

PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

DISTRICT #: \$\$\$@DISTRICT@\$\$
PLOT NAME: \$\$\$@PLOT\$NAME@\$\$
PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$\$

NMC LOOP DETECTORS			
NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D2-1	6x6	150'	1
D2-2	6x6	150'	1
D5-1	6x20	5'	7
D6-1	6x6	250'	1
D6-2	6x6	250'	1
D8-1	2-6x6	180'	11
D8-2	6x15	0'	7
D8-3	6x15	20'	1

SIGNAL HEAD CHART						
SIGNAL FACE	ALL SIGNAL INDICATIONS ARE 12"					
	R	Y	G	R	Y	G
2-1, 2-2	o	o	o			
2-3, 2-4	o	o	o	←	←	
6-1, 6-2	o	o	o			
8-1, 8-2, 8-3	o	o	o			

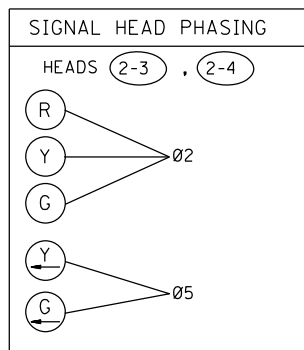
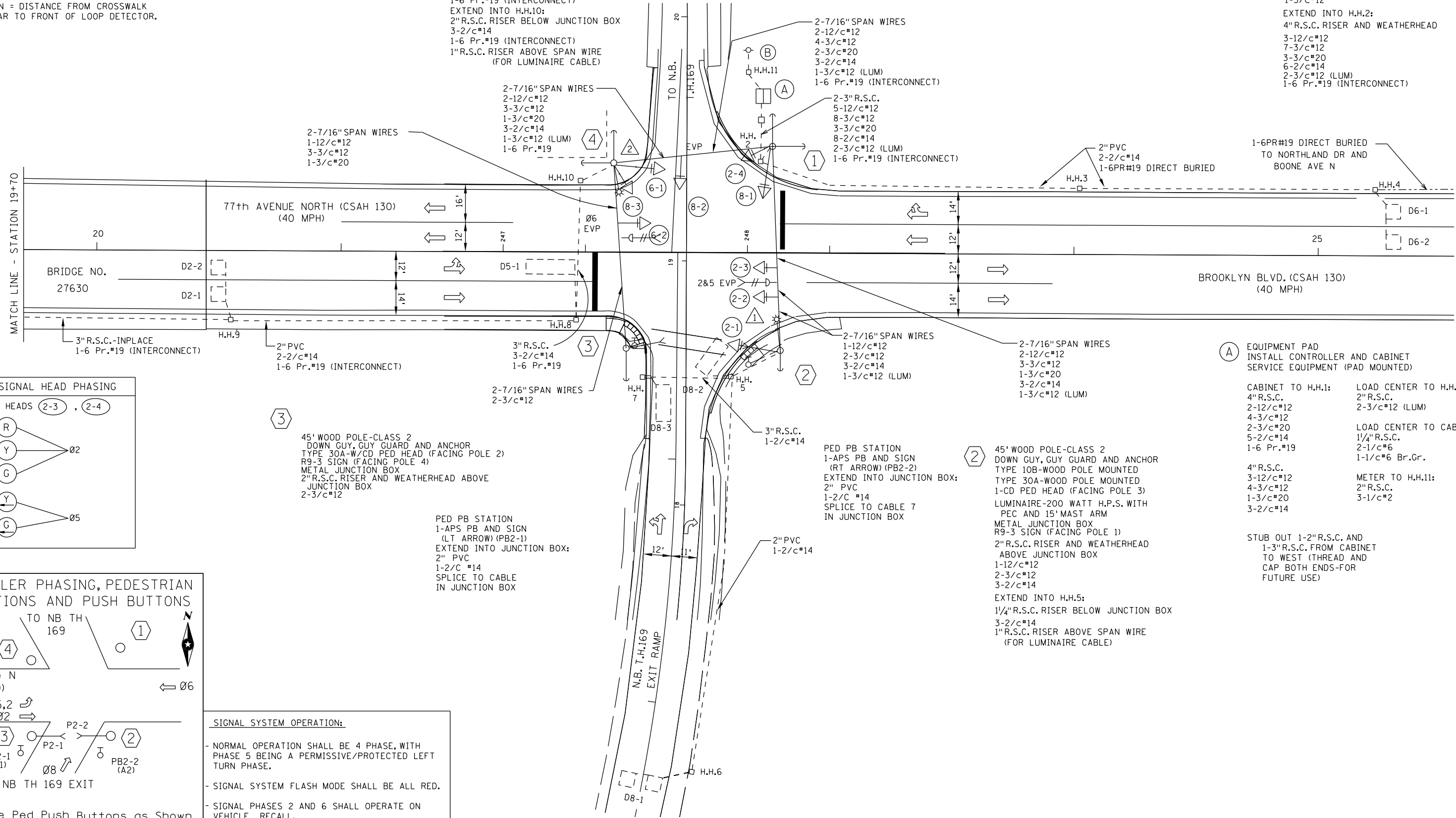
NOTE: LOCATION = DISTANCE FROM CROSSWALK OR STOP BAR TO FRONT OF LOOP DETECTOR.

④ 45' WOOD POLE-CLASS 2
2-DOWN GUYS, GUY GUARDS AND ANCHORS
2-TYPE 10A-WOOD POLE MOUNTED
2-R9-3 SIGNS (FACING POLES 1 & 3)
POLE MOUNTED (FACING POLES 1 AND 3)
LUMINAIRE-200 WATT H.P.S. WITH PEC AND 15' MAST ARM
METAL JUNCTION BOX
3" R.S.C. RISER AND WEATHERHEAD ABOVE JUNCTION BOX
3-12/c#12
3-2/c#14
1-6 Pr.#19 (INTERCONNECT)
EXTEND INTO H.H.10:
2" R.S.C. RISER BELOW JUNCTION BOX
3-2/c#14
1-6 Pr.#19 (INTERCONNECT)
1" R.S.C. RISER ABOVE SPAN WIRE (FOR LUMINAIRE CABLE)

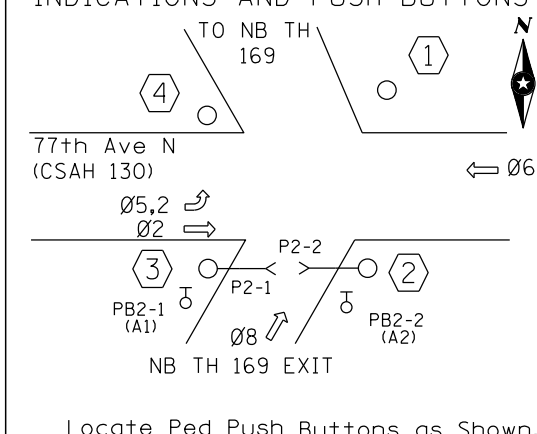
ⓑ WOOD POLE
2" R.S.C. RISER AND WEATHERHEAD
3-1/c#2
EXTEND INTO H.H.11:
2" R.S.C.
3-1/c#2



① 45' WOOD POLE-CLASS 2
2-DOWN GUYS, GUY GUARDS AND ANCHORS
TYPE 10A-WOOD POLE MOUNTED (2-4)
TYPE 10A-WOOD POLE MOUNTED (8-1)
2-R9-3 SIGNS (FACING POLES 2 & 4)
METAL JUNCTION BOX
2" R.S.C. RISER AND WEATHERHEAD ABOVE JUNCTION BOX
1-12/c#12
EXTEND INTO H.H.2:
2" R.S.C. RISER BELOW JUNCTION BOX
2-12/c#12
1-3/c#12
EXTEND INTO H.H.2:
4" R.S.C. RISER AND WEATHERHEAD
3-12/c#12
7-3/c#12
3-3/c#20
6-2/c#14
2-3/c#12 (LUM)
1-6 Pr.#19 (INTERCONNECT)



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATION:

- NORMAL OPERATION SHALL BE 4 PHASE, WITH PHASE 5 BEING A PERMISSIVE/PROTECTED LEFT TURN PHASE.
- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- SIGNAL PHASES 2 AND 6 SHALL OPERATE ON VEHICLE RECALL.

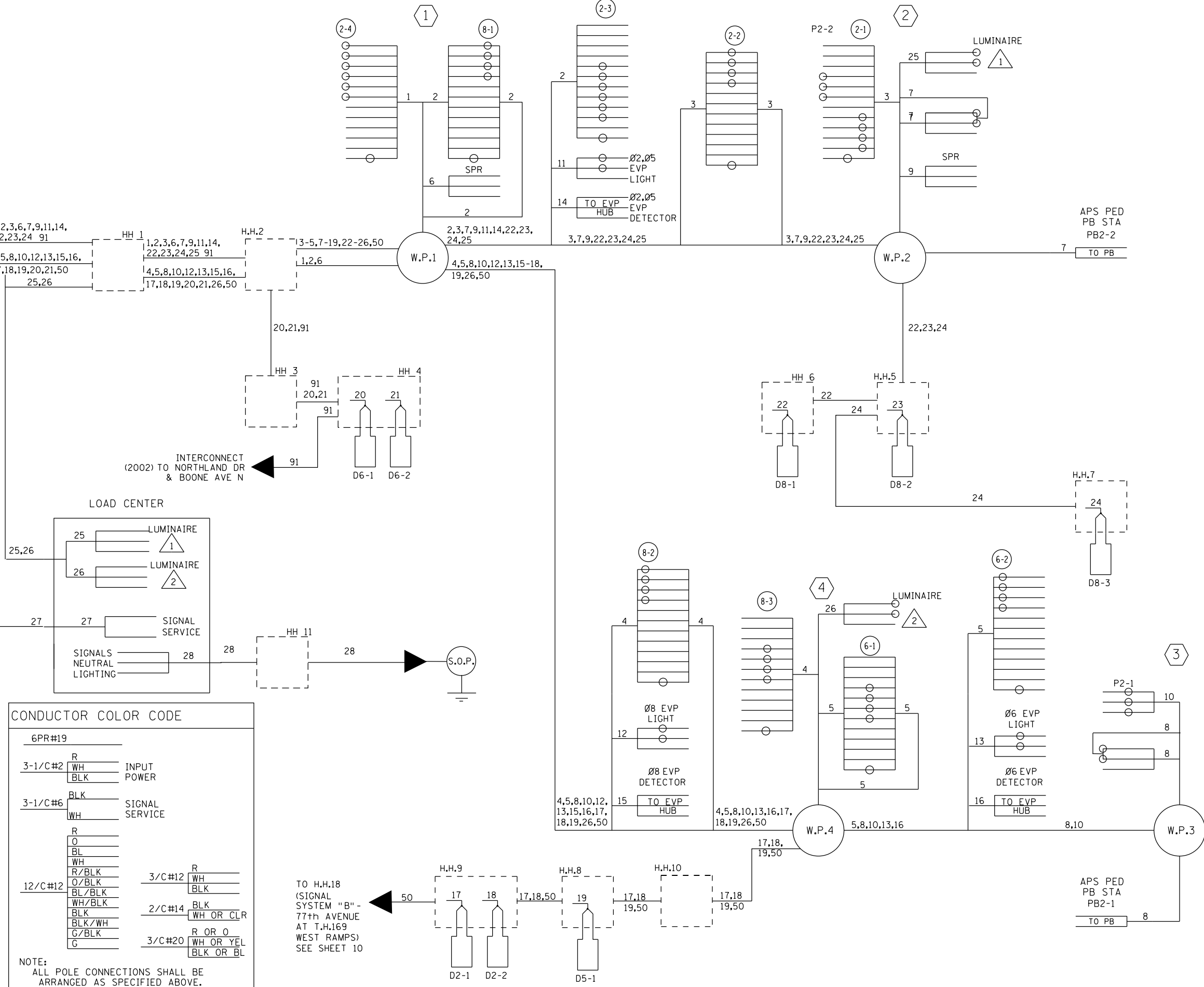
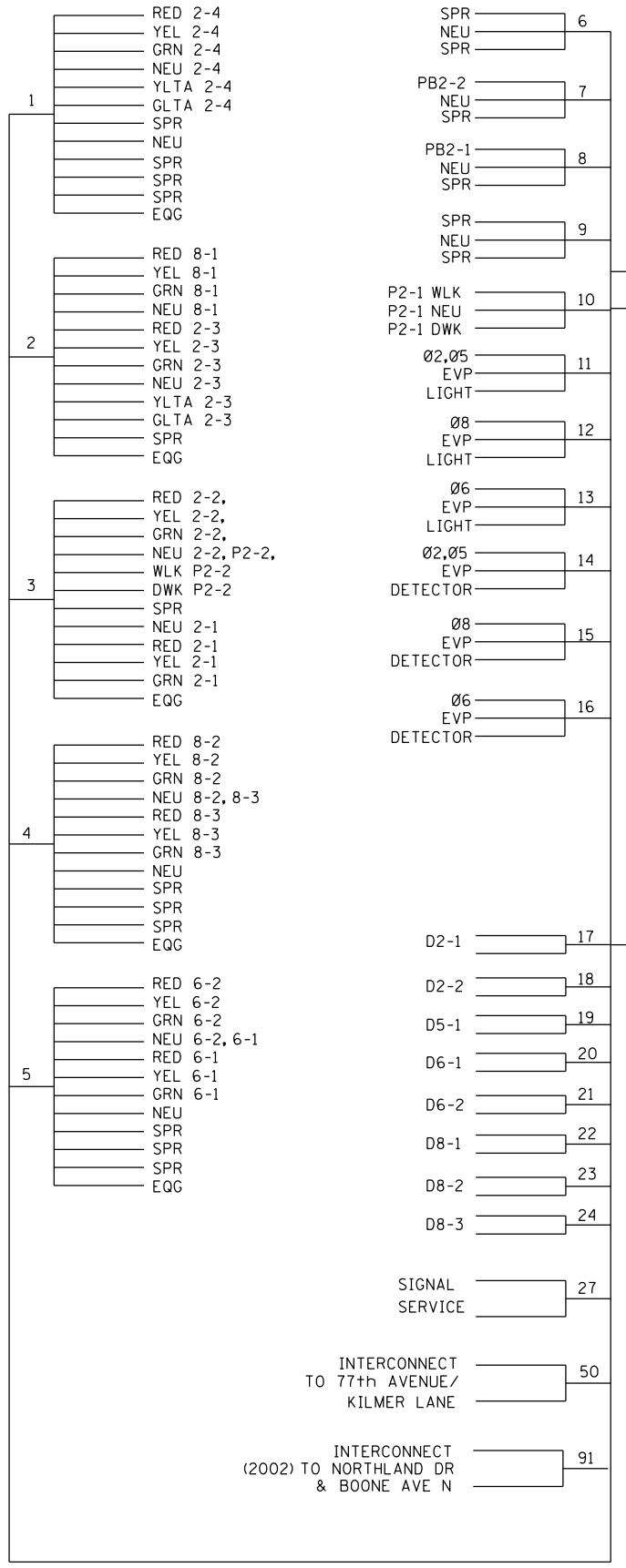
BY	DATE	REVISIONS	SYSTEM ID: 21979	T.E.	S.A.P. NO.	DRAWN BY: MAS	CKD BY: GAK	DATE: 2/19/13
EJA	06-25-15	AS-BUILT OF SP 2772-92 APS ADDED	METER ADDRESS: 7730 TRUNK HIGHWAY 169	T.E.	CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
			MASTER ID: _____	T.E.	STATE PROJ. NO. (T.H. 169)			SHEET NO. 1 OF 2 SHEETS

INTERSECTION LAYOUT
T.H. 169 AT BROOKLYN BLVD., EAST RAMPS
IN BROOKLYN PARK, HENNEPIN COUNTY

CONTROLLER CABINET

PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

DISTRICT #: @@DISTRICT@
 IPLOT NAME: \$\$\$@PLOT\$NAME@\$\$
 PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$\$



CONDUCTOR COLOR CODE

6PR#19	
3-1/C#2	R INPUT POWER
	WH
	BLK
3-1/C#6	BLK SIGNAL SERVICE
	WH
	R
	O
	BL
	WH
12/C#12	R/C#12 R
	O/BLK WH
	BL/BLK BLK
	WH/BLK 2/C#14 BLK
	BLK WH OR CLR
	G/BLK 3/C#20 R OR O
	G WH OR YEL
	BLK OR BL

NOTE: ALL POLE CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

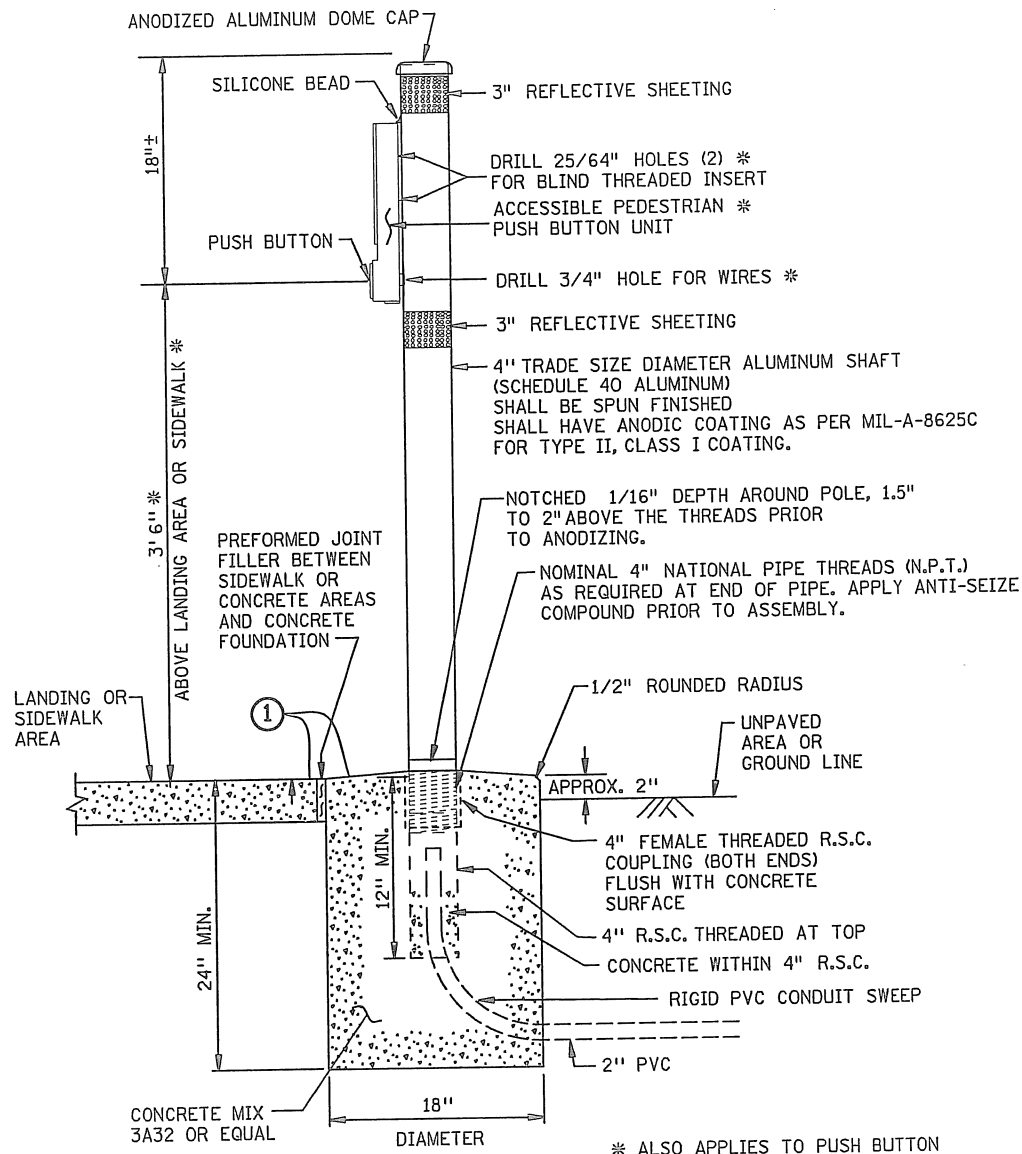
BY	DATE	REVISIONS
EJA	06-25-15	AS-BUILT OF SP 2772-92 APS ADDED

SYSTEM ID: 21979	T.E.
METER ADDRESS: 7730 TRUNK HIGHWAY 169	
MASTER ID:	T.E.

WIRING DIAGRAM
 T.H. 169 AT BROOKLYN BLVD., EAST RAMPS
 IN BROOKLYN PARK, HENNEPIN COUNTY

S.A.P. NO.	DRAWN BY: MAS	CKD BY: GAK	DATE: 2/19/13
CERTIFIED BY: _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO. 2772-92 (T.H. 169) SHEET NO. 2 OF 2 SHEETS			

PEDESTRIAN PUSH BUTTON STATION



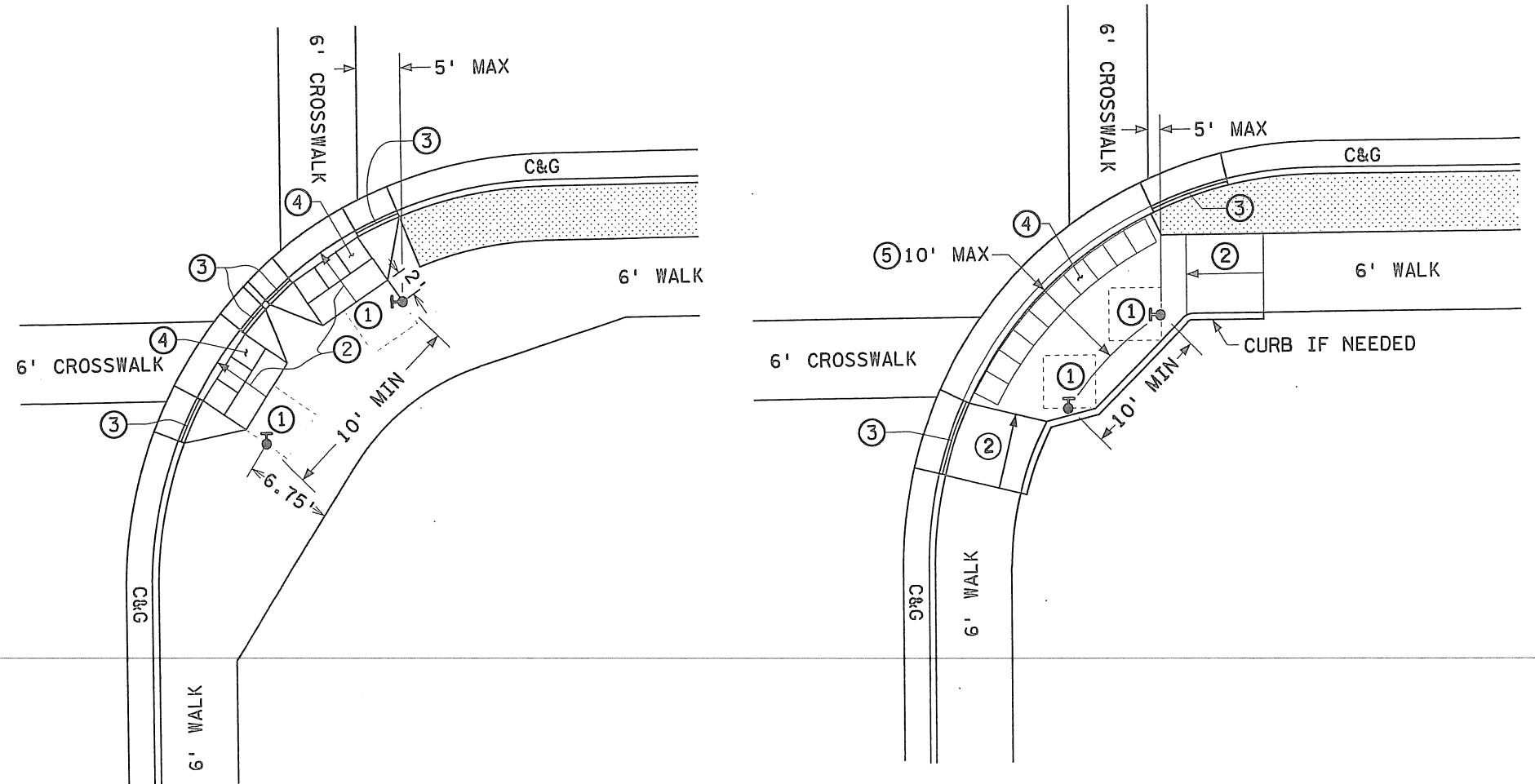
NOTES:

- PLACEMENT AND ORIENTATION OF THE PUSH BUTTON STATION IS CRITICAL. MOUNT THE BUTTON SO THAT THE FACE IS PARALLEL WITH THE ASSOCIATED CROSSWALK. SCREW IN POST TO A TIGHTENED POSITION BEFORE MOUNTING ACCESSIBLE PEDESTRIAN PUSH BUTTON UNIT TO THE POST.
- BLIND THREADED INSERTS (RIVET NUT) MUST BE INSERTED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.
- BLIND THREADED INSERTS SHALL BE ZINC PLATED STEEL WITH 1/4 - 20 UNC THREADS. INSERT SHALL BE SUITABLE FOR USE ON A MOUNTING SURFACE WALL THICKNESS OF .337". APPROVED BLIND THREADED INSERTS CAN BE FOUND ON THE MN/DOT QUALIFIED PRODUCTS LIST.
- MOUNTING BOLTS SHALL BE 1/4 - 20 STAINLESS STEEL. APPLY BRUSH ON ANTI SEIZE COMPOUND TO BOLTS PRIOR TO ASSEMBLY.
- APPLY A BEAD OF 100% SILICONE SEALANT ALONG THE TOP OF THE PUSH BUTTON UNIT WHERE IT COMES IN CONTACT WITH THE 4" POST.
- THE REFLECTIVE SHEETING SHALL BE WHITE AT INTERSECTION CORNERS AND SHALL BE YELLOW WHEN USED IN CENTER MEDIANS. SEE MN/DOT SIGNING QUALIFIED PRODUCTS LIST (GPL) FOR APPROVED TUBE DELINEATOR SHEETING.
- ANTI-SEIZE COMPOUND MUST BE USED ON THE MOUNTING BOLTS WHEN THE PEDESTRIAN SIGN IS MOUNTED.

① THE CONCRETE FOUNDATION SHALL BE CAST INPLACE AND CONSTRUCTED FLUSH WITH THE SURROUNDING SIDEWALK.

GUIDELINES FOR LOCATING APS PUSH BUTTONS:

- THIS IS A GENERAL DETAIL INTENDED TO SHOW THE REQUIREMENTS OF APS PUSH BUTTON LOCATION. FOR PROJECT SPECIFIC DETAILS REGARDING PEDESTRIAN RAMP LAYOUT, SEE THE PEDESTRIAN CURB RAMP AND SIDEWALK DETAILS.
- BUTTONS SHALL BE WITHIN 5' OF THE OUTSIDE EDGE OF THE CROSSWALK.
- THE FACE OF THE BUTTON SHALL BE PARALLEL WITH THE CROSSWALK.
- A MIN. 4'X4' LANDING AREA SHALL BE PROVIDED ADJACENT TO EACH BUTTON.
- BUTTONS SHALL BE WITHIN 10' OF THE BACK OF CURB OR EDGE OF ROADWAY.
- BUTTONS SHALL BE AT LEAST 10' APART.



- ① 4'X4' MINIMUM LANDING AREA ADJACENT TO PUSH BUTTON. (2% SLOPE MAX.)
- ② RAMP - SLOPE (5% PREFERRED 8% MAX.)
- ③ CURB TAPER SECTION AT 1:10 (10%) (HEIGHT OF CURB IS TAPERED TO 0").
- ④ DETECTABLE WARNING SURFACE (TRUNCATED DOMES) - RADIUS SECTIONS WHERE SPECIFIED.
- ⑤ DISTANCE FROM THE BACK OF CURB TO PUSH BUTTON STATION.

TYPICAL APS PEDESTRIAN PUSH BUTTON LOCATION

PLOTTED/REVISED: 2/20/2013

DISTRICT #: METRO
PLOT NAME: SS3
PATH & FILENAME: IP_PWP-d1173048SP2772-92DETAILS.dgn

BY	DATE	REVISIONS

SYSTEM ID: 21513, 21979, 21980, 22224, 22225 & 22227

ACCESSIBLE PEDESTRIAN SIGNAL (APS)
PEDESTRIAN PUSH BUTTON STATION
TYPICAL APS PUSH BUTTON LOCATION DETAIL

DRAWN BY: MAS	CKD BY: GAK	DATE: 2/19/13
CERTIFIED BY: <i>Origen Kim</i>		LIC. NO. 26829 DATE: 2/20/13
STATE PROJ. NO. 2772-92 (T.H.169)		SHEET NO. SS3 OF SS15 SHEETS