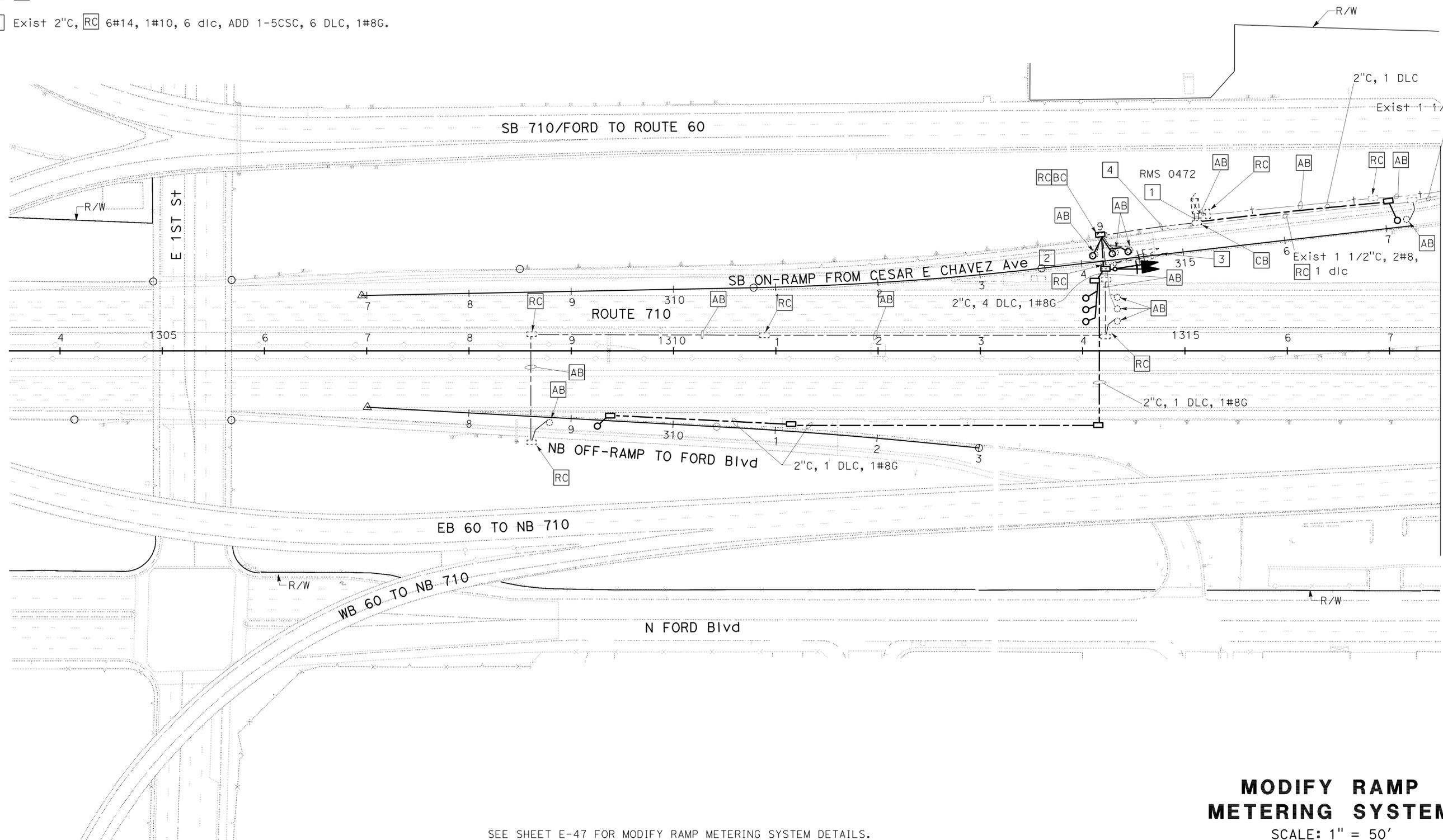
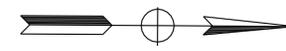


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|--|--------|-------|--|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1102 | 1507 |
| <i>Stanley L. Johnson</i> 4/4/11 REGISTERED ELECTRICAL ENGINEER DATE | | | STANLEY L. JOHNSON No. E 16761 Exp. 09/30/12 ELECTRICAL | | |
| 6-27-11 | | | PLANS APPROVAL DATE | | |
| <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small> | | | | | |

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET)

- 1 Exist 2-2 1/2"C, RC 7#14, 2#8, 1#10, dlc, TELEPHONE CABLE, ADD 1-5CSC, 6 DLC, 1#8G.
- 2 2"C, 1-5CSC, 4 DLC, 1#8G.
- 3 RC TYPE 1-A STANDARD AND SIGNAL HEADS.
- 4 Exist 2"C, RC 6#14, 1#10, 6 dlc, ADD 1-5CSC, 6 DLC, 1#8G.



MATCH LINE Sta 1317+50.00 - SEE SHEET E-44

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: HASSAN MANNA
 CHECKED BY:
 STANLEY L. JOHNSON
 HASSAN MANNA
 REVISOR BY: DATE
 DATE REVISOR: DATE

SEE SHEET E-47 FOR MODIFY RAMP METERING SYSTEM DETAILS.
 THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

MODIFY RAMP METERING SYSTEM
 SCALE: 1" = 50'

LAST REVISION DATE PLOTTED => 29-JUN-2011 00-00-00 TIME PLOTTED => 17:45

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|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1103 | 1507 |

Stanley L. Johnson 4/4/11
 REGISTERED ELECTRICAL ENGINEER DATE
 6-27-11
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

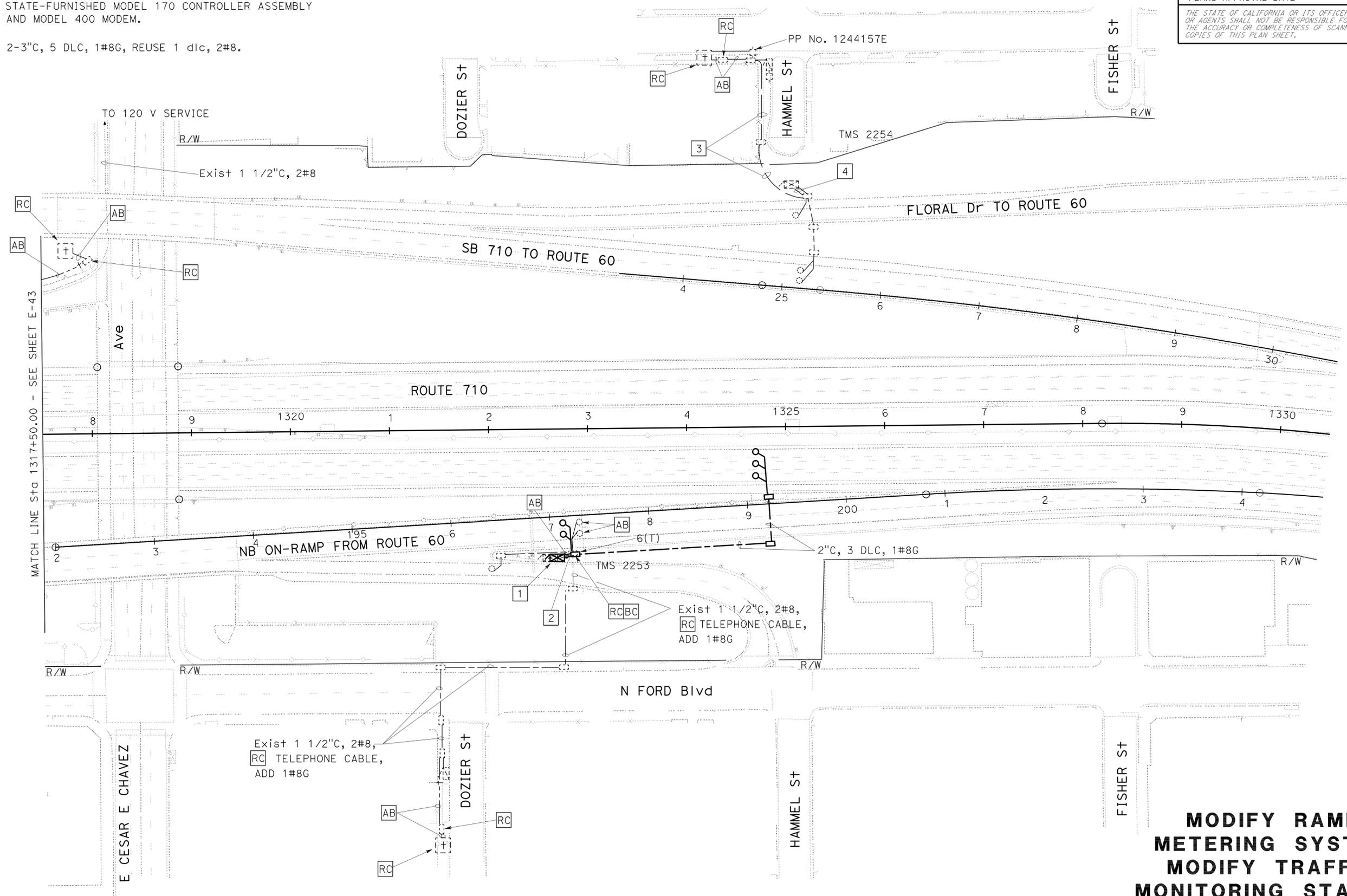
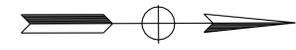
REGISTERED PROFESSIONAL ENGINEER
 STANLEY L. JOHNSON
 No. E 16761
 Exp. 09/30/12
 ELECTRICAL
 STATE OF CALIFORNIA

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET)

- 1 [RS] MODEL 170 CONTROLLER ASSEMBLY, INSTALL STATE-FURNISHED MODEL 170 CONTROLLER ASSEMBLY AND MODEL 400 MODEM.
- 2 2-3"C, 5 DLC, 1#8G, REUSE 1 dlc, 2#8.

- 3 Exist 2"C, 2#8, [RC] TELEPHONE CABLE, ADD 1#8G.
- 4 Exist 2-2 1/2"C, 2#8, 3 dlc, [RC] TELEPHONE CABLE, ADD 1#8G.



THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

**MODIFY RAMP
METERING SYSTEM
MODIFY TRAFFIC
MONITORING STATION**

SCALE: 1" = 50' **E-44**

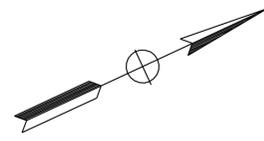
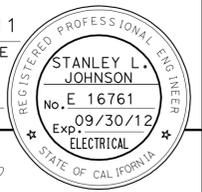
| | | | |
|--|-----------------------|--------------------|--------------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | DESIGNED BY | REVISOR |
| Caltrans TRAFFIC DESIGN | HASSAN MANNA | STANLEY L. JOHNSON | STANLEY L. JOHNSON |
| | HASSAN MANNA | HASSAN MANNA | HASSAN MANNA |
| | | | |

LAST REVISION: DATE PLOTTED => 06-JUL-2011
 00-00-00 TIME PLOTTED => 10:36

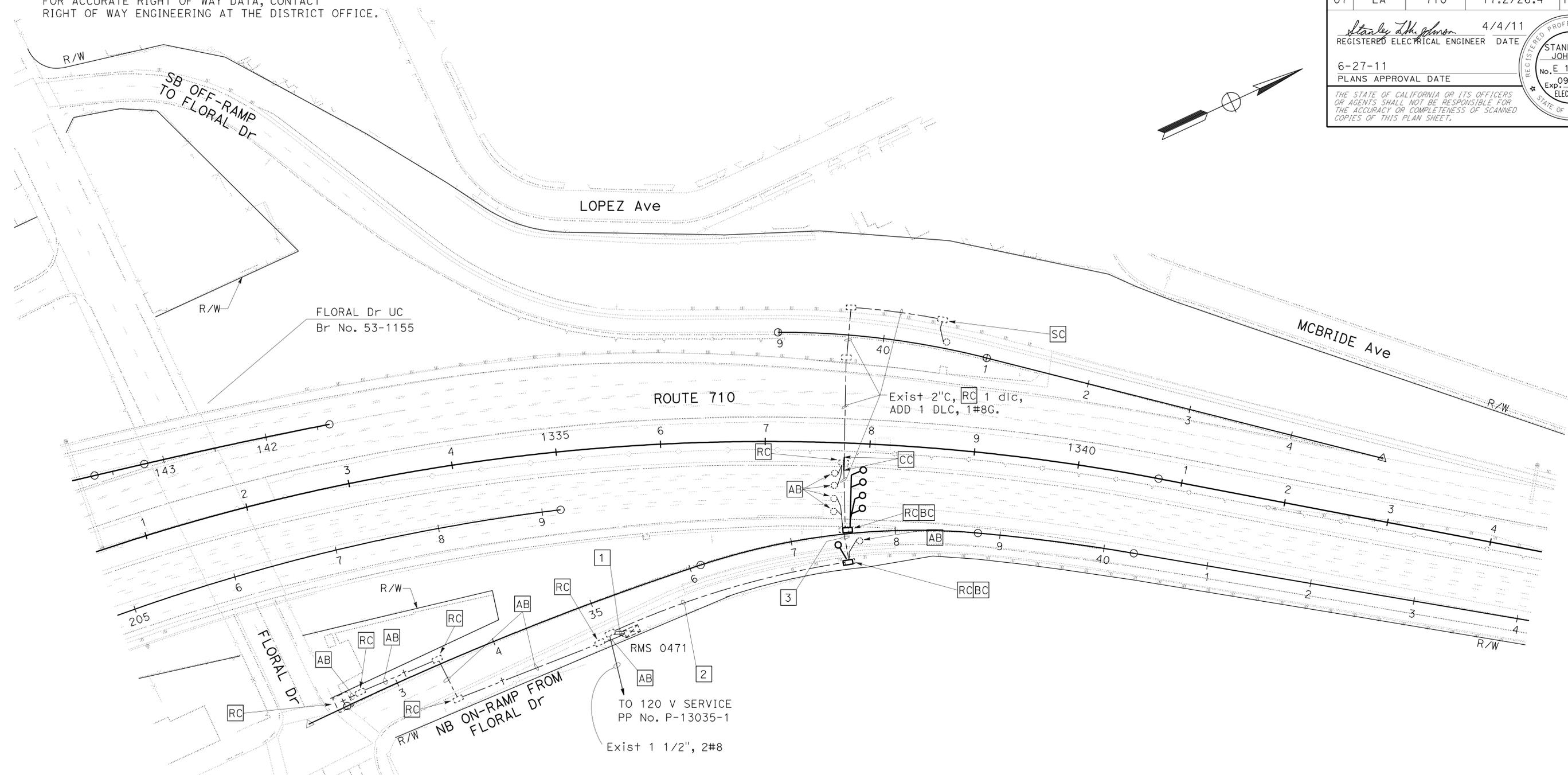
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1104 | 1507 |

| | |
|--------------------------------|--------|
| <i>Stanley L. Johnson</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



PROJECT NOTES: (THIS SHEET)

- 1 Exist 2-3"C, 2#8, RC 6 dlc, TELEPHONE CABLE, ADD 6 DLC, 1#8G.
- 2 Exist 2"C, RC 6 dlc, ADD 6 DLC, 1#8G.
- 3 Exist 2"C, RC 5 dlc, ADD 5 DLC, 1#8G.

SEE SHEET E-47 FOR MODIFY RAMP METERING SYSTEM DETAILS.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

MODIFY RAMP METERING SYSTEM

SCALE: 1" = 50'

E-45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: HASSAN MANNA
 CHECKED BY: HASSAN MANNA
 STANLEY L. JOHNSON
 HASSAN MANNA
 REVISOR: HASSAN MANNA
 DATE: 7/2/2010

USERNAME => frmikes1
DGN FILE => 720211ua046.dgn



UNIT 1879

PROJECT NUMBER & PHASE

07000208691

LAST REVISION: DATE PLOTTED => 06-JUL-2011
 00-00-00 TIME PLOTTED => 10:36

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|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1105 | 1507 |

Stanley L. Johnson 4/4/11
 REGISTERED ELECTRICAL ENGINEER DATE
 6-27-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 STANLEY L. JOHNSON
 No. E. 16761
 Exp. 09/30/12
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

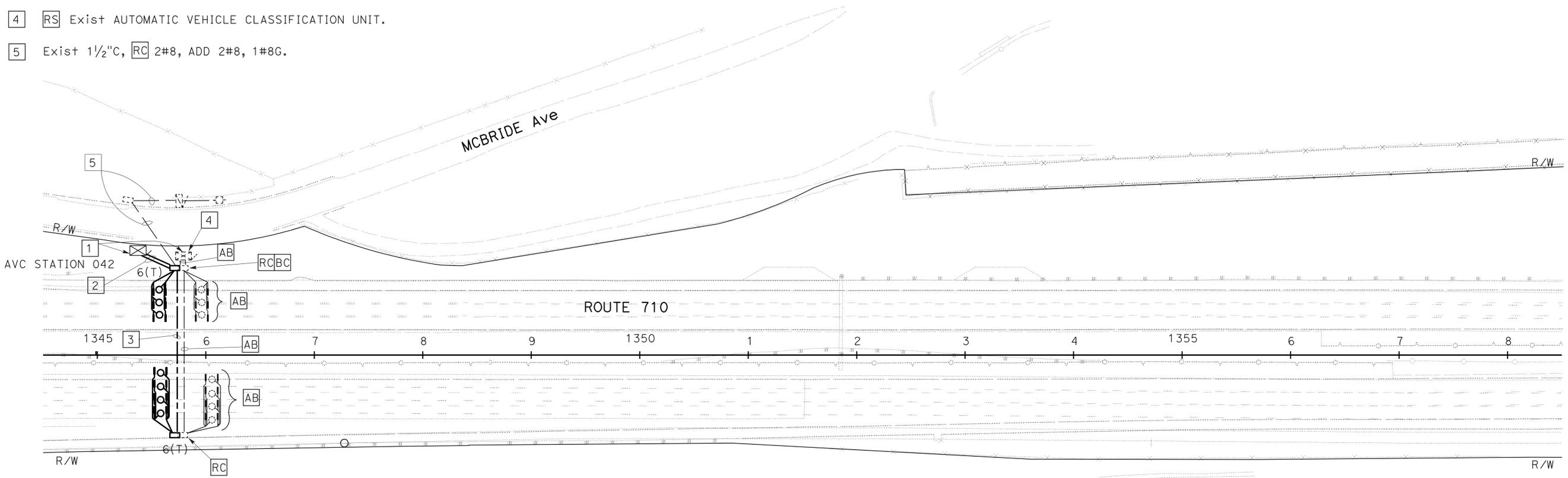
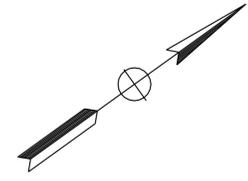
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND AND ABBREVIATIONS:

- ▬ NEW PIEZO ELECTRIC AXLE SENSOR
- ▬ Exist PIEZO ELECTRIC AXLE SENSOR
- STC NEW SCREENED TRANSMISSION CABLE

PROJECT NOTES: (THIS SHEET)

- 1 [RL] MODEL 170 CONTROLLER ASSEMBLY. INSTALL AUTOMATIC VEHICLE CLASSIFICATION UNIT.
- 2 2-3"C, 7 DLC, 14 STC, 2#8, 1#8G.
- 3 2"C, 4 DLC, 8 STC, 1#8G.
- 4 [RS] Exist AUTOMATIC VEHICLE CLASSIFICATION UNIT.
- 5 Exist 1 1/2"C, [RC] 2#8, ADD 2#8, 1#8G.



STANLEY L. JOHNSON
 HASSAN MANNA
 HASSAN MANNA
 HASSAN MANNA
 TRAFFIC DESIGN

MODIFY AUTOMATIC VEHICLE CLASSIFICATION STATION

SCALE: 1" = 50'

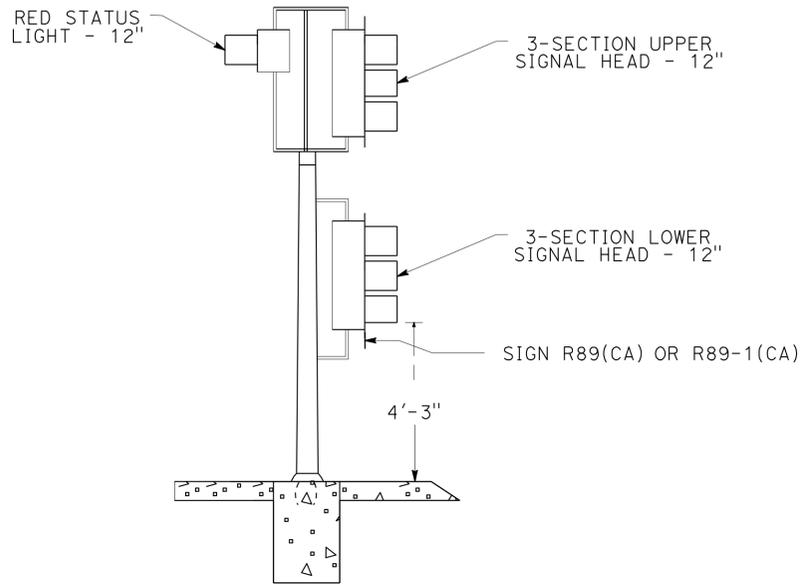
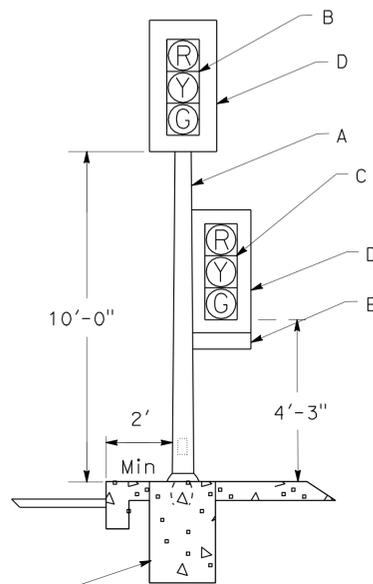
SEE SHEET E-48 FOR MODIFY AUTOMATIC VEHICLE CLASSIFICATION STATION DETAILS.

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-46

| | | | | | |
|--|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1106 | 1507 |
| <i>Stanley L. Johnson</i> REGISTERED ELECTRICAL ENGINEER | | | 4/4/11 DATE | | |
| 6-27-11 PLANS APPROVAL DATE | | | | | |
| <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small> | | | | | |

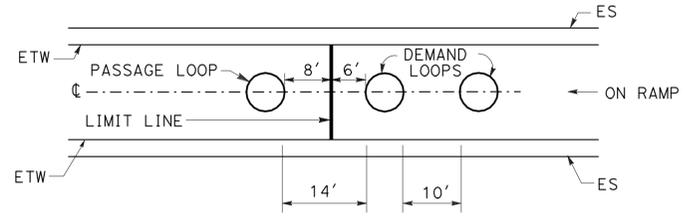
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: STANLEY L. JOHNSON
 CHECKED BY: HASSAN MANNA
 REVISED BY: STANLEY L. JOHNSON
 DATE REVISED: HASSAN MANNA



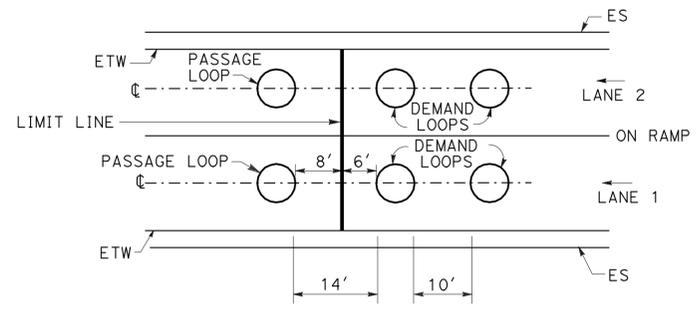
- NOTES:**
- A. TYPE 1-A STANDARD. INSTALL ANCHOR BOLTS WITH SLEEVE NUTS.
 - B. 3-SECTION 12" SIGNAL HEAD (RED, YELLOW, GREEN).
 - C. 3-SECTION, 12" SIGNAL HEAD (RED, YELLOW, GREEN), 12" FULL CIRCLE VISOR, TYPE SV-1-T BRACKET MOUNTING ON SIDE OF STANDARD AWAY FROM TRAFFIC.
 - D. BACKPLATE.
 - E. R89 (CA) SIGN FOR 1 LANE RAMP AND R89-1(CA) FOR 2 OR MORE LANES. MOUNTED ON THE BACK PLATE AND CENTERED BETWEEN GREEN SECTION AND BOTTOM OF BACK PLATE. ATTACH WITH 1/4" ALUMINUM BLIND RIVETS OR GALVANIZED 1/4" X 3/4" BOLTS, Hex NUTS, PLAIN AND LOCK WASHERS.

FOR FOUNDATION DETAILS, SEE RSP ES-7B

RAMP METERING SIGNAL DETAILS



TYPICAL 1-LANE RAMP METERING DETECTOR LOOP LAYOUT



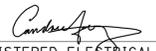
TYPICAL 2-LANE RAMP METERING DETECTOR LOOP LAYOUT

MODIFY RAMP METERING SYSTEM (DETAILS)
NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

LAST REVISION | DATE PLOTTED => 29-JUN-2011
 00-00-00 | TIME PLOTTED => 18:26

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| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1108 | 1507 |

 4/4/11
 REGISTERED ELECTRICAL ENGINEER DATE

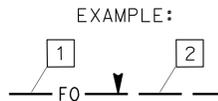
6-27-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CANDACE FUNG
 No. E16936
 Exp. 06/30/13
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND: (FOR SHEETS E-50 TO E-99)

-  FIBER OPTIC CABLE
-  SPLICE VAULT
-  SPLICE VAULT WITH SPLICE CLOSURE(S)
-  EXISTING SPLICE VAULT
-  CCTV CAMERA CONTROLLER CABINET
-  DATA NODE CONTROLLER CABINET
-  VIDEO NODE CONTROLLER CABINET
-  EXISTING CABLE NODE CONTROLLER CABINET
-  CCTV CAMERA WITH POLE
-  SURGE PROTECTOR
-  HIGH TEMPERATURE RELAY COIL
-  RELAY CONTACT NORMALLY CLOSED
-  WIRE SIZE, IF NOT INDICATED SHALL BE #12 AWG
-  FAN
-  INDICATOR LAMP
-  THERMOSTATIC CONTROL
- THERMO ADJUSTABLE CALIBRATED THERMOSTAT
-  DUPLEX RECEPTACLE
-  GROUND
-  DELIMITER FOR PROJECT NOTES



EQUIPMENT IDENTIFICATION

-  LB123 POST MILE ACCURATE TO 1/10 MILE (WITHOUT DECIMAL)
-  FREEWAY ROUTE

ABBREVIATIONS: (FOR SHEETS E-50 TO E-99)

- # NUMBER
- 2P22 2 PAIR 22 AMERICAN WIRE GAUGE
- 1SMFO 1 SINGLEMODE FIBER OPTIC CABLE
- 12SMFO 12 SINGLEMODE FIBER OPTIC CABLE
- 24SMFO 24 SINGLEMODE FIBER OPTIC CABLE
- 48SMFO 48 SINGLEMODE FIBER OPTIC CABLE
- 4WTO 4 WIRE TRANSMIT ONLY
- AC ALTERNATING CURRENT
- AVC AUTOMATIC VEHICLE CLASSIFICATION
- BNC BAYONET NAVY CONNECTOR
- CAB CABINET
- CCM CAMERA CONTROL MODEM
- CN CABLE NODE
- CS COUNT STATION
- DB-9 9 PIN D-SUBMINIATURE CONNECTOR
- DN DATA NODE
- DS-1 DIGITAL SIGNAL LEVEL 1
- EIA-232 ELECTRONICS INDUSTRIES ASSOCIATION STANDARD RS-232
- EIA-422 ELECTRONICS INDUSTRIES ASSOCIATION STANDARD RS-422
- FDU FIBER DISTRIBUTION UNIT
- FOCM FIBER OPTIC CAMERA MODEM
- FOTM FIBER OPTIC TRAFFIC MODEM
- GB GROUND BUS
- HT HIGH TEMPERATURE
- ID IDENTIFICATION NUMBER
- KWH KILOWATT HOUR
- LPP LOCAL PATCH PANEL
- NB NEUTRAL BUS
- PDA POWER DISTRIBUTION ASSEMBLY
- RG-6A/U COAXIAL CABLE
- RJ-45 8 PIN 8 CONDUCTOR CONNECTOR
- RS-232 SERIAL CABLE
- RX RECEIVER
- SCE SOUTHERN CALIFORNIA EDISON
- SMFO SINGLEMODE FIBER OPTIC
- TV TELEVISION
- TX TRANSMITTER
- VN VIDEO NODE
- VRx VIDEO RECEIVER
- VTx VIDEO TRANSMITTER
- W/GFI WITH GROUND FAULT INTERRUPTOR

GENERAL NOTES: (FOR SHEETS E-50 TO E-79)

1. EXISTING IRRIGATION SYSTEMS ARE NOT SHOWN FOR CLARITY.
2. FIBER OPTICS CONDUITS SHALL HAVE A TRACER WIRE, EXCEPT IN TYPE 1 CONDUITS. SEE E-80 FOR DETAILS.
3. COMMUNICATION CONDUIT SHALL BE CENTERED IN THE PAVED SHOULDER, OR AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.
4. THE LOCATION OF PROPOSED PULL BOXES AND SPLICE VAULTS ARE APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
5. AT VARIOUS LOCATIONS, NEW CONDUITS SHALL BE INSTALLED ACROSS NEW WALLS. THE CONTRACTOR SHALL EITHER CORE THROUGH THE WALLS OR INSTALL THE CONDUITS DURING WALLS CONSTRUCTION.
6. INSTALL ALL CABLES IN LOWER SIZE 4" CONDUIT. UPPER SIZE 4" CONDUIT IS EMPTY.

**COMMUNICATION SYSTEM
(LEGENDS, NOTES AND ABBREVIATIONS)**

NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR JACQUELINE TAN
 CALCULATED/DESIGNED BY JACQUELINE TAN
 REVISOR BY JACQUELINE TAN
 DATE REVISOR BY JACQUELINE TAN

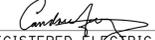


FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

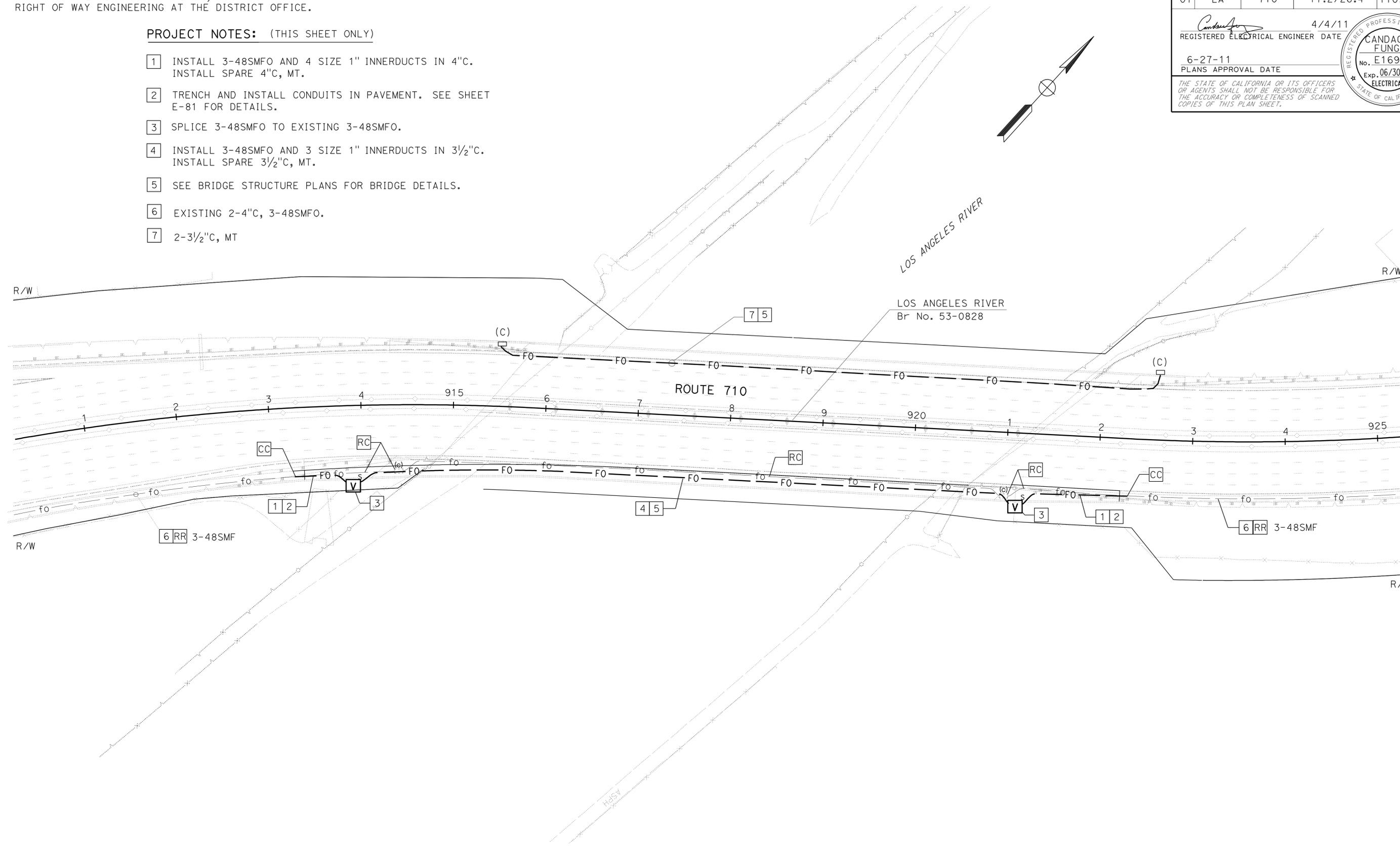
- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C.
INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE SHEET
E-81 FOR DETAILS.
- 3 SPLICE 3-48SMFO TO EXISTING 3-48SMFO.
- 4 INSTALL 3-48SMFO AND 3 SIZE 1" INNERDUCTS IN 3½"C.
INSTALL SPARE 3½"C, MT.
- 5 SEE BRIDGE STRUCTURE PLANS FOR BRIDGE DETAILS.
- 6 EXISTING 2-4"C, 3-48SMFO.
- 7 2-3½"C, MT

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1109 | 1507 |

 4/4/11
 REGISTERED ELECTRICAL ENGINEER DATE
 6-27-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CANDACE FUNG
 No. E16936
 Exp. 06/30/13
 ELECTRICAL
 STATE OF CALIFORNIA

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COMMUNICATION SYSTEM

SCALE: 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-50

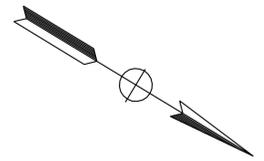
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE TAN
 CALCULATED/DESIGNED BY
 CHECKED BY
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVISED

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1111 | 1507 |

| | |
|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

| |
|----------------------------------|
| REGISTERED PROFESSIONAL ENGINEER |
| CANDACE FUNG |
| No. E16936 |
| Exp. 06/30/13 |
| ELECTRICAL |
| STATE OF CALIFORNIA |

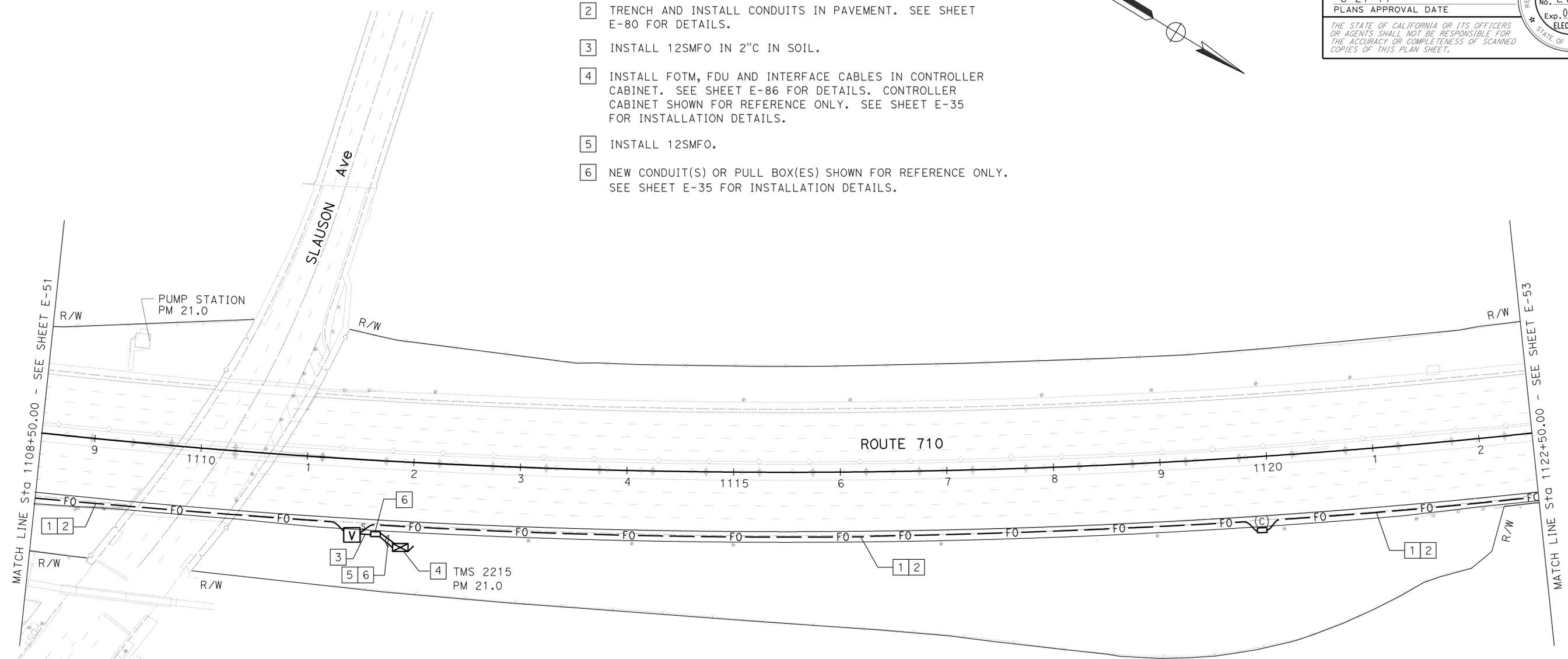
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 3 INSTALL 12SMFO IN 2"C IN SOIL.
- 4 INSTALL FOTM, FDU AND INTERFACE CABLES IN CONTROLLER CABINET. SEE SHEET E-86 FOR DETAILS. CONTROLLER CABINET SHOWN FOR REFERENCE ONLY. SEE SHEET E-35 FOR INSTALLATION DETAILS.
- 5 INSTALL 12SMFO.
- 6 NEW CONDUIT(S) OR PULL BOX(ES) SHOWN FOR REFERENCE ONLY. SEE SHEET E-35 FOR INSTALLATION DETAILS.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR JACQUELINE TAN
 CALCULATED/DESIGNED BY JACQUELINE TAN
 CHECKED BY JACQUELINE TAN
 REVISIONS BY CANDACE FUNG
 DATE REVISIONS BY JACQUELINE TAN
 DATE REVISIONS BY JACQUELINE TAN

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
 THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM

SCALE: 1" = 50'

E-52

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1112 | 1507 |

REGISTERED ELECTRICAL ENGINEER DATE 4/4/11
 6-27-11
 PLANS APPROVAL DATE

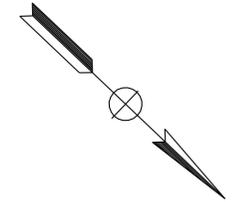
REGISTERED PROFESSIONAL ENGINEER
CANDACE FUNG
 No. E16936
 Exp. 06/30/13
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

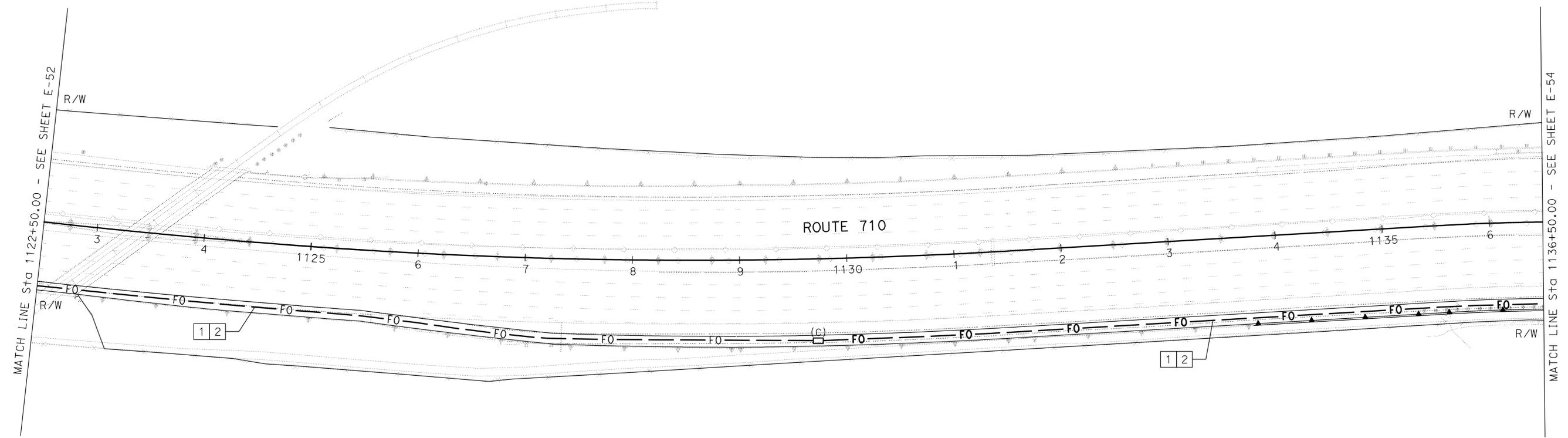
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.



| | | | |
|--|-----------------------|------------------------|----------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED/DESIGNED BY | REVISOR |
| Caltrans OFFICE OF ITS | JACQUELINE TAN | JACQUELINE TAN | CANDACE FUNG |
| | | CHECKED BY | DATE REVISOR |
| | | | JACQUELINE TAN |



COMMUNICATION SYSTEM

SCALE: 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

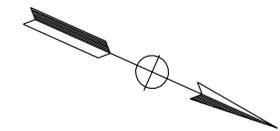
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1113 | 1507 |

| | |
|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

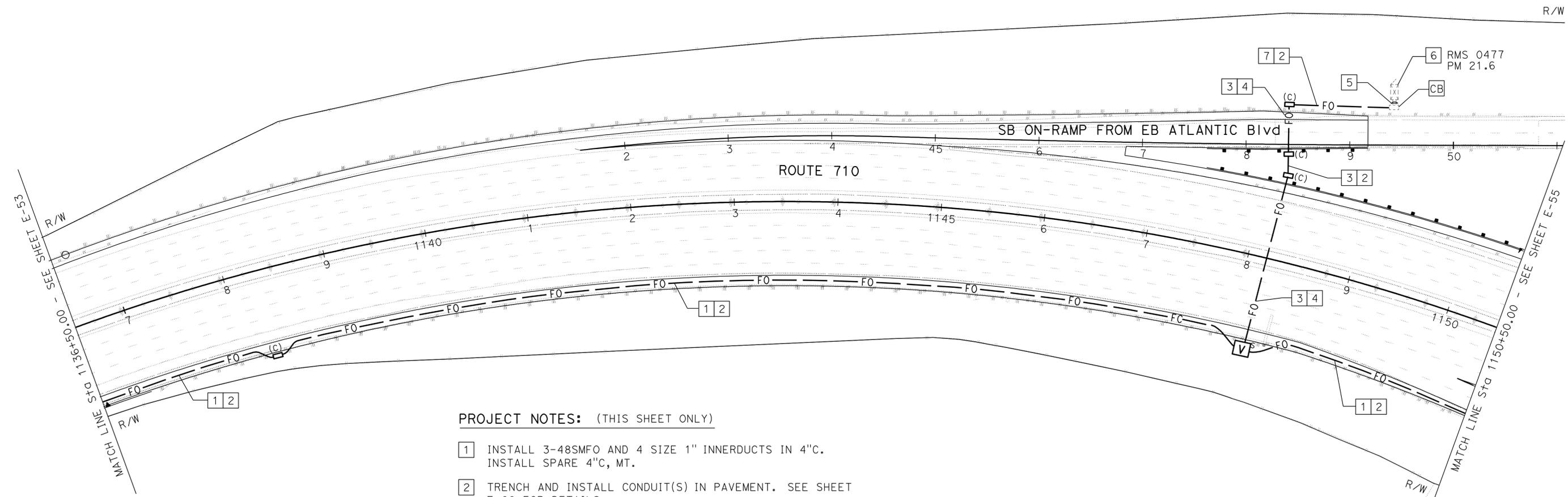
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| REGISTERED PROFESSIONAL ENGINEER |
| CANDACE FUNG |
| No. E16936 |
| Exp. 06/30/13 |
| ELECTRICAL |
| STATE OF CALIFORNIA |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE TAN
 CALCULATED/DESIGNED BY
 CHECKED BY
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVISD



- PROJECT NOTES: (THIS SHEET ONLY)**
- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
 - 2 TRENCH AND INSTALL CONDUIT(S) IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
 - 3 INSTALL 12SMFO IN 3"C.
 - 4 JACK CONDUIT UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
 - 5 ADD 12SMFO IN EXISTING 3"C.
 - 6 INSTALL FOTM, FDU AND INTERFACE CABLES IN EXISTING CONTROLLER CABINET. SEE SHEET E-85 FOR DETAILS.
 - 7 INSTALL 12SMFO IN 2"C.

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
 THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM
 SCALE: 1" = 50'

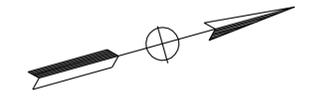
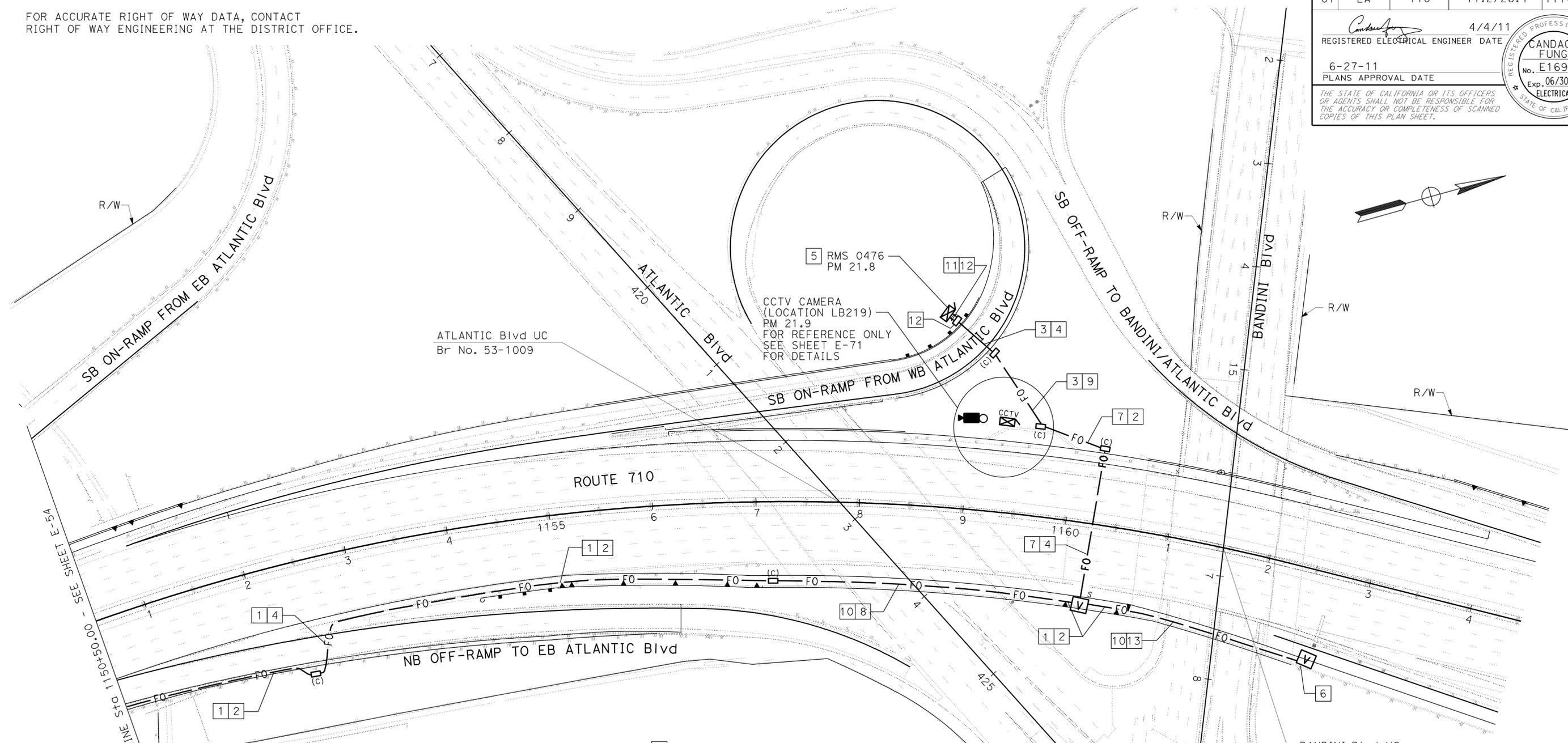
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1114 | 1507 |

| | |
|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

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|----------------------------------|
| REGISTERED PROFESSIONAL ENGINEER |
| CANDACE FUNG |
| No. E16936 |
| Exp. 06/30/13 |
| ELECTRICAL |
| STATE OF CALIFORNIA |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUIT(S) IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 3 INSTALL 12SMFO IN 2"C.
- 4 JACK CONDUIT(S) UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 5 INSTALL FOTM, FDU AND INTERFACE CABLES IN CONTROLLER CABINET. SEE SHEET E-86 FOR DETAILS. CONTROLLER CABINET SHOWN FOR REFERENCE ONLY. SEE SHEET E-37 FOR DETAILS.
- 6 COIL 30' 3-48SMFO FOR FUTURE USE, CAP AND SEAL EACH CABLE.
- 7 INSTALL 3-12SMFO IN 3"C.
- 8 ATTACH CONDUITS TO BRIDGE STRUCTURE. SEE BRIDGE STRUCTURE PLANS FOR BRIDGE ATTACHMENT TYPE AND DETAILS.
- 9 TRENCH AND INSTALL CONDUIT(S) IN SOIL. SEE SHEET E-80 FOR DETAILS.
- 10 INSTALL 3-48SMFO AND 3 SIZE 1" INNERDUCTS IN 3/2"C. INSTALL SPARE 3/2"C, MT.
- 11 INSTALL 12SMFO.
- 12 NEW CONDUIT(S) OR PULL BOX(ES) SHOWN FOR REFERENCE ONLY. SEE SHEET E-37 FOR INSTALLATION DETAILS.
- 13 ATTACH CONDUIT TO EXISTING CONCRETE BARRIER. INSTALLATION OF CONDUITS SIMILAR TO TRIGGS ST UC. SEE SHEETS E-94 AND E-95.

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM

SCALE: 1" = 50'

E-55

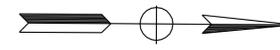
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|--|-----------------------|------------------------|--------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED/DESIGNED BY | REVISOR |
| Caltrans OFFICE OF ITS | JACQUELINE TAN | JACQUELINE TAN | CANDACE FUNG |
| | | CHECKED BY | DATE REVISED |
| | | | |

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1115 | 1507 |

| | |
|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

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|----------------------------------|
| REGISTERED PROFESSIONAL ENGINEER |
| CANDACE FUNG |
| No. E16936 |
| Exp. 06/30/13 |
| ELECTRICAL |
| STATE OF CALIFORNIA |

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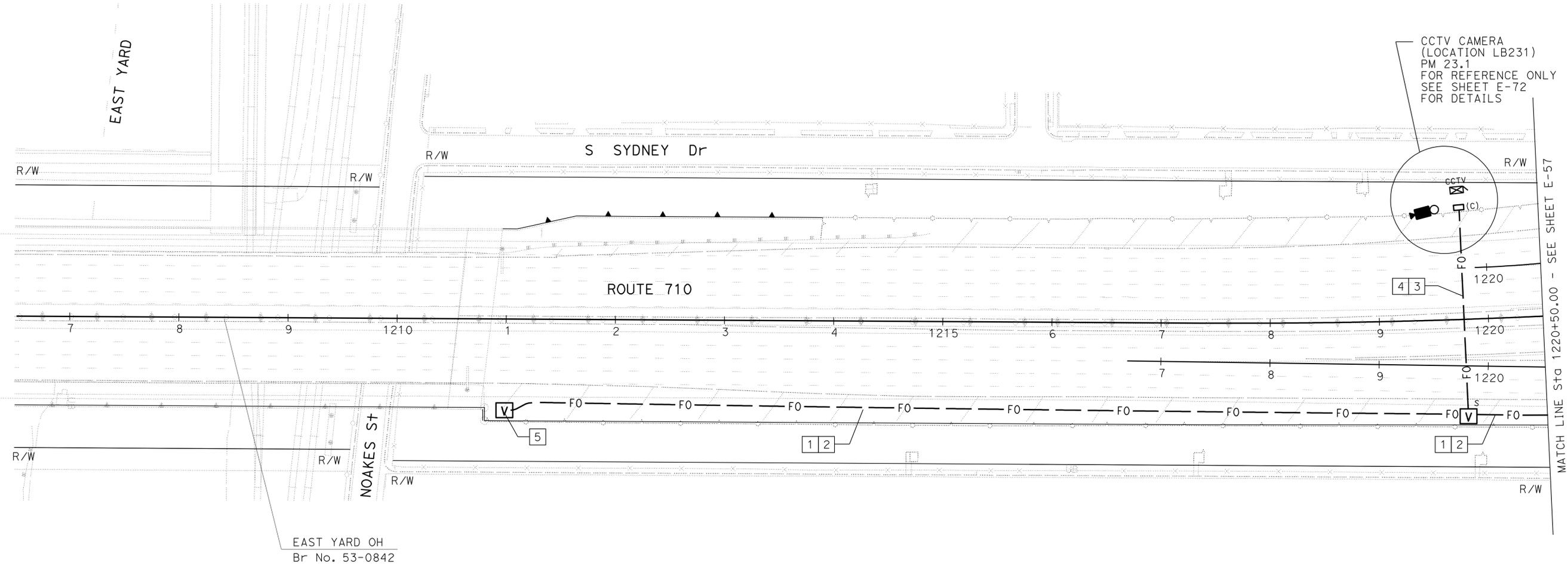


FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 3 JACK CONDUIT UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 4 INSTALL 2-12SMFO IN 3"C.
- 5 COIL 30' 3-48SMFO FOR FUTURE USE. CAP AND SEAL EACH CABLE.

| | | | |
|--|-----------------------|------------------------|---------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED/DESIGNED BY | REVISOR |
| Caltrans OFFICE OF ITS | JACQUELINE TAN | CHECKED BY | DATE |
| | | CANDACE FUNG | |
| | | JACQUELINE TAN | |



COMMUNICATION SYSTEM

SCALE: 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

LAST REVISION DATE PLOTTED => 29-JUN-2011 TIME PLOTTED => 17:29

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1116 | 1507 |

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|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

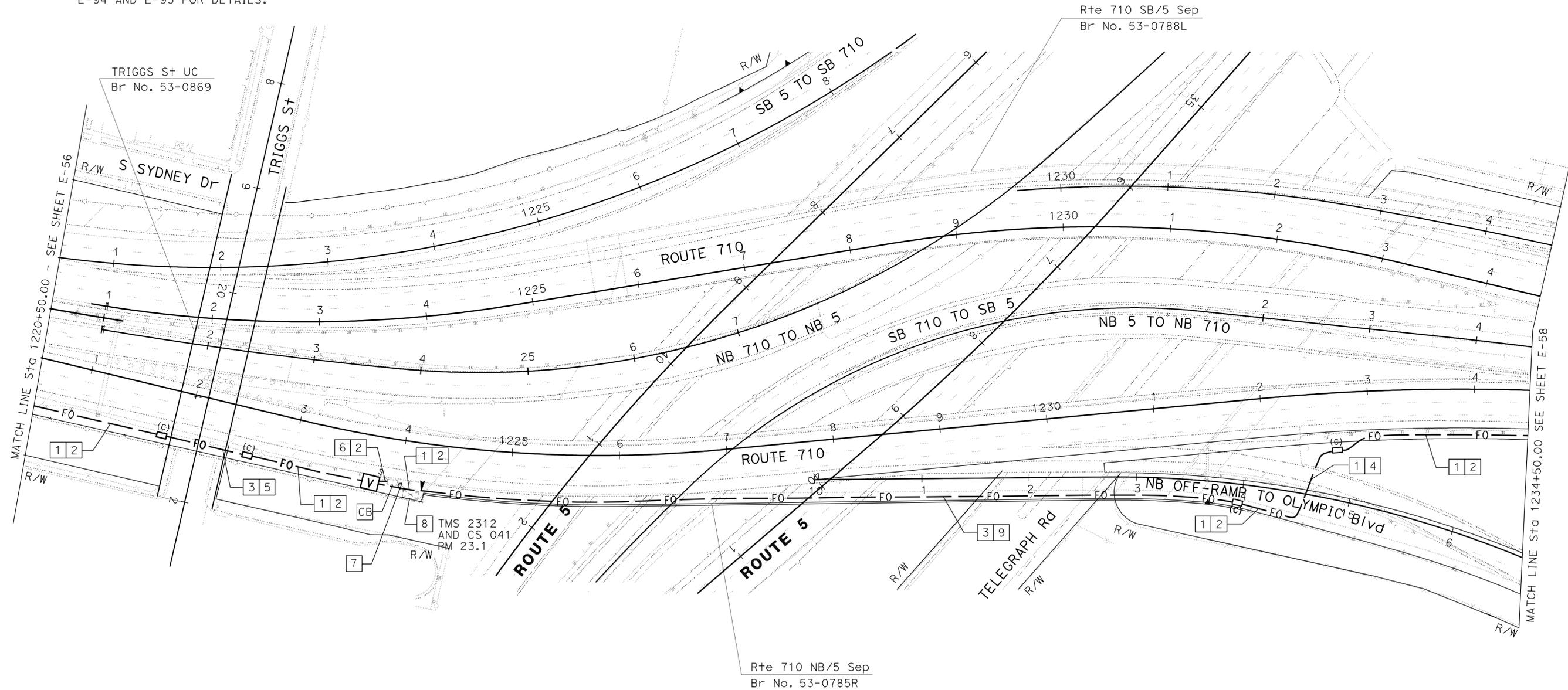
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|----------------------------------|--------------|
| REGISTERED PROFESSIONAL ENGINEER | CANDACE FUNG |
| No. E16936 | |
| Exp. 06/30/13 | |
| ELECTRICAL | |

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FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

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|--|--|
| <p>1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.</p> <p>2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.</p> <p>3 INSTALL 3-48SMFO AND 3 SIZE 1" INNERDUCTS IN 3½"C. INSTALL SPARE 3½"C, MT.</p> <p>4 JACK CONDUITS UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.</p> <p>5 ATTACH CONDUITS TO EXISTING CONCRETE BARRIER. SEE SHEETS E-94 AND E-95 FOR DETAILS.</p> | <p>6 INSTALL 12SMFO IN 2"C.</p> <p>7 ADD 12SMFO IN EXISTING 3"C.</p> <p>8 INSTALL FOTM, FDU AND INTERFACE CABLES IN EXISTING CONTROLLER CABINET. SEE SHEET E-85 FOR DETAILS.</p> <p>9 SEE BRIDGE STRUCTURE PLANS FOR BRIDGE DETAILS.</p> |
|--|--|



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR: JACQUELINE TAN
 CALCULATED/DESIGNED BY: JACQUELINE TAN
 CHECKED BY: JACQUELINE TAN
 REVISIONS: REVISOR: JACQUELINE TAN
 DATE: 7/1/2010

COMMUNICATION SYSTEM
SCALE: 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-57

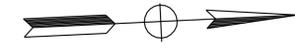
LAST REVISION: DATE PLOTTED => 29-JUN-2011
 00-00-00 TIME PLOTTED => 17:00

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Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE TAN
 CALCULATED/DESIGNED BY
 CHECKED BY
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVISED

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C.
INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUIT(S) IN PAVEMENT. SEE
SHEET E-80 FOR DETAILS.
- 3 INSTALL 12SMFO IN 3"C.
- 4 JACK CONDUIT(S) UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 5 ADD 12SMFO IN EXISTING 3"C.
- 6 INSTALL FOTM, FDU AND INTERFACE CABLES IN EXISTING CONTROLLER
CABINET. SEE SHEET E-85 FOR DETAILS.
- 7 SEE BRIDGE STRUCTURE PLANS FOR BRIDGE DETAILS.
- 8 INSTALL 3-48SMFO AND 3 SIZE 1" INNERDUCTS IN 3½"C.
INSTALL SPARE 3½"C, MT.
- 9 INSTALL 12SMFO IN 2"C.

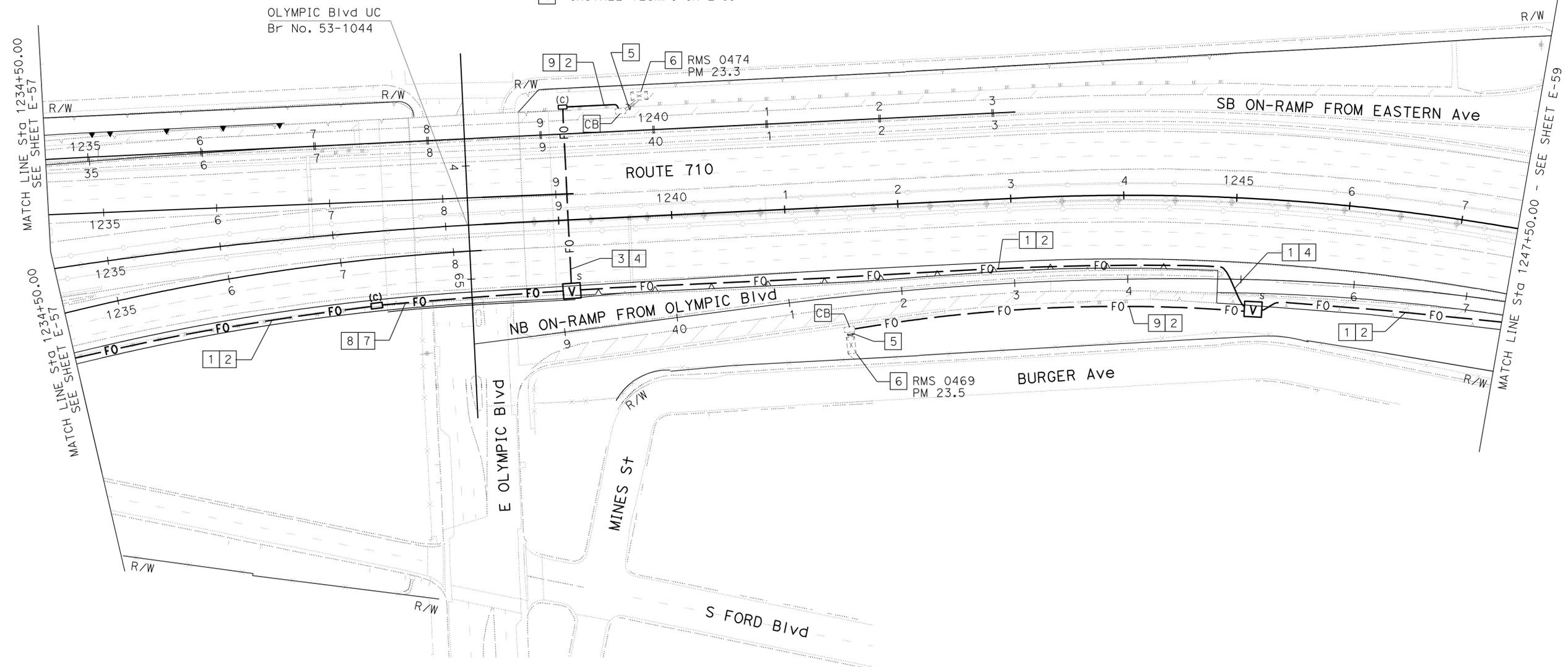


| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|-----------------------------|--------------|-----------------|
| 07 | LA | 710 | 17.2/26.4 | 1117 | 1507 |

REGISTERED ELECTRICAL ENGINEER DATE 4/4/11
 6-27-11
 PLANS APPROVAL DATE

CANDACE FUNG
 No. E16936
 Exp. 06/30/13
 ELECTRICAL

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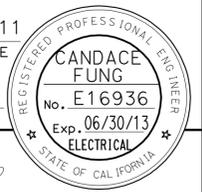
COMMUNICATION SYSTEM

SCALE: 1" = 50'

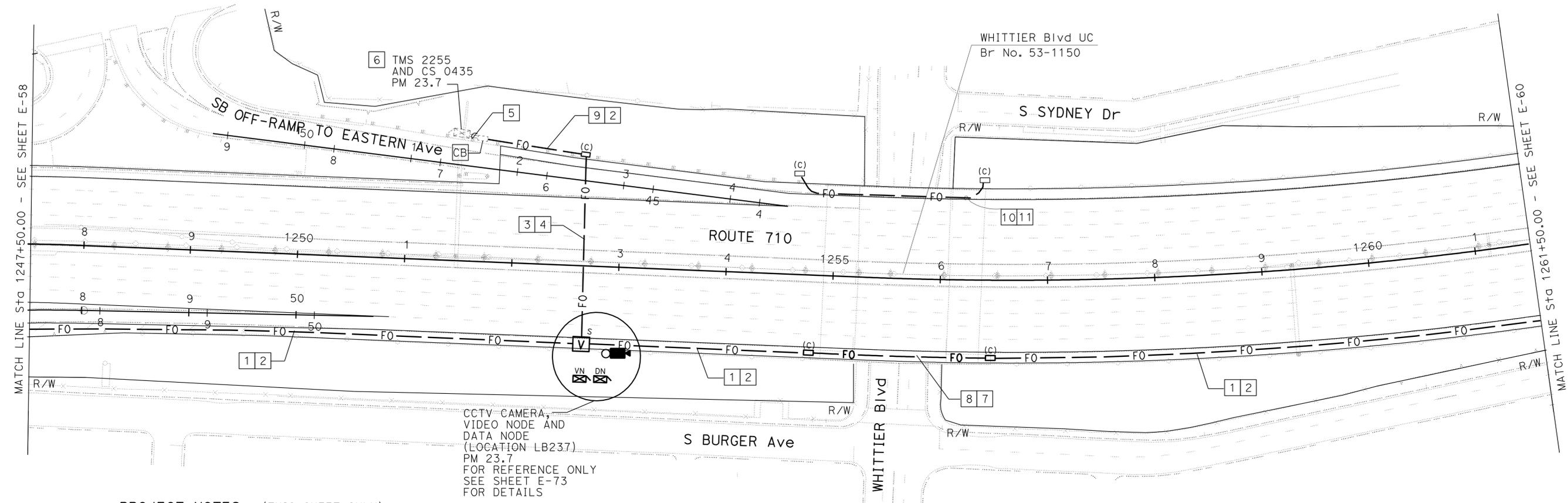
FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
 THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-58

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|--|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1118 | 1507 |
| | | | 4/4/11 | | |
| REGISTERED ELECTRICAL ENGINEER | | | DATE | | |
| 6-27-11 | | | PLANS APPROVAL DATE | | |
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FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



PROJECT NOTES: (THIS SHEET ONLY)

- 1] INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2] TRENCH AND INSTALL CONDUIT(S) IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 3] INSTALL 12SMFO IN 3"C.
- 4] JACK CONDUIT(S) UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 5] ADD 12SMFO IN EXISTING 3"C.
- 6] INSTALL FOTM, FDU AND INTERFACE CABLES IN EXISTING CONTROLLER CABINET. SEE SHEET E-85 FOR DETAILS.
- 7] ATTACH CONDUITS TO BRIDGE STRUCTURE. SEE BRIDGE STRUCTURE PLANS FOR BRIDGE ATTACHMENT TYPE AND DETAILS.
- 8] INSTALL 3-48SMFO AND 3 SIZE 1" INNERDUCTS IN 3/2"C. INSTALL SPARE 3/2"C, MT.
- 9] INSTALL 12SMFO IN 2"C.
- 10] 2-3/2"C, MT.
- 11] SEE BRIDGES STRUCTURE PLANS FOR BRIDGE DETAILS.

CCTV CAMERA, VIDEO NODE AND DATA NODE (LOCATION LB237) PM 23.7 FOR REFERENCE ONLY SEE SHEET E-73 FOR DETAILS

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM

SCALE: 1" = 50'

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| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED/DESIGNED BY | REVISOR |
| Caltrans OFFICE OF ITS | JACQUELINE TAN | JACQUELINE TAN | CANDACE FUNG |
| | | CHECKED BY | DATE REVISOR |
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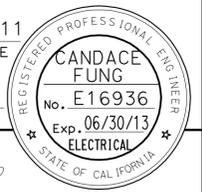
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



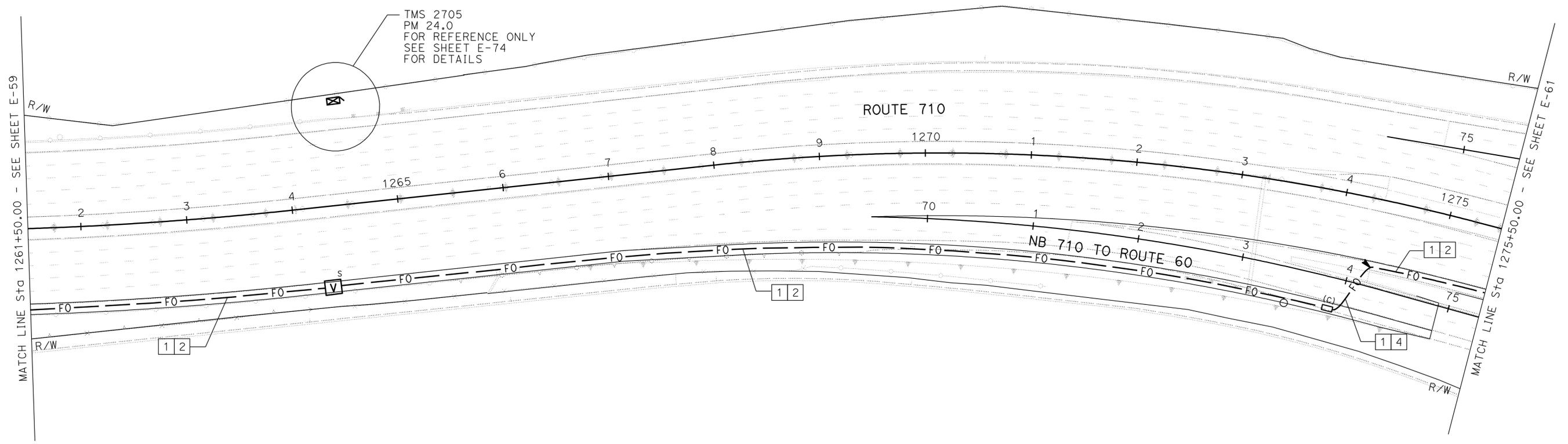
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|-----------------------------|--------------|-----------------|
| 07 | LA | 710 | 17.2/26.4 | 1119 | 1507 |

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|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
FUNCTIONAL SUPERVISOR
JACQUELINE TAN
CALCULATED/DESIGNED BY
CHECKED BY
CANDACE FUNG
JACQUELINE TAN
REVISOR BY
DATE REVISOR



PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C.
INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE
SHEET E-80 FOR DETAILS.

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM

SCALE: 1" = 50'

E-60



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|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1120 | 1507 |

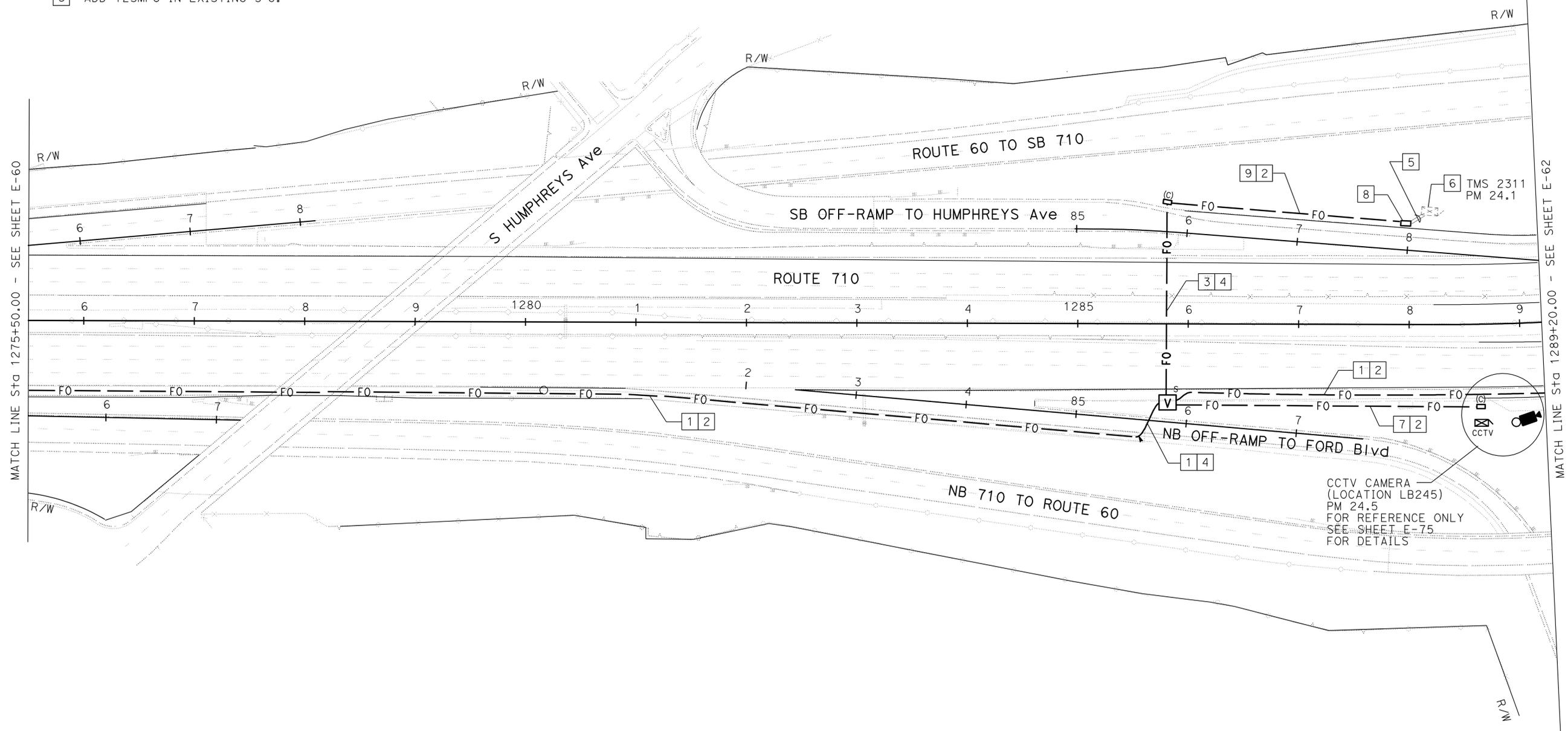
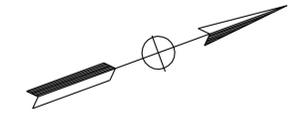
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|--------------------------------|--------|
| REGISTERED ELECTRICAL ENGINEER | DATE |
| CANDACE FUNG | 4/4/11 |
| PLANS APPROVAL DATE | |
| 6-27-11 | |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

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| <p>1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.</p> <p>2 TRENCH AND INSTALL CONDUIT(S) IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.</p> <p>3 INSTALL 12SMFO IN 3"C.</p> <p>4 JACK CONDUIT(S) UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.</p> <p>5 ADD 12SMFO IN EXISTING 3"C.</p> | <p>6 INSTALL FOTM, FDU AND INTERFACE CABLES IN EXISTING CONTROLLER CABINET. SEE SHEET E-85 FOR DETAILS.</p> <p>7 INSTALL 2-12SMFO IN 2"C.</p> <p>8 PULL BOX SHOWN FOR REFERENCE ONLY. SEE SHEET E-37 FOR DETAILS.</p> <p>9 INSTALL 12SMFO IN 2"C.</p> |
|--|---|



COMMUNICATION SYSTEM

SCALE: 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-61

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR: JACQUELINE TAN
 CALCULATED/DESIGNED BY: JACQUELINE TAN
 CHECKED BY: JACQUELINE TAN
 CANDACE FUNG
 REVISOR: JACQUELINE TAN
 DATE: 7/1/2010

LAST REVISION DATE PLOTTED => 29-JUN-2011
 00-00-00 TIME PLOTTED => 17:29

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1121 | 1507 |

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|-------------------------------------|--|---------|
| REGISTERED ELECTRICAL ENGINEER DATE | | 4/4/11 |
| PLANS APPROVAL DATE | | 6-27-11 |

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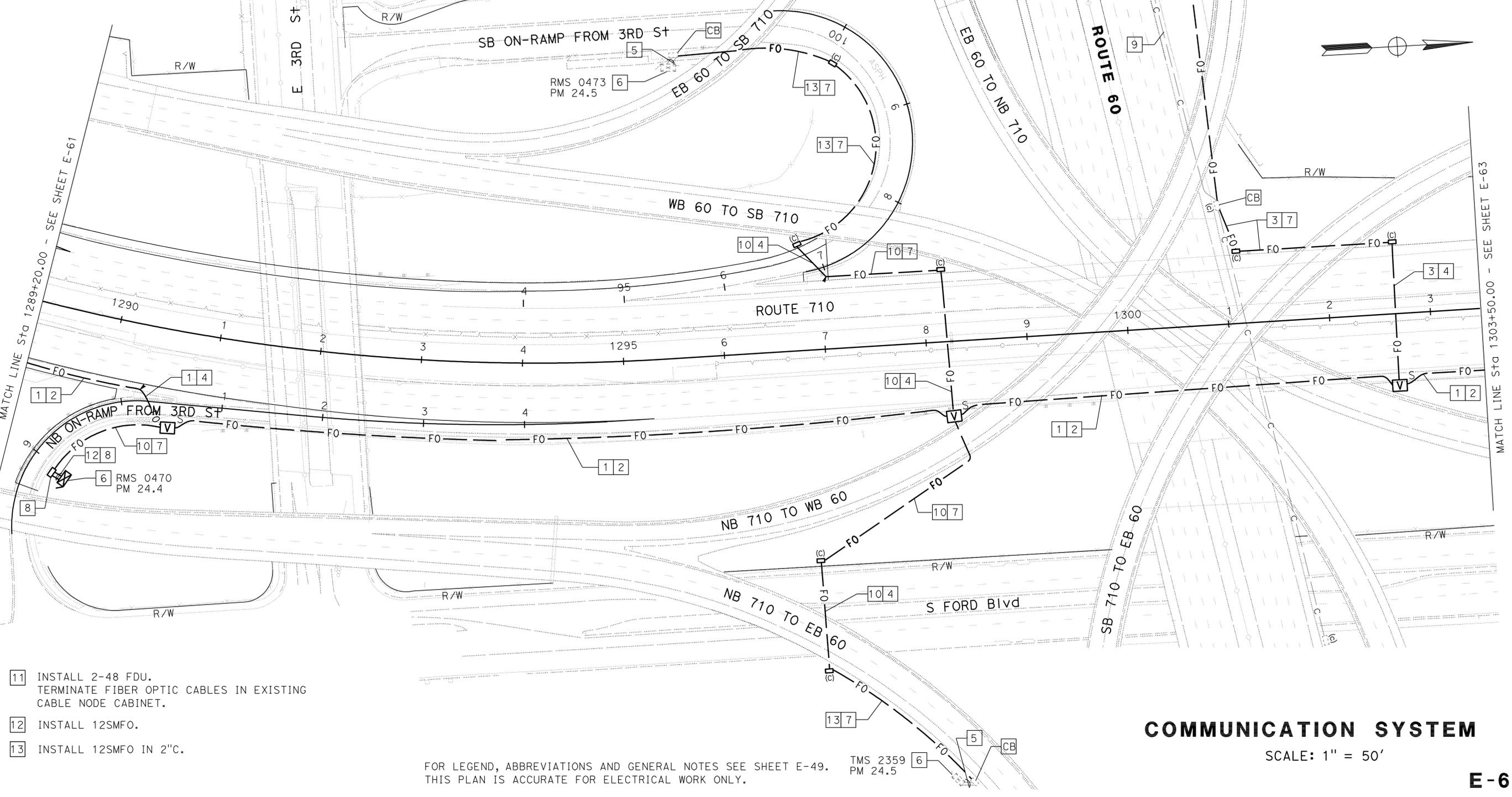


FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUIT(S) IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 3 INSTALL 2-48SMFO, 12SMFO IN 3 SIZE 1" INNERDUCTS IN 3"C.
- 4 JACK CONDUIT(S) UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 5 ADD 12SMFO IN EXISTING 3"C.

- 6 INSTALL FOTM, FDU AND INTERFACE CABLES IN CONTROLLER CABINET. SEE SHEET E-85 FOR DETAILS. CONTROLLER CABINET SHOWN FOR REFERENCE ONLY. SEE SHEET E-42 FOR DETAILS.
- 7 TRENCH AND INSTALL CONDUIT(S) IN SOIL. SEE SHEET E-80 FOR DETAILS.
- 8 NEW CONDUIT(S) OR PULL BOX(ES) SHOWN FOR REFERENCE ONLY. SEE SHEET E-42 FOR INSTALLATION DETAILS.
- 9 ADD 2-48SMFO IN EXISTING 4"C.
- 10 INSTALL 12SMFO IN 3"C.



- 11 INSTALL 2-48 FDU. TERMINATE FIBER OPTIC CABLES IN EXISTING CABLE NODE CABINET.
- 12 INSTALL 12SMFO.
- 13 INSTALL 12SMFO IN 2"C.

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM

SCALE: 1" = 50'

E-62

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| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | REVISOR |
| Caltrans OFFICE OF ITS | JACQUELINE TAN | CANDACE FUNG |
| | CHECKED BY | DATE REVISED |
| | JACQUELINE TAN | |

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1122 | 1507 |

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|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

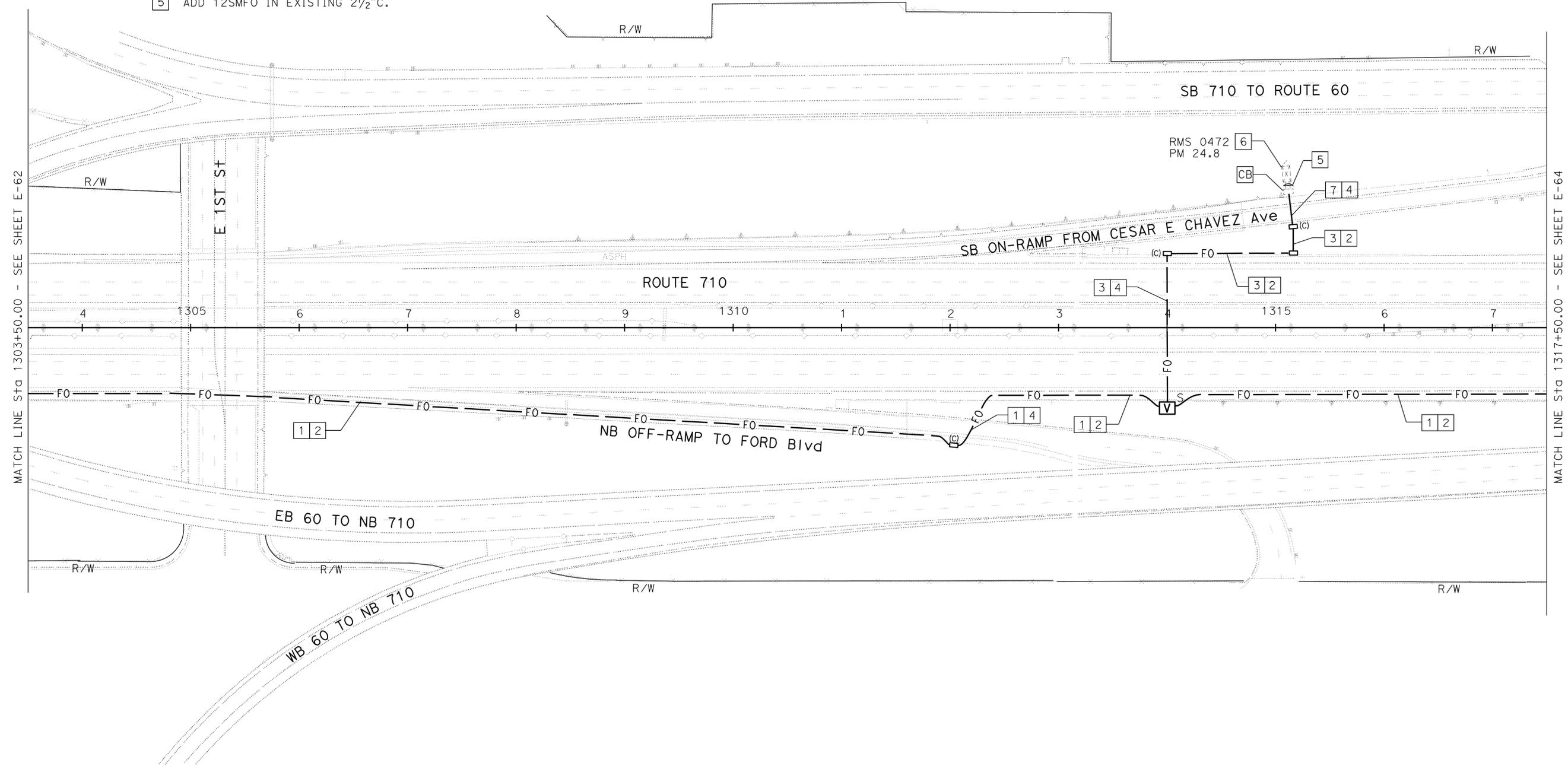
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUIT(S) IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 3 INSTALL 12SMFO IN 3"C.
- 4 JACK CONDUIT(S) UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 5 ADD 12SMFO IN EXISTING 2½"C.
- 6 INSTALL FOTM, FDU AND INTERFACE CABLES IN EXISTING CONTROLLER CABINET. SEE SHEET E-85 FOR DETAILS.
- 7 INSTALL 12SMFO IN 2"C.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE TAN
 CALCULATED/DESIGNED BY
 JACQUELINE TAN
 CHECKED BY
 JACQUELINE TAN
 REVISIONS
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVISED



COMMUNICATION SYSTEM

SCALE: 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
 THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-63

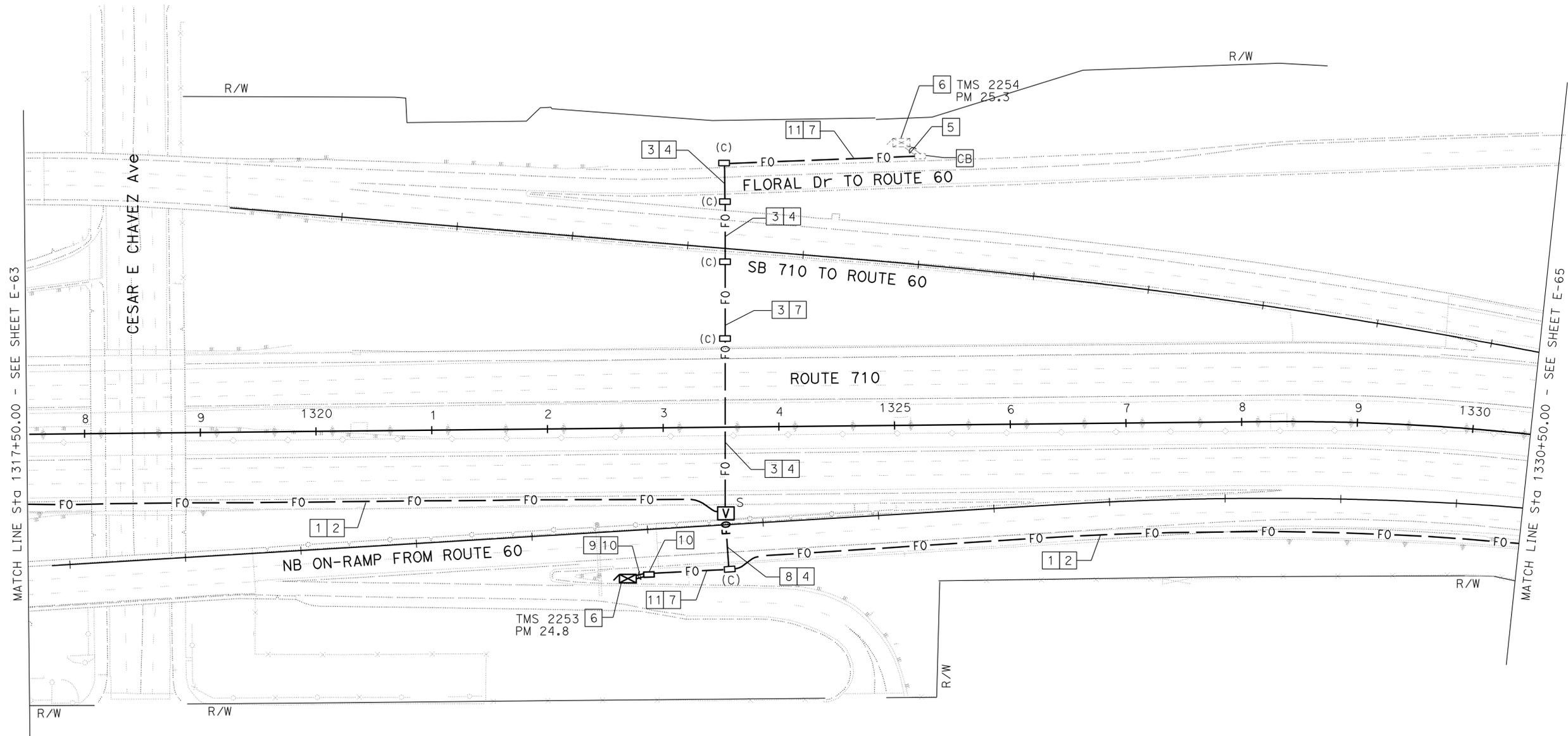
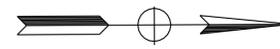
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| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1123 | 1507 |

REGISTERED ELECTRICAL ENGINEER DATE 4/4/11
 REGISTERED ELECTRICAL ENGINEER
CANDACE FUNG
 No. E16936
 Exp. 06/30/13
 ELECTRICAL
 STATE OF CALIFORNIA

6-27-11
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



PROJECT NOTES: (THIS SHEET ONLY)

- | | | |
|--|---|--|
| <p>1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.</p> <p>2 TRENCH AND INSTALL CONDUIT(S) IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.</p> <p>3 INSTALL 12SMFO IN 3"C.</p> <p>4 JACK CONDUIT(S) UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.</p> <p>5 ADD 12SMFO IN EXISTING 2 1/2"C.</p> | <p>6 INSTALL FOTM, FDU AND INTERFACE CABLES IN CONTROLLER CABINET. SEE SHEET E-86 FOR DETAILS. CONTROLLER CABINET SHOWN FOR REFERENCE ONLY. SEE SHEET E-44 FOR DETAILS.</p> <p>7 TRENCH AND INSTALL CONDUIT IN SOIL. SEE SHEET E-80 FOR DETAILS.</p> <p>8 INSTALL 3-48SMFO, 12SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.</p> <p>9 INSTALL 12SMFO.</p> | <p>10 NEW CONDUIT(S) OR PULL BOX(ES) SHOWN FOR REFERENCE ONLY. SEE SHEET E-44 FOR INSTALLATION DETAILS.</p> <p>11 INSTALL 12SMFO IN 2"C.</p> |
|--|---|--|

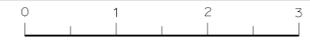
FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM

SCALE: 1" = 50'

E-64

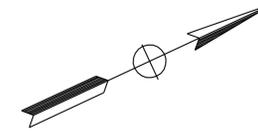
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE TAN
 CALCULATED/DESIGNED BY
 CHECKED BY
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVISED



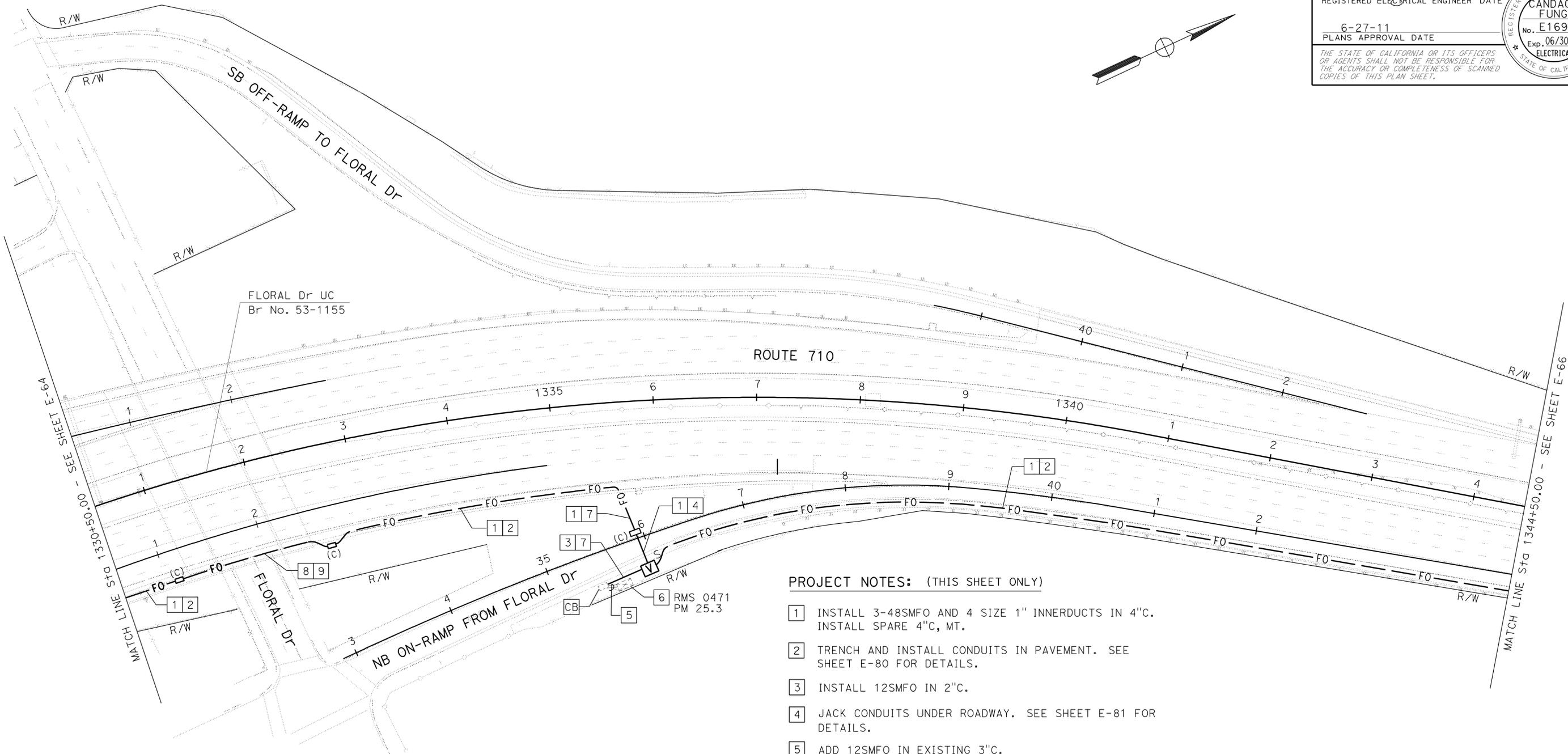
LAST REVISION DATE PLOTTED => 29-JUN-2011
 00-00-00 TIME PLOTTED => 15:48

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|---|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1124 | 1507 |
| | | | 4/11/11 | | |
| REGISTERED ELECTRICAL ENGINEER | | | DATE | | |
| CANDACE FUNG | | | | | |
| No. E16936 | | | | | |
| Exp. 06/30/13 | | | | | |
| ELECTRICAL | | | | | |
| THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. | | | | | |

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



| | | | | |
|--|-----------------------|------------------------|----------------|------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED/DESIGNED BY | REVISOR | DATE |
| Caltrans OFFICE OF ITS | JACQUELINE TAN | JACQUELINE TAN | CANDACE FUNG | |
| | | | JACQUELINE TAN | |
| | | | | |



PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 3 INSTALL 12SMFO IN 2"C.
- 4 JACK CONDUITS UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 5 ADD 12SMFO IN EXISTING 3"C.
- 6 INSTALL FOTM, FDU AND INTERFACE CABLES IN EXISTING CONTROLLER CABINET. SEE SHEET E-85 FOR DETAILS.
- 7 TRENCH AND INSTALL CONDUIT(S) IN SOIL. SEE SHEET E-80 FOR DETAILS.
- 8 SEE BRIDGE STRUCTURE PLANS FOR BRIDGE DETAILS.
- 9 INSTALL 3-48SMFO AND 3 SIZE 1" INNERDUCTS IN 3/2"C. INSTALL SPARE 3/2"C, MT.

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM

SCALE: 1" = 50'

E-65

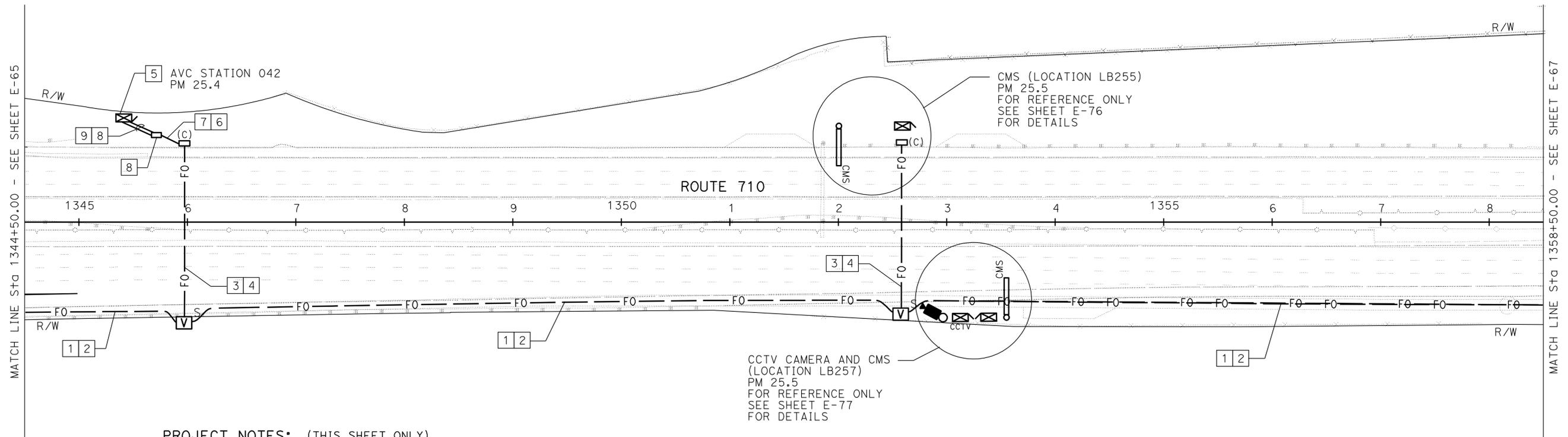
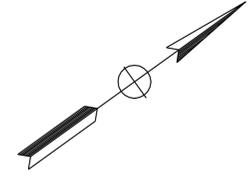


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|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1125 | 1507 |

| | |
|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



PROJECT NOTES: (THIS SHEET ONLY)

- | | |
|--|--|
| <p>1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.</p> <p>2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.</p> <p>3 INSTALL 12SMFO IN 3"C.</p> <p>4 JACK CONDUITS UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.</p> <p>5 INSTALL FOTM, FDU AND INTERFACE CABLES IN CONTROLLER CABINET. SEE SHEET E-85 FOR DETAILS. CONTROLLER CABINET SHOWN FOR REFERENCE ONLY. SEE SHEET E-46 FOR DETAILS.</p> <p>6 TRENCH AND INSTALL CONDUIT IN SOIL. SEE SHEET E-80 FOR DETAILS.</p> | <p>7 INSTALL 12SMFO IN 2"C.</p> <p>8 NEW CONDUIT(S) OR PUL BOX(ES) SHOWN FOR REFERENCE ONLY. SEE SHEET E-46 FOR INSTALLATION DETAILS.</p> <p>9 INSTALL 12SMFO.</p> |
|--|--|

COMMUNICATION SYSTEM

SCALE: 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-66

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR: JACQUELINE TAN
 CALCULATED/DESIGNED BY: JACQUELINE TAN
 CHECKED BY: JACQUELINE TAN
 REVISIONS: CANDACE FUNG, JACQUELINE TAN
 REVISOR: CANDACE FUNG, JACQUELINE TAN
 DATE: 7/1/2010

USERNAME => rrmorlak
 DGN FILE => 720211ua067.dgn



UNIT 1885

PROJECT NUMBER & PHASE

07000208691

LAST REVISION: DATE PLOTTED => 29-JUN-2011
 00-00-00 TIME PLOTTED => 15:48

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|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1126 | 1507 |

| | |
|--------------------------------|--------|
| <i>Candace</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

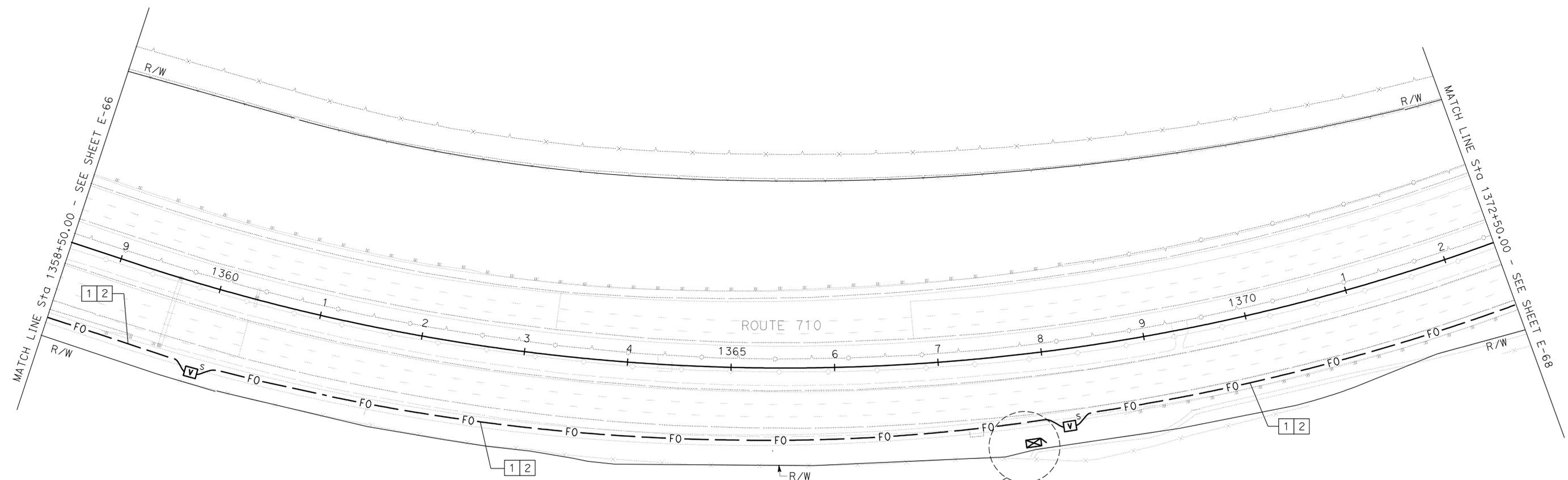
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|----------------------------------|
| REGISTERED PROFESSIONAL ENGINEER |
| CANDACE FUNG |
| No. E16936 |
| Exp. 06/30/13 |
| ELECTRICAL |
| STATE OF CALIFORNIA |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.



TMS 2706
PM 25.9
FOR REFERENCE ONLY
SEE SHEET E-78
FOR DETAILS

COMMUNICATION SYSTEM

SCALE: 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-67

| | | | |
|--|-----------------------|------------------------|----------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED/DESIGNED BY | REVISOR |
| Caltrans OFFICE OF ITS | JACQUELINE TAN | CHECKED BY | CANDACE FUNG |
| | | | JACQUELINE TAN |
| | | | DATE REVISION |

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1127 | 1507 |

| | |
|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

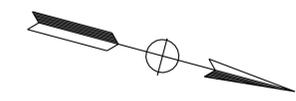
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|----------------------------------|
| REGISTERED PROFESSIONAL ENGINEER |
| CANDACE FUNG |
| No. E16936 |
| Exp. 06/30/13 |
| ELECTRICAL |
| STATE OF CALIFORNIA |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

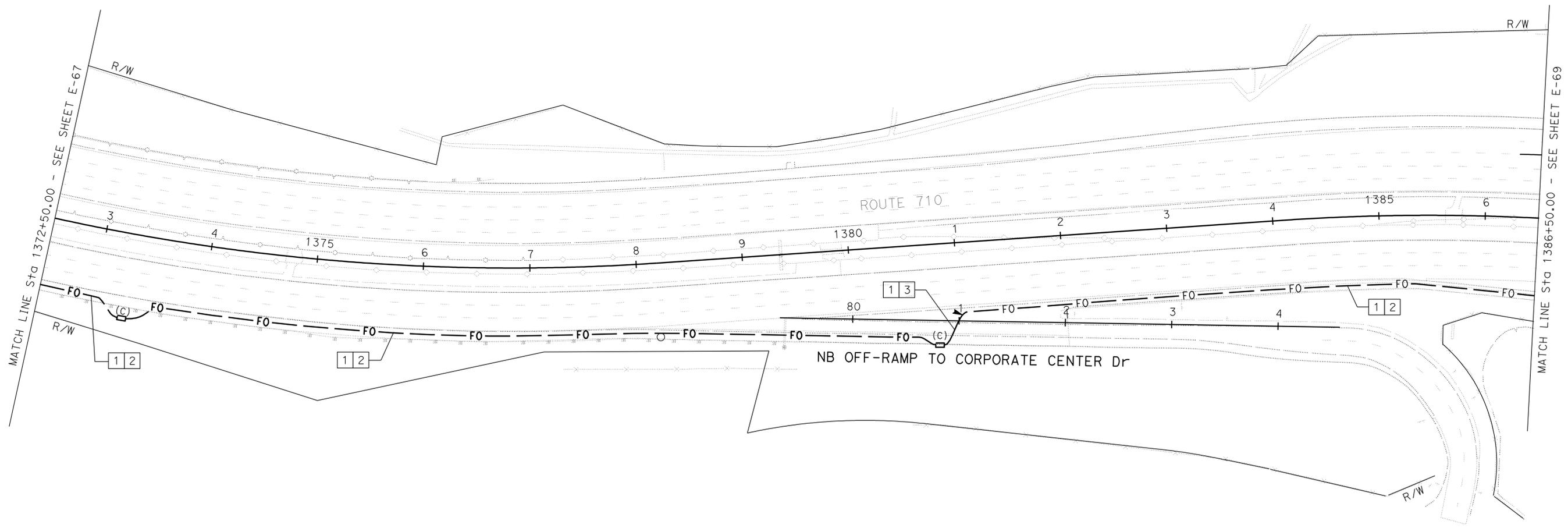
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 3 JACK CONDUITS UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.



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|--|-----------------------|------------------------|----------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED/DESIGNED BY | REVISOR |
| Caltrans OFFICE OF ITS | JACQUELINE TAN | CHECKED BY | CANDACE FUNG |
| | | | JACQUELINE TAN |
| | | | DATE REVISOR |



COMMUNICATION SYSTEM

SCALE: 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-68

LAST REVISION | DATE PLOTTED => 29-JUN-2011 | 00-00-00 | TIME PLOTTED => 19:47

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1128 | 1507 |

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|--------------------------------|--------|
| <i>Candace</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

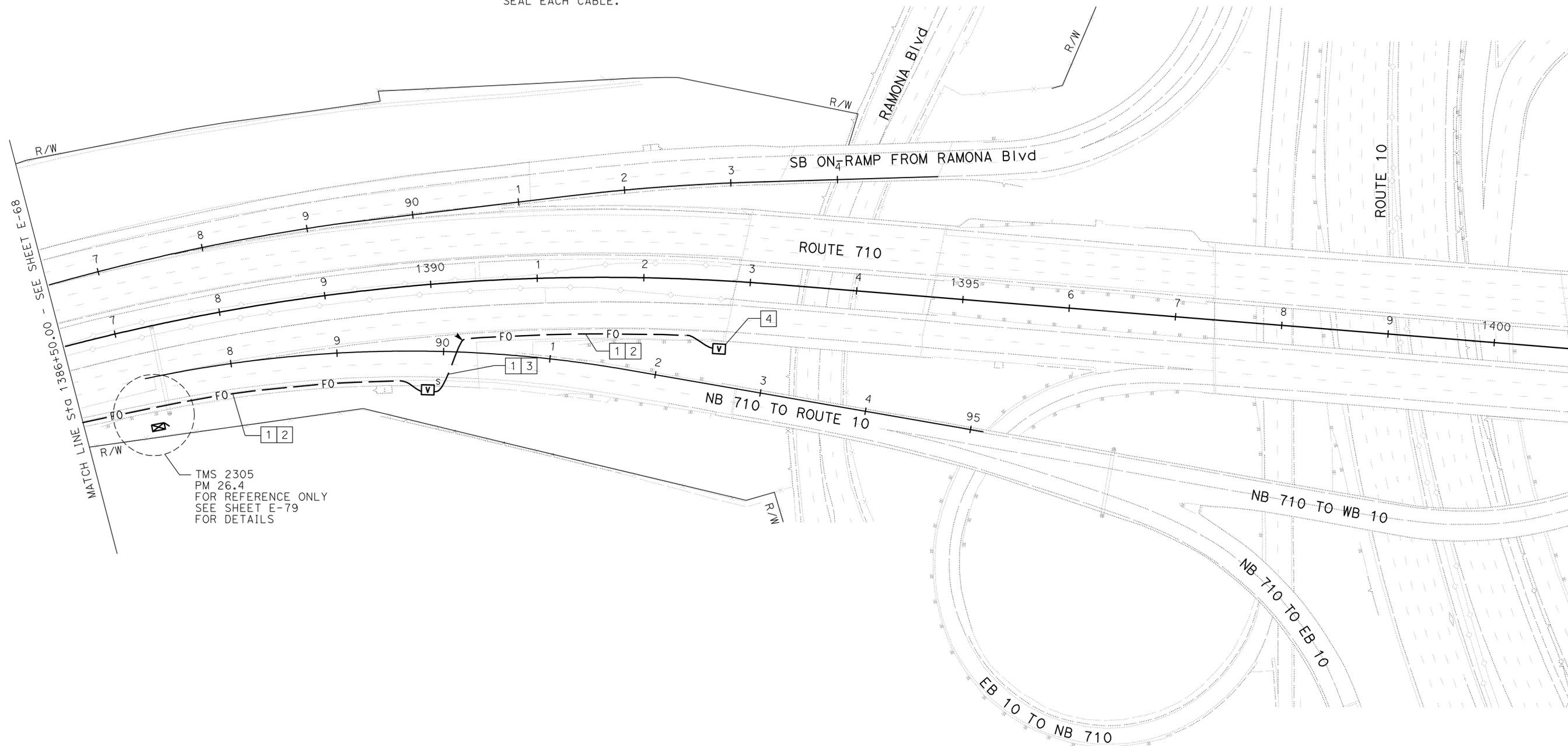
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| REGISTERED PROFESSIONAL ENGINEER |
| CANDACE FUNG |
| No. E16936 |
| Exp. 06/30/13 |
| ELECTRICAL |
| STATE OF CALIFORNIA |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL 3-48SMFO AND 4 SIZE 1" INNERDUCTS IN 4"C. INSTALL SPARE 4"C, MT.
- 2 TRENCH AND INSTALL CONDUITS IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 3 JACK CONDUITS UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 4 COIL 30' 3-48SMFO FOR FUTURE USE, CAP AND SEAL EACH CABLE.



COMMUNICATION SYSTEM

SCALE: 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-69

| | | | |
|--|-----------------------|------------------------|--------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED/DESIGNED BY | REVISOR |
| Caltrans OFFICE OF ITS | JACQUELINE TAN | CHECKED BY | DATE REVISED |
| | | CANDACE FUNG | |
| | | JACQUELINE TAN | |



| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1130 | 1507 |

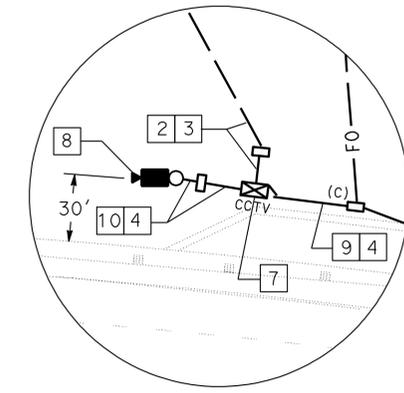
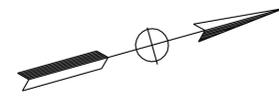
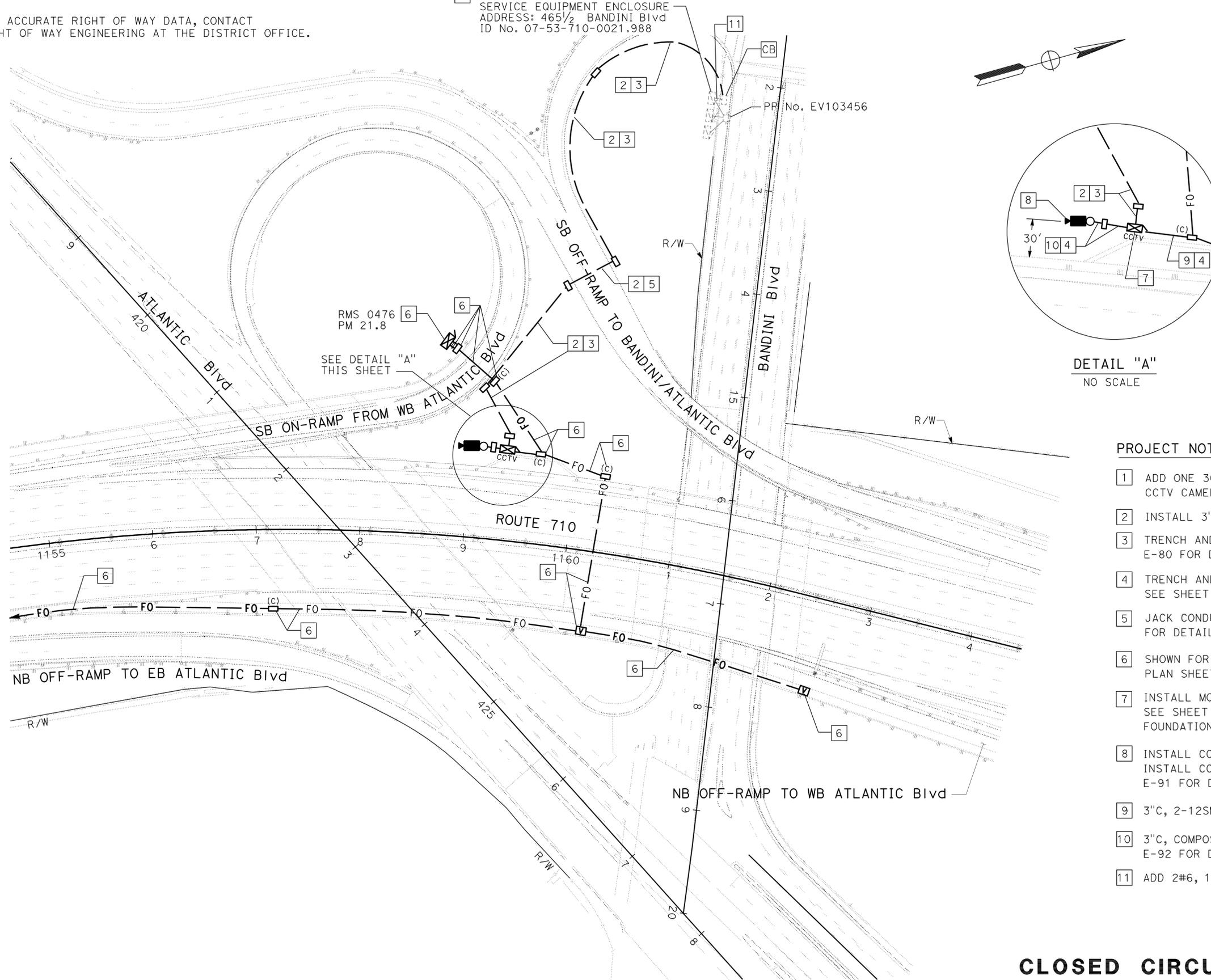
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| REGISTERED ELECTRICAL ENGINEER DATE | | 4/4/11 |
| PLANS APPROVAL DATE | | 6-27-11 |

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|----------------------------------|--|
| REGISTERED PROFESSIONAL ENGINEER | |
| CANDACE FUNG | |
| No. E16936 | |
| Exp. 06/30/13 | |
| ELECTRICAL | |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

1 TYPE III-BF SERVICE EQUIPMENT ENCLOSURE ADDRESS: 465 1/2 BANDINI Blvd ID No. 07-53-710-0021.988



DETAIL "A"
NO SCALE

PROJECT NOTES: (THIS SHEET ONLY)

- 1 ADD ONE 30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV CAMERA CONTROLLER CABINET.
- 2 INSTALL 3"C, 2#6, 1#6G.
- 3 TRENCH AND INSTALL CONDUIT IN SOIL. SEE SHEET E-80 FOR DETAILS.
- 4 TRENCH AND INSTALL CONDUIT IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 5 JACK CONDUIT UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 6 SHOWN FOR REFERENCE ONLY. SEE COMMUNICATION SYSTEM PLAN SHEET E-55 FOR INSTALLATION DETAILS.
- 7 INSTALL MODEL 334-TV CONTROLLER CABINET. SEE SHEET E-84 AND E-90 FOR CONTROLLER CABINET FOUNDATION AND CABINET WIRING DETAILS.
- 8 INSTALL CCTV CAMERA POLE TYPE CCTV 45. INSTALL CCTV CAMERA ASSEMBLY ON POLE. SEE SHEET E-91 FOR DETAILS.
- 9 3"C, 2-12SMFO.
- 10 3"C, COMPOSITE VIDEO CABLE. SEE SHEET E-91 AND E-92 FOR DETAILS.
- 11 ADD 2#6, 1#6G IN EXISTING 1 1/2"C.

**CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION LB219)**

SCALE: 1" = 50'

E-71

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

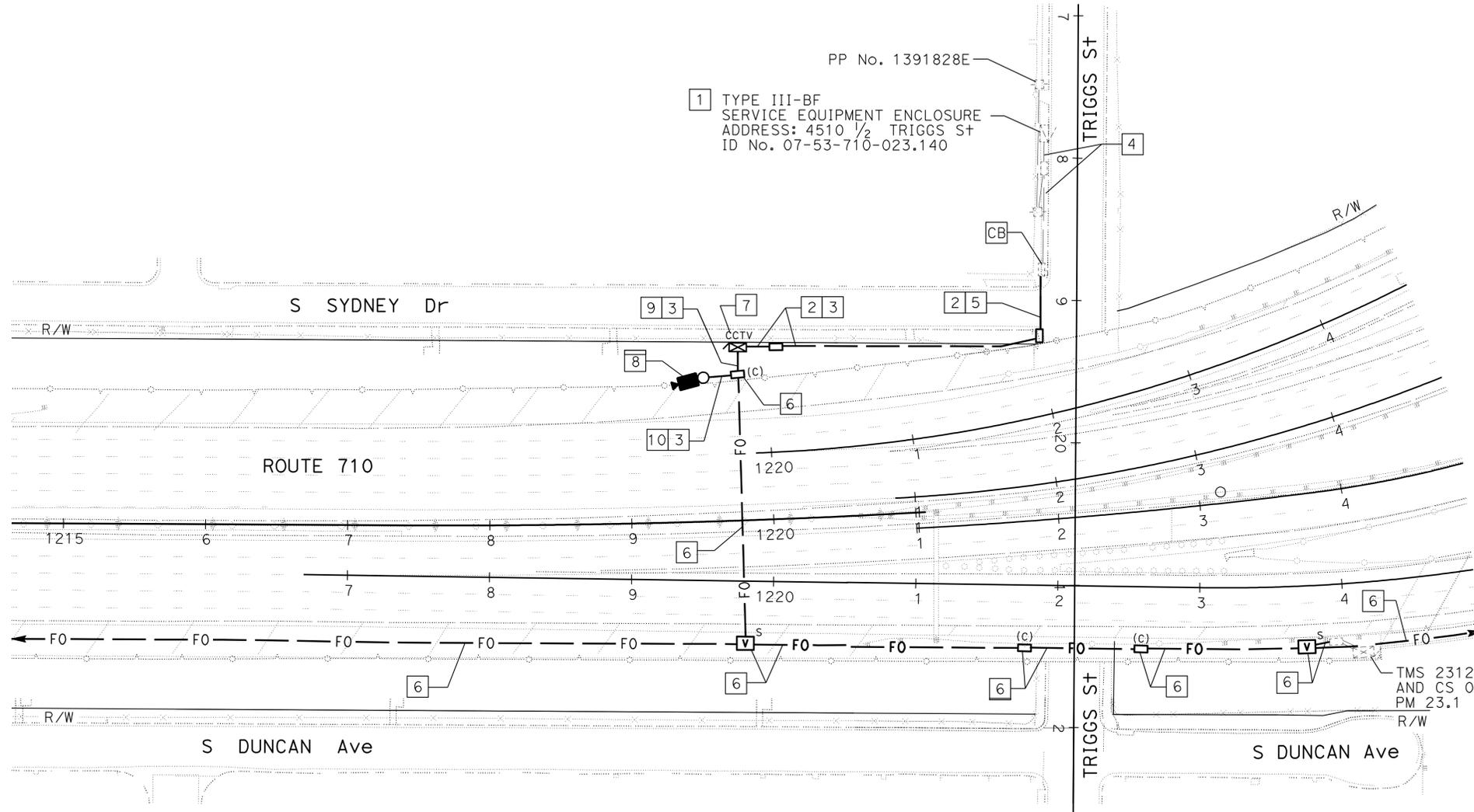
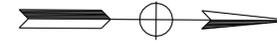
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION OFFICE OF ITS
 Caltrans®
 FUNCTIONAL SUPERVISOR JACQUELINE TAN
 CALCULATED/DESIGNED BY CHECKED BY
 CANDACE FUNG JACQUELINE TAN
 REVISED BY DATE REVISED
 REVISIONS: 00-00-00 DATE PLOTTED => 06-JUL-2011 TIME PLOTTED => 10:37

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1131 | 1507 |

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|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



PROJECT NOTES: (THIS SHEET ONLY)

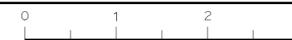
- 1 ADD ONE 30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV CAMERA CONTROLLER CABINET.
- 2 3\"/>

CLOSED CIRCUIT TELEVISION CAMERA (LOCATION LB231)

SCALE: 1" = 50'

E-72

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



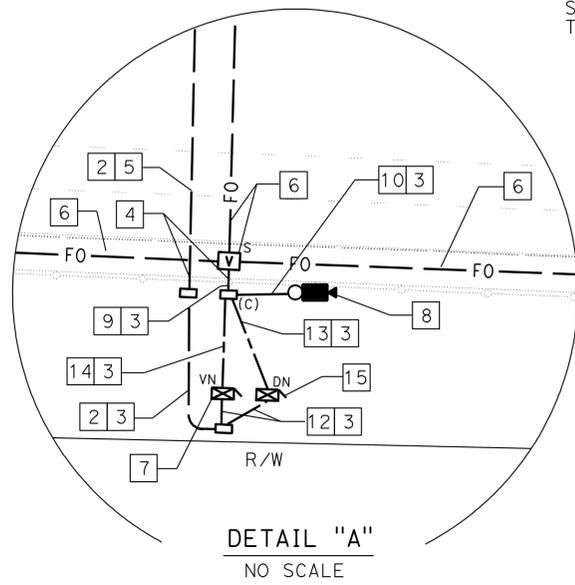
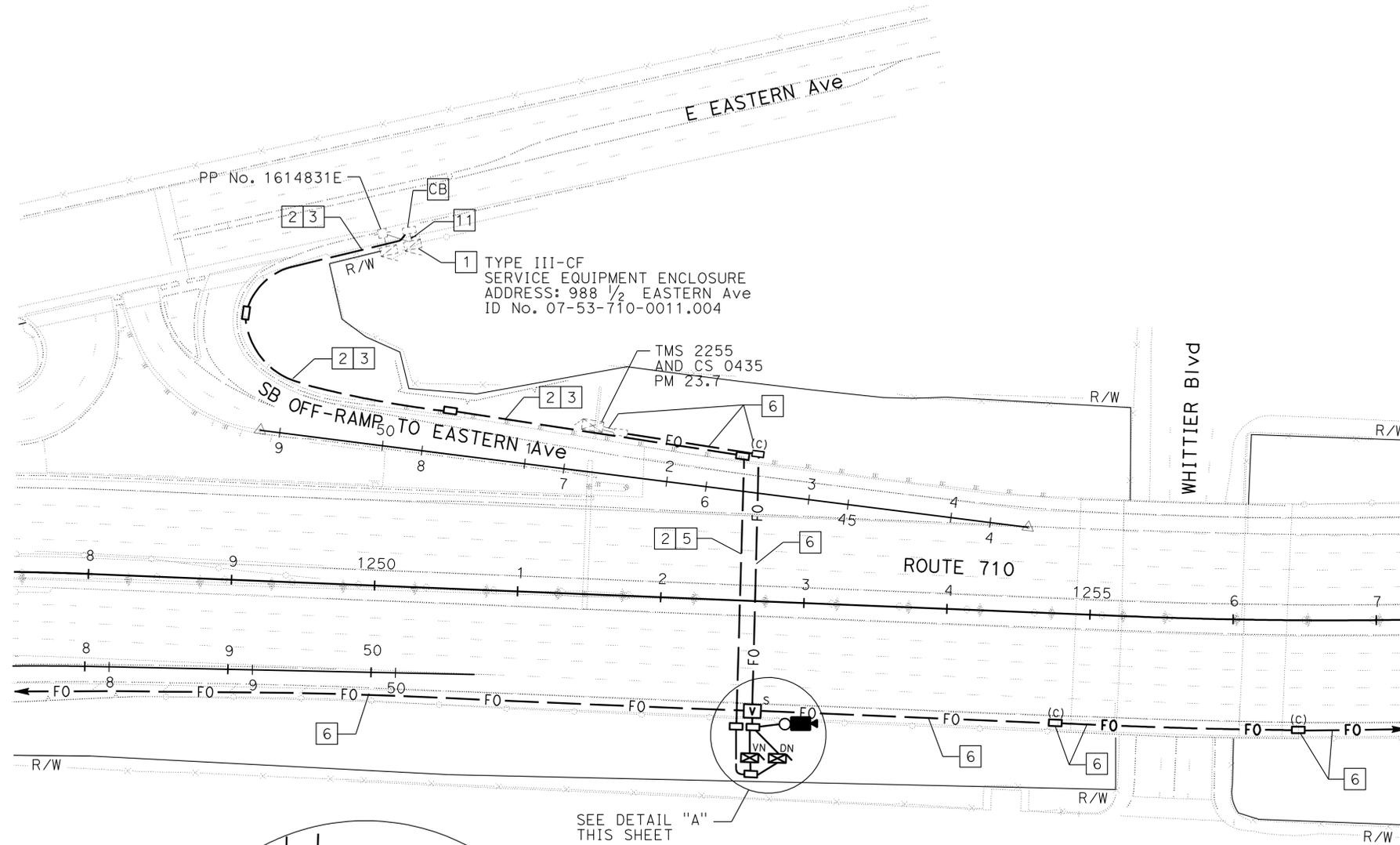
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1132 | 1507 |

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|--------------------------------|--------|
| <i>Candace</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



DETAIL "A"
NO SCALE

PROJECT NOTES: (THIS SHEET ONLY)

- 1 ADD 2-30 A, 120 V, 1P CIRCUIT BREAKERS FOR VIDEO NODE AND DATA NODE CONTROLLER CABINETS.
- 2 3"C, 4#4 AND 1#8G.
- 3 TRENCH AND INSTALL CONDUIT IN SOIL. SEE SHEET E-80 FOR DETAILS.
- 4 CORE CONDUIT THROUGH EXISTING SOUNDWALL.
- 5 JACK CONDUIT UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 6 SHOWN FOR REFERENCE ONLY. SEE COMMUNICATION SYSTEM PLAN SHEET E-59 FOR INSTALLATION DETAILS.
- 7 INSTALL MODEL 334-TV CONTROLLER CABINET. SEE SHEET E-84 AND E-89 FOR CONTROLLER CABINET FOUNDATION AND VIDEO NODE CABINET WIRING DETAILS.
- 8 INSTALL CCTV CAMERA POLE TYPE CCTV 45 BEHIND SOUNDWALL. INSTALL CCTV CAMERA ASSEMBLY ON POLE. SEE SHEET E-91 FOR DETAILS.
- 9 3"C, 4-48SMFO AND 2-12SMFO.
- 10 3"C, COMPOSITE VIDEO CABLE. SEE SHEET E-91 AND E-92 FOR DETAILS.
- 11 ADD 4#4 AND 1#8G IN EXISTING 1/2"C.
- 12 3"C, 2#4 AND 1#8G.
- 13 3"C, 2-48SMFO, 12SMFO AND 2P22.
- 14 3"C, 2-48SMFO, 12SMFO, 2P22 AND COMPOSITE VIDEO CABLE.
- 15 INSTALL MODEL 334-TV CONTROLLER CABINET. SEE SHEET E-84 AND E-88 FOR CONTROLLER CABINET FOUNDATION AND DATA NODE CABINET WIRING DETAILS.

**CLOSED CIRCUIT TELEVISION CAMERA,
VIDEO NODE AND DATA NODE
(LOCATION LB237)**

SCALE: 1" = 50'

E-73

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR JACQUELINE TAN
 CALCULATED/DESIGNED BY JACQUELINE TAN
 CHECKED BY
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVIS

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1133 | 1507 |

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|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

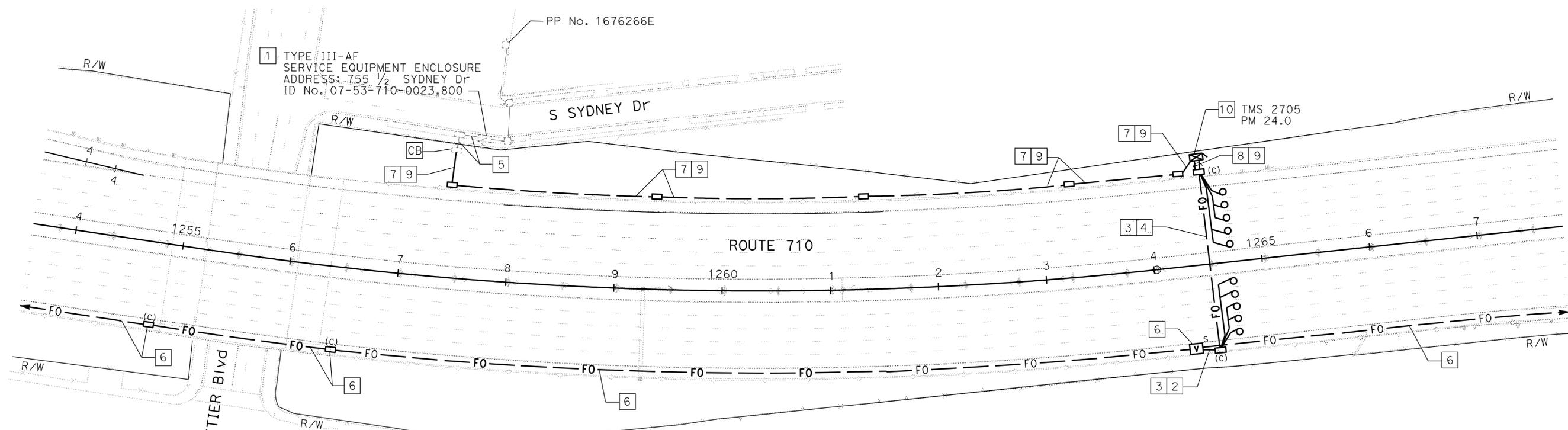
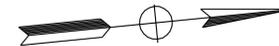
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|----------------------------------|--|
| REGISTERED PROFESSIONAL ENGINEER | |
| CANDACE FUNG | |
| No. E16936 | |
| Exp. 06/30/13 | |
| ELECTRICAL | |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 ADD ONE 30 A, 120 V, 1P CIRCUIT BREAKER FOR TMS CONTROLLER CABINET.
- 2 TRENCH AND INSTALL CONDUIT IN PAVEMENT. SEE SHEET E-80 FOR DETAILS.
- 3 3"C, 12SMFO, 5 DLC, 1#8G.
- 4 JACK CONDUIT UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 5 ADD 2#2, 1#8G IN EXISTING 1 1/2"C.



- 6 SHOWN FOR REFERENCE ONLY. SEE COMMUNICATION SYSTEM PLAN SHEETS E-59 AND E-60 FOR INSTALLATION DETAILS.
- 7 3"C, 2#2, 1#8G.
- 8 2-3"C, 12SMFO, 10 DLC, 1#8G.
- 9 TRENCH AND INSTALL CONDUIT(S) IN SOIL. SEE SHEET E-80 FOR DETAILS.
- 10 INSTALL STATE-FURNISHED MODEL 170 CONTROLLER ASSEMBLY AND MODEL 400 MODEM. SEE SHEET E-84 AND E-86 FOR CONTROLLER CABINET FOUNDATION AND CABINET WIRING DETAILS.

**TRAFFIC MONITORING STATION
(LOCATION 2705)**

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

SCALE: 1" = 50'

E-74

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION OFFICE OF ITS
 Candace Fung
 REGISTERED ELECTRICAL ENGINEER
 No. E16936
 Exp. 06/30/13
 ELECTRICAL

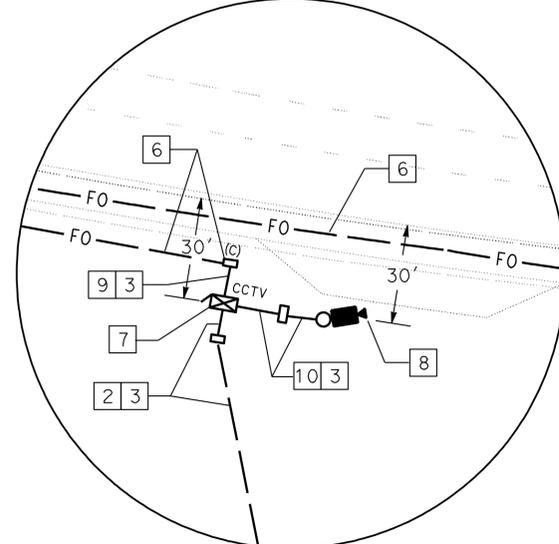
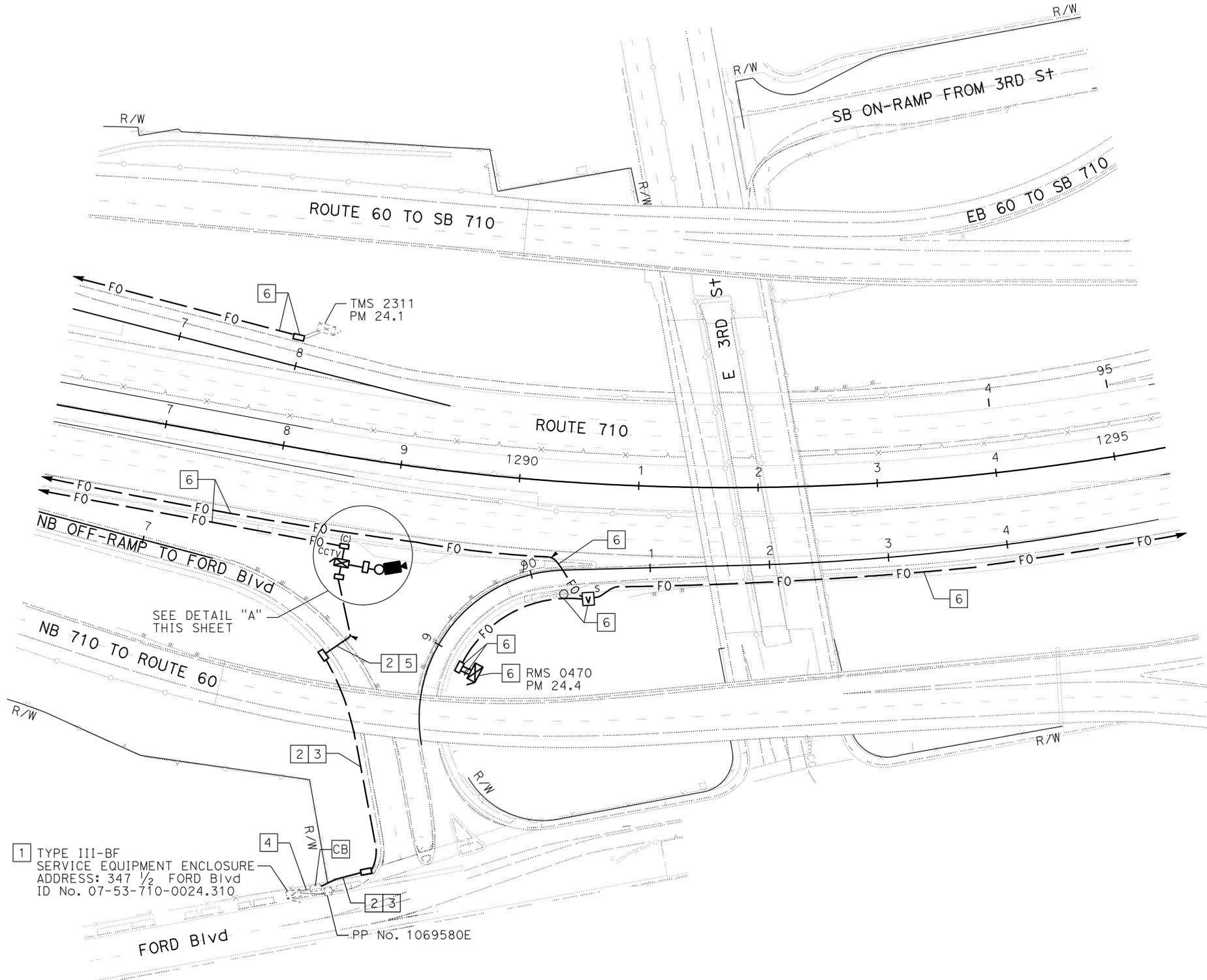
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|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1134 | 1507 |

REGISTERED ELECTRICAL ENGINEER DATE 4/4/11
 6-27-11
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



DETAIL "A"
NO SCALE

PROJECT NOTES: (THIS SHEET ONLY)

- 1 ADD ONE 30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV CAMERA CONTROLLER CABINET.
- 2 3"C, 2#8, 1#8G.
- 3 TRENCH AND INSTALL CONDUIT IN SOIL. SEE SHEET E-80 FOR DETAILS.
- 4 ADD 2#8, 1#8G IN EXISTING 1 1/2"C.
- 5 JACK CONDUIT UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 6 SHOWN FOR REFERENCE ONLY. SEE COMMUNICATION SYSTEM PLAN SHEET E-61 FOR INSTALLATION DETAILS.
- 7 INSTALL MODEL 334-TV CONTROLLER CABINET. SEE SHEET E-84 AND E-90 FOR CONTROLLER CABINET FOUNDATION AND CABINET WIRING DETAILS.
- 8 INSTALL CCTV CAMERA POLE TYPE CCTV 45. INSTALL CCTV CAMERA ASSEMBLY ON POLE. SEE SHEET E-91 FOR DETAILS.
- 9 3"C, 2-12SMFO.
- 10 3"C, COMPOSITE VIDEO CABLE. SEE SHEETS E-91 AND E-92 FOR DETAILS.

1 TYPE III-BF SERVICE EQUIPMENT ENCLOSURE ADDRESS: 347 1/2 FORD Blvd ID No. 07-53-710-0024.310

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR JACQUELINE TAN
 CALCULATED/DESIGNED BY CHECKED BY
 CANDACE FUNG JACQUELINE TAN
 REVISED BY DATE REVISED
 CANDACE FUNG JACQUELINE TAN

CLOSED CIRCUIT TELEVISION CAMERA (LOCATION LB245)
SCALE 1" = 50'

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

LAST REVISION DATE PLOTTED => 06-JUL-2011
 00-00-00 TIME PLOTTED => 10:51

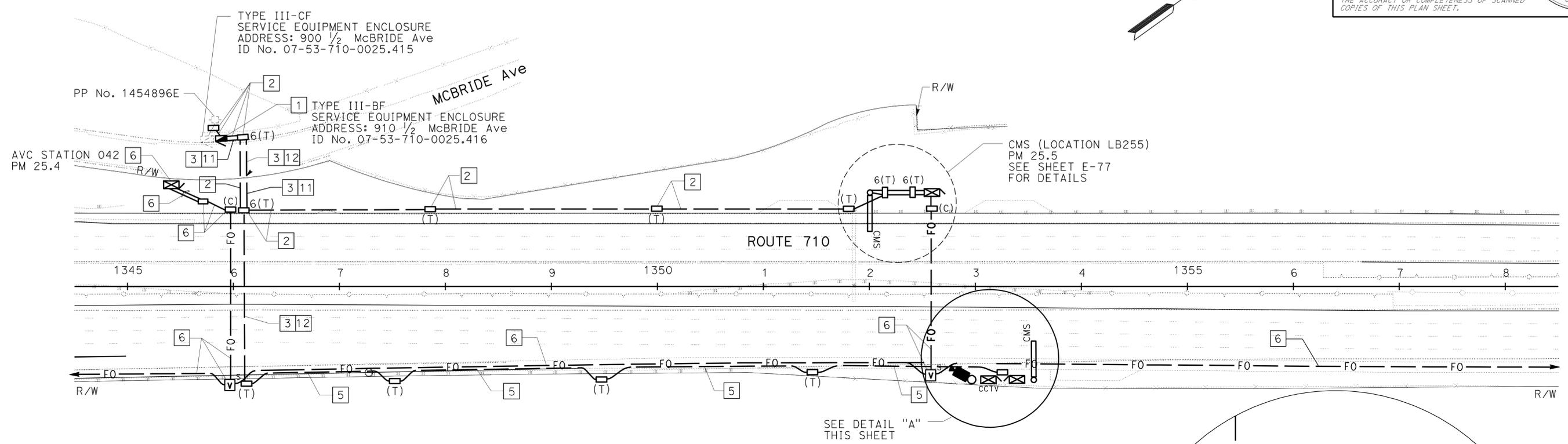
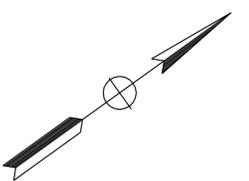
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|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1136 | 1507 |

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|---------------------------|--------|
| REGISTERED CIVIL ENGINEER | DATE |
| CANDACE FUNG | 4/4/11 |
| PLANS APPROVAL DATE | |
| 6-27-11 | |

| | |
|----------------------------------|--|
| REGISTERED PROFESSIONAL ENGINEER | |
| CANDACE FUNG | |
| No. E 16936 | |
| Exp. 06/30/13 | |
| ELECTRICAL | |

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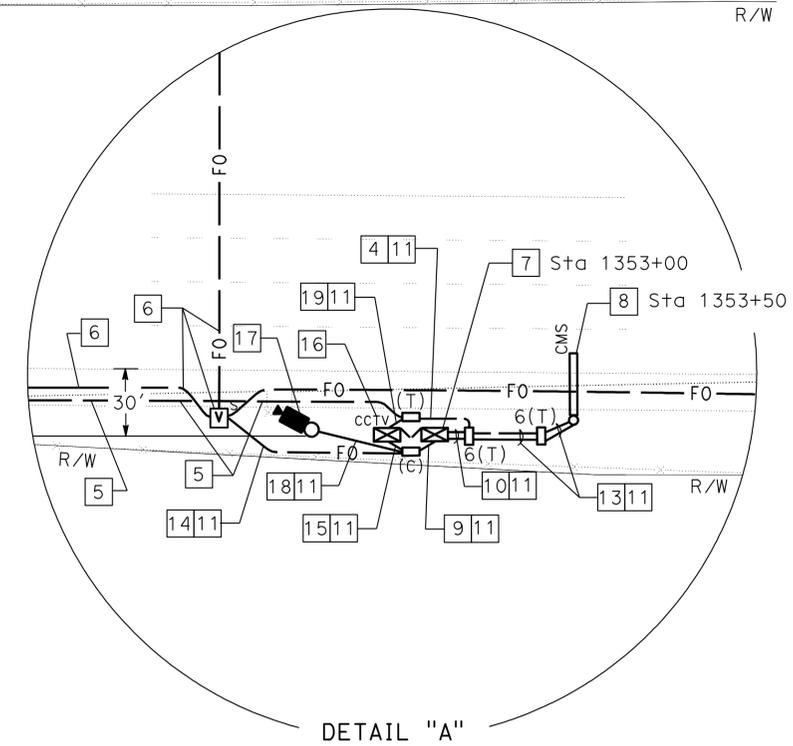
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



PROJECT NOTES: (THIS SHEET ONLY)

- | | |
|---|--|
| <p>1 SERVICE EQUIPMENT ENCLOSURE SHOWN FOR REFERENCE ONLY. SEE SHEET E-76 FOR INSTALLATION DETAILS.</p> <p>2 NEW CONDUIT(S) OR PULL BOX(ES) SHOWN FOR REFERENCE ONLY. SEE SHEET E-76 FOR INSTALLATION DETAILS.</p> <p>3 4"C, 6#2/0, 4#2, 1#4G.</p> <p>4 3"C, 6#2/0, 2#2, 1#4G.</p> <p>5 4"C, 6#2/0, 4#2, 1#4G. INSTALL CONDUIT IN THE SAME TRENCH AS COMMUNICATION CONDUITS. SEE SHEET E-80 FOR DETAILS.</p> <p>6 SHOWN FOR REFERENCE ONLY. SEE COMMUNICATION SYSTEM PLAN SHEETS E-66 FOR INSTALLATION DETAILS.</p> <p>7 INSTALL STATE-FURNISHED MODEL 170 CONTROLLER ASSEMBLY ON NEW FOUNDATION. SEE SHEET E-84 AND E-87 FOR CONTROLLER CABINET FOUNDATION AND CABINET WIRING DETAILS.</p> <p>8 INSTALL STATE-FURNISHED MODEL 500 CMS PANEL ON SIGN STRUCTURE. SEE SHEET SQ-7 FOR LOCATION DETAILS.</p> <p>9 3"C, 12SMFO.</p> <p>10 3"C, STATE-FURNISHED CMS CONTROL CABLE. 3"C, 2#2. INSTALL CONDUITS IN THE SAME TRENCH.</p> | <p>11 TRENCH AND INSTALL CONDUIT(S) IN SOIL. SEE SHEET E-80 FOR DETAILS.</p> <p>12 JACK CONDUIT UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.</p> <p>13 3"C, STATE-FURNISHED CMS CONTROL CABLE. 3"C, 6#2/0, 1#4G. SEE SHEET E-87 FOR WIRING DETAILS. INSTALL CONDUITS IN THE SAME TRENCH.</p> <p>14 3"C, 3-12SMFO.</p> <p>15 3"C, 2-12SMFO, COMPOSITE VIDEO CABLE.</p> <p>16 INSTALL MODEL 334-TV CONTROLLER CABINET. SEE SHEET E-84 AND E-90 FOR CONTROLLER CABINET FOUNDATION AND CABINET WIRING DETAILS.</p> <p>17 INSTALL CCTV CAMERA POLE TYPE CCTV 45. INSTALL CCTV CAMERA ASSEMBLY ON POLE. SEE SHEET E-91 FOR DETAILS.</p> <p>18 3"C, COMPOSITE VIDEO CABLE. SEE SHEET E-91 AND E-92 FOR DETAILS.</p> <p>19 3"C, 2#2.</p> |
|---|--|

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



DETAIL "A"
NO SCALE

**CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION LB257)
CHANGEABLE MESSAGE SIGN SYSTEM
(LOCATION LB257)**

SCALE 1" = 50'

E-77

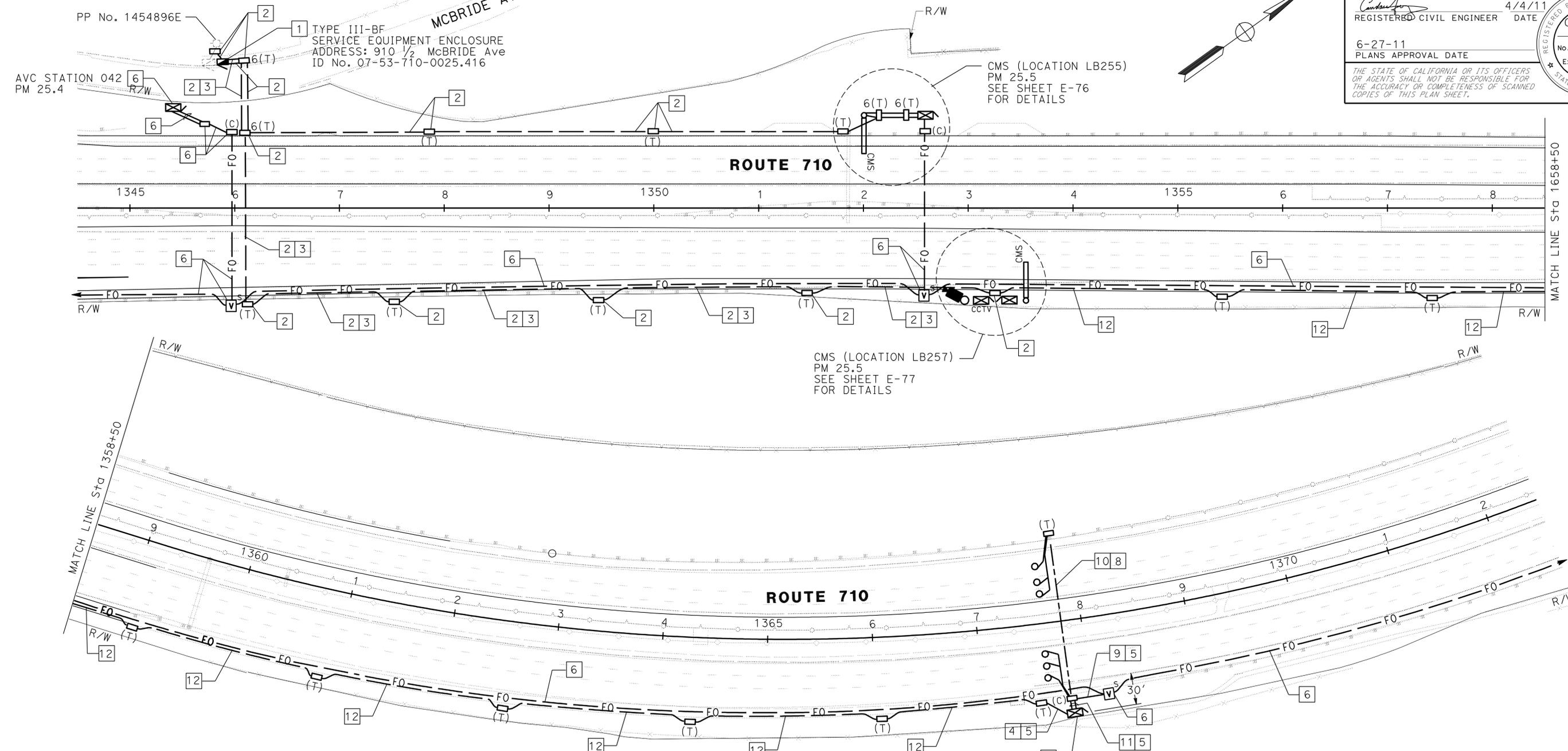
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR JACQUELINE TAN
 CALCULATED/DESIGNED BY JACQUELINE TAN
 CHECKED BY
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVIS

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1137 | 1507 |

REGISTERED CIVIL ENGINEER
 4/4/11 DATE
 6-27-11 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
CANDACE FUNG
 No. E 16936
 Exp. 06/30/13
 ELECTRICAL
 STATE OF CALIFORNIA

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



PROJECT NOTES: (THIS SHEET ONLY)

- 1 SERVICE EQUIPMENT ENCLOSURE SHOWN FOR REFERENCE ONLY. SEE SHEET E-76 FOR INSTALLATION DETAILS.
- 2 NEW CONDUIT(S) OR PULL BOX(ES) SHOWN FOR REFERENCE ONLY. SEE SHEETS E-76 AND E-77 FOR INSTALLATION DETAILS.
- 3 2#2, 1#8G. SEE SHEETS E-76 AND E-77 FOR THE INSTALLATION OF OTHER CONDUCTORS.
- 4 2"C, 2#2, 1#8G.
- 5 TRENCH AND INSTALL CONDUIT(S) IN SOIL. SEE SHEET E-80 FOR DETAILS.
- 6 SHOWN FOR REFERENCE ONLY. SEE COMMUNICATION SYSTEM PLAN SHEETS E-66 AND E-67 FOR INSTALLATION DETAILS.
- 7 INSTALL STATE-FURNISHED MODEL 170 CONTROLLER ASSEMBLY AND MODEL 400 MODEM. SEE SHEET E-84 AND E-86 FOR CONTROLLER CABINET FOUNDATION AND CABINET WIRING DETAILS.
- 8 JACK CONDUIT UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.
- 9 3"C, 12SMFO.
- 10 3"C, 3 DLC, 1#8G.
- 11 2-3"C, 12SMFO, 6 DLC, 1#8G.
- 12 2C, 2#2, 1#8G. INSTALL CONDUIT IN THE SAME TRENCH AS COMMUNICATION CONDUITS. SEE SHEET E-80 FOR DETAILS.

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

TRAFFIC MONITORING STATION (LOCATION 2706)

SCALE 1" = 50'

E-78

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE TAN
 CALCULATED/DESIGNED BY
 CHECKED BY
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVISED
 C

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1138 | 1507 |

REGISTERED ELECTRICAL ENGINEER DATE
Candace Fung

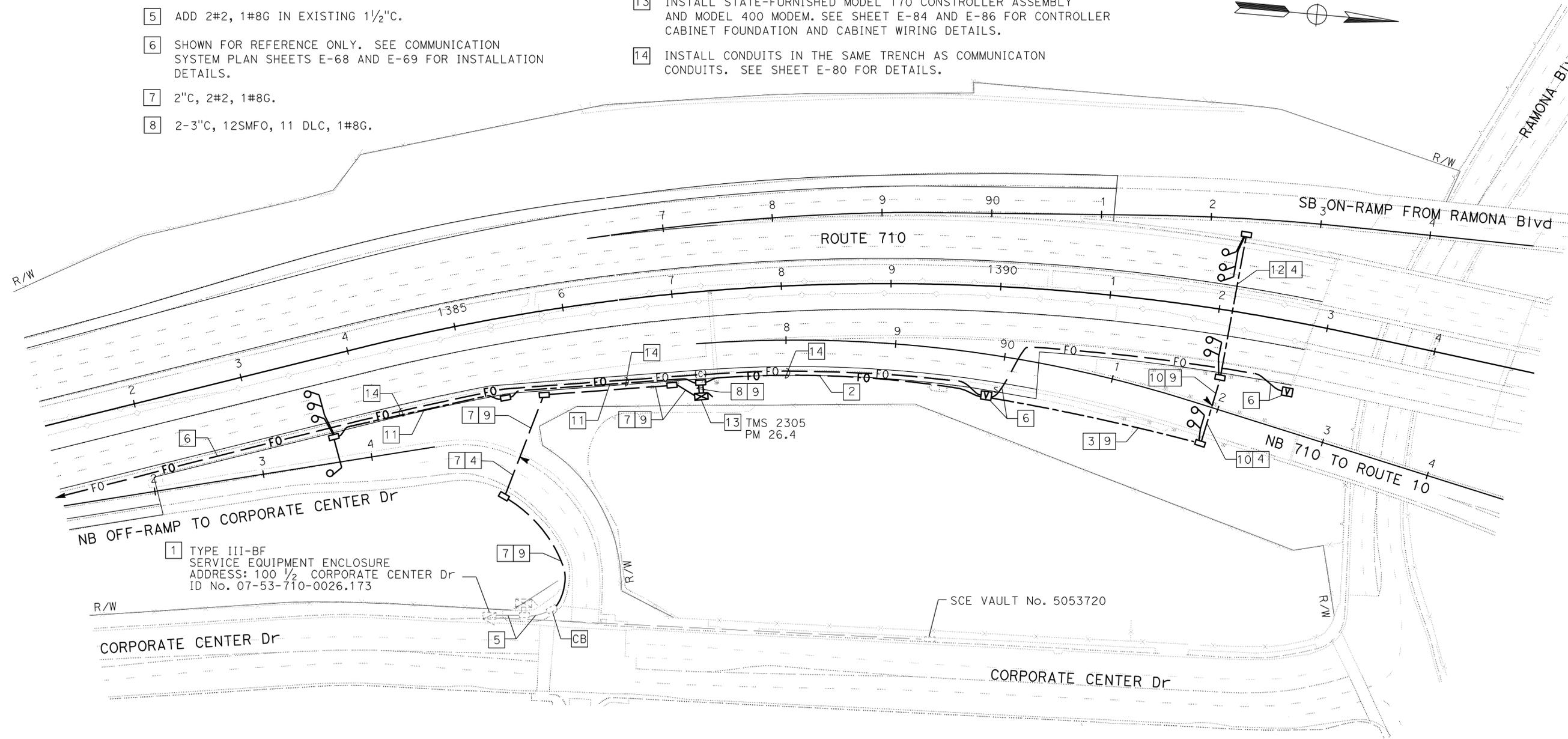
6-27-11
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
CANDACE FUNG
No. E16936
Exp. 06/30/13
ELECTRICAL
STATE OF CALIFORNIA

PROJECT NOTES: (THIS SHEET ONLY)

- | | |
|---|---|
| <p>1 ADD ONE 30 A, 120 V, 1P CIRCUIT BREAKER FOR TMS CONTROLLER CABINET.</p> <p>2 3"C, 12SMFO, 7 DLC, 1#8G.</p> <p>3 2"C, 7 DLC, 1#8G.</p> <p>4 JACK CONDUIT(S) UNDER ROADWAY. SEE SHEET E-81 FOR DETAILS.</p> <p>5 ADD 2#2, 1#8G IN EXISTING 1/2"C.</p> <p>6 SHOWN FOR REFERENCE ONLY. SEE COMMUNICATION SYSTEM PLAN SHEETS E-68 AND E-69 FOR INSTALLATION DETAILS.</p> <p>7 2"C, 2#2, 1#8G.</p> <p>8 2-3"C, 12SMFO, 11 DLC, 1#8G.</p> | <p>9 TRENCH AND INSTALL CONDUIT(S) IN SOIL. SEE SHEET E-80 FOR DETAILS.</p> <p>10 2"C, 5 DLC, 1#8G.</p> <p>11 2"C, 4 DLC, 1#8G.</p> <p>12 3"C, 3 DLC, 1#8G.</p> <p>13 INSTALL STATE-FURNISHED MODEL 170 CONSTROLLER ASSEMBLY AND MODEL 400 MODEM. SEE SHEET E-84 AND E-86 FOR CONTROLLER CABINET FOUNDATION AND CABINET WIRING DETAILS.</p> <p>14 INSTALL CONDUITS IN THE SAME TRENCH AS COMMUNICATON CONDUITS. SEE SHEET E-80 FOR DETAILS.</p> |
|---|---|



1 TYPE III-BF SERVICE EQUIPMENT ENCLOSURE
ADDRESS: 100 1/2 CORPORATE CENTER Dr
ID No. 07-53-710-0026.173

**TRAFFIC MONITORING STATION
(LOCATION 2305)**

SCALE: 1" = 50'

E-79

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR JACQUELINE TAN
 CALCULATED/DESIGNED BY CHECKED BY
 CANDACE FUNG JACQUELINE TAN
 REVISED BY DATE REVISED
 CANDACE FUNG JACQUELINE TAN

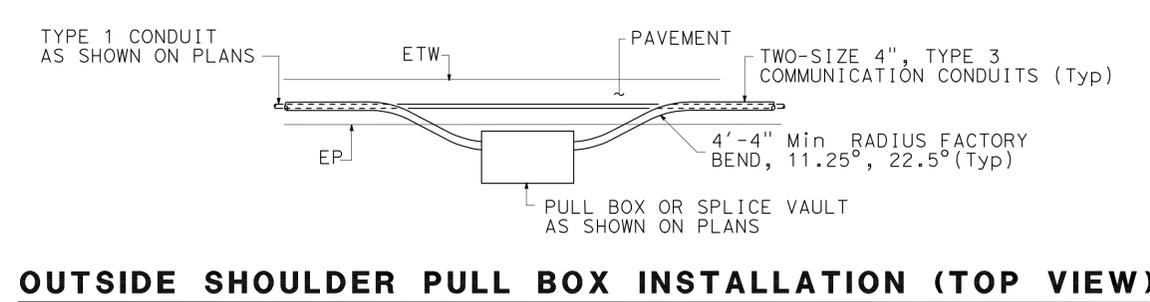
LAST REVISION DATE PLOTTED => 29-JUN-2011
 00-00-00 TIME PLOTTED => 20:24

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|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1139 | 1507 |

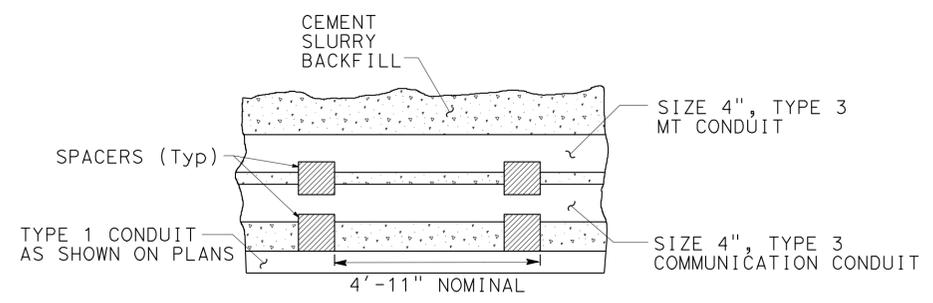
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|--------------------------------|--------|
| REGISTERED ELECTRICAL ENGINEER | DATE |
| <i>Candace Fung</i> | 4/4/11 |
| PLANS APPROVAL DATE | |
| 6-27-11 | |

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|----------------------------------|
| REGISTERED PROFESSIONAL ENGINEER |
| CANDACE FUNG |
| No. E16936 |
| Exp. 06/30/13 |
| ELECTRICAL |
| STATE OF CALIFORNIA |

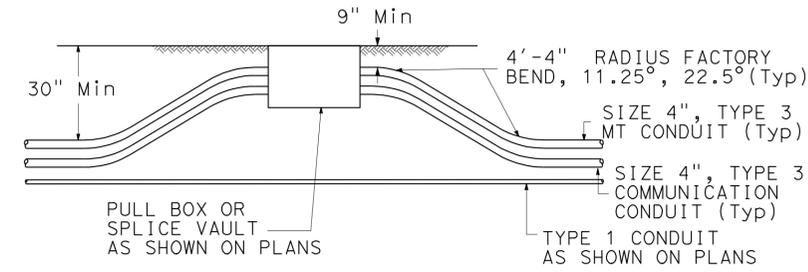
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



OUTSIDE SHOULDER PULL BOX INSTALLATION (TOP VIEW)



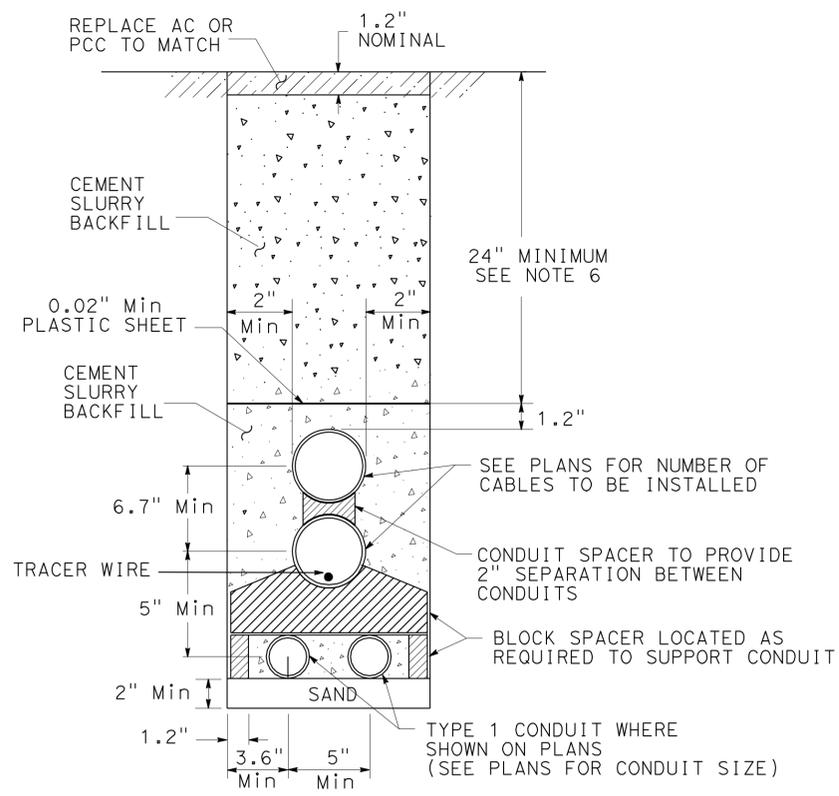
CONDUIT SPACER PLACEMENT (SIDE VIEW)



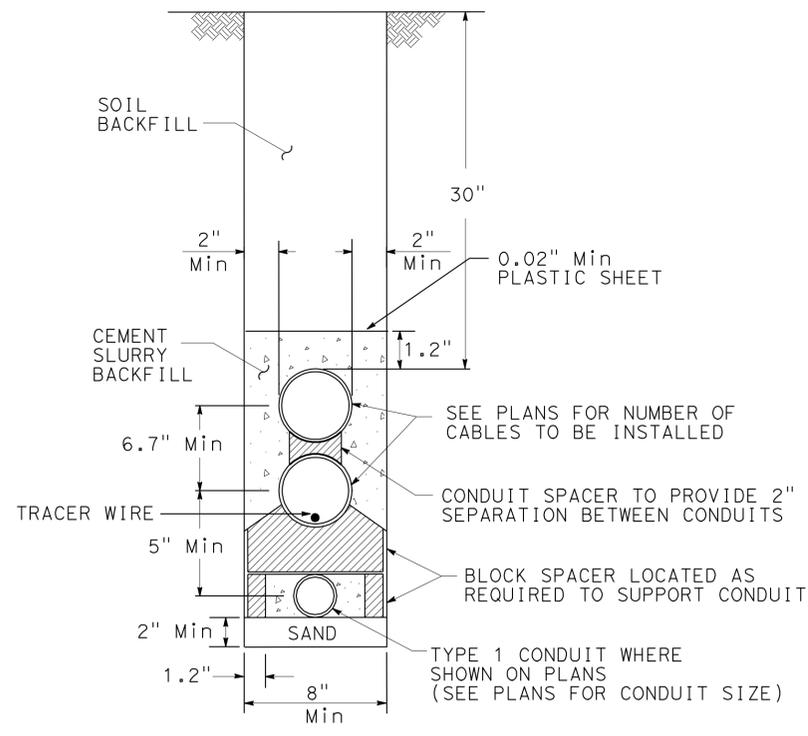
PULL BOX FOR SOIL AREA TRENCHING (ELEVATION)

NOTES: (THIS SHEET ONLY)

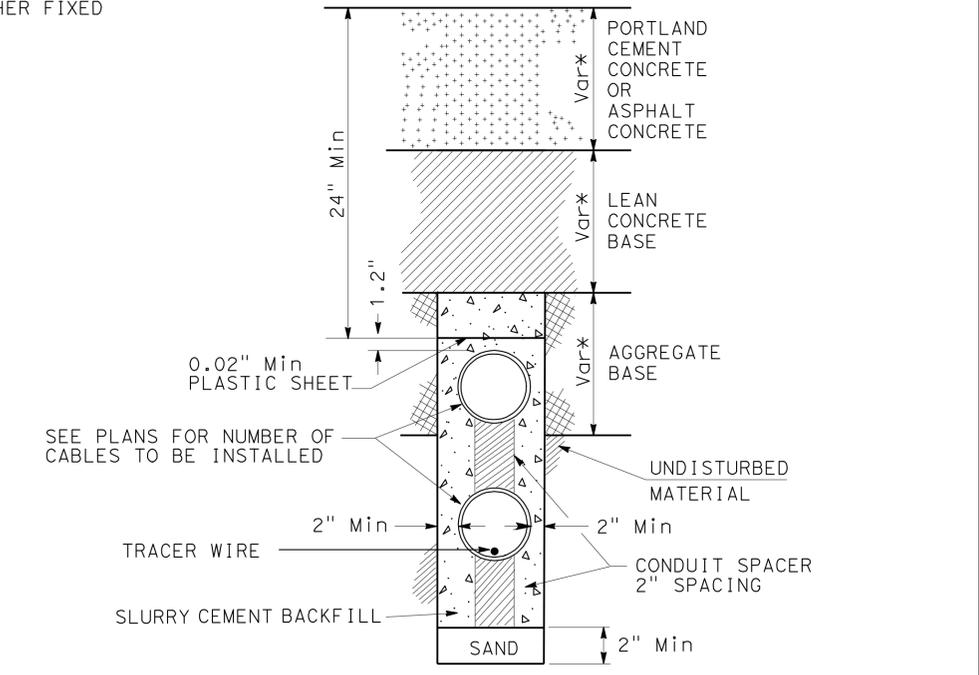
1. REPLACE AC DIKE IN KIND, AS NECESSARY.
2. TRENCH TO BE CENTERED IN SHOULDER OR AS DIRECTED BY ENGINEER.
3. MAINTAIN 24" MINIMUM COVER AND BACKFILL TRENCH WITH SLURRY CEMENT BETWEEN PULL BOX AND PAVED SHOULDER.
4. WHERE TRENCH TRANSITIONS FROM ASPHALT TO UNPAVED AREA, EXCEPT AT PULL BOXES, CONDUIT TO GRADUALLY TRANSITION FROM 24" MINIMUM DEPTH TO 30" MINIMUM DEPTH WITHIN THE ASPHALT AREA.
5. 24" MINIMUM COVER MAY BE REDUCED TO 9" MINIMUM COVER IF NEEDED TO CLEAR A STORM DRAIN OR OTHER FIXED OBJECT AS DIRECTED BY RESIDENT ENGINEER.
6. PROVIDE MINIMUM 4'-11" CLEARANCE BETWEEN ANY CONDUIT AND EXISTING STRUCTURE FOUNDATIONS.
7. ANCHOR/RESTRAIN TOP CONDUIT FROM FLOATING DURING SLURRY CEMENT BACKFILL.
8. CONDUITS SHALL BE INSTALLED IN NEW ASPHALT PAVEMENT AFTER AGGREGATE BASE IS PLACED AND COMPACTED.



TRENCH IN PAVEMENT (CONCRETE OR ASPHALT) WITH TWO 4" TYPE 3 CONDUITS AND TWO TYPE 1 CONDUITS



TRENCH IN SOIL WITH TWO 4" TYPE 1 CONDUITS AND ONE TYPE 1 CONDUIT



TRENCH IN NEW PAVEMENT (PCC or ASPHALT) WITH TWO 4" TYPE 3 CONDUITS
(* PAVEMENT THICKNESS, SEE TYPICAL CROSS SECTION PLANS)

COMMUNICATION SYSTEM (TRENCH DETAILS)

NO SCALE

E-80

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49. THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - OFFICE OF ITS SUPERVISOR
 Candace Fung
 Jacqueline Tan
 Jacqueline Tan
 Jacqueline Tan

USERNAME => s124496
DGN FILE => 720211uad081.dgn

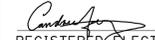
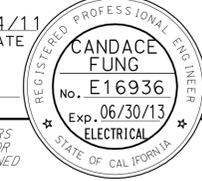
RELATIVE BORDER SCALE IS IN INCHES

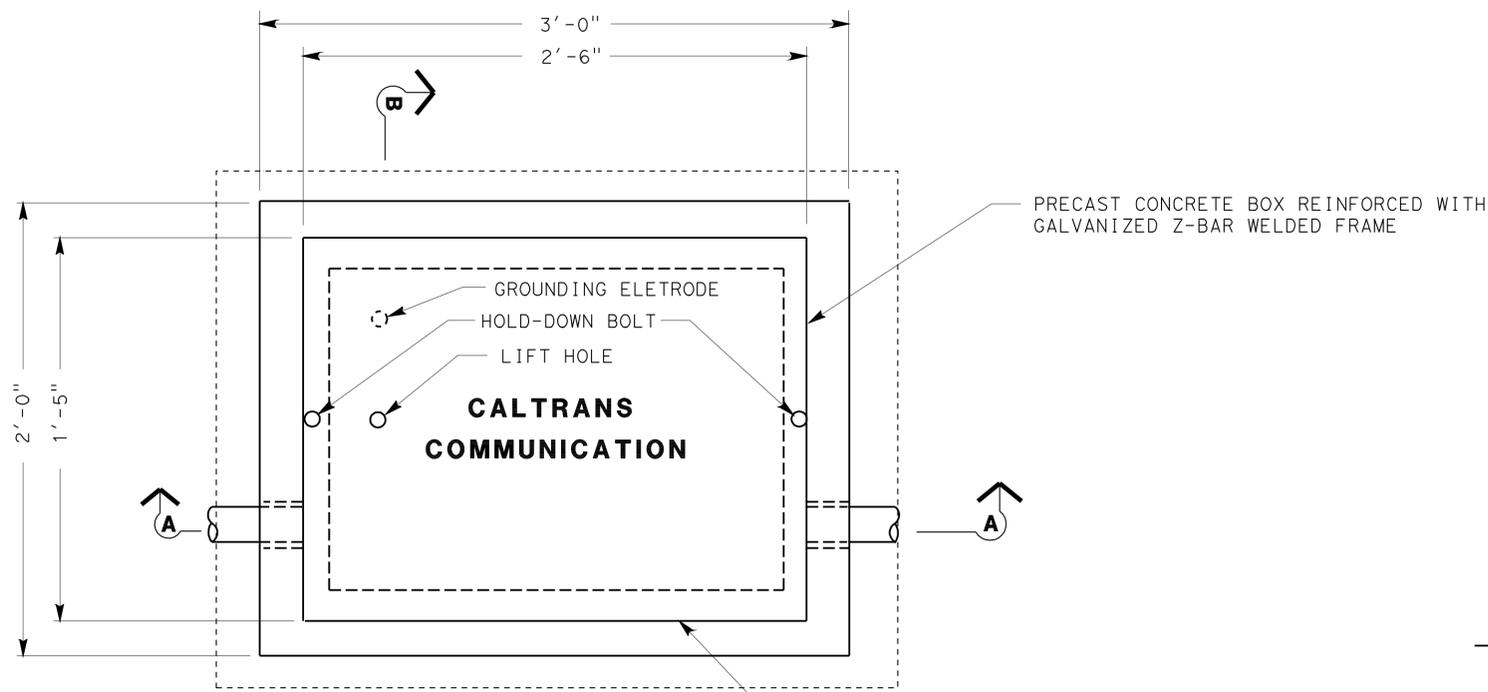
UNIT 1885

PROJECT NUMBER & PHASE

07000208691

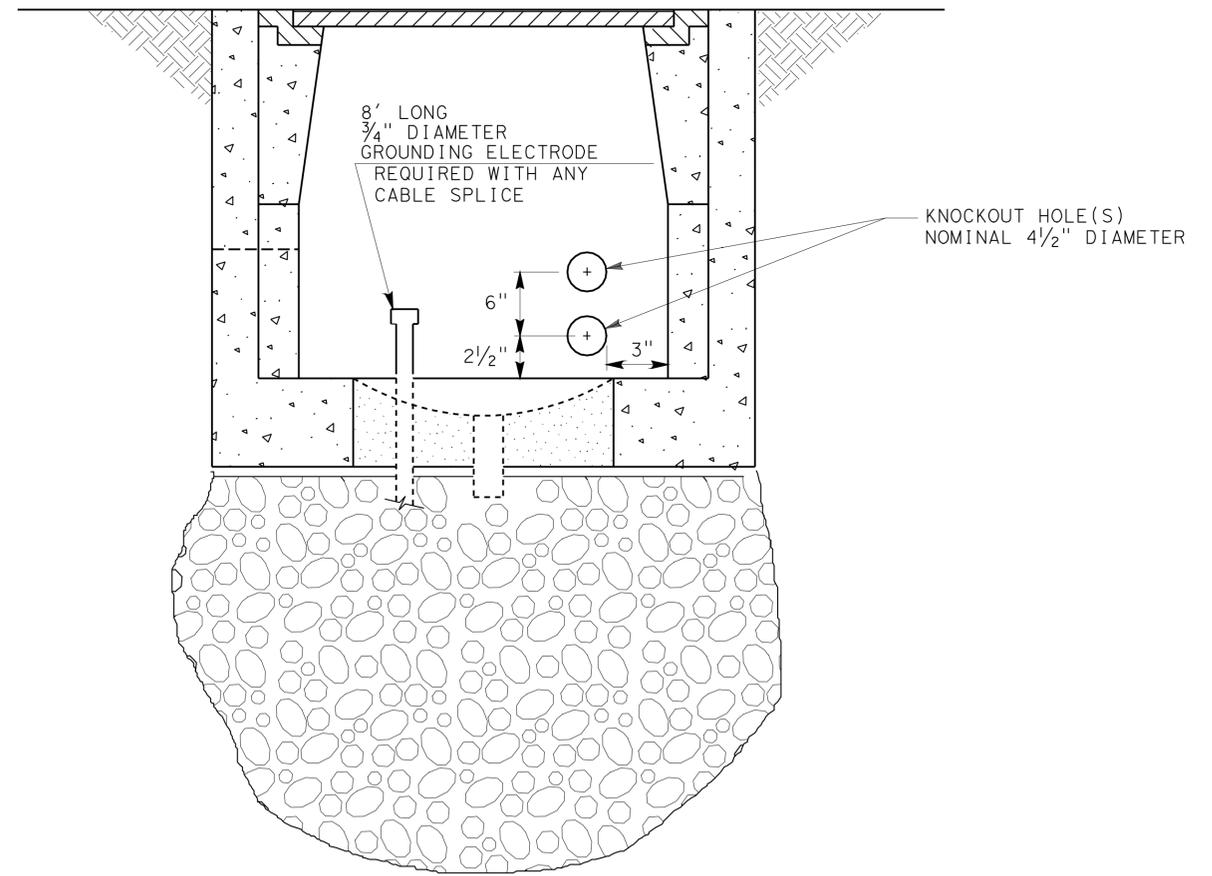
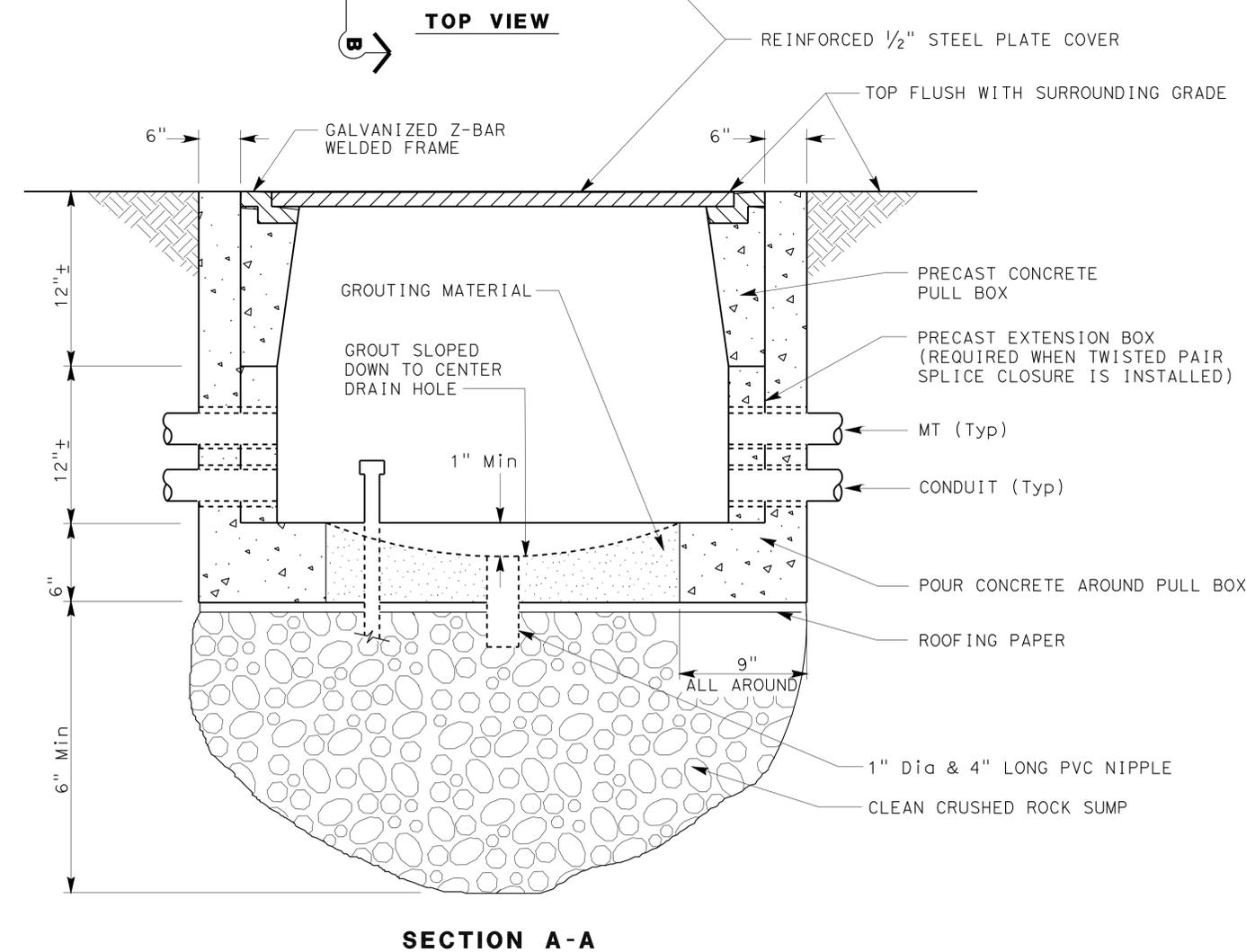
LAST REVISION DATE PLOTTED => 29-JUN-2011
 00-00-00 TIME PLOTTED => 20:25

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|--|--------|-------|---|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1141 | 1507 |
|  REGISTERED ELECTRICAL ENGINEER DATE 4/4/11 | | |  | | |
| 6-27-11 PLANS APPROVAL DATE | | | | | |
| <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small> | | | | | |



NOTES: (THIS SHEET ONLY)

- FOR DETAILS NOT SHOWN SEE STD PLAN ES-8.
- CONDUITS SHOWN ARE FOR EXAMPLE ONLY. ADDITIONAL CONDUITS MAY BE REQUIRED AS SHOWN ON THE PLAN SHEETS.



SECTION B-B

**COMMUNICATION SYSTEM
(COMMUNICATION PULL BOX DETAILS)**

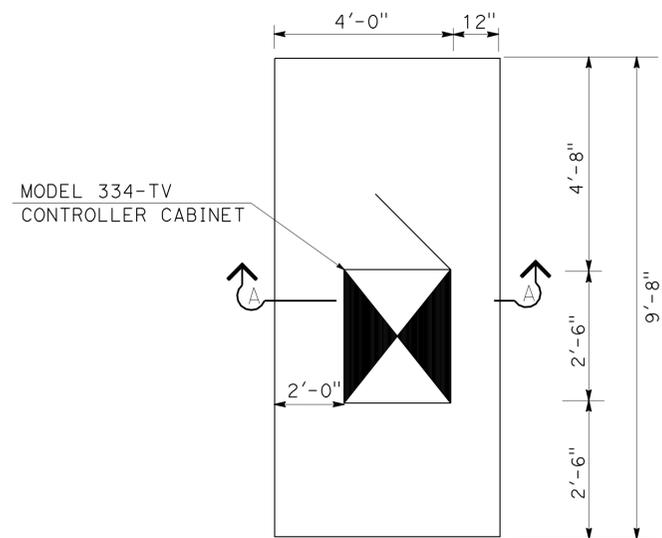
NO SCALE

E-82

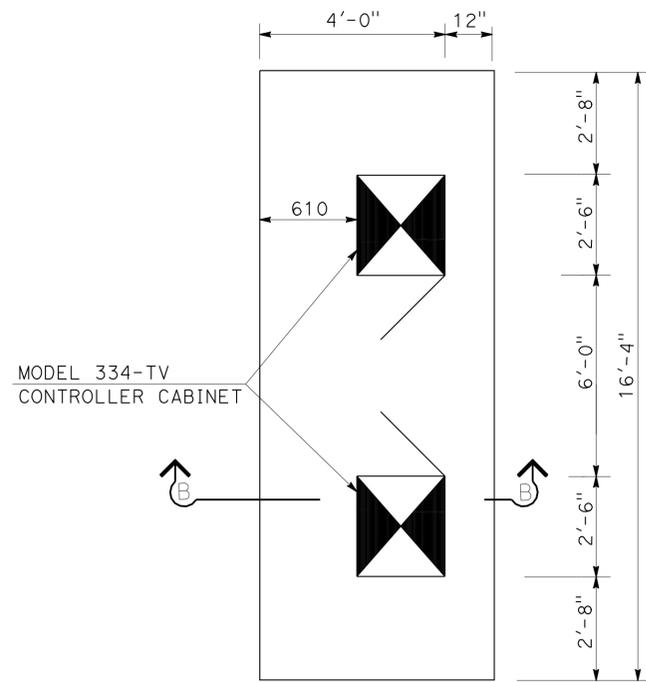
FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

| | | | |
|---|---|-----------------------------|---------------------------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans OFFICE OF ITS | FUNCTIONAL SUPERVISOR JACQUELINE TAN | DESIGNED BY CANDACE FUNG | REVISOR JACQUELINE TAN |
| | | CHECKED BY | DATE REVISION |
| | | | |

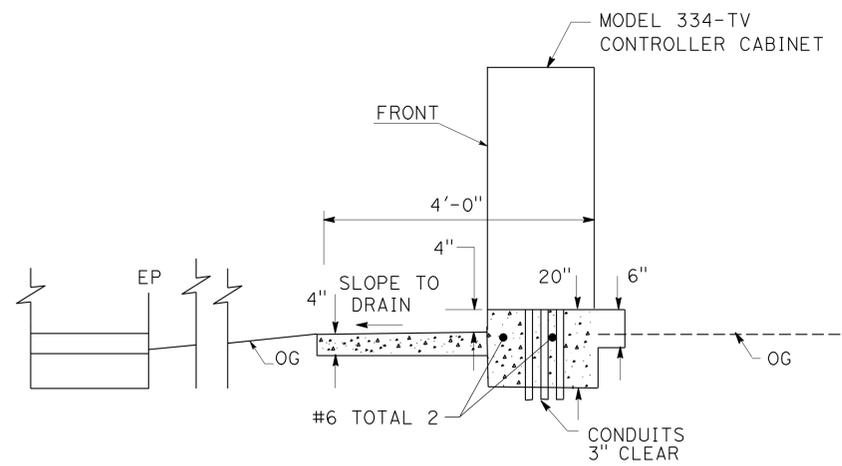
| | | | | | |
|---|--------|-------|-----------------------------|-------------------------------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1143 | 1507 |
| | | | 4/4/11 | REGISTERED ELECTRICAL ENGINEER DATE | |
| | | | 6-27-11 | PLANS APPROVAL DATE | |
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| THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. | | | | | |



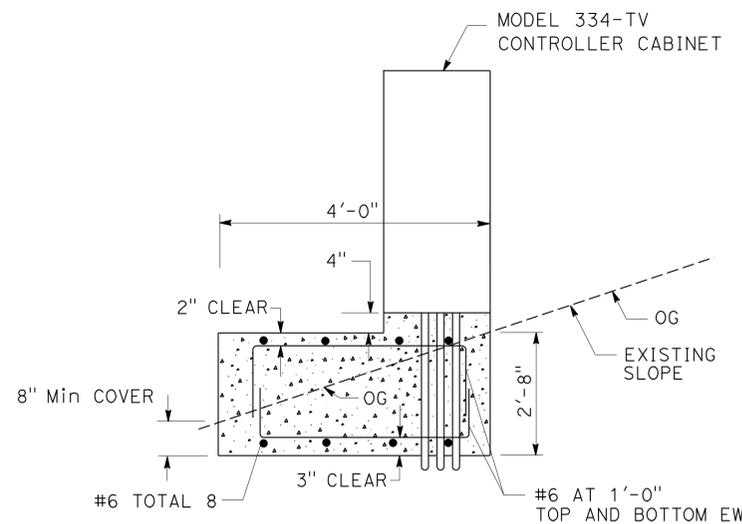
**DETAIL A
PLAN VIEW**



**DETAIL B
PLAN VIEW**



**SECTION A-A
ELEVATION VIEW FOR DETAIL A**



**SECTION B-B
ELEVATION VIEW FOR DETAIL B**

**COMMUNICATION SYSTEM
(CONTROLLER CABINET FOUNDATION DETAILS)**

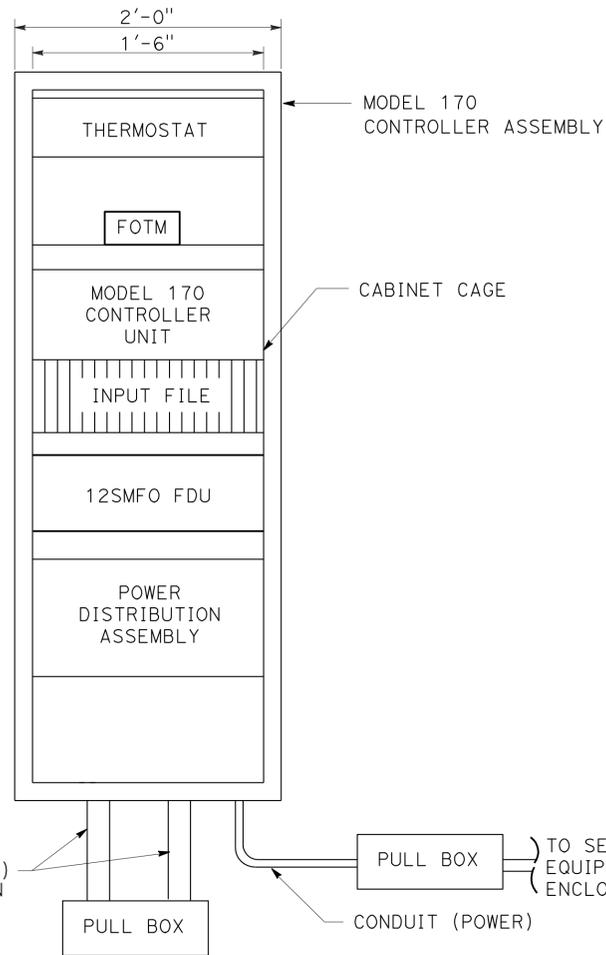
NO SCALE

E-84

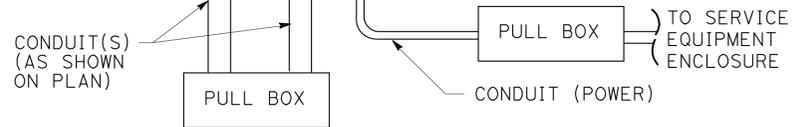
FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



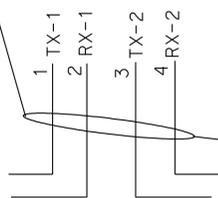
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|--|-----------------------|----------------|------|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | REVISOR | DATE |
| OFFICE OF ITS | JACQUELINE TAN | CANDACE FUNG | |
| | | JACQUELINE TAN | |
| | | | |



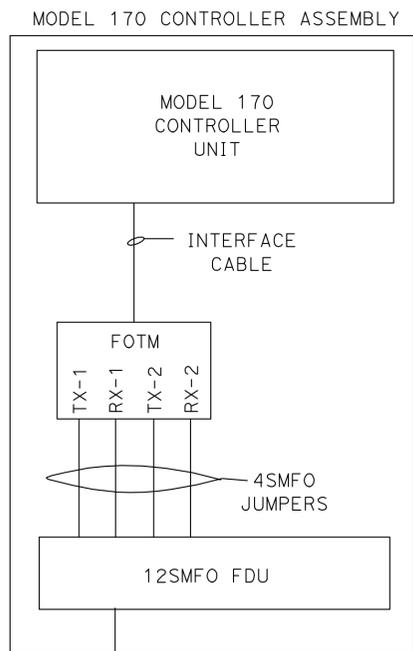
**MODEL 170 CONTROLLER ASSEMBLY
EQUIPMENT LAYOUT FOR CMS**



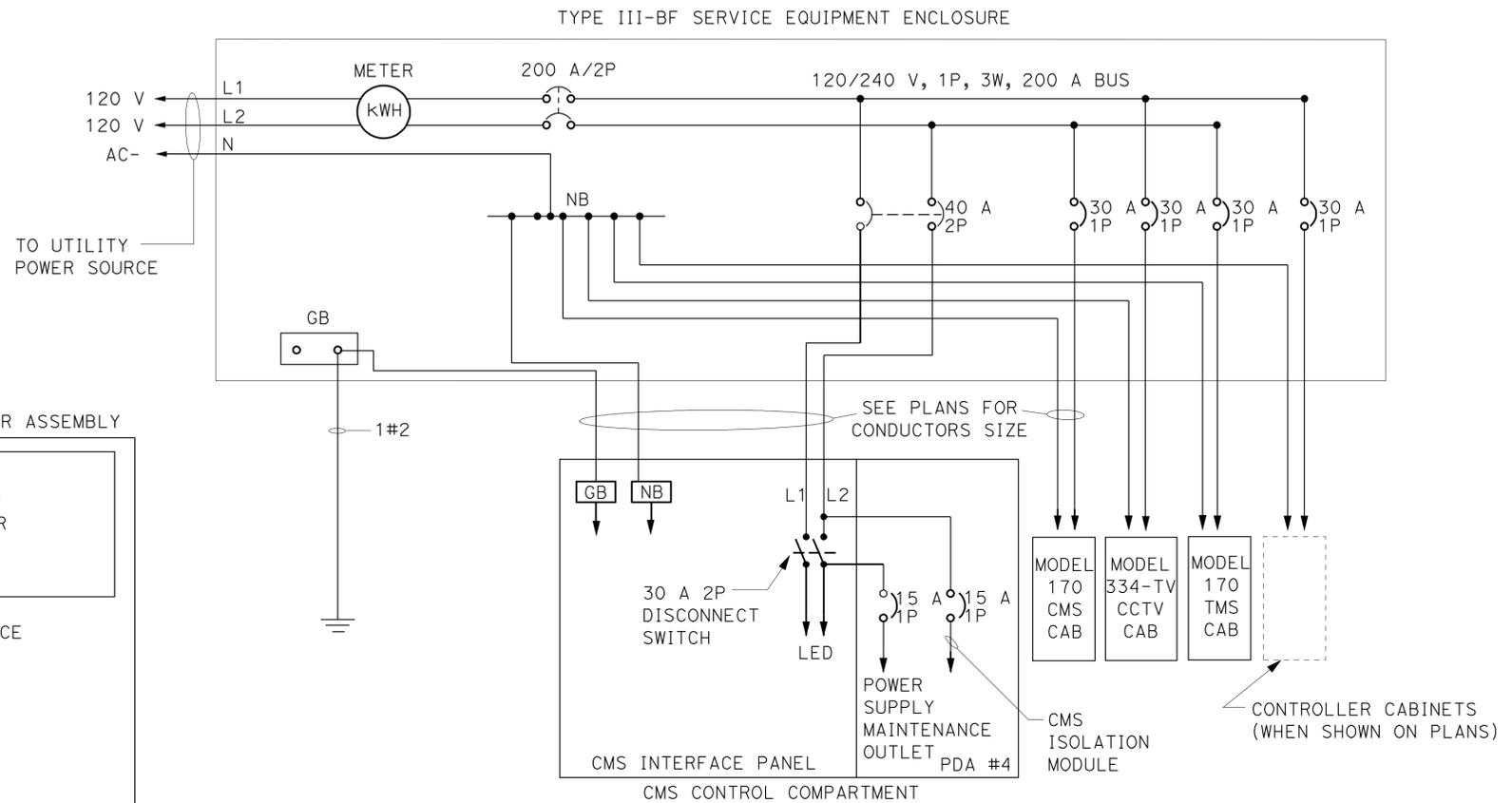
USE AND LABEL THE 12SMFO CABLE AS SHOWN



MODEL 170 CONTROLLER ASSEMBLY WIRING DETAIL FOR CMS



FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



**TYPICAL MODEL 500 CMS SYSTEM WIRING
AND CIRCUIT BREAKERS**

**CHANGEABLE MESSAGE SIGN SYSTEM
(MODEL 170 CONTROLLER ASSEMBLY DETAILS)**

NO SCALE

E-87

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1150 | 1507 |

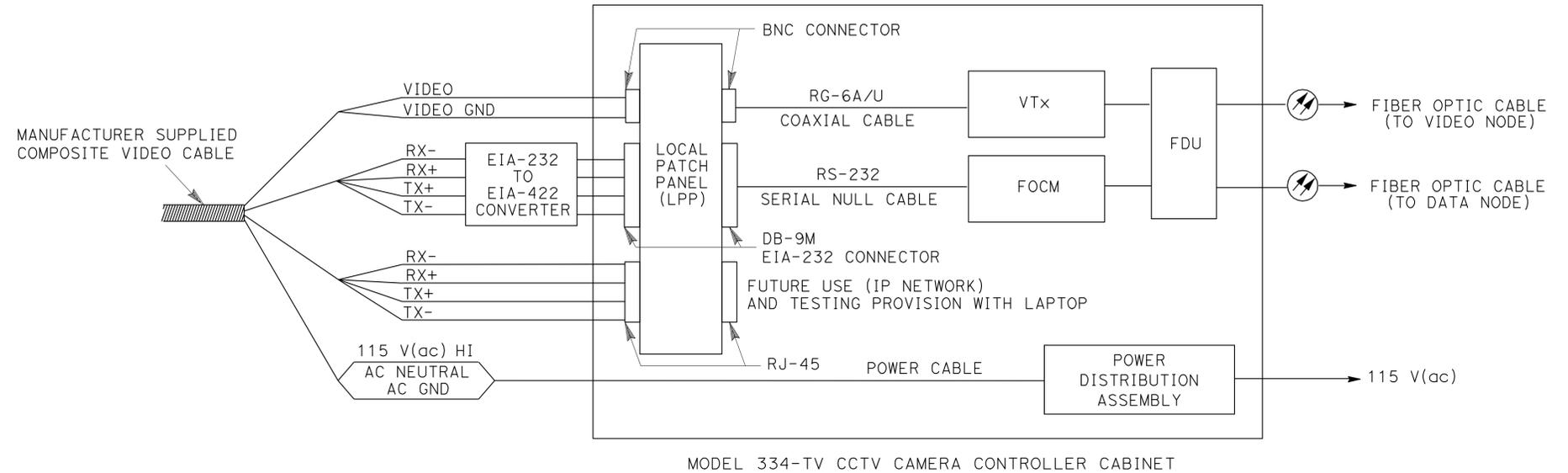
| | |
|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

| |
|----------------------------------|
| REGISTERED PROFESSIONAL ENGINEER |
| CANDACE FUNG |
| No. E16936 |
| Exp. 06/30/13 |
| ELECTRICAL |
| STATE OF CALIFORNIA |

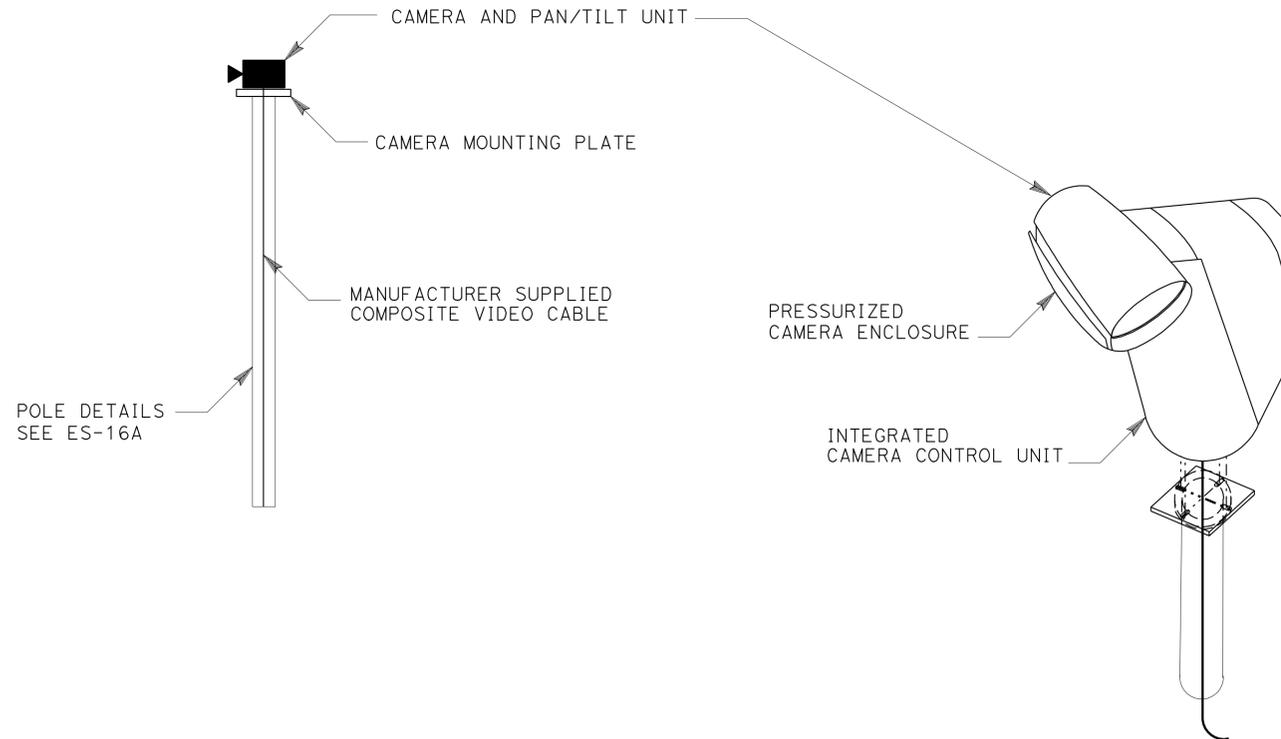
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES: (THIS SHEET ONLY)

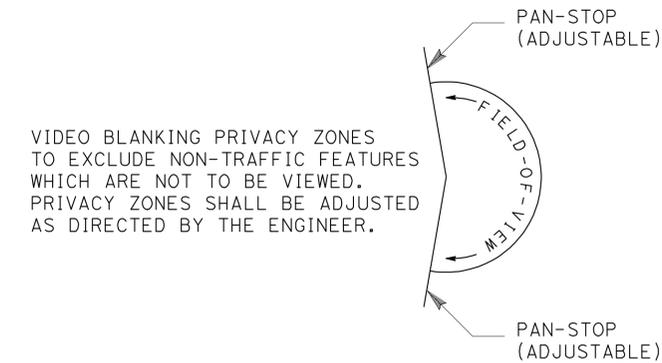
1. THE CONTRACTOR SHALL PROVIDE CABLE LENGTH FROM THE CAMERA ASSEMBLY TO THE LOCAL PATCH PANEL INCLUDING CONNECTORS AS SHOWN IN THIS SHEET.
2. THE CONTRACTOR SHALL PROVIDE ALL CABLES FROM THE LOCAL PATCH PANEL TO THE FIBER OPTIC VIDEO TRANSMITTER, FIBER OPTIC CONTROL MODEM AND PDA.
3. ALL CABLES SHALL BE ALUMINUM SHIELDED TO PREVENT CROSS TALK.
4. IN THE CCTV CAMERA CONTROLLER CABINET, THE NUMBER IDENTIFIES THE SPECIFIC CONDUCTOR TO BE USED FOR THE INDICATED FUNCTION.
5. CONNECT ALL DRAIN WIRES OF SHIELDED-CONDUCTORS TO CABINET GROUND AT THE LOCAL PATCH PANEL.
6. INSTALL CONNECTORS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
7. WATERPROOF ALL CONNECTORS AND CABLES USING WATER-TIGHT GROMMETS, SEALING COMPOUNDS AND TAPE.



WIRING DIAGRAM



CAMERA WITH PAN/TILT UNIT



ADJUSTABLE PAN-STOP DETAIL

**CLOSED CIRCUIT TELEVISION CAMERA
(WIRING DIAGRAM WITH PAN/TILT UNIT DETAILS)**

NO SCALE

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-91

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - OFFICE OF ITS
 Caltrans®
 FUNCTIONAL SUPERVISOR: JACQUELINE TAN
 CALCULATED/DESIGNED BY: JACQUELINE TAN
 CHECKED BY:
 REVISIONS:
 REVISED BY: JACQUELINE TAN
 DATE REVISED:
 DESIGNED BY: JACQUELINE TAN
 CHECKED BY:

LAST REVISION: 00-00-00
 DATE PLOTTED => 29-JUN-2011
 TIME PLOTTED => 17:25

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1151 | 1507 |

| | |
|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

REGISTERED PROFESSIONAL ENGINEER
CANDACE FUNG
 No. E16936
 Exp. 06/30/13
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

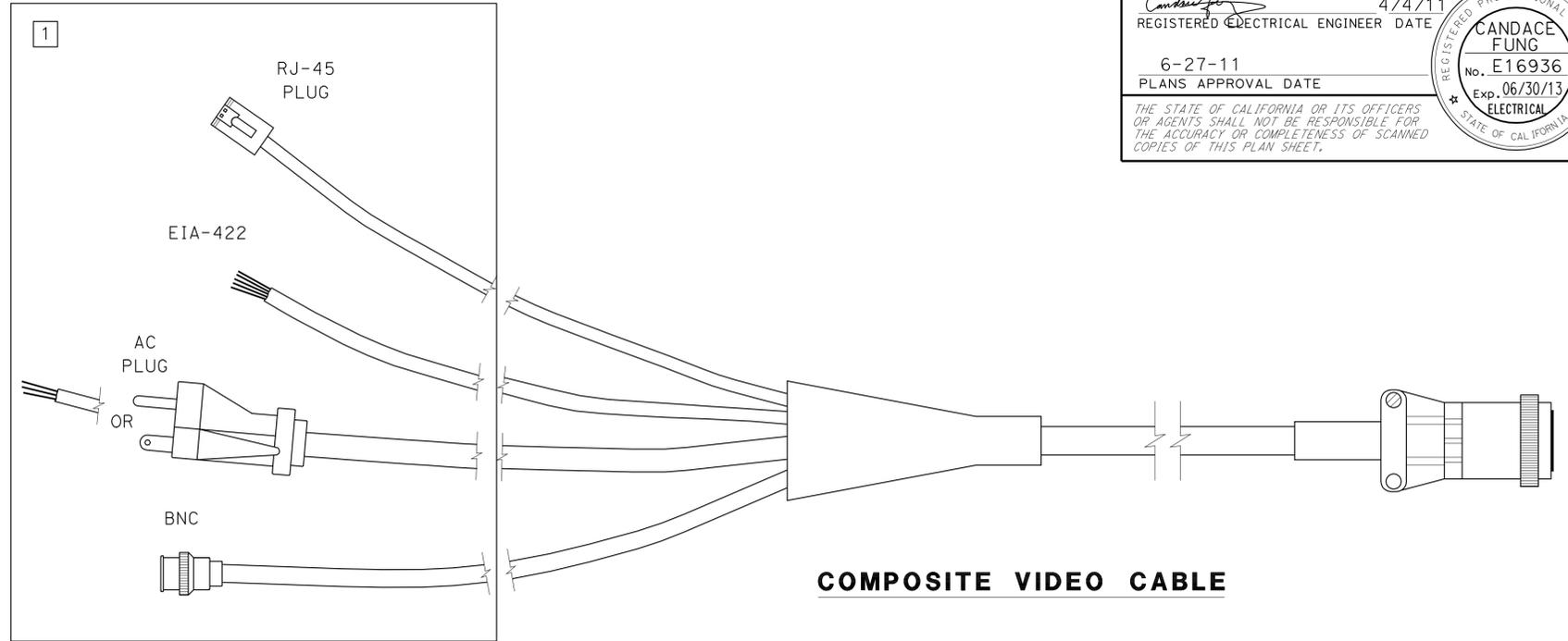
PROJECT NOTES: (THIS SHEET ONLY)

1 CONNECTORIZING SHALL BE DONE BY THE CONTRACTOR AT THE MODEL 334-TV CONTROLLER CABINET.

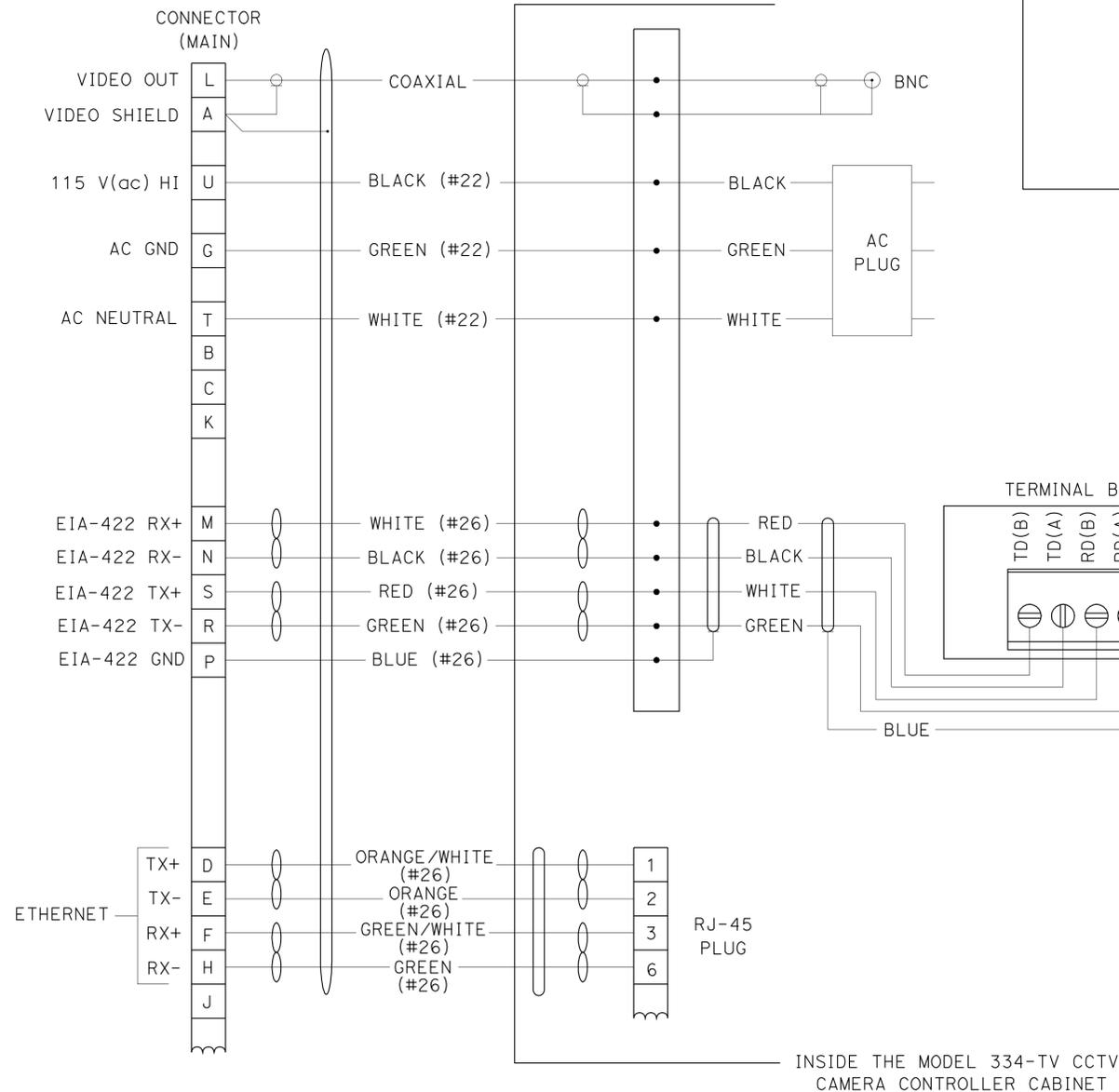
NOTES: (SHEETS E-92 TO E-93)

ALL COMPONENTS AND CONNECTORS MUST MEET NEMA TS 2 REQUIREMENTS.

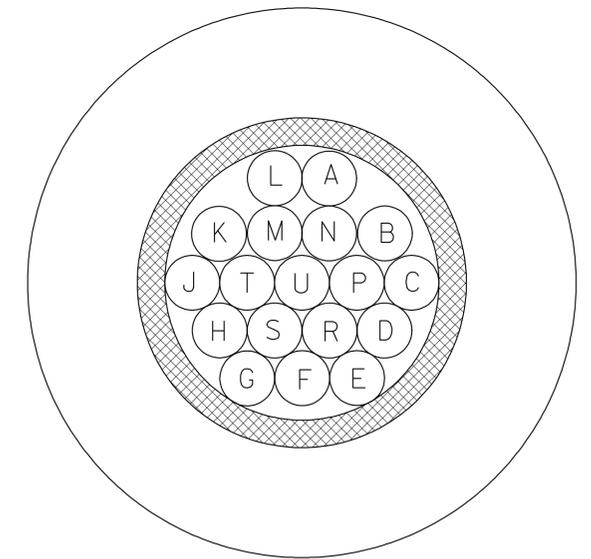
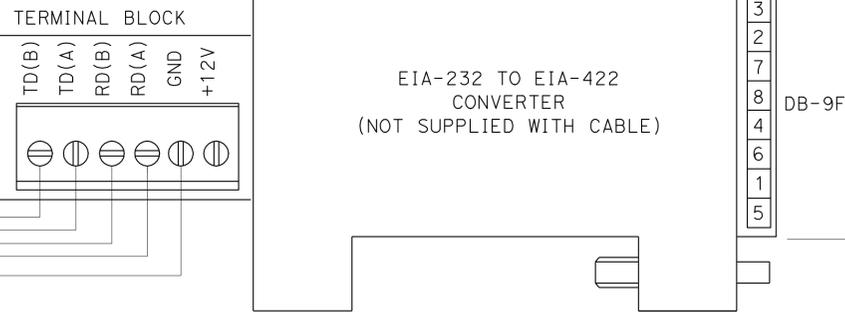
SEE SHEET E-93 FOR DETAIL



COMPOSITE VIDEO CABLE



CABLE SCHEMATIC



COMPOSITE VIDEO CABLE CROSS SECTION

**CLOSED CIRCUIT TELEVISION CAMERA
(COMPOSITE VIDEO CABLE DETAILS)**

NO SCALE

E-92

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

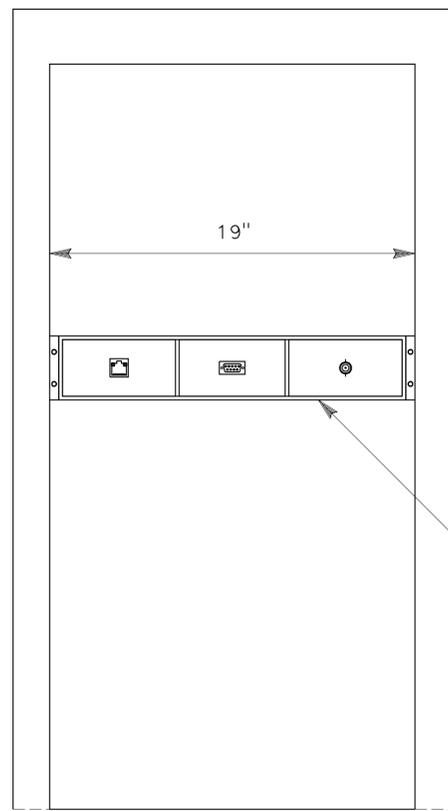
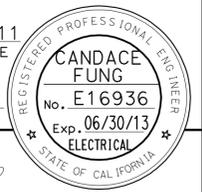
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE TAN
 CALCULATED/DESIGNED BY
 CHECKED BY
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVISED

LAST REVISION | DATE PLOTTED => 29-JUN-2011
 00-00-00 | TIME PLOTTED => 17:25

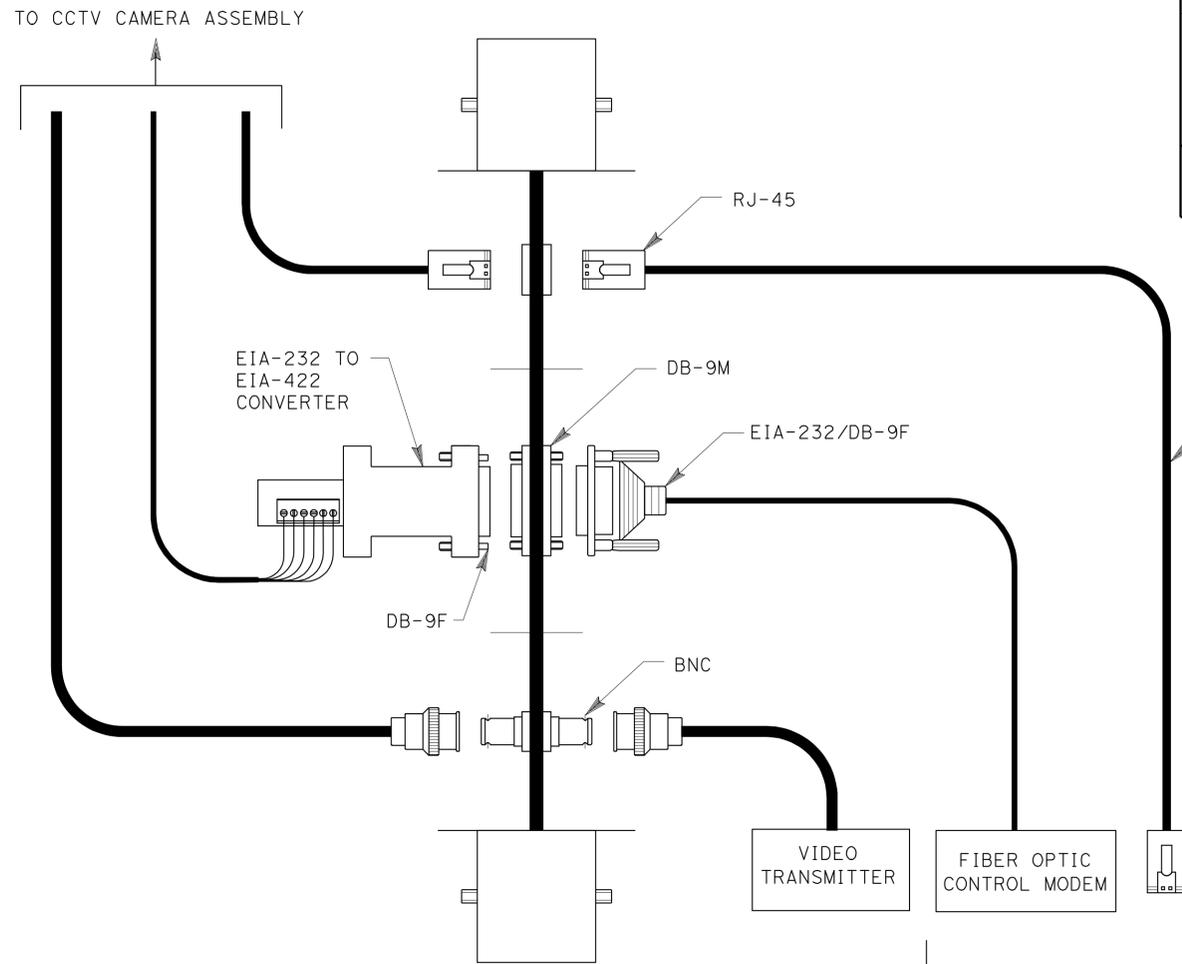
| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1152 | 1507 |

| | |
|--------------------------------|--------|
| <i>Candace Fung</i> | 4/4/11 |
| REGISTERED ELECTRICAL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

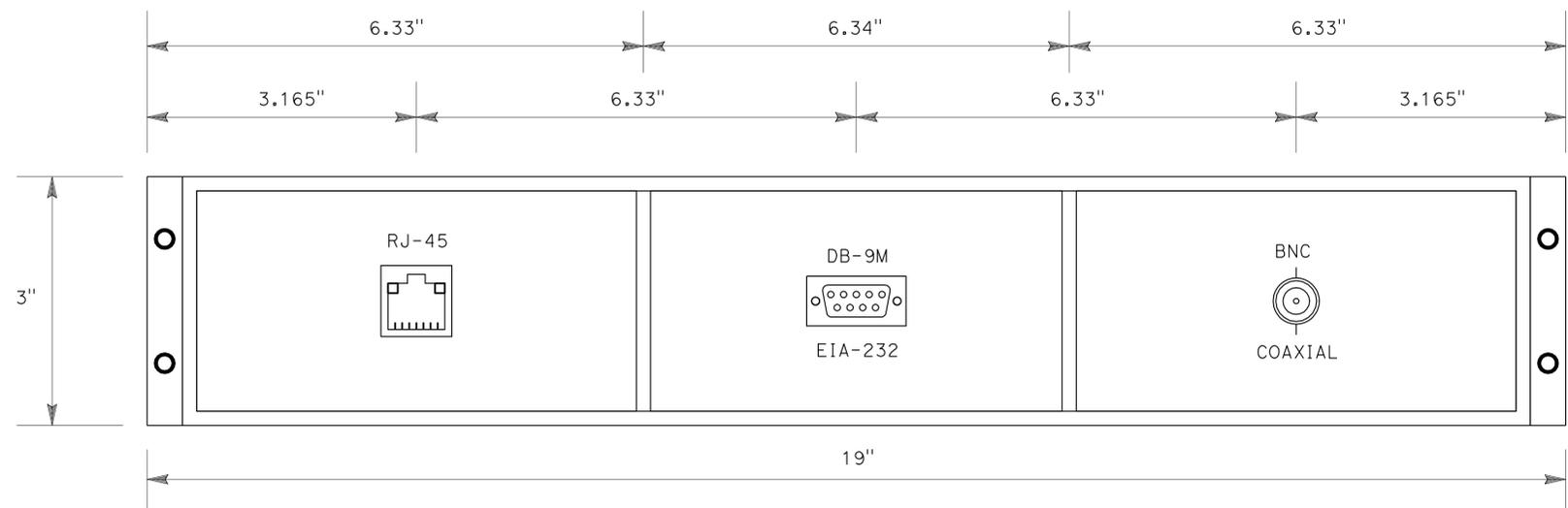
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CABINET DETAIL



**TOP VIEW
LOCAL PATCH CONTROL DETAIL**



LOCAL PATCH PANEL DETAIL

**CLOSED CIRCUIT TELEVISION CAMERA
(LOCAL PATCH PANEL DETAILS)**

NO SCALE

E-93

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

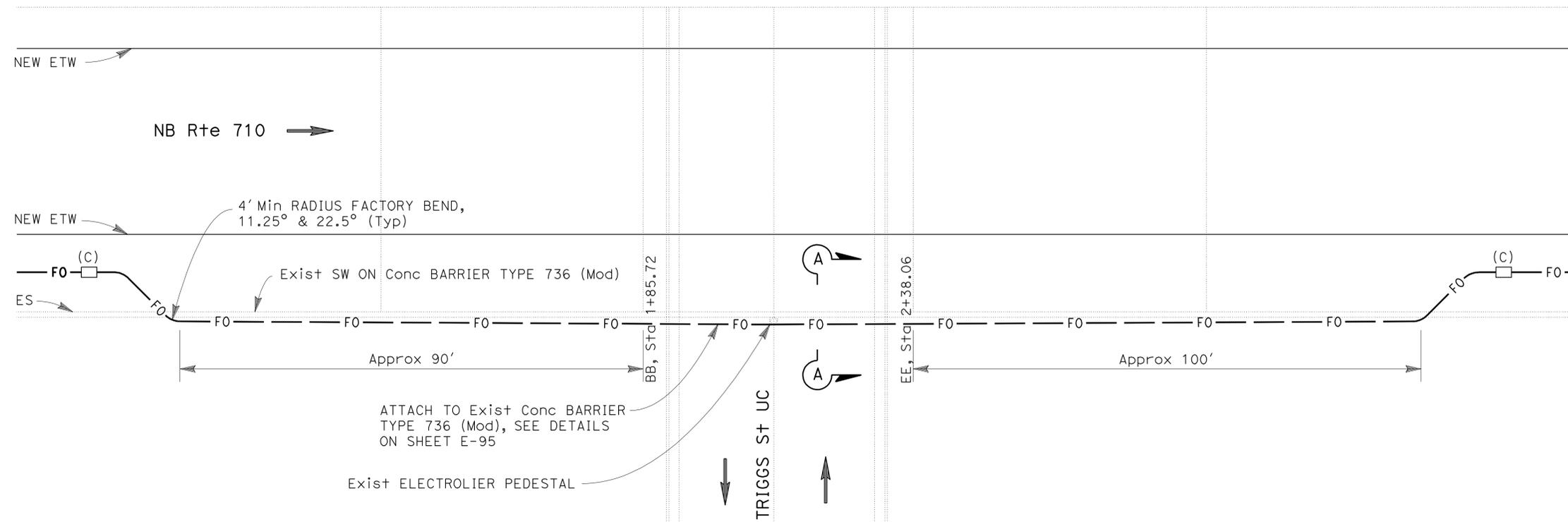
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR: JACQUELINE TAN
 CANDACE FUNG
 JACQUELINE TAN
 REVISOR: JACQUELINE TAN
 DATE: 4/4/11
 PROJECT: UNIT 1885
 SHEET: E-93 OF 1507

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1153 | 1507 |

| | |
|---------------------------|--------|
| <i>Heather Liang</i> | 4/4/11 |
| REGISTERED CIVIL ENGINEER | DATE |
| 6-27-11 | |
| PLANS APPROVAL DATE | |

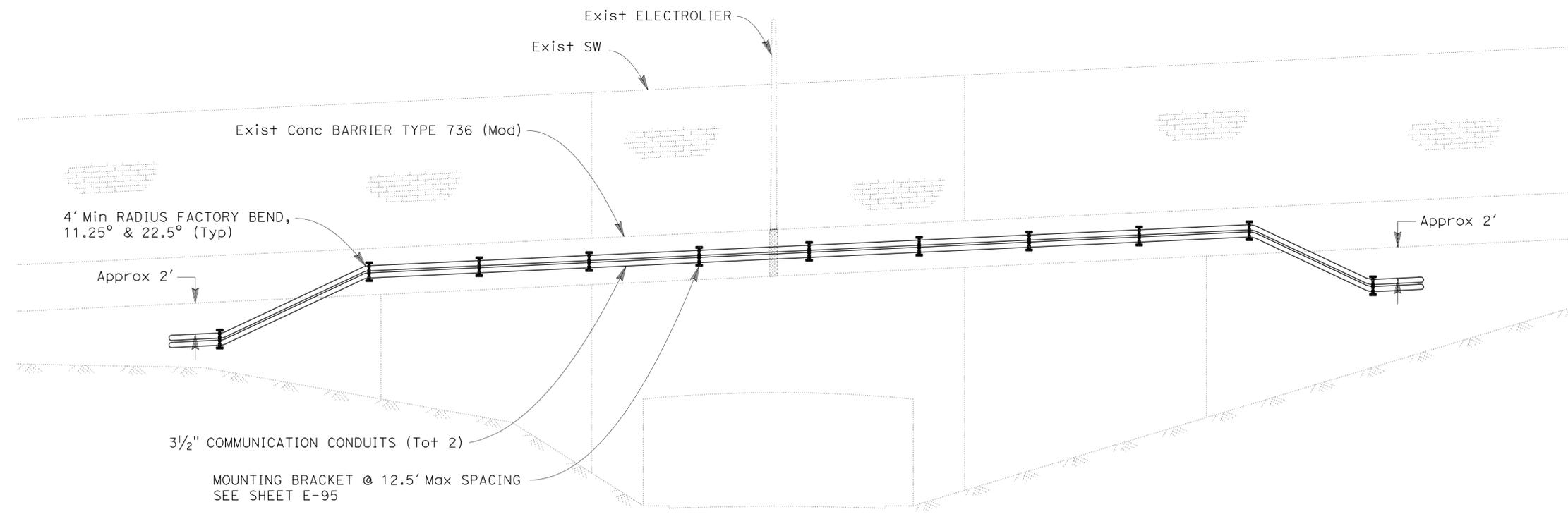
| |
|----------------------------------|
| REGISTERED PROFESSIONAL ENGINEER |
| HEATHER LIANG |
| No. C69374 |
| Exp. 6/30/12 |
| CIVIL |

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



PLAN

NOTE:
SEE SHEET E-95 FOR SECTION A-A.



ELEVATION

**COMMUNICATION SYSTEM
(CONSTRUCTION DETAILS)**

NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
FUNCTIONAL SUPERVISOR
PETER LIN
HEATHER LIANG
PETER LIN
REVISOR
DATE
DESIGNED BY
CHECKED BY

LAST REVISION | DATE PLOTTED => 06-JUL-2011
00-00-00 | TIME PLOTTED => 10:38

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1155 | 1507 |

 4/4/11
 REGISTERED ELECTRICAL ENGINEER DATE
 6-27-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CANDACE FUNG
 No. E16936
 Exp. 06/30/13
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE TAN
 CALCULATED/DESIGNED BY
 CHECKED BY
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVISED

| FIBER | USE | PM | 20.8 | 21.0 | 21.0 | 21.6 | 21.8 | 21.9 | 22.0 |
|-------|-----------------------|----|------|------|------|------|------|------|------|
| 1 | | | X | | | | | | X |
| 2 | MODEM 16 TX (RMS/TMS) | | X | | | X | X | | X |
| 3 | MODEM 16 RX (RMS/TMS) | | X | | | X | X | | X |
| 4 | MODEM 24 TX (RMS/TMS) | | X | | | | | | X |
| 5 | MODEM 24 RX (RMS/TMS) | | X | | | | | | X |
| 6 | MODEM AJ TX (RMS/TMS) | | X | | | | | | X |
| 7 | MODEM AJ RX (RMS/TMS) | | X | | | | | | X |
| 8 | MODEM 23 TX (RMS/TMS) | | X | | | | | | X |
| 9 | MODEM 23 RX (RMS/TMS) | | X | | | | | | X |
| 10 | | | X | | | | | | X |
| 11 | CMS TX | | X | | | | | | X |
| 12 | CMS RX | | X | | | | | | X |
| 13 | | | X | | | | | | X |
| 14 | FOCM TX | | X | | | | | | X |
| 15 | FOCM RX | | X | | | | | | X |
| 16 | CMS TX | | X | | | | | | X |
| 17 | CMS RX | | X | | | | | | X |
| 18 | | | X | | | | | | X |
| 19 | | | X | | | | | | X |
| 20 | | | X | | | | | | X |
| 21 | AVC/WIM | | X | | | | | | X |
| 22 | AVC/WIM | | X | | | | | | X |
| 23 | COUNT STATION | | X | | | | | | X |
| 24 | COUNT STATION | | X | | | | | | X |
| 25 | | | X | | | | | | X |
| 26 | | | X | | | | | | X |
| 27 | MODEM 16 TX (RMS/TMS) | | X | | X | | | | X |
| 28 | MODEM 16 RX (RMS/TMS) | | X | | X | | | | X |
| 29 | MODEM 24 TX (RMS/TMS) | | X | | | | | | X |
| 30 | MODEM 24 RX (RMS/TMS) | | X | | | | | | X |
| 31 | MODEM AJ TX (RMS/TMS) | | X | | | | | | X |
| 32 | MODEM AJ RX (RMS/TMS) | | X | | | | | | X |
| 33 | MODEM 23 TX (RMS/TMS) | | X | | | | | | X |
| 34 | MODEM 23 RX (RMS/TMS) | | X | | | | | | X |
| 35 | | | X | | | | | | X |
| 36 | CMS TX | | X | | | | | | X |
| 37 | CMS RX | | X | | | | | | X |
| 38 | | | X | | | | | | X |
| 39 | FOCM TX | | X | X | | | | X | X |
| 40 | FOCM RX | | X | X | | | | X | X |
| 41 | | | X | | | | | | X |
| 42 | | | X | | | | | | X |
| 43 | | | X | | | | | | X |
| 44 | | | X | | | | | | X |
| 45 | | | X | | | | | | X |
| 46 | | | X | | | | | | X |
| 47 | | | X | | | | | | X |
| 48 | | | X | | | | | | X |

| FIBER | USE | PM | 23.0 | 23.1 | 23.1 | 23.3 | 23.5 | 23.7 | 23.7 |
|-------|-----------------------|----|------|------|------|------|------|------|------|
| 1 | | | X | | | | | | O |
| 2 | MODEM 16 TX (RMS/TMS) | | X | | X | | | | O |
| 3 | MODEM 16 RX (RMS/TMS) | | X | | X | | | | O |
| 4 | MODEM 24 TX (RMS/TMS) | | X | | | | | | O |
| 5 | MODEM 24 RX (RMS/TMS) | | X | | | | | | O |
| 6 | MODEM AJ TX (RMS/TMS) | | X | | | | | | O |
| 7 | MODEM AJ RX (RMS/TMS) | | X | | | | | | O |
| 8 | MODEM 23 TX (RMS/TMS) | | X | | | | | | O |
| 9 | MODEM 23 RX (RMS/TMS) | | X | | | | | | O |
| 10 | | | X | | | | | | O |
| 11 | CMS TX | | X | | | | | | O |
| 12 | CMS RX | | X | | | | | | O |
| 13 | | | X | | | | | | O |
| 14 | FOCM TX | | X | | | | | | O |
| 15 | FOCM RX | | X | | | | | | O |
| 16 | CMS TX | | X | | | | | | O |
| 17 | CMS RX | | X | | | | | | O |
| 18 | | | X | | | | | | O |
| 19 | | | X | | | | | | O |
| 20 | | | X | | | | | | O |
| 21 | AVC/WIM | | X | | | | | | O |
| 22 | AVC/WIM | | X | | | | | | O |
| 23 | COUNT STATION | | X | | | | | | O |
| 24 | COUNT STATION | | X | | | | | | O |
| 25 | | | X | | | | | | O |
| 26 | | | X | | | | | | O |
| 27 | MODEM 16 TX (RMS/TMS) | | X | | | | X | | X |
| 28 | MODEM 16 RX (RMS/TMS) | | X | | | | X | | X |
| 29 | MODEM 24 TX (RMS/TMS) | | X | | | | | | X |
| 30 | MODEM 24 RX (RMS/TMS) | | X | | | | | | X |
| 31 | MODEM AJ TX (RMS/TMS) | | X | | | | | | X |
| 32 | MODEM AJ RX (RMS/TMS) | | X | | | | | | X |
| 33 | MODEM 23 TX (RMS/TMS) | | X | | | X | | X | X |
| 34 | MODEM 23 RX (RMS/TMS) | | X | | | X | | X | X |
| 35 | | | X | | | | | | O |
| 36 | CMS TX | | X | | | | | | O |
| 37 | CMS RX | | X | | | | | | O |
| 38 | | | X | | | | | | O |
| 39 | FOCM TX | | X | X | | | | | X |
| 40 | FOCM RX | | X | X | | | | | X |
| 41 | | | X | | | | | | X |
| 42 | | | X | | | | | | X |
| 43 | | | X | | | | | | O |
| 44 | | | X | | | | | | O |
| 45 | | | X | | | | | | O |
| 46 | | | X | | | | | | O |
| 47 | | | X | | | | | | O |
| 48 | | | X | | | | | | O |

LEGEND: (FOR SHEETS E-96 TO E-97)

X = TERMINATED ACTIVE

O = TERMINATED SPARE (FOR FUTURE CONNECTION)

COMMUNICATION SYSTEM
(FIBER ASSIGNMENT TABLE)
(DATA DISTRIBUTION)
 NO SCALE **E-96**

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1156 | 1507 |

4/4/11
 REGISTERED ELECTRICAL ENGINEER DATE
 6-27-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CANDACE FUNG
 No. E16936
 Exp. 06/30/13
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR
 JACQUELINE TAN
 CALCULATED/DESIGNED BY
 CHECKED BY
 CANDACE FUNG
 JACQUELINE TAN
 REVISED BY
 DATE REVISED

| FIBER | USE | PM | 23.7 | 24.0 | 24.1 | 24.4 | 24.5 | 24.5 | 24.5 | 3.12 | 24.6 | 24.8 | 24.8 | 25.3 | 25.3 | 25.4 | 25.5 | 25.7 | 25.7 | 25.9 | 26.4 | 26.4 | FIBER | |
|-------|-----------------------|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|----|
| 1 | | | O | | | | | | | | | | | | | | | | | | | | X | 1 |
| 2 | MODEM 16 TX (RMS/TMS) | | O | | | | | | | | | | | | | | | | | | | | X | 2 |
| 3 | MODEM 16 RX (RMS/TMS) | | O | | | | | | | | | | | | | | | | | | | | X | 3 |
| 4 | MODEM 24 TX (RMS/TMS) | | O | | | | | | | | | | | | | | | | | | | | X | 4 |
| 5 | MODEM 24 RX (RMS/TMS) | | O | | | | | | | | | | | | | | | | | | | | X | 5 |
| 6 | MODEM AJ TX (RMS/TMS) | | X | X | | | | | | | | | | | | | | | | | | | X | 6 |
| 7 | MODEM AJ RX (RMS/TMS) | | X | X | | | | | | | | | | | | | | | | X | | | X | 7 |
| 8 | MODEM 23 TX (RMS/TMS) | | X | | | X | | | X | | | X | | X | | | | | | | | | X | 8 |
| 9 | MODEM 23 RX (RMS/TMS) | | X | | | X | | | X | | | X | | X | | | | | | | | | X | 9 |
| 10 | | | O | | | | | | | | | | | | | | | | | | | | X | 10 |
| 11 | CMS TX | | O | | | | | | | | | | | | | | | | | | | | X | 11 |
| 12 | CMS RX | | O | | | | | | | | | | | | | | | | | | | | X | 12 |
| 13 | | | O | | | | | | | | | | | | | | | | | | | | X | 13 |
| 14 | FOCM TX | | X | | | | X | | | | | | | | | | | | | | | | X | 14 |
| 15 | FOCM RX | | X | | | | X | | | | | | | | | | | | | | | | X | 15 |
| 16 | CMS TX | | O | | | | | | | | | | | | | | | | | | | | X | 16 |
| 17 | CMS RX | | O | | | | | | | | | | | | | | | | | | | | X | 17 |
| 18 | | | O | | | | | | | | | | | | | | | | | | | | X | 18 |
| 19 | | | O | | | | | | | | | | | | | | | | | | | | X | 19 |
| 20 | | | O | | | | | | | | | | | | | | | | | | | | X | 20 |
| 21 | AVC/WIM | | O | | | | | | | | | | | | | O | | | | | | | X | 21 |
| 22 | AVC/WIM | | O | | | | | | | | | | | | | O | | | | | | | X | 22 |
| 23 | COUNT STATION | | O | | | | | | | | | | | | | | | | | | | | X | 23 |
| 24 | COUNT STATION | | O | | | | | | | | | | | | | | | | | | | | X | 24 |
| 25 | | | X | | | | | | | | | | | | | | | | | | | | X | 25 |
| 26 | | | X | | | | | | | | | | | | | | | | | | | | X | 26 |
| 27 | MODEM 16 TX (RMS/TMS) | | O | | | | | | | | | | | | | | | | | | | | X | 27 |
| 28 | MODEM 16 RX (RMS/TMS) | | O | | | | | | | | | | | | | | | | | | | | X | 28 |
| 29 | MODEM 24 TX (RMS/TMS) | | O | | | | | | | | | | | | | | | | | | | | X | 29 |
| 30 | MODEM 24 RX (RMS/TMS) | | O | | | | | | | | | | | | | | | | | | | | X | 30 |
| 31 | MODEM AJ TX (RMS/TMS) | | O | | | | | | | | | | | | | | | | | | | X | X | 31 |
| 32 | MODEM AJ RX (RMS/TMS) | | O | | | | | | | | | | | | | | | | | | | X | X | 32 |
| 33 | MODEM 23 TX (RMS/TMS) | | X | | X | | | X | | | | X | | X | | | | | | | | | X | 33 |
| 34 | MODEM 23 RX (RMS/TMS) | | X | | X | | | X | | | | X | | X | | | | | | | | | X | 34 |
| 35 | | | O | | | | | | | | | | | | | | | | | | | | X | 35 |
| 36 | CMS TX | | X | | | | | | | | | | | | | | X | | | | | | X | 36 |
| 37 | CMS RX | | X | | | | | | | | | | | | | | X | | | | | | X | 37 |
| 38 | | | O | | | | | | | | | | | | | | | | | | | | X | 38 |
| 39 | FOCM TX | | O | | | | | | | | | | | | | | | | | | | | X | 39 |
| 40 | FOCM RX | | O | | | | | | | | | | | | | | | | | | | | X | 40 |
| 41 | | | O | | | | | | | | | | | | | | | | | | | | X | 41 |
| 42 | | | O | | | | | | | | | | | | | | | | | | | | X | 42 |
| 43 | | | O | | | | | | | | | | | | | | | | | | | | X | 43 |
| 44 | | | O | | | | | | | | | | | | | | | | | | | | X | 44 |
| 45 | | | O | | | | | | | | | | | | | | | | | | | | X | 45 |
| 46 | | | O | | | | | | | | | | | | | | | | | | | | X | 46 |
| 47 | | | O | | | | | | | | | | | | | | | | | | | | X | 47 |
| 48 | | | O | | | | | | | | | | | | | | | | | | | | X | 48 |

LEGEND: (THIS SHEET ONLY)

C = TERMINATE TO NEW FIBER DISTRIBUTION UNIT

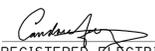
COMMUNICATION SYSTEM
(FIBER ASSIGNMENT TABLE)
(DATA DISTRIBUTION)

NO SCALE

E-97

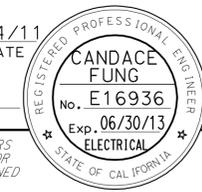
FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
 THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1157 | 1507 |


 4/4/11
 REGISTERED ELECTRICAL ENGINEER DATE

6-27-11
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



| FIBER | USE | VIDEO NODE LB237 | | | | FIBER |
|-------|-----------------------|------------------|-------------------|--------------------|--------------|-------|
| | | SPLICE VAULT | CCTV CAMERA LB210 | CCTV CAMERA LB 219 | SPLICE VAULT | |
| 1 | CCTV CAMERA LB160 (E) | X | | | X | 1 |
| 2 | CCTV CAMERA LB170 (E) | X | | | X | 2 |
| 3 | CCTV CAMERA LB185 (E) | X | | | X | 3 |
| 4 | CCTV CAMERA LB191(E) | X | | | X | 4 |
| 5 | CCTV CAMERA LB198 (E) | X | | | X | 5 |
| 6 | CCTV CAMERA LB210 | X | C-VRx | | X | 6 |
| 7 | CCTV CAMERA LB219 | X | | C-VRx | X | 7 |
| 8 | SPARE | X | | | X | 8 |
| 9 | SPARE | X | | | X | 9 |
| 10 | SPARE | X | | | X | 10 |
| 11 | SPARE | X | | | X | 11 |
| 12 | SPARE | X | | | X | 12 |
| 13 | SPARE | X | | | X | 13 |
| 14 | SPARE | X | | | X | 14 |
| 15 | SPARE | X | | | X | 15 |
| 16 | SPARE | X | | | X | 16 |
| 17 | SPARE | X | | | X | 17 |
| 18 | SPARE | X | | | X | 18 |
| 19 | SPARE | X | | | X | 19 |
| 20 | SPARE | X | | | X | 20 |
| 21 | SPARE | X | | | X | 21 |
| 22 | SPARE | X | | | X | 22 |
| 23 | SPARE | X | | | X | 23 |
| 24 | SPARE | X | | | X | 24 |
| . | SPARE | X | | | X | . |
| 48 | SPARE | X | | | X | 48 |

| FIBER | USE | VIDEO NODE LB237 | | | | | | FIBER |
|-------|-----------------------|------------------|-------------------|-------------------|-------------------|-------------------|--------------|-------|
| | | SPLICE VAULT | CCTV CAMERA LB231 | CCTV CAMERA LB237 | CCTV CAMERA LB245 | CCTV CAMERA LB257 | SPLICE VAULT | |
| 1 | CCTV CAMERA LB245 | X | | C-VTx | C-VRx | | X | 1 |
| 2 | CCTV CAMERA LB257 | X | | C-VTx | | C-VRx | X | 2 |
| 3 | SPARE | X | | | | | X | 3 |
| 4 | SPARE | X | | | | | X | 4 |
| 5 | CCTV CAMERA LB198 (E) | X | | | | | X | 5 |
| 6 | CCTV CAMERA LB210 | X | | C-VTx | | | X | 6 |
| 7 | CCTV CAMERA LB219 | X | | C-VTx | | | X | 7 |
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| 9 | CCTV CAMERA LB231 | X | C-VRx | C-VTx | | | X | 9 |
| 10 | SPARE | X | | | | | X | 10 |
| 11 | SPARE | X | | | | | X | 11 |
| 12 | SPARE | X | | | | | X | 12 |
| 13 | SPARE | X | | | | | X | 13 |
| 14 | SPARE | X | | | | | X | 14 |
| 15 | SPARE | X | | | | | X | 15 |
| 16 | SPARE | X | | | | | X | 16 |
| 17 | SPARE | X | | | | | X | 17 |
| 18 | SPARE | X | | | | | X | 18 |
| 19 | SPARE | X | | | | | X | 19 |
| 20 | SPARE | X | | | | | X | 20 |
| 21 | SPARE | X | | | | | X | 21 |
| 22 | SPARE | X | | | | | X | 22 |
| 23 | SPARE | X | | | | | X | 23 |
| 24 | SPARE | X | | | | | X | 24 |
| . | SPARE | X | | | | | X | . |
| 48 | SPARE | X | | | | | X | 48 |

LEGEND: (THIS SHEET ONLY)

- C CONNECT FIBER TO FIBER DISTRIBUTION UNIT AT VIDEO NODE (LOCATION LB237)
- X TERMINATED ACTIVE
- C-VRx CONNECT ASSIGNED FIBER TO VIDEO RECEIVER AT VIDEO NODE (LOCATION LB237)
- C-VTx CONNECT ASSIGNED FIBER TO VIDEO TRANSMITTER AT EACH CCTV CAMERA LOCATION
- (E) EXISTING

FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-49.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

**COMMUNICATION SYSTEM
(FIBER ASSIGNMENT TABLE)
(VIDEO DISTRIBUTION)**

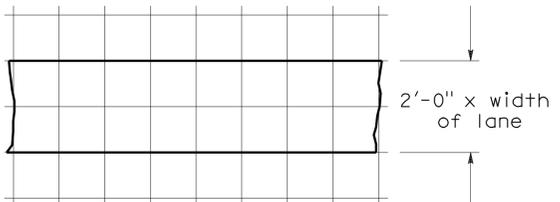
NO SCALE

E-98

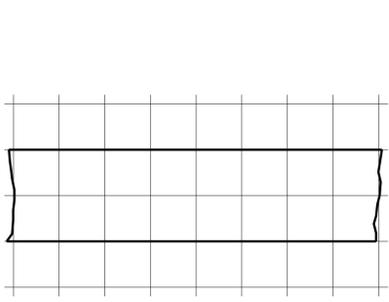
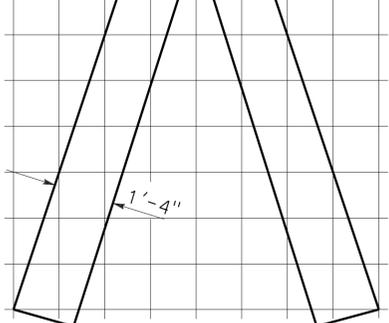
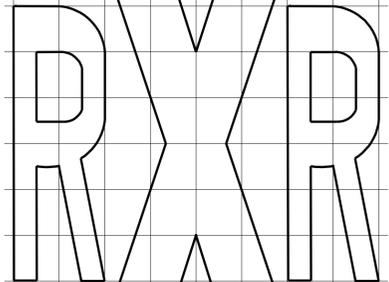
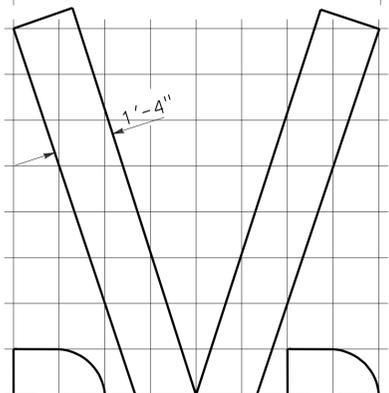
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS
 FUNCTIONAL SUPERVISOR JACQUELINE TAN
 CALCULATED/DESIGNED BY CHECKED BY
 CANDACE FUNG JACQUELINE TAN
 REVISED BY DATE REVISED

LAST REVISION DATE PLOTTED => 29-JUN-2011 17:26
 00-00-00 TIME PLOTTED => 17:26

To accompany plans dated 6-27-11



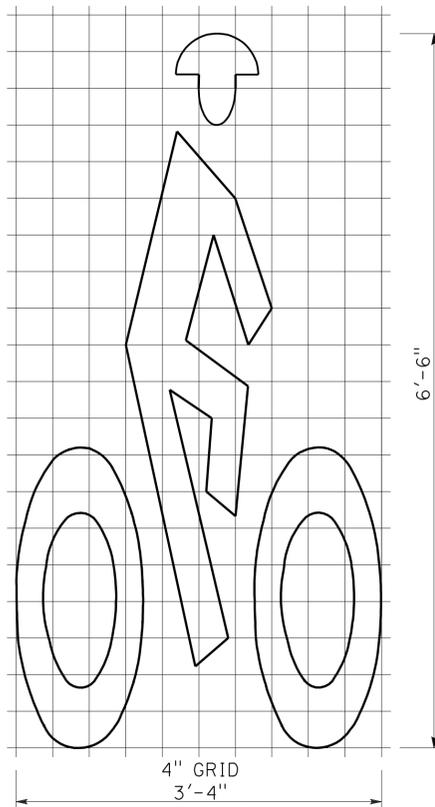
8'-0"



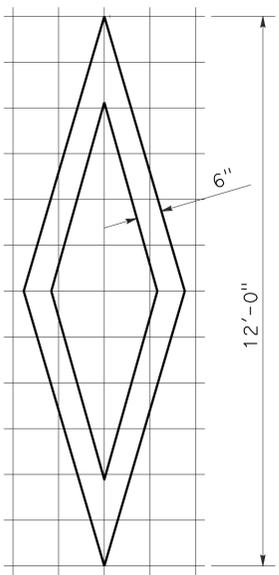
1'-0" GRID
A=70 sq ft *

RAILROAD CROSSING SYMBOL

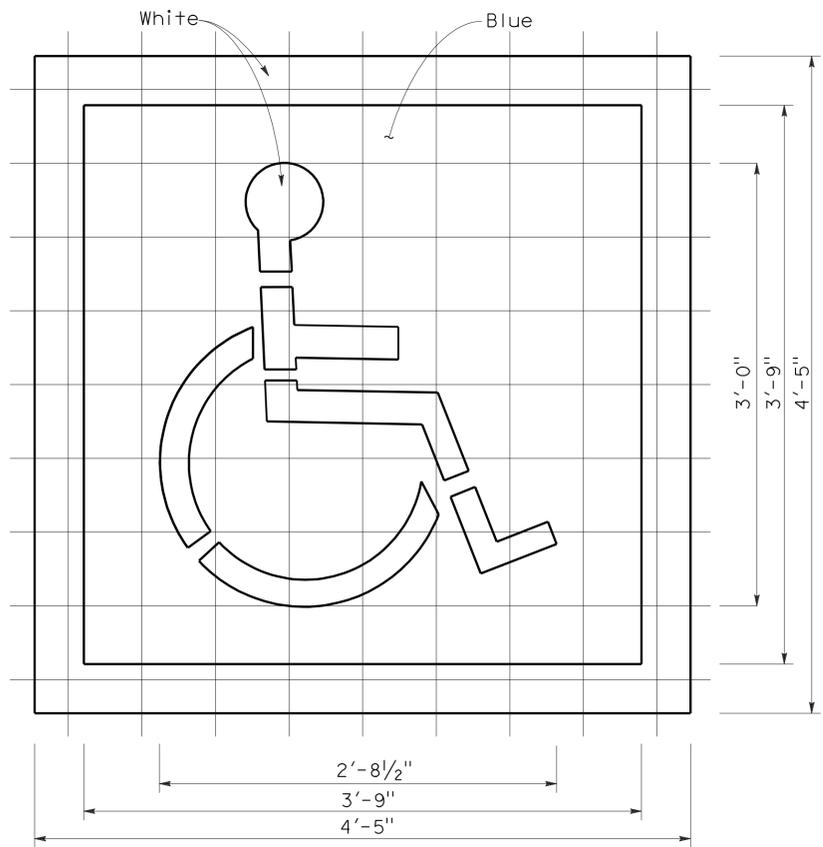
*70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



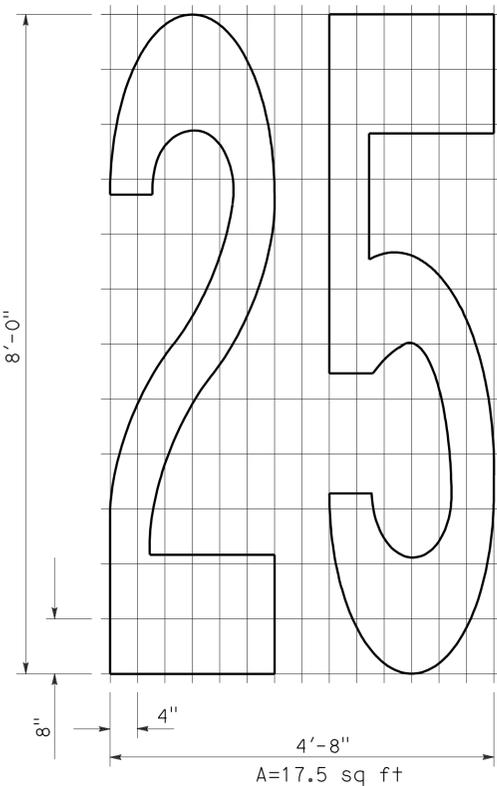
BIKE LANE SYMBOL
A=7 sq ft



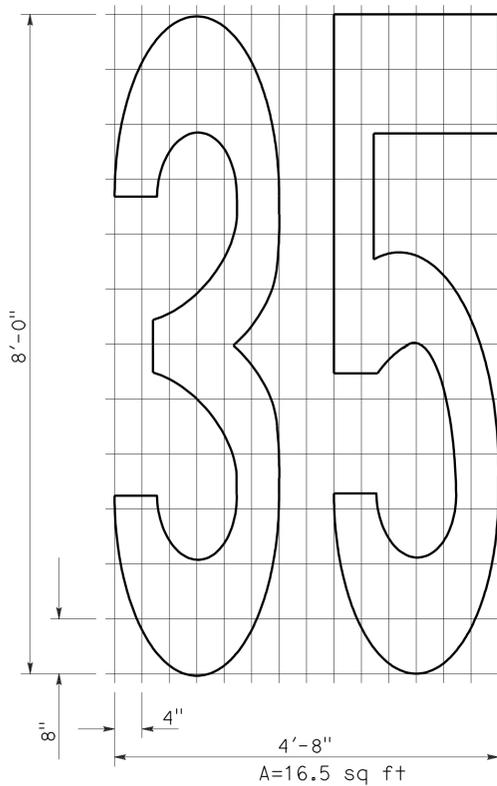
DIAMOND SYMBOL
A=11 sq ft



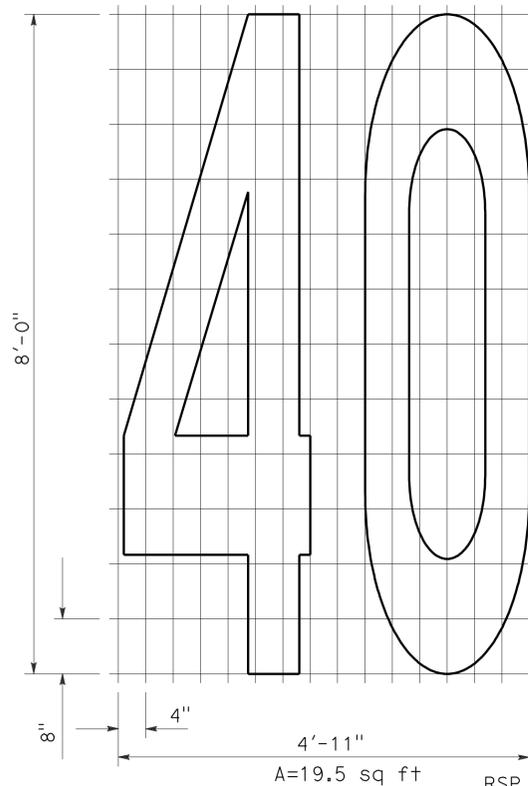
INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING
6" GRID
A (White) = 9 sq ft
A (Blue) = 14 sq ft



A=17.5 sq ft

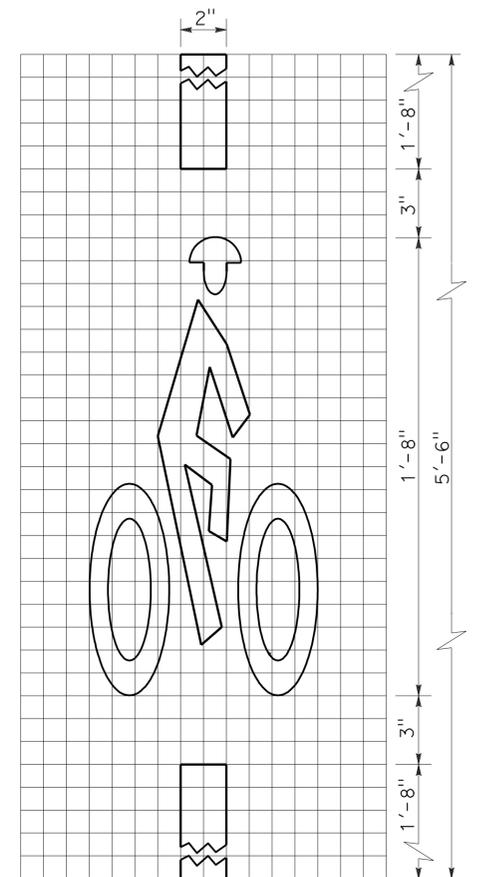


A=16.5 sq ft



A=19.5 sq ft

NUMERALS



1" GRID
10"

BICYCLE LOOP DETECTOR SYMBOL
A=2 sq ft

NOTE:
1. Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

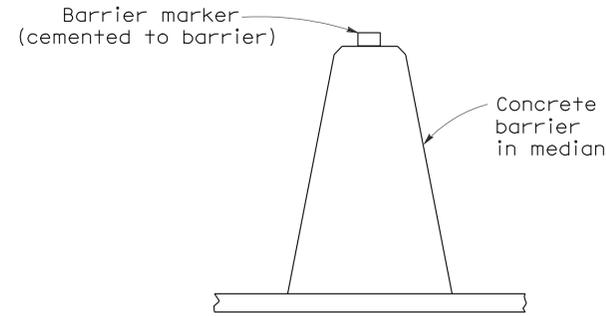
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1160 | 1507 |

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

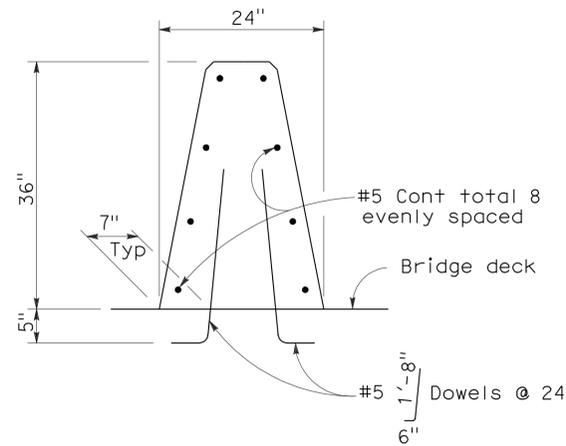
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-27-11



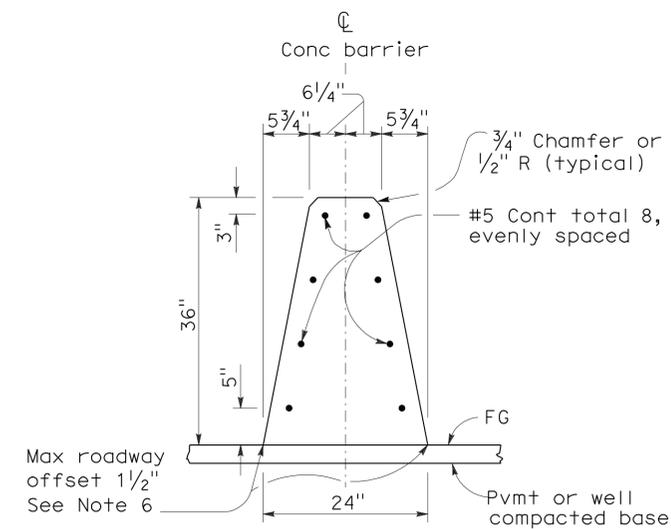
CONCRETE BARRIER TYPE 60 DELINEATION

See Notes 7 and 8



CONCRETE BARRIER TYPE 60A

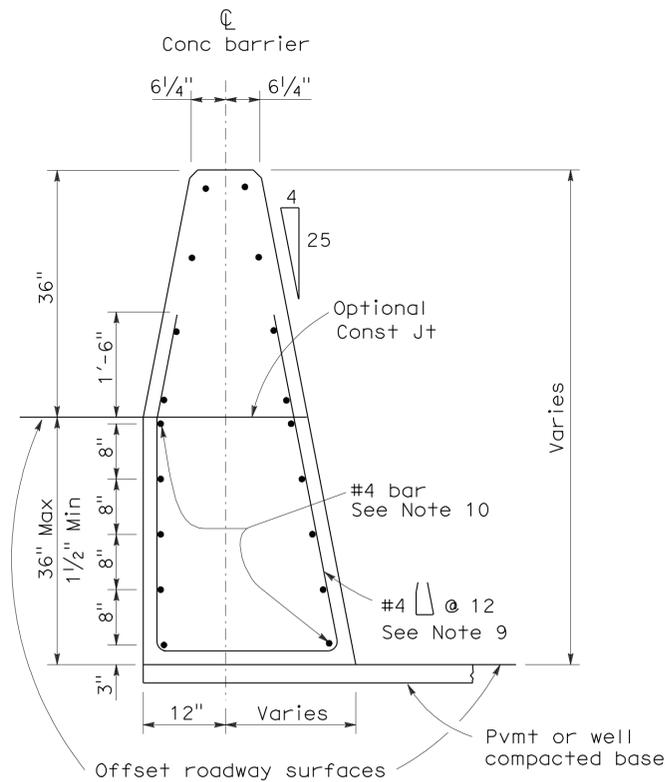
Details similar to Type 60 except as noted.



CONCRETE BARRIER TYPE 60

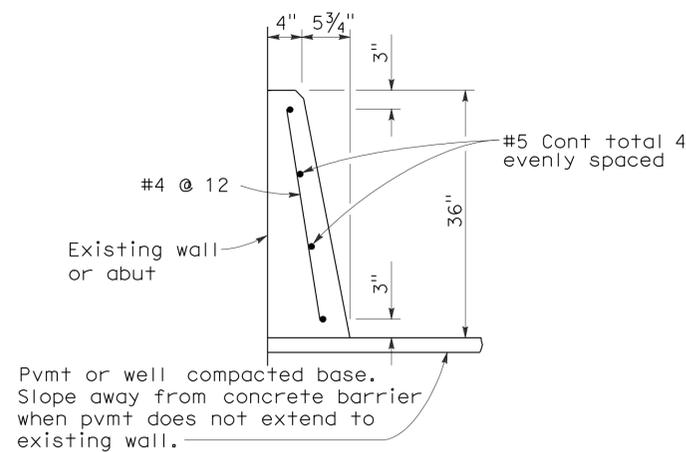
NOTES:

- See Standard Plan A76B for details of Concrete Barrier Type 60 end anchors, connection to structures and transitions to Concrete Barrier Type 50 and Concrete Barrier Type 60S.
- See Standard Plan A76C for Concrete Barrier Type 60 transitions at bridge column and sign pedestals.
- Where glare screen is required on Concrete Barrier Type 60, use Concrete Barrier Type 60G.
- Where the concrete barrier is added to the face of existing concrete structure, match existing weep holes.
- Expansion joints in concrete barrier shall be located at all deck, pavement and principal wall joints. Expansion joint filler material shall be the same size as joint or 1/2" minimum.
- Where roadway offset is greater than 1 1/2", see Concrete Barrier Type 60C.
- Barrier delineation to be used when required by the Special Provisions.
- Spacing of barrier markers to match spacing of raised pavement markers on the adjacent median edgeline pavement delineation.
- Reinforcing stirrup not required for roadway offsets less than 1'-0".
- For roadway surfaces offset greater than 1 1/2" to 3", no rebars required. For roadway surfaces offset greater than 3" to 8" use two #4 rebars at 3" above the lower roadway surface. For roadway surfaces offset greater than 8" to 12", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at 8" above the lower roadway surface. For roadway surfaces offset greater than 12" to 36", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at every 8" increment vertical spacing above the first two #4 rebars.



CONCRETE BARRIER TYPE 60C

Details similar to Type 60 except as noted. Concrete barrier end anchor when necessary. 36" roadway surfaces offset shown.



CONCRETE BARRIER TYPE 60D

CONCRETE BARRIER TYPE 60

NO SCALE

RSP A76A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A76A DATED MAY 1, 2006 - PAGE 29 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A76A

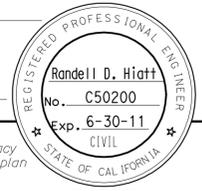
2006 REVISED STANDARD PLAN RSP A76A

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1161 | 1507 |

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

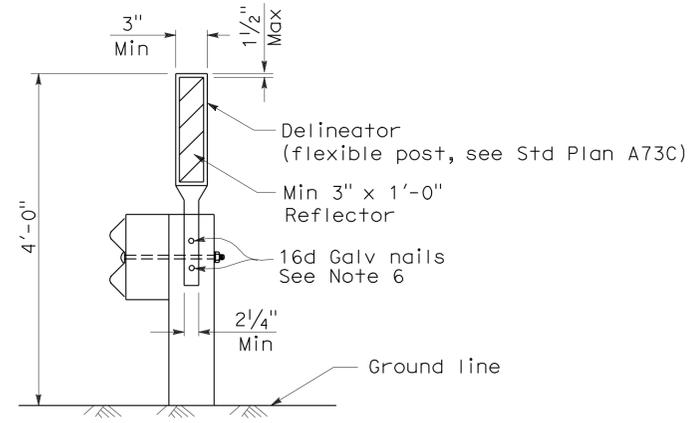
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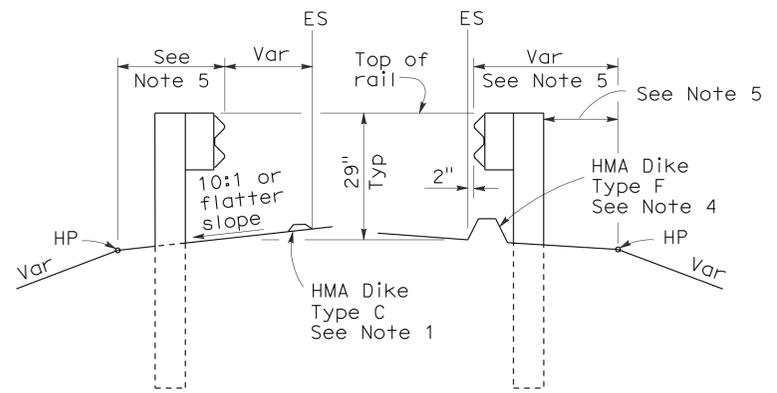
To accompany plans dated 6-27-11

NOTES:

1. When necessary to place dike in front of face of guard railing, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plans A77C3.
3. Guard railing delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under guard railing, the maximum height of the dike or curb shall be 4". Mountable dike should not be used. For dike and curb details, see Standard Plans A87A and A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



GUARD RAILING DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**

NO SCALE

RSP A77C4 DATED MAY 20, 2011 SUPERSEDES RSP A77C4 DATED JUNE 6, 2008 AND STANDARD PLAN A77C4 DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C4

2006 REVISED STANDARD PLAN RSP A77C4

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1163 | 1507 |

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

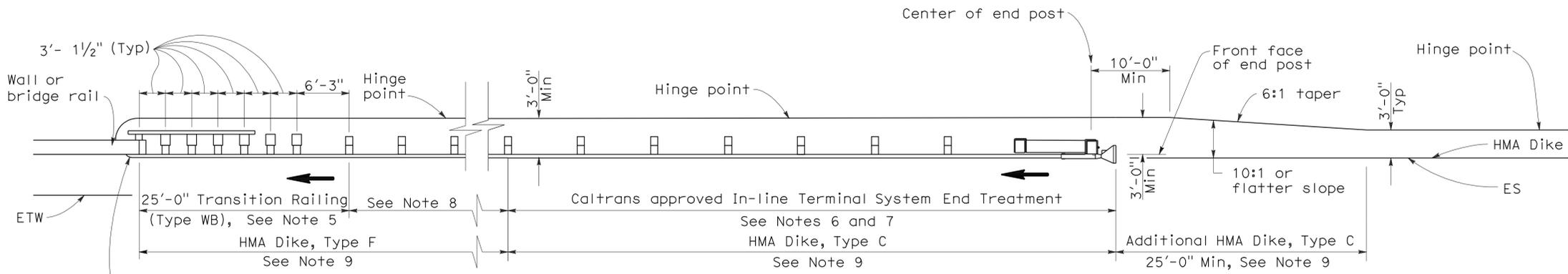
June 6, 2008
PLANS APPROVAL DATE

Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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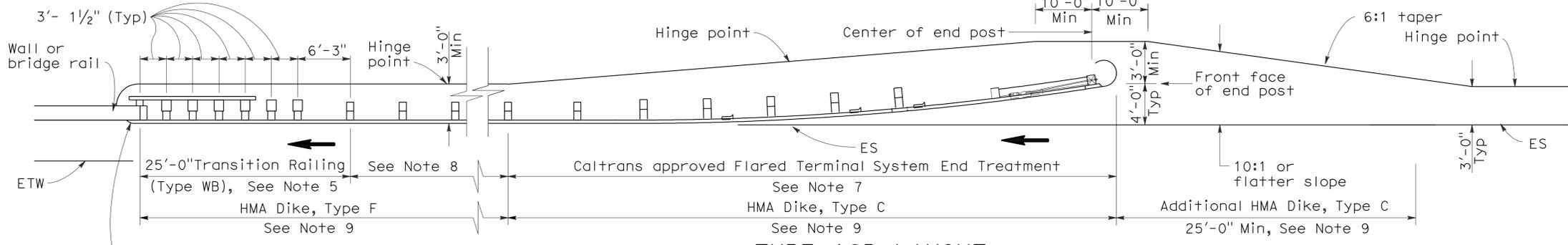
To accompany plans dated 6-27-11

2006 REVISED STANDARD PLAN RSP A77F1



TYPE 12A LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10



TYPE 12B LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For Transition Railing (Type WB) details for Types 12A and 12B Layouts, see Standard Plan A77J4.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment.

- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12A or Type 12B Layouts are typically used:
 - To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
 - To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
- See Revised Standard Plan RSP A77F3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.

- For additional details of typical connections to bridge rail, see Connection Detail AA on Revised Standard Plans RSP A77J1 and RSP A77J2 and Connection Detail FF on Standard Plans A77K1 and A77K2.
- For additional details of a typical connection to walls or abutments, see Standard Plan A77J3.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
STRUCTURE APPROACH**

NO SCALE

RSP A77F1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F1
DATED MAY 1, 2006 - PAGE 54 OF THE STANDARD PLANS BOOK DATED MAY 2006.

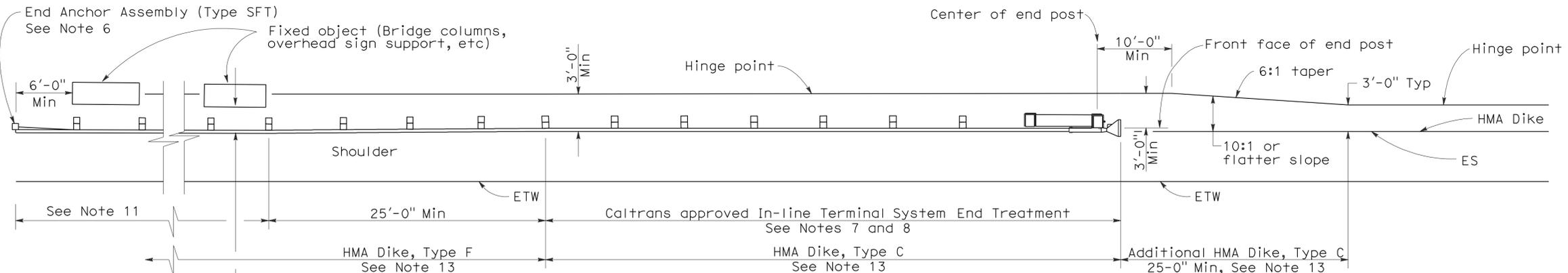
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1164 | 1507 |

RANDALL D. HIATT
 REGISTERED CIVIL ENGINEER
 No. C50200
 Exp. 6-30-09
 CIVIL
 STATE OF CALIFORNIA

June 6, 2008
 PLANS APPROVAL DATE

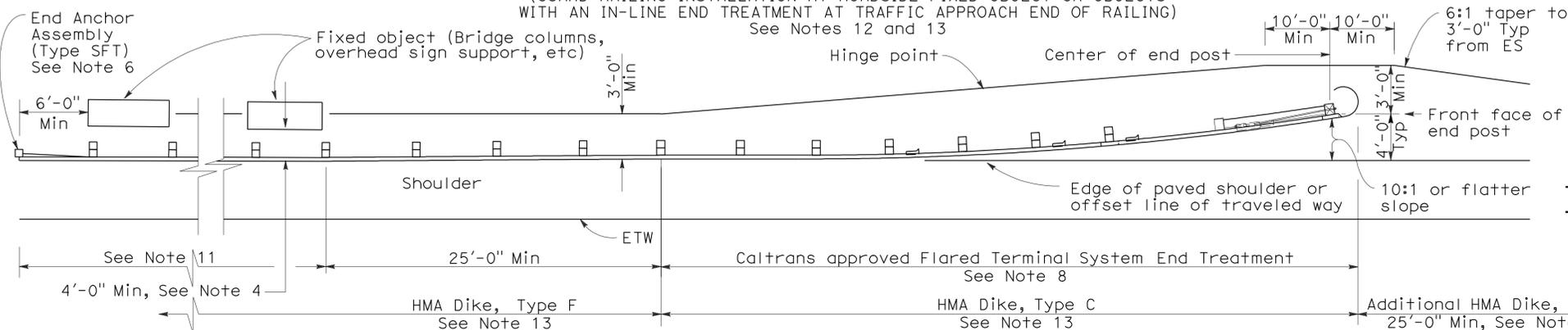
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To accompany plans dated 6-27-11



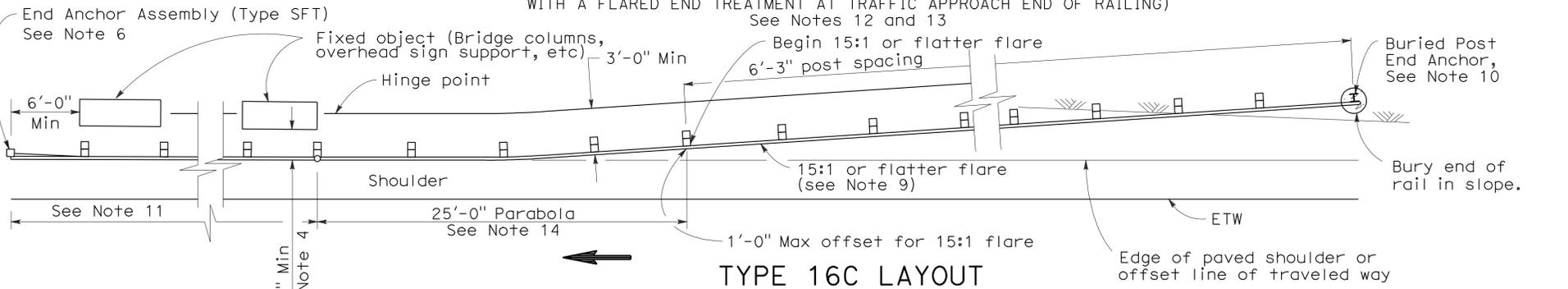
TYPE 16A LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



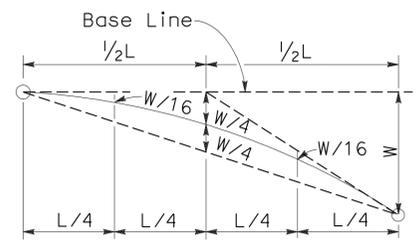
TYPE 16B LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13

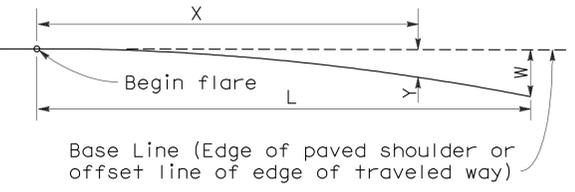


TYPE 16C LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



TYPICAL PARABOLIC LAYOUT

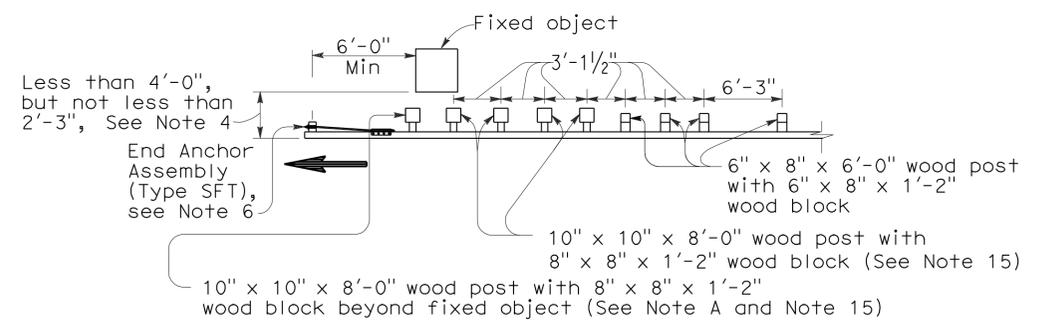


Base Line (Edge of paved shoulder or offset line of edge of traveled way)
 $Y = \frac{WX^2}{L^2}$
 Y = Offset from base line
 W = Maximum offset
 X = Distance along base line
 L = Length of flare

PARABOLIC FLARE OFFSETS

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by \rightarrow .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- The 15:1 or flatter flare used with Type 16C Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the Buried Post End Anchor used with Type 16C Layout, see Standard Plan A77I2.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
- Layout Types 16A, 16B or 16C are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for only one direction of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed objects.

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Types 16A, 16B or 16C Layouts where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE
RSP A77G3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G3 DATED MAY 1, 2006 - PAGE 61 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G3

2006 REVISED STANDARD PLAN RSP A77G3

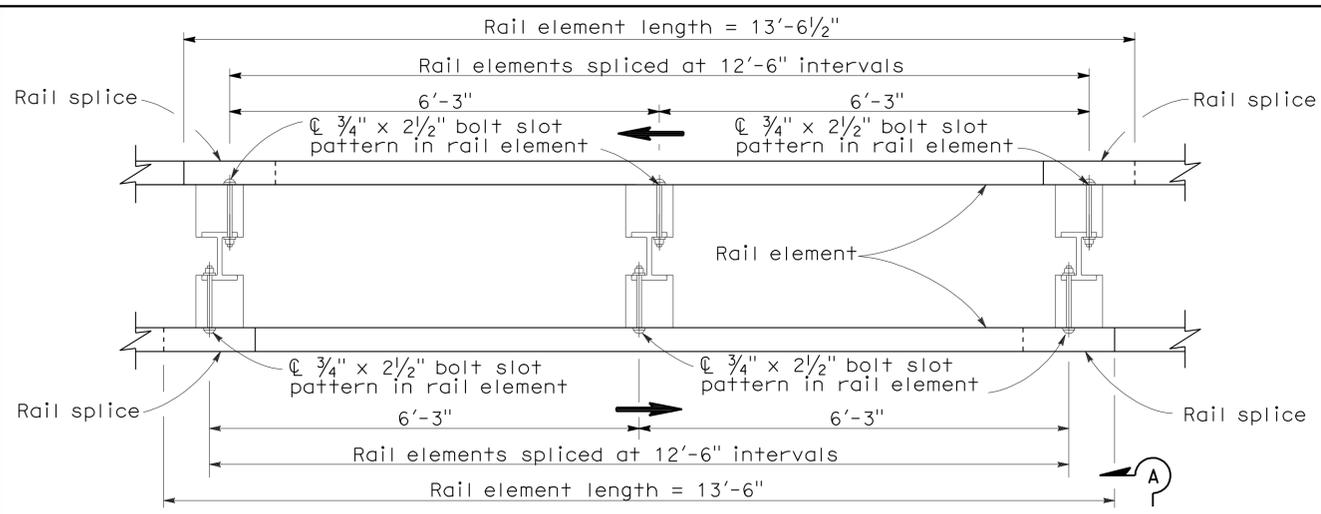
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1165 | 1507 |

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

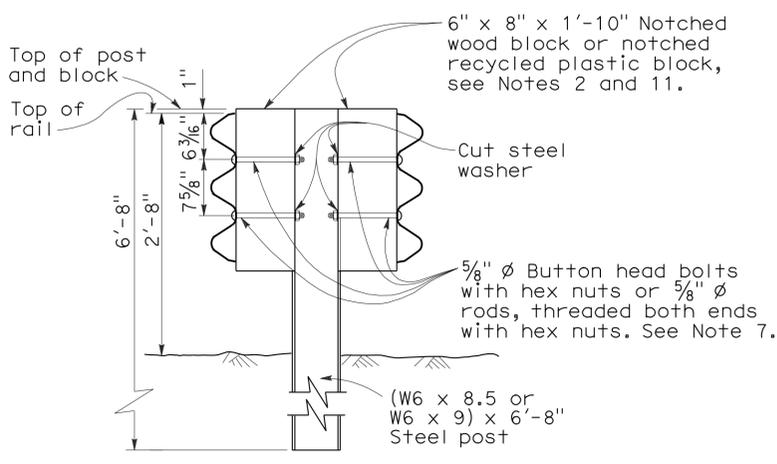
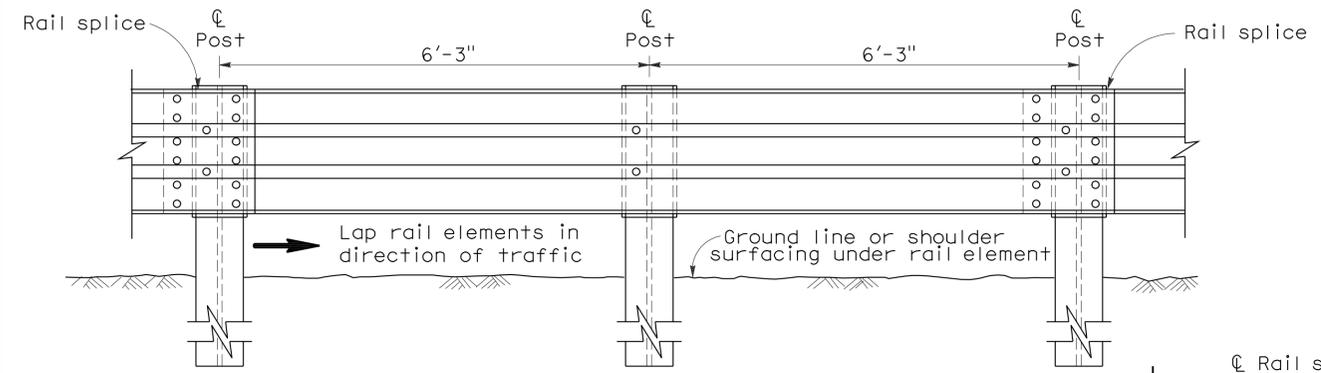
June 6, 2008
PLANS APPROVAL DATE

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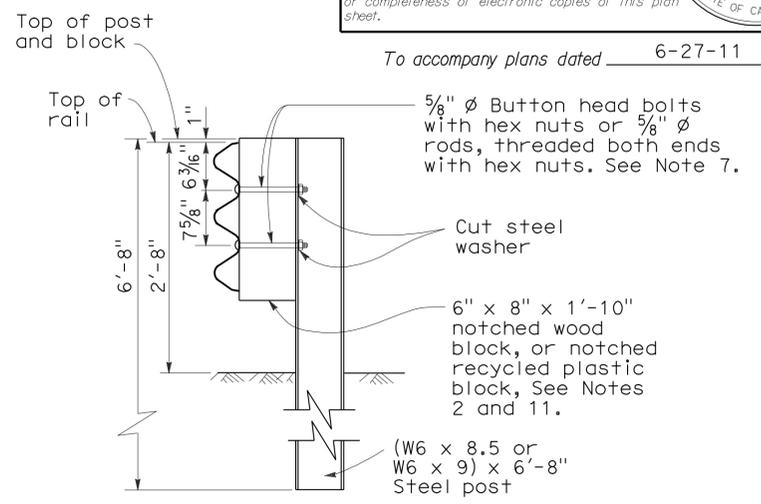
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA



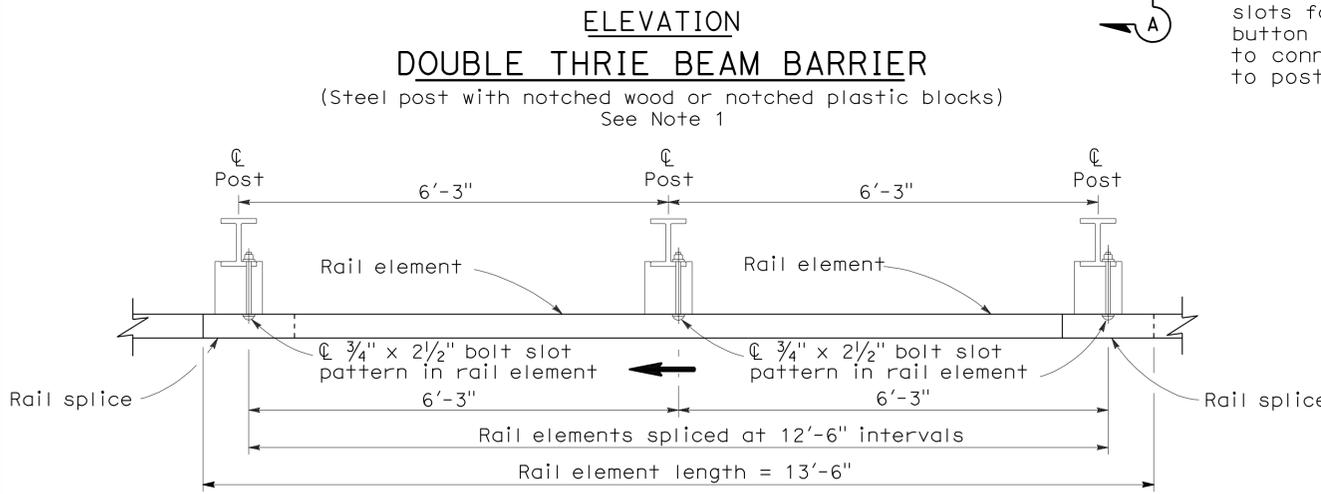
DOUBLE THRIE BEAM BARRIER
(Steel post with notched wood or notched plastic blocks)
See Note 1



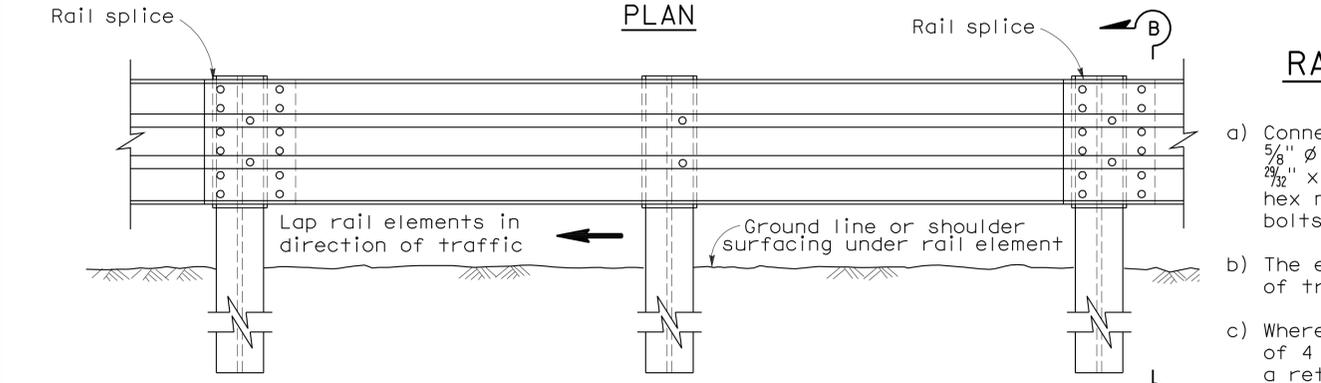
SECTION A-A
TYPICAL STEEL LINE POST INSTALLATION



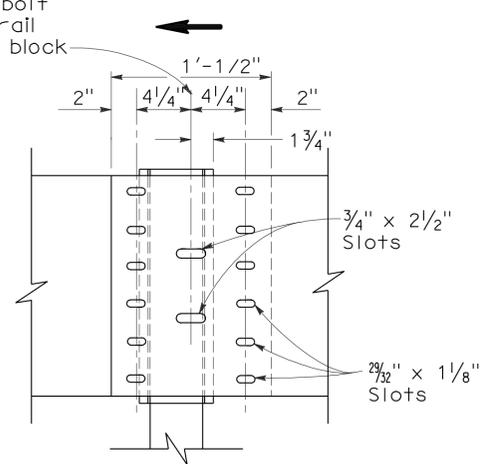
SECTION B-B
TYPICAL STEEL LINE POST INSTALLATION



SINGLE THRIE BEAM BARRIER
(Steel post with notched wood or notched plastic blocks)
See Note 1



⊙ Rail splice and slots for 5/8" ⌀ button head bolt to connect rail to post and block



ELEVATION
RAIL ELEMENT SPLICE DETAIL

- Connect the overlapped ends of the thrie beam rail elements with 5/8" ⌀ x 1 1/8" button head oval shoulder bolts inserted into the 29/32" x 1 1/8" slots and bolted together with 5/8" ⌀ x 1 1/8" recessed hex nuts. Recess of hex nut points toward rail element. A total of 12 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used. Where a return cap is to be attached to the ends of rail elements, a total of 8 of the above described splice bolts and nuts are to be used.

NOTES:

- For details of the cross section of the thrie beam rail element and details for wood post with wood block installations, see Standard Plan A78A.
- For details of standard hardware, posts and blocks used to construct thrie beam barrier, see Revised Standard Plan RSP A78C1 and Standard Plan A78C2.
- Thrie beam barrier post spacing to be 6'-3" center to center, except as otherwise noted.
- Top of barrier rail to be 2'-8" above ground line or shoulder surfacing under the rail element.
- For barrier end treatments and barrier connections, see Standard Plans A78E1, A78E2 and A78E3, Revised Standard Plans RSPs A78F1 and A78F2, Standard Plan A78G and Revised Standard Plan RSP A78H.
- For connection to Concrete Barrier, see Revised Standard Plan RSP A78I.
- Attach rail element to block and steel post with 2 bolts or rods on approaching traffic side of block and post web. No washer on rail face for rod or bolted connections to line post.
- For details of thrie beam barrier on bridges, see Standard Plan A78D2. For details of thrie beam barrier at fixed objects, see Standard Plan A78D1.
- Direction of traffic indicated by →.
- Notched face of block faces steel post.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

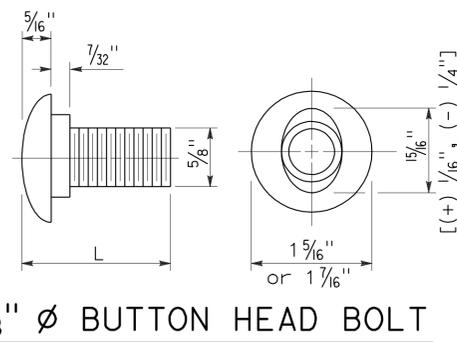
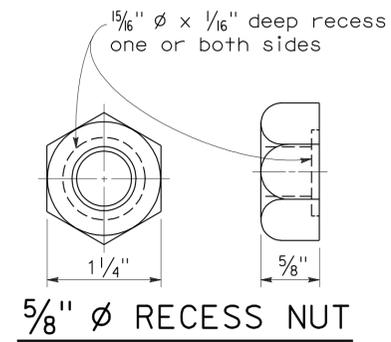
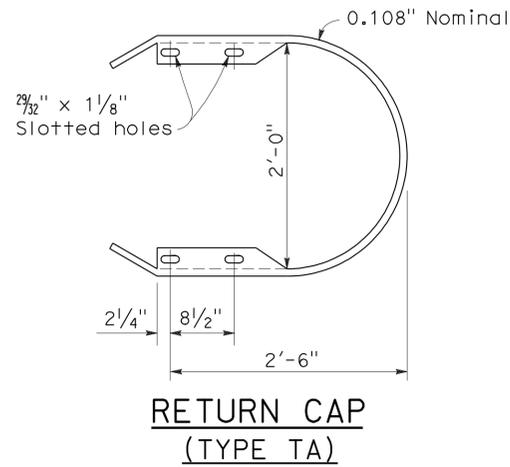
THRIE BEAM BARRIER
STANDARD BARRIER RAILING
SECTION (STEEL POST
WITH NOTCHED WOOD BLOCK
OR NOTCHED RECYCLED
PLASTIC BLOCK)

NO SCALE

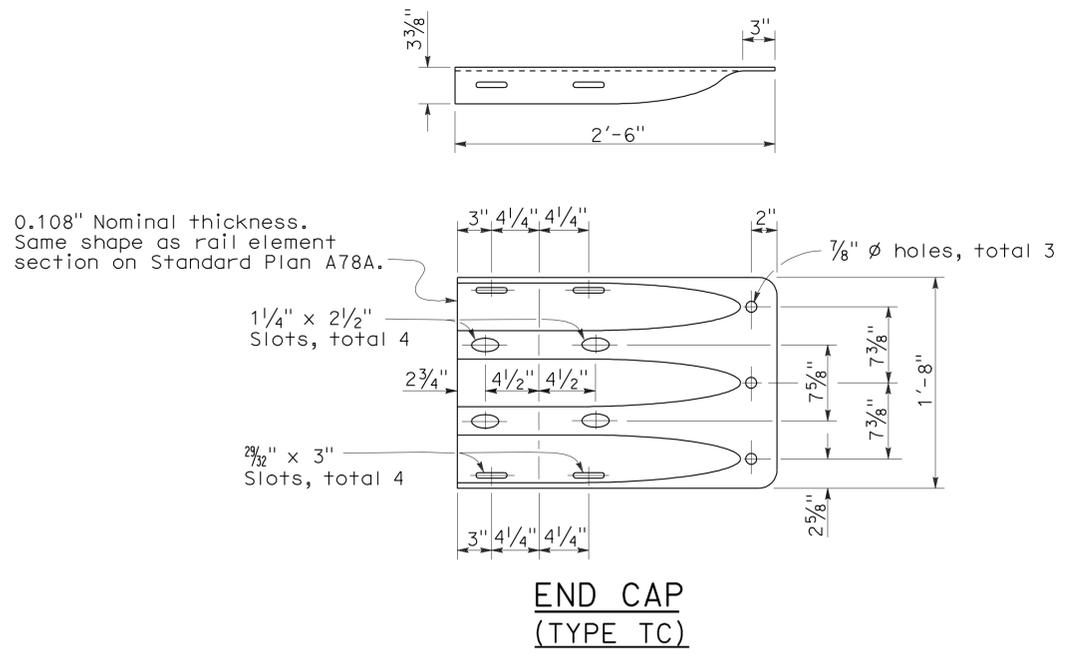
RSP A78B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A78B
DATED MAY 1, 2006 - PAGE 84 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A78B

2006 REVISED STANDARD PLAN RSP A78B



| L | THREAD LENGTH |
|--------|----------------------|
| 1 1/4" | full thread length |
| 2" | full thread length |
| 9/2" | 4" Min thread length |
| 18" | 4" Min thread length |



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**THRIE BEAM BARRIER
STANDARD HARDWARE DETAILS**

NO SCALE

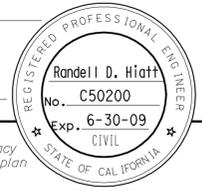
| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1167 | 1507 |

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

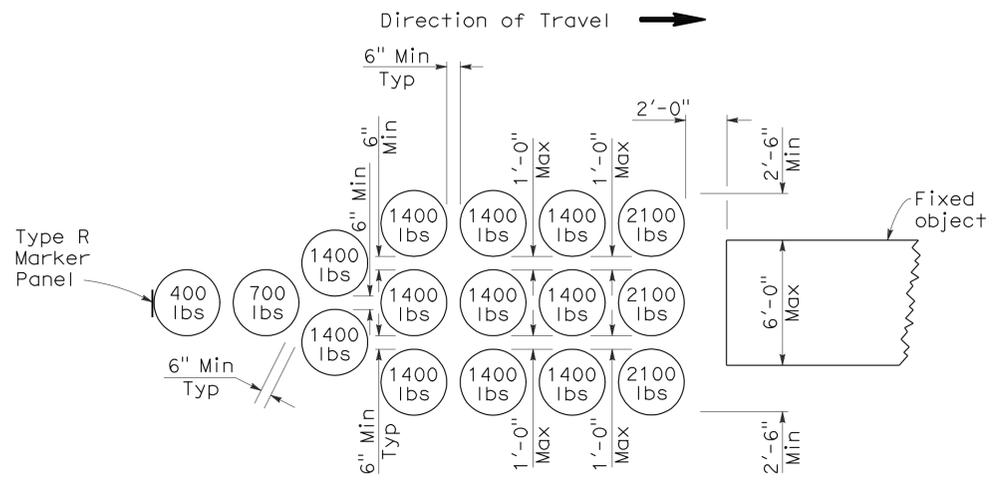
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-27-11

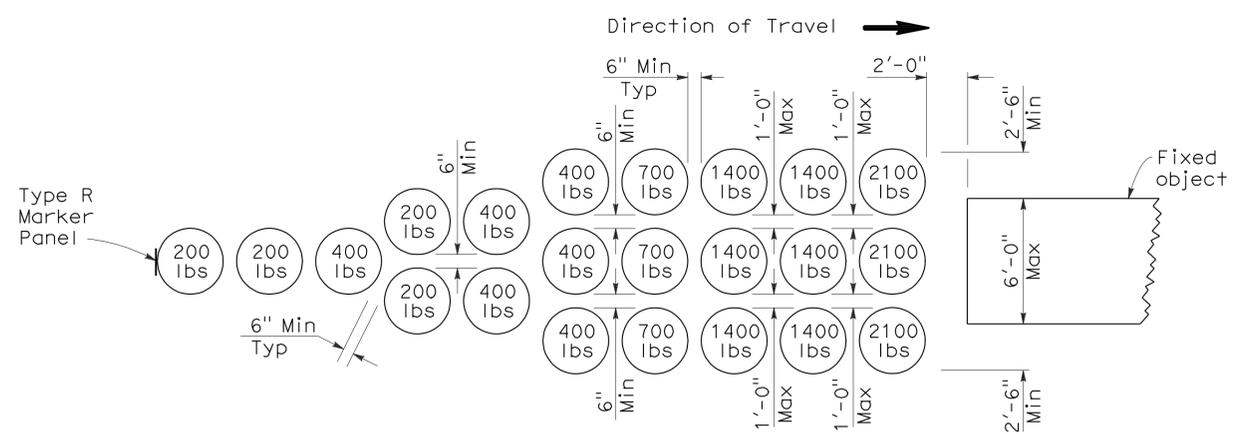


NOTES:

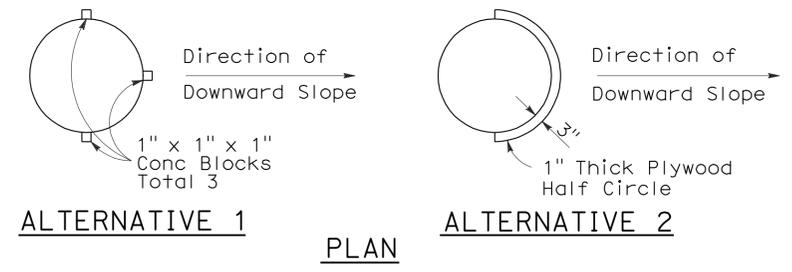
1. (XXX) Indicates module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the modules.
2. All sand weights are nominal.
3. Each module is to contain amount of sand indicated, supported according to the manufacturer's instructions.
4. Modules shall be placed on asphalt concrete, epoxy mortar or concrete surface. Modules to be placed on surfacing with greater than 5% downward slope shall be seated as shown.
5. Mass of sand and outline of each module shall be painted on the surface at each module location.
6. Module blocking, epoxied to the deck surface, is required for all modules placed on bridge decks. Two acceptable alternatives are shown. Other alternatives recommended by the manufacturer and approved by the Engineer will be accepted.
7. Place the top of the Type R marker panel 1" below the module lid.
8. Approach speeds indicated conform to NCHRP Report criteria.



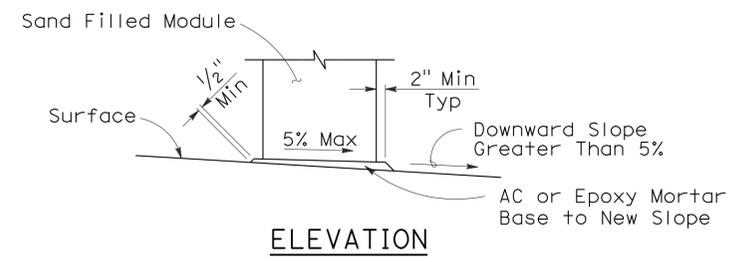
ARRAY 'U16'
Approach speed less than 45 mph



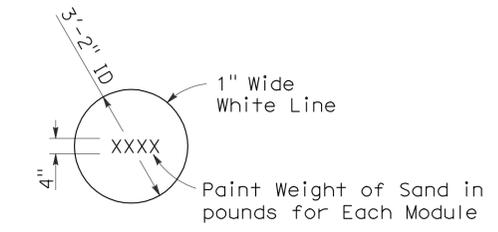
ARRAY 'U21'
Approach speed 45 mph or more



BRIDGE DECK MODULE BLOCKING DETAILS
(See Note 6)



SLOPED SEAT DETAIL
(See Note 4)



PAINTING DETAIL
(See Note 5)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CRASH CUSHION,
SAND FILLED
(UNIDIRECTIONAL)**
NO SCALE

RSP A81B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A81B
DATED MAY 1, 2006 - PAGE 100 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A81B

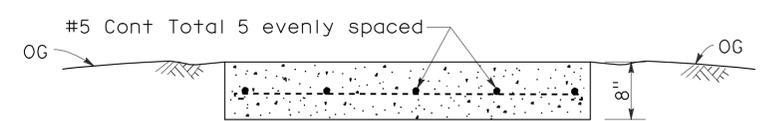
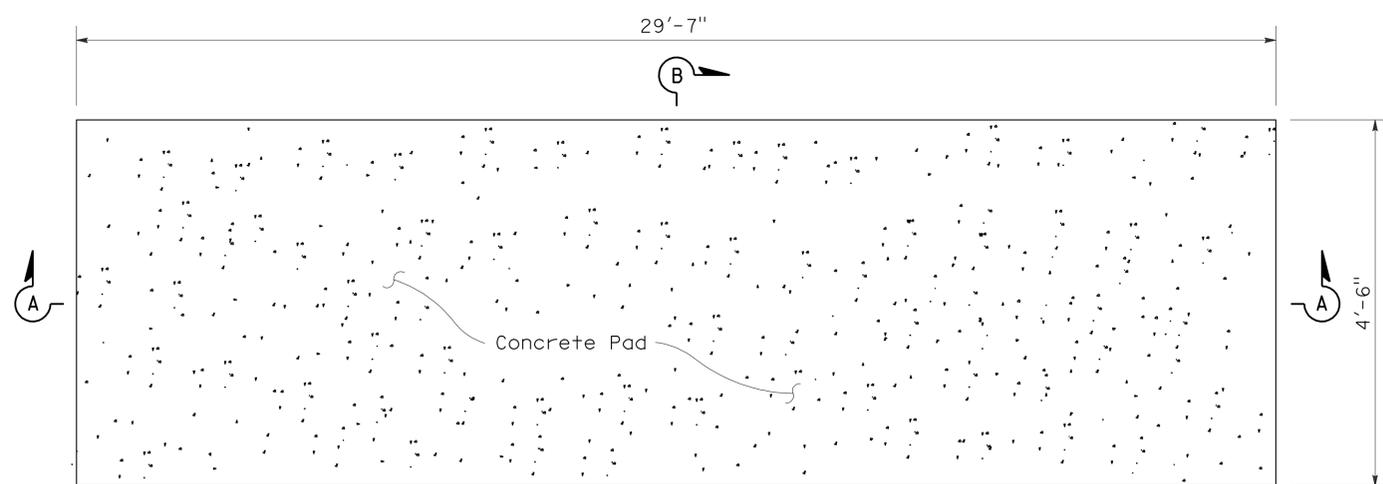
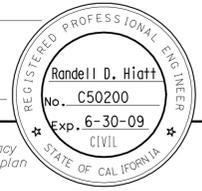
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1168 | 1507 |

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

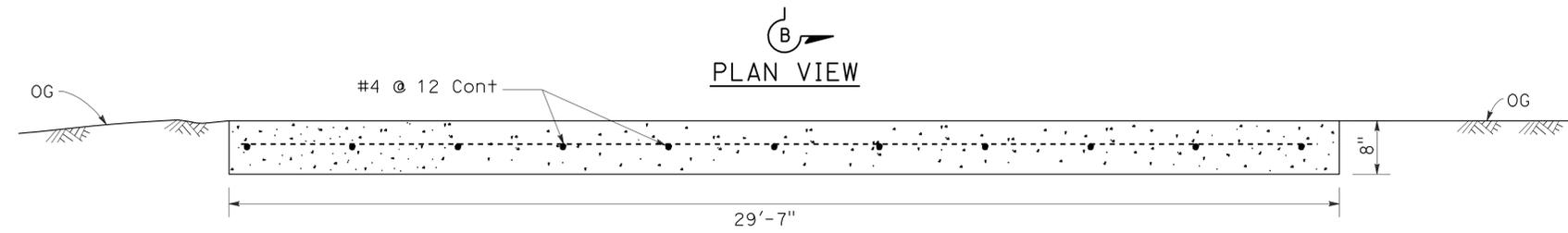
June 6, 2008
PLANS APPROVAL DATE

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To accompany plans dated 6-27-11



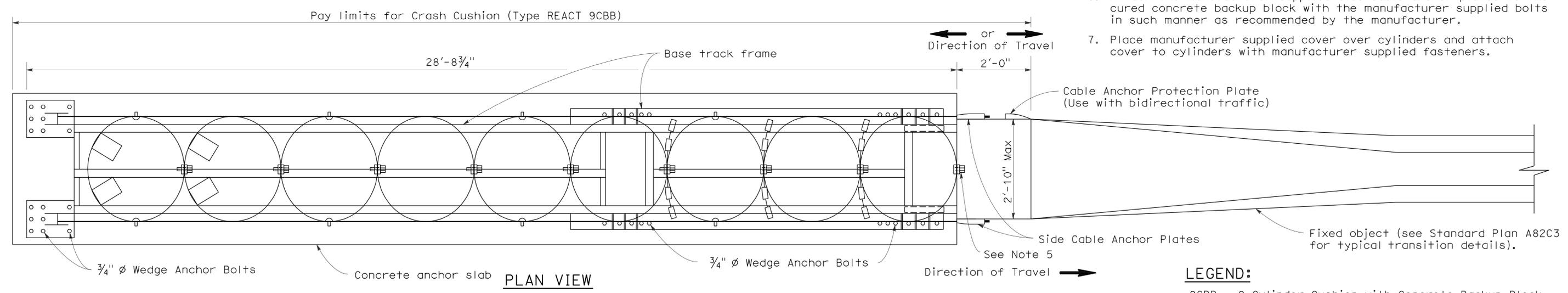
SECTION B-B



SECTION A-A
CONCRETE ANCHOR SLAB

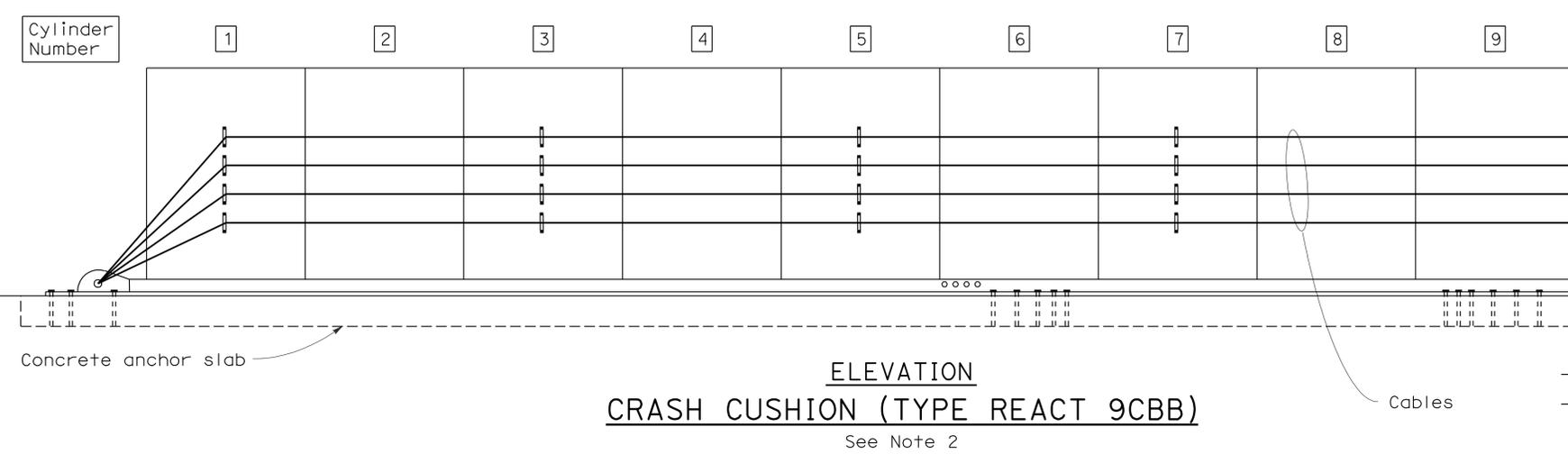
NOTES:

1. For additional details of this crash cushion, refer to manufacturer's installation instructions.
2. For details of the REACT Crash Cushion with self contained backup support (no concrete backup block), see Standard Plan A82D1.
3. The base track frame with cylinders attached comes from the manufacturer as a completely pre-assembled unit.
4. Place the crash cushion unit on the cured concrete anchor slab and use the base track frame of the crash cushion as a template for drilling anchor bolt holes. Drill holes in slab and attach crash cushion with wedge anchor bolts supplied by the manufacturer.
5. Attach last cylinder to concrete backup block with manufacturer supplied fastener in such manner as recommended by the manufacturer.
6. Attach the manufacturer supplied side cable anchor plates to the cured concrete backup block with the manufacturer supplied bolts in such manner as recommended by the manufacturer.
7. Place manufacturer supplied cover over cylinders and attach cover to cylinders with manufacturer supplied fasteners.



LEGEND:

9CBB = 9 Cylinder Cushion with Concrete Backup Block



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CRASH CUSHION
(TYPE REACT 9CBB)**

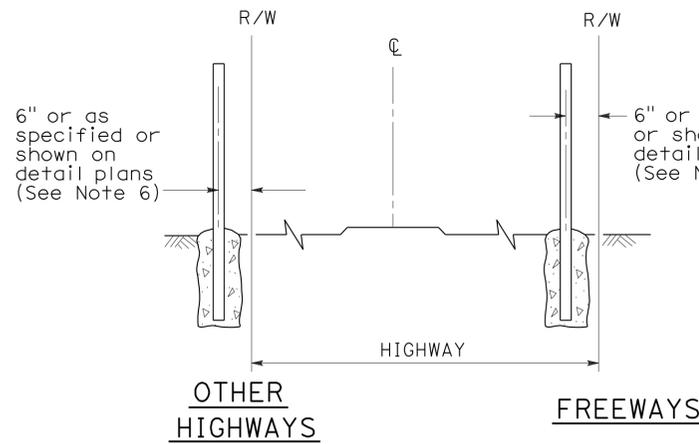
NO SCALE

RSP A82C1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A82C1
DATED MAY 1, 2006 - PAGE 104 OF THE STANDARD PLANS BOOK DATED MAY 2006.

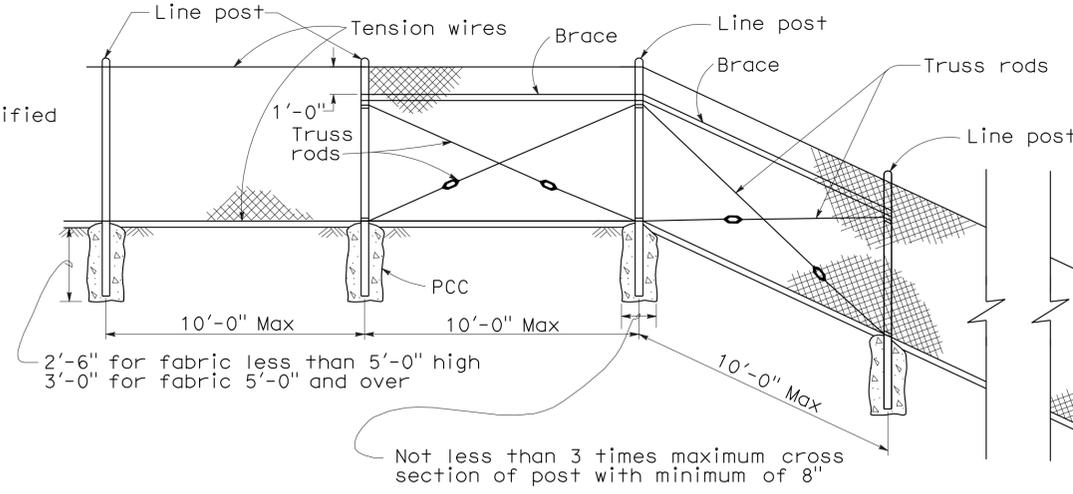
REVISED STANDARD PLAN RSP A82C1

2006 REVISED STANDARD PLAN RSP A82C1

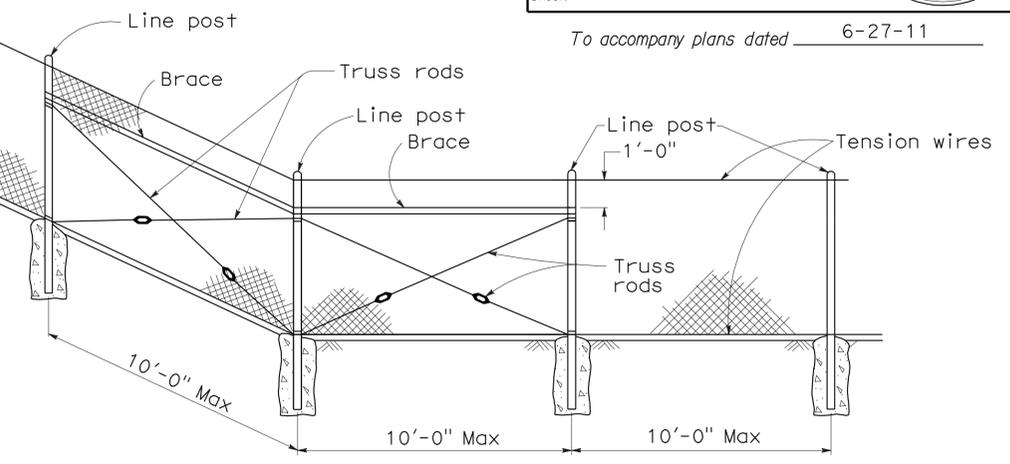
To accompany plans dated 6-27-11



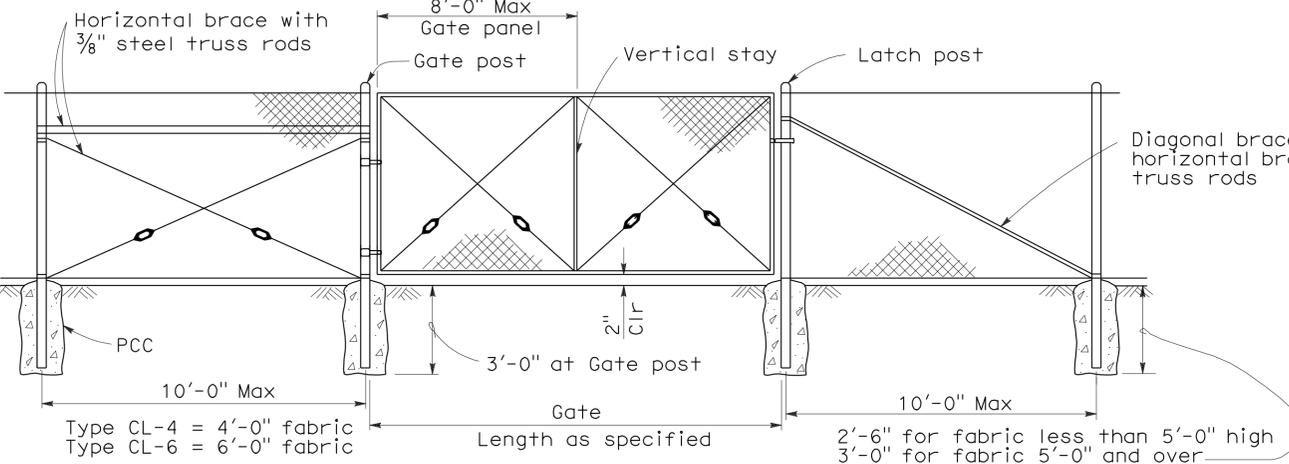
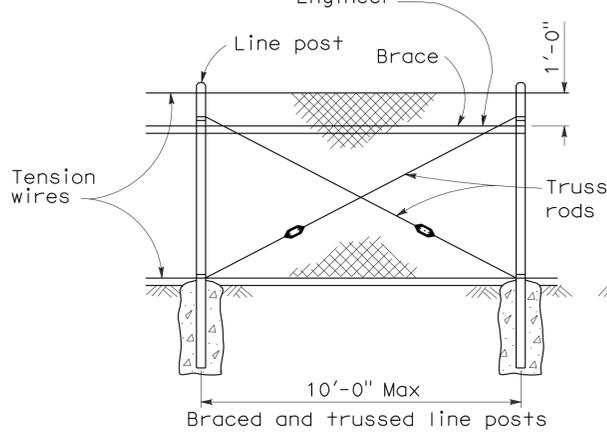
FENCE LOCATION



CHAIN LINK FENCE ON SHARP BREAK IN GRADE



Brace to be removed after all other fence construction is completed unless otherwise directed by the Engineer



CHAIN LINK GATE INSTALLATION

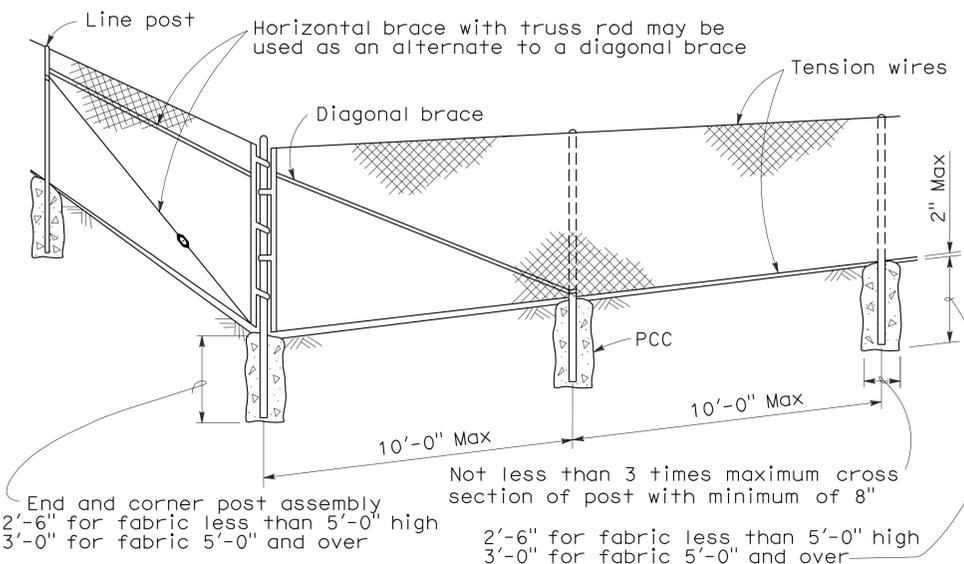
| GATE POST | | | |
|----------------|---------------------------|------------|-----------------|
| FENCE HEIGHT | GATE WIDTHS | NOMINAL ID | WEIGHT PER FOOT |
| 6'-0" and Less | Up thru 6'-0" | 2 1/2" | 4.95 LB |
| | Over 6'-0" thru 12'-0" | 4" | 10.79 LB |
| | Over 12'-0" thru 18'-0" | 5" | 14.62 LB |
| Over 6'-0" | Over 18'-0" to 24'-0" Max | 6" | 18.97 LB |
| | Up thru 6'-0" | 3" | 7.58 LB |
| | Over 6'-0" thru 12'-0" | 5" | 14.62 LB |
| | Over 12'-0" thru 18'-0" | 6" | 18.97 LB |
| | Over 18'-0" to 24'-0" Max | 8" | 28.55 LB |

Above post dimensions and weights are minimums. Larger sizes may be used on approval of the Engineer.

NOTES:

- The below table shows examples of post and brace sections which may comply with the Specifications.
- Sections shown in the tables must also comply with the strength requirements and other provisions of the Specifications.
- Other sections which comply with the strength requirements and other provisions of the Specifications may be used on approval of the Engineer.
- Options exercised shall be uniform on any one project.
- Dimensions shown are nominal.
- Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.

| FENCE HEIGHT | TYPICAL MEMBER DIMENSIONS (See Notes) | | | | | | | | | |
|--------------|---------------------------------------|-----------------|-----------------|---------------------------|-----------------|-----------------|----------|------------------|-----------------|-----------------|
| | LINE POSTS | | | END, LATCH & CORNER POSTS | | | BRACES | | | |
| | ROUND ID | H | ROLL FORMED | ROUND ID | ROLL FORMED | | ROUND ID | H | ROLL FORMED | |
| 6' & less | 1 1/2" | 1 7/8" x 1 5/8" | 1 7/8" x 1 5/8" | 2" | 3 1/2" x 3 1/2" | 2" x 1 3/4" | 1 1/4" | 1 1/2" x 1 5/16" | 1 5/8" x 1 1/4" | 1 3/4" x 1 1/4" |
| Over 6' | 2" | 2 1/4" x 2" | 2" x 1 3/4" | 2 1/2" | 3 1/2" x 3 1/2" | 2 1/2" x 2 1/2" | 1 1/4" | 1 1/2" x 1 5/16" | 1 5/8" x 1 1/4" | 1 3/4" x 1 1/4" |



CORNER POST

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE
 NO SCALE

RSP A85 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN A85 DATED MAY 1, 2006 - PAGE 111 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A85

2006 REVISED STANDARD PLAN RSP A85

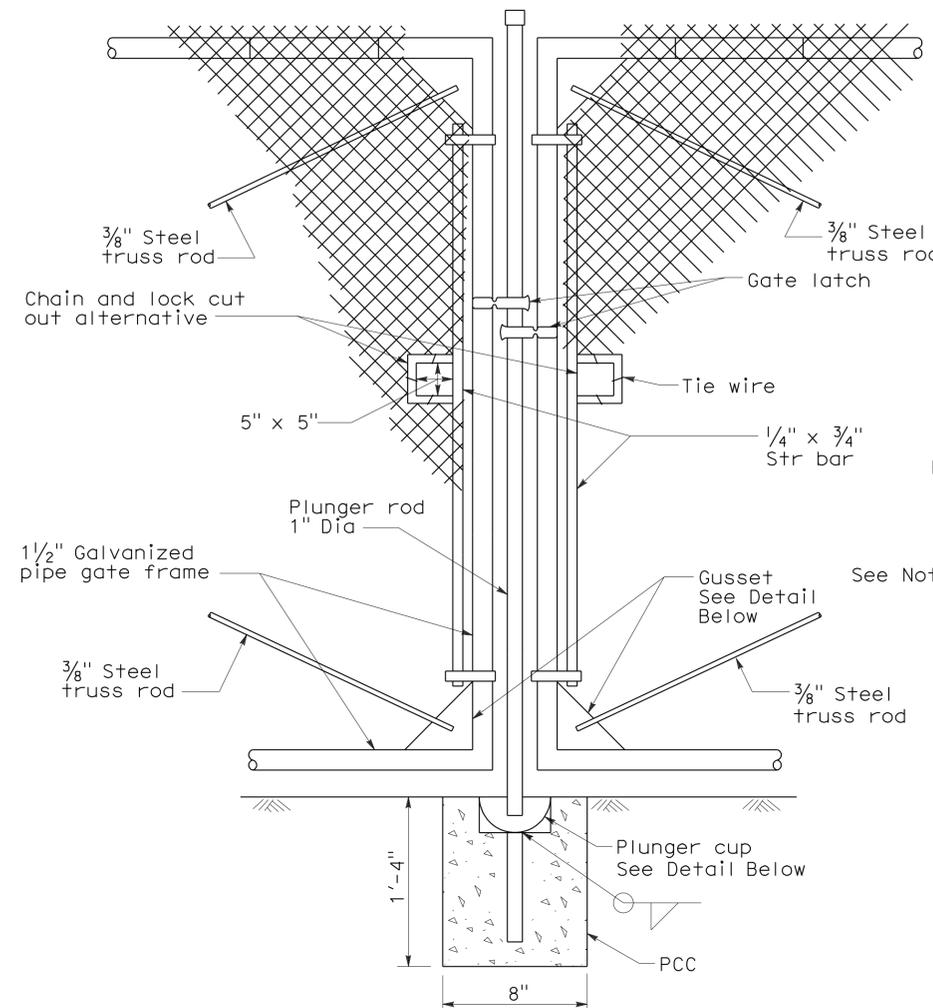
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1170 | 1507 |

Glenn DeCou
 REGISTERED CIVIL ENGINEER
 No. C34547
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

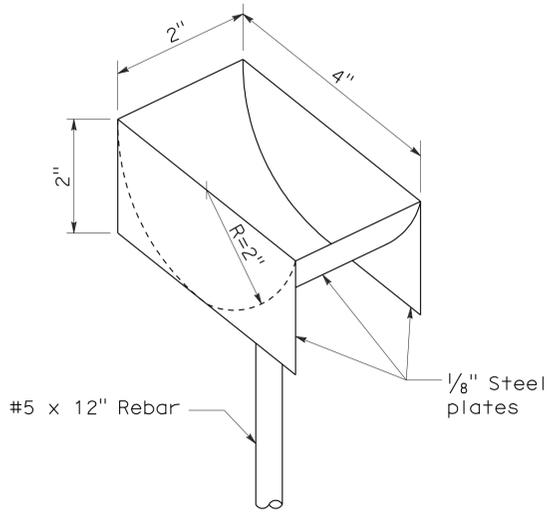
June 5, 2009
 PLANS APPROVAL DATE

To accompany plans dated 6-27-11

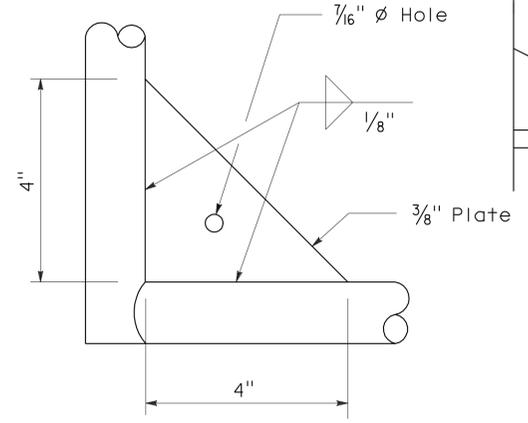
- NOTES:**
- H is 2'-6" for fabric less than 5'-0" high.
H is 3'-0" for fabric 5'-0" and over.
 - T is not less than 3 times maximum cross section of post with minimum of 8".
 - Arms with barbed wire to be used where shown on plans.
 - See Revised Standard Plan RSP A85 for Chain Link Fencing dimensions.
 - Reinforcing must comply with ASTM A 706.
 - See Detail A on New Standard Plan NSP A86B for connection at headwall.



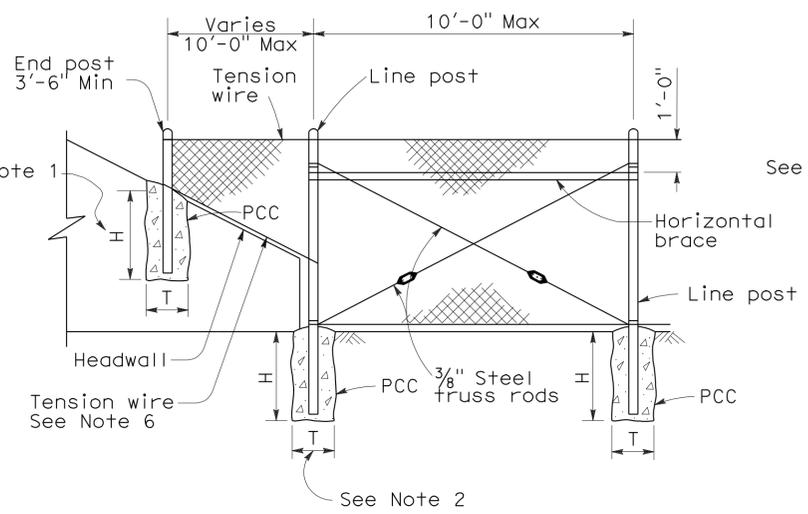
**TYPICAL DOUBLE GATE
REMOVABLE CENTER POST**



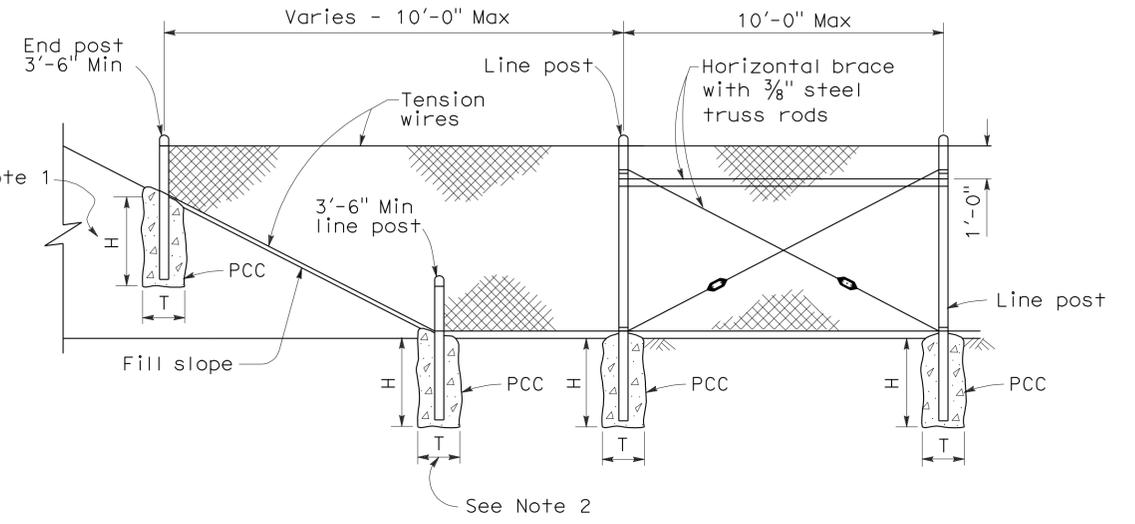
PLUNGER CUP DETAIL



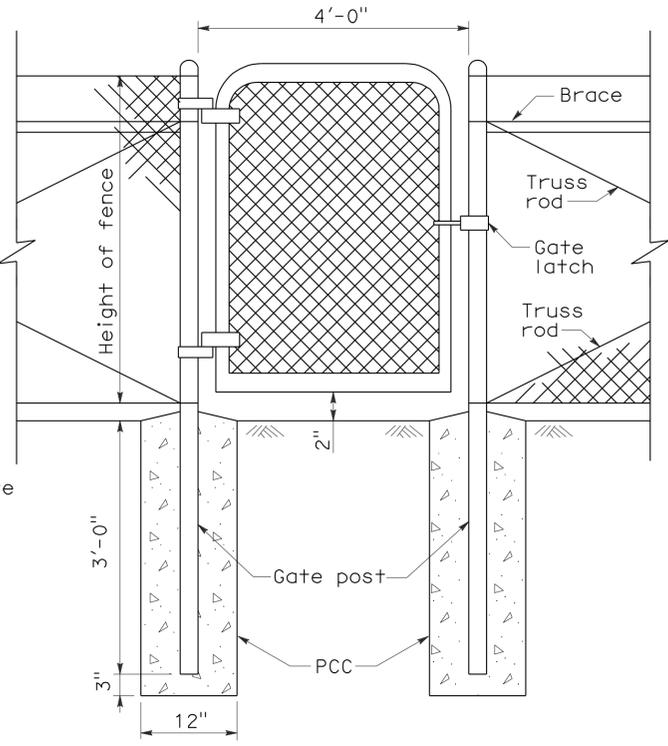
GUSSET DETAIL



METHOD OF TYING FENCE TO HEADWALL



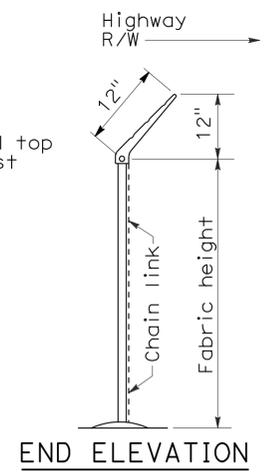
METHOD OF ERECTING FENCE FOR FILL SLOPE



WALK GATE



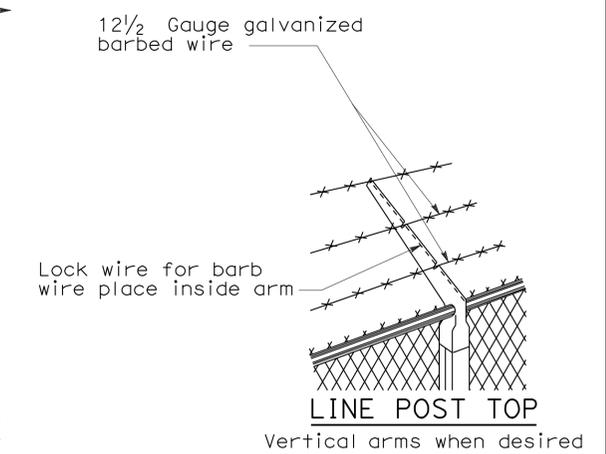
POST TOP END



END ELEVATION

BARBED WIRE POST TOP

See Note 3



LINE POST TOP

Vertical arms when desired

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE DETAILS
 NO SCALE

NSP A85A DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A85A

2006 NEW STANDARD PLAN NSP A85A

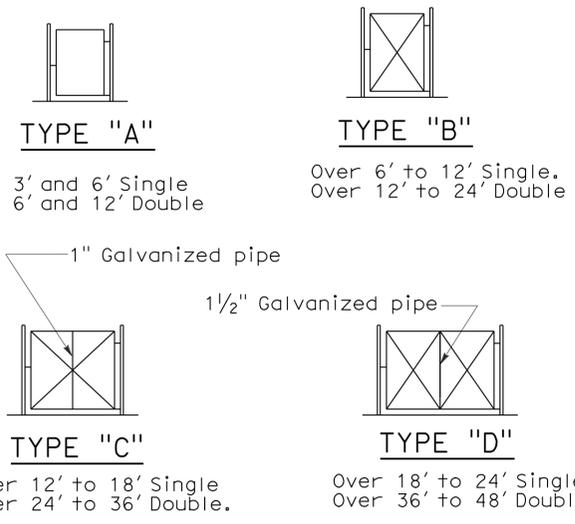
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1171 | 1507 |

Glenn DeCou
 REGISTERED CIVIL ENGINEER
 No. C34547
 Exp. 9-30-09
 STATE OF CALIFORNIA

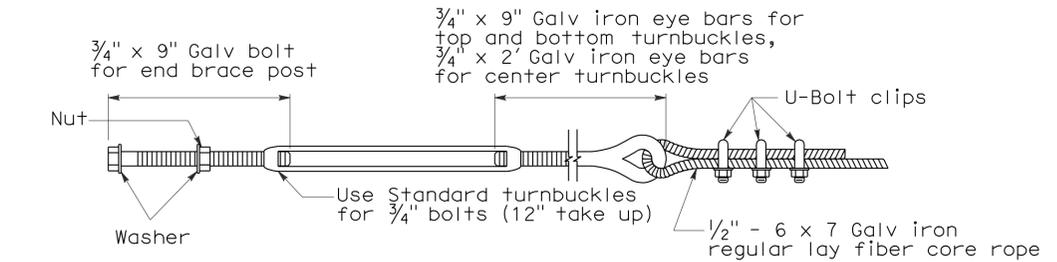
June 5, 2009
 PLANS APPROVAL DATE

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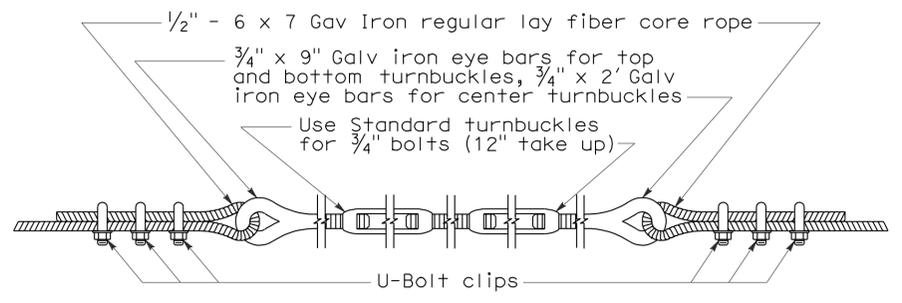
To accompany plans dated 6-27-11



TYPICAL FRAMEWORK SHOWING NUMBER OF BAYS IN GATE



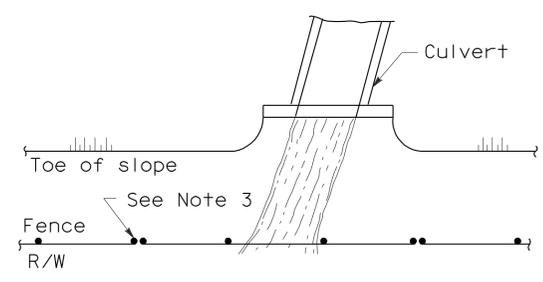
TURNBUCKLE A



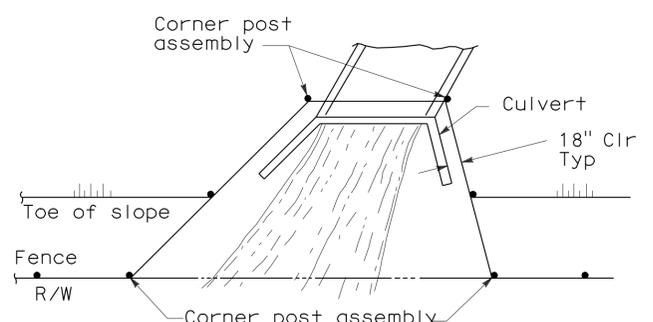
TURNBUCKLE B

NOTES:

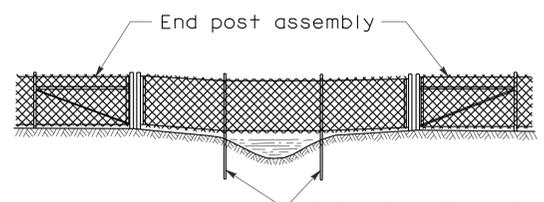
1. All material for abutment connection to be galvanized.
2. The chain link fabric shall be replaced by barbed wire strands at 12" maximum centers between the double posts.
3. When the width of the culvert makes it necessary to anchor a post to the top of the culvert, a cast iron shoe or other device approved by the Engineer shall be used.
4. Fencing over stream and around headwall may also use Barbed Wire or Wire Mesh fencing with either wood post or steel post installation.
5. See Revised Standard Plan RSP A85 for Chain Link fence dimensions. See Standard Plan A86 for Barbed Wire and Wire Mesh fence dimensions and for wood post and steel post installation.



PLAN

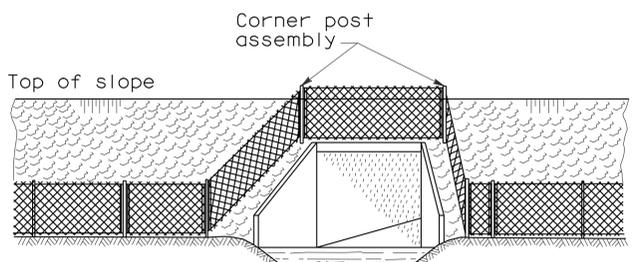


PLAN



ELEVATION

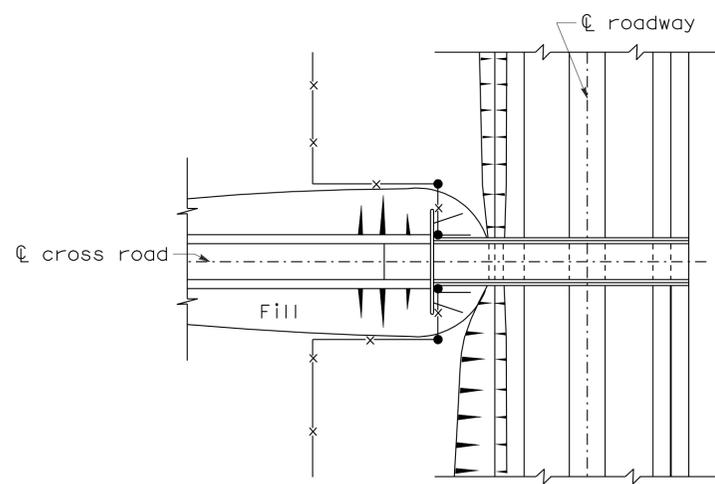
INSTALLATION OVER STREAM



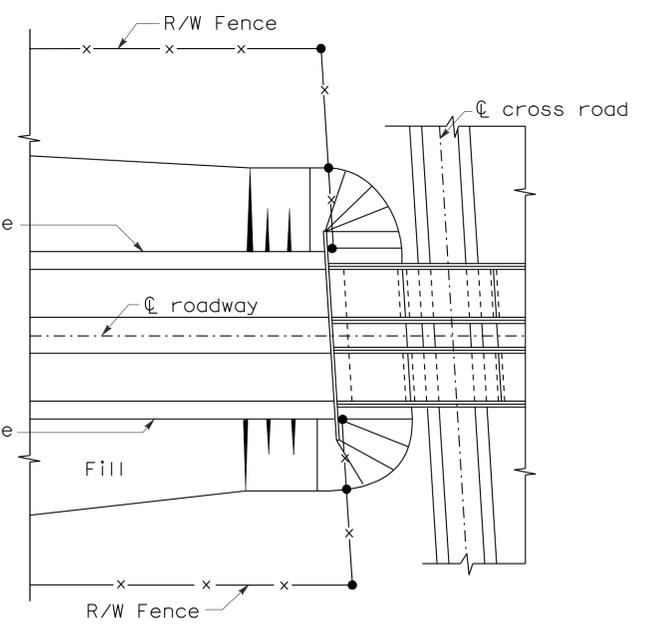
ELEVATION

INSTALLATION AROUND HEADWALL

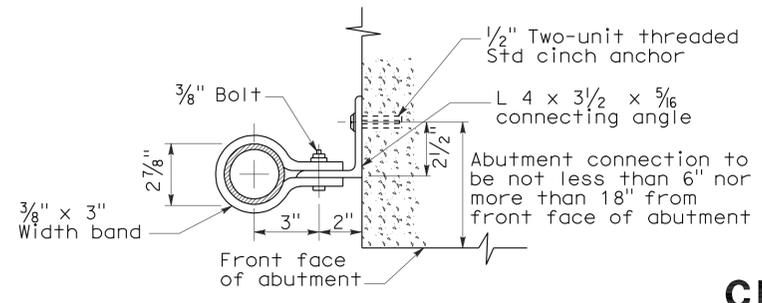
See Note 4



PLAN OF ROADWAY - UNDERPASS



PLAN OF ROADWAY - OVERPASS



ABUTMENT CONNECTION

TYPICAL INSTALLATION AT BRIDGES

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE DETAILS
 NO SCALE

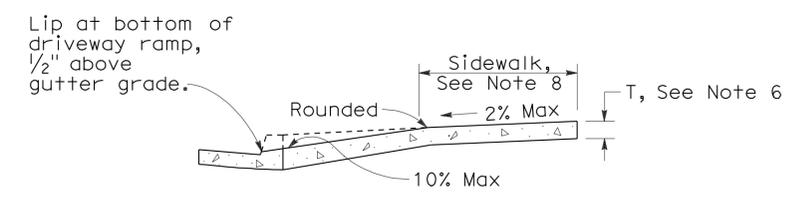
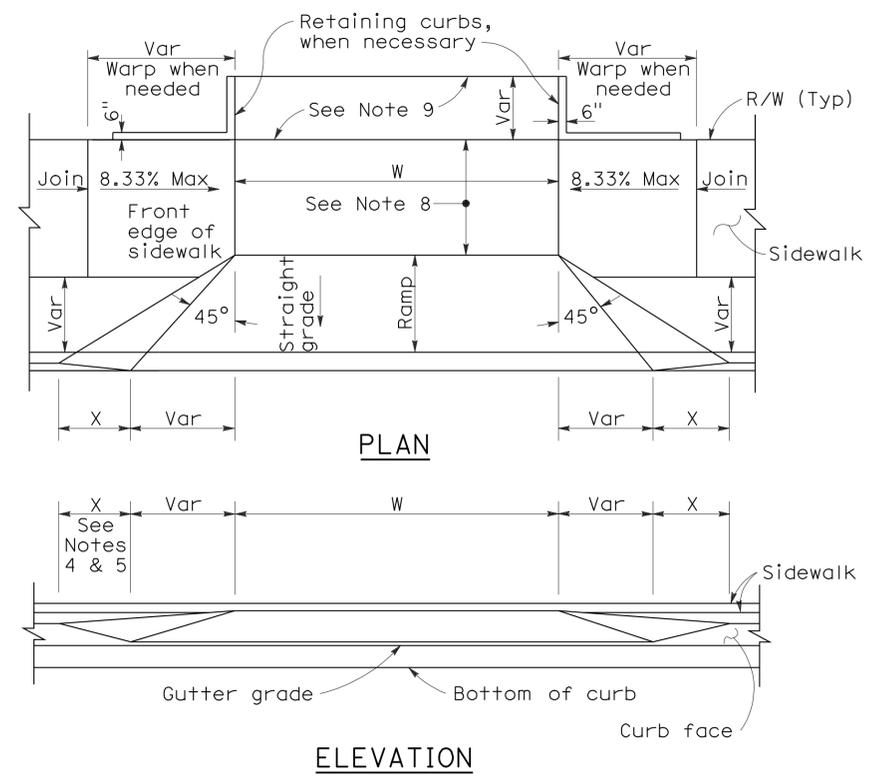
NSP A85B DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A85B

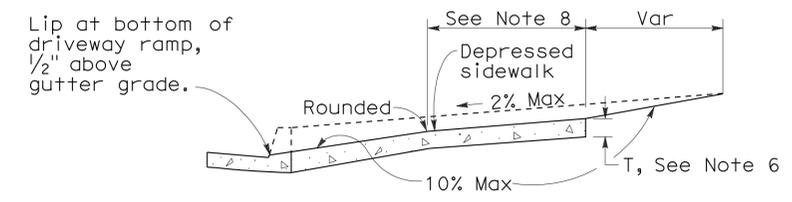
2006 NEW STANDARD PLAN NSP A85B



To accompany plans dated 6-27-11



CASE A
Typical driveway, sidewalk not depressed



CASE B
Driveway with depressed sidewalk

SECTIONS

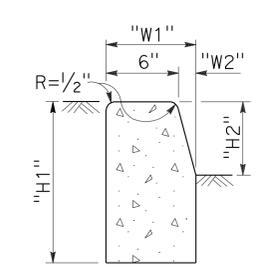
CURB QUANTITIES

| TYPE | CUBIC YARDS PER LINEAR FOOT |
|------|-----------------------------|
| A1-6 | 0.02585 |
| A1-8 | 0.03084 |
| A2-6 | 0.05903 |
| A2-8 | 0.06379 |
| A3-6 | 0.01036 |
| A3-8 | 0.01435 |
| B1-4 | 0.02185 |
| B1-6 | 0.02930 |
| B2-4 | 0.05515 |
| B2-6 | 0.06171 |
| B3-4 | 0.00641 |
| B3-6 | 0.01074 |
| B4 | 0.05709 |
| D-4 | 0.04083 |
| D-6 | 0.06804 |
| E | 0.06661 |

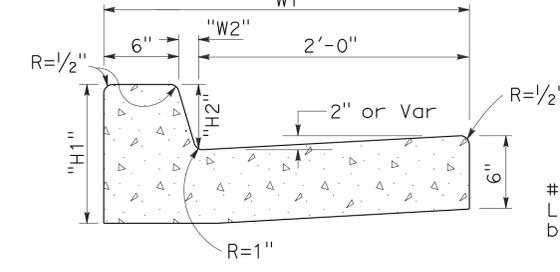
TABLE A

| CURB TYPE | DIMENSIONS | | | |
|-----------|------------|------|-----------|--------|
| | "H1" | "H2" | "W1" | "W2" |
| A1-6 | 1'-2" | 6" | 7 1/2" | 1 1/2" |
| A1-8 | 1'-4" | 8" | 8" | 2" |
| A2-6 | 1'-0" | 6" | 2'-7 1/2" | 1 1/2" |
| A2-8 | 1'-2" | 8" | 2'-8" | 2" |
| A3-6 | 6" | 5" | 7 1/4" | 1 1/4" |
| A3-8 | 8" | 7" | 7 3/4" | 1 3/4" |
| B1-4 | 1'-0" | 4" | 7 1/2" | 2 1/2" |
| B1-6 | 1'-2" | 6" | 9" | 4" |
| B2-4 | 10" | 4" | 2'-7 1/2" | 2 1/2" |
| B2-6 | 1'-0" | 6" | 2'-9" | 4" |
| B3-4 | 4" | 3" | 7" | 2" |
| B3-6 | 6" | 5" | 8 1/2" | 3 1/2" |
| D-4 | 10" | 4" | 1'-6" | 1'-1" |
| D-6 | 1'-0" | 6" | 2'-2" | 1'-8" |

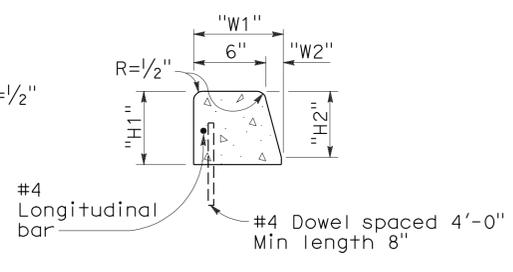
DRIVEWAYS



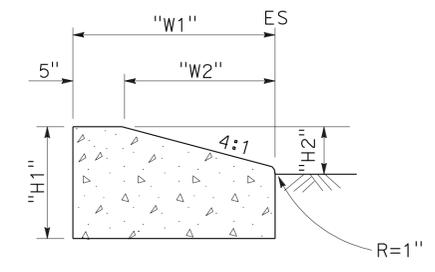
TYPE A1 CURBS
See Table A



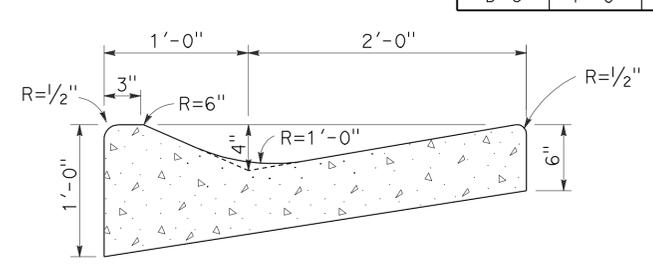
TYPE A2 CURBS
See Table A



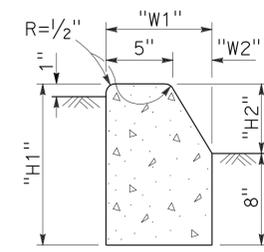
TYPE A3 CURBS
Superimposed on existing pavement
See Table A



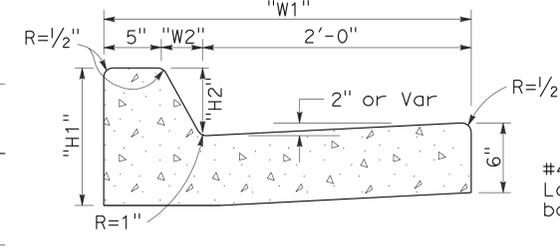
TYPE D CURBS
See Table A



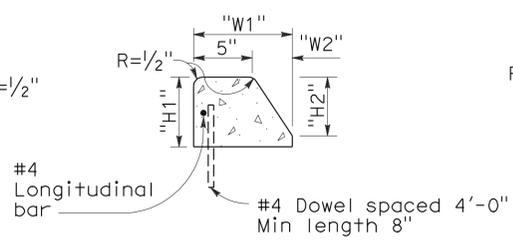
TYPE E CURB



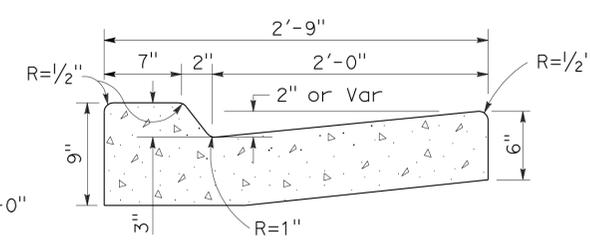
TYPE B1 CURBS
See Table A



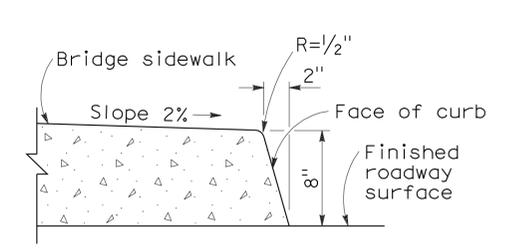
TYPE B2 CURBS
See Table A



TYPE B3 CURBS
Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB
On Bridges

NOTES:

- Case A driveway section typically applies.
- Use Case B driveway section when ramp slopes would exceed 10% in Case A.
- Use Case B driveway section when sidewalk cross slope would exceed 2% in Case A.
- X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
- X is a variable when sidewalk is located where wheelchairs may traverse the surface. Slopes shall not exceed 8.33%.
- Sidewalk and ramp thickness "T" at driveway shall be 4" for residential and 6" for commercial.
- Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
- Minimum width of clear passageway for sidewalk shall be 4'-0".
- Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
- Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

CURBS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURBS AND DRIVEWAYS

NO SCALE

2006 REVISED STANDARD PLAN RSP A87A

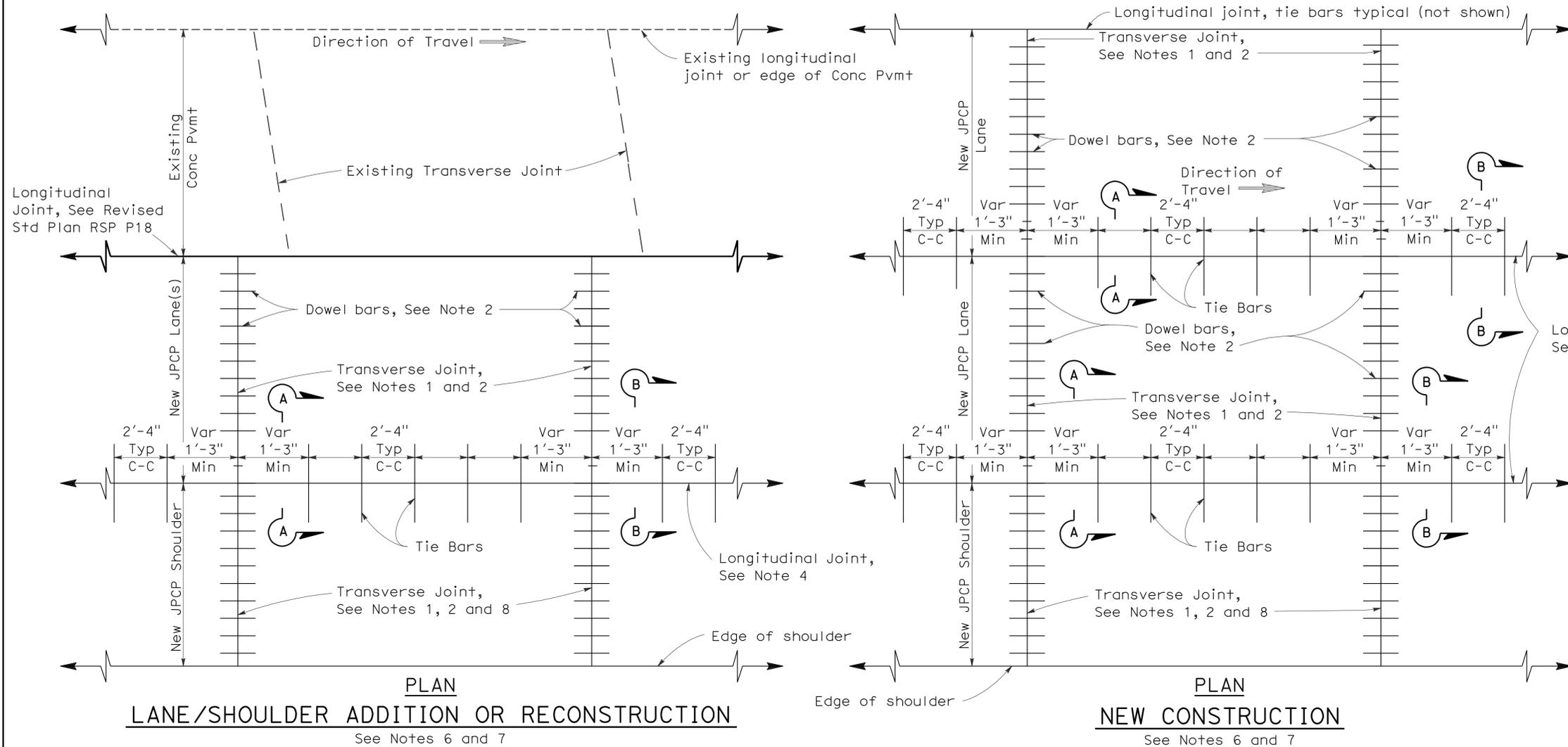
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1173 | 1507 |

William K. Farnbach
REGISTERED CIVIL ENGINEER

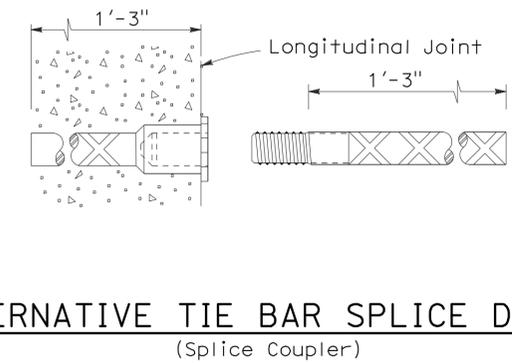
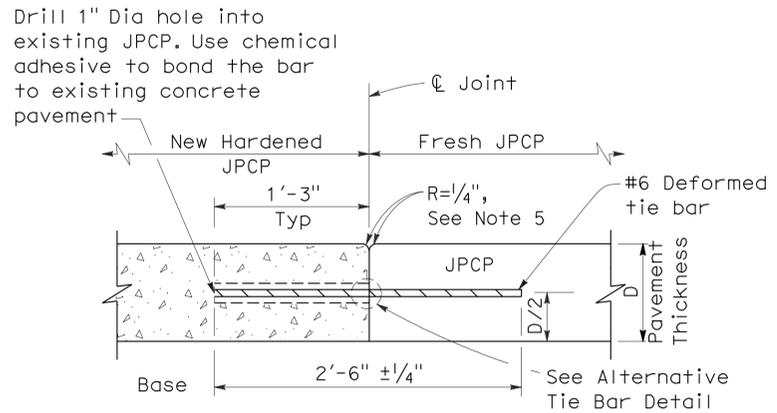
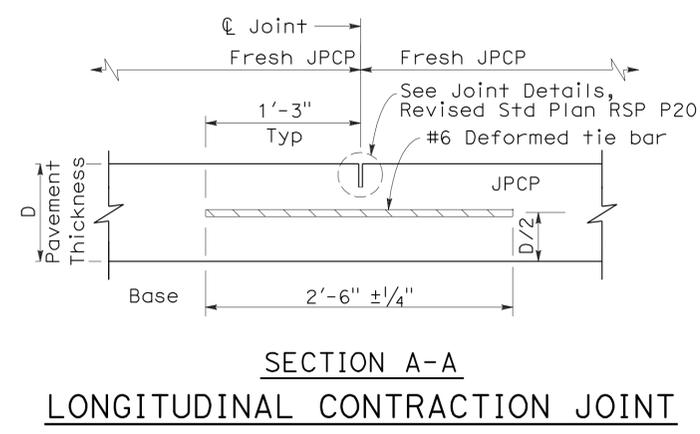
May 15, 2009
PLANS APPROVAL DATE

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To accompany plans dated 6-27-11



- NOTES:**
1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new jointed plain concrete pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
 2. For transverse joint and dowel bar details not shown, See Revised Standard Plan RSP P10.
 3. Construct longitudinal contraction joints as shown in Section A-A when more than one lane or shoulder widths are placed at one time. If constructing one lane at a time, use longitudinal construction joint, as shown in Section B-B.
 4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
 5. If fresh concrete is placed adjacent to existing concrete, the top corner of the new hardened concrete does not need to be rounded to the 1/4" radius as shown.
 6. Joint spacing patterns do not apply to intersections.
 7. Details can also apply to inside widening.
 8. Dowel bars may be omitted from shoulders when the shoulder cross slope is not the same as the adjacent traffic lane.



SECTION A-A
LONGITUDINAL CONTRACTION JOINT

SECTION B-B
LONGITUDINAL CONSTRUCTION JOINT

ALTERNATIVE TIE BAR SPLICE DETAIL
(Splice Coupler)

TIE BAR DETAILS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**JOINTED PLAIN
CONCRETE PAVEMENT**

NO SCALE

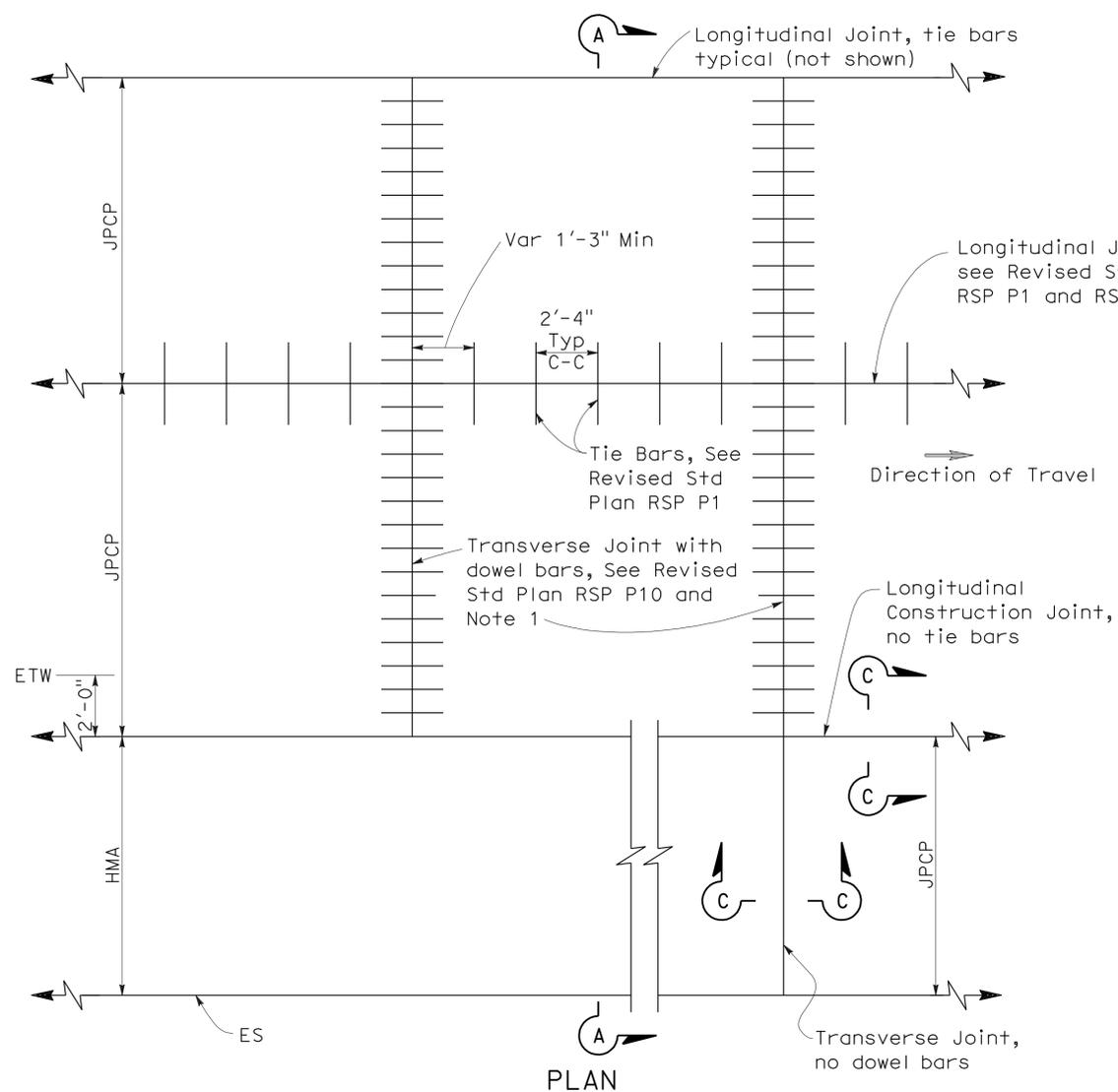
RSP P1 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P1
DATED MAY 1, 2006 - PAGE 119 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P1

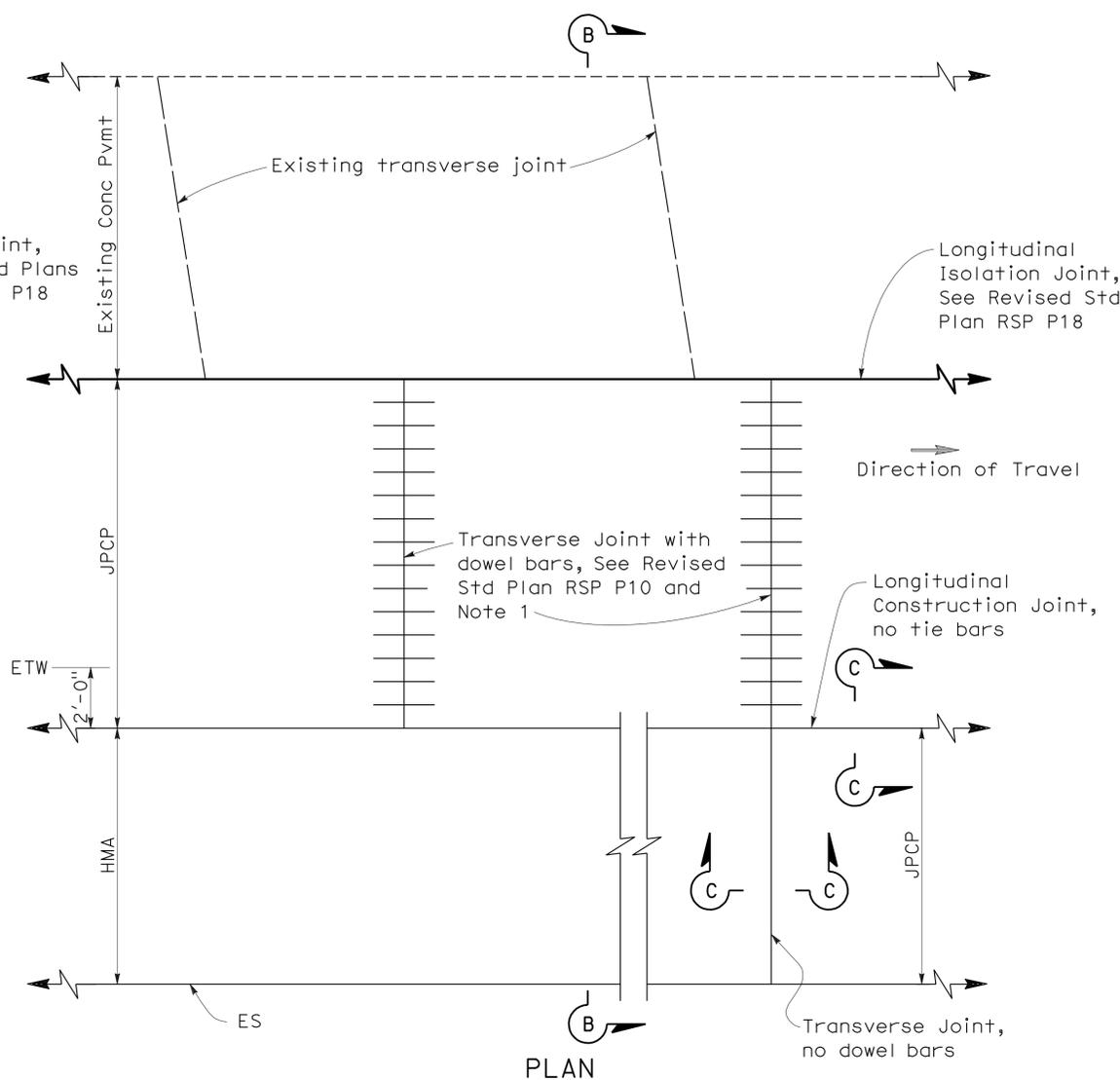
2006 REVISED STANDARD PLAN RSP P1

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1174 | 1507 |

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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 To accompany plans dated 6-27-11

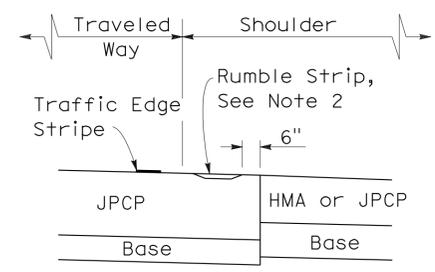


**PLAN
NEW CONSTRUCTION**

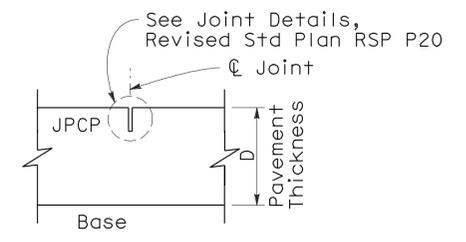


**PLAN
LANE/SHOULDER ADDITION OR RECONSTRUCTION**

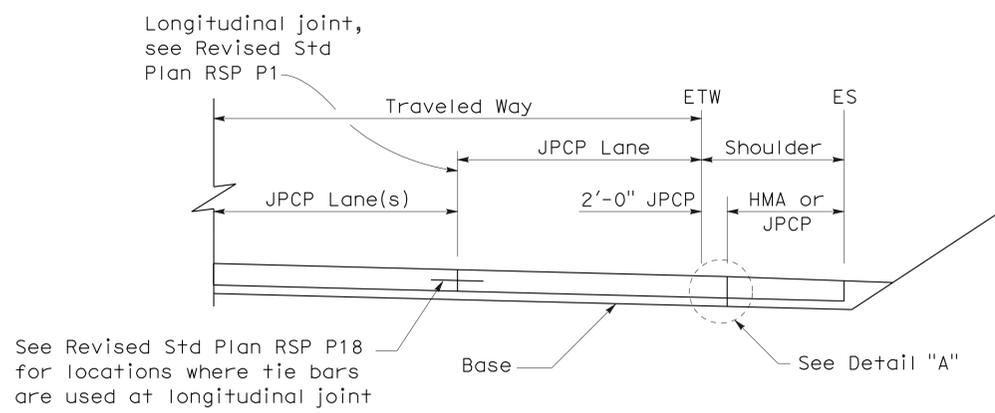
- NOTES:**
1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new Jointed Plain Concrete Pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
 2. For locations of rumble strips, see project plans. For rumble strip details not shown, see Standard Plans A40A and A40B.
 3. Joint spacing patterns do not apply to intersections.



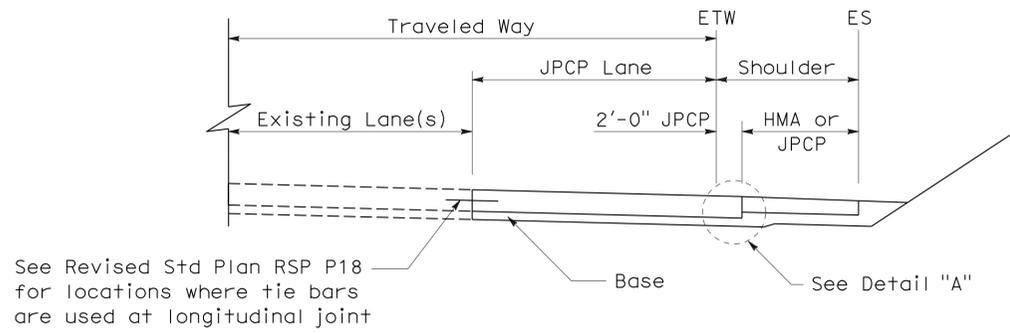
DETAIL "A"



**SECTION C-C
TRANSVERSE/LONGITUDINAL JOINT
(no dowel bars/tie bars)**



SECTION A-A



SECTION B-B

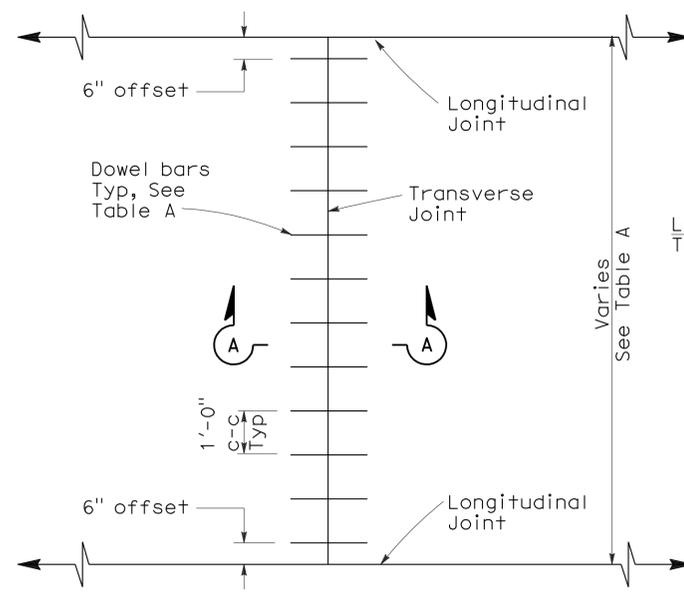
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**JOINTED PLAIN CONCRETE
PAVEMENT-WIDENED SLAB DETAILS**

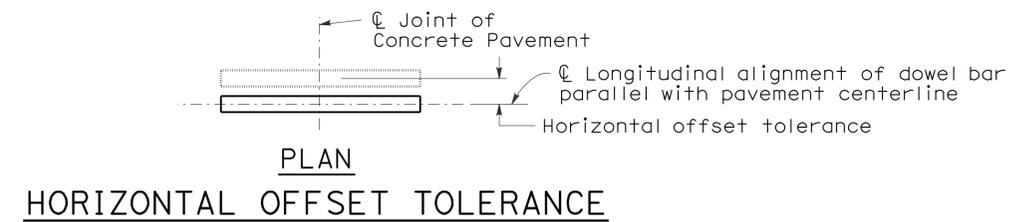
NO SCALE

RSP P2 DATED JUNE 5, 2009 SUPERCEDES STANDARD PLAN P2
DATED MAY 1, 2006 - PAGE 120 OF THE STANDARD PLANS BOOK DATED MAY 2006.

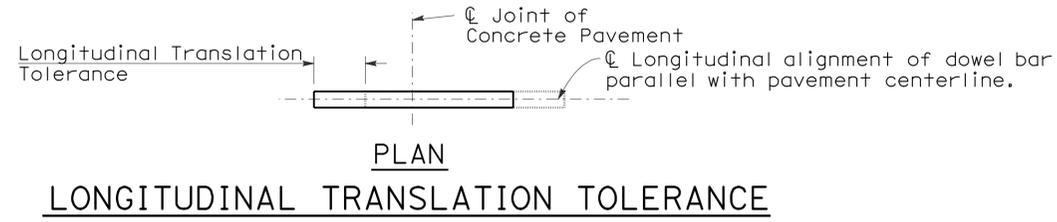
2006 REVISED STANDARD PLAN RSP P2



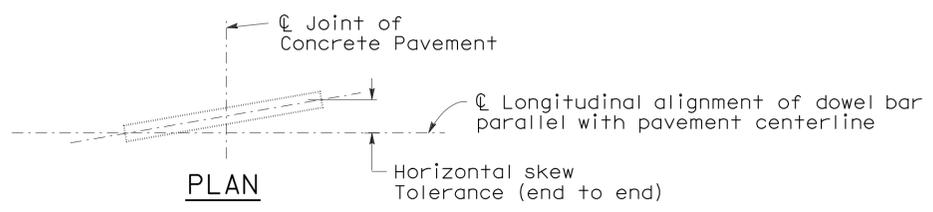
TRANSVERSE JOINT DOWEL BAR LAYOUT



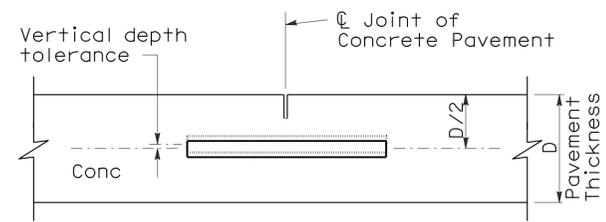
HORIZONTAL OFFSET TOLERANCE



LONGITUDINAL TRANSLATION TOLERANCE

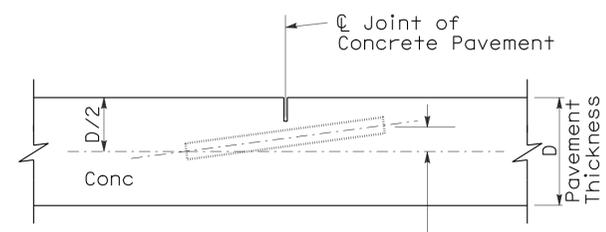


HORIZONTAL SKEW TOLERANCE



ELEVATION

VERTICAL DEPTH TOLERANCE



ELEVATION

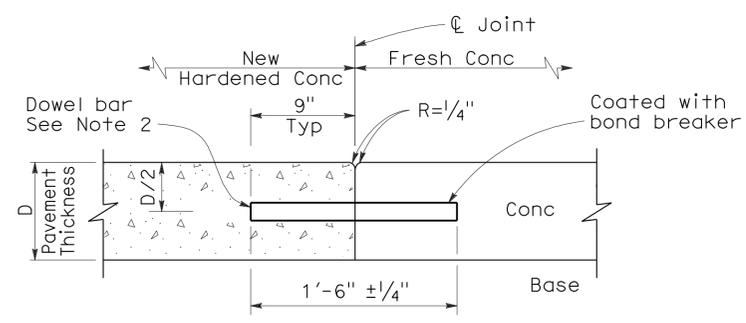
VERTICAL SKEW TOLERANCE

NOTES:

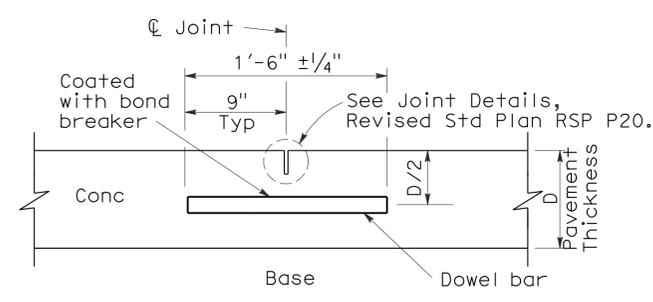
1. See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
2. 1 1/2" Dia smooth dowel bars are to be used with a pavement thickness, D, equal to or greater than 0.70 feet. For pavement thickness, D, less than 0.70 feet, use 1 1/4" Dia smooth dowel bars.
3. For widths not shown, see Project Plans.
4. If fresh concrete pavement is placed adjacent to existing concrete pavement, the top corner of the existing concrete pavement does not need to be rounded to the 1/4" radius, as shown.

TABLE A (See Note 3)

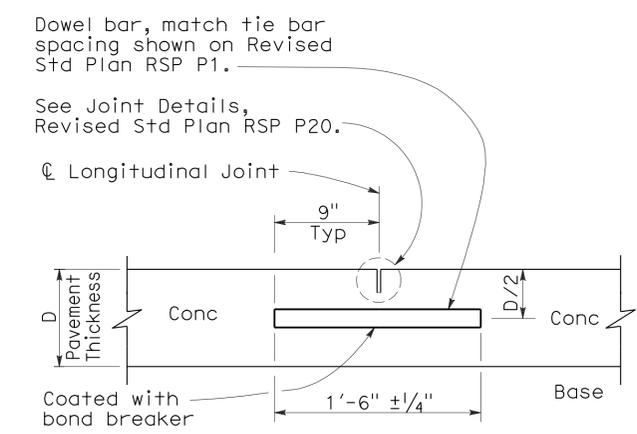
| Dowel Bar Transverse Spacing Table | |
|------------------------------------|--|
| Width between Longitudinal Joints | Number of Dowels between Longitudinal Joints |
| 14'-0" | 14 |
| 13'-0" | 13 |
| 12'-0" | 12 |
| 11'-0" | 11 |
| 10'-0" | 10 |
| 8'-0" | 8 |
| 5'-0" | 5 |
| 4'-0" | 4 |



SECTION A-A TRANSVERSE CONSTRUCTION JOINT DETAIL

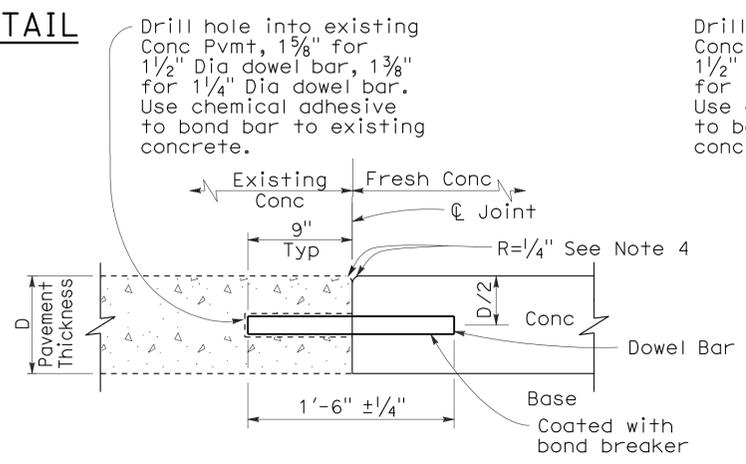


TRANSVERSE CONTRACTION JOINT



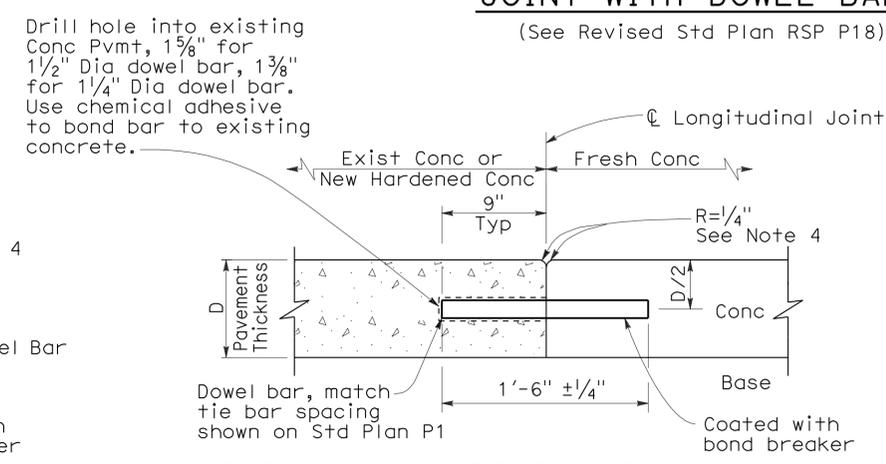
LONGITUDINAL CONTRACTION JOINT WITH DOWEL BARS

(See Revised Std Plan RSP P18)



TRANSVERSE CONSTRUCTION JOINT FOR EXISTING CONCRETE PAVEMENT

(Drill and bond locations)



LONGITUDINAL CONSTRUCTION JOINT WITH DOWEL BARS

(See Revised Std Plan RSP P18)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-DOWEL BAR DETAILS
NO SCALE

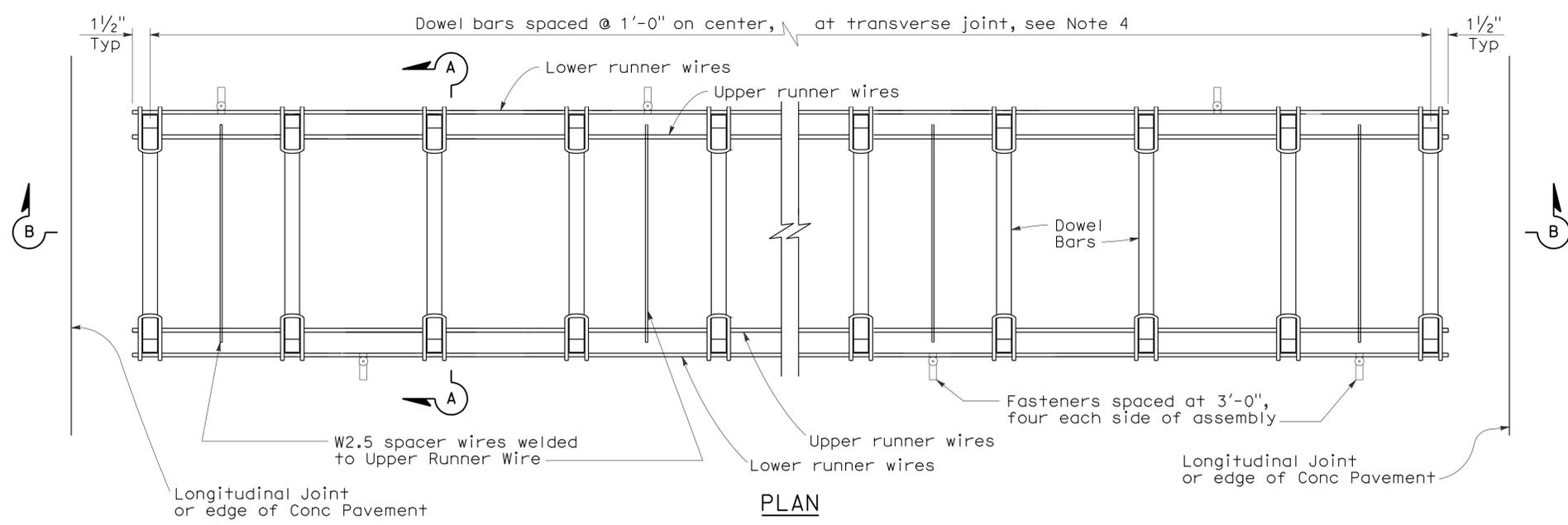
RSP P10 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P10 DATED MAY 1, 2006 - PAGE 124 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP P10

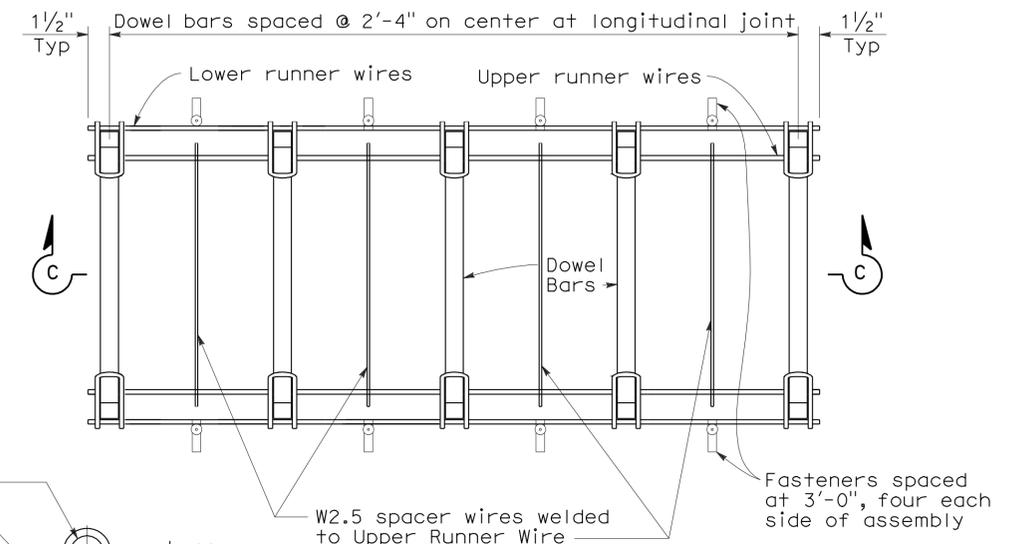
| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1176 | 1507 |

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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 REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

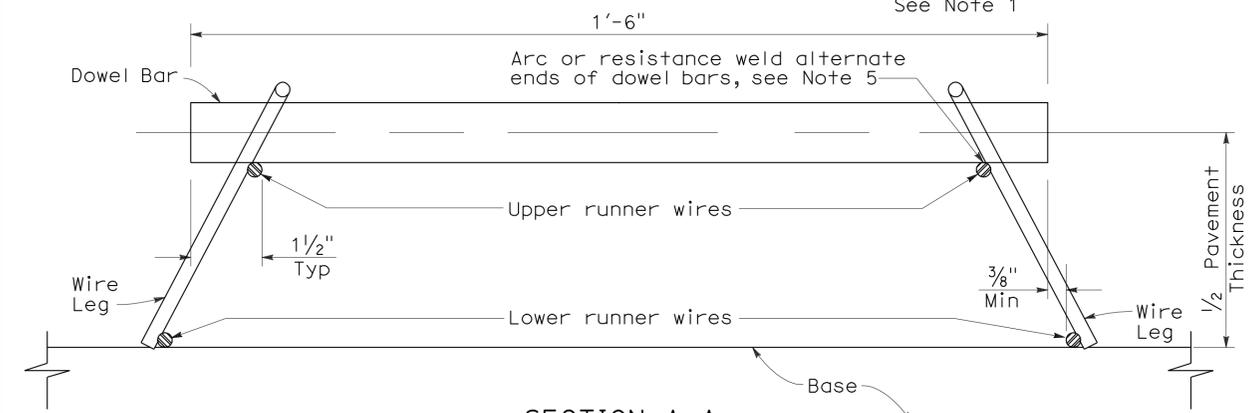
To accompany plans dated 6-27-11



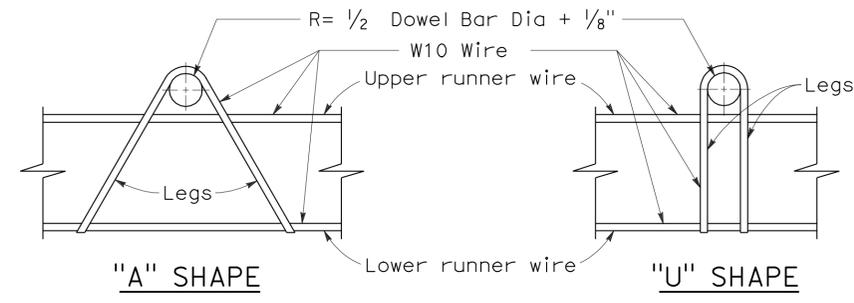
PLAN
DOWEL BAR BASKET
(TRANSVERSE JOINT)
 See Note 1



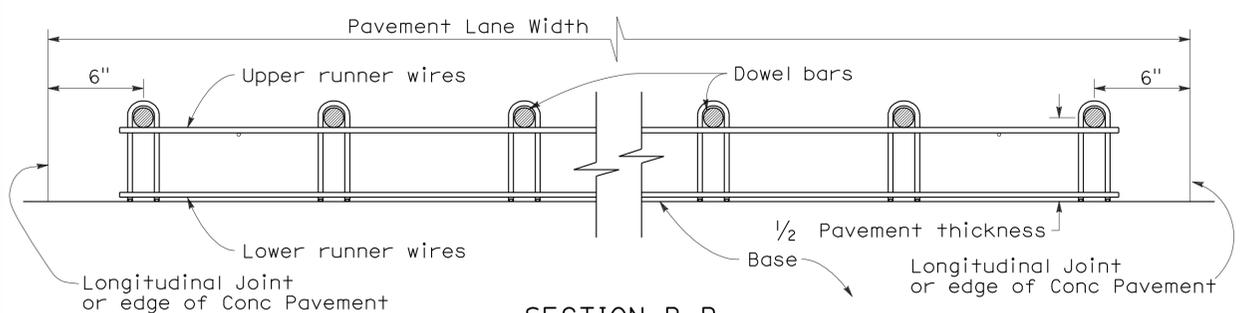
PLAN
DOWEL BAR BASKET
(LONGITUDINAL JOINT)
 See Note 1



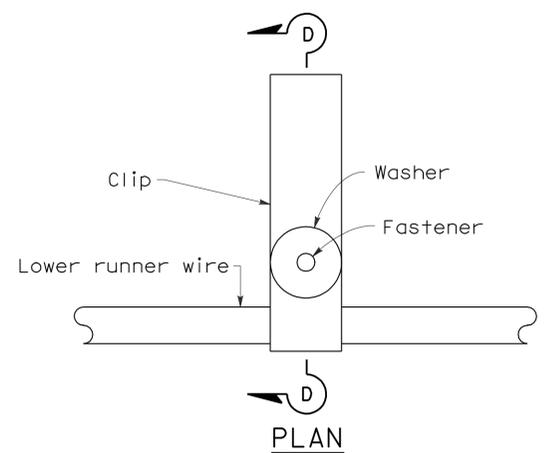
SECTION A-A



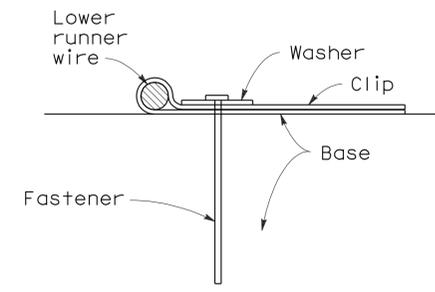
ASSEMBLY FRAME DETAILS



SECTION B-B
See Note 1



FASTENER DETAIL



SECTION D-D

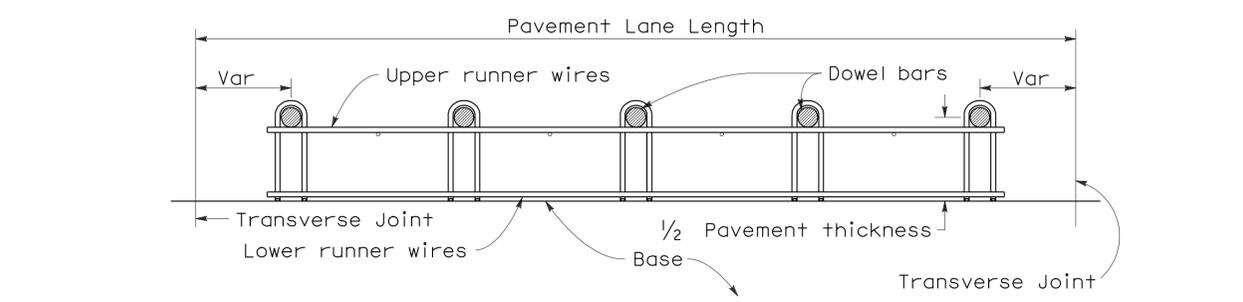
NOTES:

- "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
- Wire sizes shown are minimum required.
- All wire intersections are to be resistance welded.
- Use tie bar spacing for longitudinal dowel bar locations. See Revised Std Plans RSPs P1, P2, and P3 for tie bar requirements.
- Weld may be at top or bottom of dowel bar.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-
DOWEL BAR BASKET
DETAILS

NO SCALE



SECTION C-C
See Notes 1 and 4

RSP P12 DATED MAY 15, 2009 SUPERSEDES RSP P12 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P12 DATED MAY 1, 2006 - PAGE 125 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P12

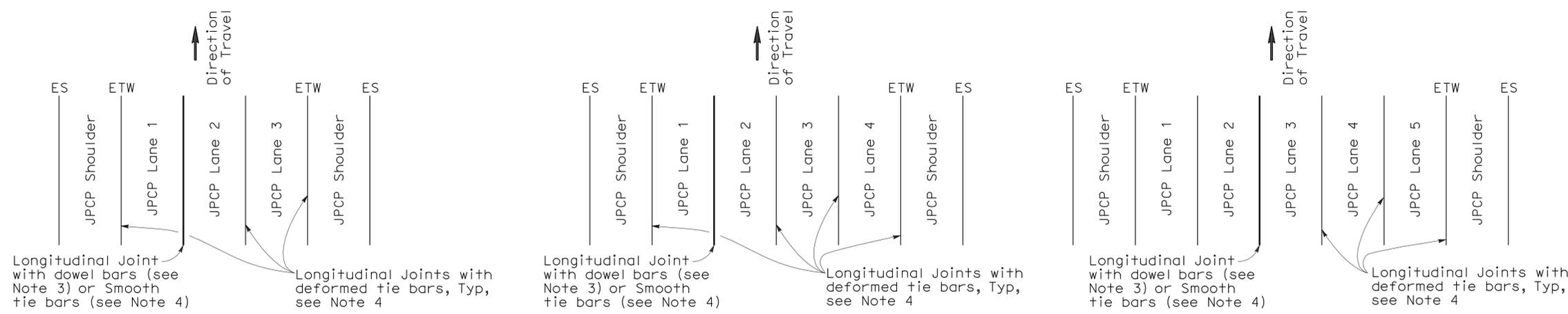
2006 REVISED STANDARD PLAN RSP P12

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1177 | 1507 |

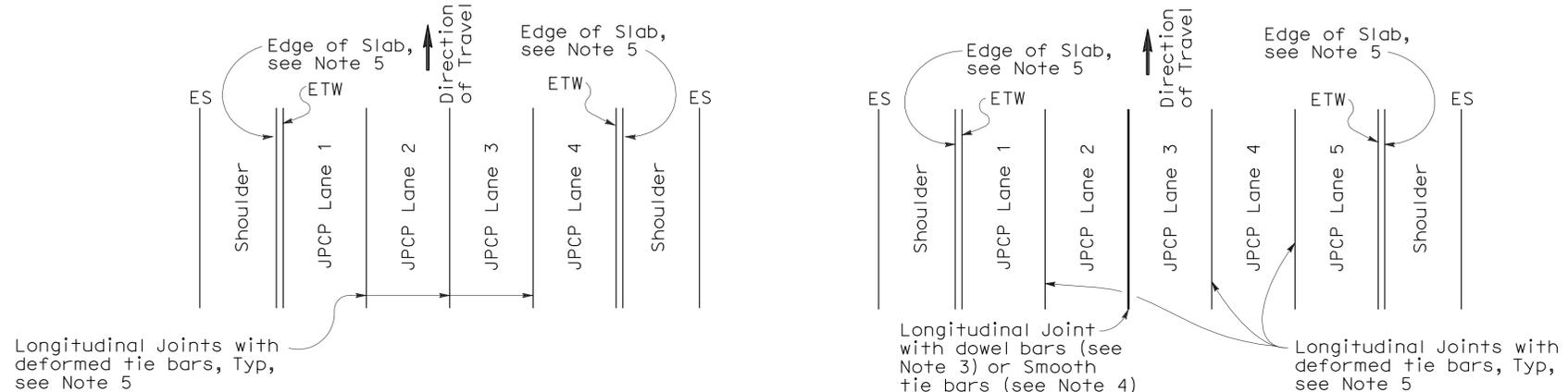
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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 William K. Farnbach
 No. C49042
 Exp. 9-30-10
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To accompany plans dated 6-27-11

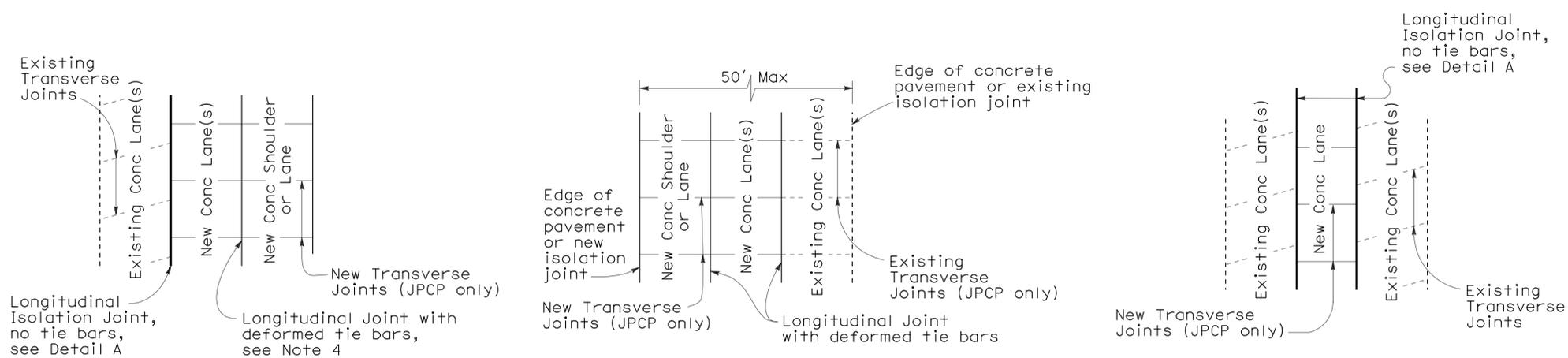


3 LANES WITH TIED CONCRETE SHOULDERS PLAN **4 LANES WITH TIED CONCRETE SHOULDERS PLAN** **5 LANES WITH TIED CONCRETE SHOULDERS PLAN**



4 LANES OR LESS WITH WIDENED SLAB PLAN **5 LANES WITH WIDENED SLAB PLAN**

NEW CONSTRUCTION
Location of Longitudinal Joints (For JPCP)



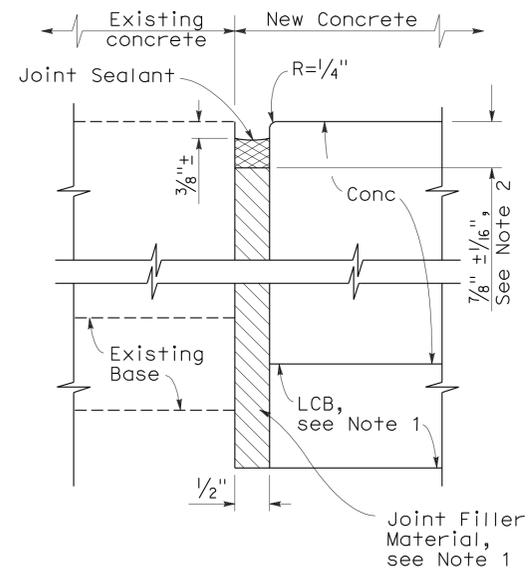
CASE 1 PLAN **CASE 2 PLAN** **CASE 3 (INTERIOR LANE REPLACEMENT) PLAN**

Transverse Joints do not align between new and existing Transverse Joints align between new and existing Transverse Joints do not align between new and existing

LANE/SHOULDER ADDITION OR RECONSTRUCTION
(For JPCP and CRCP)

NOTES:

- Where Lean Concrete Base is not used as base material, the joint filler material used for the longitudinal isolation joint shall only extend to the bottom of the new concrete slab. See Detail A.
- Use 5/8" ± 1/16" dimension for silicone sealant.
- See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
- See Revised Standard Plan RSP P1.
- See Revised Standard Plan RSP P2.



DETAIL A
ISOLATION JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-LANE SCHEMATICS AND ISOLATION JOINT DETAIL
NO SCALE

RSP P18 DATED JUNE 5, 2009 SUPERSEDES RSP P18 DATED MAY 15, 2009, RSP P18 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P18 DATED MAY 1, 2006 - PAGE 127 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P18

2006 REVISED STANDARD PLAN RSP P18

NOTE:

1. Tie bars, dowel bars, and reinforcement are not shown in joint seal details, see Revised Standard Plans RSP P1, RSP P3, RSP P10, RSP P35, RSP P45, or RSP P46 as applicable.

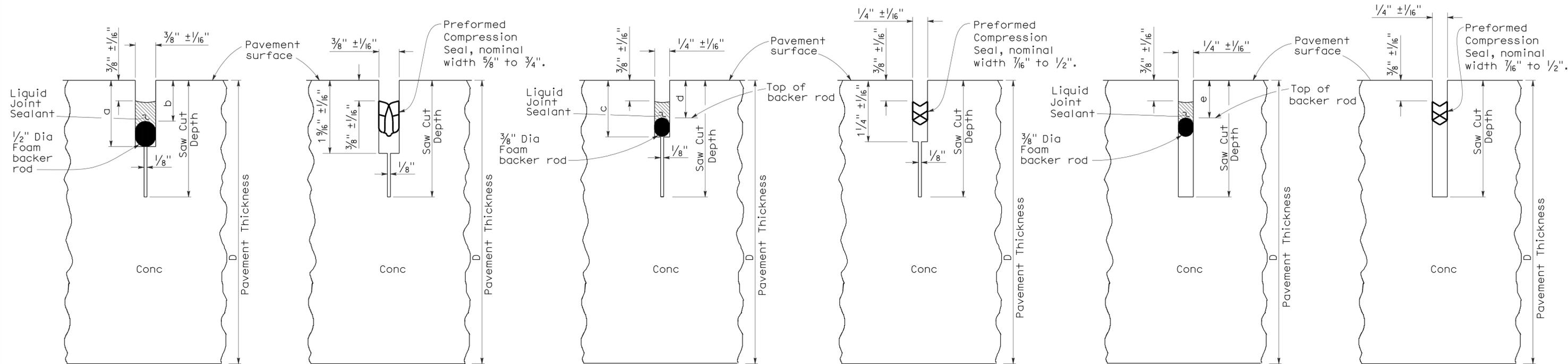
| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1178 | 1507 |

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

May 15, 2009
 PLANS APPROVAL DATE

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To accompany plans dated 6-27-11



LIQUID SEALANT COMPRESSION SEAL LIQUID SEALANT COMPRESSION SEAL LIQUID SEALANT COMPRESSION SEAL

TYPE A1 **TYPE A2** **TYPE B**

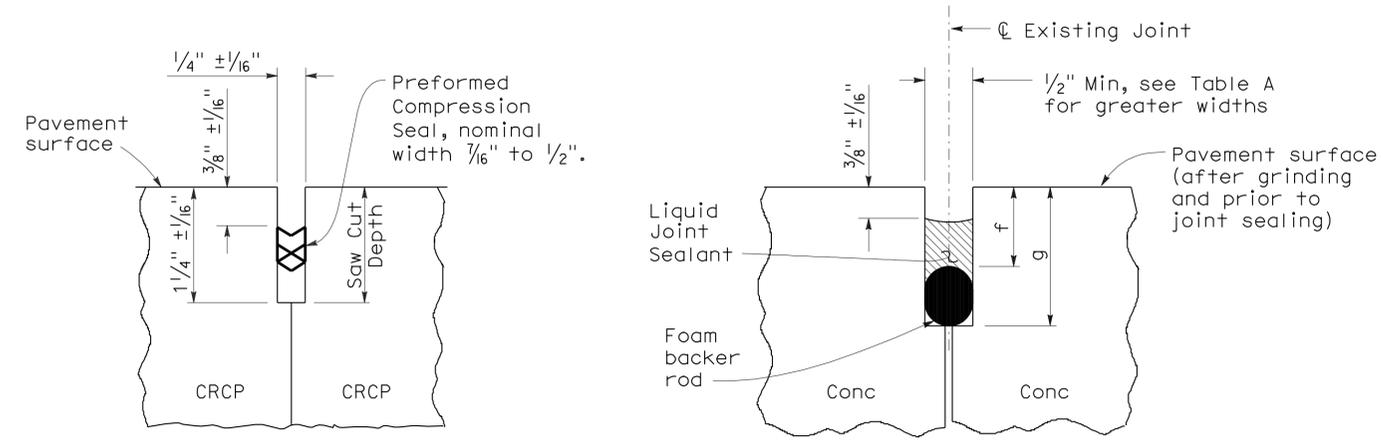
Transverse Contraction Joints Longitudinal Contraction Joints Longitudinal or Transverse Contraction Joint

LIQUID SEALANT RESERVOIR DEPTH

| LIQUID SEALANT MATERIAL | 3/8" Joint Width Type A1 | | 1/4" Joint Width Type A2 | | 1/4" Joint Width Type B |
|-------------------------|--------------------------|--------------|--------------------------|----------------|-------------------------|
| | DIMENSION | | DIMENSION | | DIMENSION |
| | a | b | c | d | e |
| SILICONE | 1" ± 1/16" | 5/8" ± 1/16" | 15/16" ± 1/16" | 9/16" ± 1/16" | 9/16" ± 1/16" |
| ASPHALT RUBBER | 1 3/16" ± 1/16" | 3/4" ± 1/16" | 1 1/16" ± 1/16" | 11/16" ± 1/16" | 11/16" ± 1/16" |

TABLE A (TYPE R JOINT)

| Sawn Joint Width | Backer Rod Diameter ± 1/16" | DIMENSION "f" | DIMENSION "g" |
|------------------|-----------------------------|---------------|---------------|
| 1" | 1 5/16" | 7/8" | 2 1/4" |
| 7/8" | 1 3/16" | 13/16" | 2" |
| 3/4" | 1" | 3/4" | 1 3/4" |
| 5/8" | 7/8" | 11/16" | 1 1/2" |
| 1/2" | 11/16" | 5/8" | 1 1/4" |



COMPRESSION SEAL LIQUID SEALANT

TYPE C **TYPE R**

Transverse and Longitudinal Construction Joints (For CRCP) Retrofit Transverse and Longitudinal Joints

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-JOINT DETAILS

NO SCALE

RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20 DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

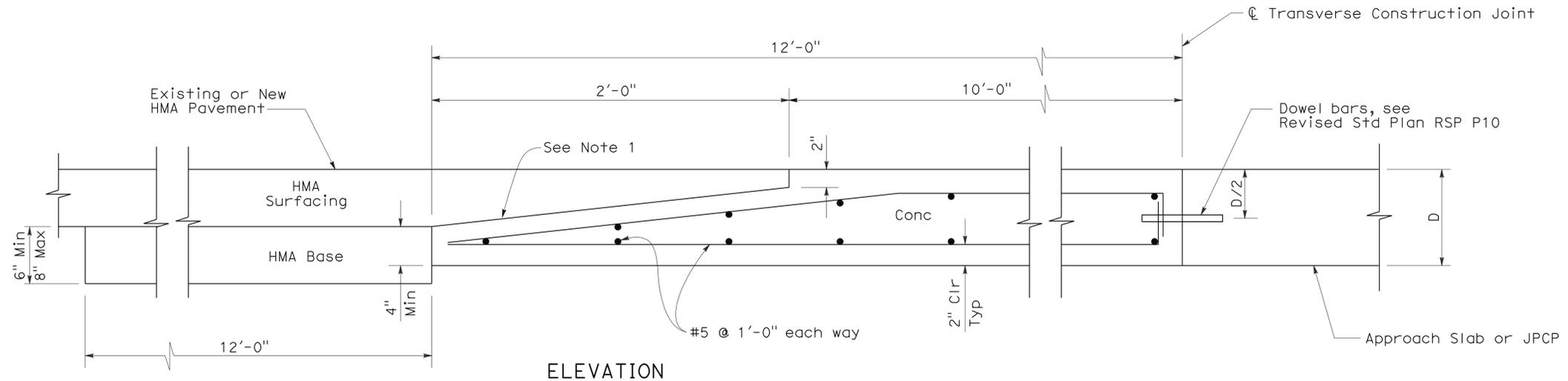
REVISED STANDARD PLAN RSP P20

2006 REVISED STANDARD PLAN RSP P20

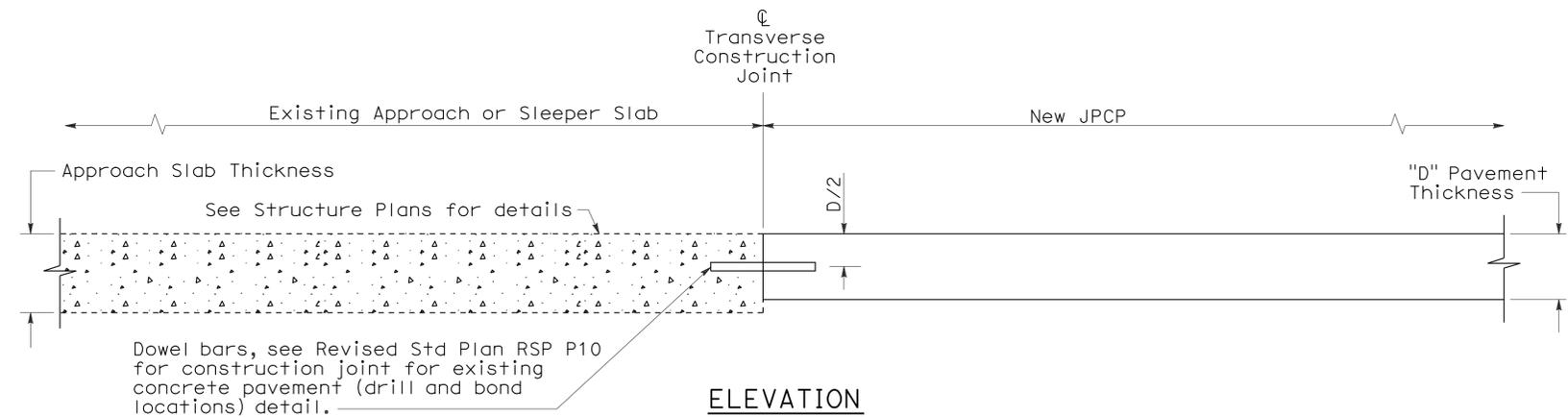
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1179 | 1507 |

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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To accompany plans dated 6-27-11

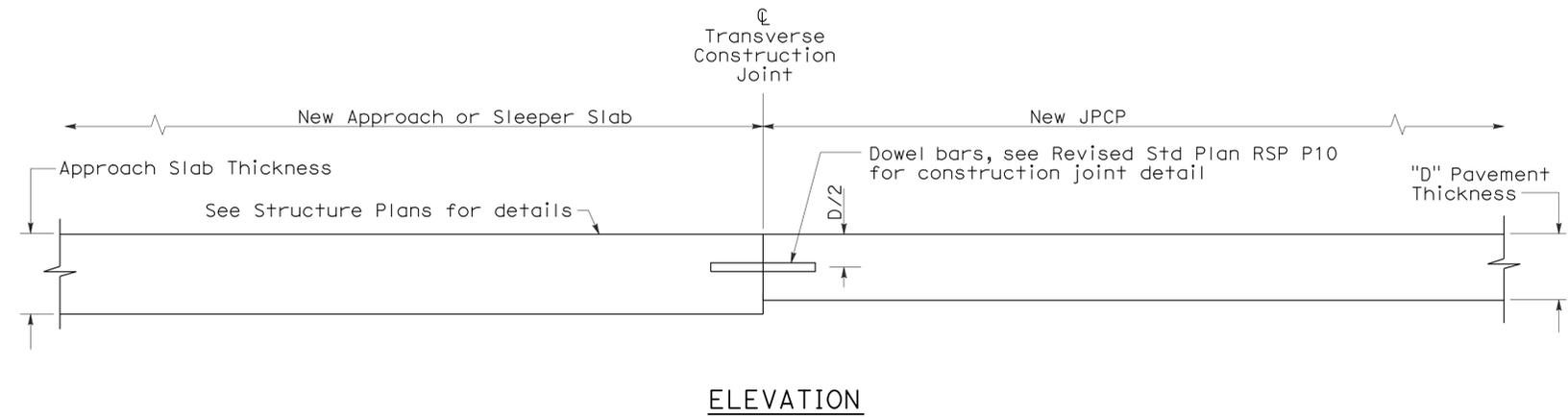


CONCRETE PAVEMENT TO HOT MIXED ASPHALT PAVEMENT TRANSITION PANEL



ELEVATION PAVEMENT END ANCHOR

NOTE:
1. Heavy broom finish.



CONCRETE PAVEMENT TRANSITION TO APPROACH OR SLEEPER SLAB

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**JOINTED PLAIN CONCRETE PAVEMENT-
END PANEL
PAVEMENT TRANSITIONS**
NO SCALE

RSP P30 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P30
DATED MAY 1, 2006 - PAGE 129 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P30

2006 REVISED STANDARD PLAN RSP P30

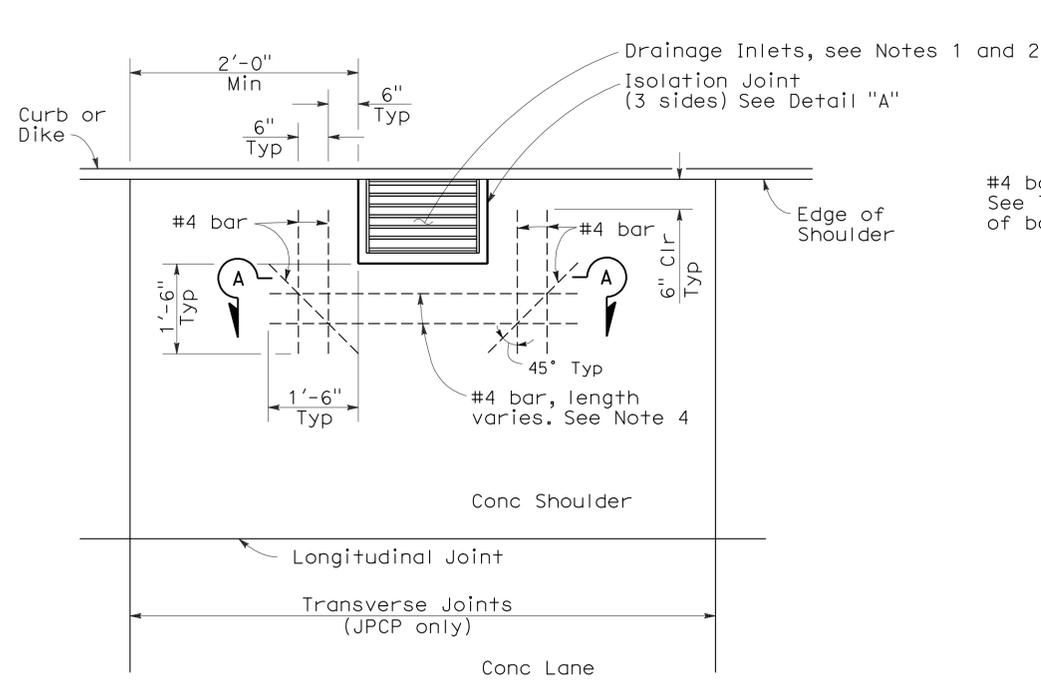
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1180 | 1507 |

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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 REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 6-27-11

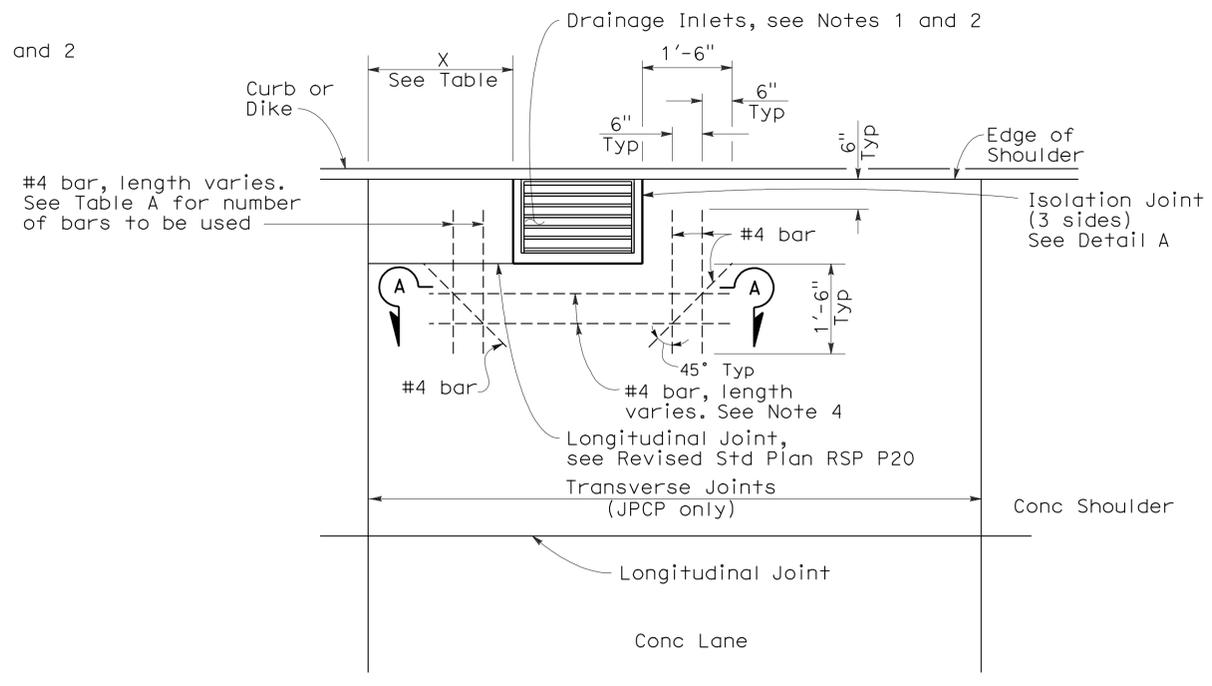
NOTES:

1. Refer to Project Plans for location and Type of drainage inlets.
2. Top of inlet shall be flush with shoulder surface.
3. Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
4. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
5. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.
6. Dowel and tie bars not shown, see Revised Standard Plan RSP P1.



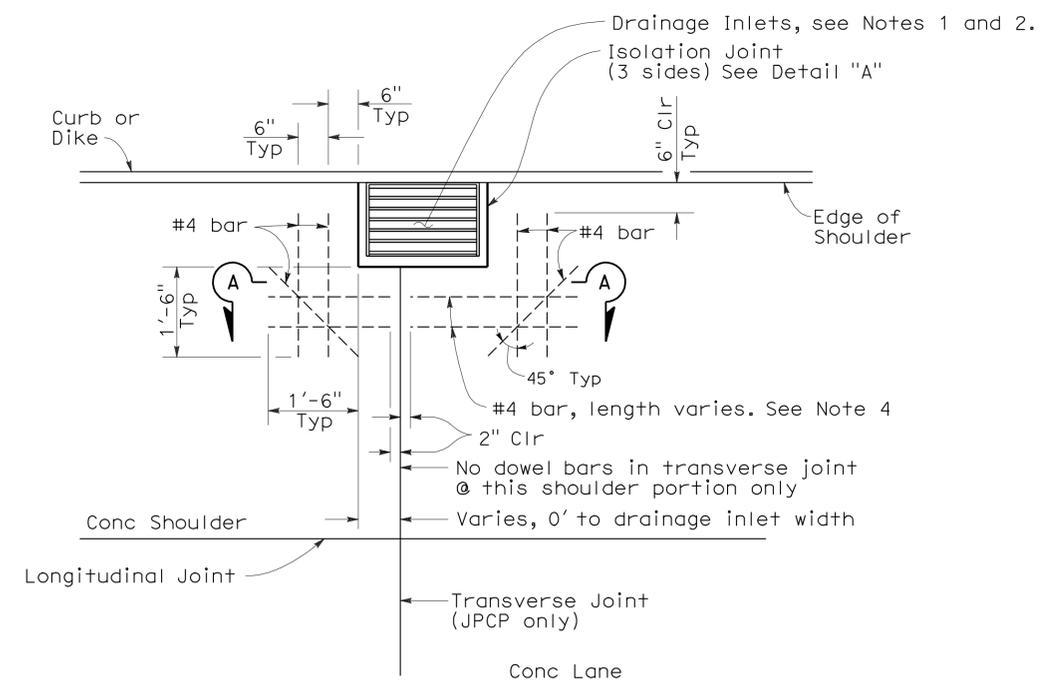
CASE 1

Transverse joint more than 2'-0" clear of drainage inlet wall or no transverse joint



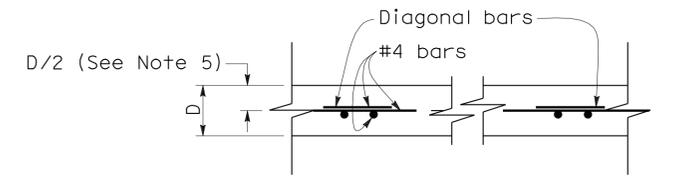
CASE 3

Transverse joint within 2'-0" of drainage inlet wall, or matches drainage inlet wall.



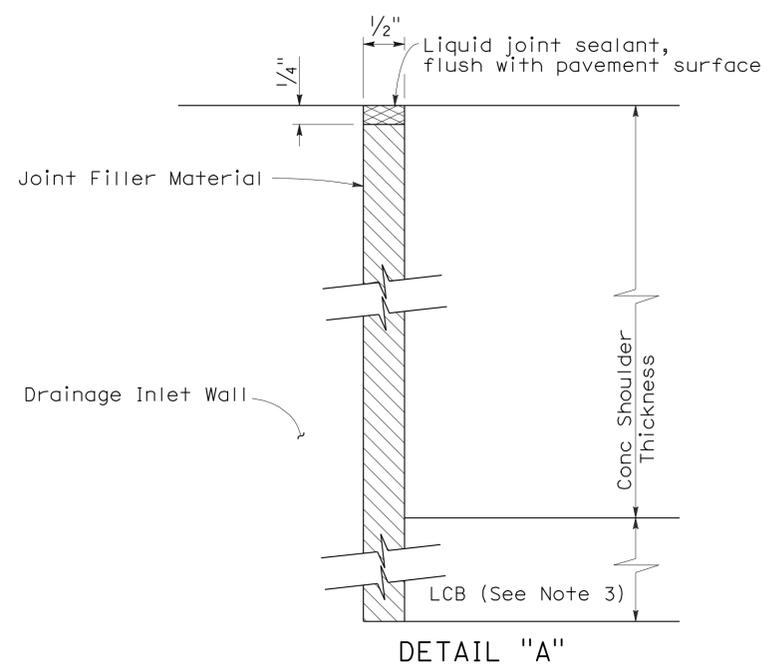
CASE 2

Transverse joint intersects drainage inlet, or matches drainage inlet wall.



SECTION A-A

D = Pavement Thickness



DETAIL "A"

ISOLATION JOINT AROUND DRAINAGE INLET

TABLE A

| DISTANCE X | BARS REQUIRED |
|----------------|---------------|
| 2'-0" to 1'-6" | 2 |
| 1'-6" to 9" | 1 @ X/2 |
| 9" or less | None |

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
 DRAINAGE INLET
 DETAILS No. 1**
 NO SCALE

RSP P45 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P45
 DATED MAY 1, 2006 - PAGE 132 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P45

2006 REVISED STANDARD PLAN RSP P45

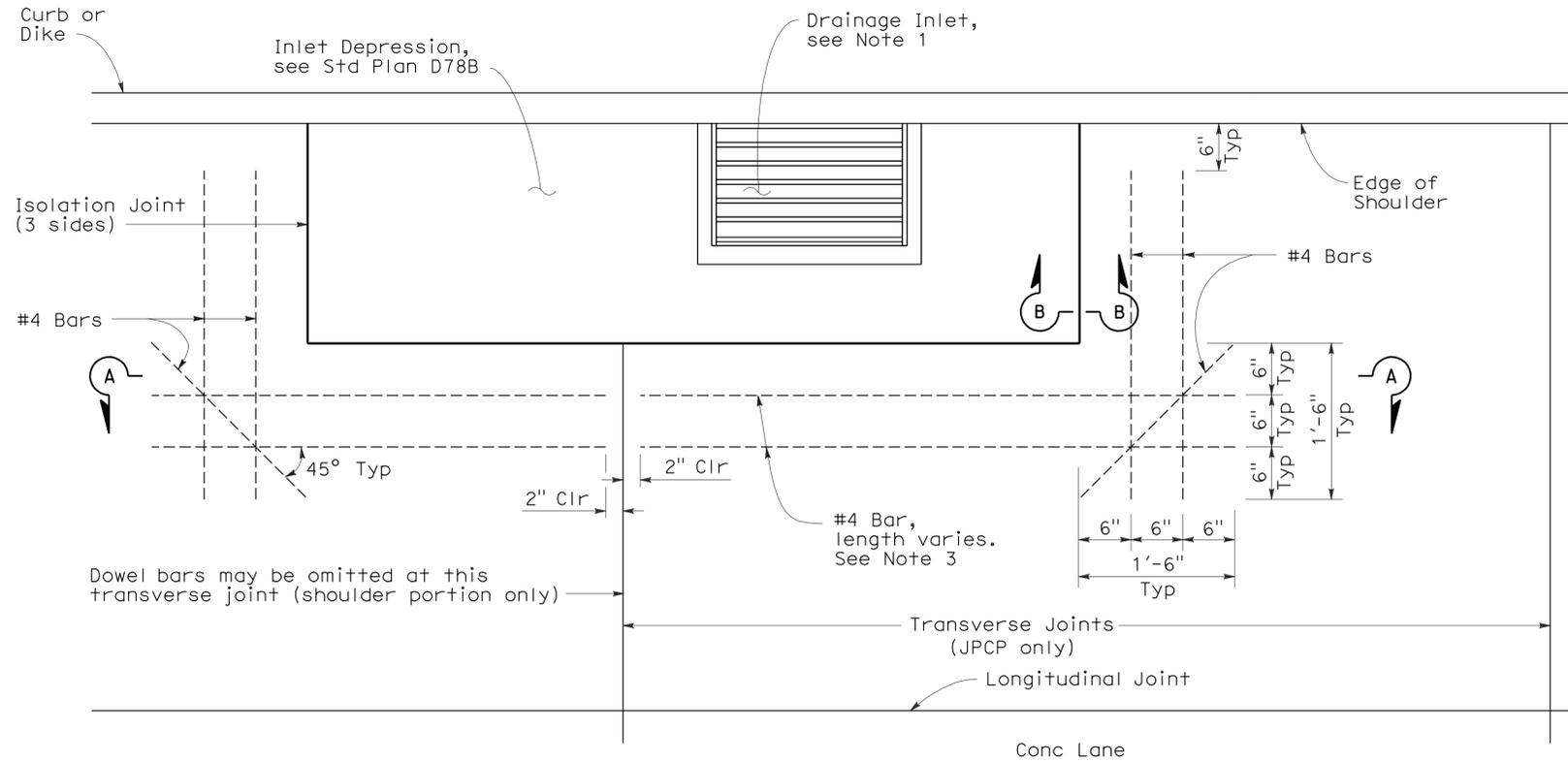
| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1181 | 1507 |

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE

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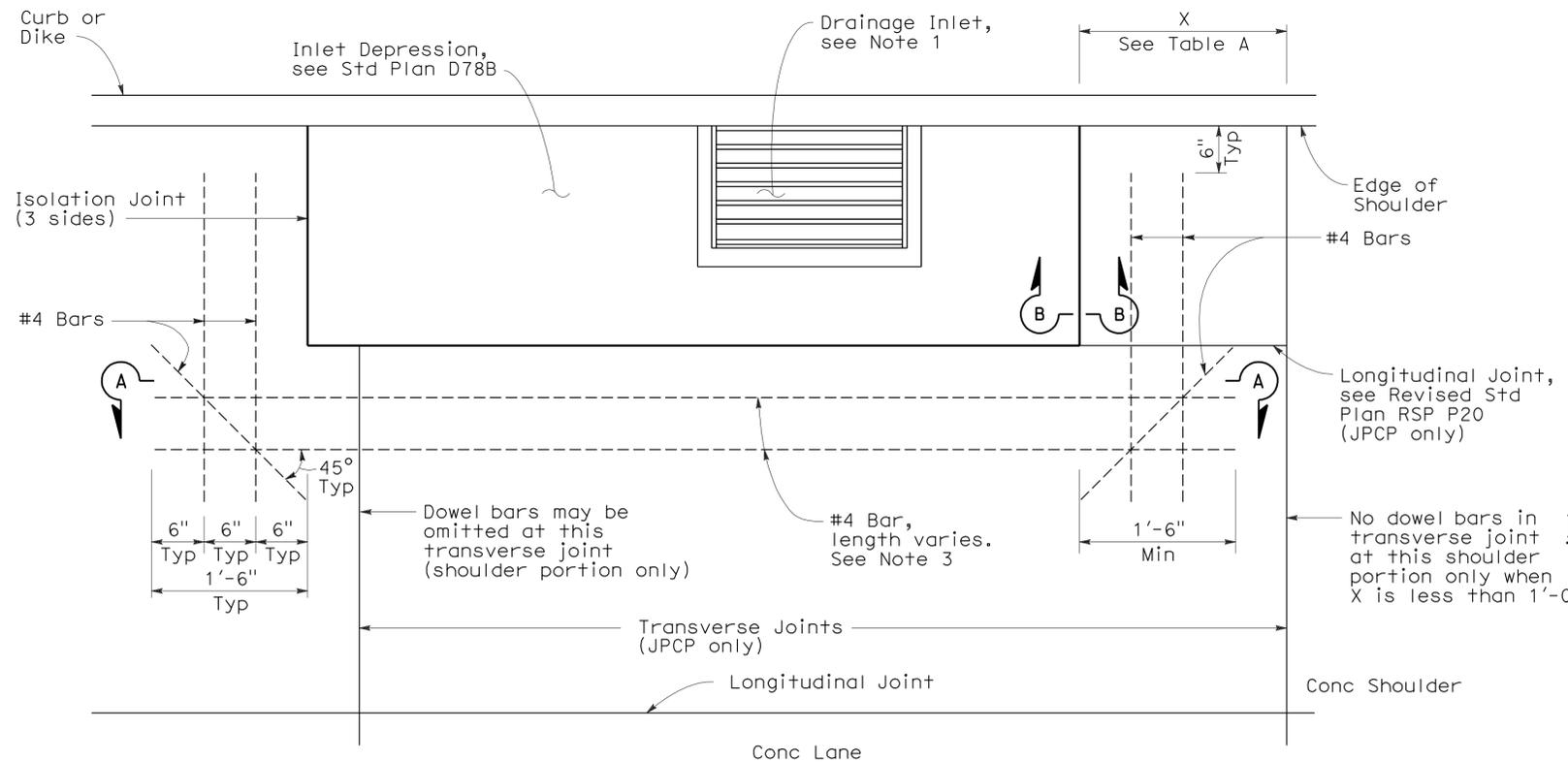
To accompany plans dated 6-27-11

2006 REVISED STANDARD PLAN RSP P46



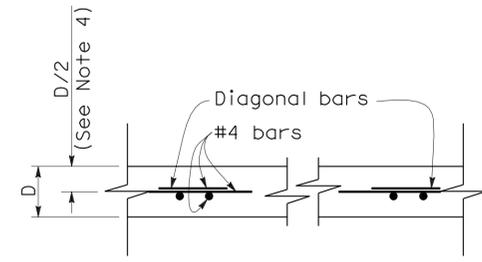
CASE A

Transverse Joint intersects inlet depression or no transverse joints.



CASE B

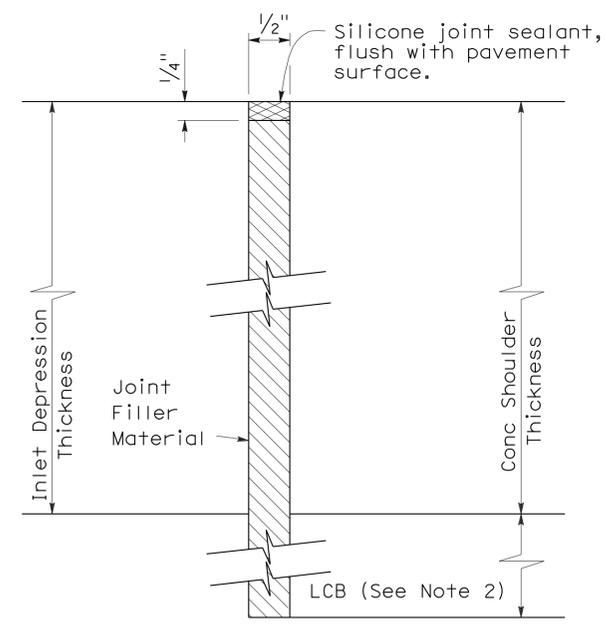
Transverse Joint within 2'-0" of edge of inlet depression.



SECTION A-A
D = Pavement Thickness

TABLE A

| DISTANCE X | BARS REQUIRED |
|----------------|---------------|
| 2'-0" to 1'-6" | 2 |
| 1'-6" to 1'-0" | 1 |
| 1'-0" or less | None |



SECTION B-B

NOTES:

1. Refer to Project Plans for location and type of drainage inlets.
2. Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
3. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
4. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.

ISOLATION JOINT AROUND INLET DEPRESSION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
DRAINAGE INLET
DETAILS No. 2**
NO SCALE

RSP P46 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P46
DATED MAY 1, 2006 - PAGE 133 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P46

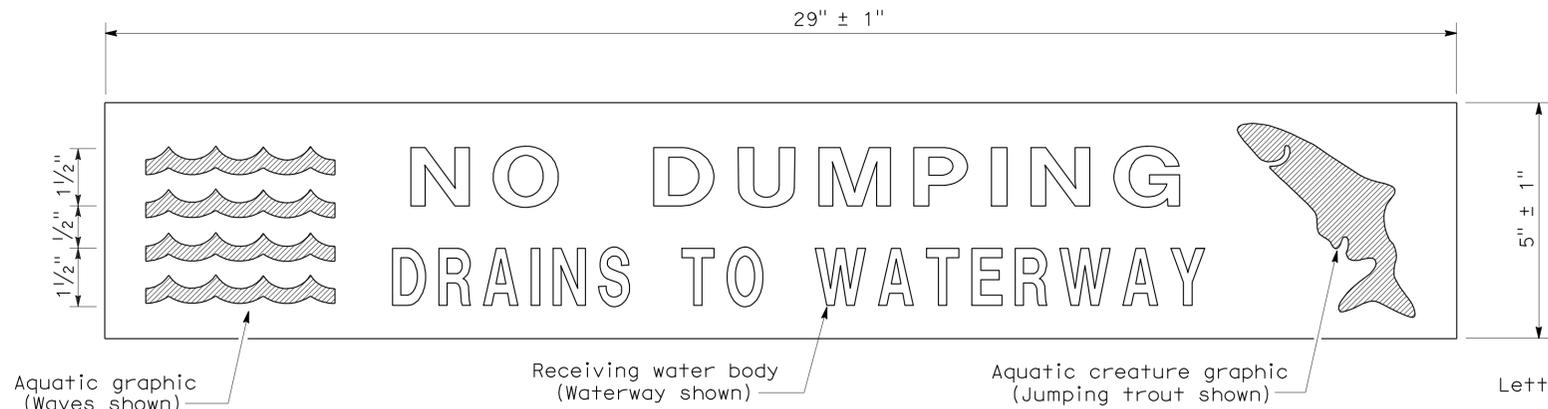
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1182 | 1507 |

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

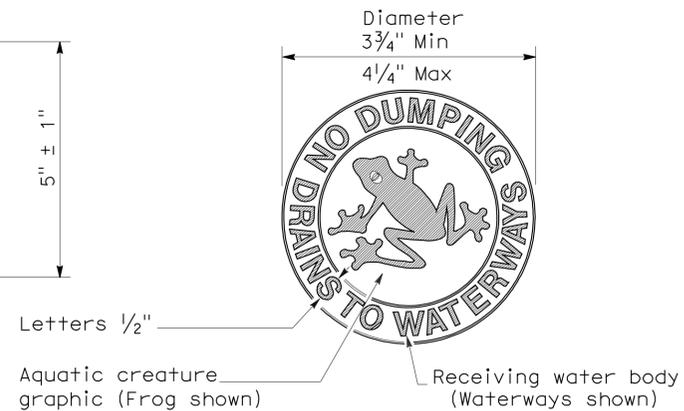
April 3, 2009
 PLANS APPROVAL DATE

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To accompany plans dated 6-27-11



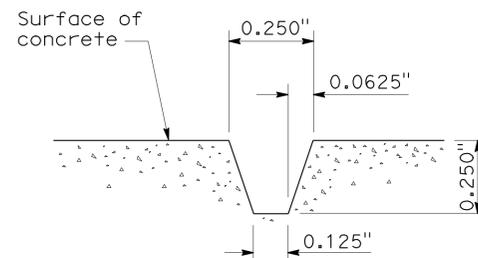
PLAN
 DRAINAGE INLET MARKER
 (PREFABRICATED THERMOPLASTIC)



PLAN
 DRAINAGE INLET MARKER
 (MEDALLION)

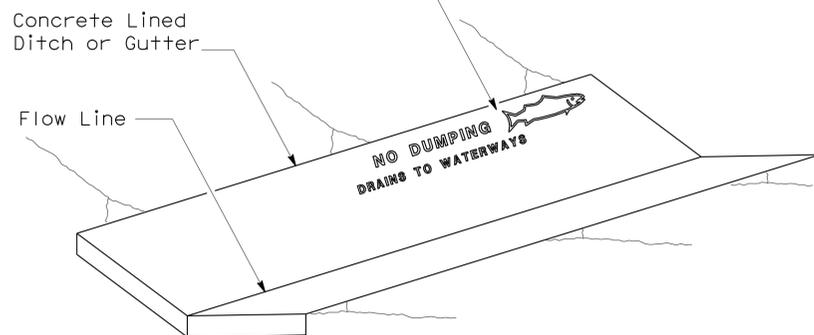


PLAN
 DRAINAGE INLET MARKER
 (STAMPED CONCRETE IMPRINT)

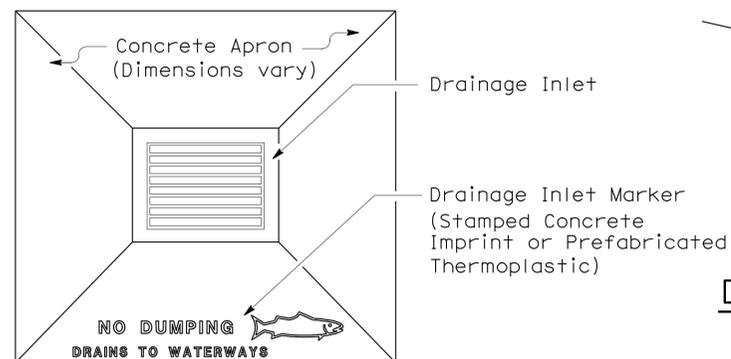


SECTION A-A
 STAMPED CONCRETE
 IMPRINT DETAIL

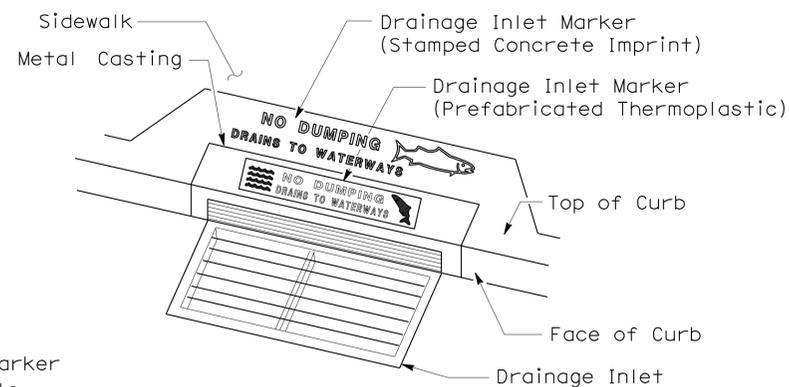
Drainage Inlet Marker
 (Stamped Concrete Imprint or
 Prefabricated Thermoplastic)
 Locations as shown on the
 plans or as directed by the
 Engineer



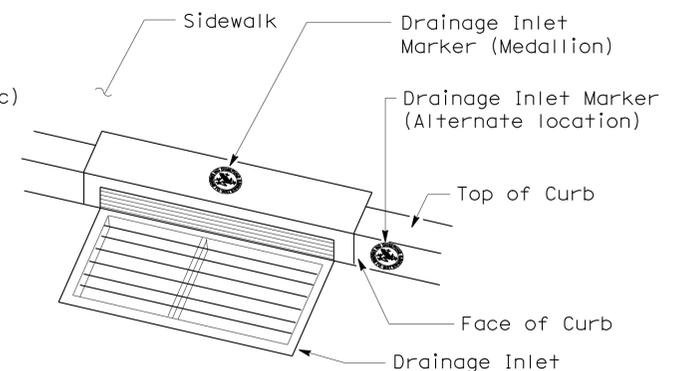
PERSPECTIVE
 DRAINAGE INLET MARKER ON
 CONCRETE LINED DITCH



PLAN
 DRAINAGE INLET MARKER ON
 DRAINAGE INLET APRON



PERSPECTIVE
 DRAINAGE INLET MARKER ON
 DRAINAGE INLET



PERSPECTIVE
 DRAINAGE INLET MARKER (MEDALLION)
 ON DRAINAGE INLET

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
DRAINAGE INLET MARKERS
 NO SCALE

NSP D71 DATED APRIL 3, 2009 SUPPLEMENTS
 THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP D71

2006 NEW STANDARD PLAN NSP D71

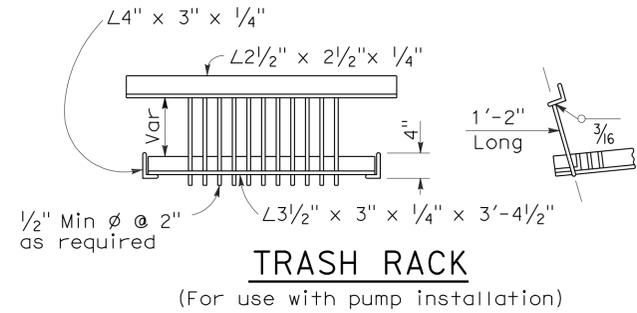
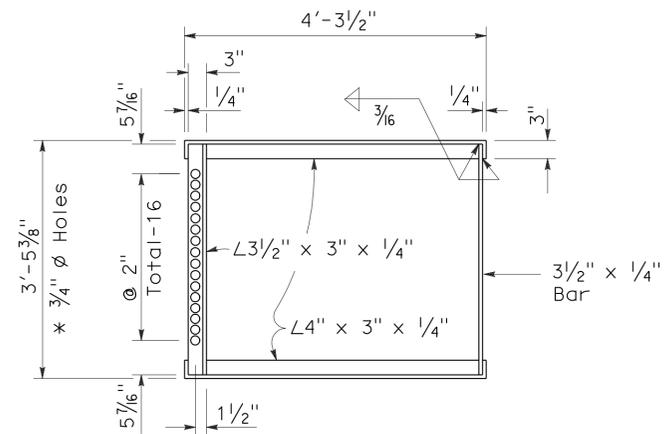
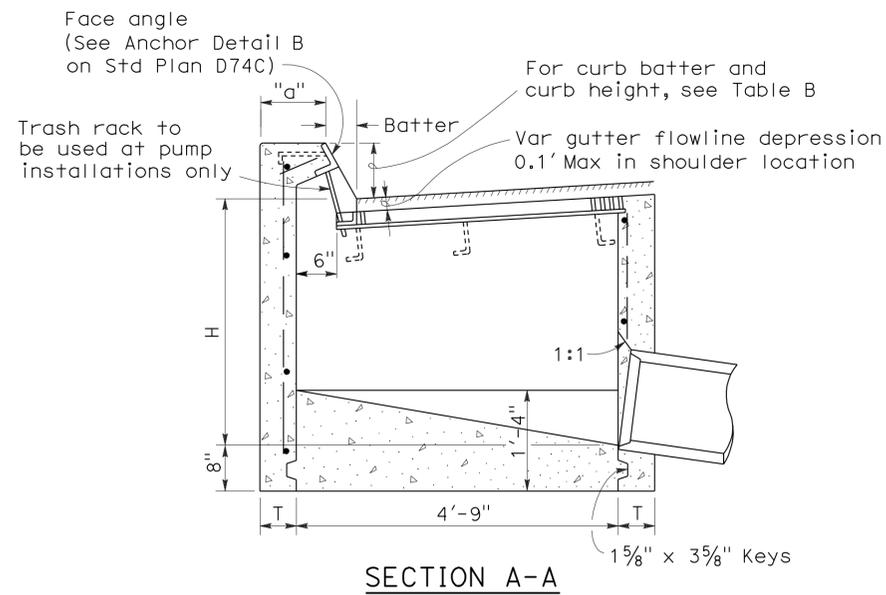
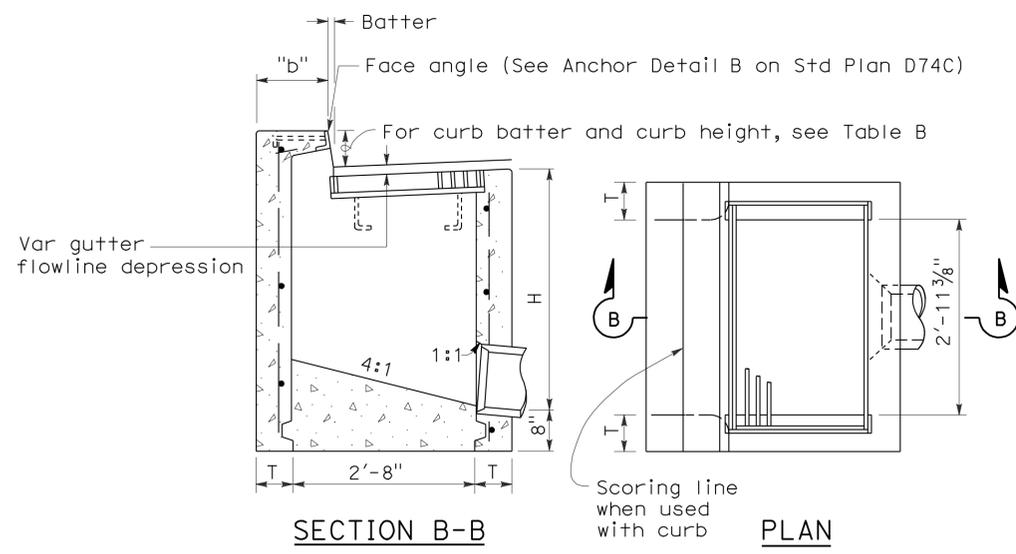


TABLE A
CONCRETE QUANTITIES

| TYPE | H=3'-0" TO 8'-0" (T=6") | | H=8'-1" TO 20'-0" (T=8") | |
|------|-------------------------|------------------------------|--------------------------|------------------------------|
| | H=3'-0" (CY) | ADDITIONAL PCC PER FOOT (CY) | H=8'-1" (CY) | ADDITIONAL PCC PER FOOT (CY) |
| GO | 1.24 | 0.245 | 3.39 | 0.346 |
| GDO | 1.62 | 0.322 | 4.36 | 0.446 |

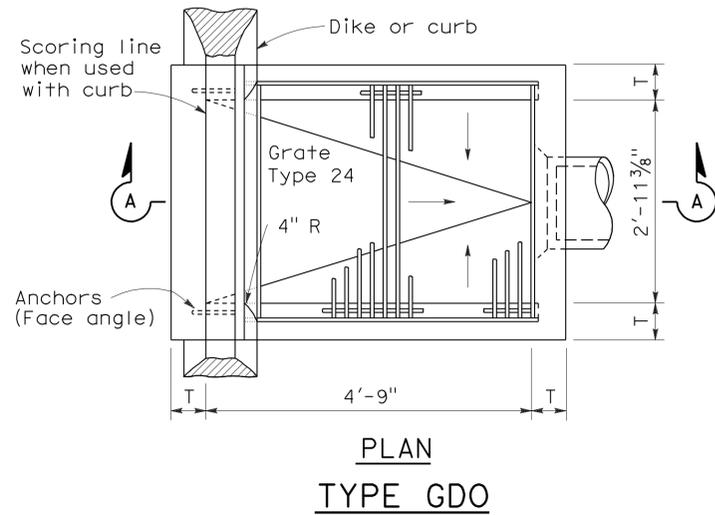
Table based on 8" floor slab, no deduction for pipe openings, and curb type giving highest quantity of concrete. No deductions or adjustments are to be made to these quantities because of pipe openings, different floor alternatives or different curb type.

TABLE B

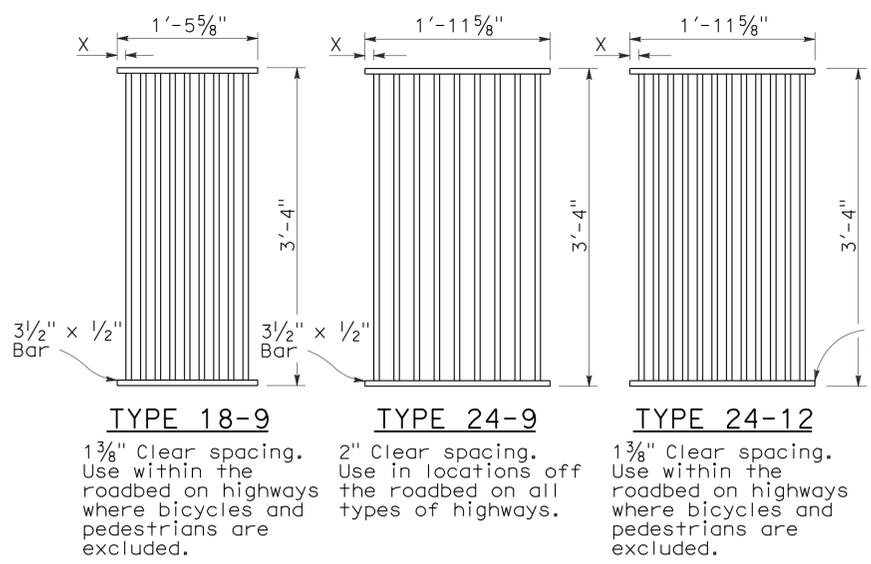
| CURB TYPE | NORMAL CURB HEIGHT | CURB BATTER | "a" DIMENSION | "b" DIMENSION |
|-------------|--------------------|-------------|---------------|---------------|
| A1-6 | 6" | 1 1/2" | T+7 1/2" | T+6 1/2" |
| A1-8 | 8" | 2" | T+7" | T+6" |
| B1-6 | 6" | 4" | T+5" | T+4" |
| Type A Dike | 6" | 3" | T+6" | T+5" |

NOTES:

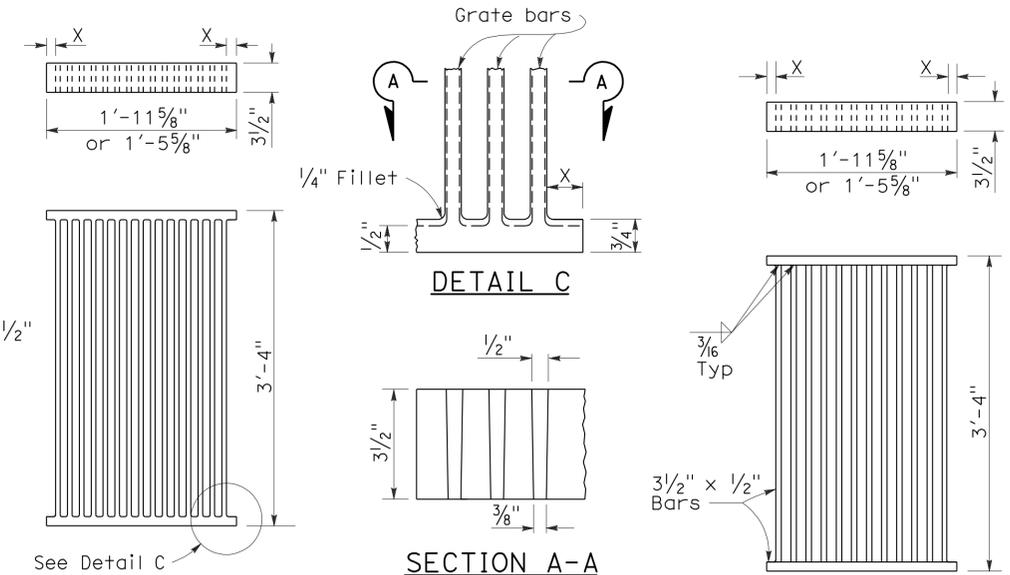
- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undeepressed.
- For "T" wall thickness, see Table A below.
- Wall reinforcing not required when "H" is 8'-0" or less and the unsupported width or length is 7'-0" or less. Walls exceeding these limits shall be reinforced with #4 @ 18"± centers placed 1/2" clear to inside of box unless otherwise shown.
- Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced bottom.
- Steps - None required where "H" is less than 2'-6". Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below top of inlet. The distance between steps shall not exceed 1'-0" and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Step inserts may be substituted for the bar steps. Step Inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
- When shown on the project plans, place a 3/4" plain round protection bar horizontally across the length of the opening and bend back 4" into the inlet wall on each side.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and shall slope toward the outlet pipe as shown.
- Galvanizing - See Standard Specifications or Special Provisions.
- See Standard Plan D77A and D77B for grate and frame details and weights of miscellaneous iron and Steel.
- See Standard Plan D78A for gutter depression details.
- Full penetration butt welds may be substituted for the fillet welds on all anchors.
- Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
- Cast-in-place or precast alternative is optional with contractor. See Standard Specifications.
- Cast-in-place inlets to be formed around all pipes/stubs intersecting the inlet and concrete poured in one continuous operation. Precast inlets shall have mortared pipe connections conforming to details for Type GCP inlets on Standard Plan D75B. See Standard Specifications for mortar composition.



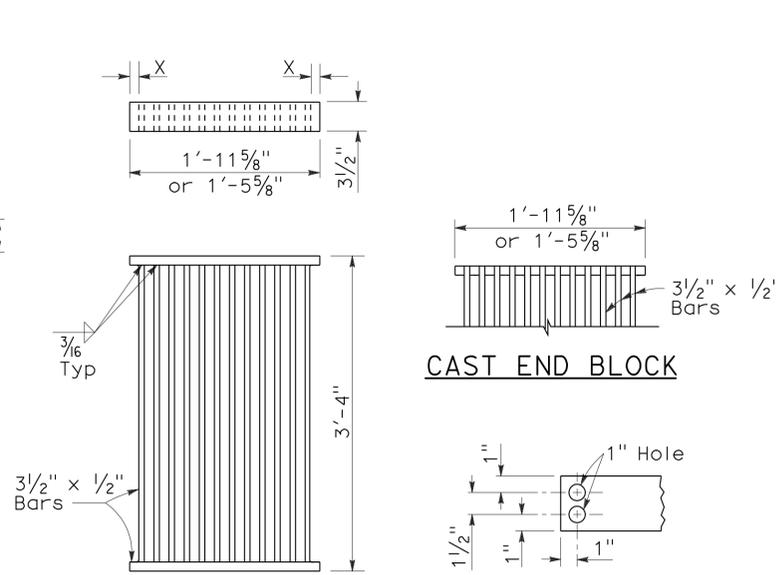
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLETS
NO SCALE



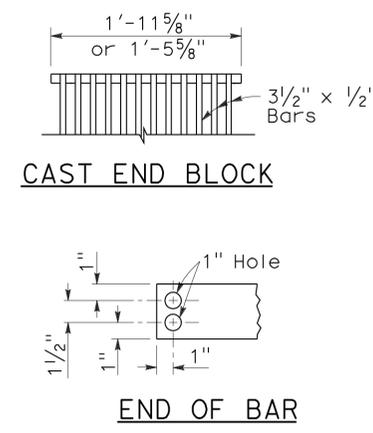
RECTANGULAR GRATE DETAILS
(See table below)



ALTERNATIVE CAST NODULAR IRON GRATE OR CAST STEEL GRATE



ALTERNATIVE WELDED GRATE

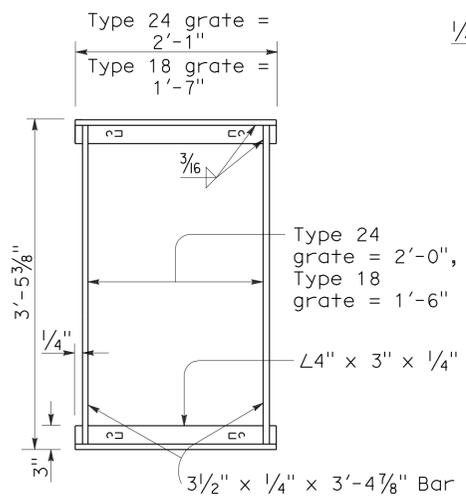


CAST END BLOCK

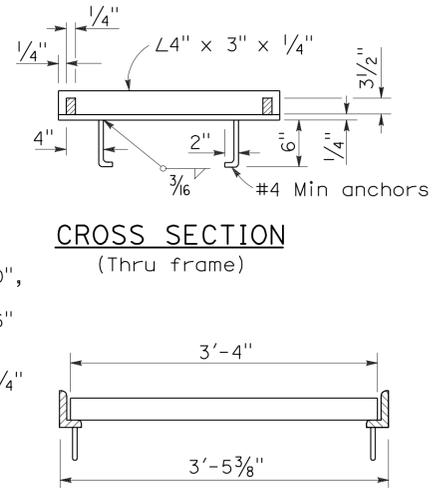
END OF BAR

NOTES:

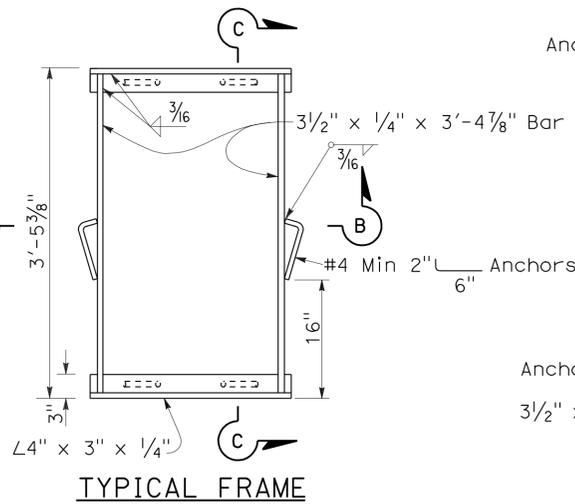
1. Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
2. Contractor has the option of using cast nodular iron, cast steel, welded, bolted, or cast end block grate.
3. See Special Provisions for requirements pertaining to galvanizing or asphalt dipping of grates and frames.
4. Rounded top of bars optional on all grates.
5. Pipe inlets with a grate shall be placed so that bars parallel direction of principle surface flow.
6. Full penetration butt welds may be substituted for the fillet welds on all anchors.
7. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
8. Grate and frame weights are based on welded grates (weights of face angles, steps, protection bars, etc. are not included).



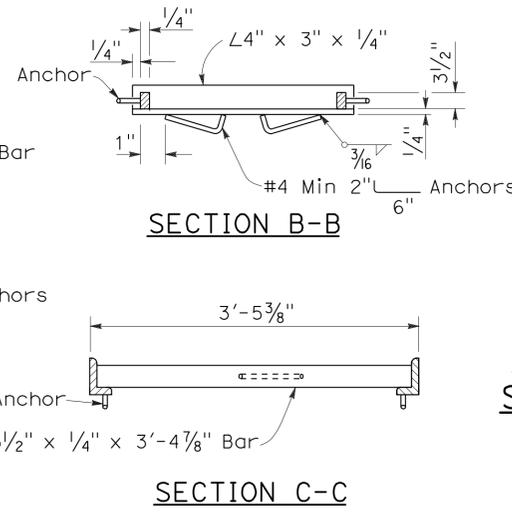
TYPICAL FRAME



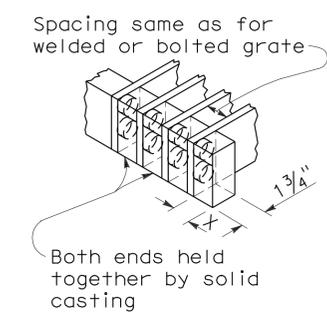
CROSS SECTION (Thru frame)
LONGITUDINAL SECTION (Thru frame and grate)



TYPICAL FRAME
ALTERNATIVE ANCHOR FOR RECTANGULAR FRAME
(For details not shown, See Rectangular Frame Details)



SECTION B-B
SECTION C-C



ALTERNATIVE CAST NODULAR IRON OR CAST STEEL END BLOCK GRATE

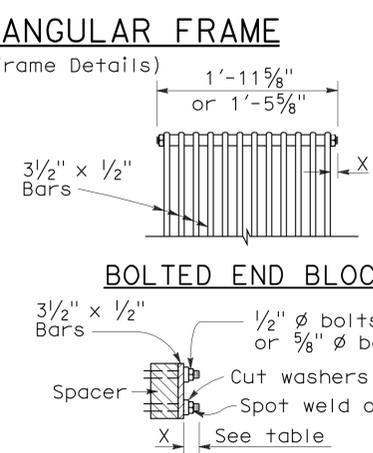
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

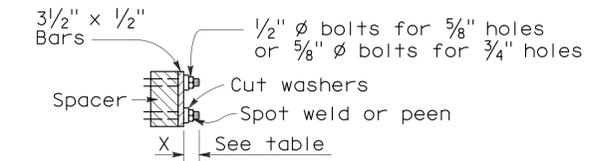
| TYPE | NO. OF BARS | CLEAR BAR SPACING | X |
|-------|-------------|-------------------|---------|
| 18-9 | 9 | 1 3/8" | 1 1/16" |
| 24-9 | 9 | 2" | 1 9/16" |
| 24-12 | 12 | 1 3/8" | 1 1/4" |

| INLET TYPE | COVER TYPE | WEIGHT LB |
|------------|------------|-----------|
| OS | PLATE | 174 |
| OL-7 | PLATE | 170 |
| OL-10 | PLATE | 170 |
| OL-14 | PLATE | 170 |
| OL-21 | PLATE | 170 |
| OCPI | PLATE | 112 |
| OCPI | REDWOOD | 42 |
| OMP | PLATE | 177 |
| OMPI | PLATE | 177 |

| INLET TYPE | GRATE TYPE | NO. OF GRATES | WEIGHT LB |
|--------------------------|------------|---------------|-----------|
| GDO | 24-12 | 2 | 634 |
| GOL-7 | 24-12 | 1 | 326 |
| GOL-10 | 24-12 | 1 | 326 |
| G0,G1,G2,G3,G4 (TYPE 24) | 24-9 | 1 | 263 |
| | 24-12 | 1 | 326 |
| G4 (TYPE 18),G5,G6 | 18-9 | 1 | 249 |
| GT1 | 18-9 | 2 | 498 |
| GT2 | 18-9 | 2 | 498 |
| GT3 | 24-12 | 2 | 652 |
| GT4 | 24-12 | 2 | 652 |
| TRASH RACK | | | 22 |

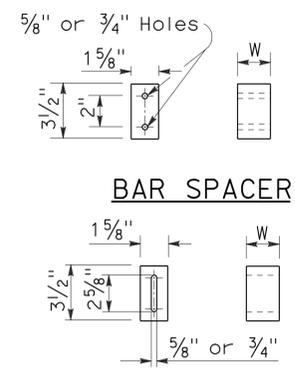


BOLTED END BLOCK



BOLTING DETAIL

ALTERNATIVE BOLTED GRATE



BAR SPACER

ALTERNATIVE SPACER
W = 1 3/8" or 2"

BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS
(See General Notes, No 8)

2006 REVISED STANDARD PLAN RSP D77A

RSP D77A DATED JANUARY 18, 2008 SUPERSEDES STANDARD PLAN D77A DATED MAY 1, 2006 - PAGE 155 OF THE STANDARD PLANS BOOK DATED MAY 2006.

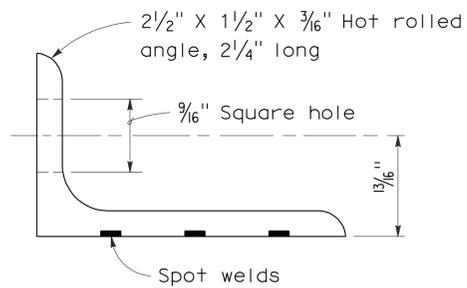
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1185 | 1507 |

Raymond Don Tsztoo
 REGISTERED CIVIL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE

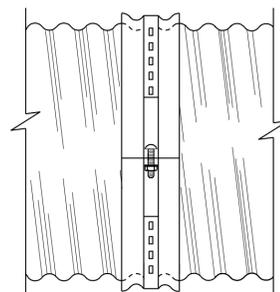
REGISTERED PROFESSIONAL ENGINEER
 Raymond Don Tsztoo
 No. C37332
 Exp. 6-30-08
 CIVIL
 STATE OF CALIFORNIA

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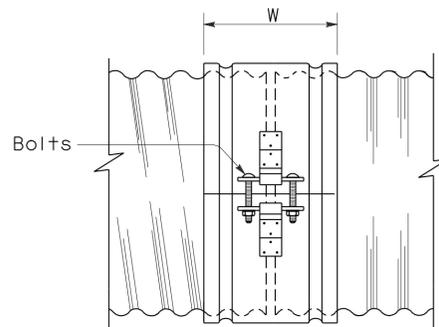
To accompany plans dated 6-27-11



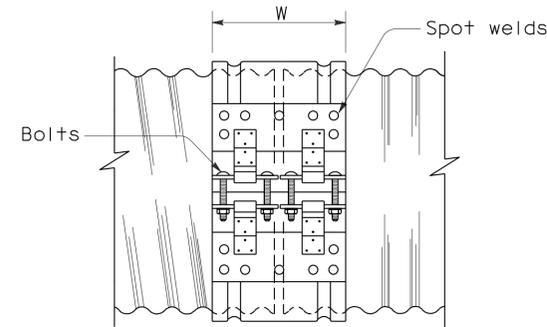
ANGLE



SIDE VIEW
ANGLE



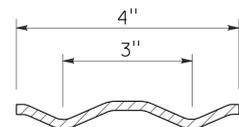
SIDE VIEW
SINGLE BAR AND STRAP



SIDE VIEW
DOUBLE BAR AND STRAP

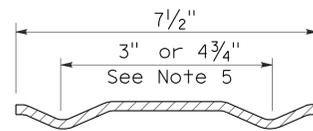
NOTES:

1. All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
2. Dimensions and thicknesses shown are minimum.
3. Spot welds shall develop minimum required strength of strap.
4. Fillet welds of equivalent strength may be substituted for spot welds or rivets.
5. Dimension depends upon whether end condition is lips up or lips down.



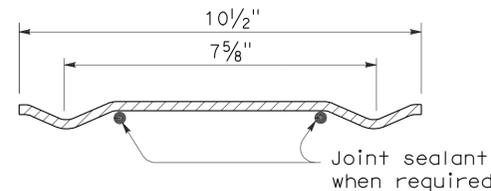
SECTION

H-4 HUGGER BAND



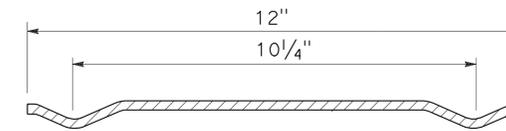
SECTION

H-7 HUGGER BAND



SECTION

H-10 HUGGER BAND



SECTION

H-12 HUGGER BAND

HUGGER COUPLING BANDS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE
COUPLING DETAILS No. 4
HUGGER COUPLING BANDS**

NO SCALE

RSP D97D DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97D
DATED MAY 1, 2006 - PAGE 186 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97D

2006 REVISED STANDARD PLAN RSP D97D

ANNULAR AND HELICAL PROFILE

| COUPLING TYPE | PIPE CORRUGATION | PIPE SIZE | W OR A | PIPE WALL THICKNESS | | | | BAR AND STRAP (CSP ONLY) | | | | ANGLE | | | | | | | |
|---------------------------|------------------|--------------|-------------|---------------------|---------------|----------------|--------|--------------------------|-----------|---------|--------------------|-------------------------|-------------------------|-------------------------|--------|----------------------|--------|--------------------------|--------|
| | | | | PIPE WALL THICKNESS | | BAND THICKNESS | | STRAP THICKNESS | BOLTS Dia | BAR Dia | BAR YIELD STRENGTH | DIMENSIONS | | BOLTS (No.- Dia) | | RIVETS ANGLE TO BAND | | SPOT WELDS ANGLE TO BAND | |
| | | | | CSP | CAP | CSP | CAP | | | | | CSP | CAP | CSP | CAP | CSP | CAP | CSP | CAP |
| TWO PIECE INTEGRAL FLANGE | 1 1/2' x 1/4" | 6"-10" | 7" | 0.052"-0.079" | 0.048"-0.060" | 0.052" | 0.060" | | | | | | | 2-3/8" | 2-3/8" | | | | |
| | | | | 12"-18" | 7" | 0.052"-0.079" | | 0.064" | | | | | | | | 2-1/2" | | | |
| UNIVERSAL | 2 2/3" x 1/2" | THROUGH 36" | 12" | 0.052"-0.138" | 0.060"-0.135" | 0.052" | 0.060" | | | | | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 3-1/2" | |
| | | 42"-60" | 12" | 0.052"-0.168" | 0.075"-0.164" | 0.052" | 0.060" | | | | | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" | |
| | | THROUGH 72" | 12" | 0.052"-0.168" | 0.164" | 0.052" | 0.105" | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" | |
| ANNULAR | 2 2/3" x 1/2" | THROUGH 36" | 7" | 0.064"-0.138" | 0.060"-0.135" | 0.052" | 0.060" | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 2-1/2" | 2-1/2" | 3-3/8" | 3-3/8" | 3-1/2" | |
| | | 42"-72" | 12" | 0.064"-0.168" | 0.075"-0.164" | 0.052" | 0.105" | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" | |
| | | 78"-84" | 12" | 0.168" | | 0.079" | | 0.109" | 1/2" | 7/8" | 45 ksi | 2" x 2" x 3/16" | | | 3-1/2" | | 3-3/8" | | 5-1/2" |
| | | 48"-90" | 14" | 0.064"-0.109" | | 0.052" | | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | | | 3-1/2" | | 3-3/8" | | 5-1/2" |
| | | 96"-120" | 14" | 0.079"-0.109" | | 0.052" | | 0.109" | 1/2" | 7/8" | 45 ksi | 2" x 2" x 3/16" | | | 3-1/2" | | 4-3/8" | | |
| HELICAL | 2 2/3" x 1/2" | THROUGH 36" | 12" | 0.052"-0.138" | 0.060"-0.135" | 0.052" | 0.060" | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 3-1/2" | |
| | | 42"-72" | 12" | 0.052"-0.168" | 0.075"-0.164" | 0.052" | 0.060" | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" | |
| | | 78"-84" | 12" | 0.168" | | 0.079" | | 0.109" | 1/2" | 7/8" | 45 ksi | 2" x 2" x 3/16" | | | 3-1/2" | | 3-3/8" | | 5-1/2" |
| | | 48"-90" | 14" | 0.064"-0.109" | | 0.052" | | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | | | 3-1/2" | | 3-3/8" | | 5-1/2" |
| | | 96"-120" | 14" | 0.079"-0.109" | | 0.052" | | 0.109" | 1/2" | 7/8" | 45 ksi | 2" x 2" x 3/16" | | | 3-1/2" | | 4-3/8" | | |
| HUGGER | 2 2/3" x 1/2" | REROLLED END | 12"-54" | 4" | 0.052"-0.109" | | 0.052" | | | | | 2 1/2" x 1 1/2" x 3/16" | 2 1/2" x 1 1/2" x 3/16" | 1-1/2" | | | | 3-1/2" | |
| | | | 60"-66" | 4" | 0.109" | | 0.064" | | | | | | 2 1/2" x 1 1/2" x 3/16" | 2 1/2" x 1 1/2" x 3/16" | 1-1/2" | | | 3-1/2" | |
| | | | 36"-48" | 4" | 0.138" | | 0.064" | | | | | | 2 1/2" x 1 1/2" x 3/16" | 2 1/2" x 1 1/2" x 3/16" | 1-1/2" | | | 3-1/2" | |
| | | | THROUGH 72" | 10 1/2" | 0.052"-0.168" | | 0.052" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | |
| | | | 78"-84" | 10 1/2" | 0.168" | | 0.079" | | 0.109" | 1/2" | 7/8" | 45 ksi | | | | | | | |
| | 3" x 1" | REROLLED END | 48"-90" | 10 1/2" | 0.064"-0.109" | | 0.052" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | |
| | | | 96"-120" | 10 1/2" | 0.079"-0.109" | | 0.052" | | 0.109" | 1/2" | 7/8" | 45 ksi | | | | | | | |
| | | | 48"-66" | 7 1/2" | 0.064"-0.109" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | 2 1/2" x 1 1/2" x 3/16" | 2 1/2" x 1 1/2" x 3/16" | 1-1/2" | | | | 3-1/2" |
| | | | 72"-90" | 7 1/2" | 0.064"-0.079" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | 2 1/2" x 1 1/2" x 3/16" | 2 1/2" x 1 1/2" x 3/16" | 1-1/2" | | | | 3-1/2" |
| | | | 48"-90" | 7 1/2" | 0.064"-0.138" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | |
| 5" x 1" | REROLLED END | 48"-120" | 12" SEE | 0.064"-0.109" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | |
| | | 48"-84" | 12" NOTE | 0.138" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | |
| | | 90"-120" | 12" 11 | 0.138" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | |
| | | | | | | DOUBLE 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

SPIRAL RIB PROFILE

| COUPLING TYPE | PIPE CORRUGATION | PIPE SIZE | W | PIPE WALL THICKNESS | | | | BAR AND STRAP (SSRP ONLY) | | | | ANGLE | | | | | | |
|---------------|------------------------------|-----------|---------|---------------------|---------------|----------------|--------|---------------------------|-----------|---------|--------------------|-----------------|-----------------|------------------|--------|----------------------|--------|--------------------------|
| | | | | PIPE WALL THICKNESS | | BAND THICKNESS | | STRAP THICKNESS | BOLTS Dia | BAR Dia | BAR YIELD STRENGTH | DIMENSIONS | | BOLTS (No.- Dia) | | RIVETS ANGLE TO BAND | | SPOT WELDS ANGLE TO BAND |
| | | | | SSRP | ASRP | SSRP | ASRP | | | | | SSRP | ASRP | SSRP | ASRP | SSRP | ASRP | SSRP |
| ANNULAR | 2 2/3" x 1/2" * REROLLED END | 24"-36" | 12" | 0.064"-0.109" | 0.060"-0.105" | 0.052" | 0.060" | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" |
| | | 42"-60" | 12" | 0.064"-0.109" | 0.075"-0.105" | 0.052" | 0.105" | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" |
| | | 66"-72" | 12" | 0.064"-0.109" | | 0.052" | | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" |
| | | 78"-114" | 12" | 0.079"-0.109" | | 0.079" | | 0.109" | 1/2" | 7/8" | 45 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" |
| HUGGER | 2 2/3" x 1/2" * REROLLED END | 24"-72" | 10 1/2" | 0.064"-0.109" | | 0.052" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | |
| | | 78"-84" | 10 1/2" | 0.109" | | 0.079" | | 0.109" | 1/2" | 7/8" | 45 ksi | | | | | | | |

* See Note 14.

14. All profiles of Spiral Rib Pipe (3/4" x 3/4" ribs at 7 1/2" pitch and 3/4" x 1" ribs at 11 1/2" pitch in both steel and aluminum and 3/4" x 1" ribs at 8 1/2" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 2/3" x 1/2" annual corrugations with a minimum of two full corrugations at each end.

NOTES: To accompany plans dated 6-27-11

- All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
- For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
- Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
- Use 1 1/4" gage line dimension on attached angle leg for rivets and spot welds.
- Band thickness shall not be less than:
 - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
 - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
- Dimensions, thicknesses and strengths shown are minimum.
- For pipe arches use same width band as for round pipe of equal periphery.
- Fillet welds of equivalent strength may be substituted for spot welds or rivets.
- Spot welds shall develop minimum required strength of strap.
- Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
- In the case of H-12 huggerbands, two piece bands are required for diameters through 96" and three piece bands are required for diameters 102" through 120".
- Two piece bands are required for pipes greater than 42" diameter.
- The 2 1/4" x 2" x 0.109" thick galvanized die-formed angle connector may be used in lieu of the 2" x 2" x 3/16" angle connector for standard joints only on pipes through 72" diameter.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE
COUPLING DETAILS No. 5
STANDARD JOINT**

NO SCALE

RSP D97E DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97E
DATED MAY 1, 2006 - PAGE 187 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97E

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1186 | 1507 |

Raymond Don Tsztou
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

2006 REVISED STANDARD PLAN RSP D97E

ANNULAR AND HELICAL PROFILE

| COUPLING TYPE | PIPE CORRUGATION | PIPE SIZE | W OR A | PIPE WALL THICKNESS | | | | BAND THICKNESS | | | | BAR AND STRAP (CSP ONLY) | | | | ANGLE | | | | | | |
|---------------------------|----------------------------|---------------|-------------|---------------------|---------------|---------------|--------|----------------|------|------|--------|--------------------------|-----------|-----------------|--------------------|------------|--------|-------------------|--------|----------------------|-----|--------------------------|
| | | | | CSP | | CAP | | CSP | | CAP | | STRAP THICKNESS | BOLTS Dia | BAR Dia | BAR YIELD STRENGTH | DIMENSIONS | | BOLTS (No. - Dia) | | RIVETS ANGLE TO BAND | | SPOT WELDS ANGLE TO BAND |
| | | | | CSP | CAP | CSP | CAP | CSP | CAP | CSP | CAP | | | | | CSP | CAP | CSP | CAP | CSP | CAP | CSP |
| TWO PIECE INTEGRAL FLANGE | 1 1/2" x 1/4" | 6"-10" | 7" | 0.064"-0.079" | 0.060" | 0.064" | 0.060" | | | | | | | | | 2-3/8" | 2-3/8" | | | | | |
| UNIVERSAL | 2 2/3" x 1/2" | 12"-24" | 12" | | 0.060"-0.105" | | 0.060" | | | | | | | | | | 3-1/2" | | | | | |
| ANNULAR | 2 2/3" x 1/2" | THROUGH 36" | 12" | 0.064"-0.138" | 0.060"-0.135" | 0.064" | 0.060" | | | | | | | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" | | |
| | | 42"-60" | 12" | 0.064"-0.079" | | 0.064" | | | | | | | | 2" x 2" x 3/16" | | 3-1/2" | | 3-3/8" | | 5-1/2" | | |
| | | 42"-60" | 12" | 0.109"-0.168" | 0.135"-0.164" | 0.064" | 0.075" | | | | | | | 2" x 2" x 1/4" | 2" x 2" x 1/4" | 3-1/2" | 3-1/2" | 5-3/8" | 5-3/8" | | | |
| | | 66"-72" | 24" | | 0.164" | | 0.105" | | | | | | | 2" x 2" x 1/4" | | 5-1/2" | | 7-3/8" | | 5-1/2" | | |
| | | 66"-84" | 24" | 0.109"-0.168" | | 0.064" | | | | | | | | 2" x 2" x 1/4" | | 5-1/2" | | 7-3/8" | | | | |
| | | 42"-54" | 12" | | 0.060"-0.105" | | 0.060" | | | | | | | 2" x 2" x 3/16" | | 3-1/2" | | 3-3/8" | | 3-3/8" | | |
| | 3" x 1" | 48"-60" | 14" | 0.064"-0.079" | | 0.064" | | | | | | | | 2" x 2" x 3/16" | | 3-1/2" | | 3-3/8" | | 5-1/2" | | |
| | | 48"-60" | 14" | 0.109" | | 0.064" | | | | | | | | 2" x 2" x 3/16" | | 3-1/2" | | 5-3/8" | | | | |
| | | 66"-120" | 25" | 0.064"-0.109" | | 0.064" | | | | | | | | 2" x 2" x 3/16" | | 5-1/2" | | 9-3/8" | | | | |
| | | 42"-60" | 14" | | 0.060"-0.105" | | 0.060" | | | | | | | 2" x 2" x 3/16" | | 3-1/2" | | 5-3/8" | | | | |
| | | 42"-60" | 14" | | 0.135" | | 0.075" | | | | | | | 2" x 2" x 1/4" | | 3-1/2" | | 5-3/8" | | | | |
| | | 66"-96" | 25" | | 0.060"-0.135" | | 0.060" | | | | | | | 2" x 2" x 1/4" | | 5-1/2" | | 7-3/8" | | | | |
| | HELICAL | 2 2/3" x 1/2" | THROUGH 36" | 12" | 0.064"-0.138" | 0.060"-0.135" | 0.064" | 0.060" | | | | | | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" | | |
| | | | 42"-54" | 12" | | 0.060"-0.105" | | 0.060" | | | | | | 2" x 2" x 3/16" | | 3-1/2" | | 3-3/8" | | 3-3/8" | | |
| 42"-60" | | | 12" | 0.064"-0.079" | | 0.064" | | | | | | | | 2" x 2" x 3/16" | | 3-1/2" | | 3-3/8" | | 5-1/2" | | |
| 42"-60" | | | 12" | 0.109"-0.168" | 0.135"-0.164" | 0.064" | 0.075" | | | | | | | 2" x 2" x 1/4" | 2" x 2" x 1/4" | 3-1/2" | 3-1/2" | 5-3/8" | 5-3/8" | | | |
| 66"-84" | | | 24" | 0.109"-0.168" | | 0.064" | | | | | | | | 2" x 2" x 1/4" | | 5-1/2" | | 7-3/8" | | | | |
| 3" x 1" | | 48"-60" | 14" | 0.064"-0.079" | | 0.064" | | | | | | | | 2" x 2" x 3/16" | | 3-1/2" | | 3-3/8" | | 5-1/2" | | |
| | | 48"-60" | 14" | 0.109" | | 0.064" | | | | | | | | 2" x 2" x 3/16" | | 3-1/2" | | 5-3/8" | | | | |
| | | 66"-120" | 25" | 0.064"-0.109" | | 0.064" | | | | | | | | 2" x 2" x 3/16" | | 5-1/2" | | 9-3/8" | | | | |
| | | 42"-60" | 14" | | 0.060"-0.105" | | 0.060" | | | | | | | 2" x 2" x 3/16" | | 3-1/2" | | 5-3/8" | | | | |
| | | 42"-60" | 14" | | 0.135" | | 0.075" | | | | | | | 2" x 2" x 1/4" | | 3-1/2" | | 5-3/8" | | | | |
| HUGGER | 2 2/3" x 1/2" REROLLED END | THROUGH 48" | 10 1/2" | 0.109" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |
| | | 54"-66" | 10 1/2" | 0.109" | | 0.064" | | DOUBLE 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |
| | | THROUGH 54" | 10 1/2" | 0.064"-0.079" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |
| | | THROUGH 60" | 10 1/2" | 0.138" | | 0.079" | | DOUBLE 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |
| | | 66"-72" | 10 1/2" | 0.138" | | 0.109" | | DOUBLE 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |
| | 3" x 1" REROLLED END | THROUGH 72" | 10 1/2" | 0.168" | | 0.109" | | DOUBLE 0.109" | 1/2" | 7/8" | 45 ksi | | | | | | | | | | | |
| | | 48"-84" | 10 1/2" | 0.109" | | 0.079" | | DOUBLE 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |
| | | 48"-90" | 10 1/2" | 0.064"-0.079" | | 0.064" | | DOUBLE 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |
| | | 96"-102" | 10 1/2" | 0.079" | | 0.079" | | DOUBLE 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |
| | | 90"-120" | 10 1/2" | 0.109" | | 0.109" | | DOUBLE 0.109" | 1/2" | 7/8" | 45 ksi | | | | | | | | | | | |

SPIRAL RIB PROFILE

| COUPLING TYPE | PIPE CORRUGATION | PIPE SIZE | W | PIPE WALL THICKNESS | | | | BAND THICKNESS | | | | BAR AND STRAP (SSRP ONLY) | | | | ANGLE | | | | | | |
|---------------|------------------------------|-----------|---------|---------------------|---------------|--------|--------|----------------|------|------|--------|---------------------------|-----------------|---------|--------------------|------------|--------|------------------|------|----------------------|--|--------------------------|
| | | | | SSRP | | ASRP | | SSRP | | ASRP | | STRAP THICKNESS | BOLTS Dia | BAR Dia | BAR YIELD STRENGTH | DIMENSIONS | | BOLTS (No.- Dia) | | RIVETS ANGLE TO BAND | | SPOT WELDS ANGLE TO BAND |
| | | | | SSRP | ASRP | SSRP | ASRP | SSRP | ASRP | SSRP | ASRP | | | | | SSRP | ASRP | SSRP | ASRP | SSRP | | |
| ANNULAR | 2 2/3" x 1/2" * REROLLED END | 24"-36" | 12" | 0.064"-0.109" | 0.060"-0.105" | 0.064" | 0.060" | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" | | | | |
| | | 42"-60" | 12" | 0.064"-0.079" | 0.075"-0.105" | 0.064" | 0.075" | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2" | 3-1/2" | 3-3/8" | 3-3/8" | 5-1/2" | | | | |
| | | 42"-60" | 12" | 0.109" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 1/4" | | 3-1/2" | | 5-3/8" | | | | | | |
| | | 66"-84" | 24" | 0.109" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | 2" x 2" x 1/4" | | 5-1/2" | | 7-3/8" | | | | | | |
| HUGGER | 2 2/3" x 1/2" * REROLLED END | 24"-54" | 10 1/2" | 0.064"-0.079" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |
| | | 24"-48" | 10 1/2" | 0.109" | | 0.064" | | 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |
| | | 54"-66" | 10 1/2" | 0.109" | | 0.064" | | Double 0.079" | 1/2" | 7/8" | 32 ksi | | | | | | | | | | | |

* See Note 13.

13. All profiles of Spiral Rib Pipe (3/4" x 3/4" ribs at 7 1/2" pitch and 3/4" x 1" ribs at 11 1/2" pitch in both steel and aluminum and 3/4" x 1" ribs at 8 1/2" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 2/3" x 1/2" annual corrugations with a minimum of two full corrugations at each end.

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 07 | LA | 710 | 17.2/26.4 | 1187 | 1507 |

Raymond Don Tsztso
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
Raymond Don Tsztso
No. C37332
Exp. 6-30-08
CIVIL

To accompany plans dated 6-27-11

NOTES:

- All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
- For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
- Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
- Use 1/4" gage line dimension on attached angle leg for rivets and spot welds.
- Band thickness shall not be less than:
 - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
 - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
- Dimensions, thicknesses and strengths shown are minimum.
- For pipe arches use same width band as for round pipe of equal periphery.
- Fillet welds of equivalent strength may be substituted for spot welds or rivets.
- Spot welds shall develop minimum required strength of strap.
- Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
- In the case of H-12 huggerbands, two piece bands are required for diameters through 96" and three piece bands are required for diameters 102" through 120".
- Two piece bands are required for pipes greater than 42" diameter.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE
COUPLING DETAILS No. 6
POSITIVE JOINT**

NO SCALE

RSP D97F DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97F
DATED MAY 1, 2006 - PAGE 188 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97F

2006 REVISED STANDARD PLAN RSP D97F

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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Raymond Don Tsztoo
REGISTERED CIVIL ENGINEER

June 6, 2008
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To accompany plans dated 6-27-11

ANNULAR AND HELICAL PROFILE

| COUPLING TYPE | PIPE CORRUGATION | PIPE SIZE | W OR A | PIPE WALL THICKNESS | | | | BAR AND STRAP (CSP ONLY) | | | ANGLE | | | | | | | | | |
|---------------------------|----------------------------|-------------|---------|---------------------|-----|---------------|-----|--------------------------|-----------|---------|------------|------|------------------|-----|----------------------|-----|--------------------------|--|--|--|
| | | | | CSP | | CAP | | STRAP THICKNESS | BOLTS Dia | BAR Dia | DIMENSIONS | | BOLTS (No.- Dia) | | RIVETS ANGLE TO BAND | | SPOT WELDS ANGLE TO BAND | | | |
| | | | | CSP | CAP | CSP | CAP | | | | CSP | CAP | CSP | CAP | CSP | CAP | CSP | | | |
| TWO PIECE INTEGRAL FLANGE | 1 1/2' x 1/4" | 6" | 7" | 0.064"-0.168" | | | | | | | | | | | | | | | | |
| | 1 1/2' x 1/4" | 8"-10" | 7" | 0.064"-0.168" | | 0.060"-0.164" | | 0.064" | 0.060" | | | | | | | | | | | |
| ANNULAR | 2 2/3" x 1/2" | THROUGH 24" | 12" | 0.064"-0.168" | | 0.060"-0.164" | | 0.064" | 0.060" | | | | | | | | | | | |
| HUGGER | 2 2/3" x 1/2" REROLLED END | THROUGH 24" | 10 1/2" | 0.064"-0.168" | | | | | | 0.079" | 1/2" | 7/8" | | | | | | | | |

NOTES:

- All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
- For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
- Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
- Use 1 1/4" gage line dimension on attached angle leg for rivets and spot welds.
- Band thickness shall not be less than:
 - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
 - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
- Dimensions, thicknesses and strengths shown are minimum.
- For pipe arches use same width band as for round pipe of equal periphery.
- Fillet welds of equivalent strenght may be substituted for spot welds or rivets.
- Spot welds shall develop minimum required strength of strap.
- Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
- For downdrain applications, two piece integral flange couplers shall have factory applied sleeve type rubber gaskets with a minimum length of 7" measured along the length of the pipe.

SPIRAL RIB PROFILE

| COUPLING TYPE | PIPE CORRUGATION | PIPE SIZE | W | PIPE WALL THICKNESS | | | | BAR AND STRAP (SSRP ONLY) | | | ANGLE | | | | | | | | | |
|---------------|------------------------------|-----------|---------|---------------------|------|---------------|------|---------------------------|-----------|---------|------------|------|------------------|------|----------------------|------|--------------------------|--|--|--|
| | | | | SSRP | | ASRP | | STRAP THICKNESS | BOLTS Dia | BAR Dia | DIMENSIONS | | BOLTS (No.- Dia) | | RIVETS ANGLE TO BAND | | SPOT WELDS ANGLE TO BAND | | | |
| | | | | SSRP | ASRP | SSRP | ASRP | | | | SSRP | ASRP | SSRP | ASRP | SSRP | ASRP | SSRP | | | |
| ANNULAR | 2 2/3" x 1/2" * REROLLED END | 24" | 12" | 0.064"-0.168" | | 0.060"-0.164" | | 0.064" | 0.060" | | | | | | | | | | | |
| HUGGER | 2 2/3" x 1/2" * REROLLED END | 24" | 10 1/2" | 0.064"-0.168" | | | | | | 0.079" | 1/2" | 7/8" | | | | | | | | |

* See Note 12.

12. All profiles of Spiral Rib Pipe (3/4" x 3/4" ribs at 7 1/2" pitch and 3/4" x 1" ribs at 11 1/2" pitch in both steel and aluminum and 3/4" x 1" ribs at 8 1/2" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 2/3" x 1/2" annual corrugations with a minimum of two full corrugations at each end.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE
COUPLING DETAILS No. 7
DOWNDRAIN**

NO SCALE

RSP D97G DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97G
DATED MAY 1, 2006 - PAGE 189 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97G

2006 REVISED STANDARD PLAN RSP D97G

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
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| 07 | LA | 710 | 17.2/26.4 | 1189 | 1507 |

Gregory A. Balzer
LICENSED LANDSCAPE ARCHITECT

June 5, 2009
PLANS APPROVAL DATE

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STATE OF CALIFORNIA
LICENSED LANDSCAPE ARCHITECT
Gregory A. Balzer
2-28-11
5-14-09
date

To accompany plans dated 6-27-11

2006 REVISED STANDARD PLAN RSP H1

A

AB aggregate base
 ABS acrylonitrile-butadiene-styrene
 AC asphalt concrete
 Adj adjacent/adjustable
 AIC auxiliary irrigation controller
 Alt alternative
 AMEND amendment
 ARV air release valve
 AUTO automatic
 AUX auxiliary
 AVB atmospheric vacuum breaker

B

B&B balled and burlapped
 B/B brass/bronze
 B/B/PL brass/bronze/plastic
 B/PL brass/plastic
 BFM bonded fiber matrix
 Bit Ctd bituminous coated
 BP booster pump
 BPA backflow preventer assembly
 BPAE backflow preventer assembly in enclosure
 BPE backflow preventer enclosure
 BV ball valve

C

CAP corrugated aluminum pipe
 CARV combination air release valve
 CCA cam coupler assembly
 CEC controller enclosure cabinet
 CHDPE corrugated high density polyethylene
 CL chain link
 CNC control and neutral conductors
 Conc concrete
 Cond conduit
 CSP corrugated steel pipe
 CST center strip
 CV check valve

D

Dia diameter
 DIP ductile iron pipe
 DN diameter nominal

E

EA each
 Elect electric/electrical
 Elev elevation
 ENCL enclosure
 EP edge of pavement
 ES edge of shoulder
 EST end strip
 ESTB establishment
 ETW edge of traveled way

F

F full circle
 F/P full/part circle
 FAU filter assembly unit
 FCV flow control valve
 FERT fertilizer
 FG finished grade
 FIPT female iron pipe thread
 FIS fertilizer injector system
 FL flow line
 FM flow monitor
 FS flow sensor
 Ft foot/feet
 FV flush valve

G

GAL Gallon(s)
 Galv galvanized
 GARV garden valve
 GPH gallons per hour
 GPM gallons per minute
 GSP galvanized steel pipe
 GV gate valve

H

H half circle
 HB hose bib
 HDPE high density polyethylene
 HP horsepower/hinge point
 HPL high pressure line
 Hwy highway

I

IC irrigation controller
 ICC irrigation controller(s) in controller enclosure cabinet
 ID inside diameter
 In inches
 IFS irrigation filtration system
 IPS iron pipe size
 IPT iron pipe thread
 Irr irrigation

L

L length
 LF linear foot

M

Max maximum
 MBGR metal beam guard railing
 MCV manual control valve
 MIC master irrigation controller
 Min minimum
 MIPT male iron pipe thread
 Misc miscellaneous
 Mtl material
 MVP maintenance vehicle pullout

N

NCN no common name
 NL nozzle line
 No. number
 NPT national pipe thread

O

O/C on center
 OD outside diameter
 Oz ounce

P

P part circle
 PB pull box
 PCC portland cement concrete
 PE polyethylene
 Pkt packet
 PL plastic
 PLT plant/planting
 PLT ESTB plant establishment
 PM post mile
 PR pressure rated
 PRLV pressure relief valve
 PSFM polymer stabilized fiber matrix
 PSI pounds per square inch
 PRV pressure reducing valve
 PVC polyvinyl chloride
 Pvmt pavement

Q

Q quarter circle
 QCV quick coupling valve

R

R radius
 RCP reinforced concrete pipe
 RCV remote control valve
 RCVM remote control valve (master)
 RCVMF remote control valve (master) w/ flow meter
 RCW recycled/reclaimed water
 RECP rolled erosion control product
 REQ required
 R/W right of way

S

S slip
 SCC sprinkler control conduit
 SCH schedule
 SF state-furnished
 Shld shoulder
 SQFT square foot/feet
 SQYD square yard(s)
 SST side strip
 Sta station
 Std standard
 SW sidewalk/sound wall

T

T third circle/thread
 TLS truck loading standpipe
 TQ three quarter circle
 TRM turf reinforcement mat
 TRVD traveled
 TT two third circle
 Typ typical

U

UG underground

V

VAU valve assembly unit

W

W width
 W/ with
 WM water meter
 WS wye strainer
 WSP welded steel pipe
 WWM welded wire mesh

NOTE:
 FOR ADDITIONAL ABBREVIATIONS,
 SEE STANDARD PLANS A10A AND A10B.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PLANTING AND IRRIGATION
 ABBREVIATIONS**

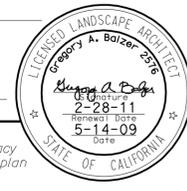
NO SCALE

RSP H1 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H1
 DATED MAY 1, 2006 - PAGE 201 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP H1

| | | | | | |
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Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 June 5, 2009
 PLANS APPROVAL DATE
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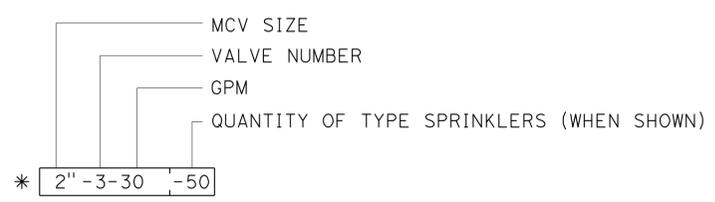
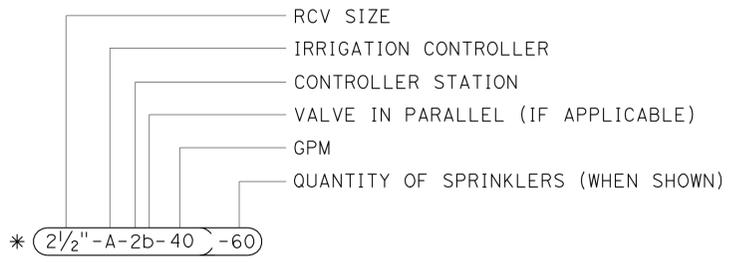


To accompany plans dated 6-27-11

| EXISTING | PROPOSED | ITEM DESCRIPTION |
|----------|----------|--|
| | | WATER METER (WM) |
| | | BACKFLOW PREVENTER ASSEMBLY (BPA) |
| | | BACKFLOW PREVENTER ASSEMBLY IN ENCLOSURE (BPAE) |
| | | BACKFLOW PREVENTER ENCLOSURE (BPE) |
| | | BOOSTER PUMP (BP) |
| | | TRUCK LOADING STANDPIPE (TLS) |
| | | FLOW SENSOR (FS) |
| | | MASTER IRRIGATION CONTROLLER (MIC) |
| | | AUXILIARY IRRIGATION CONTROLLER (AIC) |
| | | IRRIGATION CONTROLLER (IC)/ IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR) |
| | | IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC) |
| | | CONTROL AND NEUTRAL CONDUCTORS (CNC) |
| | | SPRINKLER CONTROL CONDUIT (SCC) |
| | | IRRIGATION CROSSOVER |
| | | EXTEND IRRIGATION CROSSOVER |
| | | IRRIGATION SLEEVE |
| | | DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP) |
| | | GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP) |
| | | GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP) |
| | | PLASTIC PIPE (PR 200) (SUPPLY LINE) (MAIN) |
| | | PLASTIC PIPE (PR 200) (SUPPLY LINE) (LATERAL) |
| | | PLASTIC PIPE (IRRIGATION LINE) |
| | | REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF) |
| | | MANUAL CONTROL VALVE (MCV) |
| | | VALVE ASSEMBLY UNIT (VAU) |
| | | WYE STRAINER (WS) |
| | | FILTER ASSEMBLY UNIT (FAU) |
| | | GATE VALVE (GV) |
| | | BALL VALVE (BV) |

| EXISTING | PROPOSED | ITEM DESCRIPTION |
|----------|----------|--|
| | | QUICK COUPLING VALVE (QCV) |
| | | CAM COUPLER ASSEMBLY (CCA) |
| | | PRESSURE REDUCING VALVE (PRV) |
| | | PRESSURE RELIEF VALVE (PRLV) |
| | | FLOW CONTROL VALVE (FCV) |
| | | COMBINATION AIR RELEASE VALVE (CARV) |
| | | CHECK VALVE (CV) |
| | | FLUSH VALVE (FV) |
| | | NOZZLE LINE W/TURNING UNION |
| | | IRRIGATION SYSTEM |
| | | IRRIGATION SYSTEM TO BE REMOVED |
| | | CHAIN LINK GATE |
| | | QUICK COUPLING VALVE W/SPRINKLER PROTECTOR |
| | | SPRINKLER W/SPRINKLER PROTECTOR |
| | | CONNECT TO EXISTING SYSTEM |
| | | CAP |
| | | CAP EXISTING |

VALVE CODE



* VALVE CODES FOR EXISTING VALVES ARE SHOWN IN A DASHED ENCLOSURE.

PLANTING AND IRRIGATION SYMBOLS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

RSP H2 DATED JUNE 5, 2009 SUPERSEDES RSP H2 DATED MARCH 7, 2008 AND STANDARD PLAN H2 DATED MAY 1, 2006 - PAGE 202 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP H2

2006 REVISED STANDARD PLAN RSP H2

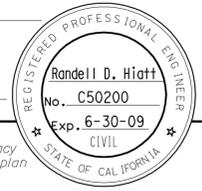
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1191 | 1507 |

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

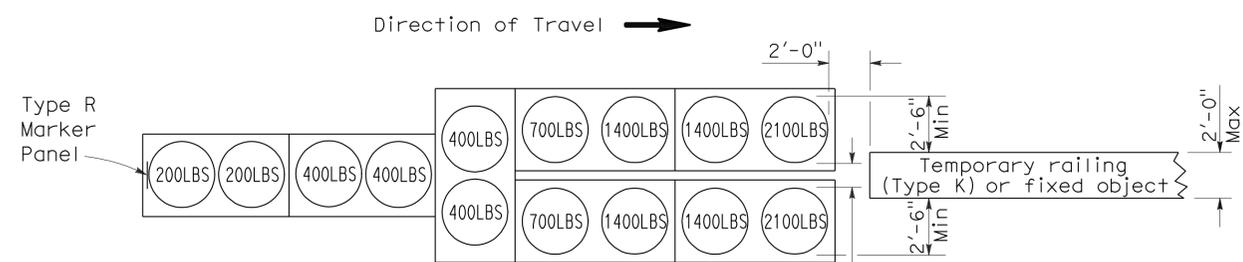
June 6, 2008
PLANS APPROVAL DATE

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To accompany plans dated 6-27-11

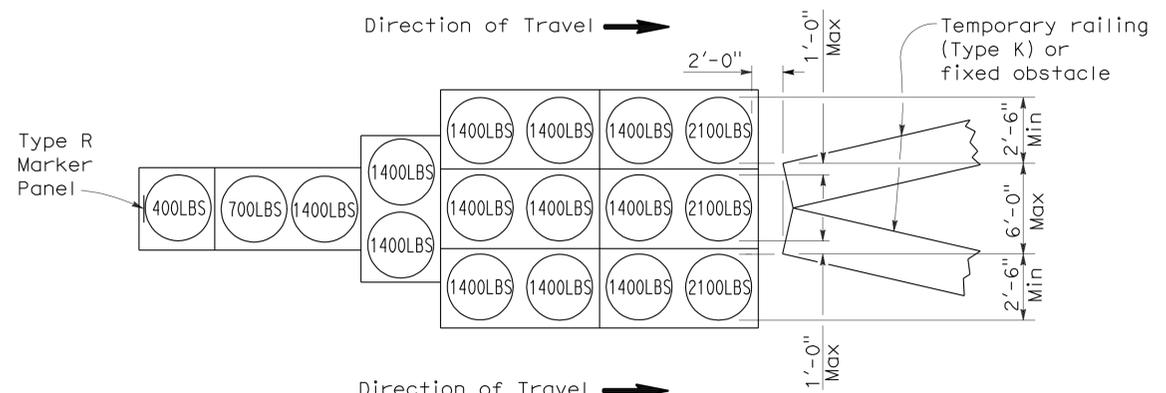


2006 REVISED STANDARD PLAN RSP T1A



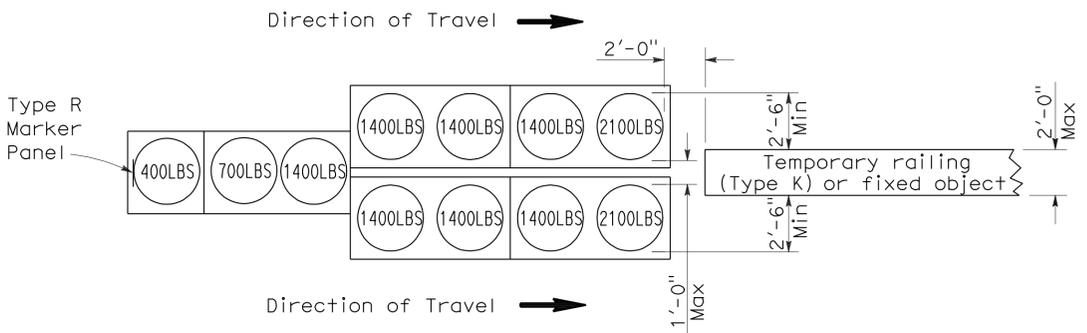
ARRAY 'TU14'

Approach speed 45 mph or more



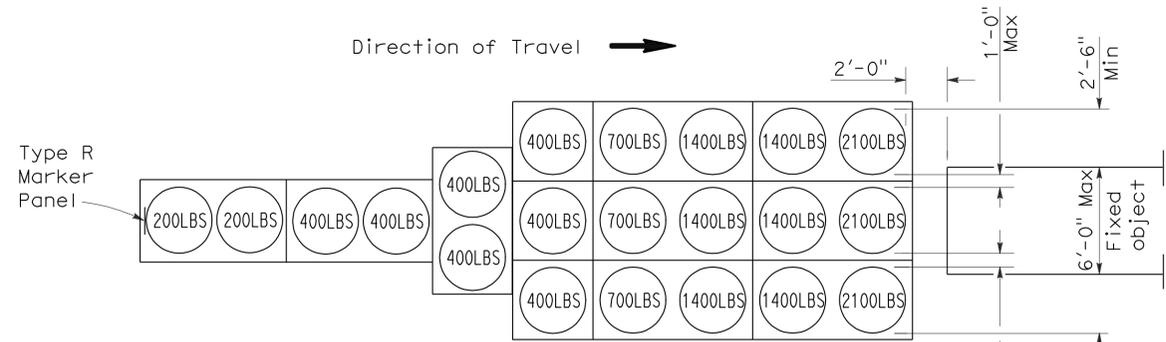
ARRAY 'TU17'

Approach speed less than 45 mph



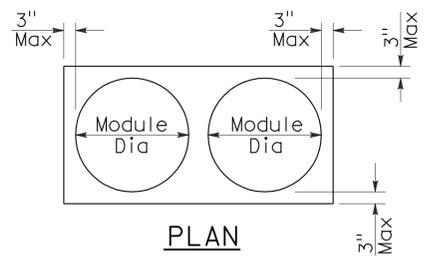
ARRAY 'TU11'

Approach speed less than 45 mph

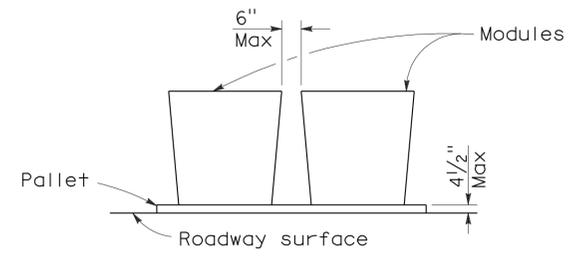


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

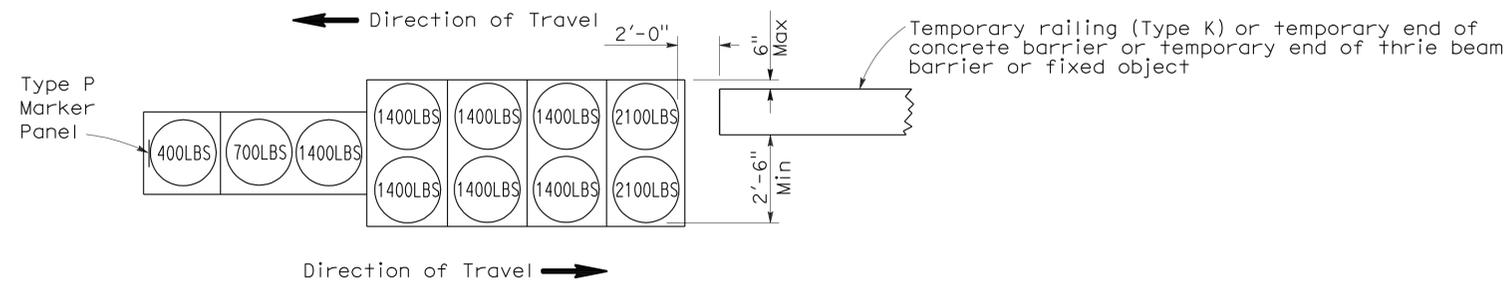
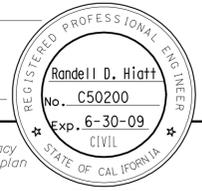
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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| 07 | LA | 710 | 17.2/26.4 | 1192 | 1507 |

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

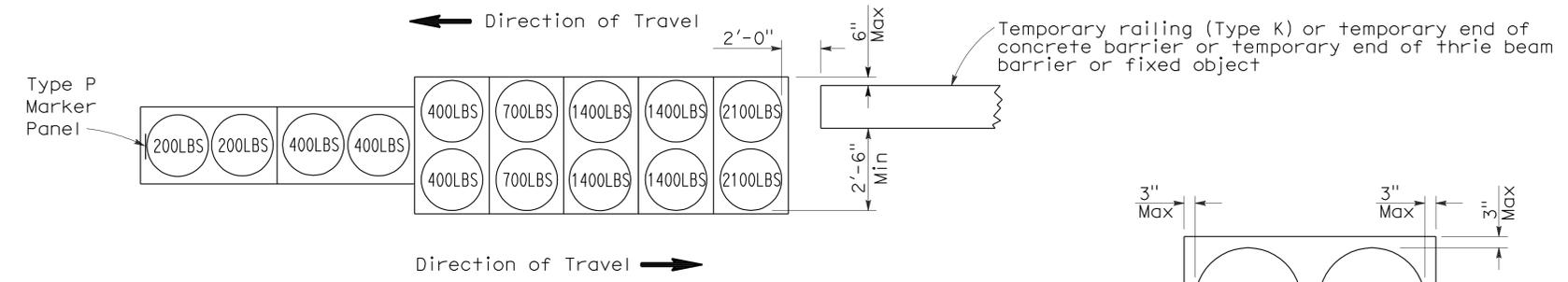
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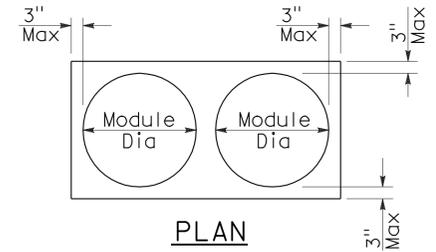
ARRAY 'TB11'

Approach speed less than 45 mph

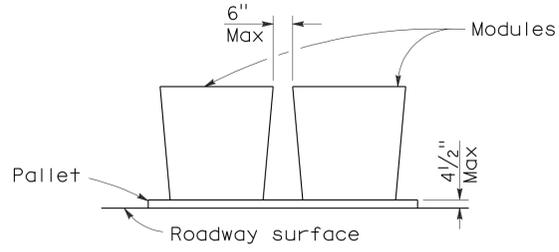


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(BIDIRECTIONAL)**

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

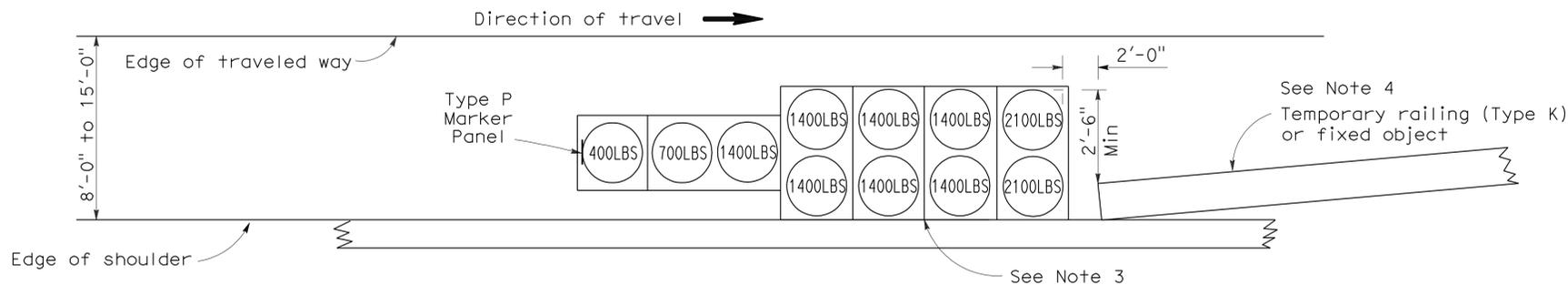
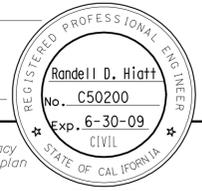
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Randell D. Hiatt
REGISTERED CIVIL ENGINEER

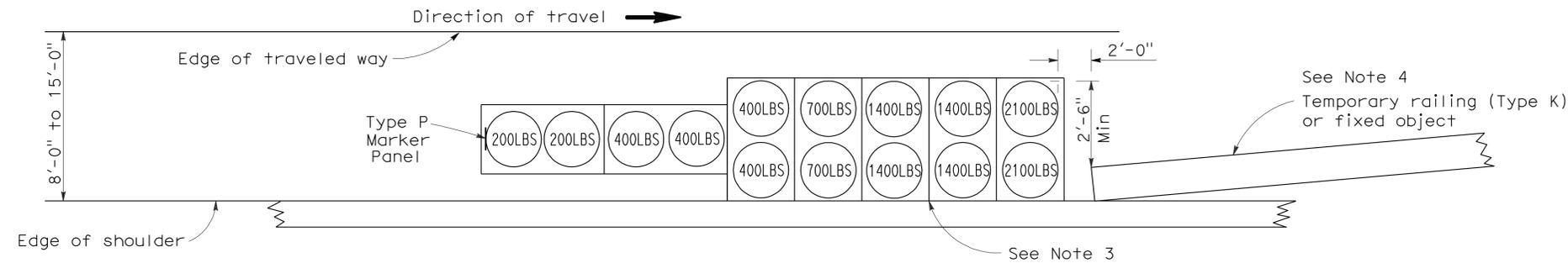
June 6, 2008
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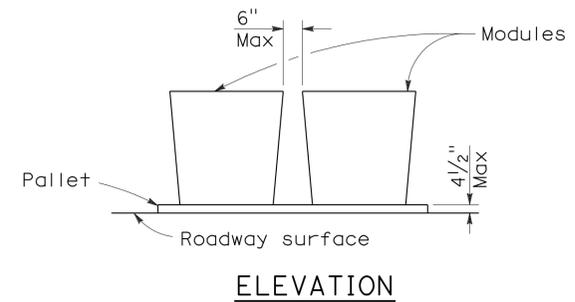
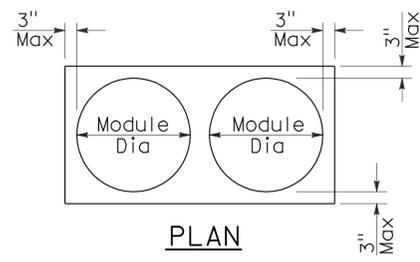
To accompany plans dated 6-27-11



ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



ARRAY 'TS14'
Approach speed 45 mph or more
See Note 9



CRASH CUSHION PALLET DETAIL
See Note 11

NOTES:

- (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
- All sand weights are nominal.
- The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
- If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**

NO SCALE
RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

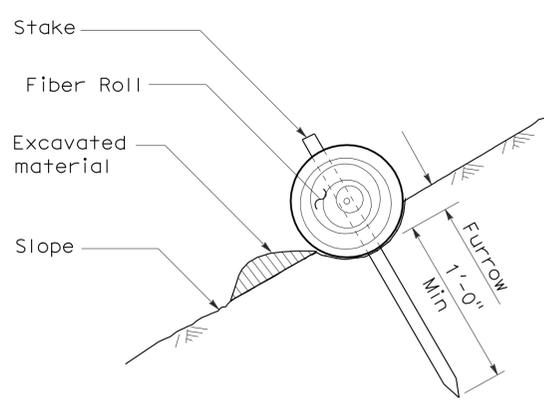
REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

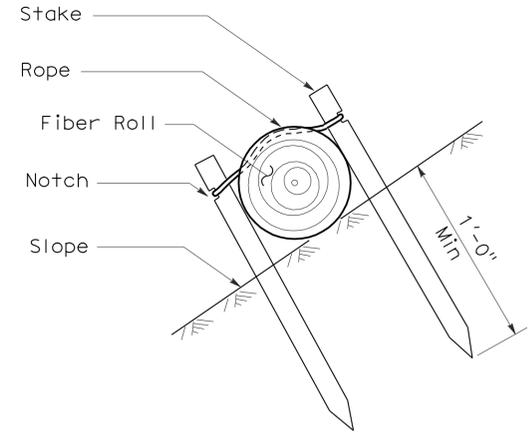
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1195 | 1507 |

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 April 3, 2009
 PLANS APPROVAL DATE
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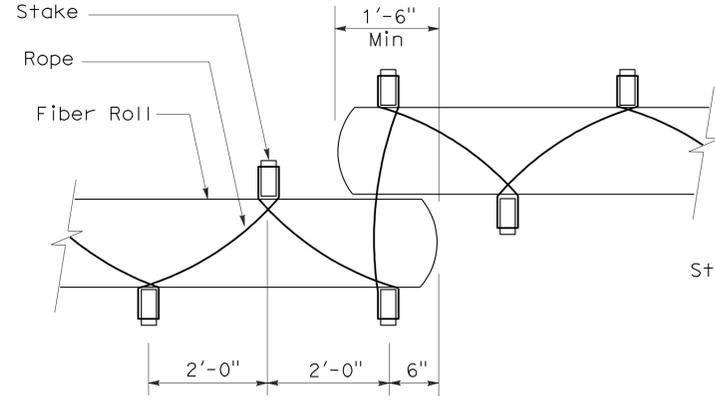
To accompany plans dated 6-27-11



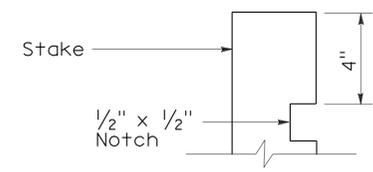
SECTION
TEMPORARY FIBER ROLL (TYPE 1)



SECTION
TEMPORARY FIBER ROLL (TYPE 2)

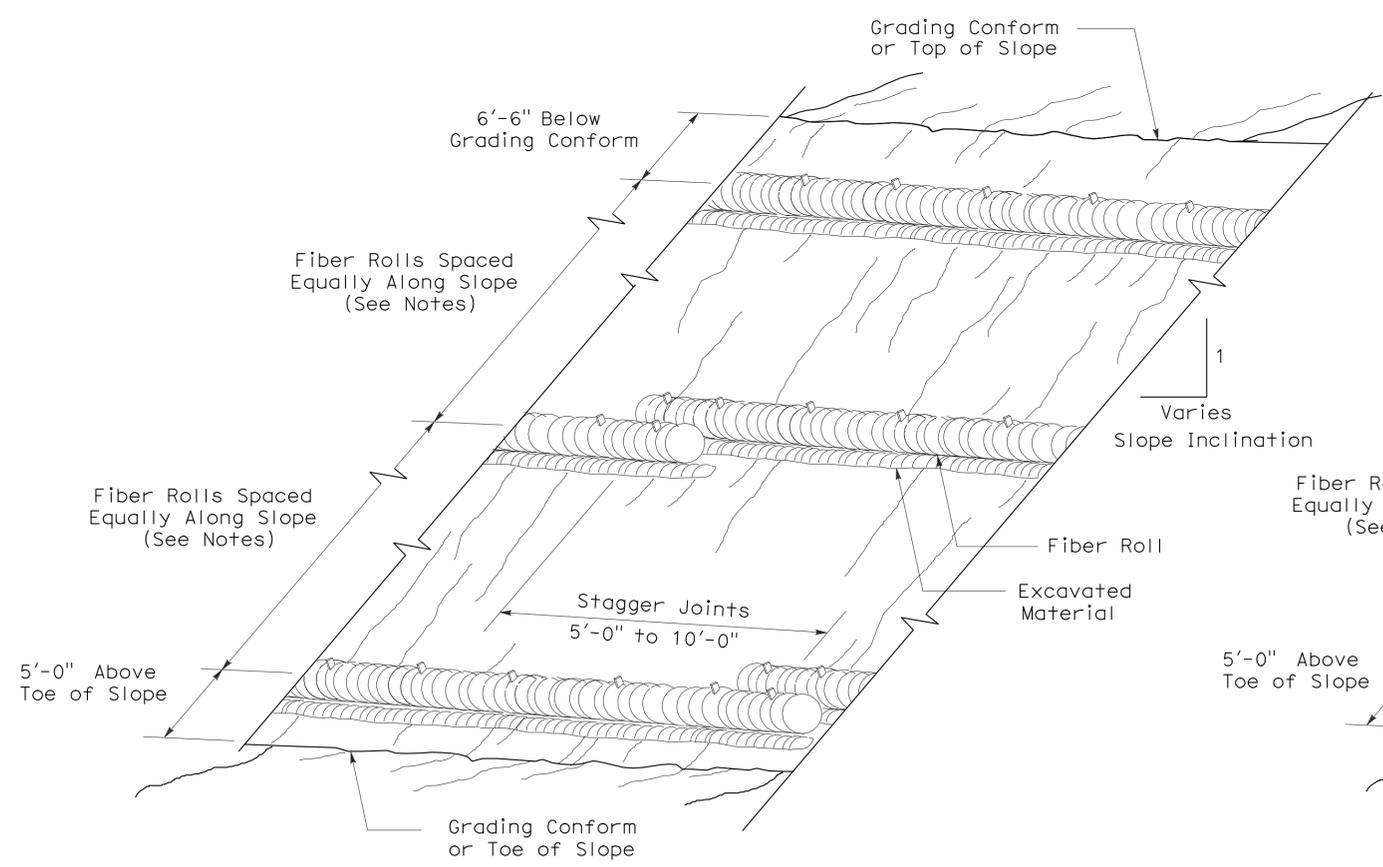


PLAN
TEMPORARY FIBER ROLL (TYPE 2)

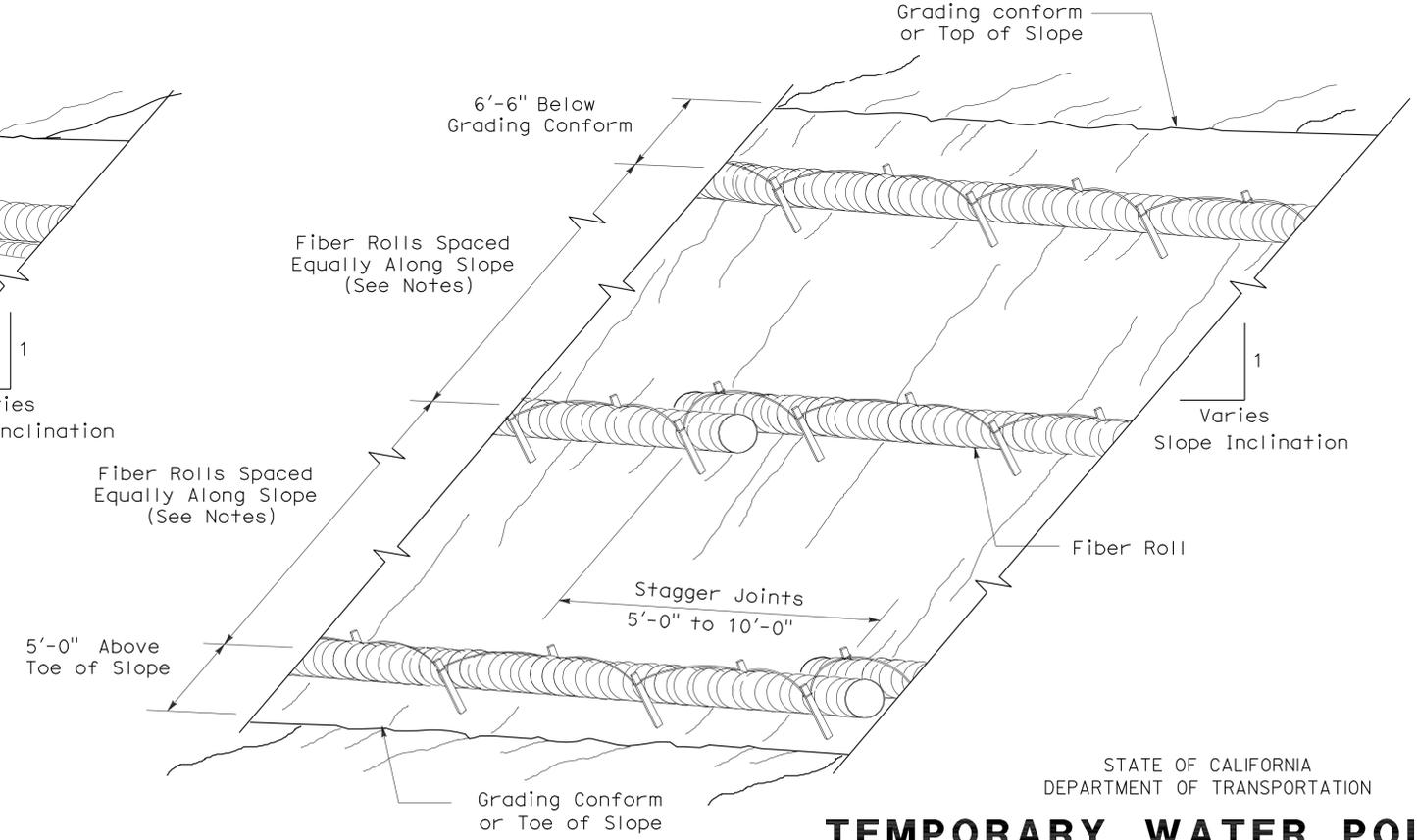


ELEVATION
STAKE NOTCH DETAIL

- NOTES:**
1. Temporary fiber roll spacing varies depending upon slope inclination.
 2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 1)



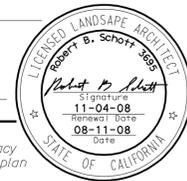
PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)
 NO SCALE

2006 REVISED STANDARD PLAN RSP T56

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1196 | 1507 |

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
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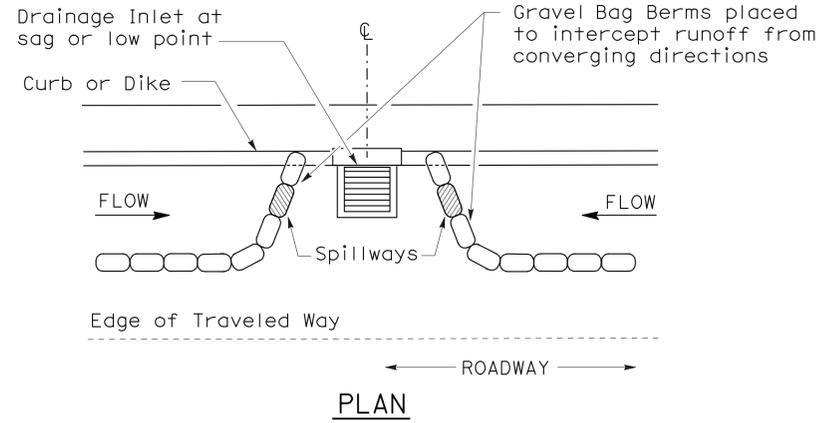


To accompany plans dated 6-27-11

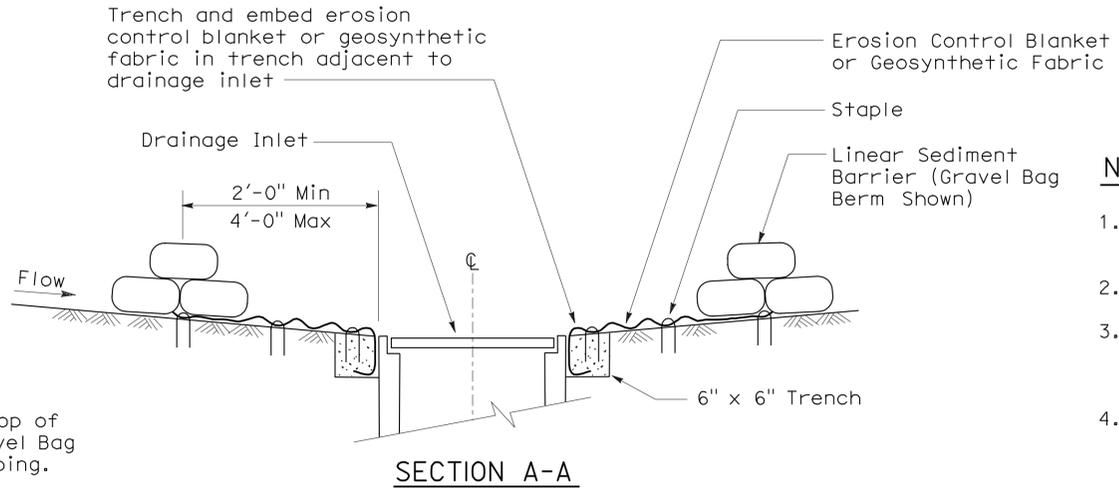
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

| SLOPE OF ROADWAY (PERCENT) | 1 to 3.9 | 4 to 5.9 | 6 to 7.9 | 8 to 10 | 10+ |
|----------------------------|----------|----------|----------|---------|-----|
| INTERVAL BETWEEN BERM | 100' | 75' | 50' | 25' | 12' |

For slope of less than 1%, install barriers only if erosion/sediment is prevalent



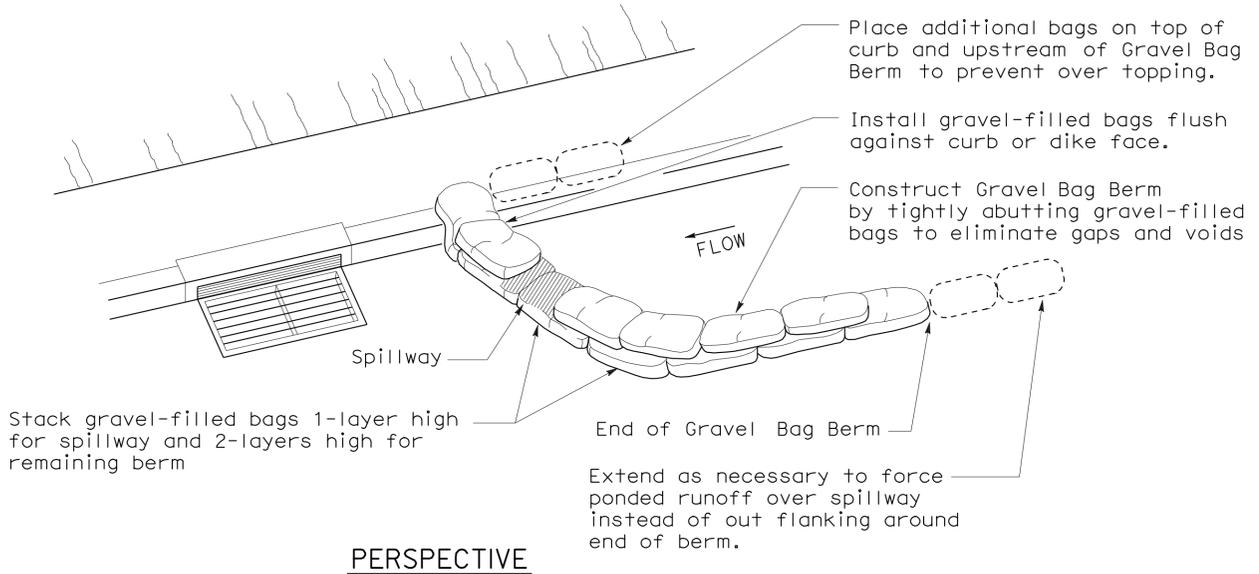
**PLAN
CONFIGURATION FOR SAG POINT INLET
(GRAVEL BAG BERM)**



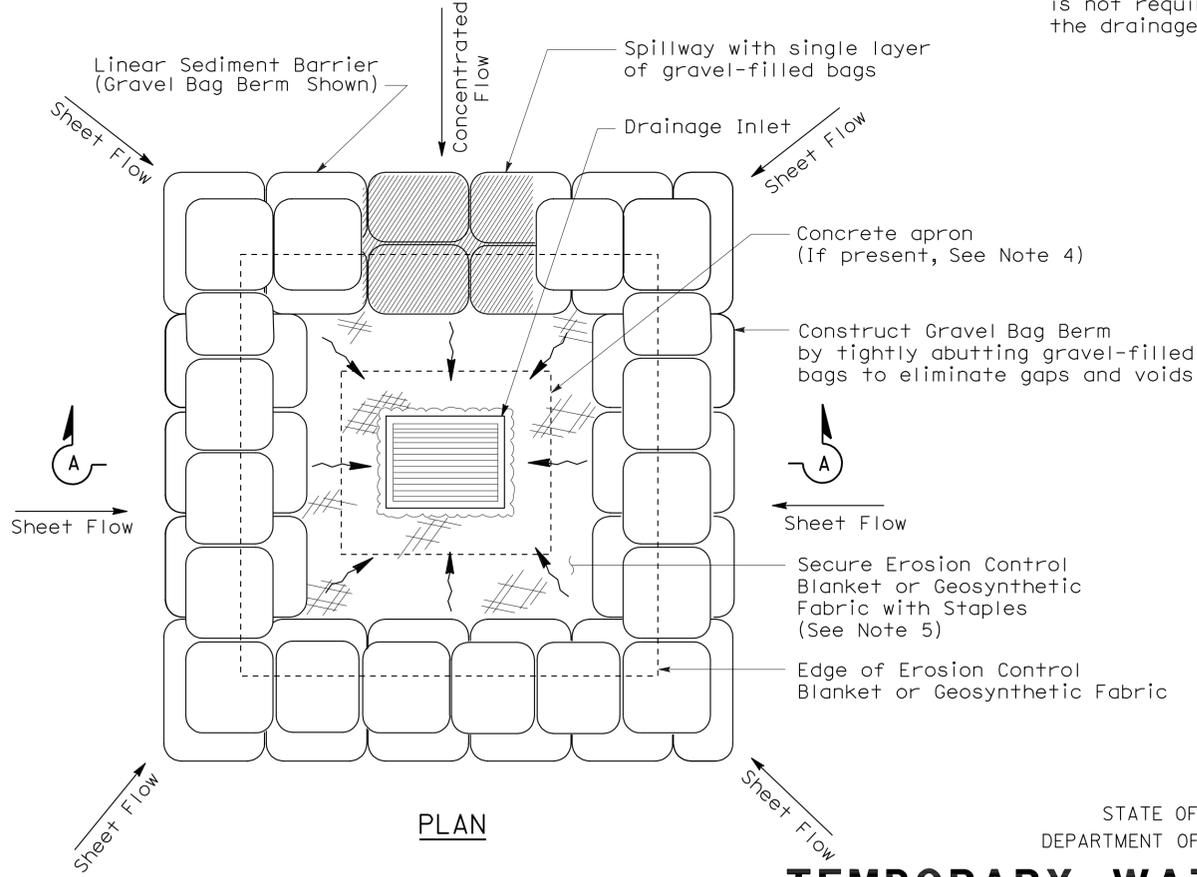
SECTION A-A

NOTES:

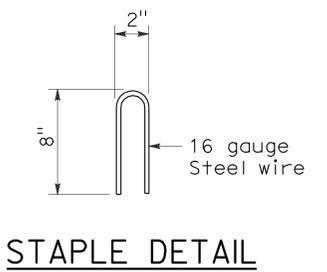
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.



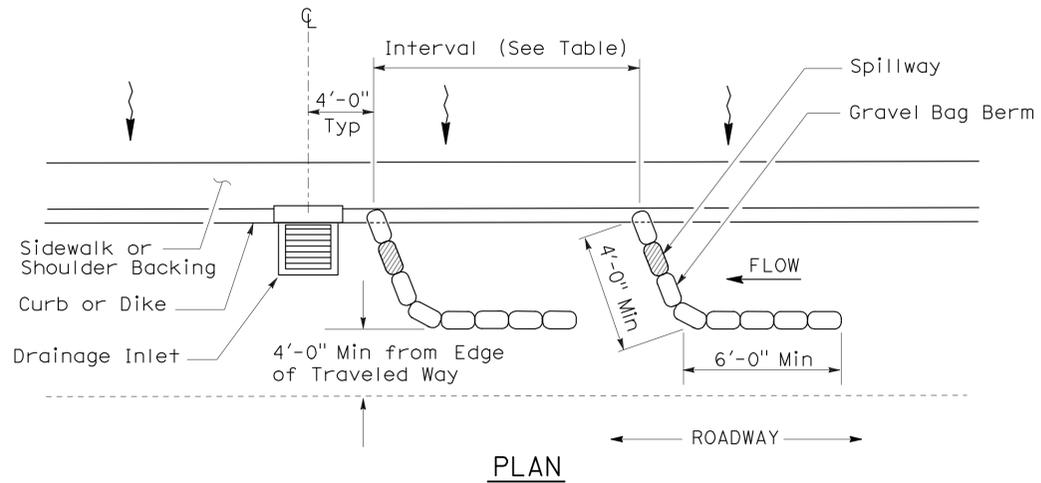
PERSPECTIVE



**PLAN
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 3B)**



STAPLE DETAIL

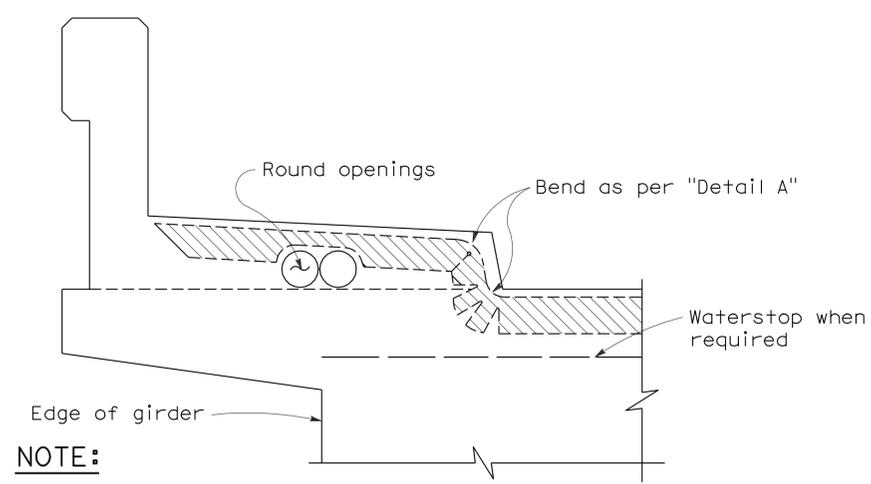


**PLAN
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 3A)
(GRAVEL BAG BERM)**

**STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION
CONTROL DETAILS
(TEMPORARY DRAINAGE
INLET PROTECTION)**

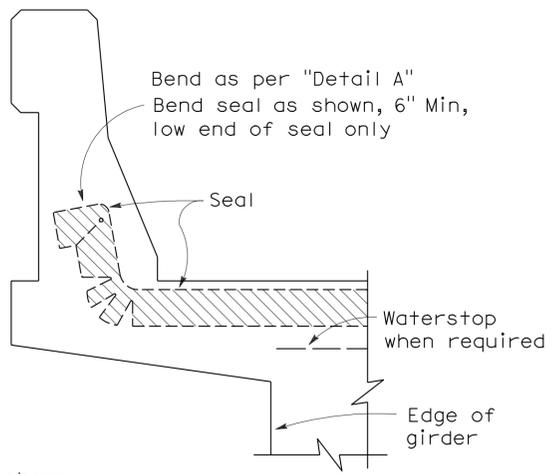
NO SCALE
NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T62

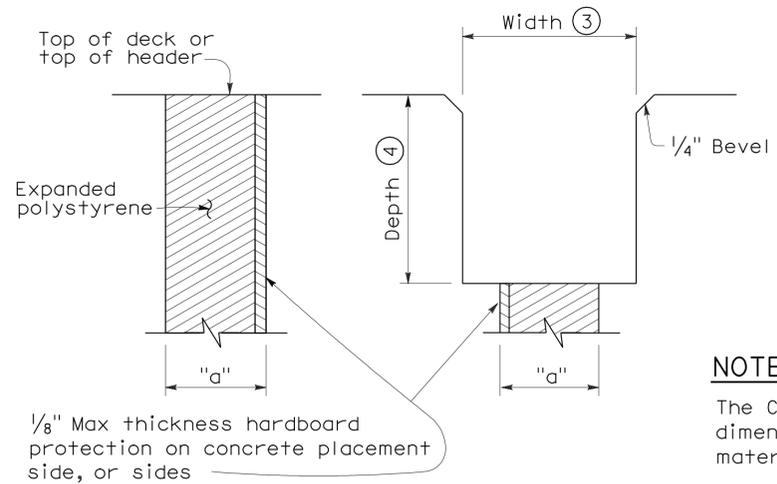


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



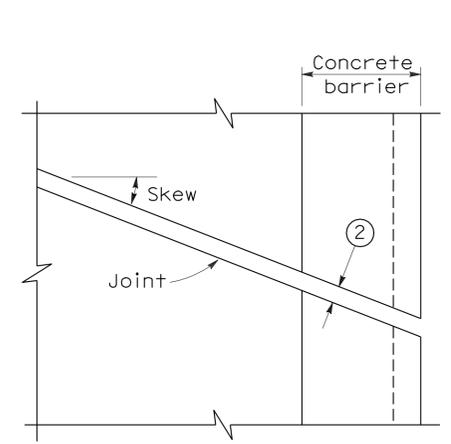
CONCRETE BARRIER



FORMING DETAIL SAWCUT DETAIL

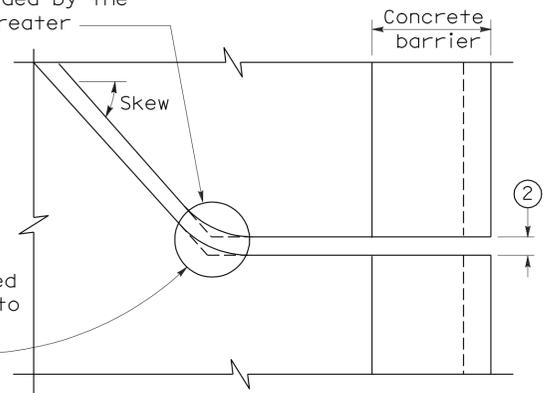
NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

JOINT SEALS DETAILS



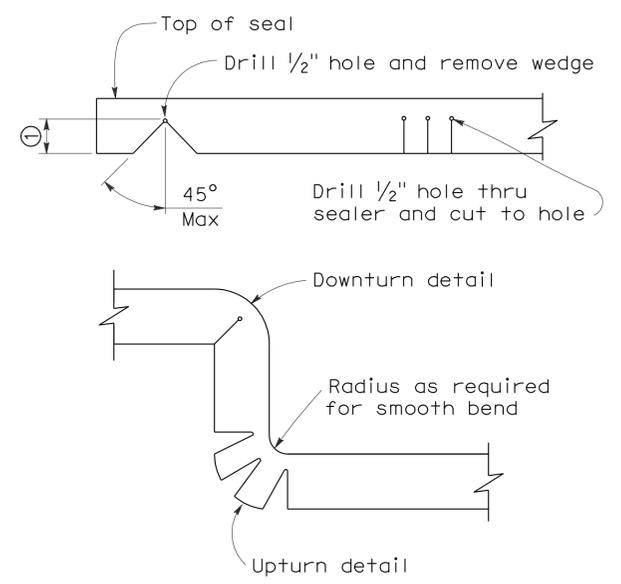
PLAN OF JOINT (SKEW ≤ 20°)

Min ϕ radius to be 4 times uncompressed width of seal or as recommended by the manufacturer, whichever is greater



PLAN OF JOINT (SKEW > 20°)

In lieu of saw cutting, this area may be blocked out and reconstructed to match saw cutting on both sides.



DETAIL A

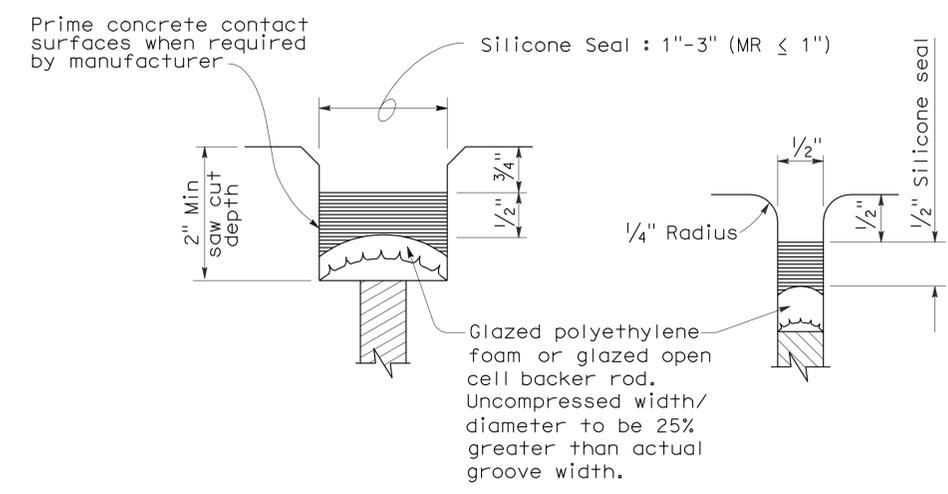
NOTES:

- Make smooth cuts from the bottom of seal to 1 1/2" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
- Opening in barrier to match width of sawn deck joint.
- Sawcut groove widths shall be as ordered by the Engineer.
- Depth of sawcut: Type A - Depth to be 2" minimum.
 Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W₂) plus dimensions shown.
- MR (movement rating) as shown on other plan sheets.
- Other depths must be approved by the Engineer.

DIMENSIONS "a" OF JOINT REQUIRED

| Movement Rating (MR) ⑤ | Bridge Type | "a" Dimension | | |
|------------------------|-------------------|----------------------|-------------|--------|
| | | Deck Concrete Placed | | |
| | | Winter | Fall-Spring | Summer |
| 2" | All except CIP/PS | 1 1/2" | 1 1/4" | 3/4" |
| | CIP/PS | 1 1/4" | 1" | 1/2" |
| 1 1/2" | All except CIP/PS | 1 1/4" | 1" | 1/2" |
| | CIP/PS | 1" | 3/4" | 1/2" |
| 1" | All except CIP/PS | 1" | 3/4" | 1/2" |
| | CIP/PS | 3/4" | 1/2" | 1/2" |
| 1/2" | All except CIP/PS | 3/4" | 3/4" | 1/2" |
| | CIP/PS | 1/2" | 1/2" | 1/2" |

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINT SEALS
(MAXIMUM MOVEMENT RATING = 2")
 NO SCALE

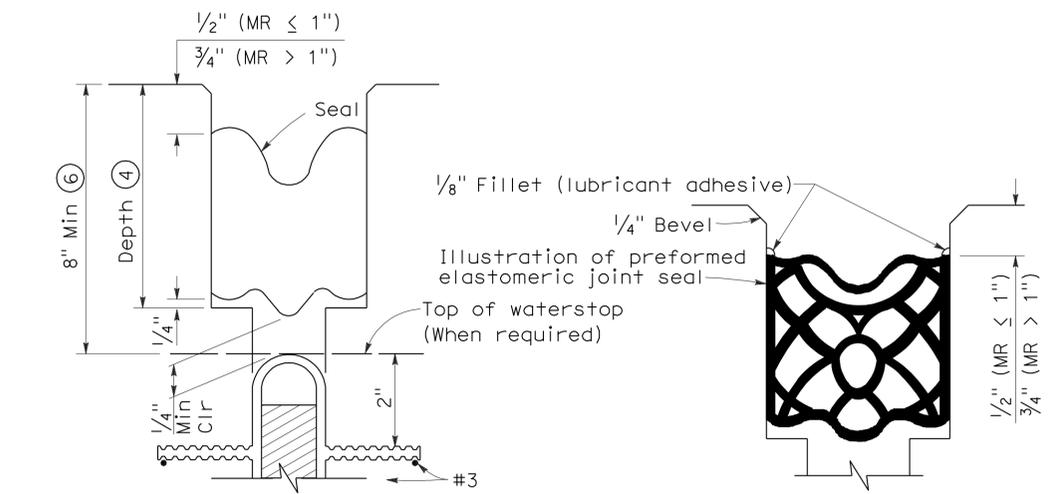


TYPE A SEAL

Movement rating : Silicone = 1" Max

TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W₂)

TYPE B SEAL

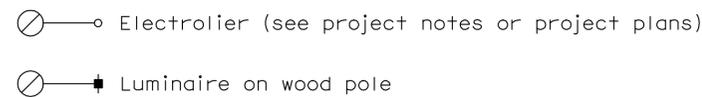
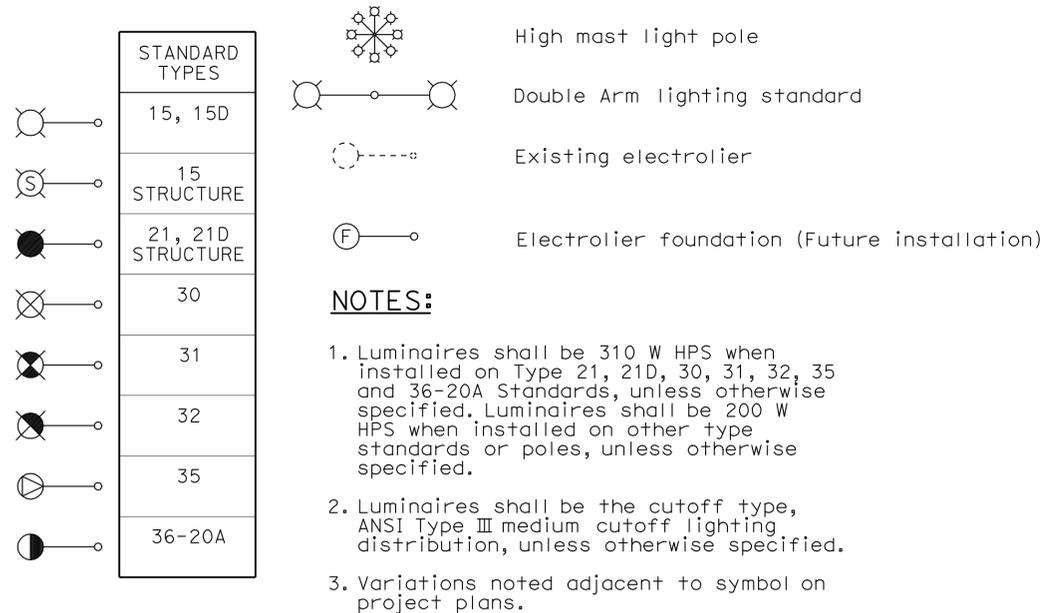
Movement Rating ≤ 2"

RSP B6-21 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B6-21 DATED MAY 1, 2006 - PAGE 258 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B6-21

2006 REVISED STANDARD PLAN RSP B6-21

ELECTROLIERS



STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

| | | |
|--------|--------|--|
| BBS | bbs | Battery backup system |
| BC | bc | Bolt circle |
| C | C | Conduit |
| CCTV | cctv | Closed circuit television |
| CKT | ckt | Circuit |
| CMS | cms | Changeable message sign |
| DLC | dlc | Loop detector lead-in cable |
| EMS | ems | Extinguishable message sign |
| EVC | evc | Emergency vehicle cable |
| EVD | evd | Emergency vehicle detector |
| FB | fb | Flashing beacon |
| FBCA | fbca | Flashing beacon control assembly |
| FBS | fbs | Flashing beacon with slip base |
| FO | fo | Fiber optic |
| G | G | Ground (Equipment Grounding Conductor) |
| GFCI | GFCI | Ground fault circuit interrupt |
| HAR | har | Highway advisory radio |
| HEX | hex | Hexagonal |
| HPS | hps | High pressure sodium |
| IISNS | iisns | Internally illuminated street name sign |
| ISL | isl | Induction sign lighting |
| LED | led | Light emitting diode |
| LMA | lma | Luminaire mast arm |
| LPS | lps | Low pressure sodium |
| LTG | ltg | Lighting |
| LUM | lum | Luminaire |
| MAT | mat | Mast arm mounting vehicle signal faces, top attachment |
| MAS | mas | Mast arm mounting vehicle signal faces, side attachment |
| MAS-4A | mas-4A | Mast arm mounting vehicle signal faces, side attachment - 4 signal section |
| MAS-4B | mas-4B | |
| MAS-4C | mas-4C | |
| MAS-5A | mas-5A | Mast arm mounting vehicle signal faces, side attachment - 5 signal section |
| MAS-5B | mas-5B | |
| MC | mc | Mercury contactor |
| M/M | m/m | Multiple to multiple transformer |
| MT | mt | Conduit with pull wire or rope only |
| MTG | mtg | Mounting |
| | mv | Mercury vapor lighting fixture |
| N | N | Neutral (Grounded Conductor) |
| NC | NC | Normally closed |
| NO | NO | Normally open |
| PB | pb | Pull box |
| PEC | pec | Photoelectric control (Type I, II, III, IV or V as shown) |
| PED | ped | Pedestrian |
| PEU | peu | Photoelectric unit |
| PPB | ppb | Pedestrian push button |
| RL | | Relocated equipment |
| RM | rm | Ramp metering |
| SB | sb | Slip base |
| SIC | sic | Signal interconnect cable |
| SIG | sig | Signal |
| SMA | sma | Signal mast arm |
| SNS | sns | Street name sign |
| SP | sp | Service point |
| TDC | tdc | Telephone demarcation cabinet |
| TMS | tms | Traffic monitoring station |
| TOS | tos | Traffic Operations System |
| VEH | veh | Vehicle |
| XFMR | xfmr | Transformer |
| COMM | comm | Communication |
| RWIS | rwis | Roadway weather information system |

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1198 | 1507 |

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

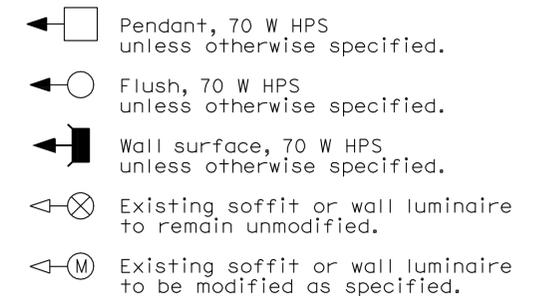
October 5, 2007
PLANS APPROVAL DATE

Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

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To accompany plans dated 6-27-11

SOFFIT AND WALL MOUNTED LUMINAIRES



NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 07 | LA | 710 | 17.2/26.4 | 1199 | 1507 |

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

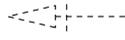
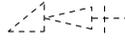
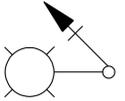
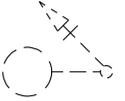
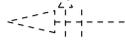
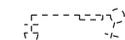
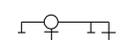
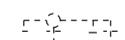
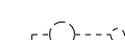
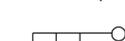
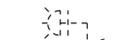
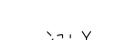
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To accompany plans dated 6-27-11

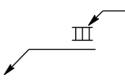
CONDUIT

| PROPOSED | EXISTING | |
|---|---|---|
| --- | --- | Lighting Conduit, unless otherwise indicated or noted |
| --- | --- | Traffic signal conduit |
| -C- | -c- | Communication conduit |
| -T- | -t- | Telephone conduit |
| -F- | -f- | Fire alarm conduit |
| -FO- | -fo- | Fiber optic conduit |
| --- | --- | Conduit termination  |
|  |  | Conduit riser in/on structure or service pole |

SIGNAL EQUIPMENT

| PROPOSED | EXISTING | |
|---|---|--|
|  |  | Pedestrian signal face |
|  |  | Pedestrian push button post |
|  |  | Pedestrian barricade |
|  |  | Vehicle signal face (with backplate, 3-Section: red, yellow and green) |
|  |  | Vehicle signal face with angle visors |
|  |  | Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified) |
|  |  | Type 15TS and Vehicle signal face |
|  |  | Vehicle signal face with red, yellow and green left arrow sections |
|  |  | Vehicle signal face with red and yellow sections and up green arrow |
|  |  | Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows |
|  |  | Type 1 Standard and attached vehicle signal faces |
|  |  | Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign |
|  |  | Type 33 Standard, Left-turn vehicle signal face and sign |
|  |  | Standard with luminaire and signal mast arms and attached vehicle signal faces |
|  |  | Cantilever flashing beacon, Type 9 Frame, with a sign unless otherwise specified or indicated |
|  |  | Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign |
|  |  | Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication |
|  |  | Controller assembly. Door indicates front of cabinet |

SERVICE EQUIPMENT

| PROPOSED | EXISTING | |
|---|---|---|
| ---OH | ---oh | Overhead lines |
|  |  | Wood pole "U" indicates utility owned |
|  |  | Pole guy with anchor |
|  |  | Utility transformer - ground mounted |
|  |  | Service equipment enclosure type |
|  |  | Service equipment enclosure door indicates front of enclosure |
|  |  | Telephone demarcation cabinet |

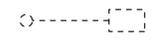
POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

| PROPOSED | EXISTING | |
|---|---|--------------------------------------|
|  |  | Overhead sign - Single post |
|  |  | Overhead sign - Two post |
|  |  | Overhead sign - Mounted on structure |
|  |  | Overhead sign with electrolier |

SIGNAL EQUIPMENT Cont

| PROPOSED | EXISTING | |
|---|---|--------------------------------------|
|  |  | Guard post |
|  |  | Type 1 Standard with "Meter On" sign |
|  |  | Emergency Vehicle detector |

NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SYMBOLS AND ABBREVIATIONS)**
 NO SCALE

RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

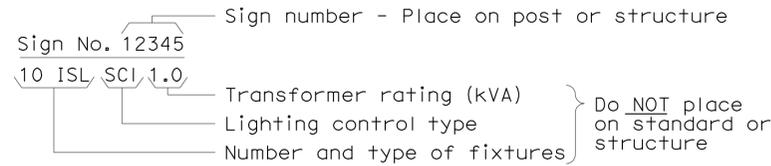
REVISED STANDARD PLAN RSP ES-1B

2006 REVISED STANDARD PLAN RSP ES-1B

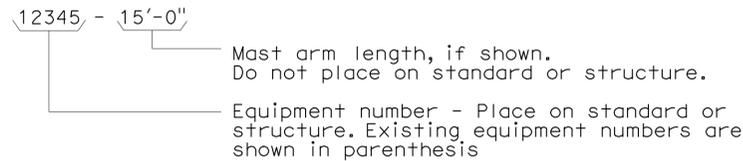
To accompany plans dated 6-27-11

EQUIPMENT IDENTIFICATION

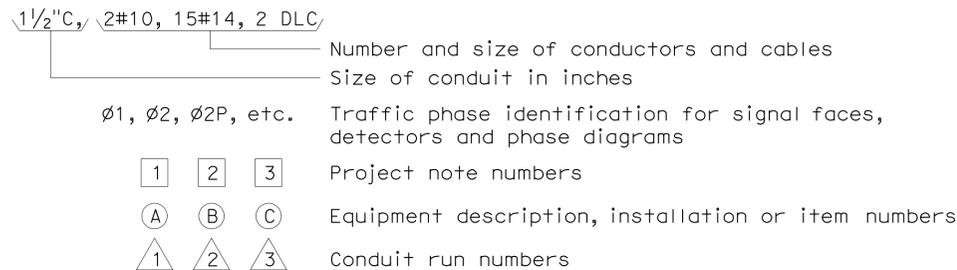
ILLUMINATED SIGN IDENTIFICATION NUMBER:



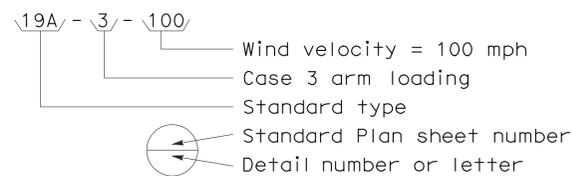
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



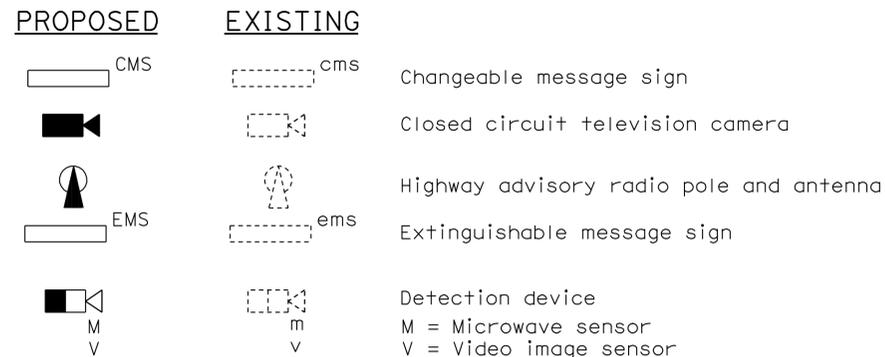
CONDUIT AND CONDUCTOR IDENTIFICATION:



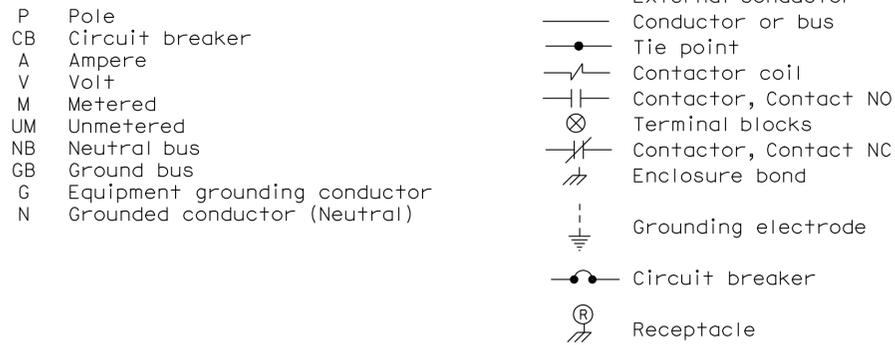
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



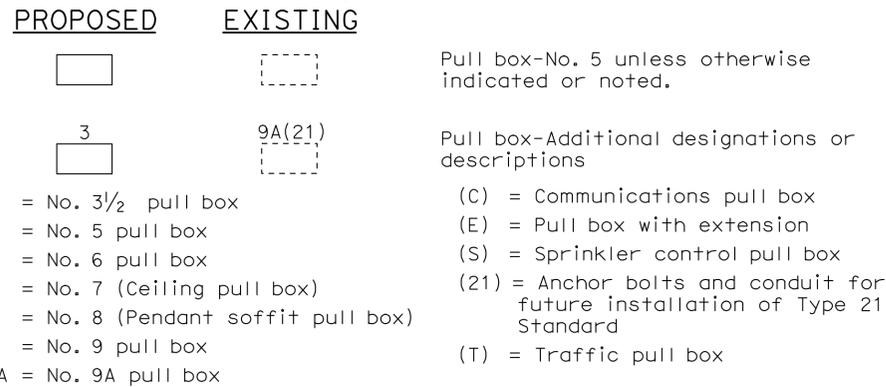
MISCELLANEOUS EQUIPMENT



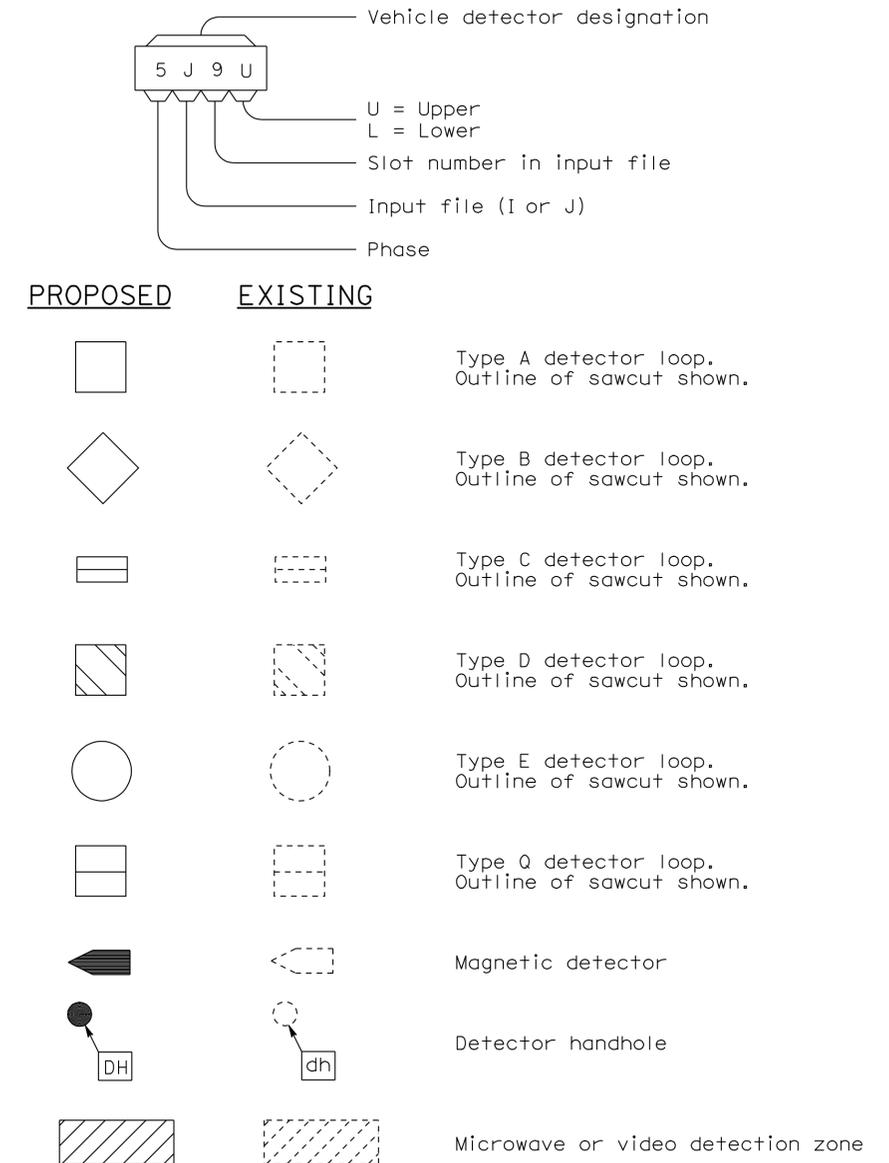
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
 DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-1C