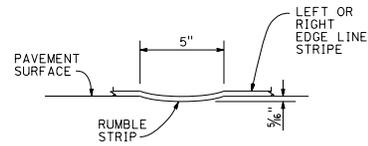
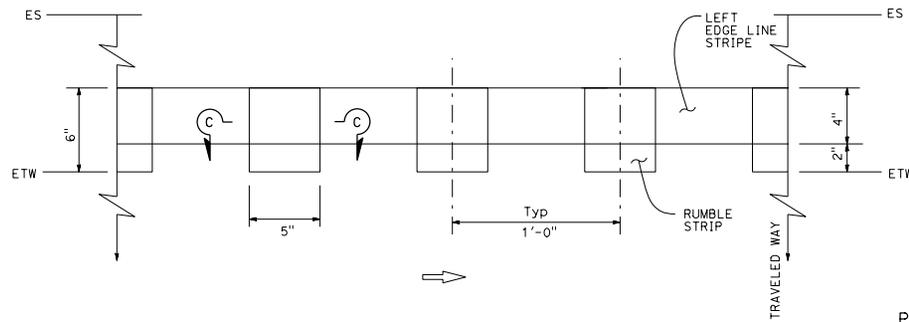


| Dist* | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|--|--------|-------|-----------------------------|--------------|-----------------|
| | | | | | |
| <i>Atifa Ferouz</i> REGISTERED CIVIL ENGINEER | | | | | |
| July 15, 2016 PLANS APPROVAL DATE | | | | | |
| No. C80402 Exp. 3-31-17 CIVIL | | | | | |
| <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> | | | | | |

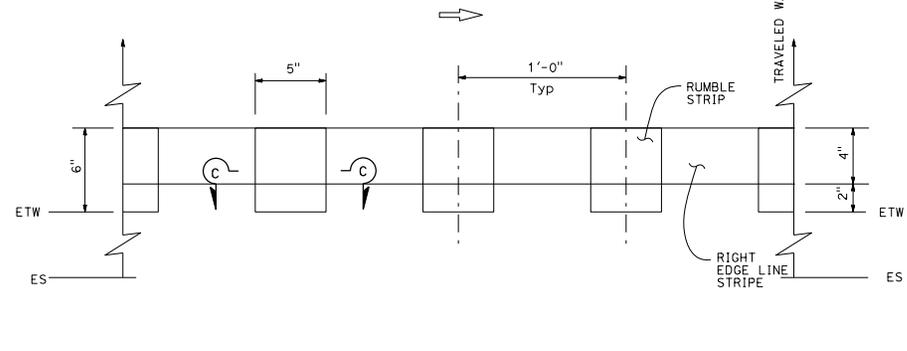
TO ACCOMPANY PLANS DATED _____



SECTION C-C



EDGE LINE RUMBLE STRIP PLACEMENT
LEFT OF DIRECTION OF TRAVEL



EDGE LINE RUMBLE STRIP PLACEMENT
RIGHT OF DIRECTION OF TRAVEL

TYPICAL EDGE LINE RUMBLE STRIP PLACEMENT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**EDGE LINE RUMBLE STRIP
DETAILS
GROUND-IN INDENTATIONS**

NO SCALE

RSP A40C DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP A40C

2015 REVISED STANDARD PLAN RSP A40C

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

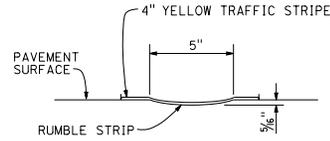
Atifa Ferouz
 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 No. C80402
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

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.

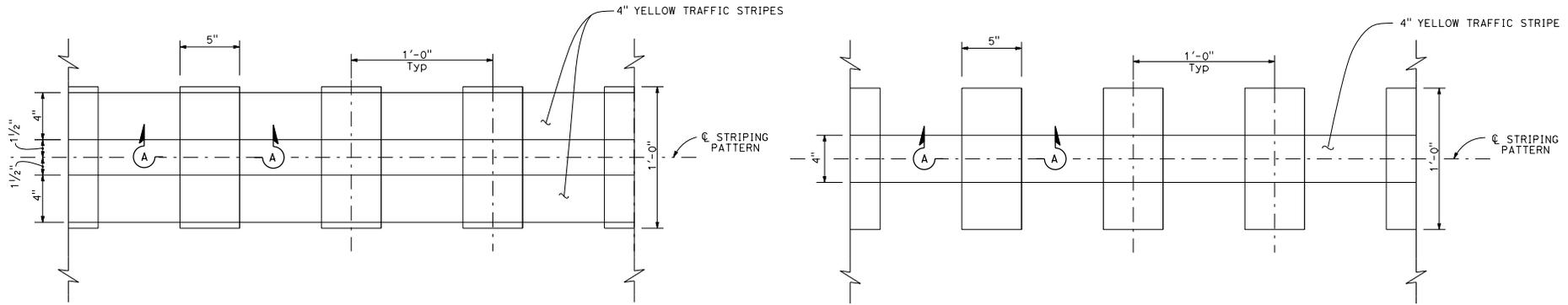
TO ACCOMPANY PLANS DATED _____

NOTE:

Detail 21 and Detail 5 traffic stripes shown, see project plans for traffic stripe details.



SECTION A-A



PLAN

RUMBLE STRIP PLACEMENT IN NO PASSING ZONE

RUMBLE STRIP PLACEMENT IN PASSING ZONE

TYPICAL CENTERLINE RUMBLE STRIP PLACEMENT

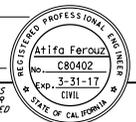
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CENTERLINE RUMBLE STRIP
DETAILS
GROUND-IN INDENTATIONS**
NO SCALE

RSP A40D DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP A40D

2015 REVISED STANDARD PLAN RSP A40D

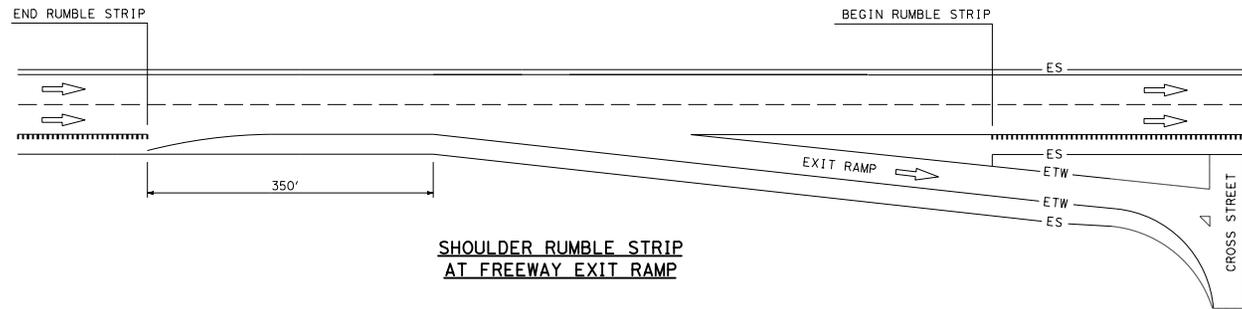
| Dist | County | Route | Post Miles Total Project | Sheet No. | Total Sheets |
|--|--------|-------|-----------------------------|--------------|-----------------|
| | | | | | |
| <i>Atifa Ferouzi</i> REGISTERED CIVIL ENGINEER | | | | | |
| July 15, 2016 PLANS APPROVAL DATE | | | | | |
| THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. | | | | | |



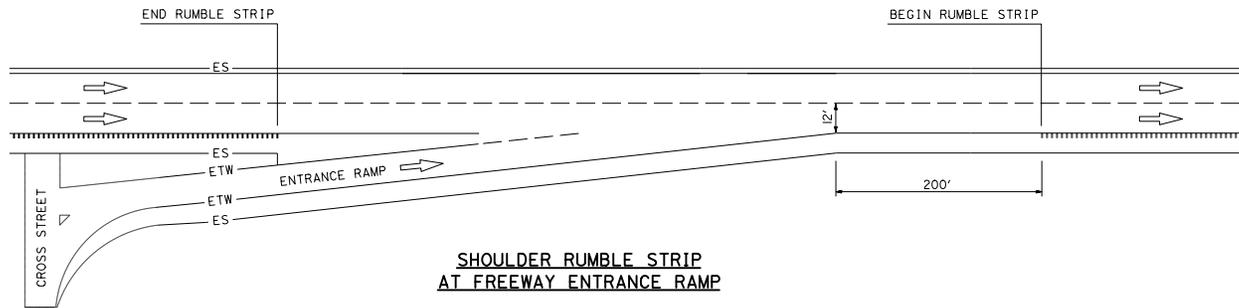
TO ACCOMPANY PLANS DATED _____

LEGEND

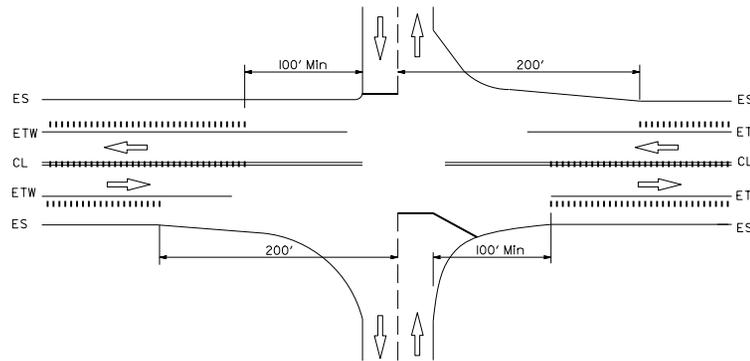
..... RUMBLE STRIP (GROUND-IN)



**SHOULDER RUMBLE STRIP
AT FREEWAY EXIT RAMP**



**SHOULDER RUMBLE STRIP
AT FREEWAY ENTRANCE RAMP**



**CENTERLINE AND SHOULDER RUMBLE STRIP
AT GRADE INTERSECTION**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**RUMBLE STRIP PLACEMENT AT
FREEWAY EXIT RAMP,
FREEWAY ENTRANCE RAMP,
AND
INTERSECTIONS**

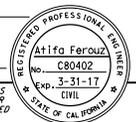
NO SCALE

RSP A40E DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

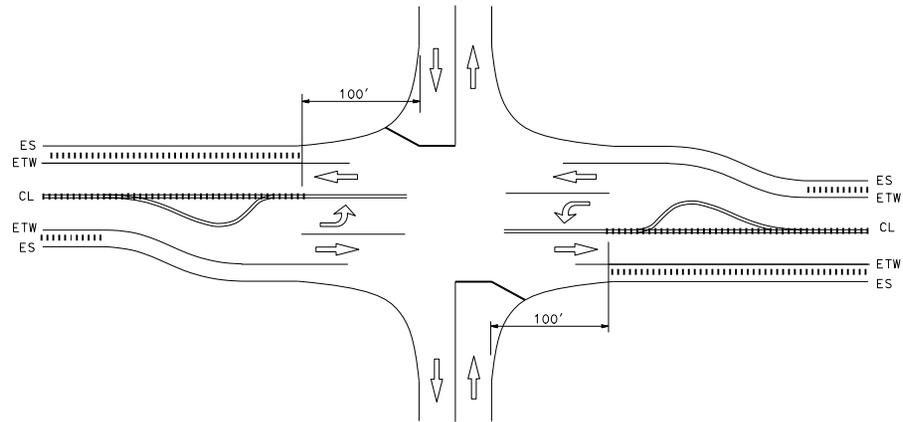
REVISED STANDARD PLAN RSP A40E

2015 REVISED STANDARD PLAN RSP A40E

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|--|--------|-------|-----------------------------|--------------|-----------------|
| | | | | | |
| <i>Atifa Ferouz</i> REGISTERED CIVIL ENGINEER | | | | | |
| July 15, 2016 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. | | | | | |



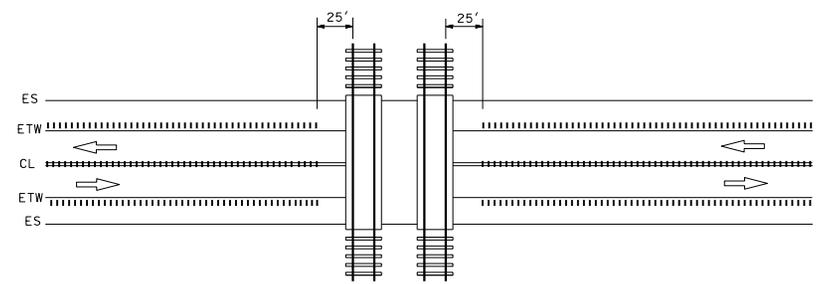
TO ACCOMPANY PLANS DATED _____



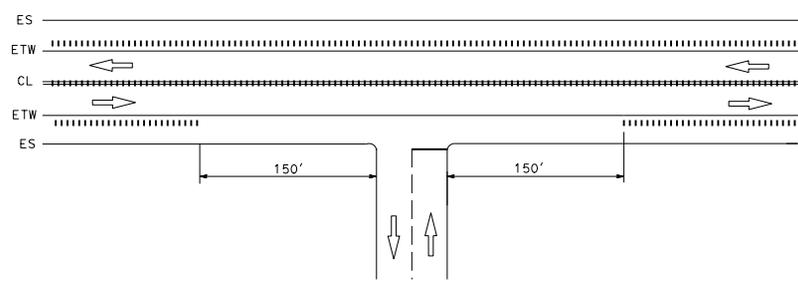
CENTERLINE AND SHOULDER RUMBLE STRIPS
AT INTERSECTION WITH LEFT TURN POCKETS

LEGEND

- RUMBLE STRIPS (GROUND-IN)
- ||||| RAILROAD TRACKS



CENTERLINE AND SHOULDER RUMBLE STRIPS
AT RAILROAD CROSSING



CENTERLINE AND SHOULDER RUMBLE STRIPS
AT DRIVEWAY/PRIVATE ROAD APPROACH

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**RUMBLE STRIP PLACEMENT AT
INTERSECTIONS WITH LEFT TURN POCKETS,
RAILROAD CROSSINGS,
PRIVATE ROADS, AND MAJOR DRIVEWAYS**

NO SCALE

RSP A40F DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

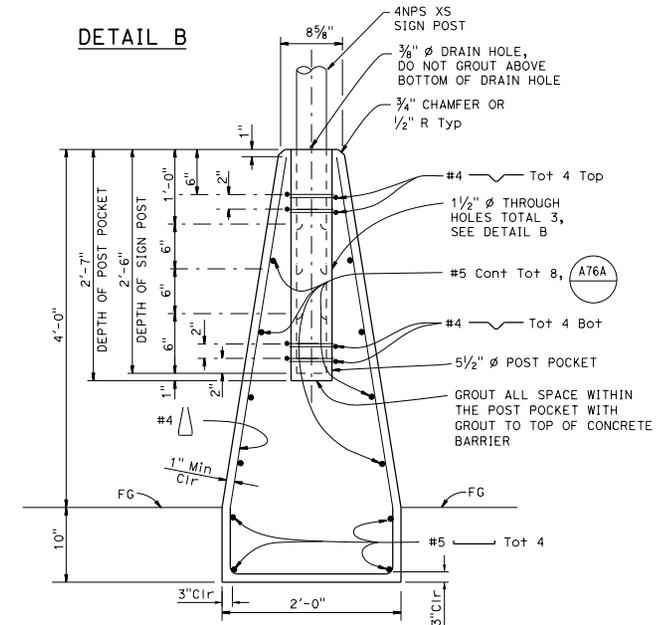
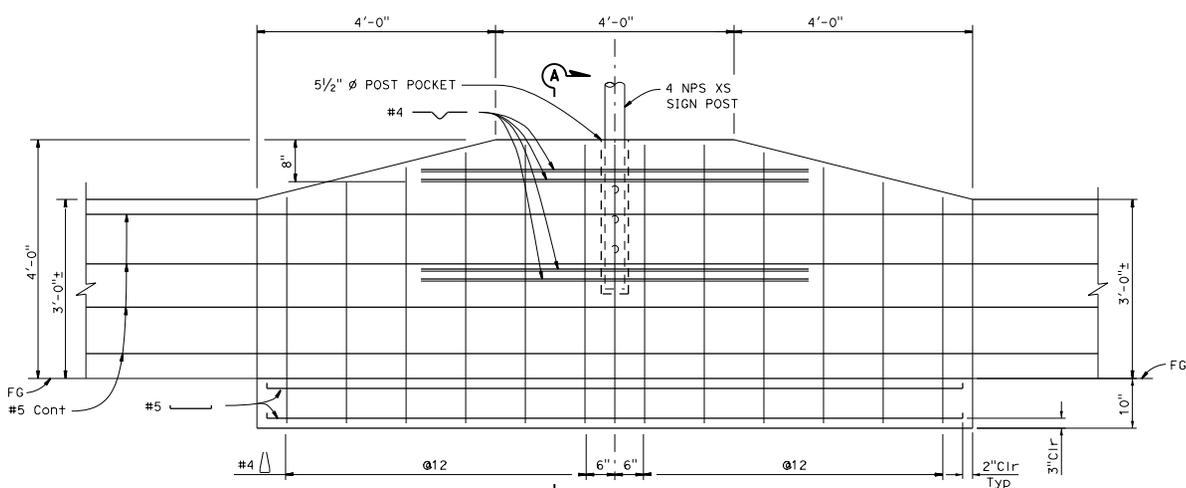
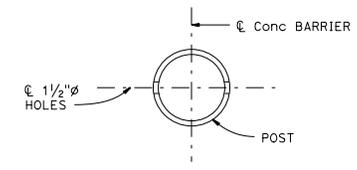
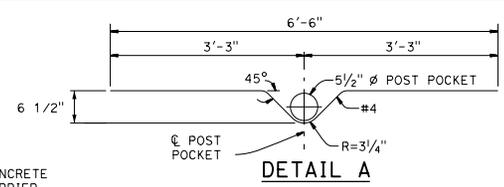
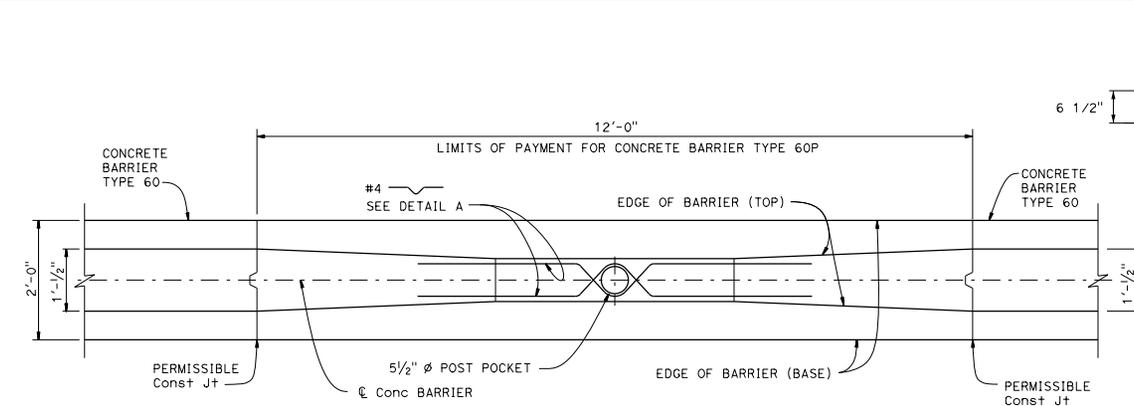
REVISED STANDARD PLAN RSP A40F

2015 REVISED STANDARD PLAN RSP A40F

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 PLANS APPROVAL DATE
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NOTE:
 For Type 60 Barrier cross section see Std Plan A76A

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CONCRETE BARRIER TYPE 60P
 NO SCALE

RSP A76BA DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP A76BA

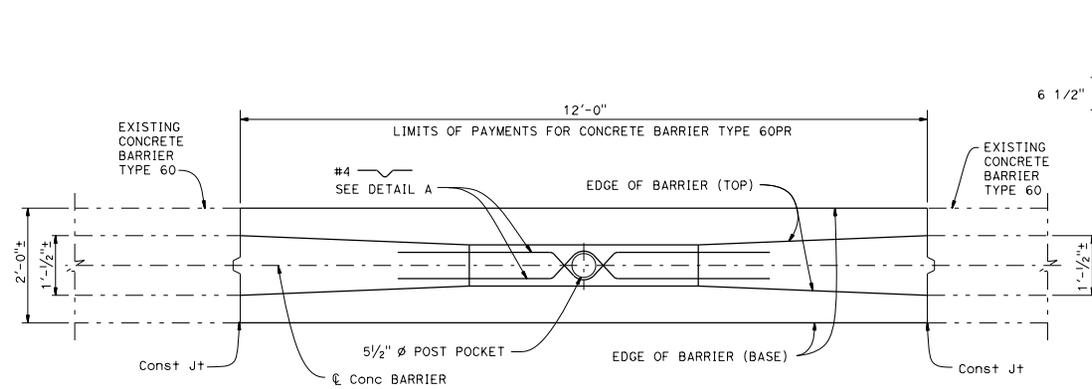
2015 REVISED STANDARD PLAN RSP A76BA

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
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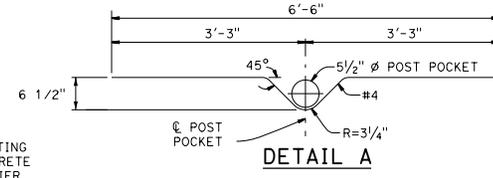
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

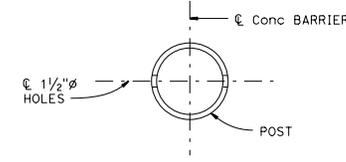
TO ACCOMPANY PLANS DATED _____



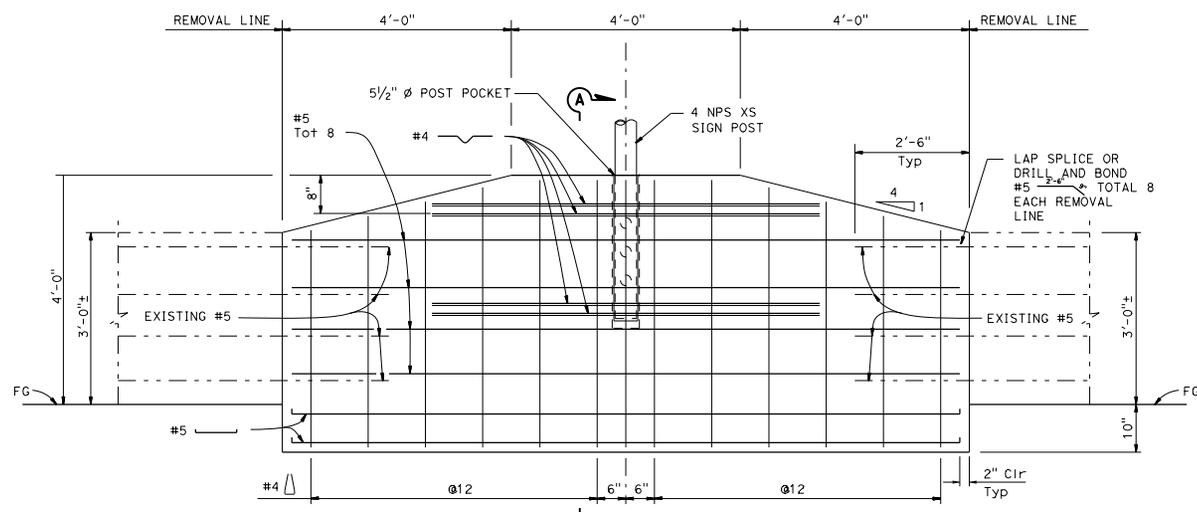
PLAN



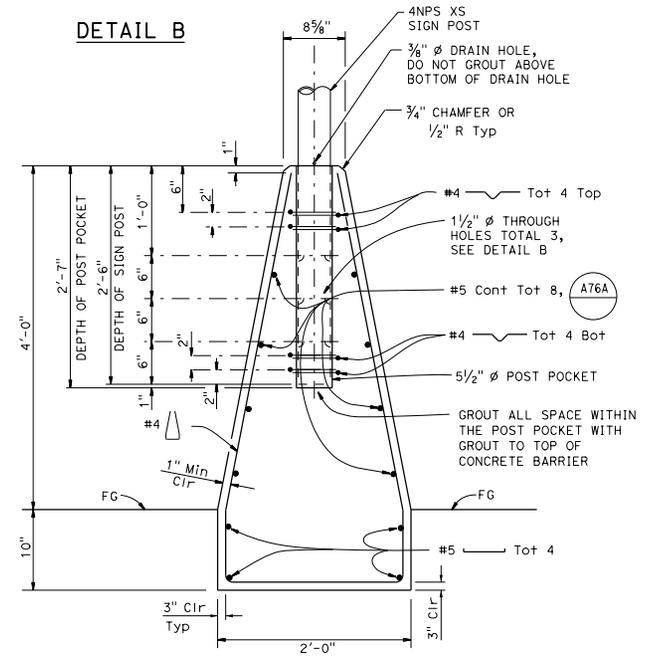
DETAIL A



DETAIL B



ELEVATION



SECTION A-A

NOTE:
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CONCRETE BARRIER TYPE 60PR
 NO SCALE

RSP A76BB DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP A76BB

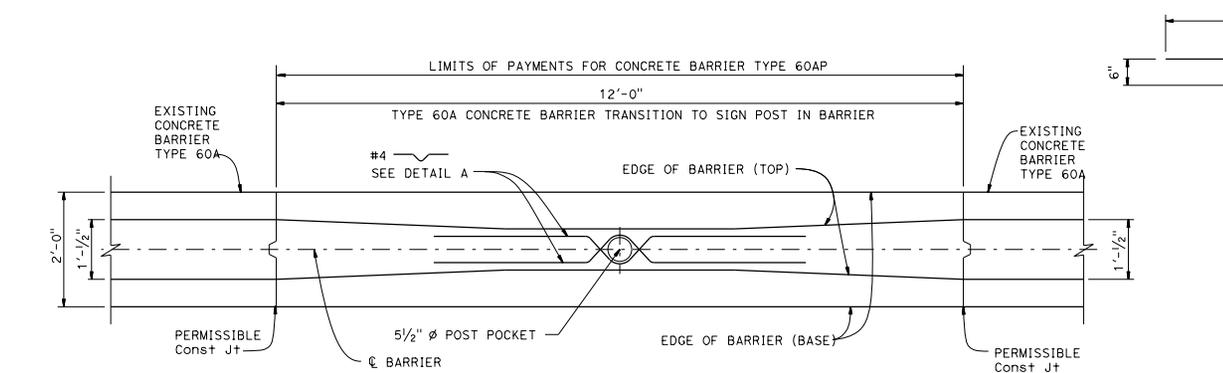
2015 REVISED STANDARD PLAN RSP A76BB

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

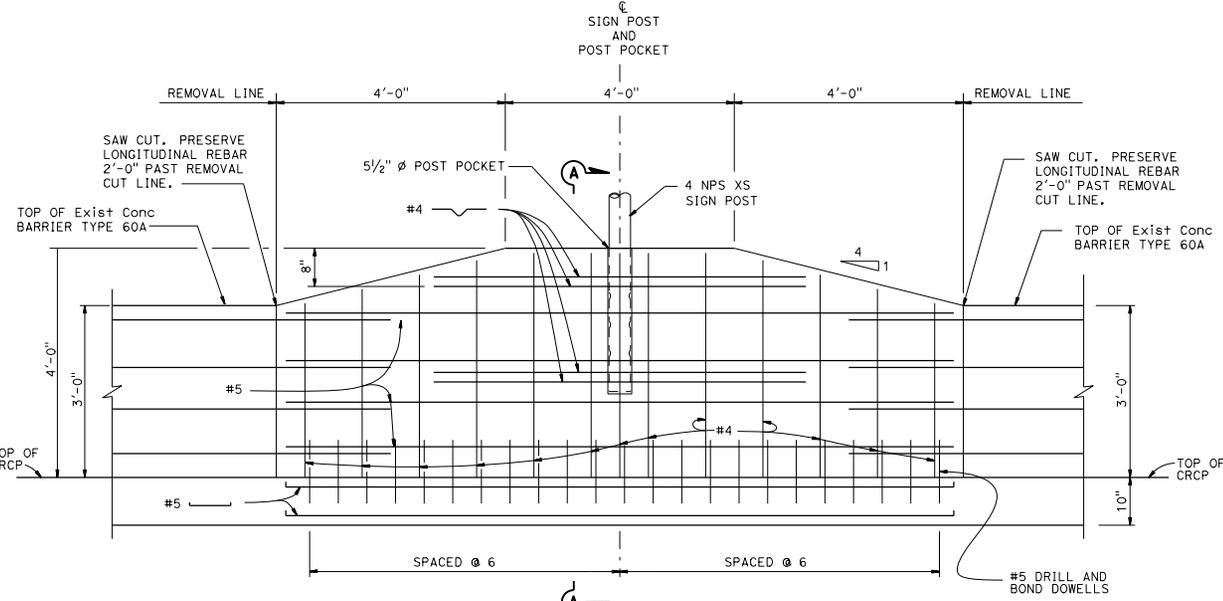
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

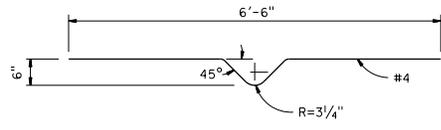
TO ACCOMPANY PLANS DATED _____



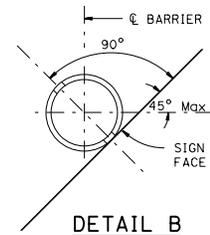
PLAN



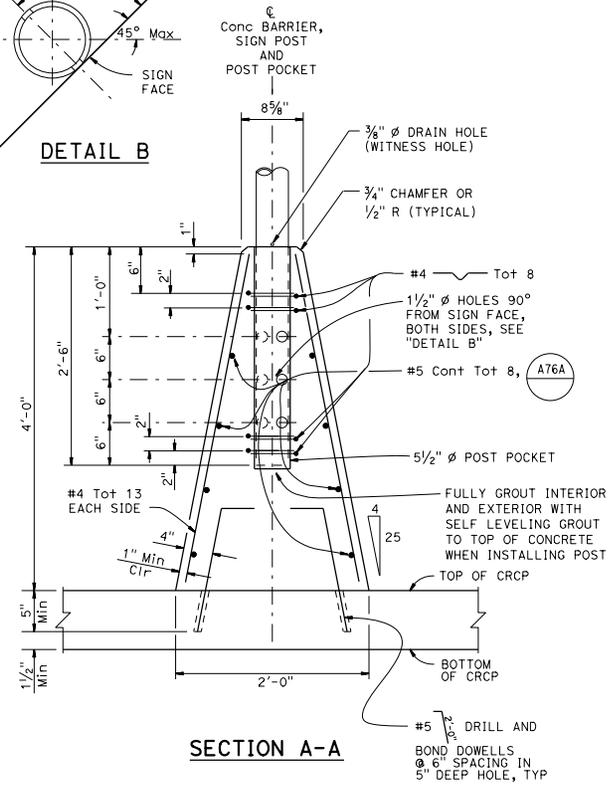
ELEVATION



DETAIL A



DETAIL B



SECTION A-A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE BARRIER TYPE 60AP
NO SCALE

RSP A76BC DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP A76BC

2015 REVISED STANDARD PLAN RSP A76BC

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

Raymond Don Tsztoo
 REGISTERED CIVIL ENGINEER
 No. C37332
 Exp. 6-30-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

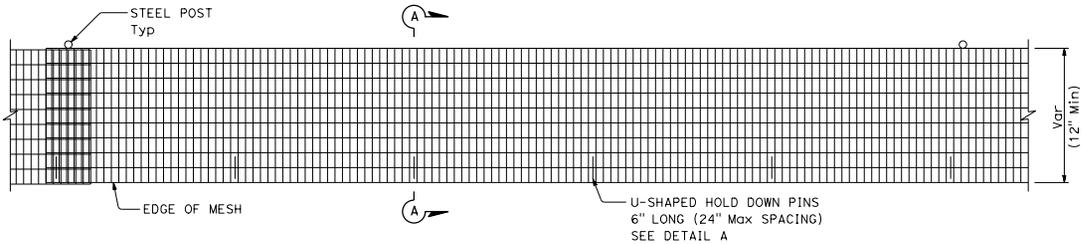
LEGEND:

 Desert Tortoise Habitat

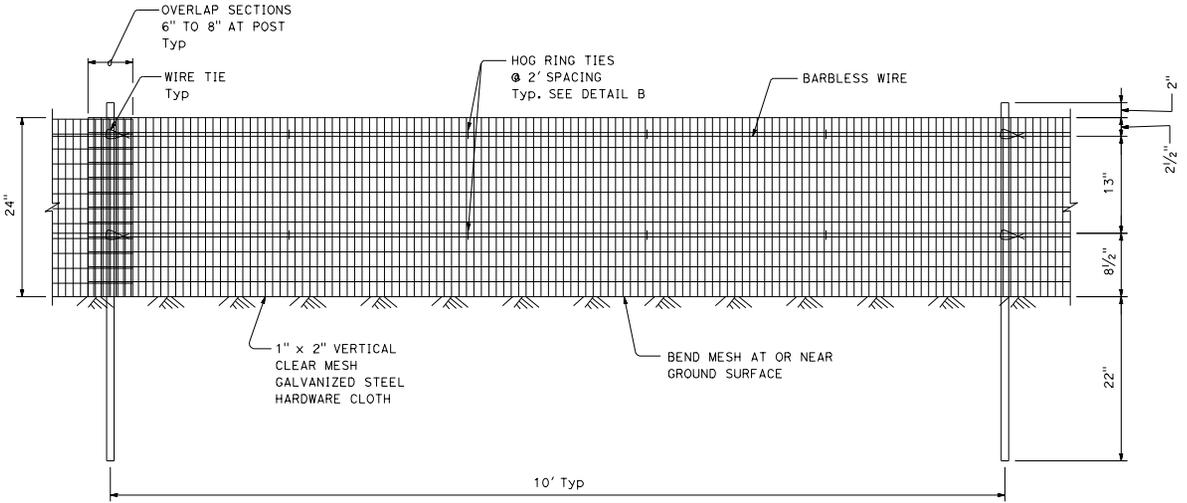
NOTES:

- Exact locations for temporary desert tortoise fence are shown on the plans.
- Horizontal portion of hardware cloth must be on habitat side of posts.

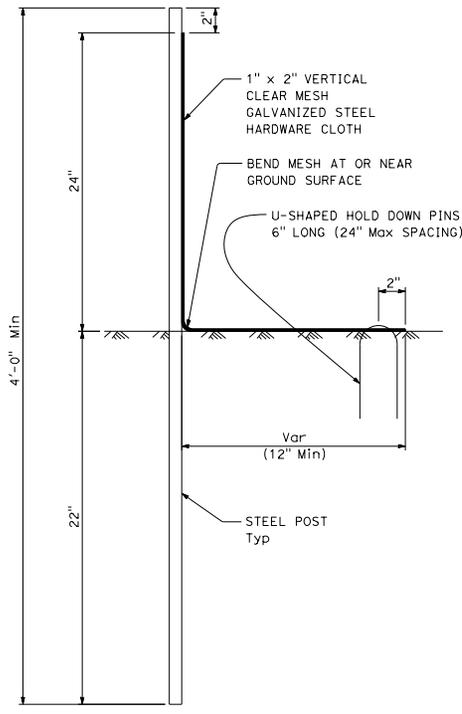
TO ACCOMPANY PLANS DATED _____



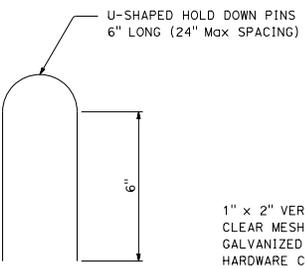
PLAN VIEW



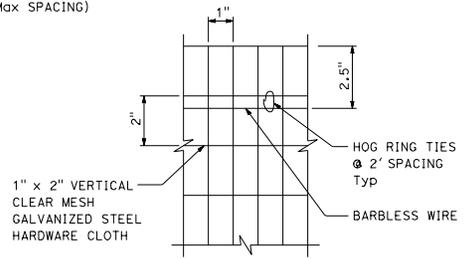
FRONT VIEW



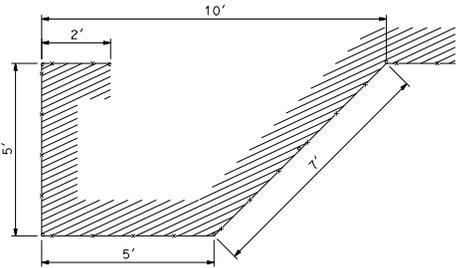
SECTION A-A



DETAIL A



DETAIL B



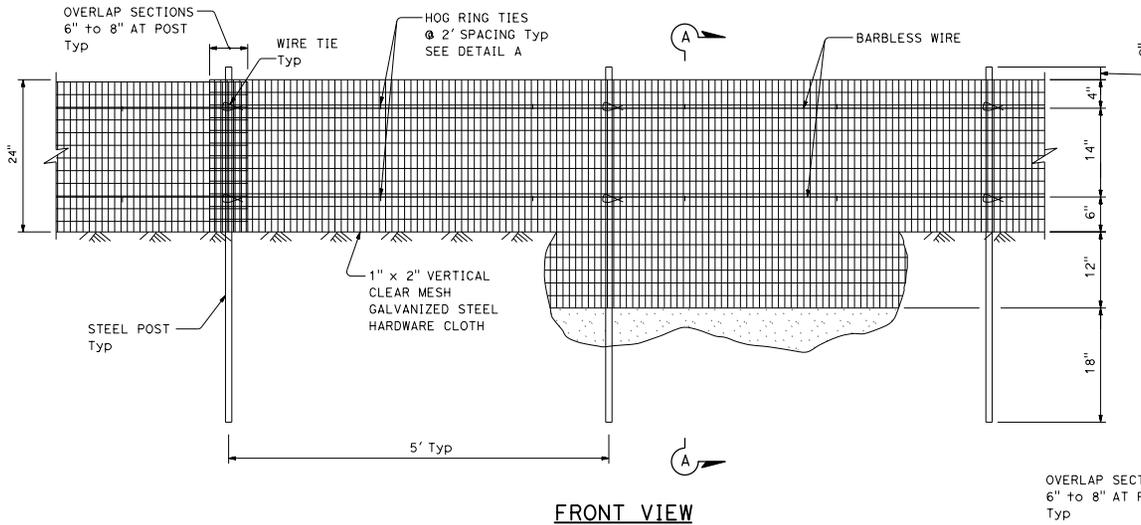
REDIRECTIONAL CONFIGURATION PLAN VIEW

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY DESERT TORTOISE FENCE
NO SCALE

RSP A84A DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP A84A

2015 REVISED STANDARD PLAN RSP A84A



LEGEND:

Desert Tortoise Habitat

NOTE:

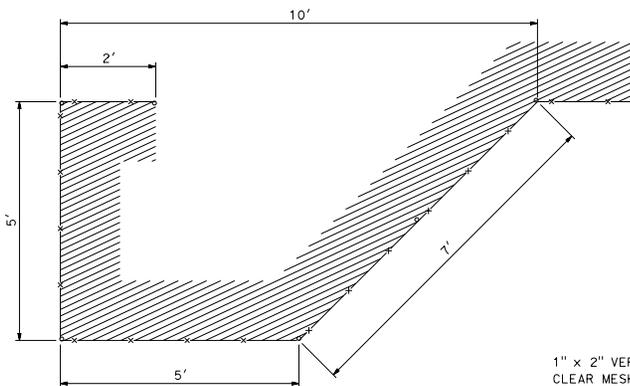
1. Exact locations for desert tortoise fence are shown on the plans.

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

Raymond Don Johnston
 REGISTERED CIVIL ENGINEER
 No. C37332
 Exp. 6-30-18
 CIVIL
 STATE OF CALIFORNIA

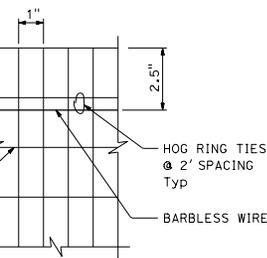
July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED _____

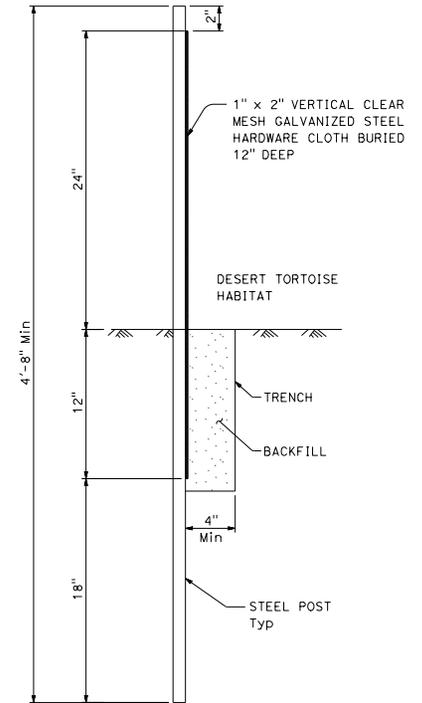
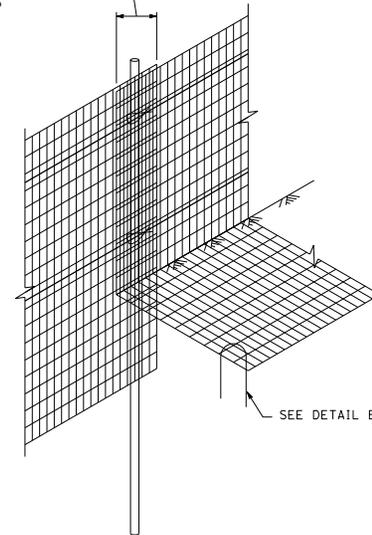


U-SHAPED HOLD DOWN PINS
6" LONG (24" Max SPACING)

DETAIL B



OVERLAP SECTIONS
6" to 8" AT POST
Typ

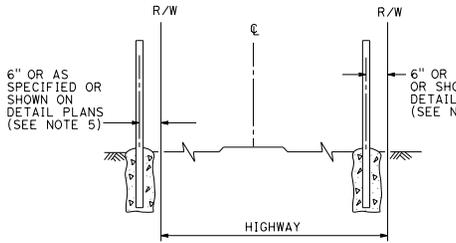


STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DESERT TORTOISE FENCE
NO SCALE

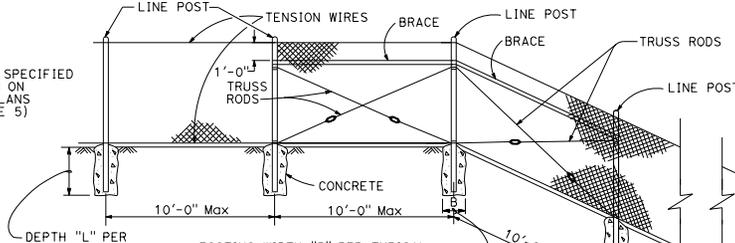
RSP A84B DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP A84B

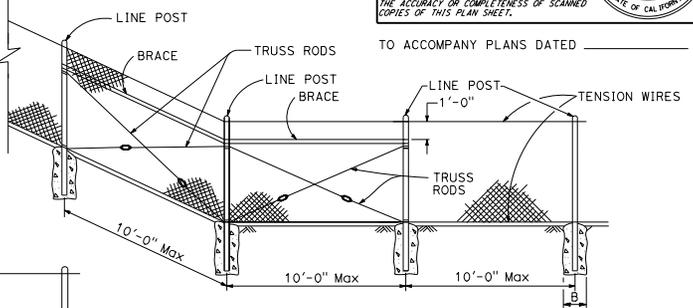
2015 REVISED STANDARD PLAN RSP A84B



FENCE LOCATION



CHAIN LINK FENCE ON SHARP BREAK IN GRADE

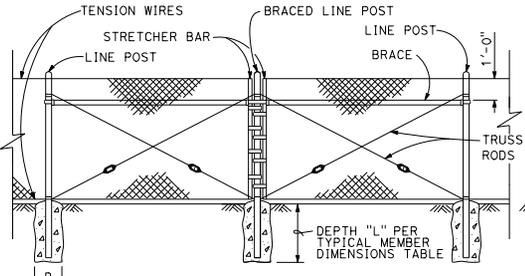


| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| | | | | | |

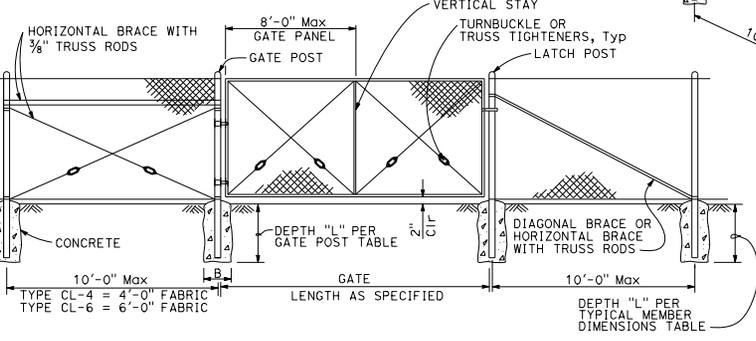
REGISTERED CIVIL ENGINEER
Sukhdeep Singh Sandher
No. C74893
Exp. 12-31-17
CIVIL

PLANS APPROVAL DATE
July 15, 2016

TO ACCOMPANY PLANS DATED _____



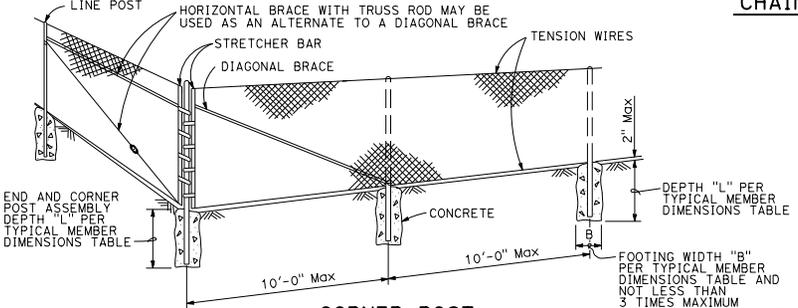
BRACED LINE POST INSTALLATION
Braced line post at intervals not exceeding 1000'



CHAIN LINK GATE INSTALLATION

| FENCE HEIGHT (Max) | SLATTED | B (in) | L (ft) | ROUND PIPE | | |
|--------------------|---------|--------|--------|------------|---------------|----------------|
| | | | | SECTION | ROUND OD PIPE | WEIGHT (lb/ft) |
| | | | | 5'-0" | NO | 12" |
| 6'-0" | NO | 12" | 2'-6" | 3 Std | 3.50" | 7.58 |
| 8'-0" | NO | 12" | 3'-0" | 3 Std | 3.50" | 7.58 |
| 10'-0" | NO | 14" | 3'-6" | 3 Std | 3.50" | 7.58 |
| 5'-0" | YES | 12" | 3'-0" | 3 1/2 Std | 4.00" | 9.12 |
| 6'-0" | YES | 14" | 3'-6" | 4 Std | 4.50" | 10.80 |
| 8'-0" | YES | 18" | 3'-6" | 5 Std | 5.56" | 14.60 |
| 10'-0" | YES | 20" | 4'-0" | 6 Std | 6.63" | 19.00 |

Above post dimensions and weights are minimums. Larger sizes may be used upon approval. Maximum Gate Width is 24'-0".



CORNER POST

NOTES:

- The table to the right shows minimum sized posts and braces complying with the specifications. Larger or heavier post and brace sizes may be used upon approval.
- 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 upon approval.
- Options exercised shall be uniform on any one project.
- 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.
- See Revised Standard Plan RSP A85B for Brace, Stretcher Bar, and Truss Tightener Details.

| FENCE HEIGHT (Max) | SLATTED | B (in) | L (ft) | TYPICAL MEMBER DIMENSIONS (See Notes) | | | | | | | | | |
|--------------------|---------|--------|--------|---------------------------------------|---------------|----------------|-----------------|----------------|-----------|---------------|----------------|-----------------|----------------|
| | | | | LINE POSTS | | | | BRACES | | | | | |
| | | | | ROUND PIPE | | ROLL FORMED | | ROUND PIPE | | ROLL FORMED | | | |
| | | | | SECTION | ROUND OD PIPE | WEIGHT (lb/ft) | SECTION | WEIGHT (lb/ft) | SECTION | ROUND OD PIPE | WEIGHT (lb/ft) | SECTION | WEIGHT (lb/ft) |
| 5'-0" | NO | 8" | 2'-6" | 1 1/2 Std | 1.90" | 2.72 | 1.875" x 1.625" | 1.85 | 2 Std | 2.38" | 3.66 | 1.625" x 1.250" | 1.35 |
| 6'-0" | NO | 10" | 2'-6" | 2 Std | 2.38" | 3.66 | 1.875" x 1.625" | 2.40 | 2 Std | 2.38" | 3.66 | 1.625" x 1.250" | 1.35 |
| 8'-0" | NO | 12" | 3'-0" | 2 1/2 Std | 2.88" | 5.80 | 3.250" x 2.500" | 4.50 | 2 Std | 2.38" | 3.66 | 1.625" x 1.250" | 1.35 |
| 10'-0" | NO | 14" | 3'-6" | 3 Std | 3.50" | 7.58 | 3.250" x 2.500" | 4.50 | 2 1/2 Std | 2.88" | 5.80 | 1.625" x 1.250" | 1.35 |
| 5'-0" | YES | 12" | 3'-0" | 3 1/2 Std | 4.00" | 9.12 | N/A | - | 2 Std | 2.38" | 3.66 | N/A | - |
| 6'-0" | YES | 14" | 3'-0" | 4 Std | 4.50" | 10.80 | N/A | - | 2 Std | 2.38" | 3.66 | N/A | - |
| 8'-0" | YES | 18" | 3'-6" | 5 Std | 5.56" | 14.60 | N/A | - | 2 Std | 2.38" | 3.66 | N/A | - |
| 10'-0" | YES | 20" | 4'-0" | 6 Std | 6.63" | 19.00 | N/A | - | 2 1/2 Std | 2.88" | 5.80 | N/A | - |

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE
NO SCALE

RSP A85 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN A85
DATED OCTOBER 30, 2015 - PAGE 117 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP A85

2015 REVISED STANDARD PLAN RSP A85

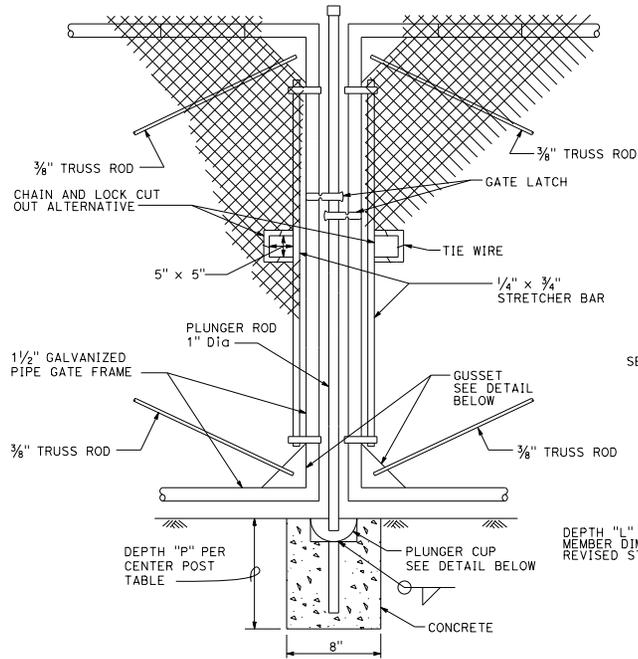
NOTES:

1. B is not less than 3 times maximum cross section of post with minimum of 8".
2. See Revised Standard Plan RSP A85 for Chain Link Fencing dimensions.
3. See Detail A on Standard Plan A86B for connection at headwall.
4. See Detail D on Standard Plan A86B for connection at headwall.

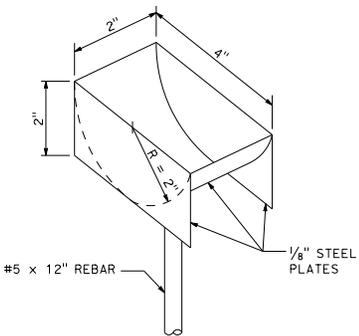
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|------|--------|-------|--------------------------|--------------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| | | | | |



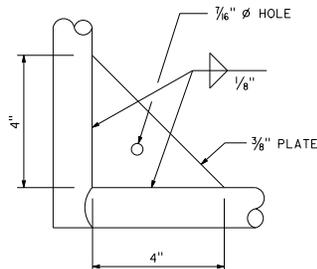
 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**DOUBLE GATE
REMOVABLE CENTER POST**

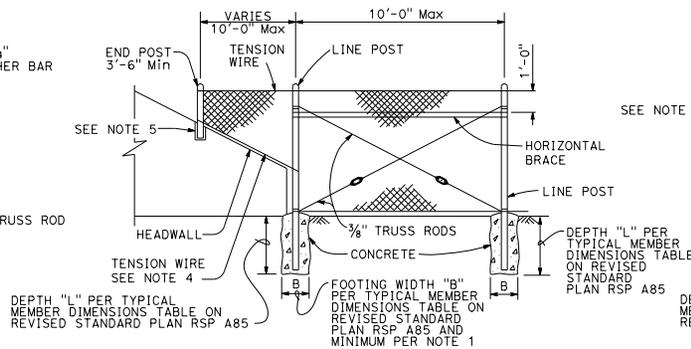


PLUNGER CUP DETAIL

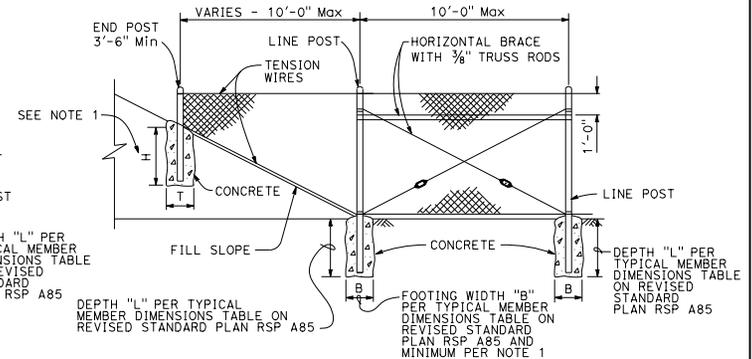


GUSSET DETAIL

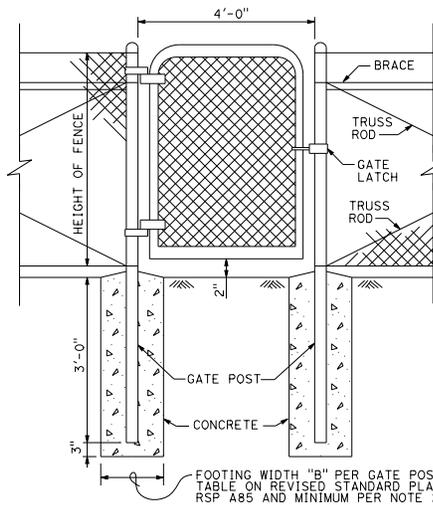
| CENTER POST | | |
|--------------------|---------|-------|
| FENCE HEIGHT (Max) | SLATTED | P |
| ALL HEIGHTS | NO | 1'-6" |
| 5'-0" | YES | 3'-0" |
| 6'-0" | YES | 3'-0" |
| 8'-0" | YES | 3'-6" |
| 10'-0" | YES | 4'-0" |



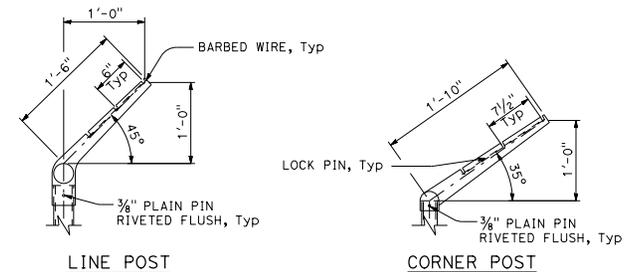
METHOD OF TYING FENCE TO HEADWALL



METHOD OF ERECTING FENCE FOR FILL SLOPE



WALK GATE



BARBED WIRE POST TOP

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

RSP A85A DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN A85A
DATED OCTOBER 30, 2015 - PAGE 118 OF THE STANDARD PLANS BOOK DATED 2015.

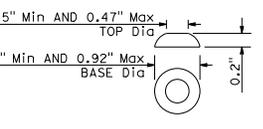
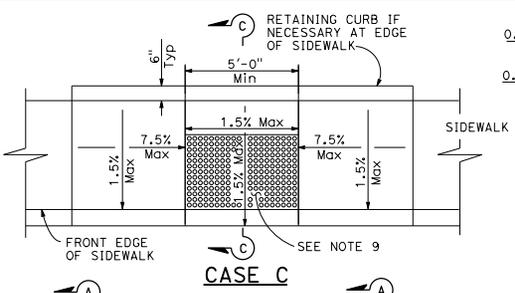
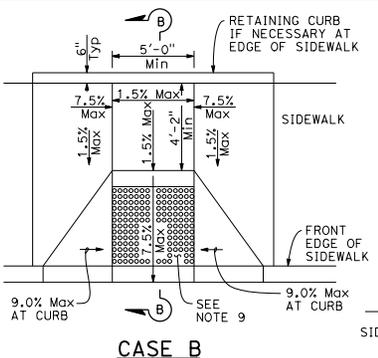
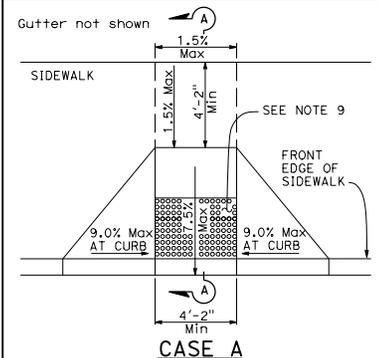
REVISED STANDARD PLAN RSP A85A

2015 REVISED STANDARD PLAN RSP A85A

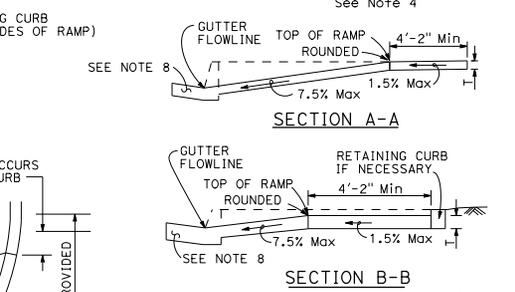
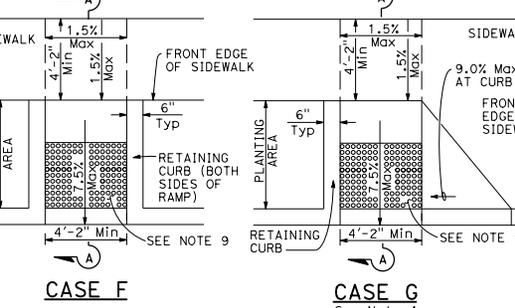
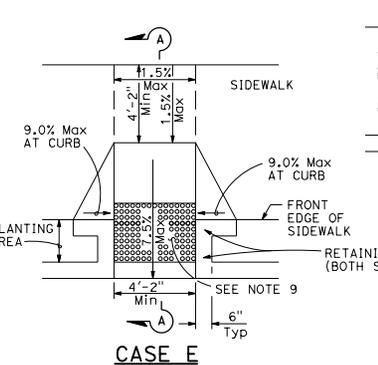
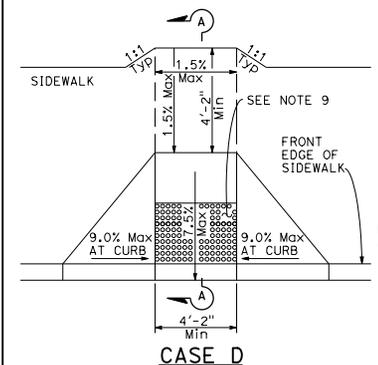
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

Hector David Cordova
 REGISTERED CIVIL ENGINEER
 No. C41957
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

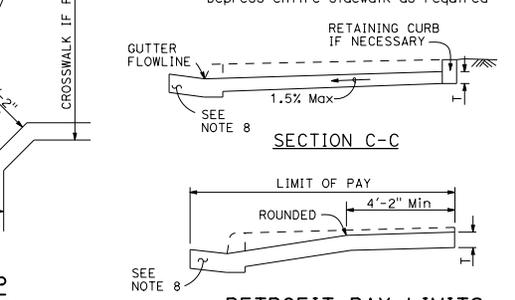
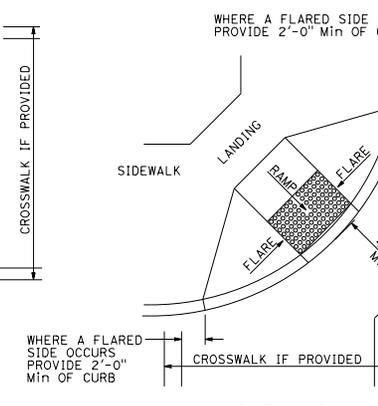
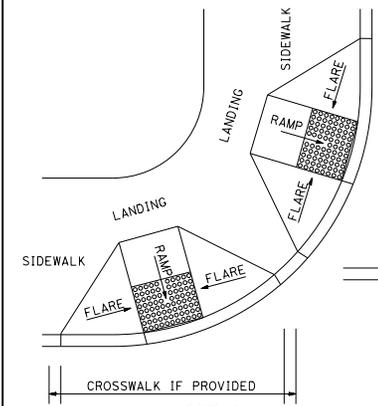


RAISED TRUNCATED DOME



NOTES:

- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
- If distance from curb to back of sidewalk (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-2".
- Side slope of ramp flares vary uniformly from a maximum of 9.0% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.
- Counter slopes of adjoining gutters and road surfaces immediately adjacent to and within 24 inches of the curb ramp shall not be steeper than 1V:20H (5.0%). Gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.
- Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. A 4'-0" wide detectable warning surface may be used on a 4'-2" wide curb ramp. Detectable Warning Surfaces shall conform to the requirements in the Standard Specifications.
- Sidewalk and ramp thickness, "T", shall be 3/2" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- Detectable warning surface may have to be cut to allow removal of utility covers while maintaining full detectable warning width and depth.



RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CURB RAMP DETAILS
NO SCALE



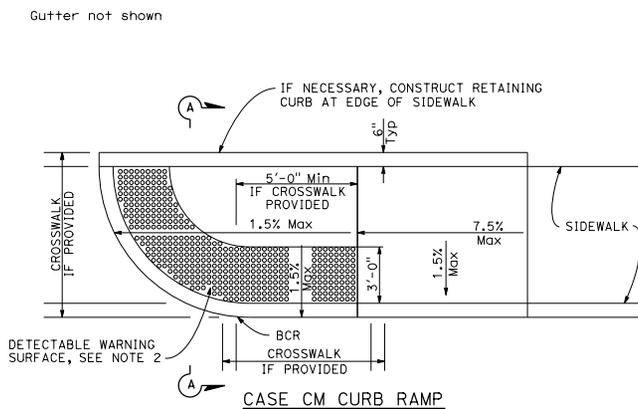
RSP A88A DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN A88A DATED OCTOBER 30, 2015 - PAGE 127 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP A88A

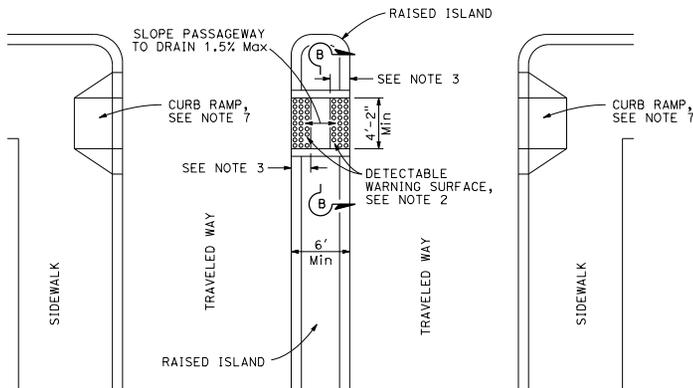
2015 REVISED STANDARD PLAN RSP A88A

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|--|--------|-------|-----------------------------|--------------|-----------------|
| | | | | | |
| | | | | | |
| July 15, 2016 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. | | | | | |

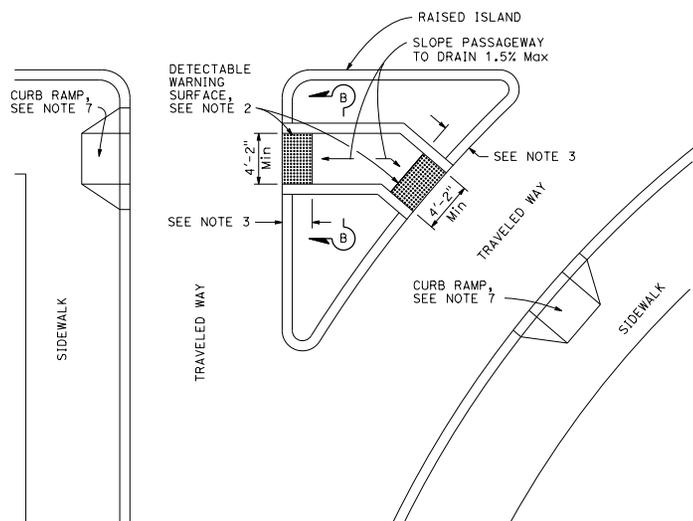
Gutter not shown



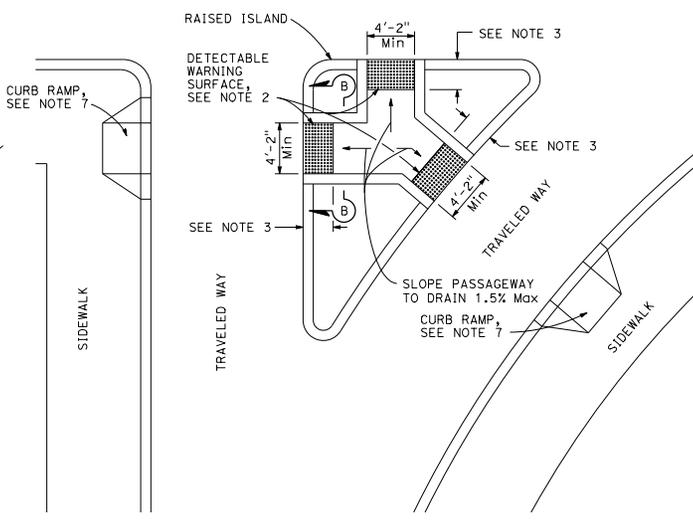
CASE CM CURB RAMP



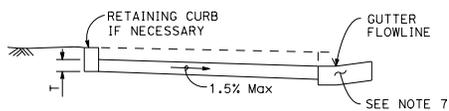
TYPE A PASSAGEWAY



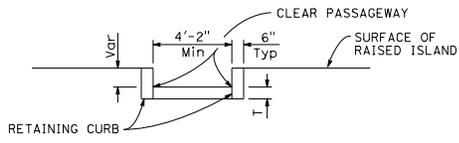
TYPE B PASSAGEWAY



TYPE C PASSAGEWAY



SECTION A-A



SECTION B-B

NOTES:

1. Sidewalk, ramp and passageway thickness, "T", shall be 3/2" minimum.
2. For details of detectable warning surfaces, see Revised Standard Plan RSP A88A.
3. Where an island passageway length is greater than or equal to 6'-0", but less than 8'-0", each detectable warning surface shall extend the full width and 2'-0" depth of the passageway length. Where an island passageway length is greater than or equal to 8'-0", each detectable warning surface shall extend the full width and 3'-0" depth of the passageway length. A 4'-0" wide detectable warning surface may be used on a 4'-2" wide island passageway.
4. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.
5. Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
6. Detectable warning surface may have to be cut to allow removal of utility covers while maintaining full detectable warning width and depth.
7. For additional curb ramp details, see Revised Standard Plan RSP A88A.

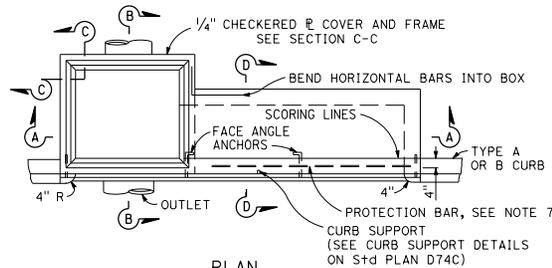
TO ACCOMPANY PLANS DATED _____

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CURB RAMP AND
ISLAND PASSAGEWAY DETAILS**
NO SCALE

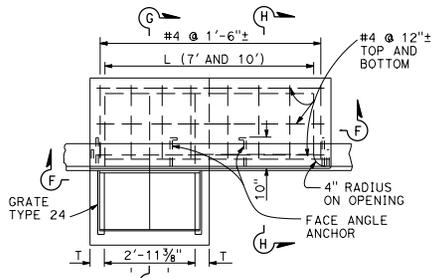
RSP A88B DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN A88B
DATED OCTOBER 30, 2015 - PAGE 128 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP A88B

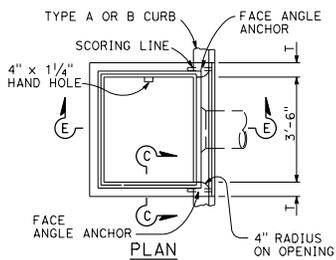
2015 REVISED STANDARD PLAN RSP A88B



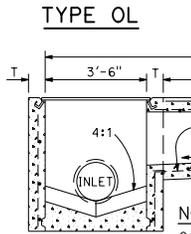
PLAN



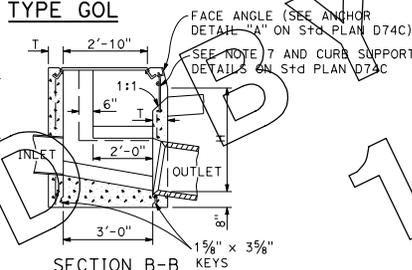
PLAN



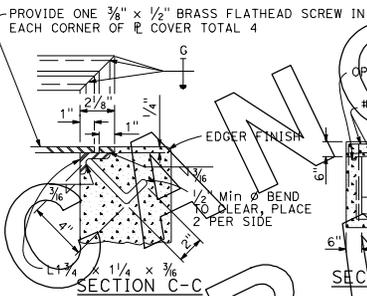
PLAN



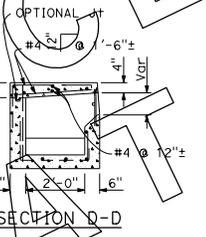
SECTION A-A



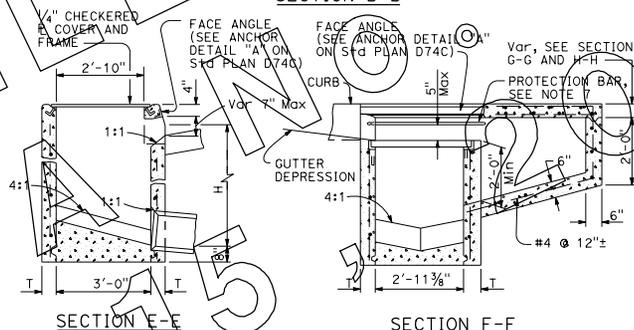
SECTION B-B



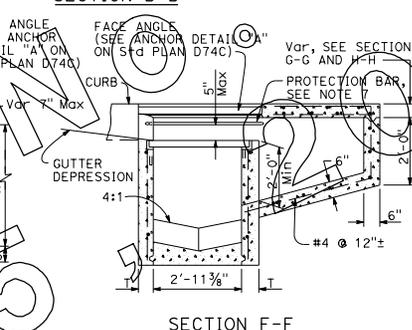
SECTION C-C



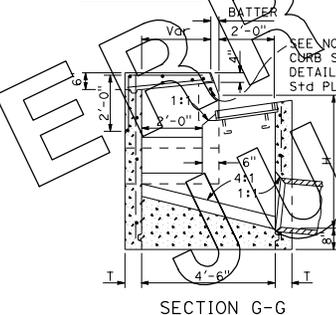
SECTION D-D



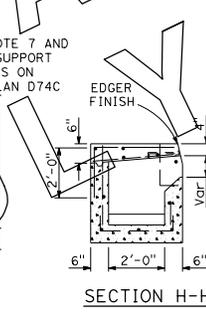
SECTION E-E



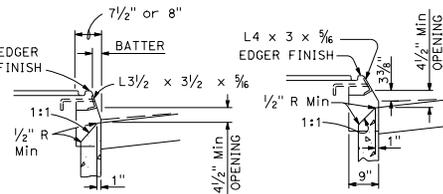
SECTION F-F



SECTION G-G



SECTION H-H



TYPE A CURBS

TYPE B CURBS

CURB OPENING DETAILS

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. C59976
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

NOTES:

- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed at the curb face.
- For "T" wall thickness, see Table A below.
- Height of curb opening will vary with the type of curb and the depth of the local depression.
- 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 bars @ 1'-6" ± 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 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.
- Except for inlets used as junction boxes, basin floor shall have a minimum slope of 4:1 from all directions toward outlet pipe and shall have a wood trowel finish.
- See Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plan D78A for gutter depression details.
- Complete joint 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 inlets to be formed around all pipes/stubs intersecting the inlet, and concrete poured in one continuous operation. Precast inlets shall have mortared connections conforming to details for Type GCP Inlet shown on Standard Plan D75B. See Standard Specifications for mortar composition.

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) |
| OS | 1.41 | 0.278 | 3.81 | 0.387 |
| OL-7 | 1.92 | 0.278 | 4.29 | 0.387 |
| OL-10 | 2.39 | 0.278 | 4.77 | 0.387 |
| OL-14 | 3.06 | 0.278 | 5.45 | 0.387 |
| OL-21 | 4.42 * | 0.278 | 6.78 | 0.387 |
| GOL-7 | 2.33 | 0.313 | 4.96 | 0.434 |
| GOL-10 | 2.84 | 0.313 | 5.47 | 0.434 |

* Based on H=3.1'
Table based on 8" floor slab, 7" curb 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, different curb types or different height of curb openings.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DRAINAGE INLETS

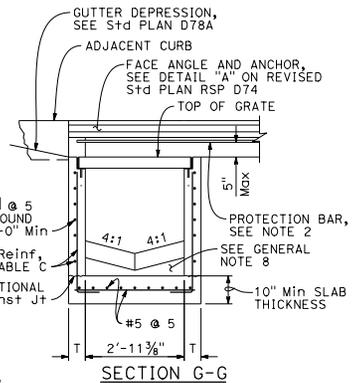
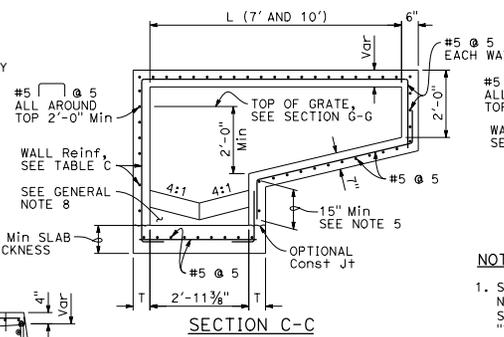
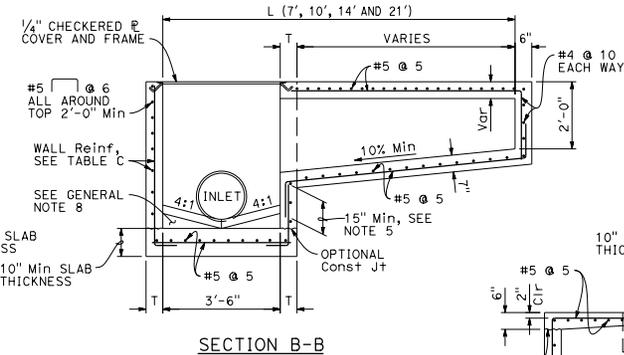
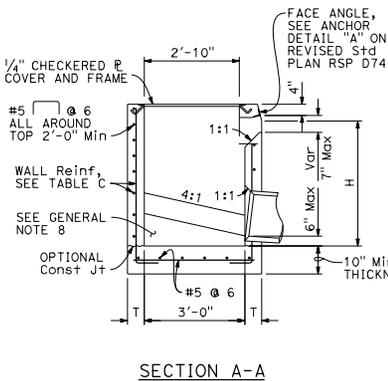
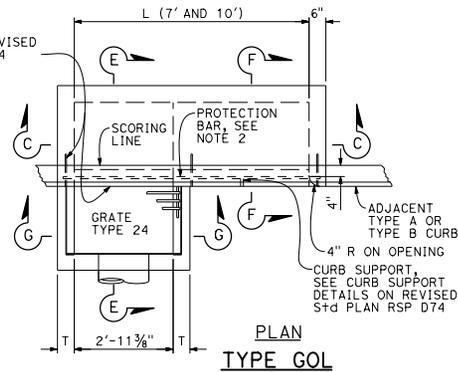
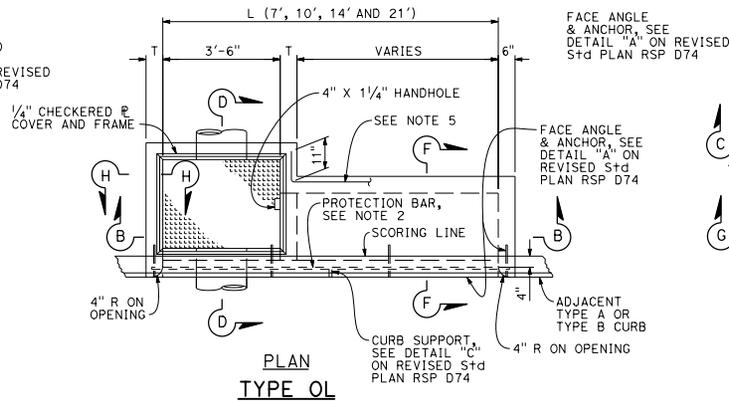
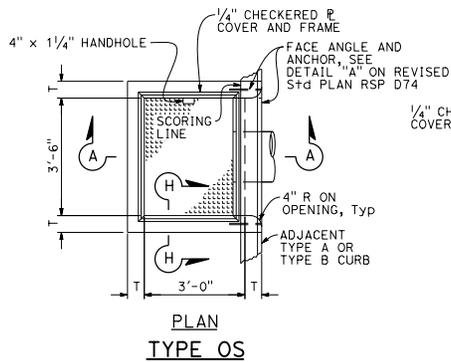
NO SCALE

D72

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |



 REGISTERED CIVIL ENGINEER
 July 15, 2016
 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.



NOTES:

1. See Revised Standard Plan RSP D72F for General Notes and additional details. See Revised Standard Plan RSP D72G for tables, wall thickness "T" and quantities.
2. Where 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.
3. Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
4. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
5. Extend all horizontal bars from inlet extensions into adjacent concrete elements of main inlet box a minimum of 15". Where shown, bend horizontal bars into box. If necessary rotate bars to maintain 2" clear coverage.
6. Height of curb opening will vary with the type of curb and the depth of the local depression.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

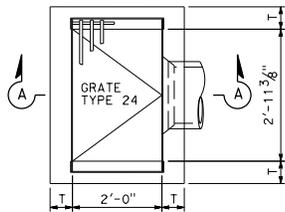
**CIP DRAINAGE INLETS
TYPES OS, OL AND GOL**

NO SCALE

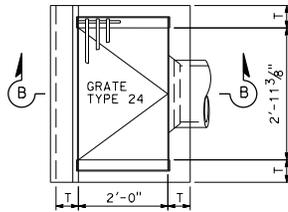
RSP D72A DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP D72A

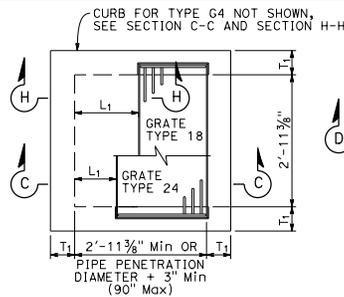
2015 REVISED STANDARD PLAN RSP D72A



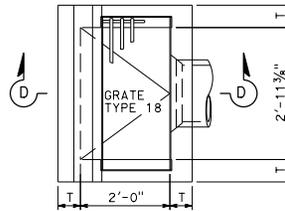
PLAN
TYPE G1



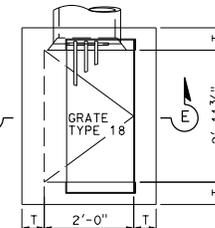
PLAN
TYPE G3



PLAN
STANDARD
TYPE G2 OR G4



PLAN
TYPE G5



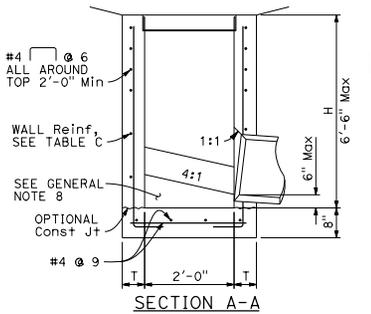
PLAN
TYPE G6

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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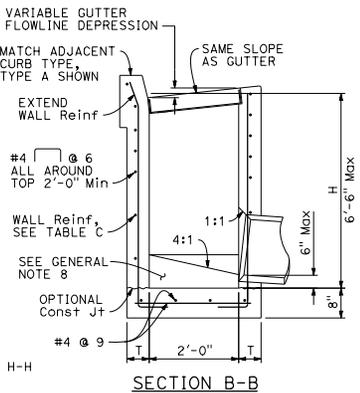
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 PLANS APPROVAL DATE
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NOTE:
 1. For notes and Table 2, See Revised Standard Plan RSP D72C.

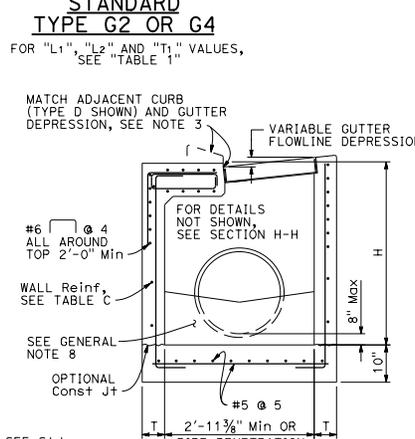
| TABLE 1 | | |
|--|----------------|-----------|
| | T ₁ | Vert BARS |
| L ₁ AND L ₂ < 2'-10" | 9" | #4 @ 12 |
| L ₁ OR L ₂ > 2'-10" | 12" | #5 @ 12 |



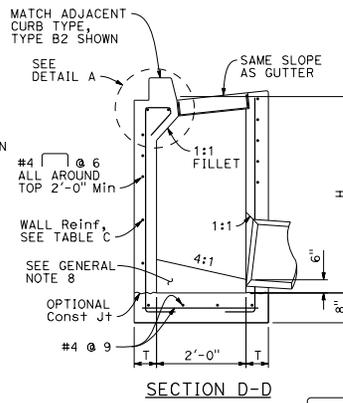
SECTION A-A



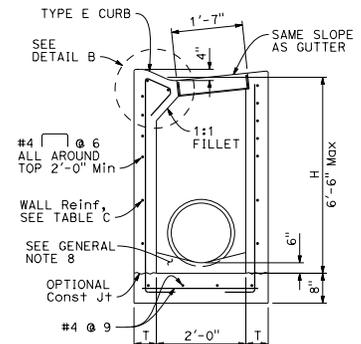
SECTION B-B



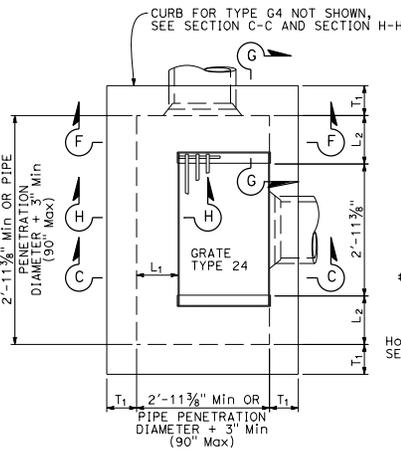
SECTION C-C



SECTION D-D

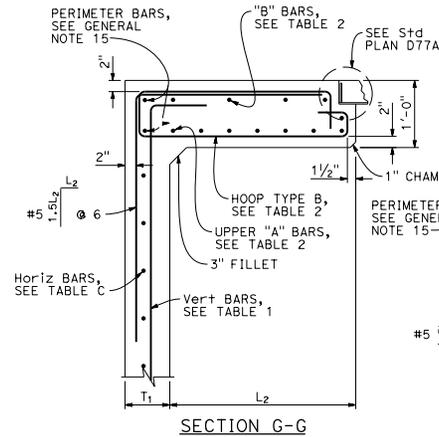


SECTION E-E

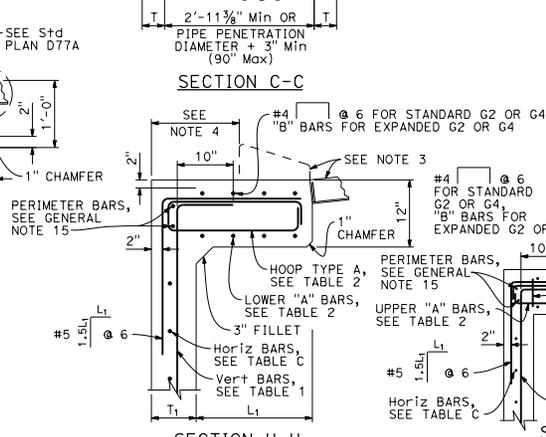


PLAN
EXPANDED
TYPE G2 OR G4

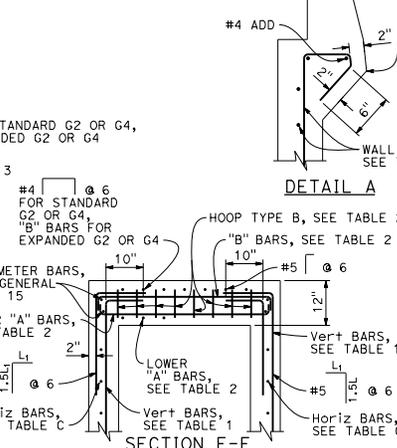
(INTEGRAL TOP ALTERNATIVE)
 FOR "L₁" AND "T₁" VALUES, SEE TABLE 1



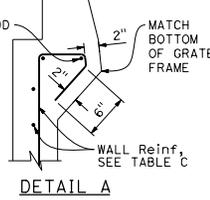
SECTION G-G



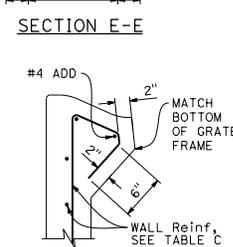
SECTION H-H



SECTION F-F



DETAIL A



DETAIL B

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CIP DRAINAGE INLETS
 TYPES G1, G2, G3,
 G4, G5 AND G6**
 NO SCALE

RSP D72A DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.
REVISED STANDARD PLAN RSP D72B

| | | | | | |
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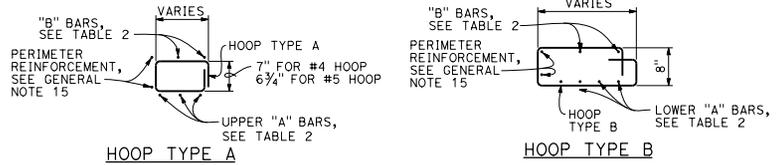

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July 15, 2016
 PLANS APPROVAL DATE

No. C59976
 Exp. 6-30-18
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NOTES:

1. See Revised Standard Plan RSP D72F for General Notes and additional details. See Revised Standard Plan RSP D72G for tables and quantities.
2. Type G4 inlet can use Grate Type 18 or 24. Type G2 inlet uses Grate Type 24.
3. Type G4 inlet details are similar to Type G2 inlet details, except for the addition of a curb and sloped grate to match the adjacent curb and gutter depression.
4. Dimension will vary with different grates, curb types, box width and wall thickness.

| TABLE 2 - TOP SLAB REINFORCEMENT | | |
|----------------------------------|-------------------------|-------------------------|
| | W/ CURB | W/O CURB |
| "A" BARS | #4 @ 5 (2 BARS Min) | #5 @ 5 (3 BARS Min) |
| "B" BARS | #4 @ 10 (2 BARS Min) | #4 @ 12 (2 BARS Min) |
| HOOPS ("A" & "B") | #4 @ 5 | #5 @ 5 |

ROTATE "A" AND "B" BARS SO HOOKED ENDS WILL MAINTAIN 2" CLEAR COVERAGE.

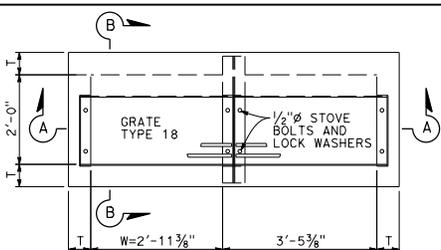
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CIP DRAINAGE INLETS
TYPES G1, G2, G3,
G4, G5 AND G6
 NO SCALE

2015 REVISED STANDARD PLAN RSP D72C

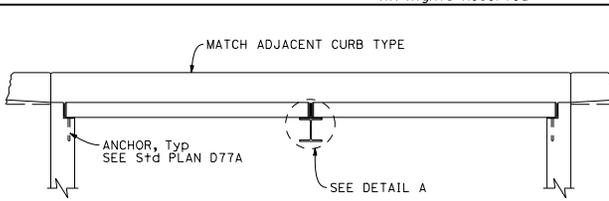
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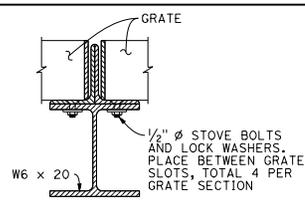
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PLAN
TYPE GT1

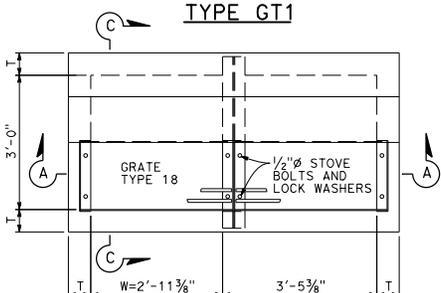


SECTION A-A

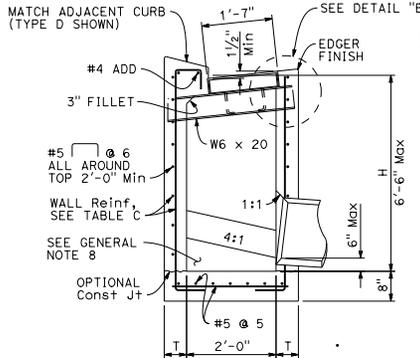


DETAIL A

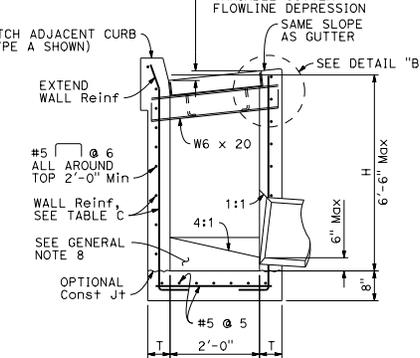
TO ACCOMPANY PLANS DATED _____



PLAN
TYPE GT2

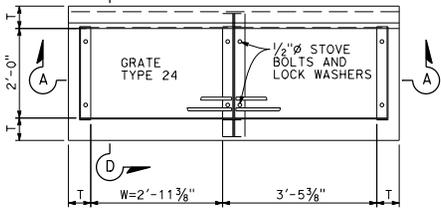


SECTION B-B

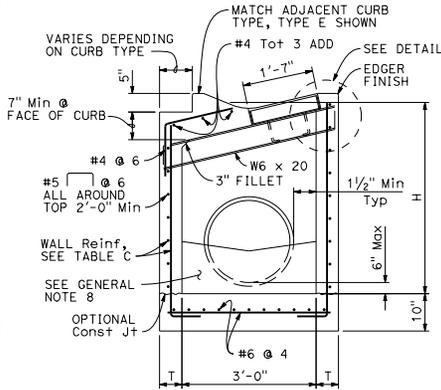


SECTION D-D

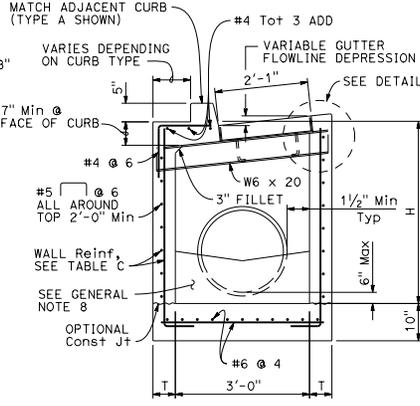
- NOTES:**
1. See Revised Standard Plan RSP D72F for General Notes and additional details. See Revised Standard Plan RSP D72G for tables, wall thickness "T" and quantities.
 2. W=2'-11 3/8" for one grate. Add 3'-5 1/2" for additional grates in tandem.
 3. Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
 4. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.



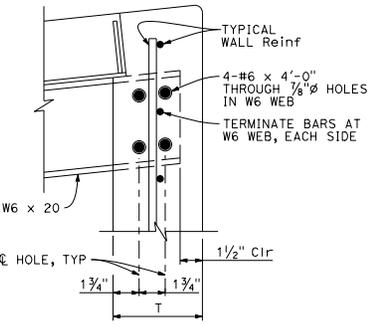
PLAN
TYPE GT3



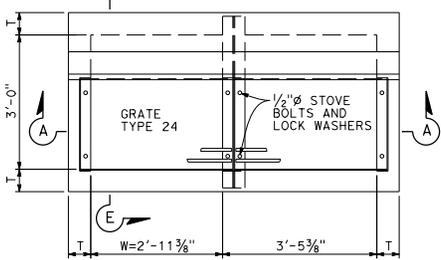
SECTION C-C



SECTION E-E



DETAIL "B"
(SIMILAR OPPOSITE END OF W6)



PLAN
TYPE GT4

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CIP DRAINAGE INLETS
TYPES GT1, GT2,
GT3 AND GT4**

NO SCALE

RSP D72D DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

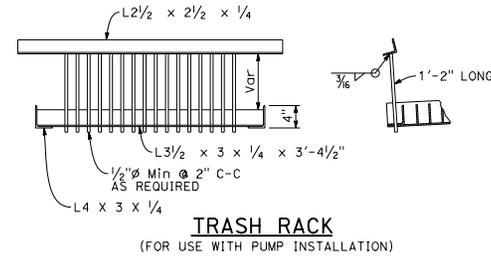
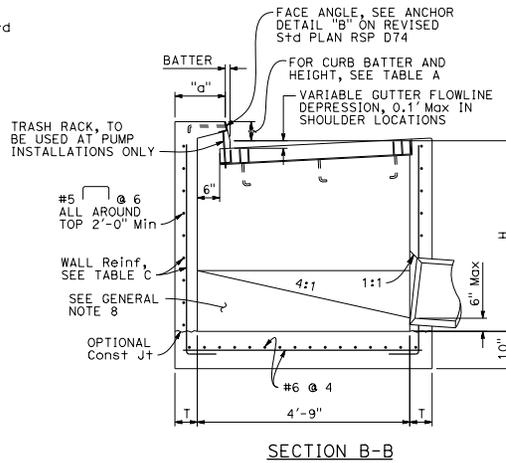
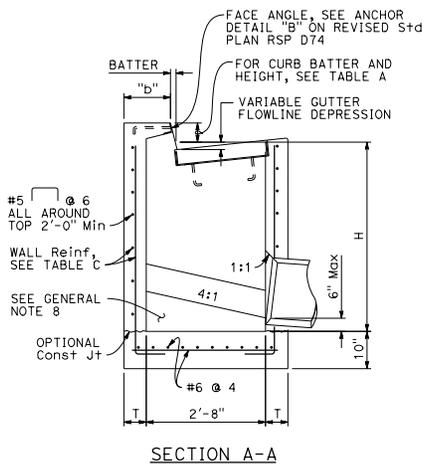
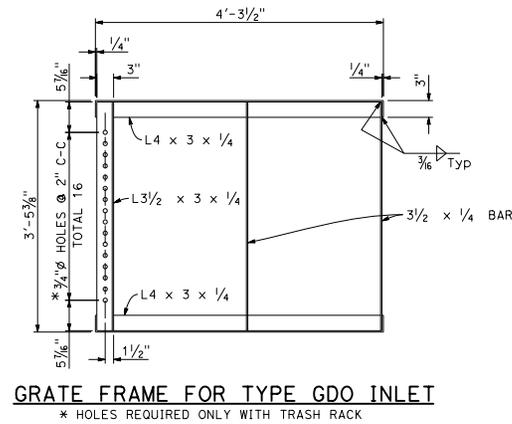
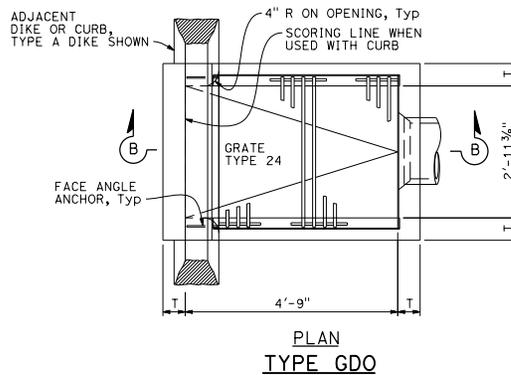
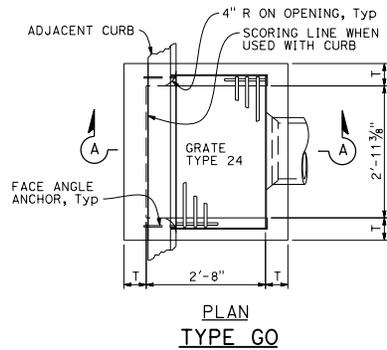
REVISED STANDARD PLAN RSP D72D

2015 REVISED STANDARD PLAN RSP D72D

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NOTES:

- See Revised Standard Plan RSP D72F for General Notes and additional details. See Revised Standard Plan RSP D72G for tables, wall thickness "T" and quantities.
- Where 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.
- Complete joint 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.

| 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" |

Height of curb opening will vary with the type of curb and the depth of the local depression.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CIP DRAINAGE INLETS
TYPES GO AND GDO**

NO SCALE

RSP D72E DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP D72E

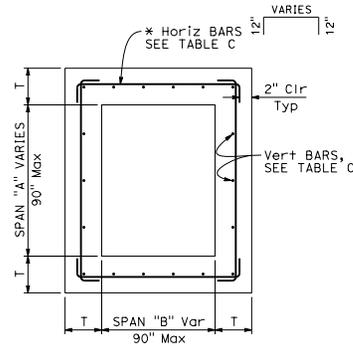
2015 REVISED STANDARD PLAN RSP D72E

GENERAL NOTES:

- "H" is measured from top of bottom slab to the normal gutter grade line undepressed at the curb face.
- For "T" wall thickness and reinforcement, see Table C on Revised Standard Plan RSP D72G.
- Wall reinforcement must be placed in the center of the wall thickness with horizontal bars placed on the exterior face. Bottom slab concrete cover must be 3" clear on the interior face unless otherwise noted. Top slab concrete cover must be 2" clear on the exterior face unless otherwise noted. Reinforcement spacing is in inches unless otherwise noted.
- 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 bottom of lid. The distance between steps must not exceed 1'-0" and be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts must comply with State Industrial Safety Requirements. See Revised Standard Plan RSP D74 for step details.
- Pipe(s) can be placed in any wall. Adjacent to each side of the opening, place additional reinforcement equivalent to half the interrupted main reinforcement. For larger pipes greater than or equal to 42" diameter, also add 4 diagonal bars, 1 bar each side. Bars must be the same size as the larger of the main vertical or horizontal bars. Extend bars one development length past the intersection with the adjacent diagonal bar, or where bars intersect mid thickness of adjacent wall bottom or top of non-continuous wall, bend ends as required into same plane.
- Set inlet so that grate bars are parallel to direction of principal surface flow.
- Curb section must match adjacent curb.
- Except for inlets used as junction boxes, basin floors must have wood trowel finish and a minimum slope of 4:1, unless otherwise noted, from all directions toward outlet pipe by casting grout fill on top of the bottom slab. The additional volume to achieve the 4:1 slope may also be achieved by casting the bottom slab and fill as a composite concrete element.
- See Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plans D78A and D78B for gutter depression details.
- See Standard Plan A87A and Revised Standard Plan RSP A87B for curb and dike details.
- Details shown apply to metal, concrete and plastic pipe(s).
- The Contractor may use WWR instead of bar reinforcement. The ratio of bar reinforcement to WWR shall be based on the yield strength ratio.
- Cast-in-place (CIP) inlets to be formed around all pipes/stubs intersecting the inlet, and concrete poured in one continuous operation.
- Perimeter reinforcement must not be smaller than main bars and #4 and serves as a rigid frame to position and attach the required structural reinforcement and may be tack welded at outer corners when using ASTM A706 weldable bars.

DESIGN NOTES:

- Design Specifications: AASHTO LRFD Bridge Design Specifications, 6th edition with 2012 Interims and Errata and CA Amendments.
- Live Load (AASHTO LRFD 3.6.1.2): HL-93, consists of design truck or tandem, and design lane load. Dynamic Load Allowance, IM = 33%. Multiple Presence Factor, m = 1.0. Design lane load was excluded in Top Slab design. A wheel load of 8 kips without impact factor was used for top slabs that are above a curb.
- Earth Load:
Vertical pressure = 140 pcf
Lateral pressure:
= 100 pcf for walls with flat embankment
= 140 pcf For walls with slope embankment, 1.5:1 Max
- Downdrag: $\phi = 34^\circ$ and $\gamma_E = 120$ pcf.
- Buoyancy: $\gamma_w = 62.4$ pcf to finished grade
- Reinforced Concrete: $f'_c = 3.6$ ksi, $f_y = 60.0$ ksi.
- Soil pressures shown are factored per AASHTO LRFD and include self-weight, live load and downdrag.



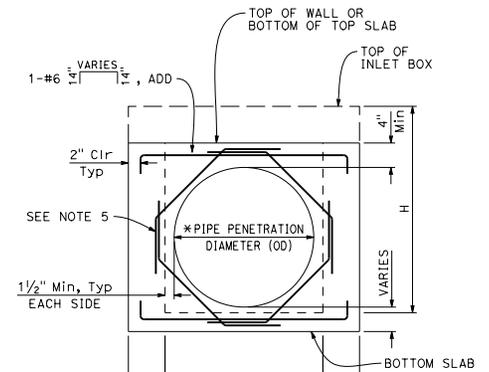
TYPICAL INLET PLAN

* ALTERNATIVE HORIZONTAL BARS

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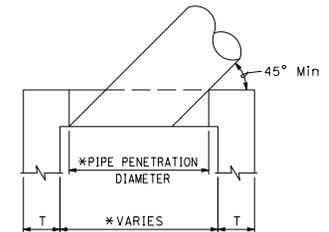
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TYPICAL WALL W/ PIPE OPENING

* SEE "SKEWED PIPE PLAN"



SKEWED PIPE PLAN

* ADJUST PIPE PENETRATION AND BOX WIDTH FOR SKEWED PIPES.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CIP DRAINAGE INLET NOTES
NO SCALE

RSP D72F DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP D72F

2015 REVISED STANDARD PLAN RSP D72F

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2015 REVISED STANDARD PLAN RSP D72G

TABLE A - CONCRETE QUANTITIES

| TYPE | H=3'-0" TO 8'-0" | | H=8'-1" TO 20'-0" | |
|---------------|------------------|-----------------------------------|-------------------|-----------------------------------|
| | H=3'-0" (CY) | ADDITIONAL CONCRETE PER FOOT (CY) | H=8'-1" (CY) | ADDITIONAL CONCRETE PER FOOT (CY) |
| G1 | 0.95 | 0.220 | SEE NOTE 2 | SEE NOTE 2 |
| G2* | 2.00 | 0.411 | 5.11 | 0.525 |
| G3 | 1.03 | 0.220 | SEE NOTE 2 | SEE NOTE 2 |
| G4 (TYPE 18)* | 2.02 | 0.411 | 5.14 | 0.525 |
| G4 (TYPE 24)* | 1.99 | 0.411 | 5.10 | 0.525 |
| G5 | 1.02 | 0.220 | SEE NOTE 2 | SEE NOTE 2 |
| G6 | 1.04 | 0.220 | SEE NOTE 2 | SEE NOTE 2 |
| OS | 1.53 | 0.278 | 5.08 | 0.504 |
| OL7 | 2.06 | 0.278 | 6.17 | 0.566 |
| OL10 | 2.85 | 0.278 | 6.85 | 0.566 |
| OL14 | 3.81 | 0.278 | 7.78 | 0.566 |
| OL21 | 5.71 | 0.278 | 9.62 | 0.566 |
| GOL7 | 2.48 | 0.313 | 6.89 | 0.630 |
| GOL10 | 3.41 | 0.313 | 7.85 | 0.630 |
| GT1 | 1.72 | 0.248 | SEE NOTE 2 | SEE NOTE 2 |
| GT2 | 2.93 | 0.530 | 7.73 | 0.762 |
| GT3 | 1.74 | 0.348 | SEE NOTE 2 | SEE NOTE 2 |
| GT4 | 2.83 | 0.530 | 7.62 | 0.762 |
| GO | 1.26 | 0.245 | 4.90 | 0.506 |
| GDO | 1.74 | 0.322 | 6.33 | 0.647 |

* Quantities are based on the minimum interior dimensions.

TABLE B - REINFORCEMENT QUANTITIES

| TYPE | H=3'-0" TO 8'-0" | | H=8'-1" TO 20'-0" | |
|---------------|------------------|--|-------------------|--|
| | H=3'-0" (LB) | ADDITIONAL REINFORCEMENT PER FOOT (LB) | H=8'-1" (LB) | ADDITIONAL REINFORCEMENT PER FOOT (LB) |
| G1 | 118 | 22.20 | SEE NOTE 2 | SEE NOTE 2 |
| G2* | 729 | 86.48 | 1794 | 171.79 |
| G3 | 118 | 22.20 | SEE NOTE 2 | SEE NOTE 2 |
| G4 (TYPE 18)* | 647 | 86.48 | 1675 | 171.79 |
| G4 (TYPE 24)* | 647 | 86.48 | 1675 | 171.79 |
| G5 | 118 | 22.20 | SEE NOTE 2 | SEE NOTE 2 |
| G6 | 118 | 22.20 | SEE NOTE 2 | SEE NOTE 2 |
| OS | 245 | 49.88 | 1057 | 120.77 |
| OL7 | 458 | 50.53 | 1324 | 126.75 |
| OL10 | 729 | 50.53 | 1595 | 126.75 |
| OL14 | 982 | 50.53 | 1849 | 126.75 |
| OL21 | 1453 | 50.53 | 2320 | 126.75 |
| GOL7 | 644 | 83.57 | 1969 | 148.79 |
| GOL10 | 883 | 83.57 | 2208 | 148.79 |
| GT1 | 486 | 96.91 | SEE NOTE 2 | SEE NOTE 2 |
| GT2 | 1040 | 117.08 | 2543 | 233.37 |
| GT3 | 486 | 96.91 | SEE NOTE 2 | SEE NOTE 2 |
| GT4 | 1001 | 117.08 | 2556 | 237.88 |
| GO | 308 | 32.44 | 1013 | 96.56 |
| GDO | 519 | 57.09 | 1654 | 165.66 |

* Quantities are based on the minimum interior dimensions.

TABLE D

| INLET | CURB USED IN QUANTITIES |
|--------------|-------------------------|
| G1 | - |
| G2 | - |
| G3 | A1-6 |
| G4 (Type 18) | A1-6 |
| G4 (Type 24) | A1-6 |
| G5 | B1-4 |
| G6 | 1/2E |
| OS | - |
| OL7 | - |
| OL10 | - |
| OL14 | - |
| OL21 | - |
| GOL7 | - |
| GOL10 | - |
| GT1 | D-6 |
| GT2 | E |
| GT3 | A2-8 |
| GT4 | A2-8 |
| GO | - |
| GDO | - |

TABLE C - WALL REINFORCEMENT

| TYPE | H≤8 (T=6",UON) | | 8<H≤20 (T=11",UON) | |
|--------------|----------------|----------|--------------------|----------|
| | HORIZ | VERTICAL | HORIZ | VERTICAL |
| OS | #4 @ 8 | #4 @ 6 | #5 @ 6 | #6 @ 4.5 |
| OL | #4 @ 6 | #4 @ 6 | #5 @ 6 | #6 @ 4.5 |
| GOL | #5 @ 6 | #5 @ 8 | #6 @ 5 | #6 @ 4.5 |
| G1 (H≤6-6") | #3 @ 6 | #3 @ 6 | - | - |
| G2 | T=9" #5 @ 5 | #5 @ 5 | T=11" #6 @ 4 | #6 @ 4.5 |
| G3 (H≤6-6") | #3 @ 6 | #3 @ 6 | - | - |
| G4 | T=9" #5 @ 5 | #5 @ 5 | T=11" #6 @ 4 | #6 @ 4.5 |
| G5 (H≤6-6") | #3 @ 6 | #3 @ 6 | - | - |
| G6 (H≤6-6") | #3 @ 6 | #3 @ 6 | - | - |
| GT1 (H≤6-6") | #5 @ 6 | #5 @ 6 | - | - |
| GT2 | T=8" #5 @ 6 | #5 @ 6 | #6 @ 4 | #6 @ 4.5 |
| GT3 (H≤6-6") | #5 @ 6 | #5 @ 6 | - | - |
| GT4 | T=8" #5 @ 6 | #5 @ 6 | #6 @ 4 | #6 @ 4.5 |
| GO | #4 @ 9 | #4 @ 6 | #4 @ 6 | #6 @ 4.5 |
| GDO | #4 @ 6 | #4 @ 6 | #5 @ 4 | #6 @ 4.5 |

TABLE E

| SOIL PRESSURE BELOW BASE SLAB (ksf) | | |
|-------------------------------------|---------|--------------------|
| TYPE | H=8'-0" | 8'-0" < H ≤ 20'-0" |
| OS | 2.93 | 5.56 |
| OL* | 2.93 | 5.56 |
| GOL* | 2.50 | 5.06 |
| G1 | 3.67 | - |
| G2 | 2.99 | 5.91 |
| G3 | 3.67 | - |
| G4 | 2.99 | 5.91 |
| G5 | 3.67 | - |
| G6 | 3.67 | - |
| GT1 | 3.66 | - |
| GT2 | 3.91 | 6.07 |
| GT3 | 3.86 | - |
| GT4 | 3.91 | 6.07 |
| GO | 3.42 | 6.11 |
| GDO | 2.52 | 6.95 |

* Main Box

NOTES:

1. No deduction or adjustment was made to the quantities of concrete and reinforcement for pipe openings, floor alternatives or curb type.
2. Maximum allowable height is 6'-6".
3. Quantities are approximate and for design purposes only.
4. Design is based on envelope of level and sloped ground.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CIP DRAINAGE INLET TABLES

NO SCALE

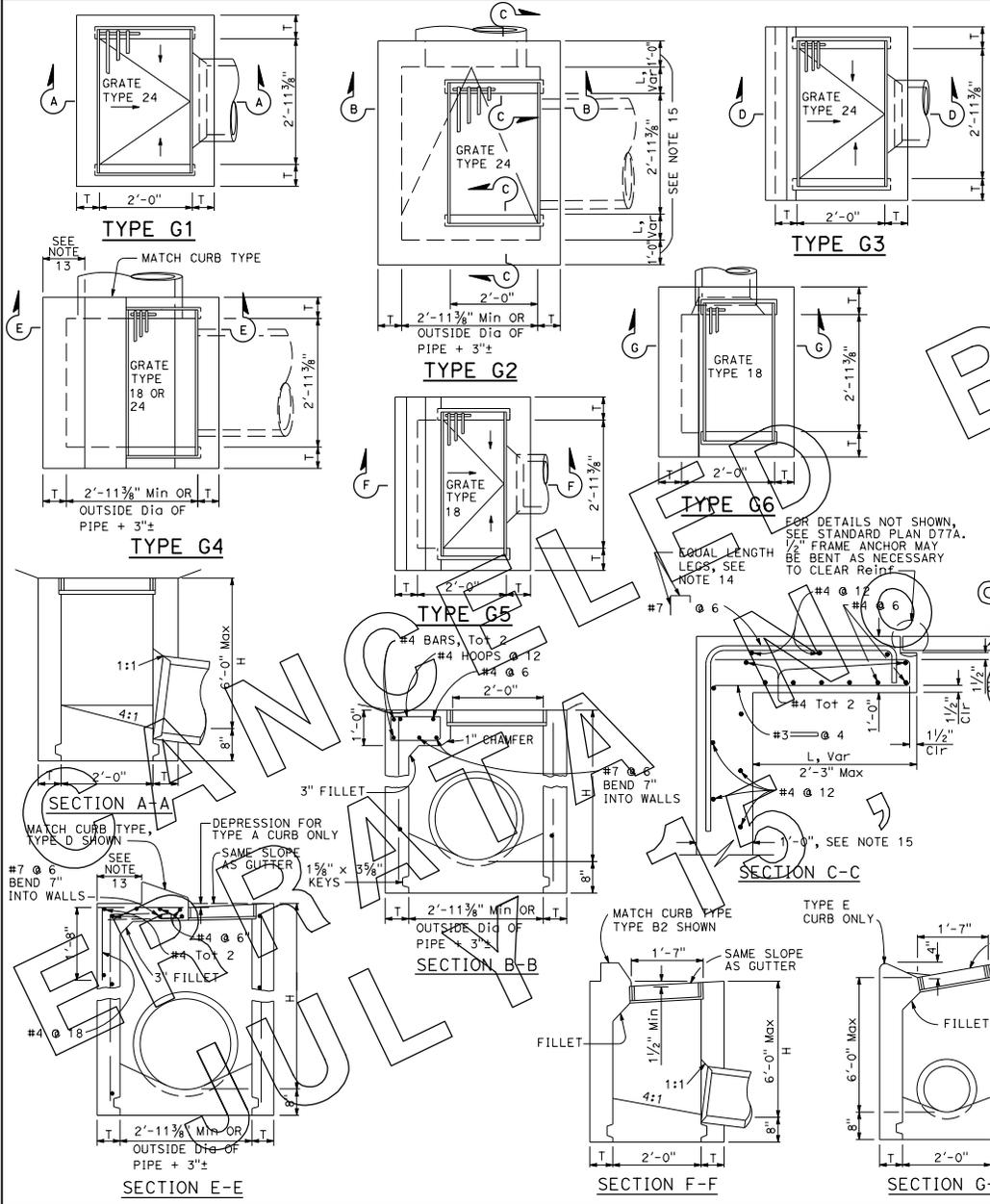
RSP D72G DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP D72G

| | | | | |
|------|--------|-------|--------------------------|--------------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| | | | | |

Carl M. Duan
 REGISTERED CIVIL ENGINEER
 No. C59876
 Exp. 6-30-16
 CIVIL

October 30, 2015
 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.



- NOTES:**
- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed.
 - 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 bars @ 1'-6" 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 and alternative half round bottom.
 - Steps are 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.
 - Details shown apply to both metal and concrete pipe.
 - Pipe(s) can be placed in any wall.
 - Curb section shall match adjacent curb.
 - Basin floors shall have wood trowel finish and a minimum slope of 4:1 from all directions toward outlet pipe.
 - Set inlet so that grate bars are parallel to direction of principal surface flow.
 - See Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
 - See Standard Plan D78A for gutter depression details.
 - This dimension will vary with different grates, curbs types, box width and wall thickness.
 - Bar may be rotated as necessary to clear opening. Where "L" is 6" or less, bar may be omitted.
 - Where "L" is 6" or less, wall thickness shall be as shown in Table A.
 - 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 connections conforming to details for Type GCP inlet shown on Standard Plan D75B. See Standard Specifications for mortar composition.

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) |
| G-1 | 0.95 | 0.220 | ** | ** |
| G-2* | 1.31 | 0.255 | 3.50 | 0.357 |
| G-3 | 1.03 | 0.220 | ** | ** |
| G-4* (TYPE 24) | 1.27 | 0.255 | 3.48 | 0.357 |
| G-4* (TYPE 18) | 1.30 | 0.255 | 3.50 | 0.357 |
| G-5 | 1.02 | 0.220 | ** | ** |
| G-6 | 1.04 | 0.220 | ** | ** |

Table based on 8" floor slab. No deductions are to be made to these quantities because of pipe openings, different floor alternatives or different curb types.

* Quantities for Type G-2 and G-4 inlets based on the minimum interior dimensions.

** Maximum allowable height 6'-0".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLETS

NO SCALE

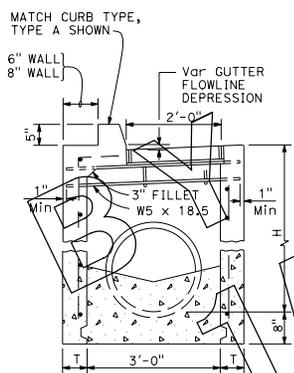
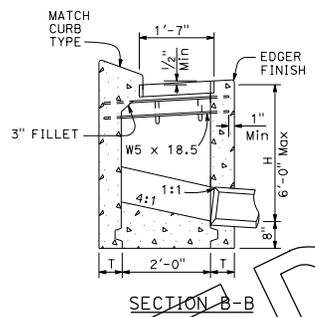
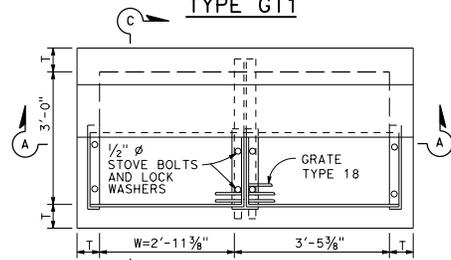
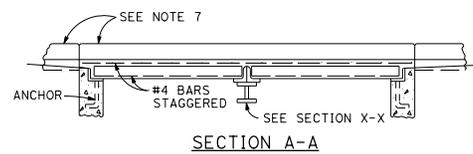
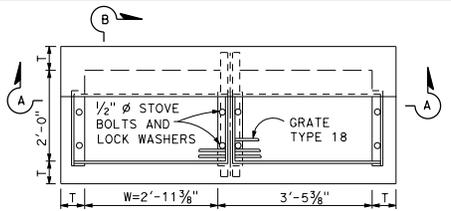
D73

2015 STANDARD PLAN D73

| | | | | |
|------|--------|-------|--------------------------|--------------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| | | | | |

C. M. Dwyer
 REGISTERED CIVIL ENGINEER
 No. C59976
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 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.



NOTES:

- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed.
- 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 bars @ 1'-6" ± 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 requirement. See Standard Plan D74C for step details.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and a minimum slope of 4:1 from all directions toward outlet pipe.
- W = 2'-11 3/8" for one grate. Add 3'-5 3/8" for additional grates in tandem.
- See Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plan D78A for gutter depression details.
- Complete joint 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 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 inlet on Standard Plan D75B. See Standard Specifications for mortar composition.

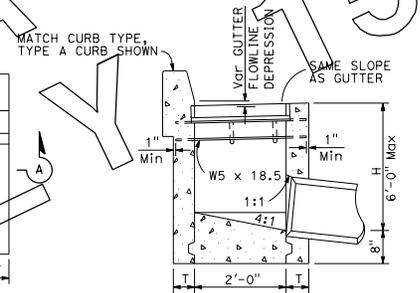
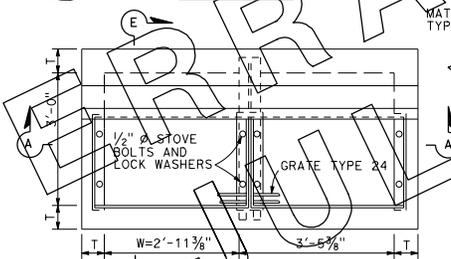
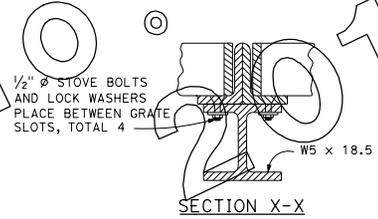
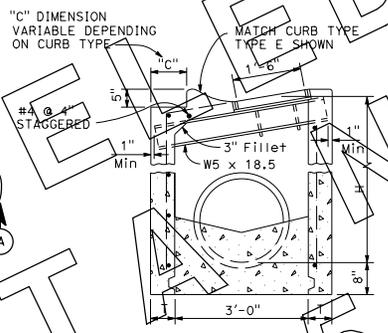
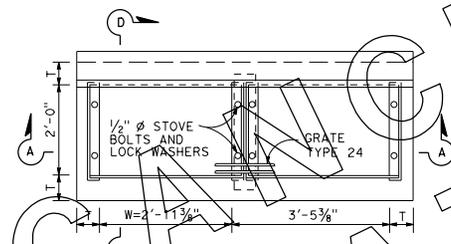


TABLE A
CONCRETE QUANTITIES

| 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 |
| GT1 | 1.74 | 0.348 | * | * |
| GT2 | 2.11 | 0.385 | 5.40 | 0.530 |
| GT3 | 1.73 | 0.348 | * | * |
| GT4 | 2.18 | 0.385 | 5.41 | 0.530 |

Table based on 8" floor slab 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.

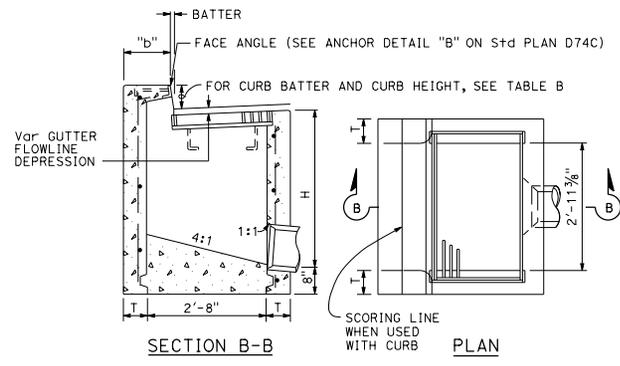
* Maximum allowable height = 6'-0".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLETS
NO SCALE

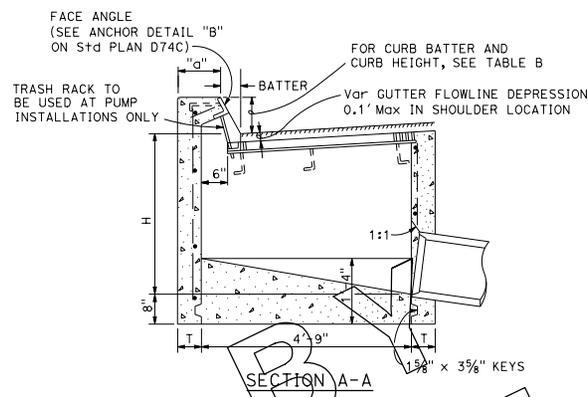
D74A

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
|------|--------|-------|--------------------------|--------------------|
| | | | | |

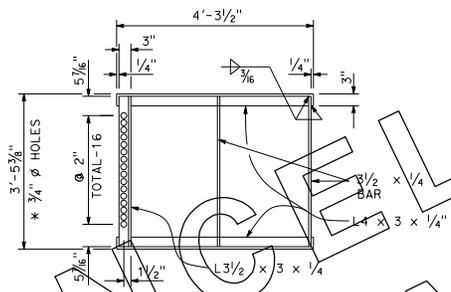
C. M. Duff
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. C59976
 Exp. 6-30-16
 CIVIL
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



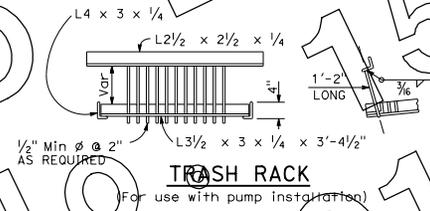
TYPE GO



SECTION A-A



GRATE FRAME FOR TYPE GDO INLET

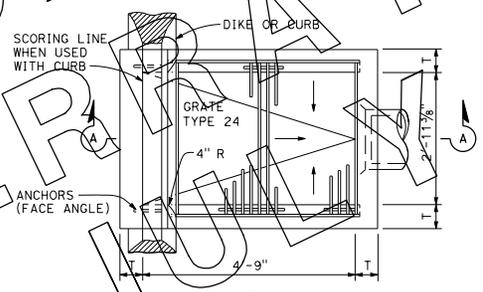


TRASH RACK

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 | 0.24 | 0.245 | 3.39 | 0.346 |
| GDO | 0.62 | 0.322 | 4.36 | 0.446 |

Table based on 8" floor slab 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.



PLAN
TYPE GDO

TABLE B

| CURB TYPE | NORMAL CURB HEIGHT | CURB BATTER | "a" DIMENSION | "b" DIMENSION |
|-------------|--------------------|-------------|---------------|---------------|
| A1-6 | 6" | 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 undepressed.
- For 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 @ 1'-0" 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.
- 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.
- Complete joint 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 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

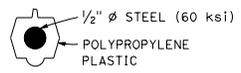
D74B

2015 STANDARD PLAN D74B

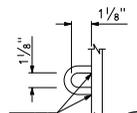
| | | | | |
|------|--------|-------|-----------------------------|---------------------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL NO. SHEETS |
| | | | | |

C. M. Dwyer
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 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.

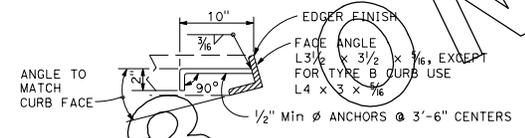
REGISTERED PROFESSIONAL ENGINEER
 Carl M. Dwyer
 No. C59976
 Exp. 8-30-16
 CIVIL
 STATE OF CALIFORNIA



TYPICAL SECTION
(Step insert)

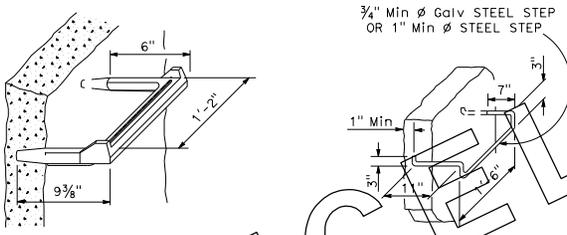


STIRRUP



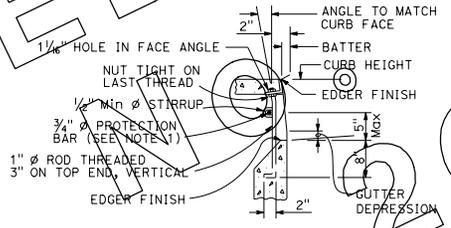
FACE ANGLE ANCHOR DETAIL "A"

| LENGTH OF CURB OPENING | No. OF ANCHORS |
|------------------------|----------------|
| 3'-6" OR LESS | 2 |
| 7'-0" | 3 |
| 10'-0" | 4 |
| 14'-0" | 5 |
| 21'-0" | 7 |

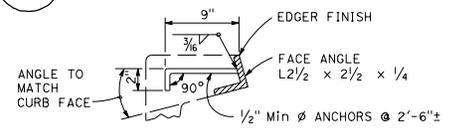


STEP INSERT **BAR STEP**

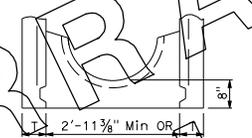
STEP DETAILS



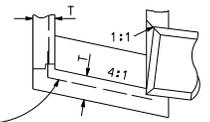
CURB SUPPORT DETAIL
See Note 2



FACE ANGLE ANCHOR DETAIL "B"



ALTERNATIVE HALF ROUND BOTTOM



ALTERNATIVE REINFORCED BOTTOM

#4 @ 1'-0" CENTERS
Min Tot 3

NOTES:

- When shown on the project plans, place a 3/4" plain round protection bar horizontally across length of the opening and bend back 4" into the inlet wall on each side.
- Curb supports shall be evenly spaced and minimal in number such that maximum span of unsupported curb is 7'-0".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLET DETAILS
NO SCALE

D74C

2015 STANDARD PLAN D74C

177

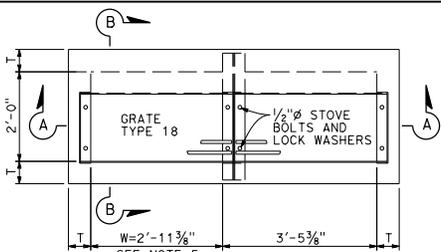
CANCELED BY 15 JULY 2016

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

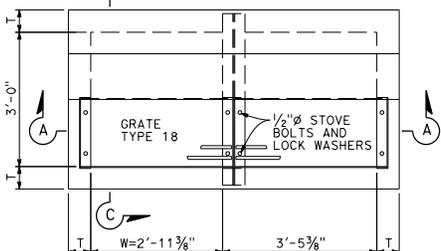


 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

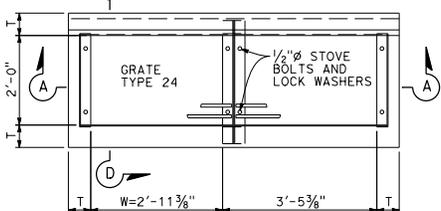
TO ACCOMPANY PLANS DATED _____



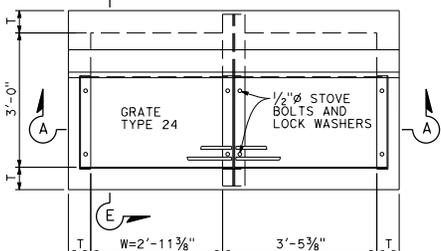
PLAN
TYPE GT1



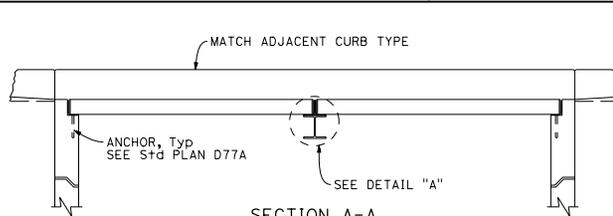
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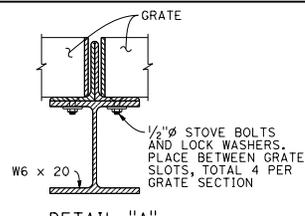
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TYPE GT3



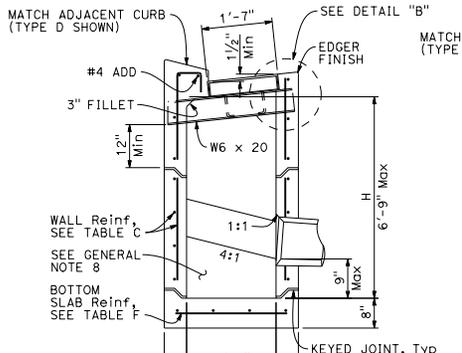
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TYPE GT4



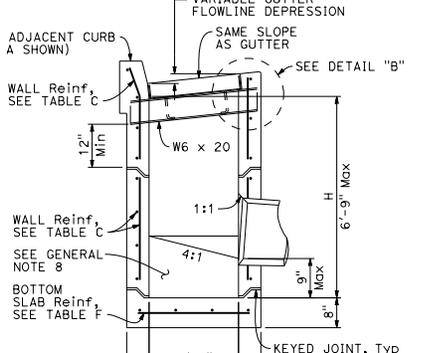
SECTION A-A



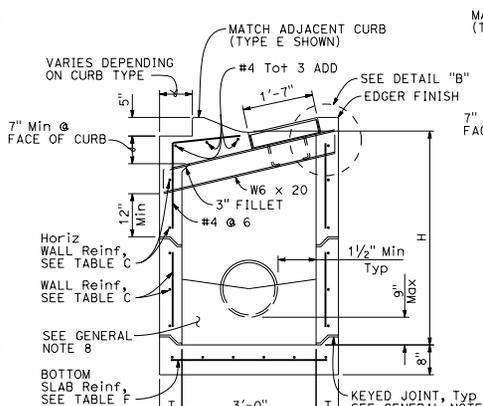
DETAIL "A"



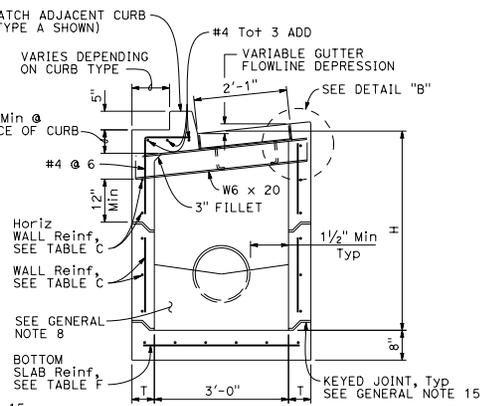
SECTION B-B



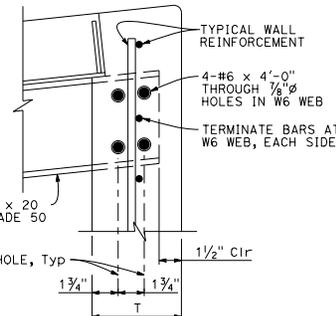
SECTION D-D



SECTION C-C



SECTION E-E



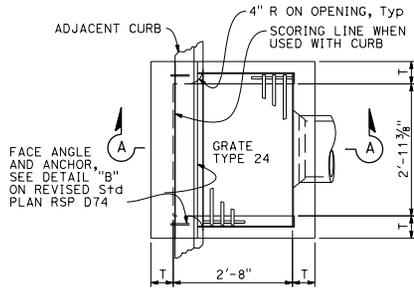
DETAIL "B"
(SIMILAR OPPOSITE END OF W6)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PRECAST
DRAINAGE INLETS
TYPES GT1, GT2,
GT3 AND GT4**
NO SCALE

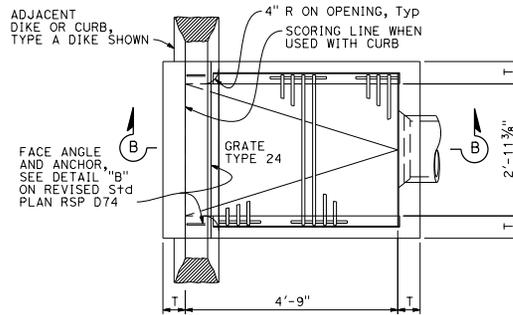
RSP D73D DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP D73D

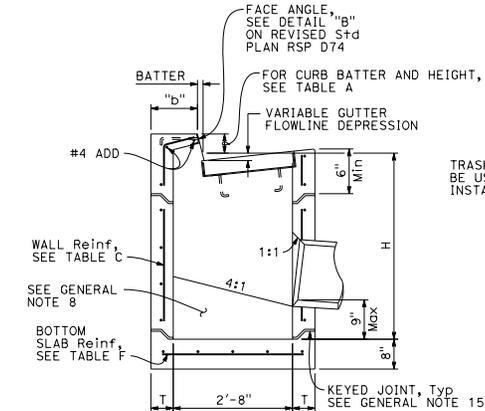
2015 REVISED STANDARD PLAN RSP D73D



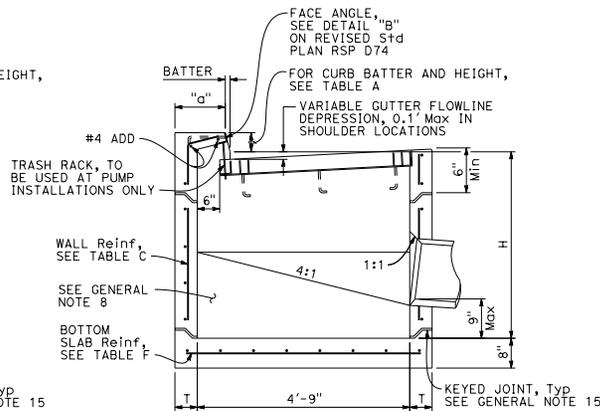
PLAN
TYPE GO



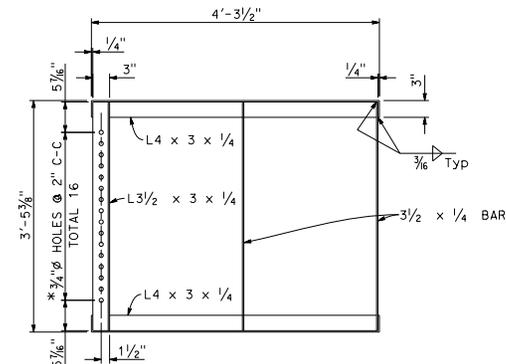
PLAN
TYPE GDO



SECTION A-A

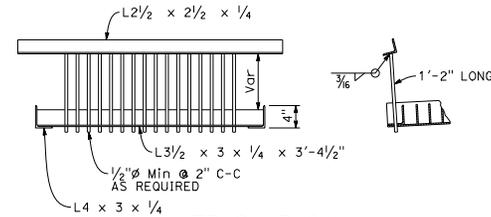


SECTION B-B



GRATE FRAME FOR TYPE GDO INLET

* HOLES REQUIRED ONLY WITH TRASH RACK



TRASH RACK
FOR USE WITH PUMP INSTALLATION

NOTES:

1. See Revised Standard Plan RSP D73F for General Notes and additional details. See Revised Standard Plan RSP D73G for tables, wall thickness "T" and quantities.
2. Where shown on the project plans, place a 3/4" x plain round protection bar horizontally across the length of the opening and bend back 4" into the inlet wall on each side.
3. Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
4. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.

| TABLE A | | | | |
|-------------|--------------------|-------------|---------------|---------------|
| 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" |

Height of curb opening will vary with the type of curb and the depth of the local depression.

| | | | | |
|-------|--------|-------|--------------------------|--------------------|
| Dist# | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| | | | | |

REGISTERED CIVIL ENGINEER
 Carl M. Dunn
 No. C59976
 Exp. 6-30-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

TO ACCOMPANY PLANS DATED _____

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PRECAST
DRAINAGE INLETS
TYPES GO AND GDO**
NO SCALE

RSP D73E DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP D73E

2015 REVISED STANDARD PLAN RSP D73E

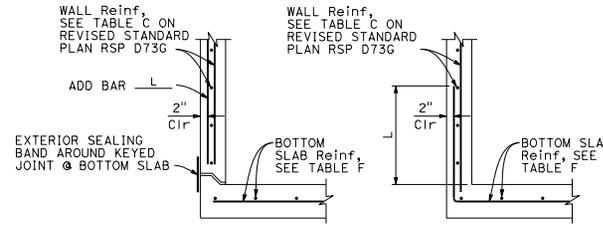
GENERAL NOTES:

- "H" is measured from top of bottom slab to the normal gutter grade line undepressed at the curb face.
- For "T" wall thickness and reinforcement, see Table C on Revised Standard Plan RSP D73G.
- Wall reinforcement must be placed at the center of wall thickness with horizontal bars placed on the exterior face. Bottom slab concrete cover must be 3" clear on the interior side face unless otherwise noted. Top slab concrete cover must be 2" clear on the exterior face unless otherwise noted. Short independent wall sections or height adjustment rings 6" to 24" high must have a minimum of two #4 horizontal bars. Reinforcement spacing is in inches unless otherwise noted.
- 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 bottom of lid. The distance between steps must not exceed 1'-0" and be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step Inserts must comply with State Industrial Safety Requirements. See Revised Standard Plan RSP D74 for step details.
- Pipe(s) can be placed in any wall. Adjacent to each side of the opening, place additional reinforcement equivalent to half the interrupted main reinforcement. For larger pipes greater than or equal to 42" diameter, also add 4 diagonal bars, 1 bar each side. Bars must be the same size as the larger of the main vertical or horizontal bars. Extend bars one development length past the intersection with the adjacent diagonal bar, or where bars intersect mid thickness of adjacent wall bottom or top of non-continuous wall, bend ends as required into same plane.
- Set inlet so that grate bars are parallel to direction of principal surface flow.
- Curb section must match adjacent curb.
- Except for inlets used as junction boxes, basin floors must have wood trowel finish and a minimum slope of 4:1, unless otherwise noted, from all directions toward outlet pipe by casting grout on top of the bottom slab. Grout must be placed prior to backfill.
- See Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plans D78A and D78B for gutter depression details.
- See Standard Plan A87A and Revised Standard Plan RSP A87B for curb and dike details.
- Details shown apply to metal, concrete and plastic pipe(s).
- The Contractor may use WWR instead of bar reinforcement. The ratio of bar reinforcement to WWR shall be based on the yield strength ratio.
- Seal precast inlets connection openings between wall and pipe with non-shrink grout or resilient connectors as specified in the Special Provisions. Precast inlets shall have mortared connections conforming to details for Type GCP Inlet shown on Standard Plan D75B. See Standard Specifications for mortar composition.
- Where shown, provide precast inlets with separate top sections for final grade adjustment. Provide keyed joints with butyl rubber sealant between the top section and wall, multiple wall sections, and wall and bottom slab. Joint design may vary but must be 1" to 3" in depth. For tongue type joints, tongue down orientation is not allowed. For keyed joints, keyway up, keyway down or tongue up configurations are allowed. Only one key type is allowed for each drainage inlet.
- Non-shrink grout can be used for upper most joint to facilitate final top grade adjustment.
- Provide a level and firm sand bedding on which to place precast inlets. Extend sand bedding under all structure backfill.
- For Integral Base, see Detail "A".
- Perimeter reinforcement must not be smaller than main bars and #4 and serves as a rigid frame to position and attach the required structural reinforcement and may be tack welded at outer corners when using ASTM A706 weldable bars.
- Inlet extensions may be cast in place after placement of main box and placement and compaction of backfill. Concrete strength must be 3.6 ksi minimum. All slab and wall thicknesses must be per Revised Standard Plan RSP D72A. All reinforcement shall extend a minimum of 24" from precast main inlet box.

DESIGN NOTES:

- Design Specifications: AASHTO LRFD Bridge Design Specifications, 6th edition with 2012 Interims and Errata and CA Amendments.
- Live Load (AASHTO LRFD 3.6.1.2): HL-93, consists of design truck or tandem, and design lane load. Dynamic Load Allowance, IM = 33%. Multiple Presence Factor, m = 1.0. Design lane load was excluded in Top Slab design. A wheel load of 8 kips without impact factor was used for top slabs that are above a curb.
- Earth Load:
Vertical pressure = 140 pcf
Lateral pressure:
= 100 pcf for walls with flat embankment
= 140 pcf For walls with slope embankment, 1.5:1 Max
- Downdrag: $\phi = 34^\circ$ and $\gamma_c = 120$ pcf.
- Buoyancy: $\gamma_w = 62.4$ pcf to finished grade.
- Reinforced Concrete: $f'_c = 5.0$ ksi, $f_y = 60.0$ ksi.
- Tables are based on the worst case from the level ground and sloped ground.
- Soil pressures shown are factored per AASHTO LRFD and include self-weight, live load and downdrag.

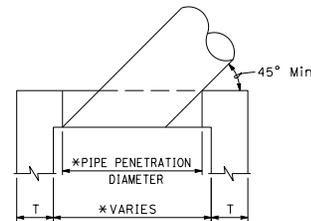
| SPAN "A" OR "B" (IN) | L (IN) |
|----------------------|--------|
| <38 | 34 |
| 38 TO 50 | 40 |
| 51 TO 64 | 47 |
| 65 TO 76 | 53 |
| 77 TO 90 | 60 |



BASE WITH KEYED JOINT INTEGRAL BASE

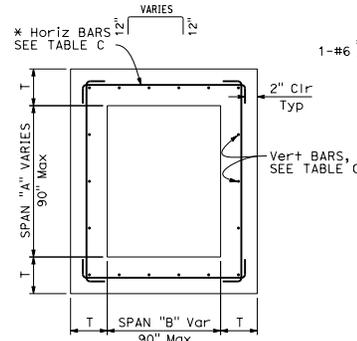
DETAIL "A"

FOR INTEGRAL BASE, CLEARANCE BETWEEN PIPE PENETRATION AND BASE SLAB MAY BE AS SHOWN IN CIP ALTERNATIVE STANDARD PLAN SHEET.



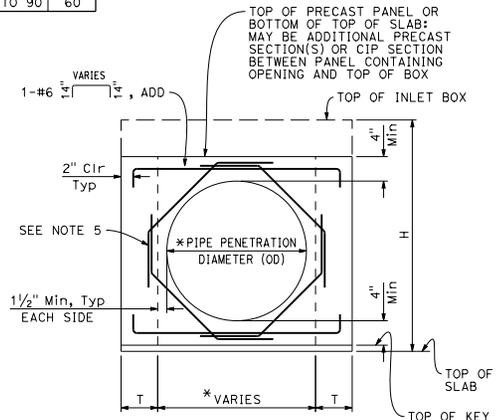
SKEWED PIPE PLAN

* ADJUST PIPE PENETRATION AND BOX WIDTH FOR SKEWED PIPES.

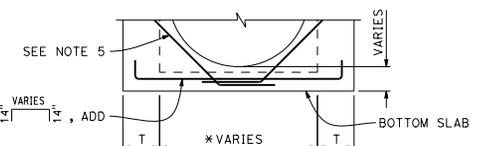


TYPICAL INLET PLAN

* ALTERNATIVE HORIZONTAL BARS



BASE WITH KEYED JOINT



INTEGRAL BASE

FOR DETAILS NOT SHOWN, SEE "BASE WITH KEYED JOINT"

TYPICAL WALL W/ PIPE OPENING

* SEE "SKEWED PIPE PLAN"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PRECAST DRAINAGE INLET NOTES
NO SCALE

RSP D73F DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP D73F

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED _____

2015 REVISED STANDARD PLAN RSP D73F

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| | | | | | |



 REGISTERED CIVIL ENGINEER
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TO ACCOMPANY PLANS DATED _____

TABLE A - CONCRETE QUANTITIES

| TYPE | H=3'-0" TO 8'-0" | | H=8'-1" TO 20'-0" | |
|---------------|------------------|-----------------------------------|-------------------|-----------------------------------|
| | H=3'-0" (CY) | ADDITIONAL CONCRETE PER FOOT (CY) | H=8'-1" (CY) | ADDITIONAL CONCRETE PER FOOT (CY) |
| G1 | 0.95 | 0.220 | SEE NOTE 2 | SEE NOTE 2 |
| G2* | 1.25 | 0.255 | 2.55 | 0.255 |
| G3 | 1.06 | 0.220 | SEE NOTE 2 | SEE NOTE 2 |
| G4 (TYPE 18)* | 1.41 | 0.255 | 2.71 | 0.255 |
| G4 (TYPE 24)* | 1.36 | 0.255 | 2.65 | 0.255 |
| G5 | 1.09 | 0.220 | SEE NOTE 2 | SEE NOTE 2 |
| G6 | 1.14 | 0.220 | SEE NOTE 2 | SEE NOTE 2 |
| OS | 1.28 | 0.278 | 2.69 | 0.278 |
| OL7 | 1.92 | 0.278 | 3.33 | 0.278 |
| OL10 | 2.43 | 0.278 | 3.84 | 0.278 |
| OL14 | 3.16 | 0.278 | 4.57 | 0.278 |
| OL21 | 4.58 | 0.278 | 5.99 | 0.278 |
| GOL7 | 2.36 | 0.313 | 4.04 | 0.434 |
| GOL10 | 2.84 | 0.313 | 4.53 | 0.434 |
| GT1 | 2.30 | 0.480 | SEE NOTE 2 | SEE NOTE 2 |
| GT2 | 2.71 | 0.530 | 5.40 | 0.530 |
| GT3 | 2.29 | 0.480 | SEE NOTE 2 | SEE NOTE 2 |
| GT4 | 2.69 | 0.530 | 5.39 | 0.530 |
| GO | 1.25 | 0.245 | 2.37 | 0.245 |
| GDO | 1.64 | 0.322 | 3.37 | 0.446 |

* Quantities are based on the minimum interior dimensions.

TABLE B - REINFORCEMENT QUANTITIES

| TYPE | H=3'-0" TO 8'-0" | | H=8'-1" TO 20'-0" | |
|---------------|------------------|--|-------------------|--|
| | H=3'-0" (LB) | ADDITIONAL REINFORCEMENT PER FOOT (LB) | H=8'-1" (LB) | ADDITIONAL REINFORCEMENT PER FOOT (LB) |
| G1 | 88.5 | 21.90 | SEE NOTE 2 | SEE NOTE 2 |
| G2* | 151.5 | 24.54 | 277.4 | 38.64 |
| G3 | 92.9 | 21.90 | SEE NOTE 2 | SEE NOTE 2 |
| G4 (TYPE 18)* | 134.4 | 24.54 | 260.3 | 38.64 |
| G4 (TYPE 24)* | 125.1 | 24.54 | 251.0 | 38.64 |
| G5 | 92.5 | 21.90 | SEE NOTE 2 | SEE NOTE 2 |
| G6 | 92.5 | 21.90 | SEE NOTE 2 | SEE NOTE 2 |
| OS | 145.8 | 35.57 | 327.8 | 49.60 |
| OL7 | 328.0 | 35.57 | 510.0 | 49.60 |
| OL10 | 467.5 | 35.57 | 649.5 | 49.60 |
| OL14 | 667.5 | 35.57 | 849.5 | 49.60 |
| OL21 | 1056.1 | 35.57 | 1238.1 | 49.60 |
| GOL7 | 474.7 | 45.17 | 706.8 | 74.02 |
| GOL10 | 604.9 | 45.17 | 836.9 | 74.02 |
| GT1 | 349.0 | 80.48 | SEE NOTE 2 | SEE NOTE 2 |
| GT2 | 403.7 | 86.82 | 849.1 | 135.15 |
| GT3 | 347.0 | 80.48 | SEE NOTE 2 | SEE NOTE 2 |
| GT4 | 403.7 | 86.82 | 849.1 | 135.15 |
| GO | 99.8 | 23.75 | 221.7 | 37.46 |
| GDO | 208.8 | 46.22 | 446.2 | 75.61 |

* Quantities are based on the minimum interior dimensions.

TABLE D

| INLET | CURB USED IN QUANTITIES |
|--------------|-------------------------|
| G1 | - |
| G2 | - |
| G3 | A1-6 |
| G4 (Type 18) | A1-6 |
| G4 (Type 24) | A1-6 |
| G5 | B1-4 |
| G6 | 1/2E |
| OS | - |
| OL7 | - |
| OL10 | - |
| OL14 | - |
| OL21 | - |
| GOL7 | - |
| GOL10 | - |
| GT1 | D-6 |
| GT2 | E |
| GT3 | A2-8 |
| GT4 | A2-8 |
| GO | - |
| GDO | - |

TABLE C - WALL REINFORCEMENT

| TYPE | H ≤ 8'-0" (T=6", UON) | | | 8'-0" < H ≤ 20'-0" (T=8", UON) | | |
|---------------------------|-----------------------|----------|------|--------------------------------|----------|------|
| | HORIZONTAL | VERTICAL | *ADD | HORIZONTAL | VERTICAL | *ADD |
| OS | #4@6 | #3@8 | #3@8 | #4@4 (T=6") | #3@8 | #3@8 |
| OL | #4@6 | #3@8 | #3@8 | #4@4 (T=6") | #3@8 | #3@8 |
| GOL | #4@5 | #3@8 | #3@8 | #5@5 | #3@6 | #3@6 |
| G1 (H ≤ 6'-9") | #4@9 | #3@8 | #3@8 | - | - | - |
| G2 & G4 (a** ≤ 38") | #4@9 | #3@8 | #3@8 | #4@5 (T=6") | #3@8 | #3@8 |
| G2 & G4 (38" < a** ≤ 50") | #4@6 | #3@8 | #3@8 | #4@4 (T=6") | #3@8 | #3@8 |
| G2 & G4 (50" < a** ≤ 64") | #4@5 | #3@8 | #3@8 | #5@5 | #3@6 | #3@6 |
| G2 & G4 (64" < a** ≤ 76") | #5@7 (T=8") | #3@6 | #3@6 | #5@4 | #3@6 | #5@6 |
| G2 & G4 (76" < a** ≤ 90") | #5@5 (T=8") | #3@6 | #3@6 | #5@3 | #3@6 | #5@6 |
| G3 (H ≤ 6'-9") | #4@9 | #3@8 | #3@8 | - | - | - |
| G5 (H ≤ 6'-9") | #4@9 | #3@8 | #3@8 | - | - | - |
| G6 (H ≤ 6'-9") | #4@9 | #3@8 | #3@8 | - | - | - |
| GT1 (H ≤ 6'-9") | #5@5 (T=8") | #3@6 | #3@6 | - | - | - |
| GT2 | #5@5 (T=8") | #3@6 | #3@6 | #5@3 | #3@6 | #5@6 |
| GT3 (H ≤ 6'-9") | #5@5 (T=8") | #3@6 | #3@6 | - | - | - |
| GT4 | #5@5 (T=8") | #3@6 | #3@6 | #5@3 | #3@6 | #5@6 |
| GO | #4@9 | #3@8 | #3@8 | #4@5 (T=6") | #3@8 | #3@8 |
| GDO | #4@5 | #3@8 | #3@8 | #5@5 | #3@6 | #3@6 |

* See Detail A on Revised Standard Plan RSP D73F for additional vertical bars at the base.
** a = Larger interior span

TABLE E

| SOIL PRESSURE BELOW BASE SLAB (ksf) | | |
|-------------------------------------|-----------|--------------------|
| TYPE | H ≤ 8'-0" | 8'-0" < H ≤ 20'-0" |
| OS | 2.89 | 5.68 |
| OL* | 2.89 | 5.68 |
| GOL* | 2.36 | 4.93 |
| G1 (H ≤ 6'-9") | 3.51 | - |
| G2 & G4 (a** ≤ 38") | 2.96 | 5.79 |
| G2 & G4 (38" < a** ≤ 50") | 2.21 | 4.51 |
| G2 & G4 (50" < a** ≤ 64") | 3.19 | 4.89 |
| G2 & G4 (64" < a** ≤ 76") | 2.50 | 4.23 |
| G2 & G4 (76" < a** ≤ 90") | 2.04 | 3.56 |
| G3 (H ≤ 6'-9") | 3.51 | - |
| G5 (H ≤ 6'-9") | 3.51 | - |
| G6 (H ≤ 6'-9") | 3.51 | - |
| GT1 (H ≤ 6'-9") | 3.41 | - |
| GT2 | 3.60 | 6.42 |
| GT3 (H ≤ 6'-9") | 3.41 | - |
| GT4 | 3.60 | 6.42 |
| GO | 3.37 | 6.46 |
| GDO | 2.48 | 7.30 |

* Main Box
** a = Larger interior span

NOTES:

- No deduction or adjustment was made to the quantities of concrete and reinforcement for pipe openings, floor alternatives or curb type.
- Maximum allowable height is 6'-9".
- Quantities are approximate and for design purposes only.
- Design is based on envelope of level and sloped ground.

TABLE F

| BASE SLAB REINFORCEMENT (T=8", UON) | | |
|-------------------------------------|------------|--------------------|
| TYPE | H ≤ 8'-0" | 8'-0" < H ≤ 20'-0" |
| OS | #4@8 (EW) | #4@5 (EW) |
| OL* | #4@8 (EW) | #4@5 (EW) |
| GOL* | #4@6 (EW) | #4@4 (EW) |
| G1 (H ≤ 6'-9") | #4@10 (EW) | - |
| G2 & G4 (a** ≤ 38") | #4@10 (EW) | #4@6 (EW) |
| G2 & G4 (38" < a** ≤ 50") | #4@8 (EW) | #4@5 (EW) |
| G2 & G4 (50" < a** ≤ 64") | #4@6 (EW) | #4@4 (EW) |
| G2 & G4 (64" < a** ≤ 76") | #4@5 (EW) | #4@3 (EW) |
| G2 & G4 (76" < a** ≤ 90") | #4@4 (EW) | #5@3 (EW) |
| G3 (H ≤ 6'-9") | #4@10 (EW) | - |
| G5 (H ≤ 6'-9") | #4@10 (EW) | - |
| G6 (H ≤ 6'-9") | #4@10 (EW) | - |
| GT1 (H ≤ 6'-9") | #4@4 (EW) | - |
| GT2 | #4@4 (EW) | #5@3 (EW) |
| GT3 (H ≤ 6'-9") | #4@4 (EW) | - |
| GT4 | #4@4 (EW) | #5@3 (EW) |
| GO | #4@10 (EW) | #4@6 (EW) |
| GDO | #4@6 (EW) | #4@4 (EW) |

(EW) Each Way
* Main Box
** a = Larger interior span

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**PRECAST
DRAINAGE INLET TABLES**
NO SCALE

RSP D73G DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP D73G

2015 REVISED STANDARD PLAN RSP D73G

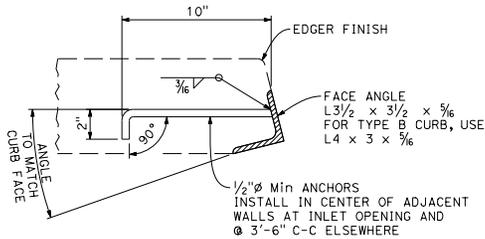
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|-------|--------|-------|-----------------------------|--------------|-----------------|
| Dist# | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| | | | | | |



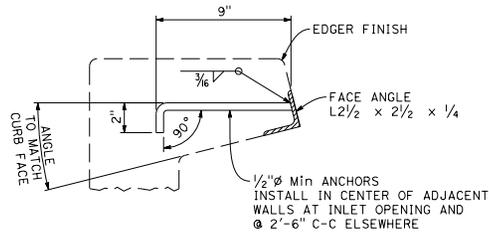
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 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED _____

| FACE ANGLE DETAIL "A" | |
|------------------------|----------------|
| LENGTH OF CURB OPENING | No. OF ANCHORS |
| 3'-6" OR LESS | 2 |
| 7'-0" | 3 |
| 10'-0" | 4 |
| 14'-0" | 5 |
| 21'-0" | 7 |



DETAIL "A"

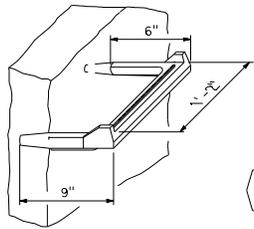


DETAIL "B"

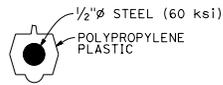
FACE ANGLE AND ANCHOR

NOTE:

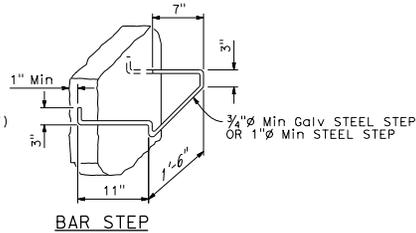
- When shown on the project plans, place a 3/4" plain round protection bar horizontally across the length of the opening and bend back 4" into the inlet wall on each side.



STEP INSERT

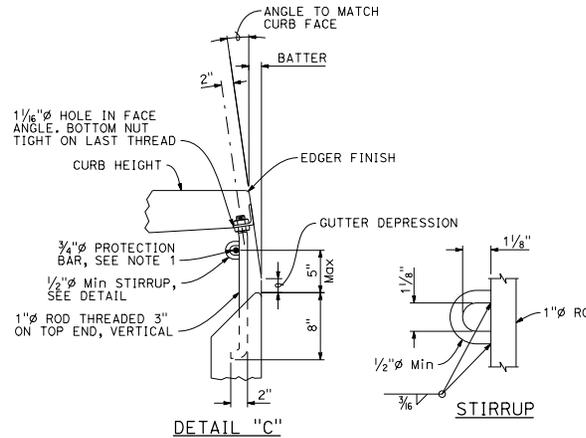


TYPICAL SECTION
(STEP INSERT)



BAR STEP

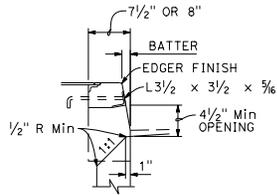
STEP DETAILS



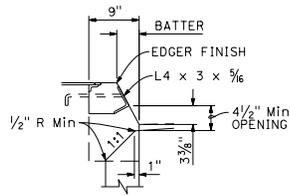
DETAIL "C"

CURB SUPPORT

CURB SUPPORTS SHALL BE EVENLY SPACED AND MINIMAL IN NUMBER SUCH THAT MAXIMUM SPAN OF UNSUPPORTED CURB IS 7'-0".



TYPE A CURBS



TYPE B CURBS

CURB OPENING DETAILS

DRAINAGE INLET DETAILS

NO SCALE

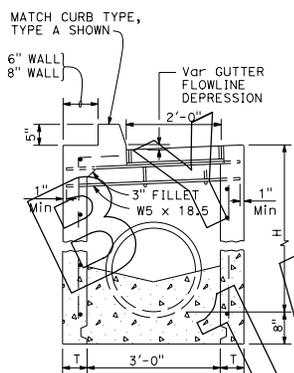
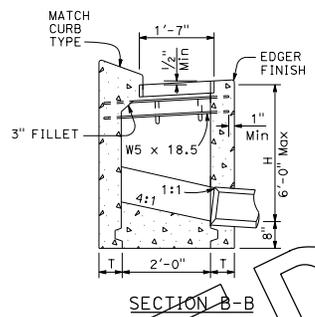
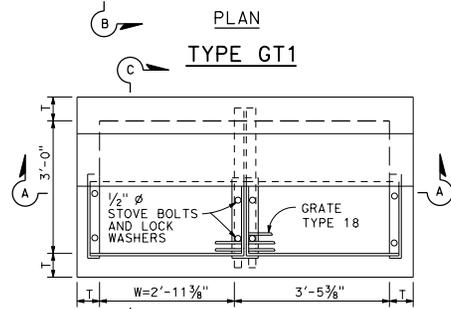
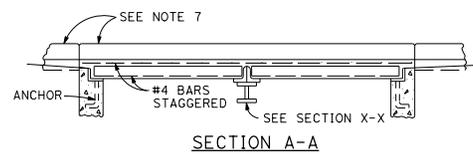
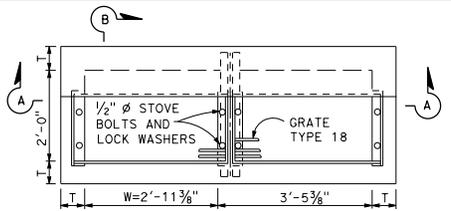
RSP D74 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP D74

2015 REVISED STANDARD PLAN RSP D74

| | | | | |
|------|--------|-------|-----------------------------|---------------------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL NO. SHEETS |
| | | | | |

C. M. Dwyer
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. C59976
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA



NOTES:

- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed.
- 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 bars @ 1'-6" ± 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 requirement. See Standard Plan D74C for step details.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and a minimum slope of 4:1 from all directions toward outlet pipe.
- W = 2'-11 3/8" for one grate. Add 3'-5 3/8" for additional grates in tandem.
- See Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plan D78A for gutter depression details.
- Complete joint 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 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 inlet on Standard Plan D75B. See Standard Specifications for mortar composition.

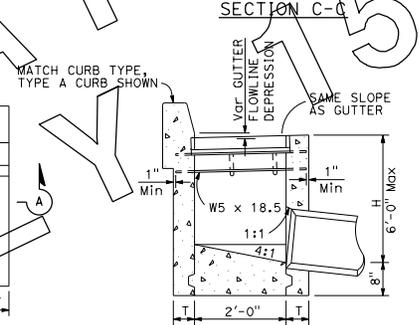
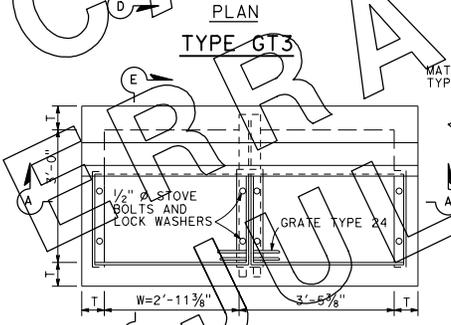
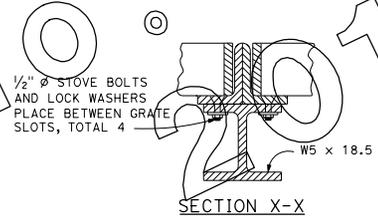
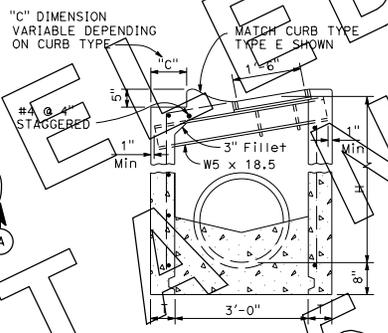
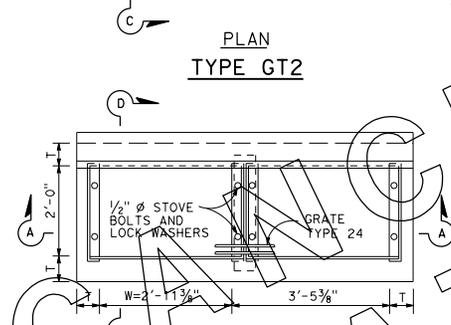


TABLE A
CONCRETE QUANTITIES

| 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 |
| GT1 | 1.74 | 0.348 | * | * |
| GT2 | 2.11 | 0.385 | 5.40 | 0.530 |
| GT3 | 1.73 | 0.348 | * | * |
| GT4 | 2.18 | 0.385 | 5.41 | 0.530 |

Table based on 8" floor slab 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.

* Maximum allowable height = 6'-0".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DRAINAGE INLETS

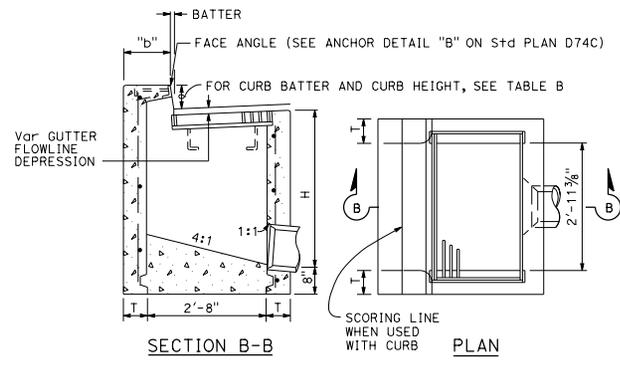
NO SCALE

D74A

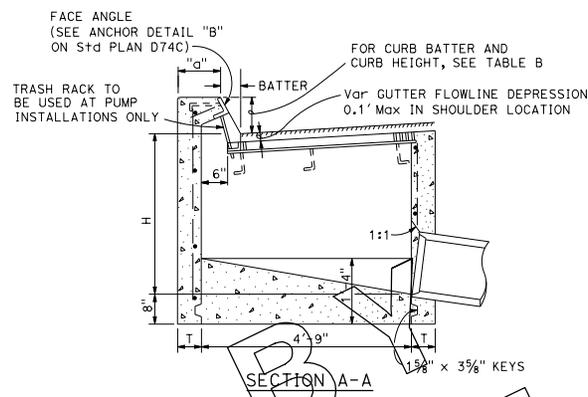
2015 STANDARD PLAN D74A

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
|------|--------|-------|--------------------------|--------------------|
| | | | | |

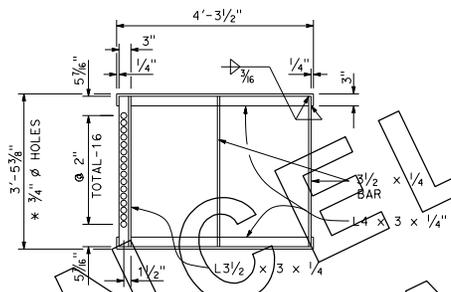
C. M. Duff
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. C59976
 Exp. 6-30-16
 CIVIL
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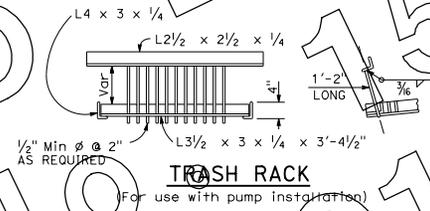
TYPE GO



SECTION A-A



GRATE FRAME FOR TYPE GDO INLET

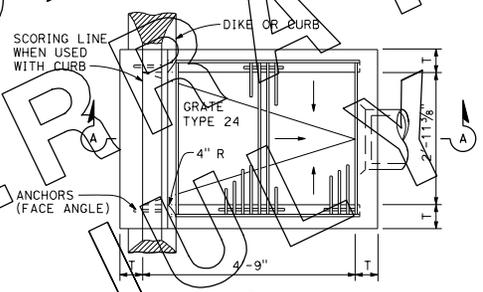


TRASH RACK

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 | 0.24 | 0.245 | 3.39 | 0.346 |
| GDO | 0.62 | 0.322 | 4.36 | 0.446 |

Table based on 8" floor slab 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.



TYPE GDO

TABLE B

| CURB TYPE | NORMAL CURB HEIGHT | CURB BATTER | "a" DIMENSION | "b" DIMENSION |
|-------------|--------------------|-------------|---------------|---------------|
| A1-6 | 6" | 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 undepressed.
- For 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 @ 1'-0" 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.
- 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.
- Complete joint 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 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

D74B

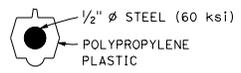
2015 STANDARD PLAN D74B

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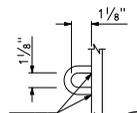
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|------|--------|-------|-----------------------------|---------------------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL NO. SHEETS |
| | | | | |

C. M. Dwyer
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
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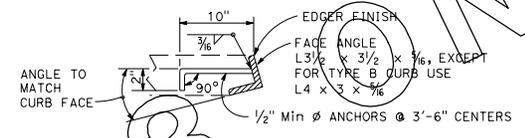
REGISTERED PROFESSIONAL ENGINEER
 Carl M. Dwyer
 No. C59976
 Exp. 8-30-16
 CIVIL
 STATE OF CALIFORNIA



TYPICAL SECTION
(Step insert)

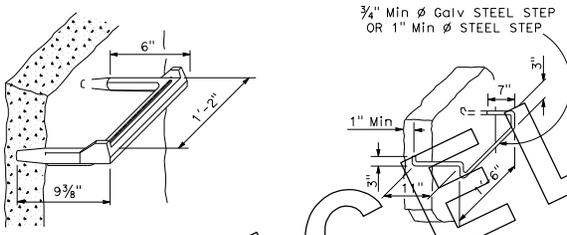


STIRRUP



FACE ANGLE ANCHOR DETAIL "A"

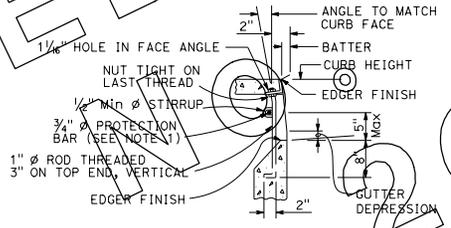
| LENGTH OF CURB OPENING | No. OF ANCHORS |
|------------------------|----------------|
| 3'-6" OR LESS | 2 |
| 7'-0" | 3 |
| 10'-0" | 4 |
| 14'-0" | 5 |
| 21'-0" | 7 |



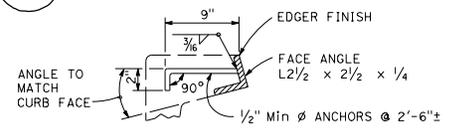
STEP INSERT

BAR STEP

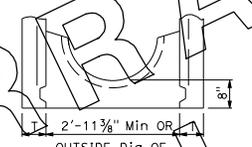
STEP DETAILS



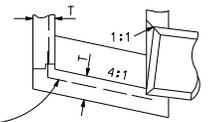
CURB SUPPORT DETAIL
See Note 2



FACE ANGLE ANCHOR DETAIL "B"



ALTERNATIVE HALF ROUND BOTTOM



ALTERNATIVE REINFORCED BOTTOM

NOTES:

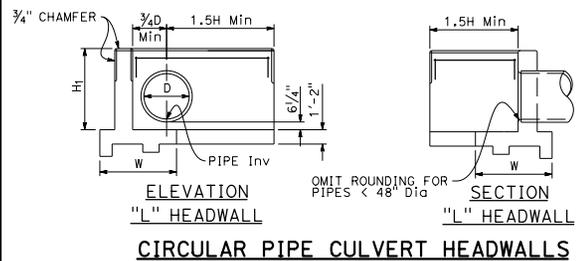
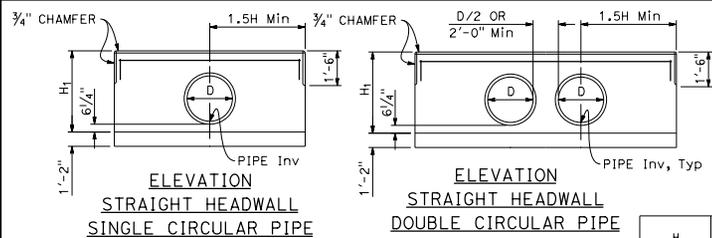
- When shown on the project plans, place a 3/4" plain round protection bar horizontally across length of the opening and bend back 4" into the inlet wall on each side.
- Curb supports shall be evenly spaced and minimal in number such that maximum span of unsupported curb is 7'-0".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLET DETAILS
NO SCALE

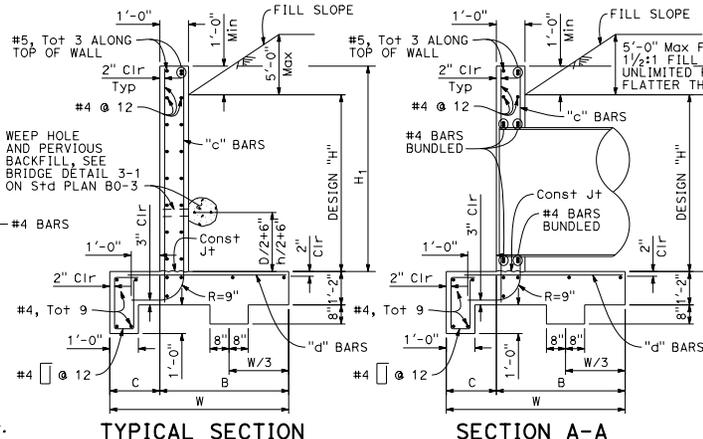
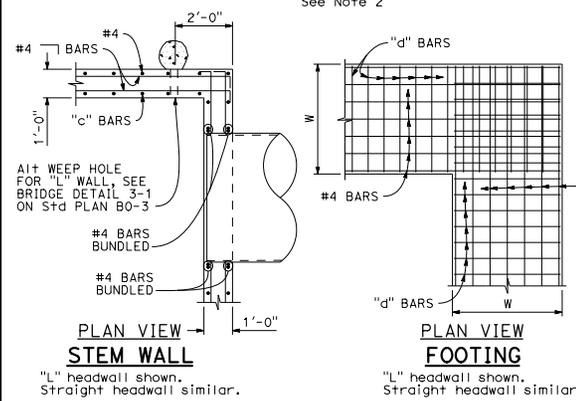
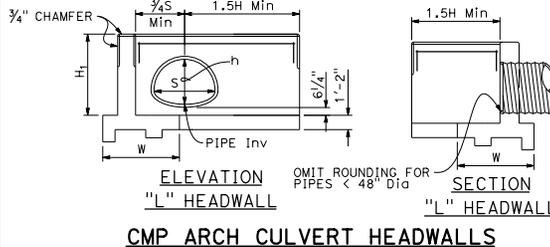
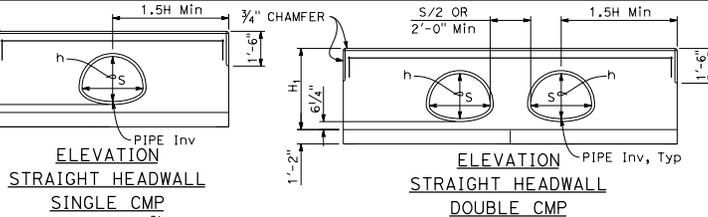
D74C

177

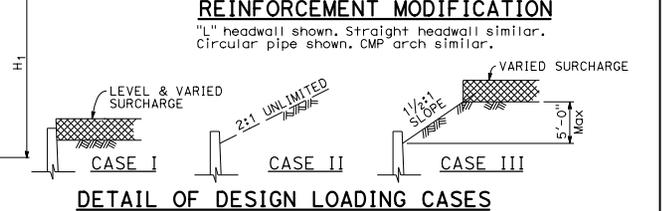
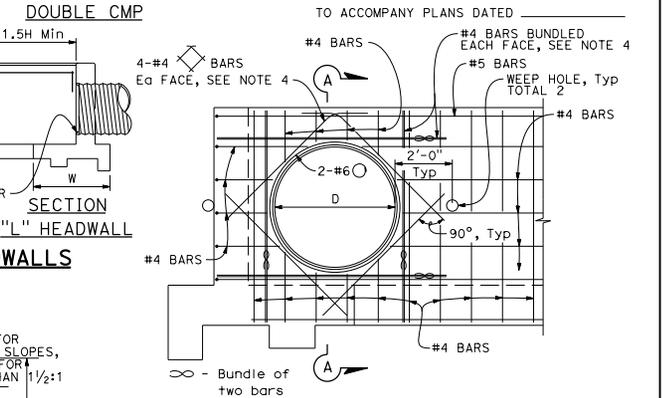
2015 STANDARD PLAN D74C



| H | CIRCULAR PIPE SIZE D | CMP ARCH SIZE S x h |
|--------|----------------------|---------------------|
| 2'-8" | 12" | - |
| 2'-11" | 15" | 21" x 15" |
| 3'-2" | 18" | 24" x 18" |
| 3'-5" | 21" | 28" x 20" |
| 3'-8" | 24" | 35" x 24" |
| 3'-11" | 27" | - |
| 4'-2" | 30" | 42" x 29" |
| 4'-5" | 33" | 49" x 33" |
| 4'-8" | 36" | - |
| 4'-11" | 39" | 57" x 38" |
| 5'-2" | 42" | 64" x 43" |
| 5'-5" | 45" | - |
| 5'-8" | 48" | 71" x 47" |
| 5'-11" | 51" | - |
| 6'-2" | 54" | - |



| | | | | | |
|---|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| | | | | | |
| July 15, 2016 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. | | | | | |



- NOTES:**
- Length of wall from @ pipe to end of wall is 1.5H Min, unless a greater length is shown on project plans.
 - Single circular pipe or single CMP shown for "L" headwall. For double pipe in "L" headwall, see "ELEVATION STRAIGHT HEADWALL DOUBLE CIRCULAR PIPE" or "ELEVATION STRAIGHT HEADWALL DOUBLE CMP" detail for additional information.
 - Cable railing to be installed on top of headwall when shown on Project Plans. See Revised Standard Plan RSP B11-47 for cable railing details.
 - Adjacent to each side of the opening, place additional reinforcement equivalent to half the interrupted main reinforcement. For pipes 42" diameter and greater, add 4 diagonals, 1 bar each side. Extend bars one development length past the intersection with the adjacent diagonal bar, or where bars intersect mid thickness of adjacent wall, bottom slab or at top of wall, bend ends as required into same plane.
 - Quantities are approximate and for design purposes only. No deduction is made for pipe or arch occupancy.

| | H | 2'-8" | 2'-11" | 3'-2" | 3'-5" | 3'-8" | 3'-11" | 4'-2" | 4'-5" | 4'-8" | 4'-11" | 5'-2" | 5'-5" | 5'-8" | 5'-11" | 6'-2" |
|------------|---------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| **CASE I | Ser (a ₀ , B') | 0.79, 4.66 | 0.83, 4.57 | 0.88, 4.58 | 0.89, 4.73 | 0.93, 4.74 | 0.93, 4.75 | 1.02, 4.75 | 1.02, 4.92 | 1.07, 4.93 | 1.11, 4.94 | 1.12, 4.98 | 1.16, 4.99 | 1.17, 5.16 | 1.21, 5.18 | 1.15, 5.53 |
| **CASE II | Ser (a ₀ , B') | 1.48, 1.75 | 1.53, 1.80 | 1.65, 1.76 | 1.64, 1.88 | 1.76, 1.85 | 1.89, 1.83 | 2.02, 1.80 | 1.97, 1.95 | 2.08, 1.94 | 2.20, 1.93 | 2.28, 1.92 | 2.39, 1.92 | 2.31, 2.08 | 2.41, 2.09 | 2.17, 2.41 |
| **CASE III | Ser (a ₀ , B') | 0.65, 4.16 | 0.68, 4.27 | 0.72, 4.29 | 0.74, 4.44 | 0.78, 4.46 | 0.82, 4.47 | 0.86, 4.47 | 0.87, 4.63 | 0.92, 4.63 | 0.96, 4.64 | 0.98, 4.69 | 1.03, 4.69 | 1.04, 4.84 | 1.09, 4.84 | 1.05, 5.18 |

REINFORCED CONCRETE HEADWALL

Quantities do not include added diagonals and do not consider pipe occupancy.

NOTE: Reinforced Concrete: f_y = 60,000 psi
f_c = 3,600 psi
Earth Density: 120 pcf
Equivalent Fluid Pressure: 36 pcf

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PIPE CULVERT HEADWALLS
STRAIGHT AND "L"**
NO SCALE
RSP D89 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN D89
DATED OCTOBER 30, 2015 - PAGE 205 OF THE STANDARD PLANS BOOK DATED 2015.
REVISED STANDARD PLAN RSP D89

2015 REVISED STANDARD PLAN RSP D89

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|-----------------------------|--------------|-----------------|
| | | | | | |

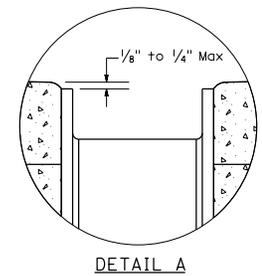
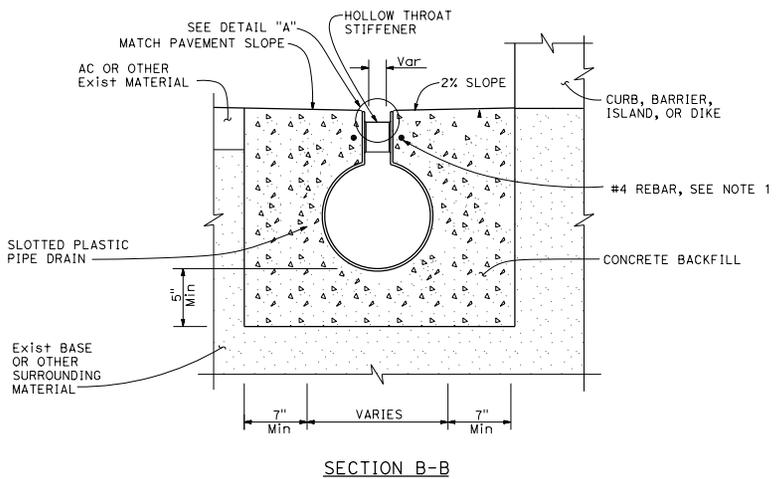
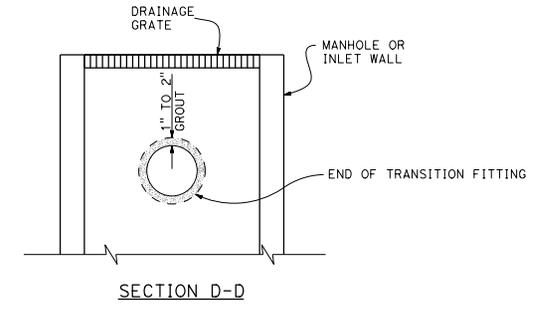
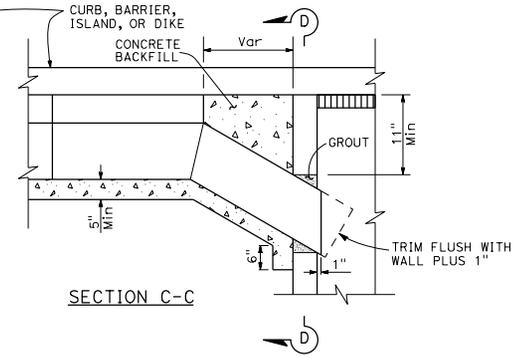
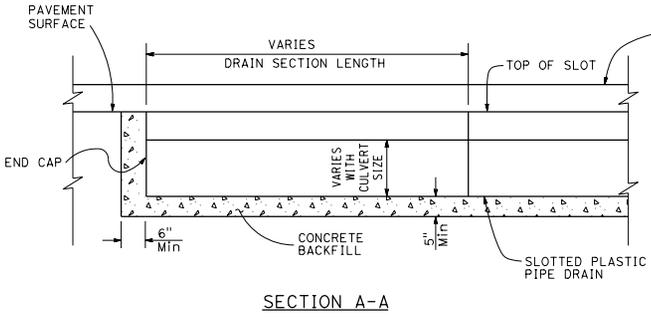
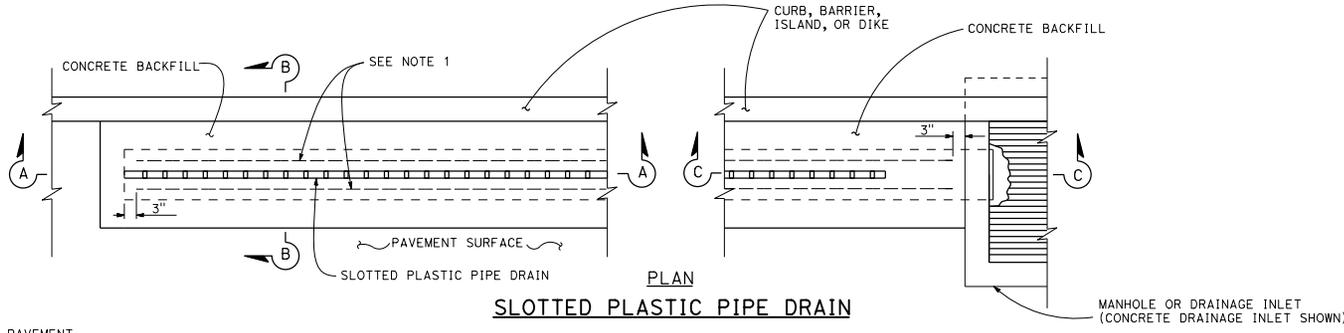
Raymond Don Isztos
 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 No. C37332
 Exp. 6-30-18
 CIVIL
 STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED _____

NOTES:

1. Lateral support, #4 bar, to be placed on both sides of slotted plastic pipe throat.
2. Slot plastic pipe cross section is a generic shape. Shape shall conform to allowable manufacturer's cross sections.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**SLOTTED PLASTIC PIPE
DRAIN DETAILS**
NO SCALE

RSP D98D DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP D98D

2015 REVISED STANDARD PLAN RSP D98D

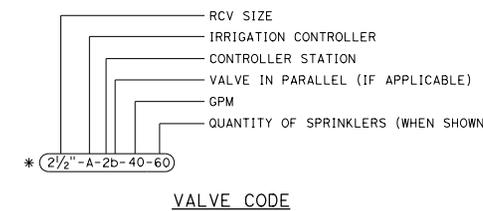
| EXISTING | NEW | ITEM DESCRIPTION | EXISTING | NEW | ITEM DESCRIPTION |
|----------|-----|---|----------|-----|--|
| | | WATER METER (WM) | | | GATE VALVE (GV) |
| | | BACKFLOW PREVENTER ASSEMBLY (BPA) | | | BALL VALVE (BV) |
| | | BACKFLOW PREVENTER ENCLOSURE (BPE) | | | QUICK COUPLING VALVE (QCV) |
| | | BOOSTER PUMP (BP) | | | CAM COUPLER ASSEMBLY (CCA) |
| | | TRUCK LOADING STANDPIPE (TLS) | | | GARDEN VALVE ASSEMBLY (GARVA) |
| | | FLOW SENSOR (FS) | | | PRESSURE REGULATING VALVE (PRV) |
| | | MASTER IRRIGATION CONTROLLER (MIC) | | | PRESSURE RELIEF VALVE (PRLV) |
| | | AUXILIARY IRRIGATION CONTROLLER (AIC) | | | FLOW CONTROL VALVE (FCV) |
| | | IRRIGATION CONTROLLER (IC) IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR) IRRIGATION CONTROLLER (IC) (TWO WIRE) | | | COMBINATION AIR RELEASE VALVE (CARV) |
| | | IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC) | | | CHECK VALVE (CV) |
| | | ARMOR-CLAD CONDUCTORS (ACC) | | | FLUSH VALVE (FV) |
| | | CONTROL AND NEUTRAL CONDUCTORS (CNC) | | | EXISTING NOZZLE LINE W/TURNING UNION |
| | | IRRIGATION CONDUIT | | | EXISTING IRRIGATION SYSTEM |
| | | IRRIGATION SLEEVE | | | EXISTING IRRIGATION SYSTEM TO BE REMOVED |
| | | DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP) | | | CHAIN LINK GATE |
| | | GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP) | | | QUICK COUPLING VALVE W/SPRINKLER PROTECTOR |
| | | GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP) | | | SPRINKLER W/SPRINKLER PROTECTOR |
| | | PLASTIC PIPE (SUPPLY LINE) (MAIN) | | | CONNECT TO EXISTING SYSTEM |
| | | PLASTIC PIPE (SUPPLY LINE) (LATERAL) | | | CAP |
| | | COPPER PIPE (SUPPLY LINE) | | | CAP EXISTING |
| | | DRIP IRRIGATION TUBING | | | FIBER ROLL |
| | | REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF) | | | COMPOST SOCK |
| | | REMOTE CONTROL VALVE W/PRESSURE REGULATOR (RCVP) | | | |
| | | EXISTING MANUAL CONTROL VALVE (MCV) | | | |
| | | DRIP VALVE ASSEMBLY (DVA) | | | |
| | | WYE STRAINER ASSEMBLY (WSA) | | | |

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

LICENSED LANDSCAPE ARCHITECT
 July 15, 2016
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED _____



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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LANDSCAPE AND EROSION CONTROL SYMBOLS
NO SCALE

RSP H1 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN H1
DATED OCTOBER 30, 2015 - PAGE 230 OF THE STANDARD PLANS BOOK DATED 2015.
REVISED STANDARD PLAN RSP H1

2015 REVISED STANDARD PLAN RSP H1

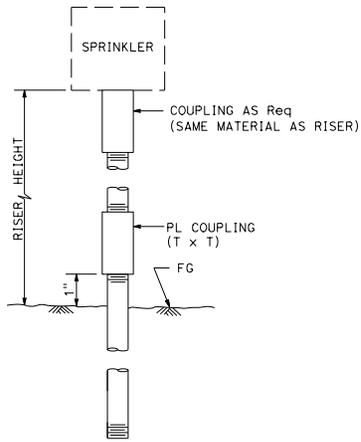
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

 LICENSED LANDSCAPE ARCHITECT
 July 15, 2016
 PLANS APPROVAL DATE
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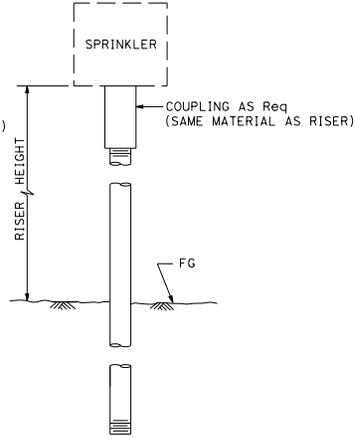
TO ACCOMPANY PLANS DATED _____

NOTES:

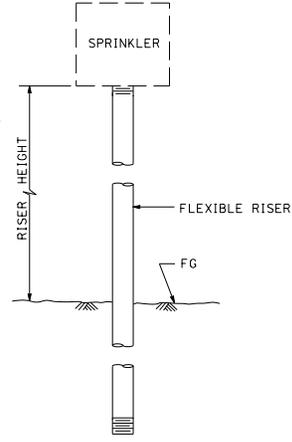
1. Install tree well sprinkler assembly on up-hill side of plant when on slope.
2. Install bubbler within basin.



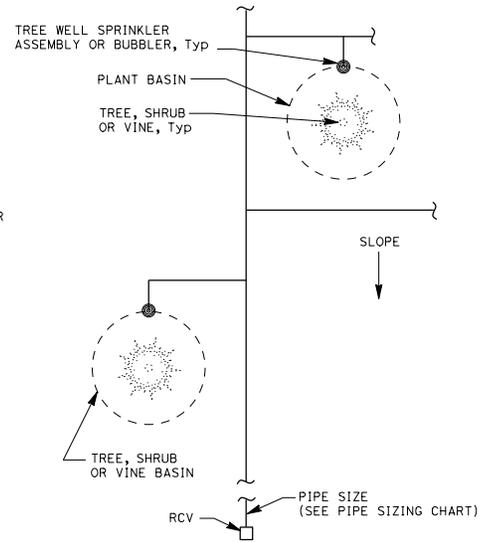
**ELEVATION
RISER TYPE I**



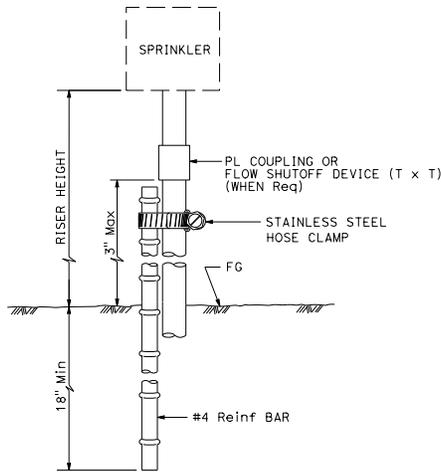
**ELEVATION
RISER TYPE II**



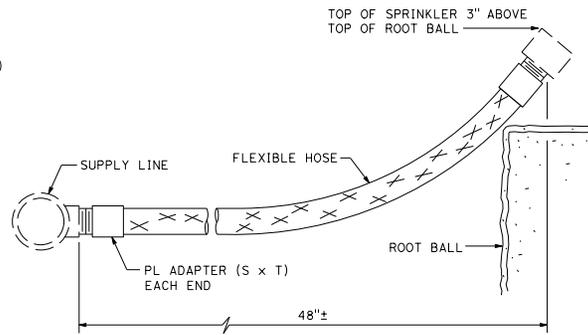
**ELEVATION
RISER TYPE III**



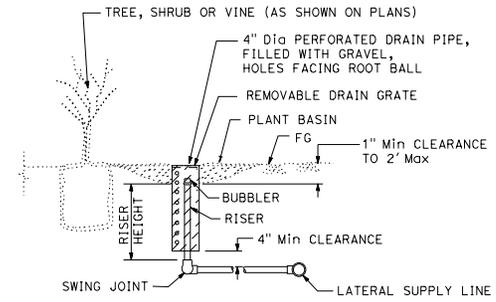
PLAN



**ELEVATION
RISER TYPE IV**



**ELEVATION
RISER TYPE V**



**SECTION
TREE WELL SPRINKLER ASSEMBLY**

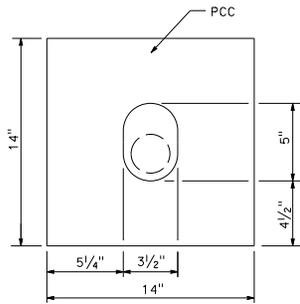
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**LANDSCAPE DETAILS
(RISER SPRINKLER ASSEMBLY)**
NO SCALE

RSP H4 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN H4
DATED OCTOBER 30, 2015 - PAGE 233 OF THE STANDARD PLANS BOOK DATED 2015.

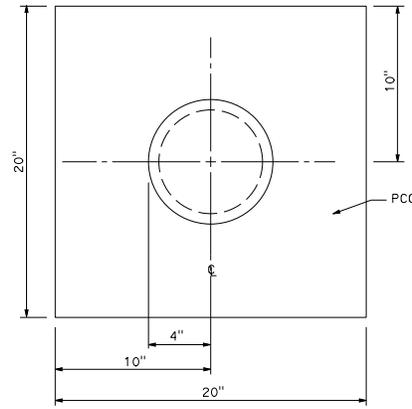
REVISED STANDARD PLAN RSP H4

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|--|--------|-------|--------------------------|-----------|--------------|
| | | | | | |
| LICENSED LANDSCAPE ARCHITECT | | | | | |
| July 15, 2016 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> | | | | | |

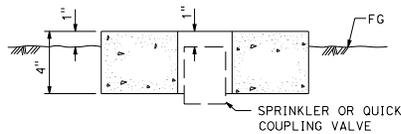
TO ACCOMPANY PLANS DATED _____



PLAN

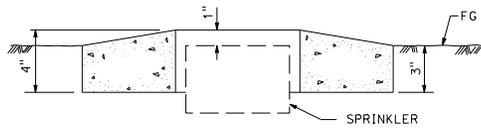


PLAN



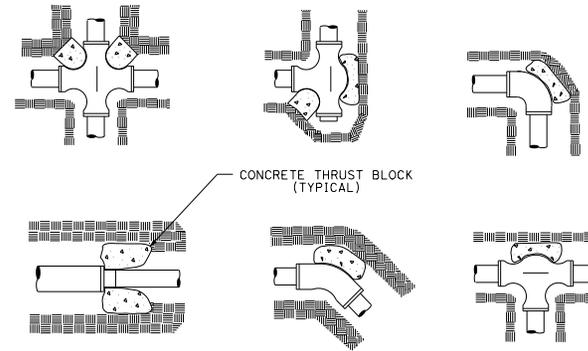
SECTION

SPRINKLER PROTECTOR TYPE I

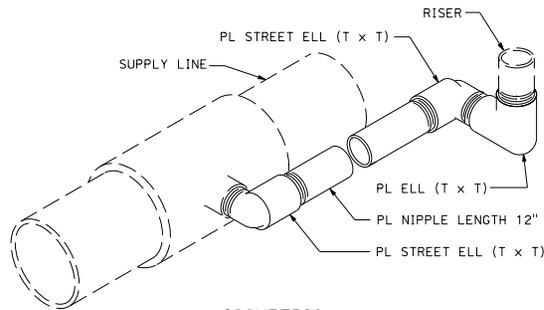


SECTION

SPRINKLER PROTECTOR TYPE II

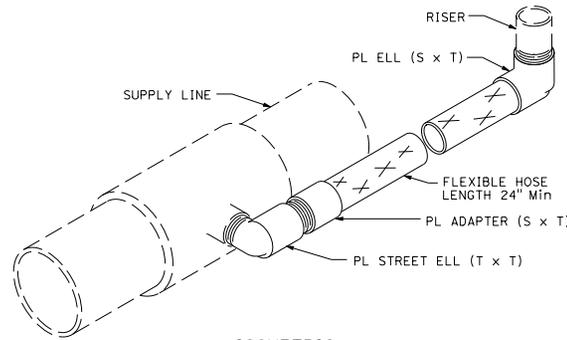


TYPICAL THRUST BLOCKS



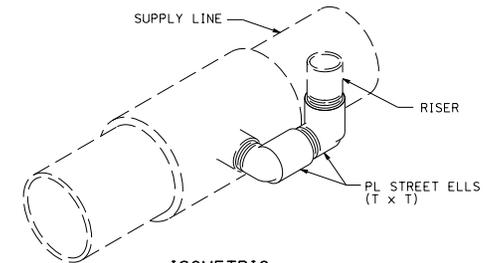
ISOMETRIC

SWING JOINT TYPE I



ISOMETRIC

SWING JOINT TYPE II



ISOMETRIC

SWING JOINT TYPE III

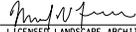
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**LANDSCAPE DETAILS
(SWING JOINT AND PROTECTOR)**
NO SCALE

RSP H5 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN H5
DATED OCTOBER 30, 2015 - PAGE 234 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP H5

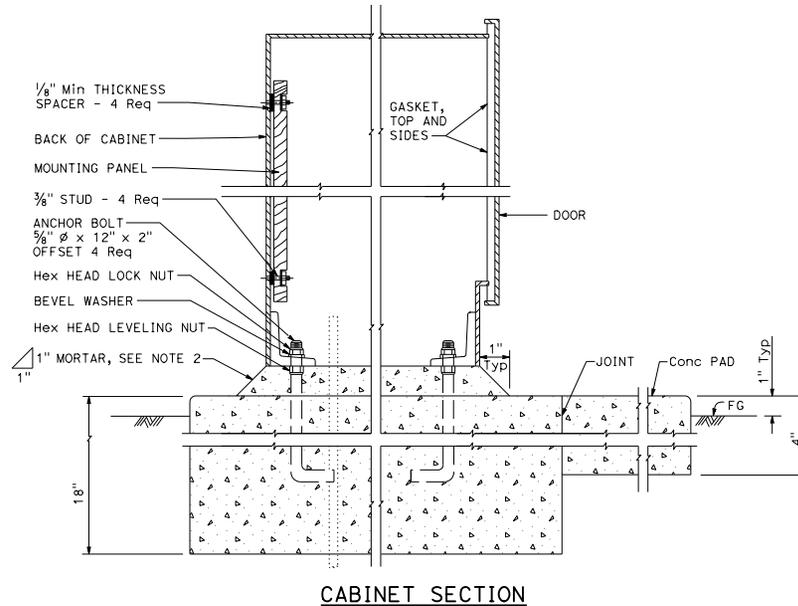
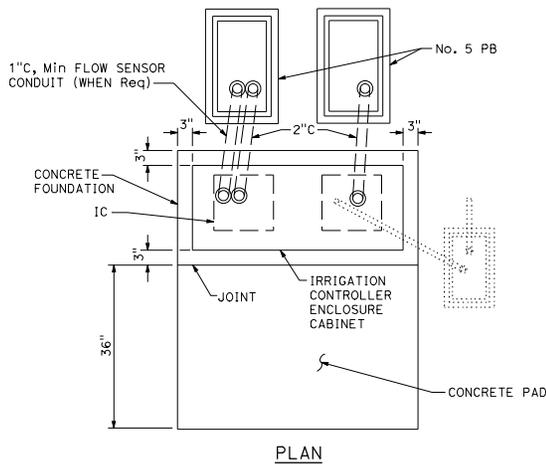
2015 REVISED STANDARD PLAN RSP H5

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|-----------------------------|--------------|-----------------|
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 LICENSED LANDSCAPE ARCHITECT
 July 15, 2016
 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.

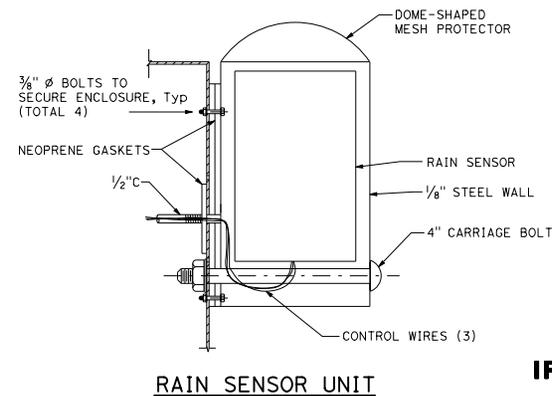
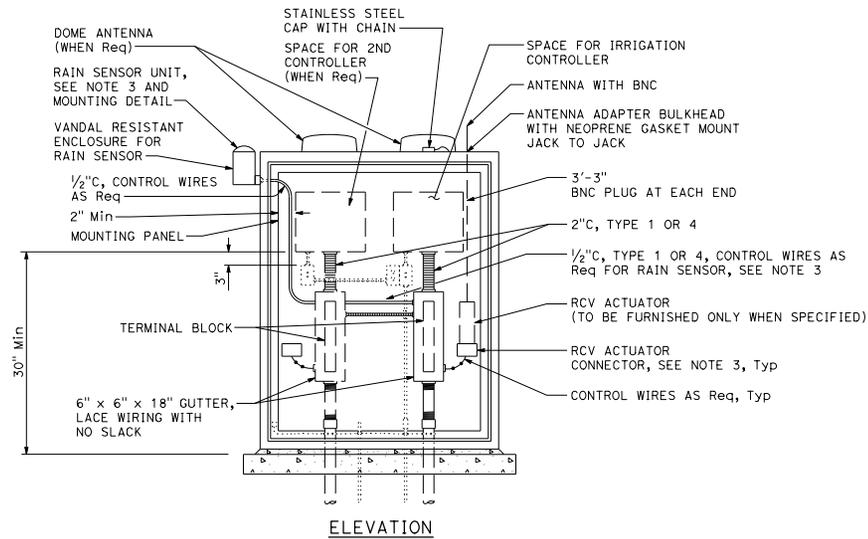


TO ACCOMPANY PLANS DATED _____



NOTES:

- All dimensions are nominal.
- Mortar shall be 1-part cement, 2-parts plaster sand.
- Rain sensor unit and remote control valve actuator connectors to be provided when specified.
- See project plans for location and number of irrigation controllers for each cabinet. Install the cabinet with the back facing the direction of oncoming traffic in the nearest traffic lane.
- The electrical items shown in dropout are not labeled. See Standard Plan ES-3H for electrical requirements.



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
IRRIGATION CONTROLLER ENCLOSURE CABINET

NO SCALE

RSP H10 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN H10 DATED OCTOBER 30, 2015 - PAGE 239 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP H10

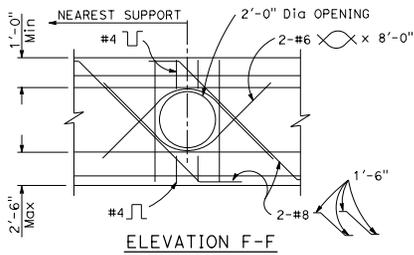
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

Peter W. Norbo
REGISTERED CIVIL ENGINEER

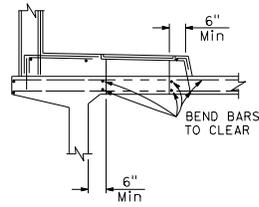
July 15, 2016
PLANS APPROVAL DATE

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.

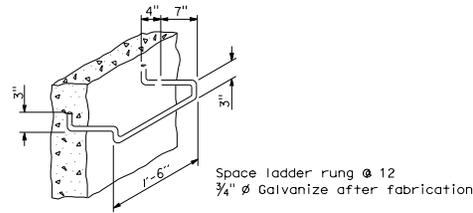
REGISTERED PROFESSIONAL ENGINEER
Peter W. Norbo
No. C57519
Exp. 12-31-17
CIVIL
STATE OF CALIFORNIA



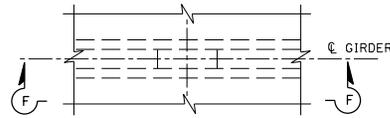
ELEVATION F-F



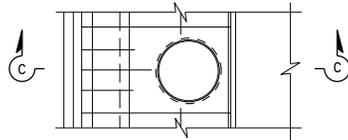
SECTION C-C



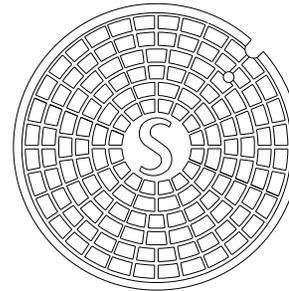
BAR STEP
LADDER RUNG DETAILS
DETAIL U44



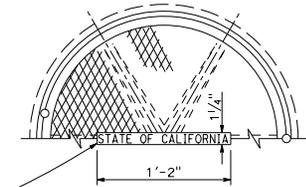
PART PLAN
GIRDER STEM ACCESS OPENING
DETAIL U41



PART PLAN
SIDEWALK ACCESS OPENING
DETAIL U42



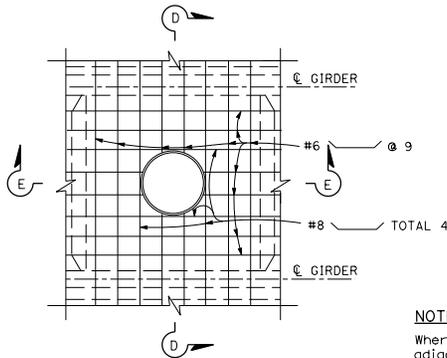
TOP OF MANHOLE COVER



TOP OF MANHOLE FRAME & COVER

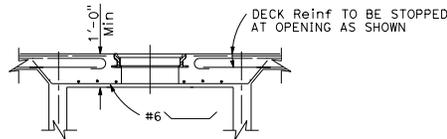
NOTES:

- For exact location of openings see other sheets.
- Location and size of manholes may be modified as directed by the Engineer, provided minimum dimensions are maintained.
- All reinforcement detailed to be placed in addition to reinforcement shown on other sheets.

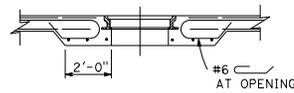


PART PLAN

DECK ACCESS OPENING
DETAIL U43



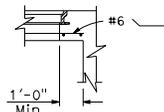
SECTION D-D



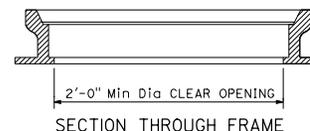
SECTION E-E

NOTE:

Where manhole is located adjacent to a diaphragm or abut, substitute half Section E-E on one side of Section E-E.



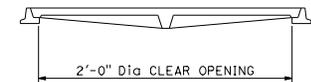
HALF SECTION E-E



SECTION THROUGH FRAME
NON-ROCKING MANHOLE FRAME & COVER
FOR DECKS
DETAIL U45

NOTES:

- Step inserts may be substituted for the standard step detail. Step inserts shall comply with State Industrial Safety requirements.
- Covers for use on sewer structures shall bear the letter "S"; on storm drain structures the letter "D"; on openings for utilities the letter "U".



SECTION THROUGH FRAME & COVER
MANHOLE FRAME & COVER
FOR SIDEWALKS
DETAIL U46

NOTES:

- Frame and cover shall be cast iron.
- Cover shall be supplied with bolt down or locking devices.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
UTILITY DETAILS

NO SCALE

RSP B7-11 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN B7-11
DATED OCTOBER 30, 2015 - PAGE 308 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B7-11

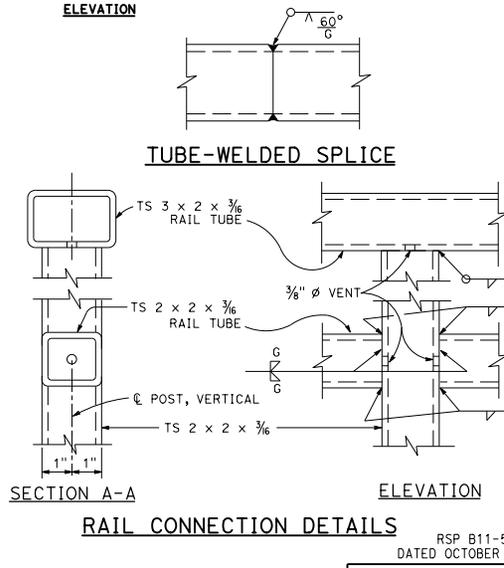
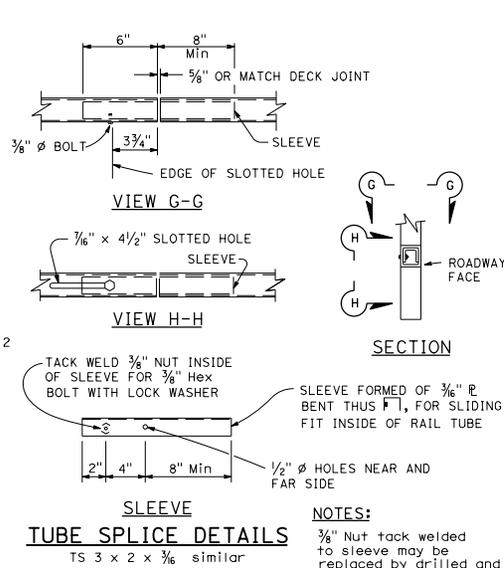
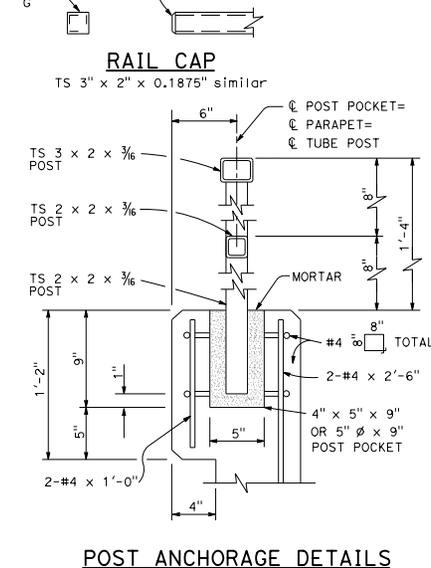
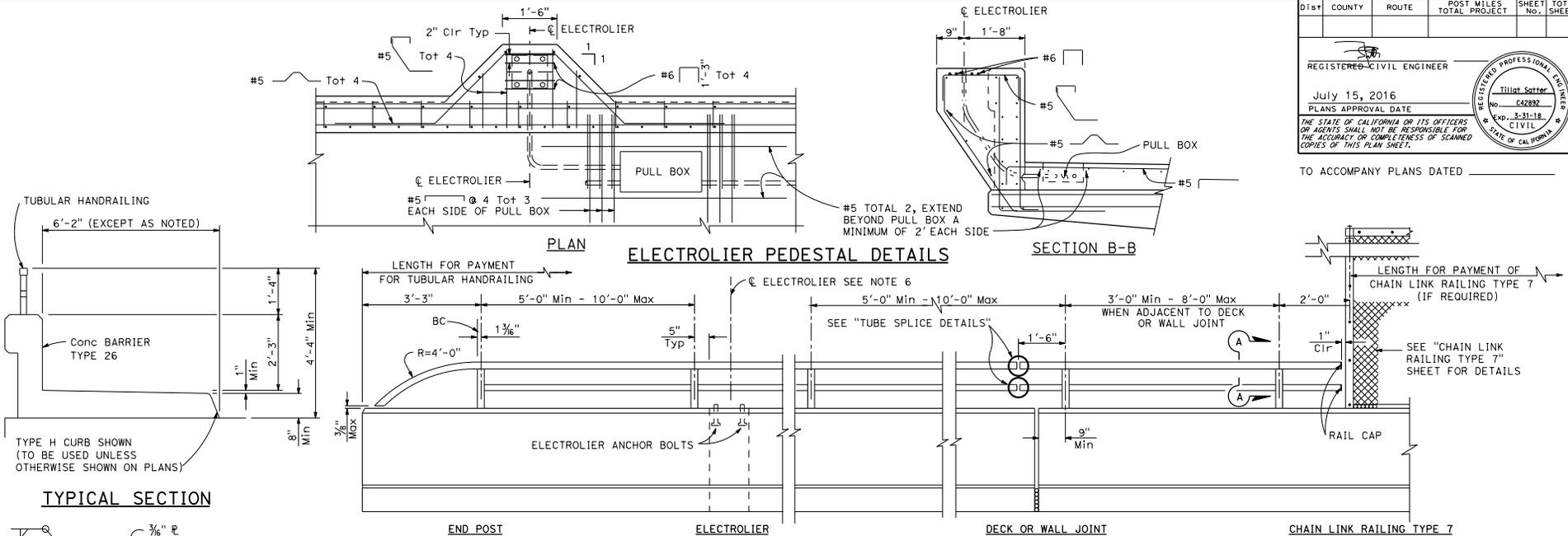
2015 REVISED STANDARD PLAN RSP B7-11

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

REGISTERED CIVIL ENGINEER
Tillot Satter
No. C42892
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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.

TO ACCOMPANY PLANS DATED _____



- NOTES:**
1. Post shall be normal to railing.
 2. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 950'.
 3. Tube splices shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
 4. Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints, electroliers, or other rail discontinuities as noted.
 5. For details and reinforcement not shown see Revised Standard Plans RSP B11-54.
 6. For electrolier mounting details, see Revised Standard Plans RSP ES-6A and RSP ES-6B.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TUBULAR HANDRAILING
NO SCALE

RSP B11-51 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN B11-51
DATED OCTOBER 30, 2015 - PAGE 312 OF THE STANDARD PLANS BOOK DATED 2015.
REVISED STANDARD PLAN RSP B11-51

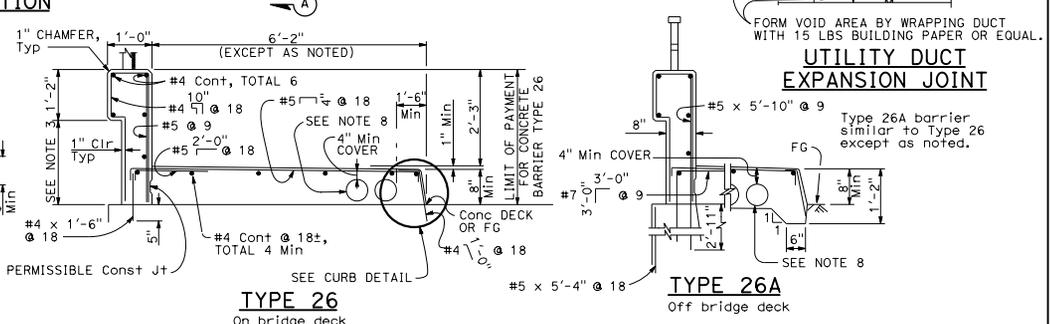
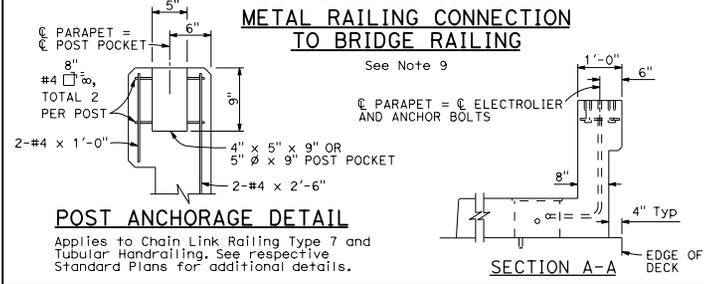
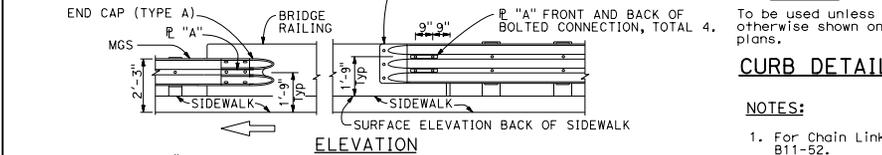
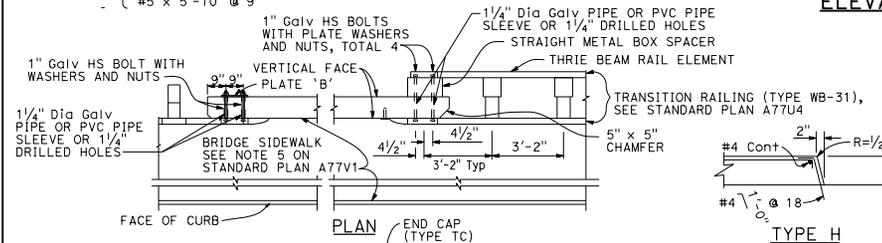
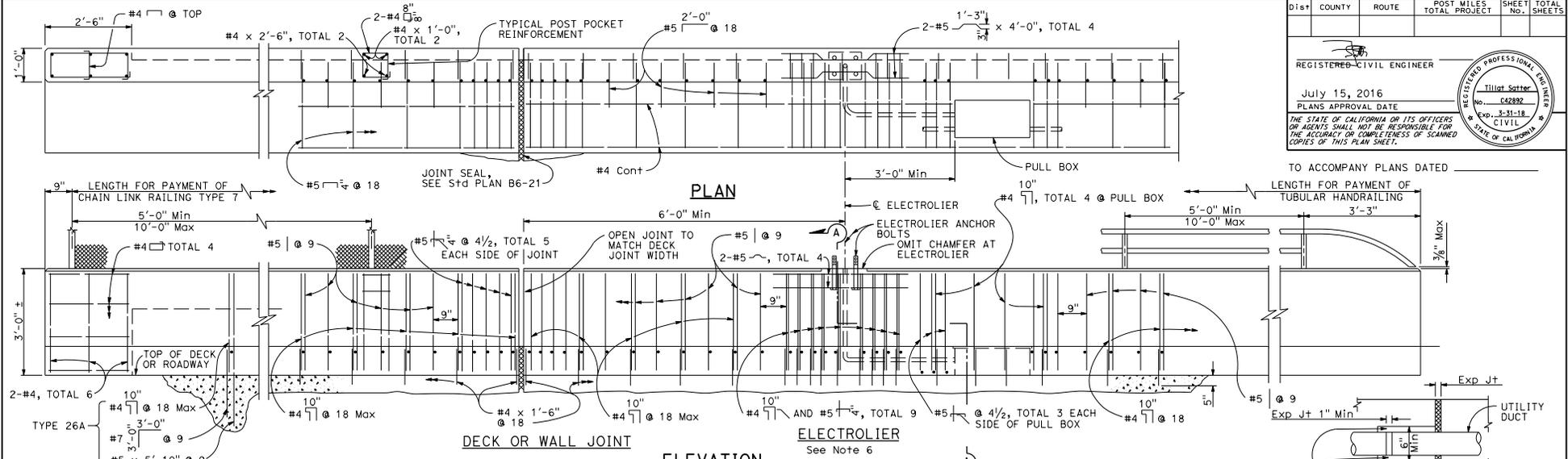
2015 REVISED STANDARD PLAN RSP B11-51

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|------|--------|-------|--------------------------|--------------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| | | | | |

REGISTERED CIVIL ENGINEER
Tillot Satter
No. C42892
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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.



NOTES:

- For Chain Link Railing notes and details not shown, see Standard Plan B11-52.
- For Handrailing notes and details not shown, see Revised Standard Plan RSP B11-51.
- Dimensions will vary with cross slope and with certain thicknesses of surfacing. See Project Plans.
- Walls are to be backfilled before railing is placed.
- Clearance to reinforcing steel in curb and railing to be 1" except as noted. Longitudinal reinforcement to stop at all expansion joints.
- See Project Plans for electrolier locations and pull box type.
- For electrical details, see Standard Plans ES-9A, ES-9B, Revised Standard Plans RSP ES-9C, RSP ES-9D and RSP ES-9E.
- A maximum of five - 4" and a minimum of two - 4" round openings for future utilities. Openings are to be sealed at ends and extended 8' minimum past end of sidewalk if not used. Duct forms are to be tied down. Minimum of 6" from face of rail to utility opening. See Standard Plan B14-3 for minimum spacing between conduit, and for details at joints.
- For typical metal railing connection details not shown, see Standard Plans A77V1 and A77V2.
- This barrier is to be used only for speeds of 45 MPH or less. For speeds greater than 45 MPH, pedestrians should be protected by a separation traffic barrier.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE BARRIER TYPE 26
NO SCALE

RSP B11-54 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN B11-54
DATED OCTOBER 30, 2015 - PAGE 314 OF THE STANDARD PLANS BOOK DATED 2015.

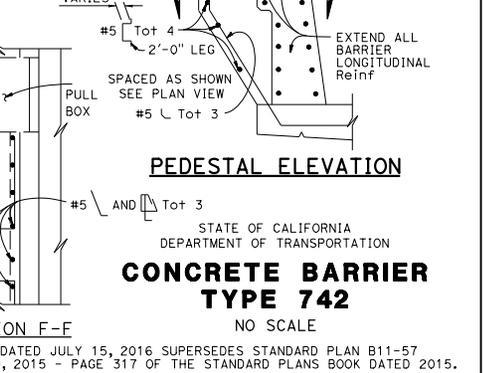
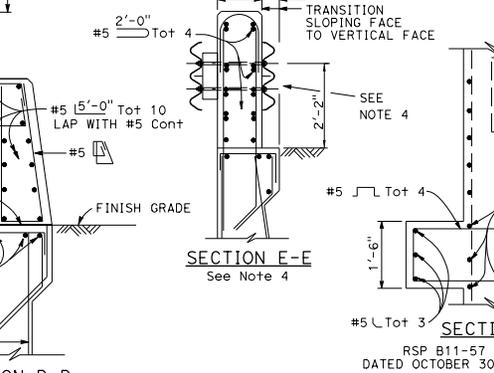
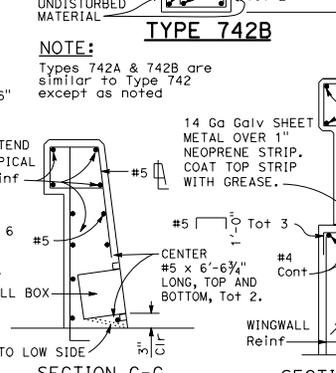
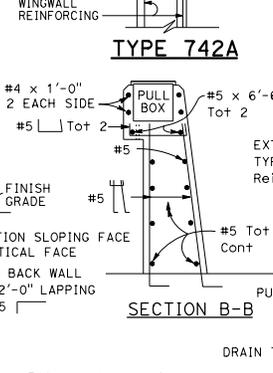
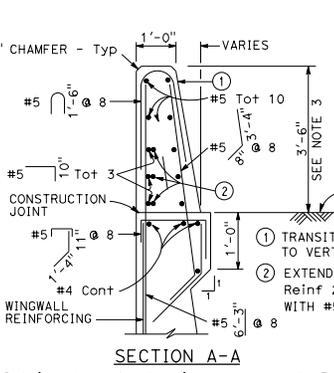
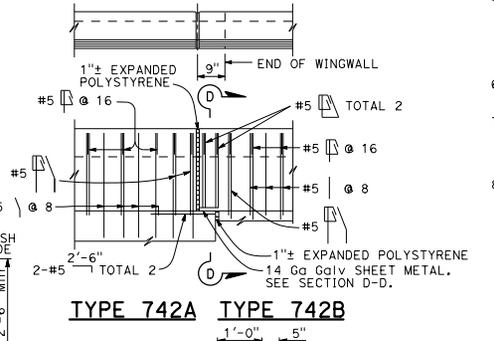
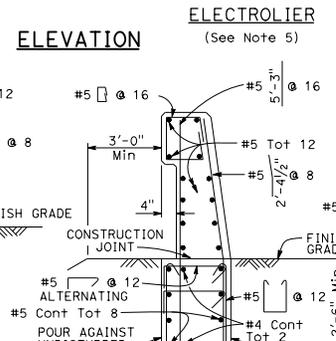
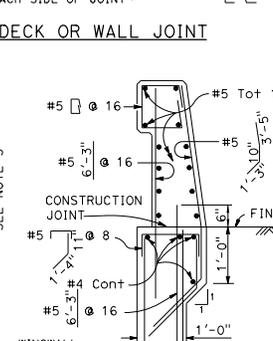
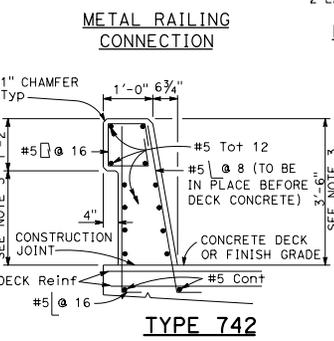
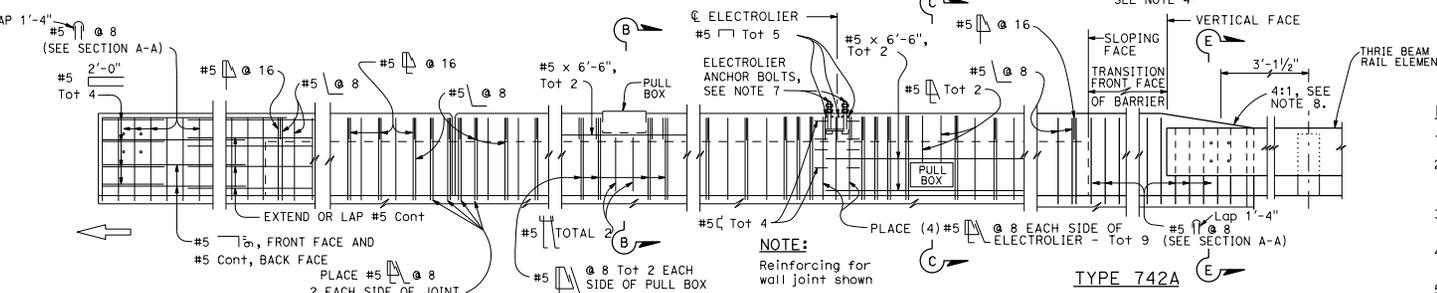
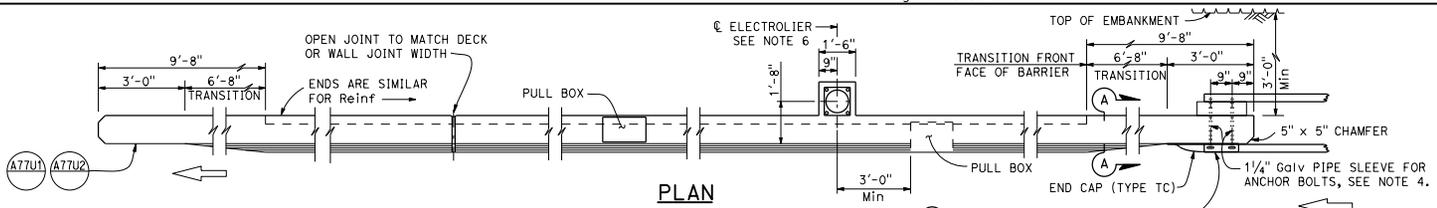
REVISED STANDARD PLAN RSP B11-54

2015 REVISED STANDARD PLAN RSP B11-54

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
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REGISTERED CIVIL ENGINEER
Tillot Satter
No. C42892
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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.



Details shown for barrier anchorage to Type 742A. Anchorage for barrier Types 742 and 742A are similar to their respective details.

- NOTES:**
1. Walls are to be backfilled before barrier is placed.
 2. Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.
 3. Dimensions may vary with roadway cross slope and with certain thickness of surfacing. See Project Plans.
 4. For typical metal railing connection details not shown, see Standard Plans A77U1 and A77U2.
 5. See Standard Plans ES-9A, ES-9B, Revised Standard Plans RSP ES-9C, RSP ES-9D and RSP ES-9E for electrical details. The maximum number of conduits in the barrier is limited to two 2" conduits along with one 3" conduit. When a 3" conduit is used, it is restricted to the base of the barrier.
 6. For electrolier mounting details, See Revised Standard Plans RSP ES-6A and RSP ES-6B.
 7. Minimum concrete edge distance, to the reinforcing shown, shall be maintained. Edge distance may be adjusted to accommodate increase in concrete cover for architectural treatment.
 8. Taper the top of the end of the bridge railing at 4:1 to match the top elevation of the three beam rail element.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE BARRIER
TYPE 742**
NO SCALE

RSP B11-57 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN B11-57
DATED OCTOBER 30, 2015 - PAGE 317 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B11-57

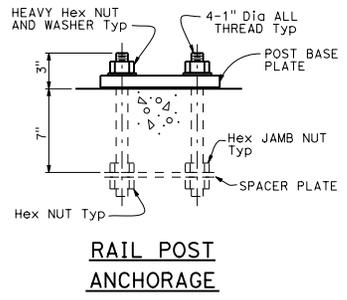
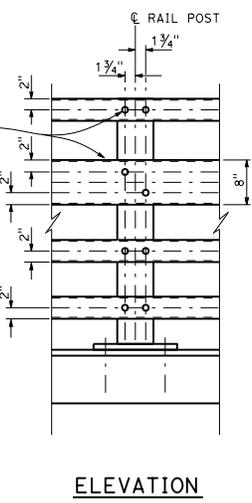
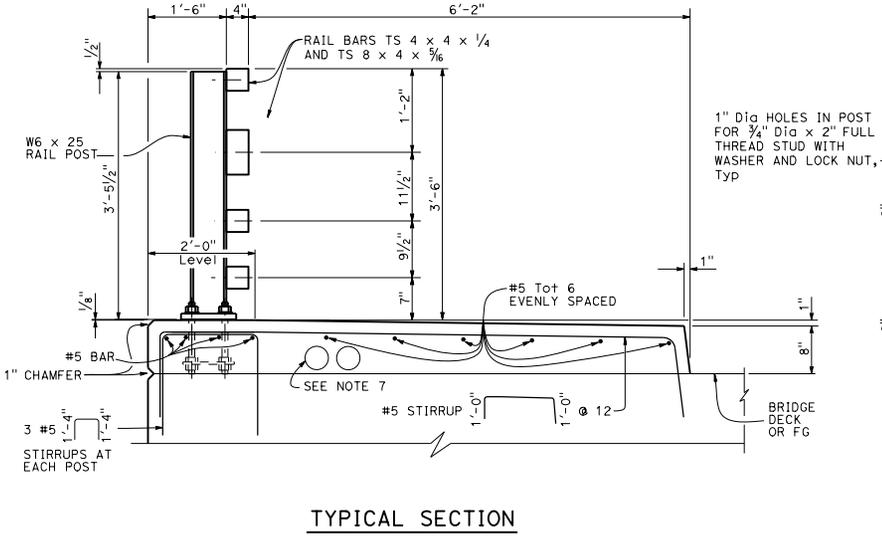
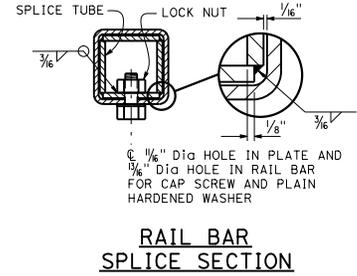
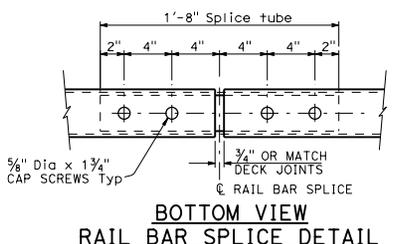
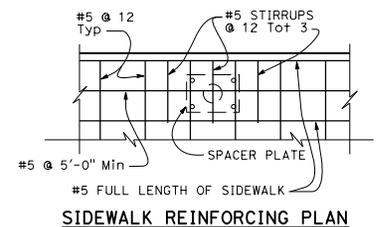
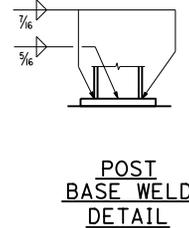
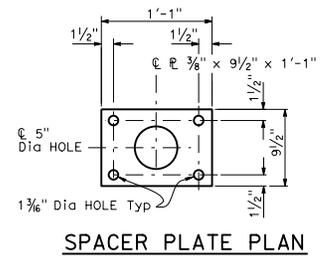
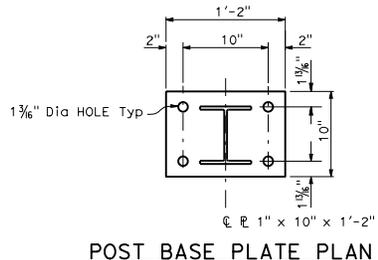
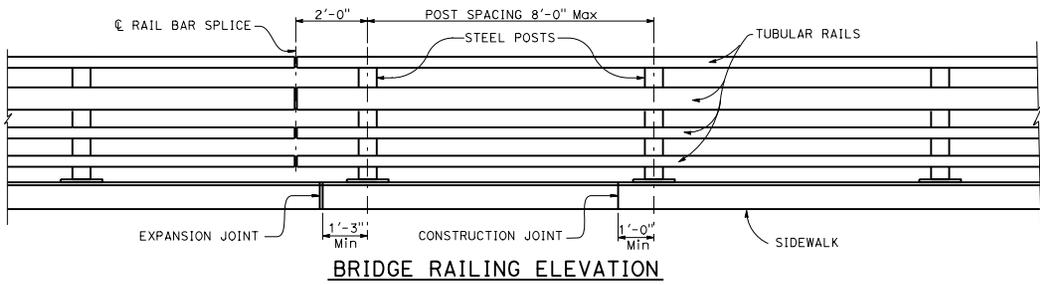
2015 REVISED STANDARD PLAN RSP B11-57

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|-----------------------------|-----------|--------------|
| | | | | | |

REGISTERED CIVIL ENGINEER
Tilgert Satter
No. C42892
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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.

TO ACCOMPANY PLANS DATED _____



- NOTES:**
- All exposed cuts or sheared edges shall be rounded and free of burrs.
 - Rail posts shall be set normal to grade.
 - Lengths of rail bar shall be attached to a minimum of two rail posts.
 - Rail post anchoring nuts shall be tightened to a snug fit and given additional 1/8 turn.
 - Holes in posts for rail bar attachment may be field drilled. Holes shall be coated with an approved zinc-rich paint prior to erection.
 - This barrier is to be used only for speeds of 45 mph or less. For speeds greater than 45 mph, pedestrians should be protected by a separation traffic barrier.
 - A maximum of six - 4" and a minimum of two - 4" round openings for future utilities. Openings are to be sealed at ends and extended 8" minimum past end of sidewalk if not used. Duct forms are to be tied down. Round openings are to be a minimum of 1'-6" from face of sidewalk curb and a minimum of 6" from face of rail. See Standard Plan B14-3 for minimum spaces between conduits and for conduit details at joints.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CALIFORNIA ST-40
BRIDGE RAIL
(SHEET 1 OF 2)**
NO SCALE

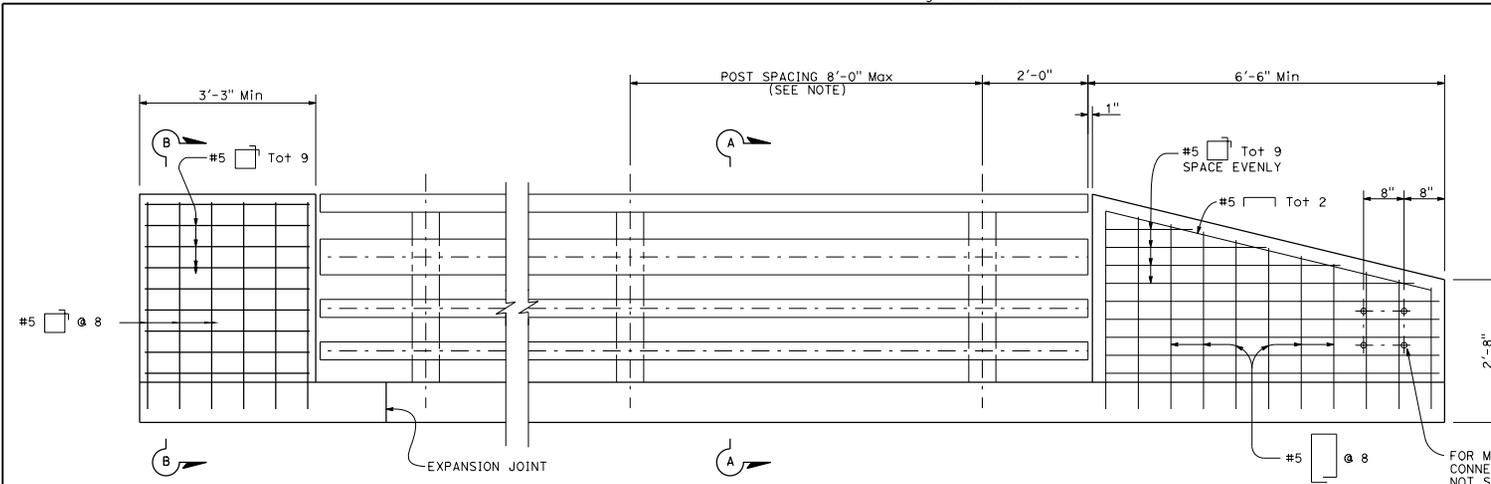
2015 REVISED STANDARD PLAN RSP B11-66

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|-----------------------------|--------------|-----------------|
| | | | | | |

REGISTERED CIVIL ENGINEER
Tillot Satter
No. C42892
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
PLANS APPROVAL DATE

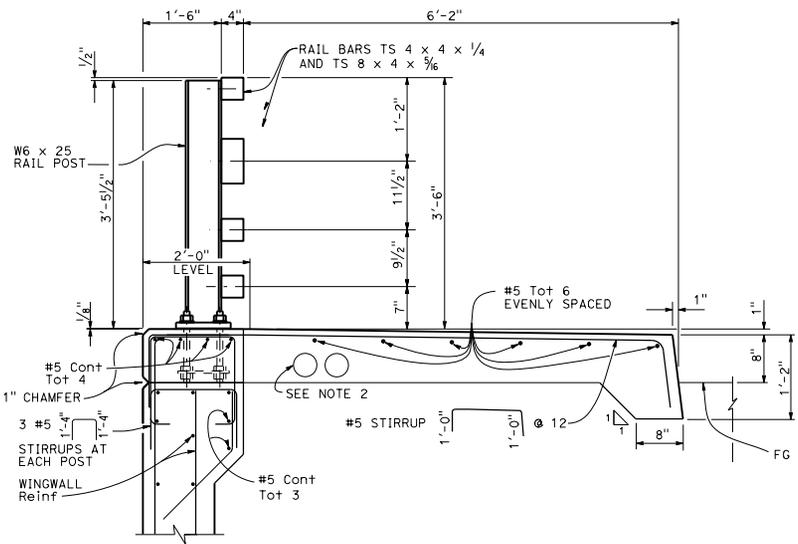
THE STATE OF CALIFORNIA OR ITS OFFICERS
OR AGENTS SHALL NOT BE RESPONSIBLE FOR
THE ACCURACY OR COMPLETENESS OF SCANNED
COPIES OF THIS PLAN SHEET.



END OF RAILING ELEVATION

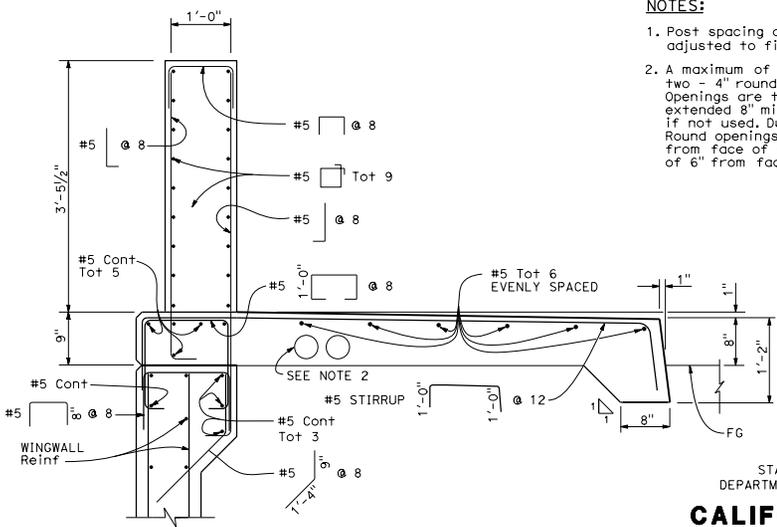
FOR METAL RAILING
CONNECTION DETAILS
NOT SHOWN, SEE
STANDARD PLANS
A77V1 AND A77V2.

TO ACCOMPANY PLANS DATED _____



SECTION A-A

For details not shown,
see Typical Section



SECTION B-B

For details not shown,
see Typical Section

NOTES:

1. Post spacing and/or end block length to be adjusted to fit bridge length or wingwall length.
2. A maximum of six - 4" and a minimum of two - 4" round openings for future utilities. Openings are to be sealed at ends and extended 8" minimum past end of sidewalk. If not used, Duct Forms are to be tied down. Round openings are to be a minimum of 1'-6" from face of sidewalk curb and a minimum of 6" from face of rail.

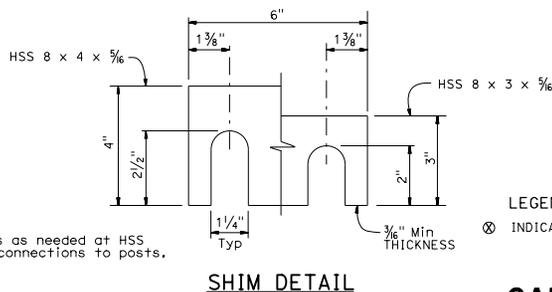
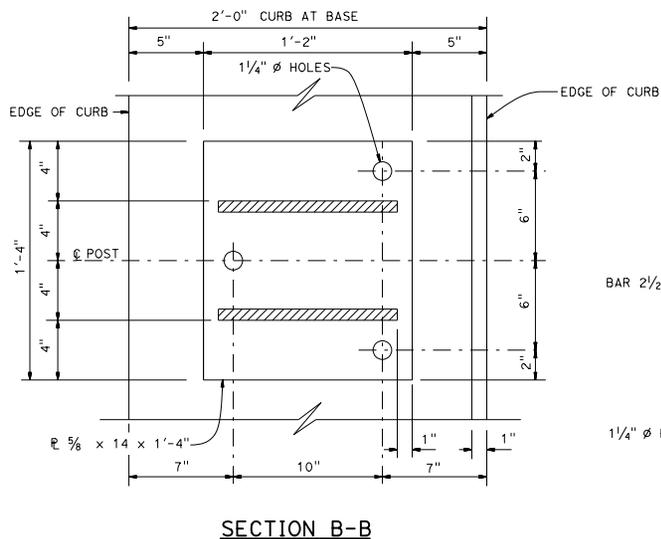
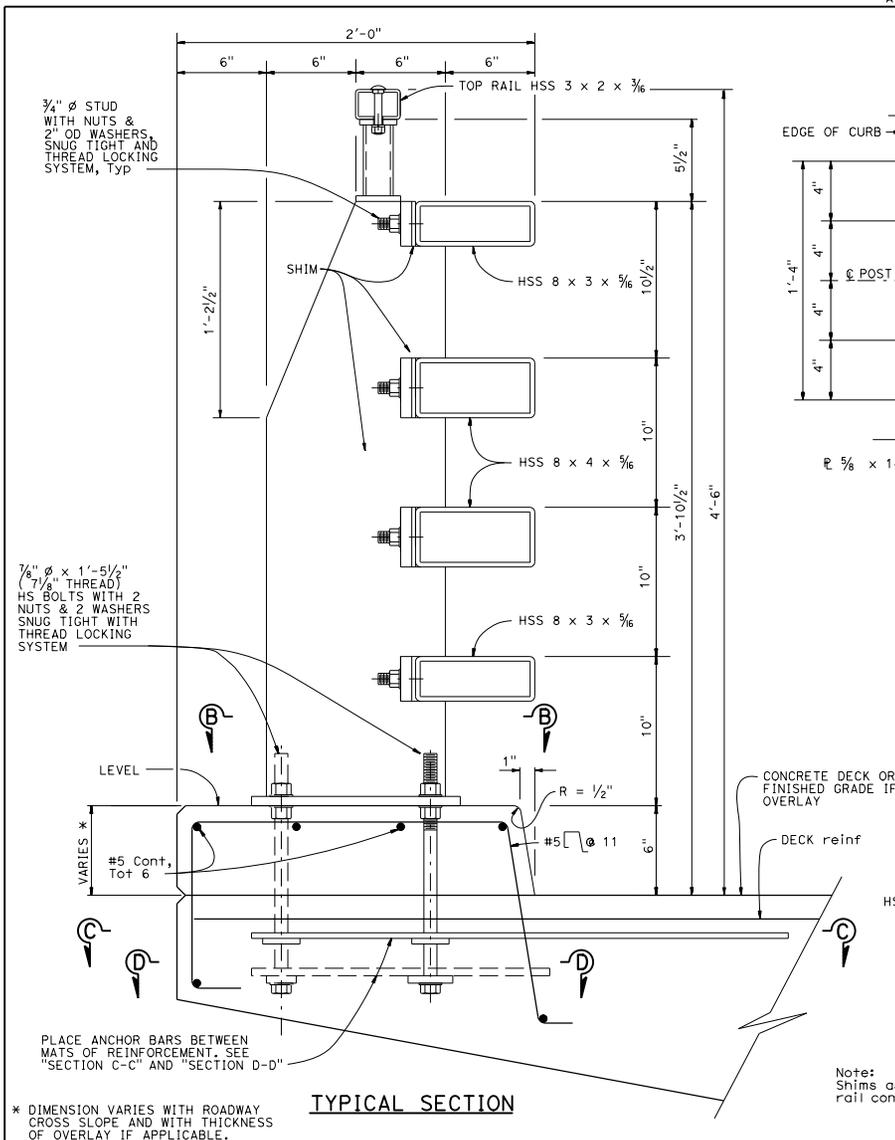
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CALIFORNIA ST-40
BRIDGE RAIL
(SHEET 2 OF 2)**

NO SCALE

RSP B11-67 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN B11-67
DATED OCTOBER 30, 2015 - PAGE 325 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B11-67

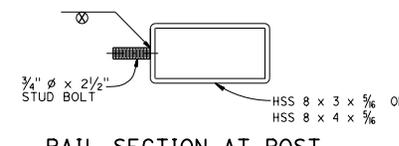
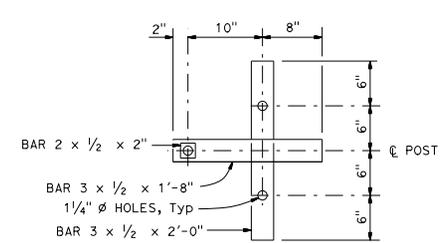
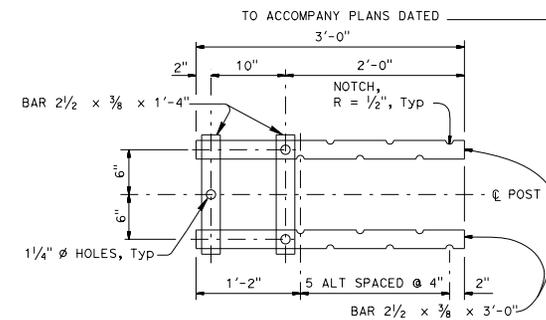
2015 REVISED STANDARD PLAN RSP B11-67



| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER
 No. C40814
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.



LEGEND:
 ⊗ INDICATES STUD WELD

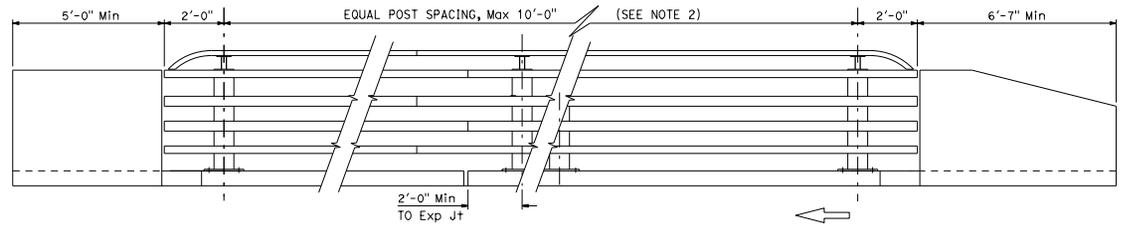
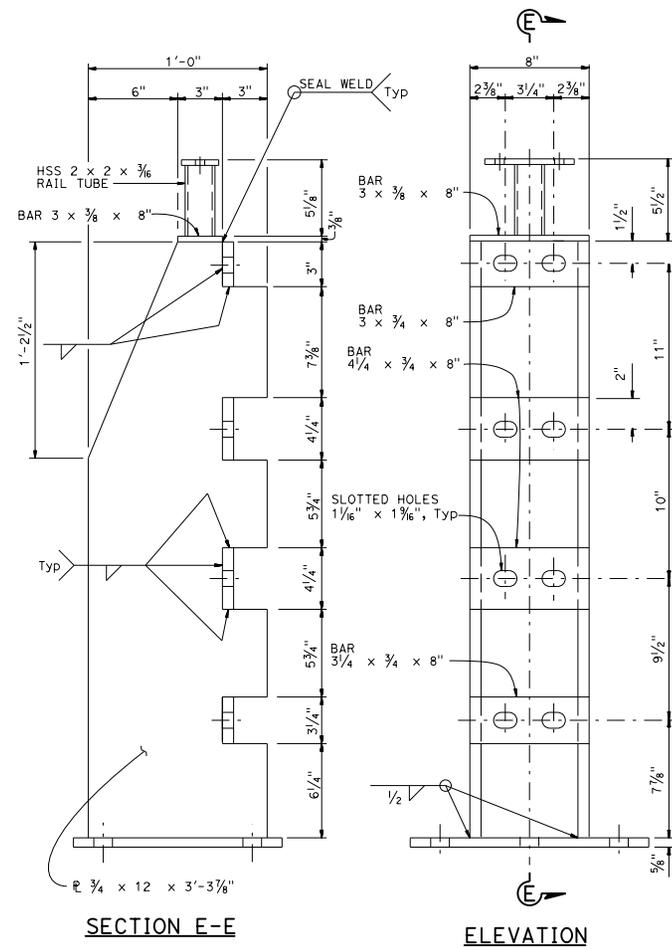
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-20S BRIDGE RAIL
(SHEET 1 OF 4)
 NO SCALE

2015 REVISED STANDARD PLAN RSP B11-71

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|--------|-------|--------------------------|-----------|--------------|
| | | | | | |
| <i>Gregory J. Kaderabek</i> REGISTERED CIVIL ENGINEER | | | | | |
| July 15, 2016 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. | | | | | |



TO ACCOMPANY PLANS DATED _____



ELEVATION

- NOTES:**
1. For approach and departure end details, see Revised Standard Plan RSP B11-73.
 2. Post spacing and/or block length to be adjusted to fit bridge length or wingwall length.
 3. All horizontal members are parallel to longitudinal profile grade of deck.
 4. Posts are normal to profile grade of structure.
 5. Posts are vertical to the transverse cross section.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-20S BRIDGE RAIL
(SHEET 2 OF 4)
NO SCALE

RSP B11-72 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B11-72

2015 REVISED STANDARD PLAN RSP B11-72

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

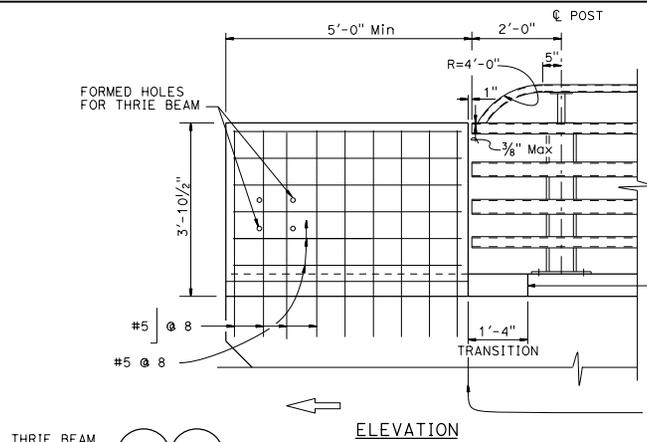
Gregory J. Koderach
 REGISTERED CIVIL ENGINEER
 No. C40814
 Exp. 3-31-17
 STATE OF CALIFORNIA

July 15, 2016
 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.

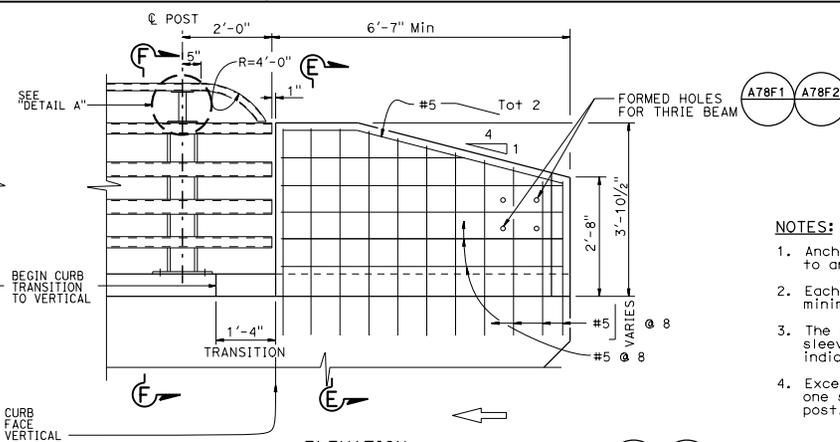
TO ACCOMPANY PLANS DATED _____

NOTES:

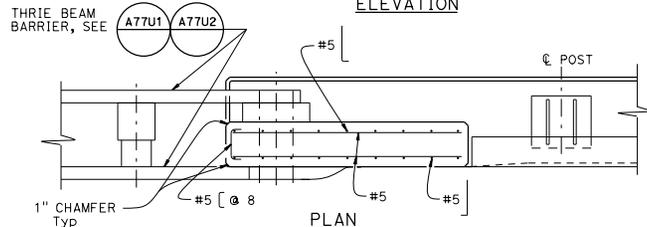
1. Anchor bolts may be tack welded (shop or field) to anchorage.
2. Each rail length must be continuous over a minimum of two posts.
3. The Contractor must check that the tubular sleeve splices conform to the dimensions indicated to assure proper clearance.
4. Except for expansion splices, not more than one splice permitted per same side of post.



ELEVATION

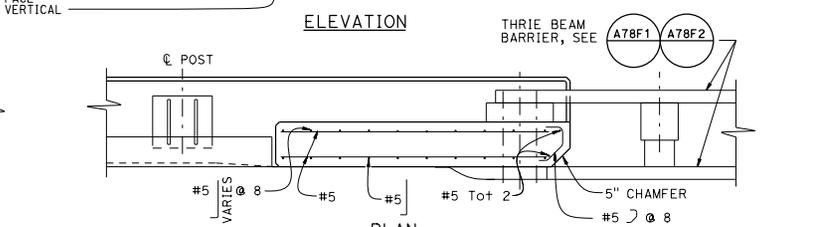


ELEVATION



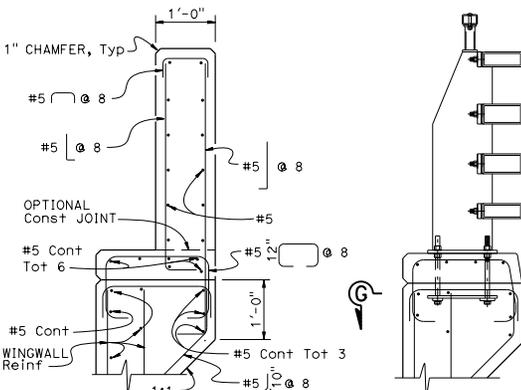
PLAN

END BLOCK DETAIL

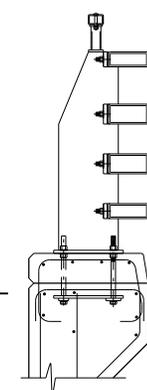


PLAN

TRANSITION BLOCK DETAIL

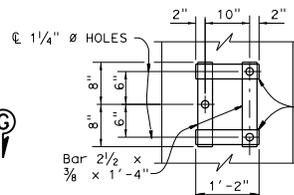


SECTION E-E

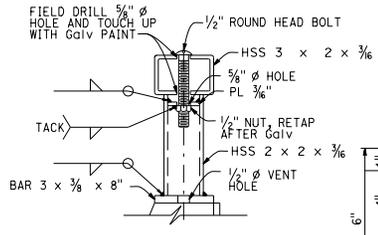


SECTION F-F

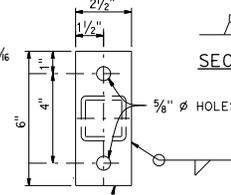
NOTE:
For details not shown, see "SECTION E-E"



VIEW G-G

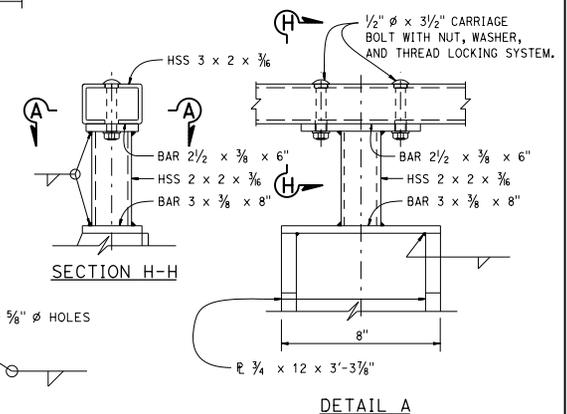


SECTION H-H ALTERNATIVE



SECTION A-A

RAIL CONNECTION DETAILS



SECTION H-H

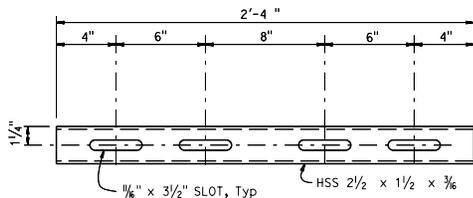
DETAIL A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-20S BRIDGE RAIL
(SHEET 3 OF 4)
NO SCALE

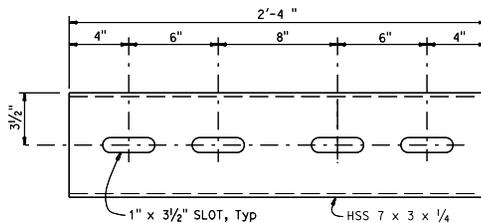
RSP B11-73 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B11-73

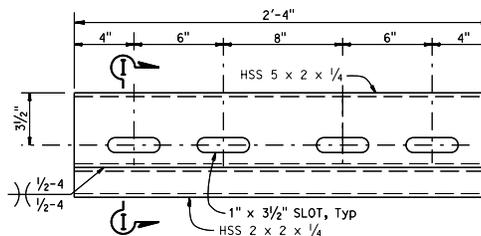
2015 REVISED STANDARD PLAN RSP B11-73



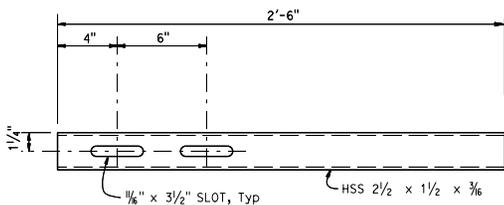
(FOR HSS 3 x 2 x 3/8 RAIL)
STANDARD SLEEVE DETAIL



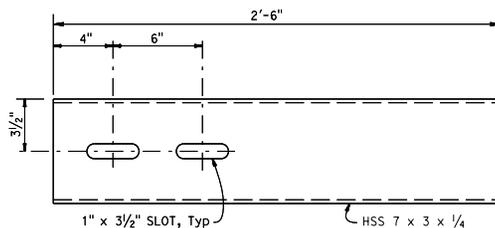
(FOR HSS 8 x 4 x 5/8 RAIL)
STANDARD SLEEVE DETAIL



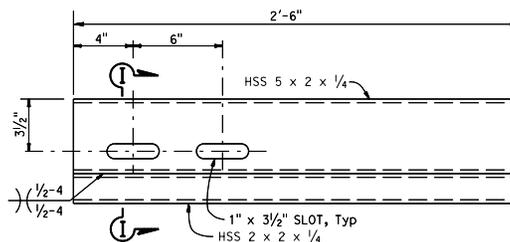
(FOR HSS 8 x 3 x 5/8 RAIL)
STANDARD SLEEVE DETAIL



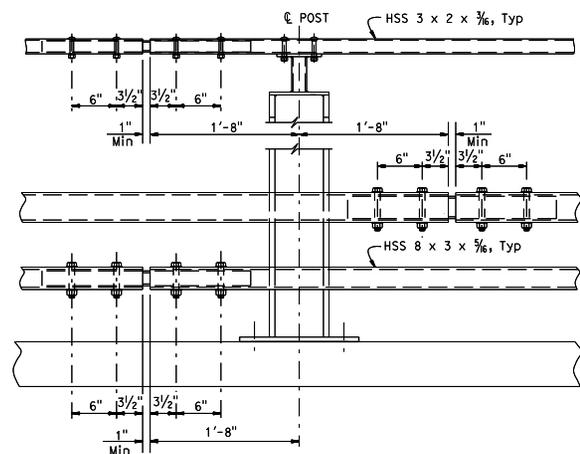
(FOR HSS 3 x 2 x 3/8 RAIL)
EXPANSION SLEEVE DETAIL



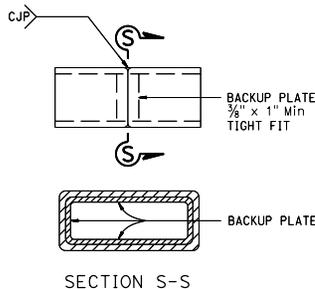
(FOR HSS 8 x 4 x 5/8 RAIL)
EXPANSION SLEEVE DETAIL



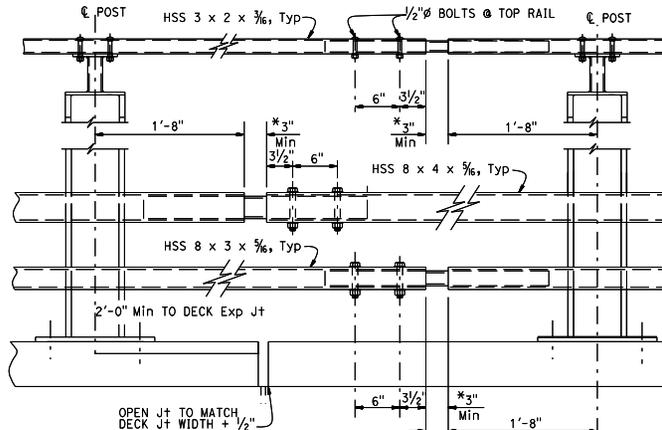
(FOR HSS 8 x 3 x 5/8 RAIL)
EXPANSION SLEEVE DETAIL



STANDARD SPLICE



ALTERNATE TUBE WELDED SPLICE



EXPANSION SPLICE

* MATCH DECK OR WALL JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CALIFORNIA ST-20S BRIDGE RAIL
(SHEET 4 OF 4)**

NO SCALE

RSP B11-74 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B11-74

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

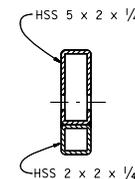
Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER
 No. C40814
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

TO ACCOMPANY PLANS DATED _____

NOTES:

- HS bolts with nut and washers, snug tightened, and thread locking system.
- Use 1/2"Ø x 3 3/8" (HSS 8 x 2 x 3/8)
Use 3/4"Ø x 4 5/8" (HSS 8 x 3 x 3/8)
Use 3/4"Ø x 5 5/8" (HSS 8 x 4 x 3/8)

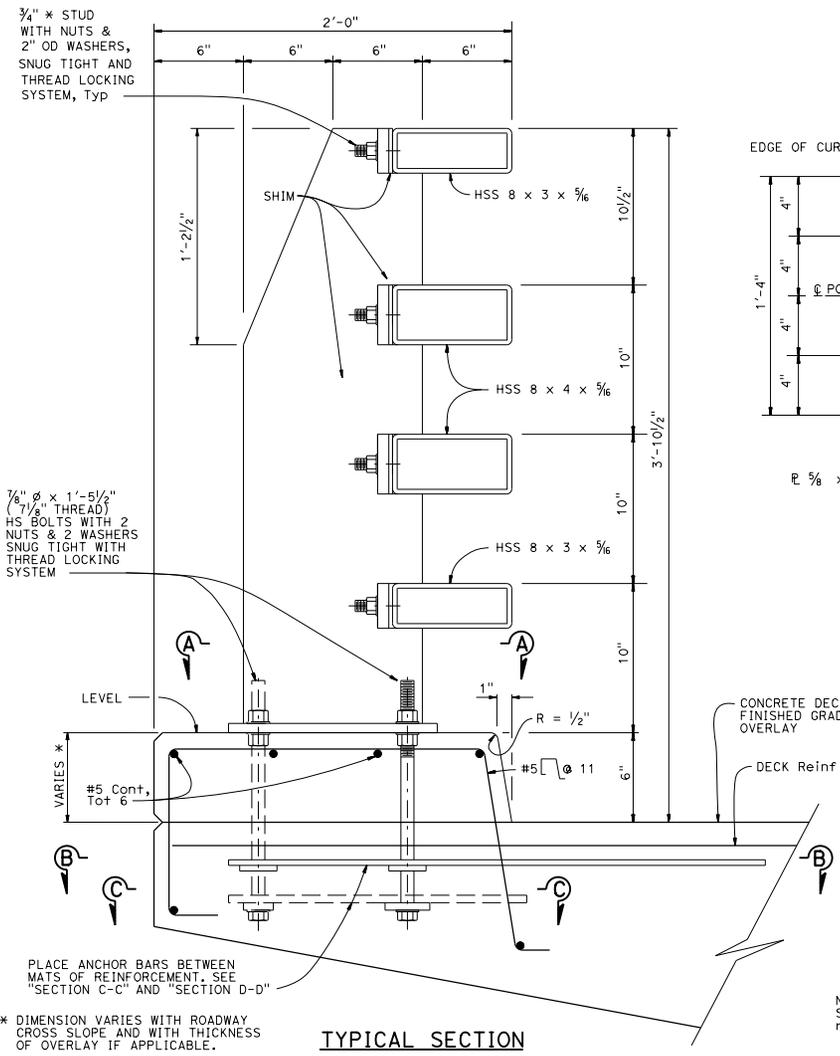


SECTION I-I

2015 REVISED STANDARD PLAN RSP B11-74

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
|------|--------|-------|--------------------------|--------------------|
| | | | | |

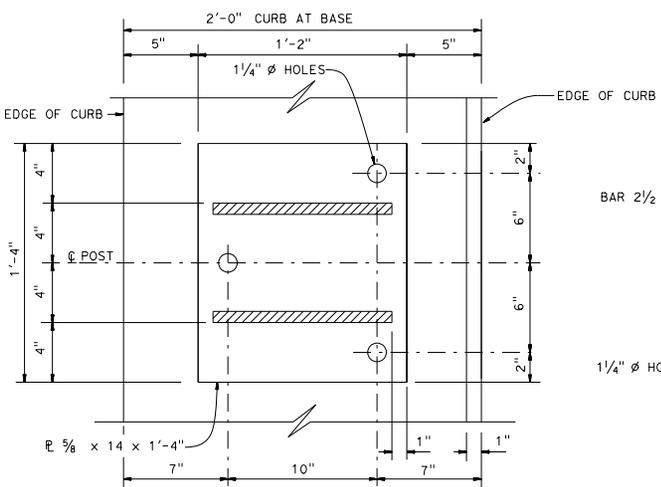
Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 No. C40814
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA



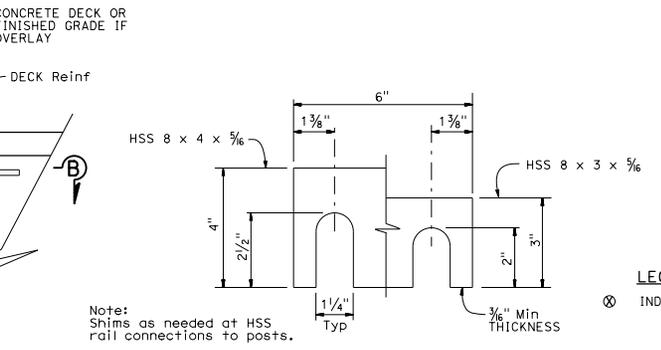
TYPICAL SECTION

PLACE ANCHOR BARS BETWEEN MATS OF REINFORCEMENT. SEE "SECTION C-C" AND "SECTION D-D"

* DIMENSION VARIES WITH ROADWAY CROSS SLOPE AND WITH THICKNESS OF OVERLAY IF APPLICABLE.

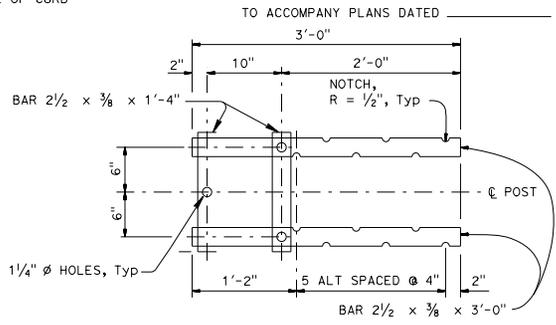


SECTION A-A

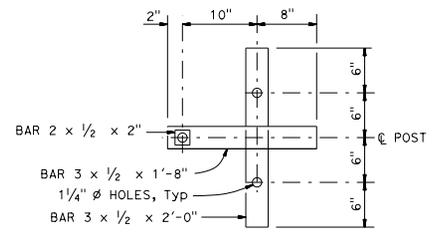


SHIM DETAIL

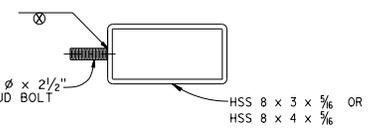
Note:
Shims as needed at HSS rail connections to posts.



SECTION B-B



SECTION C-C



SECTION AT POST

LEGEND:
⊗ INDICATES STUD WELD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-70 BRIDGE RAIL
(SHEET 1 OF 4)

NO SCALE
RSP B11-75 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B11-75

2015 REVISED STANDARD PLAN RSP B11-75

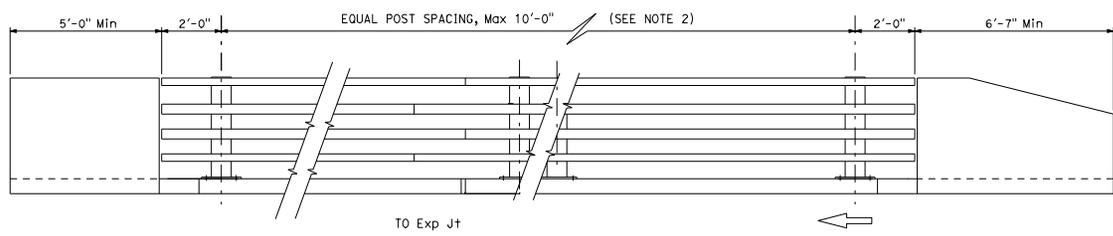
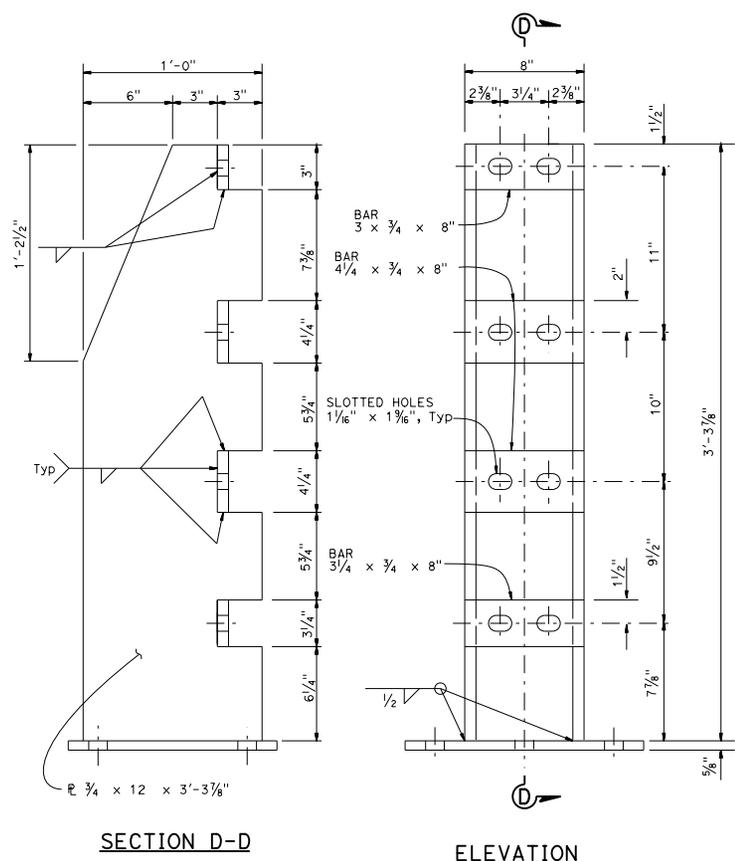
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|-----------------------------|--------------|-----------------|
| | | | | | |

Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER

July 15, 2016
 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.

TO ACCOMPANY PLANS DATED _____



ELEVATION

- NOTES:**
1. For approach and departure end details, see Revised Standard Plan RSP B11-77.
 2. Post spacing and/or block length to be adjusted to fit bridge length or wingwall length.
 3. All horizontal members are parallel to longitudinal profile grade of deck.
 4. Posts are normal to profile grade of structure.
 5. Posts are vertical to the transverse cross section.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-70 BRIDGE RAIL
(SHEET 2 OF 4)
NO SCALE

RSP B11-76 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B11-76

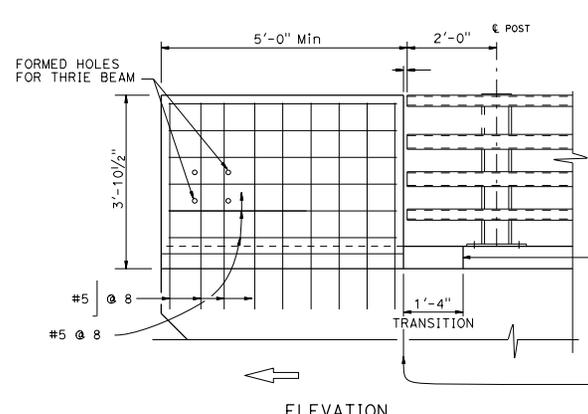
2015 REVISED STANDARD PLAN RSP B11-76

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

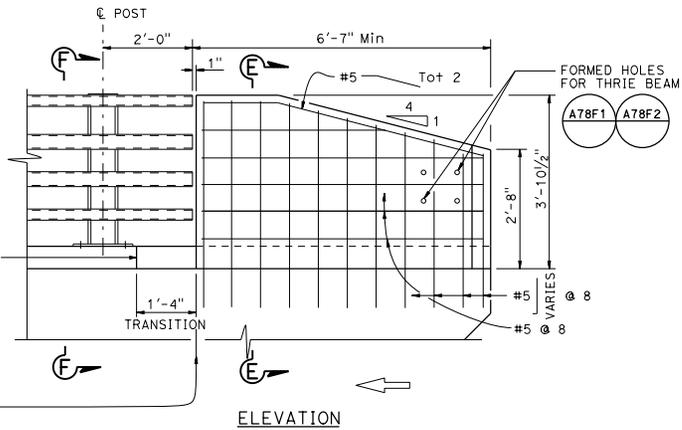
Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER
 No. C40814
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

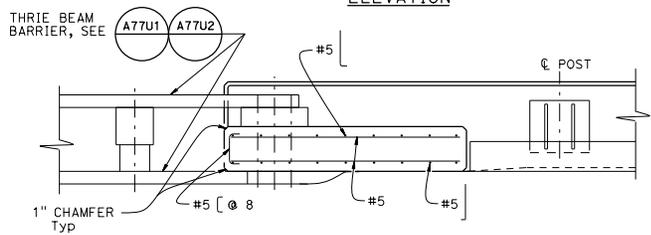
TO ACCOMPANY PLANS DATED _____



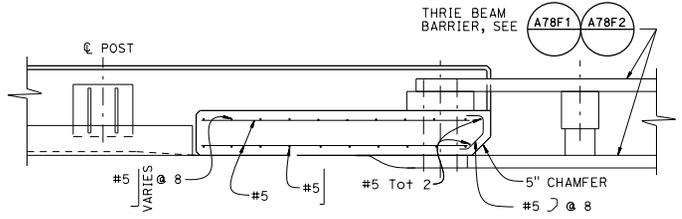
ELEVATION



ELEVATION



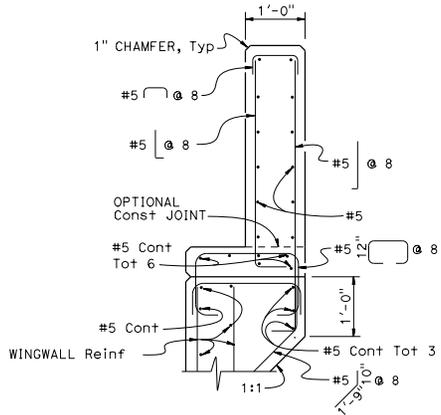
PLAN



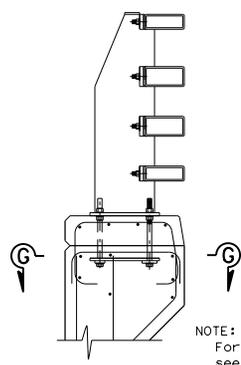
PLAN

END BLOCK DETAIL

TRANSITION BLOCK DETAIL

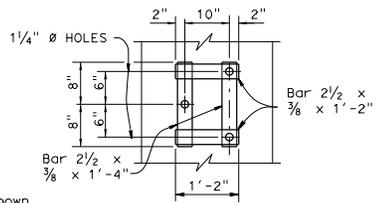


SECTION E-E



SECTION F-F

NOTE:
For details not shown,
see "SECTION E-E"



VIEW G-G

NOTES:

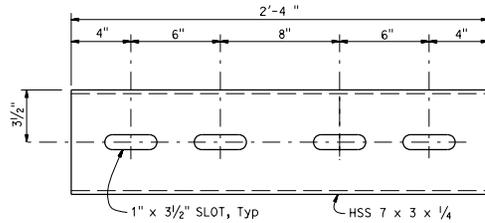
1. Anchor bolts may be tack welded (shop or field) to anchorage.
2. Each rail length must be continuous over a minimum of two posts.
3. The Contractor must check that the tubular sleeve splices conform to the dimensions indicated to assure proper clearance.
4. Except for expansion splices, not more than one splice permitted per same side of post.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-70 BRIDGE RAIL
(SHEET 3 OF 4)
NO SCALE

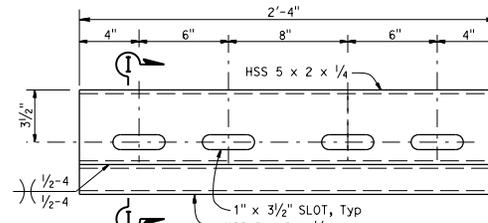
RSP B11-77 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B11-77

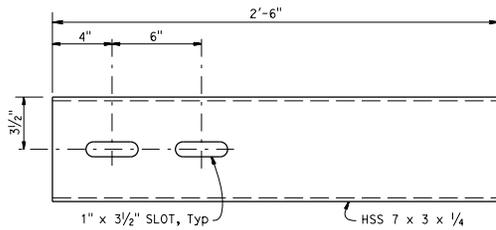
2015 REVISED STANDARD PLAN RSP B11-77



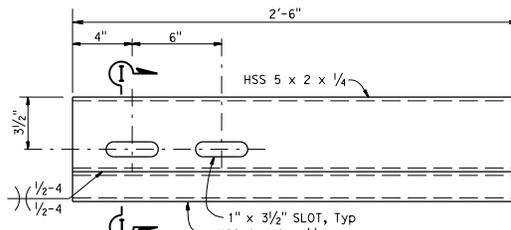
(FOR HSS 8 x 4 x 5/16 RAIL)
STANDARD SLEEVE DETAIL



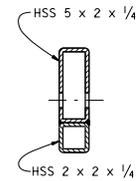
(FOR HSS 8 x 3 x 5/16 RAIL)
STANDARD SLEEVE DETAIL



(FOR HSS 8 x 4 x 5/16 RAIL)
EXPANSION SLEEVE DETAIL



(FOR HSS 8 x 3 x 5/16 RAIL)
EXPANSION SLEEVE DETAIL



SECTION I-I

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

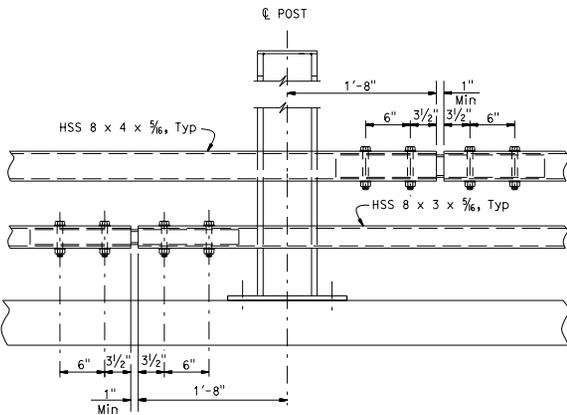
Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER
 No. C40814
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 PLANS APPROVAL DATE
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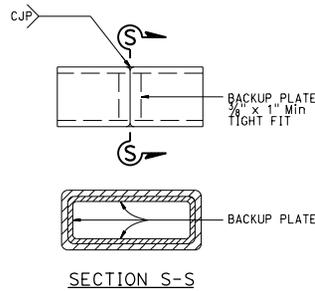
TO ACCOMPANY PLANS DATED _____

NOTES:

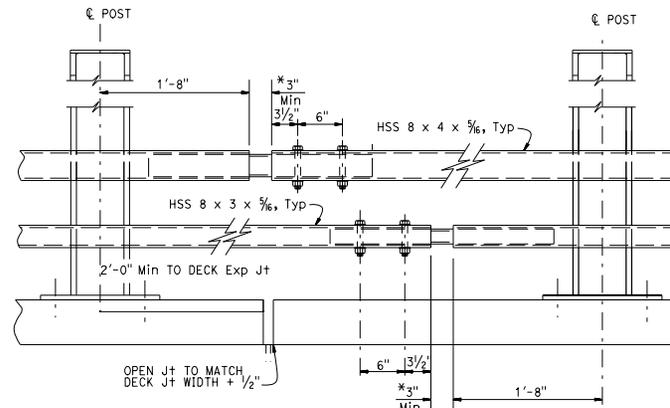
1. HS bolts with nut and washers, snug tightened, and thread locking system.
2. Use 3/4" ϕ x 4 5/8" (HSS 8 x 3 x 5/16)
Use 3/4" ϕ x 5 5/8" (HSS 8 x 4 x 5/16)



STANDARD SPLICE



ALTERNATE TUBE WELDED SPLICE



EXPANSION SPLICE

* MATCH DECK OR WALL JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CALIFORNIA ST-70 BRIDGE RAIL
(SHEET 4 OF 4)**

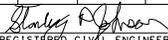
NO SCALE

RSP B11-78 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B11-78

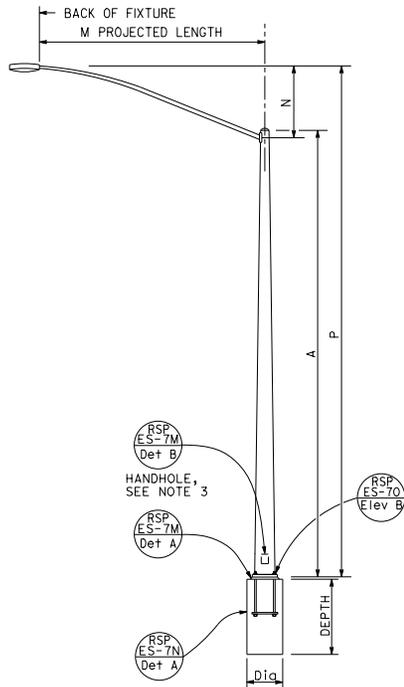
2015 REVISED STANDARD PLAN RSP B11-78

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| | | | | | |

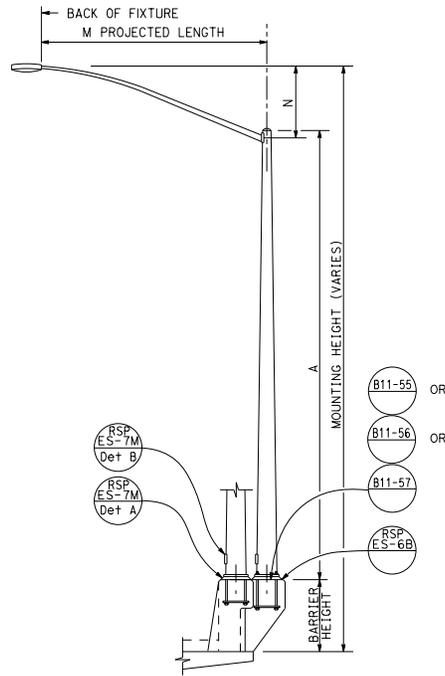

 REGISTERED CIVIL ENGINEER
 No. 05795
 Exp. 3-31-18
 CIVIL
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA

July 15, 2016
 PLANS APPROVAL DATE
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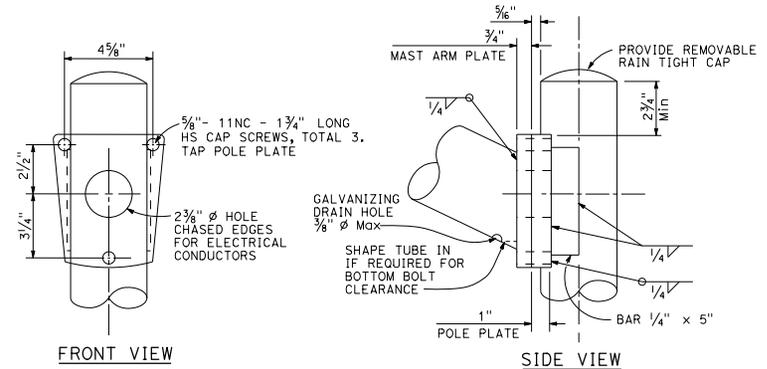
TO ACCOMPANY PLANS DATED _____



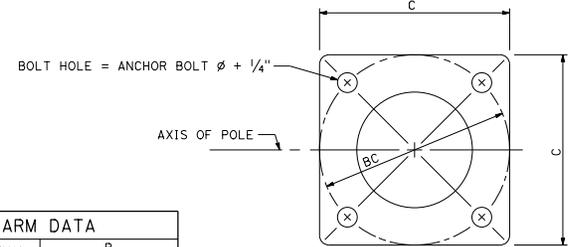
**TYPE 15 AND TYPE 21
ELEVATION A**



**TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED
ELEVATION B**



**LUMINAIRE MAST ARM CONNECTION
DETAIL R**



**BASE PLATE
DETAIL A**

| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | | CIDH PILE FOUNDATION | |
|-----------|-----------|-------------|--------|----------------|-----------------|------------------|-----------|-----------------------|----------------------|-------|
| | A HEIGHT | Min OD BASE | TOP | WALL THICKNESS | C | BC = BOLT CIRCLE | THICKNESS | ANCHOR BOLT SIZE | Dia | DEPTH |
| 15 | 30'-0" | 8" | 3 1/8" | 0.1196" | 1'-0" | 1'-0" | 1 1/2" | 1" ϕ x 36" * | 2'-6" | 6'-0" |
| 21 | 35'-0" | 8 3/8" | 3 3/8" | 0.1793" | 1'-0" | 1'-0" | 2" | 1 1/4" ϕ x 36" * | 2'-6" | 7'-0" |

* FOR BARRIER RAIL BOLTS, SEE REVISED STANDARD PLAN RSP ES-6B.

NOTES:

1.  Indicates mast arm length to be used unless otherwise noted on the plans.
2. For Type 15-SB, use Type 15 standard with Type 30 slip base plate details, see Revised Standard Plan RSP ES-6F.
3. Handhole shall be located on the downstream side of traffic.
4. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.

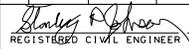
| LUMINAIRE MAST ARM DATA | | | | | |
|-------------------------|-------------|----------------|-------------------|--------------|--------------|
| M PROJECTED LENGTH | N RISE | Min OD AT POLE | NOMINAL THICKNESS | P | |
| | | | | TYPE 15 | TYPE 21 |
| 6'-0" | 2'-0" \pm | 3 1/4" | 0.1196" | 31'-6" \pm | 36'-6" \pm |
| 8'-0" | 2'-6" \pm | 3 1/2" | | 32'-0" \pm | 37'-0" \pm |
| 10'-0" | 3'-3" \pm | 3 3/8" | | 32'-9" \pm | 37'-9" \pm |
| 12'-0" | 4'-3" \pm | 3 7/8" | | 33'-9" \pm | 38'-9" \pm |
| 14'-0" | 4'-9" \pm | 4 1/4" | | 34'-3" \pm | 39'-3" \pm |
| 15'-0" | 4'-9" \pm | 4 1/4" | | 34'-3" \pm | 39'-3" \pm |

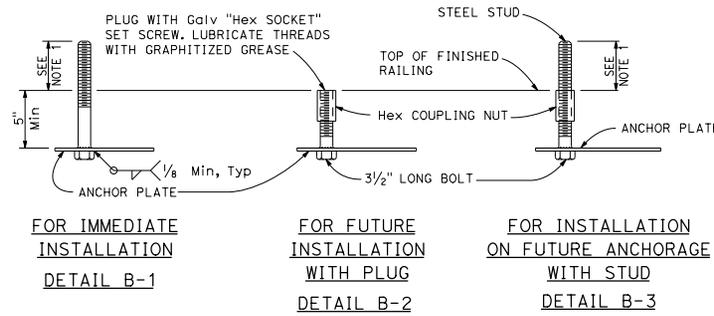
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARD,
 TYPES 15 AND 21)**
 NO SCALE

RSP ES-6A DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-6A DATED OCTOBER 30, 2015 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-6A

2015 REVISED STANDARD PLAN RSP ES-6A

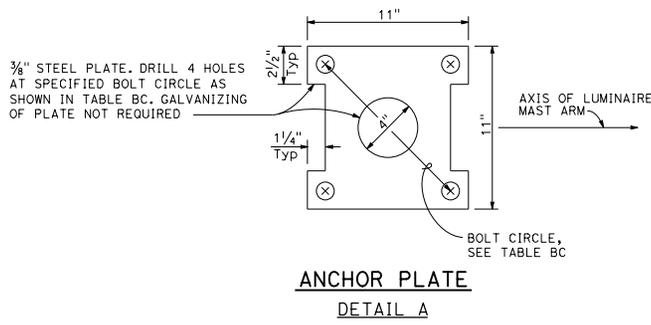
| | | | | | |
|--|--------|-------|-----------------------------|--------------|-----------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| | | | | | |
|  REGISTERED CIVIL ENGINEER | | | | | |
| July 15, 2016 PLANS APPROVAL DATE | | | | | |
| No. C5735 Exp. 3-31-18 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. | | | | | |



ELECTROLIER ANCHORAGES
DETAIL B

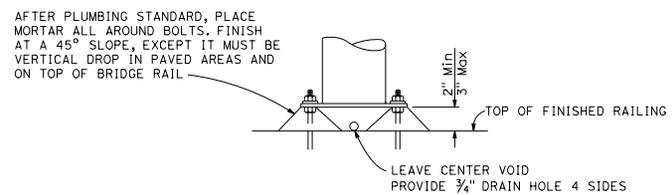
NOTES:

- Anchor bolt or stud length shall be such that thread extends 1/2" maximum above nut on level base plate after grouting. See Detail N.
- Electrolier anchor bolts shall be held in position for pouring by means of anchor plates and suitable templates. Deviation from the true position, vertical and height shall not exceed 1/16".
- See railing sheets for reinforcement and structural details at electroliers and pull boxes.



ANCHOR PLATE
DETAIL A

| TABLE BC | | | | |
|----------|------------------|----------------------|---------------------------|-----------------------------|
| TYPE | BC = BOLT CIRCLE | ANCHOR BOLT DIAMETER | COUPLING NUT BASIC LENGTH | SET SCREW LENGTH DETAIL B-2 |
| 15 | 1'-0" | 1" | 3" | 1 1/2" |
| 21 | 1'-0" | 1 1/4" | 3 3/4" | 1 7/8" |



GROUTING AT ELECTROLIER
DETAIL N

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ELECTROLIER ANCHORAGE AND
GROUTING FOR
TYPE 15 AND TYPE 21
BARRIER RAIL MOUNTED)**

NO SCALE
RSP ES-6B DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-6B
DATED OCTOBER 30, 2015 - PAGE 450 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-6B

2015 REVISED STANDARD PLAN RSP ES-6B

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |



 Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
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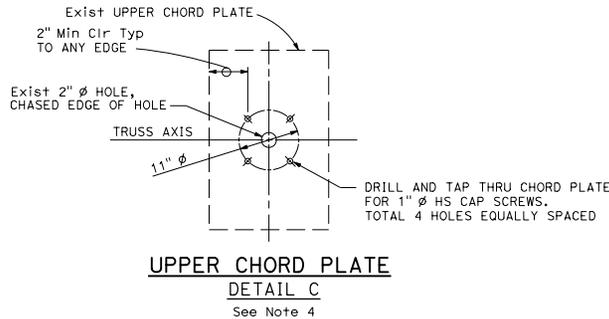
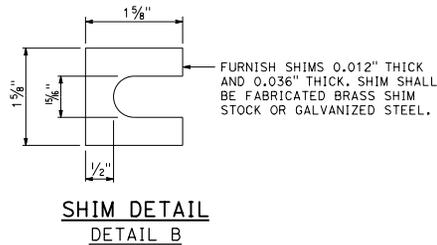
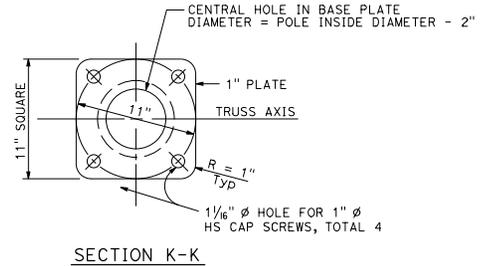
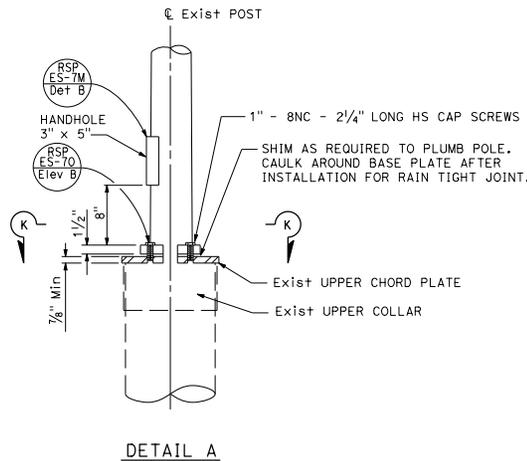
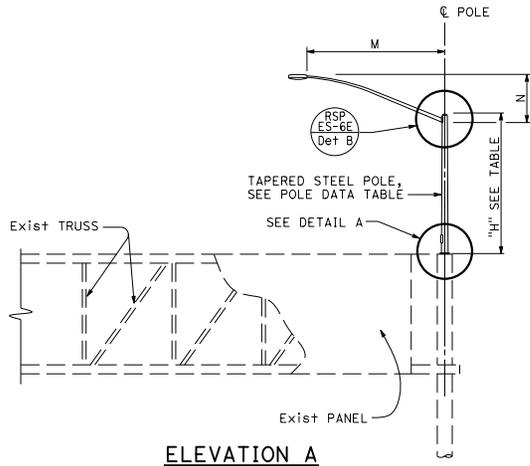
| LUMINAIRE MAST ARM DATA | | | |
|-------------------------|--------|----------------|-------------------|
| M PROJECTED LENGTH | N RISE | Min OD AT POLE | NOMINAL THICKNESS |
| 15'-0" | 4'-9"± | 4 1/2" | 0.1196" |
| 20'-0" | 2'-6"± | 5" | 0.1793" |

| POLE DATA | | | | |
|---------------------|------------|--------|--------|-----------|
| POLE EXTENSION TYPE | HEIGHT "H" | Min OD | | THICKNESS |
| | | BASE | TOP | |
| 5 | 5'-0" | 6 1/2" | 5 1/8" | 0.1793" |
| 10 | 10'-0" | 7 1/4" | | |

TO ACCOMPANY PLANS DATED _____

NOTES:

- The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
- Bolt hole locations may vary at the discretion of the Engineer.
- For Wind Loading see RSP ES-7M.
- See Std Plan S13.
- Materials (Structural Steel):
 - fy = 55,000 psi tapered steel tube (pole)
 - fy = 50,000 psi unless otherwise noted

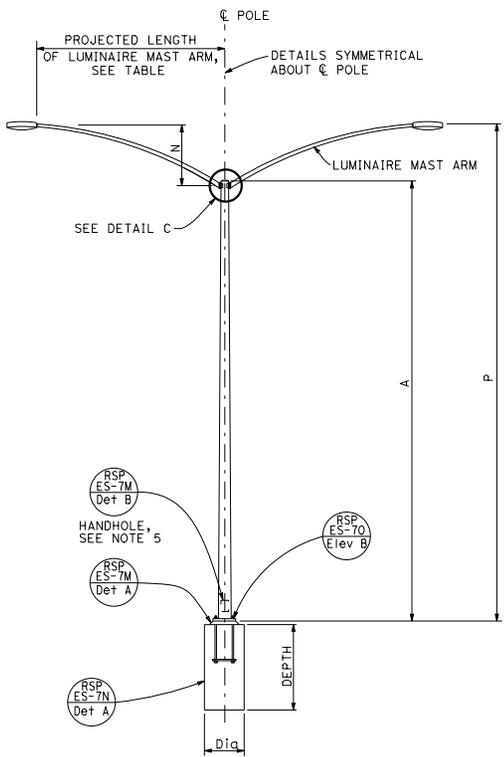


STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 5 AND 10,
OVERHEAD SIGN MOUNTED)**
NO SCALE

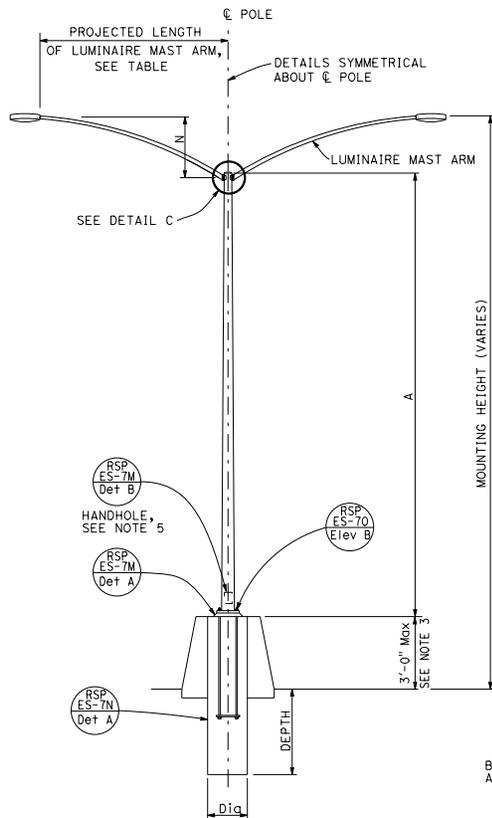
RSP ES-6C DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-6C
DATED OCTOBER 30, 2015 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-6C

2015 REVISED STANDARD PLAN RSP ES-6C



TYPE 15D AND TYPE 21D
ELEVATION A



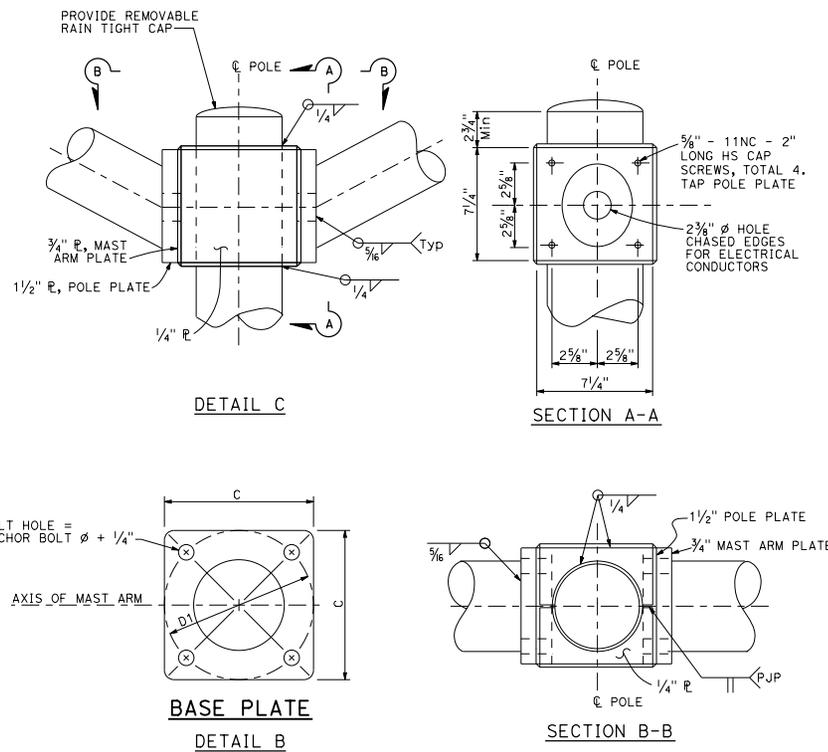
TYPE 15D AND TYPE 21D
MEDIAN BARRIER MOUNTED
ELEVATION B

| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | | CIDH PILE FOUNDATION | |
|-----------|-----------|--------|---------------|-------|------------------|-----------|------------------|-------|----------------------|--|
| | A HEIGHT | Min OD | Min THICKNESS | C | BC = BOLT CIRCLE | THICKNESS | ANCHOR BOLT SIZE | Dia | DEPTH | |
| 15D | 30'-0" | 8" | 0.1793" | 1'-0" | 1'-0" | 1/2" | 1/4" ø x 42" | 2'-6" | 7'-0" | |
| 21D | 35'-0" | 8 5/8" | 3 1/8" | 1'-0" | 1'-0" | 1/2" | 1/4" ø x 42" | 2'-6" | 7'-0" | |

| LUMINAIRE MAST ARM DATA | | | | | |
|-------------------------|--------|----------------|-------------------|----------|----------|
| PROJECTED LENGTH | N RISE | Min OD AT POLE | NOMINAL THICKNESS | P | |
| | | | | TYPE 15D | TYPE 21D |
| 6'-0" | 2'-0"± | 3/4" | 0.1196" | 31'-6"± | 36'-6"± |
| 8'-0" | 2'-6"± | 3/2" | | 32'-0"± | 37'-0"± |
| 10'-0" | 3'-3"± | 3 1/8" | | 32'-9"± | 37'-9"± |
| 12'-0" | 4'-3"± | 3 3/8" | | 33'-9"± | 38'-9"± |

NOTES:

1. [] Indicates mast arm length to be used unless otherwise noted on the plans.
2. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
3. See Concrete Barrier Details Type 60E and 60SE.
4. For locations with one arm, plug unused cap screw holes and chased outlet with galvanized cap screws and knockout plug.
5. Handhole shall be located perpendicular to the luminaire mast arm and as directed by the Engineer.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 15D AND 21D,
DOUBLE LUMINAIRE MAST ARM)
NO SCALE

RSP ES-6D DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-6D
DATED OCTOBER 30, 2015 - PAGE 452 OF THE STANDARD PLANS BOOK DATED 2015.
REVISED STANDARD PLAN RSP ES-6D

| | | | | |
|------|--------|-------|--------------------------|--------------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| | | | | |

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C67395
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE
July 15, 2016
TO ACCOMPANY PLANS DATED _____

2015 REVISED STANDARD PLAN RSP ES-6D

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| | | | | | |

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C67385

July 15, 2016
PLANS APPROVAL DATE

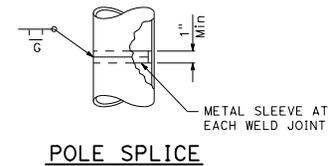
Stanley P. Johnson
REGISTERED PROFESSIONAL ENGINEER
No. C67385
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

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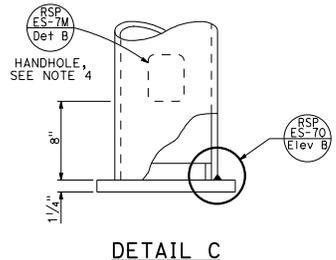
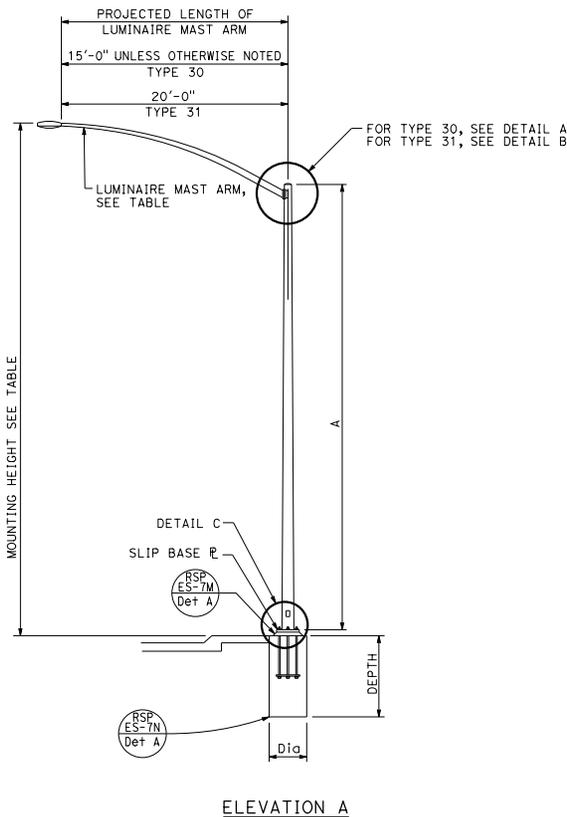
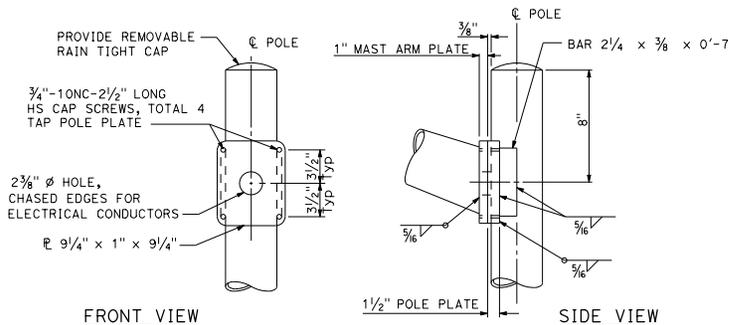
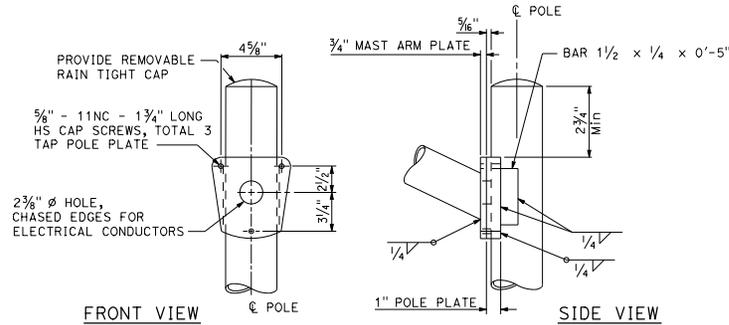
NOTES:

1. For slip base plate details, see Revised Standard Plan RSP ES-6F.
2. For Type 30 fixed base use Type 15 base plate and foundation shown on Revised Standard Plan RSP ES-6A. Use 1/4" Dia x 3'-6" anchor bolts.
3. For Type 31 fixed base use Type 32 base plate, anchor bolts and foundation on Revised Standard Plan RSP ES-6G.
4. Handhole shall be located on the downstream side of traffic.
5. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.



| PROJECTED LENGTH | THICKNESS | MINIMUM OD AT POLE | MOUNTING HEIGHT |
|------------------|-----------|--------------------|-----------------|
| * 6'-0" | 0.1196" | 3 1/4" | 36'-9"± |
| * 8'-0" | | 3 1/2" | 37'-3"± |
| * 10'-0" | | 3 7/8" | 38'-0"± |
| * 12'-0" | | 4 1/4" | 39'-0"± |
| * 15'-0" | 0.1793" | 4 1/4" | 39'-6"± |
| ** 20'-0" | | 5" | 37'-0"± |

* TYPE 30
** TYPE 31



| POLE TYPE | POLE DATA | | | CIDH PILE FOUNDATION | |
|-----------|-----------|-------------|-------------------|----------------------|-------|
| | A HEIGHT | Min OD BASE | Min THICKNESS TOP | Dia | DEPTH |
| 30 | 35'-0" | 8 3/4" | 3 1/8" | 2'-6" | 7'-0" |
| 31 | | 10 3/4" | 5 1/8" | 3'-0" | 8'-0" |

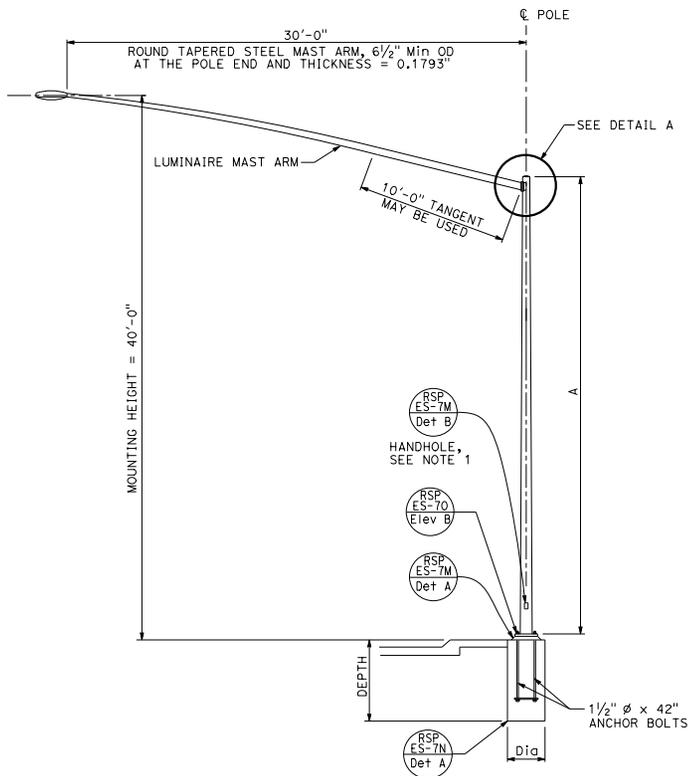
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 30 AND 31)**

NO SCALE

RSP ES-6E DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-6E DATED OCTOBER 30, 2015 - PAGE 453 OF THE STANDARD PLANS BOOK DATED 2015.

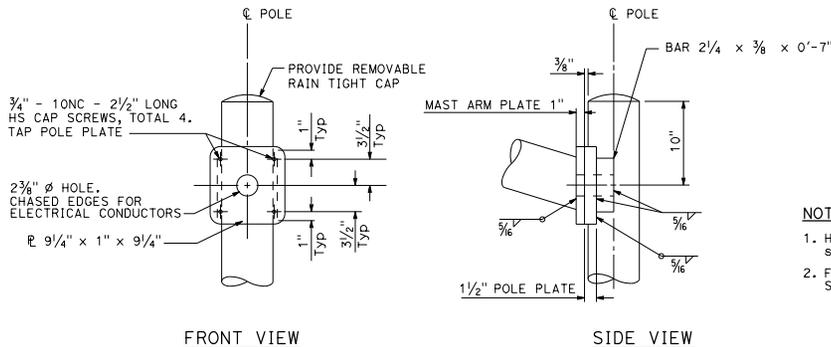
REVISED STANDARD PLAN RSP ES-6E

2015 REVISED STANDARD PLAN RSP ES-6E



ELEVATION A

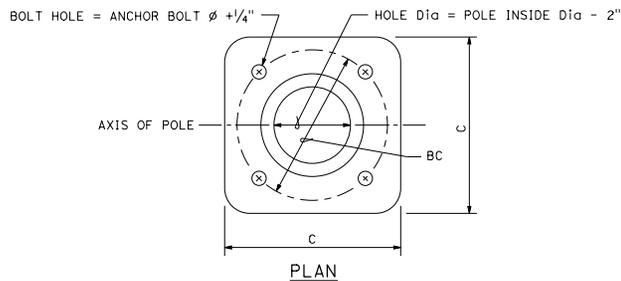
| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | CIDH PILE FOUNDATION | | |
|-----------|-----------|-------------|--------|---------------|-----------------|------------------|-----------|----------------------|-------|-------|
| | A HEIGHT | Min OD BASE | TOP | Min THICKNESS | C | BC = BOLT CIRCLE | THICKNESS | ANCHOR BOLT SIZE | Diα | DEPTH |
| 32 | 35'-0" | 10 3/4" | 5 1/2" | 0.1793" | 1'-5" | 1'-3" | 2" | 1 1/2" φ x 42" | 3'-0" | 8'-0" |



FRONT VIEW

SIDE VIEW

DETAIL A



**BASE PLATE DETAIL
DETAIL C**

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| | | | | | |

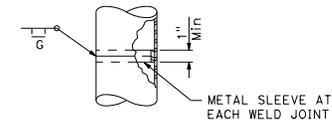
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C67395
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

TO ACCOMPANY PLANS DATED _____

NOTES:

1. Handhole shall be located on the downstream side of traffic.
2. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.



**POLE SPLICE
DETAIL B**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPE 32)**

NO SCALE

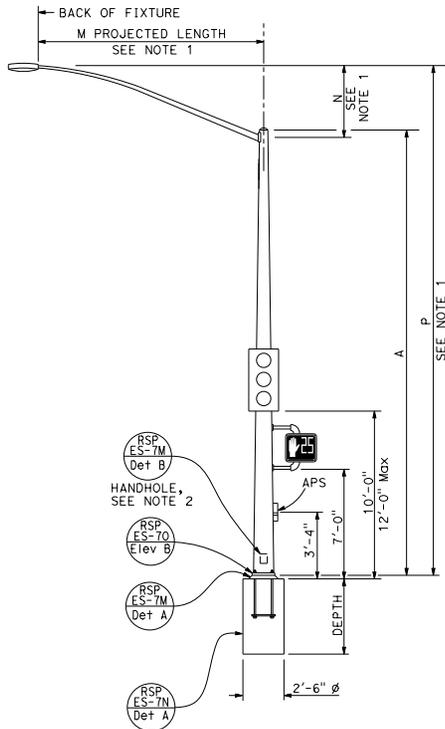
RSP ES-6G DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-6G
DATED OCTOBER 30, 2015 - PAGE 455 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-6G

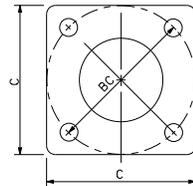
2015 REVISED STANDARD PLAN RSP ES-6G

NOTES:

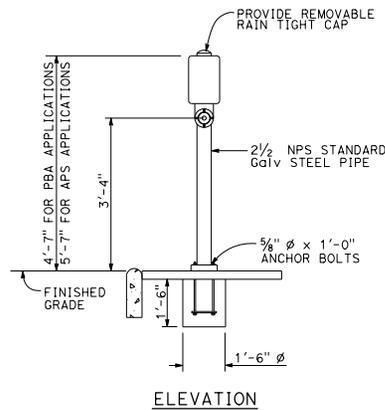
- For additional notes, details and data for Type 15TS and Type 21TS Standards, see Revised Standard Plan RSP ES-6A.
- Handhole shall be located on the downstream side of traffic.



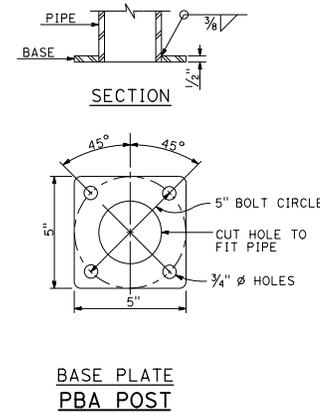
TYPE 15TS AND 21TS STANDARD
ELEVATION A
(See Note 1)



BASE PLATE
TYPE 15TS AND 21TS
DETAIL A



PUSH BUTTON ASSEMBLY POST
DETAIL B



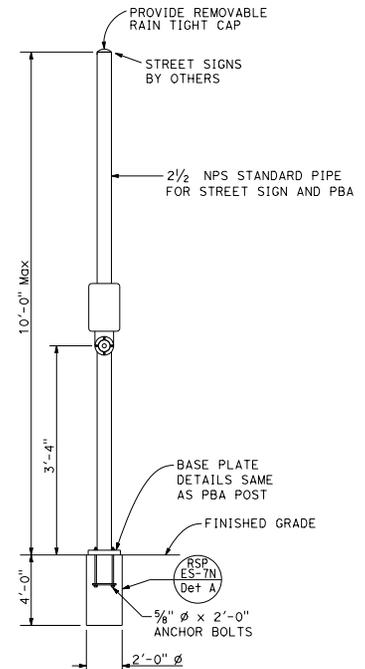
BASE PLATE
PBA POST

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C6793
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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.

TO ACCOMPANY PLANS DATED _____



COMBINED STREET SIGN
PUSH BUTTON ASSEMBLY POST
DETAIL C

| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | | CIDH |
|-----------|-----------|--------|--------|----------------|-----------------|------------------|-----------|------------------|-------|
| | A HEIGHT | Min OD | | WALL THICKNESS | C | BC = BOLT CIRCLE | THICKNESS | ANCHOR BOLT SIZE | |
| | | BASE | TOP | | | | | | |
| 15TS | 30'-0" | 8" | 3 1/8" | 0.1793" | 1'-1 1/2" | 1'-0" | 2" | 1 1/2" x 42" | 7'-6" |
| 21TS | 35'-0" | 9 3/8" | 3 3/8" | | 1'-3" | 1'-2" | | | 8'-6" |

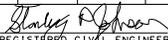
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, TYPE TS,
AND PUSH BUTTON ASSEMBLY POST)

NO SCALE

RSP ES-7A DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7A
DATED OCTOBER 30, 2015 - PAGE 456 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-7A

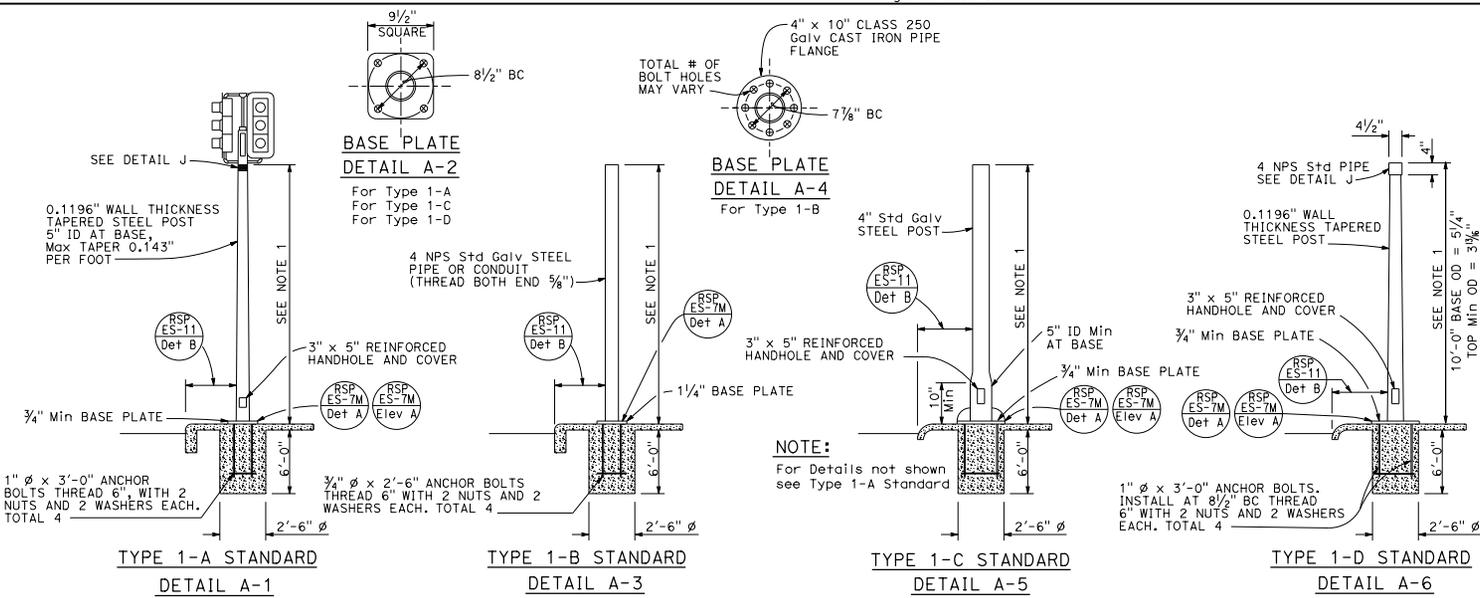
2015 REVISED STANDARD PLAN RSP ES-7A

| | | | | | |
|---|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| | | | | | |
|  REGISTERED CIVIL ENGINEER No. C67395 Exp. 3-31-18 CIVIL STATE OF CALIFORNIA | | | | | |
| July 15, 2016 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. | | | | | |

TO ACCOMPANY PLANS DATED _____

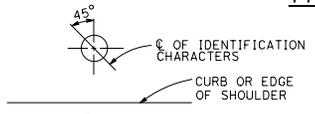
NOTES:

- Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless shorter pole is noted on project plans.
- Top of standards shall be 4 1/2" OD.
- Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
- Anchor bolts shall be bonded to conduit or grounding conductor.
- For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
- Pour foundation concrete against undisturbed soil.
- For standards with handhole, locate in the downstream side of traffic.
- Coupling nuts to be used only when shown or specified on project plans.

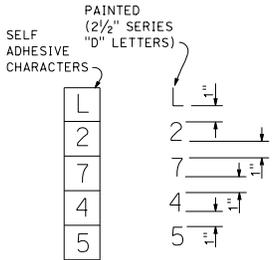


NOTE:
For Details not shown see Type 1-A Standard

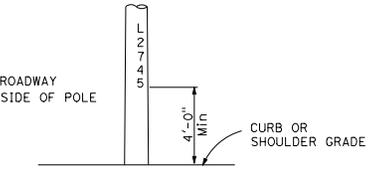
TYPE 1 SIGNAL STANDARDS DETAIL A



DETAIL B-3



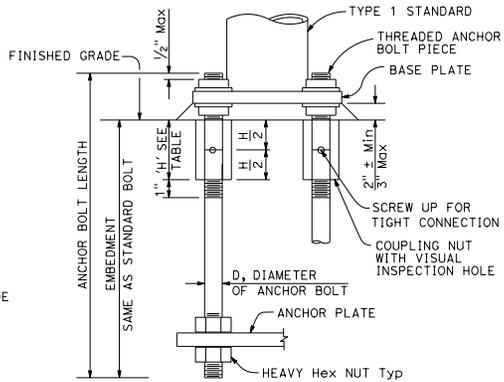
IDENTIFICATION CHARACTER DETAIL DETAIL B-1



TYPICAL IDENTIFICATION CHARACTER FORMAT DETAIL B-2

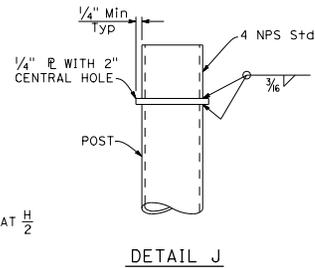
LOCATION OF EQUIPMENT IDENTIFICATION CHARACTERS ON STANDARDS AND POSTS DETAIL B

DETAIL B



ANCHOR BOLTS WITH SLEEVE NUTS DETAIL C

DETAIL C
(See Note 8)



| BOLT DIAMETER | NUT TABLE THICKNESS 'H' |
|---------------|-------------------------|
| 3/4" | 2 1/4" |
| 1" | 3" |

DETAIL J

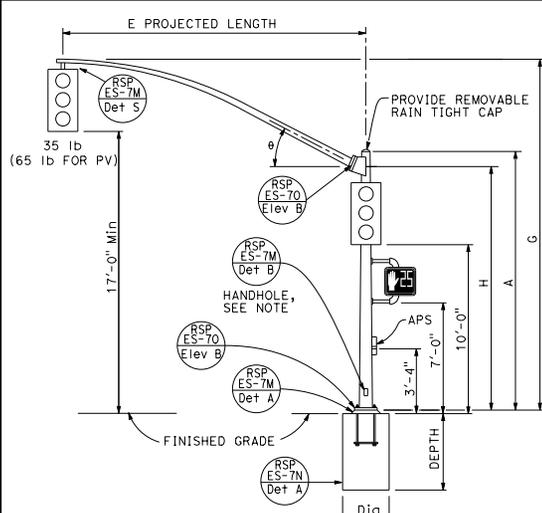
ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, TYPE 1 AND EQUIPMENT IDENTIFICATION CHARACTERS)

NO SCALE

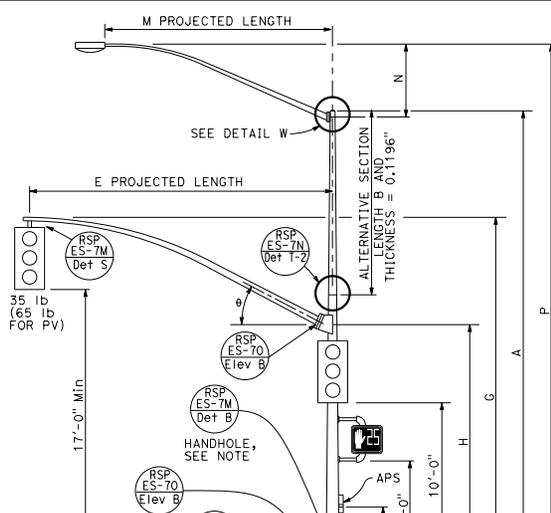
RSP ES-7B DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7B DATED OCTOBER 30, 2015 - PAGE 457 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-7B

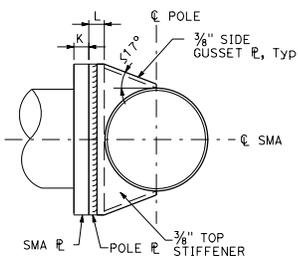
2015 REVISED STANDARD PLAN RSP ES-7B



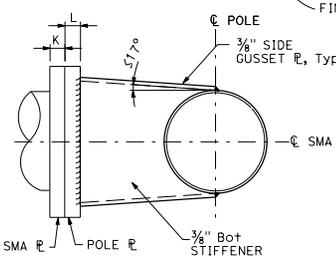
TYPE 16-1-100, 18-1-100
ELEVATION A



TYPE 19-1-100, 19A-1-100
ELEVATION B



SECTION B-B



SECTION C-C

| E PROJECTED LENGTH | G MOUNTING HEIGHT | H | Min OD AT POLE | THICKNESS | I BOLT CIRCLE | HS CAP SCREWS | J PLATE SIZE | K MAST ARM R THICKNESS | L POLE R THICKNESS | θ |
|--------------------|-------------------|--------|----------------|-----------|---------------|---------------|--------------|------------------------|--------------------|-----|
| 15'-0" | 21'-8"± | 17'-6" | 7 3/8" | 0.1793" | 12" | 1 1/4"-7NC-3" | 1'-1" | 1/4" | 1/2" | 23° |
| 20'-0" | 22'-8"± | 16'-0" | 8" | | | | | | | |
| 25'-0" | 22'-8"± | 16'-0" | 9" | | | | | | | |
| 30'-0" | 23'-0"± | 16'-0" | 10" | | | | | | | |

| M PROJECTED LENGTH | N RISE | Min OD AT POLE | THICKNESS | P MOUNTING HEIGHT |
|--------------------|--------|----------------|-----------|-------------------|
| 6'-0" | 2'-0"± | 3 1/4" | 0.1196" | 30'-0" POLE |
| 8'-0" | 2'-6"± | 3 1/2" | | 35'-0" POLE |
| 10'-0" | 3'-3"± | 3 3/8" | | 31'-6"± |
| 12'-0" | 4'-3"± | 3 7/8" | | 36'-6"± |
| 15'-0" | 4'-9"± | 4 1/4" | | 32'-0"± |

| POLE TYPE | LOAD CASE | WIND VELOCITY (mph) | POLE DATA | | | | BASE PLATE DATA | | | | LUMINAIRE MAST ARM | SIGNAL MAST ARM | CIDH PILE FOUNDATION | | | | | |
|-----------|-----------|---------------------|-----------|--------|--------|-----------|------------------------------|--------|---------|------------------|--------------------|-----------------|----------------------|------------------|-----------------|------------------|-------|--------|
| | | | A HEIGHT | Min OD | | THICKNESS | ALTERNATIVE SECTION B LENGTH | | C | BC = BOLT CIRCLE | | | THICKNESS | ANCHOR BOLT SIZE | Dia | DEPTH | | |
| | | | | BASE | TOP | | BOTTOM | TOP | | | | | | | | | | |
| 16-1-100 | 1 | 100 | 18'-6" | 12" | 9 3/8" | 0.2391" | None | None | 1'-6" | 1'-4" | 2" | 1 3/4" ø x 42" | NONE | 15'-0", [20'-0"] | 3'-0" | 9'-0" | | |
| 18-1-100 | | | 17'-0" | 12" | 9 3/8" | 0.2391" | None | None | 1'-6" | 1'-4" | 2" | 1 3/4" ø x 42" | NONE | 15'-0", [20'-0"] | 3'-0" | 9'-0" | | |
| 19-1-100 | | | 30'-0" | 14" | 9 3/4" | OR 0.25" | 10'-0" | 9 3/4" | 11 1/8" | 9 3/4" | 1'-10" | 1'-8" | 2 1/2" | 2" ø x 42" | 6'-15" [12'-0"] | 25'-0", [30'-0"] | 3'-6" | 10'-0" |
| 19A-1-100 | | | 35'-0" | 14" | 9" | OR 0.25" | 15'-0" | 9" | 11 1/8" | 9" | 1'-10" | 1'-8" | 2 1/2" | 2" ø x 42" | 6'-15" [15'-0"] | 25'-0", [30'-0"] | 3'-6" | 10'-0" |

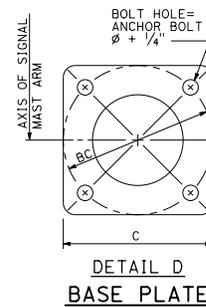
□ INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

NOTE:
Handhole shall be located on the downstream side of traffic.

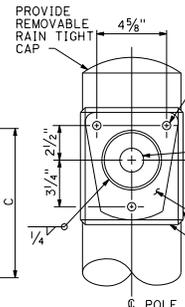
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

REGISTERED CIVIL ENGINEER
 Stanley P. Johnson
 No. C6798
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

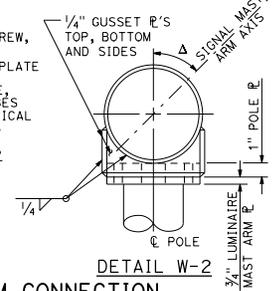
PLANS APPROVAL DATE
 July 15, 2016
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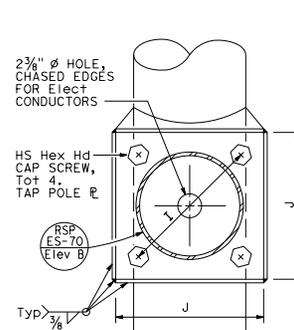
DETAIL D
BASE PLATE



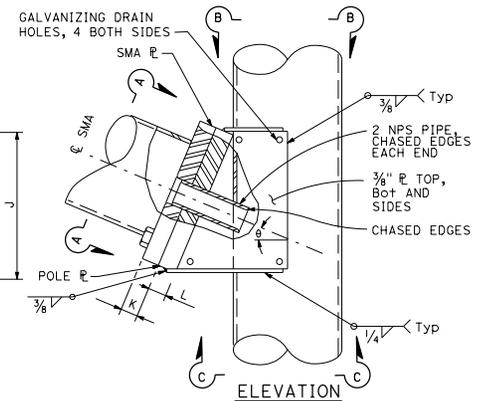
DETAIL W-1
LUMINAIRE MAST ARM CONNECTION



DETAIL W-2
SIGNAL MAST ARM CONNECTION



SECTION A-A



ELEVATION

SECTION A-A
SIGNAL MAST ARM CONNECTION

DETAIL A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

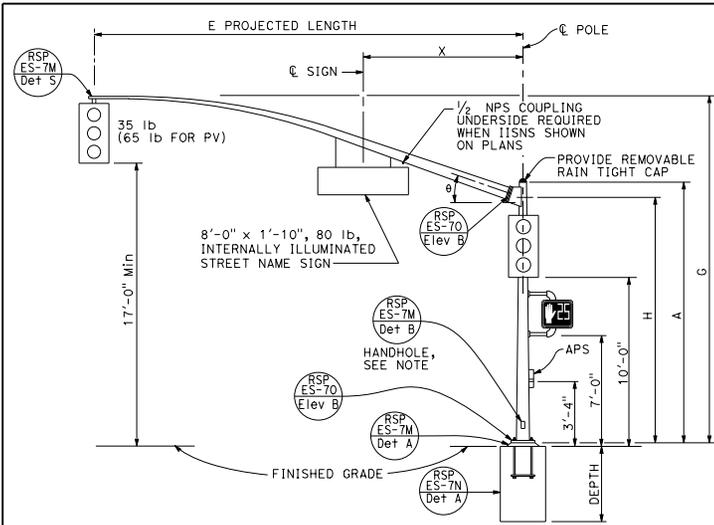
ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, CASE 1 SIGNAL MAST ARM LOADING, WIND VELOCITY = 100 MPH AND SIGNAL MAST ARM LENGTHS 15' TO 30')

NO SCALE

RSP ES-7C DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7C DATED OCTOBER 30, 2015 - PAGE 458 OF THE STANDARD PLANS BOOK DATED 2015.

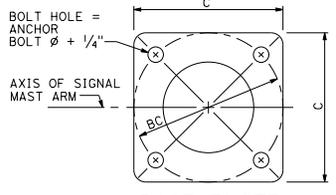
REVISED STANDARD PLAN RSP ES-7C

2015 REVISED STANDARD PLAN RSP ES-7C

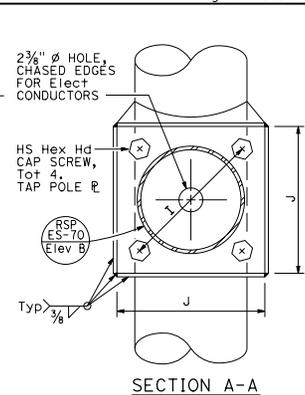


TYPE 16-2-100, 18-2-100

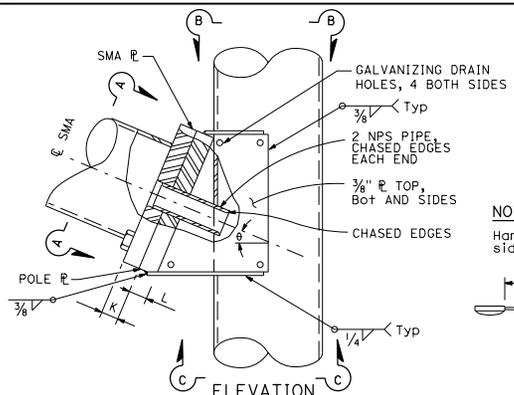
ELEVATION A



BASE PLATE
DETAIL B



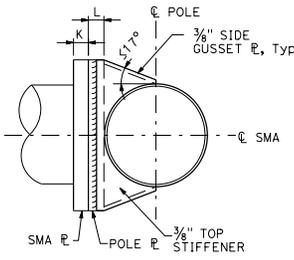
SECTION A-A



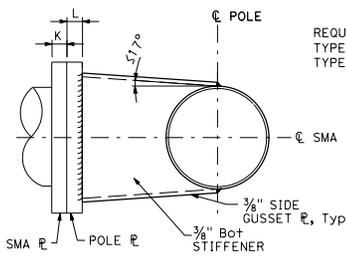
ELEVATION

SIGNAL MAST ARM CONNECTION

DETAIL A

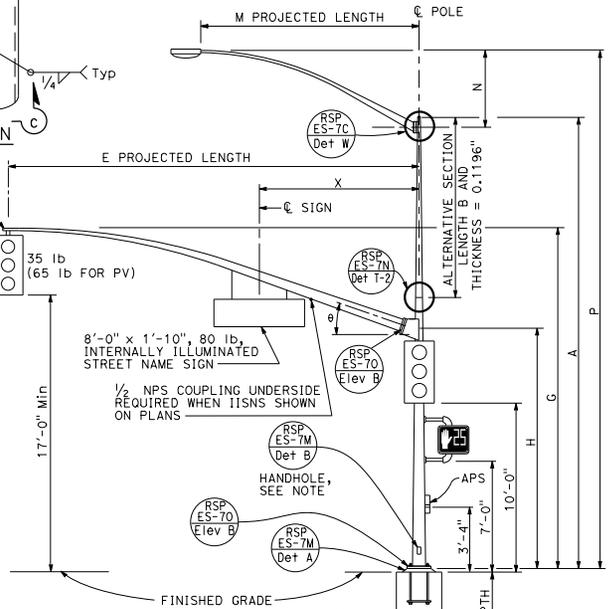


SECTION B-B



SECTION C-C

REQUIRED FOR
TYPE 17-2-100
TYPE 17A-2-100



TYPE 17-2-100, 17A-2-100,
19-2-100, 19A-2-100

ELEVATION B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 2 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 15' TO 30')**

NO SCALE
RSP ES-7D DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7D
DATED OCTOBER 30, 2015 - PAGE 459 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-7D

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

| | | | | | |
|------|--------|-------|---------------|-------|--------|
| DIST | COUNTY | ROUTE | POST MILES | SHEET | TOTAL |
| | | | TOTAL PROJECT | No. | SHEETS |

Stanley P. Johnson
REGISTERED CIVIL ENGINEER

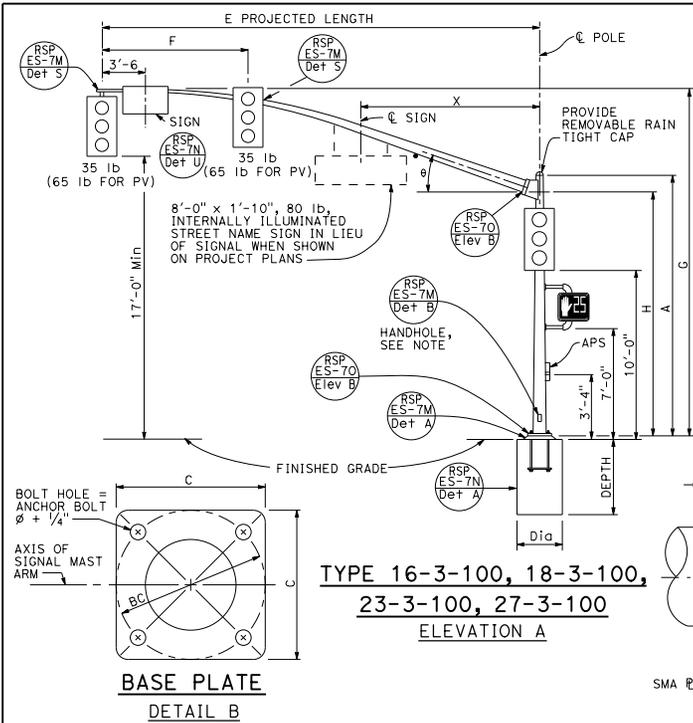
July 15, 2016
PLANS APPROVAL DATE

Stanley P. Johnson
No. C67935
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

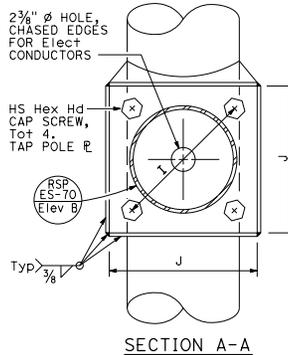
REGISTERED PROFESSIONAL ENGINEER

NOTE: TO ACCOMPANY PLANS DATED _____
Handhole shall be located on the downstream side of traffic.

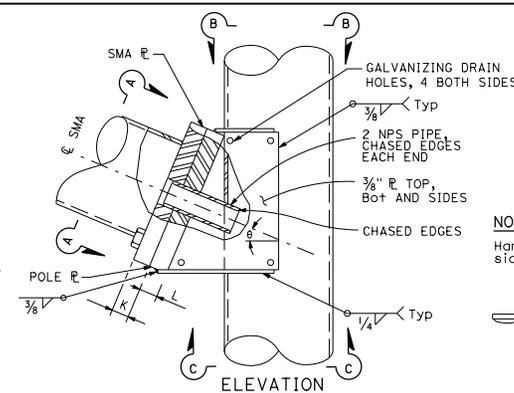
2015 REVISED STANDARD PLAN RSP ES-7D



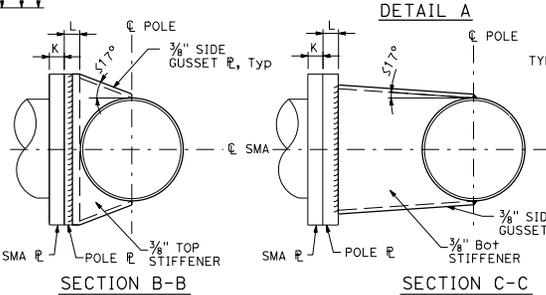
TYPE 16-3-100, 18-3-100,
23-3-100, 27-3-100
ELEVATION A



SECTION A-A
SIGNAL MAST ARM CONNECTION



ELEVATION



DETAIL A
SECTION B-B
SECTION C-C

| SIGNAL MAST ARM DATA | | | | | | | | | | | | |
|----------------------|---------------|-------------------|--------|----------------|-----------|---------------|---------------|--------------|----------------------|------------------|-----|--------|
| E PROJECTED LENGTH | F Min SPACING | G MOUNTING HEIGHT | H | Min OD AT POLE | THICKNESS | I BOLT CIRCLE | HS CAP SCREWS | J PLATE SIZE | K MAST ARM THICKNESS | L POLE THICKNESS | θ | X Max |
| 15'-0" | 8'-0" | 21'-8"± | 17'-6" | 7 7/8" | 0.1793" | 12" | | 1'-3" | 1 1/4" | 1 1/2" | 23° | - |
| 20'-0" | | 21'-8"± | | 7 3/8" | | | | | | | | |
| 25'-0" | 12'-0" | 22'-8"± | | 7 3/8" | | | | | | | | |
| 30'-0" | | 22'-8"± | | 8" | | | | | | | | |
| 35'-0" | 14'-0" | 23'-0"± | 16'-0" | 8 3/4" | 0.2391" | 13" | 1 1/4"-7NC-3" | | | 1 3/4" | 21° | 10'-6" |
| 40'-0" | | | | 9 3/8" | | | | | | | | |
| 45'-0" | 15'-0" | 23'-8"± | | 10 1/8" | | | | 1'-5" | 1 1/2" | 1 3/4" | 15° | 13'-0" |

| LUMINAIRE MAST ARM DATA | | | | | |
|-------------------------|--------|----------------|-----------|-------------------|-------------|
| M PROJECTED LENGTH | N RISE | Min OD AT POLE | THICKNESS | P MOUNTING HEIGHT | |
| | | | | 30'-0" POLE | 35'-0" POLE |
| 6'-0" | 2'-0"± | 3 1/4" | 0.1196" | 31'-6"± | 36'-6"± |
| 8'-0" | 2'-6"± | 3 1/2" | | 32'-0"± | 37'-0"± |
| 10'-0" | 3'-3"± | 3 3/8" | | 32'-9"± | 37'-9"± |
| 12'-0" | 4'-3"± | 3 7/8" | | 33'-9"± | 38'-9"± |
| 15'-0" | 4'-9"± | 4 1/4" | | 34'-3"± | 39'-3"± |

| POLE DATA | | | | BASE PLATE DATA | | | | LUMINAIRE MAST ARM | | SIGNAL MAST ARM | | CIDH PILE FOUNDATION | | |
|-----------|-----------|---------------------|----------|-----------------|------------------|---------------------|---------|--------------------|-----------|------------------|--------------------|----------------------|-------|--------|
| POLE TYPE | LOAD CASE | WIND VELOCITY (mph) | A HEIGHT | Min OD | THICKNESS | ALTERNATIVE SECTION | C | BOLT CIRCLE | THICKNESS | ANCHOR BOLT SIZE | LUMINAIRE MAST ARM | SIGNAL MAST ARM | DiA | DEPTH |
| | | | | BASE | TOP | B LENGTH | BOTTOM | TOP | | | | | | |
| 16-3-100 | | | 18'-6" | 13 3/8" | | | | | | | NONE | 15'-0" | | |
| 17-3-100 | | | 30'-0" | 11 3/4" | 0.2391" OR 0.25" | 10'-0" | 13 3/8" | 11 3/4" | | | 6'-15" [12'-0"] | 20'-0" | | |
| 18-3-100 | | | 17'-0" | 13 3/8" | | | | | | | NONE | | | |
| 19-3-100 | | | 30'-0" | 11 3/4" | | 10'-0" | 13 3/8" | 11 3/4" | 1'-11" | 1'-9" | 6'-15" [12'-0"] | 25'-0" | | 12'-0" |
| 19A-3-100 | | | 35'-0" | 11" | 0.3125" | 15'-0" | 13 3/8" | 11" | | | 6'-15" [15'-0"] | 30'-0" | | |
| 23-3-100 | | | 17'-0" | 13 3/8" | 0.2391" OR 0.25" | | | | | | NONE | | | |
| 24-3-100 | | | 30'-0" | 11 3/4" | | 10'-0" | 13 3/8" | 11 3/4" | | | 6'-15" [12'-0"] | 35'-0" | 3'-6" | |
| 24A-3-100 | | | 35'-0" | 11" | | 15'-0" | 11" | | | | 6'-15" [15'-0"] | | | |
| 26-3-100 | | | 30'-0" | 13 3/4" | 0.3125" | 10'-0" | 15 3/8" | 13 3/4" | 2'-1" | 1'-11" | 6'-15" [12'-0"] | 40'-0" | | |
| 26A-3-100 | | | 35'-0" | 13" | | 15'-0" | 13" | | | | 6'-15" [15'-0"] | 45'-0" | | 13'-0" |
| 27-3-100 | | | 17'-0" | 15 3/8" | | | | | | | NONE | | | |

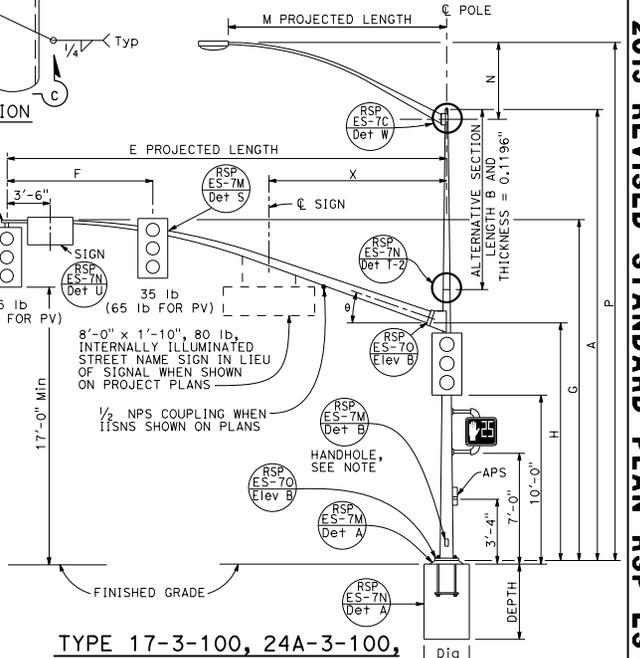
INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| | | | | | |

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C6798
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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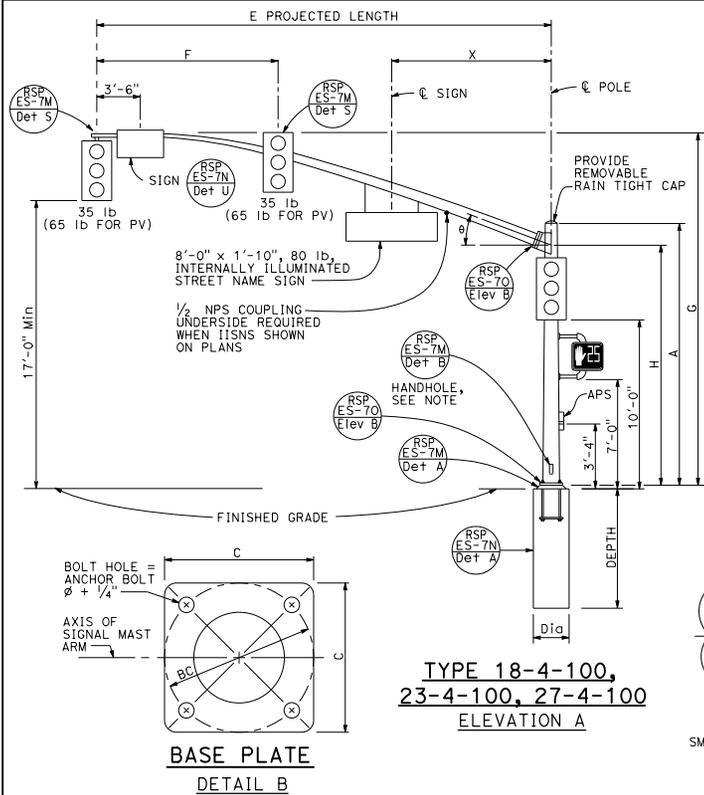
NOTE:
Handhole shall be located on the downstream side of traffic.



TYPE 17-3-100, 24A-3-100,
19-3-100, 26-3-100,
19A-3-100, 26A-3-100, 24-3-100
ELEVATION B

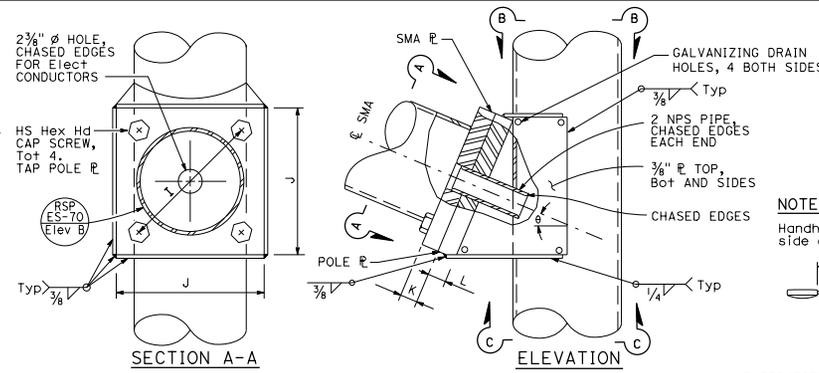
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 3 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 15' TO 45')**
NO SCALE
RSP ES-7E DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7E
DATED OCTOBER 30, 2015 - PAGE 460 OF THE STANDARD PLANS BOOK DATED 2015.
REVISED STANDARD PLAN RSP ES-7E

2015 REVISED STANDARD PLAN RSP ES-7E

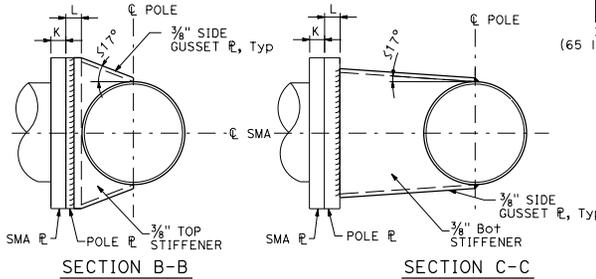


**TYPE 18-4-100,
23-4-100, 27-4-100**
ELEVATION A

BASE PLATE
DETAIL B



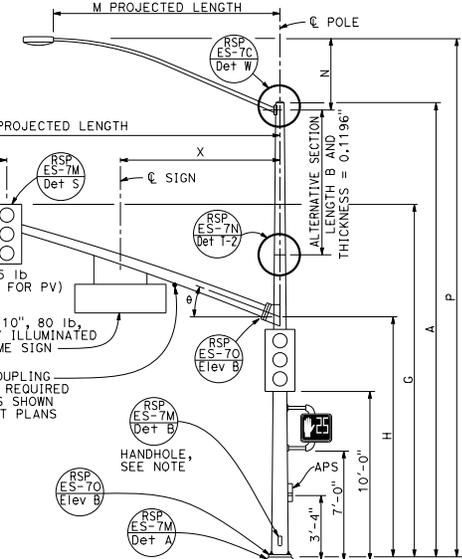
SIGNAL MAST ARM CONNECTION
DETAIL A



SECTION B-B

SECTION C-C

NOTE:
To accompany plans dated _____
Handhole shall be located on the downstream side of traffic.



**TYPE 19-4-100, 19A-4-100,
24-4-100, 24A-4-100,
26-4-100, 26A-4-100**
ELEVATION B

| SIGNAL MAST ARM DATA | | | | | | | | | | | | |
|----------------------|---------------|-------------------|--------|----------------|-----------|---------------|---------------|--------------|------------------------|--------------------|-----|--------|
| E PROJECTED LENGTH | F Min SPACING | G MOUNTING HEIGHT | H | Min OD AT POLE | THICKNESS | I BOLT CIRCLE | HS CAP SCREWS | J PLATE SIZE | K MAST ARM R THICKNESS | L POLE R THICKNESS | θ | X Max |
| 25'-0" | 10'-0" | 22'-8"± | | 7 3/8" | 0.2391" | 12" | 1 1/4"-7NC-3" | 1'-3" | 1 1/4" | 1 1/2" | 23° | 10'-6" |
| 30'-0" | 12'-0" | | 8" | 13 1/2" | | 15° | | | | | | 13'-0" |
| 35'-0" | 14'-0" | 23'-0"± | 16'-0" | 8 1/8" | | | | | | | | |
| 40'-0" | 15'-0" | | | 9 3/8" | | | | | | | | |
| 45'-0" | 15'-0" | 23'-8"± | | 10 1/4" | | | | | | | | |

| LUMINAIRE MAST ARM DATA | | | | | | |
|-------------------------|--------|----------------|-----------|-------------------|-------------|---|
| M PROJECTED LENGTH | N RISE | Min OD AT POLE | THICKNESS | P MOUNTING HEIGHT | Q | A |
| 6'-0" | 2'-0"± | 3 1/4" | 0.1196" | 30'-0" POLE | 35'-0" POLE | |
| 8'-0" | 2'-6"± | 3 1/2" | | 31'-6"± | 36'-6"± | |
| 10'-0" | 3'-3"± | 3 3/8" | | 32'-0"± | 37'-0"± | |
| 12'-0" | 4'-3"± | 4 1/4" | | 32'-9"± | 37'-9"± | |
| 15'-0" | 4'-9"± | 4 1/2" | | 33'-9"± | 38'-9"± | |
| | | | | 34'-3"± | 39'-3"± | |

| POLE TYPE | LOAD CASE | WIND VELOCITY (mph) | POLE DATA | | | | BASE PLATE DATA | | | | LUMINAIRE MAST ARM | SIGNAL MAST ARM | CIDH PILE FOUNDATION | | | | |
|-----------|-----------|---------------------|-----------|-------------|------------|------------------|------------------------------|------------------------------|---------------------------|--------|--------------------|-----------------|----------------------|-----------|-------------------|--------|-------------------|
| | | | A HEIGHT | Min OD BASE | Min OD TOP | THICKNESS | ALTERNATIVE SECTION B LENGTH | ALTERNATIVE SECTION C BOTTOM | ALTERNATIVE SECTION C TOP | C | | | BC = BOLT CIRCLE | THICKNESS | ANCHOR BOLT SIZE | DiA | DEPTH |
| 18-4-100 | 4 | 100 | 17'-0" | 16" | 13 5/8" | 0.2391" OR 0.25" | 10'-0" | 13 3/8" | 11 3/4" | 1'-11" | 1'-9" | 3" | 2 1/4"Ø x 42" | NONE | 25'-0", 30'-0" | 12'-0" | |
| 19-4-100 | | | 30'-0" | 11 3/4" | 15'-0" | | 13 3/8" | 11" | NONE | | | | | | | | 40'-0", 45'-0" |
| 19A-4-100 | | | 35'-0" | 11" | 15'-0" | | 13 3/8" | 11" | | | | | | | | | |
| 23-4-100 | | | 17'-0" | 13 5/8" | 10'-0" | | 15 5/8" | 13 3/4" | | | | | | | | | |
| 24-4-100 | | | 30'-0" | 11 3/4" | 15'-0" | 13 3/8" | 11" | | | | | | | | | | |
| 24A-4-100 | | | 35'-0" | 11" | 10'-0" | 15 5/8" | 13 3/4" | | | | | | | | | | |
| 26-4-100 | | | 30'-0" | 13 3/4" | 15'-0" | 15 5/8" | 13 3/4" | | | | | | | | | | |
| 26A-4-100 | | | 35'-0" | 13" | 15'-0" | 15 5/8" | 13" | | | | | | | | | | |
| 27-4-100 | | | 17'-0" | 15 5/8" | | | | | | | | | | | | | |

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 4 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 25' TO 45')**
RSP ES-7E DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7F
DATED OCTOBER 30, 2015 - PAGE 461 OF THE STANDARD PLANS BOOK DATED 2015.
REVISED STANDARD PLAN RSP ES-7F

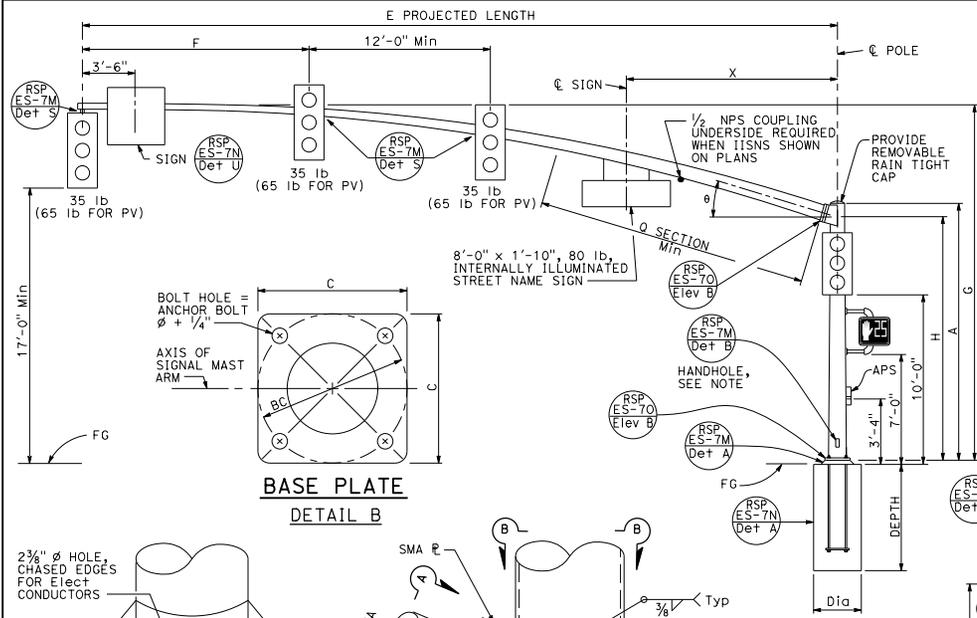
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C67393
Exp. 3-31-18
CIVIL ENGINEER PROFESSIONAL SEAL
STATE OF CALIFORNIA

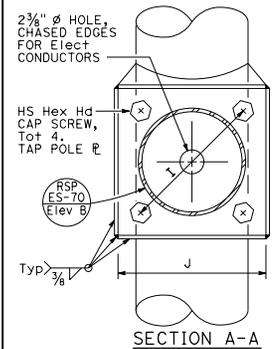
July 15, 2016
PLANS APPROVAL DATE

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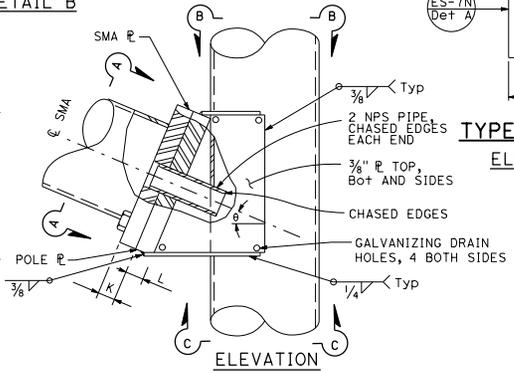
2015 REVISED STANDARD PLAN RSP ES-7F



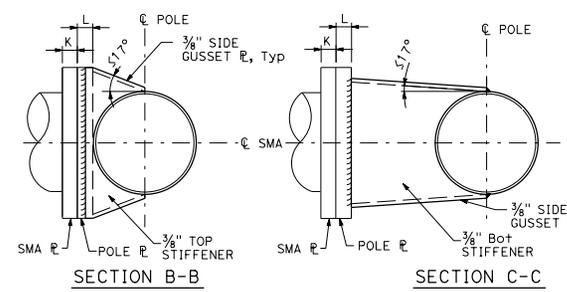
**BASE PLATE
DETAIL B**



**SIGNAL MAST ARM CONNECTION
DETAIL A**

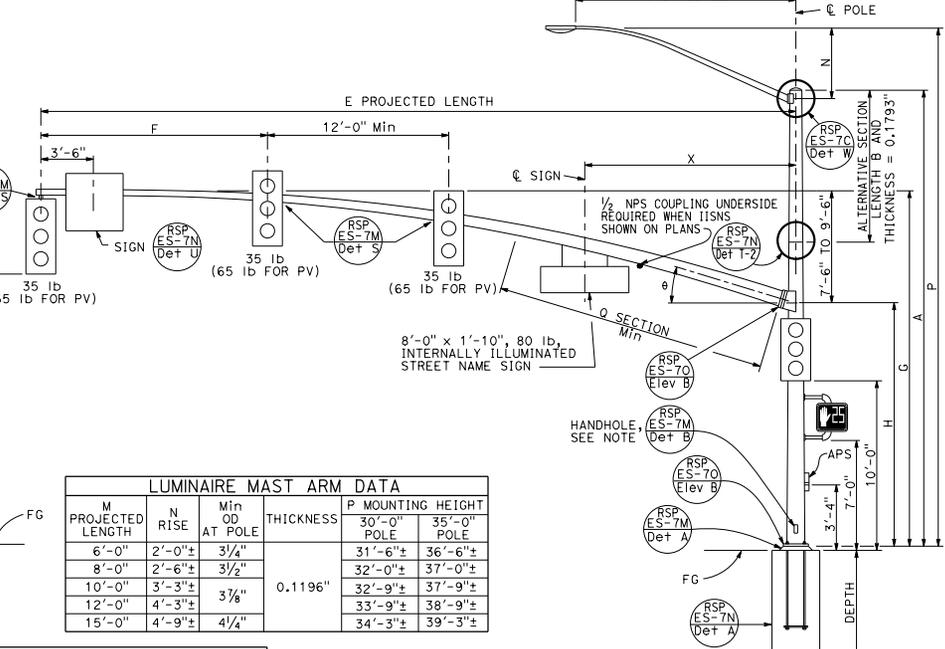


**TYPE 28-5-100
ELEVATION A**



SECTION B-B

SECTION C-C



**TYPE 29-5-100, 29A-5-100
ELEVATION B**

| M PROJECTED LENGTH | N RISE | Min OD AT POLE | THICKNESS | P MOUNTING HEIGHT POLE | P MOUNTING HEIGHT POLE |
|--------------------|--------|----------------|-----------|------------------------|------------------------|
| 6'-0" | 2'-0"± | 3 1/4" | 0.1196" | 31'-6"± | 36'-6"± |
| 8'-0" | 2'-6"± | 3 1/2" | | 32'-0"± | 37'-0"± |
| 10'-0" | 3'-3"± | 3 3/4" | | 32'-9"± | 37'-9"± |
| 12'-0" | 4'-3"± | 3 7/8" | | 33'-9"± | 38'-9"± |
| 15'-0" | 4'-9"± | 4 1/4" | | 34'-3"± | 39'-3"± |

| E PROJECTED LENGTH | F Min SPACING | G MOUNTING HEIGHT | H | Min OD AT POLE | THICKNESS | I BOLT CIRCLE | J HS CAP SCREWS | K PLATE SIZE | L MAST ARM THICKNESS | M POLE R THICKNESS | N | Q SECTION LENGTH | Q SECTION THICKNESS | X Max |
|--------------------|---------------|------------------------------|--------|-----------------------|-----------|---------------|-----------------|--------------|----------------------|--------------------|-----|------------------|---------------------|--------|
| 50'-0" 55'-0" | 15'-0" | 23'-7 1/2" TO 25'-7 1/2"± | 16'-0" | 1 1 7/8" 1'-1 1/4" | 0.1793" | 16" | 1 1/2"-6NC-3/4" | 1'-9" | 1 3/4" | 1 3/4" | 15° | 18'-0" 23'-0" | 0.2391" | 14'-0" |

| POLE TYPE | LOAD CASE | WIND VELOCITY (mph) | POLE DATA | | | | BASE PLATE DATA | | | | LUMINAIRE MAST ARM | SIGNAL MAST ARM | CIDH PILE FOUNDATION | | |
|-----------|-----------|---------------------|-----------|-------------|------------|-----------|------------------------------|---------------------------|-------|------------------|--------------------|-----------------|----------------------|------------------|--------|
| | | | A HEIGHT | Min OD BASE | Min OD TOP | THICKNESS | ALTERNATIVE SECTION B LENGTH | ALTERNATIVE SECTION C TOP | C | BC = BOLT CIRCLE | | | THICKNESS | ANCHOR BOLT SIZE | D1a |
| 28-5-100 | 5 | 100 | 17'-0" | 19 5/8" | 0.375" | 10'-0" | 17 3/4" | 2'-6" | 2'-4" | 3" | 2 1/4"Ø x 42" | NONE | 50'-0", [55'-0"] | 4'-0" | 14'-0" |
| 29-5-100 | | | 30'-0" | 17 3/4" | | 2'-6" | 2'-4" | | | | | | | | |
| 29A-5-100 | | | 35'-0" | 17" | | 15'-0" | 19 1/8" | 17" | | | | | | | |

□ INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

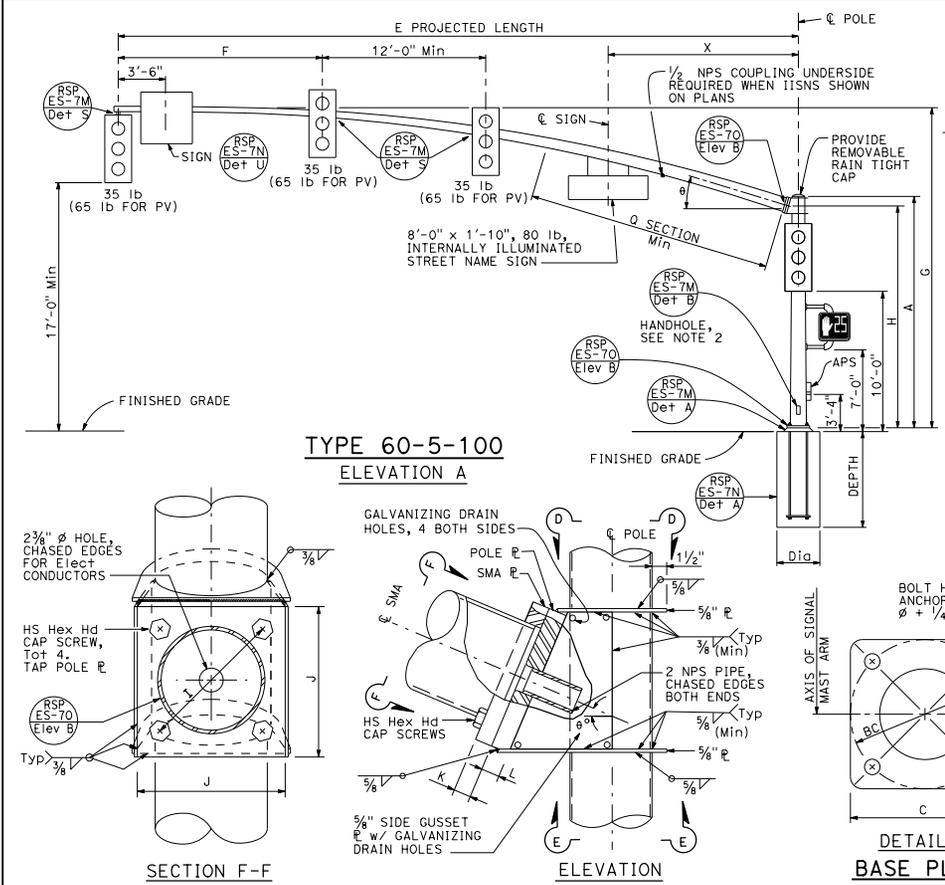
Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C67935
July 15, 2016
PLANS APPROVAL DATE
Stanley P. Johnson
REGISTERED PROFESSIONAL ENGINEER
No. C67935
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

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.

TO ACCOMPANY PLANS DATED _____
NOTE: Handhole shall be located on the downstream side of traffic.

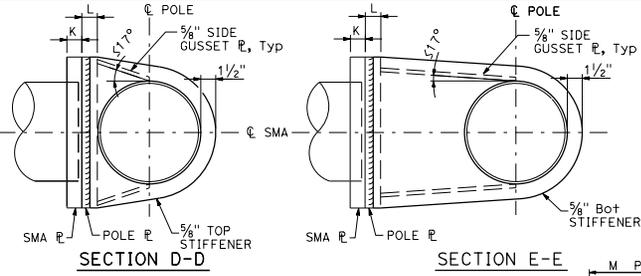
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 5 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 50' TO 55')**
NO SCALE
RSP ES-7G DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7G
DATED OCTOBER 30, 2015 - PAGE 462 OF THE STANDARD PLANS BOOK DATED 2015.
REVISED STANDARD PLAN RSP ES-7G

2015 REVISED STANDARD PLAN RSP ES-7G



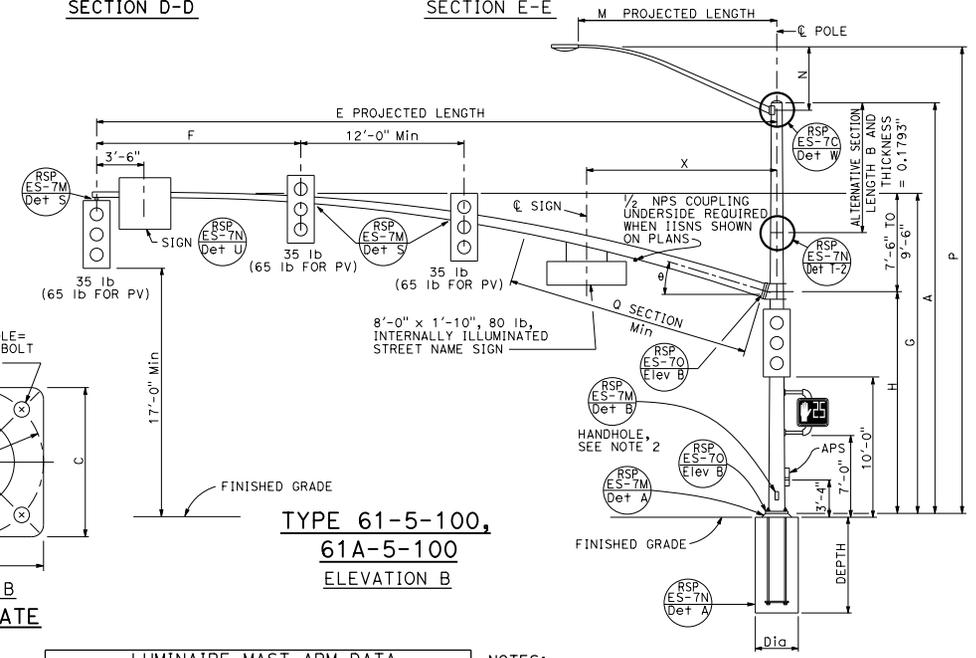
TYPE 60-5-100
ELEVATION A

SIGNAL MAST ARM CONNECTION
DETAIL B



SECTION D-D

SECTION E-E



TYPE 61-5-100,
61A-5-100
ELEVATION B

| LUMINAIRE MAST ARM DATA | | | | |
|-------------------------|--------|----------------|-----------|-------------------|
| M PROJECTED LENGTH | N RISE | Min OD AT POLE | THICKNESS | P MOUNTING HEIGHT |
| 6'-0" | 2'-0" | 3/4" | 0.1196" | 30'-0" |
| 8'-0" | 2'-6" | 3/2" | | 31'-6" |
| 10'-0" | 3'-3" | 3 1/2" | | 32'-0" |
| 12'-0" | 4'-3" | 3 3/4" | | 32'-9" |
| 15'-0" | 4'-9" | 4 1/4" | | 33'-9" |
| | | | | 35'-0" |
| | | | | 36'-6" |
| | | | | 37'-0" |
| | | | | 37'-9" |
| | | | | 38'-9" |
| | | | | 39'-3" |

NOTES:

- The radial separation between the face of the pole and the adjacent insides of the top and bottom gusset plates shall not exceed 3/16". Fillet weld size to be increased by amount of gap.
- Handhole shall be located on the downstream side of traffic.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 5 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 60' TO 65')
NO SCALE

RSP ES-7H DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7H
DATED OCTOBER 30, 2015 - PAGE 463 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-7H

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

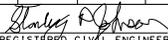
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|------|--------|-------|--------------------------|--------------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| | | | | |

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C6793
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE
July 15, 2016

TO ACCOMPANY PLANS DATED _____

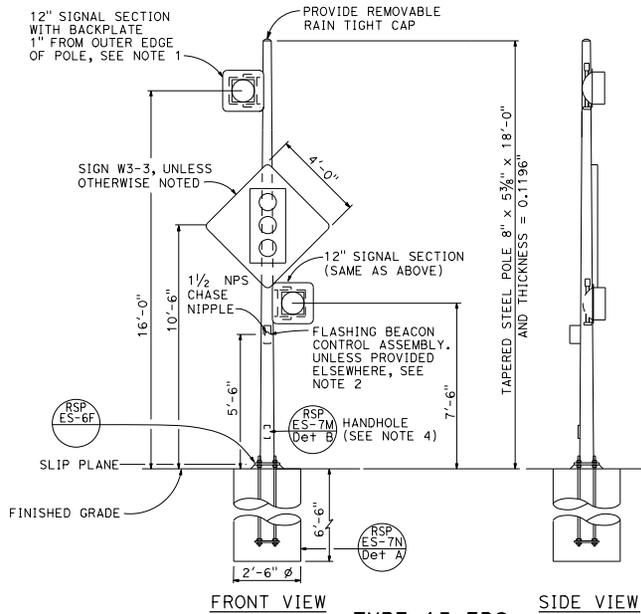
2015 REVISED STANDARD PLAN RSP ES-7H

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|--------|-------|--------------------------|-----------|--------------|
| | | | | | |
|  REGISTERED CIVIL ENGINEER No. C67395 Exp. 3-31-18 CIVIL STATE OF CALIFORNIA | | | | | |
| July 15, 2016 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. | | | | | |

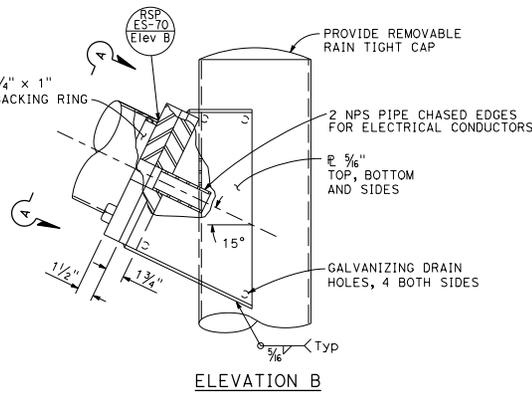
TO ACCOMPANY PLANS DATED _____

NOTES:

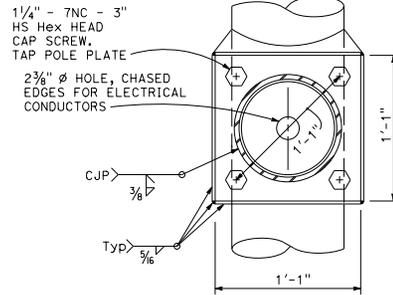
1. See Standard Plans ES-4A and ES-4D for attachment fitting details.
2. For wiring diagram, see Revised Standard Plan RSP ES-14B.
3. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
4. Handhole shall be located on the downstream side of traffic.
5. See project plans for type of standard to be installed.



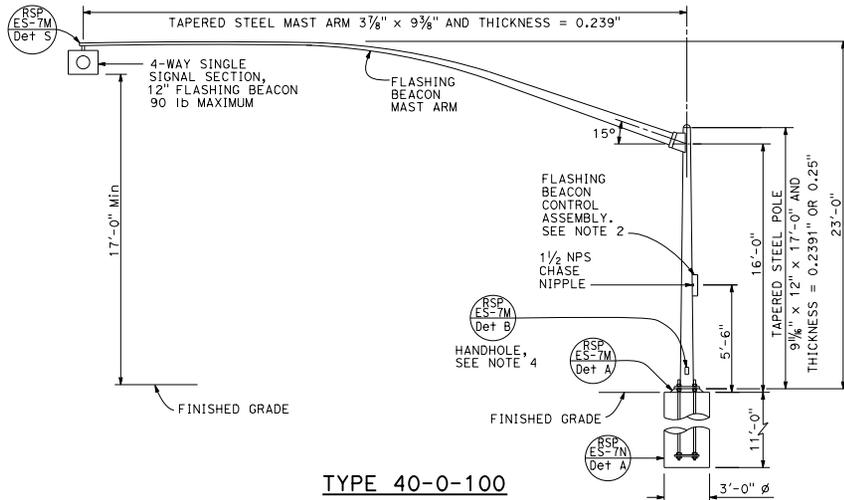
TYPE 15-FBS
FLASHING BEACON WITH SLIP BASE INSTALLATION
DETAIL A



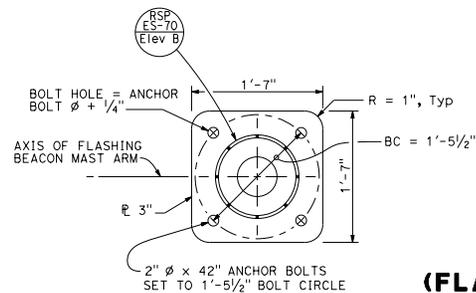
ELEVATION B



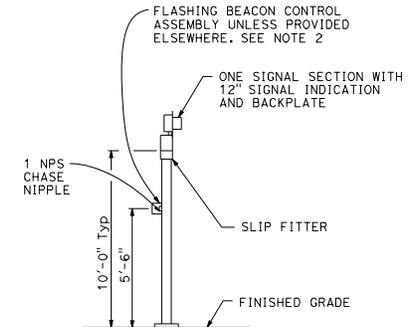
VIEW A-A
FLASHING BEACON MAST ARM
CONNECTION DETAIL
DETAIL B



TYPE 40-0-100
ELEVATION A



BASE PLATE
DETAIL C



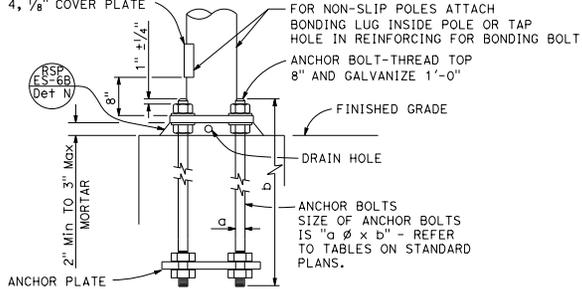
TYPE 1-A, 1-B, 1-C, AND 1-D
FLASHING BEACON INSTALLATION
DETAIL D
See Note 5

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(FLASHING BEACON ON A TYPE 1,
TYPE 15-FBS, AND TYPE 40 STANDARD)
NO SCALE

RSP ES-7J DATED JULY 15, 2016 SUPERSEDES RSP ES-7J DATED APRIL 15, 2016 AND STANDARD PLAN ES-7J DATED OCTOBER 30, 2015 - PAGE 464 OF THE STANDARD PLANS BOOK DATED 2015.
REVISED STANDARD PLAN RSP ES-7J

2015 REVISED STANDARD PLAN RSP ES-7J

4" x 6 1/2" ROUNDED RECTANGLE HANDHOLE REINFORCED WITH RING WELDED TO OUTSIDE OF POLE. SEE NOTE 4, 1/8" COVER PLATE



HANDHOLE AND ANCHORAGE

DETAIL A

IDENTIFICATION NUMBER

1. Attach a stamped metal tag with pole's identification number above the handhole. 1/4" high number, minimum.
2. Attach a stamped metal tag with mast arm's identification number to the bottom of the signal mast arm near the pole plate. 1/4" high number, minimum.

26A - 3 - 100 - 45 - 10 - F or FB

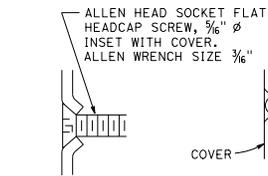
Type Load case (Use SL for special load case) Design wind velocity (mph) Signal mast arm length (ft) Standard plan year Only for poles or most arms using Detail F Only for poles or most arms using RSP ES-70

Maximum signal mast arm length

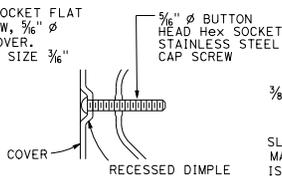
SAMPLE IDENTIFICATION NUMBER

NOTES:

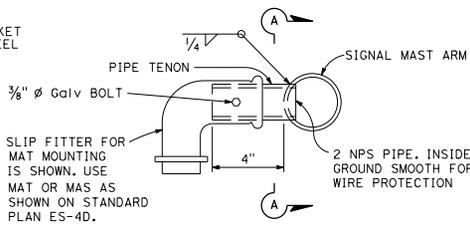
1. Provide a Hex nut, leveling nut and 2 washers for each bolt.
2. Luminaire mast arms shall be round, tapered steel tubes, taper of 0.1375" to 0.143-inch per foot with an end section 2 3/8" OD for mounting hardware. Extensions of 2 NPS Standard pipe and 7" long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 1'-3".
3. Signal mast arms shall be round, tapered steel tubes, maximum taper 0.143-inch per foot.
4. Handhole reinforcement ring shall be 1/4" x 2" for 0.1196" to 0.2391" thick poles, 3/8" x 2" for 0.3125" to 0.375" thick poles.
5. Handholes shall be located on the downstream side of traffic.
6. Detail F, fatigue resistant weld, is required at socket welded signal mast arm plate and pole base plate.
7. Cap screws shall be tightened by the turn-of-nut method 1/3 turn from a snug tight condition. No washer will be required.
8. Outside diameter, wall thickness, and corresponding section properties of poles and mast arms as shown in the Standard Plans are minimums. Unless otherwise specified, alternative sections shall require approval by the Engineer.
9. Design: AASHTO Standard Specifications for Structural Support for Highway Signs, Luminaires, and Traffic Signals, 6th Edition. Basic Wind Speed = 100 mph (3 seconds gust). Yearly Mean Wind Velocity = 15.6 mph.
10. Materials (Structural steel):
fy = 55,000 psi (tapered steel tube and anchor bolts)
fy = 50,000 psi (unless otherwise noted)
11. Materials (Reinforced concrete):
f'c = 3,625 psi
fy = 60,000 psi



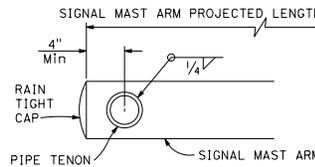
TYPICAL DETAIL
DETAIL B-1



ALTERNATIVE DETAIL
DETAIL B-2

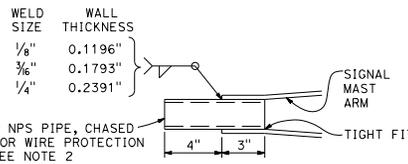


SIDE TENON
DETAIL S-1

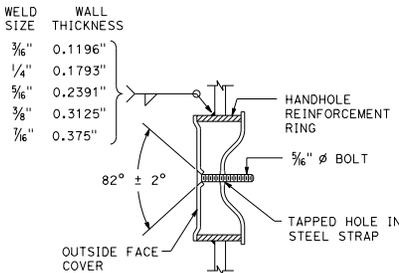


SECTION A-A

**PIPE TENONS
DETAIL S**

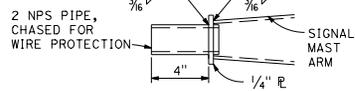


TIP TENON
DETAIL TS



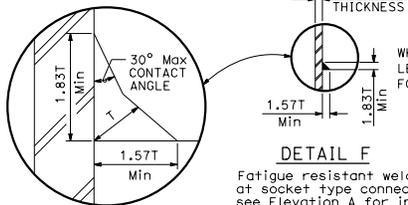
TAMPER RESISTANT HANDHOLE COVER

DETAIL B

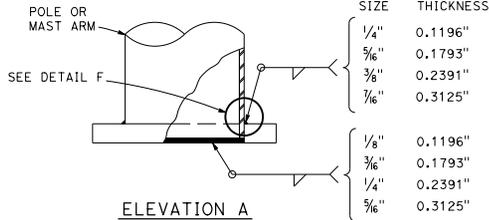


TIP TENON
DETAIL TL

This detail supersedes Detail S when so designated



DETAIL F



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
DETAIL No. 1)**
NO SCALE

RSP ES-7M DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7M
DATED OCTOBER 30, 2015 - PAGE 467 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-7M

2015 REVISED STANDARD PLAN RSP ES-7M

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

Stanley P. Johnson
REGISTERED CIVIL ENGINEER

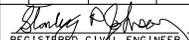
July 15, 2016
PLANS APPROVAL DATE

Stanley P. Johnson
No. C6793
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

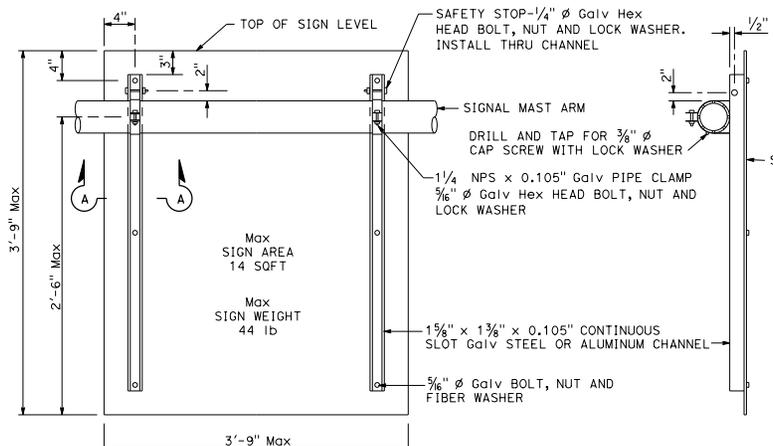
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TO ACCOMPANY PLANS DATED _____

| | | | | |
|------|--------|-------|--------------------------|--------------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET TOTAL SHEETS |
| | | | | |


 REGISTERED CIVIL ENGINEER
 No. CS793
 Exp. 3-31-18
 STATE OF CALIFORNIA

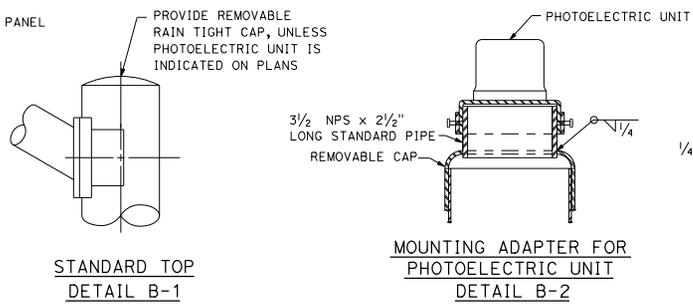
July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



REAR VIEW

SIDE VIEW

SIGN MOUNTING DETAILS
DETAIL U

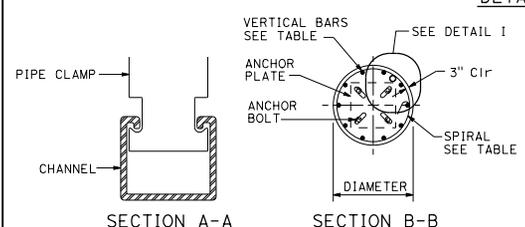


STANDARD TOP
DETAIL B-1

MOUNTING ADAPTER FOR
PHOTOELECTRIC UNIT
DETAIL B-2

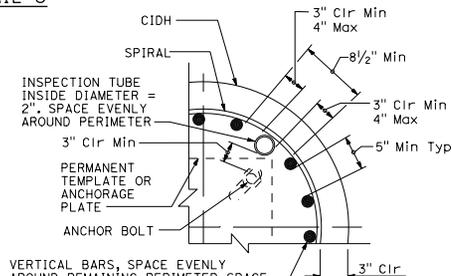
ALTERNATIVE
MOUNTING ADAPTER
DETAIL B-3

POLE TOP DETAILS
DETAIL B



SECTION A-A

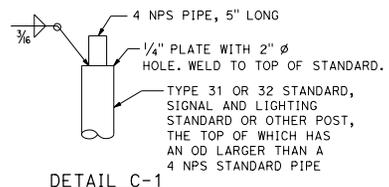
SECTION B-B



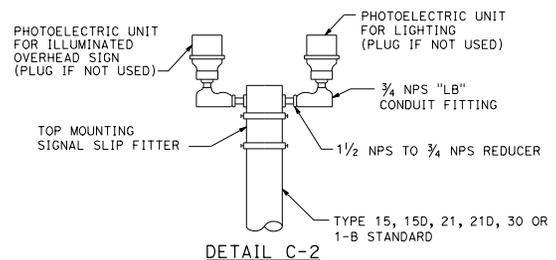
INSPECTION TUBE PLACEMENT
DETAIL I

| CIDH REINFORCING AND INSPECTION TUBE SCHEDULE | | | |
|---|---------------|-----------|-----------------|
| CIDH DIAMETER | VERTICAL BARS | SPIRAL | INSPECTION TUBE |
| 2 ft | 8-#5 | | 2 |
| 2.5 ft | 10-#6 | #4 AT 6 | 4* |
| 3 ft | 12-#7 | | 4 |
| 3.5 ft | 14-#8 | #5 AT 6 | 4 |
| 4 ft | 18-#9 | 2-#4 AT 7 | 5 |
| 4.5 ft | 18-#9 | 2-#5 AT 7 | 5 |
| 5 ft | 22-#10 | 2-#5 AT 7 | 6 |
| 6 ft | 26-#11 | 2-#6 AT 7 | 7 |

* FOR SLIP BASE VERSIONS WITH 3 ANCHOR BOLTS USE 3 INSPECTION TUBES.



DETAIL C-1



DETAIL C-2

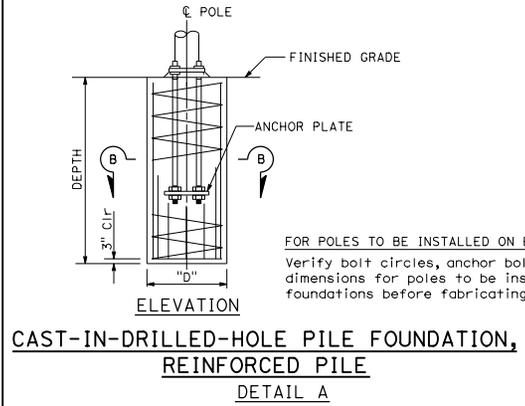
DUAL PHOTOELECTRIC UNIT MOUNTING DETAIL
DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

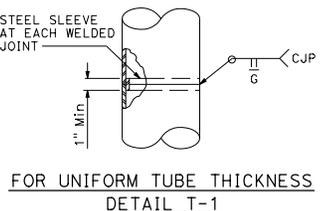
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, DETAIL No. 2)

NO SCALE
RSP ES-7N DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7N DATED OCTOBER 30, 2015 - PAGE 468 OF THE STANDARD PLANS BOOK DATED 2015.

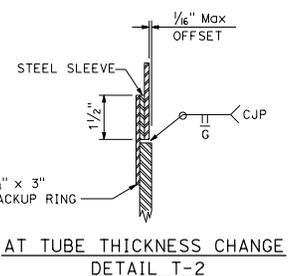
REVISED STANDARD PLAN RSP ES-7N



CAST-IN-DRILLED-HOLE PILE FOUNDATION,
REINFORCED PILE
DETAIL A



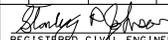
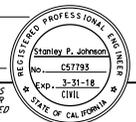
FOR UNIFORM TUBE THICKNESS
DETAIL T-1



AT TUBE THICKNESS CHANGE
DETAIL T-2

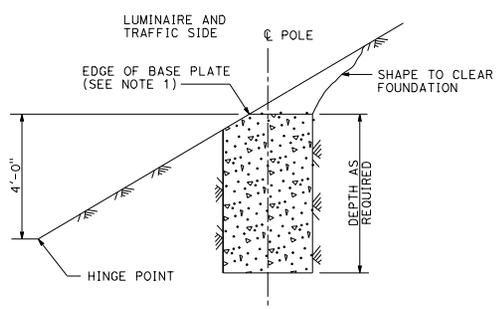
POLE SPLICES
DETAIL T

2015 REVISED STANDARD PLAN RSP ES-7N

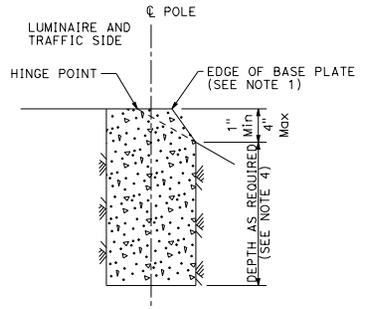
| | | | | | |
|--|--------|-------|-----------------------------|--------------|---|
| D16+ | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|  REGISTERED CIVIL ENGINEER | | | | |  |
| July 15, 2016 PLANS APPROVAL DATE | | | | | |
| <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small> | | | | | |

TO ACCOMPANY PLANS DATED _____

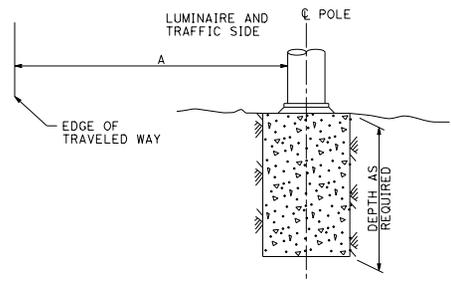
| STANDARD TYPE | SETBACK (DIMENSION A) |
|-----------------------------|-----------------------|
| 32 | 30'-0" (Min) |
| 31 | 20'-0" (Min) |
| 15, 15D, 15-SB, 21, 21D, 30 | ARM LENGTH (Min) |



CUT SLOPES
STEEPER THAN 4:1,
LESS THAN 2:1
DETAIL A-1
See Note 2 and 3



FILL SLOPES
STEEPER THAN 4:1,
LESS THAN 2:1
DETAIL A-2
See Note 2 and 3

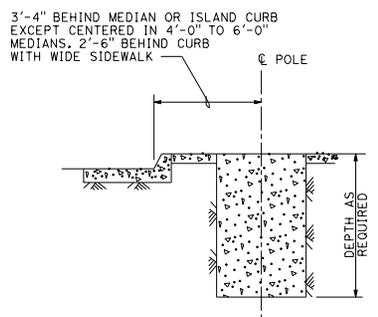


FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3
See Note 2

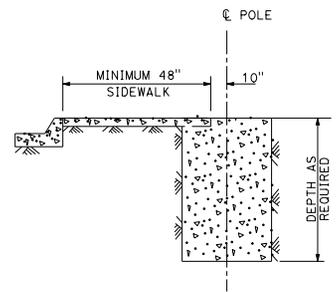
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A

NOTES:

1. Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
2. Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
3. Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
4. CIDH embedment depth shall be increased beyond standard depths by the diameter of the CIDH.



MEDIAN, ISLAND
OR WIDE SIDEWALK
DETAIL B-1
7' Wide and wider



NARROW SIDEWALK
DETAIL B-2
Less than 7' wide

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(FOUNDATION INSTALLATIONS)

NO SCALE

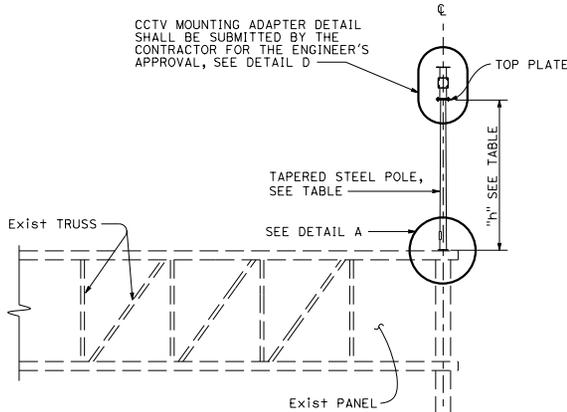
RSP ES-11 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-11 DATED
DATED OCTOBER 30, 2015 - PAGE 483 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-11

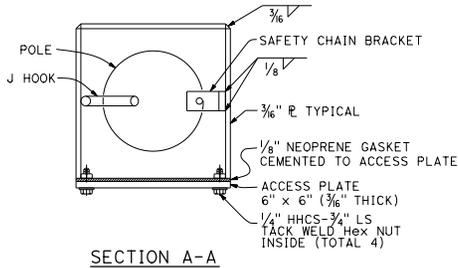
2015 REVISED STANDARD PLAN RSP ES-11

| POLE EXTENSION TYPE | POLE DATA | | | | HANDHOLE SIZE |
|---------------------|------------|-------------------|-------------------|-----------|---------------|
| | HEIGHT "h" | Min OD | | THICKNESS | |
| | | BASE | TOP | | |
| CCTV 5 | 5' | 4 $\frac{3}{8}$ " | 3 $\frac{3}{4}$ " | 0.1793" | 3" x 5" |
| CCTV 10 | 10' | 5 $\frac{1}{4}$ " | | | |
| CCTV 15 | 15' | 5 $\frac{5}{8}$ " | | | |

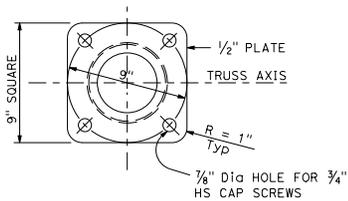
CCTV MOUNTING ADAPTER DETAIL SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE ENGINEER'S APPROVAL, SEE DETAIL D



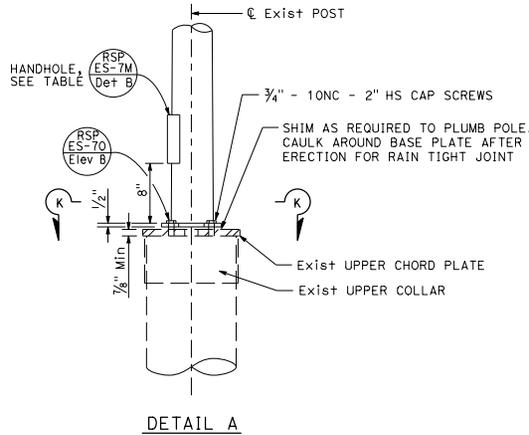
ELEVATION A



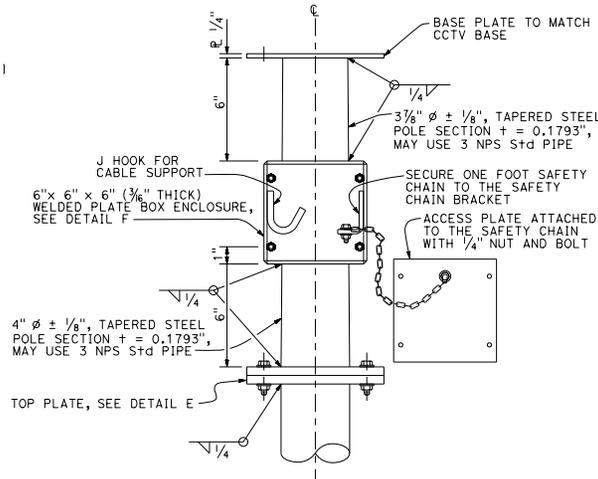
SECTION A-A



SECTION K-K



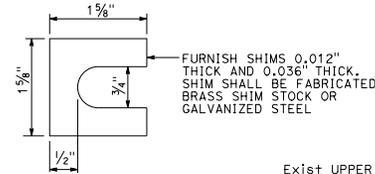
DETAIL A



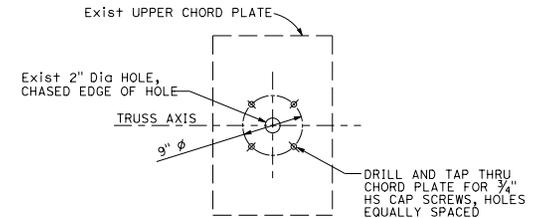
**CLOSED CIRCUIT TELEVISION MOUNTING ADAPTER
DETAIL D**

NOTES:

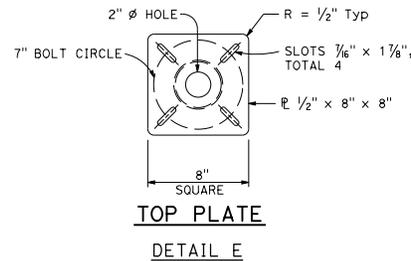
1. Verify controlling field dimensions before ordering or fabricating any material.
2. Bolt hole locations may vary at the discretion of the Engineer.
3. See Std Plan S13.
4. For wind loading see RSP ES-7M.
5. Materials (Structural Steel):
 - a. fy = 55,000 psi (tapered steel tube)
 - b. fy = 50,000 psi (unless otherwise noted)



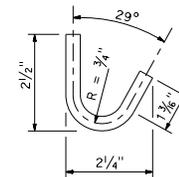
**SHIM
DETAIL B**



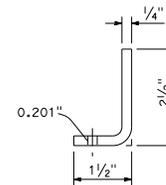
**UPPER CHORD PLATE
DETAIL C**
See Note 3



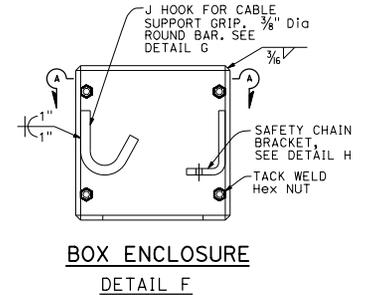
**TOP PLATE
DETAIL E**



**J HOOK
DETAIL G**



**SAFETY CHAIN BRACKET
DETAIL H**



**BOX ENCLOSURE
DETAIL F**

| | | | | | |
|------|--------|-------|--------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| | | | | | |

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C67395
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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.

TO ACCOMPANY PLANS DATED _____

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION,
5' TO 15' OVERHEAD SIGN MOUNTED POLE)**
NO SCALE

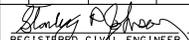
RSP ES-16A DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-16A
DATED OCTOBER 30, 2015 - PAGE 493 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-16A

2015 REVISED STANDARD PLAN RSP ES-16A

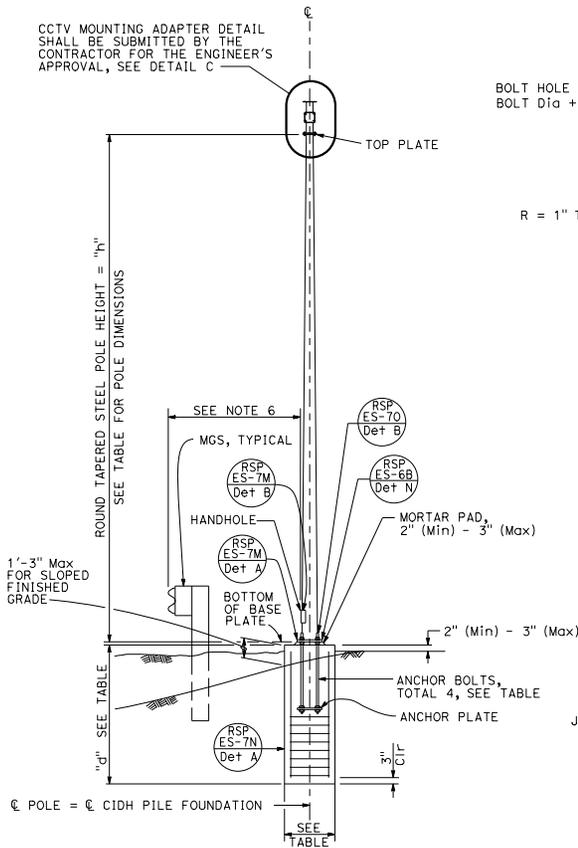
| POLE TYPE | POLE DATA | | | BASE PLATE DATA | | | | CIDH | | |
|-----------|------------|--------|--------|-----------------|-----------|-----------|---------------------|------------------|-------|-------|
| | HEIGHT "h" | Min OD | | THICKNESS | "c" | THICKNESS | ANCHOR BOLT SIZE | BC = BOLT CIRCLE | Dia | "d" |
| | | BASE | TOP | | | | | | | |
| CCTV 25 | 25' | 7 3/8" | 3 3/4" | 0.1793" | 1'-1" | 1" | 1 1/2" ϕ x 36" | 1 1/2" | 2'-6" | 7'-0" |
| CCTV 30 | 30' | 8" | | | 1'-1 1/2" | | | 1'-0" | | 7'-6" |
| CCTV 35 | 35' | 8 5/8" | | | 1'-2" | | | 1'-1" | | 8'-0" |
| CCTV 40 | 40' | 9 3/8" | | | 1'-1 1/2" | | | 1'-1 1/2" | | 8'-0" |
| CCTV 45 | 45' | 10" | | | 1'-3" | | | 1'-2" | | 8'-6" |

| | | | | | |
|------|--------|-------|---------------|-------|--------|
| D16+ | COUNTY | ROUTE | POST MILES | SHEET | TOTAL |
| | | | TOTAL PROJECT | No. | SHEETS |

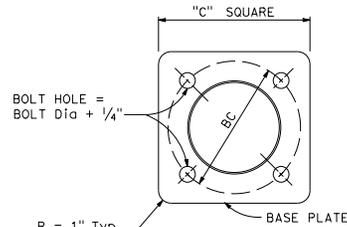

 REGISTERED CIVIL ENGINEER
 No. C67393
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

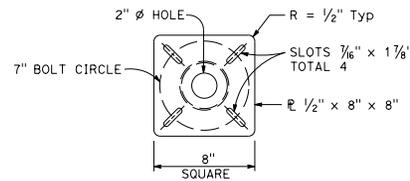
TO ACCOMPANY PLANS DATED _____



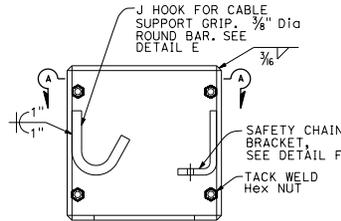
ELEVATION A



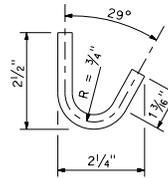
BASE PLATE
DETAIL A



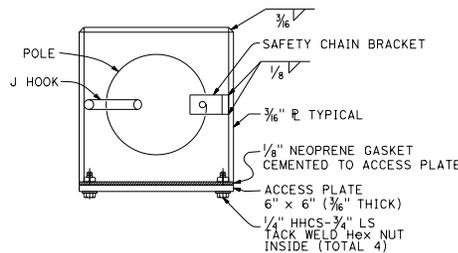
TOP PLATE
DETAIL B



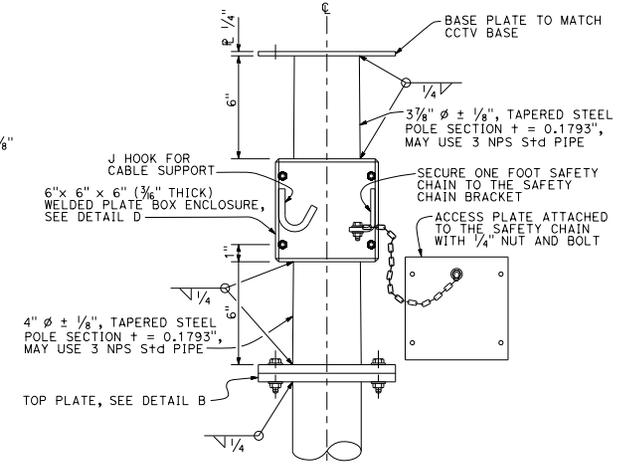
BOX ENCLOSURE
DETAIL D



J HOOK
DETAIL E



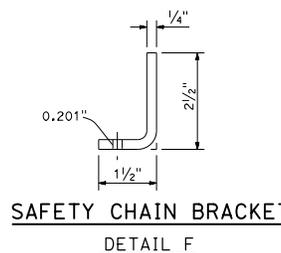
SECTION A-A



CLOSED CIRCUIT TELEVISION MOUNTING ADAPTER
DETAIL C

NOTES:

- Verify controlling field dimensions before ordering or fabricating any material.
- During pole installation, the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
- For wind loading see RSP ES-7M.
- Materials (Structural Steel):
a. fy = 55,000 psi (tapered steel tube and anchor bolts)
b. fy = 50,000 psi (unless otherwise noted)
- Materials (Reinforced Concrete):
a. f'c = 3,625 psi
b. fy = 60,000 psi
- See A77R1 thru A77R8



SAFETY CHAIN BRACKET
DETAIL F

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION,
25' TO 45' POLE)**

NO SCALE

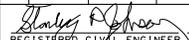
RSP ES-16B DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-16B
DATED OCTOBER 30, 2015 - PAGE 494 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-16B

2015 REVISED STANDARD PLAN RSP ES-16B

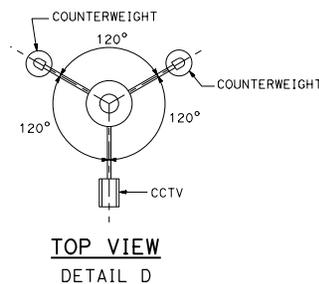
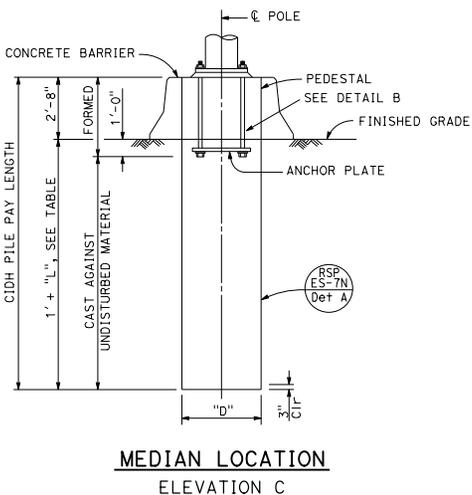
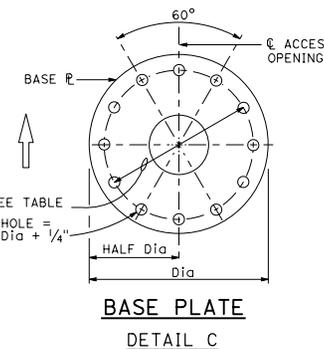
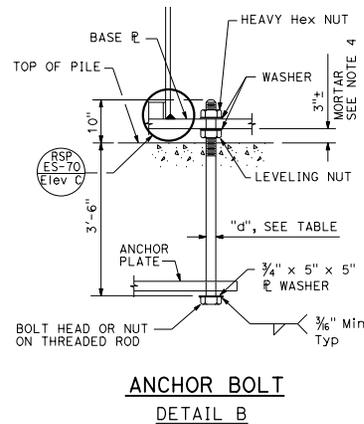
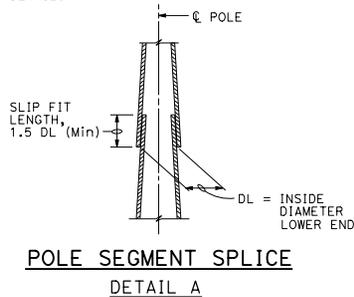
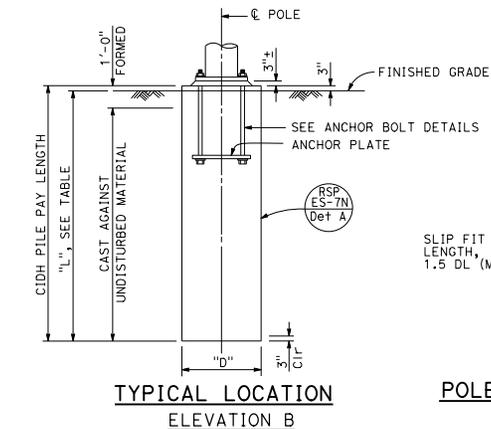
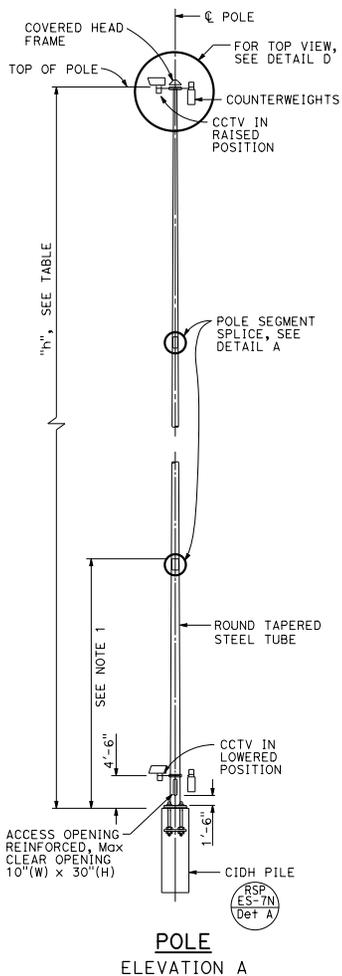
| POLE TYPE | POLE DATA | | | | | BASE PLATE DATA | | | | CIDH PILE DATA | | |
|------------|---------------|--------|---------|---|-----------------------------------|-----------------|-----------|------------------|--------|------------------|-------|--------|
| | HEIGHT "H" | Min OD | | THICKNESS BOTTOM SEGMENT (Min 25" LONG) | Min THICKNESS UPPER SEGMENT(S) | Dia | THICKNESS | ANCHOR BOLT SIZE | | BC = BOLT CIRCLE | "O" | "L" |
| | | BASE | TOP | | | | | TOTAL | "d" | | | |
| HM CCTV 50 | 50' | 18" | 10 7/8" | 0.3125" | 0.1875" | 25" | 2" | 12 | 2 1/4" | 20" | 3'-6" | 13'-0" |
| HM CCTV 60 | 60' | | 9 1/2" | | | 30" | | | | | 3" | 27" |
| HM CCTV 70 | 70' | 22" | 12" | 0.375" | 0.25" | 33" | 3" | 3" | 27" | 37" | 4'-6" | 15'-0" |
| HM CCTV 80 | 80' | 22" | 11 5/8" | | | 42" | | | | | 37" | 6'-0" |
| HM CCTV 90 | 90' | 25" | 17 1/8" | | | | | | | | | |

| | | | | | |
|------|--------|-------|-----------------------------|--------------|-----------------|
| D16+ | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| | | | | | |


 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 Stanley P. Johnson
 No. C67935
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

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 THE ACCURACY OR COMPLETENESS OF SCANNED
 COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED _____



NOTES:

1. Pole details shall suit the lowering device and this foundation plan. Pole details shall be submitted to the Engineer for approval.
2. For closed circuit television details, see Electrical Plans.
3. Foundation design is based on a 3-second wind gust of 100 mph.
4. For central void and drain holes in mortar, see Revised Standard Plan RSP ES-6B detail N.
5. For wind loading see RSP ES-7M.
6. Materials (Structural Steel):
fy = 55,000 psi (tapered steel tube)
fy = 50,000 psi (unless otherwise noted)
7. Access opening shall be located on the downstream side of traffic unless otherwise determined by the Engineer.

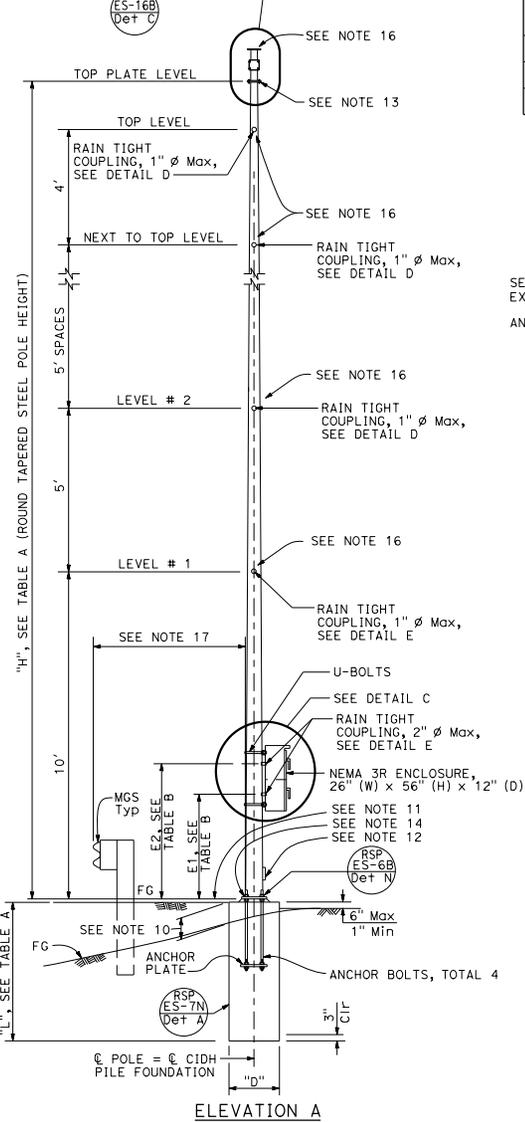
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION,
50' TO 90' HIGH MAST POLE)**
NO SCALE

RSP ES-16C DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-16C
DATED OCTOBER 30, 2015 - PAGE 495 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-16C

2015 REVISED STANDARD PLAN RSP ES-16C

WHEN CCTV IS REQUIRED, CCTV MOUNTING ADAPTER DETAIL SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE ENGINEER'S APPROVAL, SEE RSP ES-16B Det C



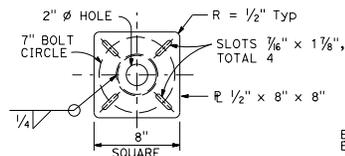
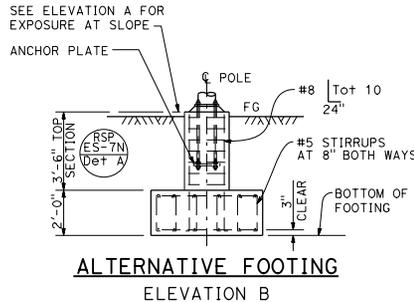
| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | | CIDH PILE DATA | | | |
|-----------|------------|--------|--------|-----------|-----------------|-----------|-----------------------|------------------|----------------|--------------|-----------|--|
| | HEIGHT "H" | Min OD | | THICKNESS | "C" | THICKNESS | ANCHOR BOLTS SIZE | BC = BOLT CIRCLE | "D" | "L" | | |
| | | BASE | TOP | | | | | | | LEVEL GROUND | UP TO 2:1 | |
| VDS 30 | 30' | 8" | 3 3/8" | 0.11793" | 1'-1 1/2" | 1 1/2" | 1 1/2" ϕ x 3'-0" | 1'-0" | 2'-6" | 6'-0" | 8'-0" | |
| VDS 35 | 35' | 8 3/4" | 3 1/8" | 0.1196" | 1'-6" | 2" | 1 1/2" ϕ x 3'-0" | 1'-4" | 3'-0" | 7'-0" | 9'-0" | |
| VDS 40 | 40' | 12" | 8 3/8" | 0.11793" | 1'-6" | 2" | 1 1/2" ϕ x 3'-0" | 1'-4" | 3'-0" | 9'-0" | 11'-0" | |

| POLE TYPE | COUPLING | |
|-----------|----------|---------|
| | E1(Max) | E2(Max) |
| VDS 30 | | |
| VDS 35 | 3'-6" | 4'-9" |
| VDS 40 | | |

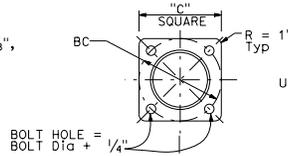
| GROUND LEVEL | SPREAD FOOTING | |
|--------------|---------------------------------------|----------------------------|
| | FOOTING SIZE (LENGTH x WIDTH x DEPTH) | REINFORCEMENT TOP & BOTTOM |
| UP TO 2:1 | 10'-0" x 10'-0" x 2'-0" | 15 - #5 EW |

| LOCATION | MAXIMUM TOTAL EPA PER LEVEL (SQUARE FEET) | MAXIMUM TOTAL WEIGHT (lb) |
|-----------------------------------|---|---------------------------|
| LEVEL #1 | | 200 |
| LEVEL #2 | 14 | |
| LEVEL #3 | 10 *** | |
| LEVEL #4 (VDS 35 AND VDS 40 ONLY) | 2.5 | 50 |
| LEVEL #5 (VDS 40 ONLY) | | |
| NEXT TO TOP LEVEL | | |
| ON TOP PLATE LEVEL ** | | |

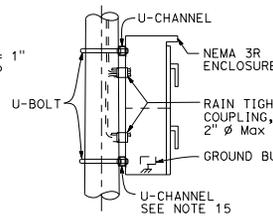
* MAXIMUM HORIZONTAL EXTENT BEYOND POLE FACE IS 4 FEET.
** MAXIMUM EXTENT ABOVE TOP PLATE IS 3 FEET.
*** 14 IF LEVEL #1 IS ZERO.



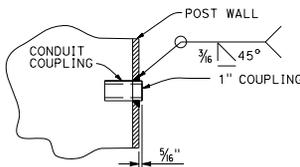
TOP PLATE DETAIL A



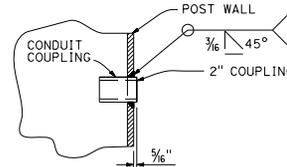
BASE PLATE DETAIL B



DETAIL C



1" COUPLING DETAIL D



2" COUPLING DETAIL E

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| | | | | | |

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C67393
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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.

NOTES:

- All steel shall be galvanized after fabrication.
- The foundation shall be treated as level ground condition if the slope inclination is flatter than 4 : 1 (Horizontal : Vertical)
- For devices mounted and mounting heights, see TABLE B.
- For wind loading see RSP ES-7M.
- Materials (Structural Steel):
a. fy = 55,000 psi (tapered steel tube)
b. fy = 50,000 psi (unless otherwise noted)
- Anchor bolts: fy = 55,000 psi
- Materials (Reinforced Concrete):
a. f'c = 3,600 psi
b. fy = 60,000 psi
- Verify all controlling field dimension before ordering of fabricating any material.
- When no barriers are used, the NEMA 3R enclosure shall be located on the downstream side and perpendicular to the roadway.
1'-3" (Max) for sloped finished grade.
- Bottom of base plate.
- Handhole. RSP ES-7M Det B, RSP ES-7M Det A
- Top plate. Install a blank flange on the top plate when closed circuit television is not used.
- RSP ES-70 Elev B
- U-channel with bracket.
- Use the manufacturer's Effective Projected Area (EPA) for attachments. Assign attachments to nearest level and sum each level, see Table D for limitations.
- See A77R1 thru A77R8

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION WITH
VEHICLE DETECTION SYSTEM,
30' TO 40' POLE)**

NO SCALE

RSP ES-16D DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-16D
DATED OCTOBER 30, 2015 - PAGE 496 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-16D

2015 REVISED STANDARD PLAN RSP ES-16D