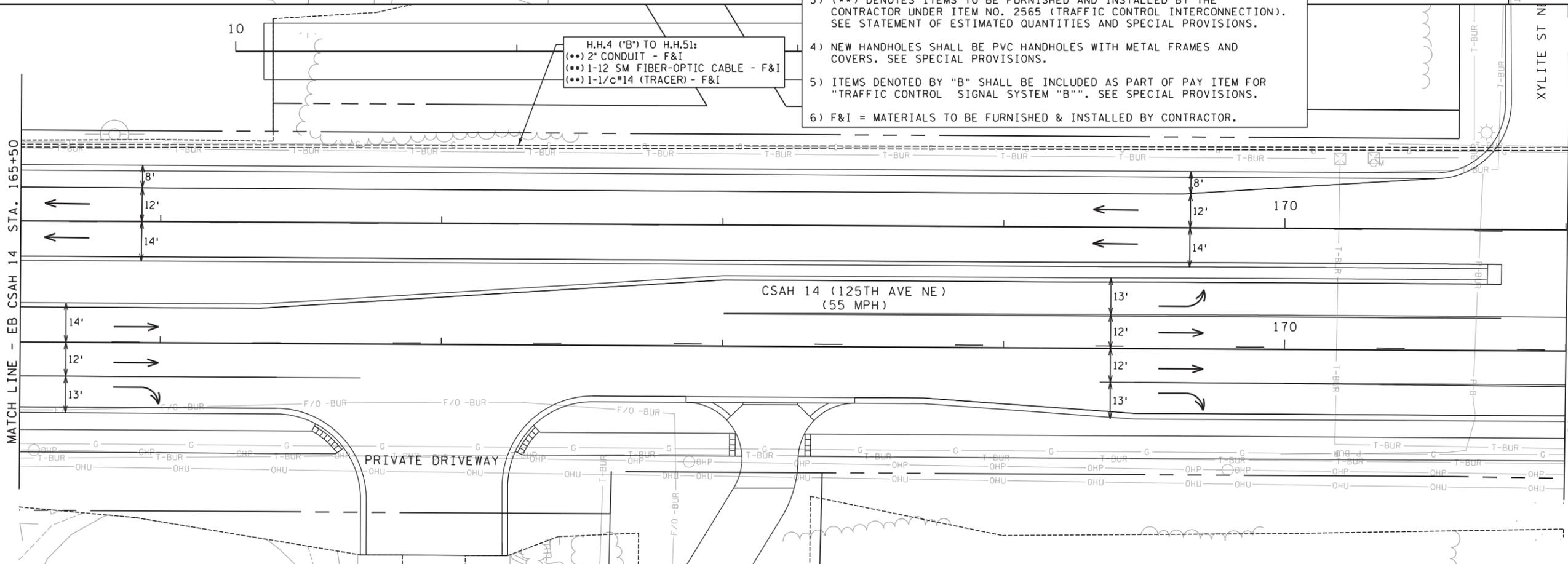
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10/21/2015

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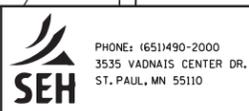
**INTERCONNECT NOTES**

- 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 INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
- 5) ITEMS DENOTED BY "B" SHALL BE INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM "B"". SEE SPECIAL PROVISIONS.
- 6) F&I = MATERIALS TO BE FURNISHED & INSTALLED BY CONTRACTOR.

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DESIGNER:	JMG		
CHECKED BY:	JEO		
NO.	BY	DATE	REVISIONS

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 Printed Name: JOHN M. GRAY, PE Date: 10/21/2015



CITY OF BLAINE, MN.  
**CSAH 14**  
 S.A.P. 002-614-039, S.A.P. 106-020-032,  
 S.A.P. 106-137-001

**SIGNAL SYSTEM "B"/INTERCONNECT INTERSECTION LAYOUT**  
 CSAH 14 (125TH AVE NE) - CLOUD DR TO HARPERS ST NE

FILE NO. 145  
 126669  
 SG14 OF SG25  
 196

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10/21/2015

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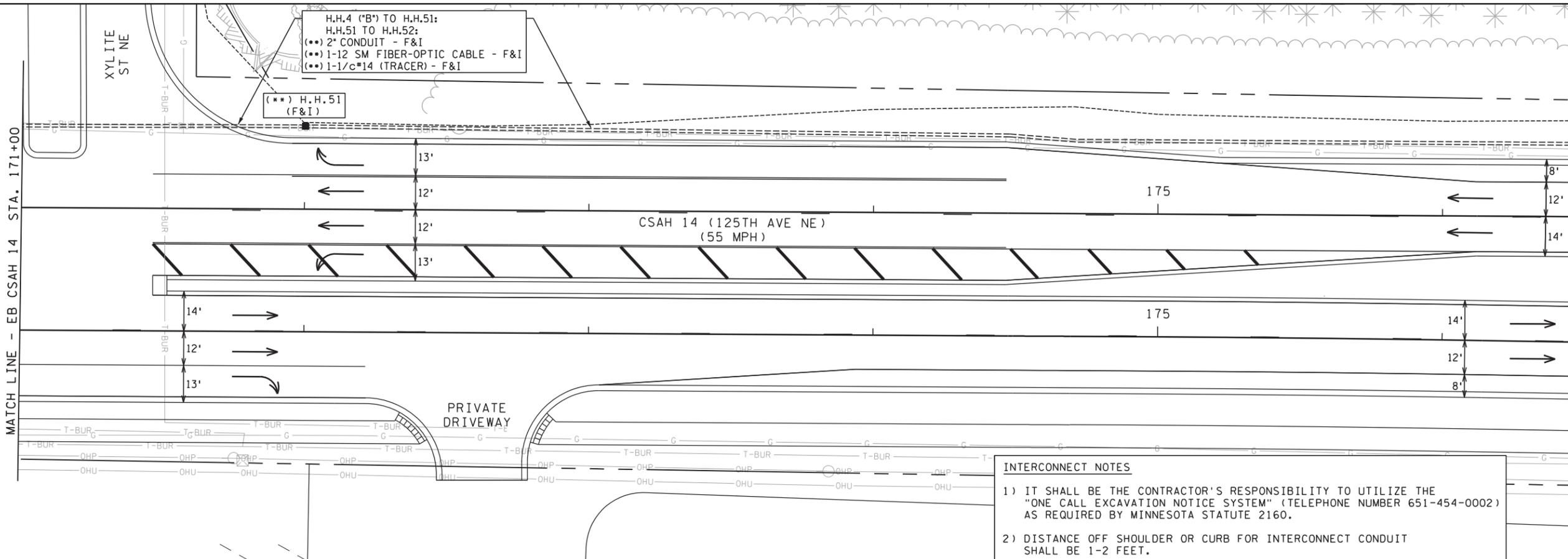
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SCALE IN FEET



MATCH LINE - EB CSAH 14 STA. 171+00

MATCH LINE - EB CSAH 14 STA. 176+50



H.H.4 ("B") TO H.H.51:  
 H.H.51 TO H.H.52:  
 (\*\*\*) 2" CONDUIT - F&I  
 (\*\*\*) 1-12 SM FIBER-OPTIC CABLE - F&I  
 (\*\*\*) 1-1/2" C\*14 (TRACER) - F&I

(\*\*\*) H.H. 51  
 (F&I)

**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 INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
- 5) F&I = MATERIALS TO BE FURNISHED & INSTALLED BY CONTRACTOR.

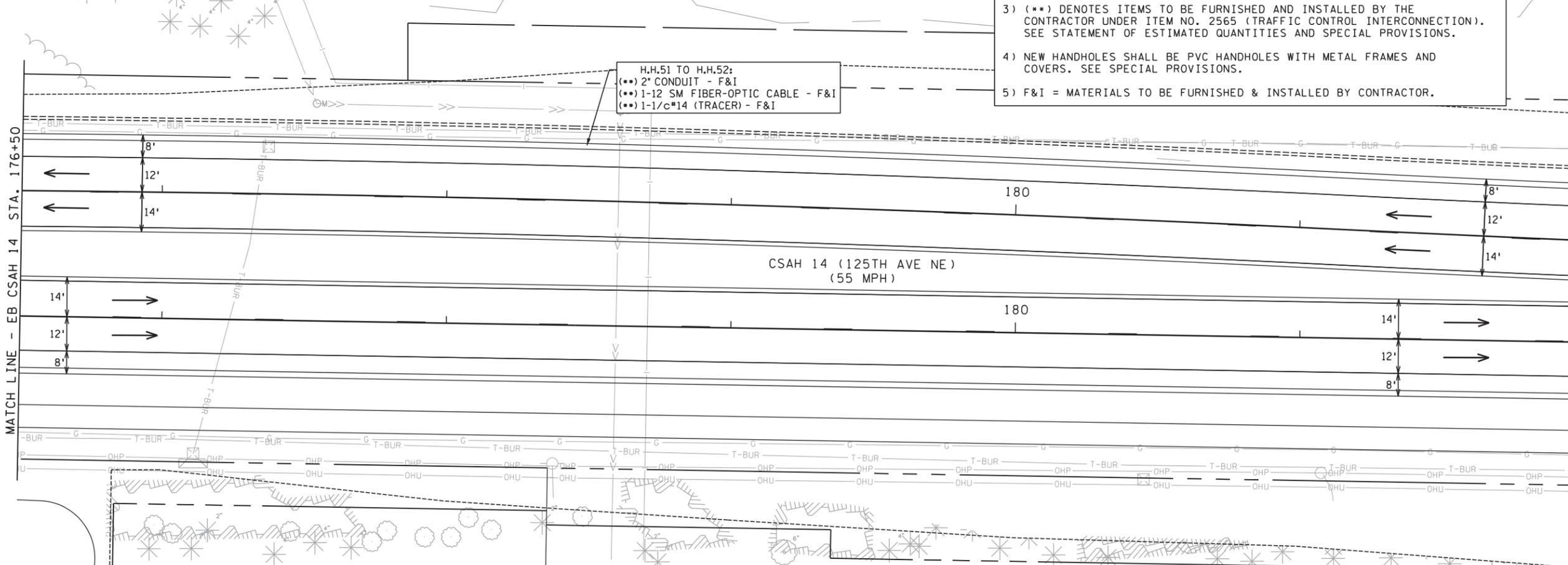
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SCALE IN FEET



MATCH LINE - EB CSAH 14 STA. 176+50

MATCH LINE - EB CSAH 14 STA. 182+00



H.H.51 TO H.H.52:  
 (\*\*\*) 2" CONDUIT - F&I  
 (\*\*\*) 1-12 SM FIBER-OPTIC CABLE - F&I  
 (\*\*\*) 1-1/2" C\*14 (TRACER) - F&I

DESIGN TEAM			
DRAWN BY:	BDY		
DESIGNER:	JMG		
CHECKED BY:	JEO		
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, PE Date: 10/21/2015

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

CITY OF BLAINE, MN.  
**CSAH 14**  
 S.A.P. 002-614-039, S.A.P. 106-020-032,  
 S.A.P. 106-137-001

**TRAFFIC SIGNAL INTERCONNECT  
 INTERSECTION LAYOUT**  
 CSAH 14 (125TH AVE NE) - CLOUD DR TO HARPERS ST NE

FILE NO. 146  
 126669  
**SG15**  
 OF SG25  
 196

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10/21/2015

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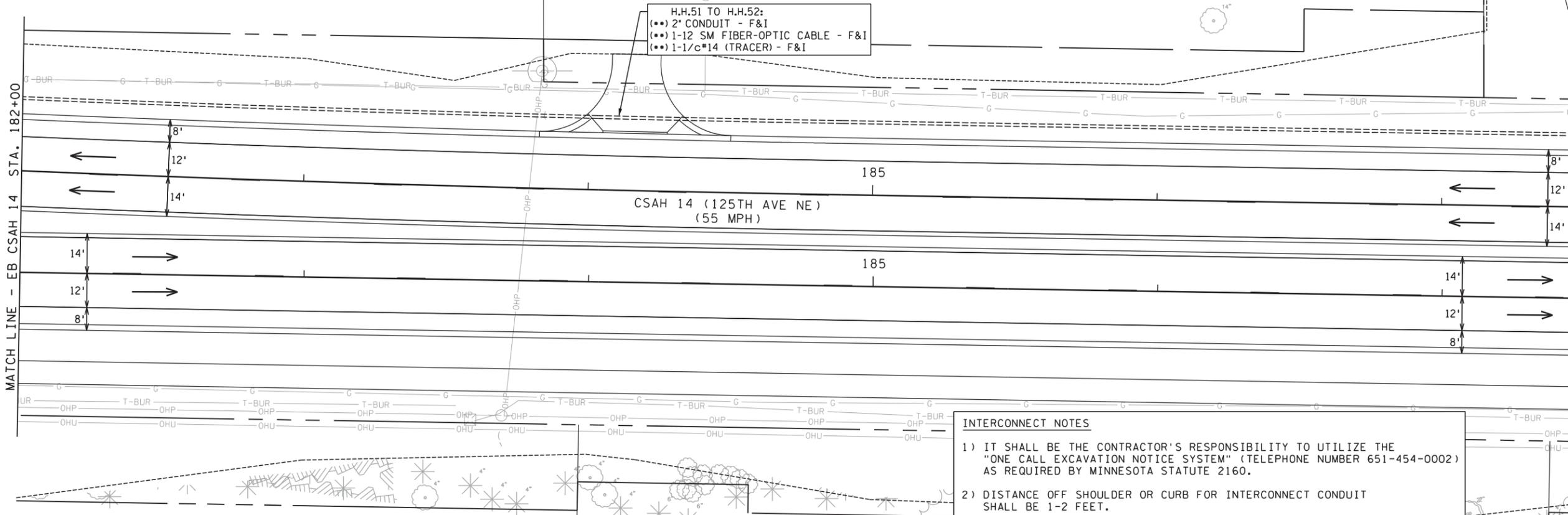
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SCALE IN FEET



MATCH LINE - EB CSAH 14 STA. 182+00

MATCH LINE - EB CSAH 14 STA. 187+50



**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 INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
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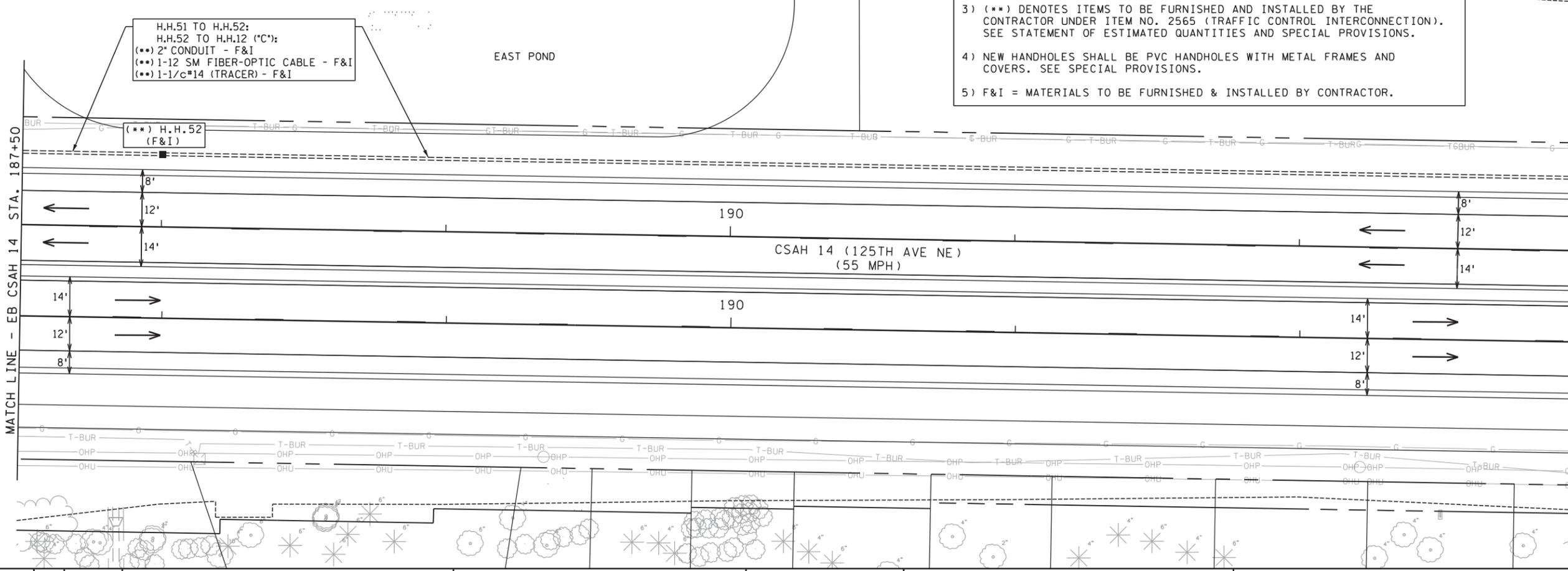
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SCALE IN FEET



MATCH LINE - EB CSAH 14 STA. 187+50

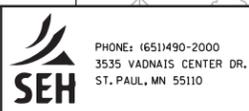
MATCH LINE - EB CSAH 14 STA. 193+00



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

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Certified By: *John M. Gray* Lic. No. 22457  
 Printed Name: JOHN M. GRAY, PE Date: 10/21/2015



CITY OF BLAINE, MN.  
**CSAH 14**  
 S.A.P. 002-614-039, S.A.P. 106-020-032,  
 S.A.P. 106-137-001

**TRAFFIC SIGNAL INTERCONNECT INTERSECTION LAYOUT**  
 CSAH 14 (125TH AVE NE) - CLOUD DR TO HARPERS ST NE

FILE NO. 147  
 126669  
 SG16 OF SG25  
 196

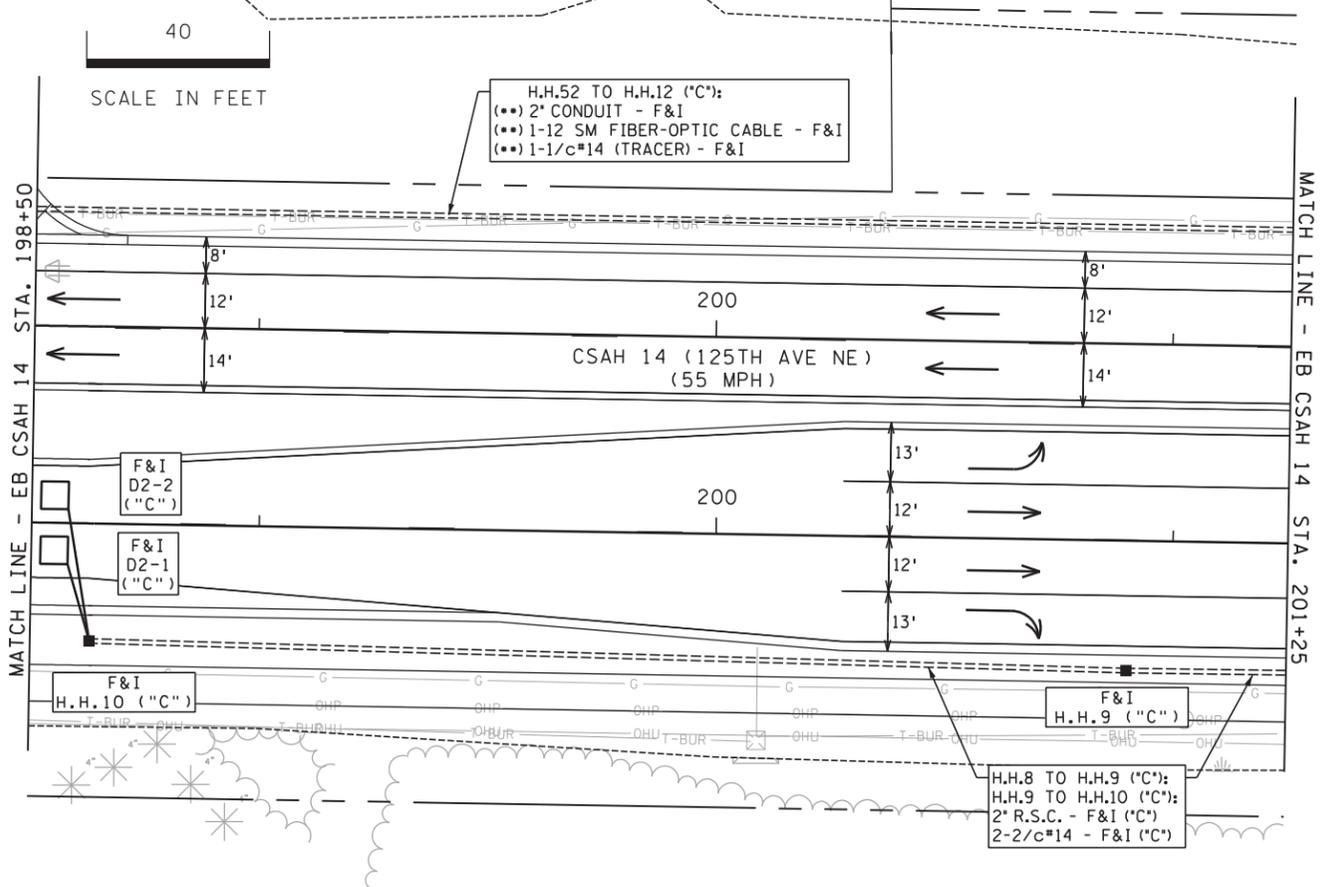
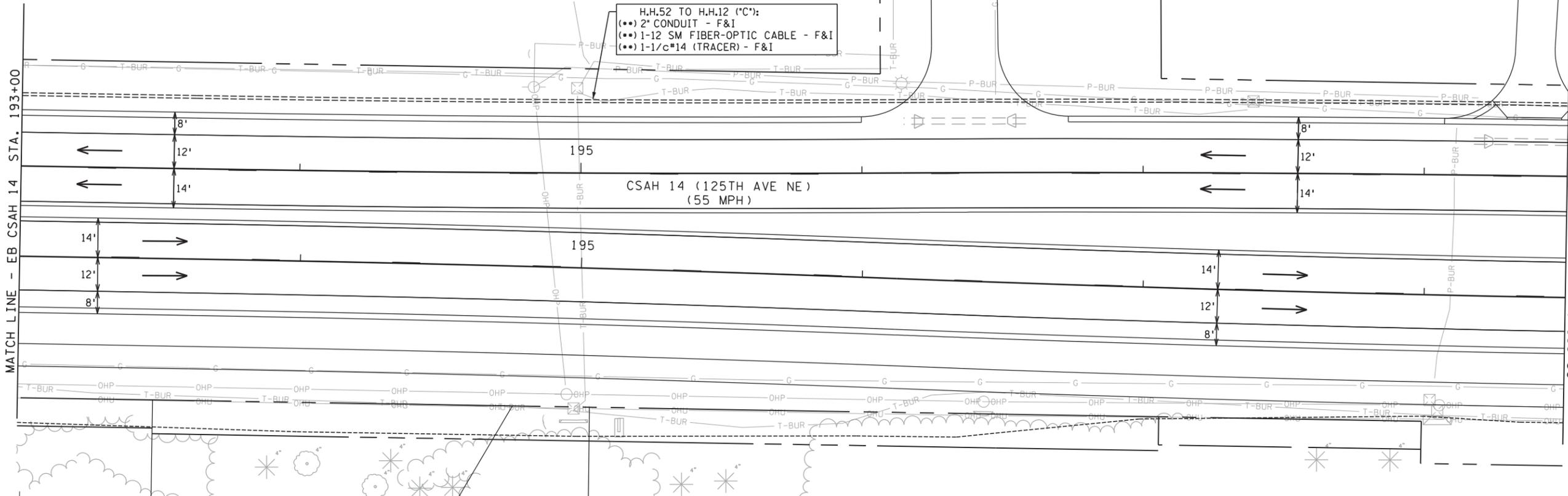
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SCALE IN FEET

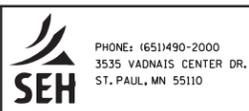


- INTERCONNECT NOTES**
- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
  - 2) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE 1-2 FEET.
  - 3) (\*\*\*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
  - 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
  - 5) ITEMS DENOTED BY "C" SHALL BE INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM "C"". SEE SPECIAL PROVISIONS.
  - 6) F&I = MATERIALS TO BE FURNISHED & INSTALLED BY CONTRACTOR.

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

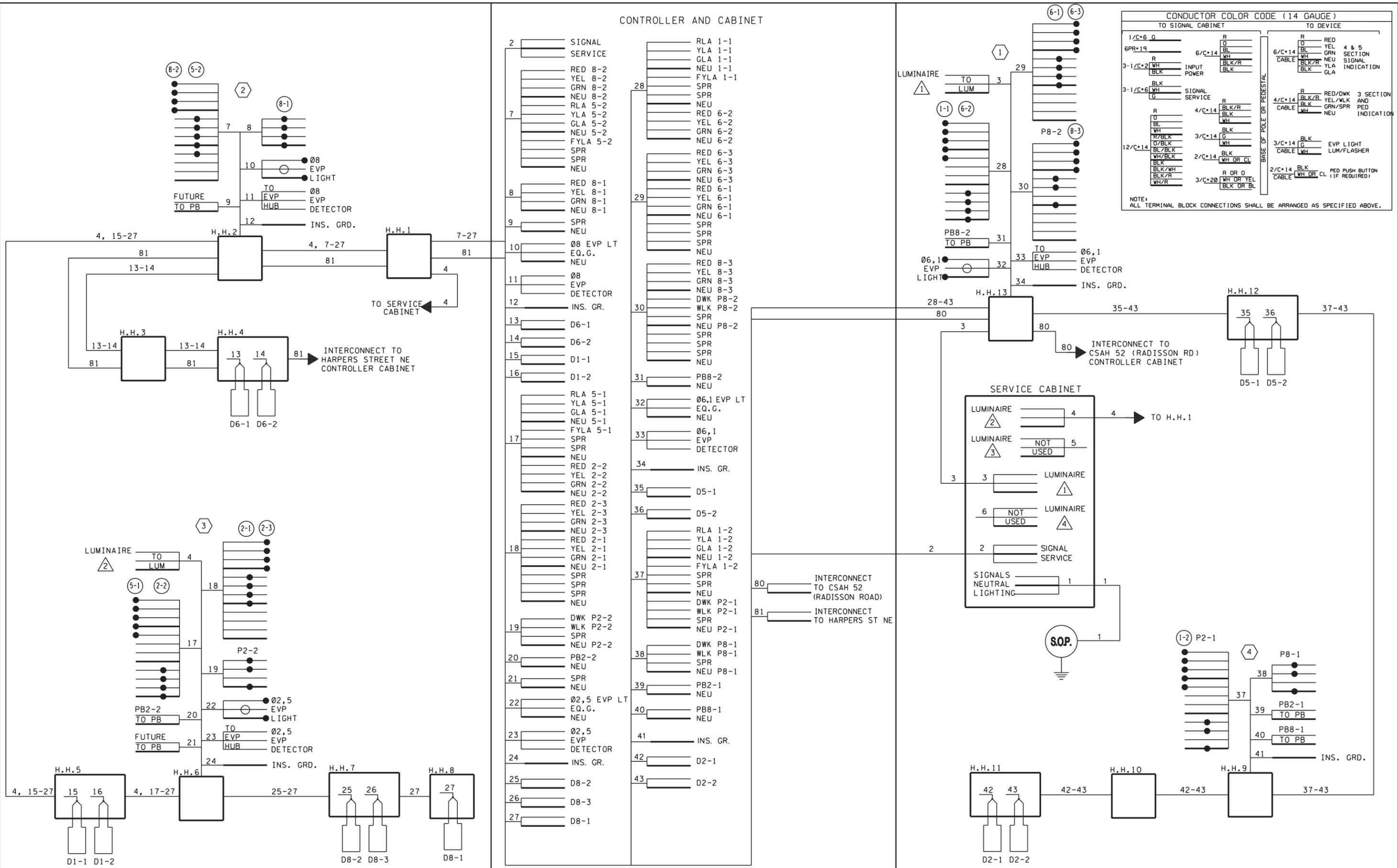
Certified By: *John M. Gray* Lic. No. 22457  
 Printed Name: JOHN M. GRAY, PE Date: 10/21/2015



CITY OF BLAINE, MN.  
**CSAH 14**  
 S.A.P. 002-614-039, S.A.P. 106-020-032,  
 S.A.P. 106-137-001

**SIGNAL SYSTEM "C"/INTERCONNECT INTERSECTION LAYOUT**  
 CSAH 14 (125TH AVE NE) - CLOUD DR TO HARPERS ST NE

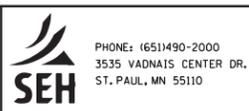
FILE NO. 126669  
**148**  
 SG17 OF SG25  
**196**



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

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, PE Date: 10/21/2015



CITY OF BLAINE, MN.  
**CSAH 14**  
 S.A.P. 002-614-039, S.A.P. 106-020-032, S.A.P. 106-137-001

**TRAFFIC SIGNAL SYSTEM "B"**  
**FIELD WIRING DIAGRAM**  
 CSAH 14 (125TH AVE NE) AT CLOUD DR NE

FILE NO. 144  
 126669  
**SG13**  
 OF SG25  
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