

THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS. DO NOT SCALE THE DRAWING. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES.

SIGNAL INDICATIONS

ALL SIGNAL INDICATIONS SHALL BE 12" LED

FACE	PHASE	R	Y	G	FYA
1-1	1	←	←	←	▲
1-2	1	←	←	←	▲
2-1	2	○	○	○	
2-2	2	○	○	○	
2-3	2	○	○	○	
2-4	2	○	○	○	
2-5	2	○	○	○	
2-6	2	○	○	○	
4-1	4	○	○	○	
4-2	4	○	○	○	
4-3	4	○	○	○	
4-4	4	○	○	○	
6-1	6	○	○	○	
6-2	6	○	○	○	

EQUIPMENT PAD (SEE DETAIL)
CONTROLLER AND CABINET
SERVICE CABINET (PAD MOUNTED)

CONTROLLER CABINET TO:
 (A) H.H. 1 1-4" CONDUIT
 2-12/C#12
 3-3/C#12
 9-2/C#14
 1-3/C#20
 1-1/C#6 INS. GR.
 1-6PR#19
 H.H. 1 4-12/C#12
 10-3/C#12
 4-2/C#14
 2-3/C#20
 2-1/C#6 INS. GR.
 2-1/C#6 INS. GR.

SERVICE CABINET TO:
 H.H. 1 CONTROLLER CAB. S.O.P.
 2" CONDUIT 2" CONDUIT 2" CONDUIT
 3-3/C#12(LUM) 2-1/C#6 3-1/C#2
 1-1/C#6 INS. GR. 1-1/C#6

LOOP DETECTORS

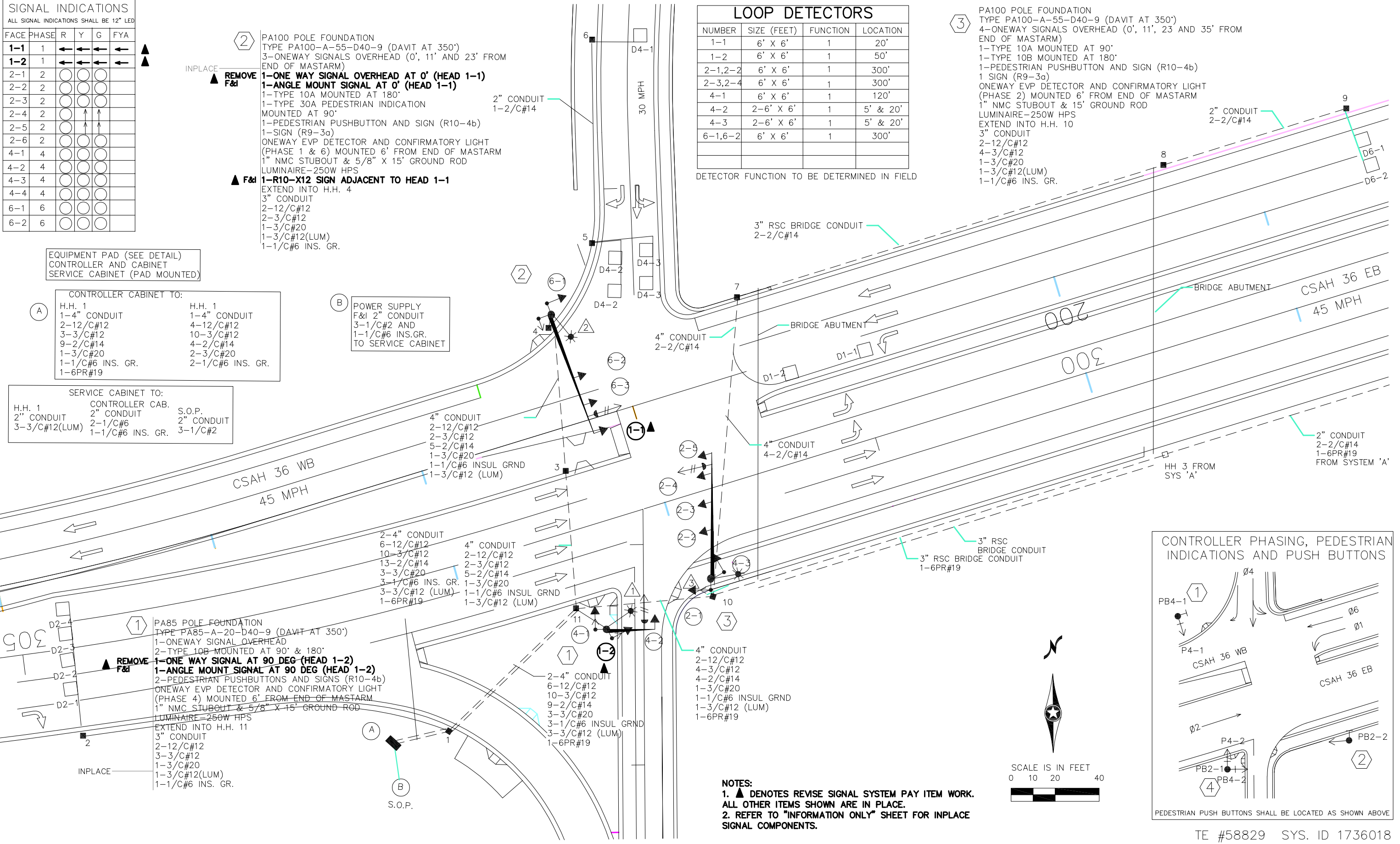
NUMBER	SIZE (FEET)	FUNCTION	LOCATION
1-1	6' X 6'	1	20'
1-2	6' X 6'	1	50'
2-1,2-2	6' X 6'	1	300'
2-3,2-4	6' X 6'	1	300'
4-1	6' X 6'	1	120'
4-2	2-6' X 6'	1	5' & 20'
4-3	2-6' X 6'	1	5' & 20'
6-1,6-2	6' X 6'	1	300'

DETECTOR FUNCTION TO BE DETERMINED IN FIELD

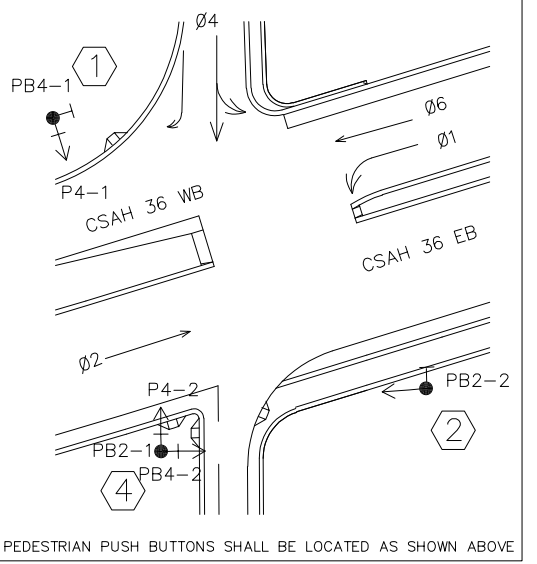
③ PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350')
 4-ONEWAY SIGNALS OVERHEAD (0', 11', 23 AND 35' FROM END OF MASTARM)
 1-TYPE 10A MOUNTED AT 90'
 1-TYPE 10B MOUNTED AT 180'
 1-PEDESTRIAN PUSHBUTTON AND SIGN (R10-4b)
 1 SIGN (R9-3a)
 ONEWAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2) MOUNTED 6' FROM END OF MASTARM
 1" NMC STUBOUT & 15' GROUND ROD
 LUMINAIRE-250W HPS
 EXTEND INTO H.H. 10
 3" CONDUIT
 2-12/C#12
 4-3/C#12
 1-3/C#20
 1-3/C#12(LUM)
 1-1/C#6 INS. GR.

② PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350')
 3-ONEWAY SIGNALS OVERHEAD (0', 11' AND 23' FROM END OF MASTARM)
 1-ONE WAY SIGNAL OVERHEAD AT 0' (HEAD 1-1)
 1-ANGLE MOUNT SIGNAL AT 0' (HEAD 1-1)
 1-TYPE 10A MOUNTED AT 180'
 1-TYPE 30A PEDESTRIAN INDICATION MOUNTED AT 90'
 1-PEDESTRIAN PUSHBUTTON AND SIGN (R10-4b)
 1-SIGN (R9-3a)
 ONEWAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 1 & 6) MOUNTED 6' FROM END OF MASTARM
 1" NMC STUBOUT & 5/8" X 15' GROUND ROD
 LUMINAIRE-250W HPS
 EXTEND INTO H.H. 4
 3" CONDUIT
 2-12/C#12
 2-3/C#12
 1-3/C#20
 1-3/C#12(LUM)
 1-1/C#6 INS. GR.

② POWER SUPPLY
 F&I 2" CONDUIT
 3-1/C#2 AND
 1-1/C#6 INS.GR.
 TO SERVICE CABINET



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



NOTES:
 1. ▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK.
 ALL OTHER ITEMS SHOWN ARE IN PLACE.
 2. REFER TO "INFORMATION ONLY" SHEET FOR INPLACE SIGNAL COMPONENTS.

TE #58829 SYS. ID 1736018

NO	DATE	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.
 PRINT NAME: EDWARD F. TERHAAR
 SIGNATURE: *Edward F. Terhaar*
 DATE: June 17, 2022 LIC. NO. 24441

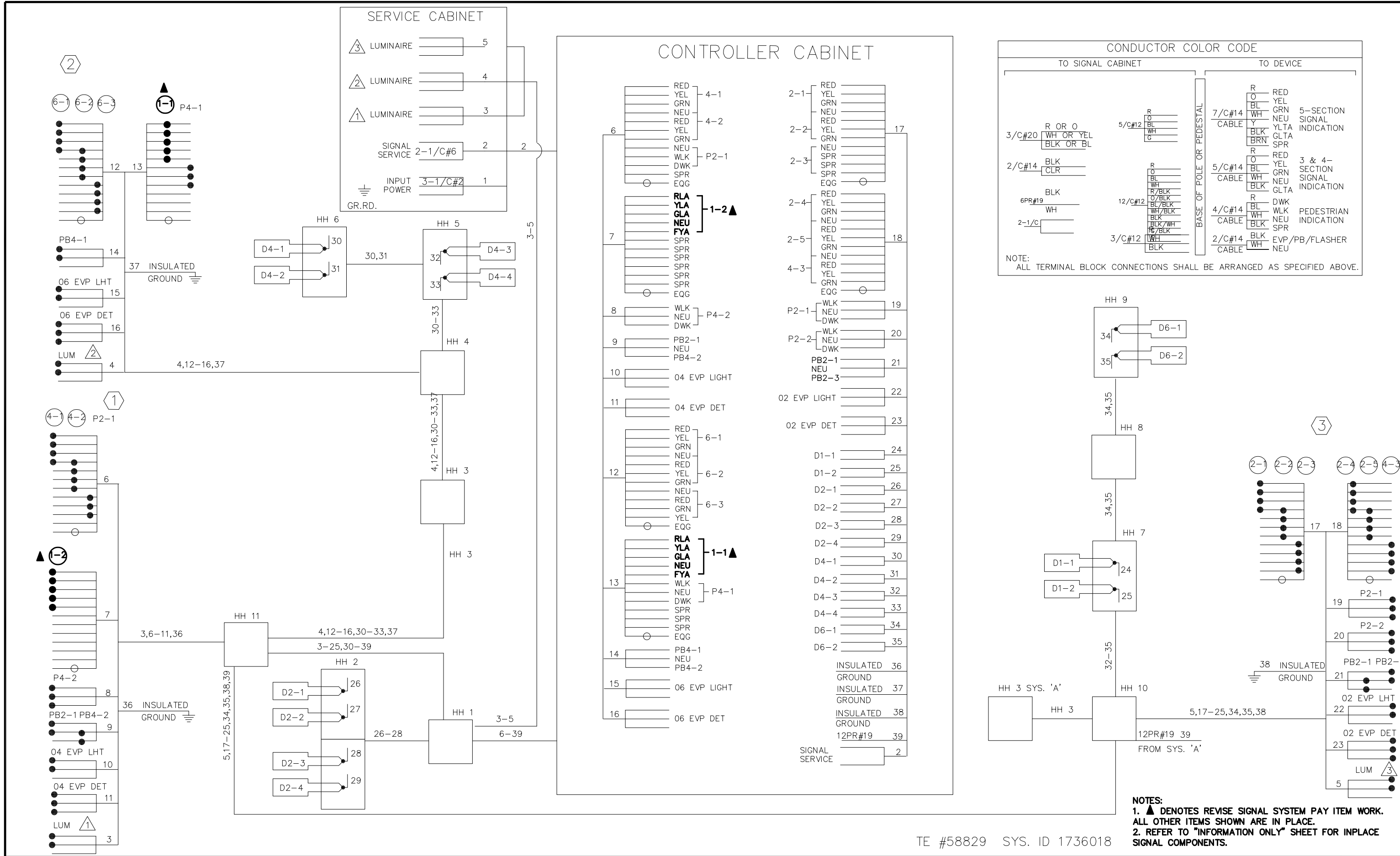
Stantec
 1800 Pioneer Creek Center
 Maple Plain, MN 55439
 www.stantec.com

SP 8608-35 (TH 101=187)

REVISE SIGNAL SYSTEM B LAYOUT
 CSAH 36/TH 101 SOUTHBOUND RAMPS

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Plot Date: 01/18/2022 - 4:32pm
Drawing Name: U:\2277046\3\CAD\Sheet.dwg
User: j...



TE #58829 SYS. ID 1736018

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Stantec

1800 Pioneer Creek Center
Maple Plain, MN 55439
www.stantec.com

SP 8608-35 (TH 101=187)

REVISE SIGNAL SYSTEM B
WIRING DIAGRAM
CSAH 36/TH 101 SOUTHBOUND RAMPS

SIGNAL INDICATIONS

DIMENSIONS ARE SHOWN IN INCHES

FACE	PHASE	FLASH	R	Y	G	RLTA	YLTA	GLTA
1-1	1	R				←	←	←
1-2	1	R				←	←	←
2-1	2	R	●	●	●			
2-2	2	R	●	●	●			
2-3	2	R	●	●	●			
2-4	2	R	●	●	●			
2-5	2	R	●	●	●			
2-6	2	R	●	●	●			
4-1	4	R	●	●	●			
4-2	4	R	●	●	●			
4-3	4	R	●	●	●			
4-4	4	R	●	●	●			
6-1	6	R	●	●	●			
6-2	6	R	●	●	●			

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 1" NMC STUBOUT & 5/8" X 15' GROUND ROD
 LUMINAIRE-250W HPS
 EXTEND INTO H.H. 4
 3" CONDUIT
 2-12/C#12
 2-3/C#12
 1-3/C#20
 1-3/C#12(LUM)
 1-1/C#6 INS. GR.

LOOP DETECTORS

NUMBER	SIZE (FEET)	FUNCTION	LOCATION
1-1	6' X 6'	1	20'
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2-3,2-4	6' X 6'	1	300'
4-1	6' X 6'	1	120'
4-3	2-6' X 6'	1	20'
4-4	2-6' X 6'	1	5'
6-1,6-2	6' X 6'	1	300'
4-2	2-6' X 6'	1	5' & 20'

DETECTOR FUNCTION TO BE DETERMINED IN FIELD

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 1 SIGN (R9-3a)
 ONEWAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2) MOUNTED 6' FROM END OF MASTARM
 1" NMC STUBOUT & 15' GROUND ROD
 LUMINAIRE-250W HPS
 EXTEND INTO H.H. 10
 3" CONDUIT
 2-12/C#12
 4-3/C#12
 1-3/C#20
 1-3/C#12(LUM)
 1-1/C#6 INS. GR.

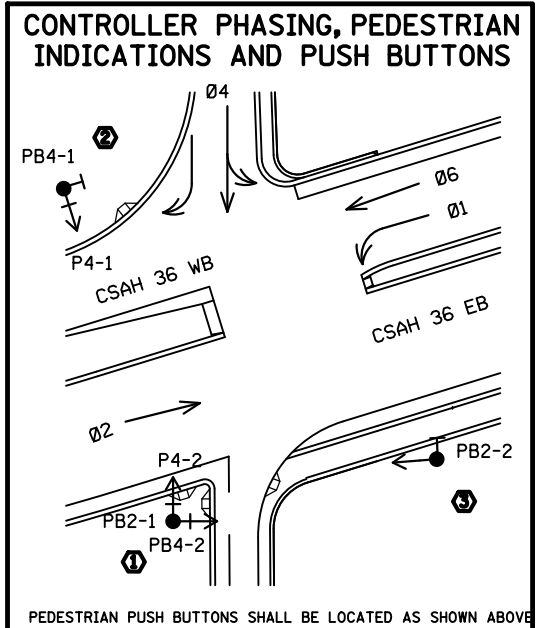
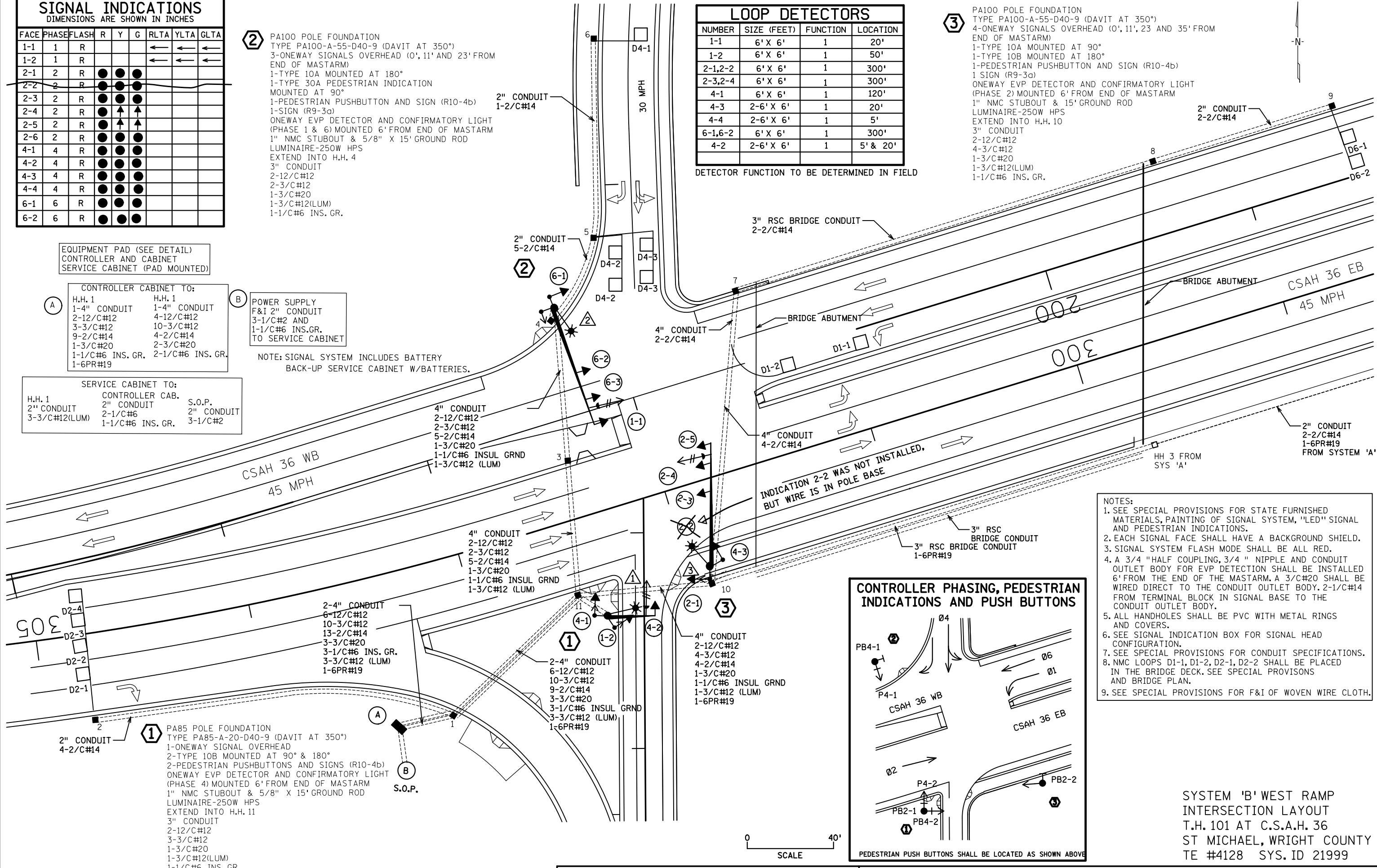
EQUIPMENT PAD (SEE DETAIL)
 CONTROLLER AND CABINET
 SERVICE CABINET (PAD MOUNTED)

A CONTROLLER CABINET TO:
 H.H. 1 H.H. 1
 1-4" CONDUIT 1-4" CONDUIT
 2-12/C#12 4-12/C#12
 3-3/C#12 10-3/C#12
 9-2/C#14 4-2/C#14
 1-3/C#20 2-3/C#20
 1-1/C#6 INS. GR. 2-1/C#6 INS. GR.
 1-6PR#19

B POWER SUPPLY
 F&I 2" CONDUIT
 3-1/C#2 AND
 1-1/C#6 INS. GR.
 TO SERVICE CABINET

NOTE: SIGNAL SYSTEM INCLUDES BATTERY
 BACK-UP SERVICE CABINET W/BATTERIES.

SERVICE CABINET TO:
 H.H. 1 CONTROLLER CAB. S.O.P.
 2" CONDUIT 2" CONDUIT 2" CONDUIT
 3-3/C#12(LUM) 1-1/C#6 INS. GR. 3-1/C#2



- NOTES:**
- SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS, PAINTING OF SIGNAL SYSTEM, "LED" SIGNAL AND PEDESTRIAN INDICATIONS.
 - EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
 - A 3/4 " HALF COUPLING, 3/4 " NIPPLE AND CONDUIT OUTLET BODY FOR EVP DETECTION SHALL BE INSTALLED 6' FROM THE END OF THE MASTARM. A 3/C#20 SHALL BE WIRED DIRECT TO THE CONDUIT OUTLET BODY. 2-1/C#14 FROM TERMINAL BLOCK IN SIGNAL BASE TO THE CONDUIT OUTLET BODY.
 - ALL HANDHOLES SHALL BE PVC WITH METAL RINGS AND COVERS.
 - SEE SIGNAL INDICATION BOX FOR SIGNAL HEAD CONFIGURATION.
 - SEE SPECIAL PROVISIONS FOR CONDUIT SPECIFICATIONS.
 - NMC LOOPS D1-1, D1-2, D2-1, D2-2 SHALL BE PLACED IN THE BRIDGE DECK. SEE SPECIAL PROVISIONS AND BRIDGE PLAN.
 - SEE SPECIAL PROVISIONS FOR F&I OF WOVEN WIRE CLOTH.

SYSTEM 'B' WEST RAMP
 INTERSECTION LAYOUT
 T.H. 101 AT C.S.A.H. 36
 ST MICHAEL, WRIGHT COUNTY
 TE #4128 SYS.ID 21999

