

PLOTTED/REVISED: 22-FEB-2018

DISTRICT #: Metro
I/PLOT NAME: 001 layout (1)
PATH & FILENAME: OTST\SIGNALS\SpanWireSystem\Span Wire System (2-22-18).dgn

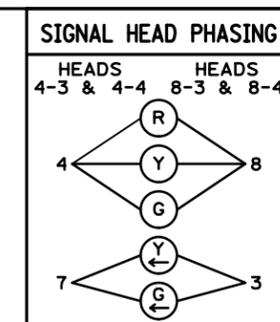
DETECTORS		
NUMBER	MOUNTING TYPE	LOCATION
M1-1	SPAN WIRE	40
S1-1, S1-2	SPAN WIRE	0
M2-1	POLE 6	300
M3-1	SPAN WIRE	40
S3-1	SPAN WIRE	15
M4-1	SPAN WIRE	180
S4-1	SPAN WIRE	0
M5-1	SPAN WIRE	40
S5-2	SPAN WIRE	15
M6-1	POLE 2	300
S7-1	SPAN WIRE	15
M7-1	SPAN WIRE	40
S8-1	SPAN WIRE	15
M8-1	SPAN WIRE	180

TYPE M MICROWAVE UNIT TC26B
S SONIC UNIT TC30
LOCATION = DISTANCE IN FEET FROM STOP BAR TO FRONT OF DETECTION AREA

(A) F&I: TEMPORARY SIGNAL CABINET BASE
INSTALL: TEMP CABINET WITH CONTROLLER (STATE FURNISHED)
CONTROLLER CABINET TO HH 1:
3" CONDUIT
2-6/C 14
11-4/C 14
2-3/C 14
4-2/C 14
8-4/C 18
2-3/C 20
1-1/C 6 INS. GR.
1-1/C 6 INS. GR.

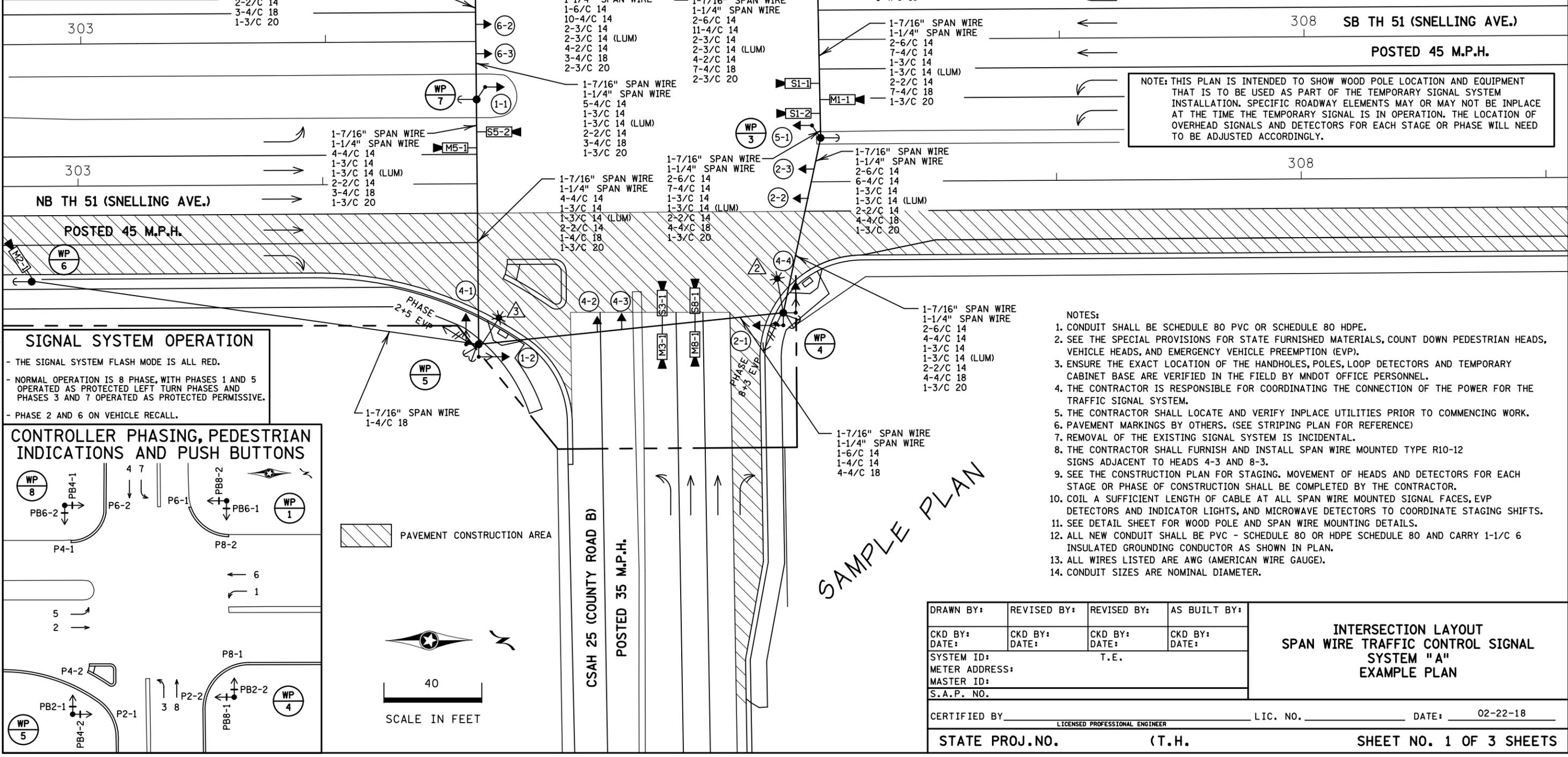
CONTROLLER CABINET TO HH 3:
2" CONDUIT
3-1/C 6

(B) INPLACE: 45' WOOD POLE WITH SERVICE EQUIPMENT AND DISCONNECT
F&I: 2" CONDUIT FROM INPLACE SERVICE EQUIPMENT TO HH 3:
3-1/C#6
2" CONDUIT FROM HH 3 TO CONTROLLER CABINET
3-1/C#6
2" CONDUIT, RISER AND WEATHERHEAD FROM INPLACE SERVICE EQUIPMENT TO HH 2:
4-3/C#14 (LUM)
FROM HH 2 TO ABOVE SPAN WIRE ON POLE 1
2" CONDUIT
4-3/C#14 (LUM)



SIGNAL HEAD CHART					
FACE	R	Y	G	Y	G
1-1, 5-1	←	←	←		
1-2, 5-2	←	←	←		
2-1, 2-2, 2-3	○	○	○		
4-1, 4-2	○	○	○		
4-3, 4-4	○	○	○	←	←
6-1, 6-2, 6-3	○	○	○		
8-1, 8-2	○	○	○		
8-3, 8-4	○	○	○	←	←

-ALL SIGNAL INDICATIONS SHALL BE 12" LED
-ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONITE WITH BACKGROUND SHIELDS

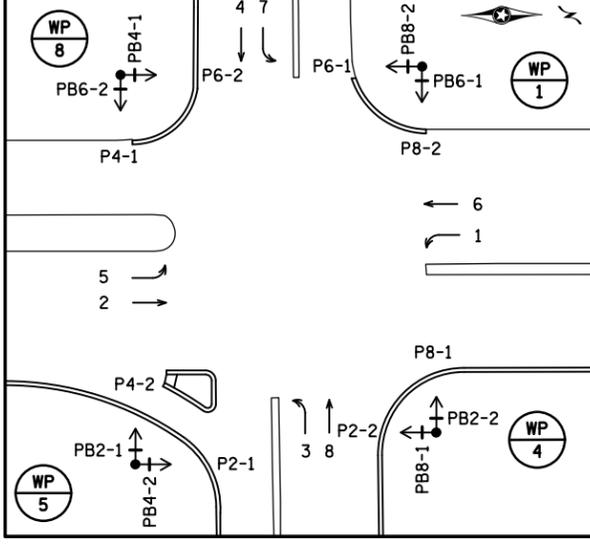


NOTE: THIS PLAN IS INTENDED TO SHOW WOOD POLE LOCATION AND EQUIPMENT THAT IS TO BE USED AS PART OF THE TEMPORARY SIGNAL SYSTEM INSTALLATION. SPECIFIC ROADWAY ELEMENTS MAY OR MAY NOT BE INPLACE AT THE TIME THE TEMPORARY SIGNAL IS IN OPERATION. THE LOCATION OF OVERHEAD SIGNALS AND DETECTORS FOR EACH STAGE OR PHASE WILL NEED TO BE ADJUSTED ACCORDINGLY.

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 1 AND 5 OPERATED AS PROTECTED LEFT TURN PHASES AND PHASES 3 AND 7 OPERATED AS PROTECTED PERMISSIVE.
- PHASE 2 AND 6 ON VEHICLE RECALL.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



- NOTES:
- CONDUIT SHALL BE SCHEDULE 80 PVC OR SCHEDULE 80 HDPE.
 - SEE THE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS, COUNT DOWN PEDESTRIAN HEADS, VEHICLE HEADS, AND EMERGENCY VEHICLE PREEMPTION (EVP).
 - ENSURE THE EXACT LOCATION OF THE HANDHOLES, POLES, LOOP DETECTORS AND TEMPORARY CABINET BASE ARE VERIFIED IN THE FIELD BY MNDOT OFFICE PERSONNEL.
 - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF THE POWER FOR THE TRAFFIC SIGNAL SYSTEM.
 - THE CONTRACTOR SHALL LOCATE AND VERIFY INPLACE UTILITIES PRIOR TO COMMENCING WORK.
 - PAVEMENT MARKINGS BY OTHERS. (SEE STRIPING PLAN FOR REFERENCE)
 - REMOVAL OF THE EXISTING SIGNAL SYSTEM IS INCIDENTAL.
 - THE CONTRACTOR SHALL FURNISH AND INSTALL SPAN WIRE MOUNTED TYPE R10-12 SIGNS ADJACENT TO HEADS 4-3 AND 8-3.
 - SEE THE CONSTRUCTION PLAN FOR STAGING. MOVEMENT OF HEADS AND DETECTORS FOR EACH STAGE OR PHASE OF CONSTRUCTION SHALL BE COMPLETED BY THE CONTRACTOR.
 - COIL A SUFFICIENT LENGTH OF CABLE AT ALL SPAN WIRE MOUNTED SIGNAL FACES, EVP DETECTORS AND INDICATOR LIGHTS, AND MICROWAVE DETECTORS TO COORDINATE STAGING SHIFTS.
 - SEE DETAIL SHEET FOR WOOD POLE AND SPAN WIRE MOUNTING DETAILS.
 - ALL NEW CONDUIT SHALL BE PVC - SCHEDULE 80 OR HDPE SCHEDULE 80 AND CARRY 1-1/C 6 INSULATED GROUNDING CONDUCTOR AS SHOWN IN PLAN.
 - ALL WIRES LISTED ARE AWG (AMERICAN WIRE GAUGE).
 - CONDUIT SIZES ARE NOMINAL DIAMETER.

DRAWN BY:	REVISED BY:	REVISED BY:	AS BUILT BY:
CKD BY:	CKD BY:	CKD BY:	CKD BY:
DATE:	DATE:	DATE:	DATE:
SYSTEM ID: METER ADDRESS: MASTER ID: S.A.P. NO.			

**INTERSECTION LAYOUT
SPAN WIRE TRAFFIC CONTROL SIGNAL
SYSTEM "A"
EXAMPLE PLAN**

PLOTTED/REVISED: 22-FEB-2018

DISTRICT #: Metro
PLOT NAME: 002 notes (2)
PATH & FILENAME: OTST\Signal\SamplerPlan\SpanWireSystem (2-22-18).dgn

WP 1
 45' WOOD POLE
 2-DOWN GUYS, GUARDS AND ANCHORS
 2-TYPE 10B-WOOD POLE MOUNTED AT 90° AND 180°
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 6+1) POLE MOUNTED
 15' MAST ARM AND LUMINAIRE (250W HPS) WITH PEC.
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS (R10-4b)(1EA. LEFT AND RIGHT)
 METAL JUNCTION BOX WITH TERMINAL BLOCK

3" CONDUIT RISER AND WEATHERHEAD FROM HH 1 TO SPAN WIRES WITH:
 2-6/C 14 2-6/C#14
 11-4/C 14 11-4/C#14
 2-3/C 14 2-3/C#14
 4-2/C 14 4-2/C#14
 8-4/C 18 7-4/C#18
 2-3/C 20 2-3/C#20
 1-1/C 6 INS. GR. 1-1/C #6 INS. GR.

3" CONDUIT ABOVE JUNCTION BOX TO SPAN WIRES WITH:
 4-4/C 14
 1-3/C 14
 2-2/C 14
 1-3/C 20

1" CONDUIT RISER AND WEATHERHEAD ABOVE SPAN WIRE WITH:
 1-3/C 14 (LUM)

WP 2
 30' WOOD POLE
 240 FT. FROM STOP BAR
 1-DOWN GUY, GUARD AND ANCHOR
 1-MICROWAVE DETECTOR

WP 3
 45' WOOD POLE
 1-DOWN GUY, GUARD AND ANCHOR
 1-TYPE 10A-WOOD POLE MOUNTED AT 90°
 METAL JUNCTION BOX WITH TERMINAL BLOCK

 1" CONDUIT ABOVE JUNCTION BOX TO SPAN WIRES WITH:
 1-4/C 14

WP 4
 45' WOOD POLE
 2-DOWN GUYS, GUARDS AND ANCHORS
 2-TYPE 10B-WOOD POLE MOUNTED AT 90° AND 180°
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 8+3) POLE MOUNTED
 15' MAST ARM AND LUMINAIRE (250W HPS) WITH PEC.
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS (R10-4b)(1EA. LEFT AND RIGHT)
 METAL JUNCTION BOX WITH TERMINAL BLOCK

 3" CONDUIT ABOVE JUNCTION BOX TO SPAN WIRES WITH:
 1-6/C 14
 3-4/C 14
 2-2/C 14
 1-3/C 14
 1-3/C 20

 1" CONDUIT RISER AND WEATHERHEAD ABOVE SPAN WIRE WITH:
 1-3/C 14 (LUM)

WP 5
 45' WOOD POLE
 2-DOWN GUYS, GUARDS AND ANCHORS
 2-TYPE 10B-WOOD POLE MOUNTED AT 90° AND 180°
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 2+5) POLE MOUNTED
 15' MAST ARM AND LUMINAIRE (250W HPS) WITH PEC.
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS (R10-4b)(1EA. LEFT AND RIGHT)
 METAL JUNCTION BOX WITH TERMINAL BLOCK

3" CONDUIT ABOVE JUNCTION BOX TO SPAN WIRES WITH:
 4-4/C 14
 2-2/C 14
 1-3/C 14
 1-3/C 20

1" CONDUIT RISER AND WEATHERHEAD ABOVE SPAN WIRE WITH:
 1-3/C 14 (LUM)

WP 6
 30' WOOD POLE
 200 FT. FROM STOP BAR
 1-DOWN GUY, GUARD AND ANCHOR
 1-MICROWAVE DETECTOR

WP 7
 45' WOOD POLE
 1-DOWN GUY, GUARD AND ANCHOR
 1-TYPE 10A-WOOD POLE MOUNTED AT 90°
 METAL JUNCTION BOX WITH TERMINAL BLOCK

 1" CONDUIT ABOVE JUNCTION BOX TO SPAN WIRES WITH:
 1-4/C 14

WP 8
 45' WOOD POLE
 2-DOWN GUYS, GUARDS AND ANCHORS
 2-TYPE 10B-WOOD POLE MOUNTED AT 90° AND 180°
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 4+7) POLE MOUNTED
 15' MAST ARM AND LUMINAIRE (250W HPS) WITH PEC.
 2-PEDESTRIAN PUSH BUTTONS AND SIGNS (R10-4b)(1EA. LEFT AND RIGHT)
 METAL JUNCTION BOX WITH TERMINAL BLOCK

 3" CONDUIT ABOVE JUNCTION BOX TO SPAN WIRES WITH:
 1-6/C 14
 3-4/C 14
 2-2/C 14
 1-3/C 14
 1-3/C 20

 1" CONDUIT RISER AND WEATHERHEAD ABOVE SPAN WIRE WITH:
 1-3/C 14 (LUM)

SAMPLE PLAN NOTES:

1. THIS "TEMPORARY SIGNAL" SAMPLE PLAN INCLUDES PEDESTRIAN CROSSING EQUIPMENT.

PEDESTRIAN CROSSINGS WITH TEMPORARY SIGNAL SYSTEMS SHOULD BE CONSIDERED WHERE THERE IS HIGH PEDESTRIAN TRAFFIC AND A LACK OF ALTERNATE PEDESTRIAN ROUTES. TYPICALLY IT IS NOT FEASIBLE TO MEET ALL OF THE ADA REQUIREMENTS FOR PEDESTRIAN CROSSINGS FOR THESE TEMPORARY CONDITIONS.

TYPICALLY PEDESTRIAN CROSSINGS ARE NOT INCLUDED WITH TEMPORARY SIGNAL SYSTEMS. CONSTRUCTION IS A TEMPORARY CONDITION, AND NORMALLY A RELATIVELY SHORT TIME PERIOD. THE CONSTRUCTION ACTIVITIES IN THESE WORK ZONES CAN MAKE THESE AREAS HAZARDOUS. IT IS ADVANTAGEOUS TO CLOSE THE INTERSECTION TO PEDESTRIANS DURING CONSTRUCTION IF POSSIBLE.

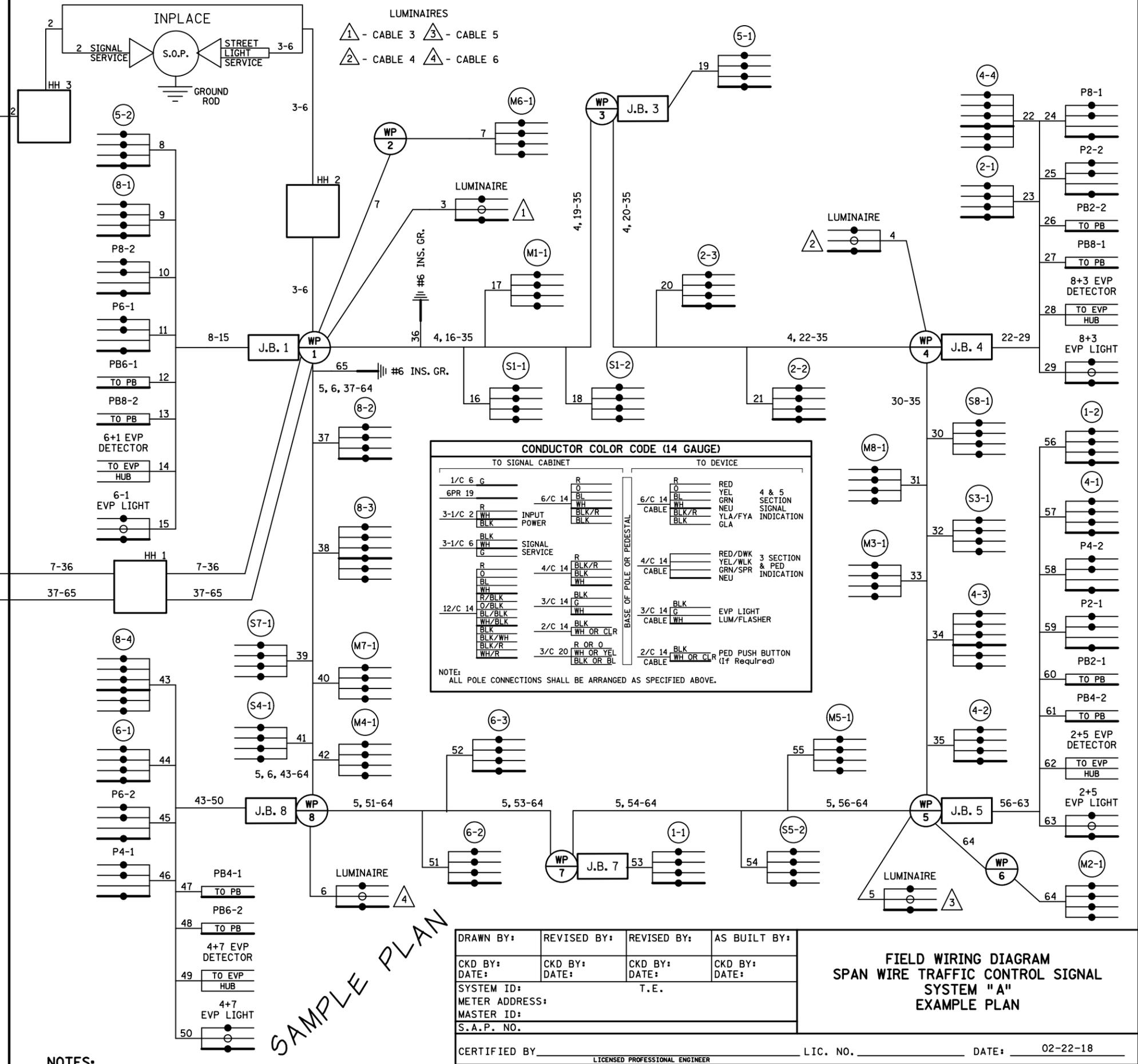
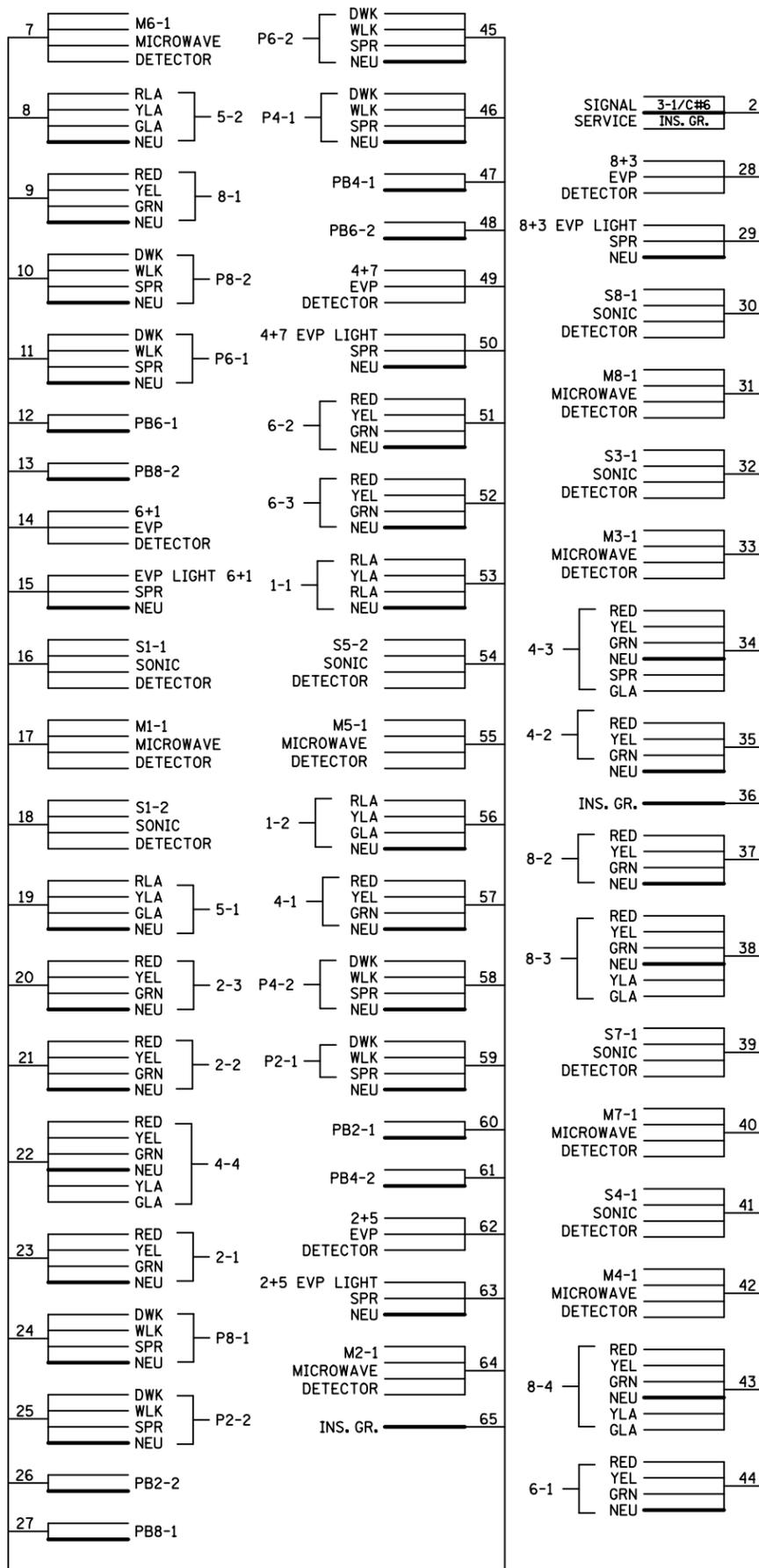
INCLUDE R9-3a SIGNS (NO PEDS) TO THE POLE NOTES IF PEDESTRIAN CROSSINGS ARE NOT PROVIDED.

2. THIS "TEMPORARY SIGNAL" SAMPLE PLAN INDICATES THAT THE E.V.P. EQUIPMENT IS TO BE MOUNTED ON THE POLES. THE E.V.P. EQUIPMENT MAY ALSO BE MOUNTED ON THE SPAN WIRE, OR THE DETECTOR MAY BE MOUNTED ON THE POLE AND THE CONFIRMATORY LIGHT MAY BE MOUNTED ON THE SPAN WIRE. THE MOUNTING LOCATION OF THE E.V.P. EQUIPMENT DEPENDS ON SPECIFIC PROJECT SITE REQUIREMENTS AND DESIGNER JUDGEMENT.

SAMPLE PLAN

DRAWN BY:	REVISED BY:	REVISED BY:	AS BUILT BY:	INTERSECTION NOTES SPAN WIRE TRAFFIC CONTROL SIGNAL SYSTEM "A" EXAMPLE PLAN
CKD BY:	CKD BY:	CKD BY:	CKD BY:	
DATE:	DATE:	DATE:	DATE:	
SYSTEM ID: T.E.				
METER ADDRESS:				
MASTER ID:				
S.A.P. NO.				
CERTIFIED BY _____		LIC. NO. _____		DATE: 02-22-18
STATE PROJ. NO.		(T.H.)		SHEET NO. 2 OF 3 SHEETS

CONTROLLER CABINET



DISTRICT #: Metro
 IPLOT NAME: 003 wiring (3)
 PATH & FILENAME: OTST\Signal\SamplePlan\SpanWireSystem (2-22-18).dgn
 PLOTTED/REVISED: 22-FEB-2018

SAMPLE PLAN

NOTES:
1. LUMINAIRES ARE METERED.

DRAWN BY:	REVISED BY:	REVISED BY:	AS BUILT BY:
CKD BY:	CKD BY:	CKD BY:	CKD BY:
DATE:	DATE:	DATE:	DATE:
SYSTEM ID:			
METER ADDRESS:			
MASTER ID:			
S.A.P. NO.			

FIELD WIRING DIAGRAM SPAN WIRE TRAFFIC CONTROL SIGNAL SYSTEM "A" EXAMPLE PLAN