

To accompany plans dated 10-18-10



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 301 | 364 |

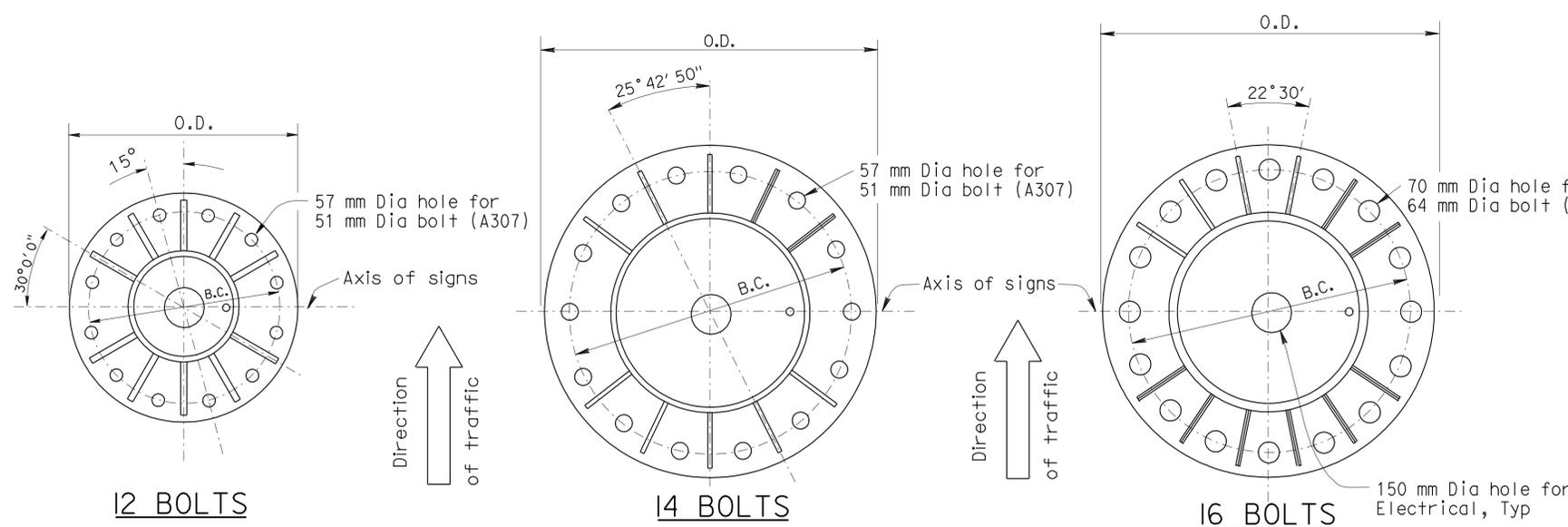
REGISTERED CIVIL ENGINEER

January 24, 2005
PLANS APPROVAL DATE

Tillat Sattar
No. C42892
Exp. 03-31-2006
CIVIL
STATE OF CALIFORNIA

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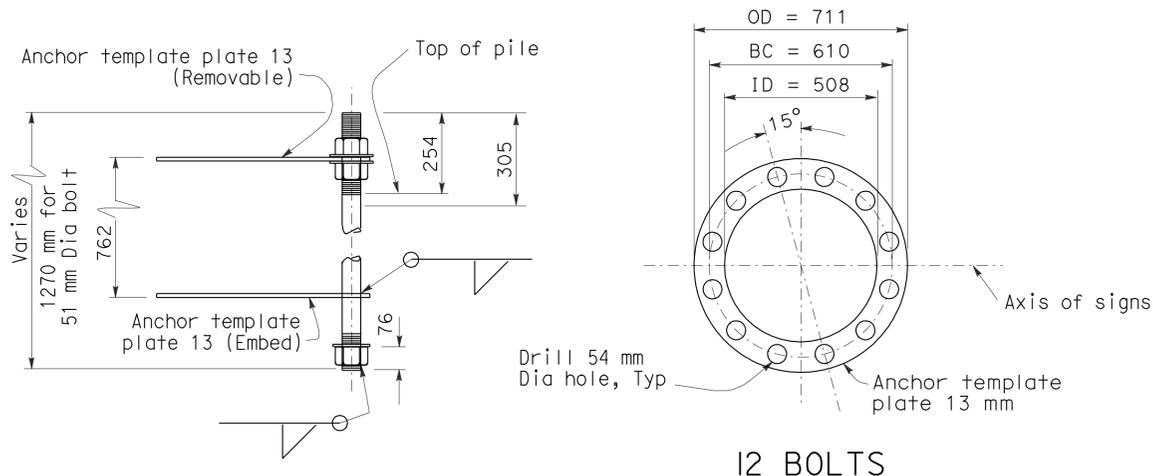
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SINGLE POST TYPE BASE PLATE DETAILS

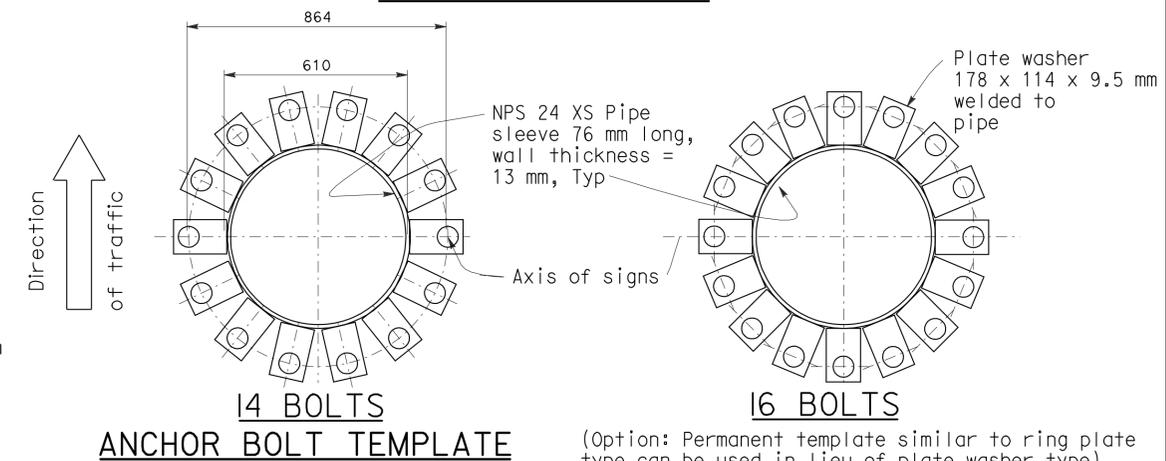
| Post Type No. | Nominal Pipe Size (NPS) | Pipe Thickness (mm) | Base P & OD & Thickness (mm) | Anchor | | Pile Dia (mm) | Pile Depth (m) | CIDH | | | | |
|---------------|-------------------------|---------------------|------------------------------|------------------|------------------------|---------------|----------------|----------------|----------------------|------------------------|---------------|------------|
| | | | | Bolt Circle (mm) | Bolts Total & Dia (mm) | | | Vertical Total | Reinforcing Bar Size | Spiral Bar Circle (mm) | Bar Size (mm) | Pitch (mm) |
| II | 14 | 12.7 | 864 x 51 | 610 | 12-51 | 1372 | 4.5 | 26 | 32 | 1143 | 16 | 89 |
| III | 16 | 12.7 | 864 x 51 | 610 | 12-51 | 1372 | 4.9 | 26 | 32 | 1143 | 16 | 89 |
| IV | 18 | 12.7 | 864 x 51 | 610 | 12-51 | 1372 | 5.5 | 26 | 32 | 1143 | 16 | 89 |
| V | 20 | 12.7 | 1016 x 64 | 864 | 14-51 | 1372 | 5.8 | 26 | 32 | 1143 | 16 | 89 |
| VI | 24 | 12.7 | 1016 x 64 | 864 | 16-64 | 1524 | 6.7 | 28 | 36 | 1295 | 16 | 89 |
| VII | 24 | 19.0 | 1016 x 64 | 864 | 16-64 | 1524 | 7.0 | 28 | 36 | 1295 | 16 | 89 |
| VIII | 24 | 24.6 | 1016 x 89 | 864 | 16-64 | 1524 | 7.6 | 28 | 36 | 1295 | 16 | 89 |
| IX | 24 | 24.6 | 1016 x 89 | 864 | 16-64 | 1524 | 7.6 | 28 | 36 | 1295 | 16 | 89 |

SINGLE POST TABLE



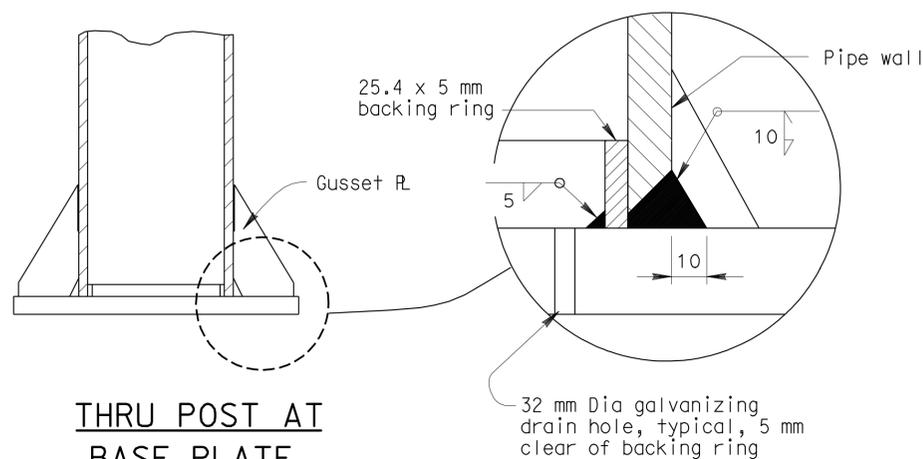
**FOR POST II THRU IV
12 BOLTS PATTERN**

**PLATE WASHER FOR
14 & 16 BOLT PATTERN**

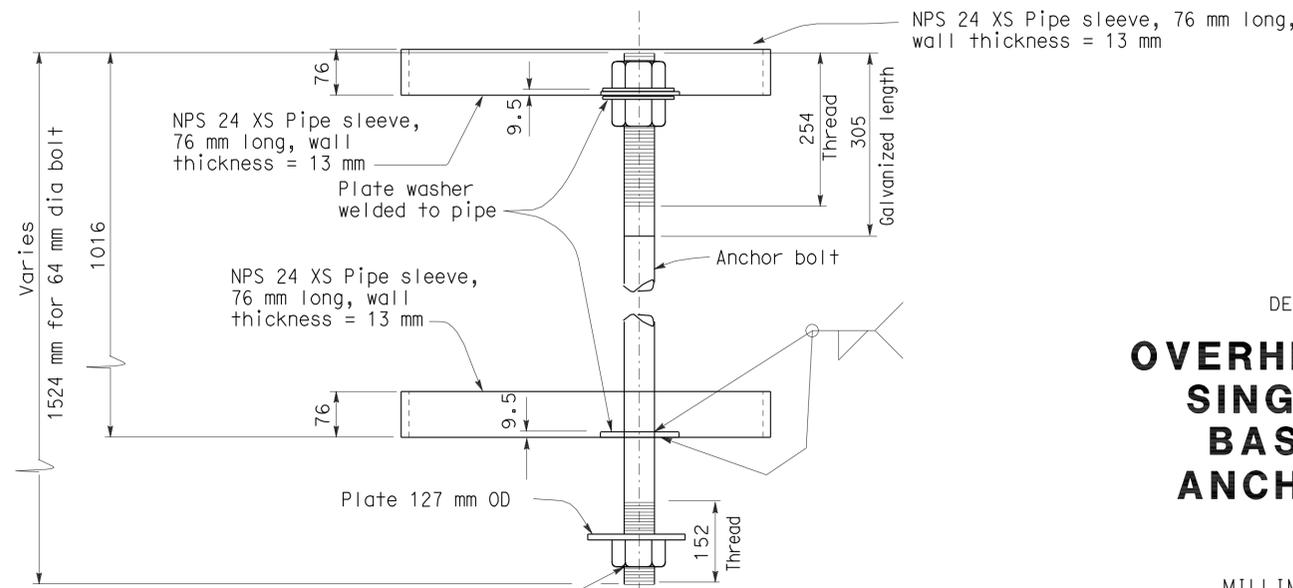


**14 BOLTS
ANCHOR BOLT TEMPLATE**

(Option: Permanent template similar to ring plate type can be used in lieu of plate washer type).



**THRU POST AT
BASE PLATE**



ANCHOR BOLT TEMPLATE ASSEMBLY DETAIL

Note: One bolt shown only. Other bolts not shown.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
SINGLE POST TYPE
BASE PLATE AND
ANCHORAGE DETAILS**

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S3 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S3
DATED JULY 1, 2004-PAGE 312 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S3

2004 REVISED STD PLAN RSP S3



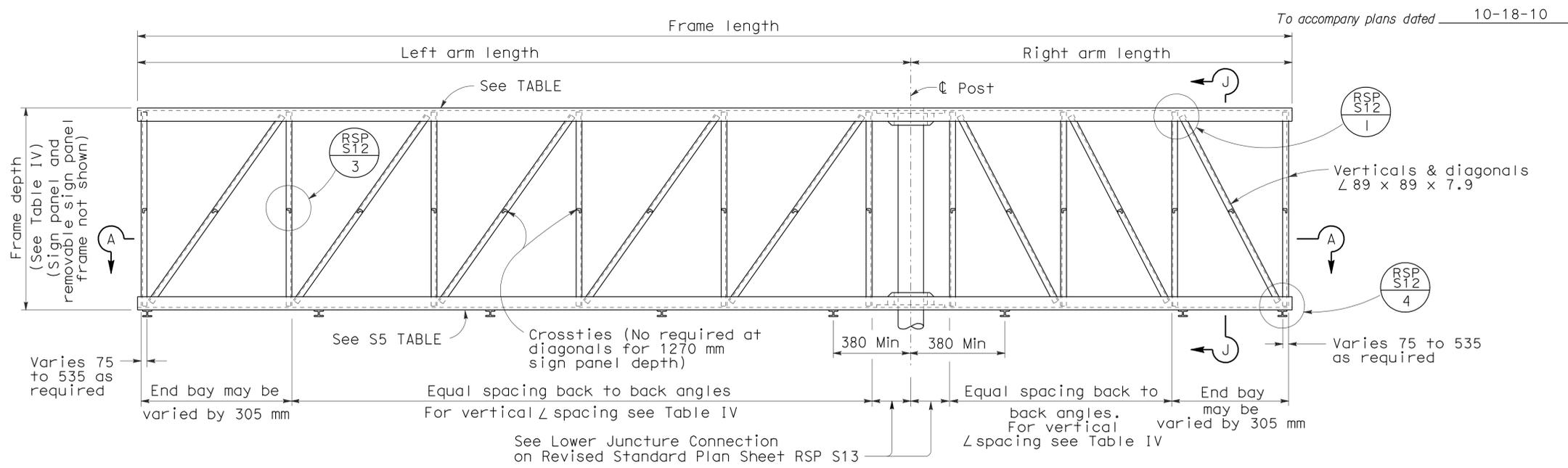
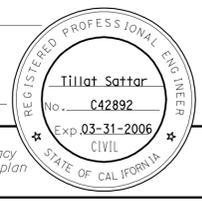
| | | | | | | |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 302 | 364 |

REGISTERED CIVIL ENGINEER

January 24, 2005
PLANS APPROVAL DATE

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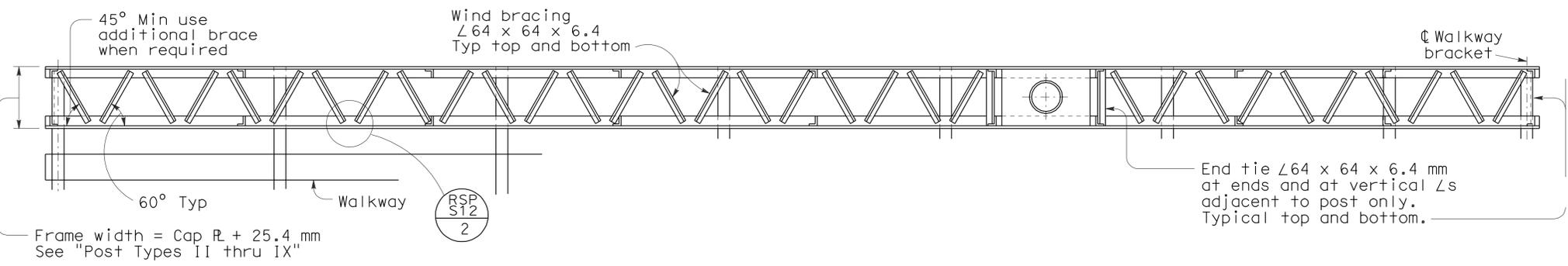


Note:
Left arm may be shorter, longer or equal to right arm length

ELEVATION

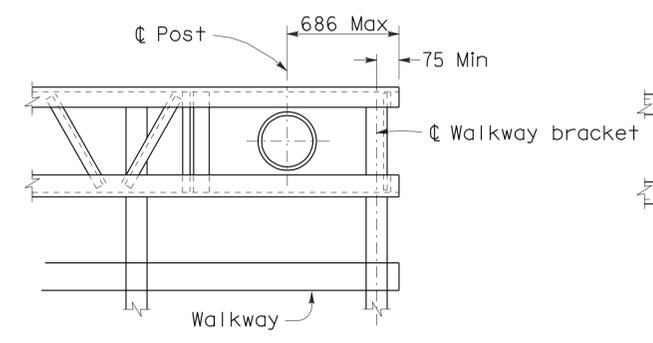
TABLE IV

| Sign Panel Depth (mm) | Frame Depth (mm) | Maximum Vertical L Spacing (mm) | See Note 6 (mm) |
|-----------------------|------------------|---------------------------------|-----------------|
| 1270 | 1423 | 1372 | 1220 |
| 1524 | 1675 | 1524 | 1220 |
| 1778 | 1931 | 1676 | 1220 |
| 2032 | 2185 | 1829 | 1525 |
| 2286 | 2439 | 2134 | 1525 |
| 2540 | 2693 | 2134 | 1830 |
| 2794 | 2693 | 2134 | 1830 |
| 3048 | 2693 | 2134 | 1830 |

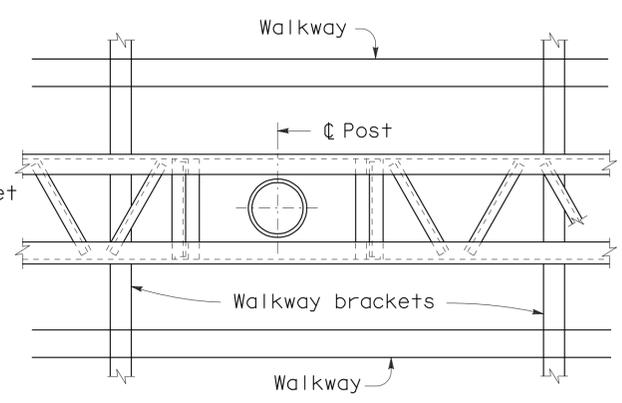


SECTION A-A

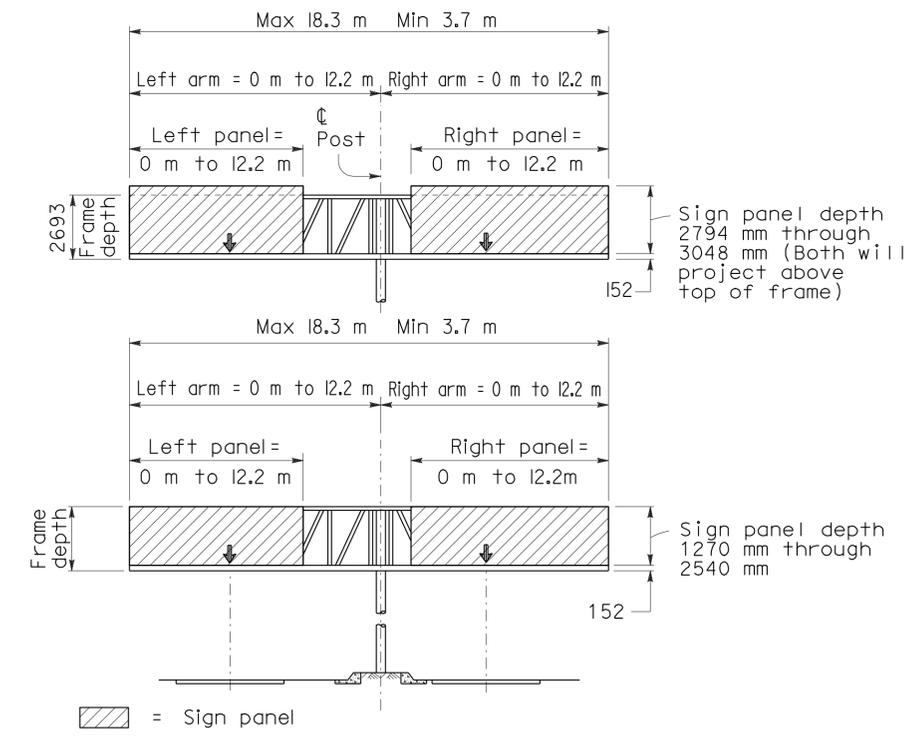
- Notes:**
- For connection of frame to post see RSP S13.
 - For walkway see RSP S16 and RSP S17.
 - For walkway length see RSP S1.
 - Minimum length of frame = 3660 mm.
 - Maximum length of frame = 18 290 mm.
 - Diagonal not required if arm length is equal to or less than shown in this column see table IV.



PART PLAN OF CANTILEVER TYPE AT POST



PART PLAN OF DOUBLE FACED TYPE AT POST



RANGE OF STRUCTURE SIZES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
SINGLE POST TYPE
STRUCTURAL FRAME MEMBERS
DETAILS No.1**

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S4 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S4 DATED JULY 1, 2004-PAGE 313 OF THE STANDARD PLANS BOOK DATED JULY 2004.

2004 REVISED Std PLAN RSP S4



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|------|--------|---------|------------------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 303 | 364 |

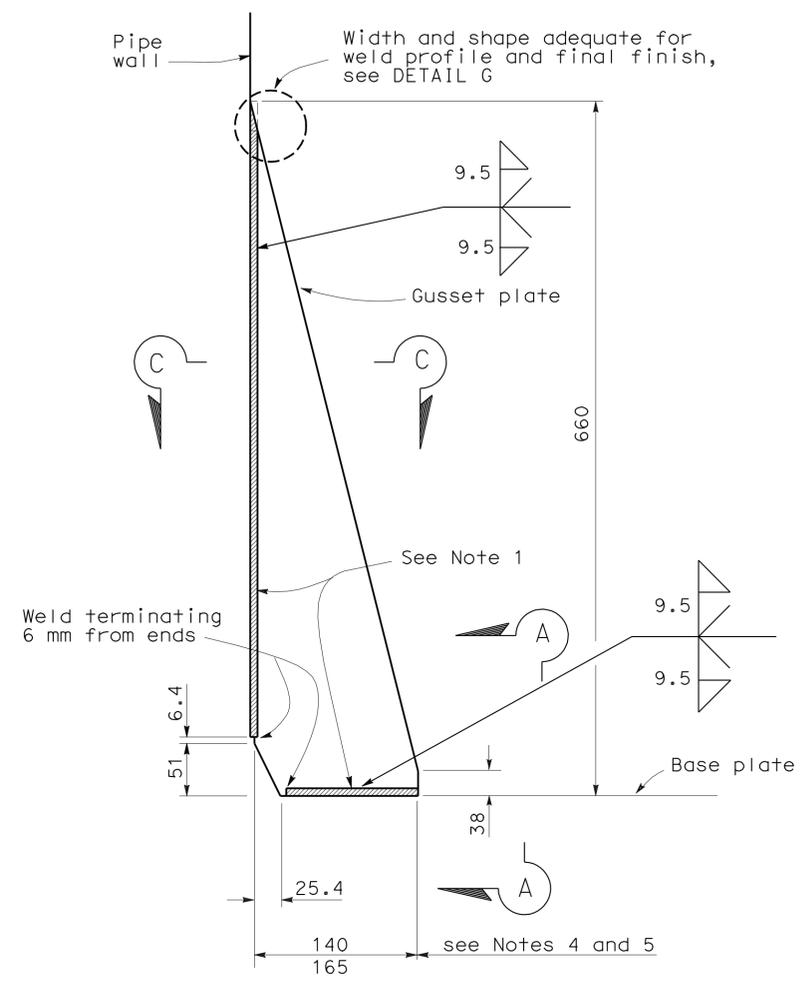
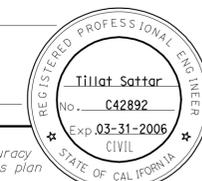
REGISTERED CIVIL ENGINEER

January 24, 2005
PLANS APPROVAL DATE

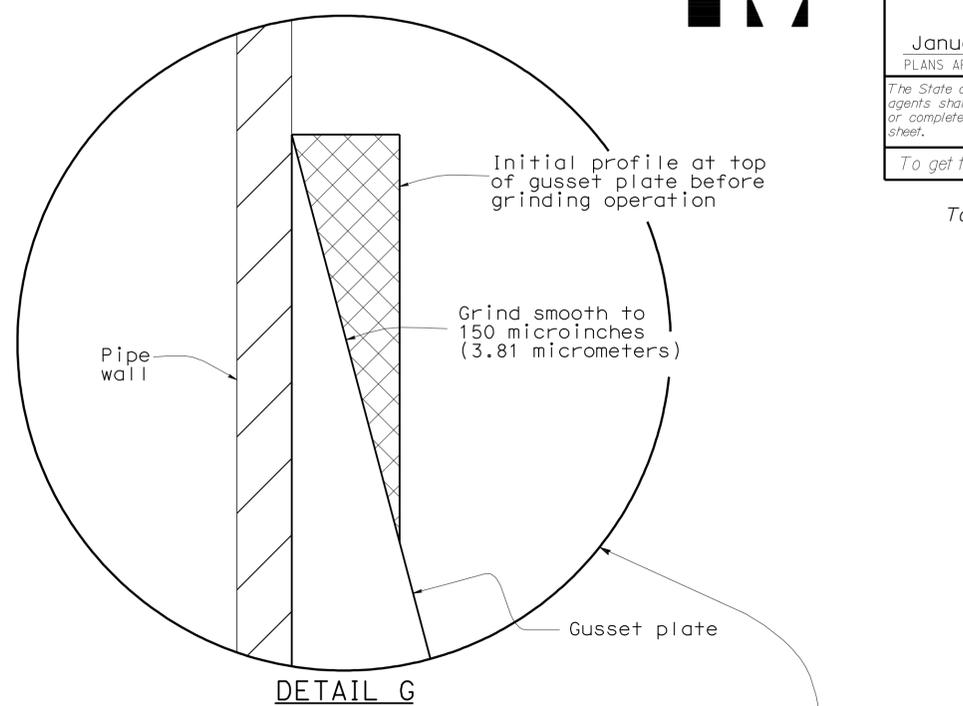
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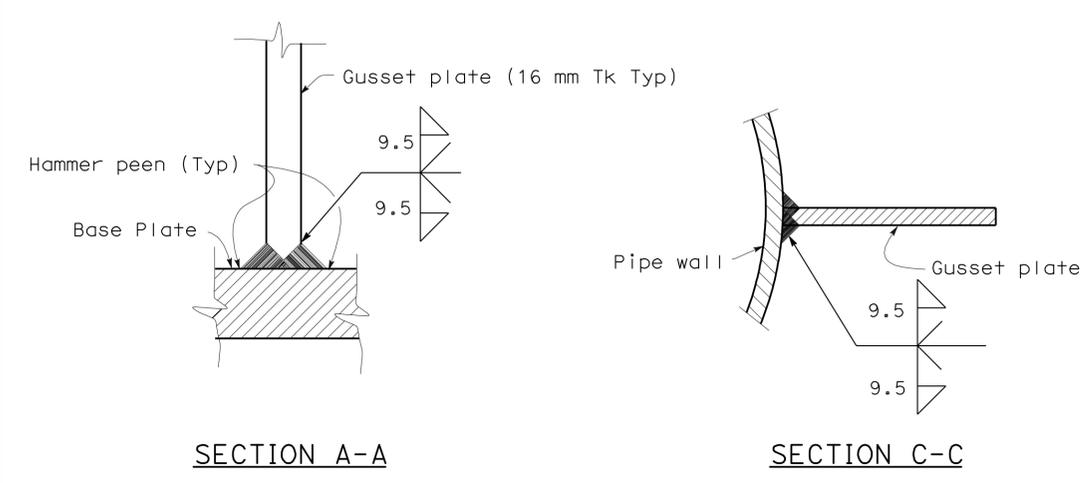
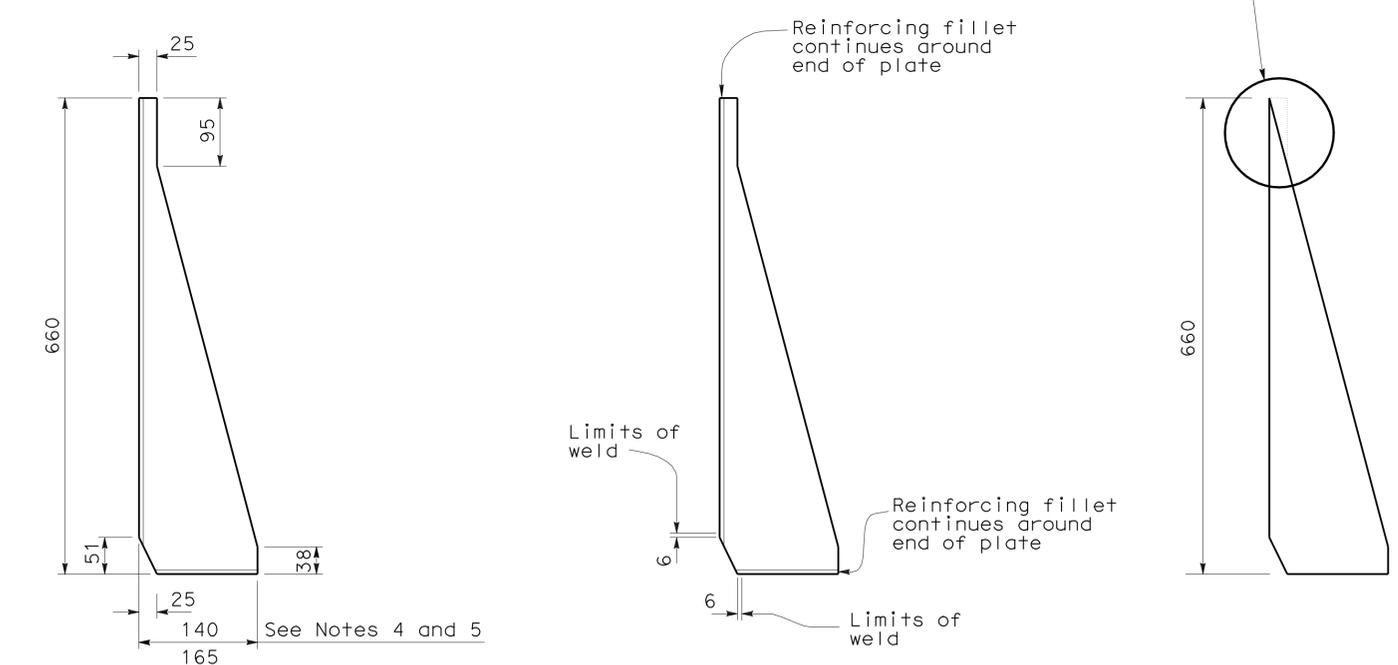
To accompany plans dated 10-18-10



WELD DETAILS



DETAIL G



SECTION A-A

SECTION C-C

NOTES

1. All welding details shall conform to the requirements of AWS D1.1 and special provisions.
2. All gussets to be same height.
3. Provide a smooth transition from gusset plate to tube.
4. 140 mm for post Types I-S through V-S and single post with 12 and 14 bolts pattern.
5. 165 mm for post Type VI-S and VII-S and single post with 16 bolts pattern.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**OVERHEAD SIGNS-TRUSS
GUSSET PLATE DETAILS**

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S6 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S6 DATED JULY 1, 2004-PAGE 315 OF THE STANDARD PLANS BOOK DATED JULY 2004.

2004 REVISED Std PLAN RSP S6



| | | | | | | |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 304 | 364 |

REGISTERED CIVIL ENGINEER

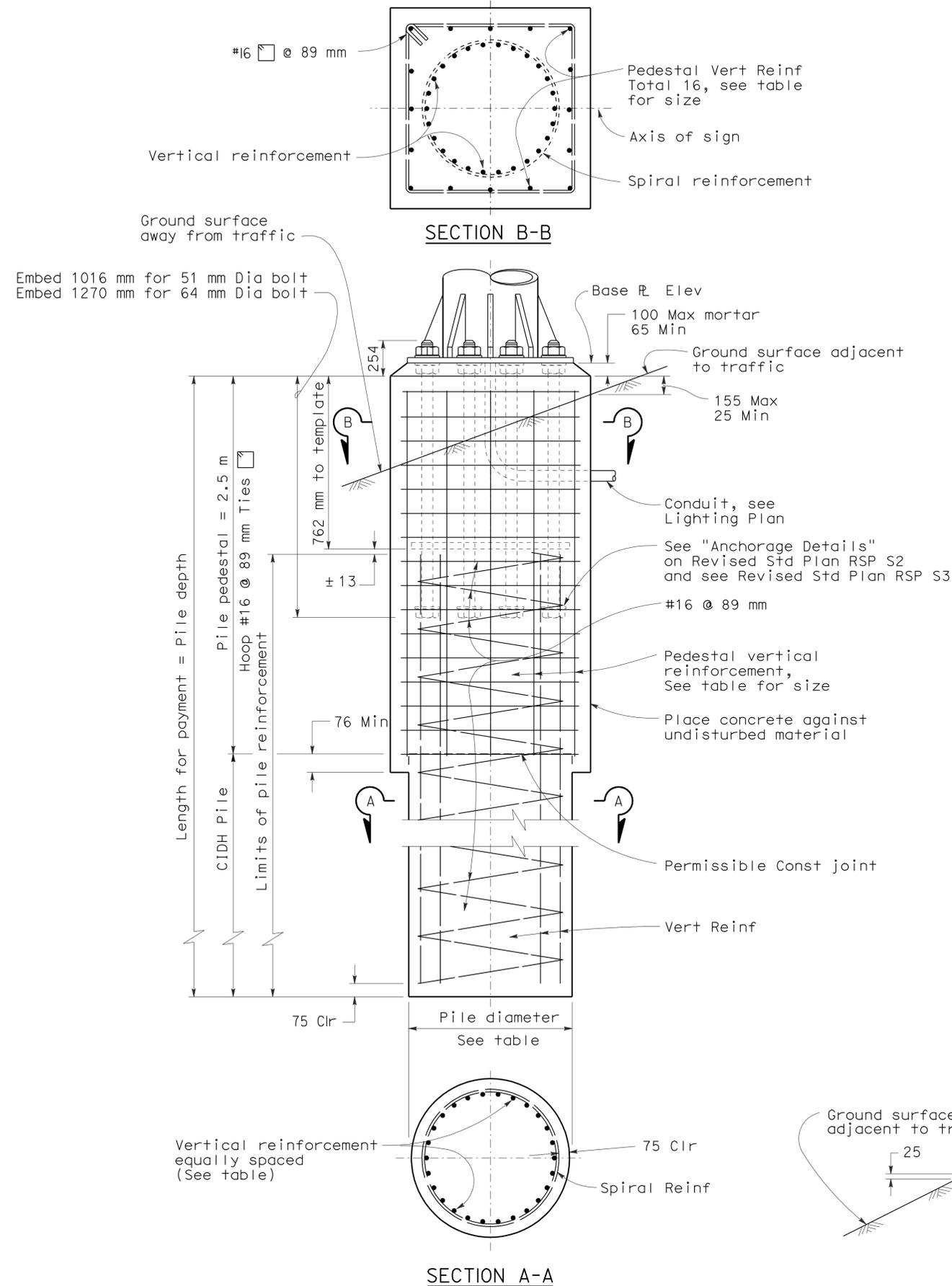
January 24, 2005
PLANS APPROVAL DATE

Tillat Sattar
No. C42892
Exp. 03-31-2006
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 10-18-10

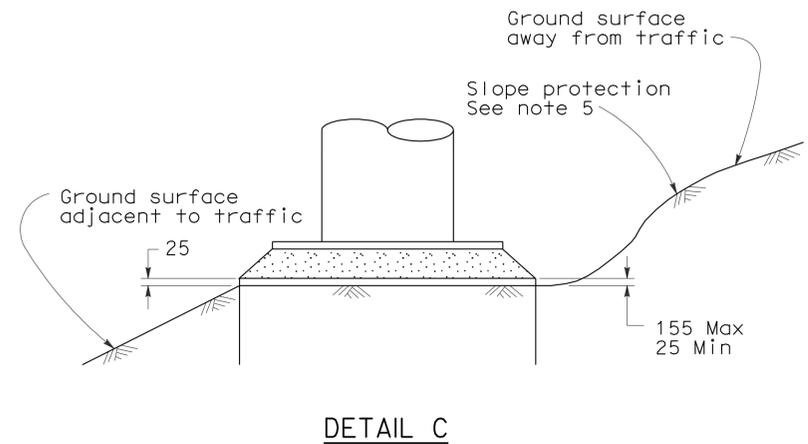


| Post Type No. | Anchor Bolts | | | Square Pedestal | | | | | CIDH | | | | | | | |
|---------------|------------------|------------------------|-------------------|-------------------------------|-------|----------|---------------------|---------------|------------|---------------|--------------------|-------|----------|-----------------|----------|------------|
| | Bolt Circle (mm) | Bolts Total & Dia (mm) | Total Length (mm) | Pedestal Square one side (mm) | Total | Bar Size | # of bars each face | Hoop Bar Size | Pitch (mm) | Pile Dia (mm) | * * Pile Depth (m) | Total | Bar Size | Bar Circle (mm) | Bar Size | Pitch (mm) |
| II | 610 | 12-51 | 1270 | 1600 | 16 | #32 | 5 | #16 | 89 | 1372 | 4.5 | 26 | #32 | 1143 | #16 | 89 |
| III | 610 | 12-51 | 1270 | 1600 | 16 | #32 | 5 | #16 | 89 | 1372 | 4.9 | 26 | #32 | 1143 | #16 | 89 |
| IV | 610 | 12-51 | 1270 | 1600 | 16 | #32 | 5 | #16 | 89 | 1372 | 5.5 | 26 | #32 | 1143 | #16 | 89 |
| V | 864 | 14-51 | 1270 | 1600 | 16 | #32 | 5 | #16 | 89 | 1372 | 5.8 | 26 | #32 | 1143 | #16 | 89 |
| VI | 864 | 16-64 | 1524 | 1753 | 16 | #36 | 5 | #16 | 89 | 1524 | 6.7 | 28 | #36 | 1295 | #16 | 89 |
| VII | 864 | 16-64 | 1524 | 1753 | 16 | #36 | 5 | #16 | 89 | 1524 | 7.0 | 28 | #36 | 1295 | #16 | 89 |
| VIII | 864 | 16-64 | 1524 | 1753 | 16 | #36 | 5 | #16 | 89 | 1524 | 7.6 | 28 | #36 | 1295 | #16 | 89 |
| IX | 864 | 16-64 | 1524 | 1753 | 16 | #36 | 5 | #16 | 89 | 1524 | 7.6 | 28 | #36 | 1295 | #16 | 89 |

* * Use Foundation Depth shown in table unless otherwise shown on the Project Plans.

NOTES

1. For anchor bolt layout see post sheet.
2. For "Base R elevation" see Project Plans.
3. Prior to erection of the post, backfill which is equivalent to the surrounding material shall be in place.
4. Pedestal shall be formed 150 mm minimum below ground surface. Remainder to be placed against undisturbed material.
5. Slope protection required when indicated on the Project Plans.
6. Foundation design is based on 2001 AASHTO article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30 degree and unit weight of soil used is 1922 kg/m³.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
SINGLE POST TYPE
SQUARE PEDESTAL PILE FOUNDATION**

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S7 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S7
DATED JULY 1, 2004-PAGE 316 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S7

2004 REVISED Std PLAN RSP S7



| | | | | | | |
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| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 305 | 364 |

REGISTERED CIVIL ENGINEER

January 24, 2005
PLANS APPROVAL DATE

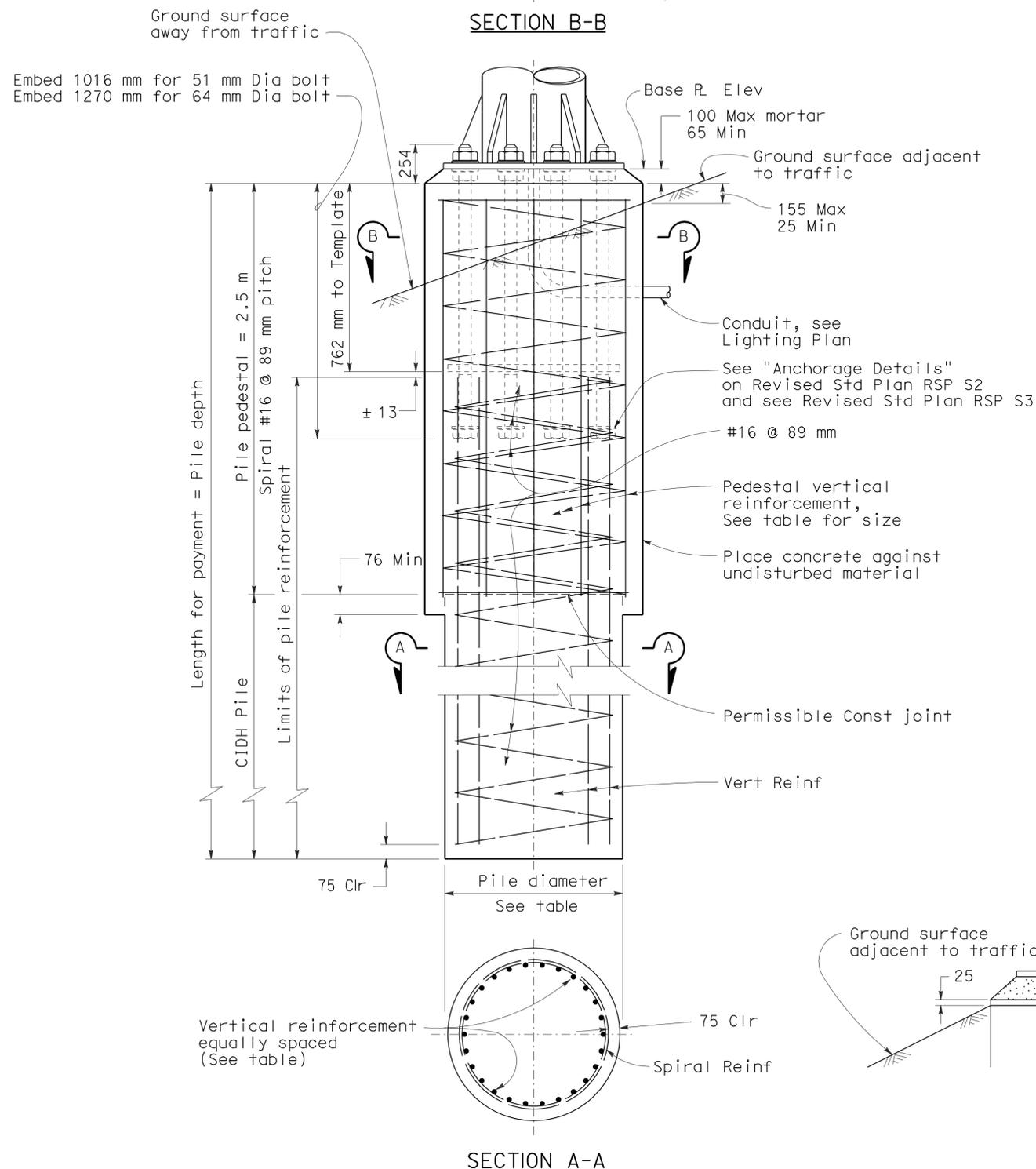
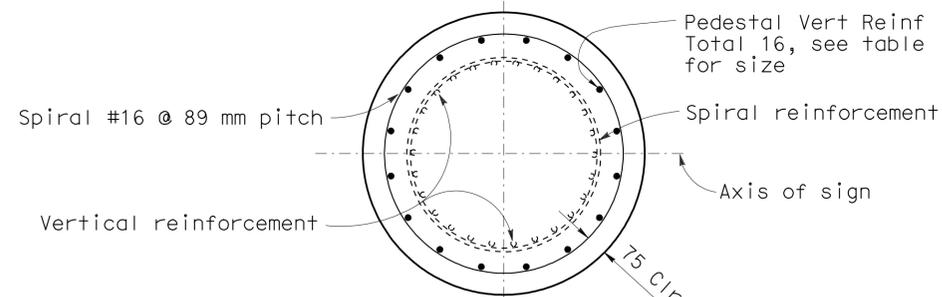
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To accompany plans dated 10-18-10

2004 REVISED Std PLAN RSP S8

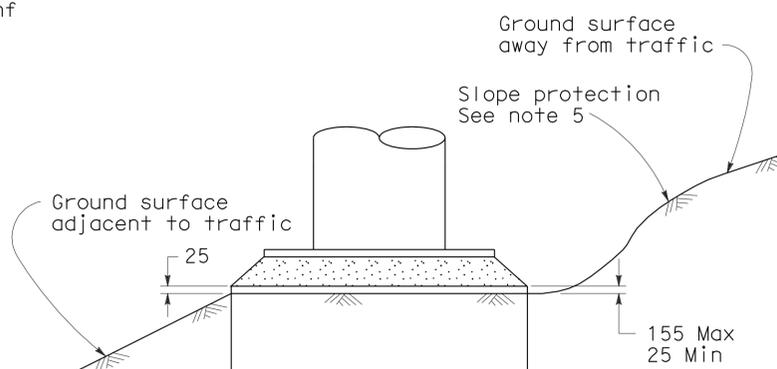


| Post Type No. | Anchor Bolts | | | Round Pedestal | | | | | | CIDH | | | | | | |
|---------------|------------------|------------------------|-------------------|----------------|-------------|----------|------------------|----------|------------|---------------|--------------------|----------------------|----------|-----------------|----------|------------|
| | Bolt Circle (mm) | Bolts Total & Dia (mm) | Total Length (mm) | Dia (mm) | Reinforcing | | | Spiral | | Pile Dia (mm) | * * Pile Depth (m) | Vertical Reinforcing | | Spiral | | |
| | | | | | Total | Bar Size | Loop Circle (mm) | Bar Size | Pitch (mm) | | | Total | Bar Size | Bar Circle (mm) | Bar Size | Pitch (mm) |
| II | 610 | 12-51 | 1270 | 1600 | 16 | #32 | 1435 | #16 | 89 | 1372 | 4.5 | 26 | #32 | 1143 | #16 | 89 |
| III | 610 | 12-51 | 1270 | 1600 | 16 | #32 | 1435 | #16 | 89 | 1372 | 4.9 | 26 | #32 | 1143 | #16 | 89 |
| IV | 610 | 12-51 | 1270 | 1600 | 16 | #32 | 1435 | #16 | 89 | 1372 | 5.5 | 26 | #32 | 1143 | #16 | 89 |
| V | 864 | 14-51 | 1270 | 1600 | 16 | #32 | 1435 | #16 | 89 | 1372 | 5.8 | 26 | #32 | 1143 | #16 | 89 |
| VI | 864 | 16-64 | 1524 | 1753 | 16 | #36 | 1581 | #16 | 89 | 1524 | 6.7 | 28 | #36 | 1295 | #16 | 89 |
| VII | 864 | 16-64 | 1524 | 1753 | 16 | #36 | 1581 | #16 | 89 | 1524 | 7.0 | 28 | #36 | 1295 | #16 | 89 |
| VIII | 864 | 16-64 | 1524 | 1753 | 16 | #36 | 1581 | #16 | 89 | 1524 | 7.6 | 28 | #36 | 1295 | #16 | 89 |
| IX | 864 | 16-64 | 1524 | 1753 | 16 | #36 | 1581 | #16 | 89 | 1524 | 7.6 | 28 | #36 | 1295 | #16 | 89 |

* * Use Foundation Depth shown in table unless otherwise shown on the Project Plans.

NOTES

1. For anchor bolt layout see post sheet.
2. For "Base R elevation" see Project Plans.
3. Prior to erection of the post, backfill which is equivalent to the surrounding material shall be in place.
4. Pedestal shall be formed 150 mm minimum below ground surface. Remainder to be placed against undisturbed material.
5. Slope protection required when indicated on the Project Plans.
6. Foundation design is based on 2001 AASHTO article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30 degree and unit weight of soil used is 1922 kg/m³.



DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
SINGLE POST TYPE
ROUND PEDESTAL PILE FOUNDATION**

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S8 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S8
DATED JULY 1, 2004-PAGE 317 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S8



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 306 | 364 |

REGISTERED CIVIL ENGINEER

January 24, 2005
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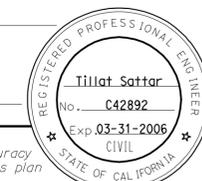
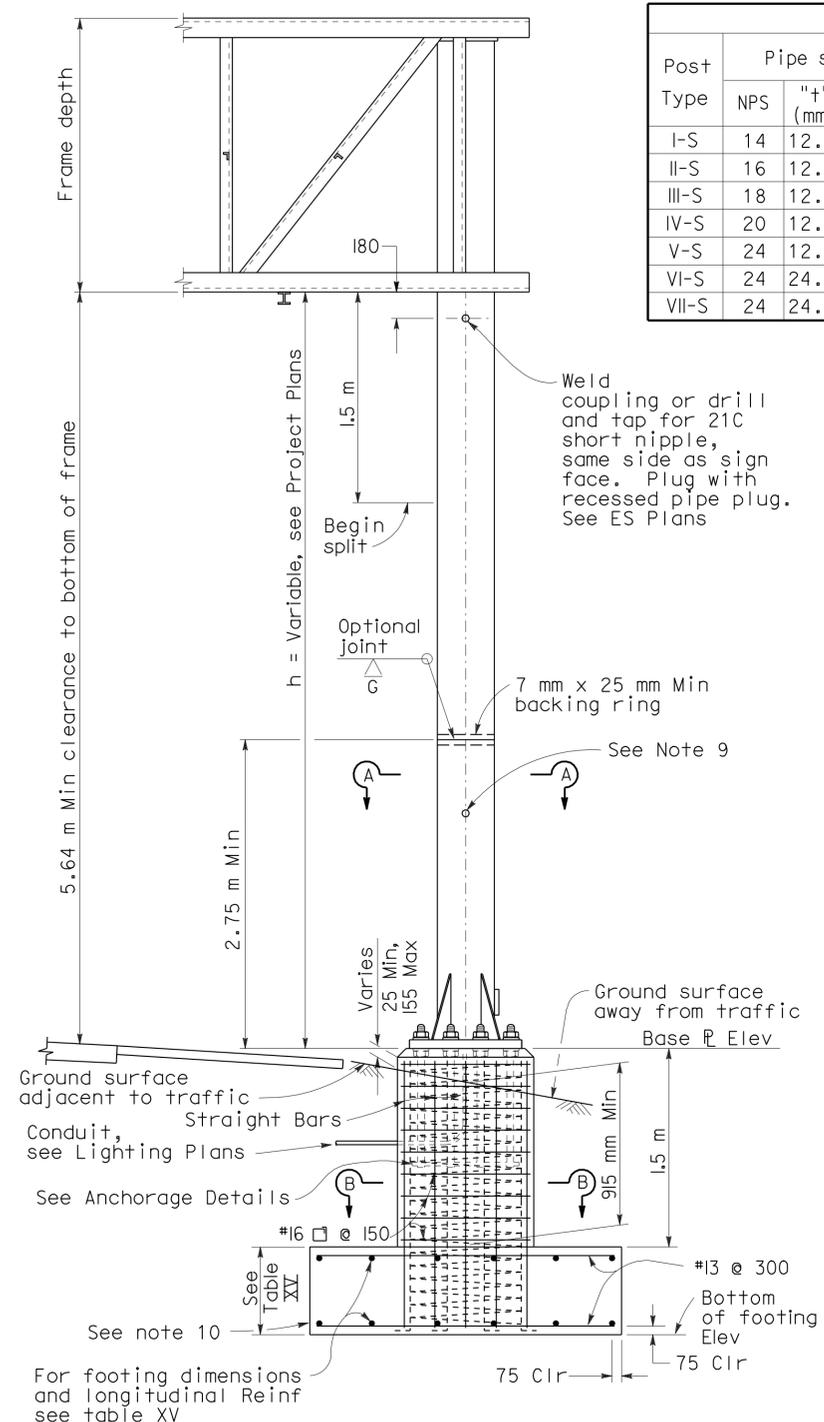
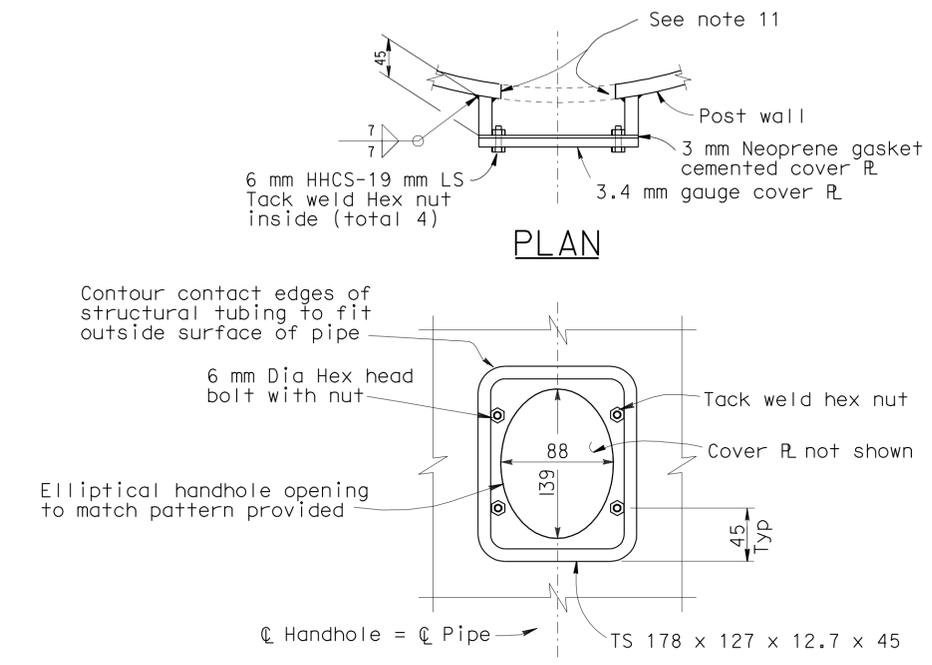
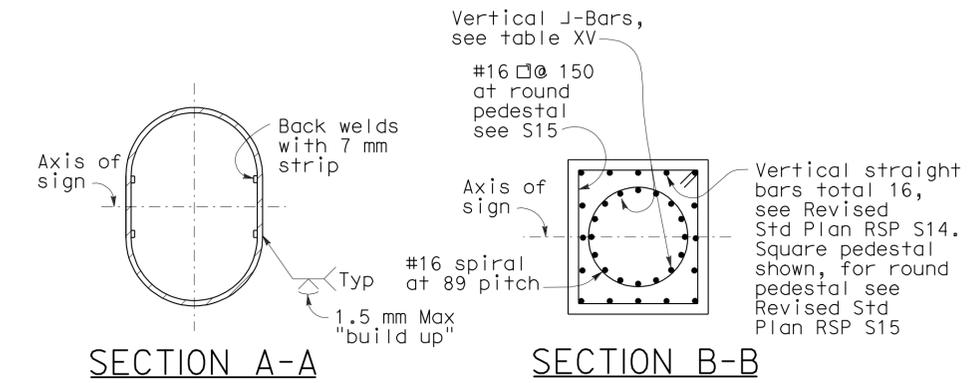


TABLE XV

| Post Type | Pipe size | | | Square pedestal size shown (mm) | Pedestal Equally spaced total | Vertical J-Bars | | Spiral Bar Size (mm) | Pitch (mm) | Spread Footing (mm) | Spread Footing Reinforcement | | | | | |
|-----------|-----------|----------|------------|---------------------------------|-------------------------------|-----------------|---------------|----------------------|------------|---------------------|------------------------------|--------|--------------|--------|-----------|--|
| | NPS | "t" (mm) | Split (mm) | | | Bar Size | Bar B.C. (mm) | | | | Width | | Longitudinal | | Footings | |
| I-S | 14 | 12.7 | 127 | 1600 | 26 | 32 | 1206 | 16 | 89 | 2134 x 3962 x 762 | 14-#19 | 14-#22 | 10-#29 | 10-#29 | #16 @ 305 | |
| II-S | 16 | 12.7 | 152 | 1600 | 26 | 32 | 1206 | 16 | 89 | 2134 x 3962 x 762 | 14-#19 | 14-#22 | 10-#29 | 10-#29 | #16 @ 305 | |
| III-S | 18 | 12.7 | 178 | 1600 | 26 | 32 | 1206 | 16 | 89 | 2134 x 3962 x 762 | 14-#19 | 14-#22 | 11-#29 | 11-#29 | #16 @ 305 | |
| IV-S | 20 | 12.7 | 203 | 1600 | 26 | 32 | 1206 | 16 | 89 | 2438 x 4267 x 762 | 15-#22 | 15-#22 | 12-#29 | 12-#36 | #16 @ 305 | |
| V-S | 24 | 12.7 | 203 | 1753 | 28 | 36 | 1355 | 16 | 89 | 2438 x 4877 x 914 | 17-#22 | 17-#22 | 12-#29 | 12-#36 | #16 @ 305 | |
| VI-S | 24 | 24.6 | 254 | 1753 | 28 | 36 | 1355 | 16 | 89 | 2743 x 5182 x 914 | 18-#22 | 18-#22 | 12-#29 | 12-#36 | #16 @ 305 | |
| VII-S | 24 | 24.6 | 254 | 1753 | 28 | 36 | 1355 | 16 | 89 | 3048 x 5486 x 914 | 19-#22 | 19-#22 | 13-#29 | 13-#36 | #16 @ 305 | |



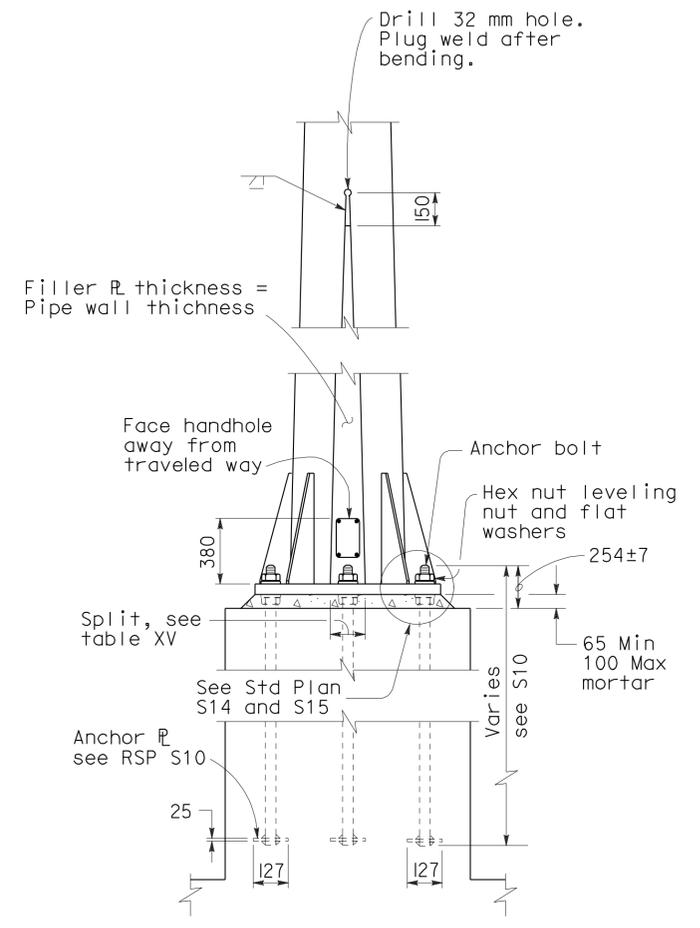
ELEVATION



ELEVATION
TYPICAL DETAILS OF
HANDHOLE AND COVER

NOTES

1. For "General Notes" see Revised Standard Plan RSP S1.
2. Longer side of post and footing shall be normal to axis of sign.
3. Backfill shall be in place prior to erection of post.
4. Thread upper 254 mm of anchor bolts and galvanize upper 305 mm.
5. Spread footing shown, use pile foundation when shown on the Project Plans. See details on Revised Standard Plans RSP S14 and RSP S15.
6. Anchor plates may be retained with hex nut or formed head as an alternative to details shown.
7. When foundation is located on a steep slope with exposed face of concrete adjacent to traffic, see "Detail C" on Revised Standard Plan RSP S14 and RSP S15.
8. Slope protection required when indicated on Project Plans.
9. Weld coupling or drill and tap for 41C chase nipple, perpendicular to sign panel axis away from approaching traffic. Plug with recessed pipe plug. See Standard Plan ES-15C.
10. Excavate to neat lines and place concrete against undisturbed material.
11. Grind edges smooth according to AWS D1.1 Section 5.15.4.3.



ANCHORAGE DETAILS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
TWO POST TYPE
POST TYPES I-S THROUGH VII-S**

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

2004 REVISED Std PLAN RSP S9



| | | | | | | |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
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| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 307 | 364 |

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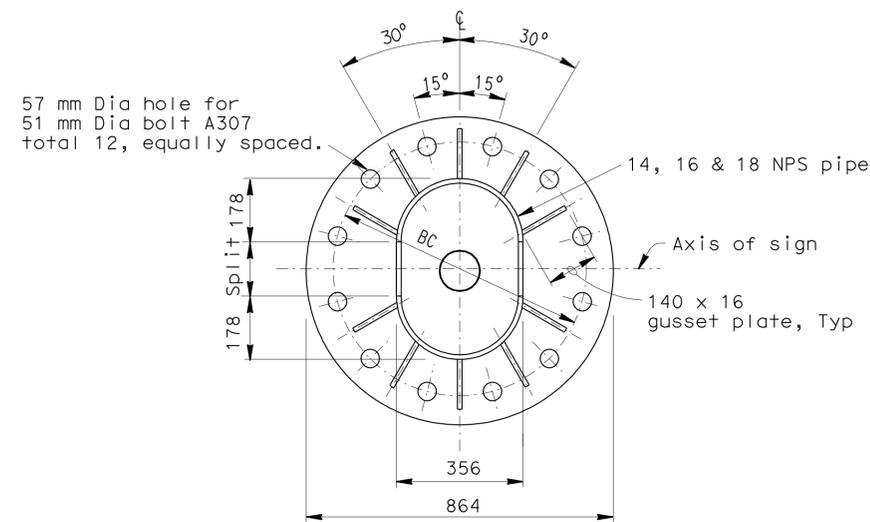
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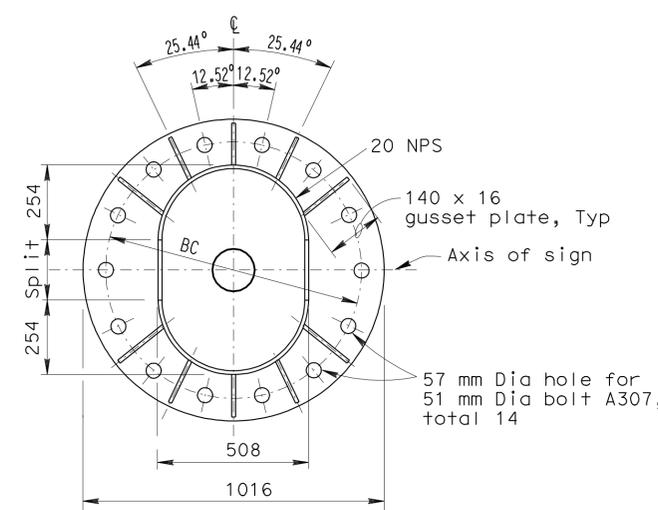
| Post Type | Nominal Pipe Size (NPS) | Pipe Wall Thickness (mm) | Pipe split (mm) | Base R OD & Thickness (mm) | Anchor | | |
|-----------|-------------------------|--------------------------|-----------------|----------------------------|------------------|------------------------|-------------|
| | | | | | Bolt Circle (mm) | Bolts total & Dia (mm) | Length (mm) |
| I-S | 14 | 12.7 | 127 | 864 x 51 | 711 | 12-51 | 1270 |
| II-S | 16 | 12.7 | 152 | 864 x 51 | 711 | 12-51 | 1270 |
| III-S | 18 | 12.7 | 178 | 940 x 51 | 787 | 12-51 | 1270 |
| IV-S | 20 | 12.7 | 203 | 1016 x 51 | 864 | 14-51 | 1270 |
| V-S | 24 | 12.7 | 203 | 1118 x 51 | 965 | 16-64 | 1524 |
| VI-S | 24 | 24.6 | 254 | 1219 x 64 | 1041 | 16-64 | 1524 |
| VII-S | 24 | 24.6 | 254 | 1219 x 64 | 1041 | 16-64 | 1524 |

To accompany plans dated 10-18-10

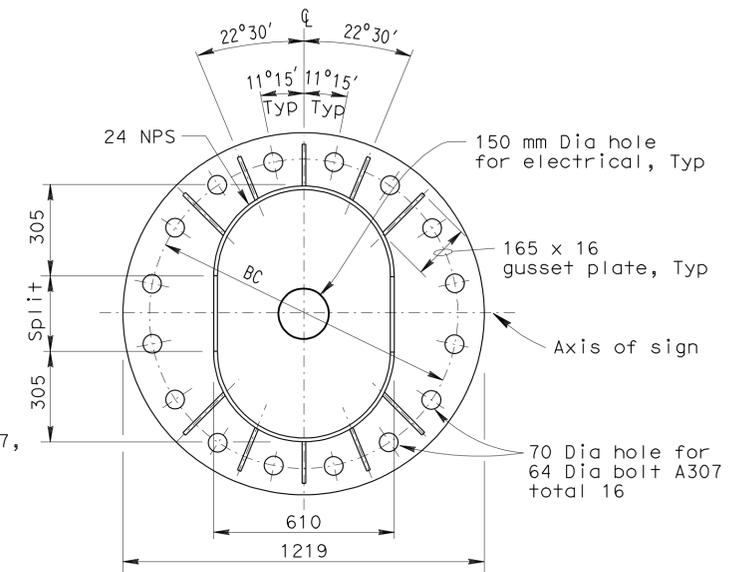
TWO POST TABLE



12 BOLTS
Type I-S shown

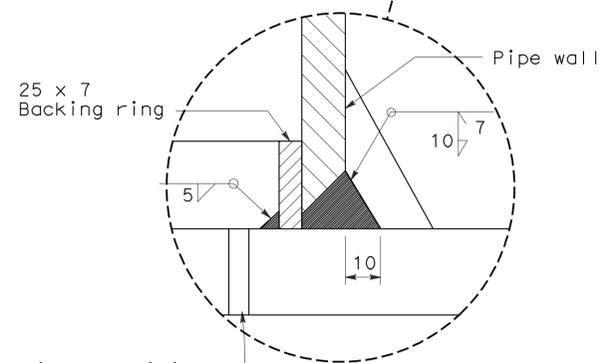
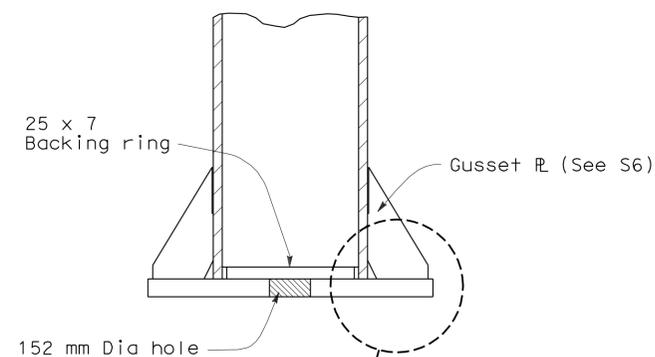


14 BOLTS



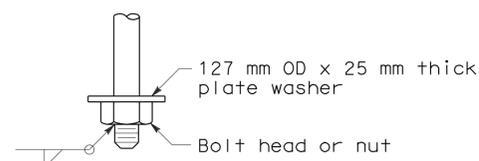
16 BOLTS
Type VI-S shown

TWO POST TYPE BASE PLATE DETAILS



32 mm Dia galvanizing drain hole, Typ 7 mm clear of backing ring

THRU POST AT BASE PLATE



ANCHORAGE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
TWO POST TYPE
BASE PLATE AND
ANCHORAGE DETAILS**

NO SCALE
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S10 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S10 DATED JULY 1, 2004-PAGE 319 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S10

2004 REVISED STD PLAN RSP S10



| | | | | | | |
|------|--------|---------|-------------------------|----------|-----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST NO. | SHEET NO. | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 308 | 364 |

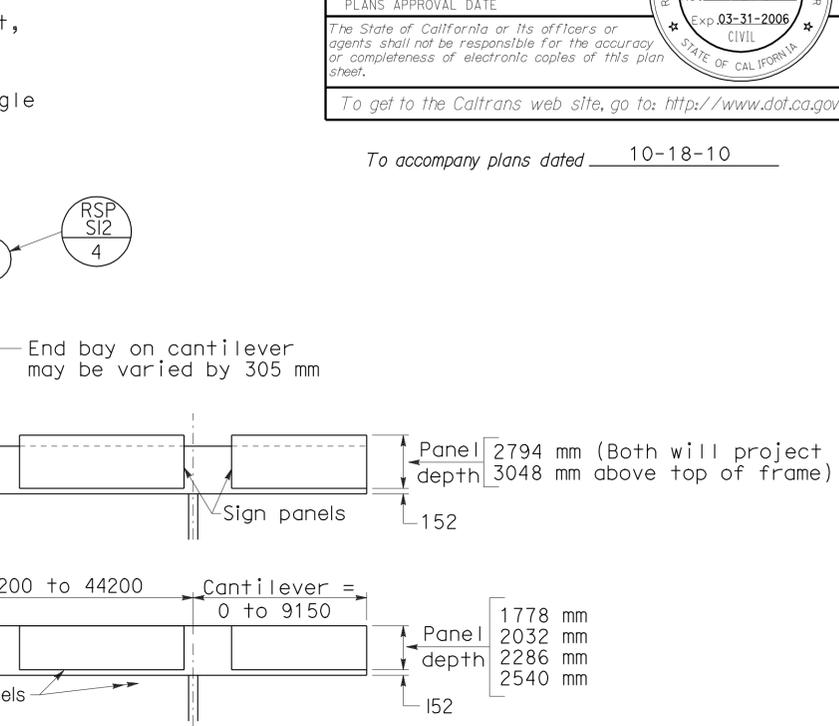
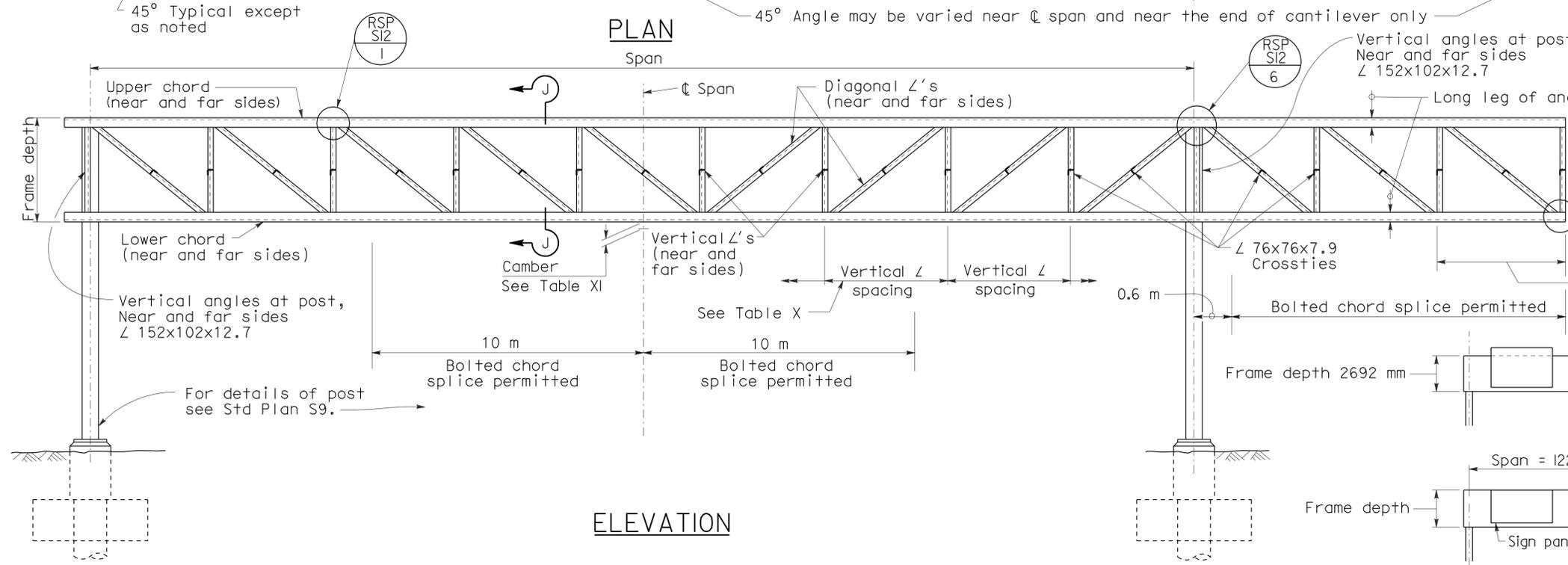
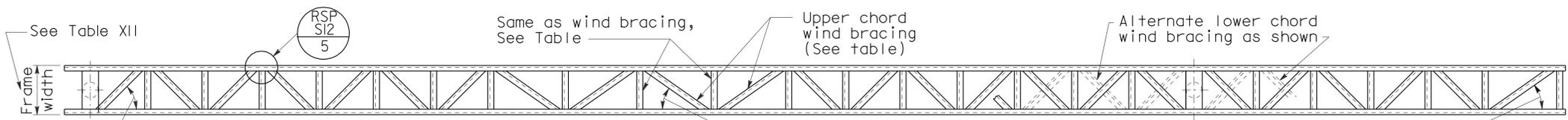
REGISTERED CIVIL ENGINEER

January 24, 2005
PLANS APPROVAL DATE

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To accompany plans dated 10-18-10



| Span (m) | 1778 mm Panel Depth | | | | | 2032 mm Panel Depth | | | | | 2286 mm Panel Depth | | | | |
|-----------|---------------------|--------------|--------------|--------------|------------------|---------------------|--------------|--------------|--------------|------------------|---------------------|--------------|--------------|--------------|------------------|
| | Frame Width (mm) | Chord L's | Vertical L's | Diagonal L's | Wind Bracing L's | Frame Width (mm) | Chord L's | Vertical L's | Diagonal L's | Wind Bracing L's | Frame Width (mm) | Chord L's | Vertical L's | Diagonal L's | Wind Bracing L's |
| 12.2-15.4 | 915 | 127x89x9.5 | 89x89x7.9 | 89x89x7.9 | 64x64x6.4 | 915 | 127x89x9.5 | 89x89x7.9 | 89x89x7.9 | 64x64x6.4 | 915 | 127x89x9.5 | 89x89x7.9 | 89x89x7.9 | 64x64x6.4 |
| 15.5-18.5 | 915 | 127x89x9.5 | | | 64x64x6.4 | 915 | 127x89x9.5 | | | 64x64x6.4 | 915 | 127x89x9.5 | | | 64x64x6.4 |
| 18.6-21.5 | 915 | 127x89x9.5 | | | 64x64x6.4 | 915 | 127x89x9.5 | | | 64x64x6.4 | 915 | 127x89x9.5 | | | 64x64x6.4 |
| 21.6-24.6 | 915 | 152x102x12.7 | | | 64x64x6.4 | 915 | 152x102x12.7 | | | 64x64x6.4 | 915 | 152x102x12.7 | | | 64x64x6.4 |
| 24.7-27.6 | 915 | 152x102x12.7 | | | 64x64x6.4 | 915 | 152x102x12.7 | | | 64x64x6.4 | 915 | 152x102x12.7 | | | 64x64x6.4 |
| 27.7-30.7 | 915 | 152x102x12.7 | | | 64x64x6.4 | 915 | 152x102x12.7 | | | 64x64x6.4 | 915 | 152x102x12.7 | | | 64x64x6.4 |
| 30.8-33.7 | 915 | 203x102x19.0 | | | 64x64x6.4 | 915 | 203x102x19.0 | | | 64x64x6.4 | 915 | 203x102x19.0 | | | 76x76x9.5 |
| 33.8-36.8 | 915 | 203x102x19.0 | | | 64x64x6.4 | 915 | 203x102x19.0 | | | 64x64x6.4 | 915 | 203x102x19.0 | | | 76x76x9.5 |
| 36.9-39.8 | 915 | 203x102x19.0 | | | 64x64x6.4 | 915 | 203x102x19.0 | | | 64x64x6.4 | 1067 | 203x102x19.0 | | | 76x76x9.5 |
| 39.9-44.2 | 915 | 203x102x19.0 | | | 64x64x6.4 | 915 | 203x102x19.0 | | | 64x64x6.4 | 1067 | 203x102x19.0 | | | 76x76x9.5 |

RANGE OF STRUCTURE SIZES

| Panel Depth (mm) | Frame Depth (mm) | Max Vertical L Spacing (mm) |
|------------------|------------------|-----------------------------|
| 1778 | 1931 | 1829 |
| 2032 | 2185 | 1829 |
| 2286 | 2439 | 2286 |
| 2540 | 2693 | 2286 |
| 2794 | 2693 | 2286 |
| 3048 | 2693 | 2286 |

| Camber For Fabrication At \bar{C} Span | |
|--|-------------|
| Span (m) | Camber (mm) |
| 12.19 - 15.24 | 27 |
| 15.25 - 30.48 | 54 |
| 30.49 - 44.20 | 83 |

TABLE X

TABLE XI

NOTES

- Frame widths shown are nominal. These widths may be varied by 6.4 mm to standardize fabrication methods.
- Walkway brackets not shown. Locate first interior bracket 813 mm Max from \bar{C} of post.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
TWO POST TYPE
STRUCTURAL FRAME MEMBERS**

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S11 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S11 DATED JULY 1, 2004-PAGE 320 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S11

| Span (m) | 2540 mm Panel Depth | | | | |
|-----------|---------------------|--------------|--------------|--------------|------------------|
| | Frame Width (mm) | Chord L's | Vertical L's | Diagonal L's | Wind Bracing L's |
| 12.2-15.4 | 915 | 127x89x9.5 | 89x89x7.9 | 89x89x7.9 | 64x64x6.4 |
| 15.5-18.5 | 915 | 127x89x9.5 | | | 64x64x6.4 |
| 18.6-21.5 | 915 | 127x89x9.5 | | | 64x64x6.4 |
| 21.6-24.6 | 915 | 152x102x12.7 | | | 64x64x6.4 |
| 24.7-27.6 | 915 | 152x102x12.7 | | | 64x64x6.4 |
| 27.7-30.7 | 915 | 152x102x12.7 | | | 64x64x6.4 |
| 30.8-33.7 | 1067 | 203x102x19.0 | | | 76x76x9.5 |
| 33.8-36.8 | 1067 | 203x102x19.0 | | | 76x76x9.5 |
| 36.9-39.8 | 1067 | 203x102x19.0 | | | 76x76x9.5 |
| 39.9-44.2 | 1067 | 203x102x19.0 | | | 76x76x9.5 |

| Span (m) | 2794 mm and 3048 mm Panel Depth | | | | |
|-----------|---------------------------------|--------------|--------------|--------------|------------------|
| | Frame Width (mm) | Chord L's | Vertical L's | Diagonal L's | Wind Bracing L's |
| 12.2-15.4 | 915 | 127x89x9.5 | 89x89x7.9 | 89x89x7.9 | 64x64x6.4 |
| 15.5-18.5 | 915 | 127x89x9.5 | | | 64x64x6.4 |
| 18.6-21.5 | 915 | 127x89x9.5 | | | 64x64x6.4 |
| 21.6-24.6 | 915 | 152x102x12.7 | | | 76x76x9.5 |
| 24.7-27.6 | 915 | 152x102x12.7 | | | 76x76x9.5 |
| 27.7-30.7 | 1067 | 152x102x12.7 | | | 76x76x9.5 |
| 30.8-33.7 | 1067 | 203x102x19.0 | | | 76x76x9.5 |
| 33.8-36.8 | 1067 | 203x102x19.0 | | | 76x76x9.5 |
| 36.9-39.8 | 1067 | 203x102x19.0 | | | 76x76x9.5 |
| 39.9-44.2 | 1067 | 203x152x19.0 | 89x89x9.5 | 89x89x9.5 | 76x76x9.5 |

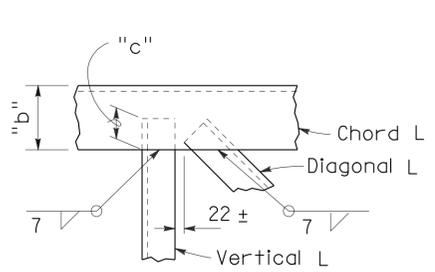
TABLE XII



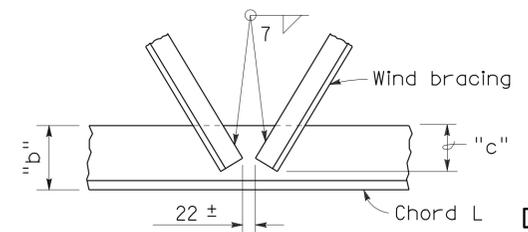
2004 REVISED STD PLAN RSP S11



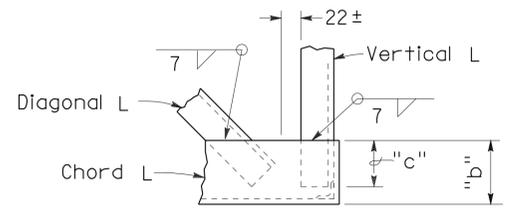
To accompany plans dated 10-18-10



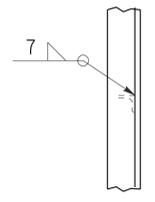
DETAIL ①



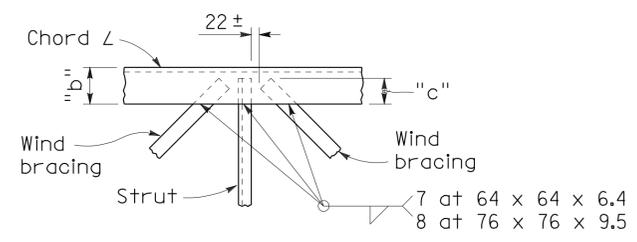
DETAIL ②



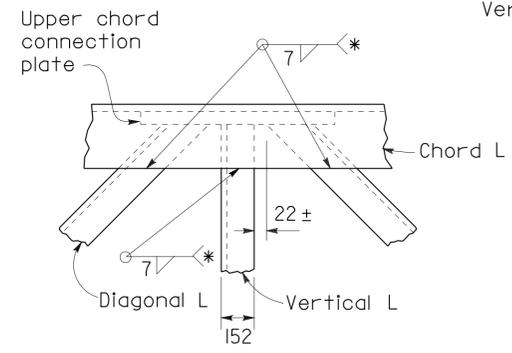
DETAIL ④



DETAIL ③



DETAIL ⑤

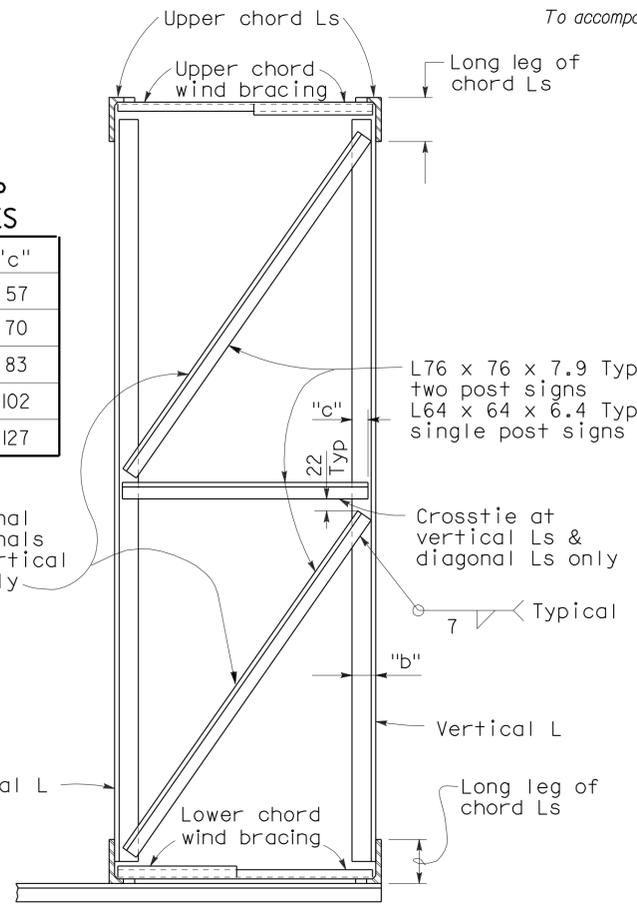


DETAIL ⑥

* Welds are to upper chord connection plate and chord angle

OVERLAP DISTANCES

| "b" | "c" |
|-----|-----|
| 89 | 57 |
| 102 | 70 |
| 127 | 83 |
| 152 | 102 |
| 203 | 127 |



TYPICAL SECTION J-J

Note: Diagonal Ls in plane of truss not shown. Bracing shown is at all vertical Ls of truss.

BOLTED CHORD SPLICE

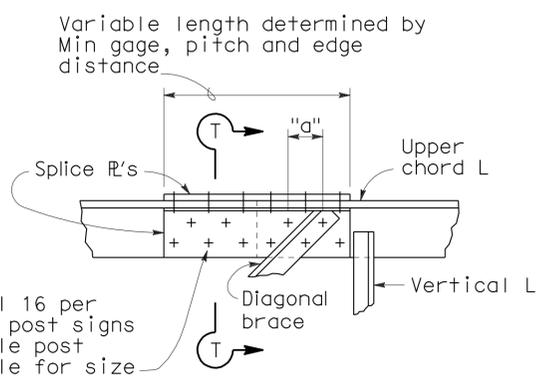
TWO POST SIGNS

| Chord L | Nominal Bolt Diameter | "a" mm Min |
|------------------|-----------------------|------------|
| 127 x 89 x 9.5 | M20 x 2.5 | 64 |
| 152 x 102 x 12.7 | M22 x 2.5 | 76 |
| 203 x 102 x 19.0 | M30 x 3.5 | 96 |
| 203 x 152 x 19.0 | M30 x 3.5 | 96 |

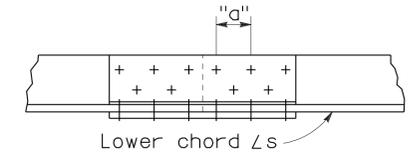
SINGLE POST SIGNS

| Chord L | Nominal Bolt Diameter | "a" mm Min |
|------------------|-----------------------|------------|
| 127 x 127 x 12.7 | M22 x 2.5 | 76 |
| 152 x 152 x 12.7 | M22 x 2.5 | 76 |

HS bolts - total 16 per splice. for two post signs and 20 per single post signs. See table for size



SPLICE WITH DIAGONAL ANGLE



SPLICE WITHOUT DIAGONAL ANGLE

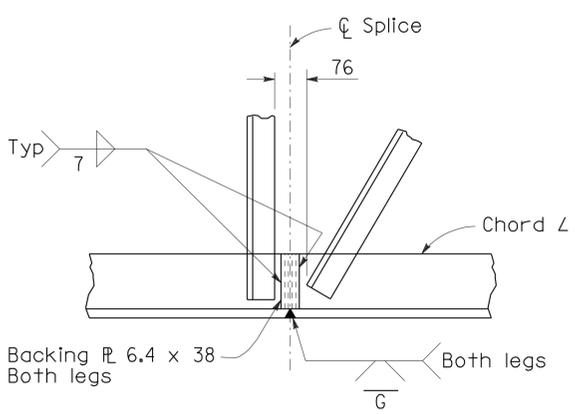
BOLTED CHORD SPLICE

SPLICE NOTES

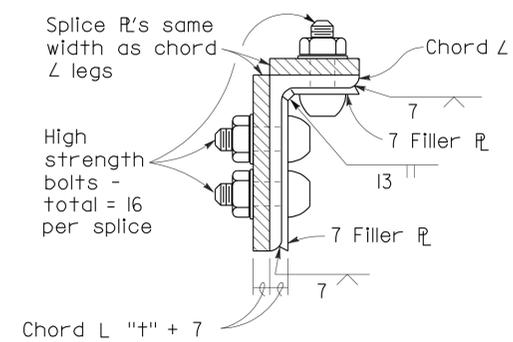
Location of Splices:
 The splice shall be located so as not to interfere with mounting the walkway brackets or the clip angles for the removable sign panel frame. For two post type see also S11.

Filler P:

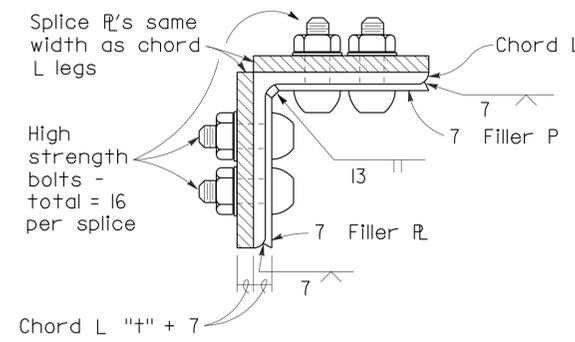
The plates welded to the angle legs on the inside shall be welded before drilling the bolt holes. The plates shall be the same length as the cover plates. The plates are not necessary on the single post signs if the splice is located over 1/3 of the cantilever length from the post. Alternative splice details may be used if approved by the Engineer.



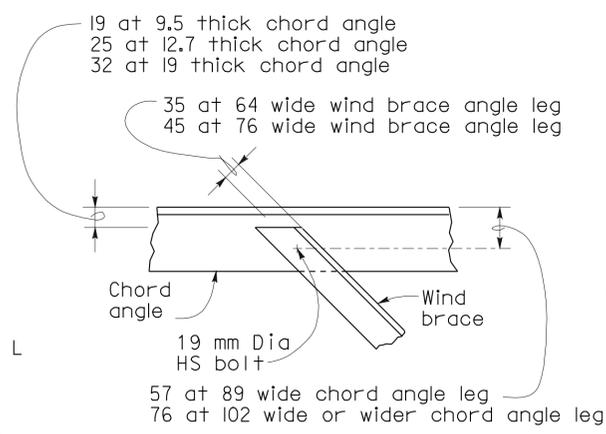
WELDED CHORD SPLICE



SECTION T-T
TWO POST SIGNS



SECTION T-T
SINGLE POST SIGNS



BOLTED WIND BRACE DETAIL

Each end of wind brace at bolted chord splice

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**OVERHEAD SIGNS-TRUSS
 STRUCTURAL FRAME DETAILS**
 NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
 RSP S12 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S12 DATED JULY 1, 2004-PAGE 321 OF THE STANDARD PLANS BOOK DATED JULY 2004.

2004 REVISED STD PLAN RSP S12

See RSP S2 Table for cap R dimensions.

Optional galvanizing drain holes: Drill and tap through cap plate for 16 mm Max Dia bolt. Hole shall be 7 mm clear of inside collar wall. Bolt length sized not to interfere with post. Install bolt after galvanizing.



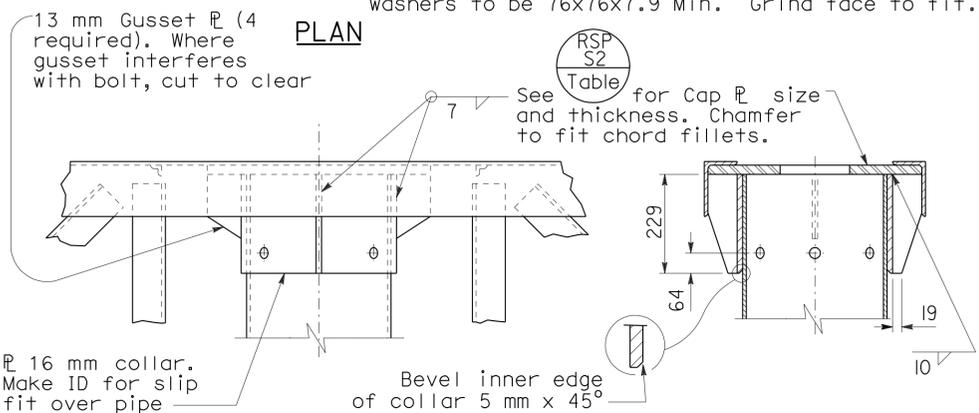
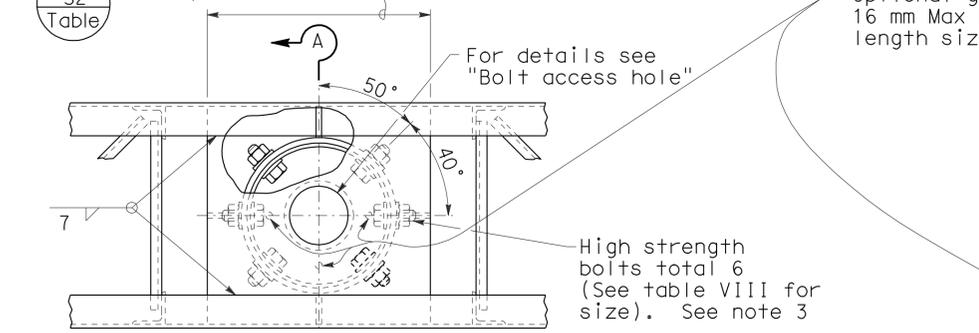
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 310 | 364 |

REGISTERED CIVIL ENGINEER
 Tiliat Sattar
 No. C42892
 Exp. 03-31-2006
 CIVIL
 STATE OF CALIFORNIA

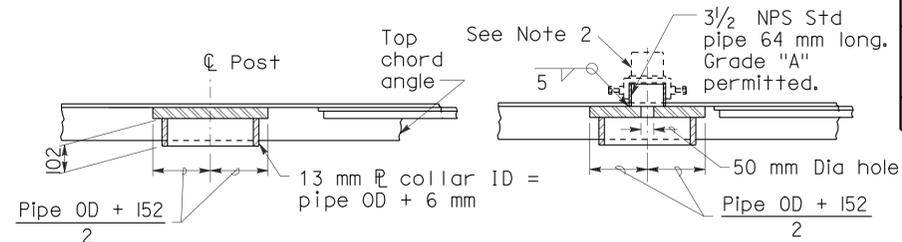
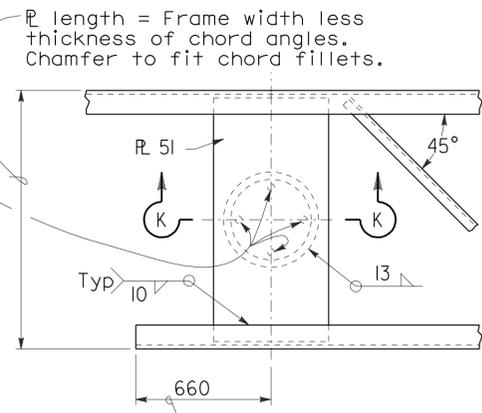
January 24, 2005
 PLANS APPROVAL DATE

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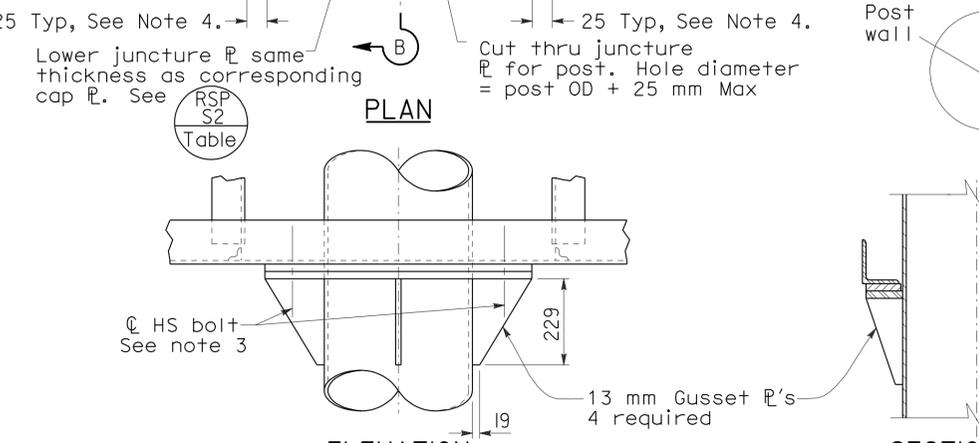
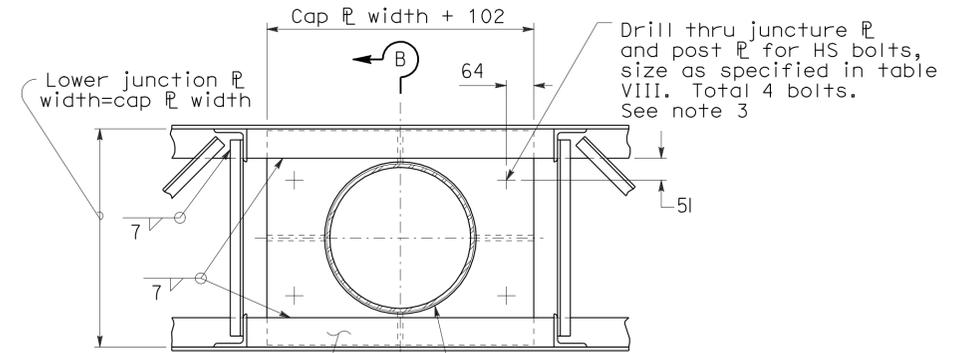
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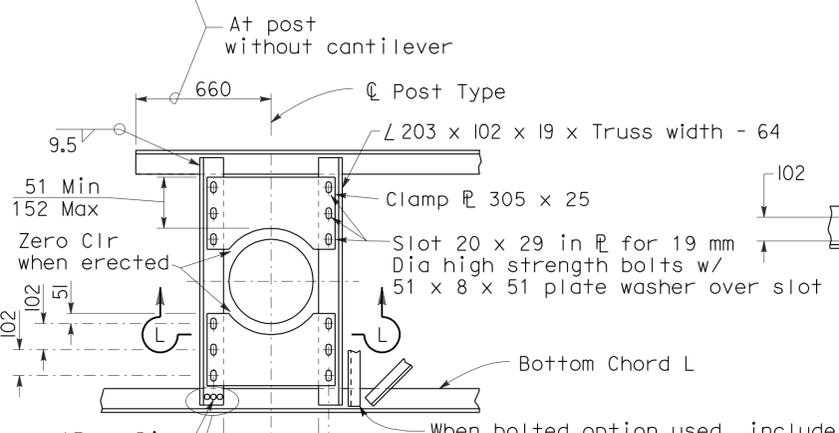
UPPER JUNCTION CONNECTION
 Single Post Type



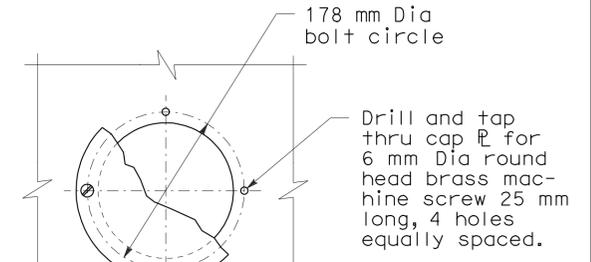
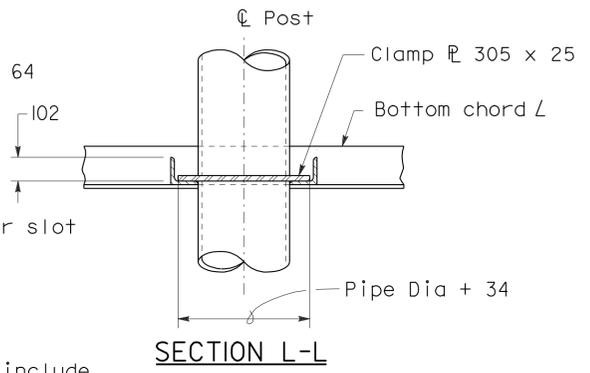
UPPER CHORD CONNECTION TO POST
 Two Post Type



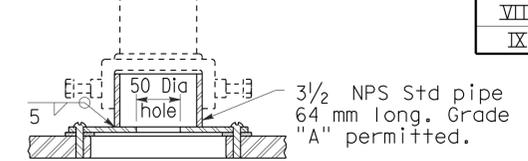
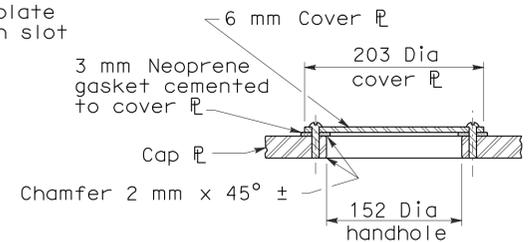
LOWER JUNCTION CONNECTION
 Single Post Type



LOWER CHORD CONNECTION TO POST
 Two Post Type



| Post Type | Bolt Size |
|-----------|-----------|
| II | M22 |
| III | M24 |
| IV | M27 |
| V | M27 |
| VI | M30 |
| VII | M30 |
| VIII | M36 |
| IX | M36 |



BOLT-ACCESS HOLE
 Single Post Type

Notes: (Single Post Type)

- In all cases, truss shall be supported at lower juncture connection. Bearing surface shall be finished true.
- Post to truss connections shall be fitted in shop.
- High strength bolts shall be snug tighten. Torque requirements are waived.
- See Part Plan of Cantilever Type at post on Revised Standard Plan RSP S4.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
 FRAME JUNCTION DETAILS**

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S13 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S13 DATED JULY 1, 2004-PAGE 322 OF THE STANDARD PLANS BOOK DATED JULY 2004.

2004 REVISED Std PLAN RSP S13



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 311 | 364 |

REGISTERED CIVIL ENGINEER

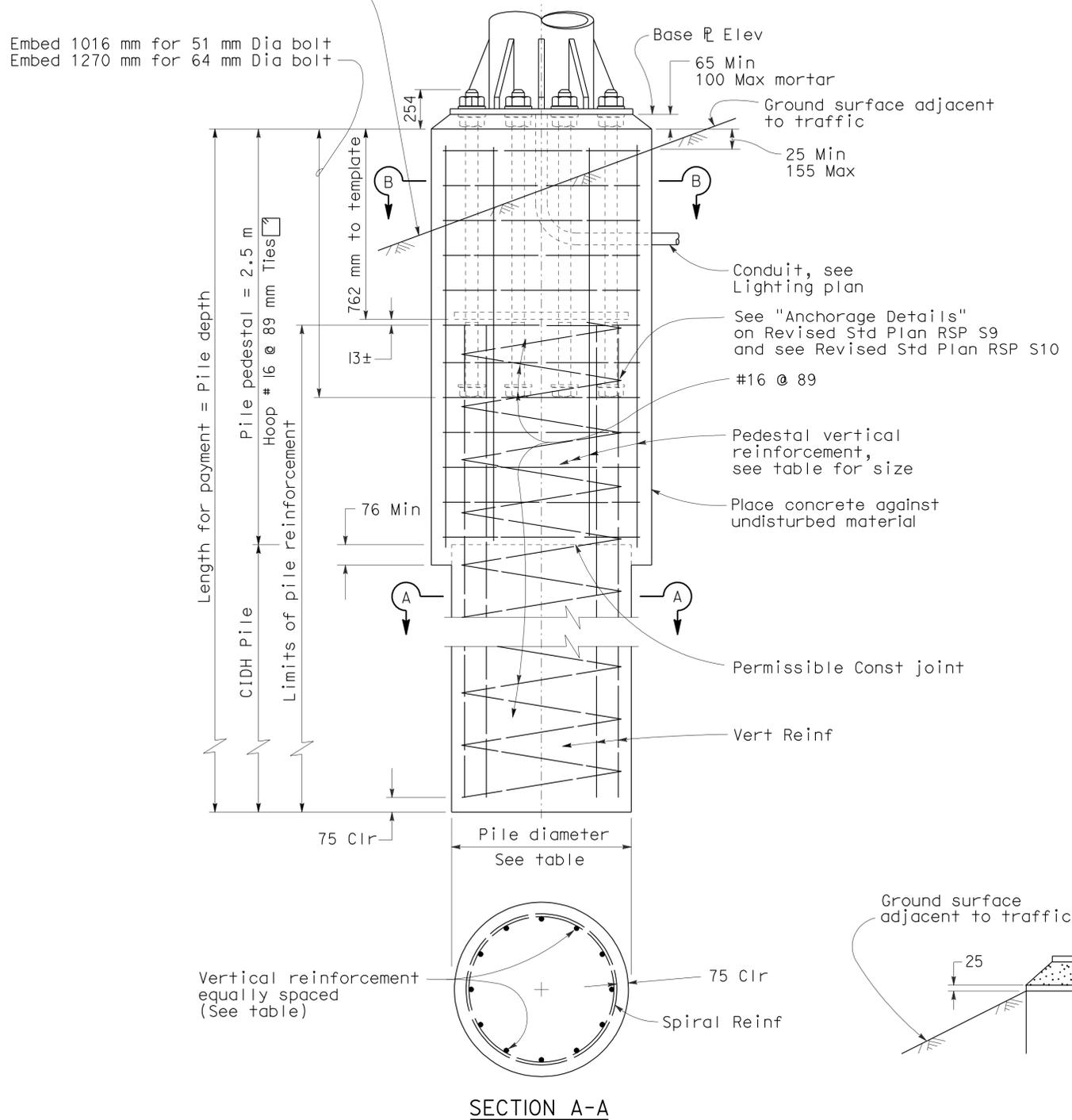
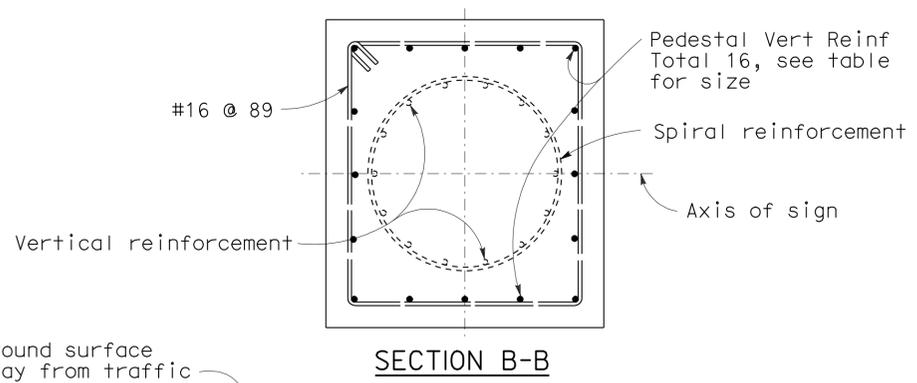
January 24, 2005
PLANS APPROVAL DATE

Tillat Sattar
No. C42892
Exp. 03-31-2006
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 10-18-10

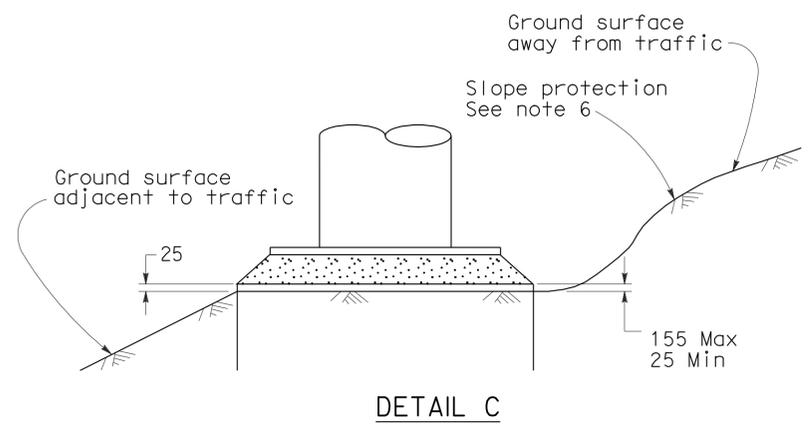


| Post Type | Anchor Bolts | | | | Square Pedestal | | | | | | CIDH Pile | | | | | | |
|-----------|--------------|----------|---------|-------------------|-------------------------------|-------------|----------|-------------------|----------|-------|---------------|------------------|-------------|----------|---------|----------|-------|
| | Total | Dia (mm) | BC (mm) | Total Length (mm) | Pedestal Square one side (mm) | Reinforcing | | | Hoop | | Pile Dia (mm) | Pile Depth (m)** | Reinforcing | | Spiral | | |
| | | | | | | Total | Bar Size | Spacing each face | Bar Size | Pitch | | | Total | Bar Size | BC (mm) | Bar Size | Pitch |
| I-S | 12 | 51 | 711 | 1270 | 1600 | 16 | 32 | 346 | 16 | 89 | 1372 | 5.5 | 26 | 32 | 1143 | 16 | 89 |
| II-S | 12 | 51 | 711 | 1270 | 1600 | 16 | 32 | 346 | 16 | 89 | 1372 | 6.0 | 26 | 32 | 1143 | 16 | 89 |
| III-S | 12 | 51 | 787 | 1270 | 1600 | 16 | 32 | 346 | 16 | 89 | 1372 | 7.0 | 26 | 32 | 1143 | 16 | 89 |
| IV-S | 14 | 51 | 864 | 1270 | 1600 | 16 | 32 | 346 | 16 | 89 | 1372 | 7.0 | 26 | 32 | 1143 | 16 | 89 |
| V-S | 16 | 64 | 965 | 1524 | 1763 | 16 | 36 | 381 | 16 | 89 | 1524 | 8.0 | 28 | 36 | 1295 | 16 | 89 |
| VI-S | 16 | 64 | 1041 | 1524 | 1763 | 16 | 36 | 381 | 16 | 89 | 1524 | 8.5 | 28 | 36 | 1295 | 16 | 89 |
| VII-S | 16 | 64 | 1041 | 1524 | 1763 | 16 | 36 | 381 | 16 | 89 | 1524 | 8.5 | 28 | 36 | 1295 | 16 | 89 |

** Use Foundation Depth shown in table unless otherwise shown on the Project Plans.

NOTES

- For anchor bolt layout see post sheet.
- For "Base ℄ elevation" see Project Plans.
- Longer side of post shall be normal to axis of sign.
- Prior to erection of the post, backfill which is equivalent to the surrounding material, shall be in place.
- Pedestal shall be formed 150 mm Min below ground surface. Remainder to be placed against undisturbed material.
- Slope protection required when indicated on the Project Plans.
- Foundation design is based on 2001 AASHTO article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30° and unit weight of soil used is 1922 kg/m³.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
TWO POST TYPE
SQUARE PEDESTAL PILE FOUNDATION**

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S14 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S14
DATED JULY 1, 2004-PAGE 323 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S14

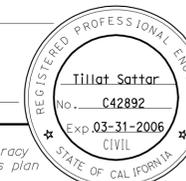
2004 REVISED STD PLAN RSP S14



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 312 | 364 |

REGISTERED CIVIL ENGINEER

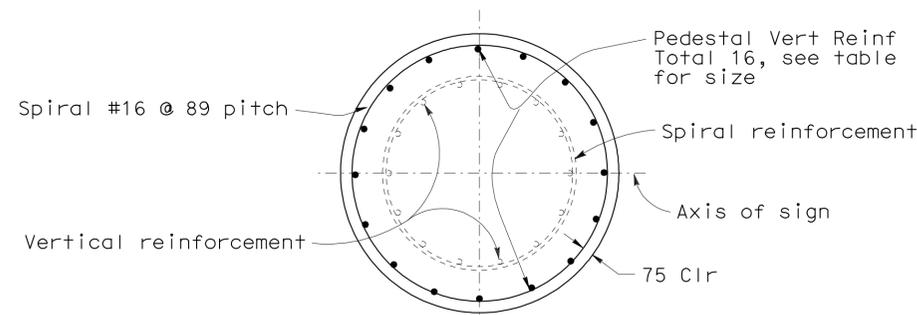
January 24, 2005
PLANS APPROVAL DATE



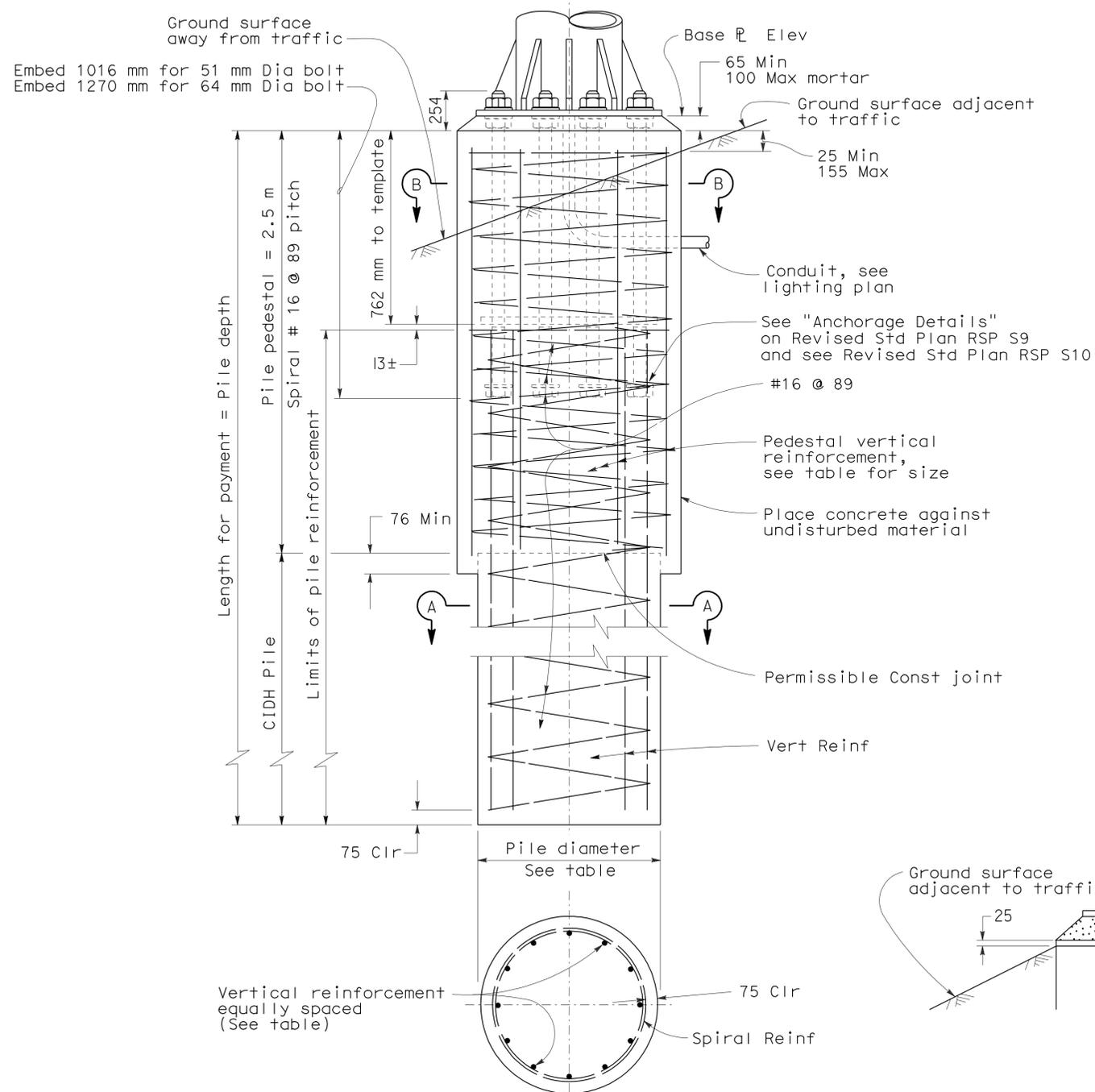
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To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

To accompany plans dated 10-18-10



SECTION B-B



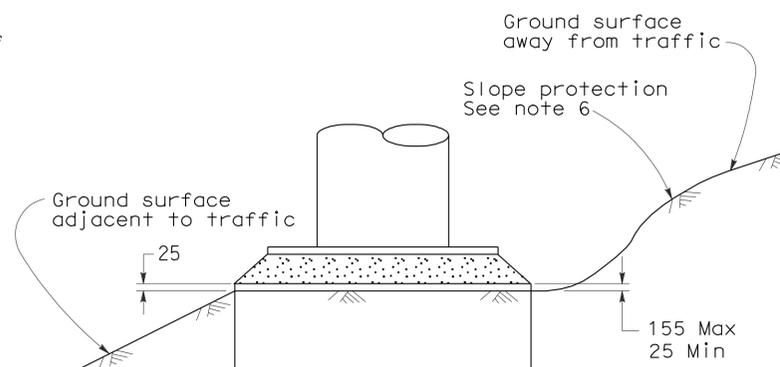
SECTION A-A

| Post Type | Anchor Bolts | | | | Round Pedestal | | | | CIDH Pile | | | | | | | | |
|-----------|--------------|----------|---------|-------------------|----------------|-------------|----|------|-----------|---------------|----------------|-------------|----|--------|------|----|----|
| | Total | Dia (mm) | BC (mm) | Total Length (mm) | Dia (mm) | Reinforcing | | Hoop | | Pile Dia (mm) | Pile Depth (m) | Reinforcing | | Spiral | | | |
| I-S | 12 | 51 | 711 | 1270 | 1600 | 16 | 32 | 1381 | 16 | 89 | 1372 | 5.5 | 26 | 32 | 1143 | 16 | 89 |
| II-S | 12 | 51 | 711 | 1270 | 1600 | 16 | 32 | 1381 | 16 | 89 | 1372 | 6 | 26 | 32 | 1143 | 16 | 89 |
| III-S | 12 | 51 | 787 | 1270 | 1600 | 16 | 32 | 1381 | 16 | 89 | 1372 | 7 | 26 | 32 | 1143 | 16 | 89 |
| IV-S | 14 | 51 | 864 | 1270 | 1600 | 16 | 32 | 1381 | 16 | 89 | 1372 | 7 | 26 | 32 | 1143 | 16 | 89 |
| V-S | 16 | 64 | 965 | 1524 | 1753 | 16 | 36 | 1533 | 16 | 89 | 1524 | 8 | 28 | 36 | 1295 | 16 | 89 |
| VI-S | 16 | 64 | 1041 | 1524 | 1753 | 16 | 36 | 1533 | 16 | 89 | 1524 | 8.5 | 28 | 36 | 1295 | 16 | 89 |
| VII-S | 16 | 64 | 1041 | 1524 | 1753 | 16 | 36 | 1533 | 16 | 89 | 1524 | 8.5 | 28 | 36 | 1295 | 16 | 89 |

** Use Foundation Depth shown in table unless otherwise shown on the Project Plans.

NOTES

- For anchor bolt layout see post sheet.
- For "Base Elevation" see Project Plans.
- Longer side of post shall be normal to axis of sign.
- Prior to erection of the post, backfill which is equivalent to the surrounding material, shall be in place.
- Pedestal shall be formed 150 mm Min below ground surface. Remainder to be placed against undisturbed material.
- Slope protection required when indicated on the Project Plans.
- Foundation design is based on 2001 AASHTO article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30° and unit weight of soil used is 1922 kg/m³.



DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
TWO POST TYPE
ROUND PEDESTAL PILE FOUNDATION**

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S15 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S15
DATED JULY 1, 2004-PAGE 324 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S15

2004 REVISED STD PLAN RSP S15

| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 313 | 364 |



REGISTERED CIVIL ENGINEER

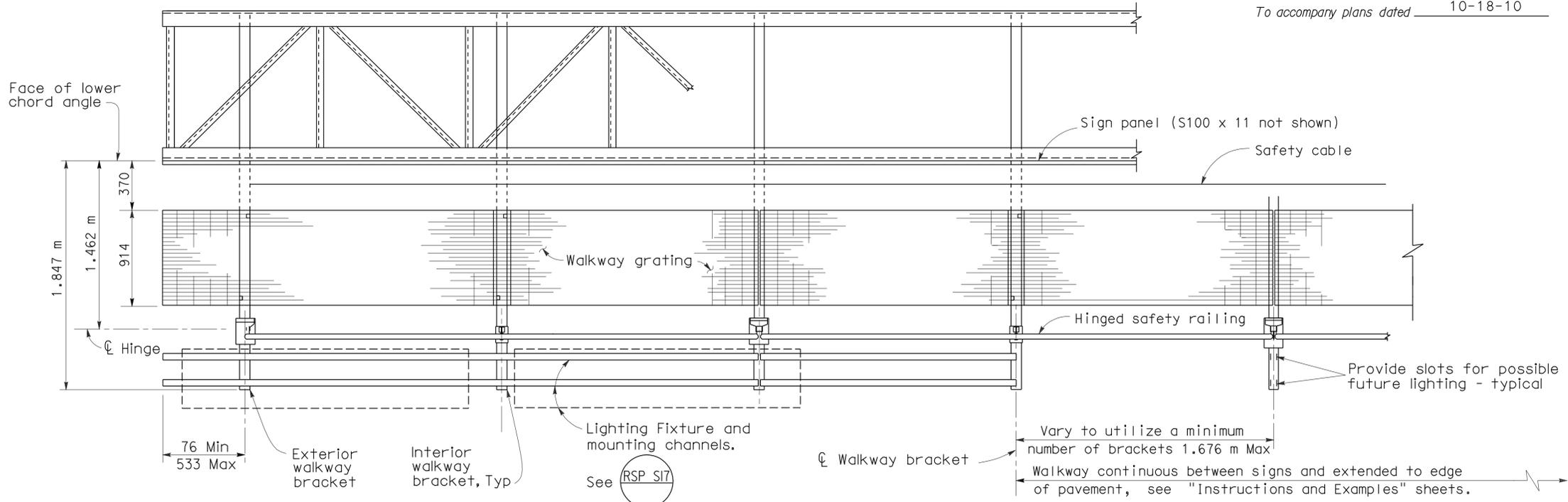
April 28, 2005
PLANS APPROVAL DATE

Tillat Sattar
No. C42892
Exp. 03-31-2006
CIVIL
STATE OF CALIFORNIA

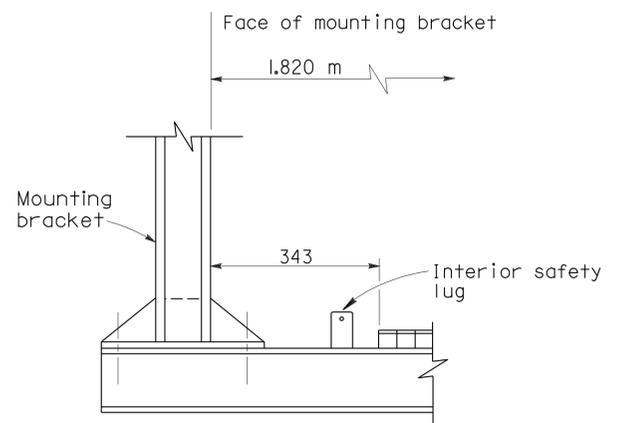
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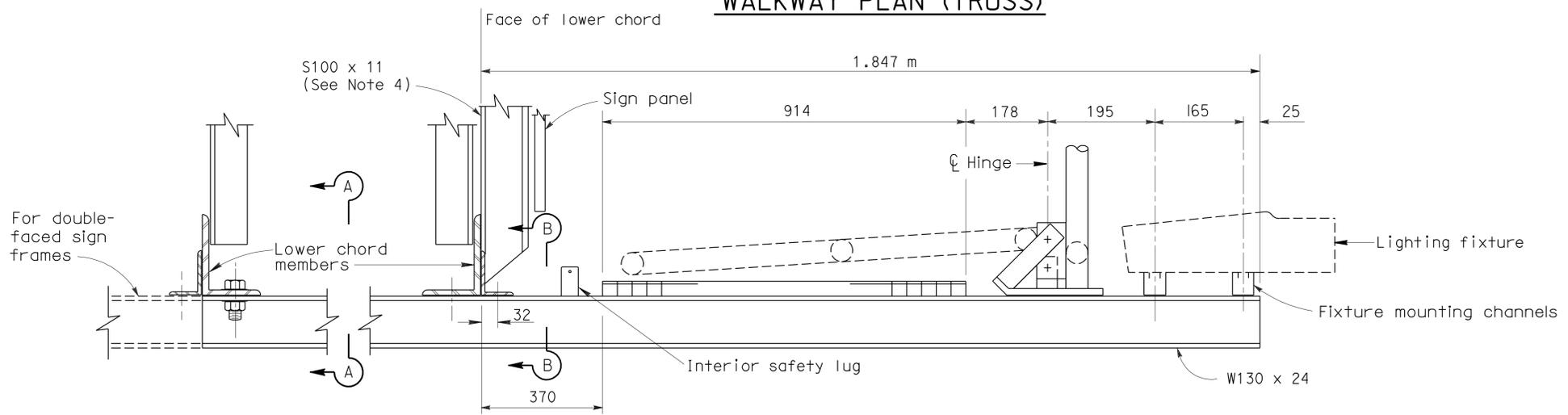
To accompany plans dated 10-18-10



WALKWAY PLAN (TRUSS)

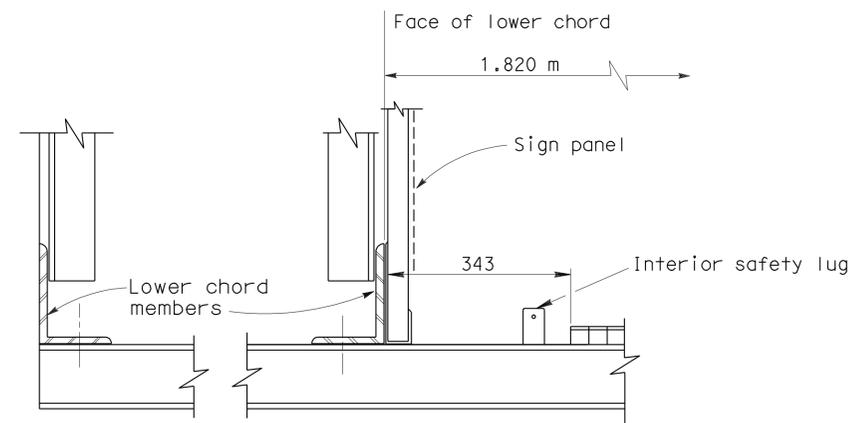


TUBULAR MOUNTED

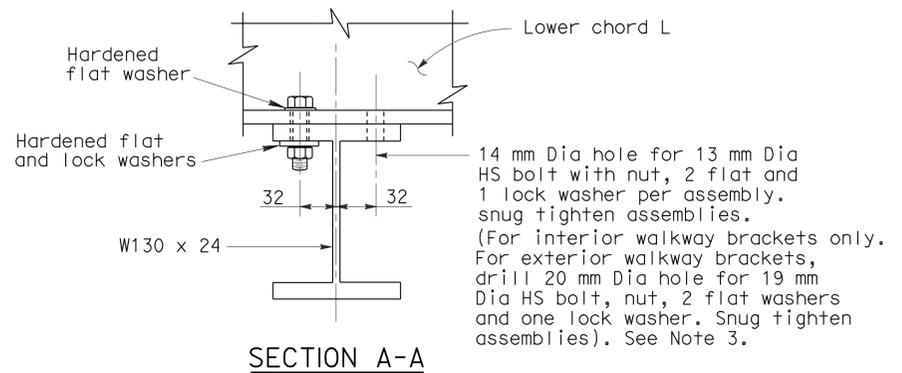


TRUSS

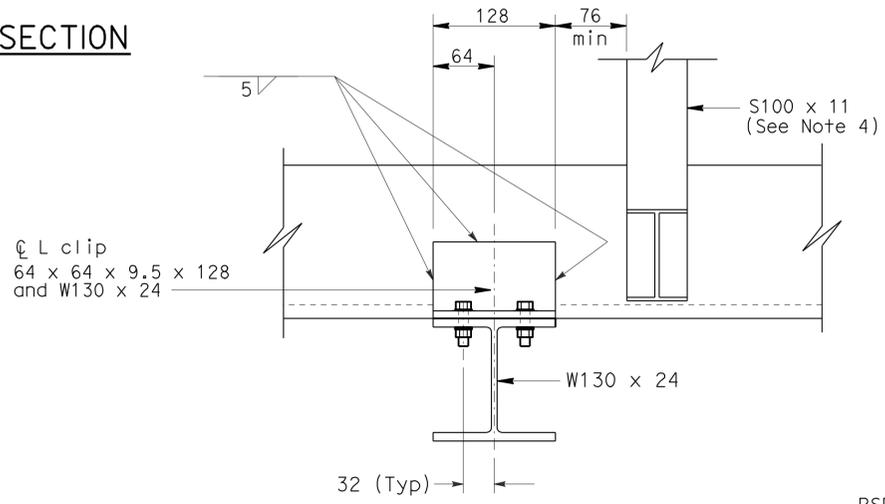
TYPICAL WALKWAY SECTION



**BOX BEAM
CLOSED TRUSS**



SECTION A-A



SECTION B-B

NOTES:

1. For spacing of lighting fixtures, see Standard Plan ES-15A.
2. For safety lug details, see Revised Standard Plan RSP S17.
3. For double faced sign frames with double walkways, use a total 8 bolt assemblies per bracket.
4. S100 x 11 to be used with laminated Type A panels. See Revised Standard Plan RSP S19.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS
WALKWAY DETAILS No.1**

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S16 DATED APRIL 28, 2005 SUPERSEDES RSP S16 DATED JANUARY 24, 2005 AND STANDARD PLAN S16 DATED JULY 1, 2004-PAGE 325 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S16

2004 REVISED STD PLAN RSP S16



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 314 | 364 |

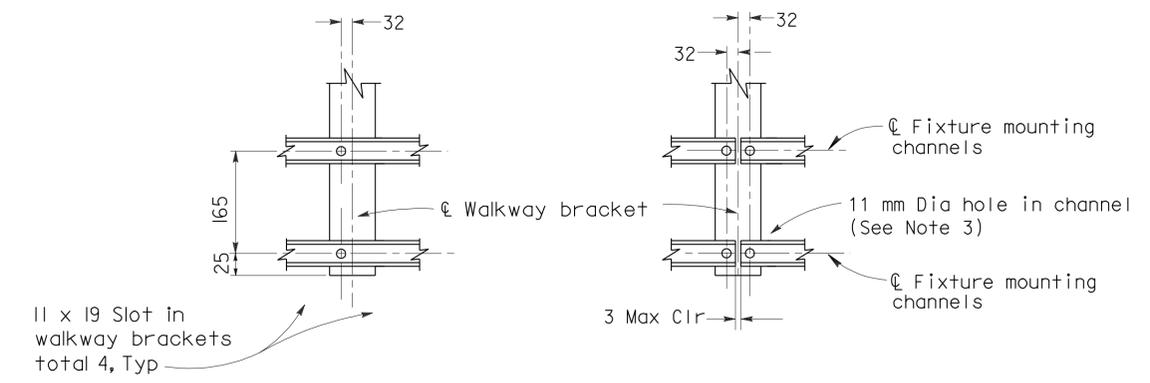
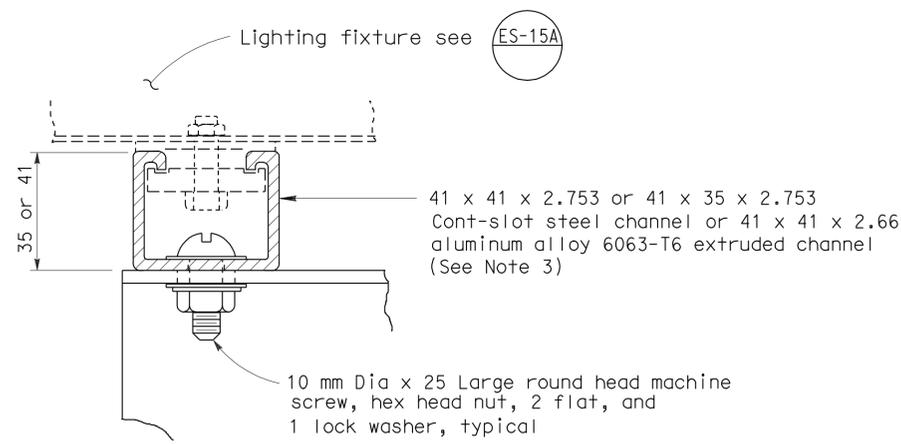
REGISTERED CIVIL ENGINEER

January 24, 2005
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Tillat Sattar
No. C42892
Exp. 03-31-2006
CIVIL
STATE OF CALIFORNIA

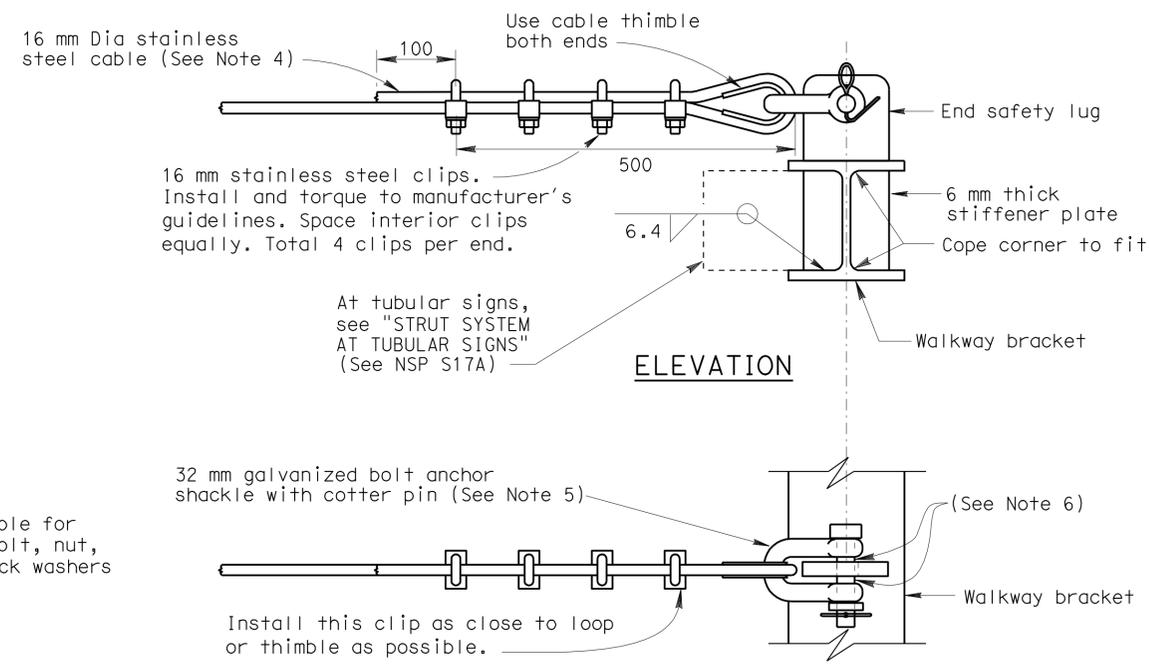
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TYPICAL CONNECTION CONNECTION AT SPLICE
LIGHTING FIXTURE MOUNTING CHANNEL DETAILS 2

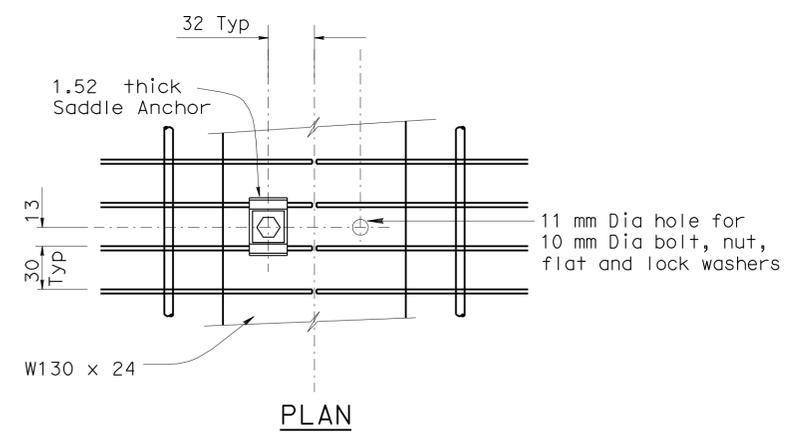
LIGHTING FIXTURE MOUNTING CHANNEL DETAILS 1



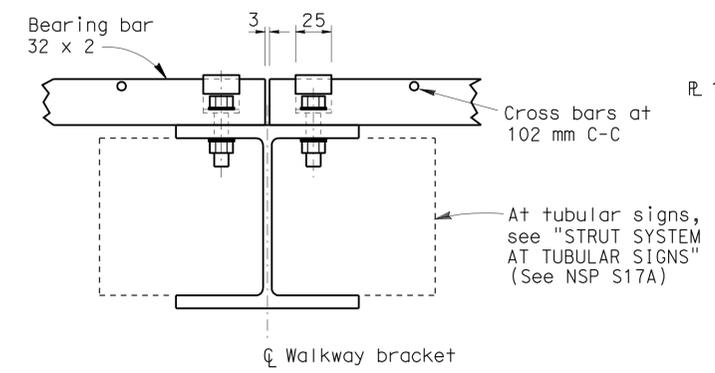
ELEVATION PLAN
END SAFETY CABLE

NOTES

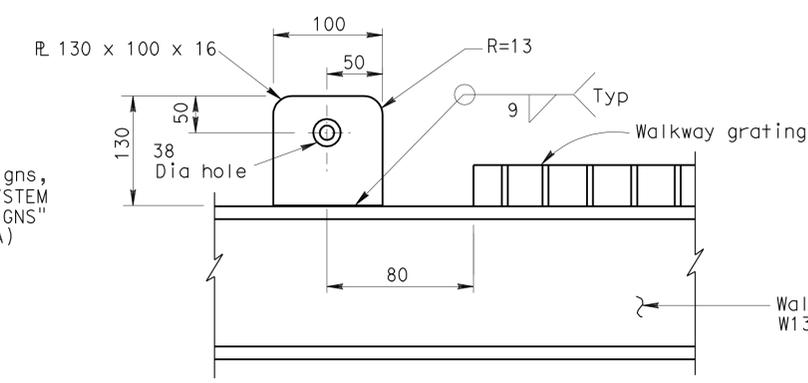
1. Welded type grating shall have 32 x 3 bearing bars at 30 mm centers with 6 mm diameter (or equal) cross bars at 102 mm centers. If mechanical lock grating is used, it shall be equal in strength to the welded type. Alternate hold-down clips may be submitted for approval.
2. Walkway grating and light fixture mounting channels to be continuous (no splices) over as many walkway brackets as practical and consistent with fabrication, ease of handling and assembly.
3. Contractor may substitute 41 x 41 x 2.753 cont-slot steel channel with pre-punched slots not larger than 10 mm x 77 mm. Slots shall be at bottom of channel and shall be parallel to channel. Slots shall be spaced not closer than 100 mm center to center.
4. Stainless steel cable shall be plain with 6 x 19 IWRC construction using Type 302 or 304 stainless steel strands. Minimum cable breaking strength shall exceed 155 kN. Cable shall be free of kinks, knots, or deformation and shall be continuous between end lugs. Splices not allowed.
5. Shackle shall be galvanized steel with working load limit of 107 kN.
6. Place an equal amount of washers on each side to align cable with end lug without restricting shackle bolt rotation or contacting cable.
7. Cable shall be installed with a deflection not to exceed 25 mm, measure from taut position, when pulled with an upward force of 0.13 kN at midpoint between any two walkway brackets.



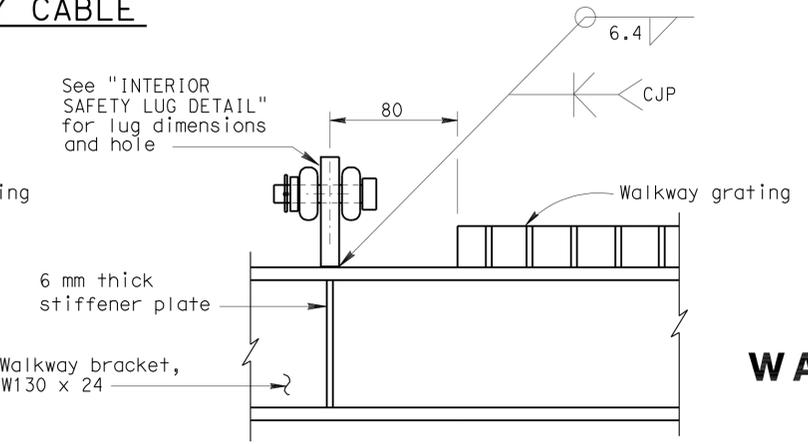
PLAN



SECTION A-A
WALKWAY GRATING DETAILS
Shown at splice



INTERIOR SAFETY LUG DETAIL
(At every walkway bracket between exterior walkway brackets)



END SAFETY LUG DETAIL
(At exterior walkway brackets)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**OVERHEAD SIGNS
WALKWAY DETAILS No.2**

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S17 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S17
DATED JULY 1, 2004-PAGE 326 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S17

2004 REVISED STD PLAN RSP S17



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 315 | 364 |

REGISTERED CIVIL ENGINEER

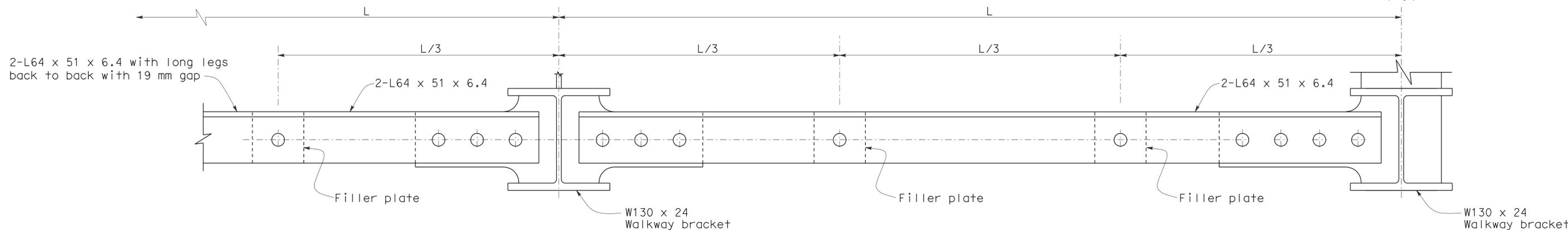
January 24, 2005
PLANS APPROVAL DATE

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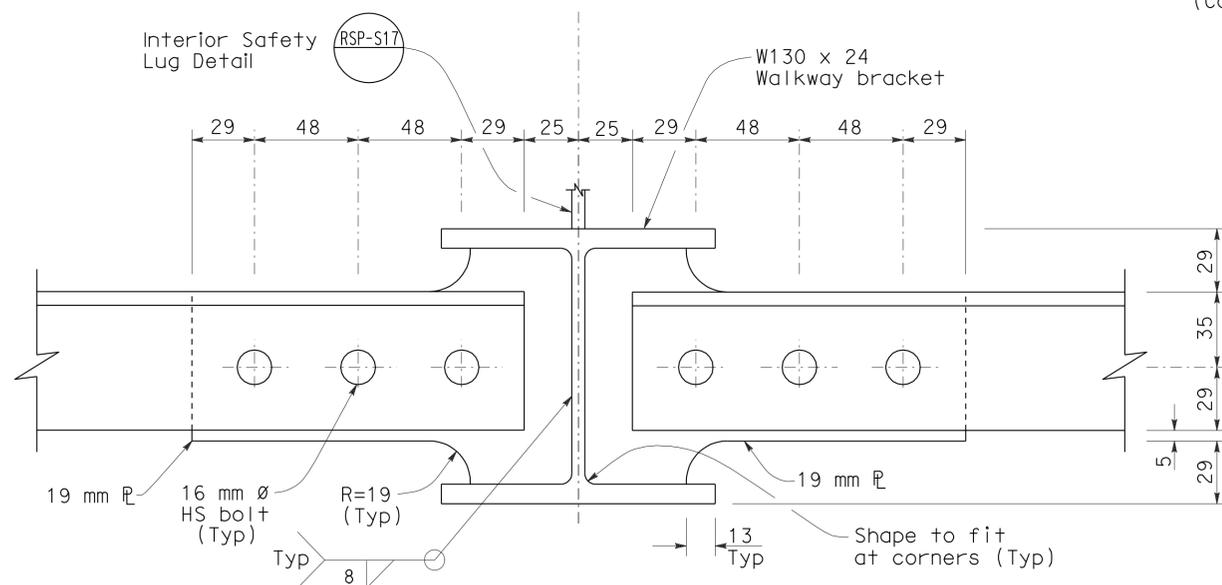


To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

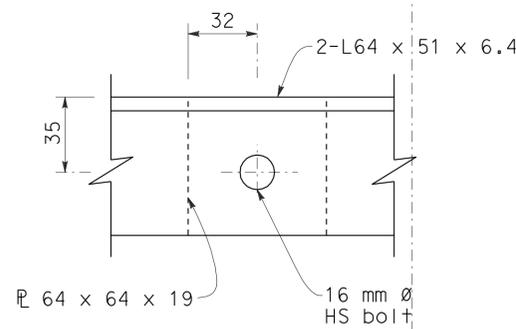
To accompany plans dated 10-18-10



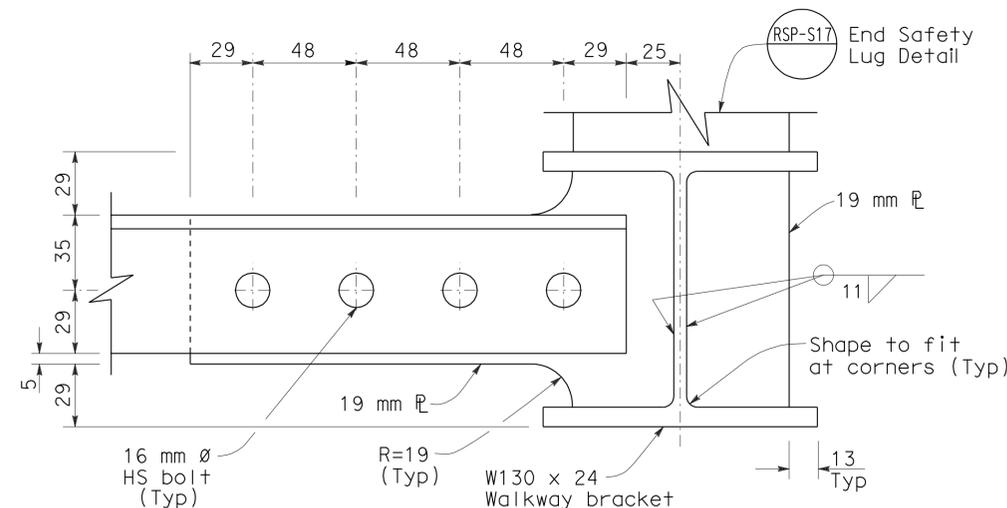
STRUT SYSTEM AT TUBULAR SIGNS
(Continuous between end safety lug locations)



INTERIOR SAFETY LUG LOCATION



FILLER PLATE



END SAFETY LUG LOCATION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**OVERHEAD SIGNS
WALKWAY DETAILS No.3**

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN
NSP S17A DATED JANUARY 24, 2005
SUPPLEMENTS THE STANDARD PLANS BOOK DATED JULY 2004.



| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|------------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 316 | 364 |

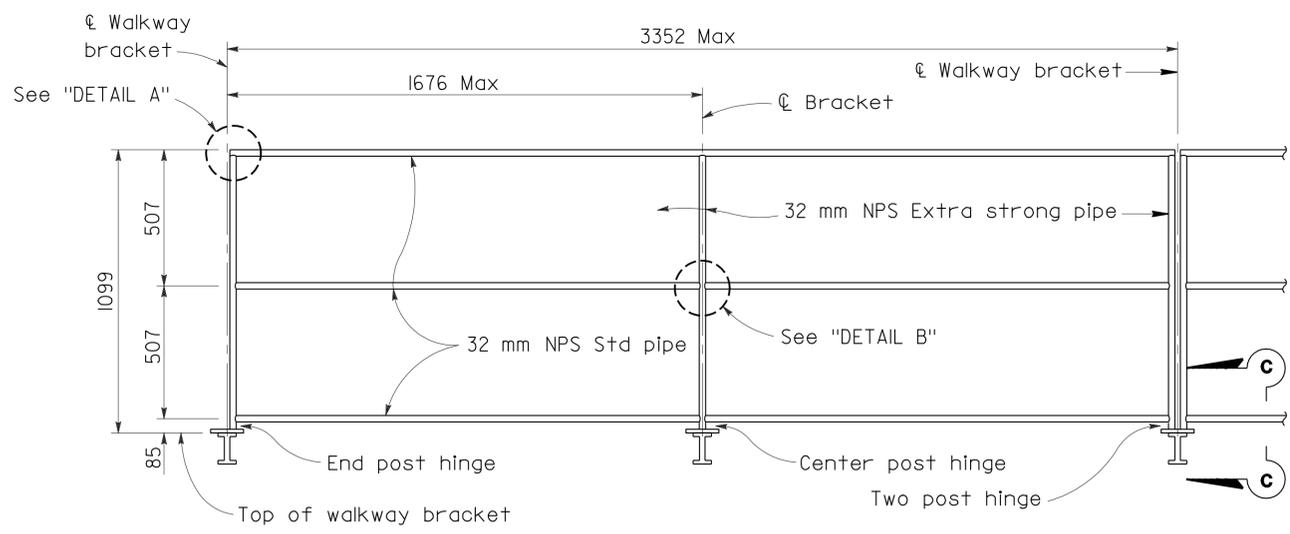
REGISTERED CIVIL ENGINEER

January 24, 2005
PLANS APPROVAL DATE

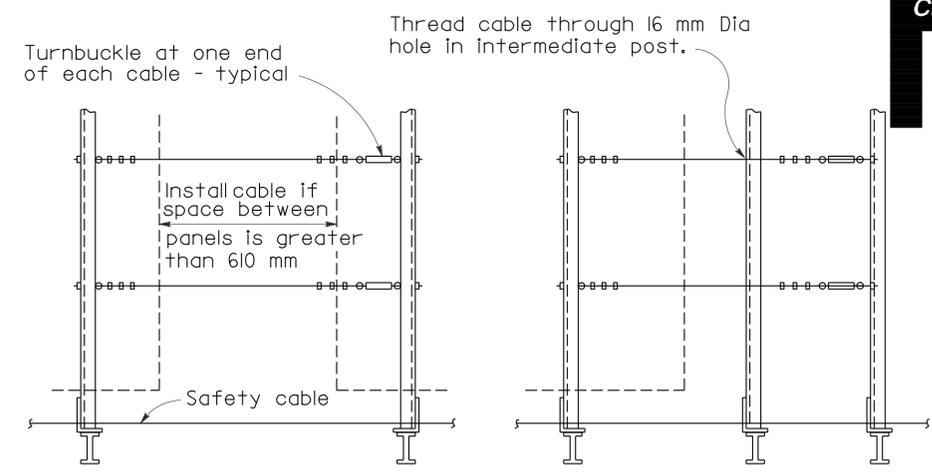
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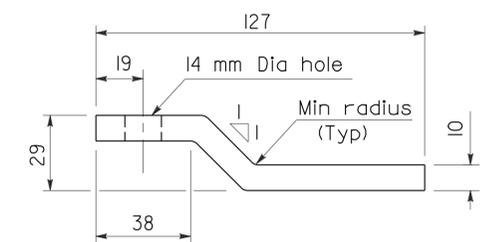
To accompany plans dated 10-18-10



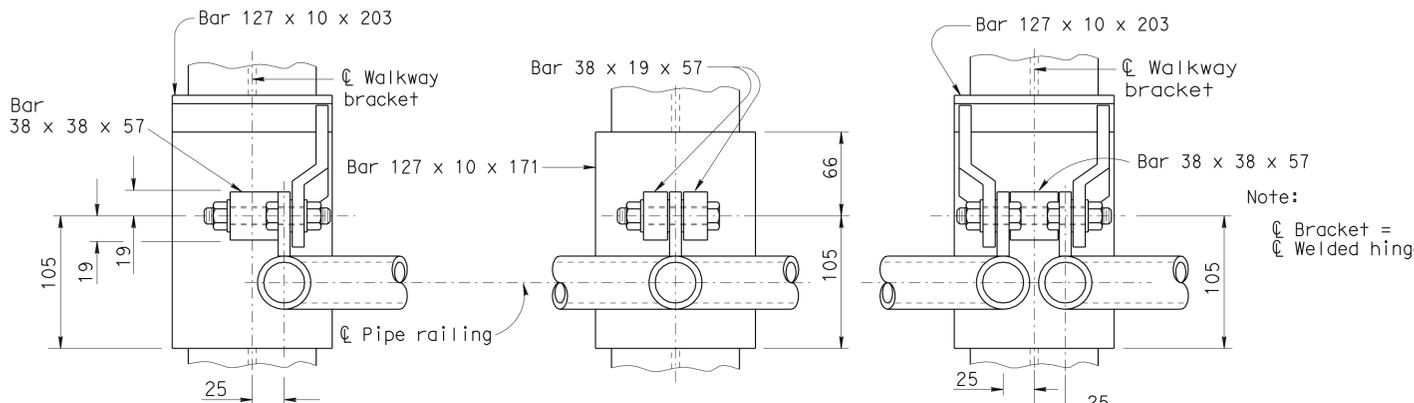
SAFETY RAILING ELEVATION



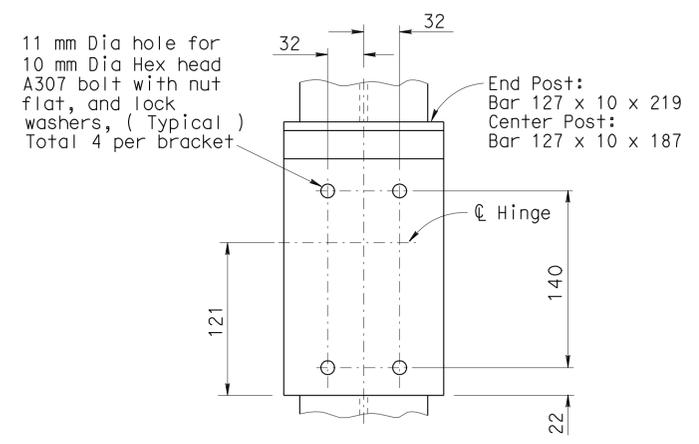
BETWEEN PANELS **BEYOND PANELS**
UPPER SAFETY CABLE ELEVATION
For tubular structures



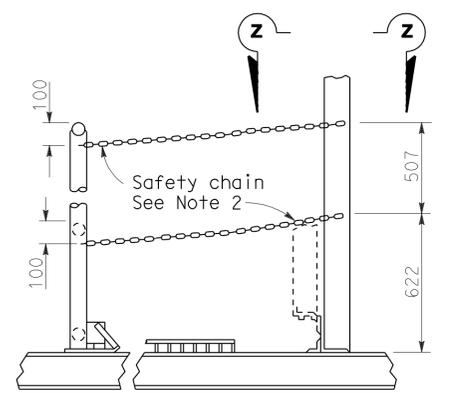
PLAN - KICKER BAR



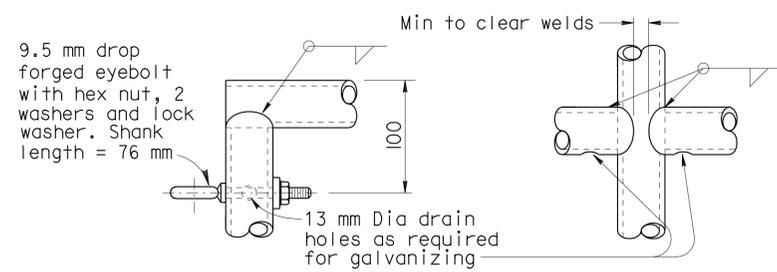
END POST **CENTER POST WELDED HINGE - PLAN** **TWO POST**



TYPICAL BOLTED (ALTERNATIVE) HINGED CONNECTION

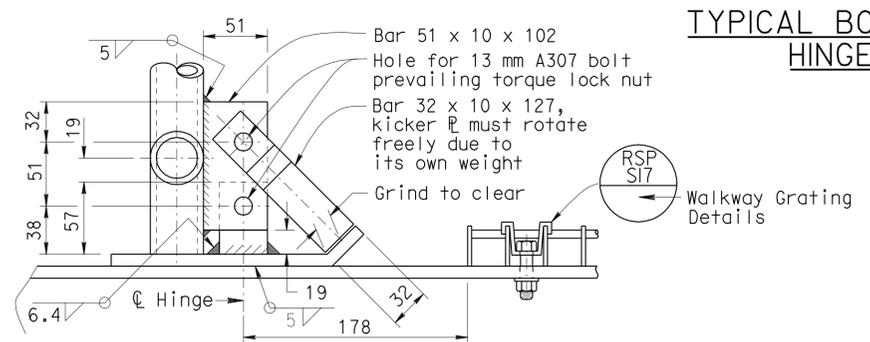


CHAIN ASSEMBLY



DETAIL A **DETAIL B**

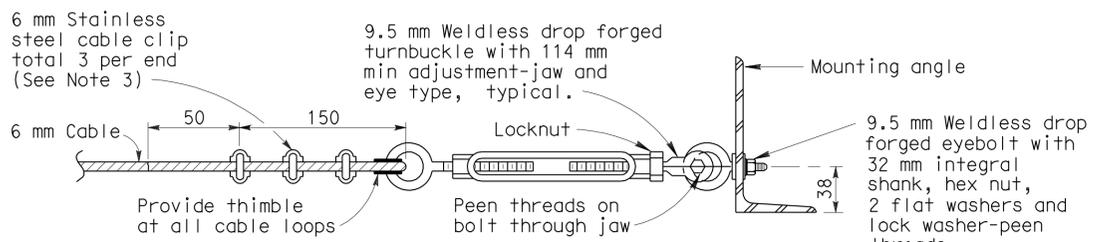
Note: Alternative venting methods may be used if approved by the Engineer.



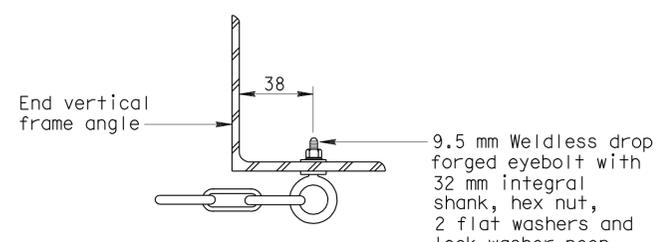
DETAIL C

NOTES

- Special care shall be taken to insure that the complete hinge and latch assembly will hold the safety railing in a steady manner, free of wobble while in the raised position. Maximum allowable displacement from vertical at top of railing when latched shall be 12 mm.
- Safety chain shall be 9.5 mm galvanized steel coil chain, approximately 39.4 links per meter. Length shall be minimum which allows lock-up of safety railing. Minimum of two safety chains per safety railing. Material shall be Grade 43 high test chain ASTM A413.
- Cable clips shall be installed according to manufacturer's recommendation.



TURNBUCKLE DETAILS



VIEW Z-Z

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**OVERHEAD SIGNS
WALKWAY SAFETY
RAILING DETAILS**

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S18 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S18
DATED JULY 1, 2004-PAGE 327 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S18

2004 REVISED STD PLAN RSP S18



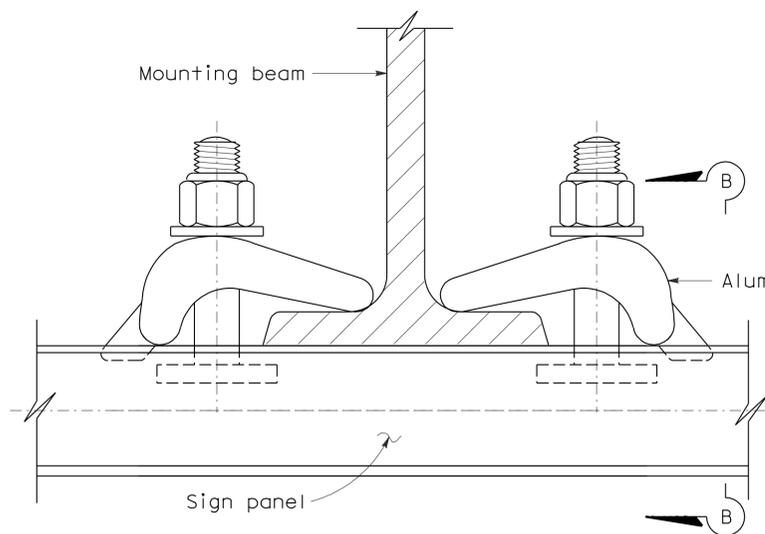
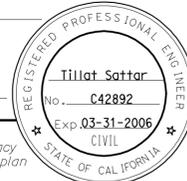
| | | | | | | |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 318 | 364 |

REGISTERED CIVIL ENGINEER

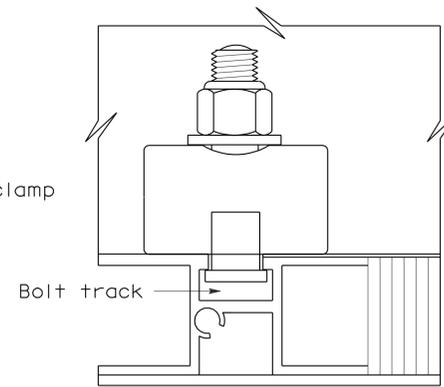
January 24, 2005
PLANS APPROVAL DATE

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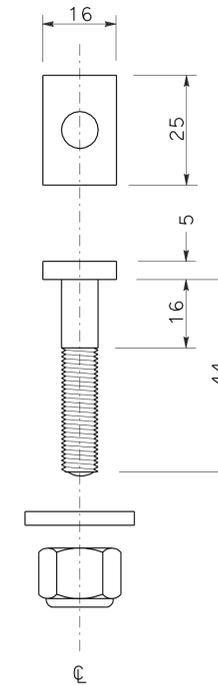
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>



TYPICAL ALUMINUM CLAMP MOUNTING



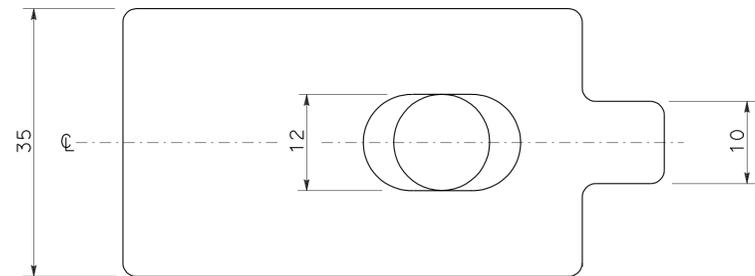
**SECTION B-B
TYPICAL BOLTED CONNECTION
TO STRUCTURE SUPPORT**



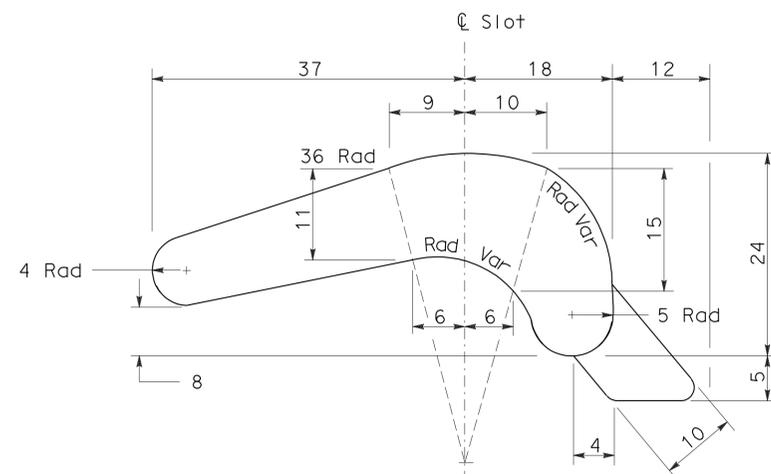
STAINLESS STEEL BOLT

A-1 HARDWARE QUANTITY TABLE

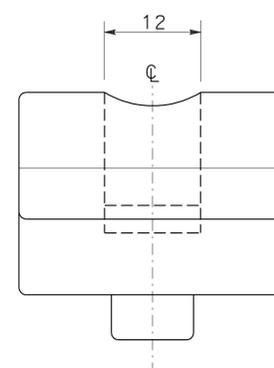
| SIGN LENGTH mm | SIGN DEPTH mm - See Note 6 | UNITS REQUIRED See Note 5 |
|-------------------|-------------------------------|------------------------------|
| 4572 or less | 1270 - 1524 | 4 |
| 4877 - 7315 | 1270 - 1524 | 6 |
| 4572 or less | 1778 - 3048 | 8 |
| 4877 - 7315 | 1778 - 3048 | 12 |



TOP VIEW



SIDE VIEW



FRONT VIEW

NOTES

1. Refer to applicable Standard Plan for additional mounting details.
2. Mounting clamp shall be aluminum casting as specified in the Special Provisions.
3. Rectangular head bolt, hexagon stop nut, and flat washer shall be 10 mm diameter (18-8) stainless steel.
4. One unit of A-1 hardware shall consist of two sets of these components: clamp, bolt, nut and washer.
5. Signs 2794 mm and 3048 mm in depth may be fabricated in three panel sections to avoid legend from being placed on a horizontal seam. Increase number of units of mounting hardware accordingly.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TYPE A-1 MOUNTING HARDWARE
OVERHEAD LAMINATED
TYPE A PANEL
TRUSS AND LIGHTWEIGHT
SIGN STRUCTURES**

NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP S87 DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN S87
DATED JULY 1, 2004-PAGE 369 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP S87

2004 REVISED Std PLAN RSP S87

ELECTROLIERS

| STANDARD TYPES | High mast lighting standard |
|-------------------|--|
| 15, 15D | High mast lighting standard |
| 15 STRUCTURE | Double arm lighting standard |
| 21, 21D STRUCTURE | Existing electrolier |
| 30 | Electrolier foundation (Future installation) |
| 31 | |
| 32 | |
| 35 | |
| 36-20A | |

NOTES

- Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- Variations noted adjacent to symbol on project plans.

- Electrolier (see project notes or project plans)
- Luminaire on wood pole

STANDARD NOTES

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

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

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



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 319 | 364 |

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

October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated 10-18-10

SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- Existing soffit or wall luminaire to be modified as specified.

NOTE

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED JULY 1, 2004-PAGE 413 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-1A

2004 REVISED STD PLAN RSP ES-1A

CONDUIT

PROPOSED

EXISTING

| | | |
|--|--|---|
| | | Lighting conduit, unless otherwise indicated or noted |
| | | Traffic signal conduit |
| | | Communication conduit |
| | | Telephone conduit |
| | | Fire alarm conduit |
| | | Fiber optic conduit |
| | | Conduit termination |
| | | Conduit riser in/on structure or Service pole |



SIGNAL EQUIPMENT

PROPOSED

EXISTING

| | | |
|--|--|---|
| | | Pedestrian signal face |
| | | Pedestrian push button post |
| | | Pedestrian barricade |
| | | Vehicle signal face (with backplate, 3-Section: red, yellow and green) |
| | | Vehicle signal face with angle visors |
| | | Modifications of basic symbols: "L" Indicates all non-arrow sections louvered "LG" Indicates louvered green section only "PV" Indicates 300 mm programmed visibility sections "200" indicates all 200 mm sections (only when specified) |
| | | Type 15TS and Vehicle signal face |
| | | Vehicle signal face with red, yellow and green left arrow sections |
| | | Vehicle signal face with red and yellow sections and up green arrow |
| | | Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows |
| | | Type 1 Standard and attached vehicle signal faces |
| | | Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign |
| | | Type 33 Standard, Left-turn vehicle signal face and sign |
| | | Standard with luminaire and signal mast arms and attached vehicle signal faces |
| | | Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated |
| | | Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign |
| | | Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication |
| | | Controller assembly. Door indicates front of cabinet |
| | | Guard post |
| | | Type 1 Standard with "Meter On" sign |
| | | Emergency vehicle detector |

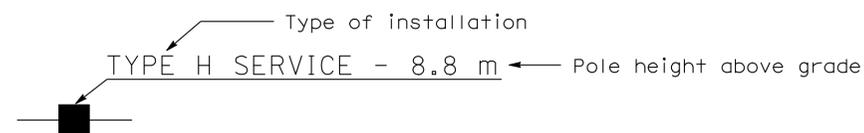
SERVICE EQUIPMENT

PROPOSED

EXISTING

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

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

PROPOSED

EXISTING

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



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REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
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October 5, 2007
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To accompany plans dated 10-18-10

NOTES

- All signal sections shall be 300 mm unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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RSP ES-1B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1B
DATED JULY 1, 2004-PAGE 414 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-1B

2004 REVISED STD PLAN RSP ES-1B



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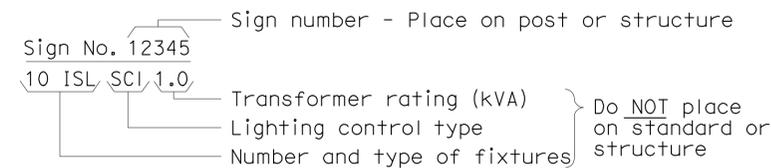
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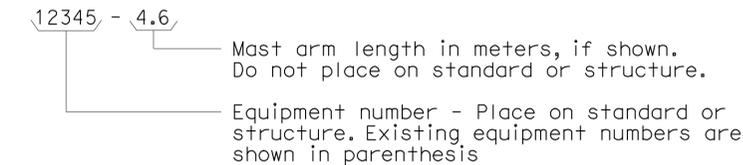
To accompany plans dated 10-18-10

EQUIPMENT IDENTIFICATION

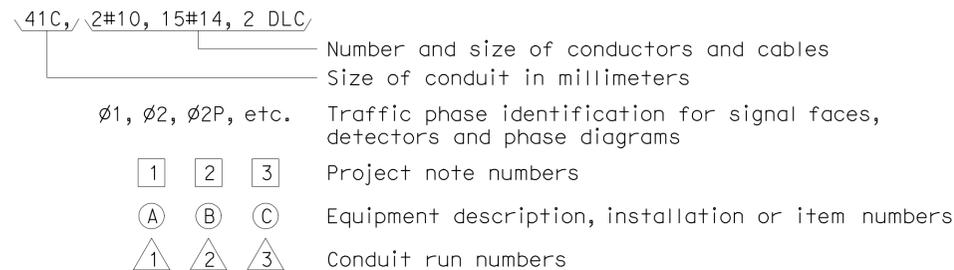
ILLUMINATED SIGN IDENTIFICATION NUMBER:



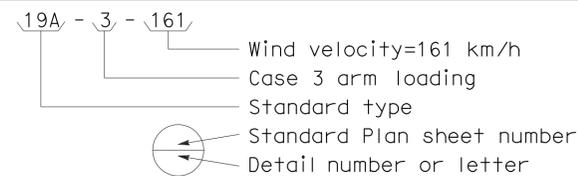
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



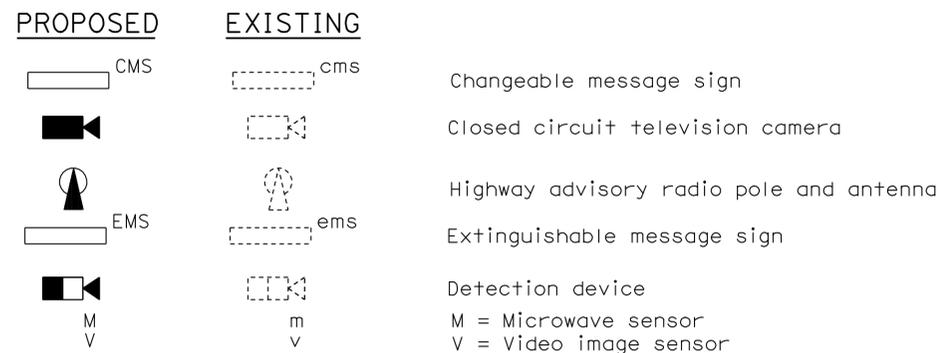
CONDUIT AND CONDUCTOR IDENTIFICATION:



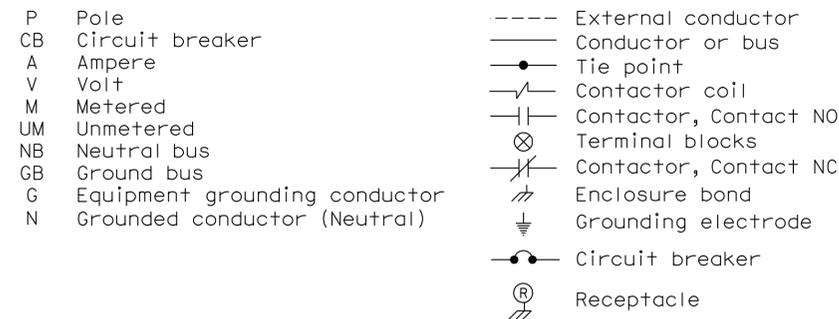
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



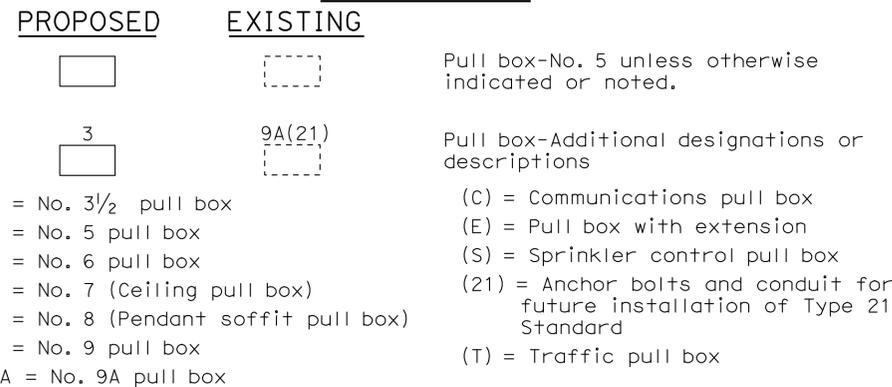
MISCELLANEOUS EQUIPMENT



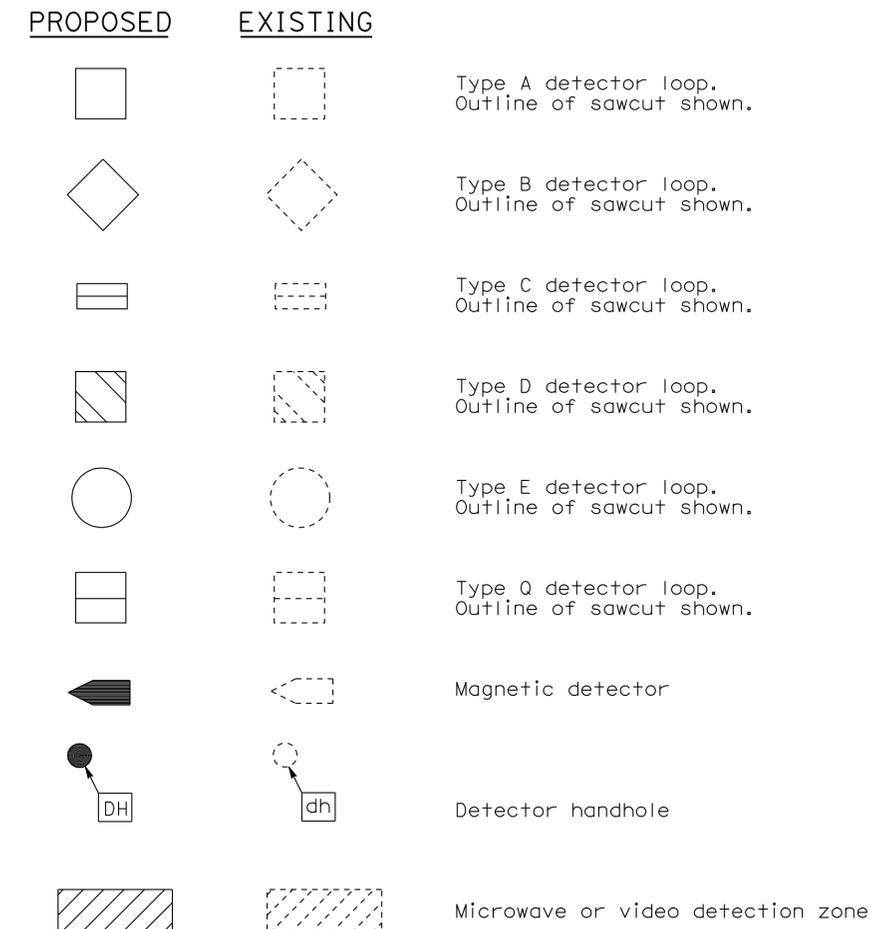
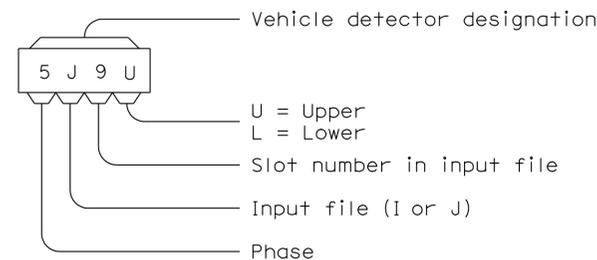
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)

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RSP ES-1C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1C
 DATED JULY 1, 2004-PAGE 415 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-1C

2004 REVISED STD PLAN RSP ES-1C



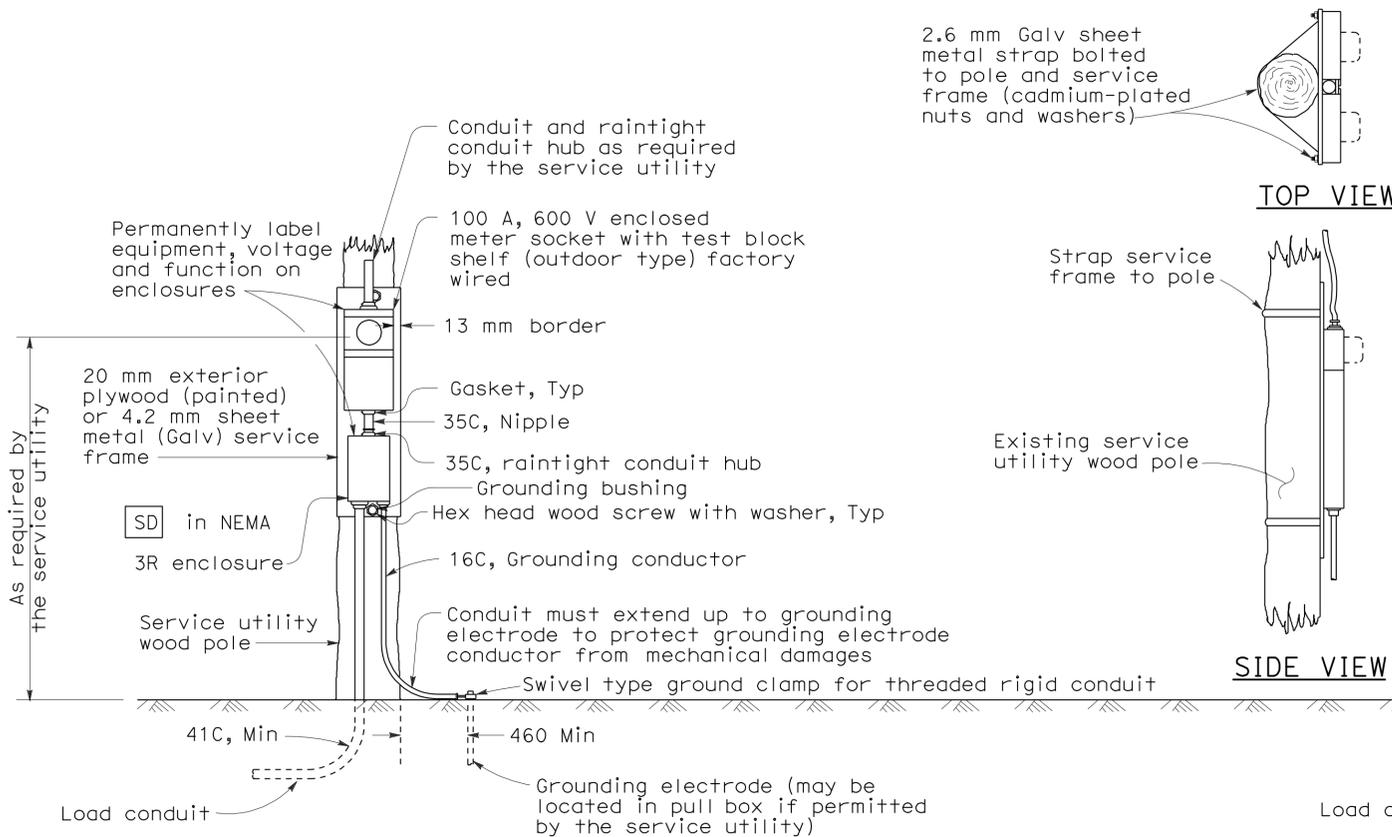
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 322 | 364 |

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
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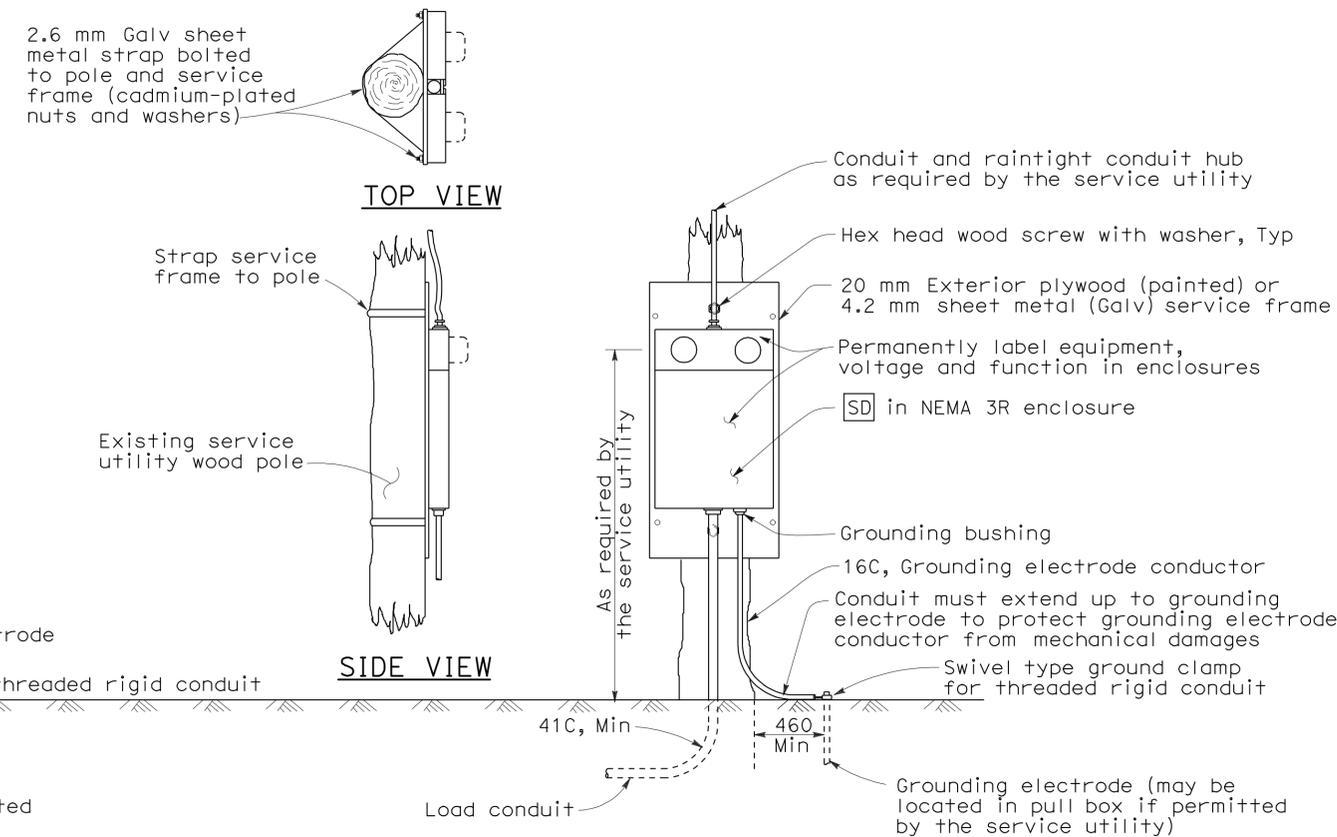
October 5, 2007
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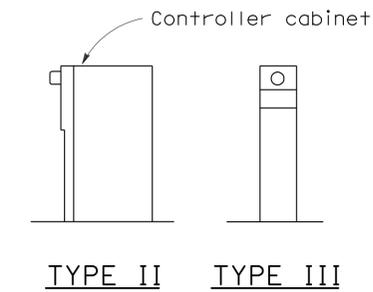


TYPE SCE-1 SERVICE



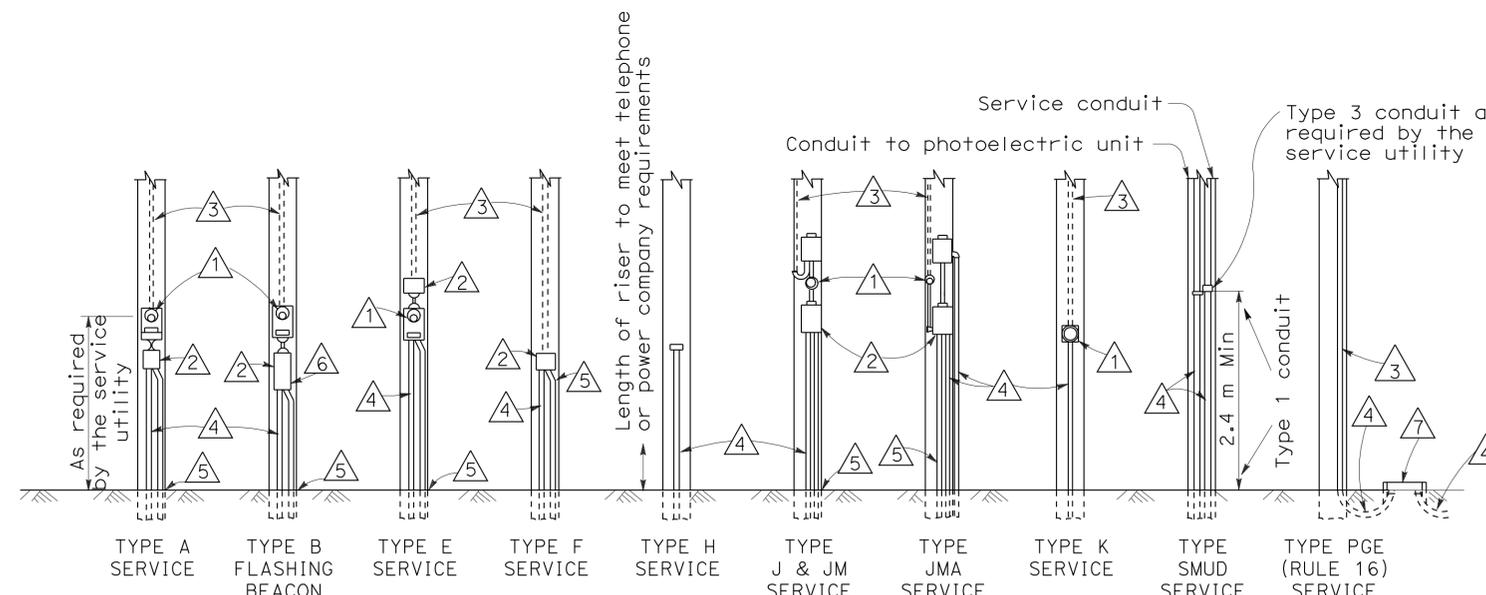
TYPE SCE-2 SERVICE

To accompany plans dated 10-18-10



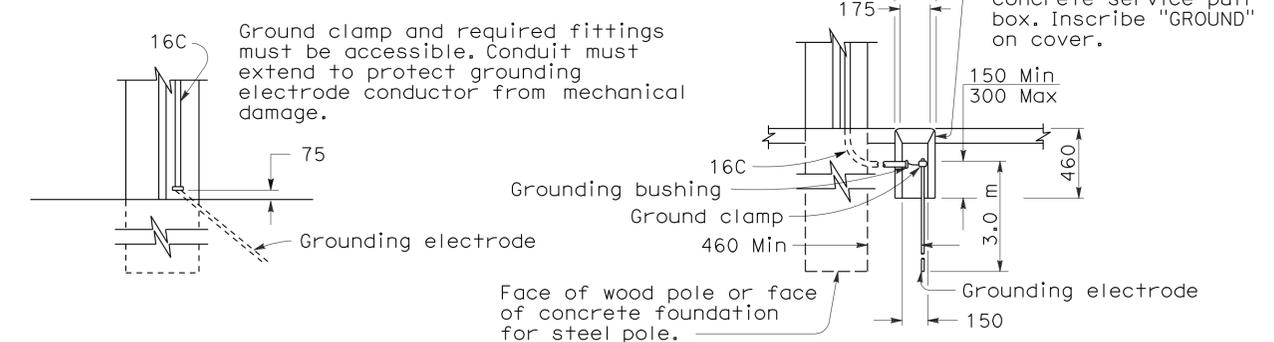
TYPE OF SERVICE (TYPICAL)

Type II service equipment enclosure mounted on a side of a controller cabinet.
 Type III complete free-standing service equipment enclosure.



- NOTES**
- ① Meter socket.
 - ② Service enclosure with a minimum 60 A rated main circuit breaker, unless otherwise shown.
 - ③ (a) Utility owned pole. The service utility will furnish and install required service riser, PEU with conductors and other equipment as needed.
 (b) State owned pole. The Contractor shall furnish and install required service riser and equipment.
 - ④ Conduit, length and size as required.
 - ⑤ 16C, 1#6. See "Service Grounding" detail.
 - ⑥ Flashing beacon control assembly.
 - ⑦ Service pull box, No. 5 unless otherwise noted, furnished and installed by the Contractor. Service utility shall determine the exact location.

POLE MOUNTED SERVICE INSTALLATIONS



SERVICE GROUNDING

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT)

NO SCALE
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RSP ES-2A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2A DATED JULY 1, 2004-PAGE 416 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-2A

2004 REVISED STD PLAN RSP ES-2A



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
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NOTES-TYPE III SERVICE EQUIPMENT ENCLOSURES:

1. Service equipment enclosure and metering equipment shall meet the requirements of the service utility. The meter area shall have a sealable, lockable, weathertight cover that can be removed without the use of tools.
2. Service equipment enclosures shall be factory wired and conform to NEMA standards.
3. Dimensions of service equipment enclosures shall meet the requirements of the service utility.
4. The dead front panels on Type III-A service equipment enclosures shall have a continuous stainless steel or aluminum piano hinge. The panel in front of the breakers shall be secured with a latch or captive screws. No live parts shall be mounted on the dead front panel.
5. The exterior door shall have provisions for padlocking. The padlock hole shall be a minimum diameter of 11 mm.
6. Enclosures housing transformers of more than one kVA shall have effective screened ventilation louvers of not less than 32 000 mm². Screen shall be stainless steel No. 304, with a No. 10 size mesh. Framed screen shall be secured with at least four bolts.
7. Fasteners on the exterior of the enclosure shall be vandal-resistant and shall not be removable from the exterior. Screws, nuts, bolts and washers shall be stainless steel.
8. Landing lugs for incoming service conductors shall be compatible with either copper or aluminum conductors sized to suit the conductors shown on the plan. Landing lugs shall be copper or tin-plated aluminum. Neutral bus shall be rated for 125 A and be suitable for copper or aluminum conductors unless otherwise specified. The terminal shall include but not be limited to:
 - a) Incoming terminals (landing lugs)
 - b) Neutral lugs
 - c) Solid neutral terminal strip
9. At least 6 standard single pole circuit breaker spaces, 20 mm nominal, shall be provided for branch circuits. Circuit breaker interiors shall be copper. Interiors of enclosure shall accept plug-in or cable-in/cable-out circuit breakers.
10. Control wiring shall be 600 V, 14 stranded machine tool wire. Where subject to flexing, 19 strand wire shall be used.
11. Main bus shall be rated for 125 A and shall be tin-plated copper.
12. A plastic laminated wiring diagram shall be provided with brass mounting eyelets and attached to the inside of the enclosure and the wiring diagram shall affixed to the interior with a UL or ETL approved method.
13. An engraved phenolic nameplate on the dead front panel indicating the function of each circuit or device shall be installed with stainless steel rivets or stainless steel screws:
 - a) Adjacent to the breaker or device with character size a minimum of 3 mm.
 - b) At the top of the exterior door panel indicating system number, voltage level and number of phases with character size a minimum of 5 mm.
14. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.
15. In unpaved areas a raised portland cement concrete pad 600 mm x 100 mm x width of foundation shall be constructed in front of new service equipment enclosure installation. Pad shall be set to elevation of foundation.
16. Foundation shall extend 50 mm minimum beyond edge of service equipment enclosure.
17. Internal bus, where shown, is typical only. Alternative design of proposed service equipment enclosure shall be submitted to the Engineer for approval.
18. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.
19. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.
20. Type III-AR and Type III-BR service equipment enclosures shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.
21. Minimum clearance shall be required for front and back of service equipment enclosure per National Electrical Code, Article 110.26, "Spaces About Electric Equipment (600 Volts, Nominal, or Less)".

To accompany plans dated 10-18-10

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT NOTES
 TYPE III SERIES)**

NO SCALE
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RSP ES-2C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2C
 DATED JULY 1, 2004-PAGE 418 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-2C

2004 REVISED STD PLAN RSP ES-2C



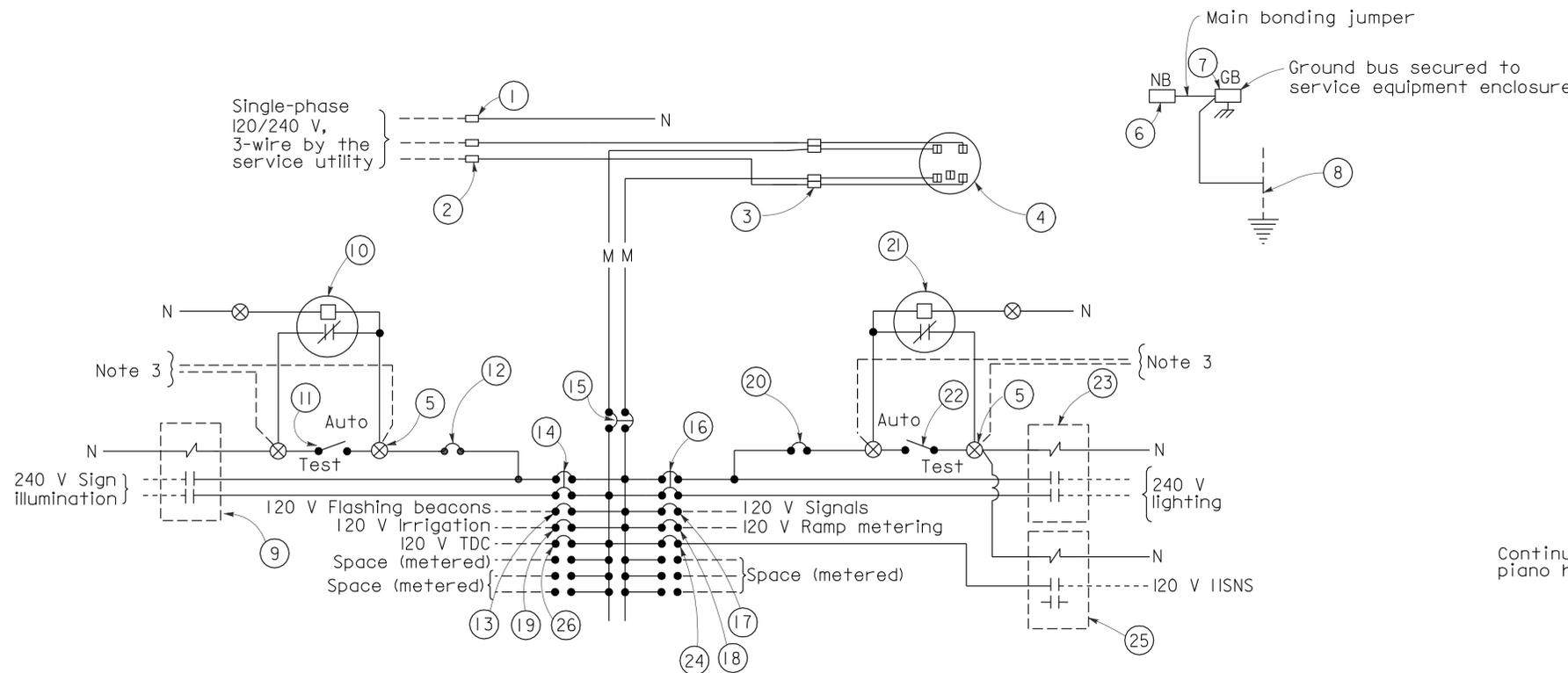
| | | | | | | |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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REGISTERED ELECTRICAL ENGINEER
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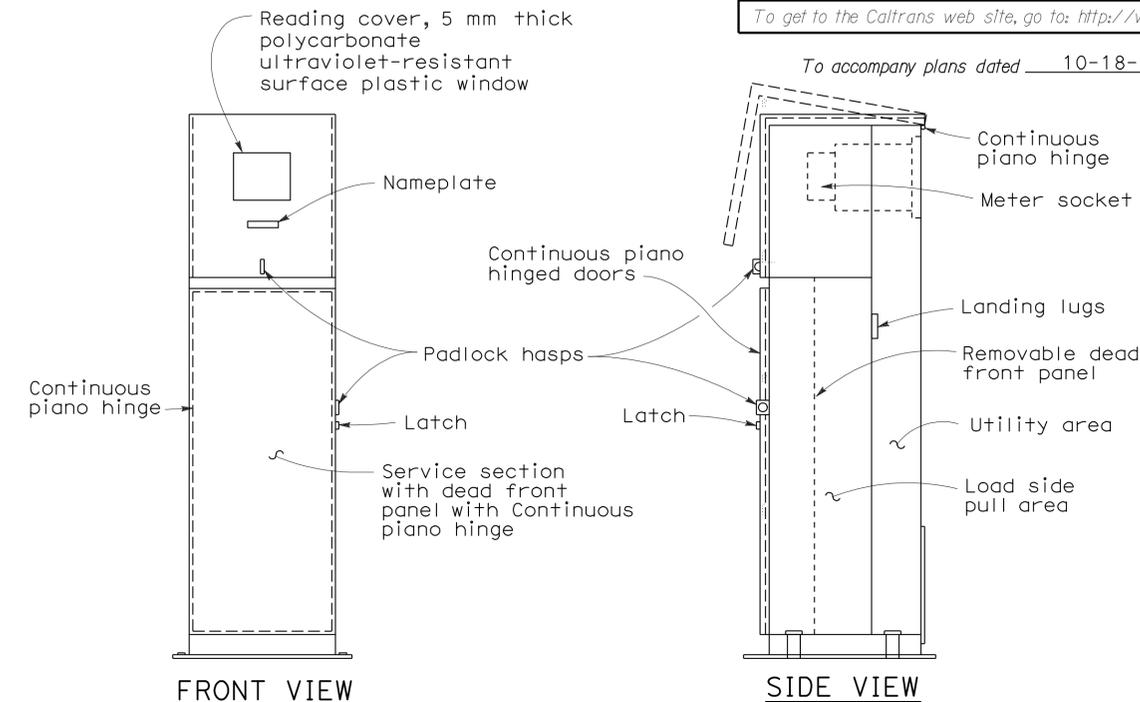
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120/240 V SERVICE WIRING DIAGRAM (TYPICAL)



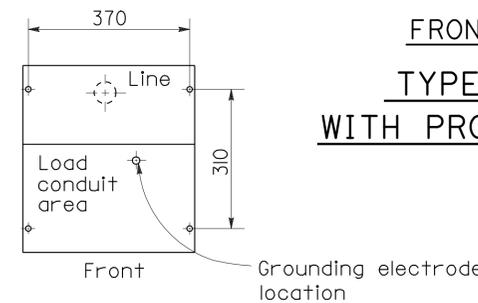
FRONT VIEW

SIDE VIEW

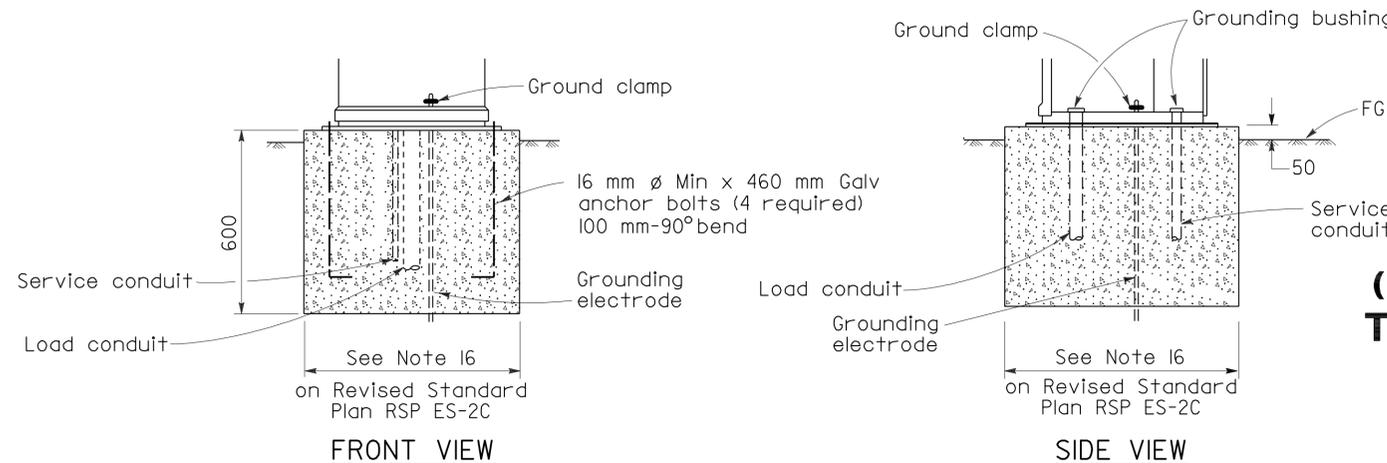
TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR ONE 100 A METER (TYPICAL)

TYPE III-B SERVICE (120/240 V) EQUIPMENT LEGEND

| ITEM No. | COMPONENT | NAME PLATE DESCRIPTION |
|----------|-----------------------------|-------------------------------|
| ① | Neutral lug | |
| ② | Landing lug (Note 6) | |
| ③ | Test bypass facility | |
| ④ | Meter socket and support | |
| ⑤ | Terminal blocks | |
| ⑥ | Neutral bus | |
| ⑦ | Ground bus | |
| ⑧ | Grounding electrode | |
| ⑨ | 30 A, 2PNO Contactor | Sign Illumination |
| ⑩ | Photoelectric unit (Note 7) | |
| ⑪ | 15 A, IP, Test switch | Sign Illumination Test Switch |
| ⑫ | 15 A, 120 V, IP, CB | Sign Illumination Control |
| ⑬ | 15 A, 120 V, IP, CB | Flashing Beacon |
| ⑭ | 30 A, 240 V, 2P, CB | Sign Illumination |
| ⑮ | 100 A, 240 V, 2P, CB | Main Breaker |
| ⑯ | 30 A, 240 V, 2P, CB | Lighting |
| ⑰ | 50 A, 120 V, IP, CB | Signals |
| ⑱ | 30 A, 120 V, IP, CB | Ramp Metering |
| ⑲ | 20 A, 120 V, IP, CB | Irrigation |
| ⑳ | 15 A, 120 V, IP, CB | Lighting Control |
| ㉑ | Photoelectric unit (Note 7) | |
| ㉒ | 15 A, IP, Test switch | Lighting Test Switch |
| ㉓ | 60 A, 2PNO Contactor | Lighting |
| ㉔ | 15 A, 120 V, IP, CB | IISNS |
| ㉕ | 30 A, 2PNO Contactor | IISNS |
| ㉖ | 20 A, 120 V, IP, CB | Telephone Demarcation Cabinet |



BASE FOR TYPE III-B SERVICE EQUIPMENT ENCLOSURE



TYPE III-B SERVICE EQUIPMENT ENCLOSURE FOUNDATION DETAILS

NOTES (FOR SERVICE EQUIPMENT ENCLOSURE)

- Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
- Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
- Connect to remote test switch mounted on lighting standards, sign post or structure when required.
- Items No. ① and ⑥ shall be isolated from the service equipment enclosure.
- Meter sockets shall be 5 clip type.
- The landing lug shall be suitable for multiple conductors.
- Type V photoelectric control shall be used unless otherwise indicated on the plans.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT AND TYPICAL WIRING DIAGRAM, TYPE III -B SERIES)

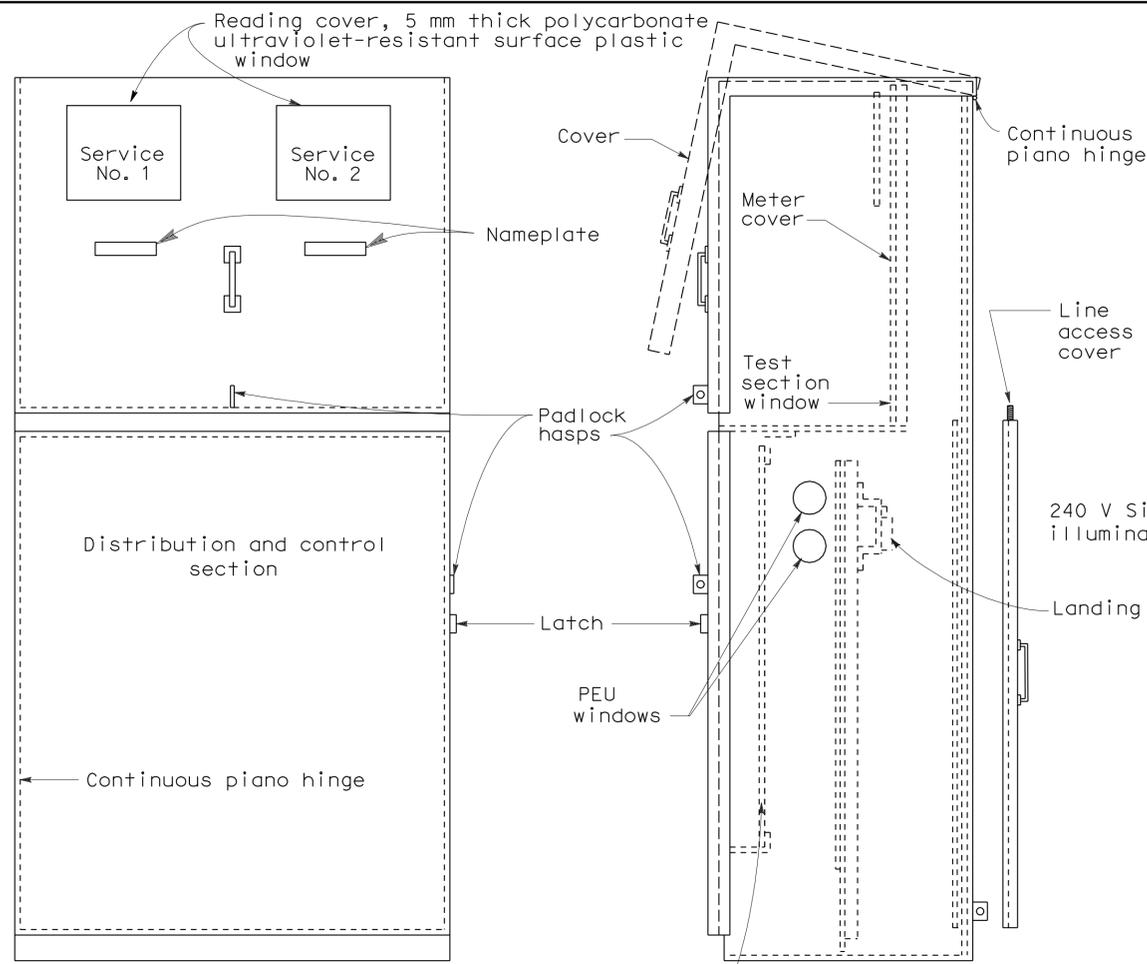
NO SCALE

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RSP ES-2E DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2E DATED JULY 1, 2004-PAGE 420 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-2E

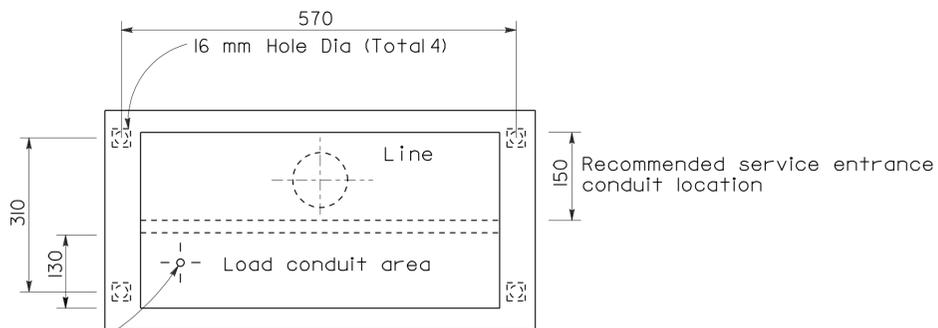
2004 REVISED STD PLAN RSP ES-2E



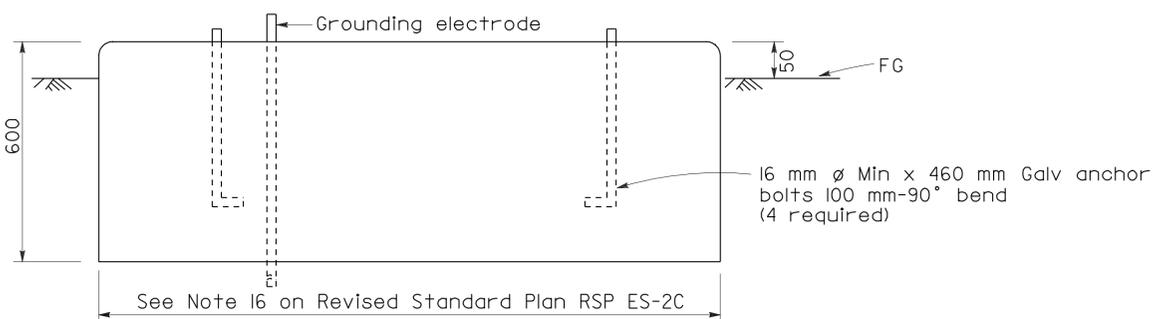
FRONT VIEW

SIDE VIEW

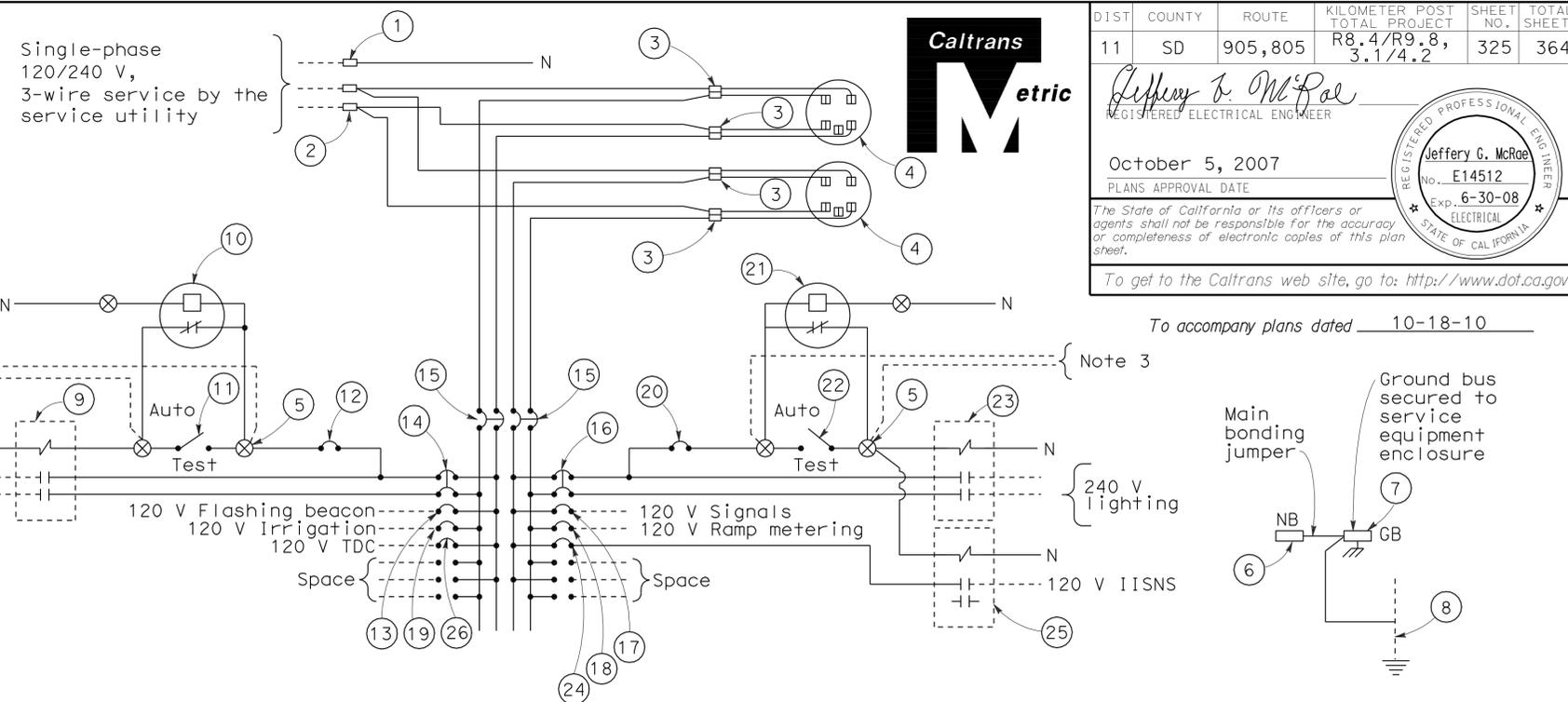
TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR TWO 100 A METERS (TYPICAL)



BASE FOR TYPE III-C SERVICE EQUIPMENT ENCLOSURE



FOUNDATION DETAIL



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

| TYPE III-C SERVICE (120/240 V) EQUIPMENT LEGEND | | | | | |
|---|-----------------------------|-------------------------------|----------|-----------------------------|-------------------------------|
| ITEM No. | COMPONENT | NAME PLATE DESCRIPTION | ITEM No. | COMPONENT | NAME PLATE DESCRIPTION |
| ① | Neutral lug | | ⑭ | 30 A, 240 V, 2P, CB | Sign Illumination |
| ② | Landing lug (Note 6) | | ⑮ | 100 A, 240 V, 2P, CB | Main Breaker |
| ③ | Test bypass facility | | ⑯ | 30 A, 240 V, 2P, CB | Lighting |
| ④ | Meter socket and support | | ⑰ | 50 A, 120 V, 1P, CB | Signals |
| ⑤ | Terminal blocks | | ⑱ | 30 A, 120 V, 1P, CB | Ramp Metering |
| ⑥ | Neutral bus | | ⑲ | 20 A, 120 V, 1P, CB | Irrigation |
| ⑦ | Ground bus | | ⑳ | 15 A, 120 V, 1P, CB | Lighting Control |
| ⑧ | Grounding electrode | | ㉑ | Photoelectric unit (Note 7) | |
| ⑨ | 30 A, 2PNO, Contactor | Sign Illumination | ㉒ | 15 A, 1P, Test switch | Lighting Control |
| ⑩ | Photoelectric unit (Note 7) | | ㉓ | 60 A, 2PNO Contactor | Lighting |
| ⑪ | 15 A, 1P, Test switch | Sign Illumination Test Switch | ㉔ | 15 A, 120 V, 1P, CB | IISNS |
| ⑫ | 15 A, 120 V, 1P, CB | Sign Illumination Control | ㉕ | 30 A, 2PNO Contactor | IISNS |
| ⑬ | 15 A, 120 V, 1P, CB | Flashing Beacon | ㉖ | 20 A, 120 V, 1P, CB | Telephone Demarcation Cabinet |

NOTES (FOR SERVICE EQUIPMENT ENCLOSURE)

1. Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
2. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
3. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
4. Items No. ① and ⑥ shall be isolated from the service equipment enclosure.
5. Meter sockets shall be 5 clip type.
6. The landing lug shall be suitable for multiple conductors.
7. Type V photoelectric control shall be used unless otherwise indicated on the plans.



| | | | | | | |
|------|--------|---------|-------------------------|----------|-----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST NO. | SHEET NO. | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 325 | 364 |

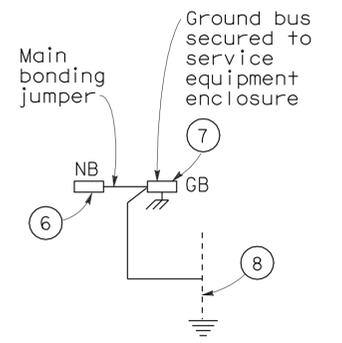
REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated 10-18-10



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT AND
 TYPICAL WIRING DIAGRAM
 TYPE III -C SERIES)**
 NO SCALE
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RSP ES-2F DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2F DATED JULY 1, 2004-PAGE 421 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-2F

2004 REVISED STD PLAN RSP ES-2F



| | | | | | | |
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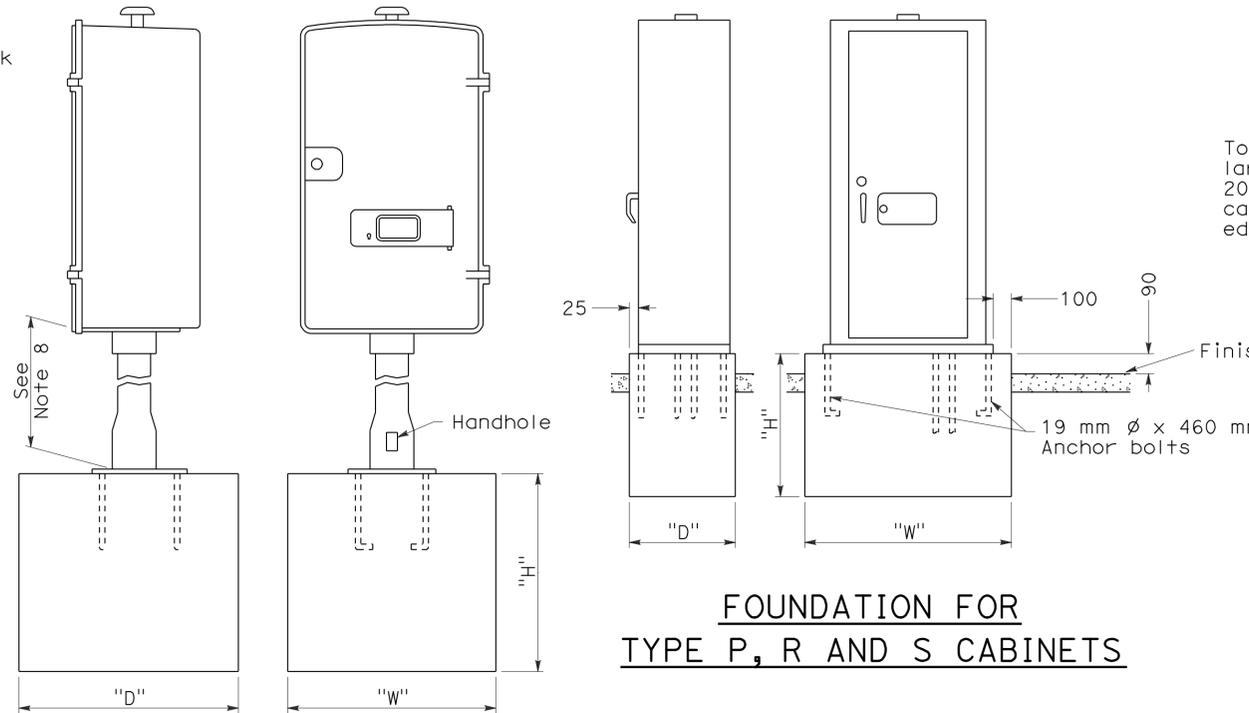
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NOTES - CONTROLLER CABINETS

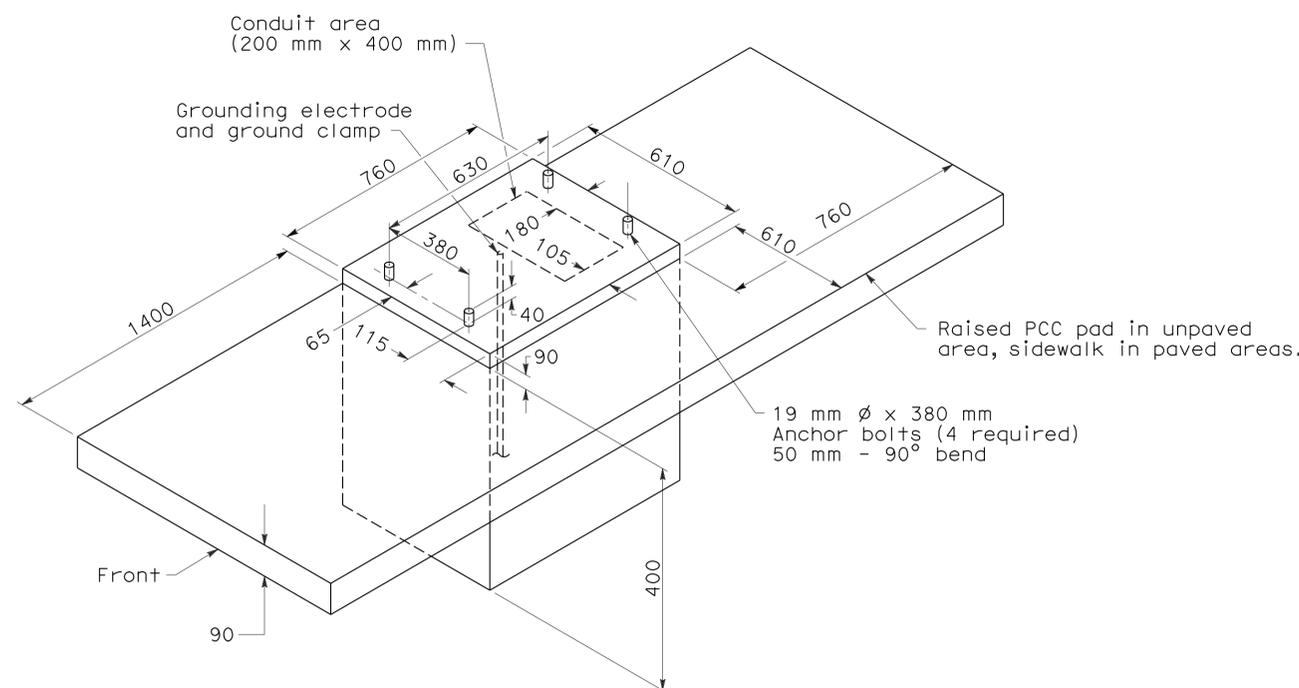
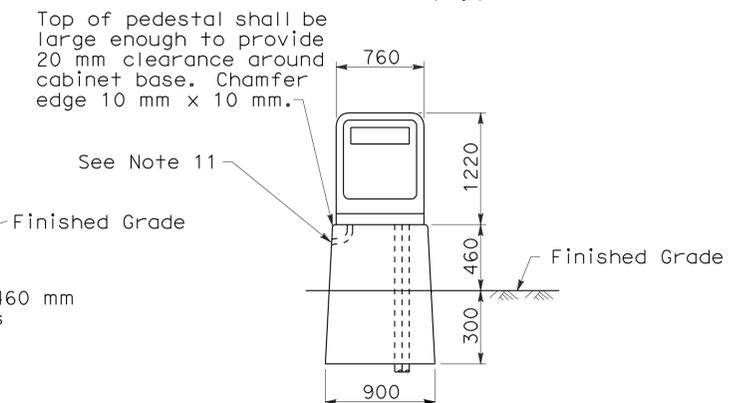
- Cabinet dimensions are nominal.
- Foundations shall be located to provide 600 mm minimum clearance between face of curb and any portion of cabinet.
- Type G, M, P, R, S and Model 336 cabinets shall be installed with the back toward the nearest lane of traffic.
- The controller cabinet ground bus shall be bonded to the controller equipment enclosure.
- In unpaved areas, a raised portland cement concrete pad shall be constructed in front of each controller cabinet. Pad shall be 900 mm x 900 mm x 100 mm for Type G cabinets and shall be 900 mm x 100 mm thick x width of foundation for Types M, P, R, S and Model 336 cabinets.
- In unpaved areas, the top of foundation for Type G, P, R and S cabinets shall be 150 mm above surrounding grade. Top of foundation for Type M or Model 336 cabinet shall be 460 mm above surrounding grade.
- In sidewalks and other paved areas, top of foundation for Type G cabinet shall be level with surrounding grade. Top of foundation for Type P, R and S cabinets shall be 90 mm above surrounding grade.
- The steel pedestal, base plate, bolt circle and foundation for Type G cabinet shall be the same as that shown for a Type 1-C Standard. Pedestal shall be 640 mm - 760 mm in length. Anchor bolts shall be 19 mm ϕ x 460 mm with a 50 mm - 90° bend. Four bolts required per cabinet.
- Type G cabinet shall be provided with a slipfitter to permit mounting an 114 mm outside diameter pedestal. Slipfitter shall be bolted to bottom of the cabinet.
- Type G cabinet shall be provided with 8 screened, raintight holes, 13 mm diameter or larger, in the bottom of the cabinet.
- A 25 mm drain shall be provided through the foundation of a Type M or Model 336 cabinet. Drain pipe shall be screened.
- See Table for cabinet and foundation dimensions; "D" = Depth, "H" = Height and "W" = Width.
- Cabinet shelves shall be adjustable for vertical spacing and shall be removable. Type M, P, R and S cabinets shall be provided with a minimum of two shelves.
- Anchor bolts for Type M, P, R, S and Model 336 cabinets shall be 19 mm ϕ x 460 mm with a 50 mm - 90° bend.
- An approved mastic or caulking compound shall be placed on the foundation prior to placing the cabinet to seal openings between bottom of cabinet and foundation.
- Controller units, plug-mounted equipment, shelf-mounted equipment and wall-mounted equipment shall be located to permit safe and easy removal or replacement without removing any other piece of equipment.
- Cabinet fan may be installed at an alternate location near the top of the cabinet when approved by the Engineer.
- Where telephone interconnect is required, a minimum of 130 mm clear vertical space shall be provided inside the cabinet for the equipment.
- Telephone interconnect conductors shall be enclosed in a 21C or larger conduit through the foundation. Type 4 metal conduit shall be used to separate telephone and power conductors in cabinets and pedestals.
- For Model 332, 334 and 336 cabinet details, see "Traffic signal controller equipment specifications".



FOUNDATION FOR TYPE G CABINET

FOUNDATION FOR TYPE P, R AND S CABINETS

PEDESTAL FOUNDATION FOR TYPE M OR MODEL 336 CABINET



FOUNDATION DETAILS
For Model 332 and 334 cabinets

| CABINET | FOUNDATION | | | |
|---------|-------------|--------|--------|--------|
| | TYPE/ MODEL | H (mm) | W (mm) | D (mm) |
| G | | 900 | 600 | 600 |
| M 336 | | 760 | 900 | 560 |
| P | | 460 | 1330 | 710 |
| R | | 460 | 1330 | 710 |
| S | | 460 | 1820 | 710 |

STATE OF CALIFORNIA
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(CONTROLLER CABINET
DETAILS)**

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RSP ES-3C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-3C DATED JULY 1, 2004-PAGE 425 OF THE STANDARD PLANS BOOK DATED JULY 2004.

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2004 REVISED STD PLAN RSP ES-3C



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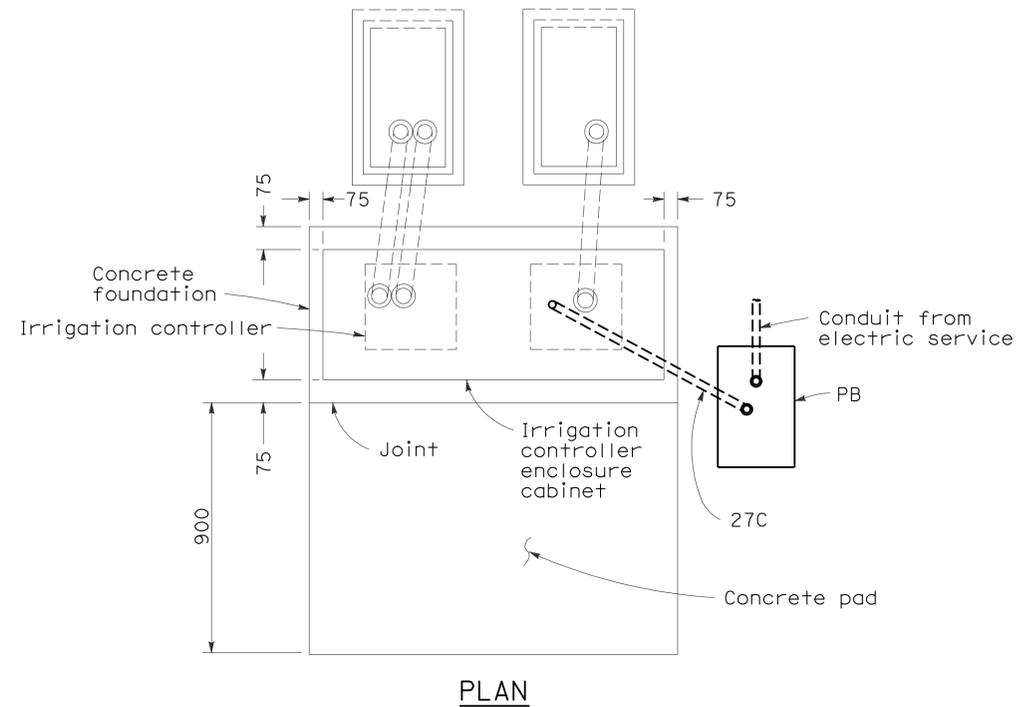
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Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
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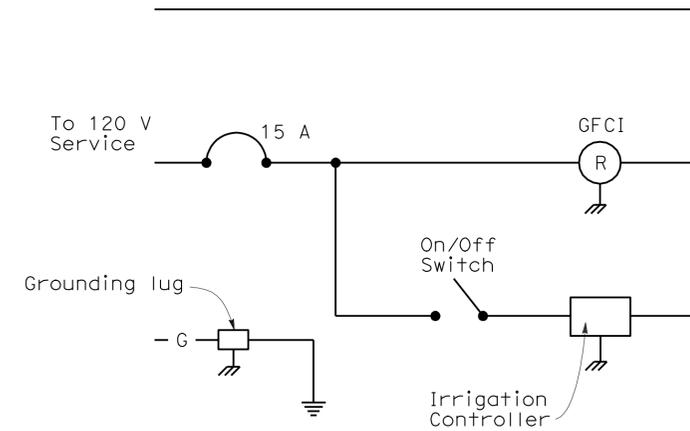
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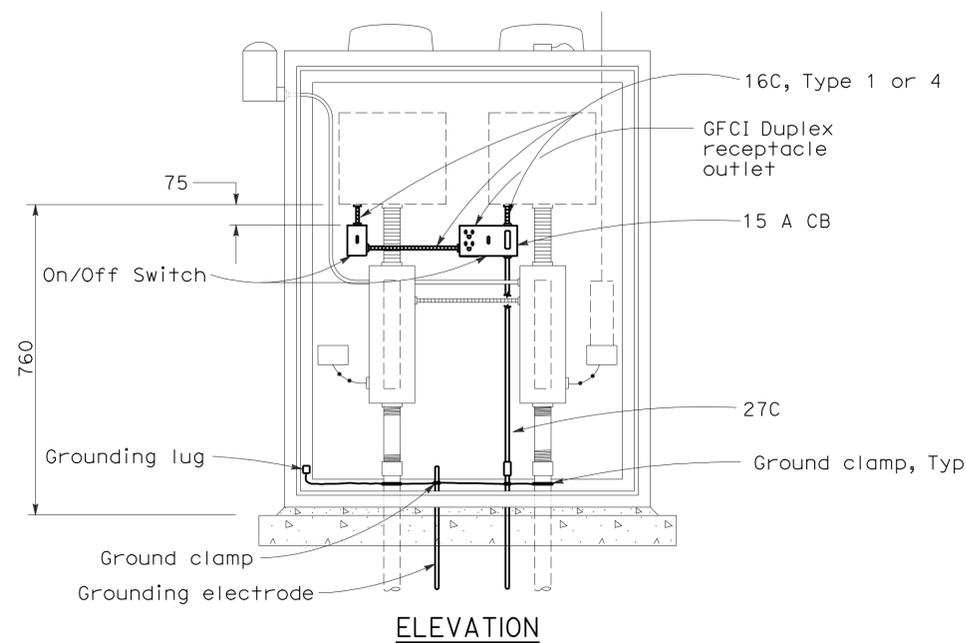


NOTE:

See Standard Plan H10 for other details.



**IRRIGATION CONTROLLER
ENCLOSURE CABINET
WIRING DIAGRAM
(TYPICAL)**



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(IRRIGATION CONTROLLER
ENCLOSURE CABINET)**

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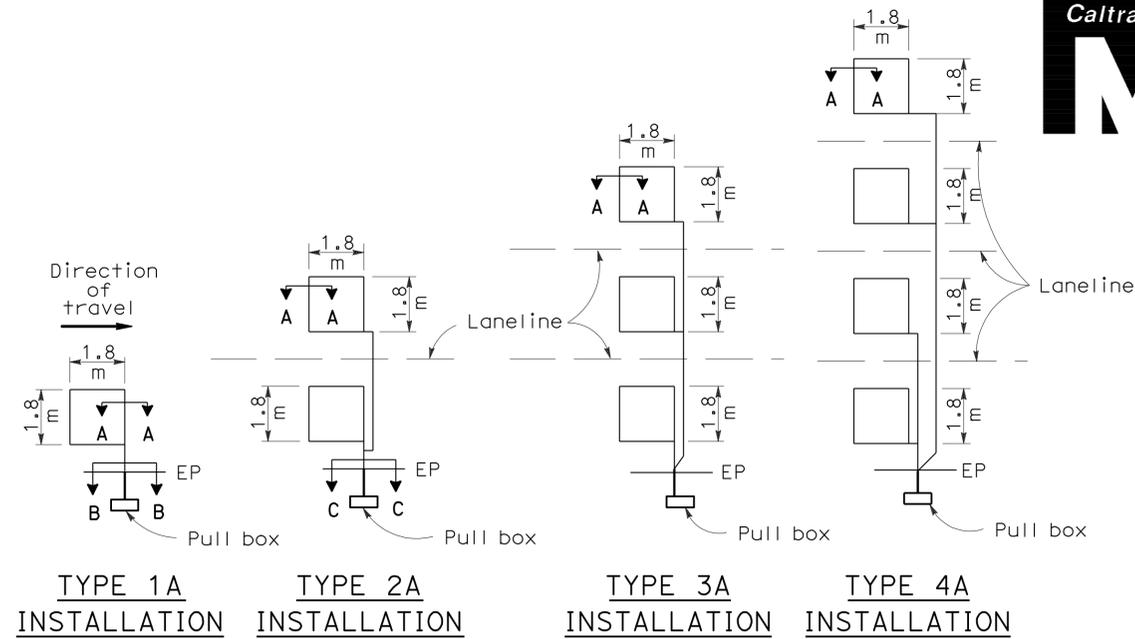
RSP ES-3H DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-3H
 DATED JULY 1, 2004-PAGE 430 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-3H

2004 REVISED STD PLAN RSP ES-3H

LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 600 mm minimum. Distance between lead-in saw cuts shall be 150 mm minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
8. Install loop conductor in slot using a 5 mm to 6 mm thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 1.5 m of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per meter minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in cable. Splices shall be soldered.
15. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

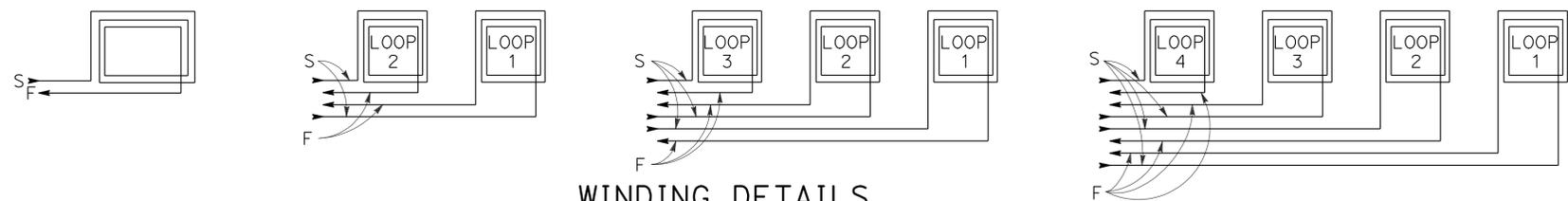


TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION

SAWCUT DETAILS

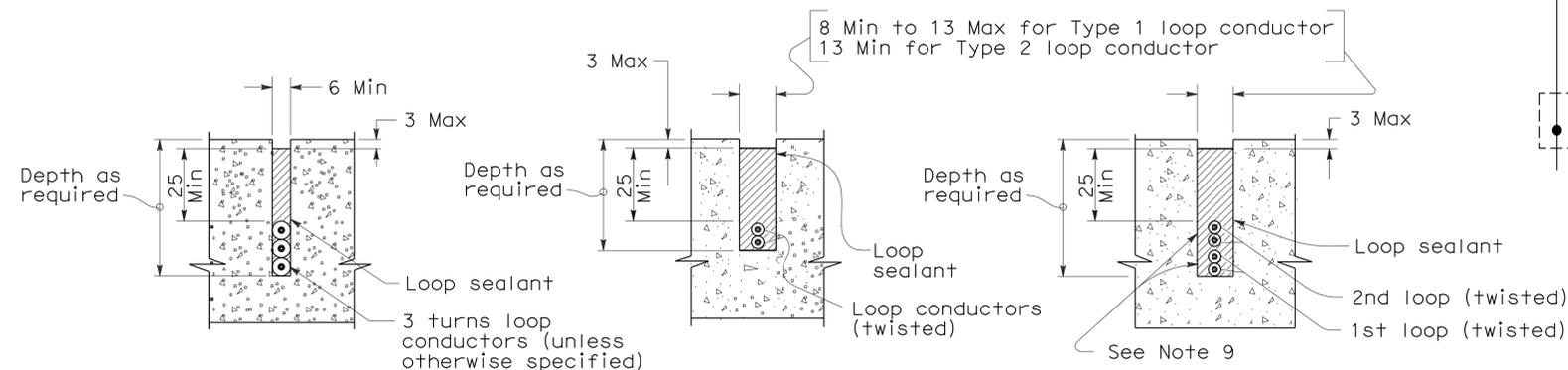
(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
 2. 1B thru 4B = 1 Type B loop configuration in each lane.
 3. 1C = 1 Type C loop configuration entering lanes as required.
 4. 1D thru 4D = 1 Type D loop configuration in each lane.
 5. 1E thru 4E = 1 Type E loop configuration in each lane.
 6. 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)

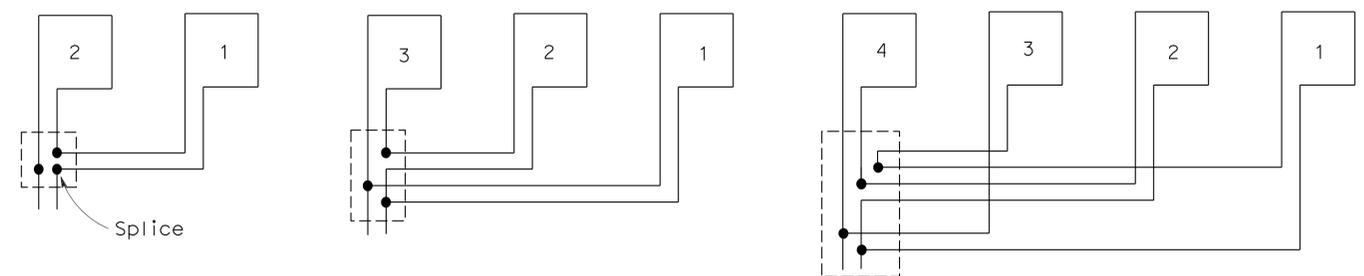


WINDING DETAILS

See Notes 6 and 7



SECTION A-A SECTION B-B SECTION C-C
SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(DETECTORS)**

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DATED JULY 1, 2004-PAGE 436 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-5A

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Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
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Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

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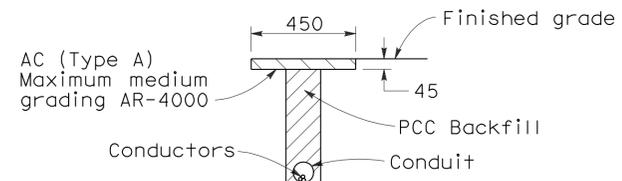
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Jeffrey G. McRae
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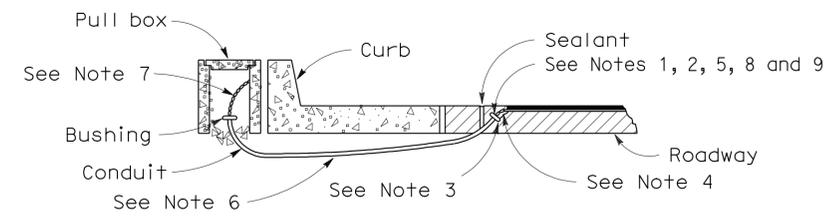
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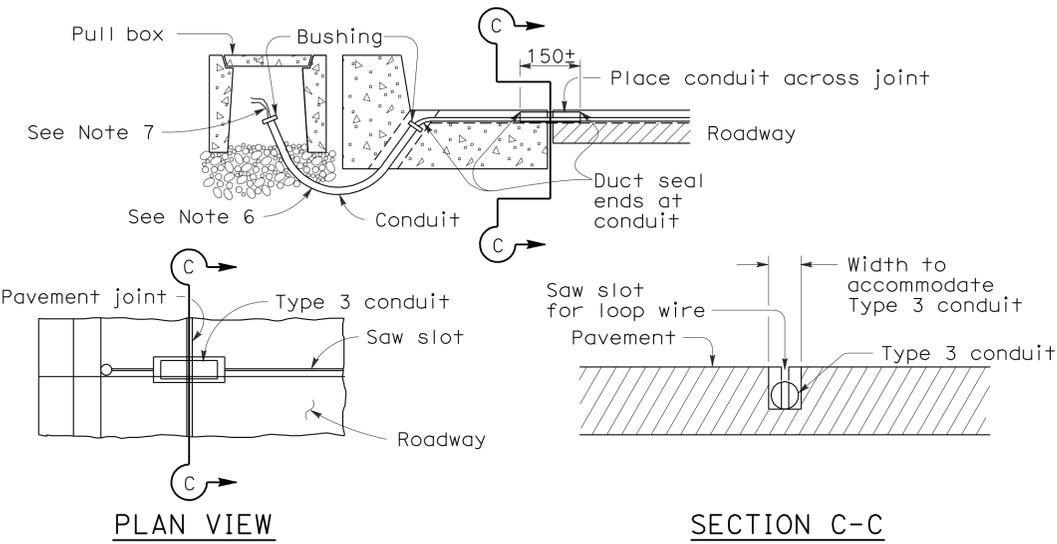
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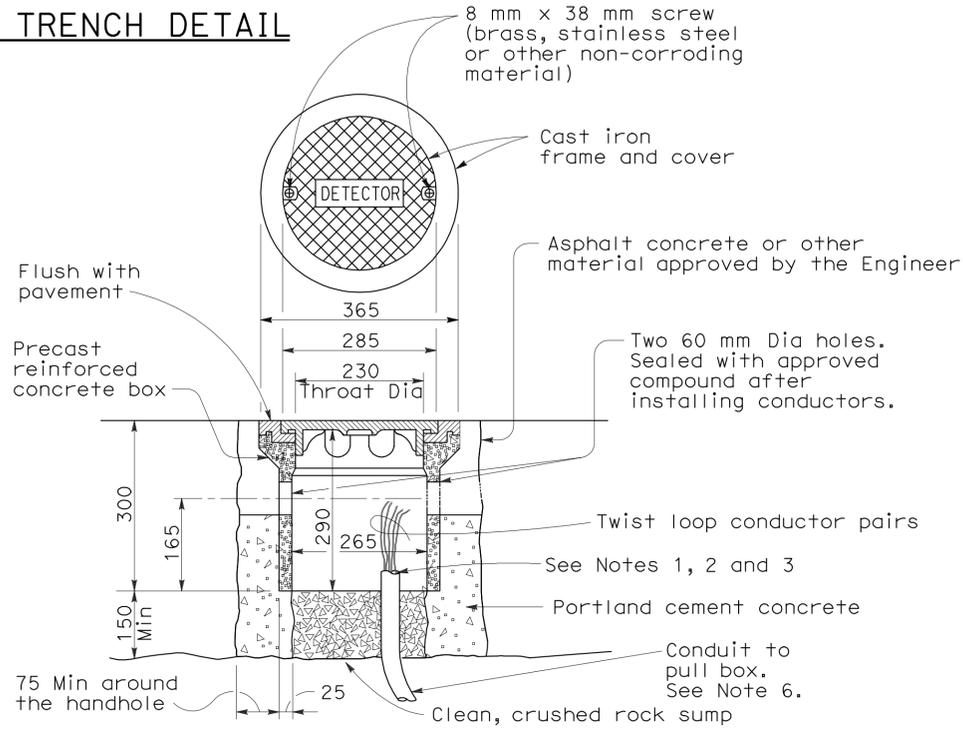
"T" TRENCH DETAIL



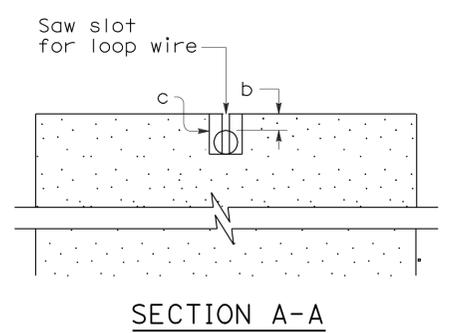
TYPE A CURB TERMINATION DETAIL



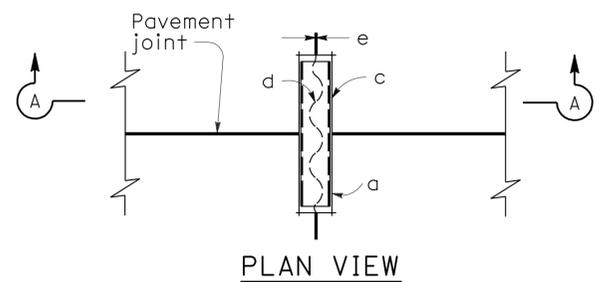
TYPE B CURB TERMINATION DETAILS



DETECTOR HANDHOLE DETAILS

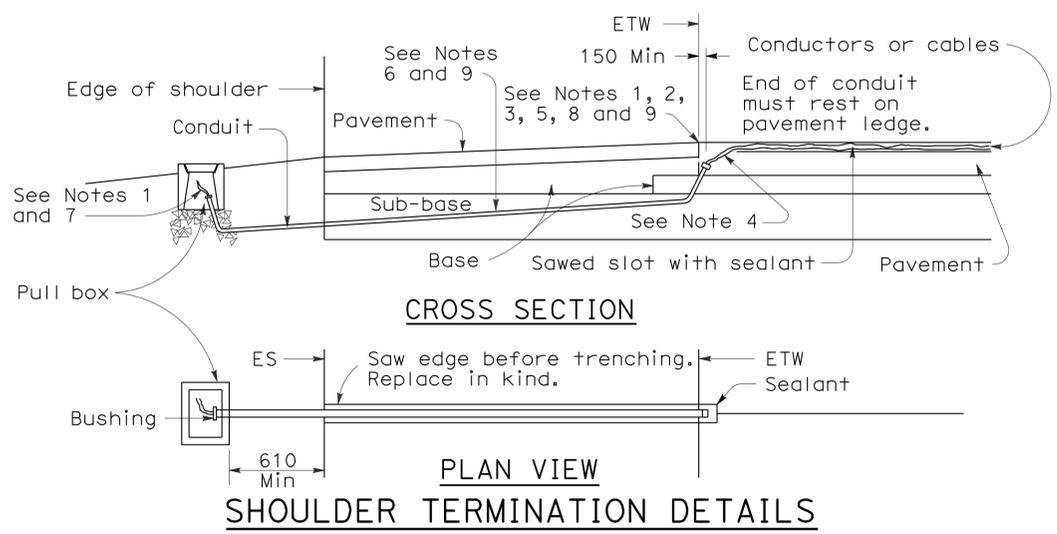


SECTION A-A



PLAN VIEW

TYPICAL LOOP LEAD-IN DETAILS AT PAVEMENT JOINT



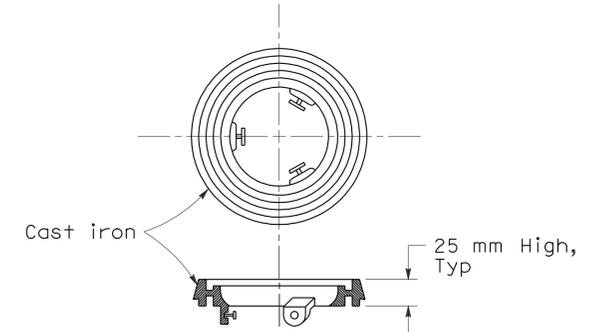
SHOULDER TERMINATION DETAILS

NOTES (This sheet only):

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 75 mm each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 80 mm below roadway surface.
- Conduit size Loop Conductors
27C Minimum 1 to 2 pairs
41C Minimum 3 to 4 pairs
53C Minimum 5 or more pairs
- Splice detector conductors or cables to lead-in-cable run to controller cabinet.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 600 mm into the shoulder pavement.

NOTES:

- 21C, Type 3 conduit 150 mm long minimum, plug both ends with caulking compound to keep out sealant.
- 13 mm minimum between top of conduit and pavement surface.
- Saw cut shall not exceed 25 mm in width and 3 mm longer than conduit to be installed.
- Conductors with 13 mm minimum slack inside conduit.
- Inductive loop detector saw slot.



NOTE:

Use for Type A detector handhole on pavement resurfacing only.

LOCKING GRADE RING

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

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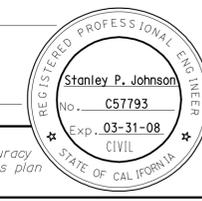
RSP ES-5D DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-5D DATED JULY 1, 2004-PAGE 439 OF THE STANDARD PLANS BOOK DATED JULY 2004.

2004 REVISED STD PLAN RSP ES-5D

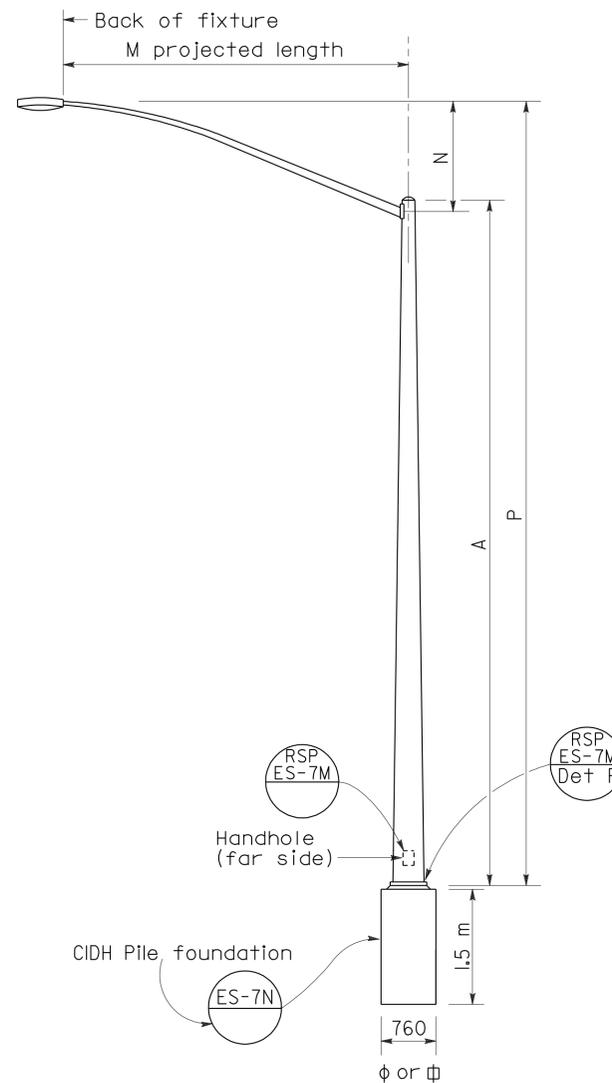


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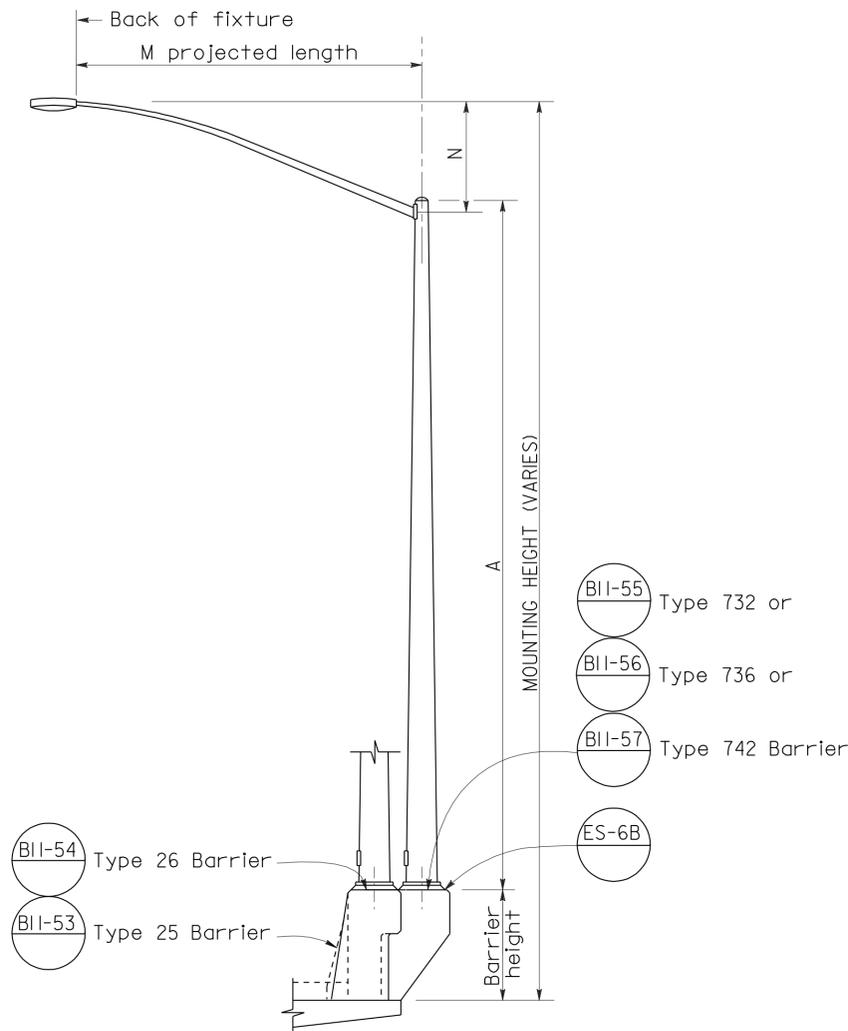
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
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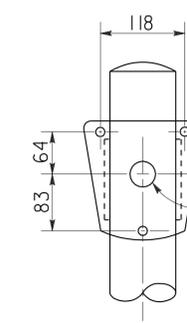
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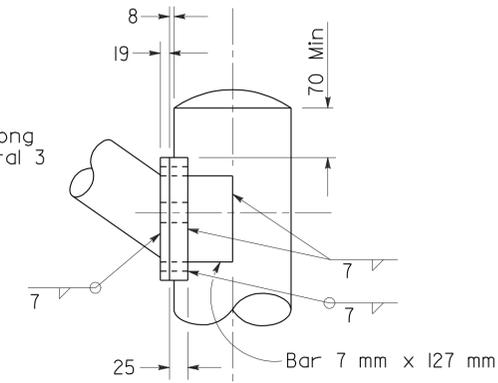
ELEVATION
TYPE 15 AND TYPE 21



ELEVATION
TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED

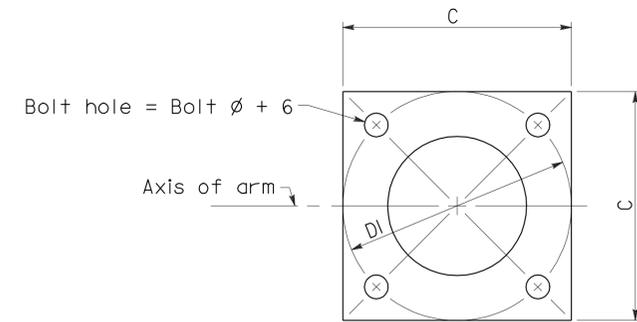


16 - 11 NC - 45 mm long HS cap screws, total 3 Tap pole plate
60 mm ϕ hole. Chased edges for electrical conductors



DETAIL R
LUMINAIRE ARM CONNECTION

HIGH STRENGTH CAP SCREWS
16 - 11NC - 45
Length (mm)
Threads (per inch)
Size (mm)



BASE PLATE

| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | | LUMINAIRE ARM |
|-----------|-----------|--------|-----|----------------|-----------------|----------------|------------|------------------------|--------------------------------------|
| | A Height | Min OD | | Wall Thickness | C | DI Bolt Circle | Thick-ness | Anchor Bolts Size | |
| | | Base | Top | | | | | | |
| 15 | 9.1 | 203 | 98 | 3.04 | 305 | 305 | 25 | 25 ϕ x 915 x 102* | 1.8-4.6 <input type="checkbox"/> 3.7 |
| 21 | 10.7 | 219 | 98 | 3.04 | 305 | 305 | 25 | See ES-6B | 1.8-4.6 <input type="checkbox"/> 3.7 |

| LUMINAIRE ARM DATA | | | | | |
|--------------------|------------|----------------|-------------------|------------|------------|
| M Projected Length | N Rise | Min OD At Pole | Nominal Thickness | P | |
| | | | | Type 15 | Type 21 |
| m | mm | mm | mm | m | m |
| 1.8 | 610 \pm | 83 | 3.04 | 9.5 \pm | 11.2 \pm |
| 2.4 | 760 \pm | 89 | 3.04 | 9.7 \pm | 11.3 \pm |
| 3.1 | 990 \pm | 98 | 3.04 | 9.9 \pm | 11.5 \pm |
| 3.7 | 1290 \pm | 98 | 3.04 | 10.2 \pm | 11.8 \pm |
| 4.6 | 1450 \pm | 108 | 3.04 | 10.3 \pm | 11.9 \pm |

*For barrier rail bolts, see Standard Plan ES-6B.

NOTES:

- Indicates arm length to be used unless otherwise noted on the plans.
- For Type 15-SB, use Type 15 standard with Type 30 base plate details, see Standard Plan ES-6F.
- For additional notes, see Revised Standard Plan RSP ES-7M and ES-7N.

STATE OF CALIFORNIA
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ELECTRICAL SYSTEMS
(LIGHTING STANDARD
TYPES 15 AND 21)

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 January 18, 2008
 PLANS APPROVAL DATE
 No. C57793
 Exp. 03-31-08
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 STATE OF CALIFORNIA
 REGISTERED PROFESSIONAL ENGINEER

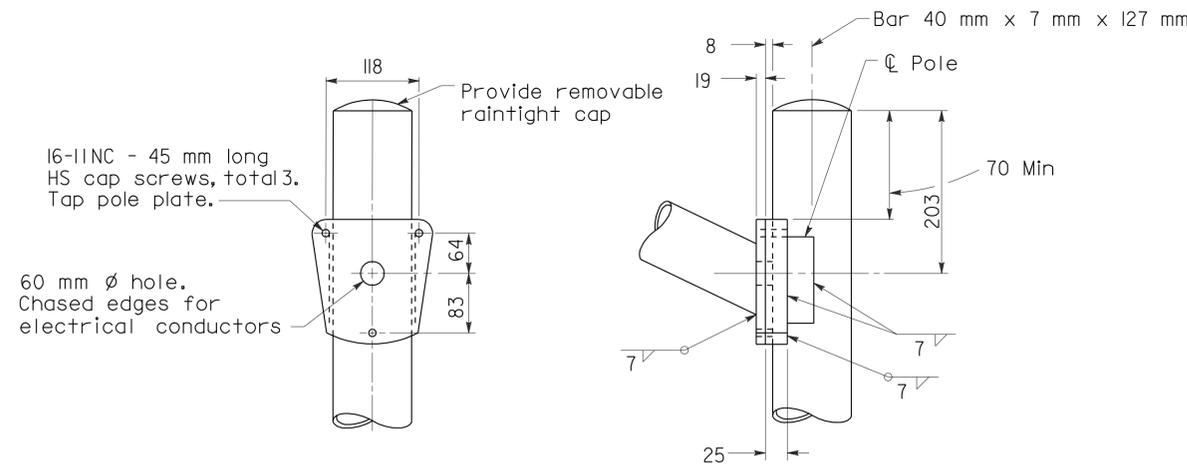
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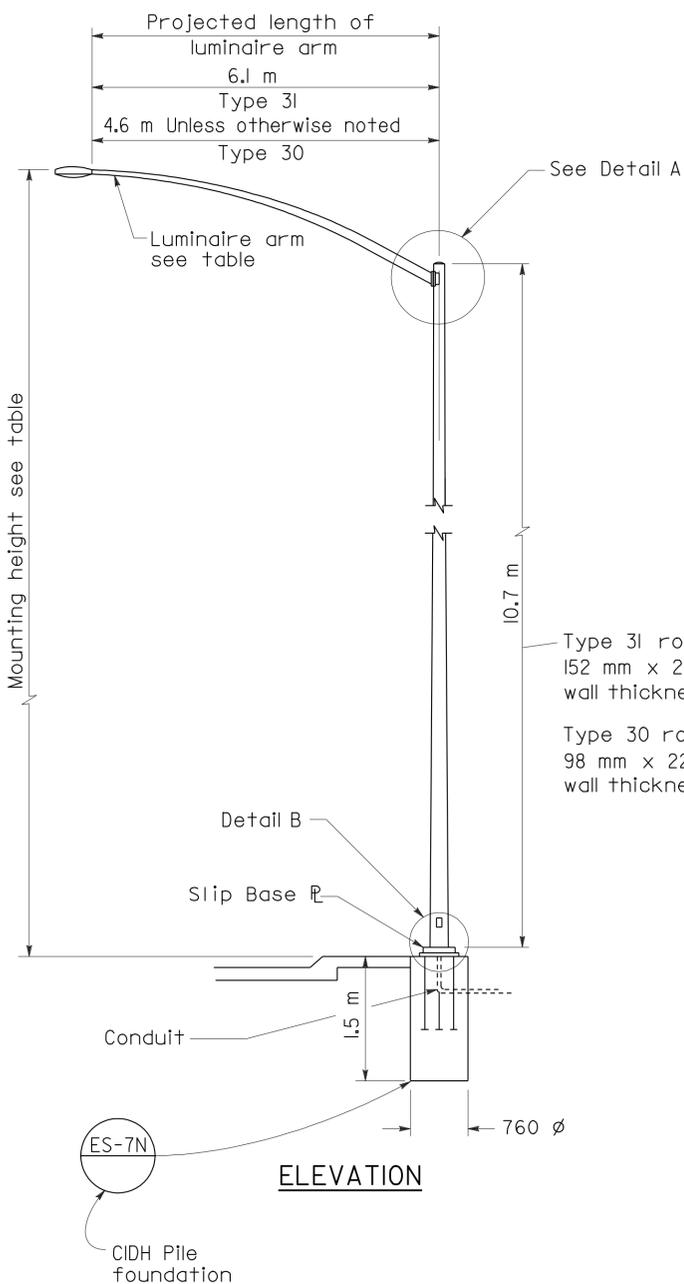
LUMINAIRE ARM DATA

| PROJECTED LENGTH | THICKNESS | MINIMUM OD @ POLE | MOUNTING HEIGHT |
|------------------|-----------|-------------------|-----------------|
| m | mm | mm | m |
| * 1.8 | 3.04 | 83 | 11.2± |
| 2.4 | | 89 | 11.4± |
| 3.1 | | 95 | 11.6± |
| 3.7 | | 95 | 11.9± |
| 4.6 | | 108 | 12.0± |
| ** 6.1 | 4.55 | 127 | 11.3± |

- * Type 30 - arm length 1.8 m - 4.6 m maximum
- ** Type 31 - arm lengths 6.1 m

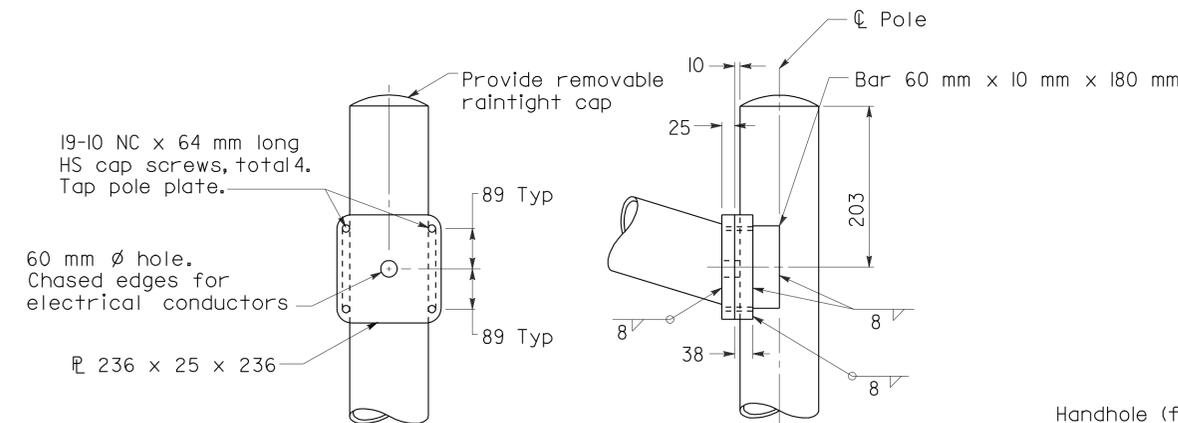


DETAIL A - TYPE 30

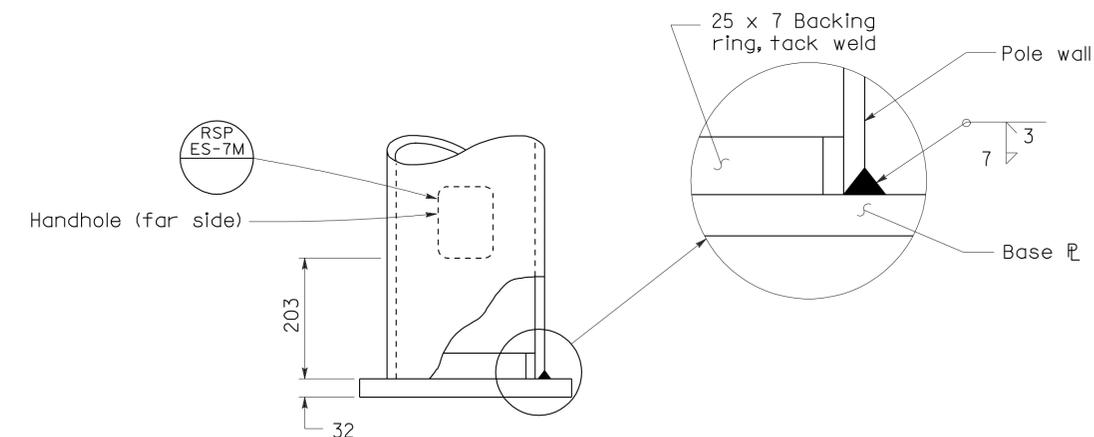


ELEVATION

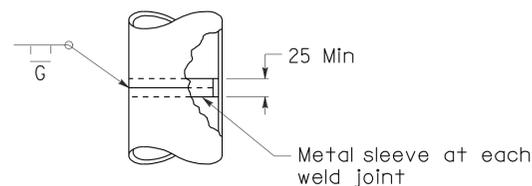
HIGH STRENGTH CAP SCREWS
 16 - IINC - 45
 Length (mm)
 Threads (per inch)
 Size (mm)



DETAIL A - TYPE 31



DETAIL B



POLE SPLICE

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**ELECTRICAL SYSTEMS
 (LIGHTING STANDARDS
 TYPES 30 AND 31**

NO SCALE

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RSP ES-6E DATED JANUARY 18, 2008 SUPERSEDES RSP ES-6E DATED JANUARY 218, 2005 AND STANDARD PLAN ES-6E DATED JULY 1, 2004-PAGE 444 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-6E

2004 REVISED STD PLAN RSP ES-6E



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 CIVIL
 STATE OF CALIFORNIA

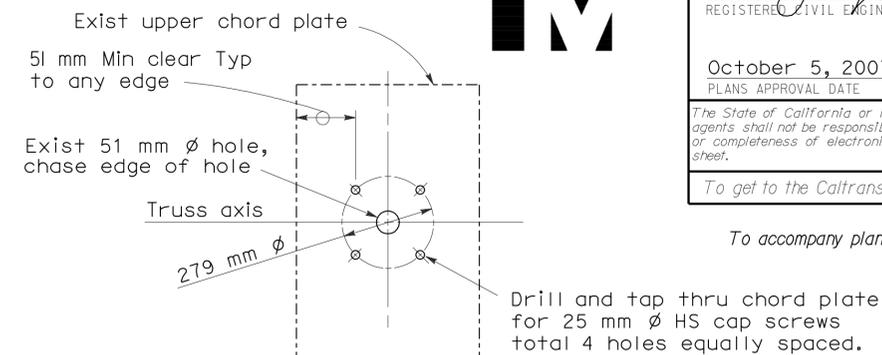
October 5, 2007
 PLANS APPROVAL DATE

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| LUMINAIRE ARM DATA | | | |
|--------------------|--------|----------------|-------------------|
| M Projected Length | N Rise | Min OD At Pole | Nominal Thickness |
| m | mm | mm | mm |
| 4.6 | 1450± | 108 | 3.04 |
| 6.1 | 750± | 127 | 4.55 |

| Pole Extension Type | Height "H" (m) | Pole Data | | Thickness (mm) |
|---------------------|----------------|-------------|-----|----------------|
| | | Min OD (mm) | | |
| | | BASE | TOP | |
| Type 5 | 1.5 | 165 | 152 | 4.55 |
| Type 10 | 3.0 | 184 | 152 | 4.55 |



UPPER CHORD PLATE



GENERAL NOTES:

SPECIFICATIONS

Design : AASHTO Standard specifications for structural supports for highway signs, luminaires and traffic signals, dated 2001

LOADING

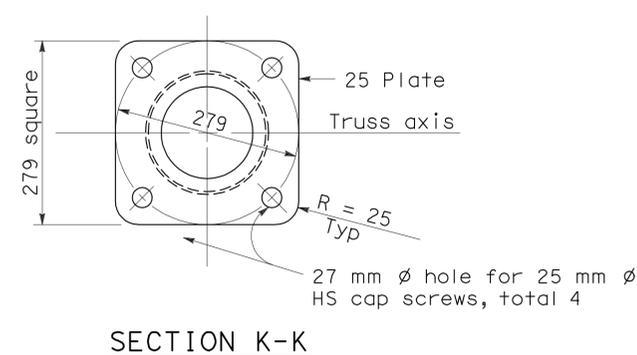
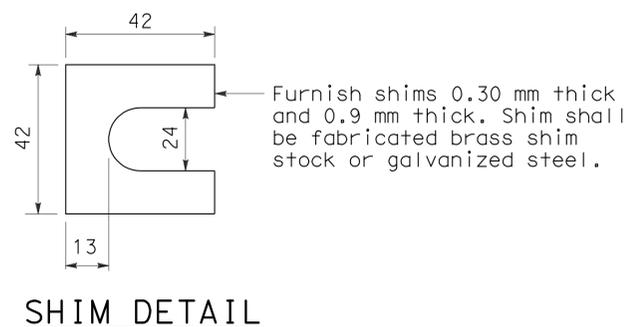
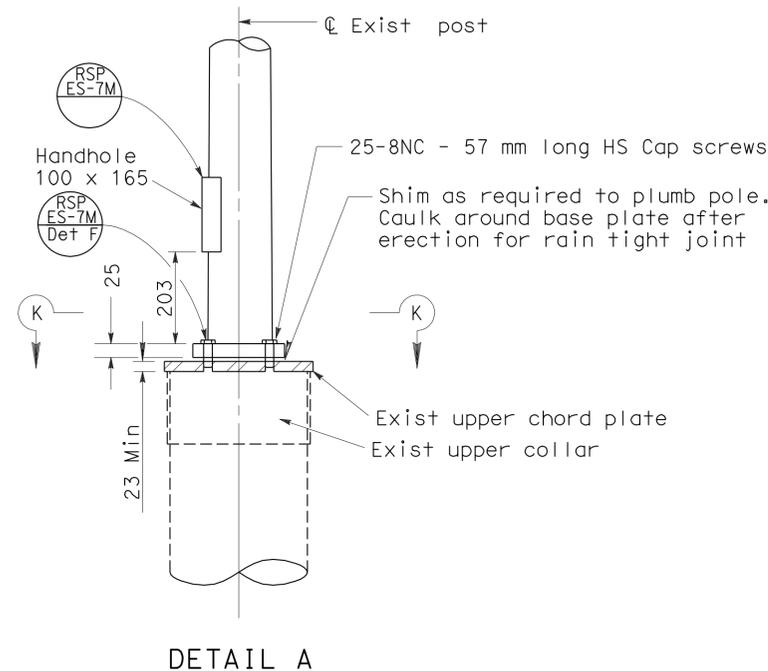
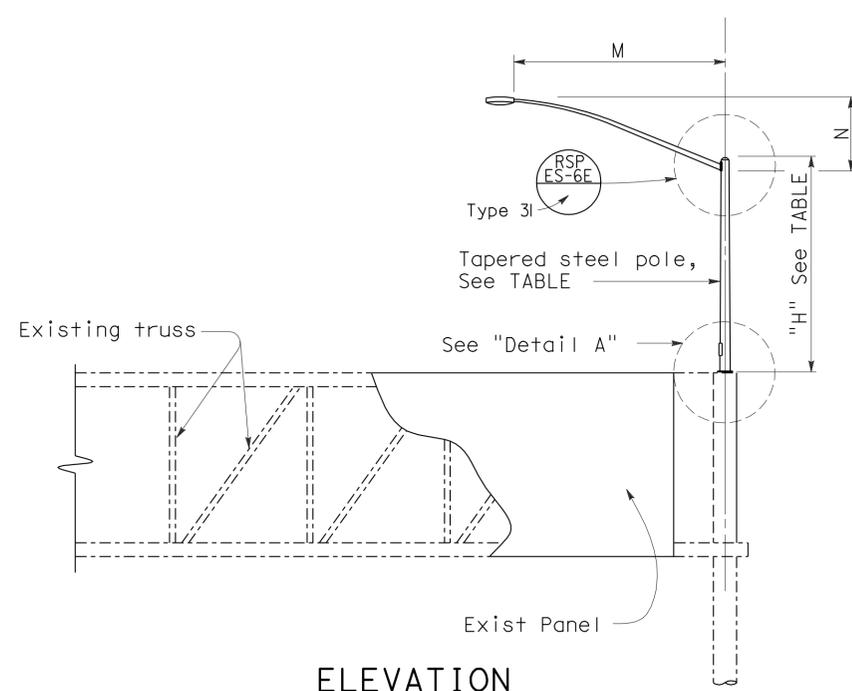
Wind Loadings : 129 km/h

UNIT STRESSES

Structural Steel : $f_y = 330$ MPa tapered steel tube (Pole)
 $f_y = 250$ MPa unless otherwise noted

NOTES:

- The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
- All steel shall be galvanized after fabrication.
- Bolt hole locations may vary at the discretion of the Engineer.



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARDS
 TYPE 5 AND TYPE 10
 OVERHEAD SIGN MOUNTED)**

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-6K DATED OCTOBER 5, 2007 SUPERSEDES RSP ES-6K DATED JANUARY 24, 2005 AND STANDARD PLAN ES-6K DATED JULY 1, 2004-PAGE 450 OF THE STANDARD PLANS BOOK DATED JULY 2004.

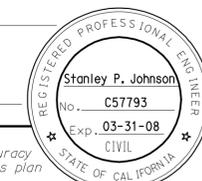
REVISED STANDARD PLAN RSP ES-6K

2004 REVISED STD PLAN RSP ES-6K



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 333 | 364 |

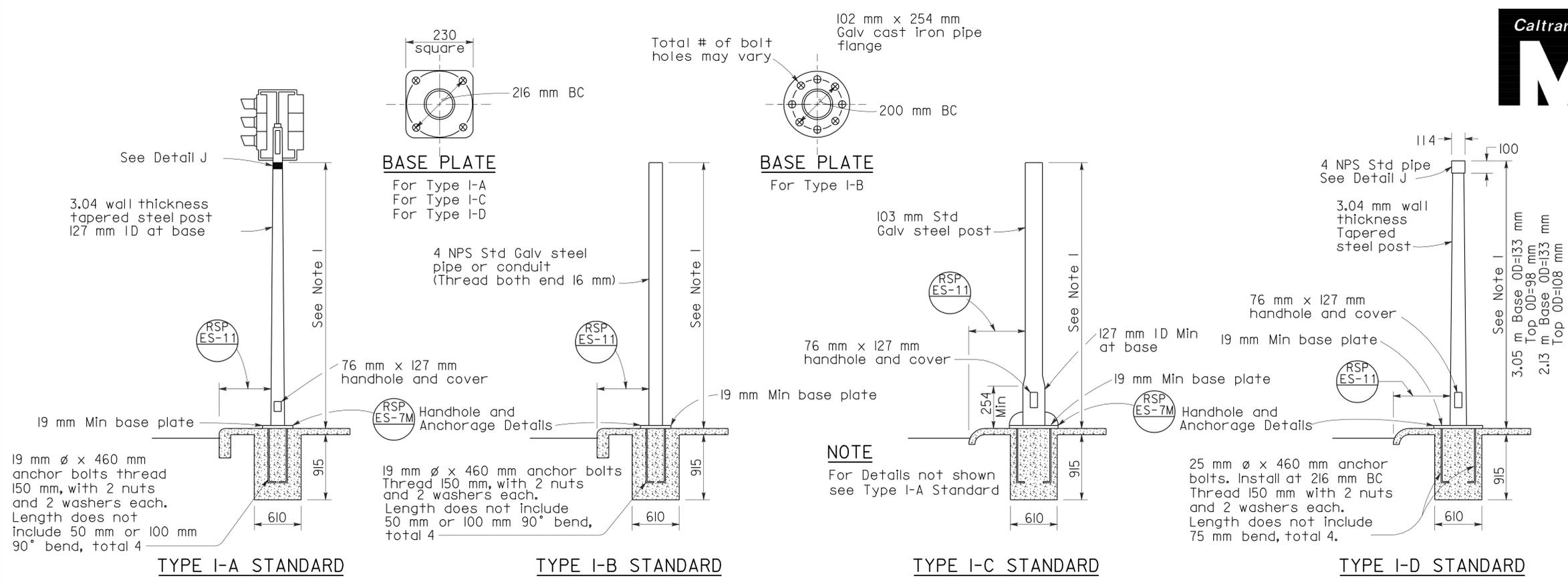
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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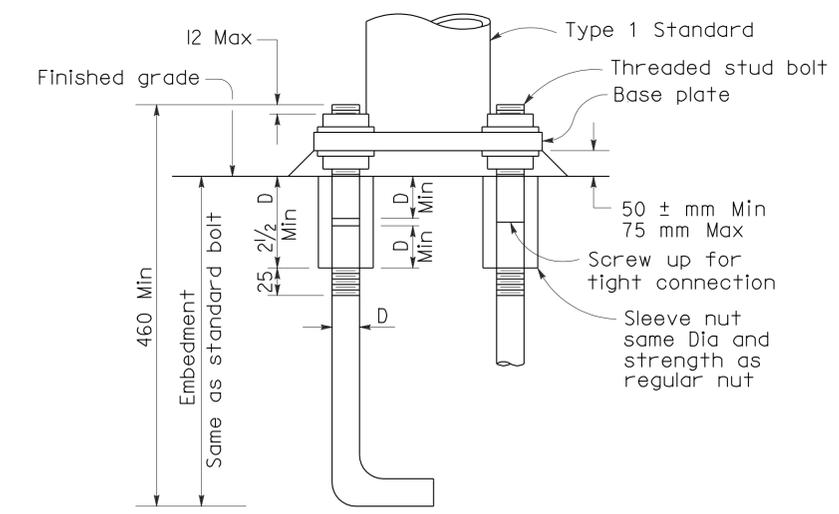
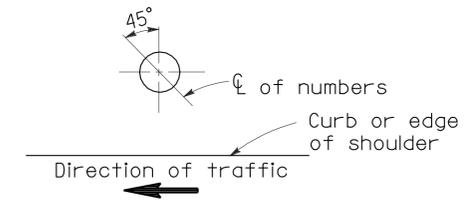
To accompany plans dated 10-18-10

NOTES:

- Standards shall be 3.05 m ± 50 mm for vehicle signals and 2.13 m ± 50 mm for pedestrian signals unless otherwise noted on plans.
- Top of standards shall be 114 mm OD.
- Conduits shall extend 50 mm maximum above finished surface of foundation and for Types I-A, I-C and I-D shall be sloped toward handhole.
- Anchor bolts shall be bonded to conduit or grounding conductor.
- Conduit between standard and adjacent pull box shall be Size 53 minimum.
- Paint numbers on roadway side facing traffic when electrolifer or post is left of direction of traffic.

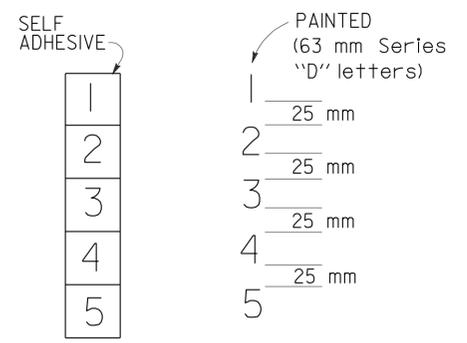
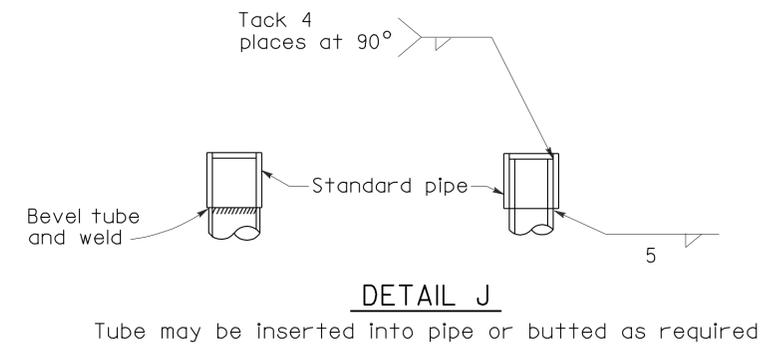


TYPE I SIGNAL STANDARDS

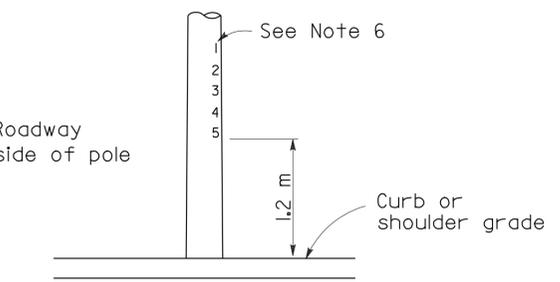
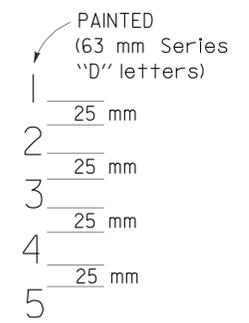


ANCHOR BOLTS WITH SLEEVE NUTS

Sleeve nuts to be used only when shown or specified on Project Plans
 D = Diameter of anchor bolt



NUMBER DETAIL



TYPICAL NUMBER FORMAT

LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEM (SIGNAL AND LIGHTING STANDARD TYPE 1 STANDARDS AND EQUIPMENT NUMBERING)

NO SCALE
 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-7B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-7B DATED JULY 1, 2004-PAGE 452 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7B

2004 REVISED STD PLAN RSP ES-7B



| | | | | | | |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 334 | 364 |

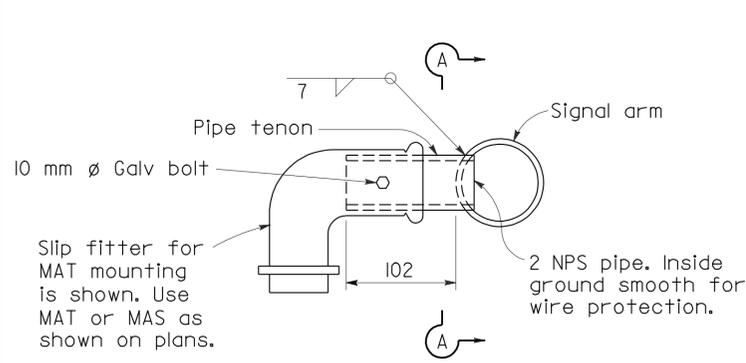
| | |
|---------------------------|--|
| REGISTERED CIVIL ENGINEER | |
| April 28, 2005 | |
| PLANS APPROVAL DATE | |

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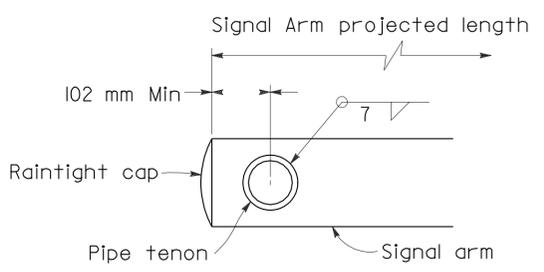
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

To accompany plans dated 10-18-10

2004 REVISED STD PLAN RSP ES-7M



DETAIL S-SIDE TENON



SECTION A-A

IDENTIFICATION NUMBER

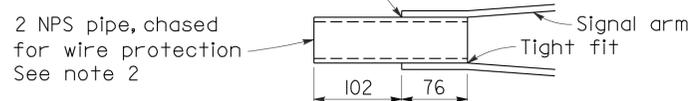
Attach a stamped metal tag with each pole's identification number to shaft above handhole. 7 mm high number minimum. A similar tag shall be attached to the top of the signal mast arm near the pole plate.

Sample Identification Number

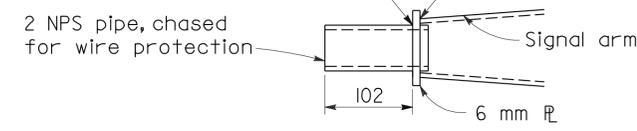
Type Load case Design wind velocity (km/h) Signal arm length maximum (m) Standard plan year Only for poles with fatigue resistant welds

19A - 3 - 161 - 9.1 - 04 - F
Use SL for special load case

PIPE TENONS

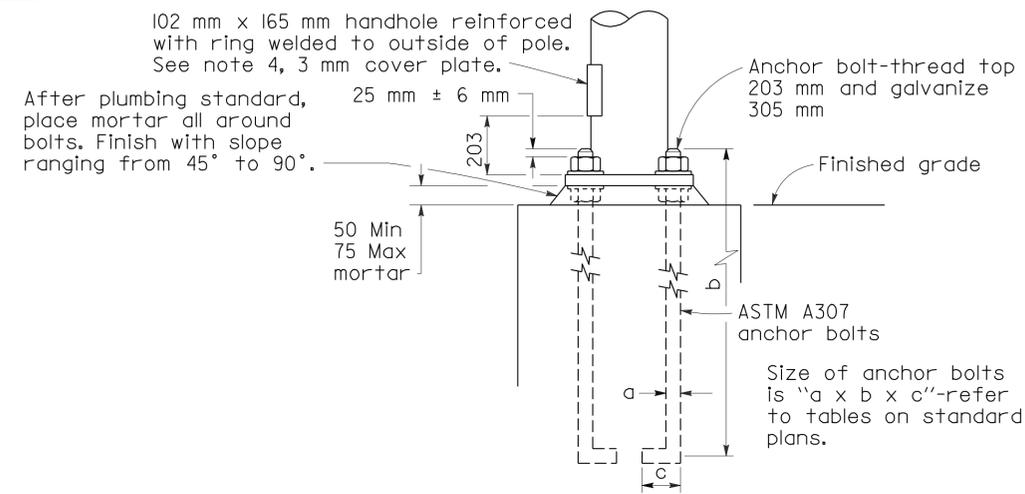


DETAIL TS-TIP TENON



DETAIL TL-TIP TENON

This detail supersedes Detail S when so designated



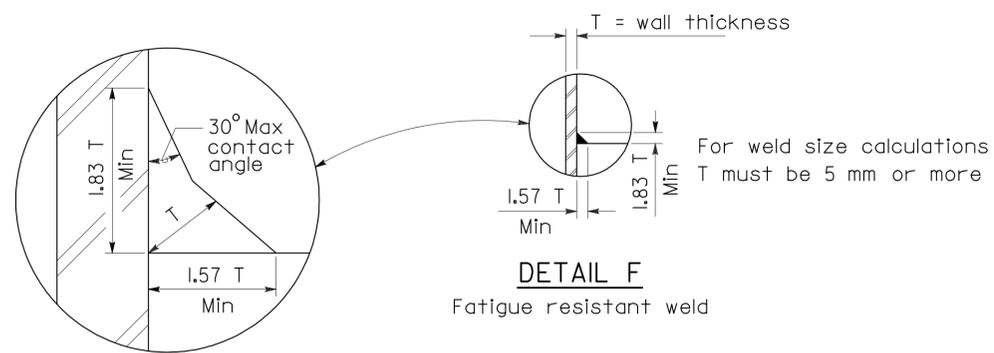
HANDHOLE AND ANCHORAGE DETAILS

GENERAL NOTES

- SPECIFICATIONS**
 DESIGN : AASHTO Standard specifications for structural supports for highway signs, luminaires and traffic signals dated 2001.
- Loading**
 WIND LOADINGS : 161 km/h
 Unit Stresses
 STRUCTURAL STEEL : fy = 330 MPa tapered steel tube
 fy = 250 MPa unless otherwise noted
- CONSTRUCTION** : Standard Specifications and the Special Provisions

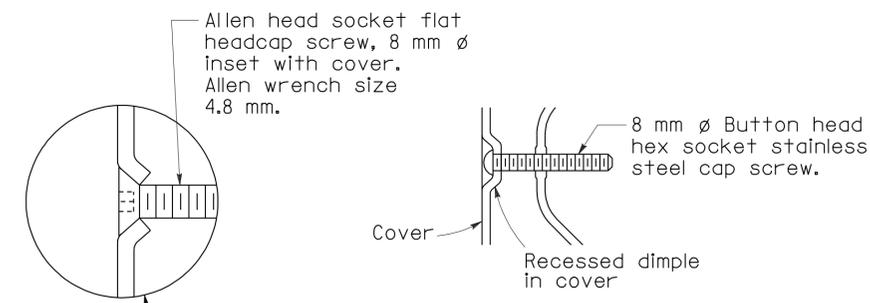
NOTES

- ASTM A307 anchor bolts are required for each pole. Provide a hex nut, leveling nut and 2 washers for each bolt.
- Luminaire arms shall be round, tapered steel tubes, taper of 11.45 mm/m to 11.66 mm/m with an end section 60 mm OD for mounting hardware. Extensions of 2 NPS Standard pipe and 178 mm long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 381 mm.
- Signal arms shall be round, tapered steel tubes, maximum taper 11.66 mm/m.
- Handhole reinforcement ring shall be 6 mm x 51 mm for 3.04 mm to 6.07 mm poles, 10 mm x 51mm for 7.94 mm.
- Handholes for lighting standards shall be located on the downstream side of the pole unless otherwise noted on the plans.
- Detail F, fatigue resistant weld, is required at signal arm plate and pole base plate.
- Cap screws shall be tightened by the turn-of-nut method 1/3 turn to form a snug tight condition. No washer will be required.
- During pole erection, the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
- When Project Plans show a lesser number of signs and signals, the Project Plans shall prevail.
- Outside diameter, wall thickness, and corresponding section properties at the base of traffic signal poles and arms as shown in the Standard Plans are minimums. Unless otherwise specified, alternative sections require approval by the Engineer.



DETAIL F

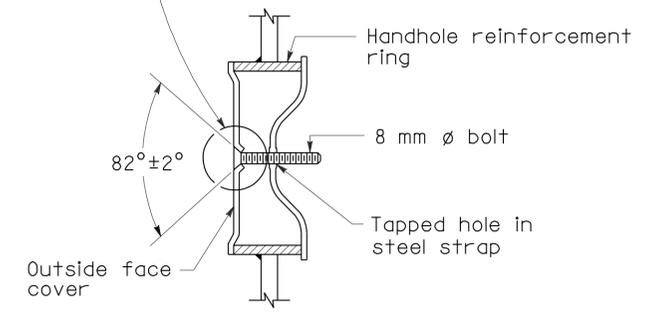
Fatigue resistant weld



ALTERNATIVE DETAIL

| Pole or Arm | Weld Size | Wall Thickness |
|--------------|-----------|----------------|
| See Detail F | 7 | 3.04 |
| | 8 | 4.55 |
| | 10 | 6.07 |
| | 11 | 7.94 |
| See Detail F | 4 | 3.04 |
| | 5 | 4.55 |
| | 7 | 6.07 |
| | 8 | 7.94 |

ELEVATION A



TAMPER RESISTANT HANDHOLE COVER

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SIGNAL AND LIGHTING STANDARDS
 DETAILS No. 1)**

NO SCALE
 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-7M DATED APRIL 28, 2005 SUPERSEDES RSP ES-7M DATED JANUARY 24, 2005 AND STANDARD PLAN ES-7M DATED JULY 1, 2004-PAGE 463 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7M



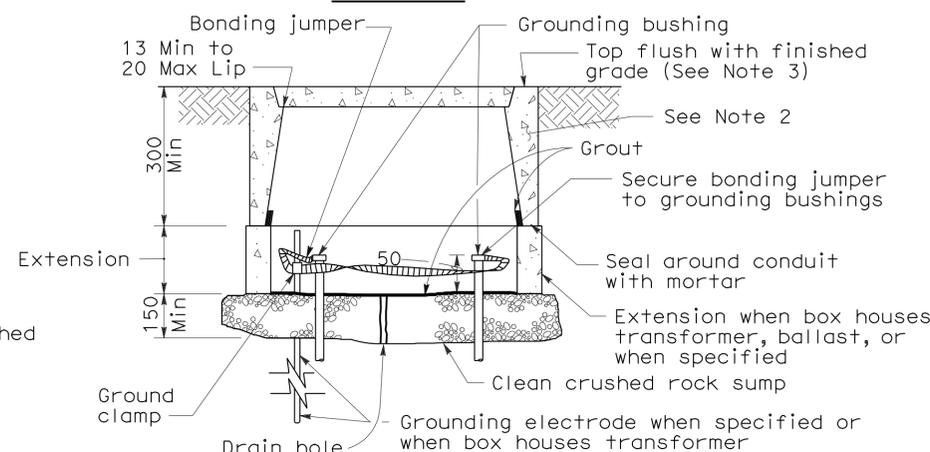
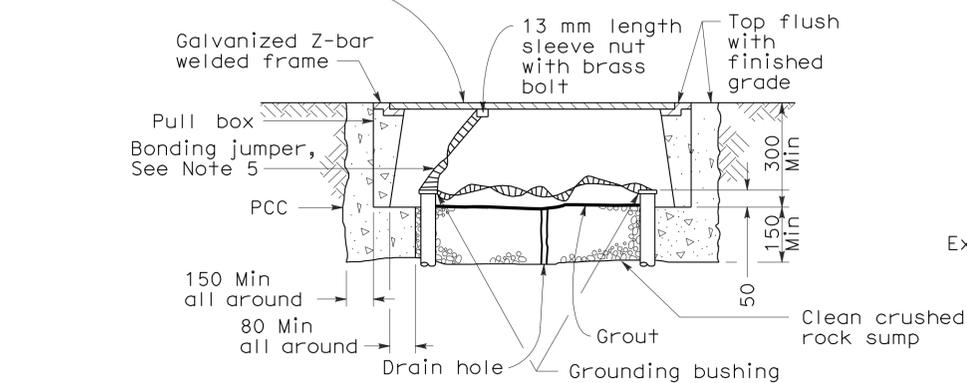
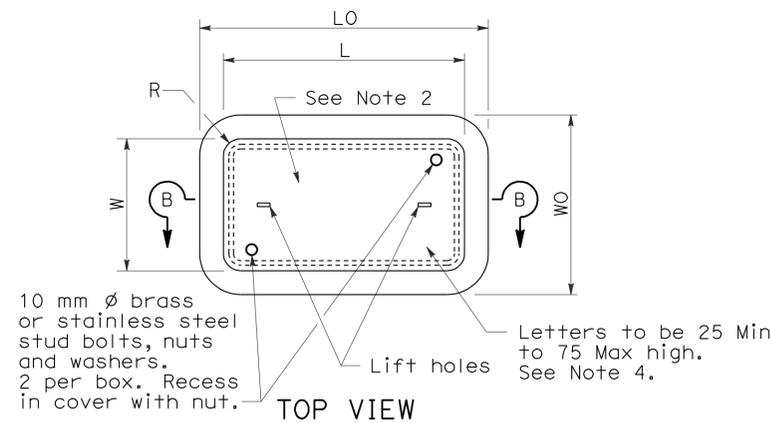
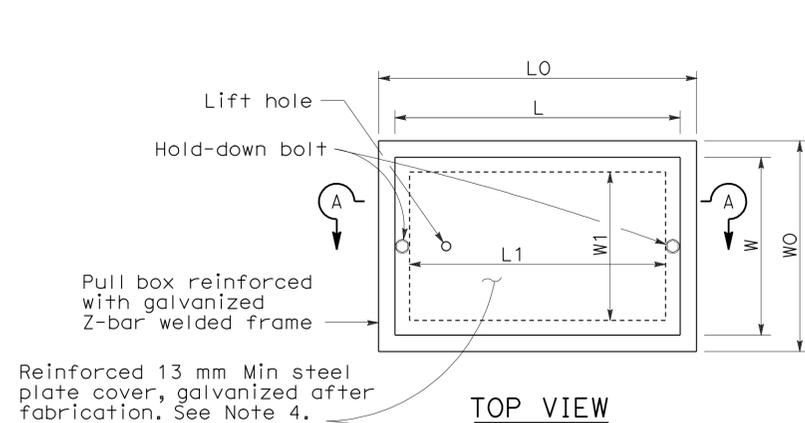
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 335 | 364 |

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

October 5, 2007
PLANS APPROVAL DATE

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SECTION A-A
No. 3 1/2(T), No. 5(T) AND
No. 6(T) TRAFFIC PULL BOX

SECTION B-B
INSTALLATION DETAILS

DIMENSION TABLE

| PULL BOX | CONCRETE BOX | | | | NON-PCC BOX | | CONCRETE OR NON-PCC COVERS | | | | |
|-----------|---------------------|---------------------------------|---------|---------|----------------------|---------------------------------|----------------------------|-----------|--------|----------------|------------|
| | Minimum * Thickness | Minimum Depth Box and Extension | L0 (mm) | W0 (mm) | Minimum ** Thickness | Minimum Depth Box and Extension | L ** (mm) | W ** (mm) | R (mm) | Edge Thickness | Edge Taper |
| No. 3 1/2 | 25 mm | No Extension | 457 | 330 | 8 mm | No Extension | 390 | 260 | 27 | 45 mm | 3 mm |
| No. 5 | 25 mm | 560 mm | 666 | 425 | 8 mm | 510 mm | 590 | 350 | 32 | 50 mm | 3 mm |
| No. 6 | 40 mm | 610 mm | 854 | 524 | 10 mm | 510 mm | 775 | 444 | 32 | 50 mm | 3 mm |

* Excluding conduit web ** Top dimension

DIMENSION TABLE

| PULL BOX | CONCRETE BOX | | | | NON-PCC BOX | | CONCRETE OR NON-PCC COVERS | | | | | | |
|--------------|---------------------|---------------------------------|-----------|--------------|-------------|--------------|----------------------------|---------------------------------|-----------|-----------|--------|----------------|------------|
| | Minimum * Thickness | Minimum Depth Box and Extension | L0 (mm) | W0 (mm) | L1 (mm) | W1 (mm) | Minimum ** Thickness | Minimum Depth Box and Extension | L ** (mm) | W ** (mm) | R (mm) | Edge Thickness | Edge Taper |
| No. 3 1/2(T) | 40 mm | 305 mm | 530 \pm | 430 \pm 25 | 370 \pm | 270 \pm 25 | Does Not Apply | Does Not Apply | 510 \pm | 350 \pm | 0 | 13 mm | None |
| No. 5(T) | 45 mm | 305 mm | 750 \pm | 600 \pm 25 | 480 \pm | 330 \pm 25 | Does Not Apply | Does Not Apply | 690 \pm | 410 \pm | 0 | 13 mm | None |
| No. 6(T) | 50 mm | 305 mm | 900 \pm | 760 \pm 25 | 600 \pm | 430 \pm 25 | Does Not Apply | Does Not Apply | 840 \pm | 510 \pm | 0 | 13 mm | None |

* Excluding conduit web ** Top dimension

NOTES ON PULL BOXES:

- Traffic pull box shall be provided with steel cover and special concrete footing. Steel cover shall have embossed non-skid pattern.
- Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.
- Top of pull boxes shall be flush with surrounding grade or top of adjacent curb, except that in unpaved areas where pull box is not immediately adjacent to and protected by a concrete foundation, pole or other protective construction, the box shall be placed with its top 30 mm above surrounding grade. Where practicable, pull boxes shown in the vicinity of curbs shall be placed adjacent to the back of curb, and pull boxes shown adjacent to standards shall be placed on side of foundation facing away from traffic, unless otherwise noted. When pull box is installed in sidewalk area, the depth of the pull box shall be adjusted so that the top of the pull box is flush with the sidewalk.

- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" Sprinkler control circuits, 50 V or less; "CALTRANS" On all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service.

a) No. 3 1/2 pull box.

- "SIGNAL" Traffic signal circuits with or without street or sign lighting circuits.
- "ST LIGHTING" Street or sign lighting circuits where voltage is under 600 V.

b) No. 5, 6, 9 or 9A pull box.

- "TRAFFIC SIGNAL" Traffic signal circuits with or without street or sign lighting circuits.
- "STREET LIGHTING" Street or sign lighting circuits where voltage is under 600 V.
- "STREET LIGHTING-HIGH VOLTAGE" Street or sign lighting circuits where voltage is above 600 V.
- "IRRIGATION" Circuits to irrigation controller 120 V or more.
- "RAMP METER" Ramp meter circuits.
- "COUNT STATION" Count or speed monitor circuits.
- "COMMUNICATION" Communication circuits.
- "TOS COMMUNICATIONS" TOS communications line.
- "TOS POWER" TOS power.
- "TDC POWER" Telephone demarcation cabinet power.
- "CCTV" Closed circuit television circuits.
- "TMS" Traffic monitoring station circuits.
- "CMS" Changeable message sign circuits.
- "HAR" Highway advisory radio circuits.

5. Bonding jumper for metal covers shall be 1 m long, minimum.

6. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 3 mm greater.

7. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 3 mm. Top outside edge of concrete covers and pull boxes shall have a 6 mm minimum radius.

8. Pull box shall not be installed within the boundaries of new or existing curb ramps.

9. Pull boxes for electroliers, post and signal standards shall be located \pm 1.5 m from the station of the adjacent electrolier, post or signal standard. Pull boxes shall be placed adjacent to back of curb or edge of shoulder except where this is impractical, a box may be placed in another suitable protected and accessible location.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(PULL BOX DETAILS)

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-8 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-8
DATED JULY 1, 2004-PAGE 467 OF THE STANDARD PLANS BOOK DATED JULY 2004.

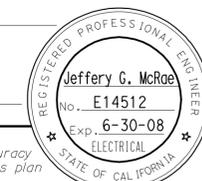
REVISED STANDARD PLAN RSP ES-8

2004 REVISED STD PLAN RSP ES-8



| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|------------------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 336 | 364 |

Jeffery B. McRae
REGISTERED ELECTRICAL ENGINEER

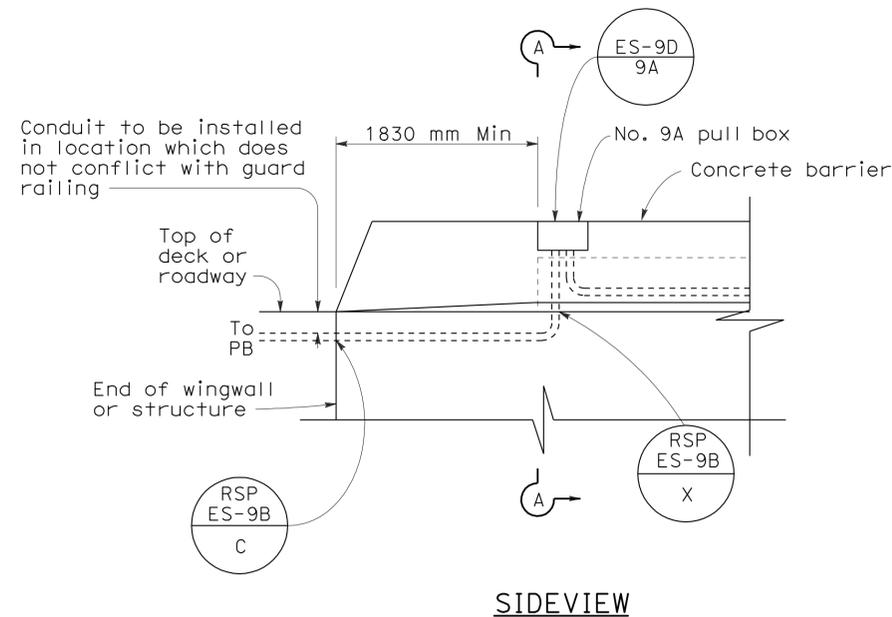


October 5, 2007
PLANS APPROVAL DATE

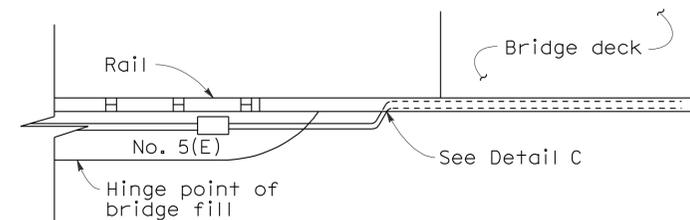
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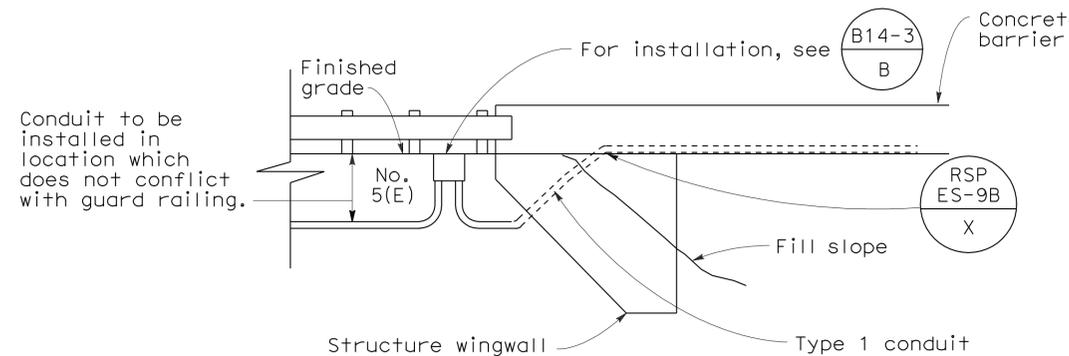
To accompany plans dated 10-18-10



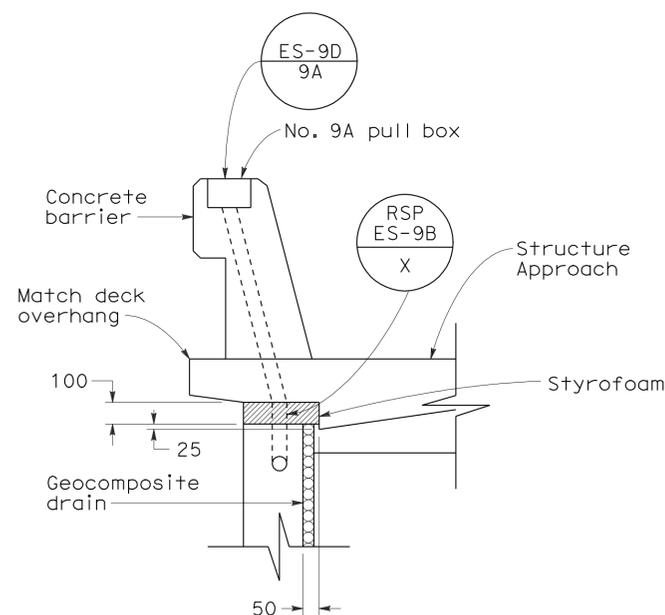
SIDEVIEW



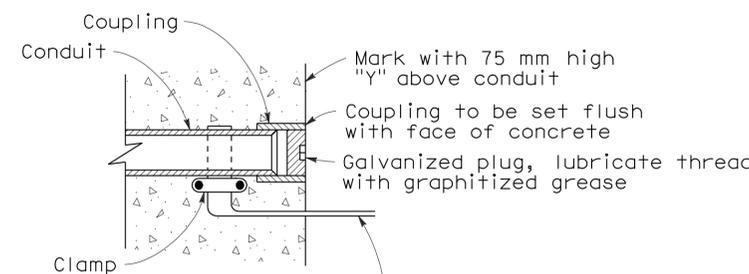
TOP VIEW



**SIDE VIEW
DETAIL I
CONDUIT TERMINATION**



**SECTION A-A
DETAIL A
CONDUIT TERMINATION**



Copper bonding strap install only at structure construction joint, extend at least 150 mm from face of concrete

**DETAIL C
CONDUIT TERMINATION**

**ELECTRICAL SYSTEMS
(ELECTRICAL DETAILS
STRUCTURE INSTALLATIONS)**

NO SCALE
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RSP ES-9A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-9A
DATED JULY 1, 2004-PAGE 468 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-9A

2004 REVISED STD PLAN RSP ES-9A



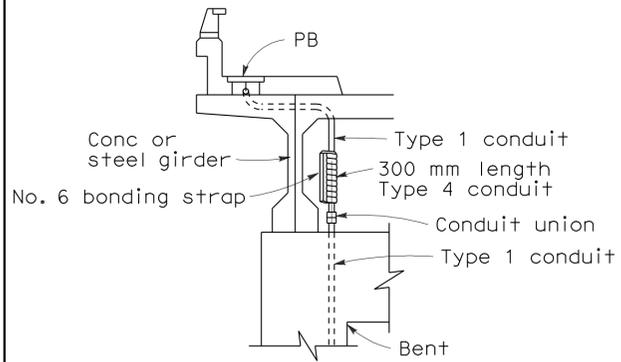
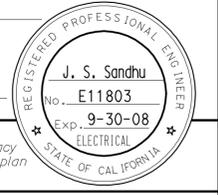
| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|------------------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 337 | 364 |

Aswunder to founder
 REGISTERED ELECTRICAL ENGINEER

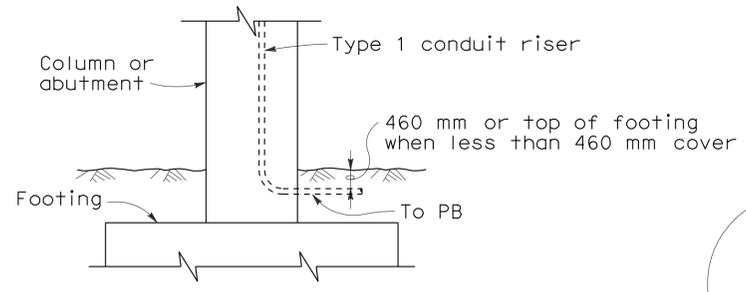
October 5, 2007
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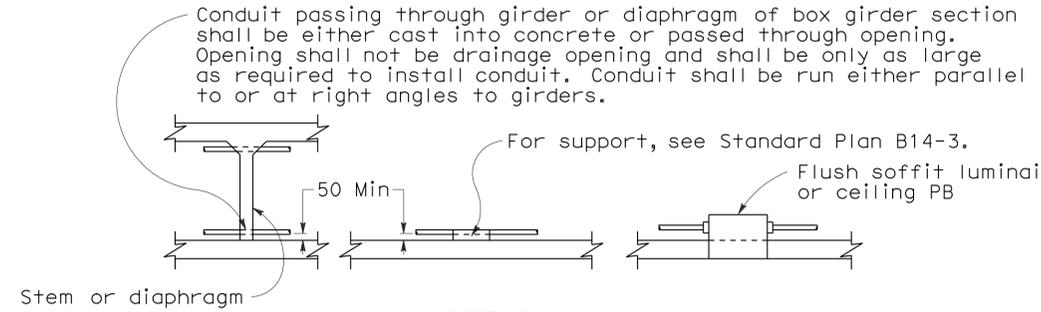
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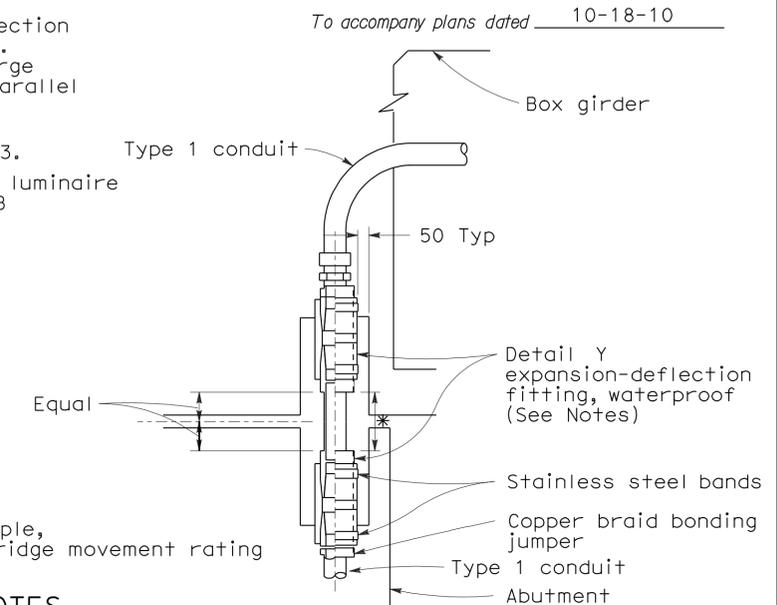
DETAIL R
CONDUIT RISER CONNECTION



DETAIL T
LOWER END OF CONDUIT RISER AT COLUMN OR ABUTMENT

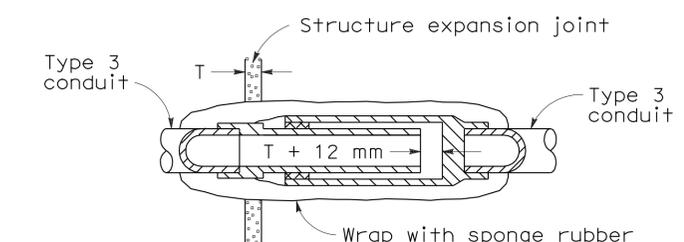


DETAIL S
CONDUIT INSTALLATION WITHIN BOX GIRDER SECTIONS



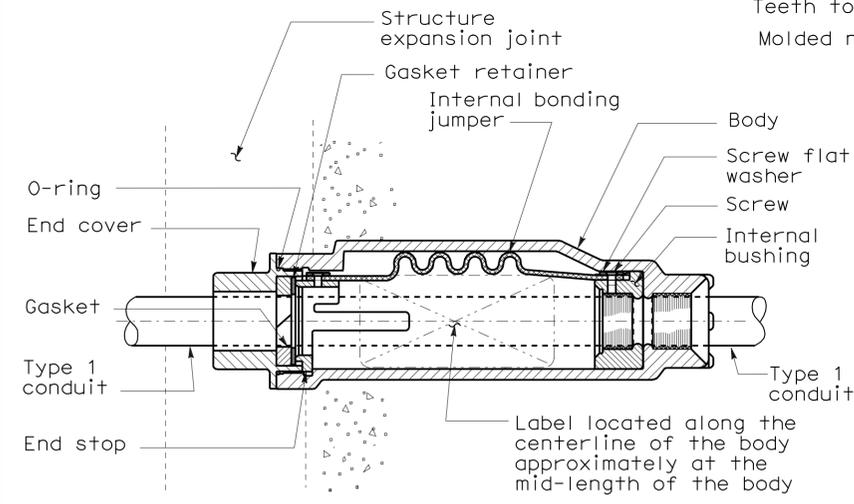
NOTES

1. Fitting and pocket required only where movement can occur between girder and abutment.
2. Fill pocket around fitting with resilient waterproof compound.

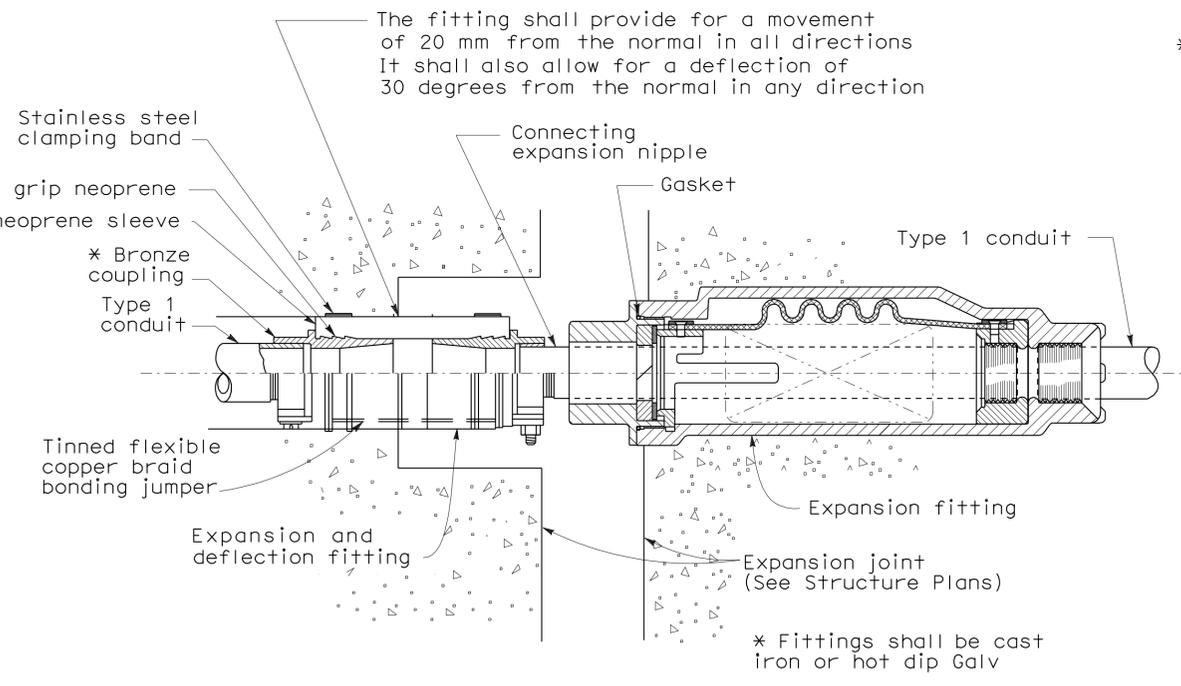


NON-METALLIC CONDUIT EXPANSION FITTING INSTALLATION DETAIL

(To be used only when shown or specified on Project Plans)

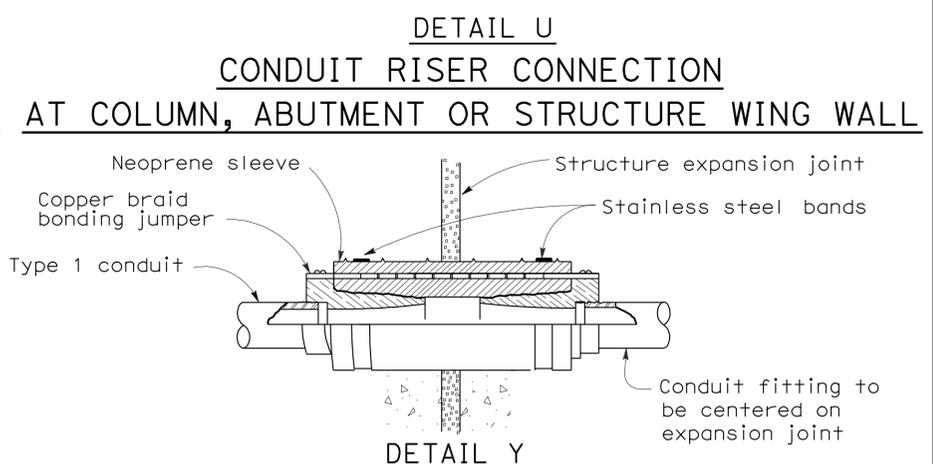


DETAIL X
CONDUIT EXPANSION FITTINGS



DETAIL XY
COMBINATION EXPANSION-DEFLECTION FITTINGS METALLIC CONDUIT INSTALLATION

* Conduit nipple, Length = Bridge movement rating



DETAIL Y
CONDUIT EXPANSION-DEFLECTION FITTING

NOTES

1. Except for sidewalk joints, a conduit expansion fitting or expansion-deflection fitting shall be installed at each 13 mm or greater structure joint, hinge or abutment.
2. Fittings or combination of fittings shall be installed to accommodate the movement rating as shown on the structure plans.
3. Fittings shall be installed parallel to superstructure girders.
4. Where lateral movement greater than 6 mm may occur, a neoprene sleeve expansion-deflection fitting shall be installed straddling the joint.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (ELECTRICAL DETAILS STRUCTURE INSTALLATIONS)

NO SCALE
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
RSP ES-9B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-9B DATED JULY 1, 2004-PAGE 469 OF THE STANDARD PLANS BOOK DATED JULY 2004.

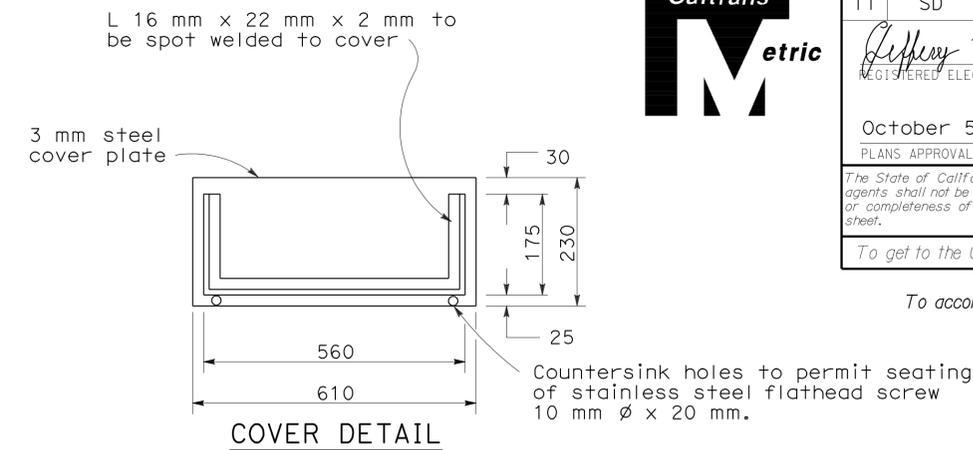
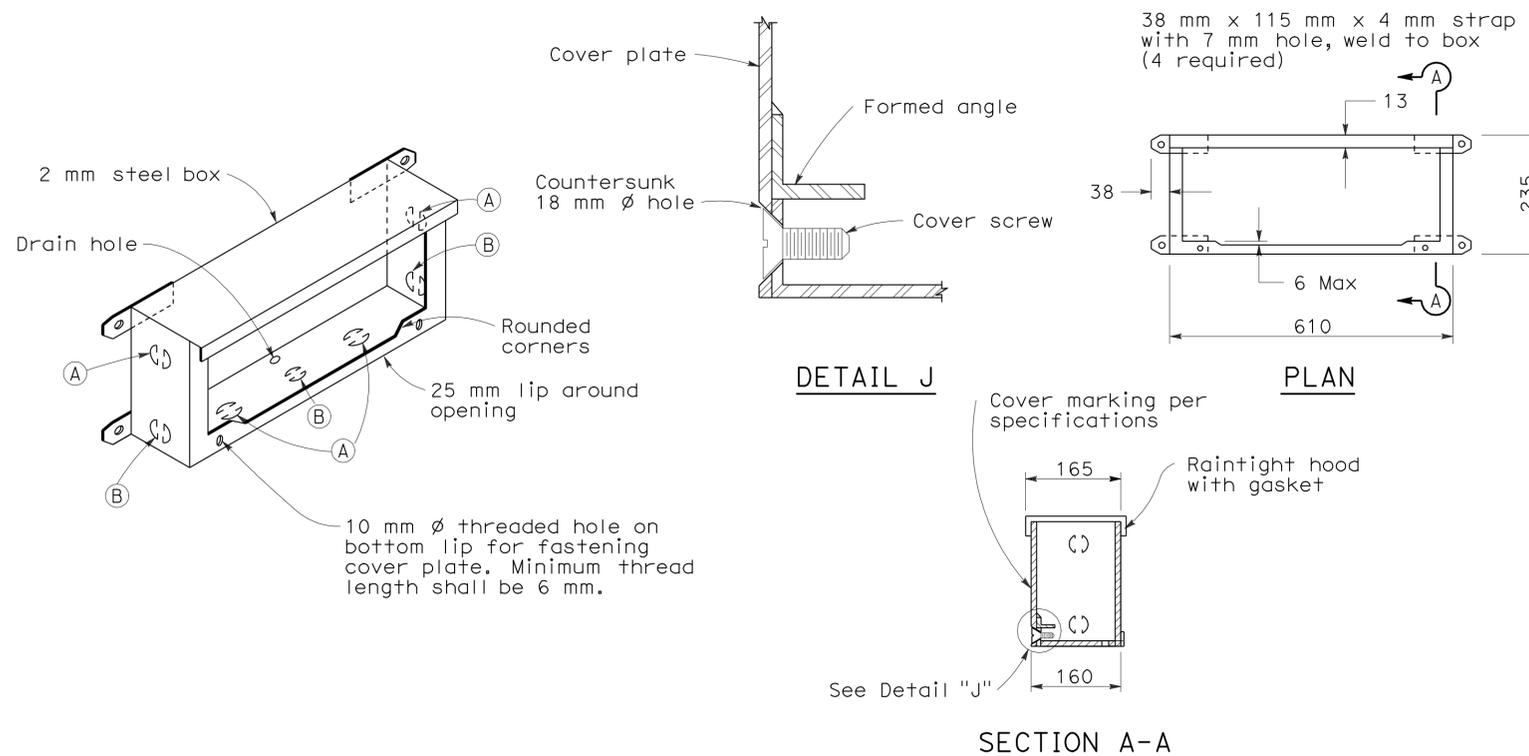
2004 REVISED Std PLAN RSP ES-9B



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 338 | 364 |

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

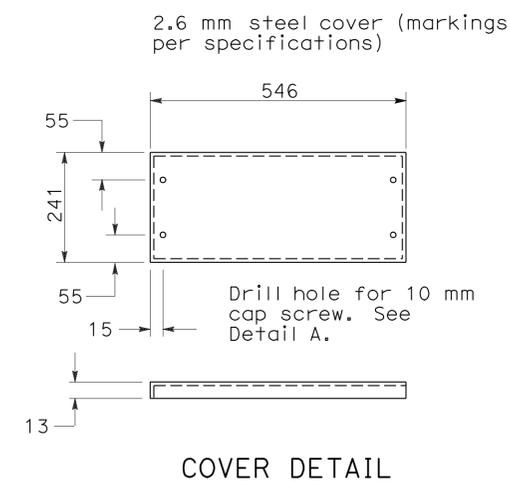
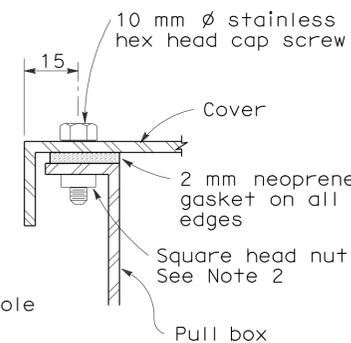
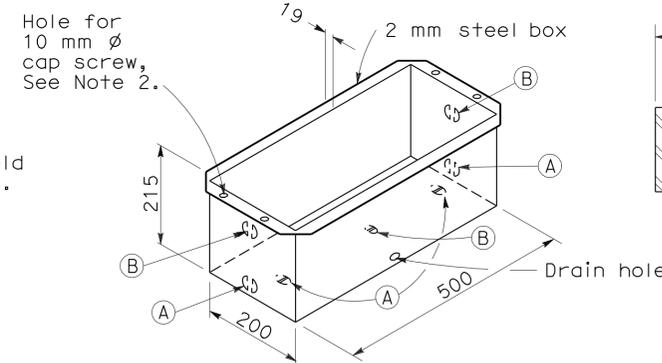
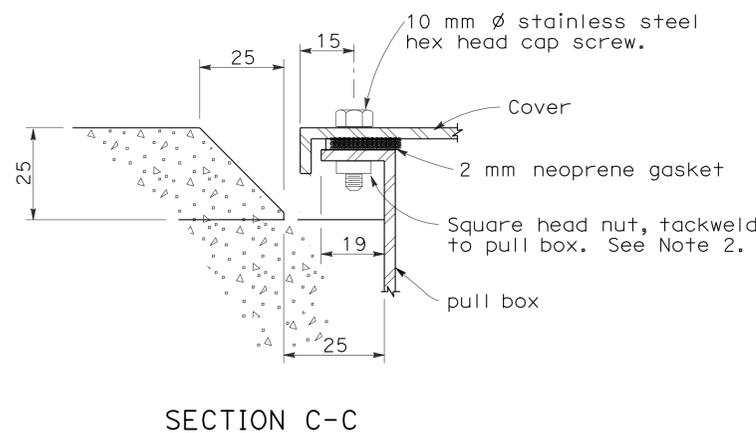
October 5, 2007
 PLANS APPROVAL DATE
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INSTALLATION NOTE

Box shall be parallel to top of railing. Close cover box during pouring with 6 mm plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of raintight hood.

No. 9 STRUCTURE PULL BOX



NOTES: No. 9 and 9A Pull Box

- Corner joints shall be lapped and secured by spot welding or riveting.
- Where cap screws are used to attach cover to box, either of the following methods of providing adequate threading may be used:
 - Tack weld square nut to bottom of flange (Total 4), or
 - Tack weld a 6 mm x 16 mm x 200 mm bar beneath flange (Total 2).
- Pound knockouts flat after punching.
- Multiple size knockouts shall not be permitted.
- Pull box covers shall be marked as shown on Revised Standard Plan RSP ES-8.

**KNOCKOUT SCHEDULE
No. 9 AND 9A PULL BOX**

- (A) 53C, 1 each end, 2 on bottom.
- (B) 78C, 1 each end, 1 on bottom.

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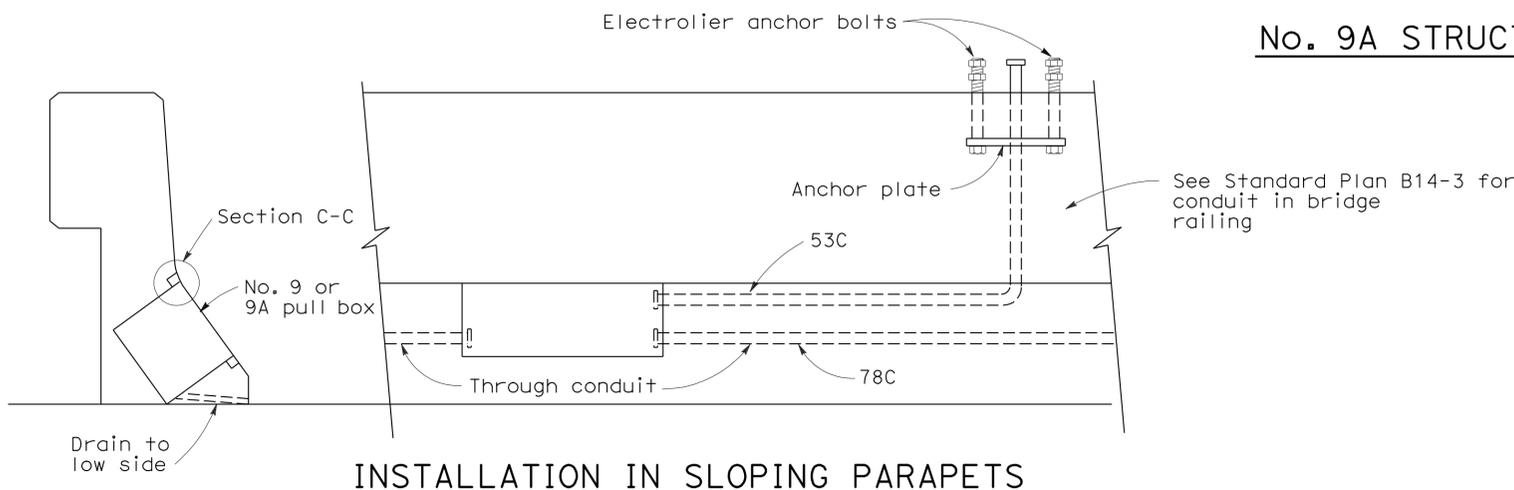
**ELECTRICAL SYSTEMS
(ELECTRICAL DETAILS
STRUCTURE INSTALLATIONS)**

NO SCALE

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MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-9C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-9C
DATED JULY 1, 2004-PAGE 470 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-9C



INSTALLATION IN SLOPING PARAPETS

For reinforcement in area of electrolier, see railing sheets. For electrolier anchor bolts, see Standard Plan ES-6B.



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 339 | 364 |

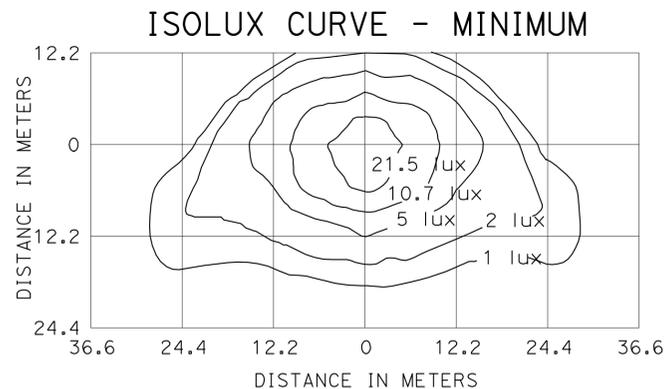
REGISTERED ELECTRICAL ENGINEER
Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

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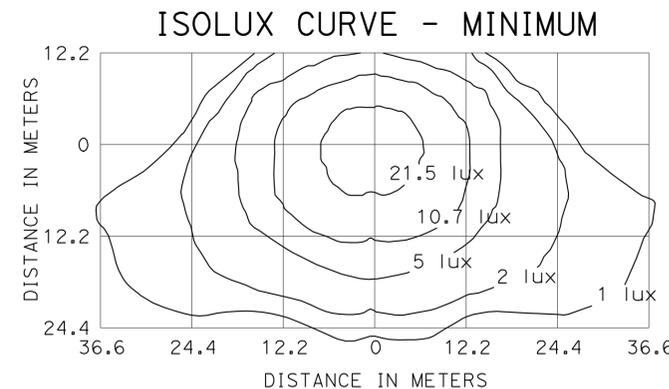
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

To accompany plans dated 10-18-10



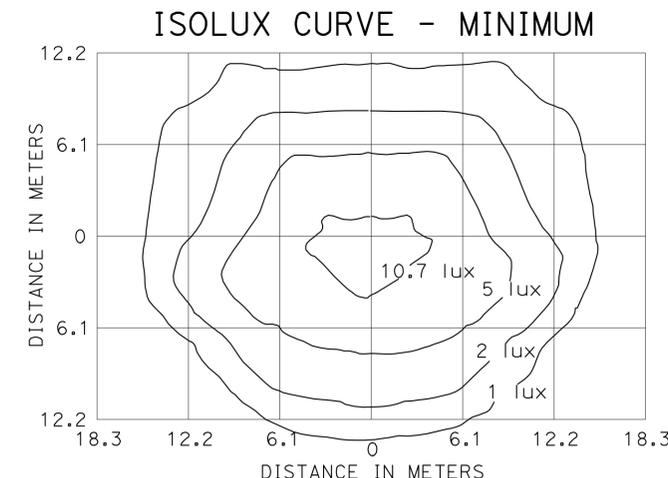
TYPE III MEDIUM CUTOFF

Cutoff Luminaire
 10.4 m Mounting Height
 LAMP OPERATED AT 22 000 lm
 200 W HIGH PRESSURE SODIUM LAMP
 ANSI DESIGNATION S66



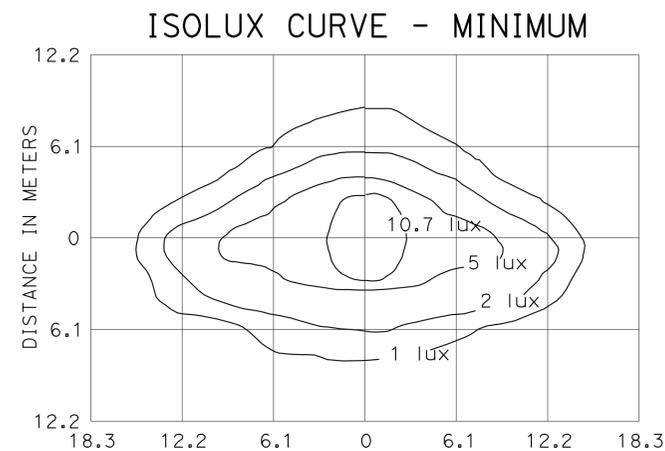
TYPE III MEDIUM CUTOFF

Cutoff Luminaire
 12.2 m Mounting Height
 LAMP OPERATED AT 37 000 lm
 310 W HIGH PRESSURE SODIUM LAMP
 ANSI DESIGNATION S67



FLUSH SOFFIT LUMINAIRE

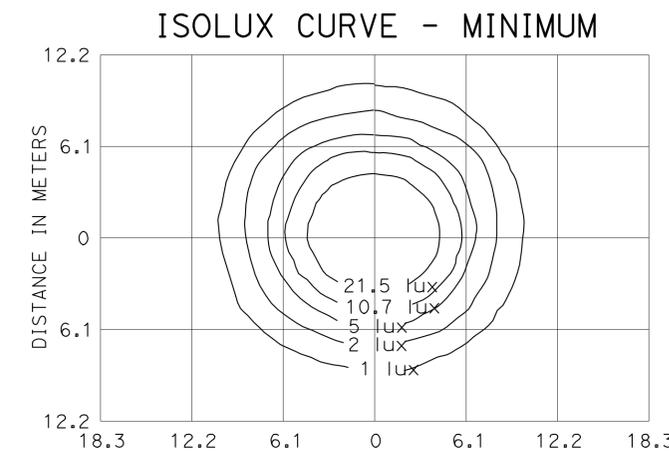
5.2 m Mounting Height
 LAMP OPERATED AT 5800 lm
 70 W HIGH PRESSURE SODIUM LAMP
 ANSI DESIGNATION S62



PENDANT SOFFIT LUMINAIRE

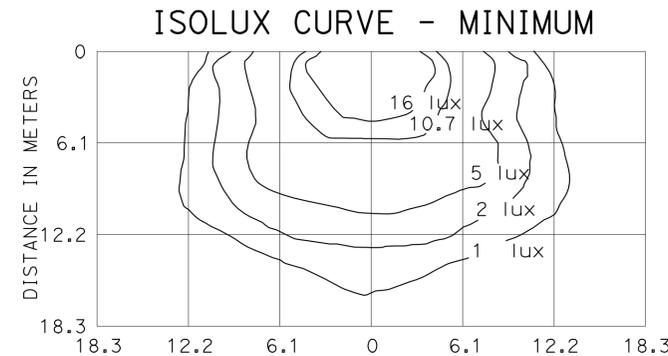
TYPE III SHORT

5.2 m Mounting Height
 LAMP OPERATED AT 5800 lm
 70 W HIGH PRESSURE SODIUM LAMP
 ANSI DESIGNATION S62



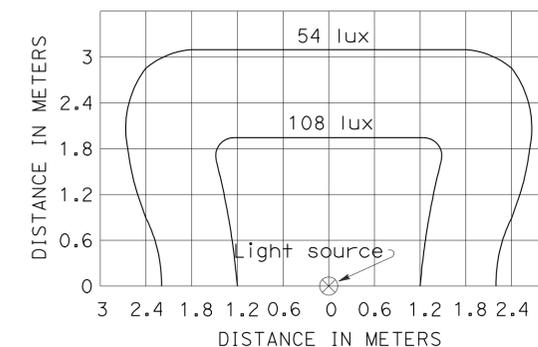
PENDANT SOFFIT LUMINAIRE

5.2 m Mounting Height
 LAMP OPERATED AT 5800 lm
 70 W HIGH PRESSURE SODIUM LAMP
 ANSI DESIGNATION S62



DETAIL "W" WALL LUMINAIRE

4.6 m Mounting Height
 LAMP OPERATED AT 9500 lm
 100 W HIGH PRESSURE SODIUM LAMP
 ANSI DESIGNATION S54

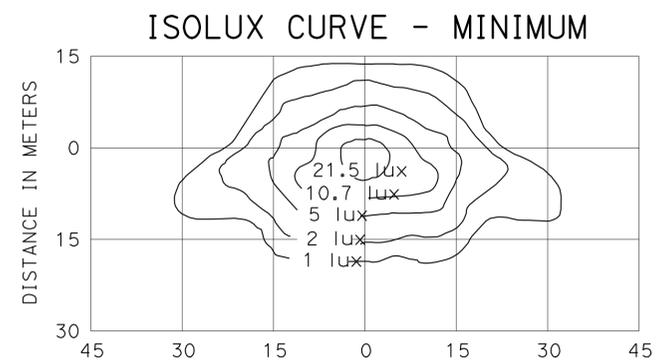


SIGN LIGHTING FIXTURE ISOLUX DIAGRAM

1. Curves represent the minimum lux of initial illumination on a 3 m x 6 m panel.
2. The lux shown are with the fixture attached to the light fixture mounting channel which places the center of the source 1420 mm in front of panel and 300 mm below the bottom edge.
3. Applicable lamp: 85-W fluorescent phosphor coated induction lamp.

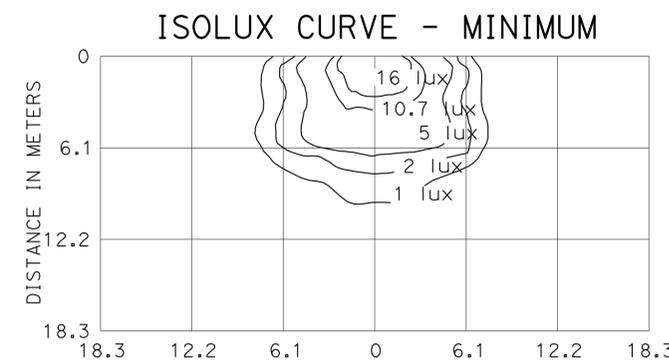
NOTE

Isolux diagrams show the minimum horizontal lux required.



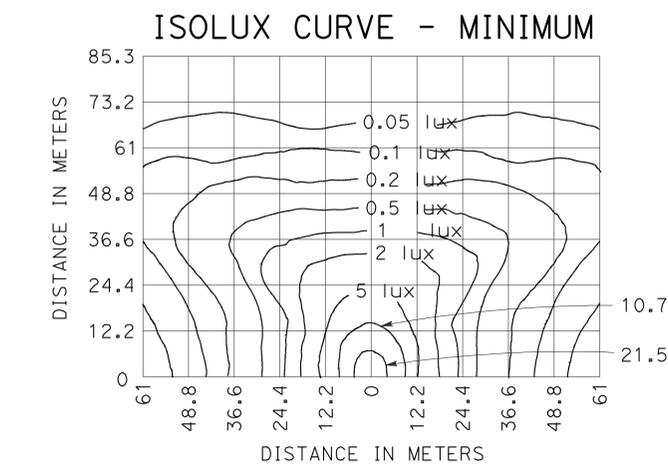
TYPE III MEDIUM CUTOFF

Cutoff Luminaire
 9.1 m Mounting Height
 LAMP OPERATED AT 16 000 lm
 150 W HIGH PRESSURE SODIUM LAMP
 ANSI DESIGNATION S55



WALL LUMINAIRE

4.6 m Mounting Height
 LAMP OPERATED AT 5800 lm
 70 W HIGH PRESSURE SODIUM LAMP
 ANSI DESIGNATION S62



LOW PRESSURE SODIUM LUMINAIRE

12.2 m Mounting Height
 LAMP OPERATED AT 33 000 lm
 180 W LOW PRESSURE SODIUM LAMP

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (ISOLUX DIAGRAMS)**

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-10 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-10 DATED JULY 1, 2004-PAGE 474 OF THE STANDARD PLANS BOOK DATED JULY 2004.



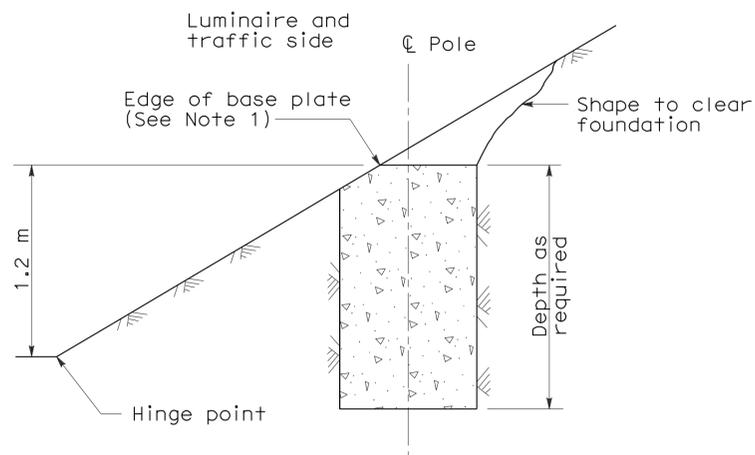
| | | | | | |
|------|--------|---------|------------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 340 | 364 |

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 No. C57793
 Exp. 03-31-08
 CIVIL
 STATE OF CALIFORNIA

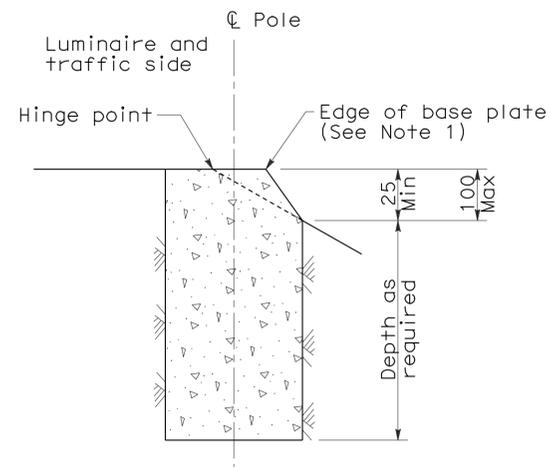
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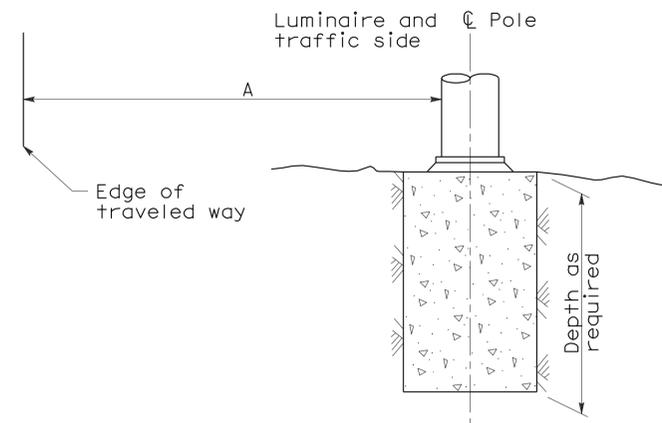
To accompany plans dated 10-18-10



**CUT SLOPES
 STEEPER THAN 1:4**
 See Note 2



**FILL SLOPES
 STEEPER THAN 1:4**
 See Note 2



**FLAT SECTIONS, CUT OR FILL SLOPES
 1:4 OR FLATTER**

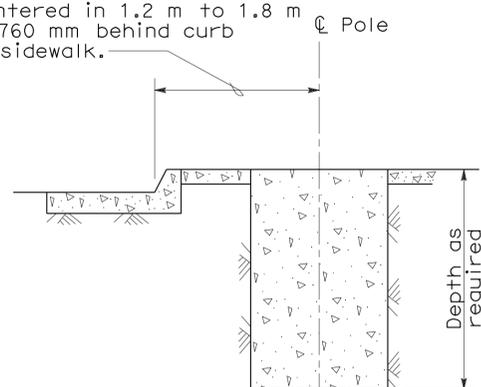
| STANDARD TYPE | SETBACK (DIMENSION A) |
|-----------------------------|-----------------------|
| 32 | 9 m Min |
| 31, 36-20A | 6 m Min |
| 15, 15D, 15-SB, 21, 21D, 30 | Mast Arm Length (Min) |

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

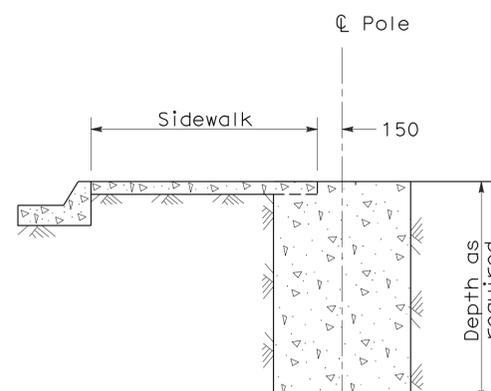
NOTES:

- Where a portion of the foundation is above grade, the top edges shall have a 25 mm chamfer.
- Horizontal setbacks on cut and fill slopes steeper than 1:4 shall not exceed the distance shown for flat sections.

1 m behind median or island curb except centered in 1.2 m to 1.8 m medians. 760 mm behind curb with wide sidewalk.



**MEDIAN, ISLAND
 OR WIDE SIDEWALK**
 (2 m wide and wider)



NARROW SIDEWALK
 (Less than 2 m wide)

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS

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

NO SCALE
 ALL DIMENSIONS ARE IN
 MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-11 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-11
 DATED JULY 1, 2004-PAGE 475 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-11

2004 REVISED STD PLAN RSP ES-11



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 341 | 364 |

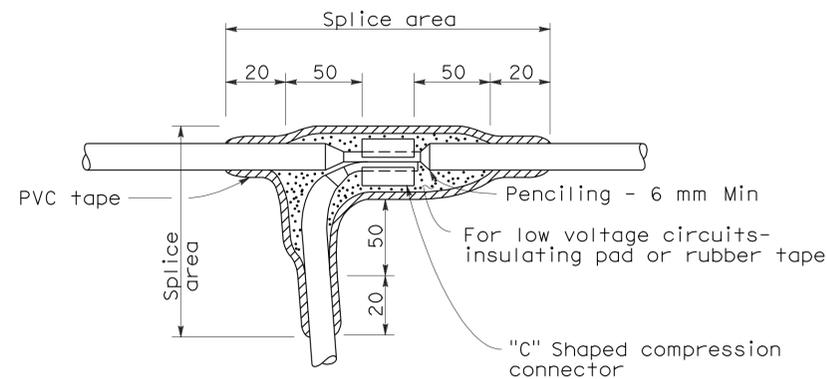
REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

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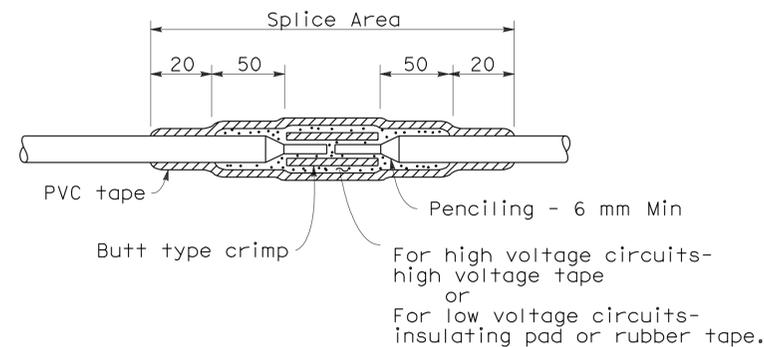
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>

To accompany plans dated 10-18-10



TYPE "C" SPLICE

Between 1 free-end and 1 through conductor



TYPE "S" SPLICE

Between 2 free-ends

NOTES:

1. Dimensions are minimum.
2. Rubber tapes shall be rolled after application.

INSULATION METHODS

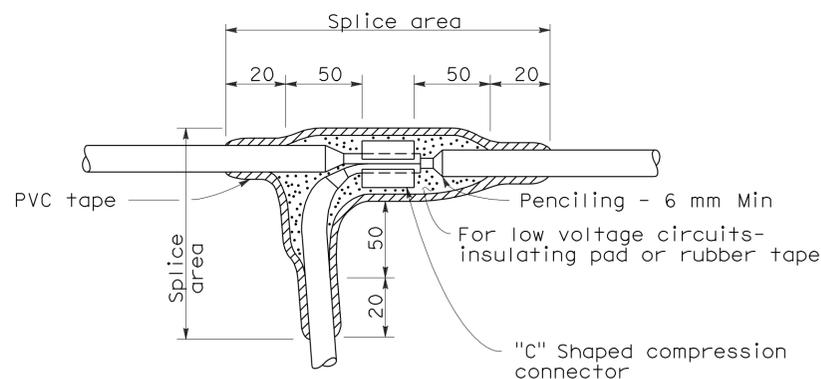
Low Voltage Circuits (0-600 V)

METHOD "B"

1. Completely cover the splice area with electrical insulating coating and allow to dry.
2. Apply 2 layers of electrical insulating pad with minimum thickness of 4 mm each layer or 2 layers, half lapped, synthetic oil resistant, self fusing rubber tape.
3. Apply 3 layers half lapped polyvinyl chloride tape.
4. Cover entire splice with electrical insulating coating and allow to dry.

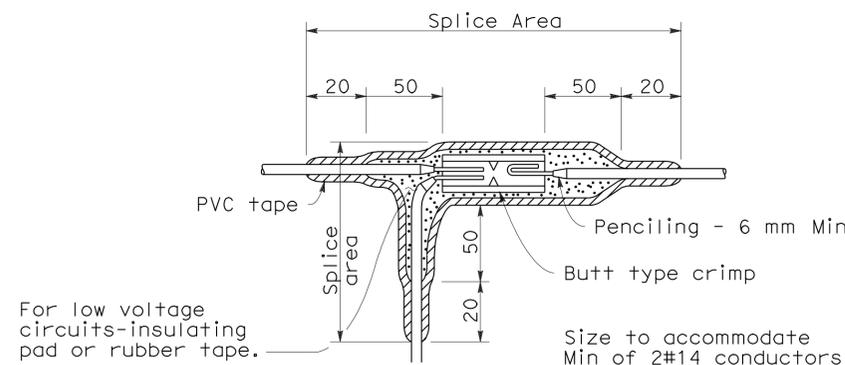
High Voltage Circuits (Over 600 V)

1. Completely cover the splice area with electrical insulating coating and allow to dry.
2. Apply high voltage tape to a minimum thickness equal to original insulation.
3. Apply 3 layers half lapped polyvinyl chloride tape.
4. Cover entire splice with electrical insulating coating and allow to dry.



TYPE "T" SPLICE

For 3 free-ends



TYPE "ST" SPLICE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SPLICING DETAILS)**

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-13A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-13A
DATED JULY 1, 2004-PAGE 478 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-13A

2004 REVISED STD PLAN RSP ES-13A



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 342 | 364 |

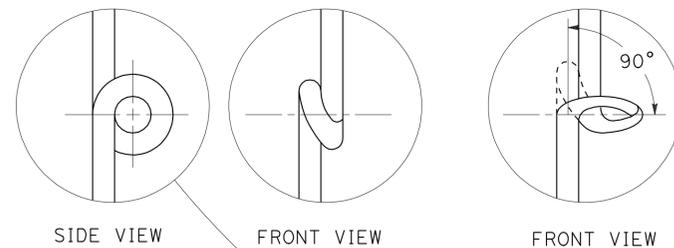
REGISTERED ELECTRICAL ENGINEER
Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

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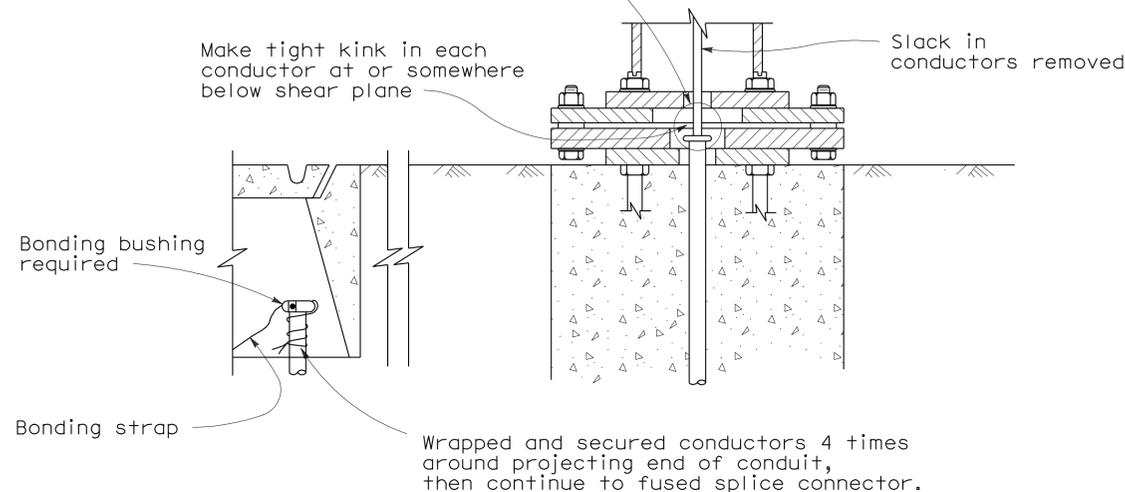
To accompany plans dated 10-18-10



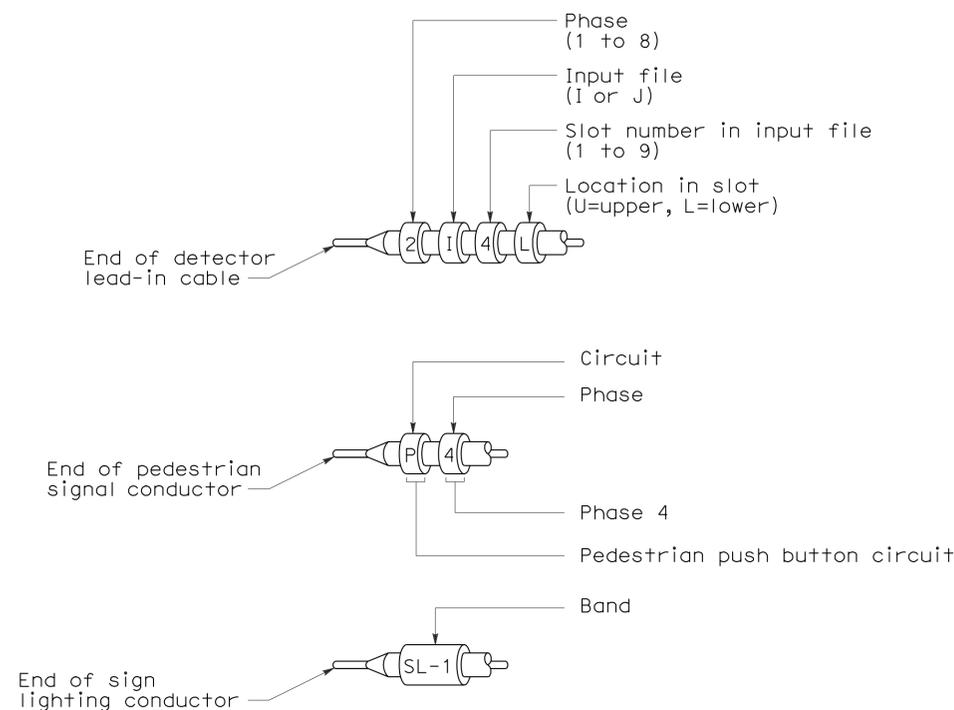
Continue kink to at least 90° position as indicated in step 2.

STEP 1

STEP 2



KINKING DETAIL FOR SLIP BASE STANDARDS



TYPICAL BANDING OF CONDUCTOR ENDS

Primary lines of multiple ballasts shall be provided with fused connectors. Fuse ratings shall be as noted below.

| CIRCUIT VOLTAGE | FUSE VOLTAGE RATING | FUSE CURRENT RATING | | | | | | | | | | | | | | | | |
|-----------------|---------------------|---------------------|-------|-------|-------|-------|-------|-------|--------|-----------------------------|------|------|-------|-------|-------------------------|---|-------|-------|
| | | HPS LAMP BALLAST | | | | | | | | LOW PRESSURE SODIUM BALLAST | | | | | INDUCTION SIGN LIGHTING | SINGLE PHASE (TWO WIRE) TRANSFORMERS (PRIMARY SIDE) | | |
| | | 70 W | 100 W | 150 W | 200 W | 250 W | 310 W | 400 W | 1000 W | 35 W | 55 W | 90 W | 135 W | 180 W | 85 W | 1 kVA | 2 kVA | 3 kVA |
| 120 V | 250 V | 5 | 5 | 5 | 5 | 5 | 5 | 5 | - | 5 | 5 | 5 | 5 | 5 | 5 | 10 | 20 | 30 |
| 240 V | 250 V | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 5 | 5 | 5 | 6 | 10 | 20 |
| 480 V | 500-600 V | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 2 | 2 | 2 | 3 | 3 | 1* | 3 | 6 | 10 |

* See Revised Standard Plan RSP ES-15D, Type SC3 Control.

**FUSE RATINGS FOR FUSED CONNECTORS
LUMINAIRE BALLAST FUSING**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(WIRING DETAILS AND
FUSE RATINGS)**

NO SCALE
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RSP ES-13B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-13B DATED JULY 1, 2004-PAGE 479 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-13B

2004 REVISED STD PLAN RSP ES-13B



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 343 | 364 |

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

October 5, 2007
 PLANS APPROVAL DATE

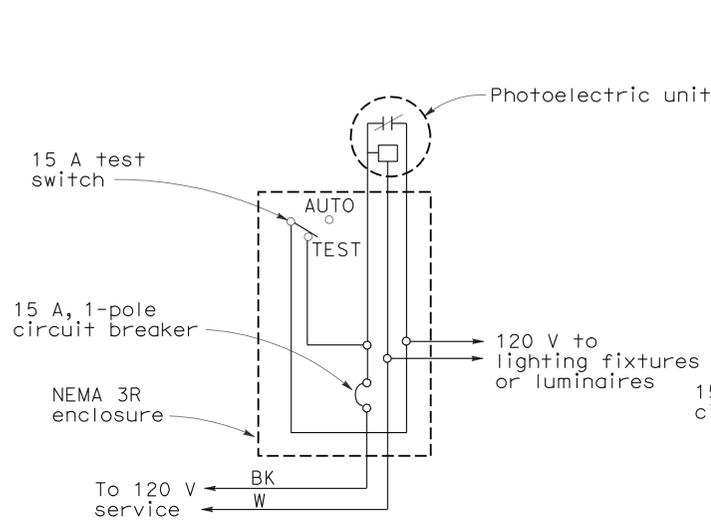
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NOTES: (FOR LIGHTING AND SIGN ILLUMINATION CONTROL)

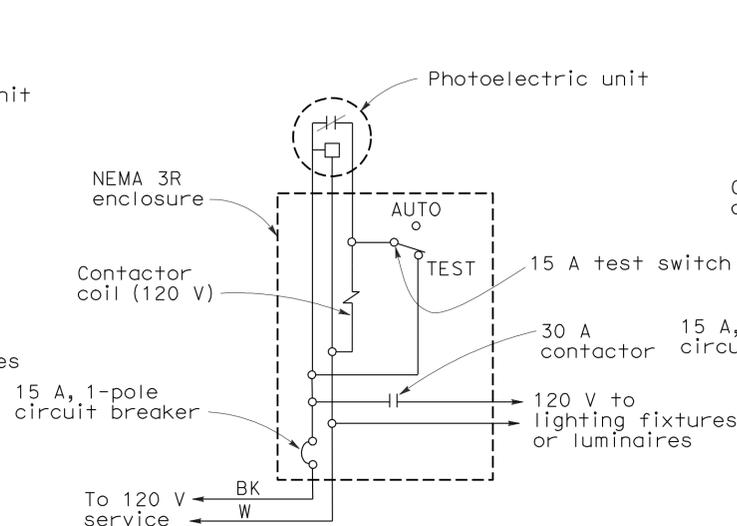
1. The ballast voltages of lighting fixtures and luminaires shall match line service voltages.
2. Voltage rating of photoelectric controls shall conform to the service voltage indicated on the plans.
3. Terminal strip shall be provided for wiring to fixtures.
4. Type SC1A, SC2A, SC3A controls are similar to Types SC1, SC2, SC3 controls respectively except test switch and wiring are not required.

To accompany plans dated 10-18-10



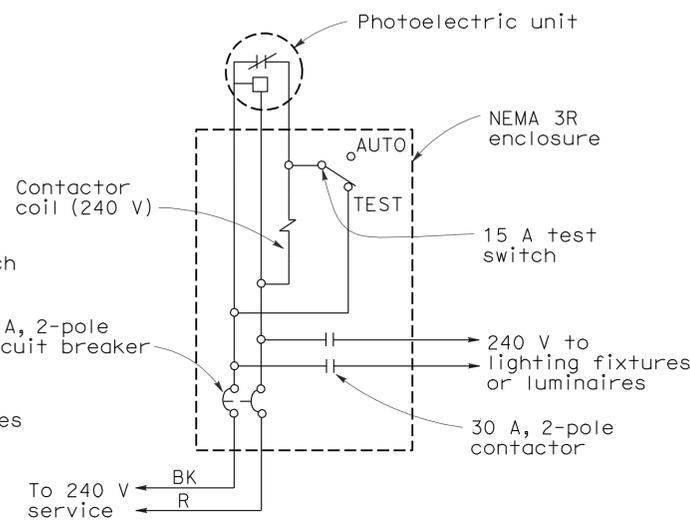
TYPE LC1 CONTROL

For 120 V unswitched circuit with no more than 800 W load.



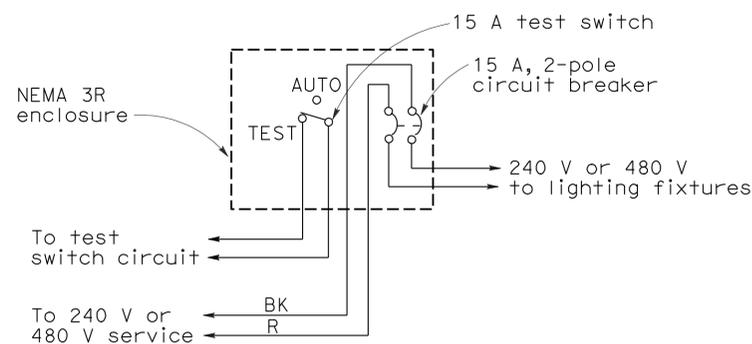
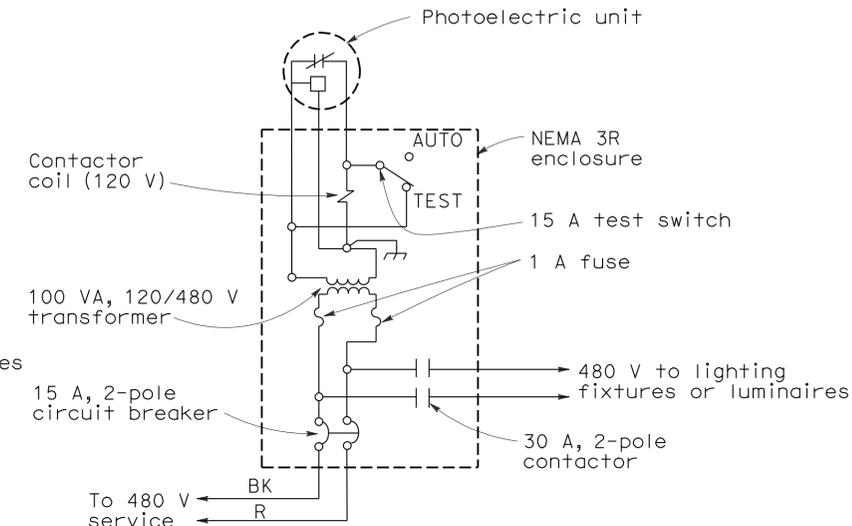
TYPE LC2 CONTROL

For 120 V unswitched circuit



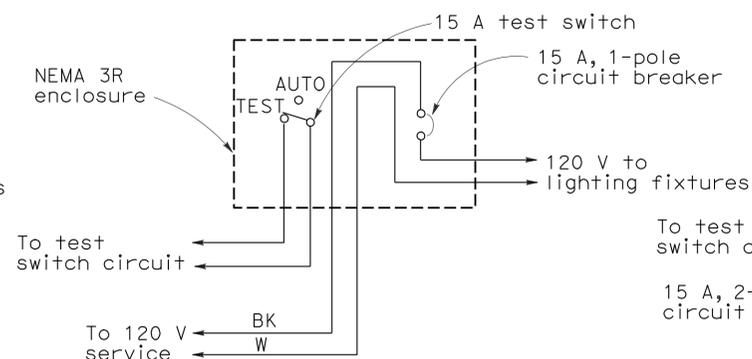
TYPE LC3 CONTROL

For 240 V and 480 V unswitched circuit



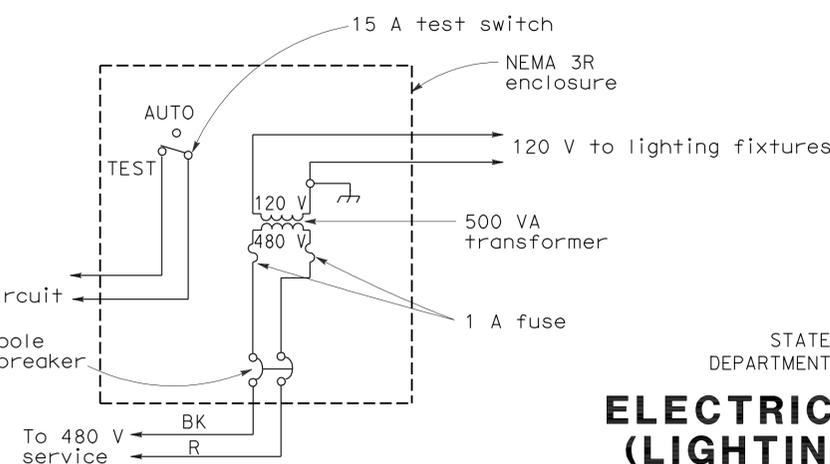
TYPE SC1 CONTROL

For 240 V or 480 V switched circuit, see Note 4 for Type SC1A



TYPE SC2 CONTROL

For 120 V switched circuit, see Note 4 for Type SC2A



TYPE SC3 CONTROL

For 480 V switched sign circuit, see Note 4 for Type SC3A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LIGHTING AND SIGN
ILLUMINATION CONTROL)**

NO SCALE
ALL DIMENSIONS ARE IN
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RSP ES-15D DATED OCTOBER 5, 2007 SUPERSEDES RSP ES-15D DATED APRIL 28, 2005 AND STANDARD PLAN ES-15D DATED JULY 1, 2004-PAGE 486 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-15D

2004 REVISED STD PLAN RSP ES-15D

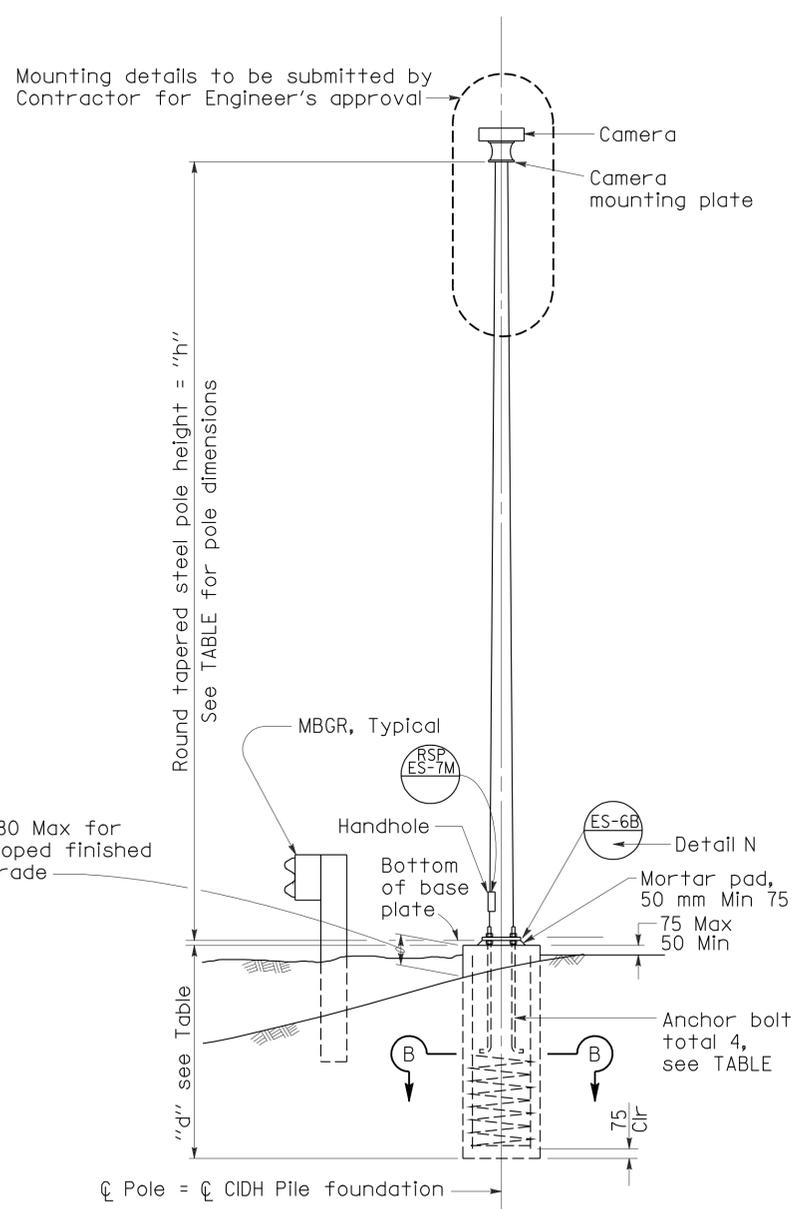


| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|------------------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 344 | 364 |

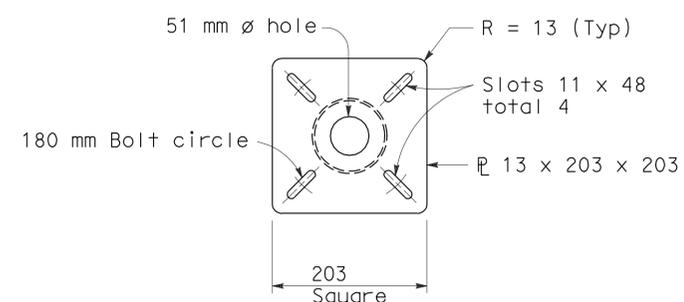
| | |
|---|--|
| REGISTERED CIVIL ENGINEER | |
| January 24, 2005 | |
| PLANS APPROVAL DATE | |
| | |
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| Pole Type | Pole Data | | | | Base Plate Data | | | | "d" 610 mm ø CIDH Pile (m) | Structural Steel kg plus 3.5% Galvanizing |
|-----------|-------------------|-------------|-----|-------------------|-----------------|-------------------|-------------------|----------------|-------------------------------------|--|
| | Height "h" (m) | Min OD (mm) | | Thickness (mm) | "C" (mm) | Thickness (mm) | Anchor Bolts (mm) | | | |
| | | BASE | TOP | | | | SIZE | BC=BOLT CIRCLE | | |
| CCTV 25 | 7.62 | 187 | 98 | 4.55 | 305 | 25.4 | 25 x 920 x 102 | 267 | 1.83 | 180 |
| CCTV 30 | 9.14 | 203 | 98 | 4.55 | 305 | 25.4 | 25 x 920 x 102 | 279 | 2.13 | 215 |
| CCTV 35 | 10.67 | 219 | 98 | 4.55 | 305 | 25.4 | 25 x 920 x 102 | 305 | 2.13 | 250 |
| CCTV 40 | 12.19 | 238 | 98 | 4.55 | 330 | 25.4 | 32 x 920 x 102 | 330 | 2.13 | 295 |
| CCTV 45 | 13.72 | 254 | 98 | 4.55 | 330 | 25.4 | 32 x 920 x 102 | 343 | 2.44 | 340 |

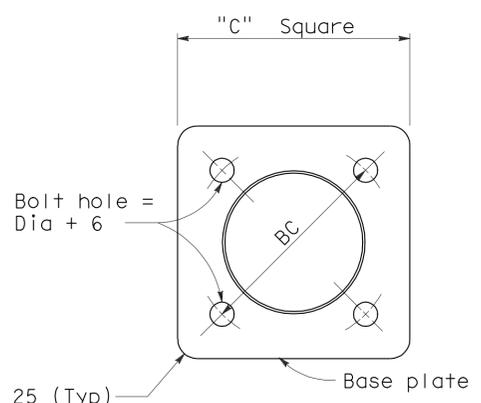
To accompany plans dated 10-18-10



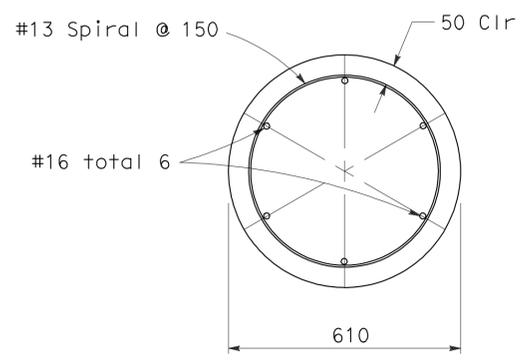
ELEVATION



CAMERA MOUNTING PLATE



BASE PLATE



SECTION B-B

GENERAL NOTES:

- SPECIFICATIONS**
Design : AASHTO Standard specifications for structural supports for highway signs, luminaires and traffic signals dated 2001.
- LOADING**
Wind Loadings : 161km/h
- UNIT STRESSES**
Structural Steel : fy = 330 MPa tapered steel tube
fy = 250 MPa unless otherwise noted
Anchor bolts = A307
Reinforced Concrete : f'c = 25 MPa
fy = 415 MPa

NOTES:

- The Contractor shall verify controlling field dimensions before ordering or fabricating any material.
- All steel shall be galvanized after fabrication.
- During pole erection, the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION
POLE DETAILS)**

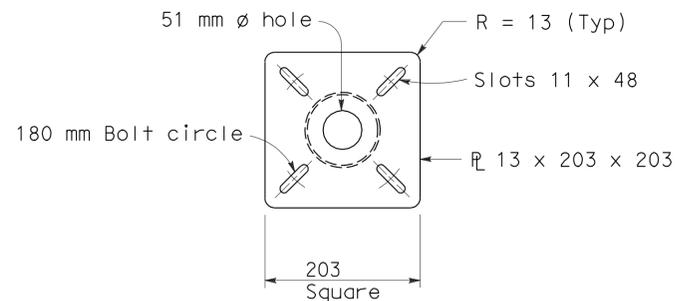
NO SCALE
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-16A DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN ES-16A
DATED JULY 1, 2004-PAGE 487 OF THE STANDARD PLANS BOOK DATED JULY 2004.

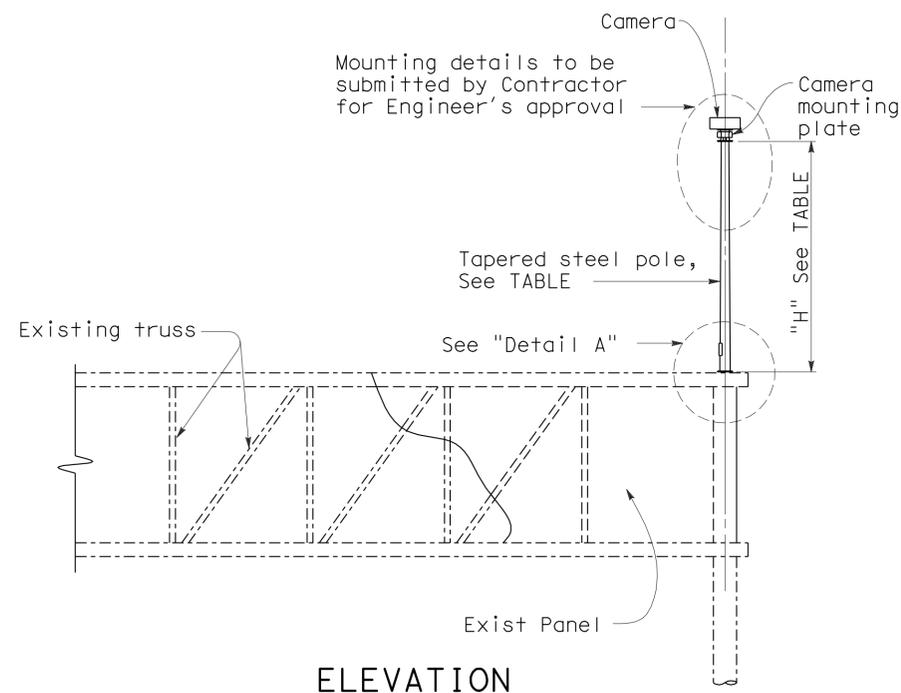
REVISED STANDARD PLAN RSP ES-16A

2004 REVISED STD PLAN RSP ES-16A

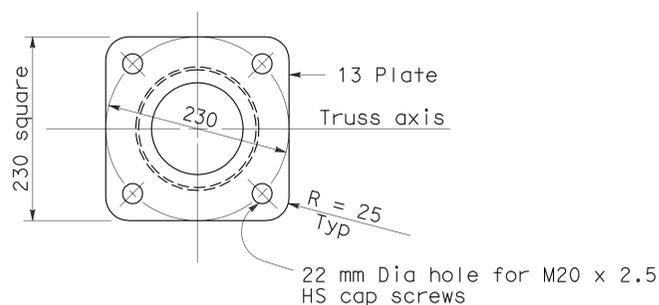
| Pole Extension Type | Pole Data | | | |
|---------------------|----------------|-------------|-----|----------------|
| | Height "H" (m) | Min OD (mm) | | Thickness (mm) |
| | | BASE | TOP | |
| CCTV 5 | 1.5 | 116 | 98 | 4.55 |
| CCTV 10 | 3.0 | 133 | 98 | 4.55 |
| CCTV 15 | 4.5 | 151 | 98 | 4.55 |



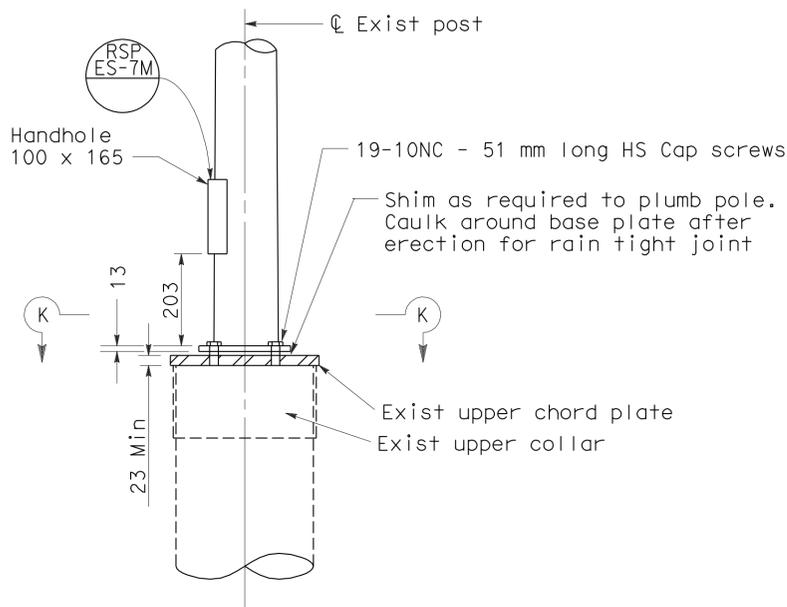
CAMERA MOUNTING PLATE



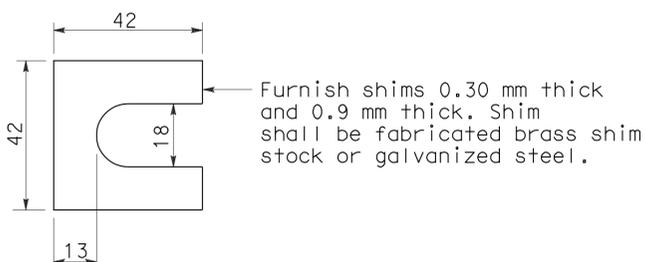
ELEVATION



SECTION K-K



DETAIL A



SHIM DETAIL



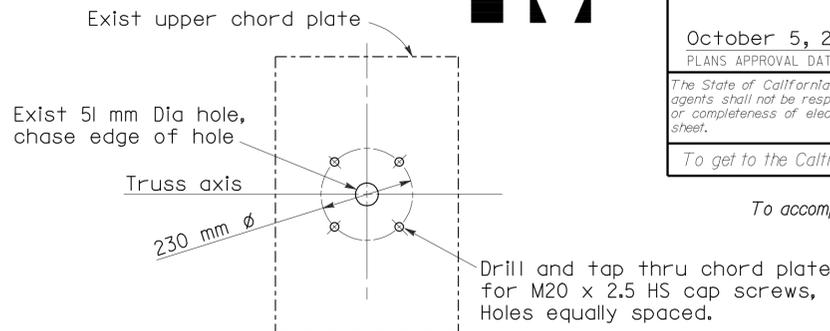
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 345 | 364 |

REGISTERED CIVIL ENGINEER
Stanley P. Johnson
 No. C57793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

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To get to the Caltrans web site, go to: <http://www.dot.ca.gov>



UPPER CHORD PLATE



GENERAL NOTES:

SPECIFICATIONS

Design : AASHTO Standard specifications for structural supports for highway signs, luminaires and traffic signals dated 2001.

LOADING

Wind Loadings : 161 km/h

UNIT STRESSES

Structural Steel : fy = 330 MPa tapered steel tube
 fy = 250 MPa unless otherwise noted

NOTES:

1. The Contractor shall verify controlling field dimensions before ordering or fabricating any material.
2. All steel shall be galvanized after fabrication.
3. Bolt hole locations may vary at the discretion of the Engineer.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
 (CLOSED CIRCUIT TELEVISION
 POLE DETAILS-OVERHEAD
 SIGN MOUNTED)**

NO SCALE

ALL DIMENSIONS ARE IN
 MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES16B DATED OCTOBER 5, 2007 SUPERSEDES RSP ES-16B DATED JANUARY 24, 2005 AND STANDARD PLAN ES-16B DATED JULY 1, 2004-PAGE 488 OF THE STANDARD PLANS BOOK DATED JULY 2004.

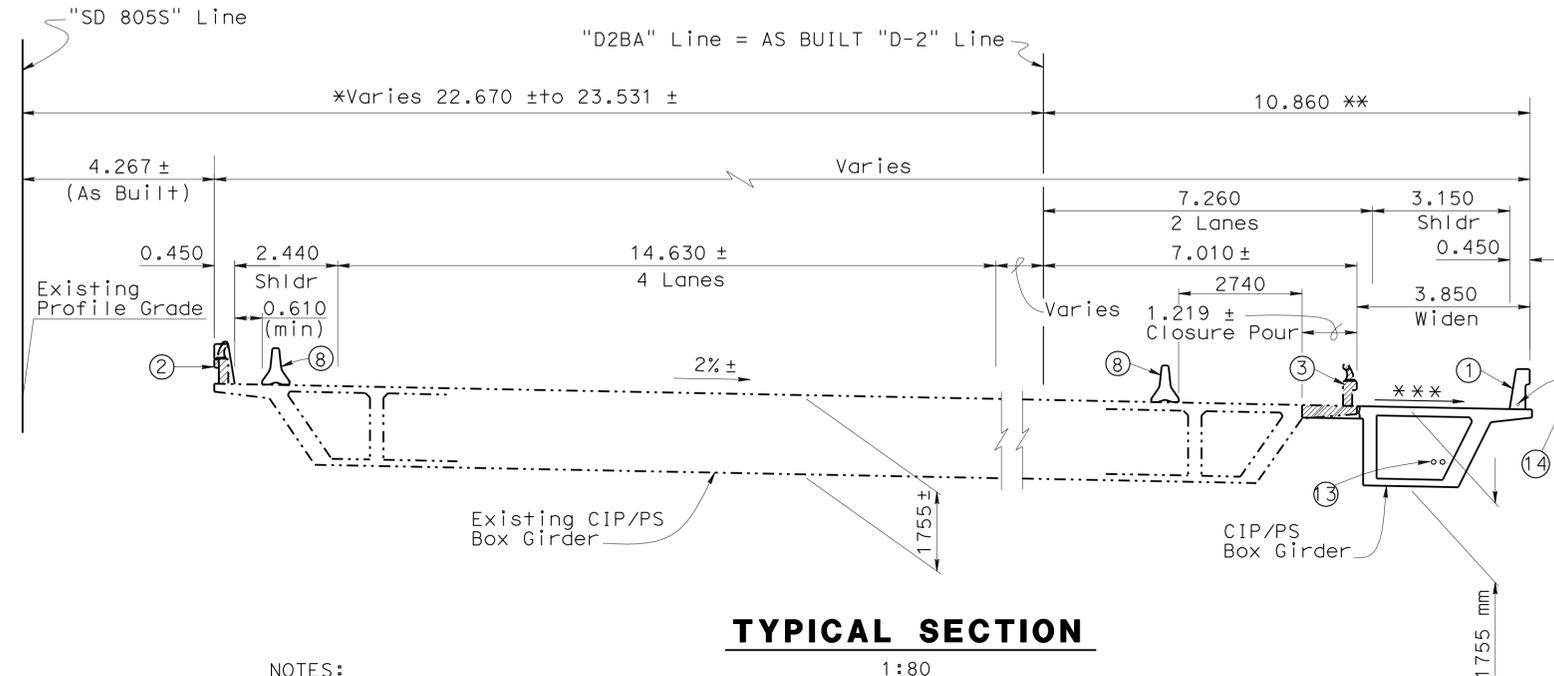
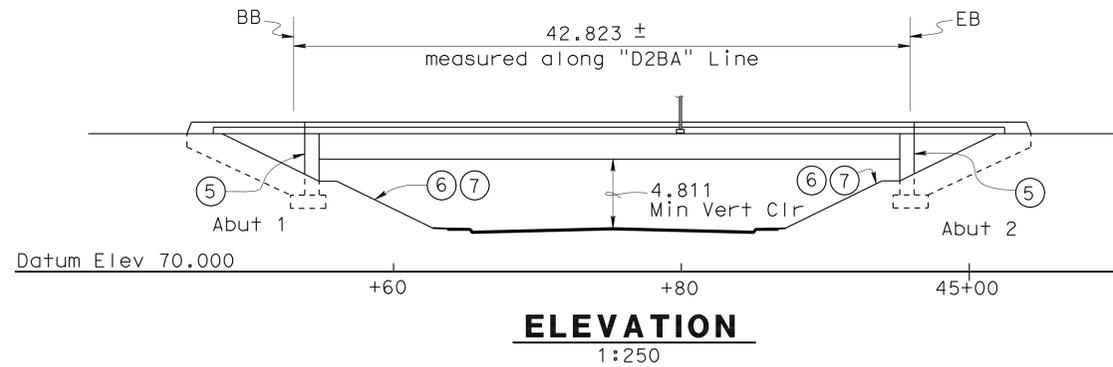
REVISED STANDARD PLAN RSP ES-16B

2004 REVISED STD PLAN RSP ES-16B



| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET No | TOTAL SHEETS |
|------|--------|---------|------------------------------|----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 346 | 364 |

Ronald J. Bromenschenkel
 REGISTERED CIVIL ENGINEER DATE 11-17-09
 10-18-10
 PLANS APPROVAL DATE
 No. C47092
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA
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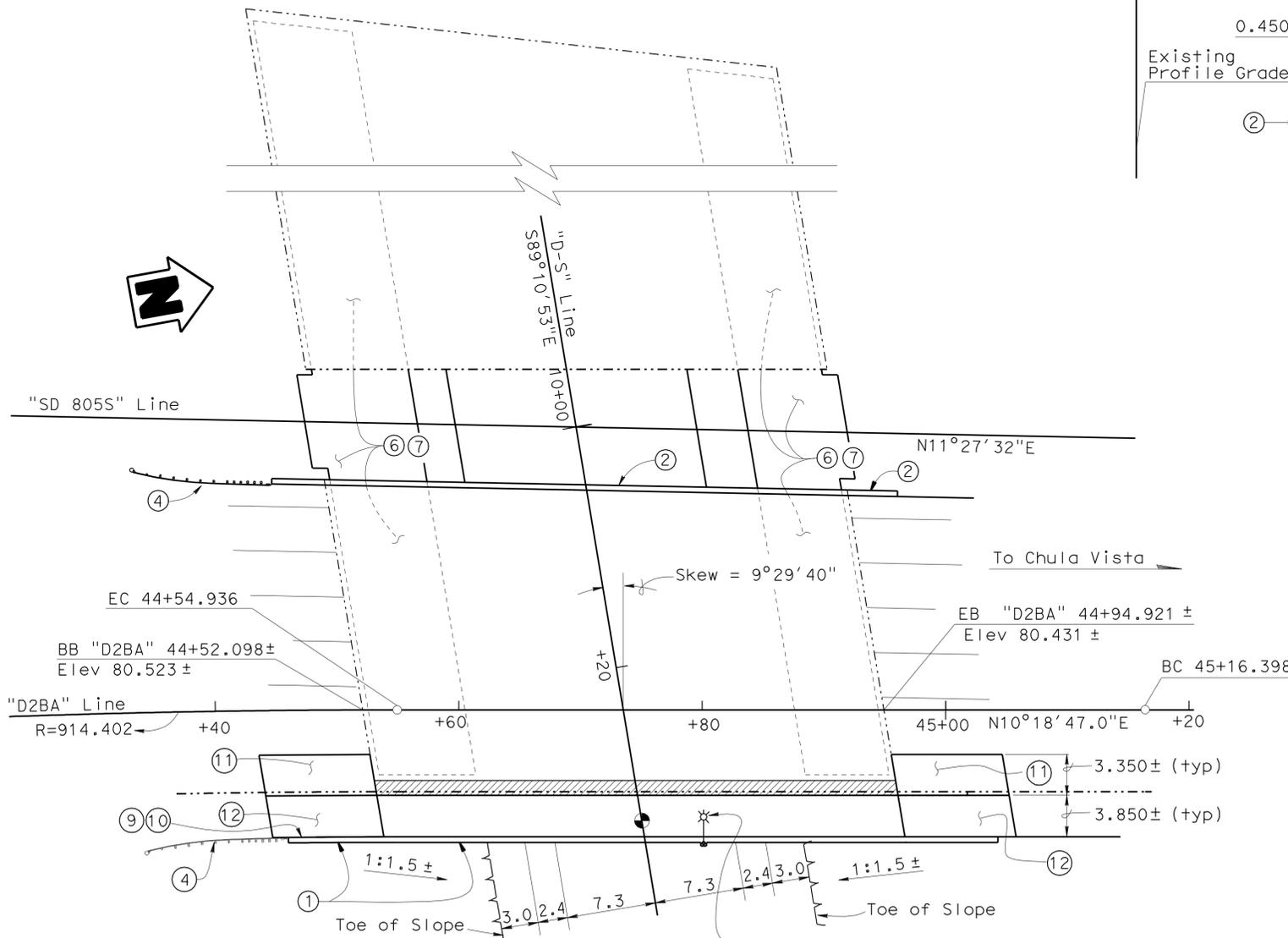


NOTES:

- ① Type 736/736A Concrete Barrier
 - ② Replace Existing Barrier with Type 736(mod)/736A(mod) Concrete Barrier
 - ③ Remove Existing Barrier and portion of Overhang
 - ④ MBGR, see 'Road Plans'
 - ⑤ Structure to be cast high and lowered into place
 - ⑥ Remove Existing Slope Paving
 - ⑦ Slope Paving
 - ⑧ Temporary Railing, Type "k", see 'Road Plans'
 - ⑨ Paint "DeI Sol UC"
 - ⑩ Paint "Br. No. 57-0854R"
 - ⑪ Structure Approach Type R(9D)
 - ⑫ Structure Approach Type N(9D)
 - ⑬ 2 - 103 Ø mm Conduits for communication (Fiberglass Conduit), see 'Road Plans'
 - ⑭ 53 Ø mm Conduit, see "Lighting and Sign Illumination"
- * Dimension measured normal to "SD805" Line
 ** Dimension measured normal to "D2BA" Line
 *** Match Existing Cross Slope
 ● Indicates Point of Minimum Vertical Clearance.

QUANTITIES

| | | |
|--|--------|-----|
| JACKING SUPERSTRUCTURE | LUMP | SUM |
| REMOVE SLOPE PAVING | LUMP | SUM |
| BRIDGE REMOVAL (PORTION) | LUMP | SUM |
| STRUCTURE EXCAVATION (BRIDGE) | 80 | m3 |
| STRUCTURE BACKFILL (BRIDGE) | 50 | m3 |
| PRESTRESSING CAST-IN-PLACE CONCRETE | LUMP | SUM |
| STRUCTURAL CONCRETE, BRIDGE FOOTING | 10 | m3 |
| STRUCTURAL CONCRETE, BRIDGE | 140 | m3 |
| STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N) | 20 | m3 |
| STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R) | 18 | m3 |
| JOINT SEAL (MR 15 MM) | 15 | m |
| BAR REINFORCING STEEL (BRIDGE) | 21 000 | kg |
| 200 MM CORRUGATED STEEL PIPE DOWNDRAIN (1.63 MM THICK) | 40 | m |
| SLOPE PAVING (STAMPED CONCRETE) | 630 | m2 |
| MINOR CONCRETE (GUTTER) | 130 | m |
| BRIDGE DECK DRAINAGE SYSTEM | 300 | kg |
| CONCRETE BARRIER (TYPE 736) | 54 | m |
| CONCRETE BARRIER (TYPE 736 MODIFIED) | 54 | m |



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

For General Notes, see "INDEX TO PLANS" sheet

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

| | | | | | | | | |
|---------------------|------------|--------------|---------------------|--------------------|--|--------------------------|----------|--|
| DESIGN ENGINEER | DESIGN | BY L. Bahia | CHECKED S. Galgiani | LOAD FACTOR DESIGN | LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD | BRIDGE NO. | 57-0854R | DEL SOL BLVD UNDERCROSSING (WIDEN) GENERAL PLAN |
| | DETAILS | BY T. Nguyen | CHECKED S. Galgiani | LAYOUT | BY S. Galgiani | KILOMETER POST | 3.512 | |
| | QUANTITIES | BY L. Bahia | CHECKED S. Galgiani | SPECIFICATIONS | BY M. Jagruti | PLANS AND SPECS COMPARED | | |

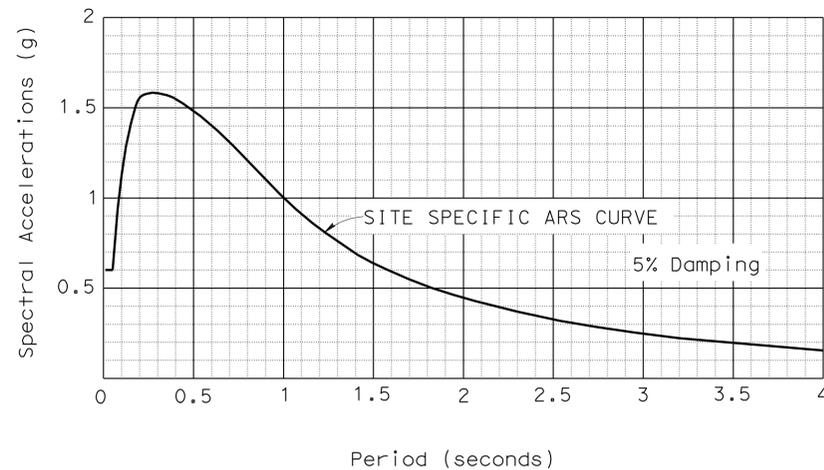
| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET No | TOTAL SHEETS |
|------|--------|---------|------------------------------|----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 347 | 364 |

Ronald J. Bromenschenkel
 REGISTERED CIVIL ENGINEER DATE 11-17-09

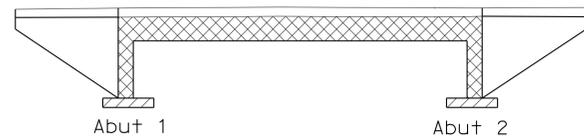
10-18-10
 PLANS APPROVAL DATE

No. C47092
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

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ACCELERATION RESPONSE SPECTRA



- Structural Concrete, Bridge (f'c = 25 MPa @ 28 days)
- Structural Concrete, Bridge Footing (f'c = 30 MPa @ 28 days)
- Structural Concrete, Bridge (f'c = 35 MPa @ 28 days)

CONCRETE STRENGTH AND TYPE LIMITS
 No Scale

FALSEWORK RELEASE

Alternative 1:

Falsework shall be released as soon as permitted by the specifications. Closure Pour shall not be placed sooner than 60 days after the Falsework had been released.

Alternative 2:

Falsework shall not be released less than 28 days after the last Concrete has been placed. Closure Pour shall not be placed sooner than 14 days after the Falsework has been released.

When Falsework Release Alternative 2 is used, Camber values are 0.75 times those shown.

| SPREAD FOOTING DATA | | | |
|---------------------|-------------------------|------------------------|----------------------|
| Location | Allowable Bearing (KPa) | Ultimate Bearing (KPa) | Design Loading (KPa) |
| Abut 1 | 288 | NA | 288 |
| Abut 2 | 288 | NA | 288 |

**GENERAL NOTES
 LOAD FACTOR DESIGN**

- DESIGN: BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO with Interims and Revisions by CALTRANS)
- SEISMIC DESIGN: CALTRANS SEISMIC DESIGN CRITERIA (SDC), VERSION 1.2 DECEMBER 2001
- DEAD LOAD: Includes 1675 Pa for Future Wearing Surface
- LIVE LOADING: HS20-44 and Alternative and Permit Design Load
- SEISMIC LOADING: SITE SPECIFIC ARS (Peak Rock Acceleration=0.6g)
- REINFORCED CONCRETE: f_y = 414 MPa, f'c = 25 MPa, n = 8, Transverse Deck Slabs (Working Stress Design), f_s = 138 MPa, f'c = 8 MPa, n = 10
- PRESTRESSED CONCRETE: See "Prestressing Notes" on "GIRDER LAYOUT DETAILS" sheets.
- STRUCTURAL STEEL: f_y = 248 MPa

INDEX TO PLANS

| SHEET NO. | TITLE |
|-----------|-------------------------------------|
| 1 | GENERAL PLAN |
| 2 | INDEX TO PLANS |
| 3 | FOUNDATION PLAN |
| 4 | ABUTMENT LAYOUT |
| 5 | ABUTMENT DETAILS NO. 1 |
| 6 | ABUTMENT DETAILS NO. 2 |
| 7 | ABUTMENT DETAILS NO. 3 |
| 8 | ABUTMENT DETAILS NO. 4 |
| 9 | TYPICAL SECTION |
| 10 | GIRDER LAYOUT DETAILS |
| 11 | DECK DRAIN TYPE D-2 MODIFIED |
| 12 | SLOPE PAVING - FULL SLOPE |
| 13 | STRUCTURE APPROACH N(9D) |
| 14 | STRUCTURE APPROACH TYPE R(9D) |
| 15 | STRUCTURE APPROACH DRAINAGE DETAILS |
| 16 | LOG OF TEST BORINGS 1 of 4 |
| 17 | LOG OF TEST BORINGS 2 of 4 |
| 18 | LOG OF TEST BORINGS 3 of 4 |
| 19 | LOG OF TEST BORINGS 4 of 4 |

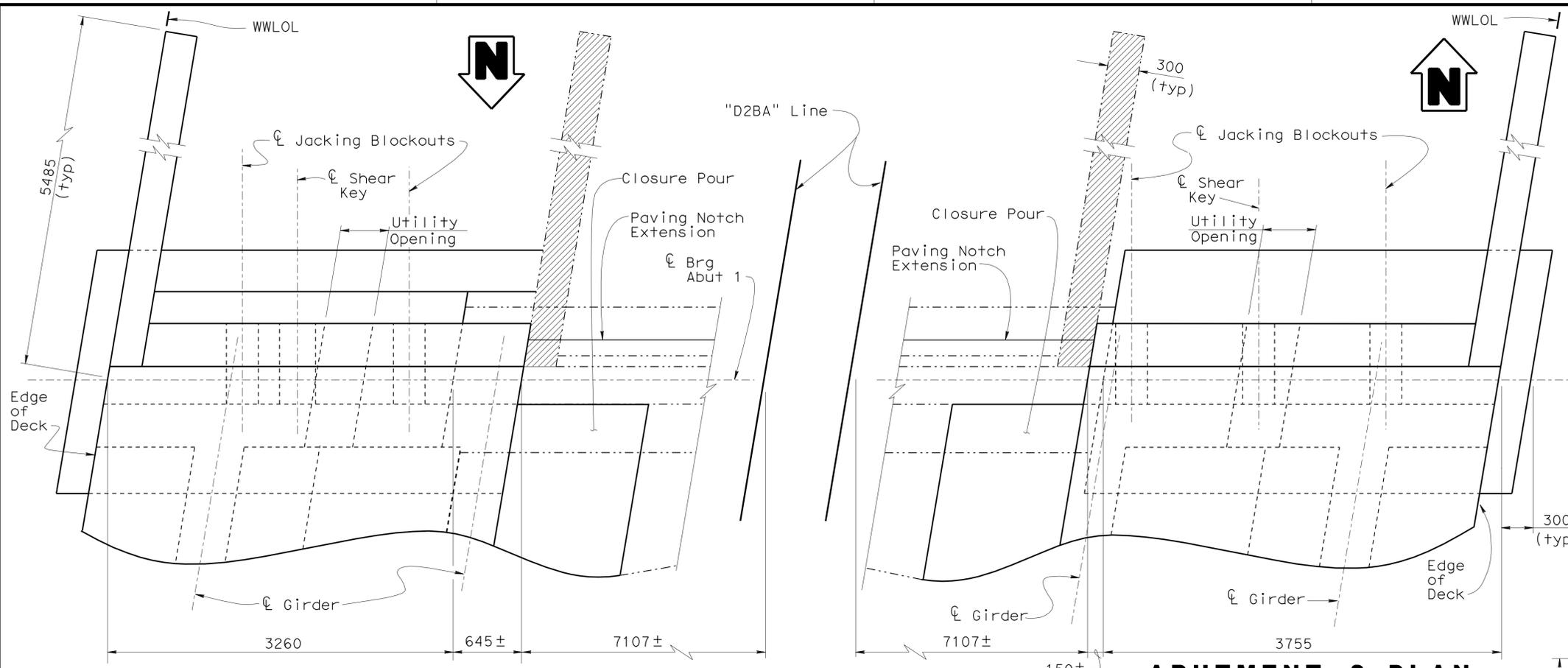
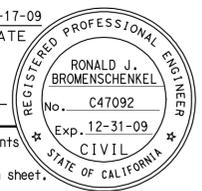
STANDARD PLANS DATED JULY 2004

| | |
|-----------|--|
| A62C | LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE |
| B0-1 | BRIDGE DETAILS |
| B0-3 | BRIDGE DETAILS |
| B0-5 | BRIDGE DETAILS |
| B0-13 | BRIDGE DETAILS |
| B3-9 | RETAINING WALL DETAILS NO. 2 |
| RSP B6-21 | JOINT SEALS |
| B7-1 | BOX GIRDER DETAILS |
| B7-10 | UTILITY OPENING BOX GIRDER (MAXIMUM MOVEMENT RATING = 50 mm) |
| RSP B8-5 | CAST-IN-PLACE PRESTRESSED GIRDERS |
| B11-56 | CONCRETE BARRIER, TYPE 736 |
| B14-5 | WATER SUPPLY LINE |



| | | | | | | |
|--|--------------------|---------------------|--|---|-----------------------|--|
| | DESIGN BY L. Bahia | CHECKED S. Galgiani | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 14 | BRIDGE NO. 57-0854R | DEL SOL BLVD UNDERCROSSING (WIDEN) INDEX TO PLANS |
| | DETAILS BY K. Kubo | CHECKED S. Galgiani | | | KILOMETER POST 3.512 | |
| ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN | | | ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100 | | CU 11226 EA 091831 | DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 11-19-09, 02-09-05, 02-15-05, 2-16-05, 03-09-05, 09-18-09, 09-14-09, 10-28-09, 11-16-09 |
| FILE => 57-1141-021+p.dgn | | | | | | SHEET 2 OF 19 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04) |

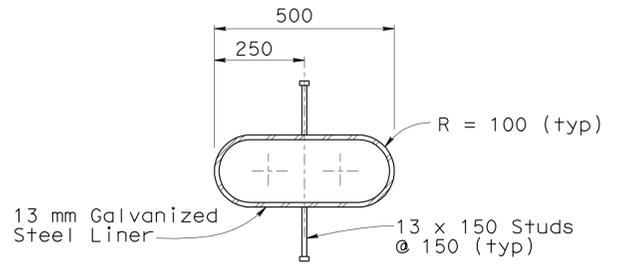
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| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET No | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 349 | 364 |
| Ronald J. Bromenschenkel | | | 11-17-09 | REGISTERED CIVIL ENGINEER DATE | |
| 10-18-10 | | | PLANS APPROVAL DATE | | |
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ABUTMENT 1 PLAN
1:25

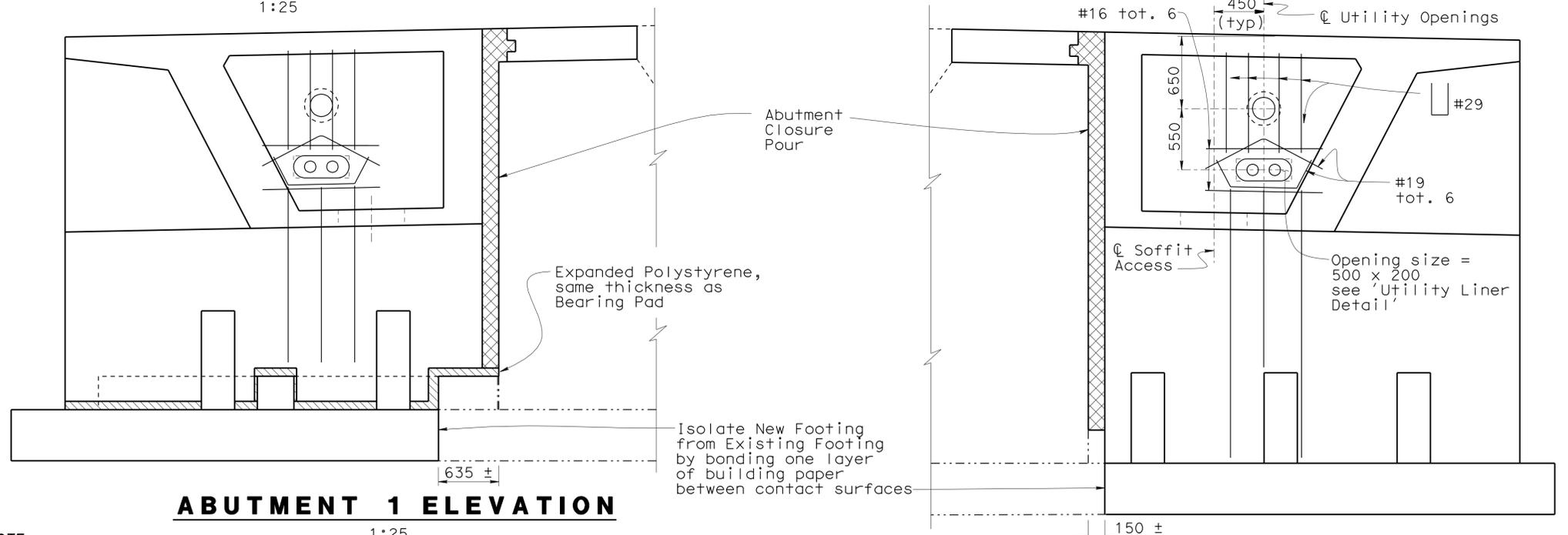
ABUTMENT 2 PLAN
1:25

Indicates Existing Wingwall Concrete Removal



NOTE: Steel liner not required if stressing is performed after grouting utilities

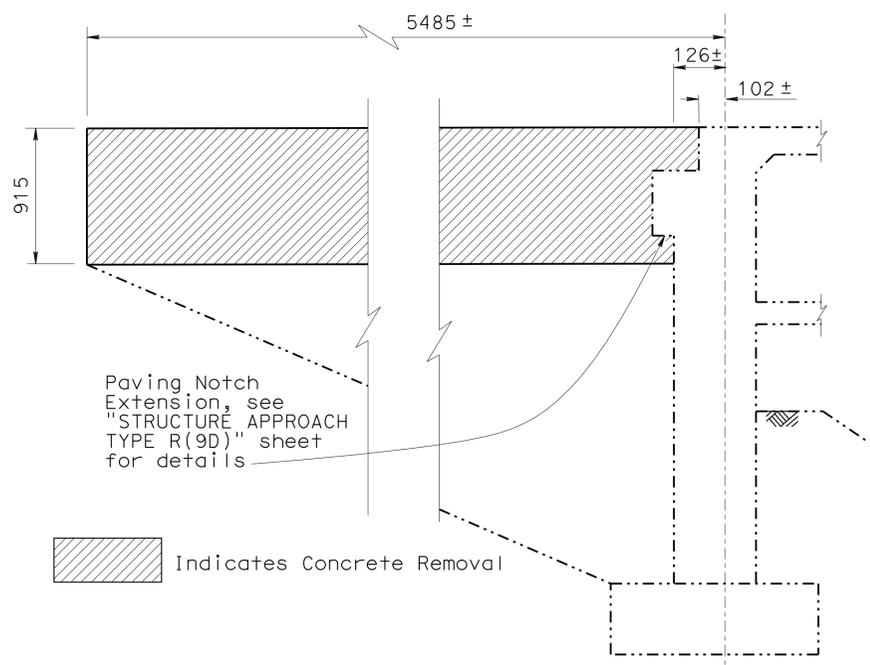
UTILITY LINER DETAIL
1:10



ABUTMENT 1 ELEVATION
1:25

ABUTMENT 2 ELEVATION
1:25

NOTE: Utility Opening Reinforcement is typical at both Abutments.



WINGWALL CONCRETE REMOVAL
No Scale

NOTE: For Jacking Details, see "ABUTMENT DETAILS NO. 3" sheet.

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



| | | | | |
|------------|----|------------|---------|-------------|
| DESIGN | BY | L. Bahia | CHECKED | S. Galgiani |
| DETAILS | BY | M. Johnson | CHECKED | S. Galgiani |
| QUANTITIES | BY | L. Bahia | CHECKED | S. Galgiani |

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 14

BRIDGE NO.
57-0854R
KILOMETER POST
3.512

DEL SOL BLVD UNDERCROSSING (WIDEN)
ABUTMENT LAYOUT

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

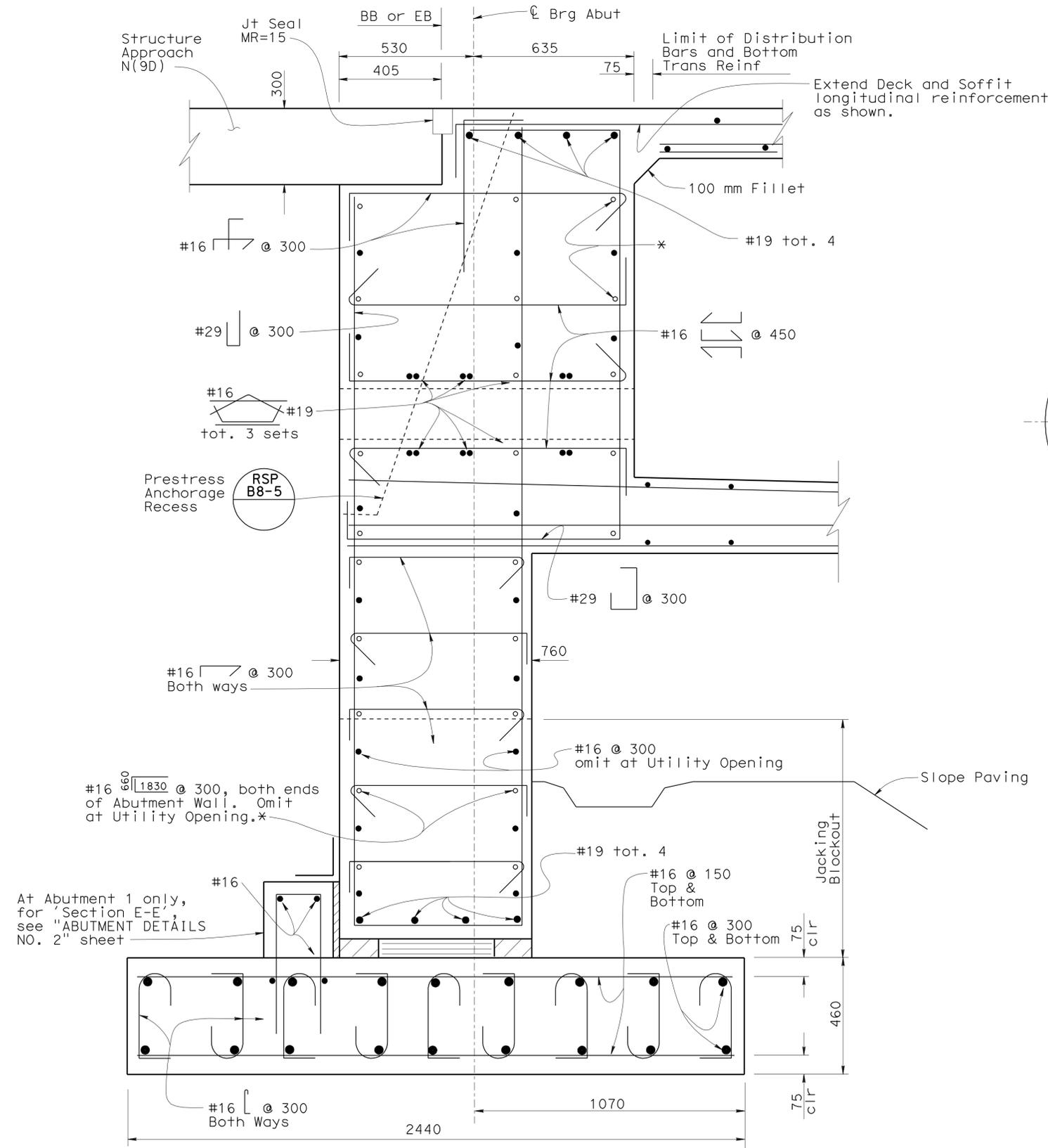


CU 11226
EA 091831

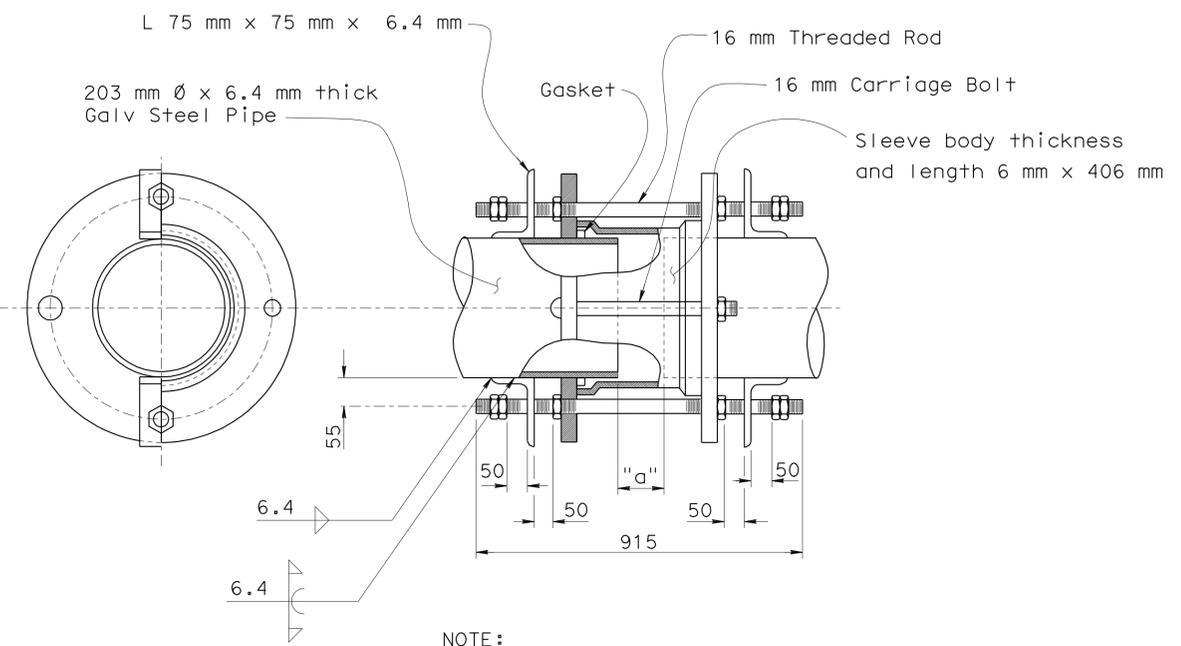
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| DISREGARD PRINTS BEARING EARLIER REVISION DATES | REVISION DATES | SHEET | OF |
| | 09-16-09 09-14-09 10-27-09 10-28-09 10-29-09 11-16-09 09-26-05 09-26-05 09-27-05 | 4 | 19 |

| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | POST PROJECT | SHEET No | TOTAL SHEETS |
|------|--------|---------|------------------------------|--------------|----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 350 | 364 |

Ronald J. Bromenschenkel
 REGISTERED CIVIL ENGINEER DATE 11-17-09
 10-18-10
 PLANS APPROVAL DATE
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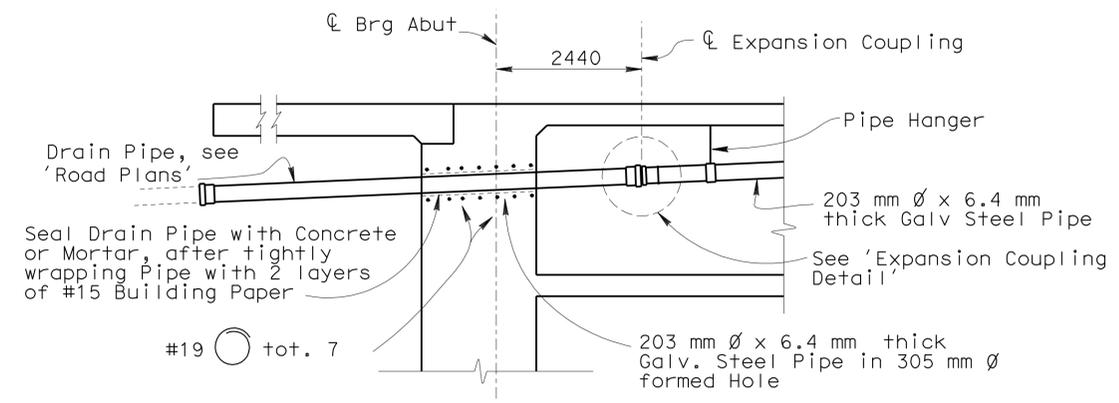


ABUTMENT 1 SECTION
 1:10
 RSP B6-21



EXPANSION COUPLING DETAIL
 No Scale

NOTE: For Deck Drain Details/Layout see "GIRDER LAYOUT DETAILS" sheet.



DECK DRAIN PIPE DETAIL
 No Scale

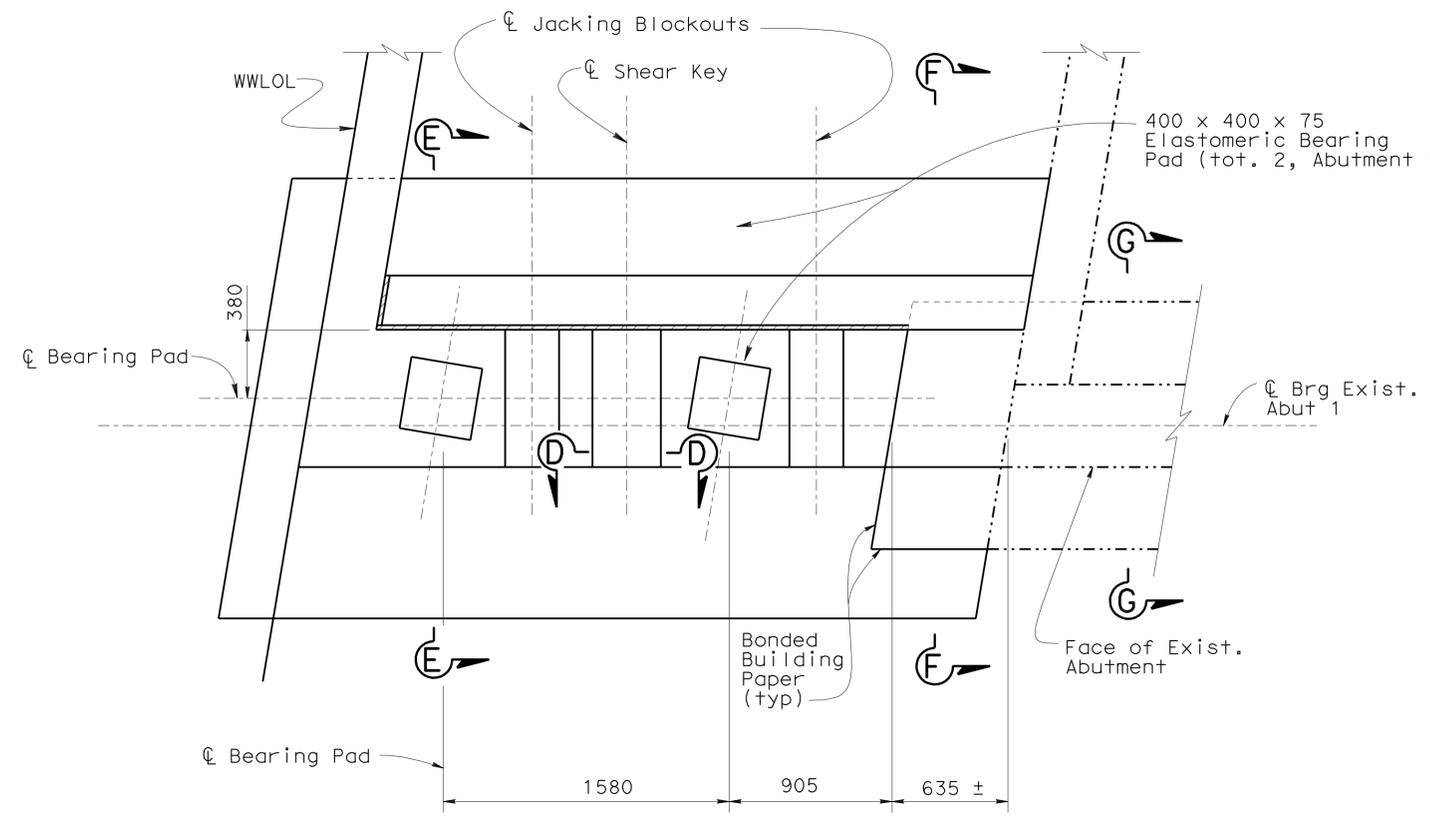
NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

| | | | | | | | | |
|--|------------|---------------|---------------------|--|---|-----------------------|----------|--|
| | DESIGN | BY L. Bahia | CHECKED S. Galgiani | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 14 | BRIDGE NO. | 57-0854R | DEL SOL BLVD UNDERCROSSING (WIDEN) ABUTMENT DETAILS NO. 1 |
| | DETAILS | BY M. Johnson | CHECKED S. Galgiani | | | KILOMETER POST | 3.512 | |
| | QUANTITIES | BY L. Bahia | CHECKED S. Galgiani | | | | | |
| ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN | | | | ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS | | CU 11226 EA 091831 | | DISREGARD PRINTS BEARING EARLIER REVISION DATES 11-19-09 05-07-05 05-01-05 09-22-05 09-28-05 09-14-09 08-11-09 10-26-09 |

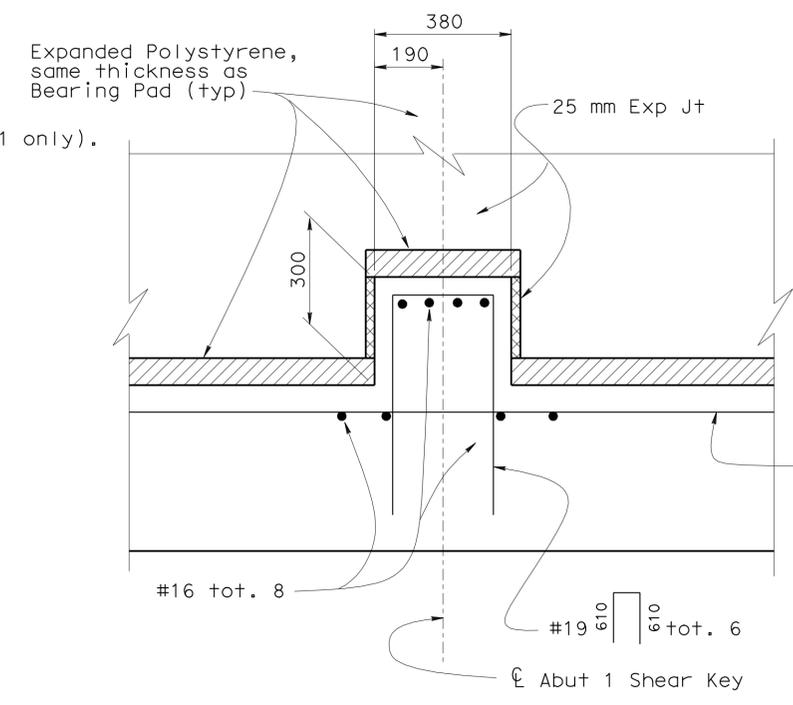
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| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET No | TOTAL SHEETS |
|------|--------|---------|------------------------------|----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 351 | 364 |

Ronald J. Bromenschenkel
 REGISTERED CIVIL ENGINEER DATE 11-17-09
 10-18-10
 PLANS APPROVAL DATE
 No. C47092
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

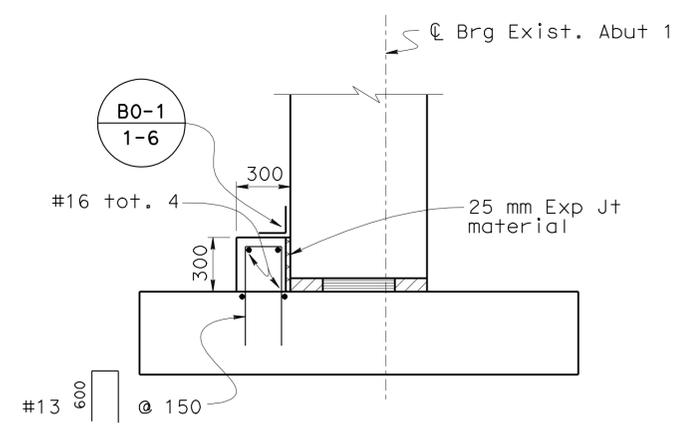


BEARING PAD LOCATIONS AT ABUTMENT 1 FOOTING
 1:20



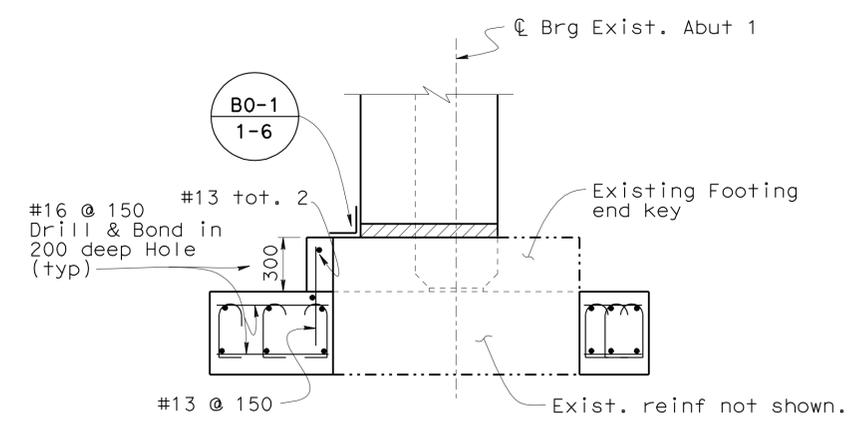
SECTION D-D
 1:10

Top Mat Footing Reinforcement.
 All Footing Reinforcement not shown.

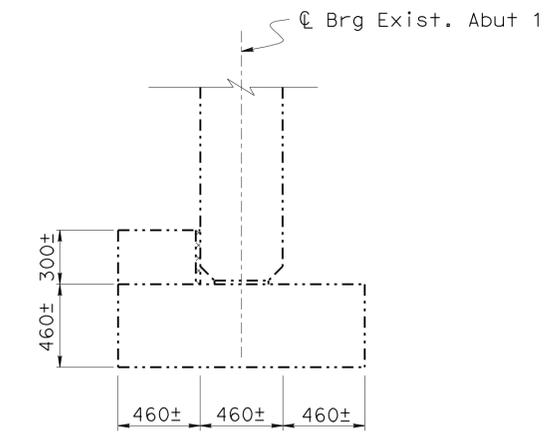


SECTION E-E
 1:20

NOTE: All reinforcement not shown.



SECTION F-F
 1:20



SECTION G-G
 (BASED ON AS-BUILTS)
 1:20

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



| | | |
|------------|-------------|---------------------|
| DESIGN | BY L. Bahia | CHECKED S. Galgiani |
| DETAILS | BY K. Kubo | CHECKED S. Galgiani |
| QUANTITIES | BY L. Bahia | CHECKED S. Galgiani |

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 14

| | |
|----------------|----------|
| BRIDGE NO. | 57-0854R |
| KILOMETER POST | 3.512 |

DEL SOL BLVD UNDERCROSSING (WIDEN)
ABUTMENT DETAILS NO. 2

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



CU 11226
 EA 091831

| REVISION DATES | SHEET | OF |
|--|-------|----|
| 04-18-05 04-20-05 09-20-05 09-18-09 09-14-09 10-27-09 10-28-09 10-28-09 11-17-09 | 6 | 19 |

USERNAME => H11engr DATE PLOTTED => 20-OCT-2010 TIME PLOTTED => 11:15

SUGGESTED CONSTRUCTION SEQUENCE

1. Cast Footings and allow concrete strength to reach 80% f'c (min) prior to jacking.
2. Cast Abutments and Superstructure in elevated position.
3. Stress and grout prestress tendons.
4. Complete lowering operation.
5. Remove Jacks and Shotcrete Slots and Abutment 2 Key.
6. Place Closure Pour, Wingwalls, and Abutment 1 Rear Footing Keyway.
7. Place Barrier

JACKING NOTES

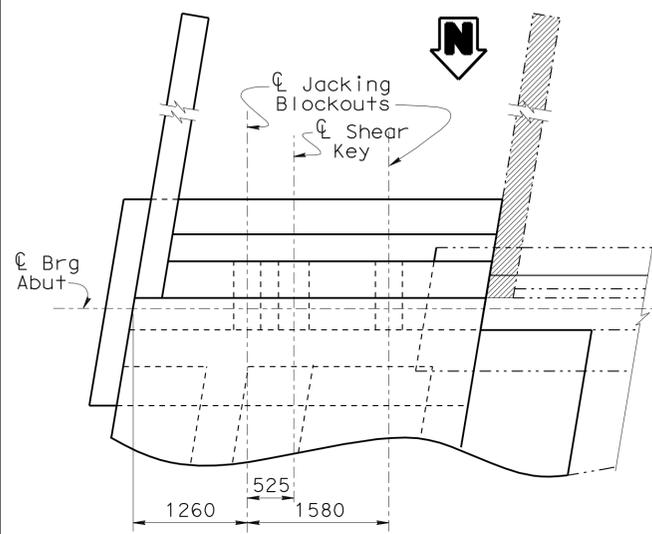
1. Jack Reactions shown are theoretical and based on structure dead load only. Barrier, Wingwalls, Live Loads, Falsework and Construction Loads are not included.
2. Jacks must be capable of sustaining twice the anticipated reactions.
3. Jacks shall be used only for elevation adjustments. Separate load Bearing elements shall be used for carrying long term construction loads.
4. Maximum Concrete Bearing Pressure under any Jack must be less than 14 MPa.
5. Uniform lowering of the structure is required. Maximum allowable differential movement between Abutments shall be 25 mm.
6. Temporary supports must ensure the lateral stability of the Jacking system.
7. Four point independent jacking required.

| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET No | TOTAL SHEETS |
|------|--------|---------|------------------------------|----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 352 | 364 |

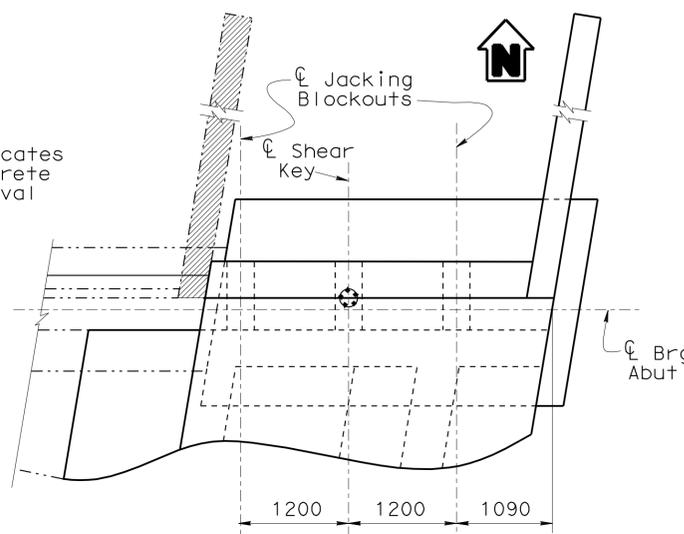
Ronald J. Bromenschenkel
 REGISTERED CIVIL ENGINEER DATE 11-17-09
 10-18-10
 PLANS APPROVAL DATE
 No. C47092
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA
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NOTE:

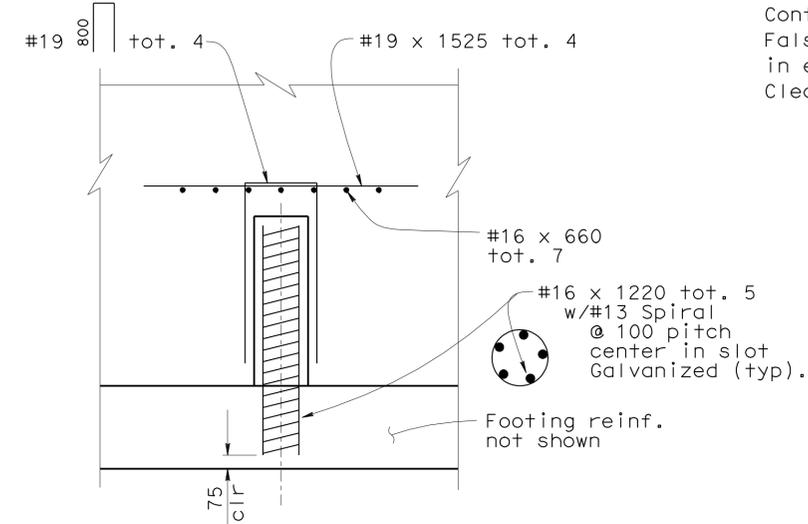
Contractor may elect to utilize a specialized Falsework system in lieu of casting structure in elevated position so long as minimum Vertical Clearance of 4.57 m is maintained at all times.



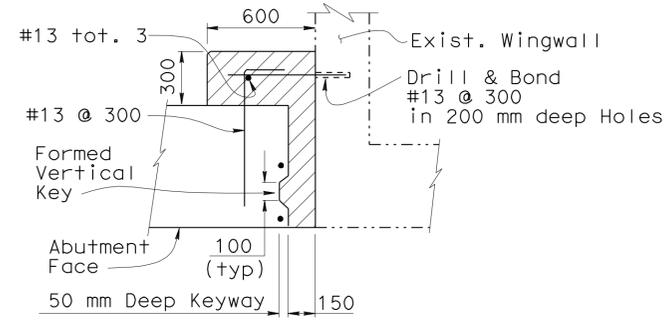
ABUTMENT 1 PLAN
1:40



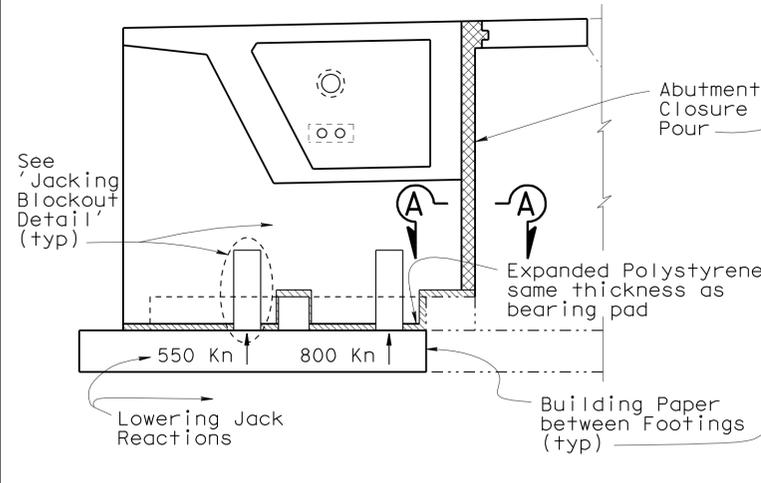
ABUTMENT 2 PLAN
1:40



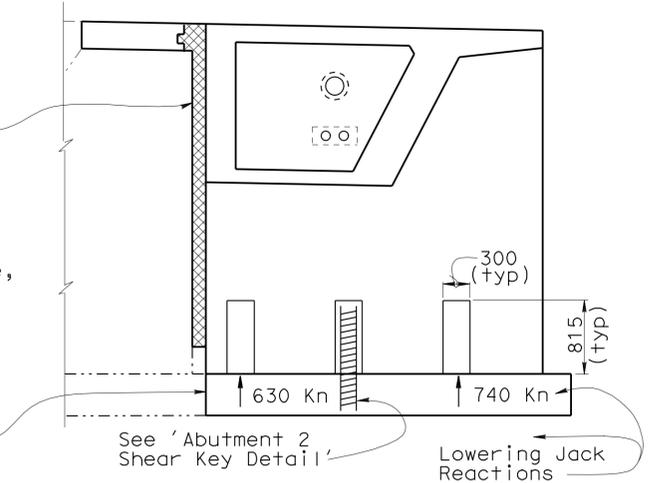
ABUTMENT 2 SHEAR KEY DETAIL
1:20



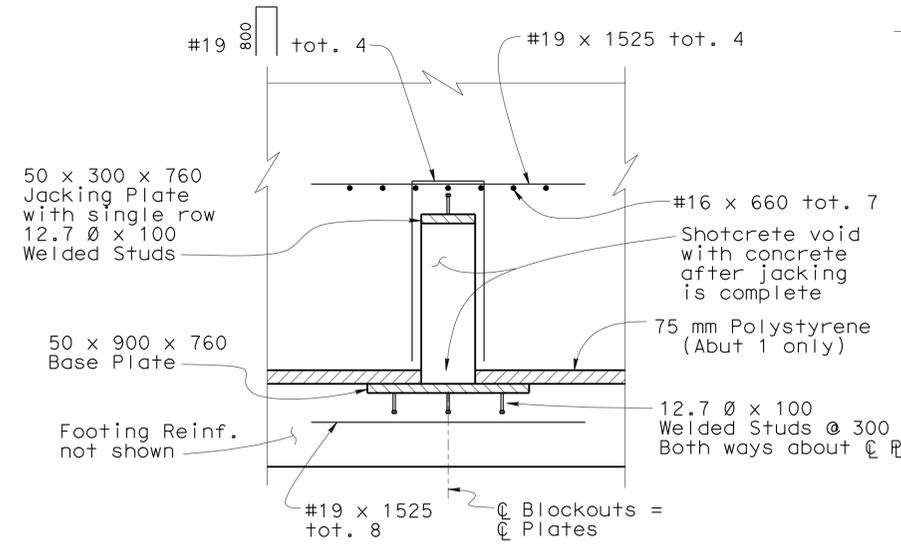
SECTION A-A
1:20



ABUTMENT 1 ELEVATION
1:40



ABUTMENT 2 ELEVATION
1:40



JACKING BLOCKOUT DETAIL
1:20

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

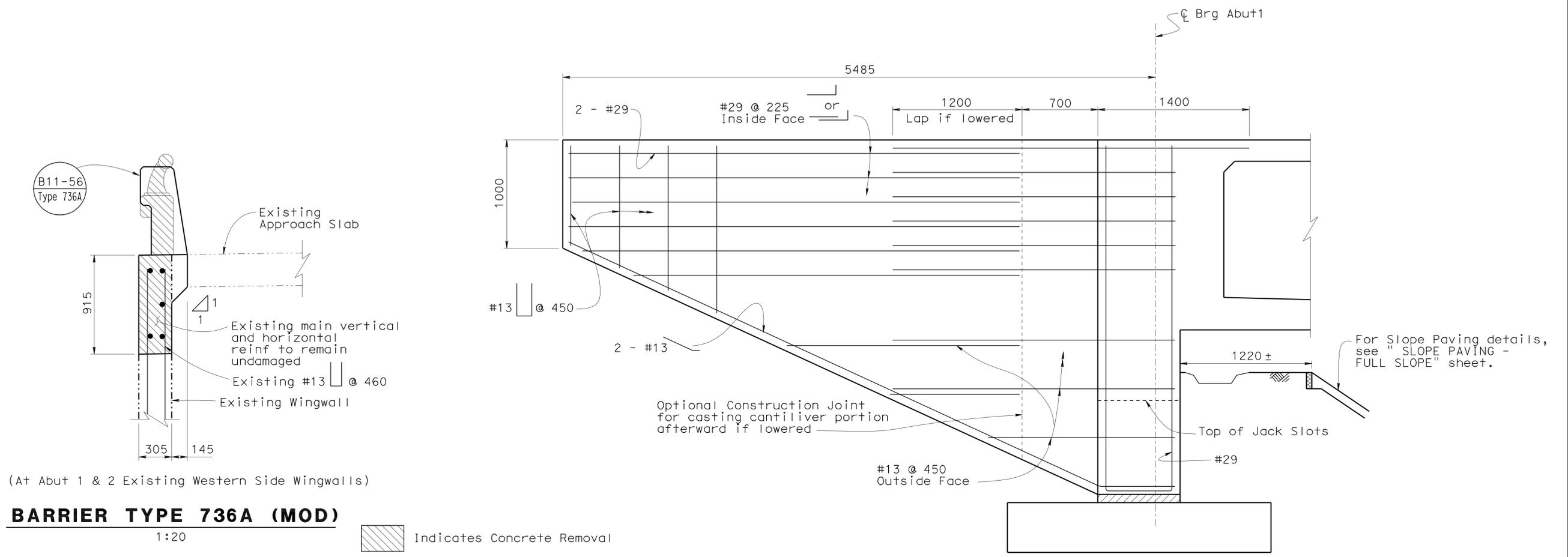
| | | | | | | |
|--|------------------------|---------------------|---|--|----------------------|--|
| | DESIGN BY L. Bahia | CHECKED S. Galgiani | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 14 | BRIDGE NO. 57-0854R | DEL SOL BLVD UNDERCROSSING (WIDEN) ABUTMENT DETAILS NO. 3 |
| | DETAILS BY M. Johnson | CHECKED S. Galgiani | | | KILOMETER POST 3.512 | |
| | QUANTITIES BY L. Bahia | CHECKED S. Galgiani | CU 11226 EA 091831 | FILE => 57-1141-07abutde+03.dgn | REVISION DATES | SHEET 7 OF 19 |

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN
 ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET No | TOTAL SHEETS |
|------|--------|---------|------------------------------|----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 353 | 364 |

Ronald J. Bromenschenkel
 REGISTERED CIVIL ENGINEER DATE 11-17-09
 10-18-10
 PLANS APPROVAL DATE
 No. C47092
 Exp. 12-31-09
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(At Abut 1 & 2 Existing Western Side Wingwalls)

BARRIER TYPE 736A (MOD)

1:20

Indicates Concrete Removal

NOTE: For details not shown, see 'Wingwall Concrete Removal' on 'ABUTMENT LAYOUT' sheet

NOTE: Abutment 1 shown. Abutment 2 opposite hand.

WINGWALL DETAIL BO-1

1:20

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



| | | |
|------------|-------------|---------------------|
| DESIGN | BY L. Bahia | CHECKED S. Galgiani |
| DETAILS | BY K. Kubo | CHECKED S. Galgiani |
| QUANTITIES | BY L. Bahia | CHECKED S. Galgiani |

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 14

| | |
|----------------|----------|
| BRIDGE NO. | 57-0854R |
| KILOMETER POST | 3.512 |

DEL SOL BLVD UNDERCROSSING (WIDEN)
 ABUTMENT DETAILS NO. 4

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



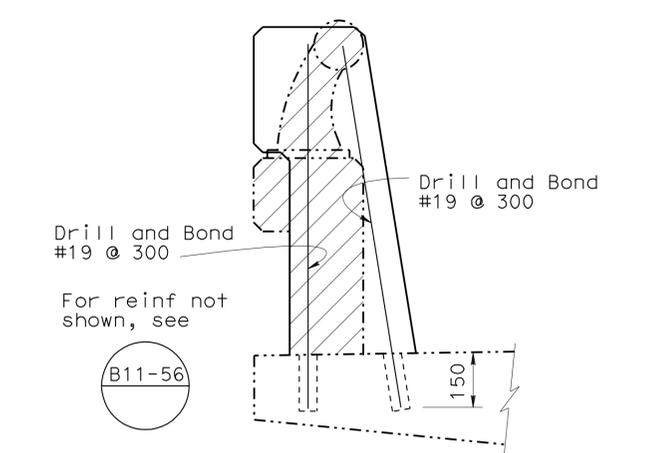
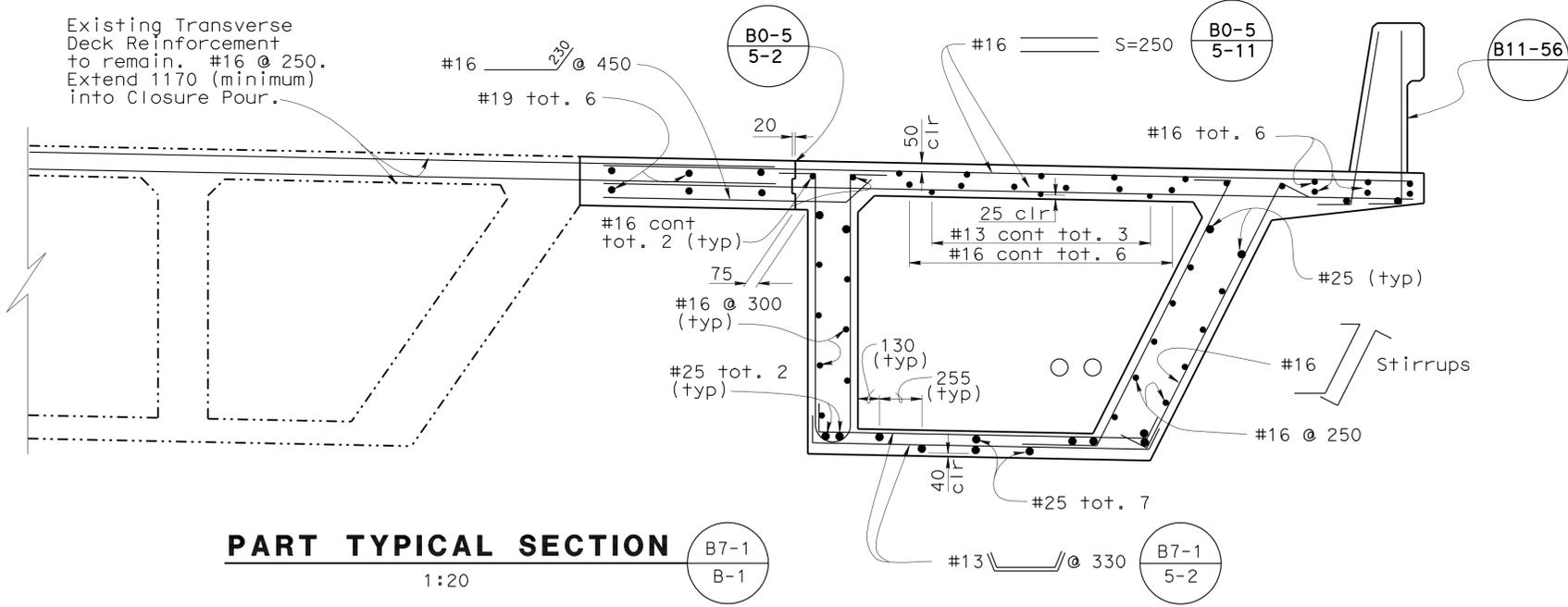
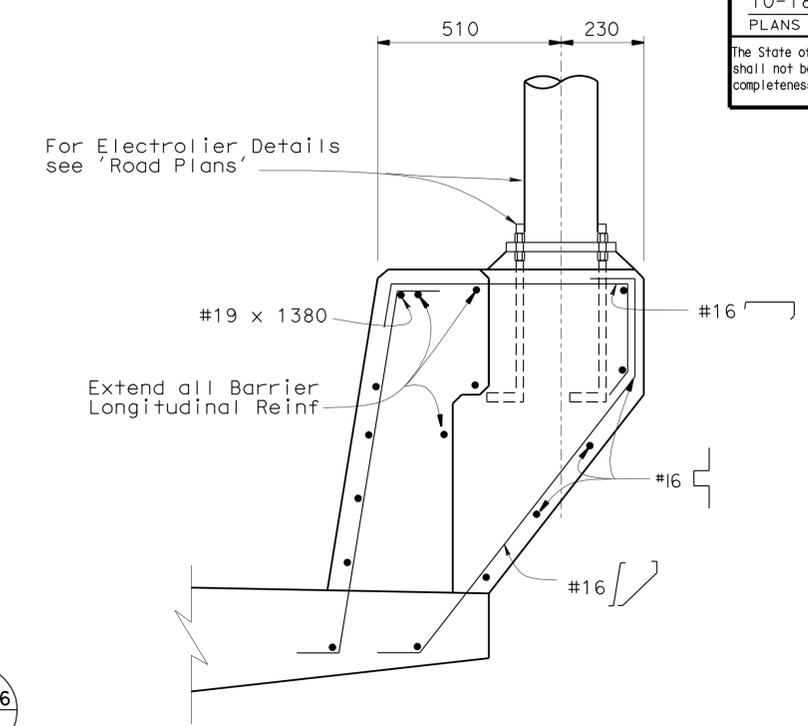
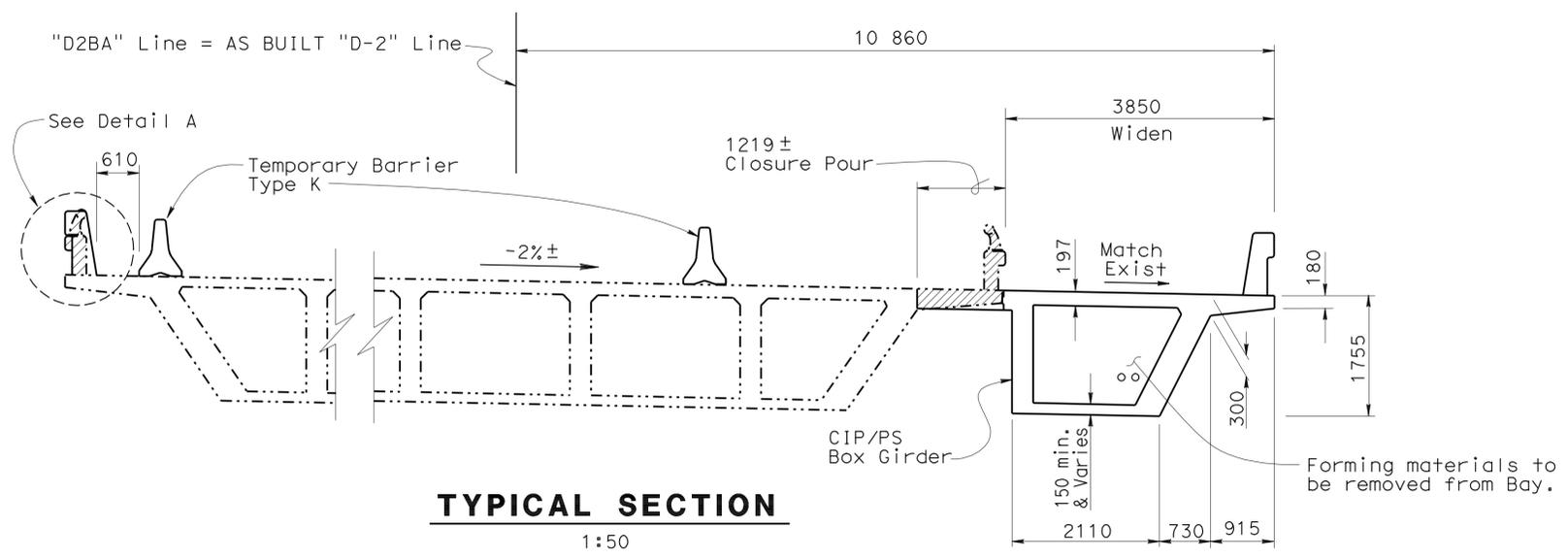
CU 11226
 EA 091831

| REVISION DATES | SHEET | OF |
|--|-------|----|
| 06-22-05 09-10-09 09-14-09 10-28-09 10-29-09 11-17-09 02-18-05 02-17-05 04-28-05 | 8 | 19 |

| | | | | | |
|------|--------|---------|------------------------------|----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET No | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 354 | 364 |

Ronald J. Bromenschenkel
 REGISTERED CIVIL ENGINEER DATE 11-17-09
 10-18-10
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 RONALD J. BROMENSCHENKEL
 No. C47092
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA



NOTE:
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| | | | | | | | |
|--|------------|---------------|---------------------|--|---|----------------|---|
| | DESIGN | BY L. Bahia | CHECKED S. Galgiani | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 14 | BRIDGE NO. | DEL SOL BLVD UNDERCROSSING (WIDEN) TYPICAL SECTION |
| | DETAILS | BY M. Johnson | CHECKED S. Galgiani | | | 57-0854R | |
| | QUANTITIES | BY L. Bahia | CHECKED S. Galgiani | | | KILOMETER POST | |
| | | | | | | 3.512 | |

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

CU 11226 EA 091831

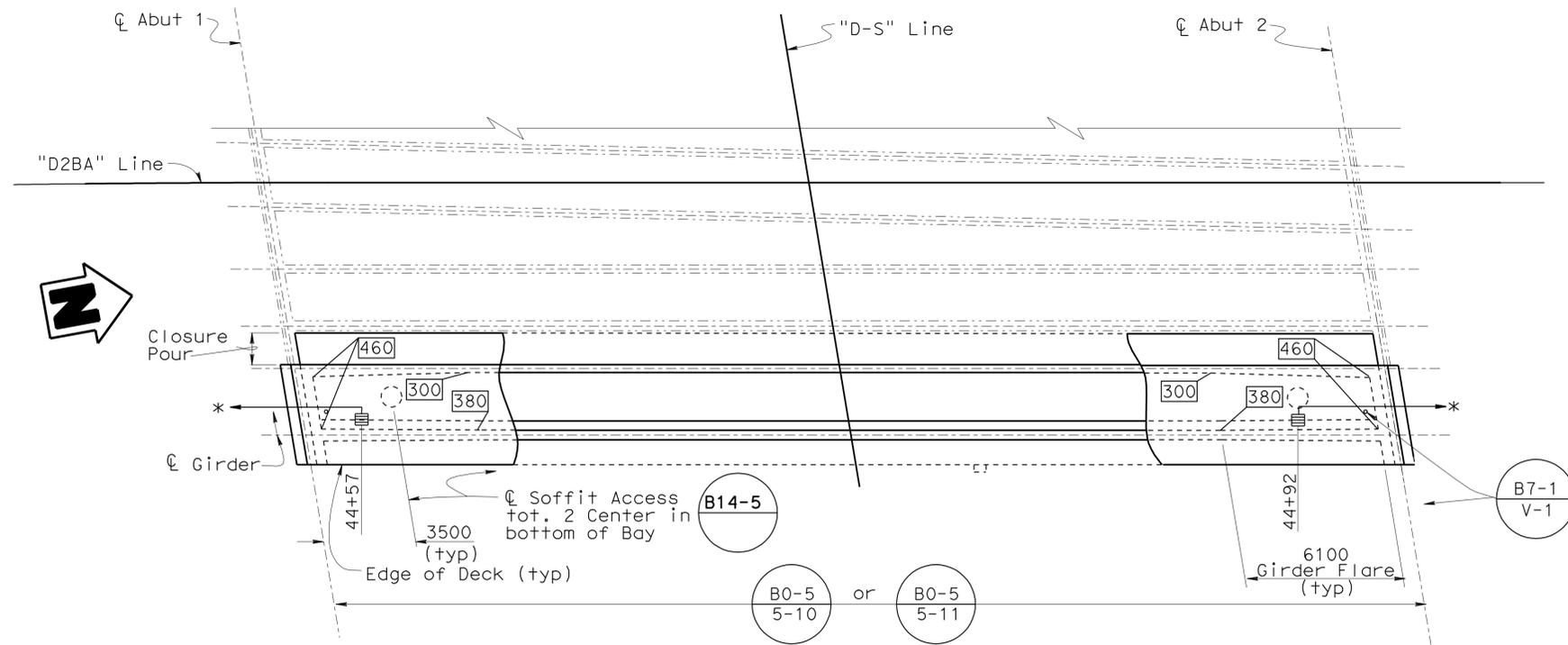
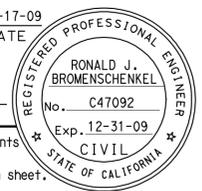
DISREGARD PRINTS BEARING EARLIER REVISION DATES

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 09-16-09 | 10-28-09 | 10-28-09 | 11-17-09 | 04-28-05 | 05-14-05 | 09-02-05 | 09-16-09 | 09-14-09 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

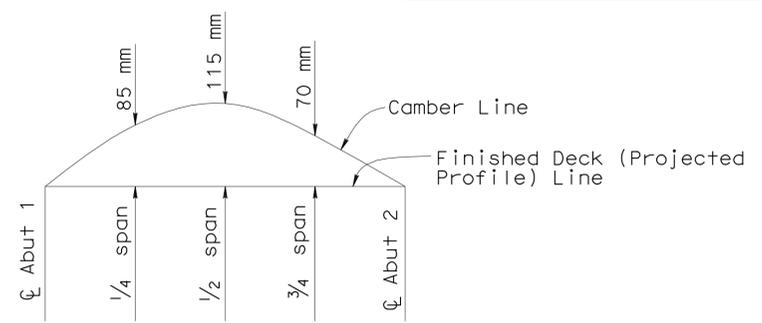
SHEET 9 OF 19

STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

| | | | | | |
|--|--------|---------|------------------------------|----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET No | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 355 | 364 |
| Ronald J. Bromenschenkel | | | 11-17-09 | | |
| REGISTERED CIVIL ENGINEER | | | DATE | | |
| 10-18-10 | | | PLANS APPROVAL DATE | | |
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PLAN
1:125
* For 'Deck Drain Pipe Detail', see 'ABUTMENT DETAILS NO. 1' sheet. For Drainage beyond Bridge, see 'Road Plans'



Does not include allowance for Falsework settlement.

CAMBER DIAGRAM
No Scale

PRESTRESSING NOTES

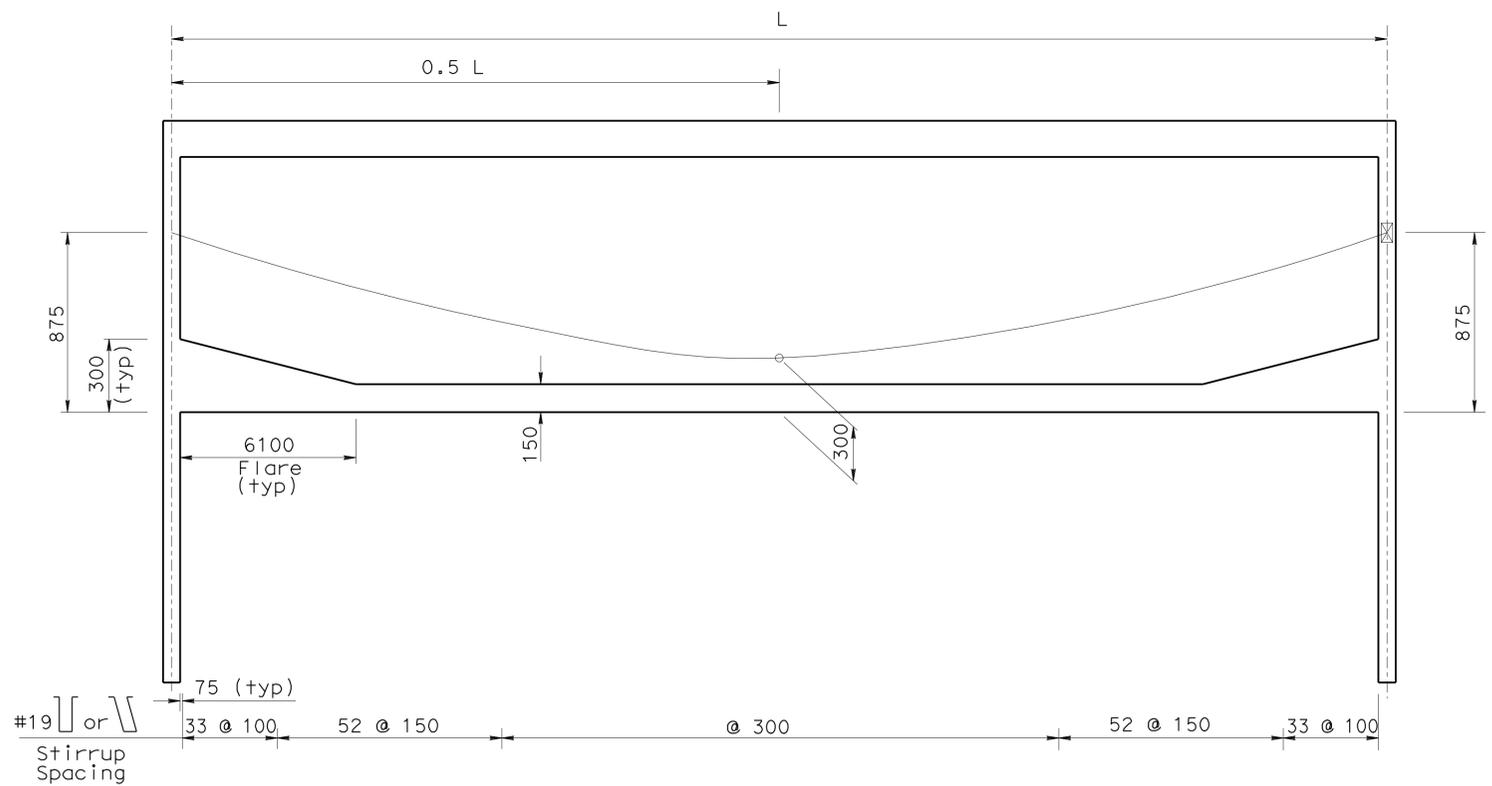
1860 MPa Low Relaxation Strand:
 $P_{Jack} = 15,300$ kN
Anchor Set = 10 mm
Total Number of Girders = 2

Distribution of prestress force (P_{Jack}) between girders shall not exceed the ratio of 3:2.
Maximum final force variation between girders shall not exceed 3200 kN.
Concrete: $f'_c = 35$ MPa @ 28 days
 $f'_{ci} = 25$ MPa @ time of stressing

Contractor shall submit elongation calculations based on initial stress at
 $\delta = .979$ times jacking stress.
One end stressing shall be performed from Abutment 1.

NOTES:

- "L" is Girder length measured along ϕ of Girders.
 - Cable path is parabolic between points shown.
 - Concrete Barrier not shown.
- \boxtimes Indicates Point of No Movement for one-end stressing.
 - \square Indicates Girder Stem width.
 - \equiv Denotes Deck Drain, Type D2, Stationed along DB2A line.



LONGITUDINAL SECTION
No Scale

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

| | | | | | | |
|--|------------------------|---------------------|---|---|---|---|
| | DESIGN BY L. Bahia | CHECKED S. Galgiani | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 14 | BRIDGE NO. 57-0854R | DEL SOL BLVD UNDERCROSSING (WIDEN) GIRDER LAYOUT DETAILS |
| | DETAILS BY K. Kubo | CHECKED S. Galgiani | | | KILOMETER POST 3.512 | |
| | QUANTITIES BY L. Bahia | CHECKED S. Galgiani | | | | |
| ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN | | | ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100 | | CU 11226 EA 091831 DISREGARD PRINTS BEARING EARLIER REVISION DATES | |

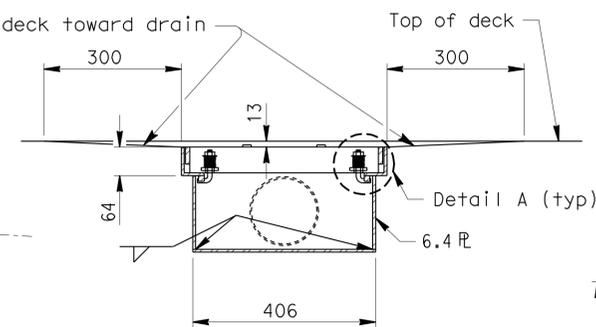
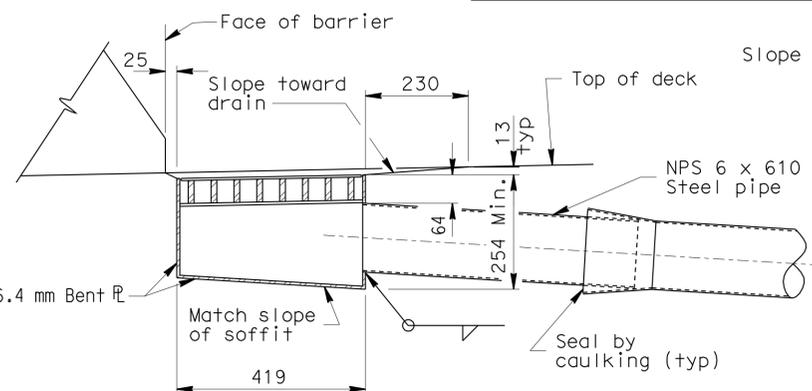
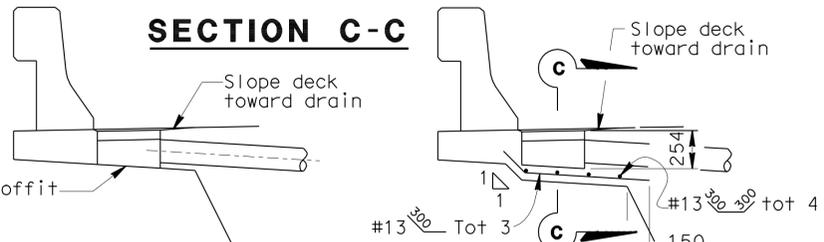
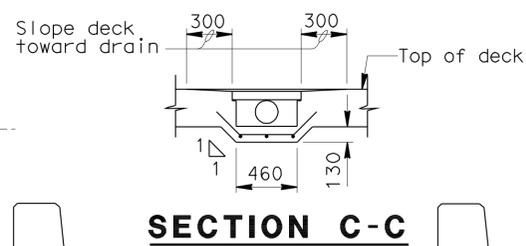
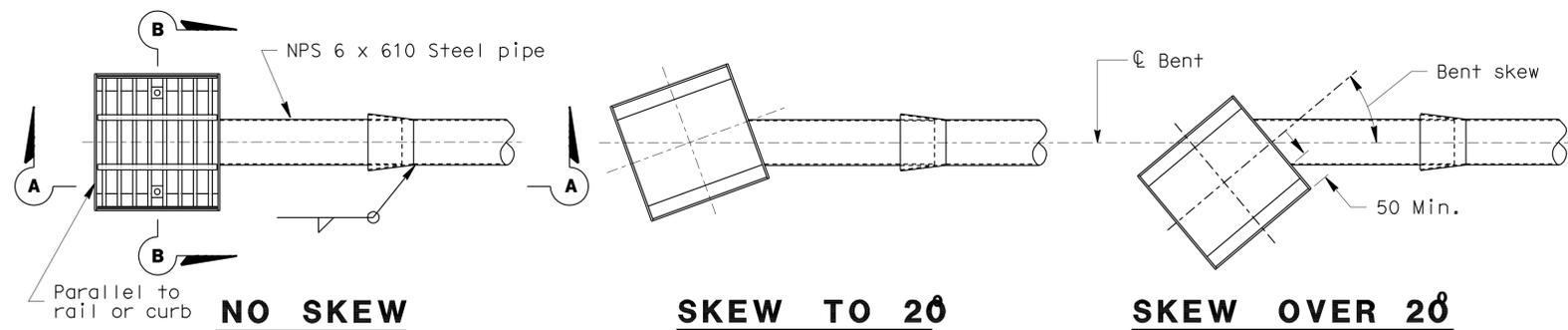
USERNAME => h11enard DATE PLOTTED => 20-OCT-2010 TIME PLOTTED => 11:15



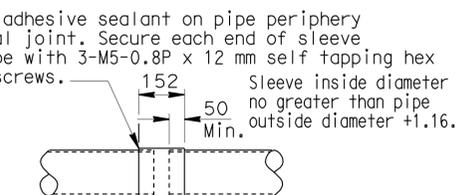
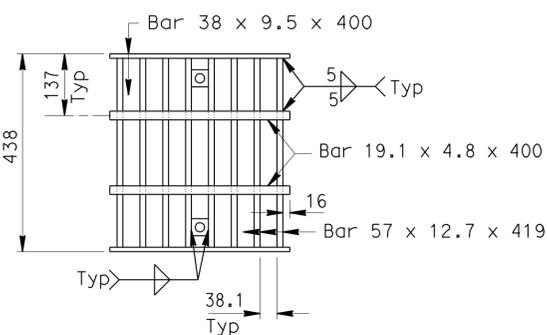
| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|---------|------------------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 356 | 364 |

10-18-10
 PLANS APPROVAL DATE
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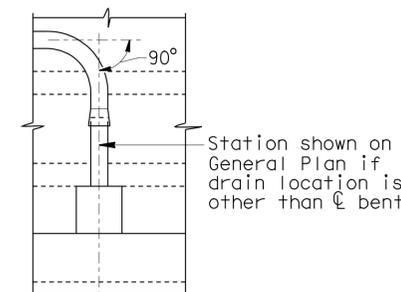
REGISTERED PROFESSIONAL ENGINEER
 RONALD J. BROMENSCHENKEL
 No. C47092
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA



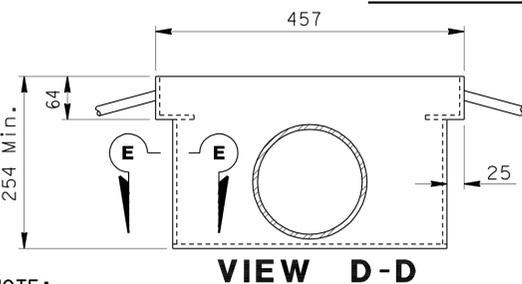
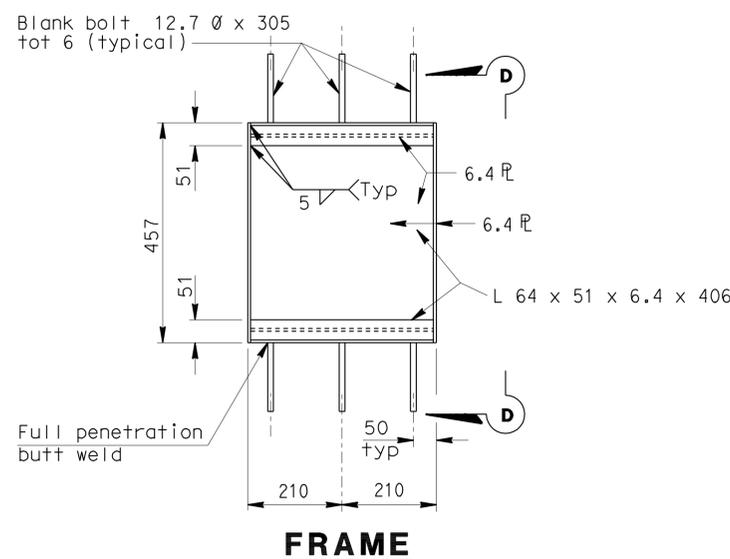
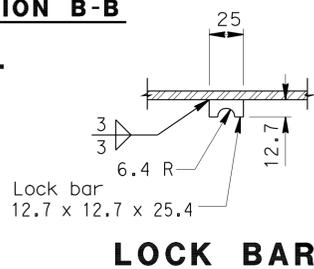
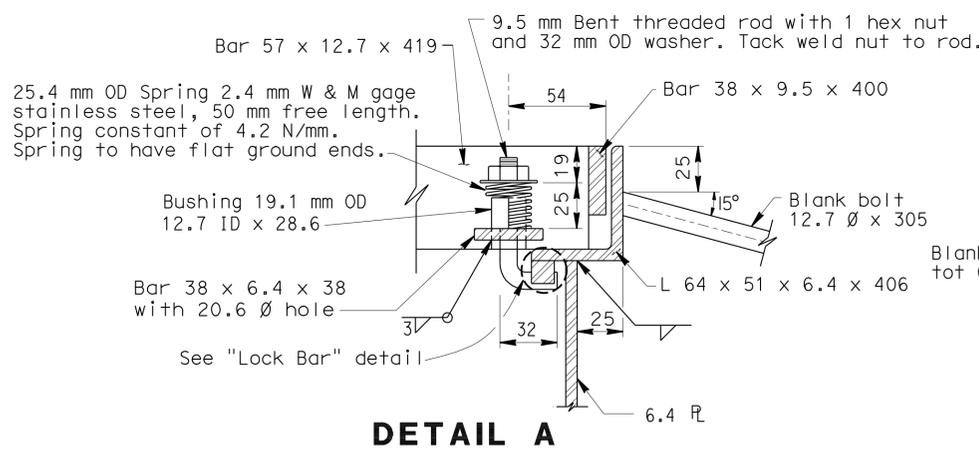
DECK DRAIN ASSEMBLY DETAIL



SLEEVE CONNECTION



DRAIN PIPE ALIGNMENT



SECTION E-E

SPECIAL DETAILS

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

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

| STANDARD DRAWING | | | |
|-------------------|--------------------------|-------------------|--------------|
| RELEASE DATE | DESIGN | CHECKED | RELEASED BY |
| REVISED | BY S. WIMAN | M. LEWIS | |
| FILE NO. xs10-020 | DETAILS BY G. WILLIFORD | M. LEWIS | |
| | SUBMITTED BY S. D. WIMAN | DRAWING DATE 8/96 | OFFICE CHIEF |

Details Removed

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

| | |
|----------------|----------|
| BRIDGE NO. | 57-0854R |
| KILOMETER POST | 3.512 |

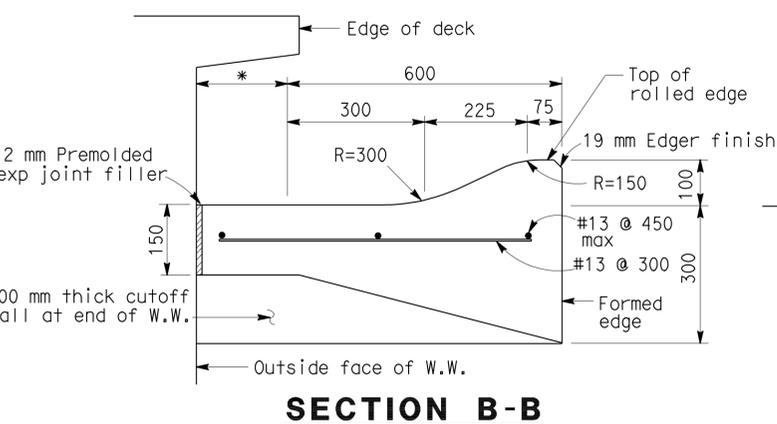
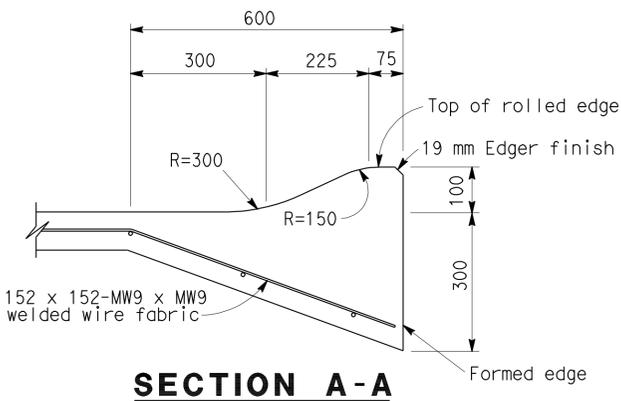
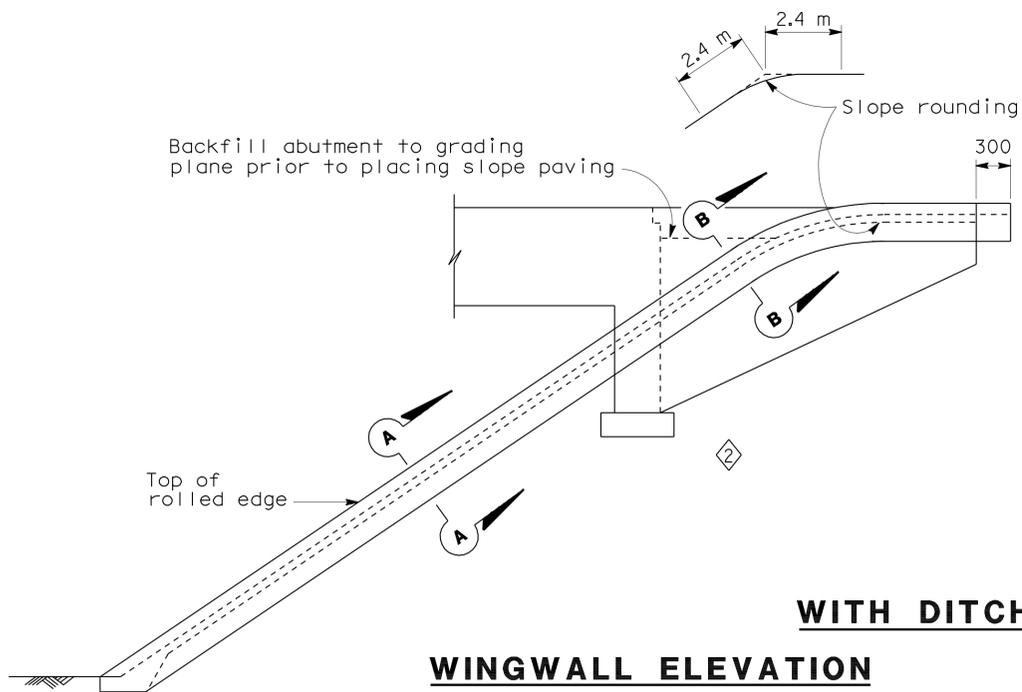
DEL SOL BLVD UNDERCROSSING (WIDEN)
DECK DRAIN TYPE D-2 MODIFIED



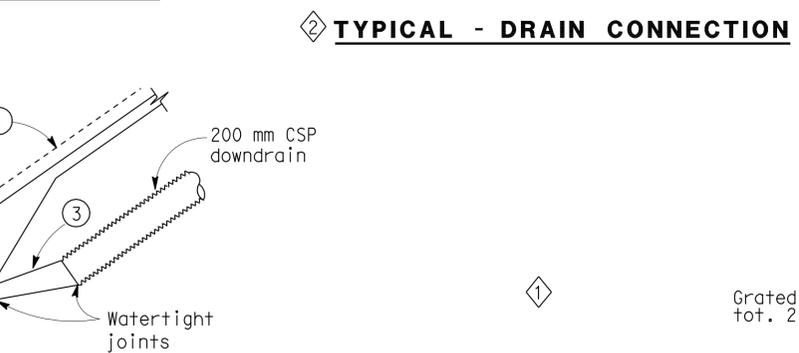
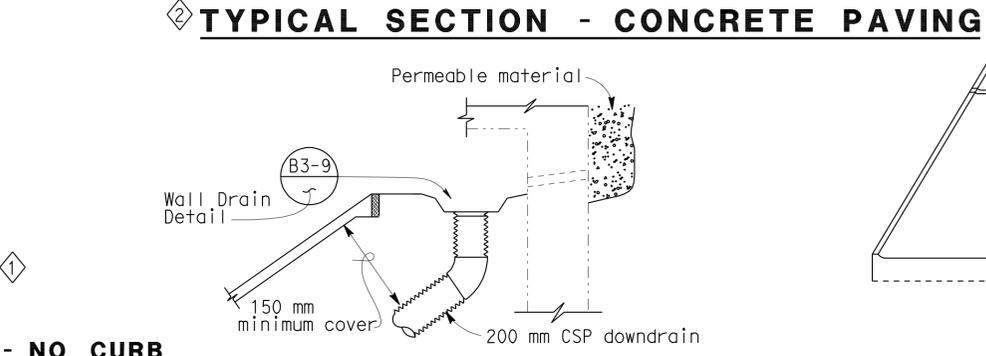
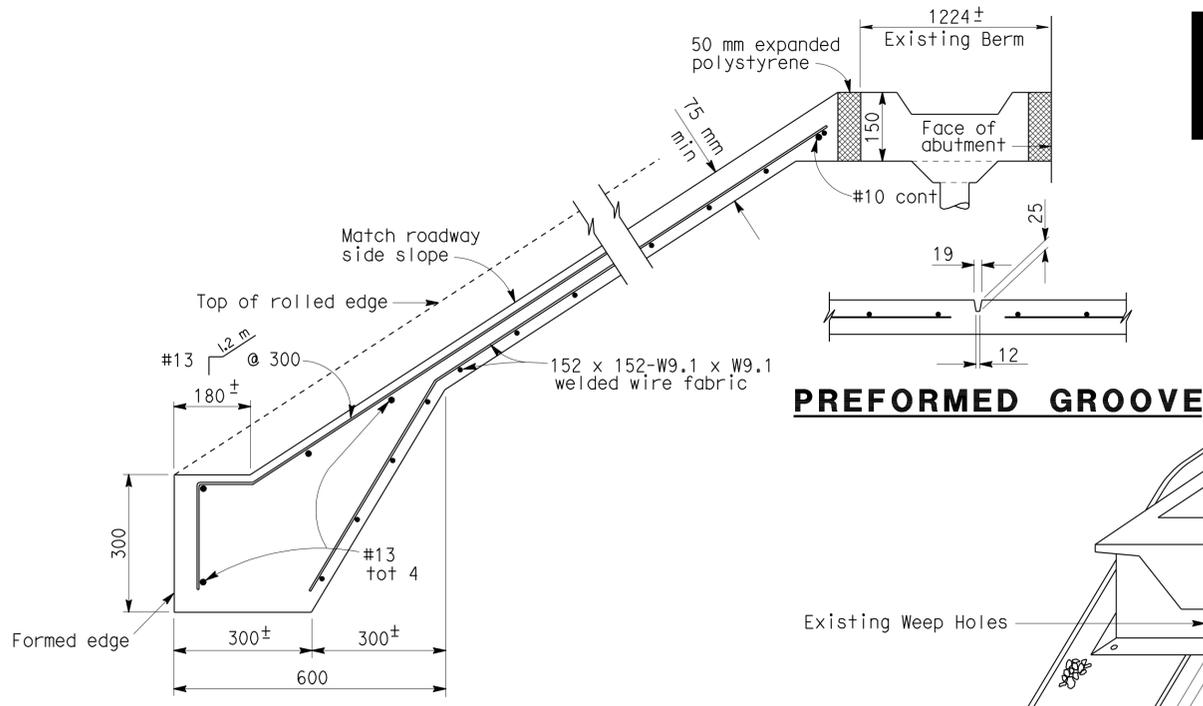
| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|---------|------------------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 357 | 364 |

11-17-09
 REGISTERED ENGINEER - CIVIL
 RONALD J. BROMENSCHENKEL
 No. C47092
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

10-18-10
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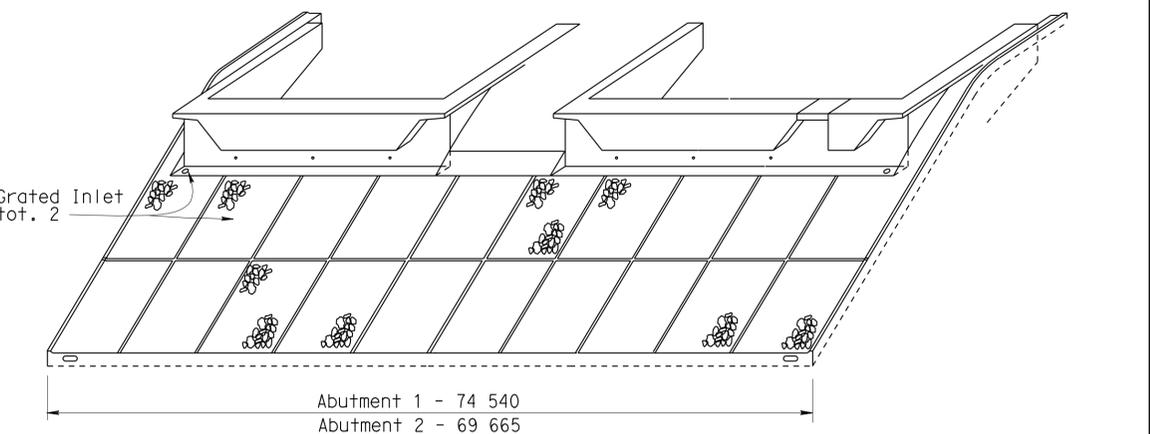
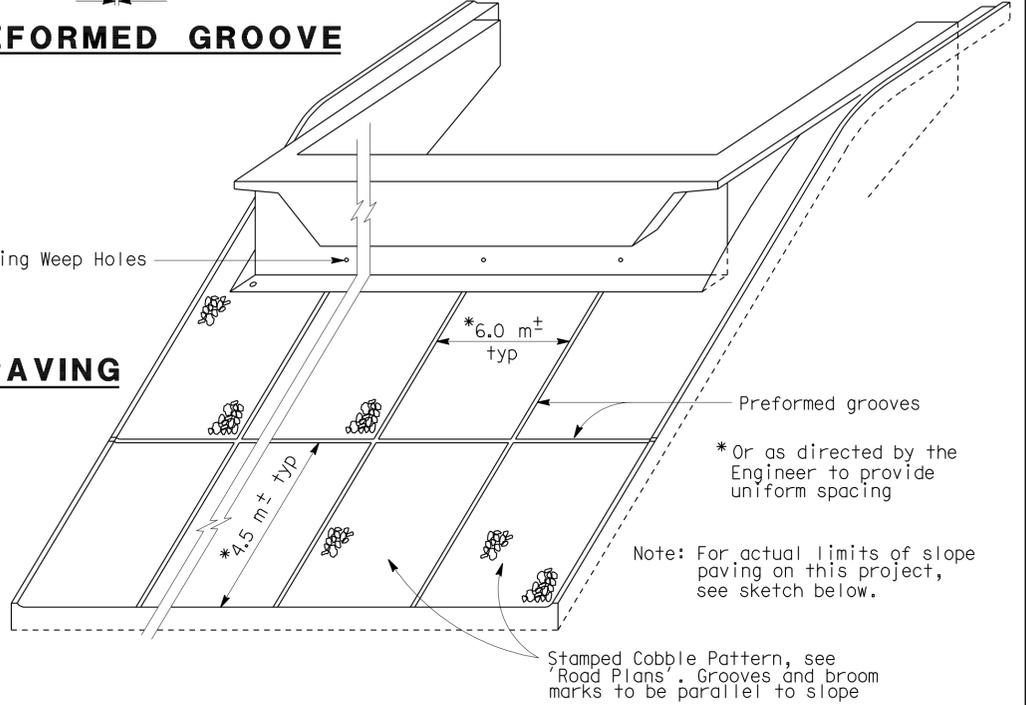


NOTE: *This dimension becomes zero when edge of deck is at outside face of W.W.
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



DRAINAGE DETAILS
 Note: Drainage details are only applicable when (B0-3) or (3-5) is indicated on detail sheets.

- ① Top of rolled edge
- ② Conduit: 1.6 mm galv corrugated steel or 2.8 mm smooth galv steel
- ③ Taper: { 1.6 mm / 2.8 mm smooth galv steel
- ④ 200 mm perforated steel pipe (1.6 mm thick) underdrain behind abutment. Connect to downdrain as shown on Limits of Slope Paving & Drainage layout.



SPECIAL DETAILS
 NO SCALE
 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

| STANDARD DRAWING | | | |
|-----------------------------|--------------------------|-------------------------------|---------|
| FILE NO. xs4-210 | DESIGN BY | BY | CHECKED |
| DRAWING DATE Revised | DETAILS BY R. YEE | BY C.W. PURKISS | CHECKED |
| SUBMITTED BY | | DESIGN SUPERVISOR | |
| | | <i>Ronald J. Bromenschkel</i> | |

| |
|---|
| <ul style="list-style-type: none"> ① Deleted Detail ② Modified Detail |
|---|

| | |
|---|--|
| STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF STRUCTURES STRUCTURE DESIGN 14 |
|---|--|

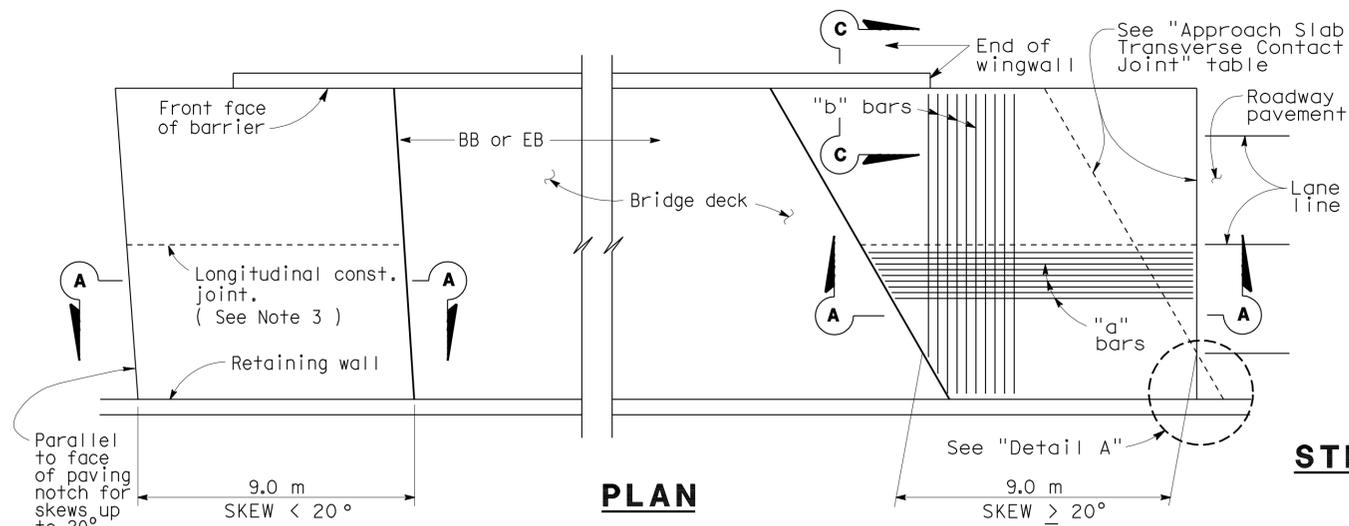
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|-------------------------|---|
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| KILOMETER POST 3.512 | SLOPE PAVING - FULL SLOPE |



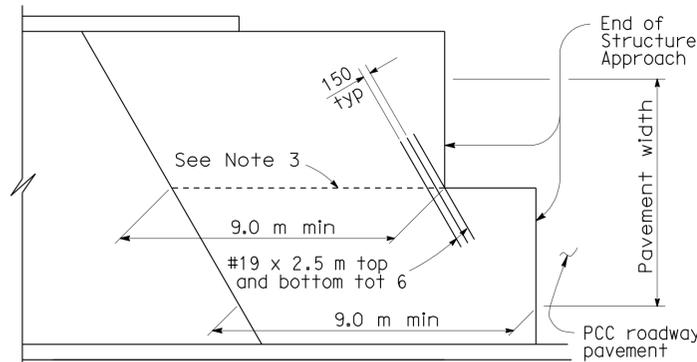
| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|---------|------------------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 358 | 364 |

Ronald J. Bromenschenkel 11-17-09
 REGISTERED ENGINEER - CIVIL
 No. C47092
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 STATE OF CALIFORNIA

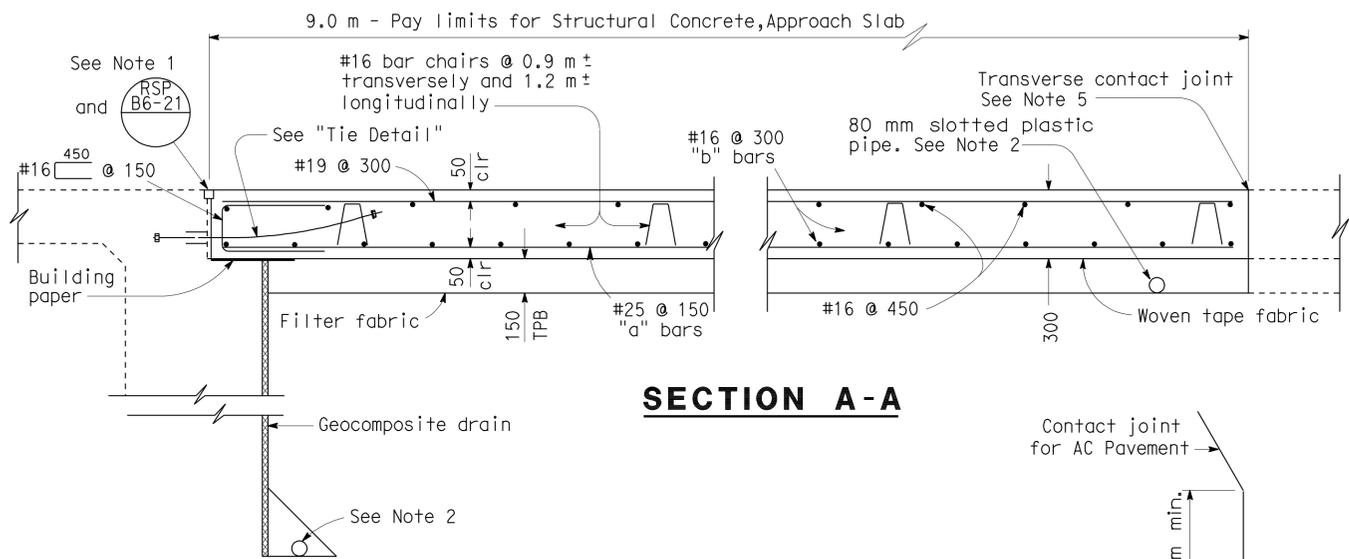
10-18-10
 PLANS APPROVAL DATE
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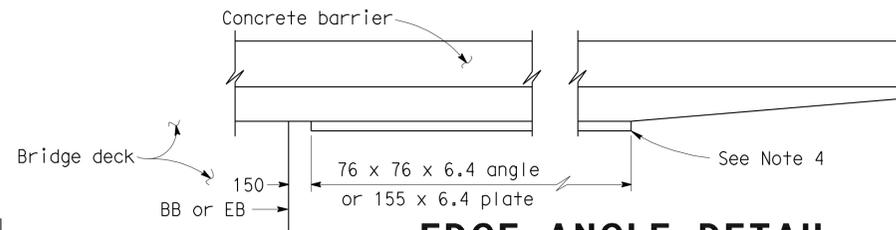
STRUCTURE APPROACH - END STAGGER DETAIL



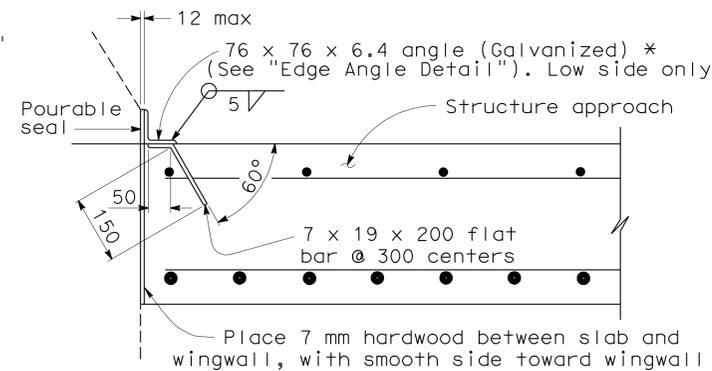
| APPROACH SLAB TRANSVERSE CONTACT JOINT | | |
|--|--|-------------------------------------|
| APPROACH SKEW | WITH AC ROADWAY PAVEMENT | WITH PCC ROADWAY PAVEMENT |
| < 20° | Parallel to face of paving notch | Parallel to face of paving notch |
| 20° - 45° | Parallel to face of P N use (Detail A) | Stagger lines 7.2 m to 10.8 m apart |
| > 45° | Parallel to face of P N use (Detail A) | Stagger at each lane line |



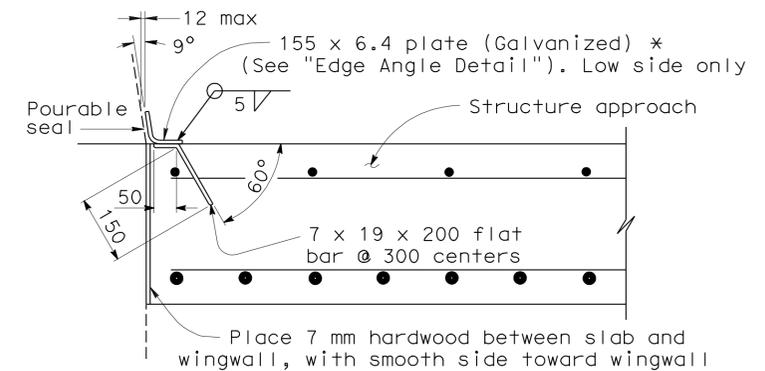
SECTION A-A



EDGE ANGLE DETAIL



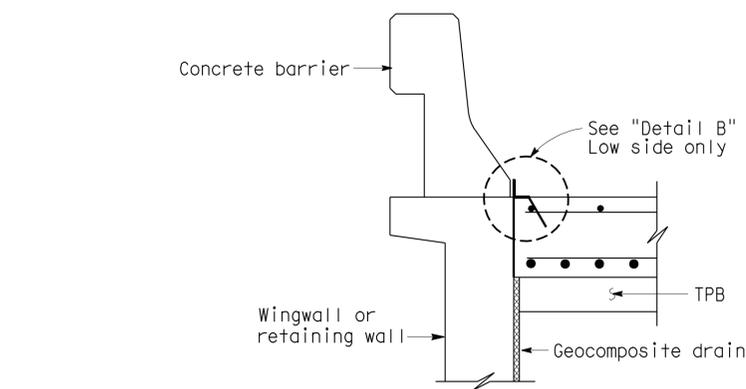
***(TO BE USED WITH TYPE 25 OR TYPE 27 CONCRETE BARRIER)**



***(TO BE USED WITH TYPE 732 OR TYPE 736 CONCRETE BARRIER)**

DETAIL A

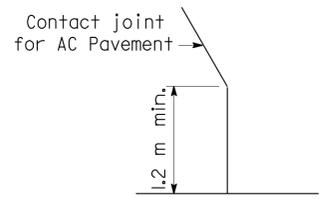
DETAIL B



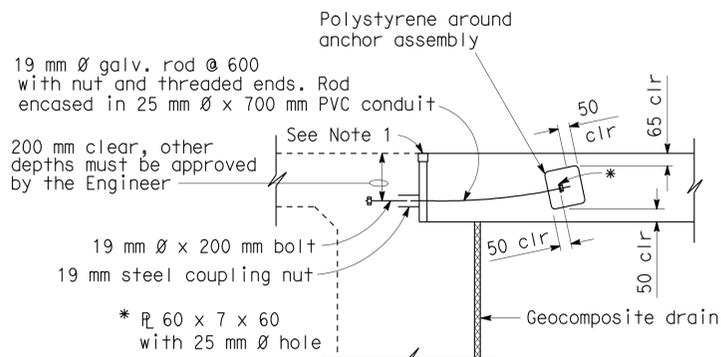
TYPE E-2

SECTION C-C

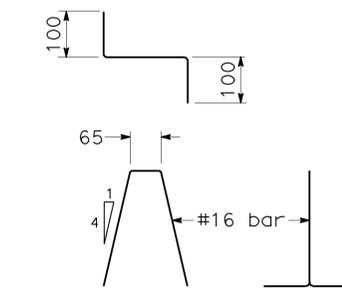
(Type E-1 to be used, unless otherwise shown on plans)



DETAIL A



TIE DETAIL



BAR CHAIR DETAIL

NO SCALE

NOTES:

- For details not noted or shown, see Structure Plans.
- For drainage details, see "Structure Approach Drainage Details" sheet.
- Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
- End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach, as applicable.
- For transverse contact joint with new PCC paving, refer to Standard Plan P30.
- At the contractor's option, approach slab transverse reinforcement may be placed parallel to paving notch. Spacing of transverse reinforcement is measured along roadway.

Polystyrene to be removed.
SPECIAL DETAILS
 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

1 TYPE E-1

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

| STANDARD DRAWING | | | | RELEASED BY | |
|------------------|---------|--------------|--------------|--------------|----------------|
| RELEASE DATE | REVISED | DESIGN BY | M. TRAFFALIS | CHECKED | E. THORKILDSEN |
| FILE NO. | xs3-180 | DETAILS BY | R. YEE | CHECKED | E. THORKILDSEN |
| | | SUBMITTED BY | M. HA | DRAWING DATE | 4/98 |

Deleted Detail

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 57-0854R
KILOMETER POST 3.512

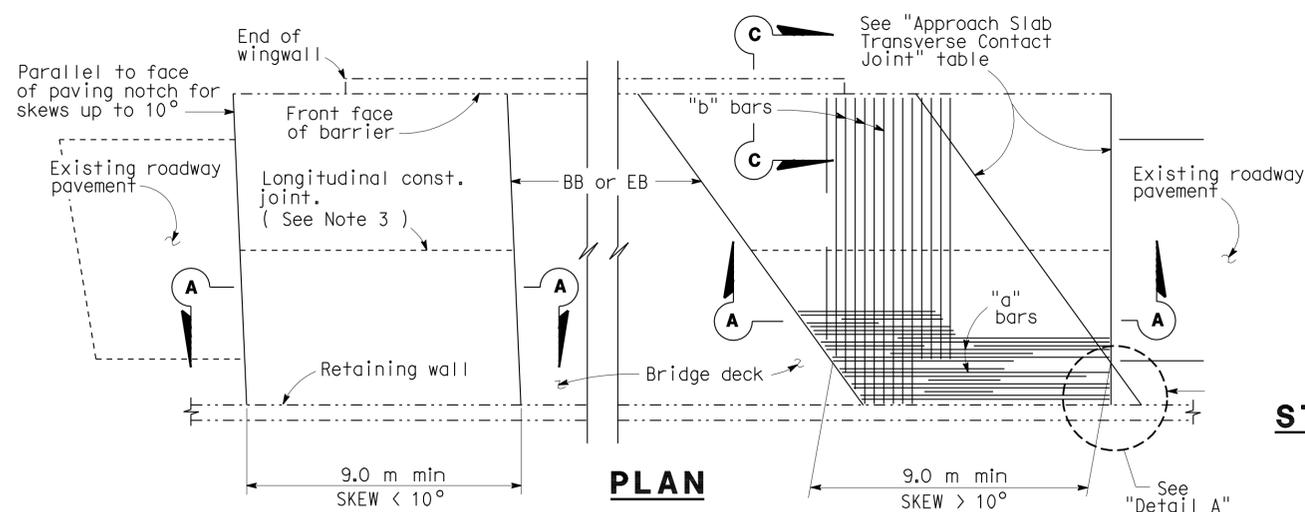
DEL SOL BLVD UNDERCROSSING (WIDEN)
STRUCTURE APPROACH TYPE N(9D)



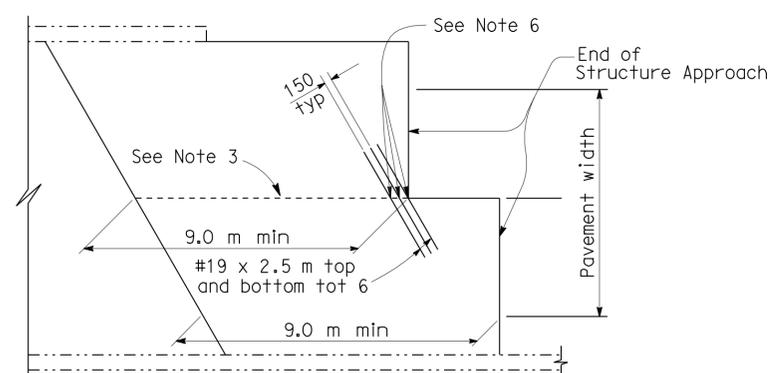
| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|---------|------------------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 359 | 364 |

Ronald J. Bromenschenkel 11-17-09
REGISTERED ENGINEER - CIVIL
No. C47092
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

10-18-10
PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

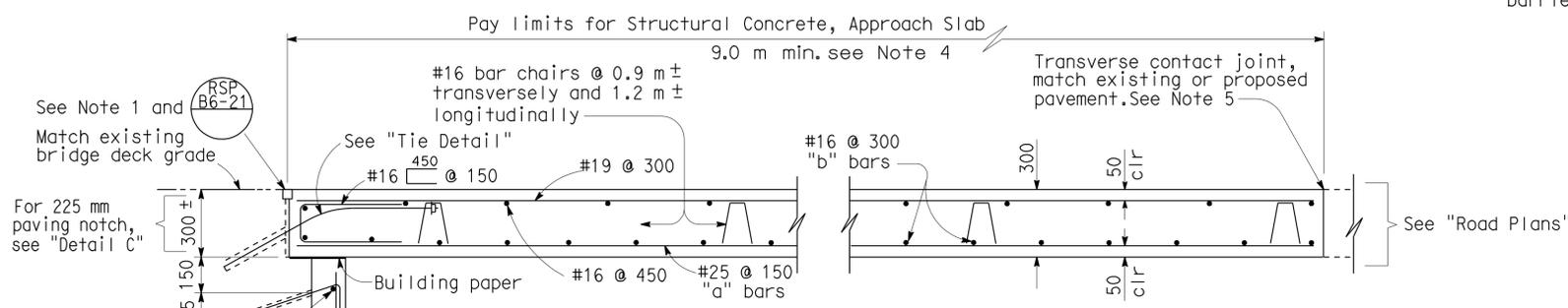


STRUCTURE APPROACH - END STAGGER DETAIL

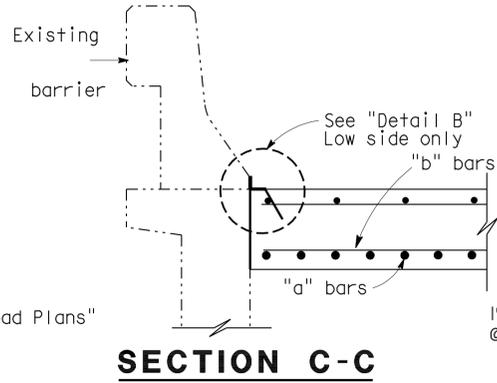


APPROACH SLAB TRANSVERSE CONTACT JOINT

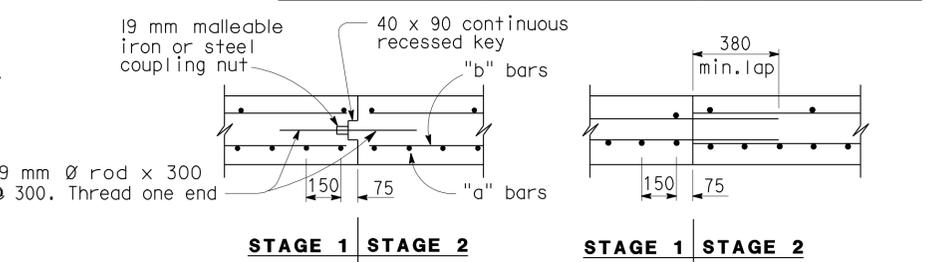
| APPROACH SKEW | WITH AC ROADWAY PAVEMENT | WITH PCC ROADWAY PAVEMENT |
|---------------|--|-------------------------------------|
| < 10° | Parallel to face of paving notch | Parallel to face of paving notch |
| 10° - 45° | Parallel to face of P N use (Detail A) | Stagger lines 7.2 m to 10.8 m apart |
| > 45° | Parallel to face of P N use (Detail A) | Stagger at each lane line |



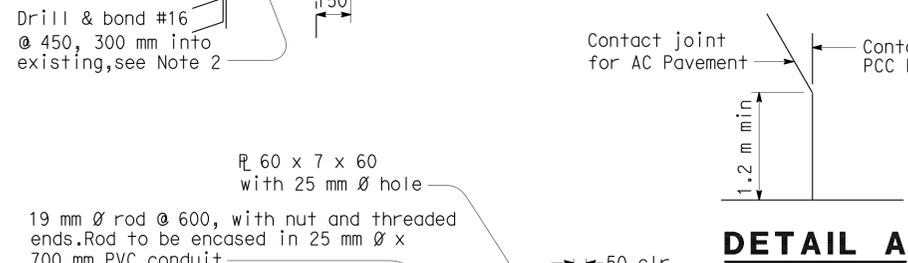
SECTION A-A



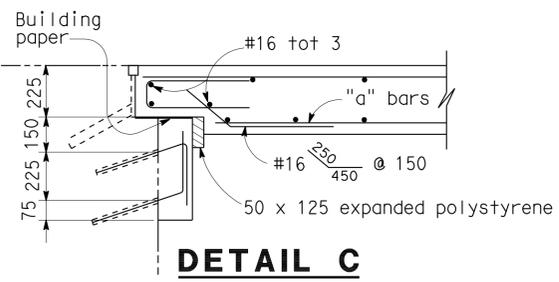
SECTION C-C



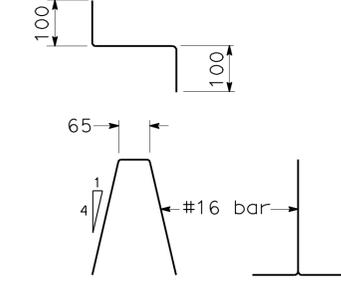
LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES



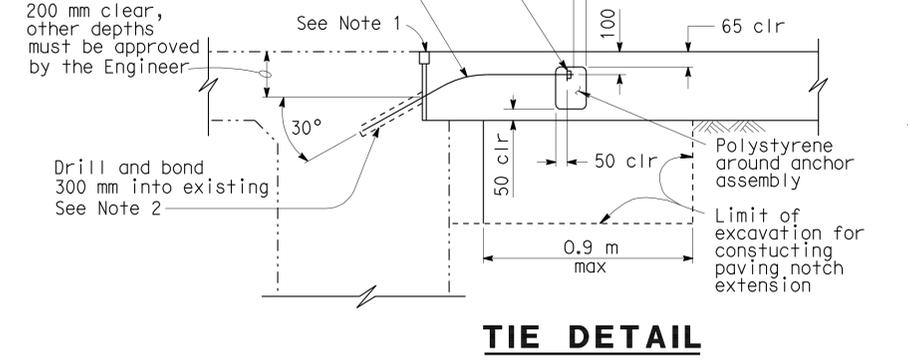
DETAIL A



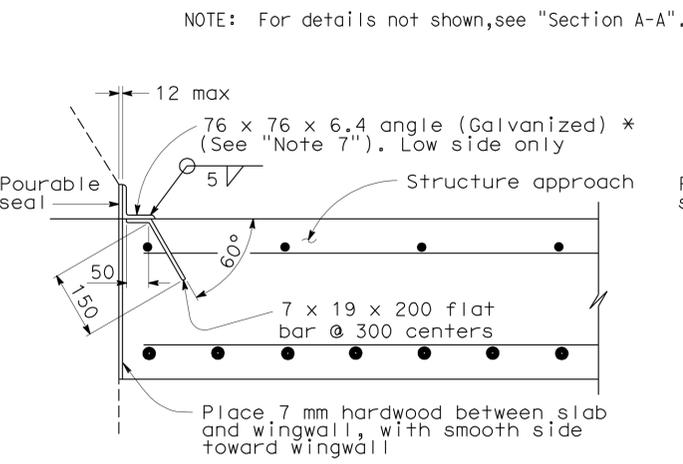
DETAIL C



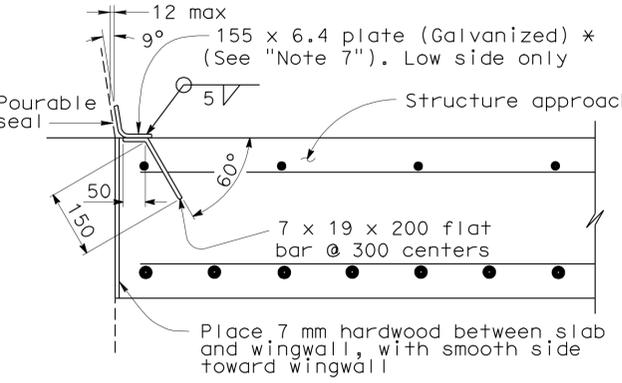
BAR CHAIR DETAIL



TIE DETAIL



DETAIL B



*(TO BE USED WITH TYPE 25 OR TYPE 27 CONCRETE BARRIER) *(TO BE USED WITH TYPE 732 OR TYPE 736 CONCRETE BARRIER)

- NOTES:**
- For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required.
 - Space to avoid existing prestress anchorages and main reinforcement.
 - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
 - Transverse contact joint shall be a minimum of 1.5 m from an existing or constructed weakened plane joint.
 - For transverse contact joint with new PCC paving, refer to Standard Plan P30.
 - Couplers are required for stage construction.
 - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.

NO SCALE
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

STANDARD DRAWING

| | | | |
|-------------------------------|----------------------------------|----------------------------------|--|
| RELEASE DATE 7/9/03 | DESIGN BY M. TRAFFALIS | CHECKED E. THORKILDSEN | RELEASED BY <i>Ronald J. Bromenschenkel</i> |
| FILE NO. xs3-140 | DETAILS BY R. YEE | CHECKED E. THORKILDSEN | OFFICE CHIEF |
| | SUBMITTED BY M. HA | DRAWING DATE 8/92 | |

| | | |
|--|---|---|
| STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES | BRIDGE NO. 57-0854R KILOMETER POST 3.512 |
|--|---|---|

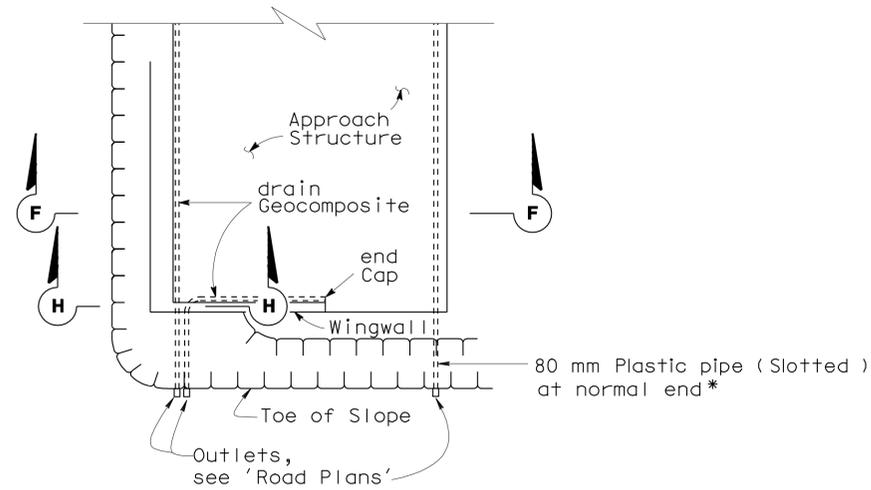
| | |
|---|--|
| DEL SOL BLVD UNDERCROSSING (WIDEN) | |
| STRUCTURE APPROACH TYPE R(9D) | |



| DIST. | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|---------|------------------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 360 | 364 |

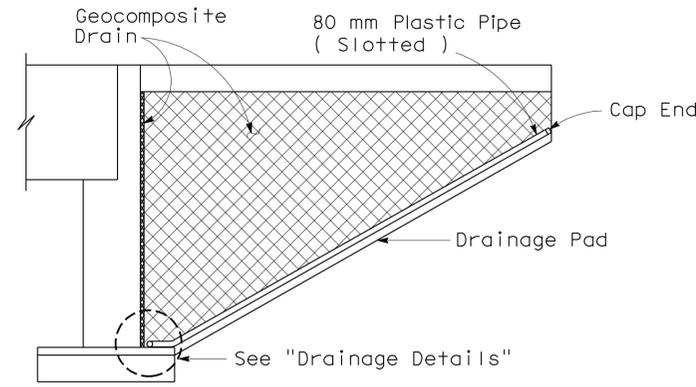
Ronald J. Bromenschenkel 11-17-09
 REGISTERED ENGINEER - CIVIL
 No. C47092
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

10-18-10
 PLANS APPROVAL DATE
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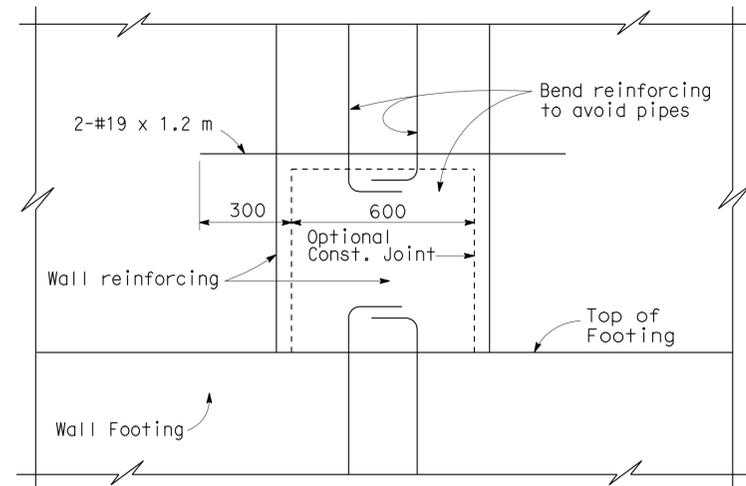


TYPICAL PLAN

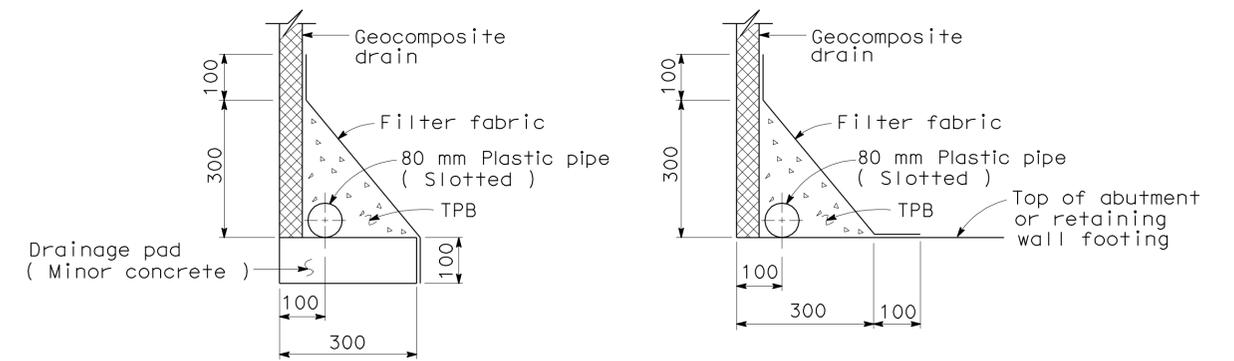
*For pipe layout at staggered end, see 'Detail B'.



CANTILEVER WINGWALL SECTION F-F



SECTION H-H



WITHOUT FOOTING

WITH FOOTING

DRAINAGE DETAILS

SPECIAL DETAILS

NO SCALE
 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

| STANDARD DRAWING | | | |
|--------------------------------|----------------------------------|----------------------------------|---------------------------------------|
| RELEASE DATE 4/23/98 | DESIGN BY <i>M. TRAFFALIS</i> | CHECKED <i>E. THORKILDSEN</i> | RELEASED BY <i>Richard D. Ford</i> |
| FILE NO. REVISED | DETAILS BY <i>R. YEE</i> | CHECKED <i>E. THORKILDSEN</i> | OFFICE CHIEF |
| | SUBMITTED BY <i>M. HA</i> | DRAWING DATE <i>4/98</i> | |

- ① Detail Modified
- ② Detail Removed

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO.
57-0854R
KILOMETER POST
3.512

**DEL SOL BLVD UNDERCROSSING (WIDEN)
 STRUCTURE APPROACH DRAINAGE DETAILS**



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST PROJECT | SHEET No | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------|----------|--------------|
| 11 | SD | 905,805 | R8+4/R9+8 3+1/4+2 | 8 | 361 | 364 |

REGISTERED CIVIL ENGINEER
 HECTOR VALENCIA
 No. C65257
 Exp. 9-30-05
 CIVIL
 STATE OF CALIFORNIA

10-18-10
 PLANS APPROVAL DATE

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LEGEND OF BORING OPERATIONS

57 mm CONE PENETRATION BORING
 No. count recorded
 Pushes
 Driving rate, in seconds per 300 mm
 MB 136 penetration hammer or (at bottom)

ROTARY SAMPLE BORING (WET)
 Size of sampler (mm)
 Size of soil (mm)
 Reporting of 83-5 (kg) (Using 15.7 kg hand)
 Shear strength (kPa)
 Vane shear (kPa)

ROTARY SAMPLE BORING (DRY)
 Top Hole EL.
 Location
 Boring Date
 Refusal

ELECTRONIC CONE PENETROMETER TEST
 Cone Penetrometer dimensions and testing standards to 344.186, or as noted.

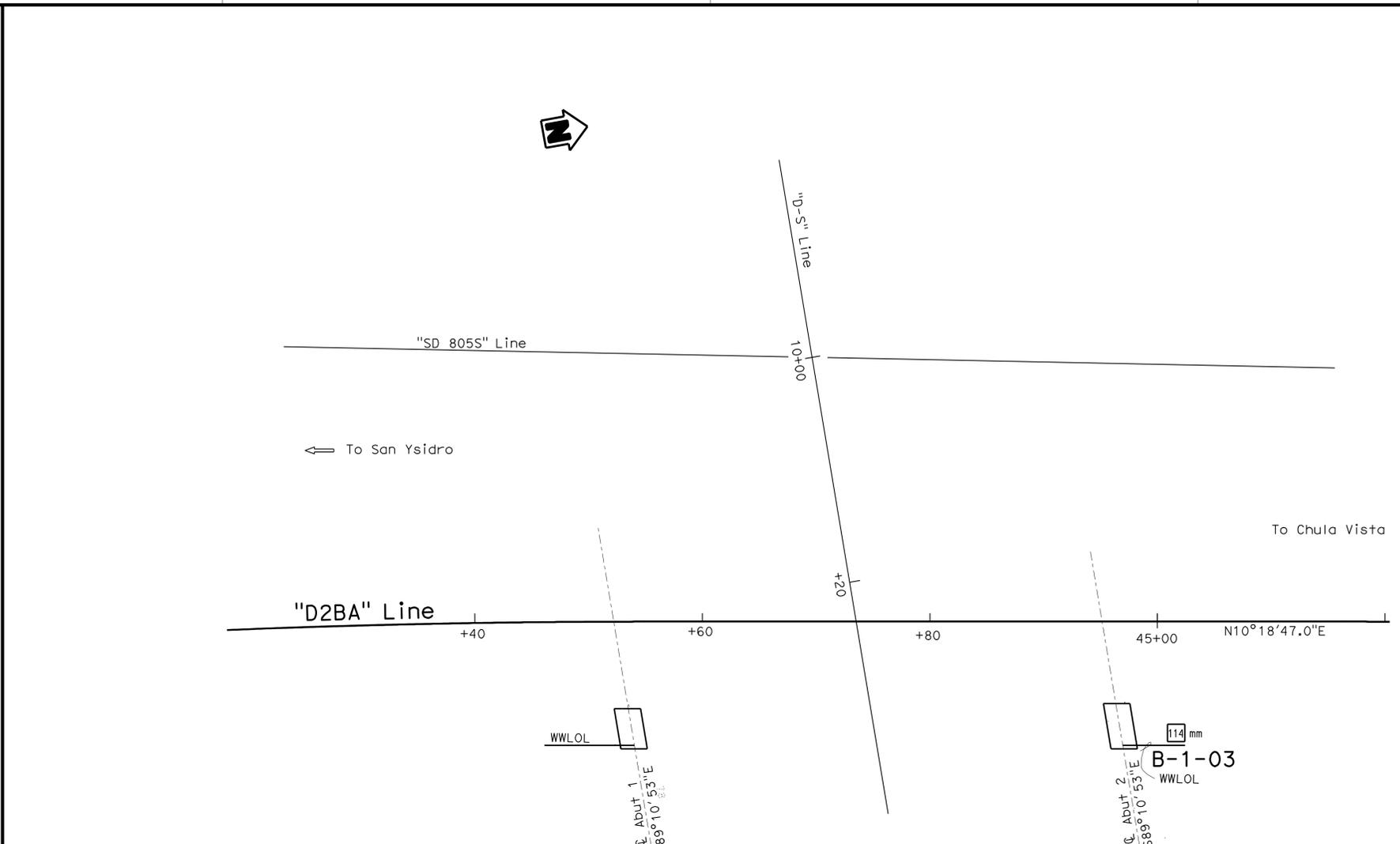
LEGEND OF EARTH MATERIALS

| | |
|---------------------------|----------------------------|
| GRAVEL | CLAYEY SILT |
| SAND | PEAT and/or ORGANIC MATTER |
| SILT | COBBLES and/or BOULDERS |
| CLAY | ANGULAR ROCK |
| SANDY CLAY or CLAYEY SAND | SEDIMENTARY ROCK |
| SANDY SILT or SILTY SAND | METAMORPHIC |
| SILTY CLAY | |

CONSISTENCY CLASSIFICATION FOR SOILS

| SPT N-value (0.3m) | Consistency |
|--------------------|--------------|
| 0-4 | Very Loose |
| 5-10 | Loose |
| 11-30 | Medium Dense |
| 31-50 | Dense |
| >50 | Very Dense |

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



BENCH MARK
 BM WP 80525 Elev. 75.95 m
 Chisled "+" in sidewalk on north side of Del Sol Blvd.
 NAVD 88 (Vertical datum)
 CCS 83 (Horizontal datum)

PLAN
 1:250

- NOTES:**
- The descriptions and classifications of rock and/or soil, including consistency and relative density descriptors, used by the field and/or office personnel for the exploration boreholes shown on this sheet are based on the "Soil and Rock Logging Classification Manual (Field Guide)", Engineering Service Center, Office of Structure Foundations, August 1996.
 - Soil colors were determined by using Munsell Soil Color Charts (1994, Revised Edition). Rock colors were determined using Geological Society of America rock color charts (1995, 8th Printing).
 - At boring B-1-03 an attempt to measure ground water was made. No ground water was encountered to the maximum depth of that boring.
 - Test boring B-1-03, utilized a Dietrich auto hammer to advance the sampler using a 63.5 kg hammer with a 760 mm drop. Penetration index values shown are the actual blow counts recorded in the field. Soil descriptions shown on the LOTB sheets are based on these index values.
 - E = Blow count for 0.3 m penetration extrapolated from blow count for less than 0.3 m (due to change in material or hard driving).
 - RQD with an asterisk designation (i.e. RQD=53%*) indicates that the rock within the drilled interval is soft and that the soundness criteria has not been met (as described by Deere and Deere, 1989). Rock not meeting the soundness criteria is defined as moderately soft, soft, or very soft.

| | | | | | | | |
|-----------------------------|---------------|------------------------------|--|-------------------------|---|------------|---------------------------------|
| ENGINEERING SERVICES | | GEOTECHNICAL SERVICES | | FIELD INVESTIGATION BY: | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | BRIDGE NO. | DEL SOL BLVD. UC (WIDEN) |
| DRAWN BY | W. Tang 01/04 | | | H. Valencia | | 57-0854R | |
| CHECKED BY | B. Harwell | | | | KILOMETER POST | | |
| | | | | | 3.512 | | |



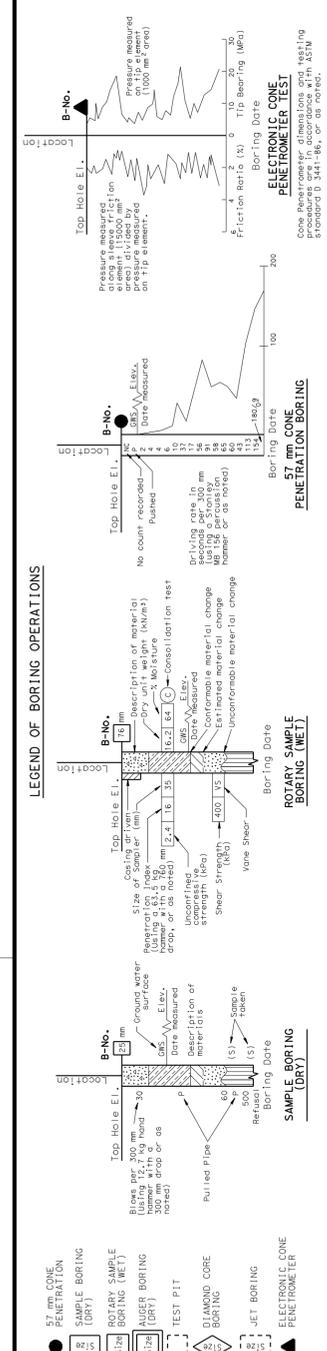
| | | | | | | |
|------|--------|---------|-------------------------|--------------|----------|--------------|
| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST PROJECT | SHEET No | TOTAL SHEETS |
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 362 | 364 |

REGISTERED CIVIL ENGINEER
 HECTOR VALENCIA
 No. C65257
 Exp. 9-30-05
 CIVIL
 STATE OF CALIFORNIA

10-18-10
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FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS" 1 OF 3



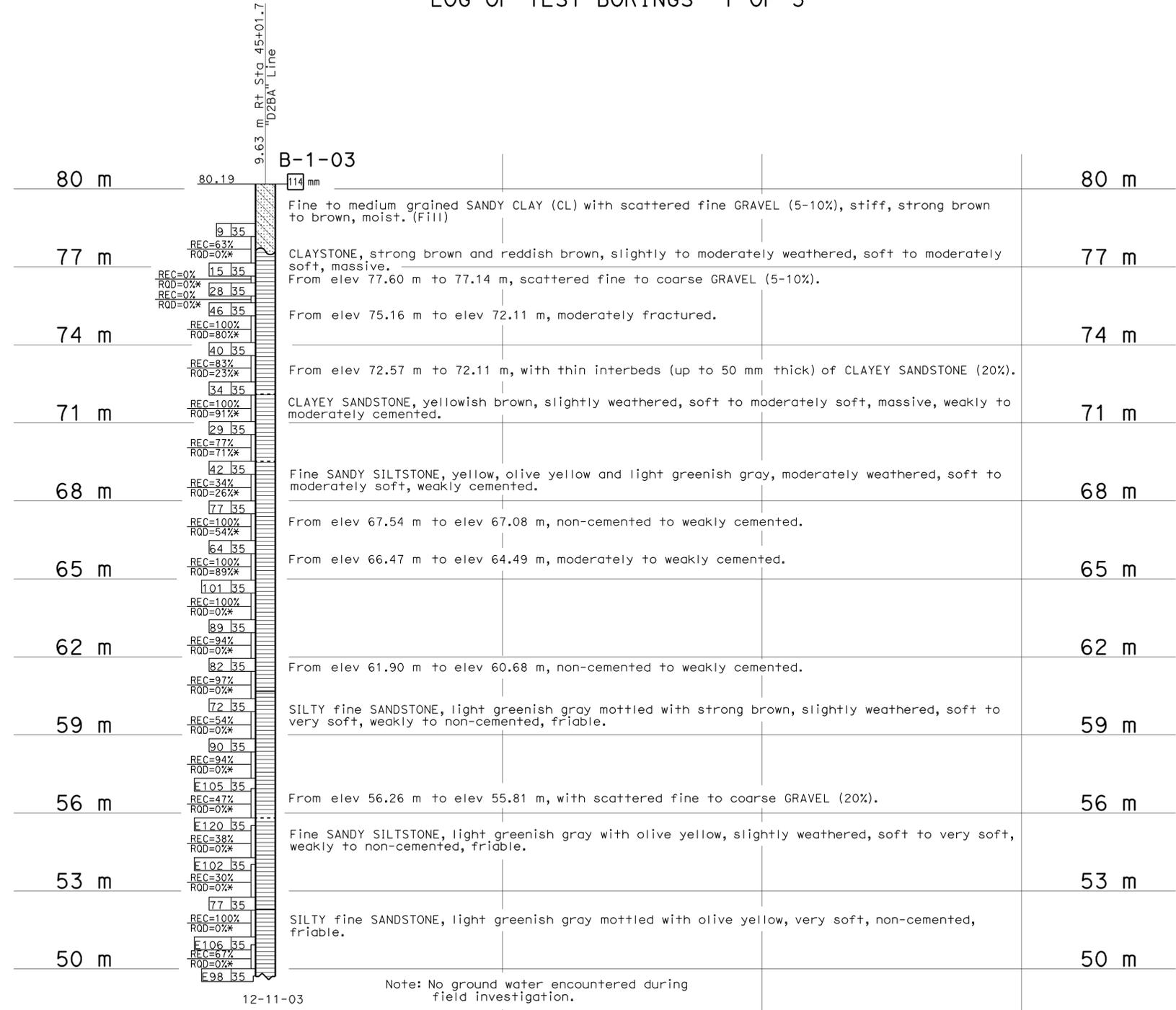
LEGEND OF EARTH MATERIALS

| | |
|---------------------------|----------------------------|
| GRAVEL | CLAYEY SILT |
| SAND | PEAT and/or ORGANIC MATTER |
| SILT | COBBLES and/or BOULDERS |
| CLAY | ANGULAR ROCK |
| SANDY CLAY or CLAYEY SAND | SEDIMENTARY ROCK |
| SANDY SILT or SILTY SAND | METAMORPHIC |
| SILTY CLAY | |

CONSISTENCY CLASSIFICATION FOR SOILS

| | |
|--------------------|--------------|
| SPT N-value (0-30) | Consistency |
| 0-4 | Very Loose |
| 5-10 | Loose |
| 11-30 | Medium Dense |
| 31-50 | Dense |
| >50 | Very Dense |
| C2 | Very Soft |
| 2-4 | Soft |
| 5-8 | Firm |
| 9-15 | Stiff |
| 16-30 | Very Stiff |
| >30 | Hard |

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



| | | | | | | | |
|-----------------------------|---------------|------------------------------|--|-------------------------|---|-------------------------|--|
| ENGINEERING SERVICES | | GEOTECHNICAL SERVICES | | FIELD INVESTIGATION BY: | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | BRIDGE NO. 57-0854R | DEL SOL BLVD. UC (WIDEN) LOG OF TEST BORINGS 2 OF 4 |
| DRAWN BY | W. Tang 01/04 | | | H. Valencia | DIVISION OF STRUCTURES STRUCTURE DESIGN | KILOMETER POST 3.512 | |
| CHECKED BY | B. Harwell | | | | | | |



| DIST | COUNTY | ROUTE | KILOMETER TOTAL PROJECT | POST PROJECT | SHEET No | TOTAL SHEETS |
|------|--------|---------|-------------------------|--------------|----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | | 363 | 364 |

10-18-10
 PLANS APPROVAL DATE
 REGISTERED CIVIL ENGINEER
 Hector Valencia
 No. C65257
 Exp. 9-30-05
 CIVIL
 STATE OF CALIFORNIA

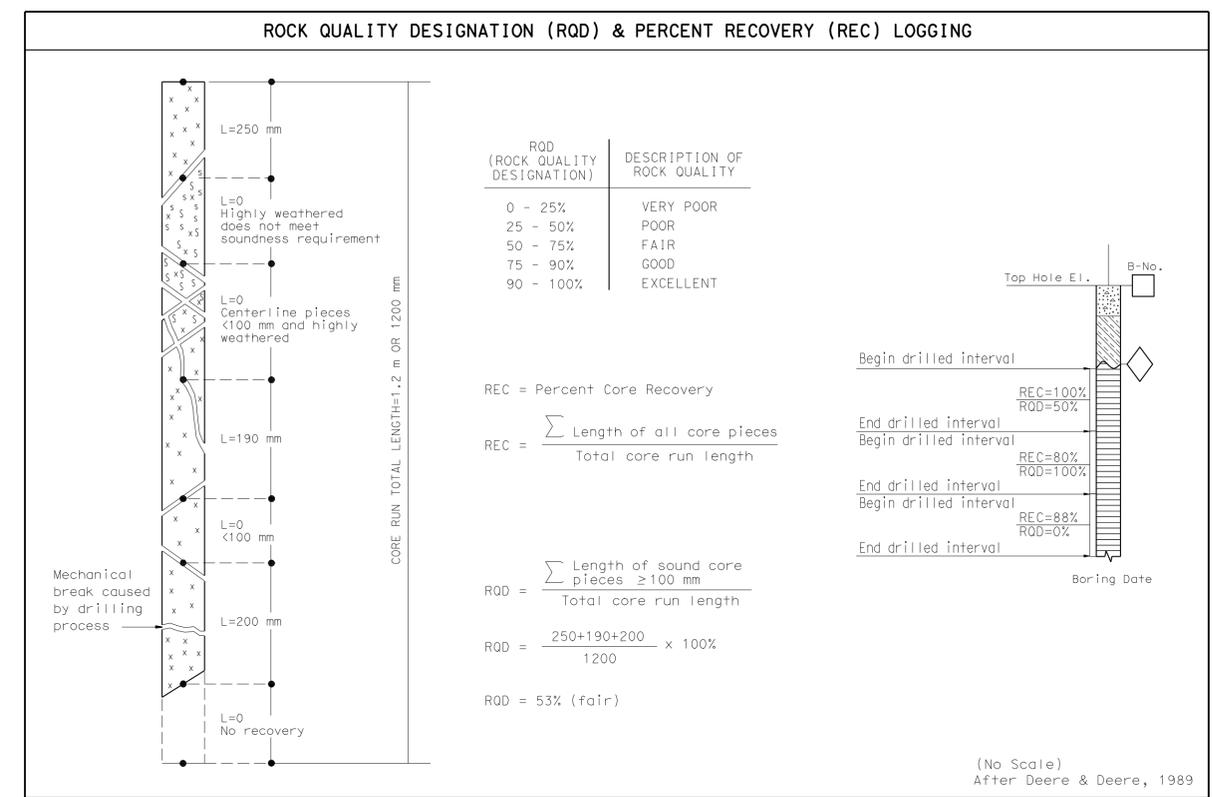
| WEATHERING DESCRIPTORS | | | | | | | Modified from United States Bureau of Reclamation, Engineering Geology Field Manual. |
|-------------------------|--|--|---|--|---|---|---|
| Descriptors | | Diagnostic features | | | | General characteristics (strength, excavation, etc.) [§] | |
| | | Chemical weathering-Discoloration and/or oxidation | | Mechanical weathering-Grain boundary conditions (disaggregation) primarily for granitics and some coarse-grained sediments | Texture and solutioning | | |
| Alphanumeric descriptor | Descriptive term | Body of rock | Fracture surfaces ¹ | | Texture | Solutioning | |
| W1 | Fresh | No discoloration, not oxidized. | No discoloration or oxidation. | No separation, intact (tight). | No change. | No solutioning. | Hammer rings when crystalline rocks are struck. Almost always rock excavation except for naturally weak or weakly cemented rocks such as siltstones or shales. |
| W2 | Slightly weathered to fresh ^o | | | | | | |
| W3 | Slightly weathered | Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull. | Minor to complete discoloration or oxidation of most surfaces. | No visible separation, intact (tight). | Preserved. | Minor leaching of some soluble minerals may be noted. | Hammer rings when crystalline rocks are struck. Body of rock not weakened. With few exceptions, such as siltstones or shales, classified as rock excavation. |
| W4 | Moderately to slightly weathered ^o | | | | | | |
| W5 | Moderately weathered | Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy." | All fracture surfaces are discolored or oxidized. | Partial separation of boundaries visible. | Generally preserved. | Soluble minerals may be mostly leached. | Hammer does not ring when rock is struck. Body of rock is slightly weakened. Depending on fracturing, usually is rock excavation except in naturally weak rocks such as siltstones or shales. |
| W6 | Intensely to moderately weathered ^o | | | | | | |
| W7 | Intensely weathered | Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions. | All fracture surfaces are discolored or oxidized, surfaces friable. | Partial separation, rock is friable; in semiarid conditions granitics are disaggregated. | Texture altered by chemical disintegration (hydration, argillation). | Leaching of soluble minerals may be complete. | Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened. Usually common excavation. |
| W8 | Very intensely weathered | | | | | | |
| W9 | Decomposed | Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay. | | Complete separation of grain boundaries (disaggregated). | Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete. | | Can be granulated by hand. Always common excavation. Resistant minerals such as quartz may be present as "stringers" or "dikes." |

Note: This chart and its horizontal categories are more readily applied to rocks with feldspars and mafic minerals. Weathering in various sedimentary rocks, particularly limestones and poorly indurated sediments, will not always fit the categories established. This chart and weathering categories may have to be modified for particular site conditions or alteration such as hydrothermal effects; however, the basic framework and similar descriptors are to be used.

^oCombination descriptors are permissible where equal distribution of both weathering characteristics are present over significant intervals or where characteristics present are "in between" the diagnostic feature. However, dual descriptors should not be used where significant, identifiable zones can be delineated. When given as a range only two adjacent terms may be combined. "Decomposed to slightly weathered," or "moderately weathered to fresh" are not acceptable.

¹Does not include directional weathering along shears or faults and their associated features. For example, a shear zone that carried weathering to great depths into a fresh rock mass would not require the rock mass to be classified as weathered.

[§]These are generalizations and should not be used as diagnostic features for weathering or excavation classification. These characteristics vary to a large extent based on naturally weak materials or cementation and type of excavation.



| FRACTURE DENSITY | | Modified from United States Bureau of Reclamation, Engineering Geology Field Manual. |
|--|--|--|
| FRACTURE DENSITY- Based on the spacing of all natural fractures in an exposure or core recovery lengths in boreholes; excludes mechanical breaks, shears, and shear zones; however, shear-disturbed zones (fracturing outside the shear) are included. Descriptors or fracture density apply to all rock exposures such as tunnel walls, dozer trenches, outcrops, or foundation cut slopes and inverts, as well as boreholes. Descriptive criteria presented below are based on borehole cores where lengths are measured along the core axis, for other exposures the criteria is distance measured between fractures (size of blocks). | | |
| UNFRACTURED (FD0): No fractures. | | |
| VERY SLIGHTLY FRACTURED (FD1): Core recovered mostly in lengths greater than 1 m. | | |
| SLIGHTLY TO VERY SLIGHTLY FRACTURED (FD2)* | | |
| SLIGHTLY FRACTURED (FD3): Core recovered mostly in lengths from 300 to 1000 mm, with few scattered lengths less than 300 mm or greater than 1000 mm. | | |
| MODERATELY TO SLIGHTLY FRACTURED (FD4)* | | |
| MODERATELY FRACTURED (FD5): Core recovered mostly in 100 to 300 mm lengths with most lengths about 200 mm. | | |
| INTENSELY TO MODERATELY FRACTURED (FD6)* | | |
| INTENSELY FRACTURED (FD7): Lengths average from 30 to 100 mm with scattered fragmented intervals. Core recovered mostly in lengths less than 100 mm. | | |
| VERY INTENSELY TO INTENSELY FRACTURED (FD8)* | | |
| VERY INTENSELY FRACTURED (FD9): Core recovered mostly as chips and fragments with a few scattered short core lengths. | | |
| * Combinations of fracture densities (e.g. very intensely to intensely fractured, or moderately to slightly fractured) are used where equal distribution of both fracture density characteristics are present over a significant interval or exposure, or where characteristics are "in between" the descriptor definitions. | | |

| ROCK HARDNESS DESCRIPTORS | | |
|--|-----------------|--|
| Alphanumeric Descriptor | Descriptor | Criteria |
| H1 | Extremely hard | Core, fragment, or exposure cannot be scratched with knife or sharp pick; can only be chipped with repeated heavy hammer blows. |
| H2 | Very hard | Cannot be scratched with knife or sharp pick. Core or fragment breaks with repeated heavy hammer blows. |
| H3 | Hard | Can be scratched with knife or sharp pick with difficulty (heavy pressure). Heavy hammer blow required to break specimen. |
| H4 | Moderately hard | Can be scratched with knife or sharp pick with light or moderate pressure. Core or fragment breaks with moderate hammer blow. |
| H5 | Moderately soft | Can be grooved 2 mm deep by knife or sharp pick with moderate or heavy pressure. Core or fragment breaks with light hammer blow or heavy manual pressure. |
| H6 | Soft | Can be grooved or gouged easily by knife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure. |
| H7 | Very soft | Can be readily indented, grooved or gouged with fingernail, or carved with a knife. Breaks with light manual pressure. |
| Any bedrock unit softer than H7, very soft, is to be described using ASTM D-2488 consistency descriptors. | | |
| Note: Although "sharp pick" is included in these definitions, descriptions of ability to be scratched, grooved or gouged by a knife is the preferred criteria. | | |
| Modified from United States Bureau of Reclamation, Engineering Geology Field Manual. | | |

| BEDDING, FOLIATION, OR FLOW TEXTURE DESCRIPTORS | |
|--|---------------------|
| Descriptors | Thickness / Spacing |
| Massive | Greater than 3 m |
| Very thickly (bedded, foliated, or banded) | 1 to 3 m |
| Thickly | 300 mm to 1 m |
| Moderately | 100 to 300 mm |
| Thinly | 30 to 100 mm |
| Very thinly | 10 to 30 mm |
| Laminated (intensely foliated or banded) | Less than 10 mm |
| Modified from United States Bureau of Reclamation, Engineering Geology Field Manual. | |

| DIST. | COUNTY | ROUTE | POST MILES-TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 11 | SD | 805 | | | |

REGISTERED CIVIL ENGINEER NO. 5565
 DATE APPROVED _____

TO ACCOMPANY PLANS DATED 10-18-10

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES
 As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

| DIST. | COUNTY | ROUTE | KILOMETER POST-TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|---------|------------------------------|-----------|--------------|
| 11 | SD | 905,805 | R8.4/R9.8, 3.1/4.2 | 364 | 364 |

REGISTERED CIVIL ENGINEER
 HECTOR VALENCIA
 No. C65257
 Exp. 9-30-05
 CIVIL
 STATE OF CALIFORNIA

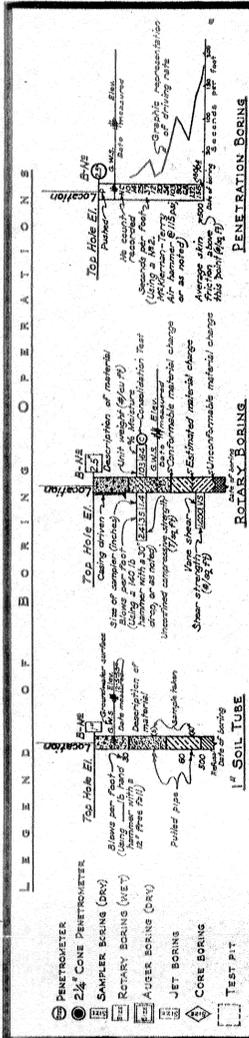
DEL SOL BLVD. UC (WIDEN)
 LOG OF TEST BORINGS 4 OF 4

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA
 CU: 11
 EA: 091831
 BRIDGE NO. 57-0854R

Revisions made to this Log of Test Borings from the original 1970 Log of Test Borings are the addition of the following table and notes:
 Sheet 19 of 19

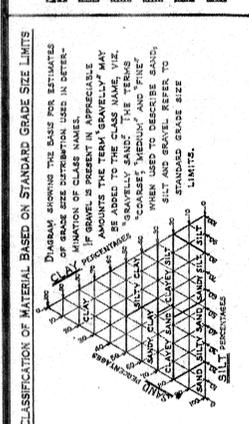
| Boring | Station | Offset from "D2BA Line" |
|--------|---------|-------------------------|
| B-1 | 44+53.7 | 7.0 m Right |
| B-2 | 44+90.6 | 26.5 m Left |
| B-3 | 44+91.8 | 4.6 m Right |
| B-4 | 44+44.5 | 60.4 m Left |
| B-5 | 44+50.0 | 29.6 m Left |
| B-6 | 44+53.1 | 16.5 m Left |
| B-7 | 44+79.3 | 54.9 m Left |
| B-8 | 44+48.2 | 34.8 m Left |

- Notes:
 1. See the General Plan and/or Foundation Plan for Metric Stationing.
 2. The data presented in the table above are the metric locations for the As-Built Log of Test Borings referenced to the proposed new structure location. This table is presented on this sheet for the convenience of any bidder, contractor or other interested party.



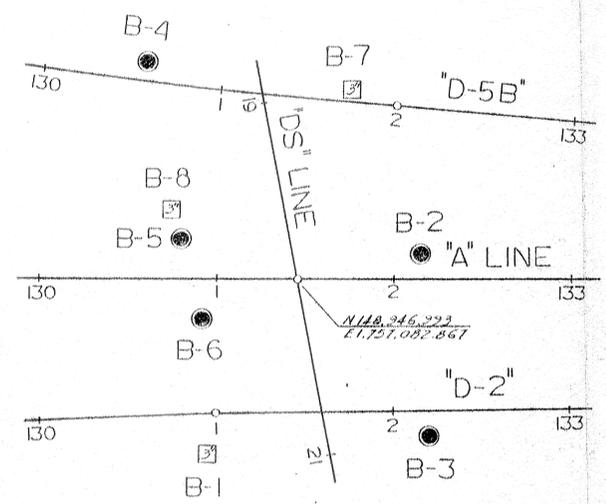
LEGEND OF EARTH MATERIALS

| | |
|---------------------------|--------------------------|
| GRAVEL | SILT CLAY OR CLAYEY SILT |
| SAND | PEAT AND ORGANIC MATTER |
| SILT | FILL MATERIAL |
| CLAY | IGNEOUS ROCK |
| SANDY CLAY OR CLAYEY SAND | SEDIMENTARY ROCK |
| SILT SAND | METAMORPHIC ROCK |



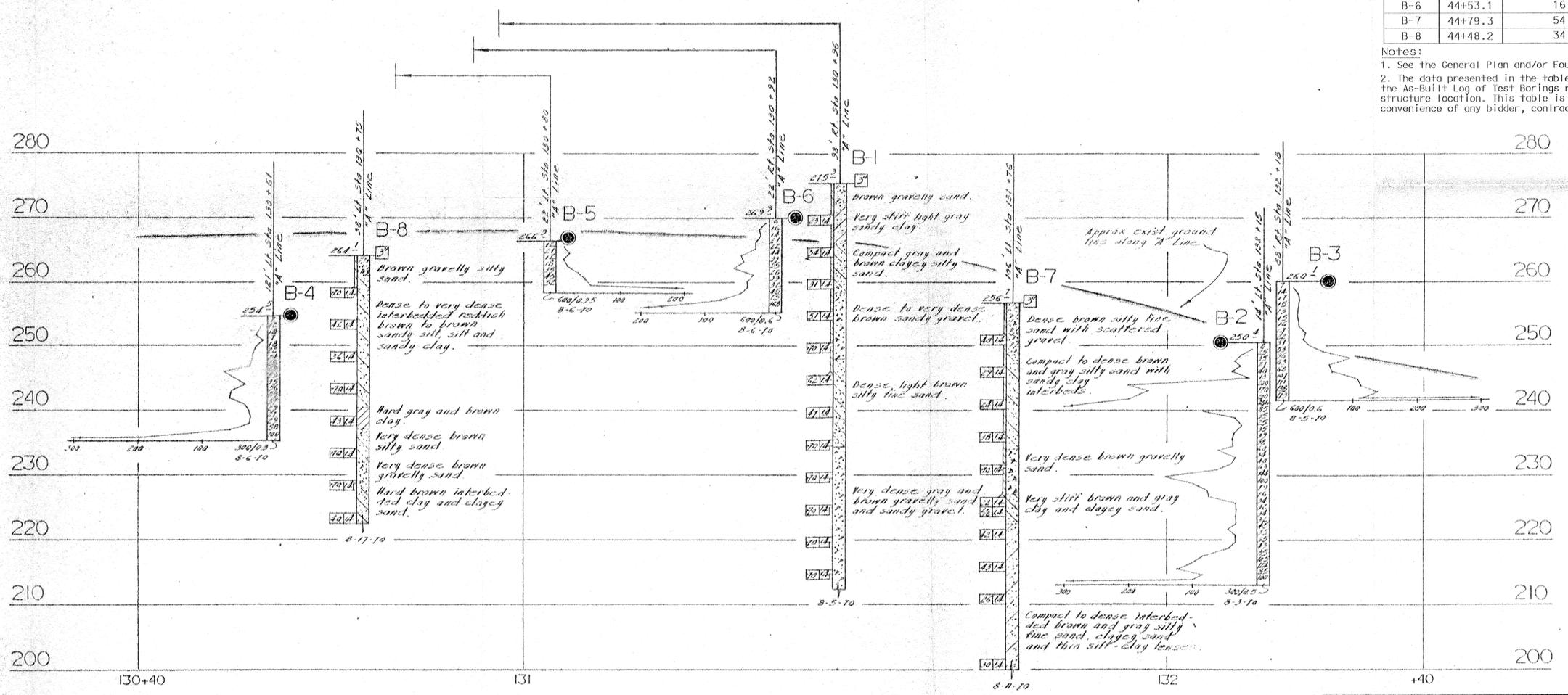
NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

BENCH MARK
 B.M. #A 857D
 162' LI. 125' 60" "A" N118.402.140 E1756.808.110
 Elev. 267.95'



PLAN
 Scale: 1" = 50'

PROFILE
 Scale: Vert. 1" = 10'
 Horiz. 1" = 10'



NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY ABOVE DIST. GEOLOGY SECTION. DATE August 1970.

GEOLOGY

STATE OF CALIFORNIA
 TRANSPORTATION AGENCY
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

DEL SOL BOULEVARD UNDERCROSSING

LOG OF TEST BORINGS

| | | | |
|----------------------|---------------|-------------|----------------|
| BRIDGE NO. 57-854R/L | POST MILE 2.2 | DRAWING NO. | SHEET 19 OF 19 |
|----------------------|---------------|-------------|----------------|

WO 045811
 CU 11251
 FILENAME => 57-1141-191tb05.tif

Disregard prints bearing earlier revision dates

| REVISION DATES | (PRELIMINARY STAGE ONLY) |
|----------------|--------------------------|
| | |