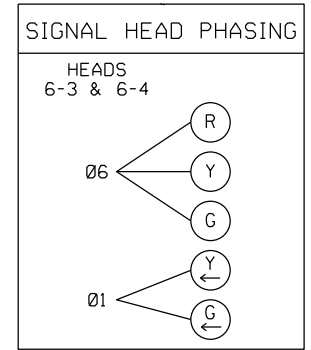


PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

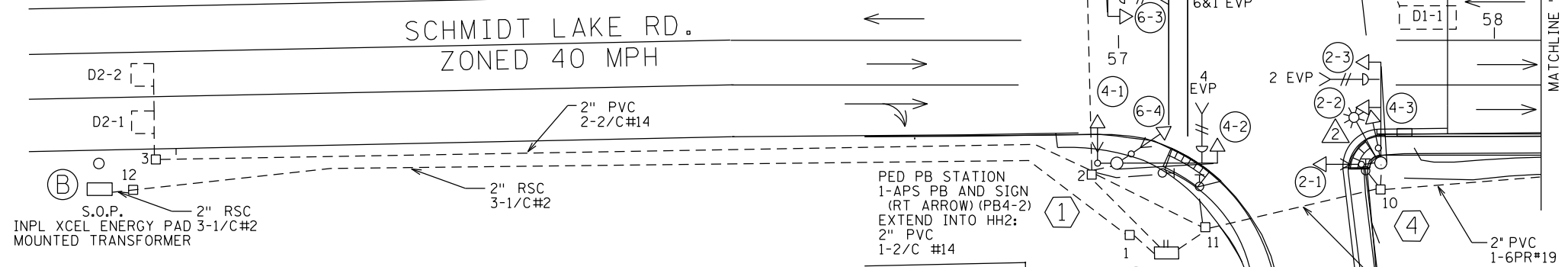
DISTRICT #: \$\$\$@DISTRICT@\$\$  
PLOT NAME: \$\$\$@PLOT\$NAME@\$\$  
PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$\$

| LOOP DETECTORS |             |          | SIGNAL HEAD CHART   |         |   |   |      |      |
|----------------|-------------|----------|---------------------|---------|---|---|------|------|
| NUMBER         | SIZE (FEET) | LOCATION | ALL INDICATIONS 12" |         |   |   |      |      |
| • D1-1         | 6 X 15      | 10'      | FACE                | RED LED | Y | G | YLTA | GLTA |
| + D4-1         | 2-6 X 6     | 120'     | 2-1,2-2,2-3         | ○       | ○ | ○ |      |      |
| D4-2           | 6 X 6       | 0'       | 6-3,6-4             | ○       | ○ | ○ | ←    | ←    |
| D4-3           | 6 X 6       | 20'      | 6-1,6-2             | ○       | ○ | ○ |      |      |
| • D2-1,D2-2    | 6 X 6       | 250'     | 4-1                 | ○       | ○ | ○ |      |      |
| • D6-2,D6-3    | 6 X 6       | 70'      | 4-2,4-3             | ○       | ○ | ○ |      |      |
| * D6-1         |             |          |                     |         |   |   |      |      |

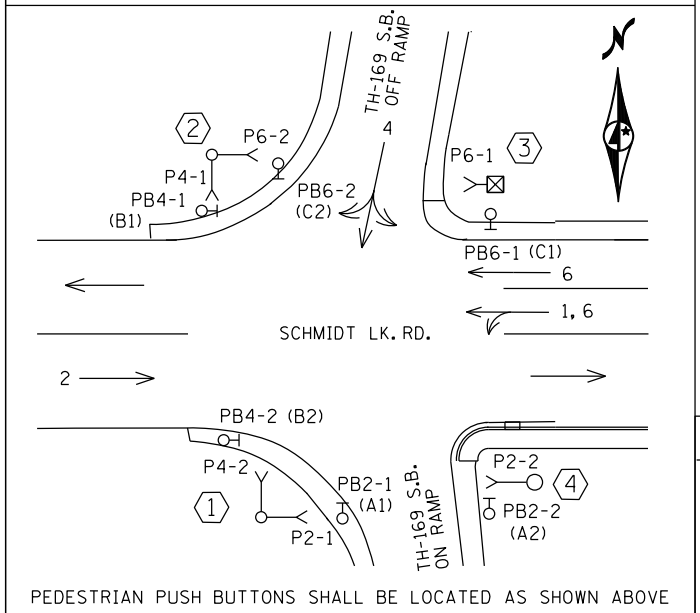
- PVC LOOP DETECTOR
  - + SAW CUT LOOP DETECTOR
  - \* MICROWAVE DETECTOR UNIT TC26B
- LOCATION = DISTANCE IN FEET FROM STOP BAR/PEDESTRIAN MARKINGS TO FRONT OF DETECTOR



(B) S.O.P. INPL. NSP PAD MOUNTED TRANSFORMER  
2" RSC FROM HH 1 WITH 3-1/C#2, INSTALL VIA HH 12 TO NSP PAD



CONTROLLER PHASING, PEDESTRIAN INDICATIONS, PUSH BUTTONS AND TYPE "R" SIGNS



(1) PA85 POLE FOUNDATION  
TYPE PA85-A-25  
ONE WAY SIGNAL AT 0'  
2-TYPE 10B AT 0 AND 180 DEG  
2-CD PED HEADS AT 0 AND 180 DEG  
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT (4)  
1-SIGN FACING EAST (R6-1L) ONE WAY  
1-SIGN FACING WEST (R6-1R) ONE WAY  
EXTEND TO HH2:  
3" RSC  
2-12/C#12  
2-3/C#12  
1-3/C#20

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED
- NORMAL OPERATION IS 4 PHASE
- PHASE 1 IS A PROTECTIVE/PERMISSIVE LEFT TURN PHASE
- PHASE 2 & PHASE 6 ARE ON VEHICLE RECALL

(2) PA90 POLE FOUNDATION  
TYPE PA90-A-30-D40-9 (DAVIT AT 350 DEG)  
1-ONE WAY SIGNAL AT 0'  
1-ONE-WAY SIGN AT 12' (WITH A FREY STRAP ADAPTOR)  
TYPE 10B AT 270 DEG  
TYPE 30A AT 90 DEG  
2-CD PED HEADS AT 90 AND 270 DEG  
LUMINAIRE 200W HPS  
1-R10-12 SIGN (ADJACENT TO HEAD 6-3)  
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT (1&6)  
EXTEND TO HH4:  
3" RSC  
2-12/C#12  
3-3/C#12  
1-3/C#20

(3) PEDESTAL FOUNDATION  
15' SIGNAL PEDESTAL POLE PLUS BASE  
1-MICROWAVE DETECTOR UNIT (TC26B) TYPE 4A  
1-CD PED HEAD  
1-SIGN FACING EAST (R6-1L) ONE WAY  
1-SIGN FACING WEST (R6-1R) ONE WAY  
1-R9-3a SIGN (FACING POLE 4)  
EXTEND TO HH7:  
3" RSC  
1-4/C#14  
1-4/C#18

(A) EQUIPMENT PAD  
CONTROLLER AND CABINET  
SERVICE CABINET  
CABINET TO HH2: CABINET TO HH1:  
4" RSC 4" RSC  
4-12/C#12 2-12/C#12  
4-3/C#12 2-3/C#12  
1-4/C#14 2-2/C#14  
12-2/C#14 1-3/C#20  
1-4/C#18 1-6PR#19  
2-3/C#20

3" RSC STUBBED OUT OF CONTROLLER CABINET (THREADED & CAPPED BOTH ENDS)

SERVICE CABINET TO CONTROLLER CABINET  
2" RSC  
2-1/C#6  
1-1/C#6 INS. GR.

SERVICE CABINET TO HH 2  
2" RSC  
2-3/C#12 (LUM)

SERVICE CABINET TO HH 1  
2" RSC  
3-1/C#2

HH 2 TO HH 11  
2" RSC  
1-3/C#12

(4) PA85 POLE FOUNDATION  
TYPE PA85-A-25-D40-9 (DAVIT AT 350 DEG)  
1-ONE WAY SIGNAL AT 0'  
1-ONE WAY SIGNAL AT 12' (WITH A FREY ADAPTOR)  
TYPE 10A AT 0 DEG  
TYPE 10B AT 270 DEG  
1-CD PED HEAD AT 270 DEG  
LUMINAIRE 200W HPS  
1-R9-3 SIGN (NO PED FACING POLE 3)  
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT (2)  
EXTEND TO HH10:  
3" RSC  
2-12/C#12  
3-3/C#12  
1-3/C#20

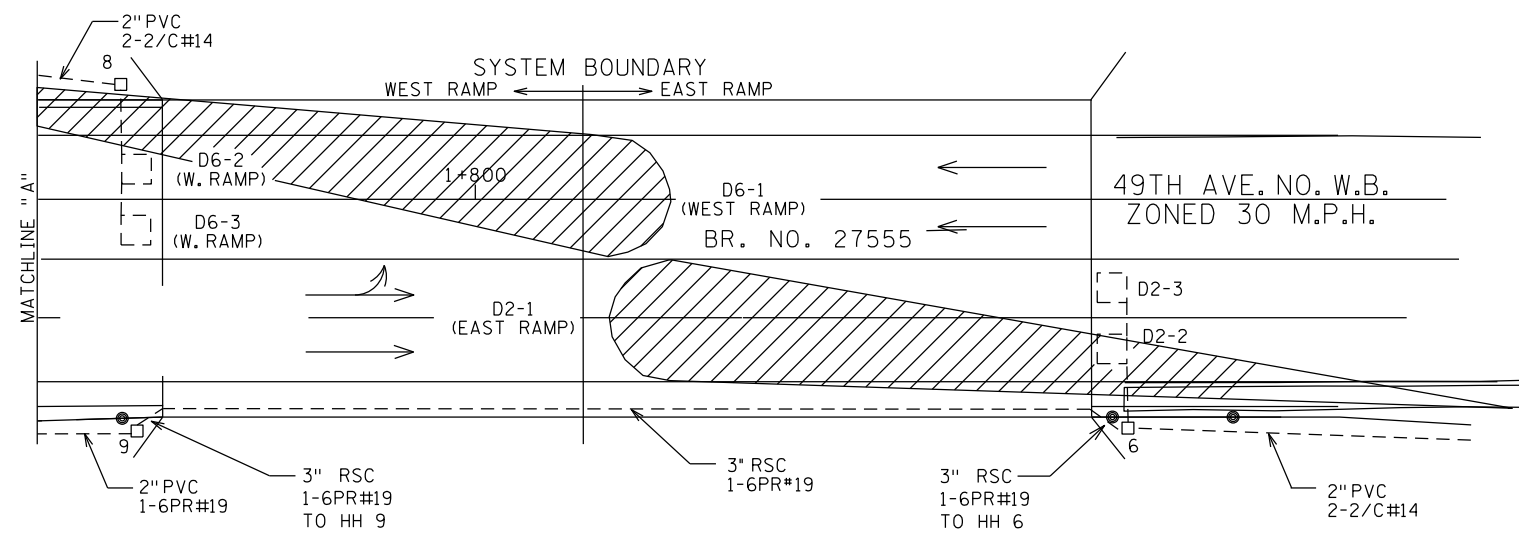
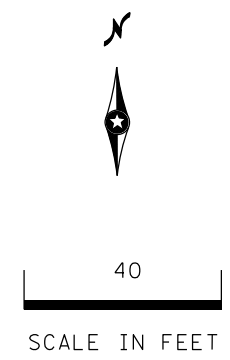


|     |          |  |                                       |      |
|-----|----------|--|---------------------------------------|------|
| BY  | DATE     | REVISIONS                                  | SYSTEM ID: 22225                      | T.E. |
| EJA | 06-24-15 | AS-BUILT OF SP 2772-92 APS & CD PEDS ADDED | METER ADDRESS: 9695 SCHMIDT LAKE ROAD | T.E. |
|     |          |  | MASTER ID:                            |      |

INTERSECTION LAYOUT  
T.H. 169 AT SCHMIDT LAKE ROAD, WEST RAMPS  
IN PLYMOUTH, HENNEPIN COUNTY

|                    |                |                |               |
|--------------------|----------------|----------------|---------------|
| S.A.P. NO.         | DRAWN BY: MAS  | CKD BY: GAK    | DATE: 2/19/13 |
| CERTIFIED BY _____ | LIC. NO. _____ | DATE: _____    |               |
| STATE PROJ. NO.    | (T.H. 169)     | SHEET NO. 1 OF | 3 SHEETS      |

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



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

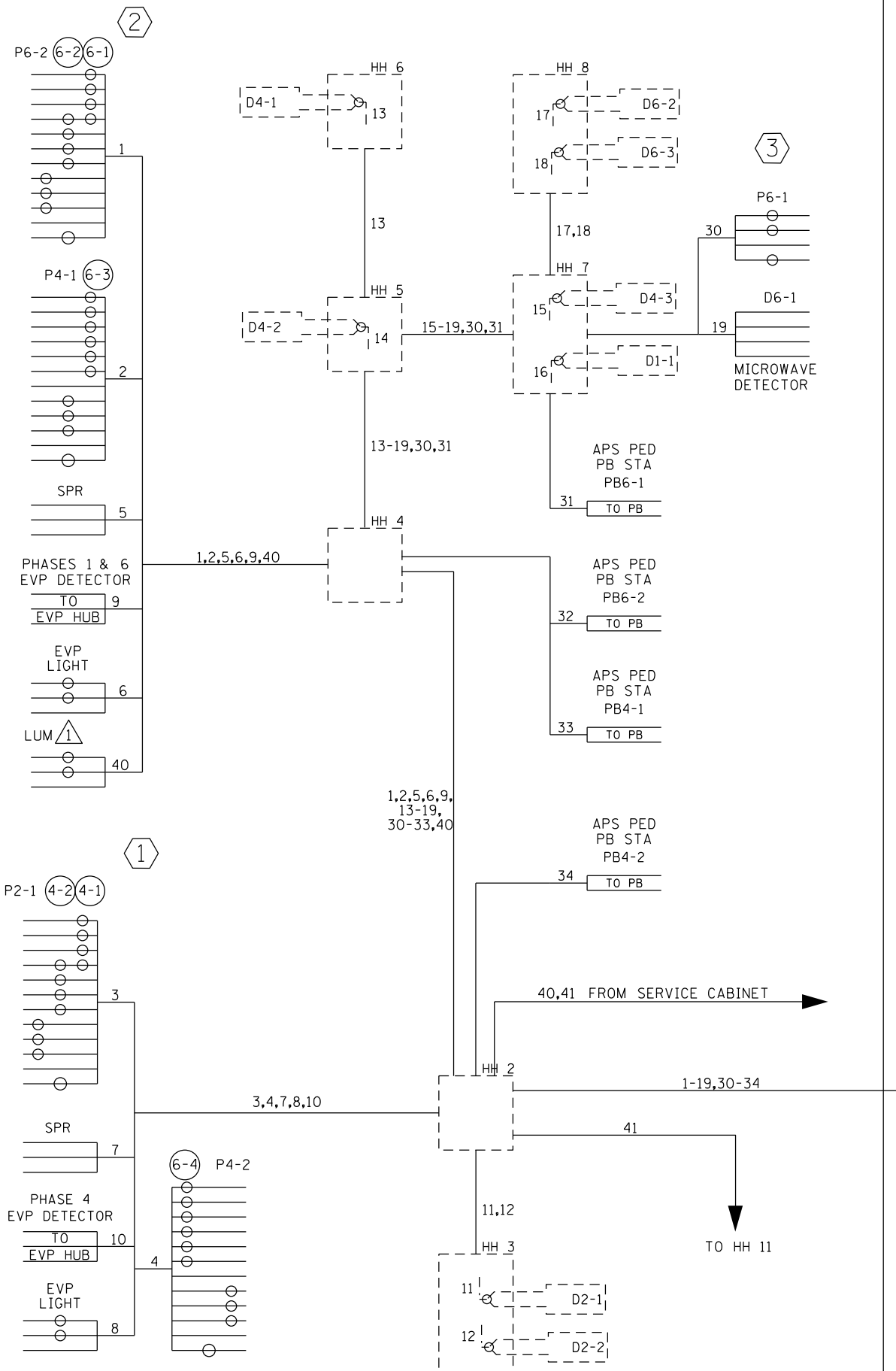
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|-----|----------|--|---------------------------------------|------|--------------------|---------------|----------------|----------------------------|
| BY  | DATE     | REVISIONS                                  | SYSTEM ID: 22225                      | T.E. | S.A.P. NO.         | DRAWN BY: MAS | CKD BY: GAK    | DATE: 2/19/13              |
| EJA | 06-24-15 | AS-BUILT OF SP 2772-92 APS & CD PEDS ADDED | METER ADDRESS: 9695 SCHMIDT LAKE ROAD |      | CERTIFIED BY _____ |               |                | LIC. NO. _____ DATE: _____ |
|     |          |  | MASTER ID: 22226                      | T.E. | STATE PROJ. NO.    | (T.H. 169)    | SHEET NO. 2 OF | 3 SHEETS                   |

MATCHLINE LAYOUT  
 TH 169 AT SCHMIDT LAKE ROAD WEST RAMPS  
 IN PLYMOUTH, HENNEPIN COUNTY

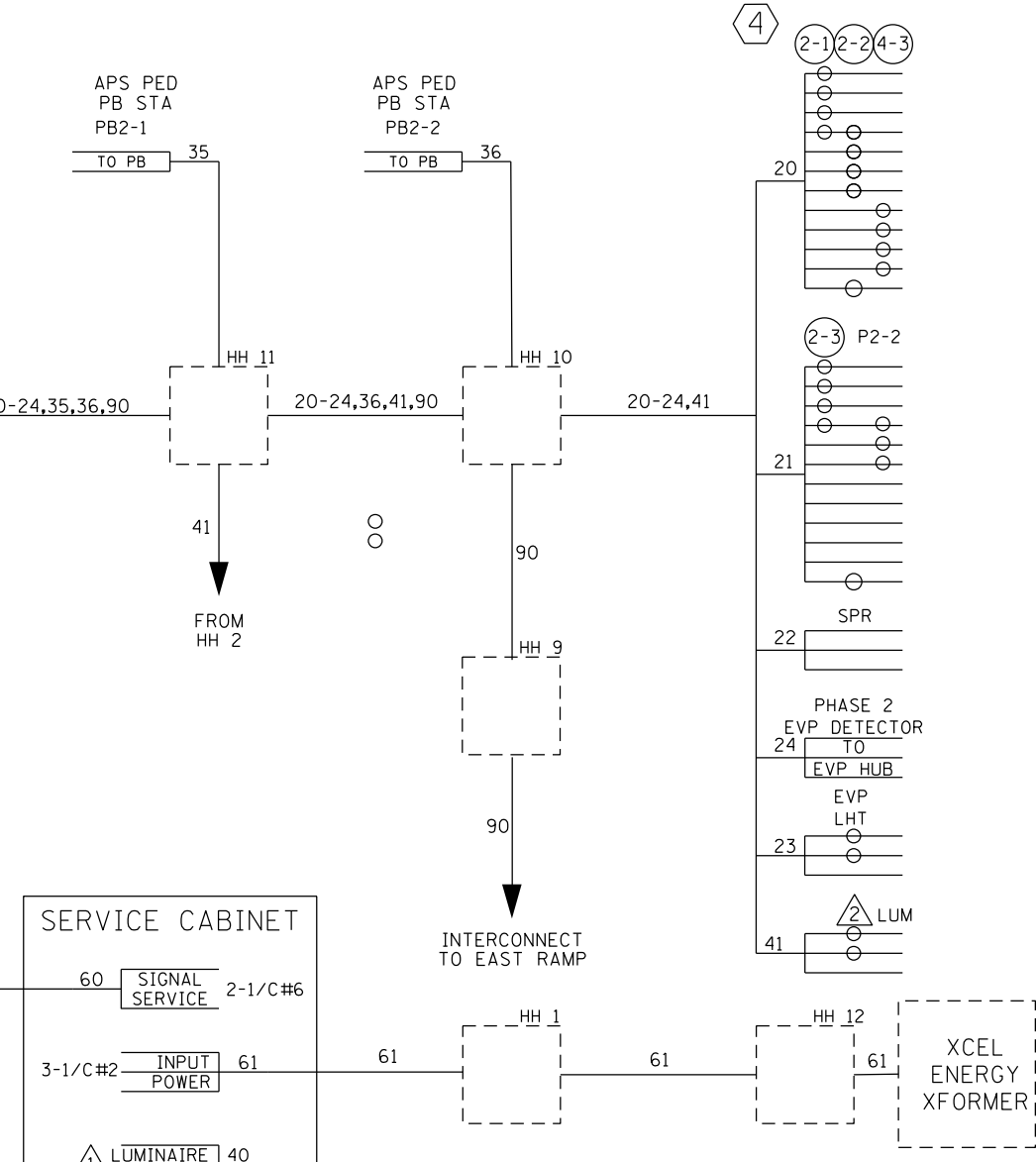
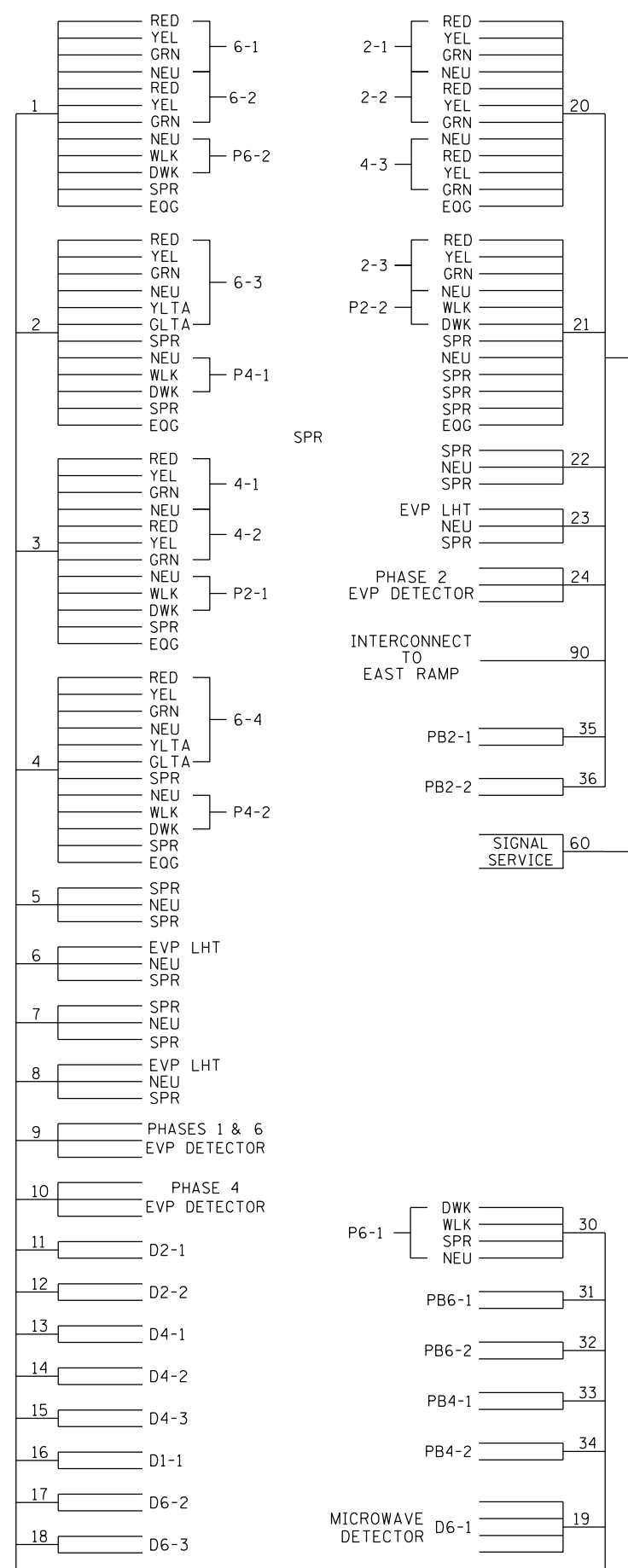
LICENSED PROFESSIONAL ENGINEER

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

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



CONTROLLER CABINET



| CONDUCTOR COLOR CODE |        |        |                |
|----------------------|--------|--------|----------------|
| 6PR#19               |        |        |                |
| 4/C#14               | R      | BLK/R  |                |
|                      |        | BLK    |                |
|                      |        | WH     |                |
| 3-1/C#2              | R      | WH     | INPUT POWER    |
|                      |        | BLK    |                |
| 2-1/C#6              | BLK    | WH     | SIGNAL SERVICE |
| 12/C#14              | R      | 4/C#18 | BLK            |
|                      | O      |        | WH             |
|                      | BL     |        | G              |
|                      | WH     |        |                |
|                      | R/BLK  |        | BLK            |
|                      | O/BLK  |        | WH             |
|                      | BL/BLK |        | R              |
|                      | WH/BLK |        |                |
|                      | BLK    |        | 2/C#14         |
|                      | BLK/WH |        | BLK OR CLR     |
|                      | G/BLK  |        | 3/C#20         |
|                      | G      |        | R OR O         |
|                      |        |        | WH OR YEL      |
|                      |        |        | BLK OR BL      |

NOTE:  
ALL POLE CONNECTIONS ARE ARRANGED AS SPECIFIED ABOVE.

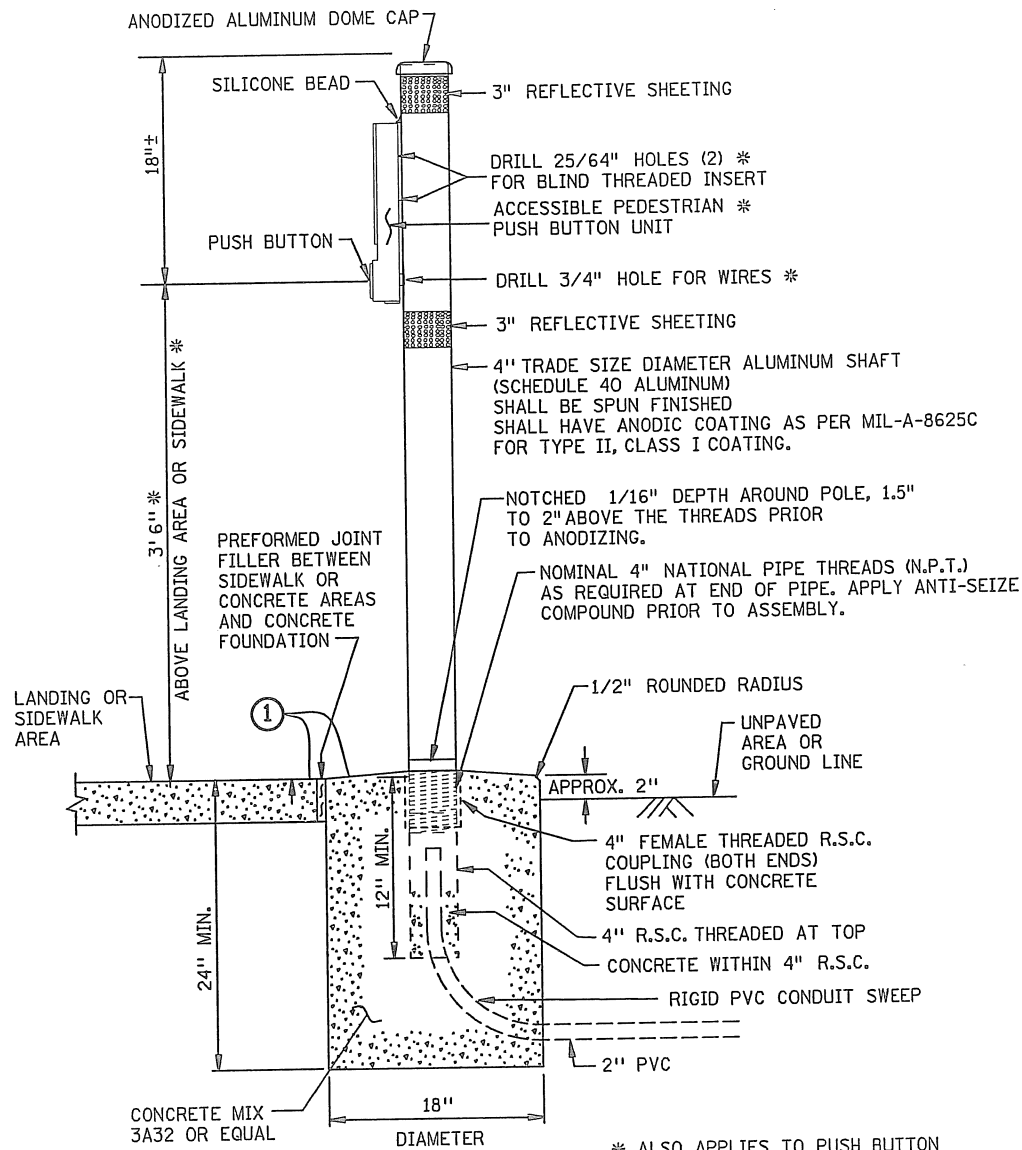
| BY  | DATE     | REVISIONS                                  |
|-----|----------|--|
| EJA | 06-24-15 | AS-BUILT OF SP 2772-92 APS & CD PEDS ADDED |

SYSTEM ID: 22225 T.E.  
METER ADDRESS: 9695 SCHMIDT LAKE ROAD T.E.  
MASTER ID:

WIRING DIAGRAM  
T.H. 169 AT SCHMIDT LAKE ROAD, WEST RAMPS IN PLYMOUTH, HENNEPIN COUNTY

S.A.P. NO.  
DRAWN BY: MAS CKD BY: GAK DATE: 2/19/13  
CERTIFIED BY: \_\_\_\_\_ LIC. NO. 26829 DATE: \_\_\_\_\_  
STATE PROJ. NO. (T.H. 169) SHEET NO. 3 OF 3 SHEETS

# PEDESTRIAN PUSH BUTTON STATION



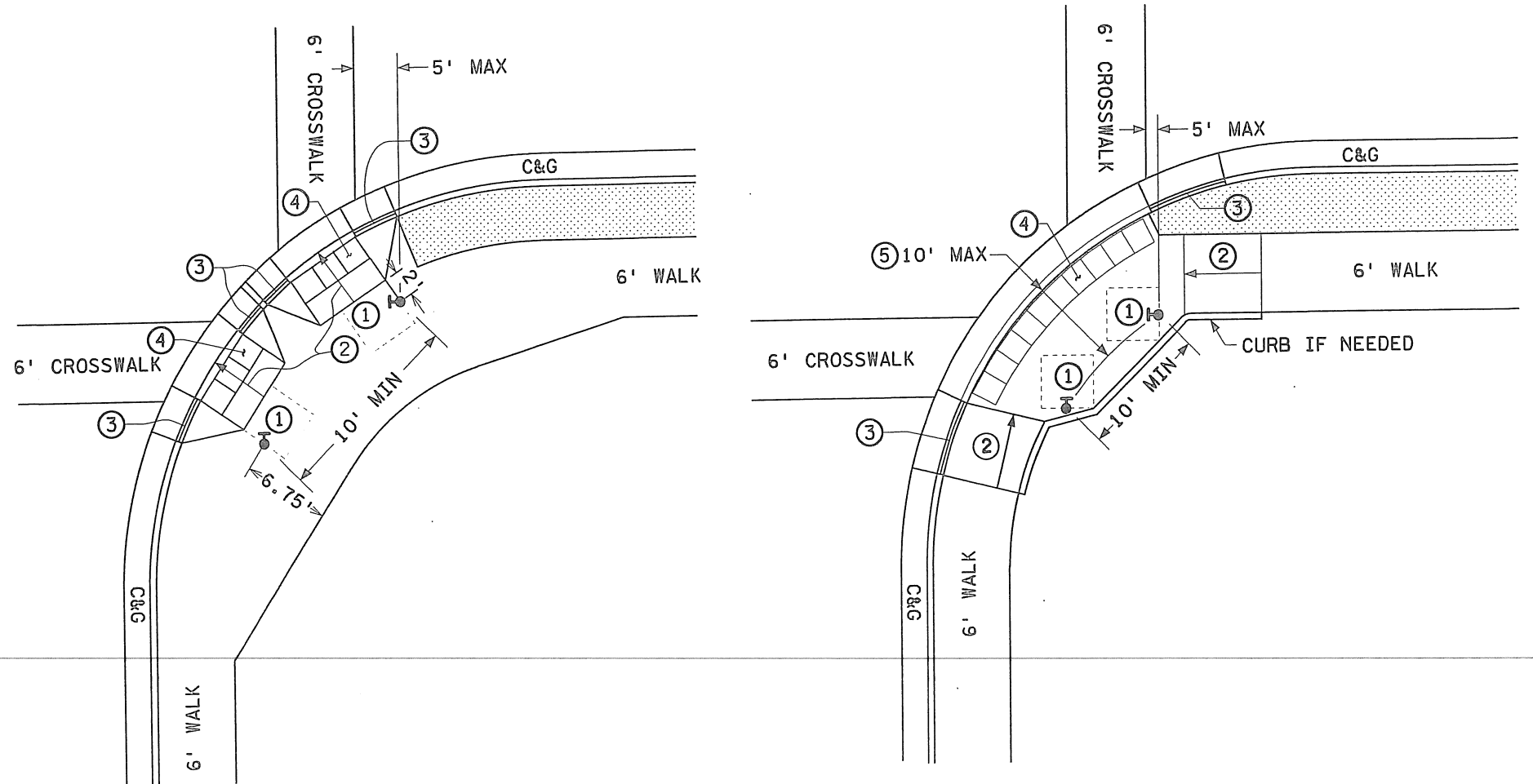
### NOTES:

- 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>Orinay Kim</i>   |             | LIC. NO. 26829 |
| STATE PROJ. NO. 2772-92 (T.H.169) |             | DATE: 2/20/13  |
| SHEET NO. SS3 OF SS15 SHEETS      |             |                |