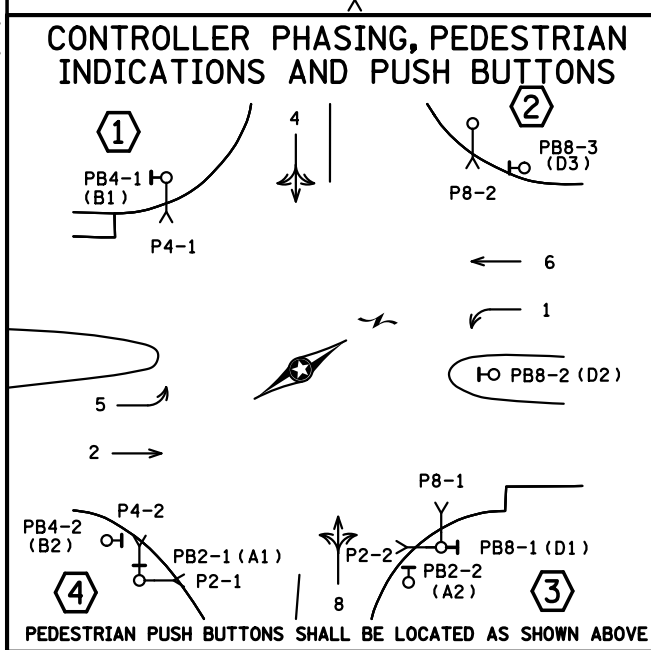
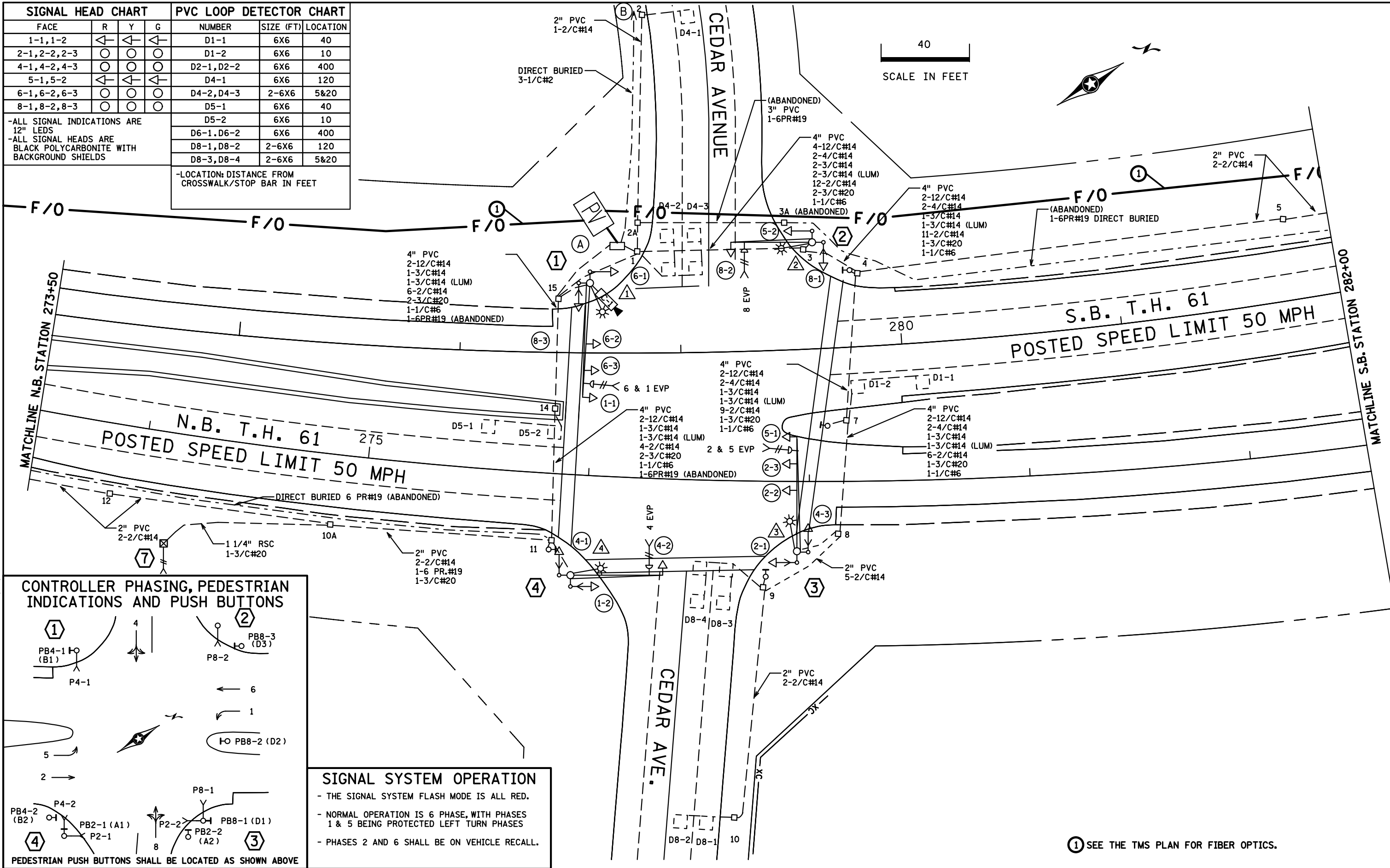


SIGNAL HEAD CHART				PVC LOOP DETECTOR CHART		
FACE	R	Y	G	NUMBER	SIZE (FT)	LOCATION
1-1,1-2	←	←	←	D1-1	6X6	40
2-1,2-2,2-3	○	○	○	D1-2	6X6	10
4-1,4-2,4-3	○	○	○	D2-1,D2-2	6X6	400
5-1,5-2	←	←	←	D4-1	6X6	120
6-1,6-2,6-3	○	○	○	D4-2,D4-3	2-6X6	5&20
8-1,8-2,8-3	○	○	○	D5-1	6X6	40
-ALL SIGNAL INDICATIONS ARE 12" LEDS -ALL SIGNAL HEADS ARE BLACK POLYCARBONITE WITH BACKGROUND SHIELDS				D5-2	6X6	10
				D6-1,D6-2	6X6	400
				D8-1,D8-2	2-6X6	120
				D8-3,D8-4	2-6X6	5&20
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET						

PLOTTED/REVISED: 11/5/2015



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 & 5 BEING PROTECTED LEFT TURN PHASES
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

① SEE THE TMS PLAN FOR FIBER OPTICS.

DISTRICT #: METRO
IPLOT NAME: LAYOUT
PATH & FILENAME: IP_PWP-d079954T21042_sgl.dgn

BY	DATE	REVISIONS
EJA	11-05-15	AS-BUILT OF SP 6222-168 FIBER & CAMERA

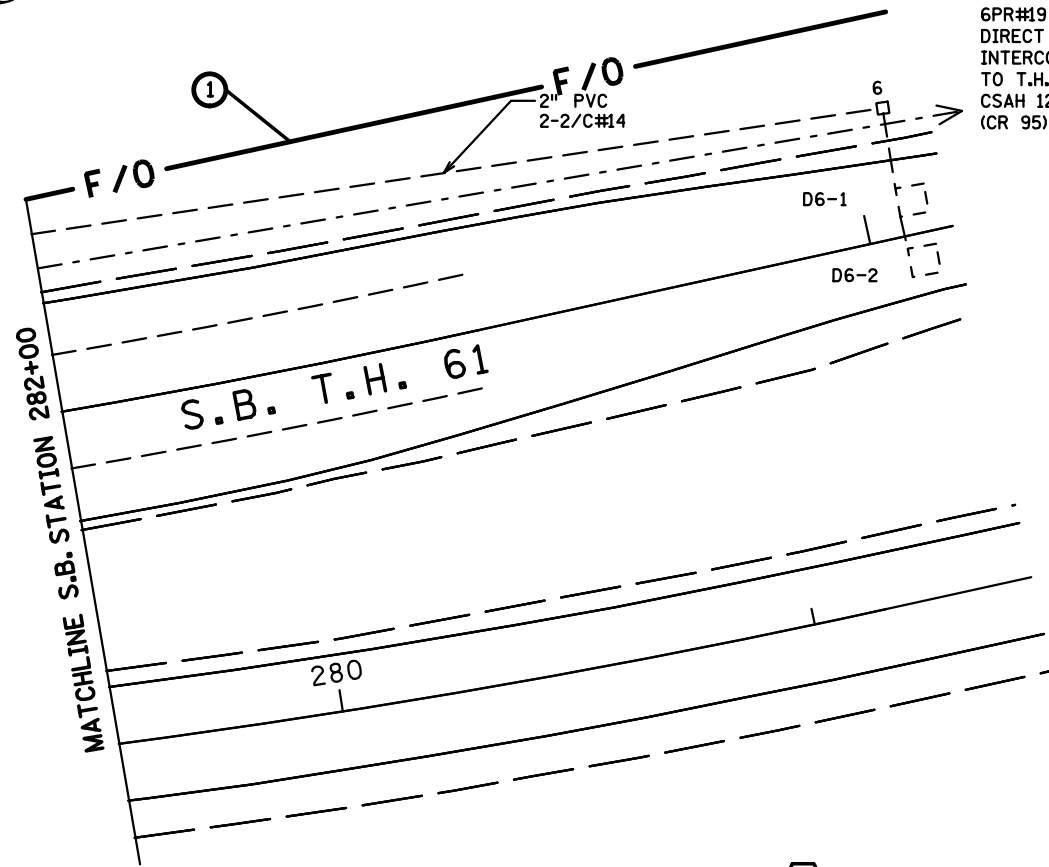
SYSTEM ID: 21042 T.E.
METER ADDRESS: 3889 HIGHWAY 61
MASTER ID: 21742 T.E.

INTERSECTION LAYOUT
TH 61 AT CEDAR AVENUE
WHITE BEAR LAKE, RAMSEY COUNTY

S.A.P. NO.	DRAWN BY: SJK	CKD BY: EJA	DATE: 06-14-12
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO.	(T.H. 61)	SHEET NO.	1 OF 4 SHEETS



PLOTTED/REVISED: 11/5/2015



(ABANDONED)
6PR#19
DIRECT BURIED
INTERCONNECT
TO T.H. 61 AT
CSAH 12 (CR F)/
(CR 95) ASH ST.

- ① PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9-X6-350/CAM 400 (X6 AT 350 DEG)
LUMINAIRE-250W HPS
VIDEO CAMERA
2-SWING AWAY HINGES
1-ANGLE MOUNT SIGNAL AT 0'
1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 6 & 1) AT 6'
2-STRAIGHT MOUNT SIGNALS AT 11' & 23'
2-ANGLE MOUNT SIGNALS AT 90 & 180 DEG
1-ANGLE MOUNT CD PED HEAD AT 90 DEG
1-APS PB AND SIGN (RT ARROW)(PB4-1)
1-TYPE D SIGN
1-TYPE R9-3 SIGN (FACING POLE 2)
3" PVC TO HH 15:
2-12/C#14
1-3/C#14
1-3/C#14 (LUM)
1-2/C#14
1-3/C#20
1-1/C#6 INS. GR.
1-7/16" GROUNDING BRAID TO GROUND ROD IN H.H.15
1-3/C#14 (CAMERA POWER)
1-COM CABLE
1-COAXIAL CABLE

- ② PA100 POLE FOUNDATION
TYPE PA100-A-35-D40-9 (DAVIT AT 350 DEG)
2-SWING AWAY HINGES
LUMINAIRE-250W HPS
1-ANGLE MOUNT SIGNAL AT 0'
1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASE 8) AT 6'
2-ANGLE MOUNT SIGNALS AT 90 & 180 DEG
1-ANGLE MOUNT CD PED HEAD AT 180 DEG
1-TYPE R9-3 SIGN (FACING POLE 1)
3" PVC TO HH 3:
2-12/C#14
1-3/C#14
1-3/C#14 (LUM)
1-3/C#20
1-1/C#6 INS. GR.

APS PED PB STA (PB8-3)
1-APS PB AND SIGN (RT ARROW)
EXTEND IN TO HH 4
1 1/4" PVC
1-2/C#14

- ④ PA100 POLE FOUNDATION
TYPE PA100-A-40-D40-9 (DAVIT AT 350 DEG)
2-SWING AWAY HINGES
1-ANGLE MOUNT SIGNAL AT 0'
1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASE 4) AT 6'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT CD PED HEADS AT 90 & 180 DEG
1-APS PB AND SIGN (LT ARROW) (PB2-1)
3" PVC TO HH 11:
2-12/C#14
1-3/C#14
1-3/C#14 (LUM)
1-2/C#14
1-3/C#20
1-1/C#6 INS. GR.

- ③ PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
2-SWING AWAY HINGES
LUMINAIRE-250W HPS
1-ANGLE MOUNT SIGNAL AT 0'
1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 2 & 5) AT 6'
2-STRAIGHT MOUNT SIGNALS AT 11' & 23'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT CD PED HEADS AT 90 & 180 DEG
1-APS PB AND SIGN (RT ARROW) (PB8-1)
1-TYPE D SIGN
3" PVC TO HH 8:
2-12/C#14
2-4/C#14
1-3/C#14
1-3/C#14 (LUM)
1-2/C#14
1-3/C#20
1-1/C#6 INS. GR.

APS PED PB STA (PB2-2)
1-APS PB AND SIGN (RT ARROW)
EXTEND IN TO HH 9
1 1/4" PVC
1-2/C#14

- ⑦ PEDESTAL FOUNDATION
13' PEDESTAL POLE PLUS BASE
ONE WAY EVP DETECTOR
EXTEND INTO HH 10:
1 1/4" RSC
1-3/C#20

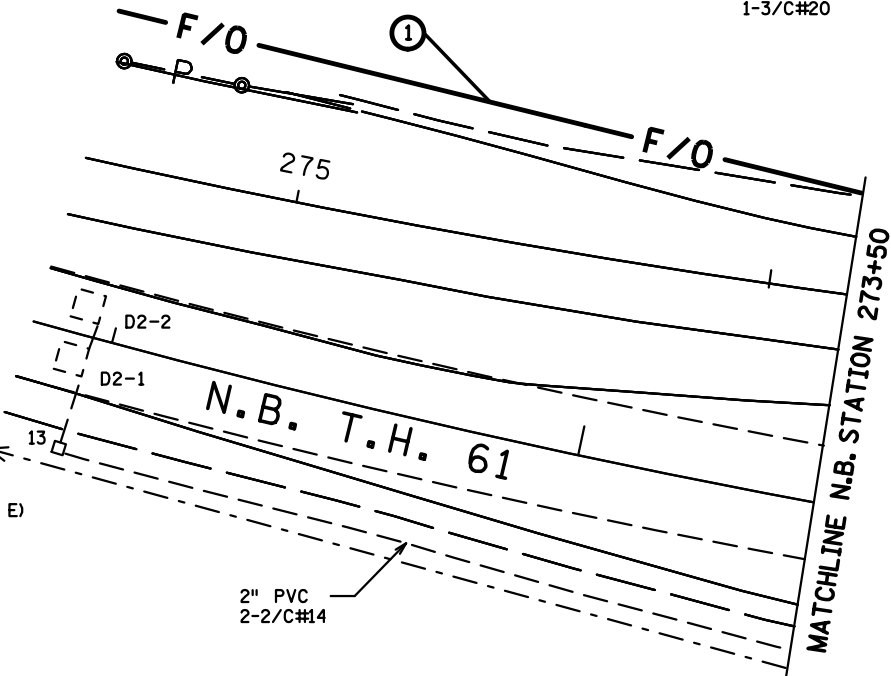
APS PED PB STA (PB4-2)
1-APS PB AND SIGN (RT ARROW)
EXTEND IN TO HH 11
1 1/4" PVC
1-2/C#14

- Ⓐ EQUIPMENT PAD - SEE DETAIL
SERVICE CABINET
CONTROLLER AND CABINET
4" PVC TO HH 1:
4-12/C#14
2-4/C#14
2-3/C#14
15-2/C#14
2-3/C#20
1-6PR#19
1-1/C#6 INS. GR.
2" PVC STUBBED
OUT - CAPPED BOTH ENDS
3/4" PVC STUBBED OUT
CAPPED FOR TELEPHONE LINE
2" PVC TO SERVICE CABINET
2-1/C#6
1-1/C#6 INS. GR.
2" PVC (COMMS) TO SERVICE CABINET
SERVICE CABINET TO HH 1:
2" PVC
4-3/C#14 (LUM)
HH 1 TO HH 15:
2" PVC
2-3/C#14 (LUM)

- 4" PVC TO HH 15:
4-12/C#14
2-3/C#14
3-3/C#20
7-2/C#14
1-6PR#19
1-1/C#6 INS. GR.
1-3/C#14 (CAMERA POWER)
1-COM CABLE
1-COAXIAL CABLE

- Ⓑ SOP
EXCEL ENERGY POLE
TO SERVICE CABINET
3-1/C#2 DIRECT BURIED

(ABANDONED)
6PR#19
DIRECT BURIED
INTERCONNECT
TO HH 53
61 AT CSAH 15 (CR E)



CONTROLLER CABINET TO TMS PULL VAULT
1.5" PVC INSIDE EXISTING 3" PVC STUBOUT:
1-6SM FIBER OPTIC

① SEE THE TMS PLAN FOR FIBER OPTICS.

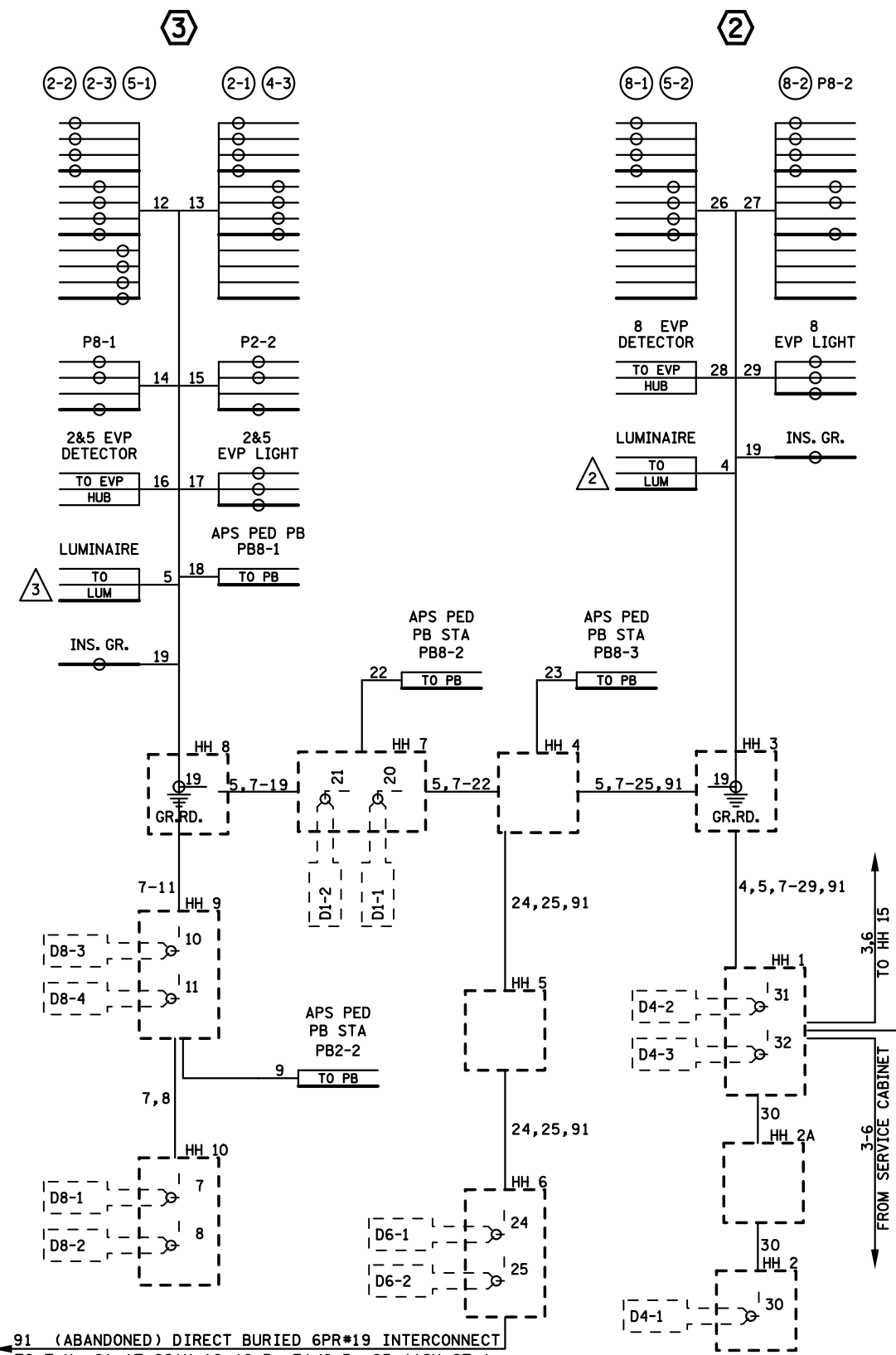
DISTRICT #: METRO
IPLOT NAME: MATCH LINES POLE NOTES
PATH & FILENAME: IP_PWP-d0779954Y21042_sgl.dgn

BY	DATE	REVISIONS	SYSTEM ID: 21042	T.E.	S.A.P. NO.	DRAWN BY: SJK	CKD BY: EJA	DATE: 06-14-12
EJA	11-05-15	AS-BUILT OF SP 6222-168 FIBER & CAMERA	METER ADDRESS: 3889 HIGHWAY 61		CERTIFIED BY _____	LIC. NO. 19863	DATE: 06-21-12	
			MASTER ID: 21742	T.E.	STATE PROJ. NO.	(T.H.61)	SHEET NO. 2 OF	4 SHEETS

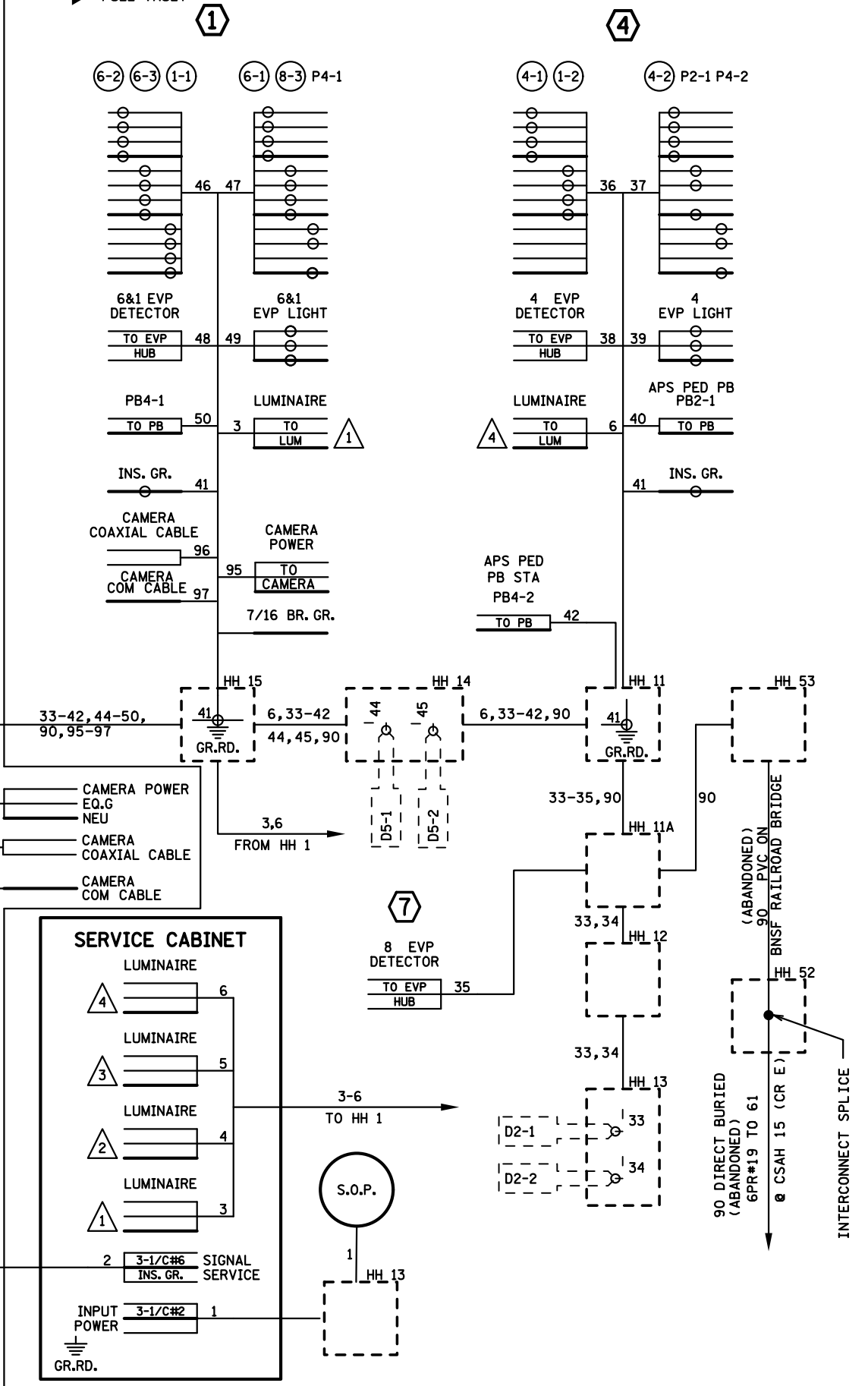
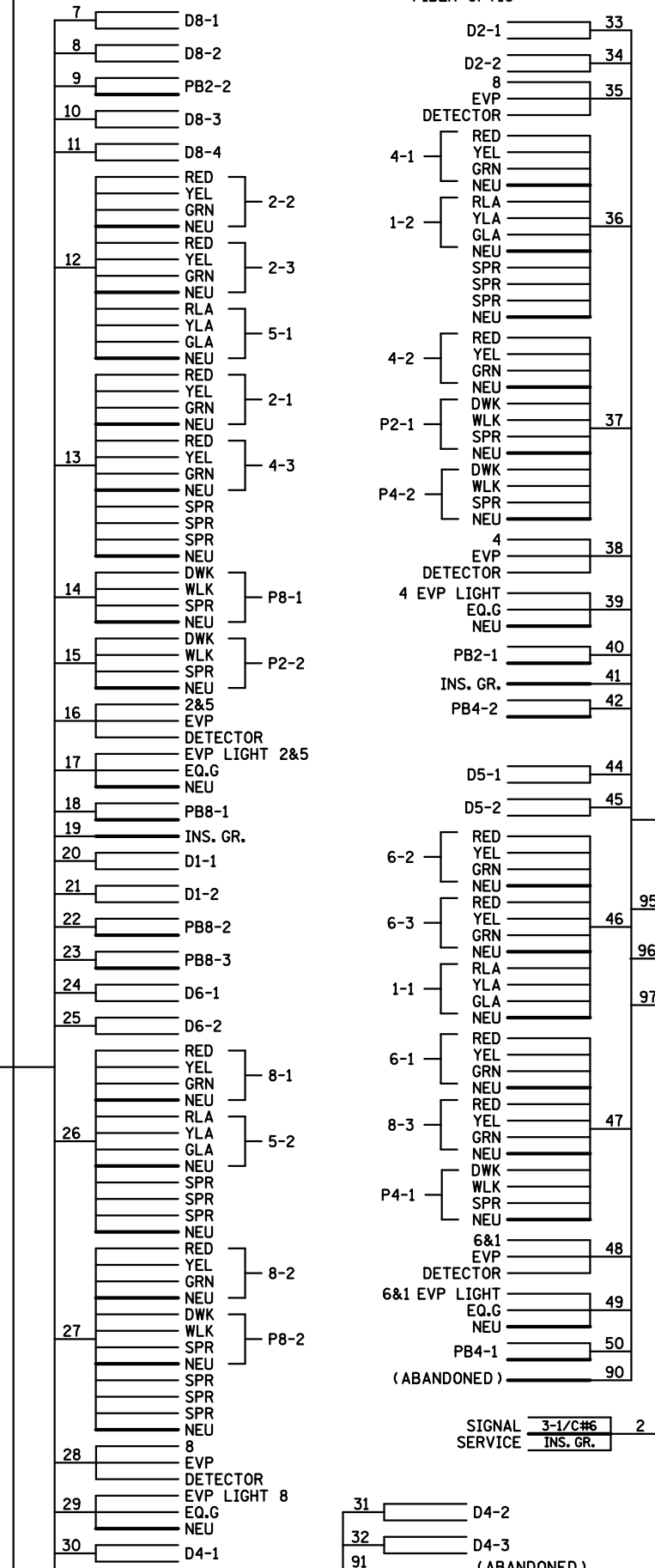
**MATCH LINES AND POLE NOTES
TH 61 AT CEDAR AVENUE
WHITE BEAR LAKE, RAMSEY COUNTY**

PLOTTED/REVISED: 11/5/2015

DISTRICT #: METRO
PLOT NAME: WIRING DIAGRAM
PATH & FILENAME: IP_PWP-d0779954\T21042_sgl.dgn



NOTES:
 1. LUMINAIRES ARE UNMETERED.
 2. SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).
 3. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.



BY	DATE	REVISIONS
EJA	11-05-15	AS-BUILT OF SP 6222-168 FIBER & CAMERA

SYSTEM ID: 21042	T.E.
METER ADDRESS: 3889 HIGHWAY 61	
MASTER ID: 21742	T.E.

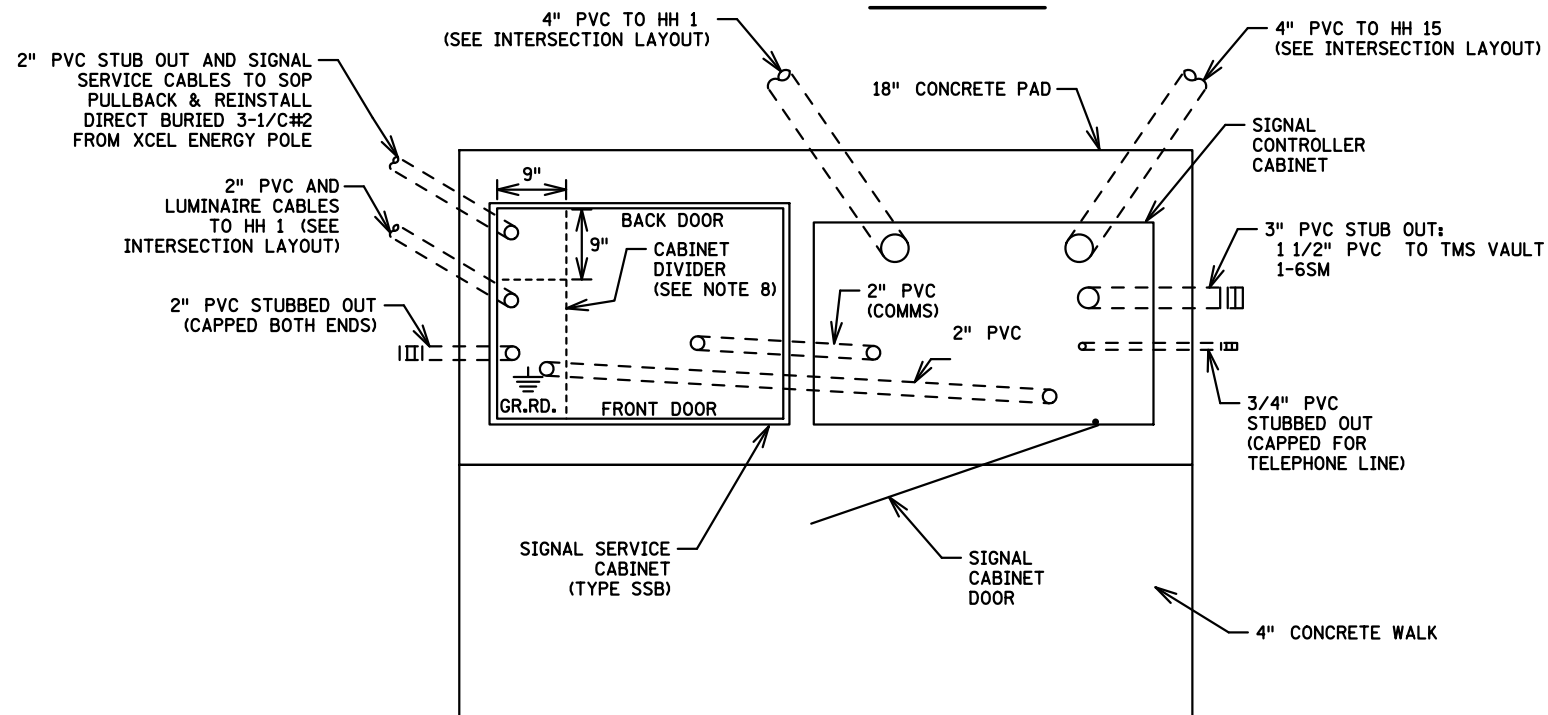
FIELD WIRING DIAGRAM
 TH 61 AT CEDAR AVENUE
 WHITE BEAR LAKE, RAMSEY COUNTY

S.A.P. NO.	DRAWN BY: SJK	CKD BY: EJA	DATE: 06-14-12
CERTIFIED BY	LIC. NO.	DATE:	
STATE PROJ. NO.	(T.H. 61)	SHEET NO.	4 OF 4 SHEETS

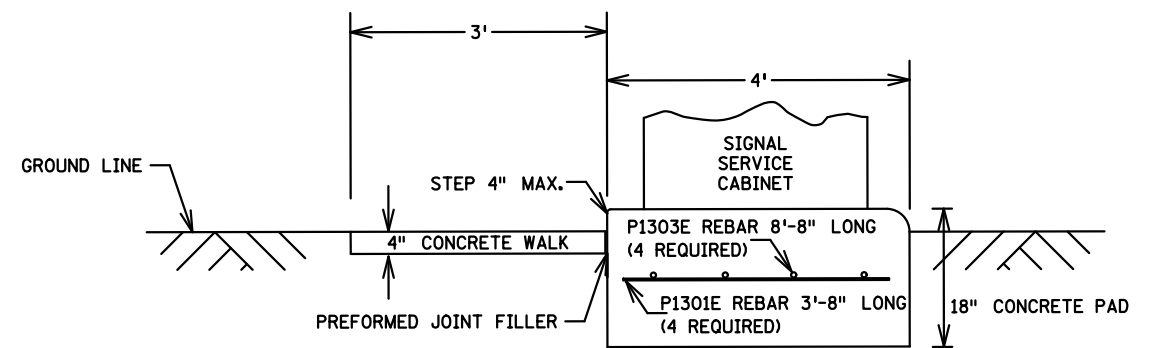
TYPICAL PAD WITH CONTROLLER CABINET AND SERVICE CABINET

SEE INTERSECTION LAYOUT FOR CABLE INFORMATION (NOT TO SCALE)

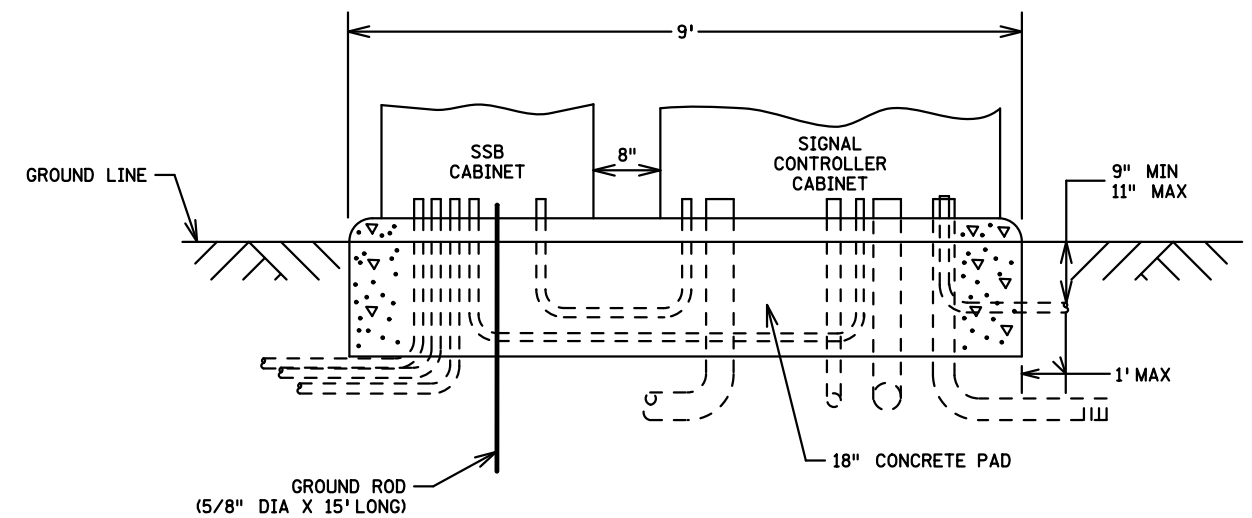
PLAN VIEW



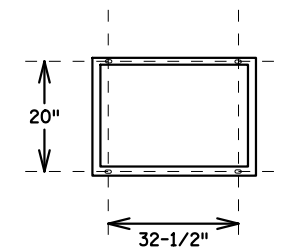
SIDE VIEW



FRONT VIEW

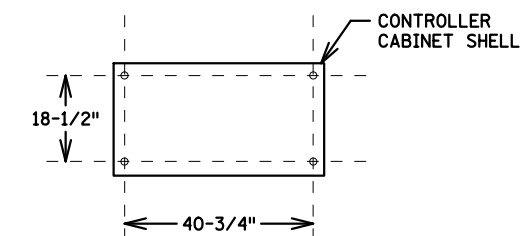


S.S.B. SERVICE CABINET BOLT PATTERN



DIMENSION SHOWN ARE CENTER ROD TO CENTER ROD

CONTROLLER CABINET TYPE "P" & "R" BOLT PATTERN



DIMENSION SHOWN ARE CENTER ROD TO CENTER ROD

PLOTTED/REVISED: 11/5/2015

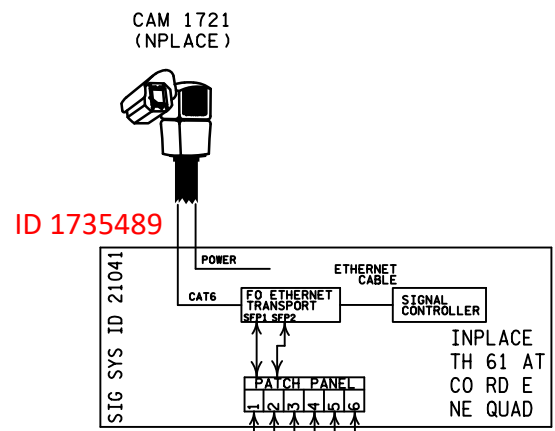
DISTRICT #: METRO
IPLOT NAME: T21042_sgl
PATH & FILENAME: IP_PWP-d0779954T21042_sgl.dgn

BY	DATE	REVISIONS
EJA	11-05-15	AS-BUILT OF SP 6222-168 & SP 6222-161

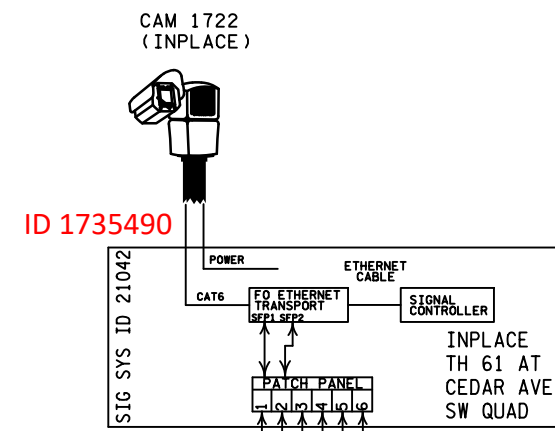
SYSTEM ID: 21042	T.E.
METER ADDRESS: 3889 HIGHWAY 61	
MASTER ID: 21742	T.E.

**EQUIPMENT PAD LAYOUT
T.H. 61 AT CEDAR AVENUE
IN WHITE BEAR LAKE, RAMSEY COUNTY**

S.A.P. NO.	DRAWN BY: MAS	CKD BY: EJA	DATE: 12-21-09
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO.	(T.H.61)	SHEET NO. 3	OF 4 SHEETS



NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES. ALL FIBER INTERCONNECT CABLES, CAMERAS, AND VAULTS SHOWN ON THIS PAGE ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE (EXCEPT FOR FIBER-OPTIC CABLE SPLICING LOCATION TO BE COMPLETED BY THE CONTRACTOR AND PAID FOR UNDER THE "TRAFFIC CONTROL INTERCONNECT" PAY ITEM (ITEM NO. 2565). SEE SPECIAL PROVISIONS.



TRUNK ID# 61-190

TRUNK ID# 61-191

TRUNK ID# 61-192

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FIBER OPTIC CABLE MARKINGS @
SPICE ENCLOSURE VAULT ENTRY

FIBER OPTIC CABLE MARKINGS @
SPICE ENCLOSURE VAULT ENTRY

FIBER OPTIC CABLE MARKINGS @
SPICE ENCLOSURE VAULT ENTRY

FIBER OPTIC CABLE MARKINGS @
SPICE ENCLOSURE VAULT ENTRY

INPLACE
PULL/SPLICE VAULT TH61 AT
CO RD E (CSAH 15) NE QUAD

INPLACE
PULL/SPLICE VAULT TH61 AT
CEDAR AVE SW QUAD

DESIGN TEAM			
DRAWN BY:	MRB		
DESIGNER:	MRB		
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.
Certified By: *John M. Gray* Lic. No. 22457
Printed Name: JOHN M. GRAY Date: 12/22/2023



RAMSEY COUNTY, MINNESOTA
T.H. 61
S.P. 6222-197

SIGNAL PLAN
FIBER OPTIC SCHEMATIC
TRUCK HIGHWAY 61 (WILLOW LAKE RD TO CEDAR AVE)