

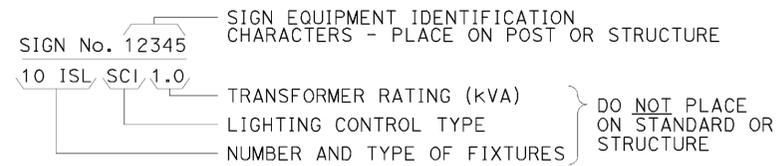
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	101	181

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE

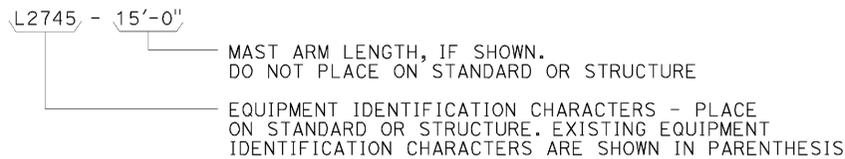
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EQUIPMENT IDENTIFICATION

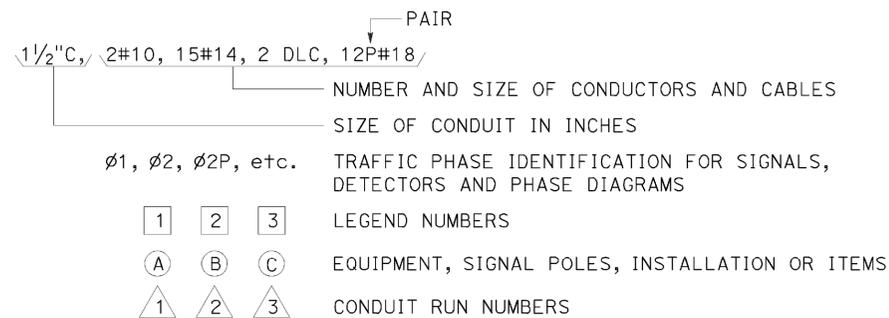
ILLUMINATED SIGN IDENTIFICATION:



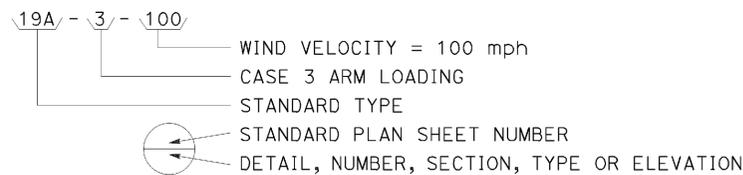
ELECTROLIER OR EQUIPMENT IDENTIFICATION:



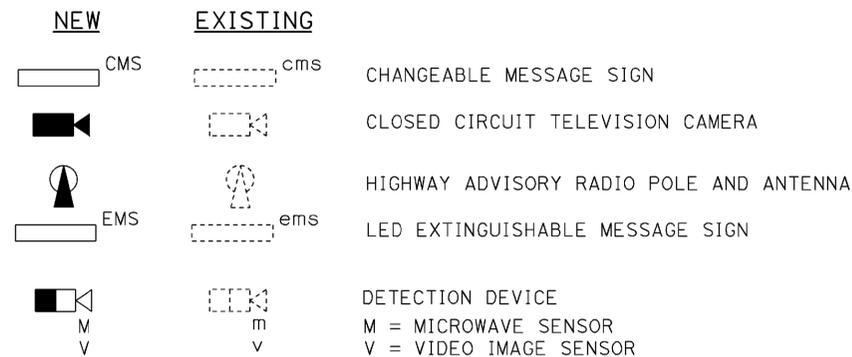
CONDUIT AND CONDUCTOR IDENTIFICATION:



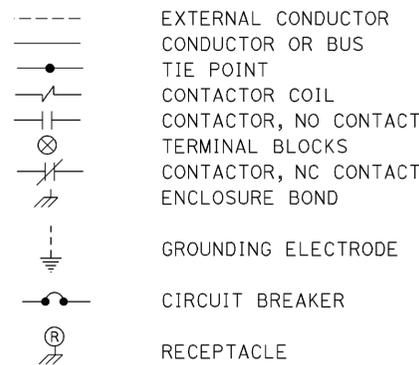
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



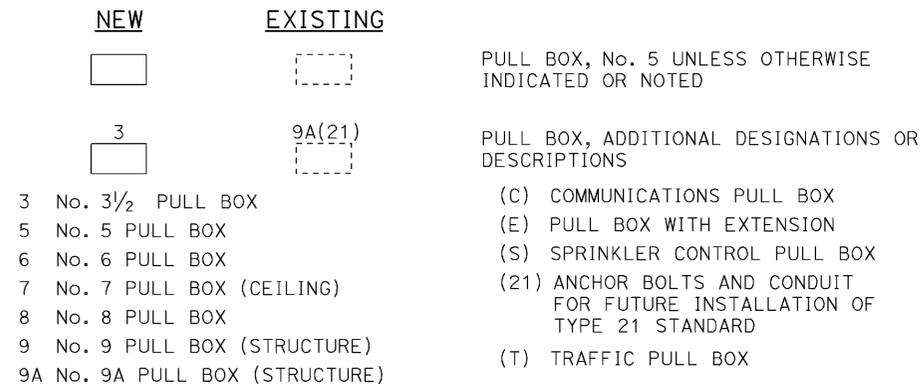
MISCELLANEOUS EQUIPMENT



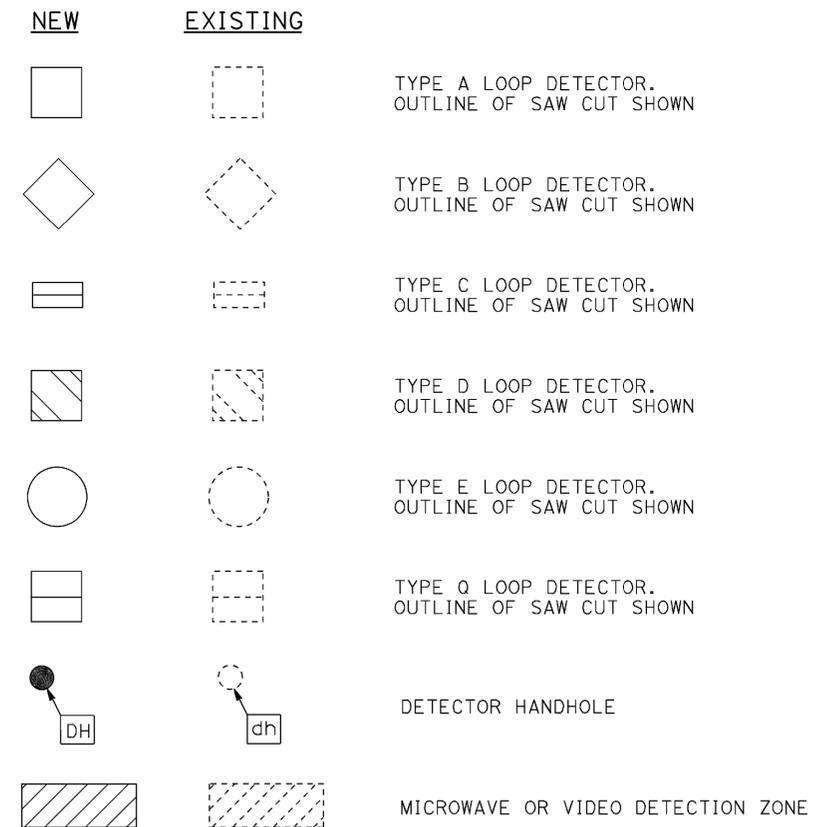
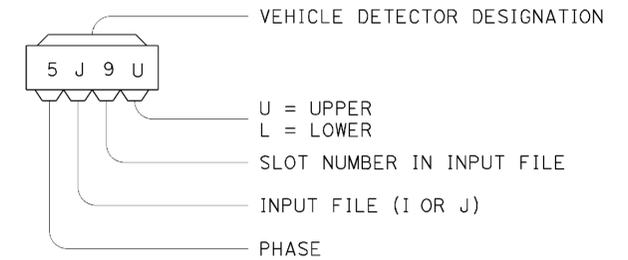
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED APRIL 15, 2016 SUPERSEDES RSP ES-1C DATED OCTOBER 30, 2015 AND RSP ES-1C DATED JULY 19, 2013 AND STANDARD PLAN ES-1C DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1C

NOTES:

1. 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.
2. Cabinet fan may be installed at an alternate location near the top of the cabinet when approved by the Engineer.
3. Where telephone interconnect is required, a minimum of 5" clear vertical space shall be provided inside the cabinet for the equipment.
4. Telephone interconnect conductors shall be enclosed in a 3/4" or larger conduit through the foundation. Type 4 conduit shall be used to separate telephone and power conductors in cabinets.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	102	181

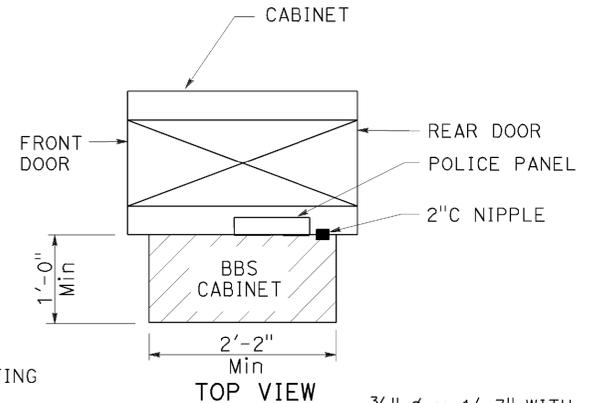
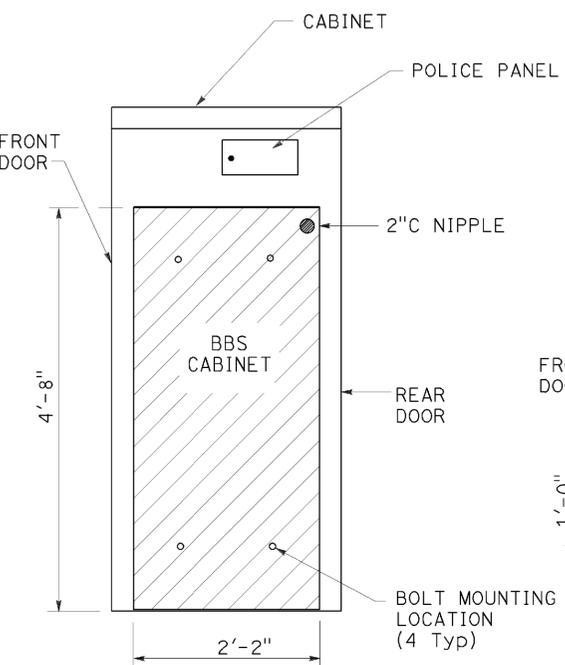
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

April 15, 2016
PLANS APPROVAL DATE

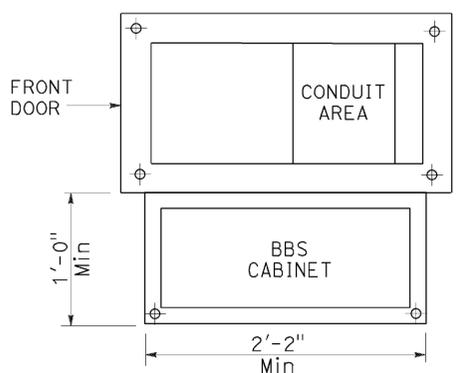
Theresa Aziz Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 06-15-16



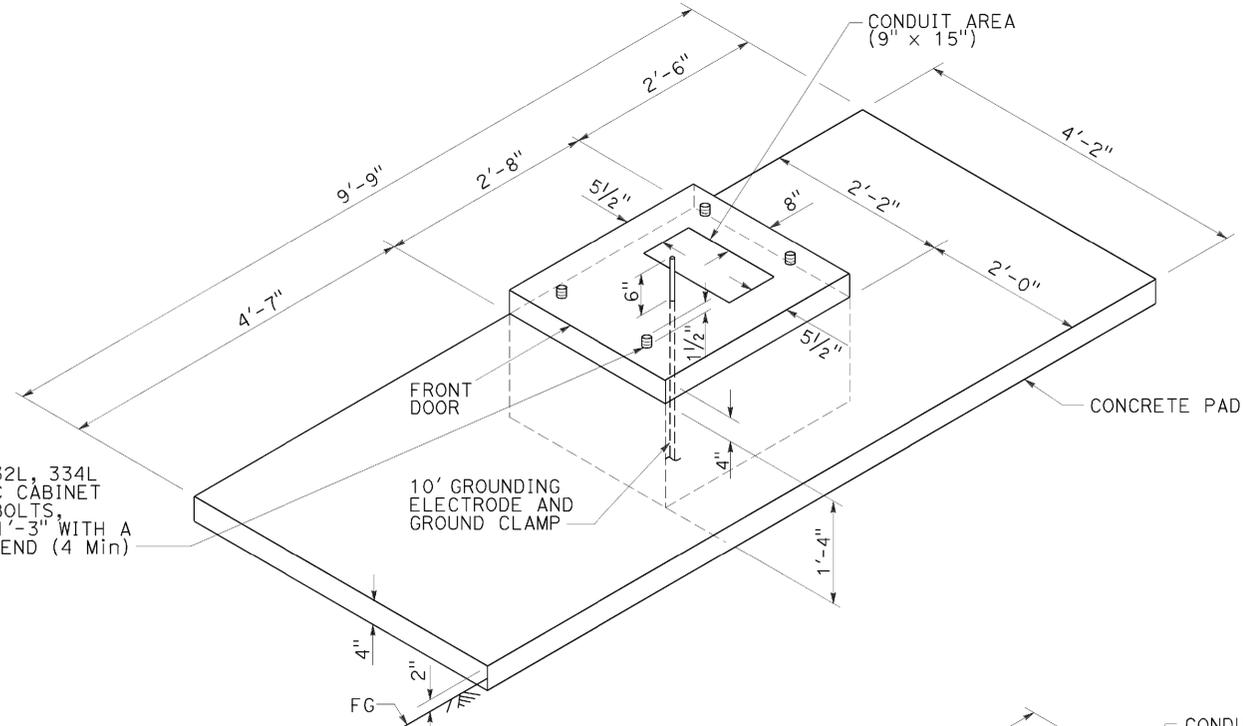
BBS CABINET MOUNTED TO THE MODEL 332L CABINET



BASE PLAN FOR BBS MOUNTED TO THE MODEL 332L CABINET

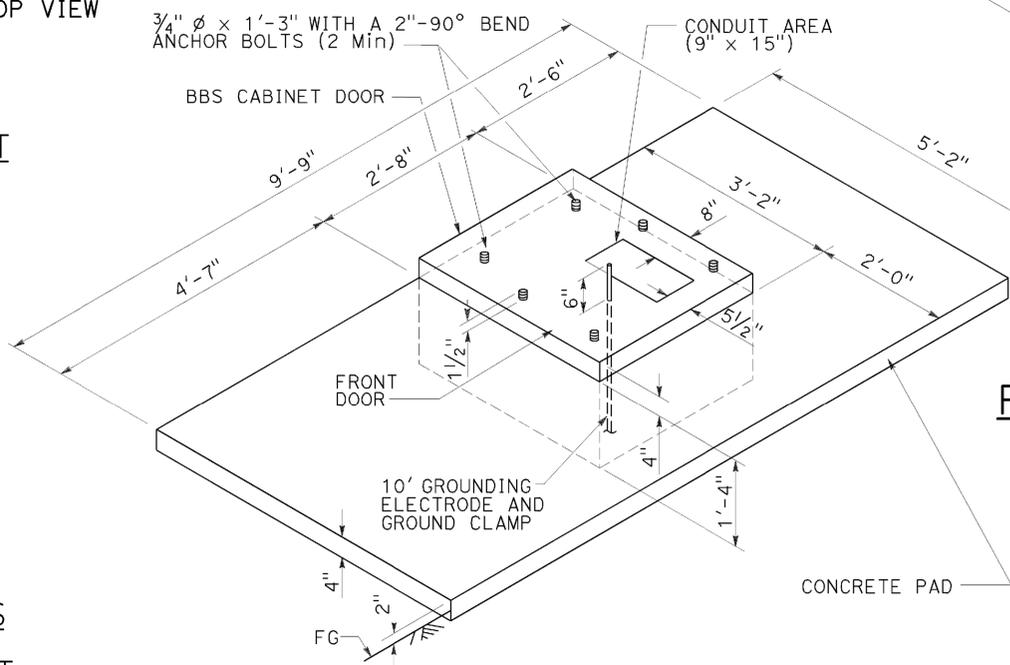
(FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))

MODEL 332L, 334L OR 334LC CABINET ANCHOR BOLTS, 3/4" Ø x 1'-3" WITH A 2"-90° BEND (4 Min)

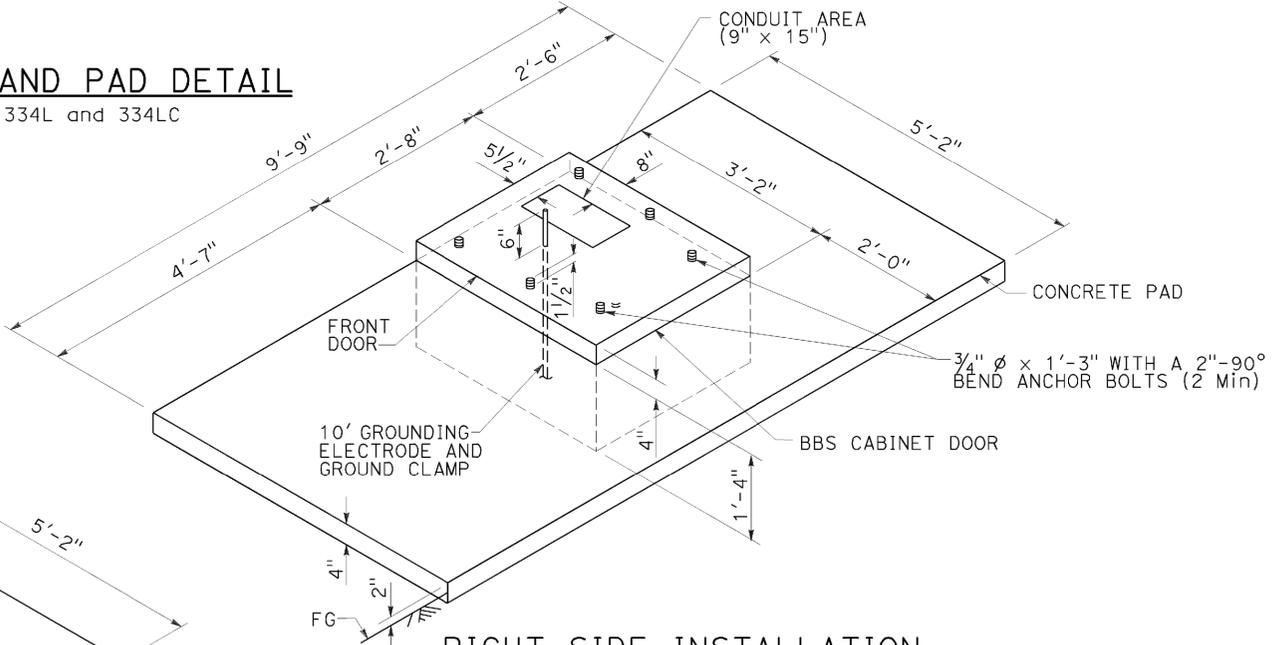


FOUNDATION AND PAD DETAIL
Model 332L, 334L and 334LC

3/4" Ø x 1'-3" WITH A 2"-90° BEND ANCHOR BOLTS (2 Min)



LEFT SIDE INSTALLATION DETAIL A



RIGHT SIDE INSTALLATION DETAIL B

MODIFIED MODEL 332L CABINET FOUNDATION DETAIL FOR BATTERY BACKUP SYSTEM

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (CONTROLLER CABINET FOUNDATION AND PAD DETAILS)

NO SCALE

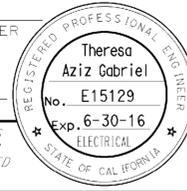
RSP ES-3C DATED APRIL 15, 2016 SUPERSEDES RSP ES-3C DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-3C DATED MAY 20, 2011 - PAGE 437 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3C

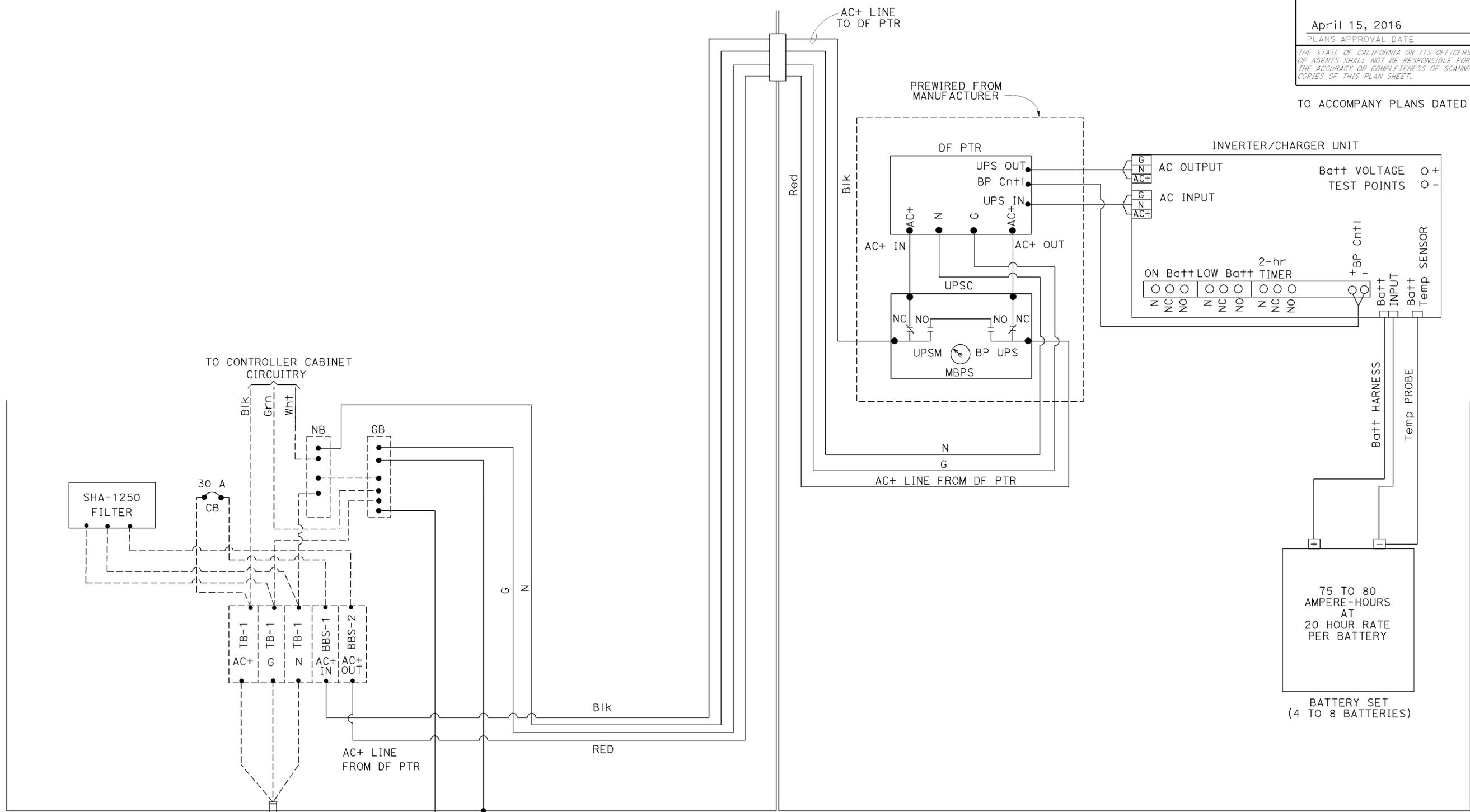
2010 REVISED STANDARD PLAN RSP ES-3C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	103	181

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED 06-15-16



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(ELECTRONICS ASSEMBLY CONNECTION DIAGRAM,
WITH BYPASS CONTROL LINE)
 NO SCALE

RSP ES-31 DATED APRIL 15, 2016 SUPERSEDES RSP ES-31
 DATED OCTOBER 30, 2015 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

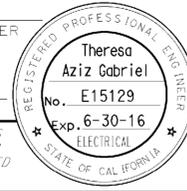
REVISED STANDARD PLAN RSP ES-31

2010 REVISED STANDARD PLAN RSP ES-31

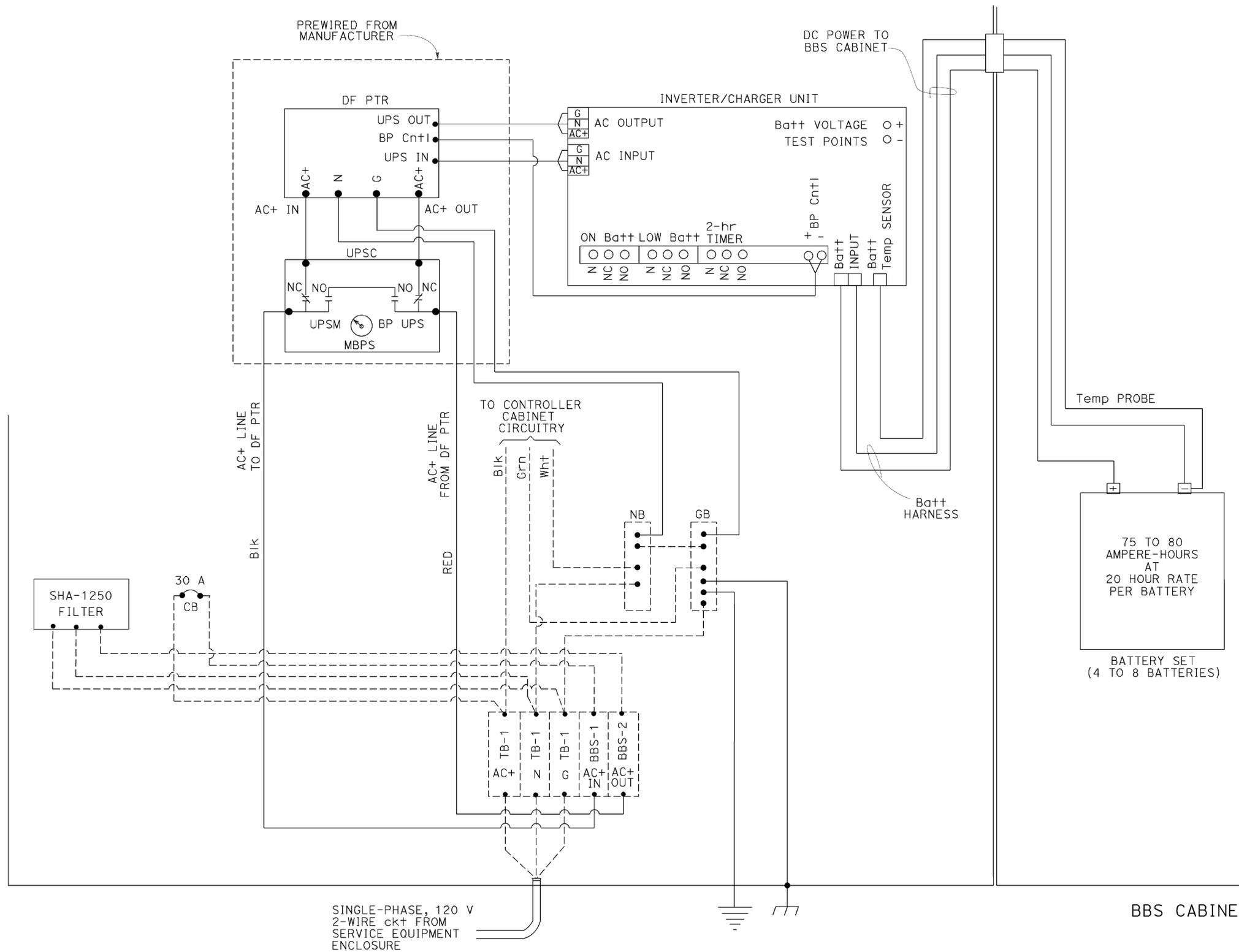
DATE PLOTTED => 04-AUG-2016
 TIME PLOTTED => 12:18

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	104	181

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



TO ACCOMPANY PLANS DATED 06-15-16



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(ELECTRONICS ASSEMBLY CONNECTION DIAGRAM, WITH BYPASS CONTROL LINE)
 NO SCALE

RSP ES-3J DATED APRIL 15, 2016 SUPERSEDES RSP ES-3J DATED OCTOBER 30, 2015 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

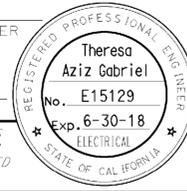
REVISED STANDARD PLAN RSP ES-3J

2010 REVISED STANDARD PLAN RSP ES-3J

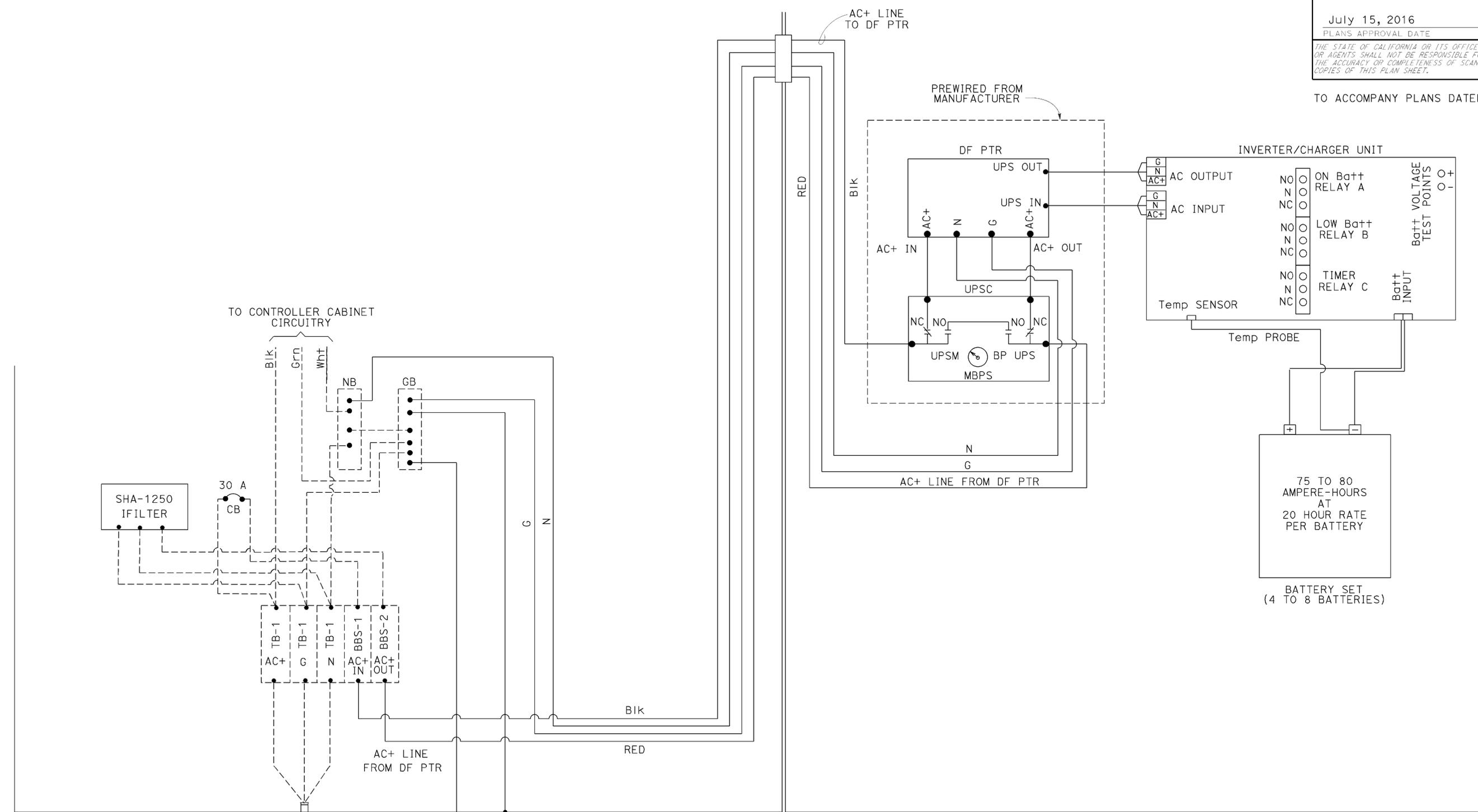
DATE PLOTTED => 04-AUG-2016
 TIME PLOTTED => 12:19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	105	181

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED 06-15-16



SINGLE-PHASE, 120 V
2-WIRE ck+ FROM
SERVICE EQUIPMENT
ENCLOSURE

CONTROLLER CABINET

BBS CABINET

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ELECTRONICS ASSEMBLY CONNECTION DIAGRAM,
WITHOUT BYPASS CONTROL LINE)**

NO SCALE

RSP ES-3K DATED JULY 15, 2016 SUPERSEDES RSP ES-3K DATED APRIL 15, 2016 AND RSP ES-3K DATED OCTOBER 30, 2015 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

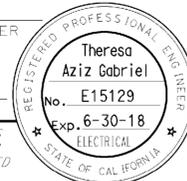
REVISED STANDARD PLAN RSP ES-3K

2010 REVISED STANDARD PLAN RSP ES-3K

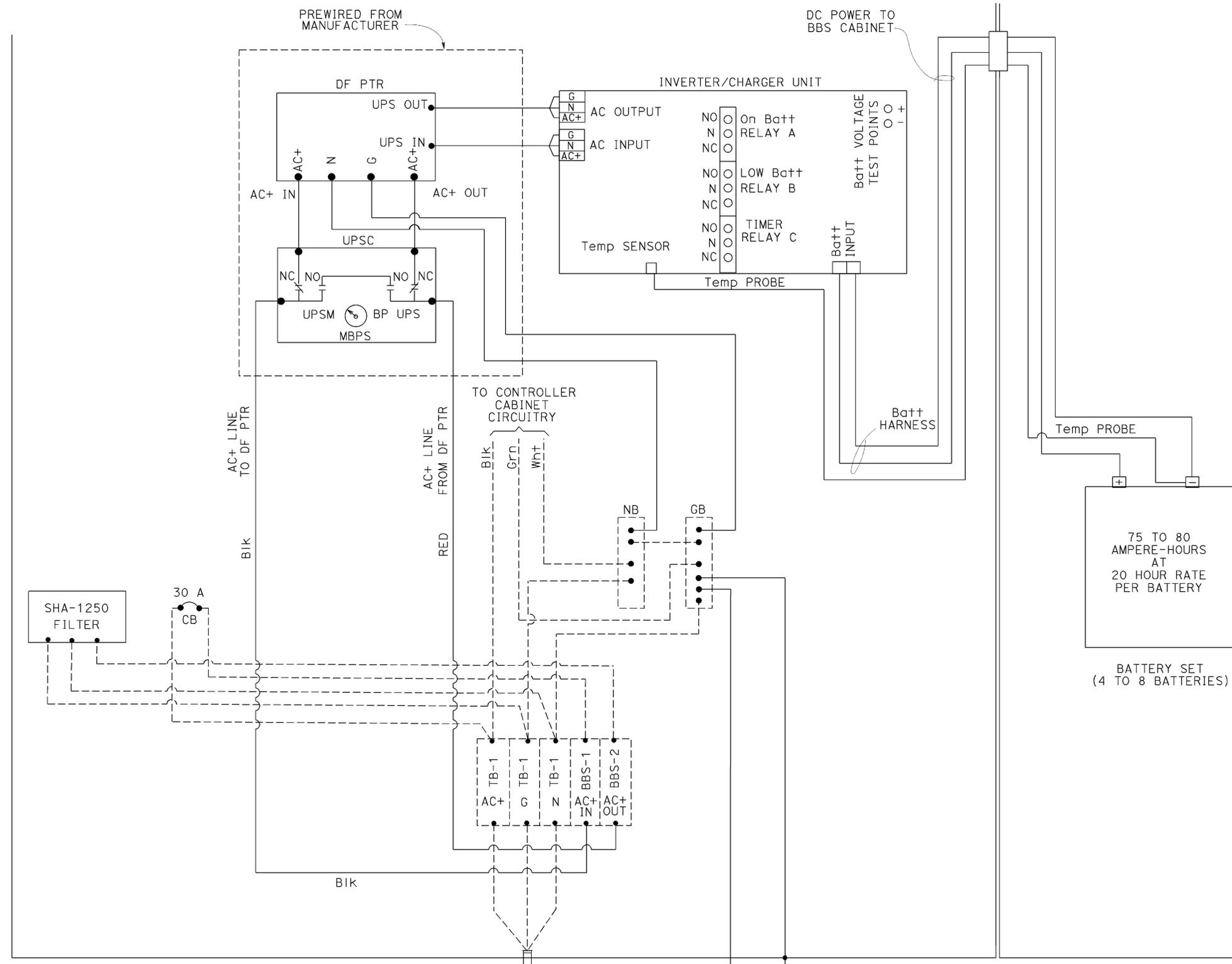
DATE PLOTTED => 04-AUG-2016
TIME PLOTTED => 12:19

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	106	181

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED 06-15-16



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(ELECTRONICS ASSEMBLY CONNECTION DIAGRAM, WITHOUT BYPASS CONTROL LINE)

NO SCALE
 RSP ES-3L DATED JULY 15, 2016 SUPERSEDES RSP ES-3L DATED APRIL 15, 2016 AND RSP ES-3L DATED OCTOBER 30, 2015 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3L

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Plu	70	50.6/51.7	107	181

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 06-15-16

PLAN VIEW OF OTHER SIDE MOUNTINGS

ABBREVIATIONS:

- SV SIDE MOUNTED SIGNAL HEADS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED SIGNAL HEADS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES
(3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

NOTES:

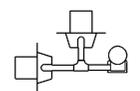
1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplate installation.
3. See Revised Standard Plans RSP ES-4D and RSP ES-4E for attachment fitting details.

PLAN VIEW OF TOP MOUNTINGS

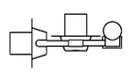
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SIGNAL HEADS AND MOUNTINGS)**
 NO SCALE

RSP ES-4A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-4A DATED JULY 19, 2013 AND STANDARD PLAN ES-4A DATED MAY 20, 2011 - PAGE 443 OF THE STANDARD PLANS BOOK DATED 2010.

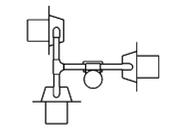
REVISED STANDARD PLAN RSP ES-4A



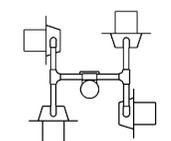
SV-2-TD



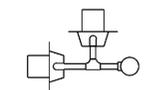
SV-2-TC



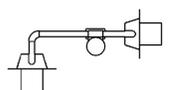
SV-3-TC



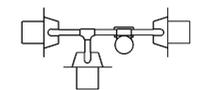
SV-4-TC



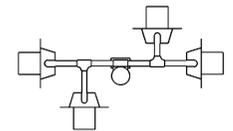
SV-2B



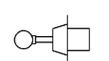
SV-2-TB



SV-3-TB



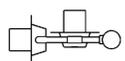
SV-4-TB



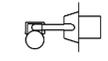
SV



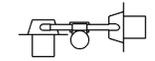
SV-1



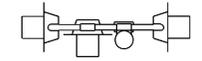
SV-2A



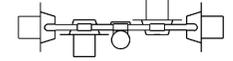
SV-1-T



SV-2-TA



SV-3-TA

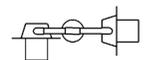


SV-4-TA

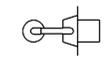
SIDE MOUNTINGS



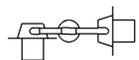
TV-1



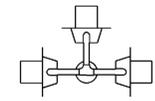
TV-2



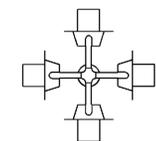
TV-1-T



TV-2-T



TV-3-T



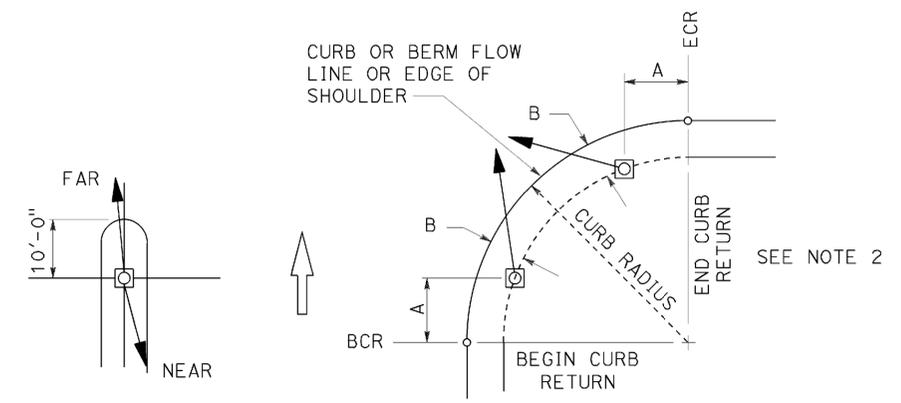
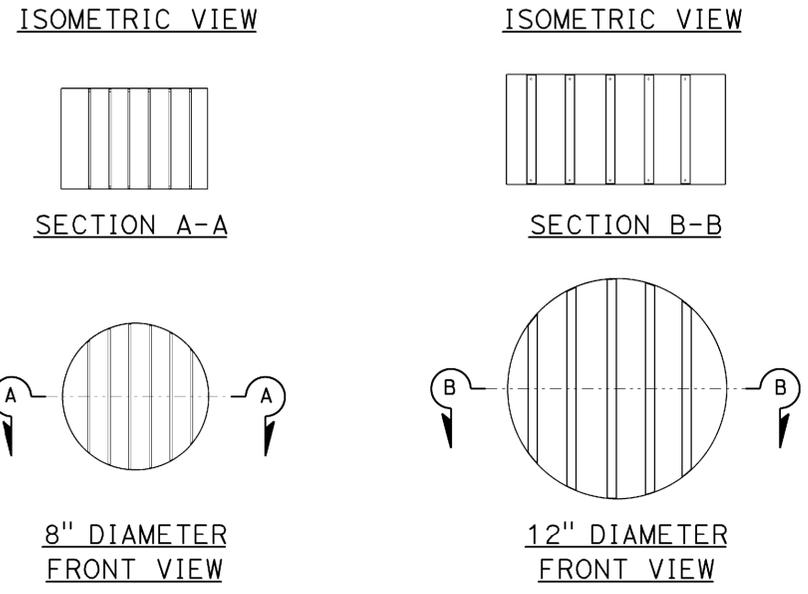
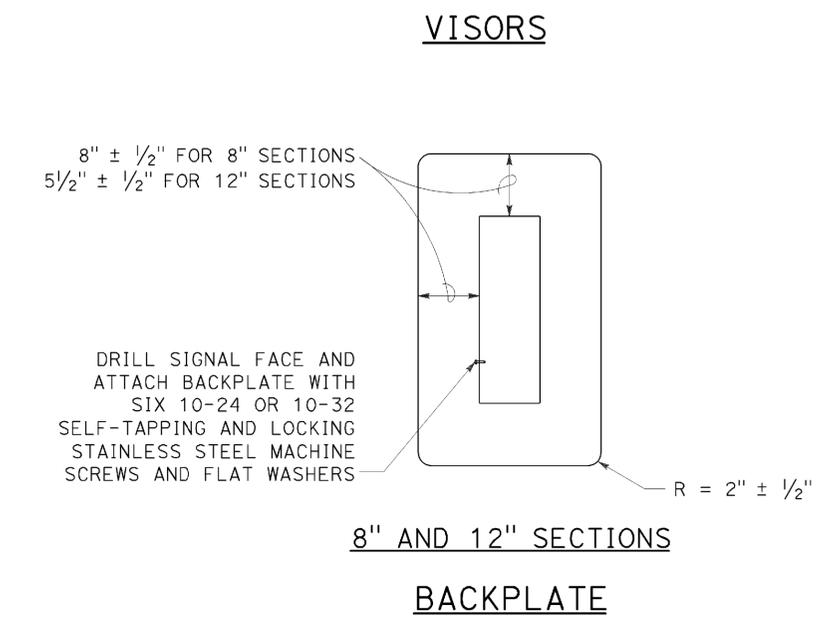
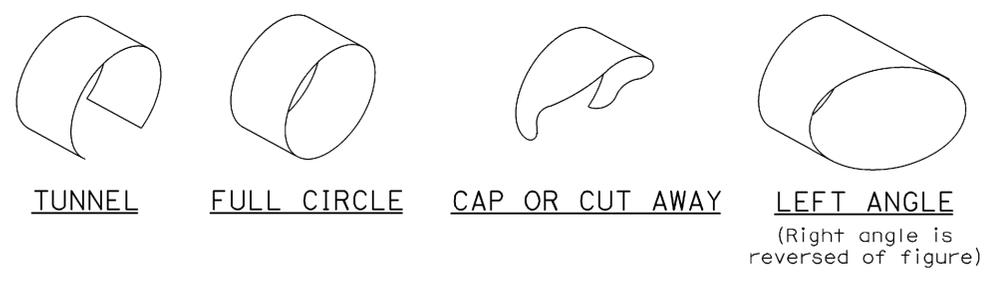
TV-4-T

TOP MOUNTINGS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	108	181

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 06-15-16

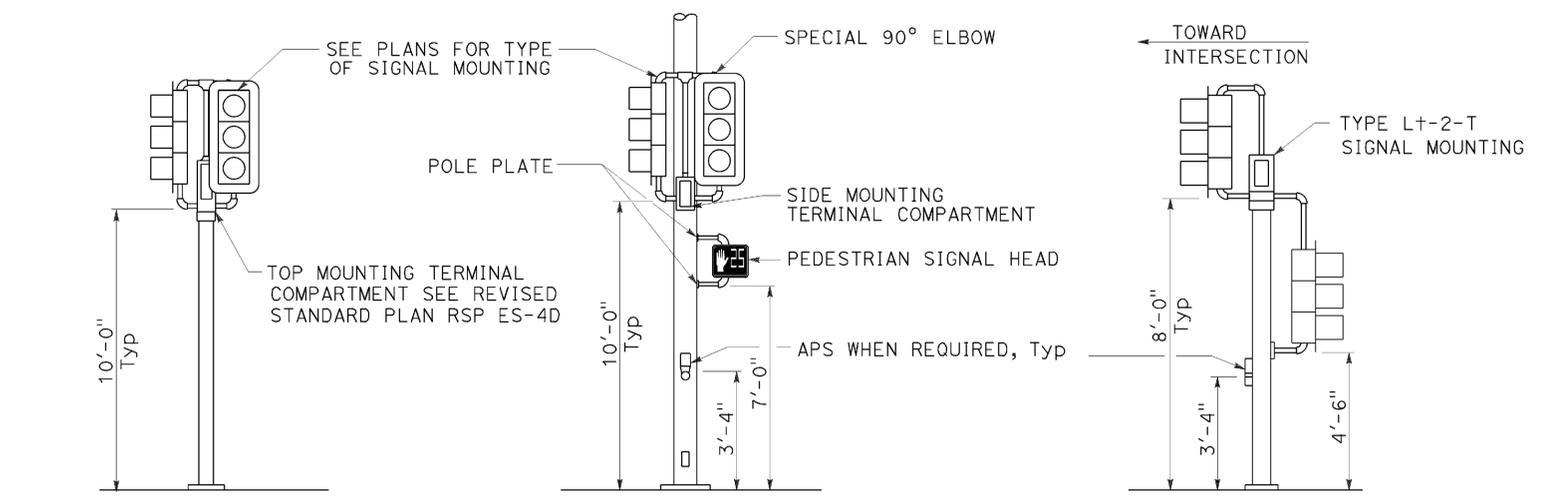


- NOTES:**
1. Typical signal pole placement unless dimensioned on plans.
 2. For A and B dimensions, see Pole Schedule.

DIRECTIONAL LOUVER

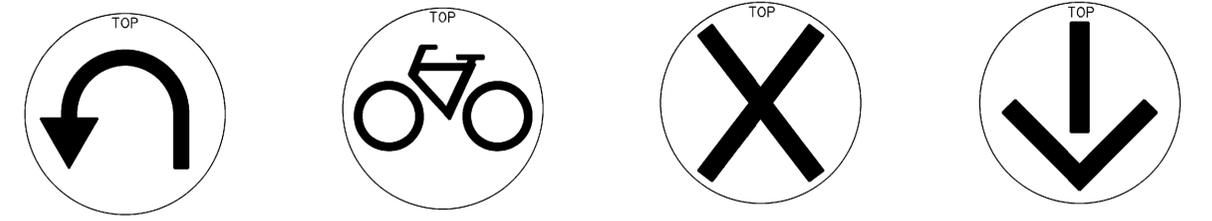
Directional louvers shall be oriented and secured in place with one plated brass machine screw and nut.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



TOP MOUNTED SIGNALS (TV)
 Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans
SIDE MOUNTED SIGNALS (SV AND SP)
 Normally used on standards with luminaire or signal mast arm
LEFT TURN LANE SIGNAL
 Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans

TYPICAL SIGNAL HEAD INSTALLATIONS



SIGNAL FACES

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)
 NO SCALE

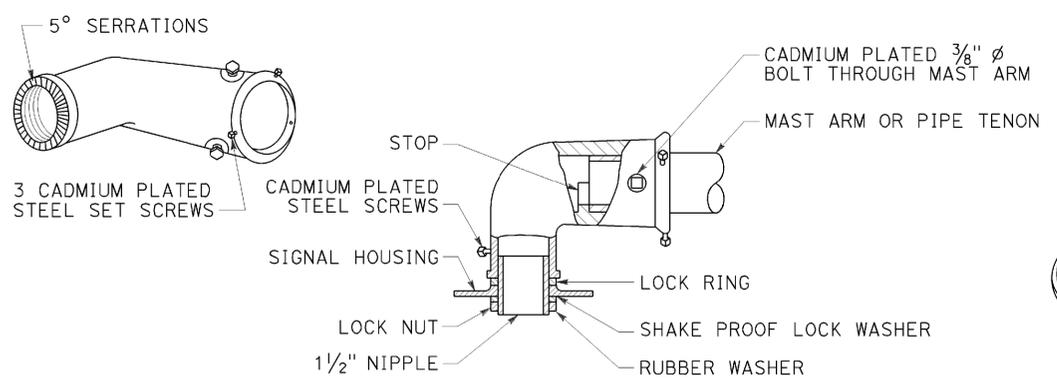
RSP ES-4C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-4C DATED JULY 19, 2013 AND STANDARD PLAN ES-4C DATED MAY 20, 2011 - PAGE 445 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4C

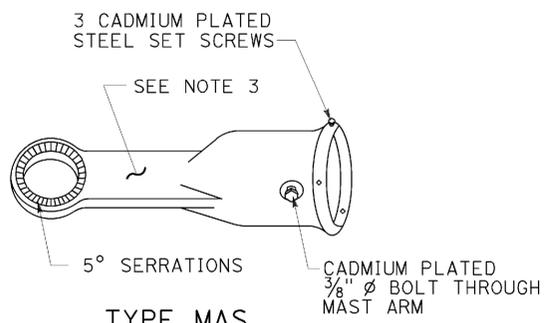
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Piu	70	50.6/51.7	109	181

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
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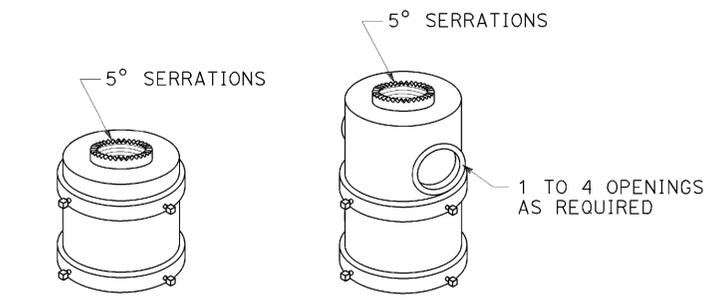
2010 REVISED STANDARD PLAN RSP ES-4D



TYPE MAT
MAST ARM MOUNTING
 For 2 NPS pipe, see Note 1.

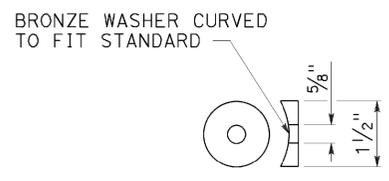


TYPE MAS
MAST ARM MOUNTING
 For 2 NPS pipe, see Note 1.

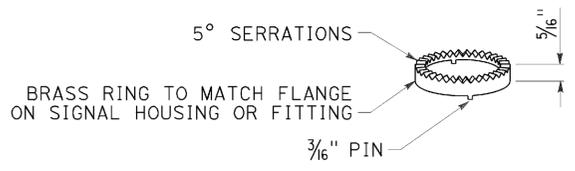


TOP MOUNTINGS
 For 4 NPS pipe, see Note 2.

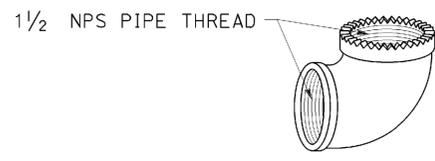
SIGNAL SLIP FITTERS



DETAIL C



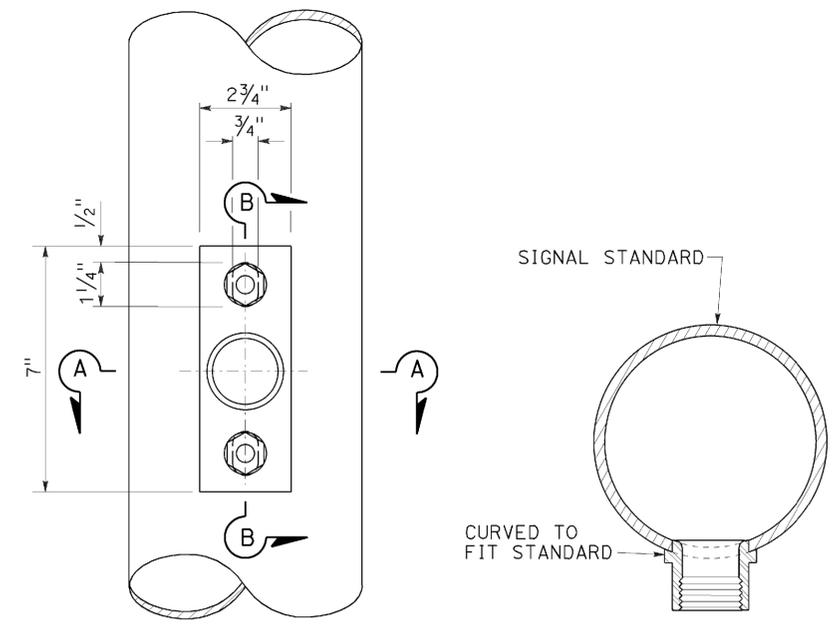
LOCK RING
 Use where locking ring is not integral with signal housing or fitting.



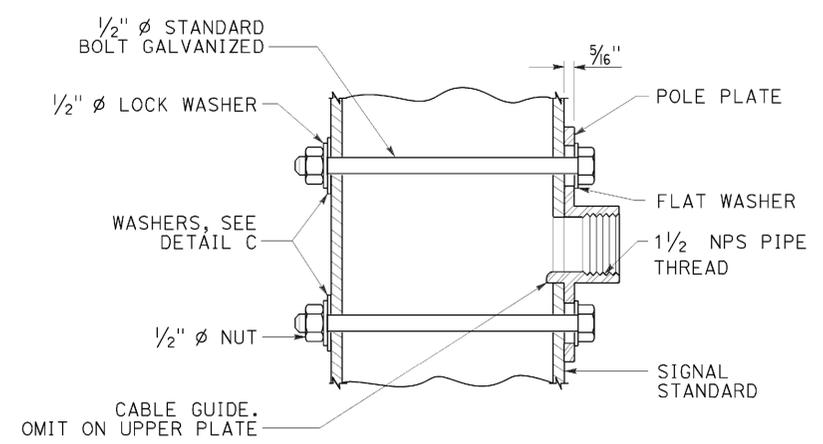
SPECIAL 90° ELBOW
 One for each signal head, except those with special slip fitter mounting

- NOTES:**
- After mast arm signal has been plumbed and secured, drill 1/16" hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated 3/8" Ø galvanized bolt with washer under bolt head through hole and secure with washer, nut, and locknut. Seal openings between mast arm mountings and mast arm with mastic.
 - (A) Threaded top mounted slip fitter openings shall be 1 1/2" NPS.
 (B) Serrations in fittings shall match those on bottom of signal heads or in lock ring.
 (C) Top opening shall be offset when backplate is used.
 - Wireway shall have a cross section area of 0.95 square inch minimum. Minimum width of 1/2".

MISCELLANEOUS MOUNTING HARDWARE

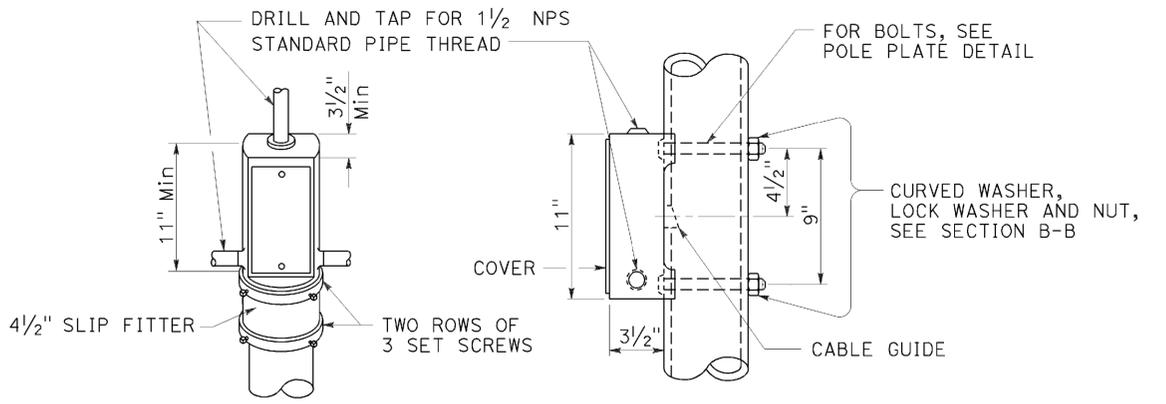


TOP VIEW
SECTION A-A



SECTION B-B

POLE PLATE FOR SIDE MOUNTED SIGNAL HEAD WITHOUT TERMINAL COMPARTMENT



TOP MOUNTING
SIDE MOUNTING
TERMINAL COMPARTMENT

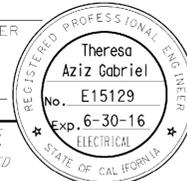
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL HEAD MOUNTING)
 NO SCALE

RSP ES-4D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 20, 2011 - PAGE 446 OF THE STANDARD PLANS BOOK DATED 2010.

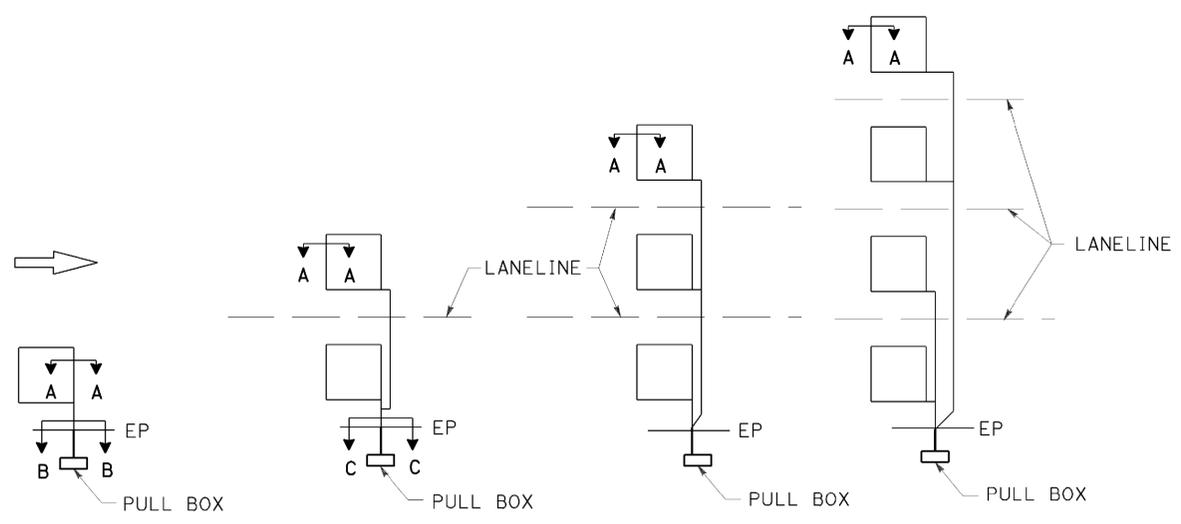
REVISED STANDARD PLAN RSP ES-4D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	110	181

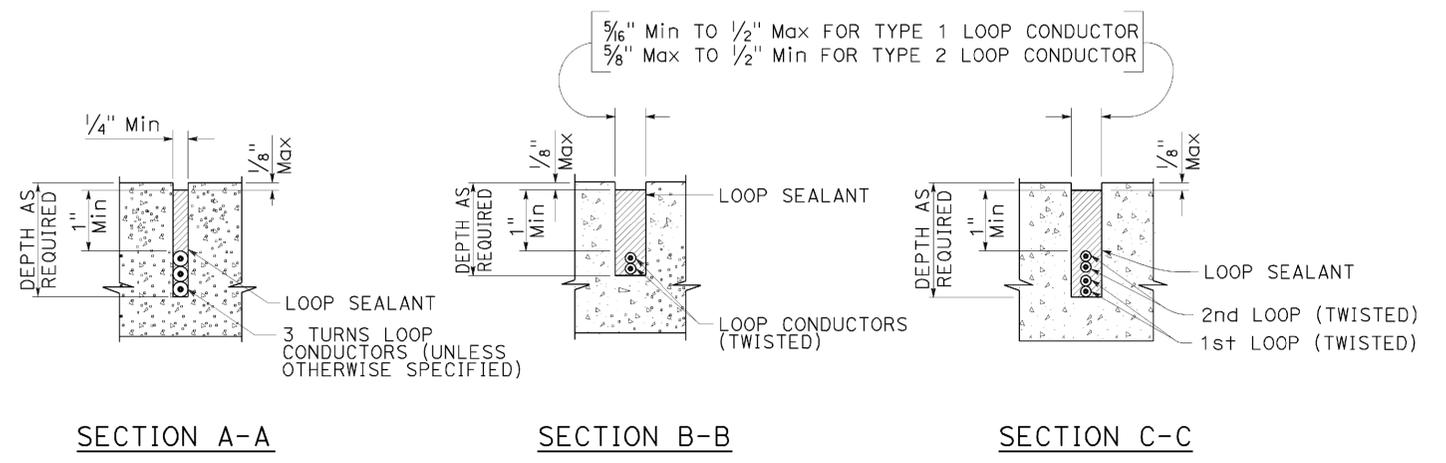
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE
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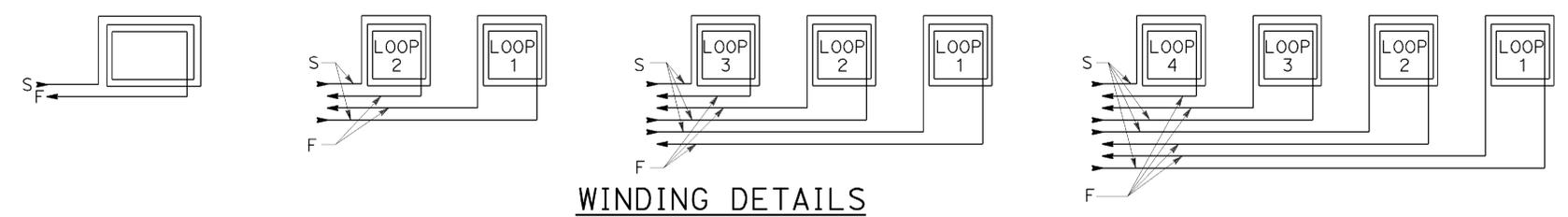
TO ACCOMPANY PLANS DATED 06-15-16



SAW CUT DETAILS
Type A loop detector configurations illustrated

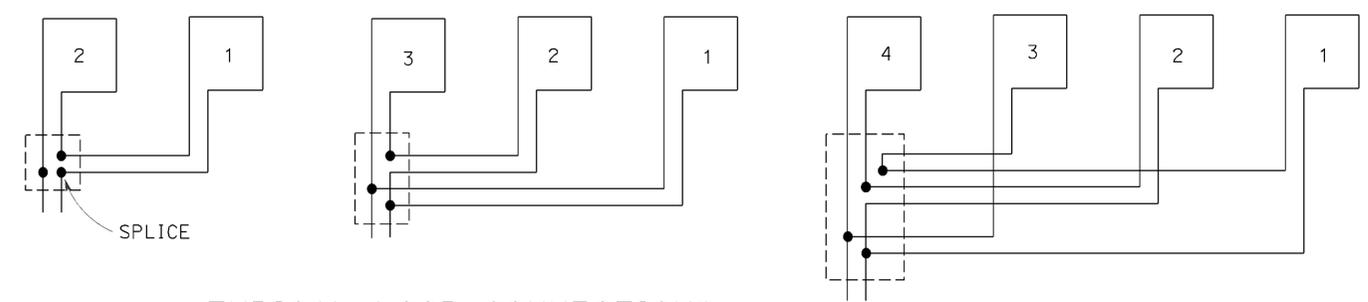


SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



WINDING DETAILS

ABBREVIATIONS:
 S - START
 F - FINISH



TYPICAL LOOP CONNECTIONS
Dashed lines represent the pull box

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LOOP DETECTORS)**
 NO SCALE

RSP ES-5A DATED APRIL 15, 2016 SUPERSEDES RSP ES-5A
 DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-5A DATED
 MAY 20, 2011 - PAGE 448 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5A

2010 REVISED STANDARD PLAN RSP ES-5A

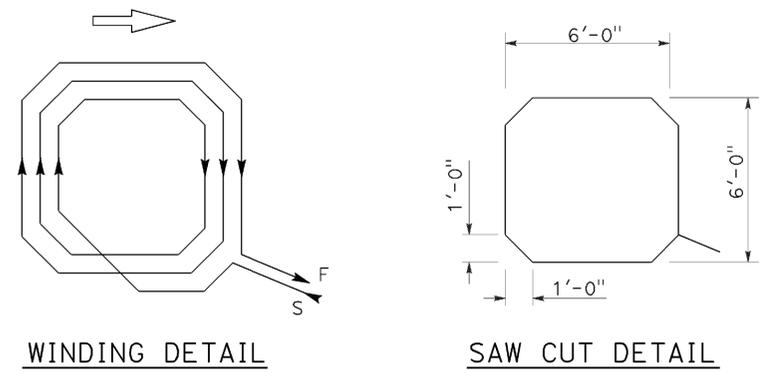
DATE PLOTTED => 04-AUG-2016
 TIME PLOTTED => 12:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	111	181

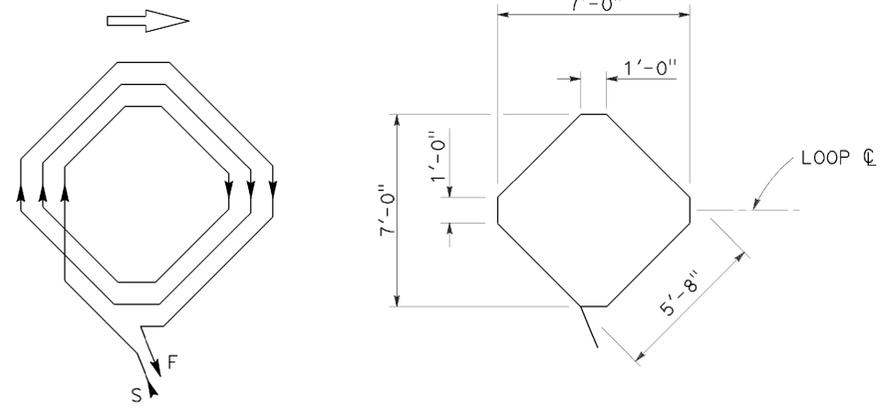
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Theresa
 Aziz Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

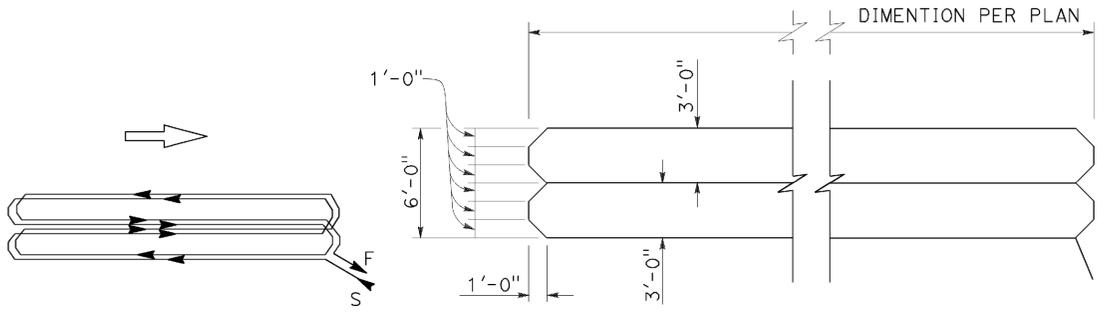
TO ACCOMPANY PLANS DATED 06-15-16



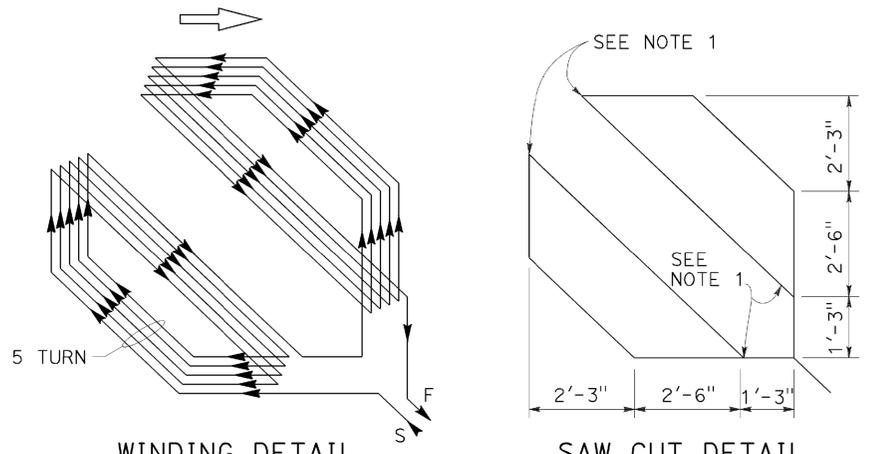
WINDING DETAIL
SAW CUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



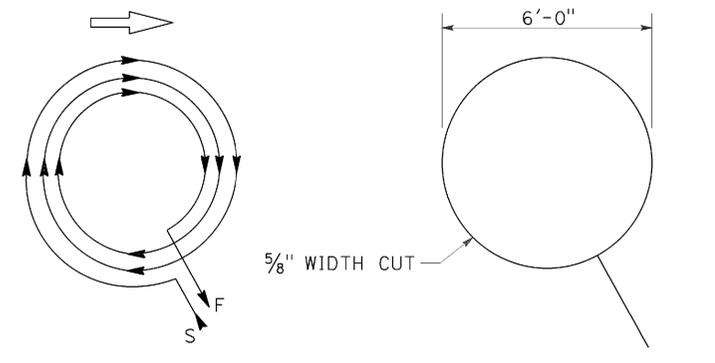
WINDING DETAIL
SAW CUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



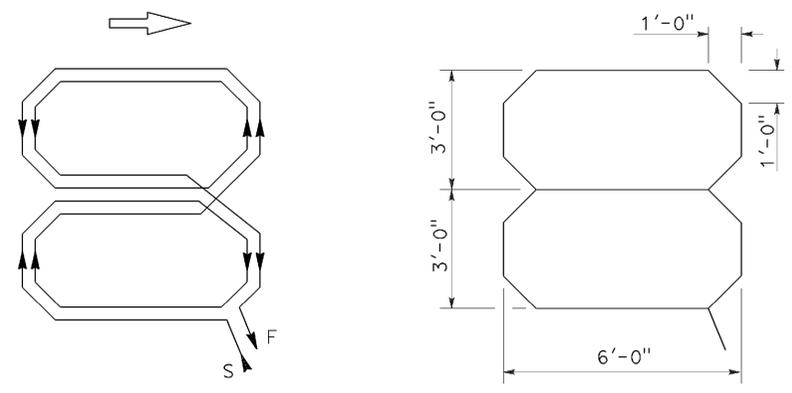
WINDING DETAIL
SAW CUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



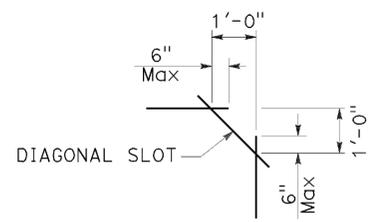
WINDING DETAIL
SAW CUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAW CUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAW CUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



**PLAN VIEW OF
DIAGONAL SLOT
AT CORNERS**

- NOTES:**
1. Round corners of acute angle saw cuts to prevent damage to conductors.
 2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.
 3. Use Type D loops for limit line detection and bicycle lanes.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(DETECTORS)**
NO SCALE

RSP ES-5B DATED APRIL 15, 2016 SUPERSEDES RSP ES-5B DATED OCTOBER 30, 2015 AND RSP ES-5B DATED JULY 19, 2013 AND STANDARD PLAN ES-5B DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5B

2010 REVISED STANDARD PLAN RSP ES-5B

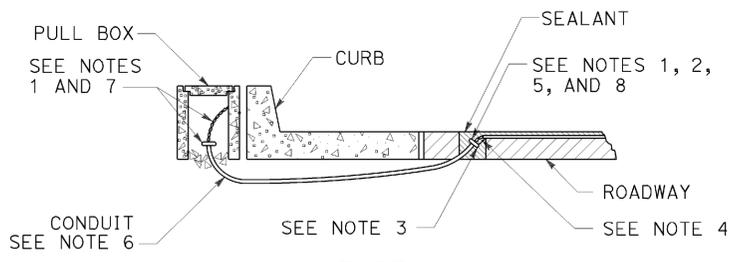
DATE PLOTTED => 04-AUG-2016
TIME PLOTTED => 12:22Z

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	112	181

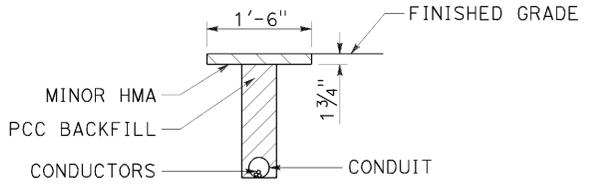
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED 06-15-16

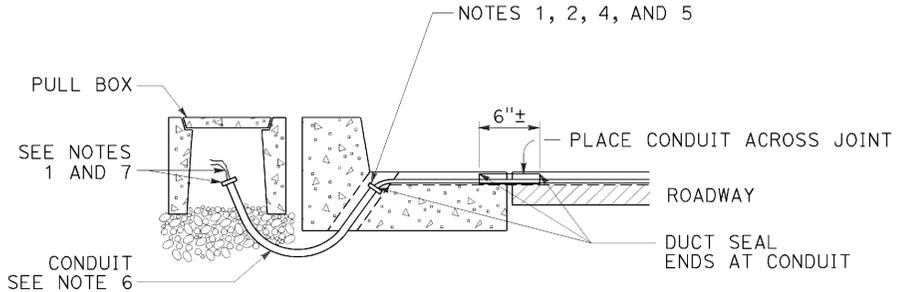
2010 REVISED STANDARD PLAN RSP ES-5D



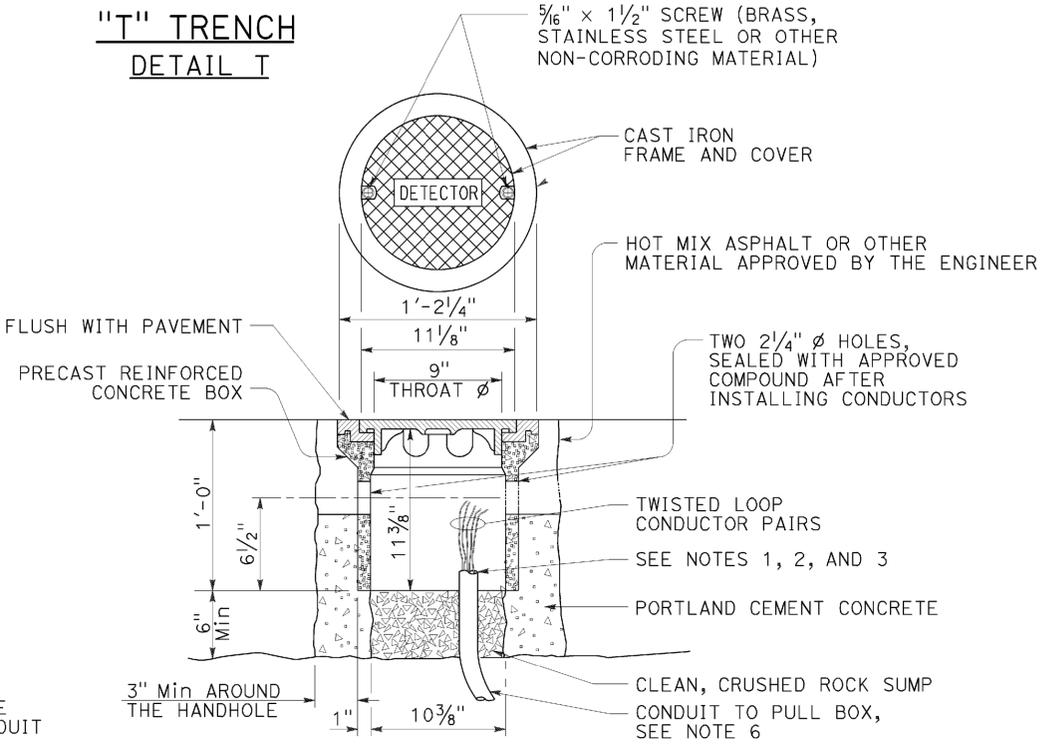
**TYPE A
CURB TERMINATION DETAIL**



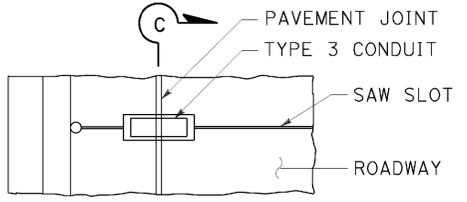
**"T" TRENCH
DETAIL 1**



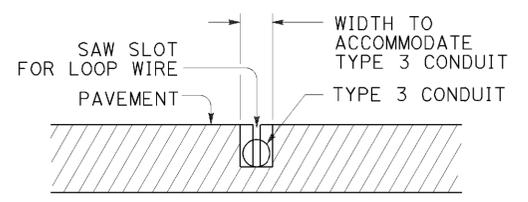
CROSS SECTION



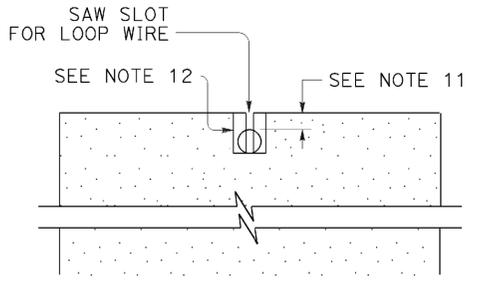
DETECTOR HANDHOLE DETAIL



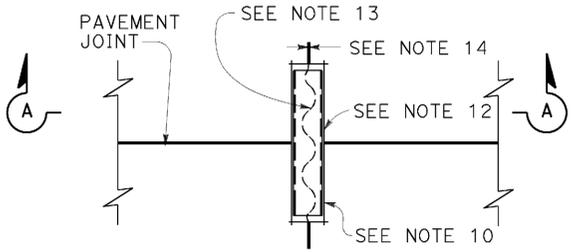
PLAN VIEW



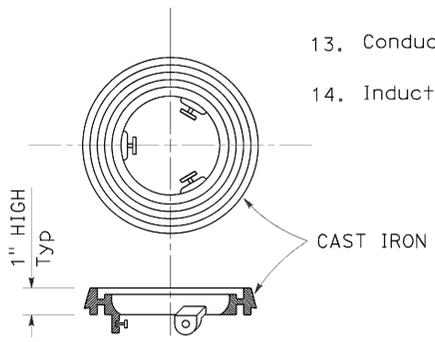
SECTION C-C



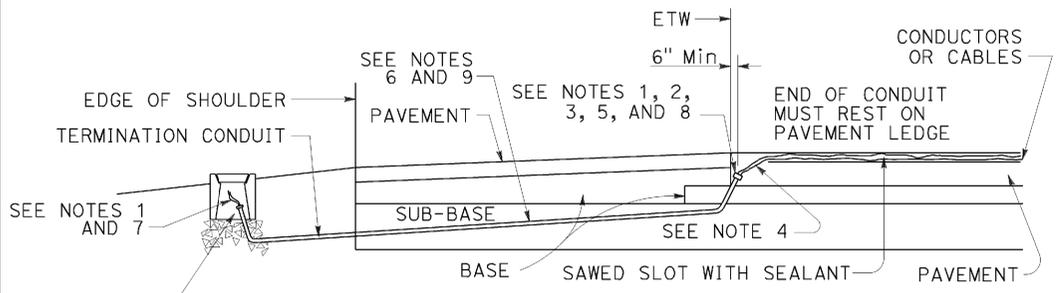
SECTION A-A



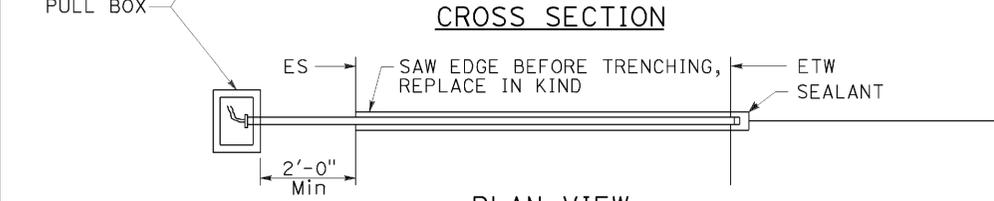
**PLAN VIEW
TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT**



LOCKING GRADE RING



CROSS SECTION



**PLAN VIEW
SHOULDER TERMINATION DETAILS**

NOTES:

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" 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 3/8" below roadway surface.
- Conduit size Loop conductors
 1"C minimum 1 to 2 pairs
 1 1/2"C minimum 3 to 4 pairs
 2"C minimum 5 or more pairs
- Splice detector conductors or cables to detector lead-in-cable.
- 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 2'-0" into the shoulder pavement.
- 3/4"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
- 1/2" Minimum between top of conduit and pavement surface.
- Sawcut shall not exceed 1" in width and 1/8" longer than conduit to be installed.
- Conductors with 1/2" minimum slack inside conduit.
- Inductive loop detector saw slot.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(CURB AND SHOULDER TERMINATION,
TRENCH, AND HANDHOLE DETAILS)**

NO SCALE

RSP ES-5D DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-5D DATED JULY 19, 2013 AND STANDARD PLAN ES-5D DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.

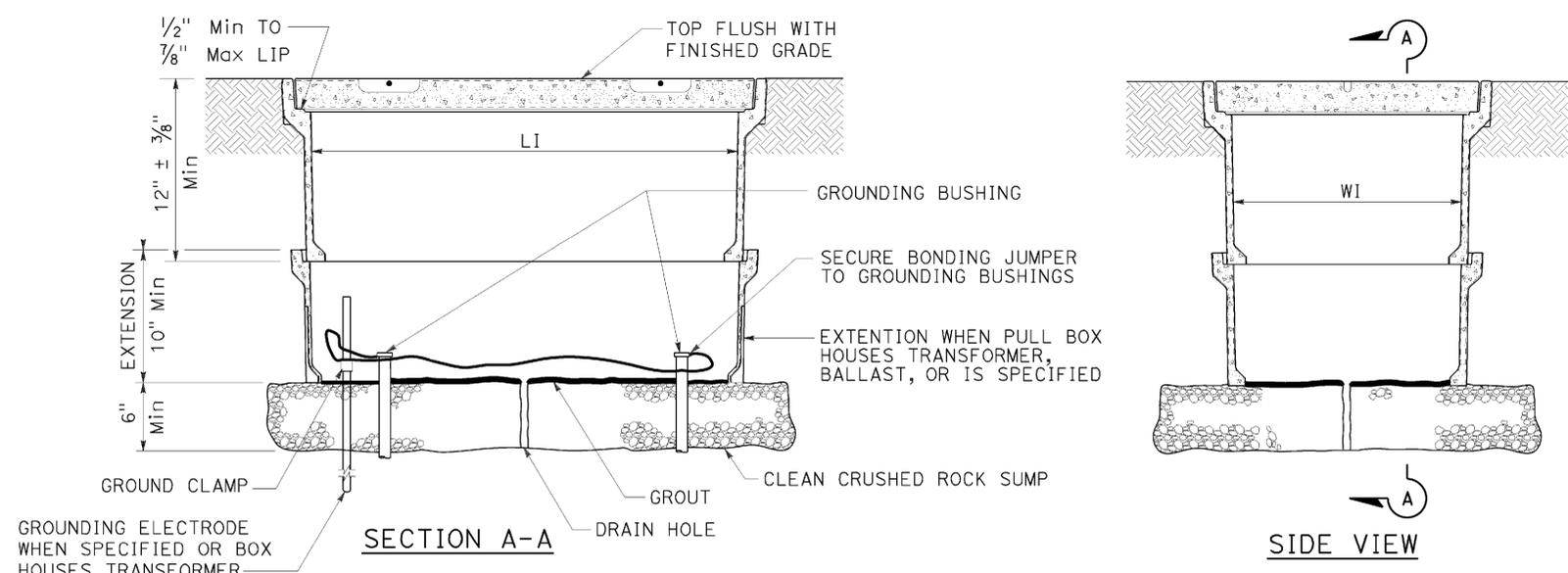
REVISED STANDARD PLAN RSP ES-5D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Piu	70	50.6/51.7	113	181

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE
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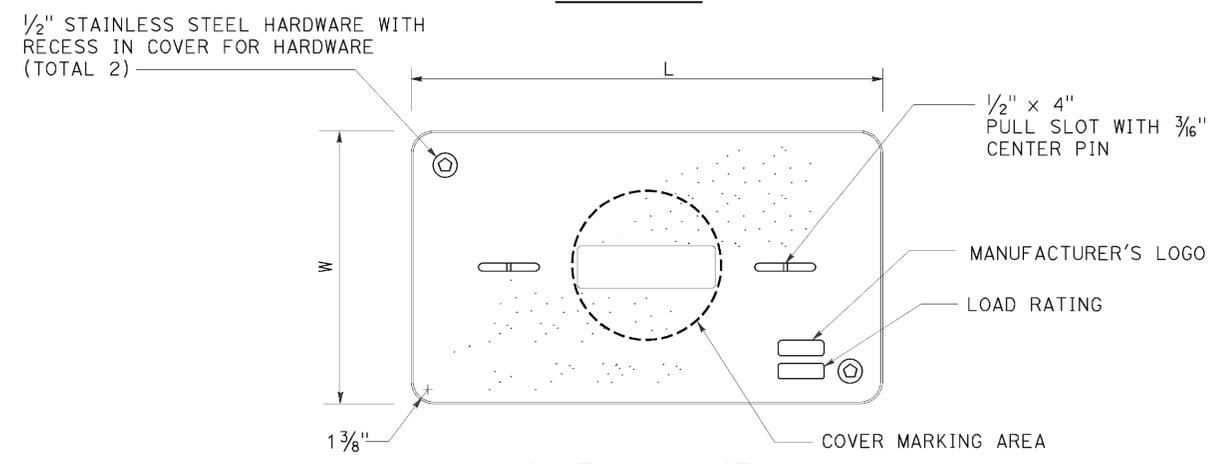
TO ACCOMPANY PLANS DATED 06-15-16



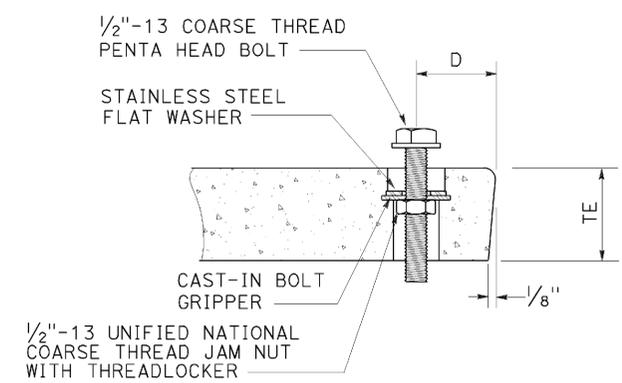
INSTALLATION DETAILS
DETAIL A

NOTES:

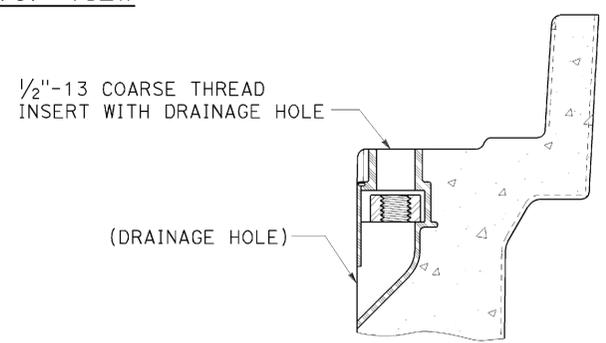
1. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
2. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
3. Dimensions for the cover for non-traffic pull box are nominal values.



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MINIMUM WEIGHT	LI Min	WI Min	TE	D	L	W	MINIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3"	9"	1 3/4"	1 3/4"	1' - 3 1/4" - 1' - 3 3/8"	10" - 10 1/8"	30 lb
No. 5	12"	10"	55 lb	1' - 8"	11"	2"	1 3/4"	1' - 11 1/4"	1' - 1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 4 1/4"	1' - 3 1/4"	2"	2"	2' - 6 1/2"	1' - 5 1/2"	85 lb

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(NON-TRAFFIC PULL BOX)
NO SCALE

RSP ES-8A DATED APRIL 15, 2016 SUPERSEDES RSP ES-8A DATED OCTOBER 30, 2015 AND RSP ES-8A DATED JULY 19, 2013 AND RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8A

2010 REVISED STANDARD PLAN RSP ES-8A

DATE PLOTTED => 04-AUG-2016
TIME PLOTTED => 12:22

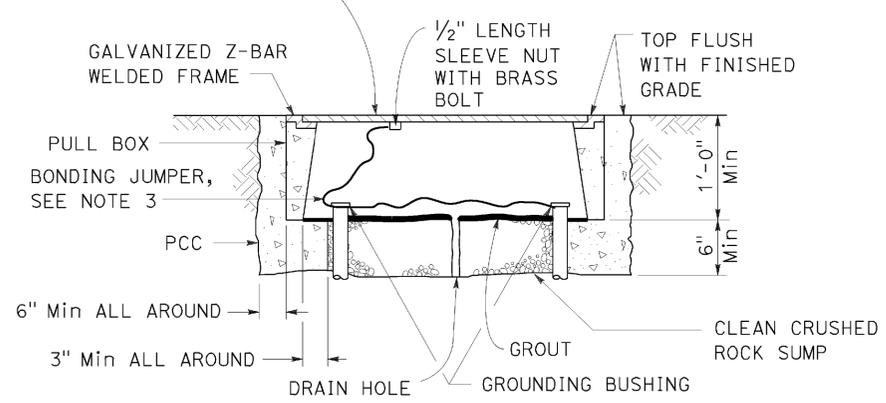
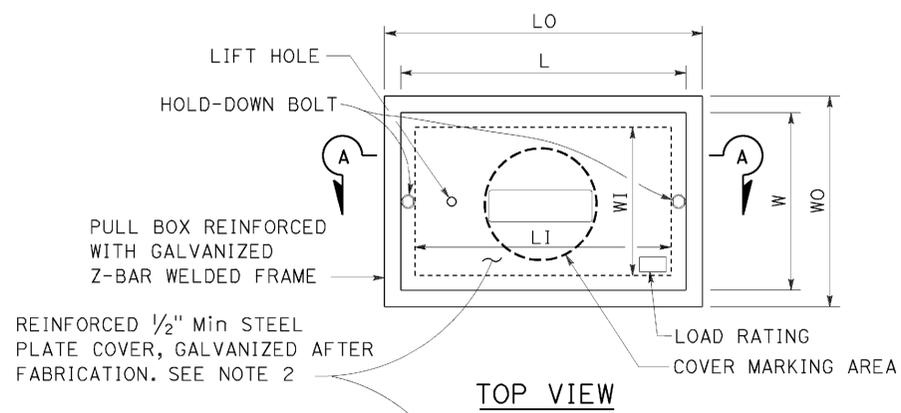
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Plu	70	50.6/51.7	114	181

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

April 15, 2016
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 06-15-16



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

NOTES:

- 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.
- Bonding jumper for metal covers shall be 3' long, minimum.
- 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 1/8" greater.
- 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 1/8".

PULL BOX	PULL BOX				COVER			
	MINIMUM * THICKNESS	MINIMUM DEPTH BOX AND EXTENSION	LO	LI	WO	WI	L **	W **
No. 3 1/2(T)	1 1/2"	1'-0"	1'-10" - 1'-11"	1'-5" - 1'-6 1/2"	1'-3" - 1'-4"	10" - 1'-0"	1'-8" - 1'-8 1/2"	1'-1" - 1'-2"
No. 5(T)	1 3/4"	1'-0"	2'-5" - 2'-6"	2'-0" - 2'-1"	1'-6" - 1'-7"	1'-1" - 1'-2"	2'-3" - 2'-3 1/2"	1'-4" - 1'-4 1/2"
No. 6(T)	2"	1'-0"	2'-11" - 3'-1"	2'-6" - 2'-7"	1'-10" - 2'-0"	1'-5" - 1'-6"	2'-9" - 2'-9 1/2"	1'-8" - 1'-8 1/2"

* EXCLUDING CONDUIT WEB ** TOP DIMENSION

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (TRAFFIC PULL BOX)**
 NO SCALE

RSP ES-8B DATED APRIL 15, 2016 SUPERSEDES RSP ES-8B
 DATED OCTOBER 30, 2015 AND RSP ES-8B DATED JULY 19, 2013 AND RSP ES-8B
 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

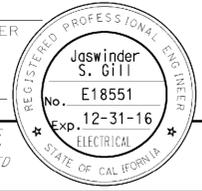
REVISED STANDARD PLAN RSP ES-8B

2010 REVISED STANDARD PLAN RSP ES-8B

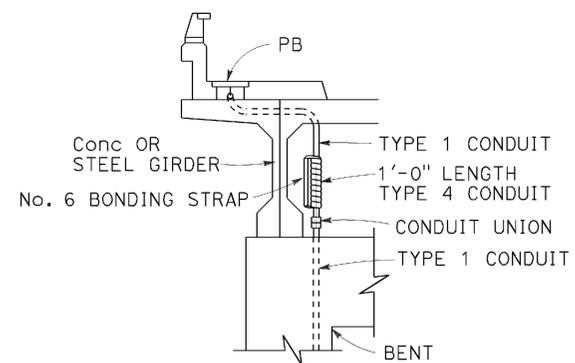
DATE PLOTTED => 04-AUG-2016
 TIME PLOTTED => 12:23

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Plu	70	50.6/51.7	115	181

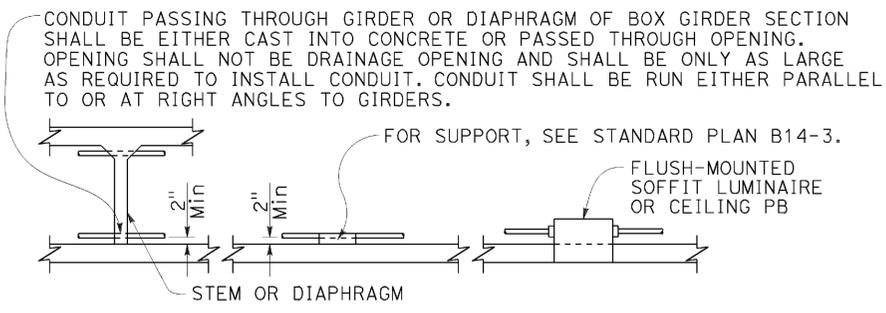
Jagswinder & Co.
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
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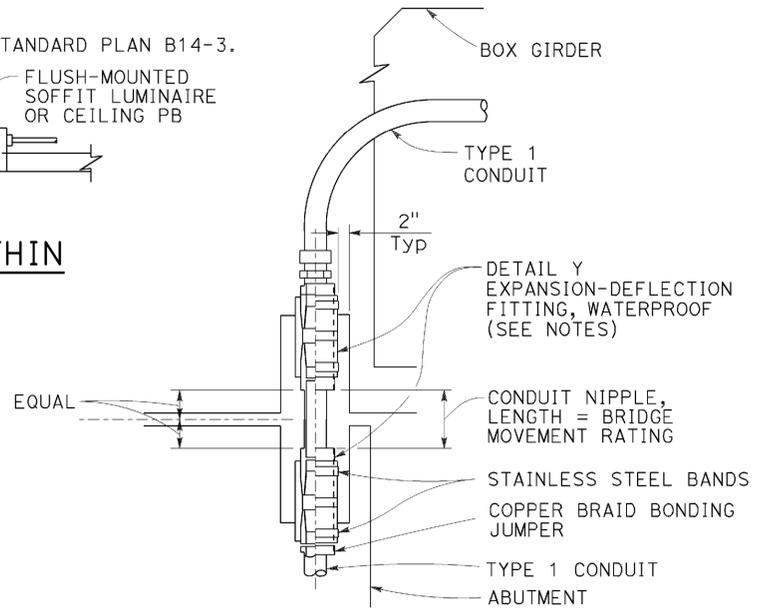
TO ACCOMPANY PLANS DATED 06-15-16



CONDUIT RISER CONNECTION
DETAIL R

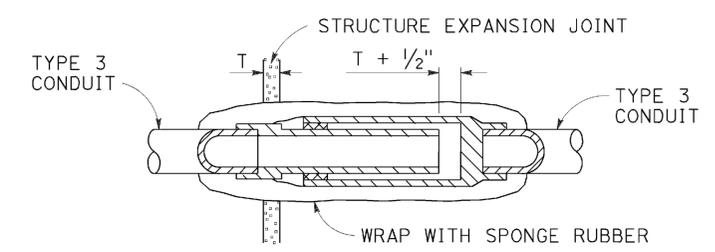


CONDUIT INSTALLATION WITHIN BOX GIRDER SECTIONS
DETAIL S

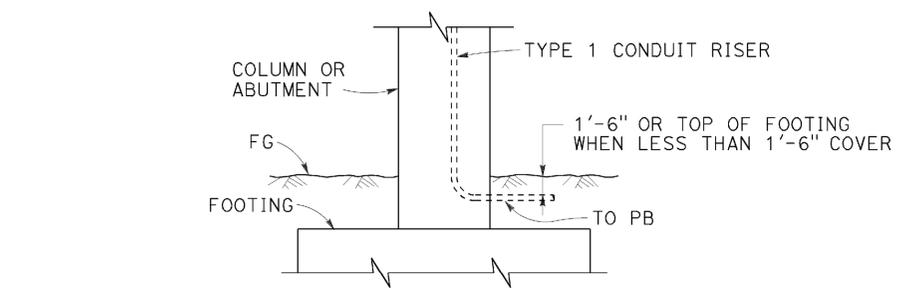


- NOTES:**
1. Fitting and pocket required only where movement can occur between girder and abutment.
 2. Fill pocket around fitting with resilient waterproof compound.

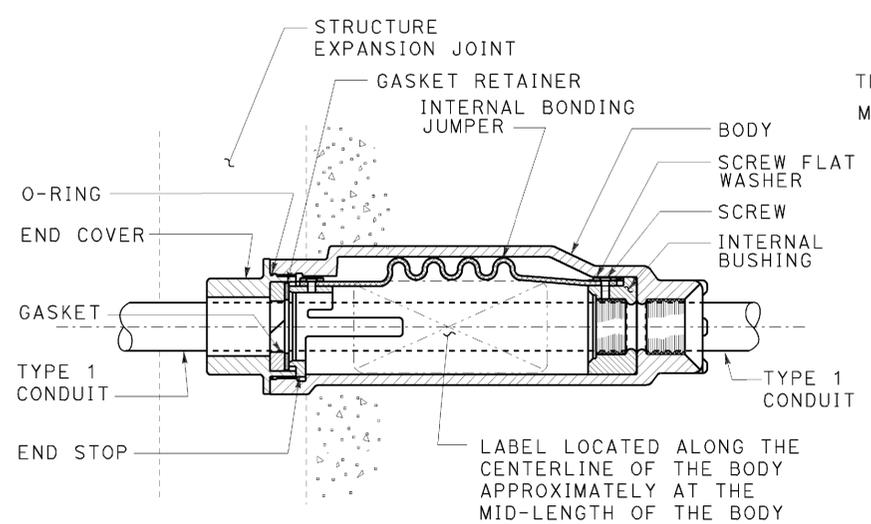
CONDUIT RISER CONNECTION AT COLUMN, ABUTMENT OR STRUCTURE WING WALL
DETAIL U



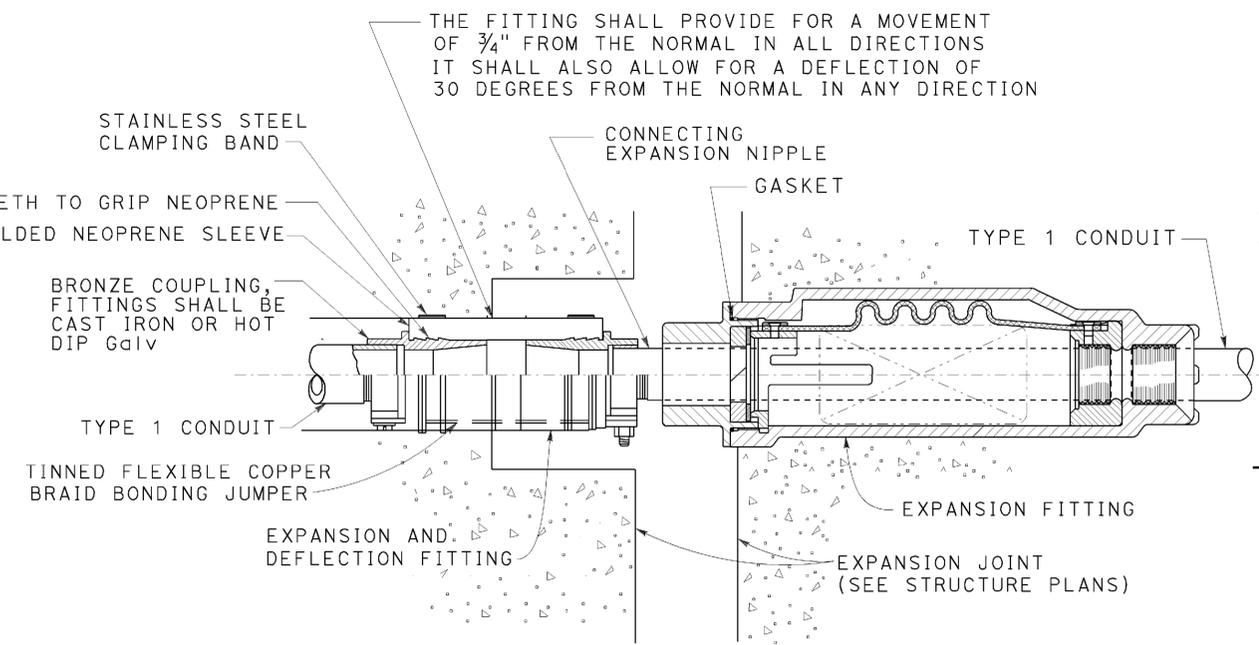
NON-METALLIC CONDUIT EXPANSION FITTING INSTALLATION DETAIL
DETAIL V
To be used only when shown or specified on Project Plans



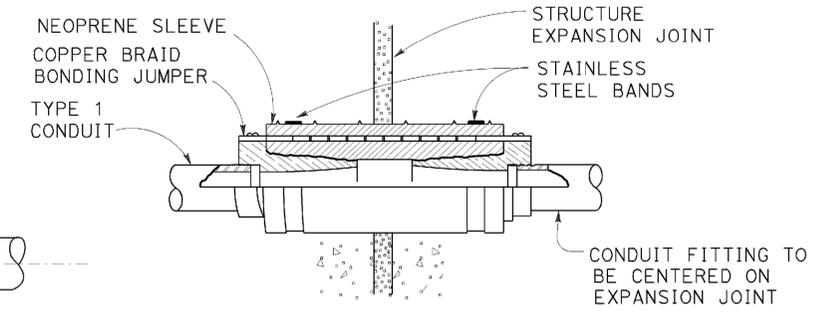
LOWER END OF CONDUIT RISER AT COLUMN OR ABUTMENT
DETAIL T



CONDUIT EXPANSION FITTING
DETAIL X



COMBINATION EXPANSION-DEFLECTION FITTINGS METALLIC CONDUIT INSTALLATION
DETAIL XY



CONDUIT EXPANSION-DEFLECTION FITTING
DETAIL Y

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (CONDUIT RISER AND EXPANSION FITTING, STRUCTURE INSTALLATIONS)
NO SCALE

RSP ES-9B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-9B DATED MAY 20, 2011 - PAGE 482 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-9B

2010 REVISED STANDARD PLAN RSP ES-9B

DATE PLOTTED => 04-AUG-2016
TIME PLOTTED => 12:23

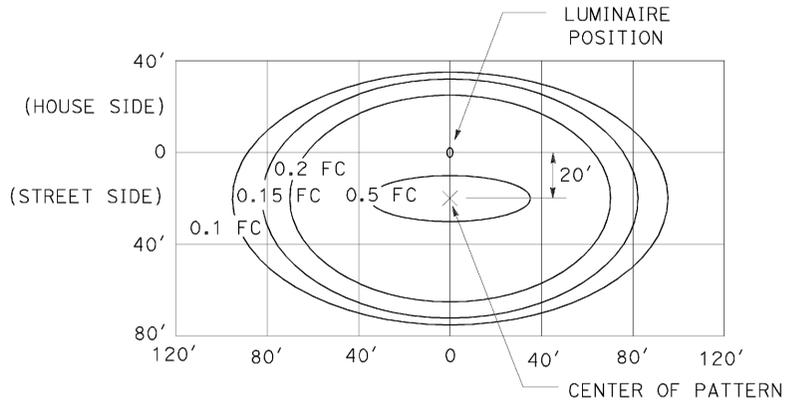
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	116	181

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
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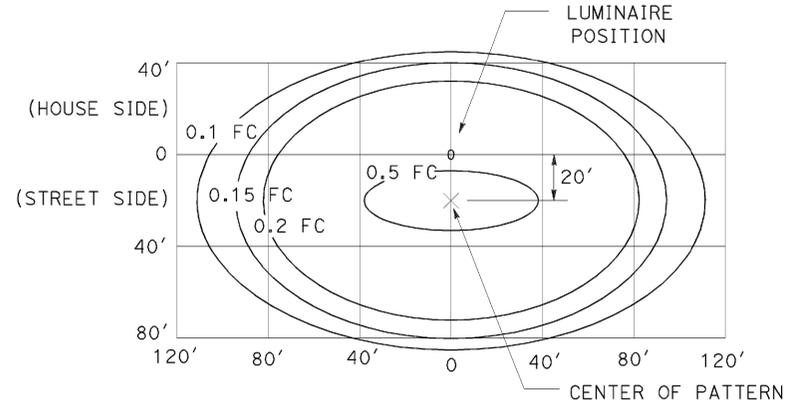


TO ACCOMPANY PLANS DATED 06-15-16

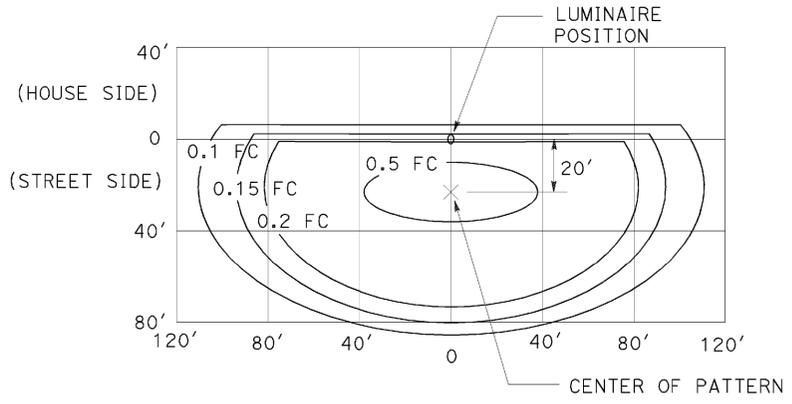
NOTE:
Curves represent the minimum footcandle (FC).



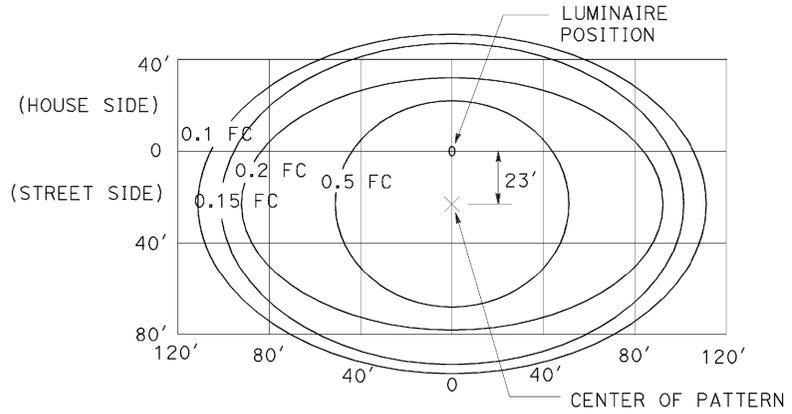
LED LUMINAIRE 165 W
34' Mounting Height



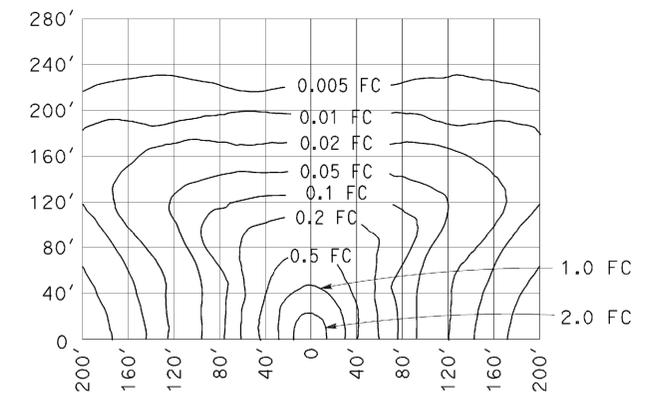
LED LUMINAIRE 235 W
40' Mounting Height



LED LUMINAIRE 235 W
40' Mounting Height
with back side control



LED LUMINAIRE 300 W
40' Mounting Height



LOW-PRESSURE SODIUM LUMINAIRE 180 W
40' Mounting Height
Lamp operated at 33,000 lm

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ISOFOOTCANDLE CURVES)**

NO SCALE

RSP ES-10A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-10A DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-10A

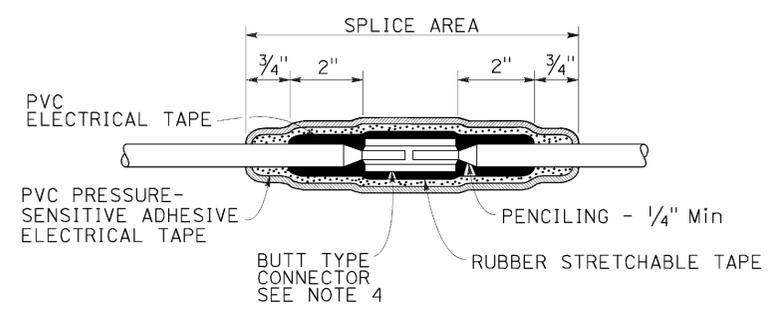
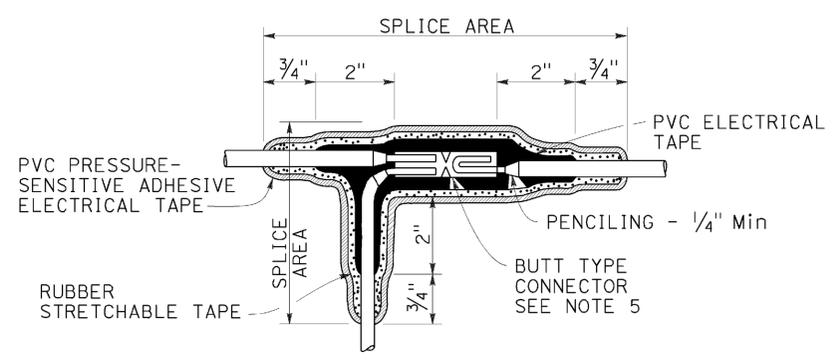
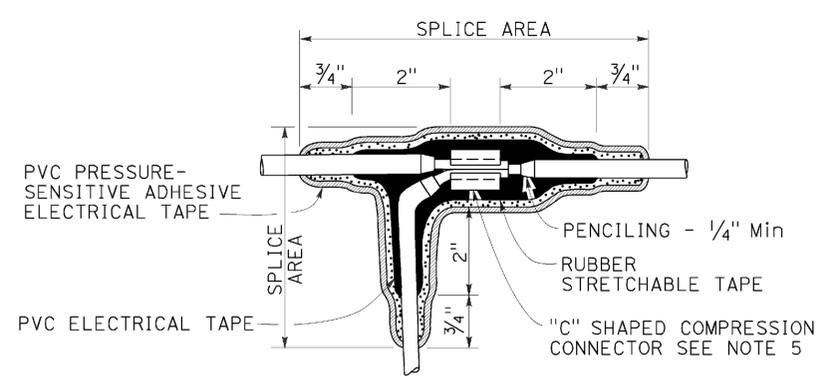
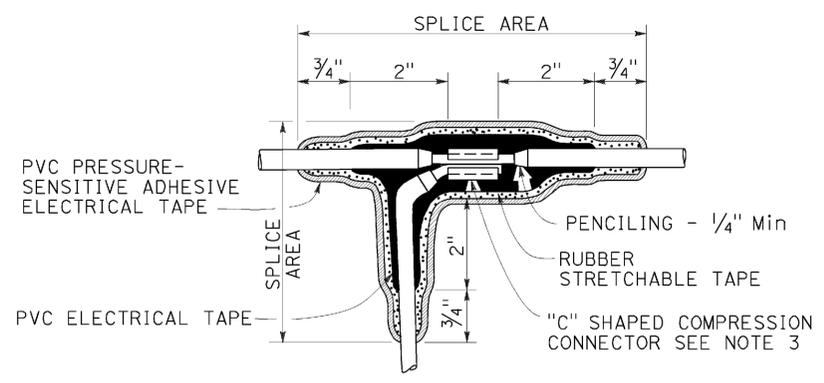
2010 REVISED STANDARD PLAN RSP ES-10A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	117	181

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

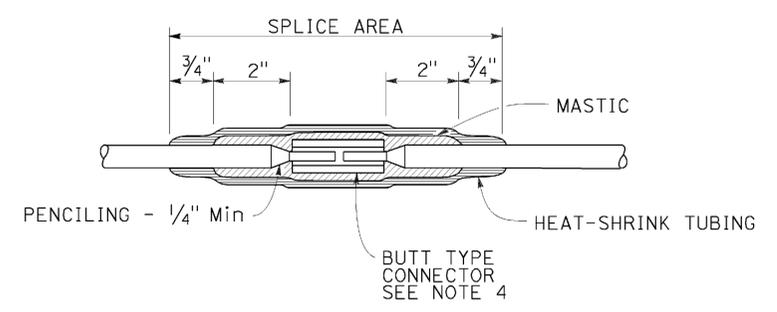
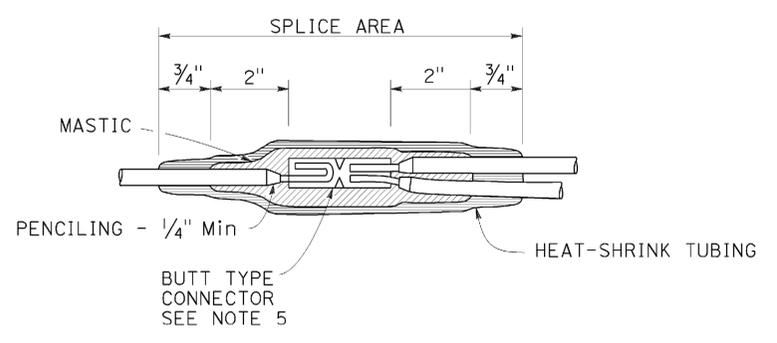
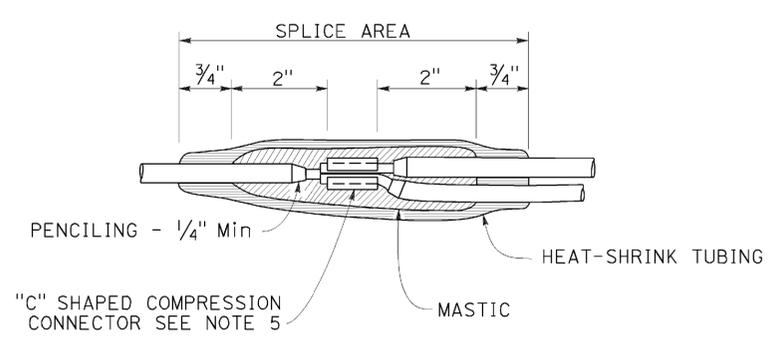


TO ACCOMPANY PLANS DATED 06-15-16



- NOTES:**
1. Dimensions are minimum.
 2. Rubber tapes shall be rolled after application.
 3. Between 1 free-end and 1 through conductor.
 4. Between 2 free-end conductors.
 5. Between 3 free-end conductors.

TYPICAL SPLICE INSULATION METHOD B



TYPICAL SPLICE INSULATION HEAT-SHRINK TUBING

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SPLICE INSULATION METHODS DETAILS)**

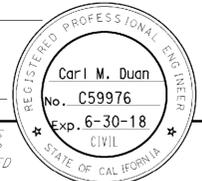
NO SCALE
 RSP ES-13A DATED APRIL 15, 2016 SUPERSEDES RSP ES-13A DATED OCTOBER 30, 2015 AND
 STANDARD PLAN ES-13A DATED MAY 20, 2011 - PAGE 491 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-13A

2010 REVISED STANDARD PLAN RSP ES-13A

DATE PLOTTED => 04-AUG-2016
 TIME PLOTTED => 12:24

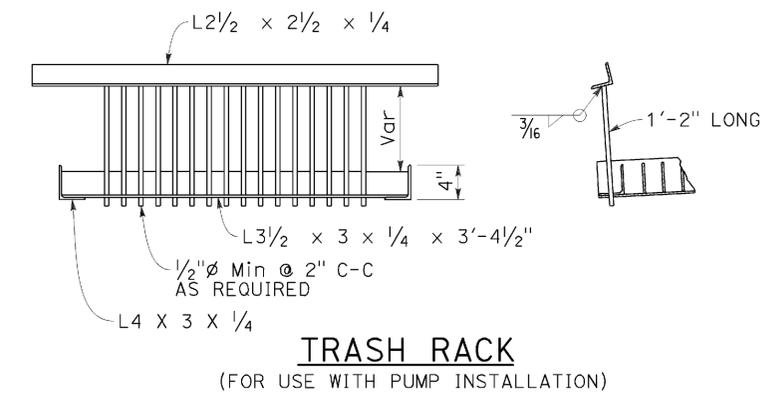
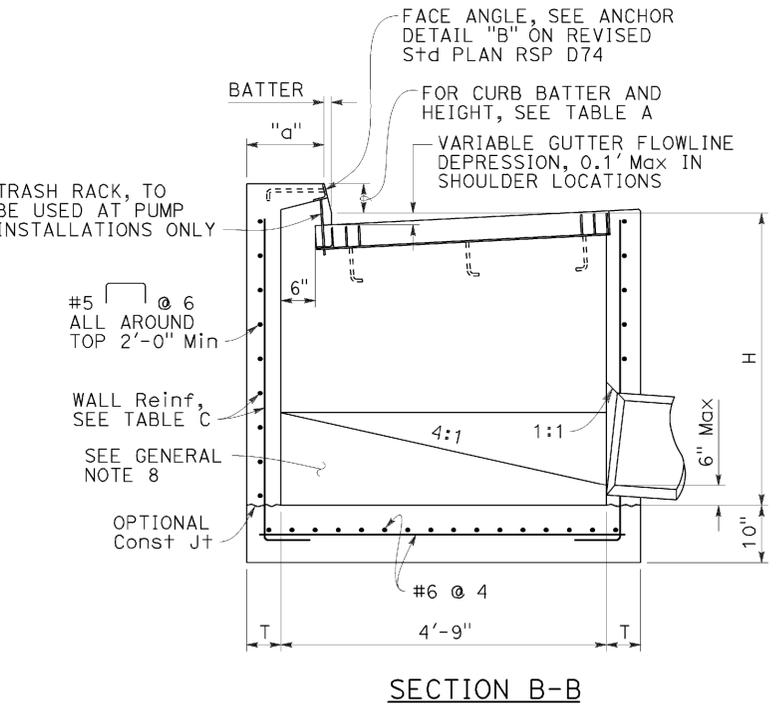
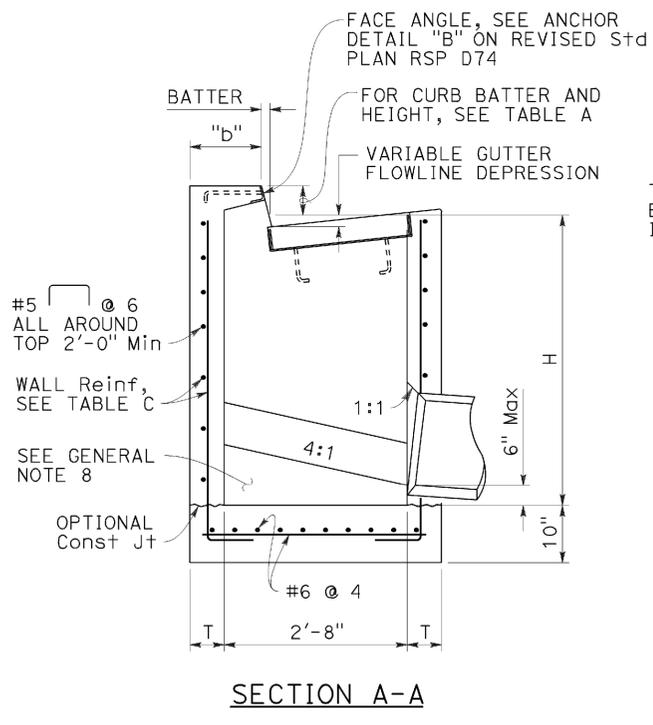
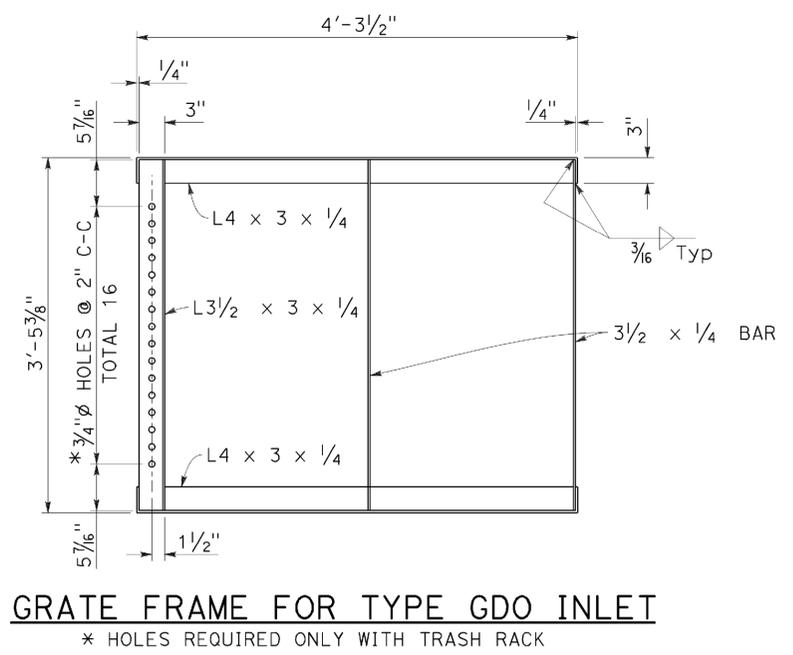
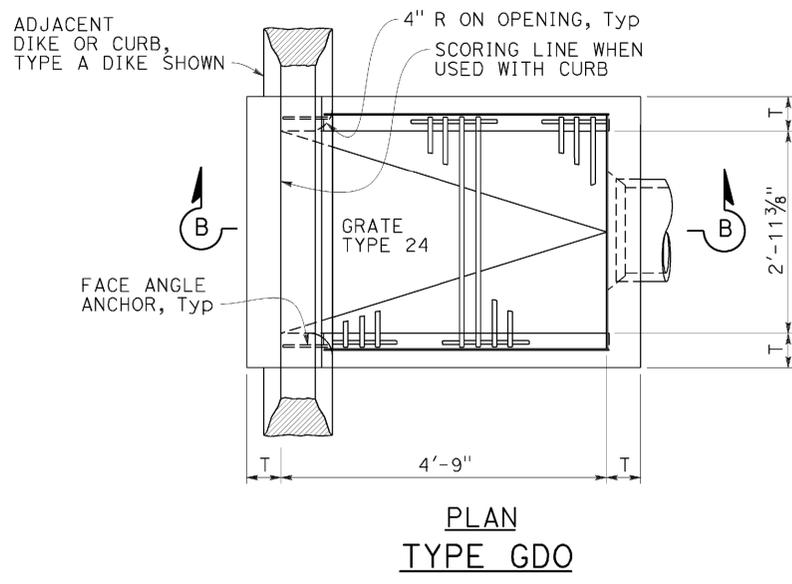
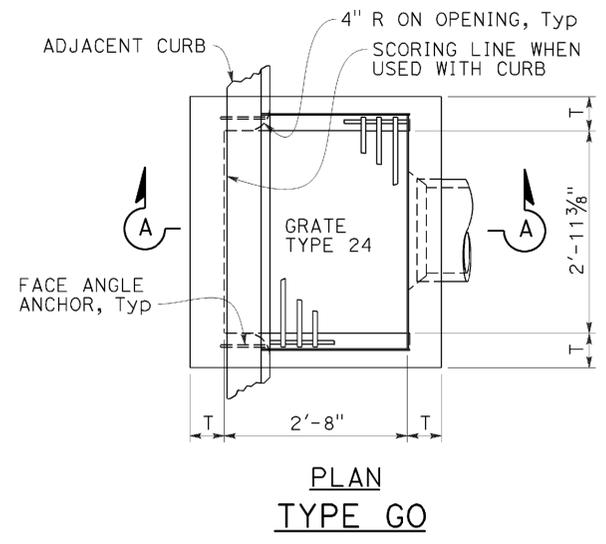
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	118	181



 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED 06-15-16

2010 REVISED STANDARD PLAN RSP D72E



NOTES:

1. See Revised Standard Plan RSP D72F for General Notes and additional details. See Revised Standard Plan RSP D72G for tables, wall thickness "T" and quantities.
2. Where shown on the project plans, place a 3/4" plain round protection bar horizontally across the length of the opening and bend back 4" into the inlet wall on each side.
3. Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
4. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.

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

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

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

RSP D72E DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D72E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	119	181

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

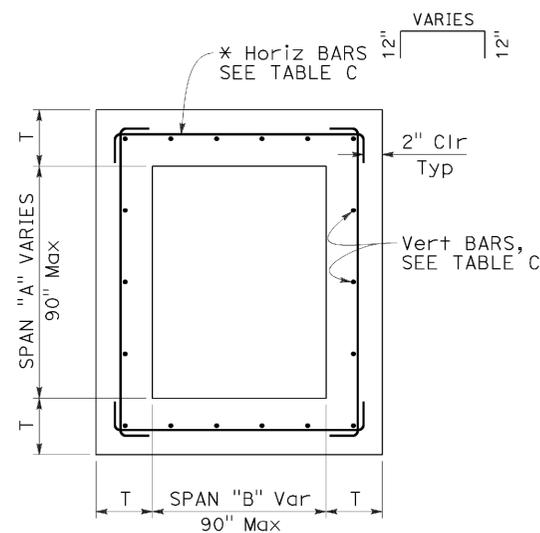
GENERAL NOTES:

- "H" is measured from top of bottom slab to the normal gutter grade line undepressed at the curb face.
- For "T" wall thickness and reinforcement, see Table C on Revised Standard Plan RSP D72G.
- Wall reinforcement must be placed in the center of the wall thickness with horizontal bars placed on the exterior face. Bottom slab concrete cover must be 3" clear on the interior face unless otherwise noted. Top slab concrete cover must be 2" clear on the exterior face unless otherwise noted. Reinforcement spacing is in inches unless otherwise noted.
- Steps - None required where "H" is less than 2'-6". Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below bottom of lid. The distance between steps must not exceed 1'-0" and be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts must comply with State Industrial Safety Requirements. See Revised Standard Plan RSP D74 for step details.
- Pipe(s) can be placed in any wall. Adjacent to each side of the opening, place additional reinforcement equivalent to half the interrupted main reinforcement. For larger pipes greater than or equal to 42" diameter, also add 4 diagonal bars, 1 bar each side. Bars must be the same size as the larger of the main vertical or horizontal bars. Extend bars one development length past the intersection with the adjacent diagonal bar, or where bars intersect mid thickness of adjacent wall bottom or top of non-continuous wall, bend ends as required into same plane.
- Set inlet so that grate bars are parallel to direction of principal surface flow.
- Curb section must match adjacent curb.
- Except for inlets used as junction boxes, basin floors must have wood trowel finish and a minimum slope of 4:1, unless otherwise noted, from all directions toward outlet pipe by casting grout fill on top of the bottom slab. The additional volume to achieve the 4:1 slope may also be achieved by casting the bottom slab and fill as a composite concrete element.
- See Revised Standard Plans RSP D77A and RSP D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plans D78A and D78B for gutter depression details.
- See Revised Standard Plans RSP A87A and RSP A87B for curb and dike details.
- Details shown apply to metal, concrete and plastic pipe(s).
- The Contractor may use WWR instead of bar reinforcement. The ratio of bar reinforcement to WWR shall be based on the yield strength ratio.
- Cast-in-place (CIP) inlets to be formed around all pipes/stubs intersecting the inlet, and concrete poured in one continuous operation.
- Perimeter reinforcement must not be smaller than main bars and #4 and serves as a rigid frame to position and attach the required structural reinforcement and may be tack welded at outer corners when using ASTM A706 weldable bars.

DESIGN NOTES:

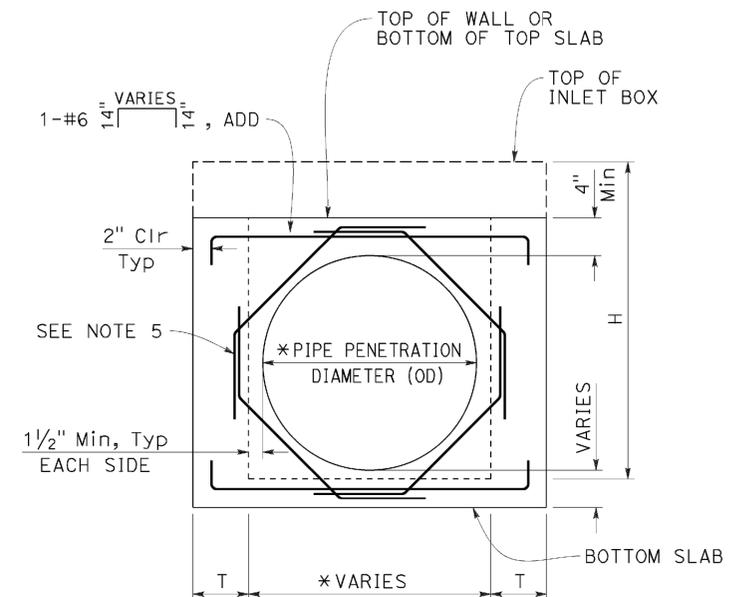
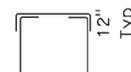
- Design Specifications: AASHTO LRFD Bridge Design Specifications, 6th edition with 2012 Interims and Errata and CA Amendments.
- Live Load (AASHTO LRFD 3.6.1.2): HL-93, consists of design truck or tandem, and design lane load. Dynamic Load Allowance, IM = 33%
Multiple Presence Factor, m = 1.0
Design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

TO ACCOMPANY PLANS DATED 06-15-16



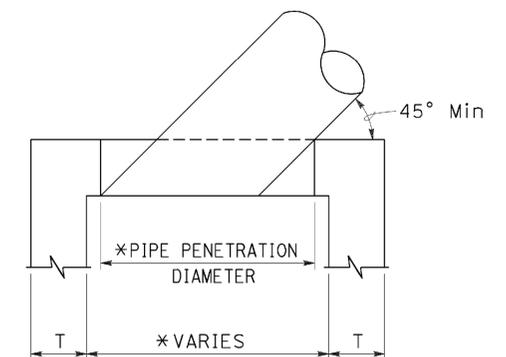
TYPICAL INLET PLAN

* ALTERNATIVE HORIZONTAL BARS



TYPICAL WALL W/ PIPE OPENING

* SEE "SKEWED PIPE PLAN"



SKEWED PIPE PLAN

* ADJUST PIPE PENETRATION AND BOX WIDTH FOR SKEWED PIPES.

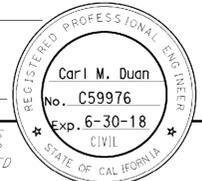
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CIP DRAINAGE INLET NOTES
NO SCALE

RSP D72F DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D72F

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	120	181


 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 06-15-16

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

* Quantities are based on the minimum interior dimensions.

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

* Quantities are based on the minimum interior dimensions.

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

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

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

* Main Box

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CIP DRAINAGE INLET TABLES

NO SCALE

RSP D72G DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D72G

2010 REVISED STANDARD PLAN RSP D72G

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	121	181

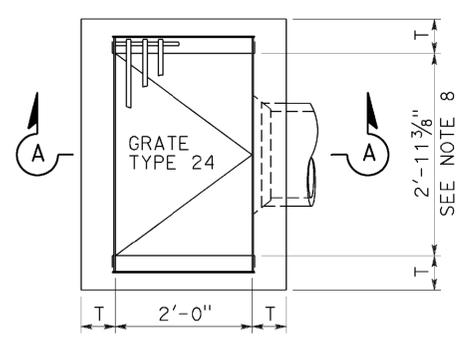
REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 06-15-16

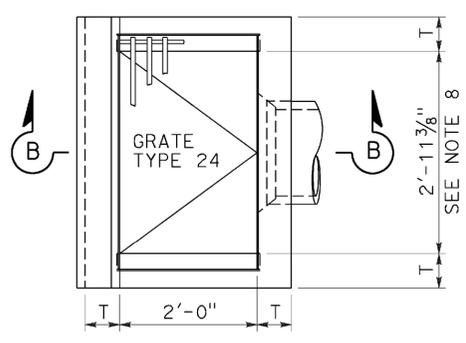
NOTE:
 1. For notes and Table 2, See Revised Standard Plan RSP D73C.

TABLE 1

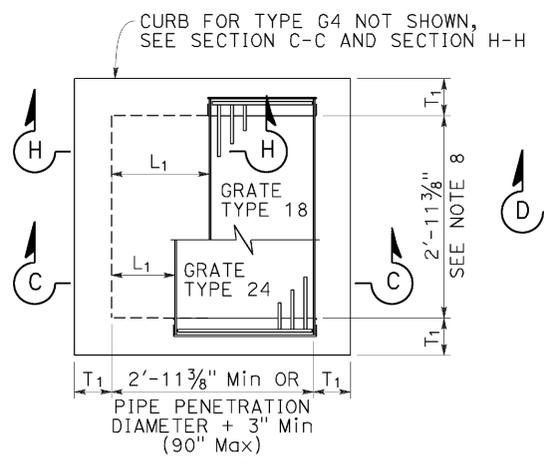
	T ₁	Vert BARS
L ₁ AND L ₂ < 2'-10"	8"	#4 @ 12
L ₁ OR L ₂ > 2'-10"	12"	#5 @ 12



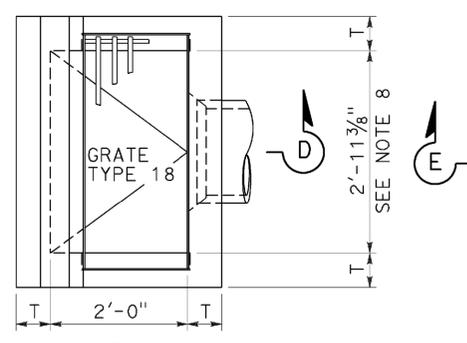
PLAN TYPE G1



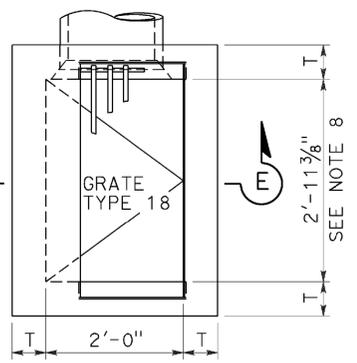
PLAN TYPE G3



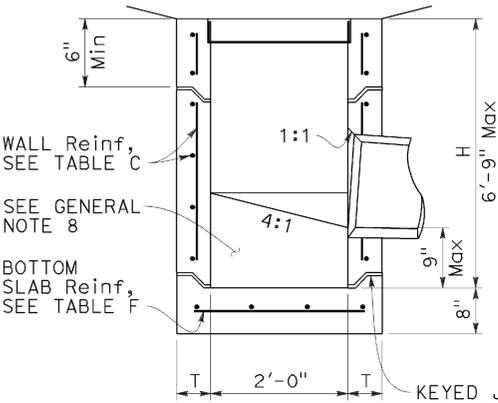
PLAN STANDARD TYPE G2 OR G4
 (INTEGRAL TOP ALTERNATIVE)
 FOR "L" AND "T" VALUES, SEE TABLE 1



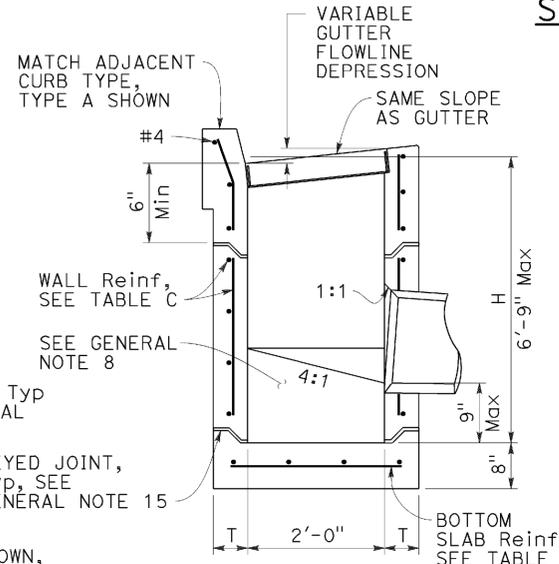
PLAN TYPE G5



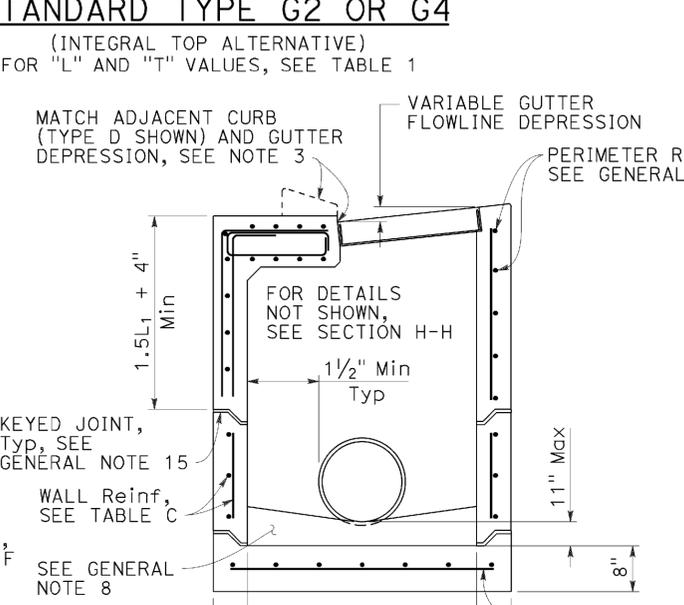
PLAN TYPE G6



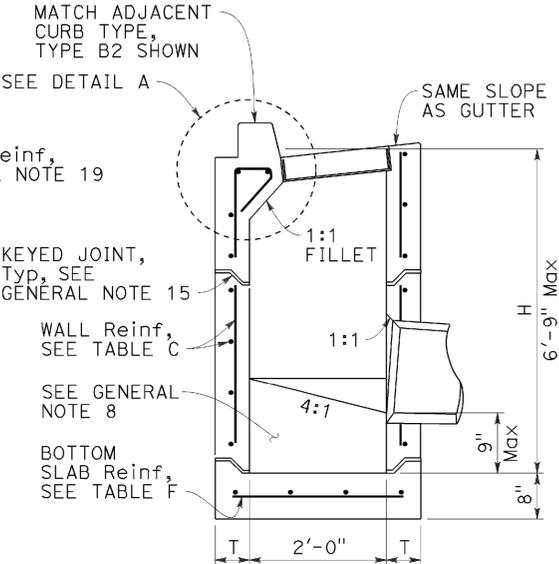
SECTION A-A



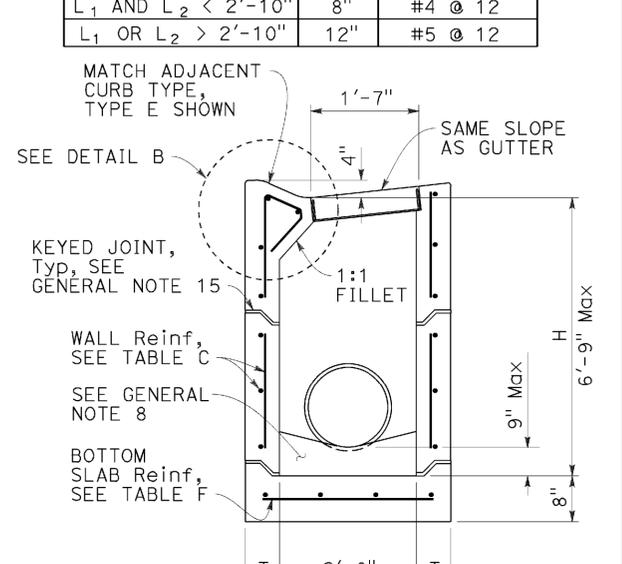
SECTION B-B



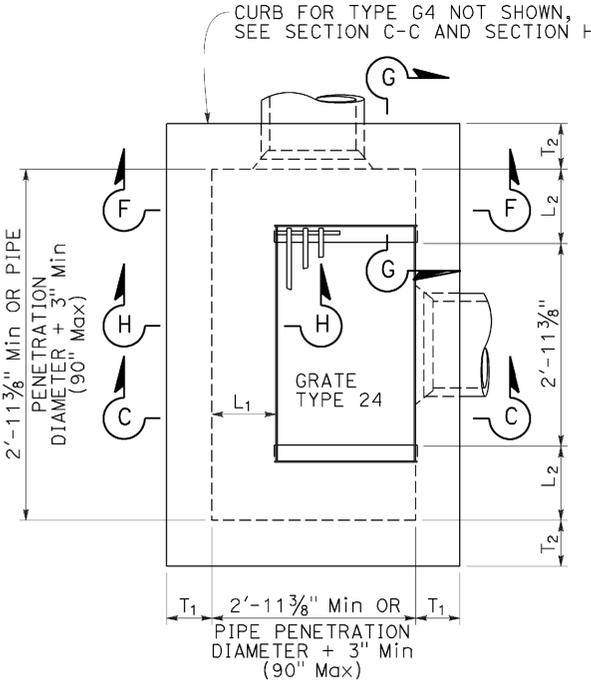
SECTION C-C



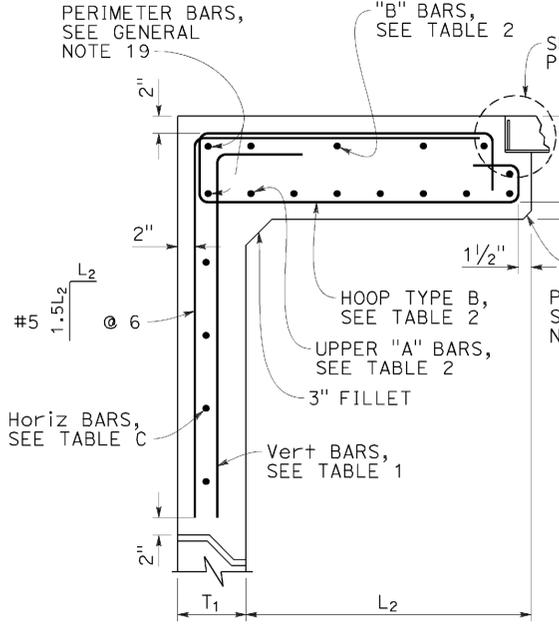
SECTION D-D



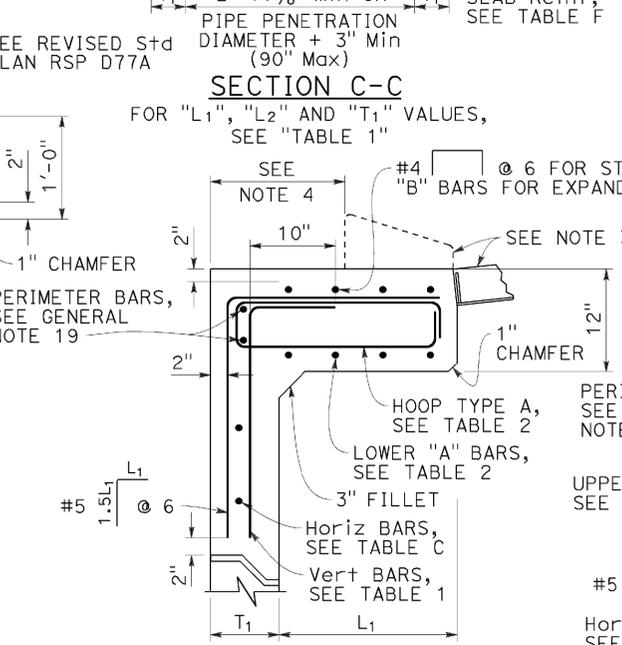
SECTION E-E



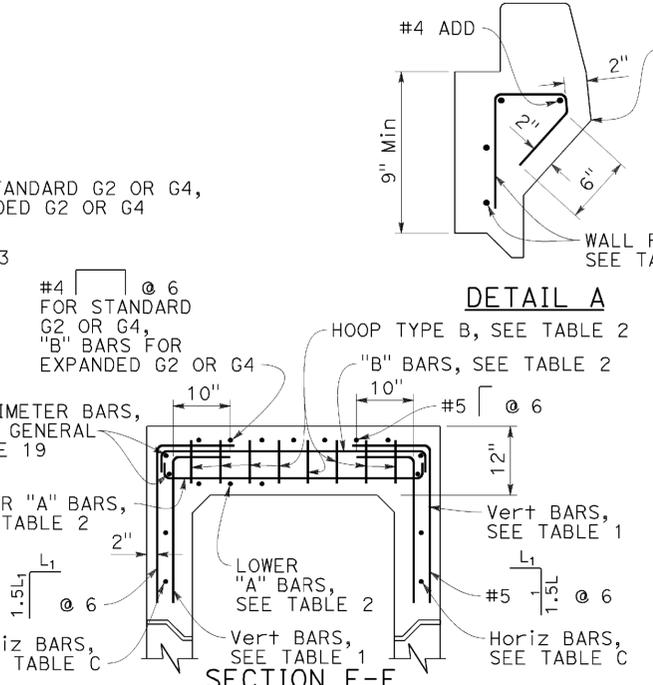
PLAN EXPANDED TYPE G2 OR G4
 (INTEGRAL TOP ALTERNATIVE)
 FOR "L1", "L2" AND "T1" VALUES, SEE "TABLE 1"



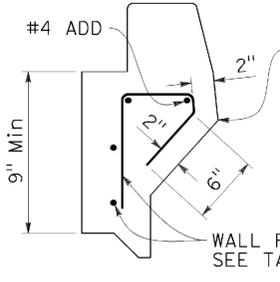
SECTION G-G



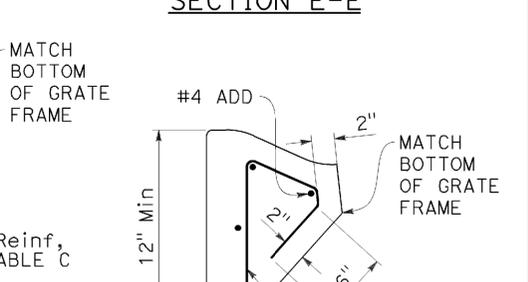
SECTION H-H



SECTION F-F



DETAIL A



DETAIL B

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

PRECAST DRAINAGE INLETS TYPES G1, G2, G3, G4, G5 AND G6

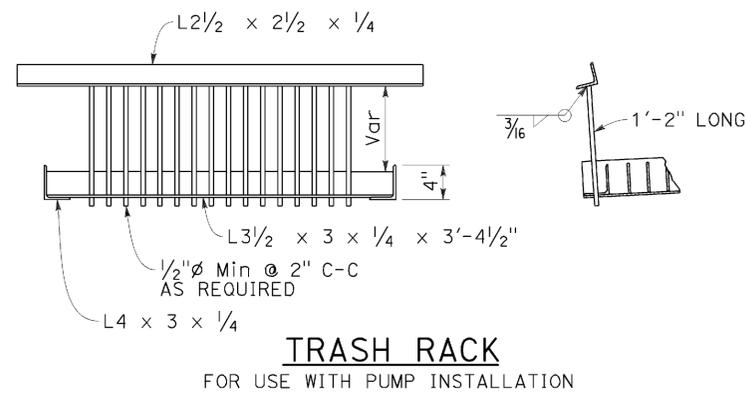
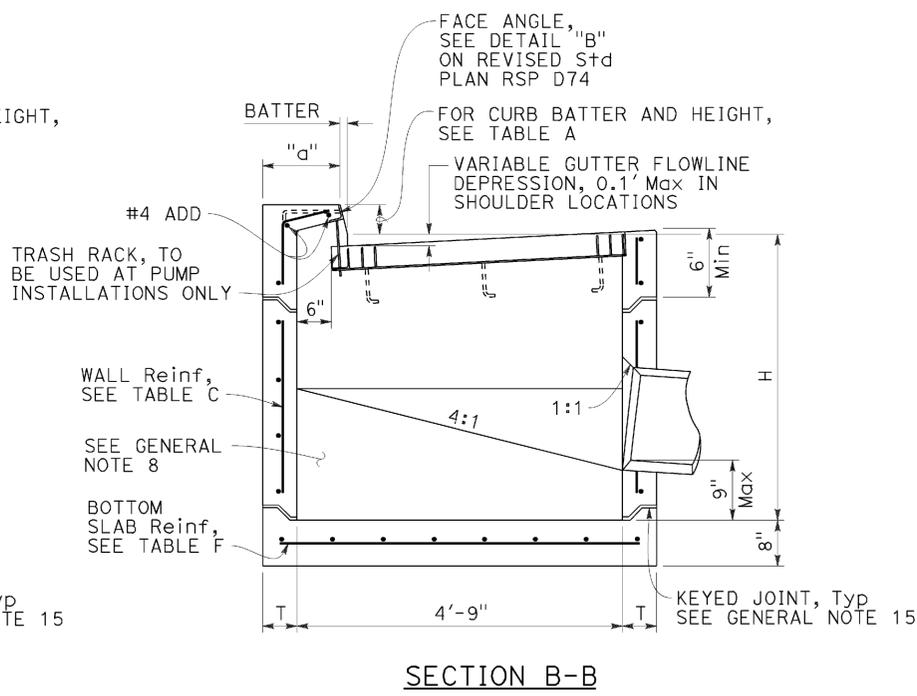
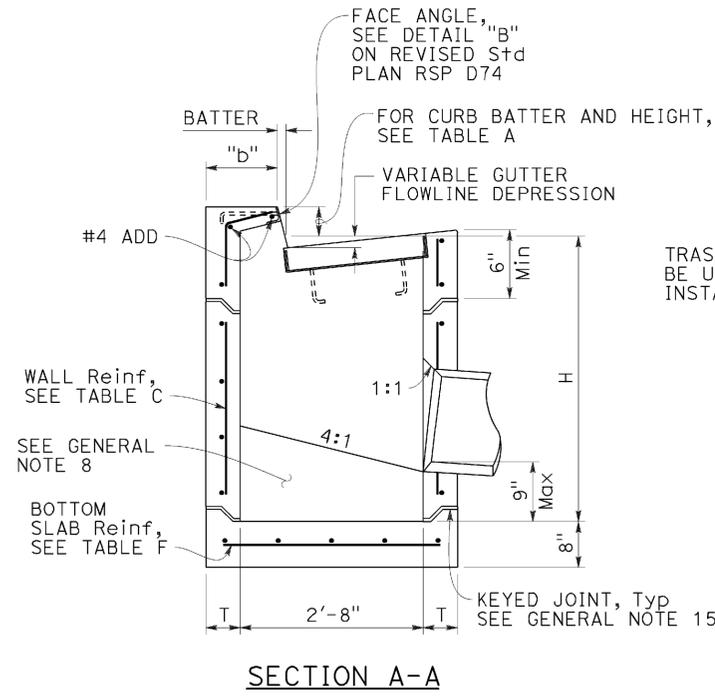
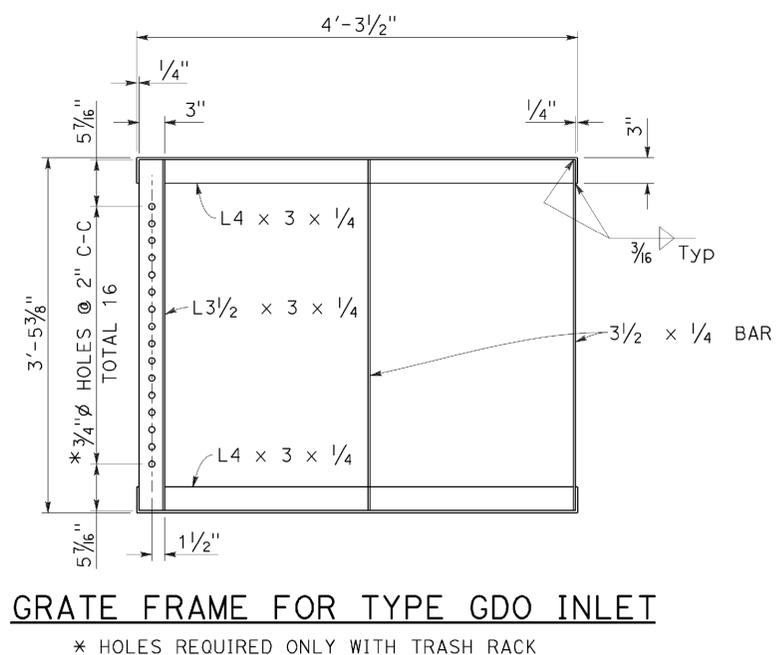
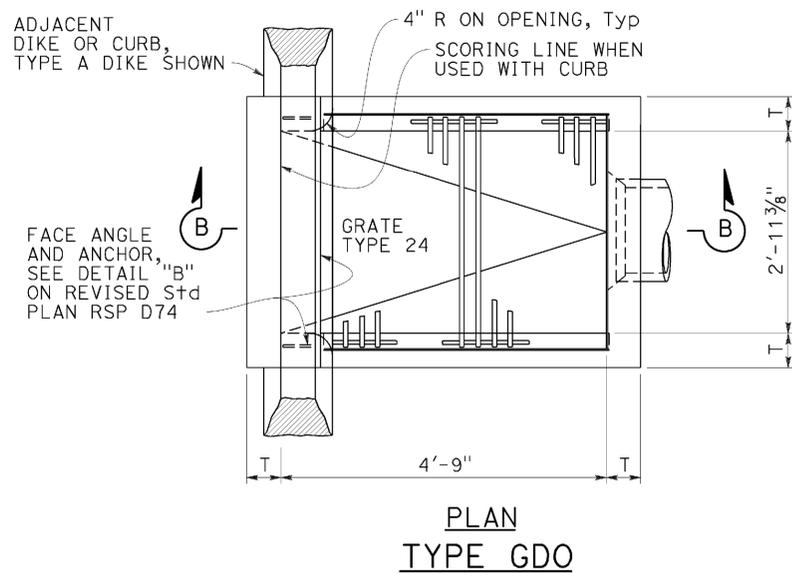
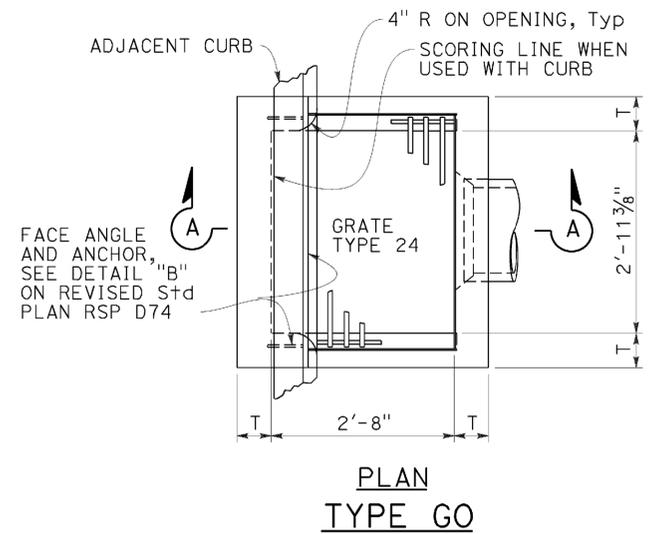
NO SCALE

RSP D73B DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73B

2010 REVISED STANDARD PLAN RSP D73B

TO ACCOMPANY PLANS DATED 06-15-16



NOTES:

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

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

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**PRECAST
DRAINAGE INLETS
TYPES GO AND GDO**

NO SCALE

RSP D73E DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73E

GENERAL NOTES:

- "H" is measured from top of bottom slab to the normal gutter grade line undeformed at the curb face.
- For "T" wall thickness and reinforcement, see Table C on Revised Standard Plan RSP D73G.
- Wall reinforcement must be placed at the center of wall thickness with horizontal bars placed on the exterior face. Bottom slab concrete cover must be 3" clear on the interior side face unless otherwise noted. Top slab concrete cover must be 2" clear on the exterior face unless otherwise noted. Short independent wall sections or height adjustment rings 6" to 24" high must have a minimum of two #4 horizontal bars. Reinforcement spacing is in inches unless otherwise noted.
- Steps - None required where "H" is less than 2'-6". Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below bottom of lid. The distance between steps must not exceed 1'-0" and be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts must comply with State Industrial Safety Requirements. See Revised Standard Plan RSP D74 for step details.
- Pipe(s) can be placed in any wall. Adjacent to each side of the opening, place additional reinforcement equivalent to half the interrupted main reinforcement. For larger pipes greater than or equal to 42" diameter, also add 4 diagonal bars, 1 bar each side. Bars must be the same size as the larger of the main vertical or horizontal bars. Extend bars one development length past the intersection with the adjacent diagonal bar, or where bars intersect mid thickness of adjacent wall bottom or top of non-continuous wall, bend ends as required into same plane.
- Set inlet so that grate bars are parallel to direction of principal surface flow.
- Curb section must match adjacent curb.
- Except for inlets used as junction boxes, basin floors must have wood trowel finish and a minimum slope of 4:1, unless otherwise noted, from all directions toward outlet pipe by casting grout on top of the bottom slab. Grout must be placed prior to backfill.
- See Revised Standard Plans RSP D77A and RSP D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plans D78A and D78B for gutter depression details.
- See Revised Standard Plans RSP A87A and RSP A87B for curb and dike details.
- Details shown apply to metal, concrete and plastic pipe(s).
- The Contractor may use WWR instead of bar reinforcement. The ratio of bar reinforcement to WWR shall be based on the yield strength ratio.
- Seal precast inlets connection openings between wall and pipe with non-shrink grout or resilient connectors as specified in the Special Provisions. Precast inlets shall have mortared connections conforming to details for Type GCP Inlet shown on Revised Standard Plan RSP D75B. See Standard Specifications for mortar composition.
- Where shown, provide precast inlets with separate top sections for final grade adjustment. Provide keyed joints with butyl rubber sealant between the top section and wall, multiple wall sections, and wall and bottom slab. Joint design may vary but must be 1" to 3" in depth. For tongue type joints, tongue down orientation is not allowed. For keyed joints, keyway up, keyway down or tongue up configurations are allowed. Only one key type is allowed for each drainage inlet.
- Non-shrink grout can be used for upper most joint to facilitate final top grade adjustment.
- Provide a level and firm sand bedding on which to place precast inlets. Extend sand bedding under all structure backfill.
- For Integral Base, see Detail "A".
- Perimeter reinforcement must not be smaller than main bars and #4 and serves as a rigid frame to position and attach the required structural reinforcement and may be tack welded at outer corners when using ASTM A706 weldable bars.
- Inlet extensions may be cast in place after placement of main box and placement and compaction of backfill. Concrete strength must be 3.6 ksi minimum. All slab and wall thicknesses must be per Revised Standard Plan RSP D72A. All reinforcement shall extend a minimum of 24" from precast main inlet box.

DESIGN NOTES:

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

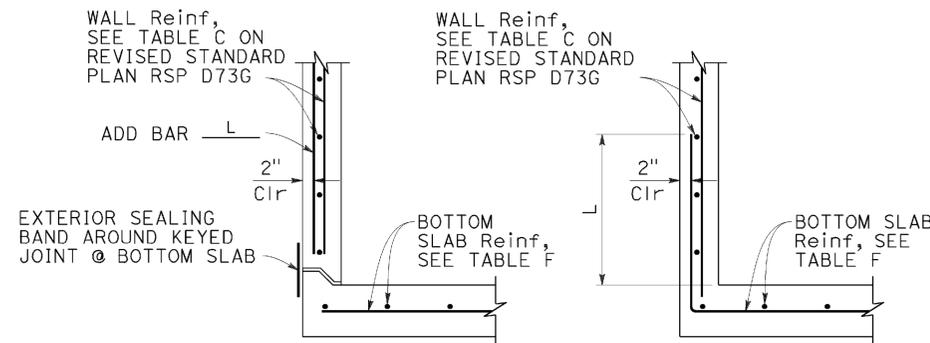
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	123	181



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

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

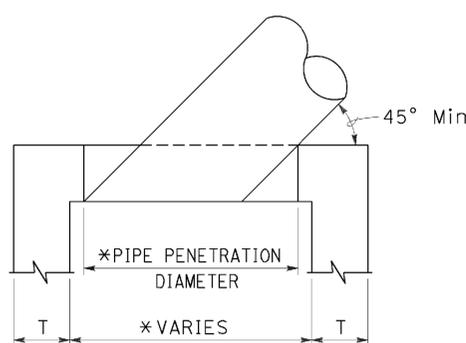
TO ACCOMPANY PLANS DATED 06-15-16



BASE WITH KEYED JOINT INTEGRAL BASE

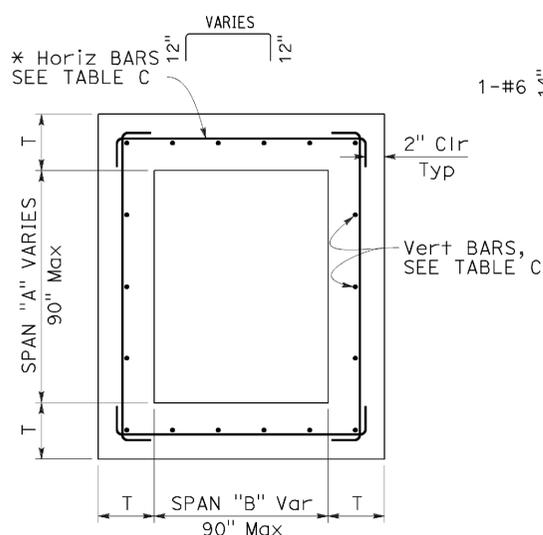
DETAIL "A"

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



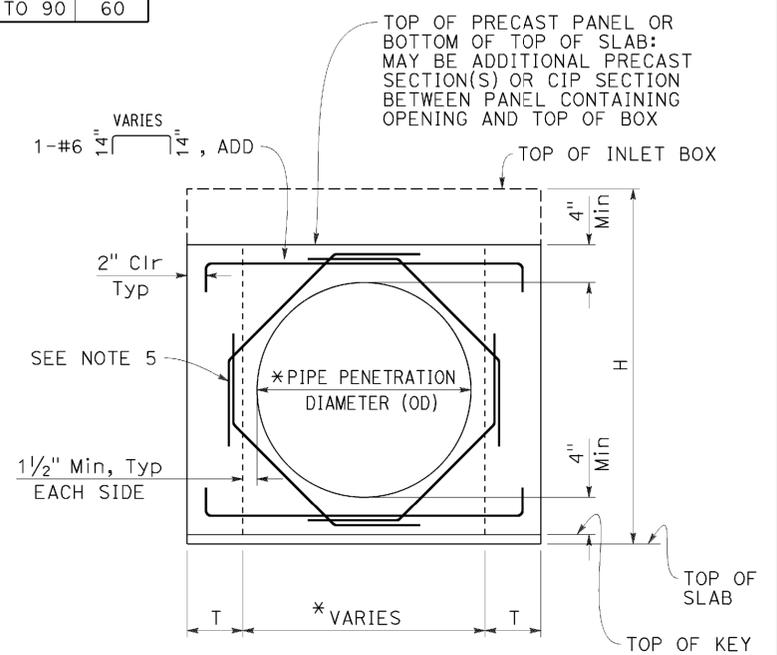
SKEWED PIPE PLAN

* ADJUST PIPE PENETRATION AND BOX WIDTH FOR SKEWED PIPES.

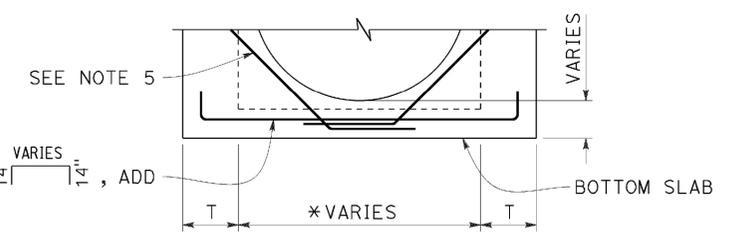


TYPICAL INLET PLAN

* ALTERNATIVE HORIZONTAL BARS



BASE WITH KEYED JOINT



INTEGRAL BASE

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

TYPICAL WALL W/ PIPE OPENING

* SEE "SKEWED PIPE PLAN"

PRECAST DRAINAGE INLET NOTES
NO SCALE

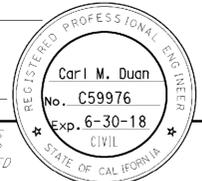
RSP D73F DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73F

2010 REVISED STANDARD PLAN RSP D73F

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Piu	70	50.6/51.7	124	181


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



TO ACCOMPANY PLANS DATED 06-15-16

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

* Quantities are based on the minimum interior dimensions.

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

* Quantities are based on the minimum interior dimensions.

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

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

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

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

* Main Box
 ** a = Larger interior span

NOTES:

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

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

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PRECAST
 DRAINAGE INLET TABLES**
 NO SCALE

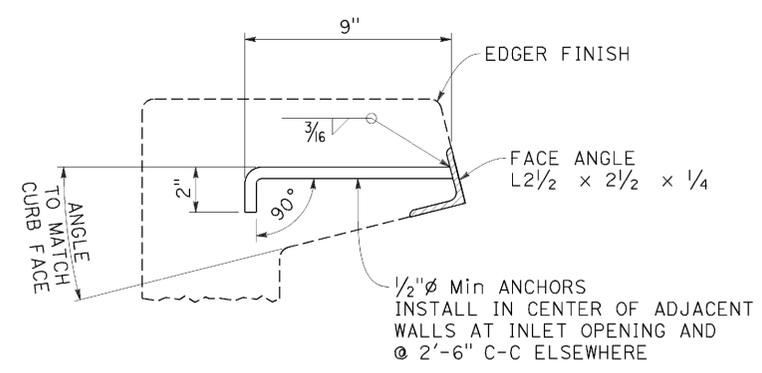
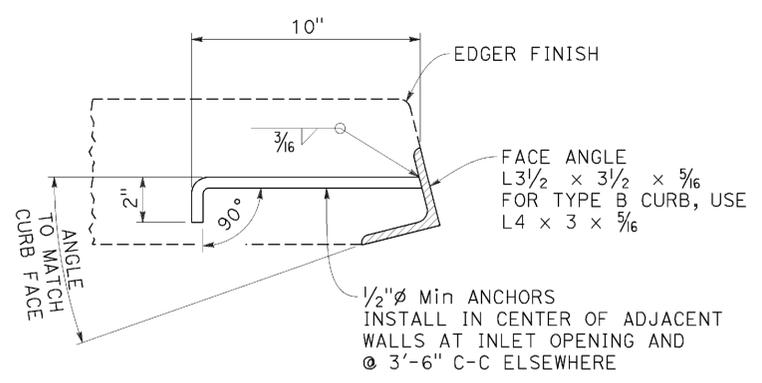
RSP D73G DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73G

2010 REVISED STANDARD PLAN RSP D73G

DATE PLOTTED => 04-AUG-2016
 TIME PLOTTED => 12:27

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



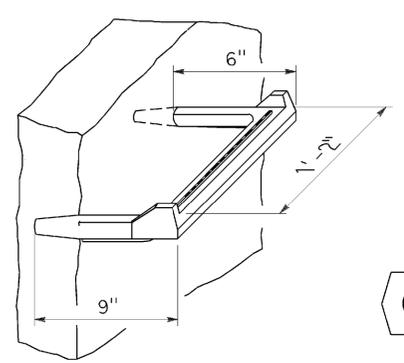
DETAIL "A"

DETAIL "B"

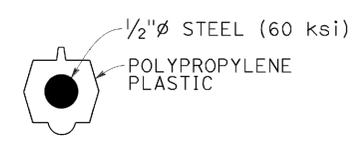
FACE ANGLE AND ANCHOR

NOTE:

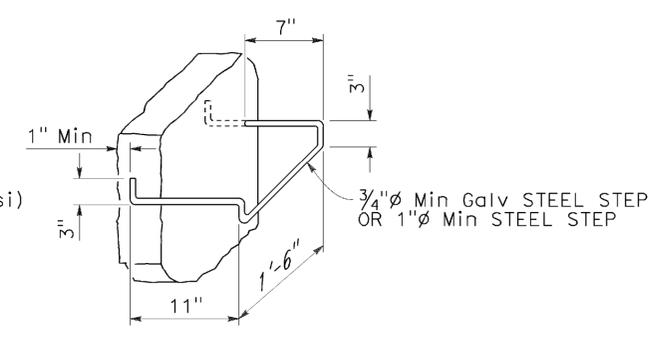
- When shown on the project plans, place a 3/4 inch diameter plain round protection bar horizontally across the length of the opening and bend back 4 inches into the inlet wall on each side.



STEP INSERT

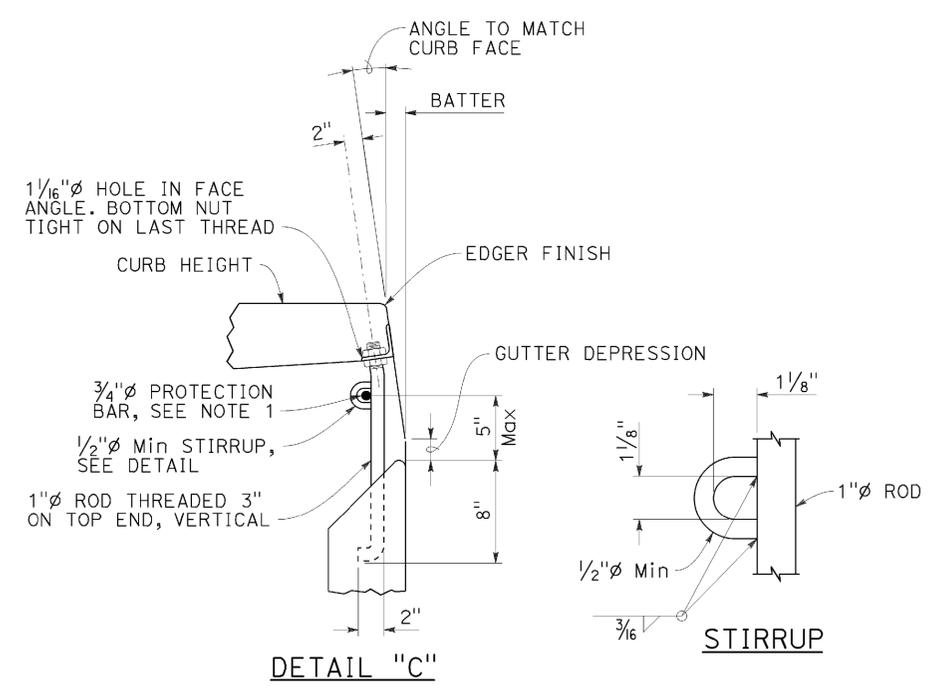


TYPICAL SECTION
(STEP INSERT)

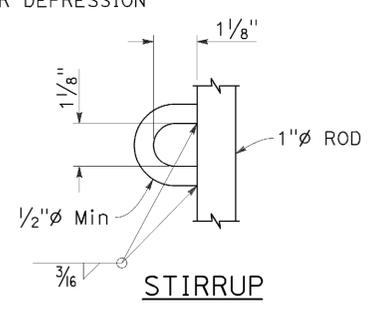


BAR STEP

STEP DETAILS



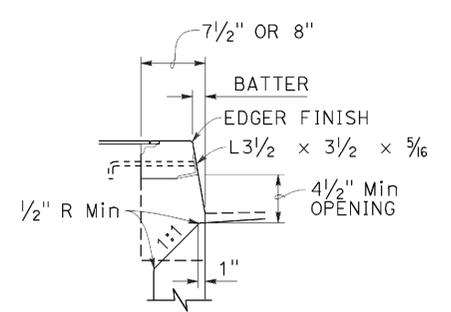
DETAIL "C"



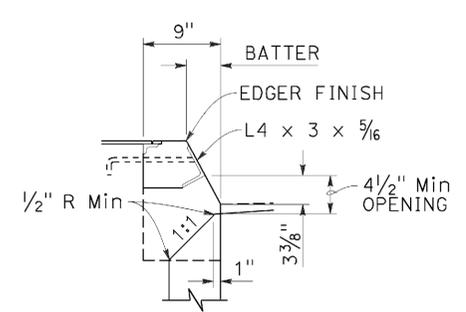
STIRRUP

CURB SUPPORT

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



TYPE A CURBS



TYPE B CURBS

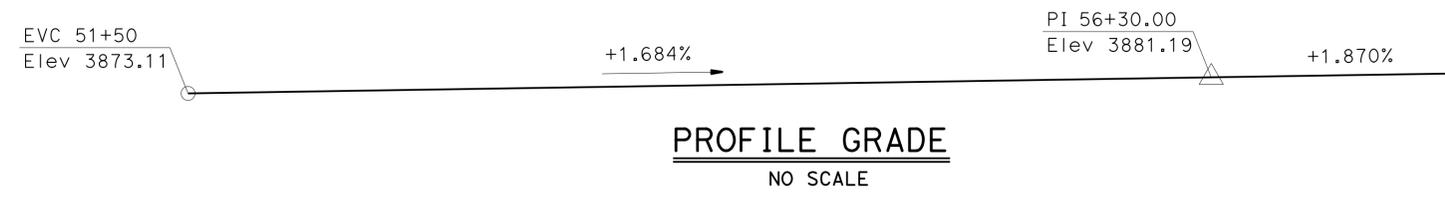
CURB OPENING DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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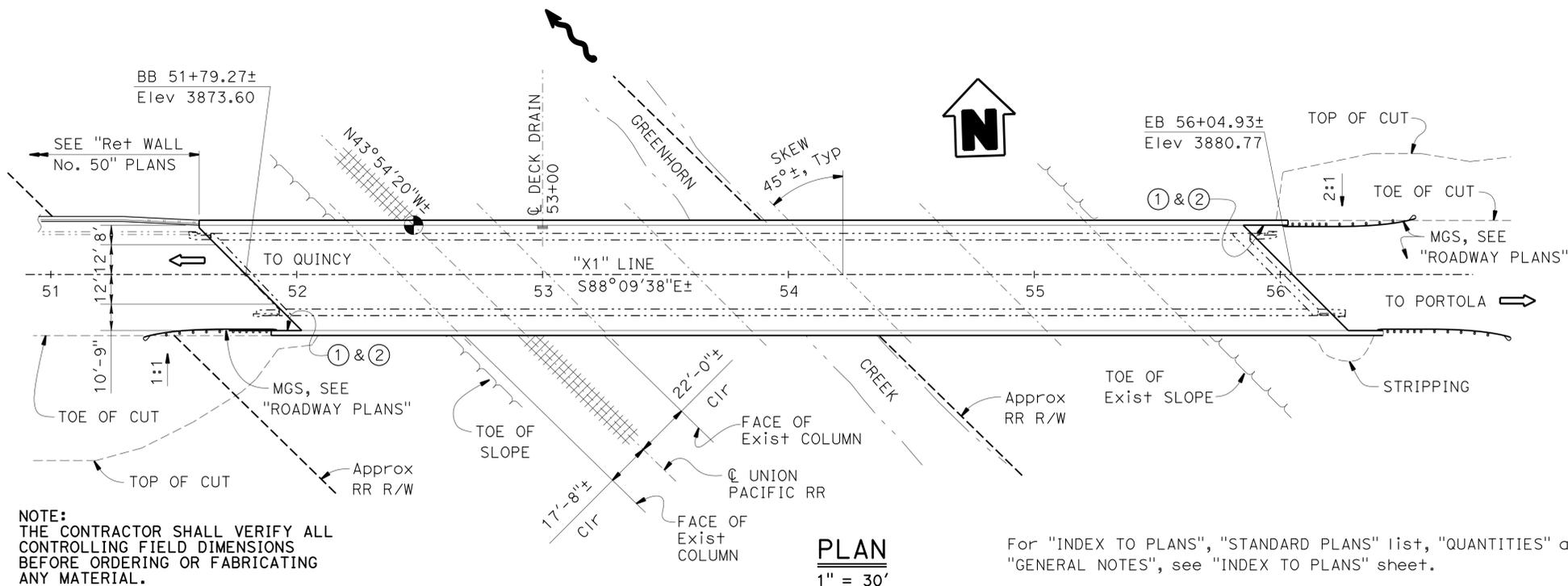
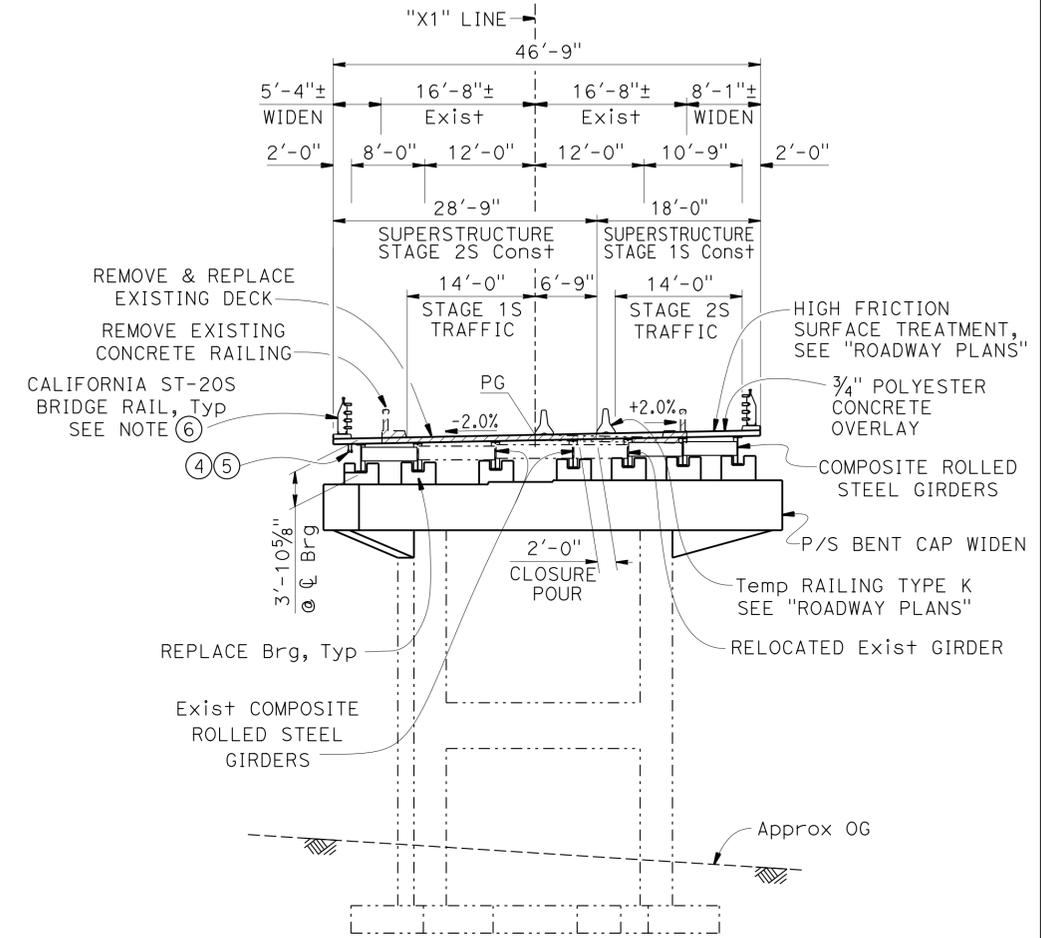
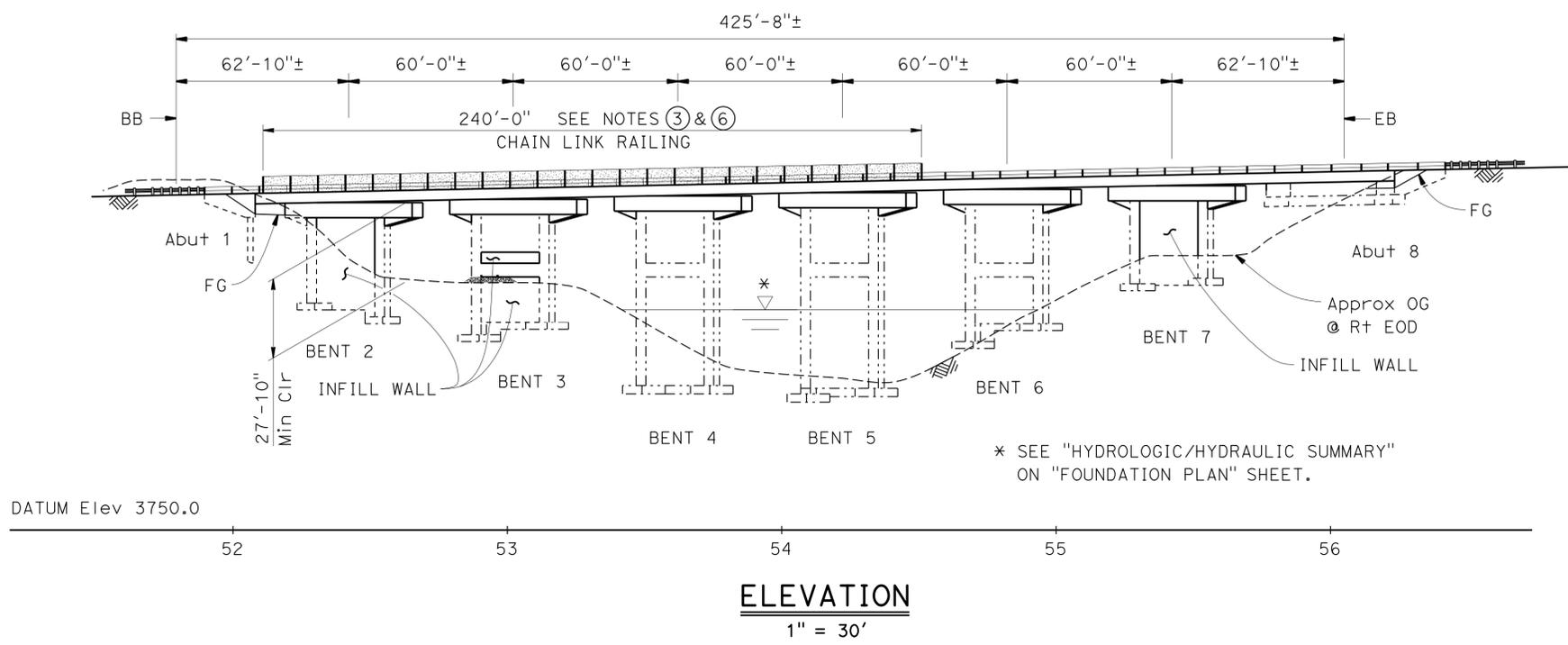
<i>Manode Kodsuntie</i>		6/2/16
REGISTERED CIVIL ENGINEER	DATE	
06-15-16		
PLANS APPROVAL DATE		

REGISTERED PROFESSIONAL ENGINEER	No. 56671
Exp. 6/30/17	CIVIL
STATE OF CALIFORNIA	

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- LEGEND:
- Indicates Point of Minimum Vertical Clearance
 - ▨ Indicates Deck and Railing Removal Limits
 - Indicates Existing Structure



- NOTES:
- Paint "SPRING GARDEN BRIDGE & OVERHEAD".
 - Paint "Br No. 09-0062".
 - The Chain Link Railing shall be installed on both the right and left side of bridge, beginning at the BB and extending the length shown, measured along the corresponding edge of deck.
 - 2"Ø conduit (fiber optic cable), see "ROADWAY PLANS".
 - 2"Ø conduit (power conductors), see "ROADWAY PLANS".
 - Natina Stain shall be applied to the exposed metal surfaces of the bridge rail and chain link railing.

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

DESIGN ENGINEER Jeff Sims	DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 AND ALTERNATIVE LOAD; AND PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	09-0062	SPRING GARDEN BRIDGE & OVERHEAD (WIDEN) GENERAL PLAN
	DETAILS	BY Bob Huddleston	CHECKED Kevin Harper	LAYOUT	BY Manode Kodsuntie			CHECKED Kevin Harper	POST MILE	
	QUANTITIES	BY Gerald Dickerson	CHECKED EC / EW / JT	SPECIFICATIONS	BY Sirisha Nelapatla	CHECKED Sirisha Nelapatla				

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0	1	2	3
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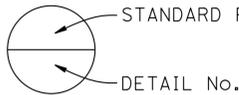
UNIT: 3576	PROJECT NUMBER & PHASE: 02000001611	CONTRACT NO.: 02-2C0904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 1 OF 41
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INDEX TO PLANS

Sht No.	Title
1	GENERAL PLAN
2	INDEX TO PLANS
3	DECK CONTOURS
4	FOUNDATION PLAN
5	ABUTMENT 1 LAYOUT
6	ABUTMENT 8 LAYOUT
7	ABUTMENT DETAILS NO. 1
8	ABUTMENT DETAILS NO. 2
9	ABUTMENT DETAILS NO. 3
10	ABUTMENT DETAILS NO. 4
11	ABUTMENT DETAILS NO. 5
12	ABUTMENT DETAILS NO. 6
13	ABUTMENT DETAILS NO. 7
14	ABUTMENT BEARING DETAILS
15	INFILL WALL BENT 2
16	INFILL WALL BENT 3
17	INFILL WALL BENT 7
18	BENT DETAILS NO. 1
19	BENT DETAILS NO. 2
20	BENT DETAILS NO. 3
21	BENT DETAILS NO. 4
22	BENT BEARING DETAILS NO. 1
23	BENT BEARING DETAILS NO. 2
24	TYPICAL SECTION
25	GIRDER LAYOUT
26	GIRDER DETAILS NO. 1
27	GIRDER DETAILS NO. 2
28	GIRDER DETAILS NO. 3
29	GIRDER DETAILS NO. 4
30	DECK DETAILS
31	CHAIN LINK RAILING DETAILS
32	DECK DRAIN - TYPE C
33	CALIFORNIA ST-20S BRIDGE RAIL DETAILS NO. 1
34	CALIFORNIA ST-20S BRIDGE RAIL DETAILS NO. 2
35	CALIFORNIA ST-20S BRIDGE RAIL DETAILS NO. 3
36	CALIFORNIA ST-20S BRIDGE RAIL DETAILS NO. 4
37	LOG OF TEST BORINGS 1 OF 5
38	LOG OF TEST BORINGS 2 OF 5
39	LOG OF TEST BORINGS 3 OF 5
40	LOG OF TEST BORINGS 4 OF 5
41	LOG OF TEST BORINGS 5 OF 5

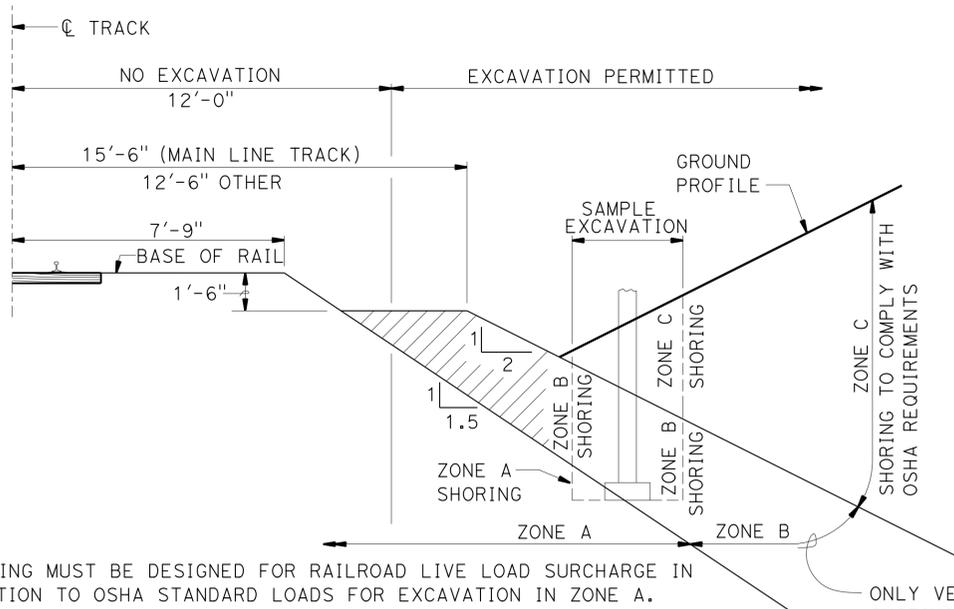
STANDARD PLANS 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
RSP A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62C	LIMITS OF PAYMENT FOR STRUCTURE EXCAVATION AND BACKFILL BRIDGE
B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-5	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
B14-3	COMMUNICATION AND SPRINKLER CONTROL CONDUITS (CONDUIT LESS THAN 4")



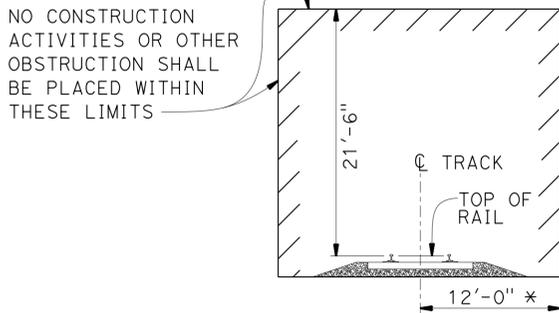
GENERAL RAILROAD SHORING NOTES:

- All dimensions are measured perpendicular to $\text{\textcircled{C}}$ Track.
- Prior to commencing any work, the Contractor shall submit for approval by the Railroad detailed plans indicating the nature and extent of the track protection shoring proposed. The Contractor shall install the temporary shoring system per the approved plans. Design of the temporary shoring system to comply with current RAILROAD GUIDELINES FOR TEMPORARY SHORING.
- For excavations which encroach into Zone A or B, shoring plans shall be accompanied by design calculations. Plans and calculations must be signed and stamped by a Professional Engineer registered in the State of California.



GENERAL RAILROAD EXCAVATION ZONES

NO SCALE



* Dimension measured perpendicular to $\text{\textcircled{C}}$ track

MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

GENERAL NOTES

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:

AASHTO LRFD Bridge Design Specifications 2012, 6th edition and the Caltrans Amendments preface dated January 2014

SEISMIC DESIGN:

Caltrans Seismic Design Criteria (SDC), Version 1.7 dated April 2013

DEAD LOAD:

Includes 26 psf for future wearing surface

LIVE LOADING:

HL93 and permit design load.

SEISMIC LOADING:

Moment Magnitude : $M_{max} = 7.0$
Peak Ground Acceleration = 0.3 g
 $V_{s30} = 2000 \text{ ft/sec}$

REINFORCED CONCRETE:

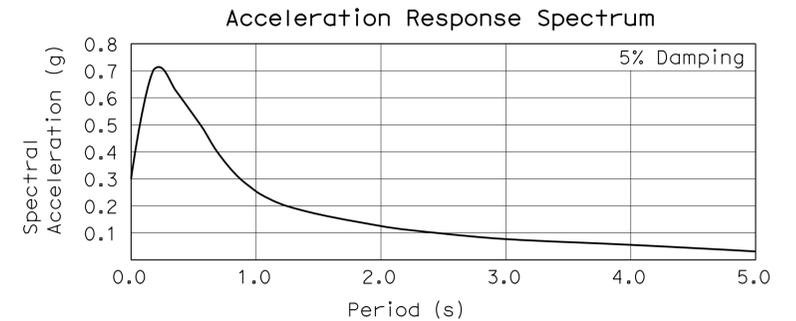
NEW	EXISTING:
$f_y = 60 \text{ ksi}$	$f_y = 40 \text{ ksi}$
$f'_c = 3.6 \text{ ksi}$	$f'_{ce} = 5 \text{ ksi}$
$n = 8$	

PRESTRESSED CONCRETE:

See prestressing notes

STRUCTURAL STEEL:

NEW	EXISTING:
W-Shapes: $F_y = 50 \text{ ksi}$	W-Shapes
All other: $F_y = 36 \text{ ksi Min}$	All other: $F = 33 \text{ ksi}$



QUANTITIES

LEAD COMPLIANCE PLAN	LUMP	SUM
WORK AREA MONITORING (BRIDGE)	LUMP	SUM
CORE AND PRESSURE GROUT DOWEL (1/4")	2,016	LF
REPAIR CRACKED WELD	LUMP	SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	18,112	SQFT
FURNISH POLYESTER CONCRETE OVERLAY	1,132	CF
PLACE POLYESTER CONCRETE OVERLAY	18,112	SQFT
BRIDGE REMOVAL (PORTION)	LUMP	SUM
STRIPPING EXCAVATION	22	CY
STRIPPING EXCAVATION (NATURALLY OCCURRING ASBESTOS)	21	CY
STRUCTURE EXCAVATION (BRIDGE)	144	CY
STRUCTURE EXCAVATION (NATURALLY OCCURRING ASBESTOS)	131	CY
STRUCTURE BACKFILL (BRIDGE)	118	CY
PERVIOUS BACKFILL MATERIAL (BRIDGE)	4	CY
30" CAST-IN-DRILLED-HOLE CONCRETE PILING	35	LF
30" CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	56	LF
PRESTRESSING	LUMP	SUM
STRUCTURAL CONCRETE, BRIDGE FOOTING	22	CY
STRUCTURAL CONCRETE, BRIDGE	604	CY
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	569	CY
DRILL AND BOND DOWEL	587	LF
JOINT SEAL (MR 1")	488	LF
BAR REINFORCING STEEL (BRIDGE)	104,630	LB
BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE)	158,245	LB
FURNISH STRUCTURAL STEEL (BRIDGE)	334,769	LB
ERECT STRUCTURAL STEEL (BRIDGE)	334,769	LB
ERECT STRUCTURAL STEEL (EXISTING GIRDER)	28	EA
CLEAN STRUCTURAL STEEL (EXISTING BRIDGE)	LUMP	SUM
PAINT STRUCTURAL STEEL (EXISTING BRIDGE)	LUMP	SUM
CLEAN AND PAINT STRUCTURAL STEEL	LUMP	SUM
SPOT BLAST CLEAN AND PAINT UNDERCOAT	4,975	SQFT
STAIN GALVANIZED SURFACES	LUMP	SUM
MISCELLANEOUS METAL (BRIDGE)	4,735	LB
CHAIN LINK RAILING	480	LF
CALIFORNIA ST-20S BRIDGE RAIL	896	LF

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Bob Huddleston	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED EC / EW / JT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.
09-0062
POST MILE
51.21

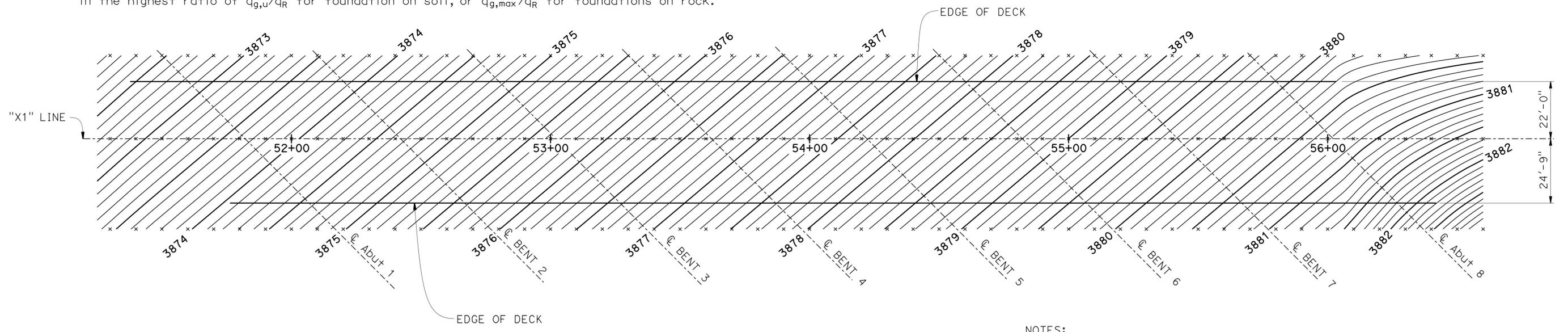
SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
INDEX TO PLANS

Support Location	Service ² Permissible Net Contact Stress (Settlement) (ksf)	Strength/Construction ³ Factored Gross Nominal Bearing Resistance $\phi_b = 0.45$ (ksf)	Extreme Event ³ Factored Gross Nominal Bearing Resistance $\phi_b = 1.00$ (ksf)
Bent 2 Left Footing (existing)	48.6	22.5	50
Bent 2 Right Footing (existing)	48	22.5	50
Bent 3 Left Footing (existing)	48	22.5	50
Bent 3 Right Footing (existing)	48.5	22.5	50
Bent 4 Left Footing (existing)	49	22.5	50
Bent 4 Right Footing (existing)	49	22.5	50
Bent 5 Left Footing (existing)	49	22.5	50
Bent 5 Right Footing (existing)	49	22.5	50
Bent 6 Left Footing (existing)	48	22.5	50
Bent 6 Right Footing (existing)	48.7	22.5	50
Bent 7 Left Footing (existing)	49	22.5	50
Bent 7 Right Footing (existing)	48.6	22.5	50
Abutment 8 Left Widening (new footing)	49.5	22.5	N/A
Abutment 8 Right Widening (new footing)	49	22.5	N/A

Location	Pile Type	Nominal Resistance (kips)		Design Pile Tip Elevation (ft)	30"Ø CIDH Specified Pile Tip Elevation (ft)	30"Ø CIDH Rock Socket Specified Tip Elevation (ft)
		Compression	Tension			
Abut 1 (Right)	30"Ø CIDH with 30"Ø CIDH Rock Socket	330	0	(a) 3834.0 (d) 3845.5	3852.0	3834.0
Abut 1 (Left)	30"Ø CIDH with 30"Ø CIDH Rock Socket	370	0	(a) 3832.0 (d) 3845.5	3852.0	3832.0

- NOTES:
- Controlling load combination is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundation on rock.
 - Controlling load combination for Service Limit State is the one resulting in the highest ratio of $q_{n,u}/q_{pn}$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock.
 - Controlling load combination for Strength, Construction, and Extreme Event is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundation on soil, or $q_{g,max}/q_R$ for foundations on rock.

- NOTES:
- Design tip elevations are controlled by (a) Compression and (d) Lateral.
 - The CIDH specified tip elevation shall not be raised.

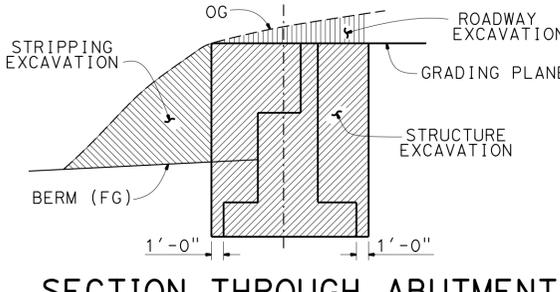
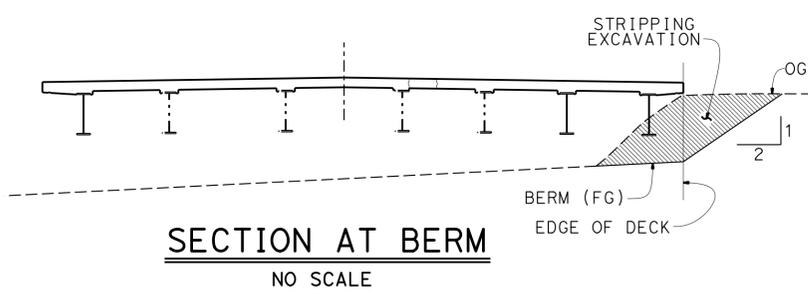


PLAN
1" = 20'

- NOTES:
- Contours are for top of concrete deck and have been adjusted by lowering $\frac{3}{4}$ " from profile grade for polyester concrete overlay.
 - Contours do not include camber
 - Contour interval = 0.10'
- *- Indicates 10'-0" intervals along station line

HYDROLOGIC / HYDRAULIC DATA SUMMARY		
DRAINAGE AREA: 35.3 SQUARE MILES		
FREQUENCY (YEARS)	DESIGN FLOOD	BASE FLOOD
DISCHARGE, CUBIC FEET PER SECOND (CFS)	4110	5300
WATER SURFACE Elev AT BRIDGE, FEET	3821.6	3831.5

FLOOD PLAIN DATA ARE BASED UPON INFORMATION AVAILABLE WHEN THE PLANS WERE PREPARED AND ARE SHOWN TO MEET FEDERAL REQUIREMENTS. THE ACCURACY OF SAID INFORMATION IS NOT WARRANTED BY THE STATE AND INTERESTED OR AFFECTED PARTIES SHOULD MAKE THEIR OWN INVESTIGATIONS.



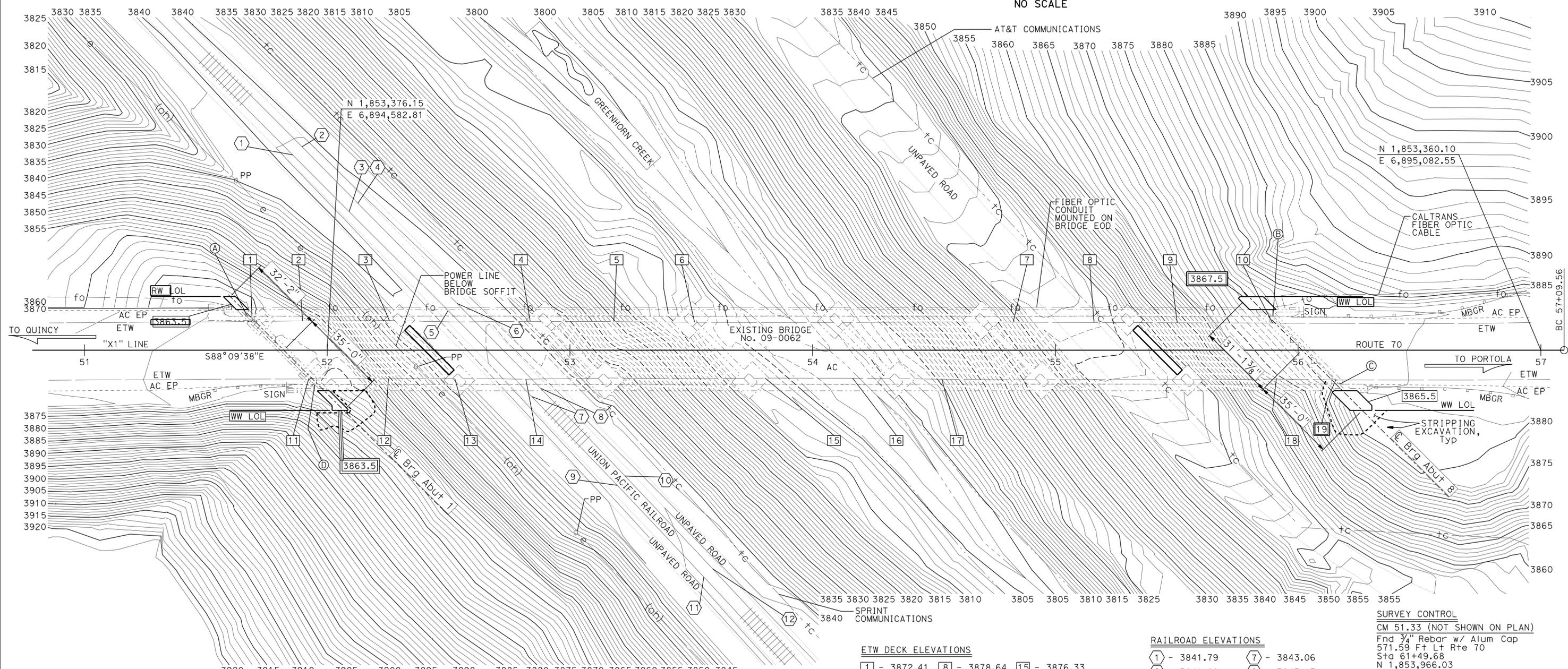
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	129	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

06-15-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

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NOTES:

- Piles not shown.
- XXXX.X Denotes bottom of footing elevation
- Indicates existing structure
- Indicates limits of Stripping Excavation

Bridge Location #09-0062

(A) - 14.04 Lt "X1" LINE, Sta 51+67.12, Elev=3872.53±
(B) - 13.62 Lt "X1" LINE, Sta 55+89.64, Elev=3880.22±
(C) - 13.91 Rt "X1" LINE, Sta 56+17.19, Elev=3880.62±
(D) - 14.29 Rt "X1" LINE, Sta 51+94.86, Elev=3873.04±

ETW DECK ELEVATIONS

1 - 3872.41	8 - 3878.64	15 - 3876.33
2 - 3872.86	9 - 3879.23	16 - 3876.93
3 - 3873.54	10 - 3879.96	17 - 3877.53
4 - 3874.50	11 - 3872.90	18 - 3880.00
5 - 3875.08	12 - 3873.58	19 - 3880.37
6 - 3875.68	13 - 3874.07	
7 - 3878.07	14 - 3874.58	

RAILROAD ELEVATIONS

1 - 3841.79	7 - 3843.06
2 - 3841.80	8 - 3843.13
3 - 3842.12	9 - 3843.46
4 - 3842.12	10 - 3843.53
5 - 3842.63	11 - 3843.90
6 - 3842.68	12 - 3843.97

SURVEY CONTROL
 CM 51.33 (NOT SHOWN ON PLAN)
 Fnd 3/4" Rebar w/ Alum Cap
 571.59 Ft Lt Rte 70
 Sta 61+49.68
 N 1,853,966.03
 E 6,895,294.19
 Elev = 4063.44

Cal-Trans 6 (NOT SHOWN ON PLAN)
 Fnd 3/4" Rebar w/ Alum Cap
 96.18 Ft S75°40'17"E Rte 70
 Sta 64+73.72
 N 1,853,551.45
 E 6,895,909.27
 Elev = 3902.61

PRELIMINARY INVESTIGATION SECTION				DESIGN BY Manode Kodsuntie	CHECKED Kevin Harper	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO. 09-0062	SPRING GARDEN BRIDGE & OVERHEAD (WIDEN) FOUNDATION PLAN
SCALE 1"=20'	VERT.DATUM NGVD29	PHOTOGRAMMETRY AS OF: X	DETAILS BY Bob Huddleston	CHECKED Kevin Harper	POST MILE 51.21				
ALIGNMENT TIES Dis+ TRAVERSE SHEET	SURVEYED BY DISTRICT	CHECKED BY J. BORDEN	QUANTITIES BY Gerald Dickerson	CHECKED Eric Chaffee					

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

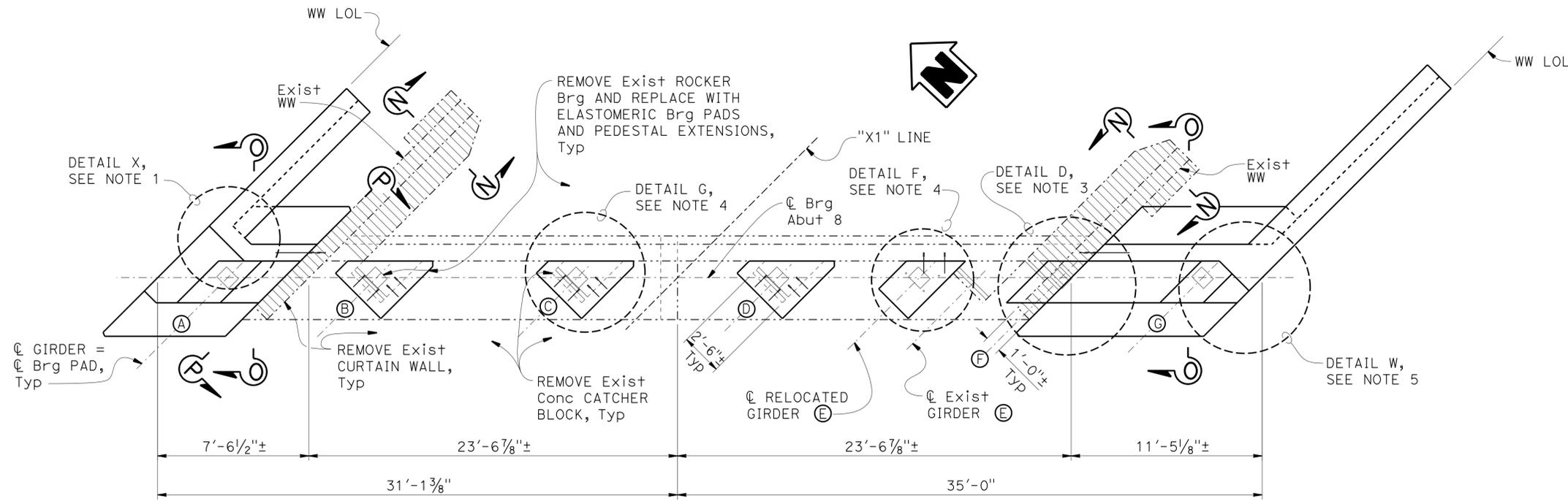
UNIT: 3646 PROJECT NUMBER & PHASE: 0200000161 CONTRACT NO.: 02-2c0904

DATE: 2/4/2015 REVISION DATES: 7/28/15, 04/04/16 SHEET 4 OF 41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	131	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 PLANS APPROVAL DATE 06-15-16
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REGISTERED PROFESSIONAL ENGINEER
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA



PLAN

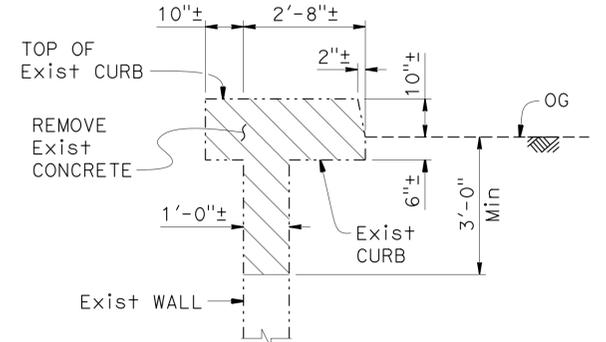
1/4" = 1'-0"

NOTES:

1. For SECTIONS A-A & D-D and "DETAIL X", see "ABUTMENT DETAILS NO. 2" sheet.
2. For SECTIONS P-P & U-U, see "ABUTMENT DETAILS NO. 5" sheet.
3. For "DETAIL D", see "ABUTMENT DETAILS NO. 5" sheet.
4. For DETAILS F & G, see "ABUTMENT DETAILS NO. 6" sheet.
5. For "DETAIL W", see "ABUTMENT DETAILS NO. 7" sheet.
6. For WEEP HOLE AND GEOCOMPOSITE DRAIN ALTERNATIVE, see "ABUTMENT DETAILS NO. 7" sheet.
7. Existing girders not shown.

LEGEND:

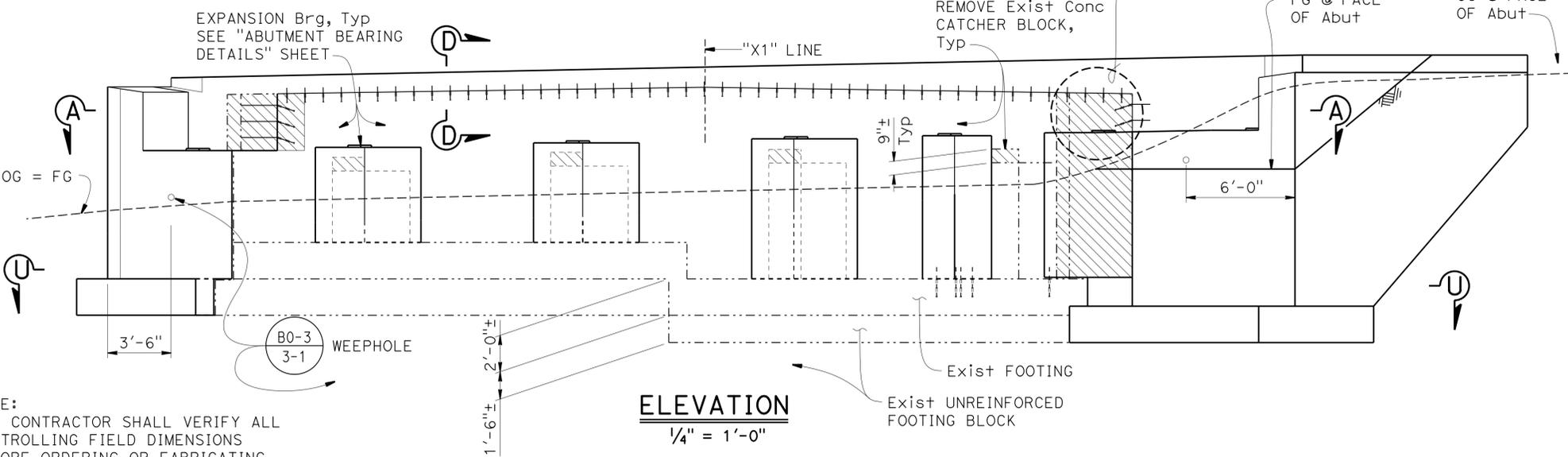
- ▨ Indicates Bridge Removal (portion)
- Indicates existing structure
- ⊗ Girder designation
- * Indicates epoxy coated reinforcement



NOTE: Existing railing not shown.

SECTION N-N

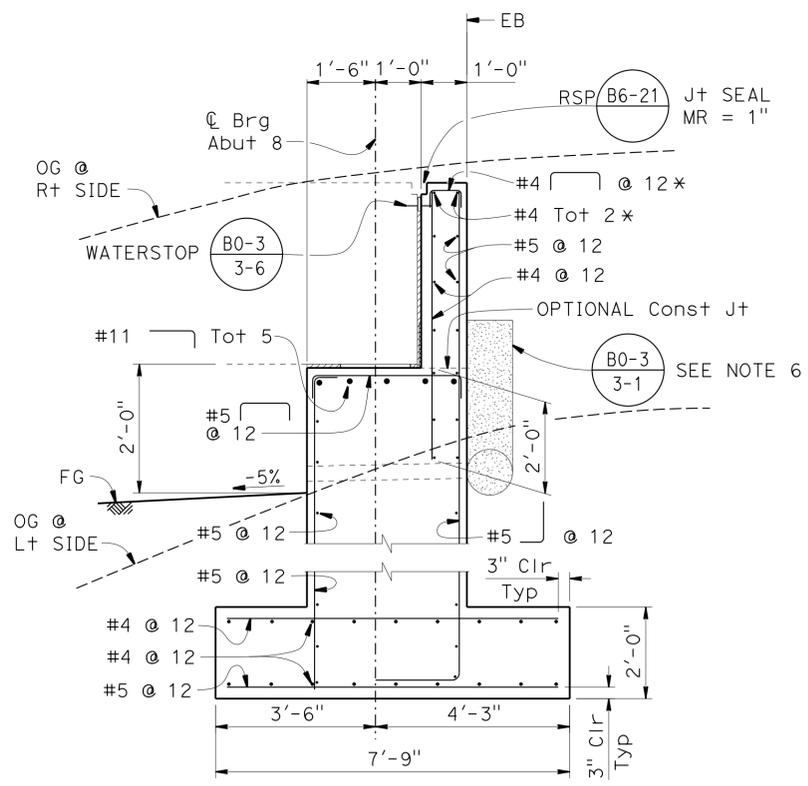
1/2" = 1'-0"



ELEVATION

1/4" = 1'-0"

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



SECTION O-O

1/2" = 1'-0"

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Bob Huddleston / Jin Zhou	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Chaffee

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.21

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
ABUTMENT 8 LAYOUT

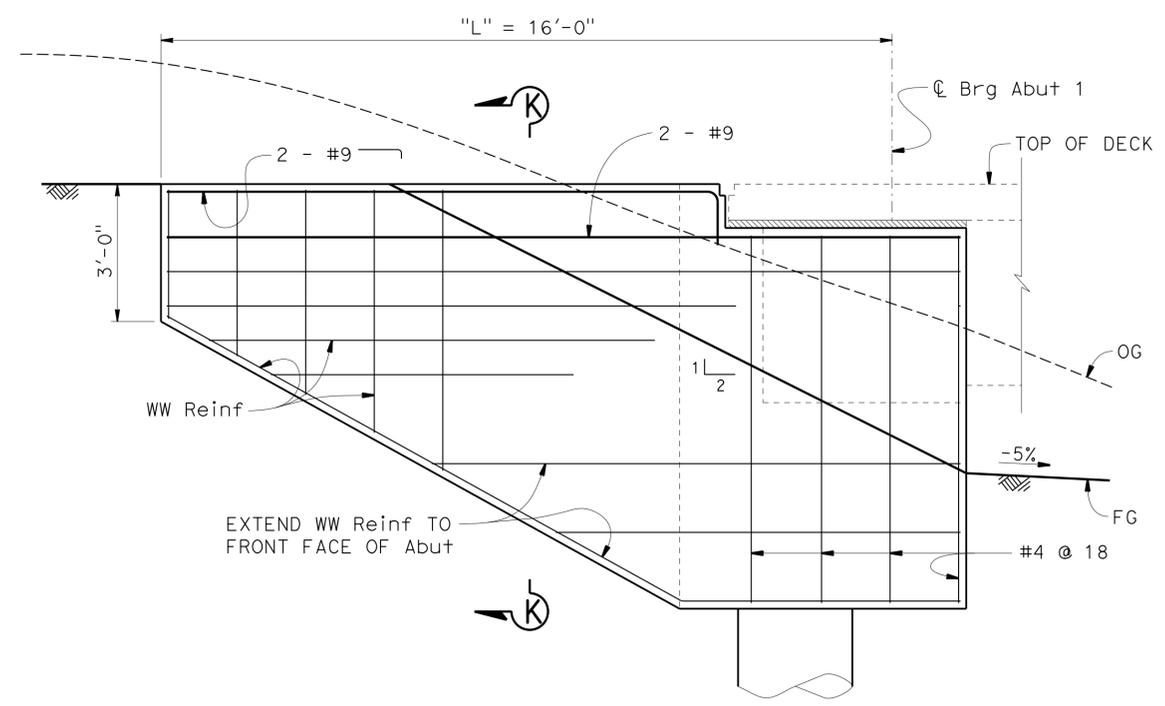
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	132	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

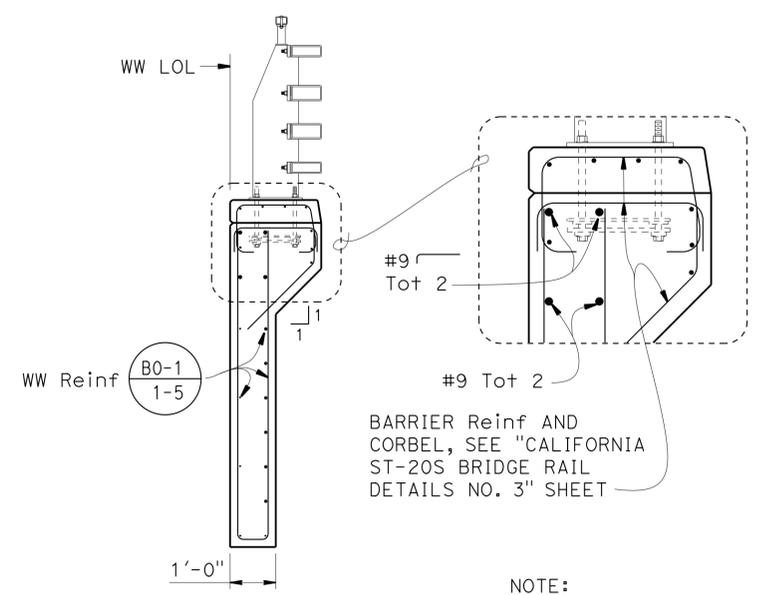
06-15-16
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REGISTERED PROFESSIONAL ENGINEER
Manode Kodsuntie
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

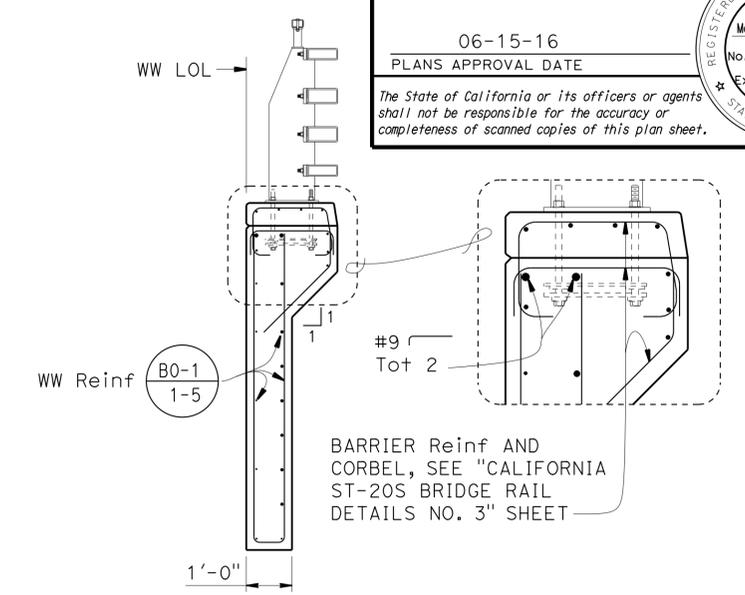


NOTE: California ST-20S Bridge Rail not shown.
WINGWALL ELEVATION - ABUTMENT 1 (B0-1)
 1/2" = 1'-0"

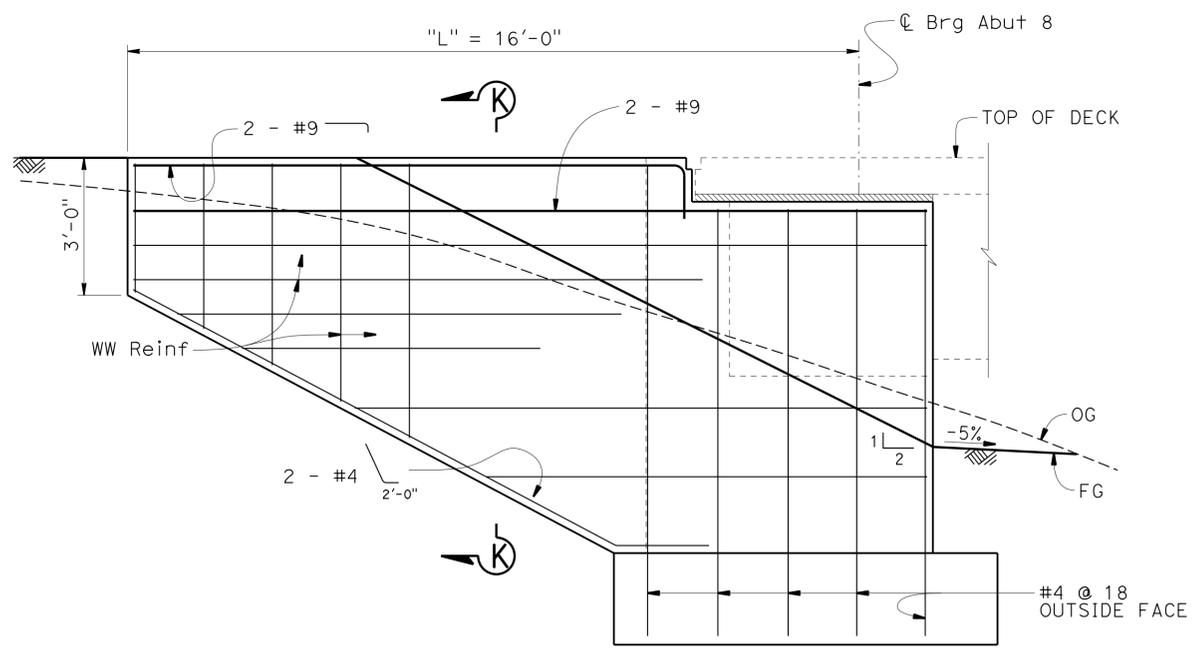


SECTION K-K
 1/2" = 1'-0"

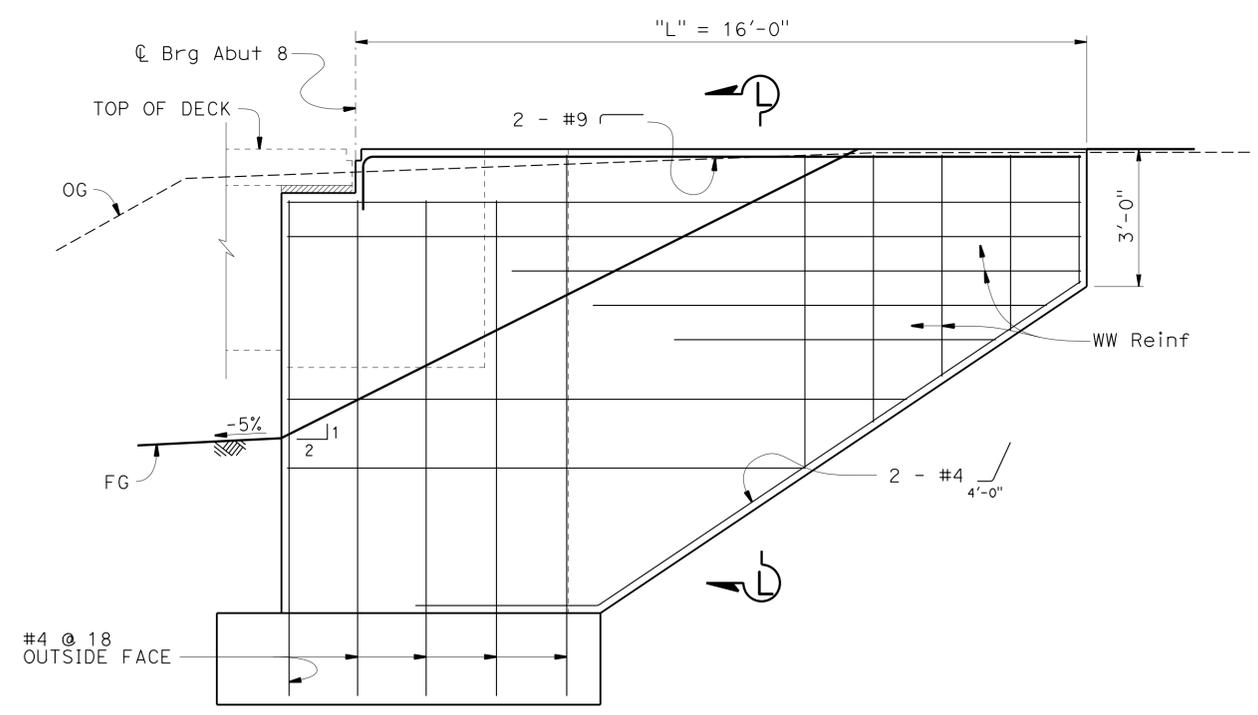
NOTE: Barrier reinforcement shall be epoxy coated.



SECTION L-L
 1/2" = 1'-0"



NOTE: California ST-20S Bridge Rail not shown.
WINGWALL ELEVATION - ABUTMENT 8 LEFT (B0-1)
 1/2" = 1'-0"



NOTE: California ST-20S Bridge Rail not shown.
WINGWALL ELEVATION - ABUTMENT 8 RIGHT (B0-1)
 1/2" = 1'-0"

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Bob Huddleston	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Chaffee

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.21

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
ABUTMENT DETAILS NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	133	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

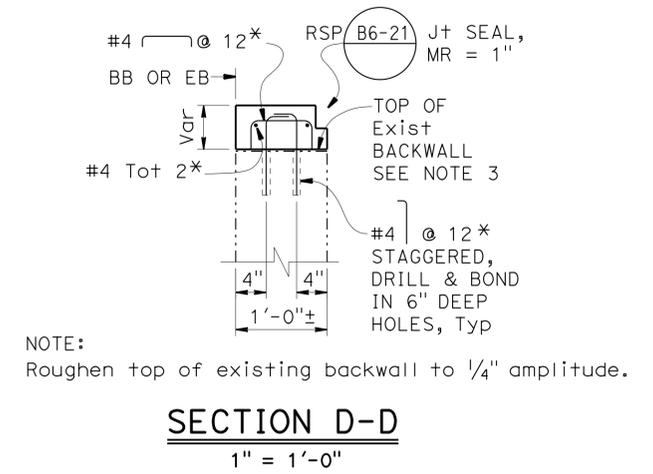
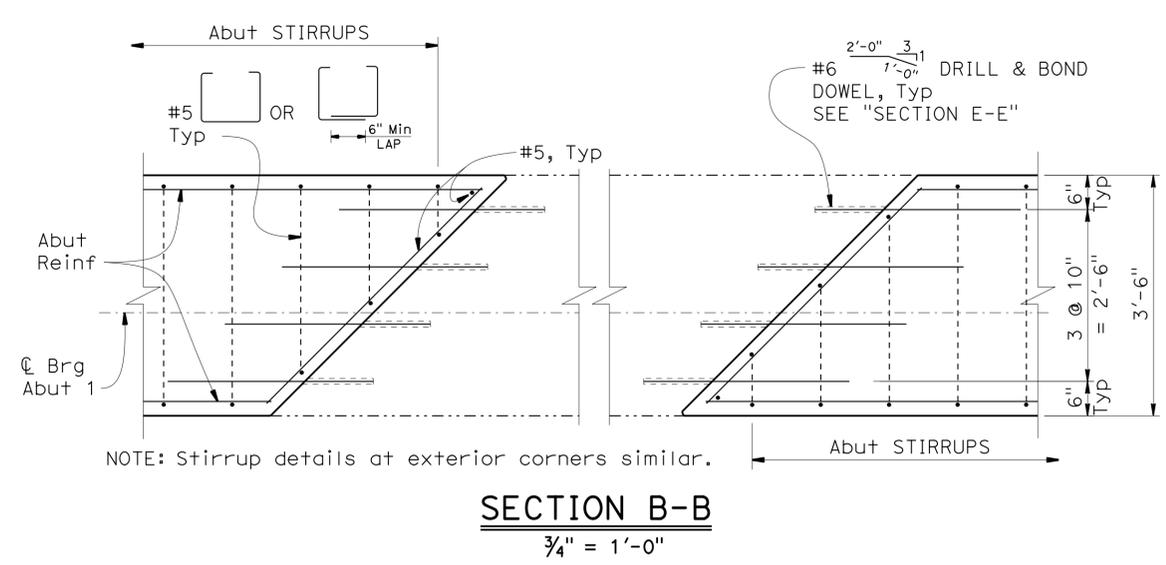
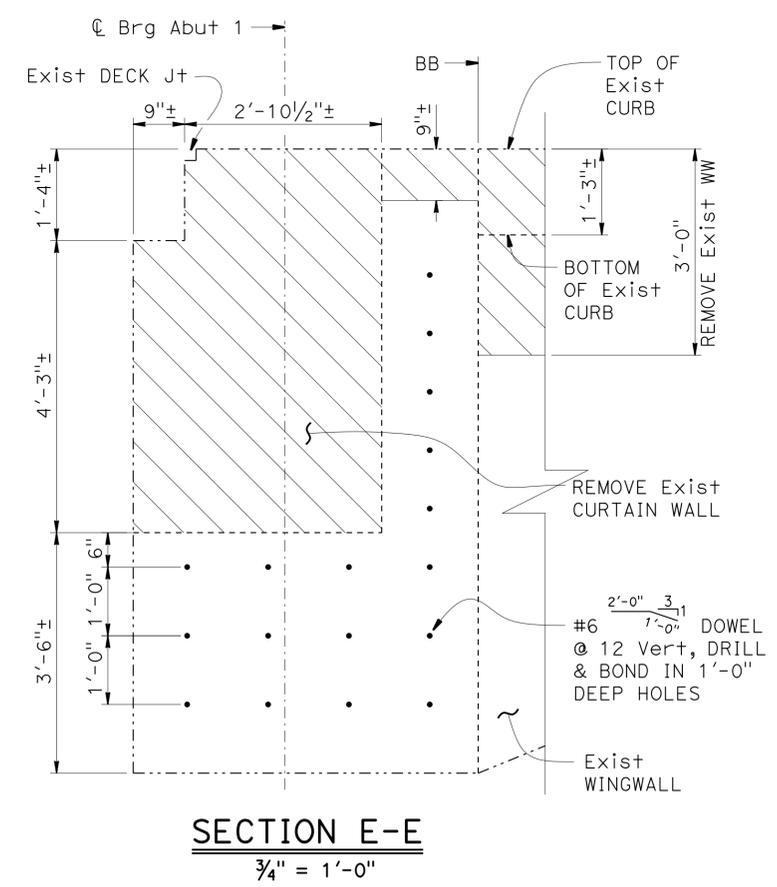
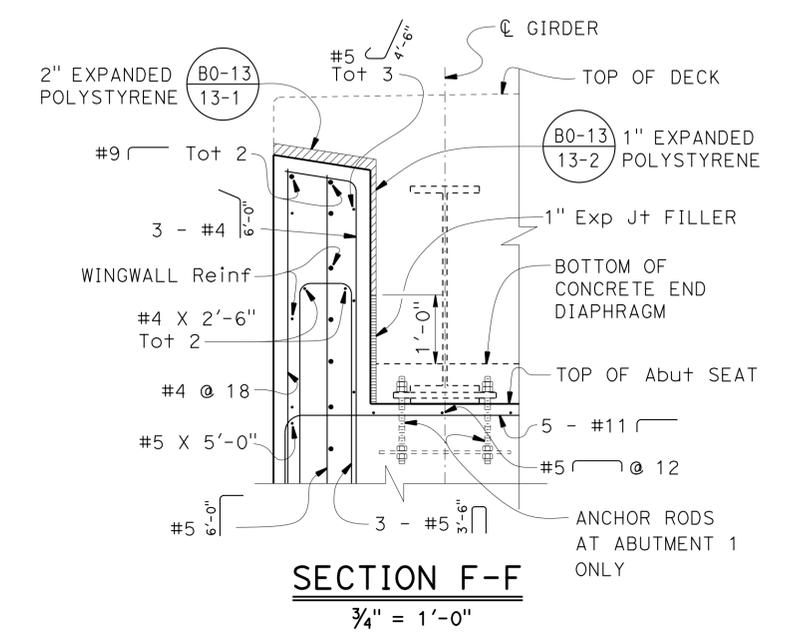
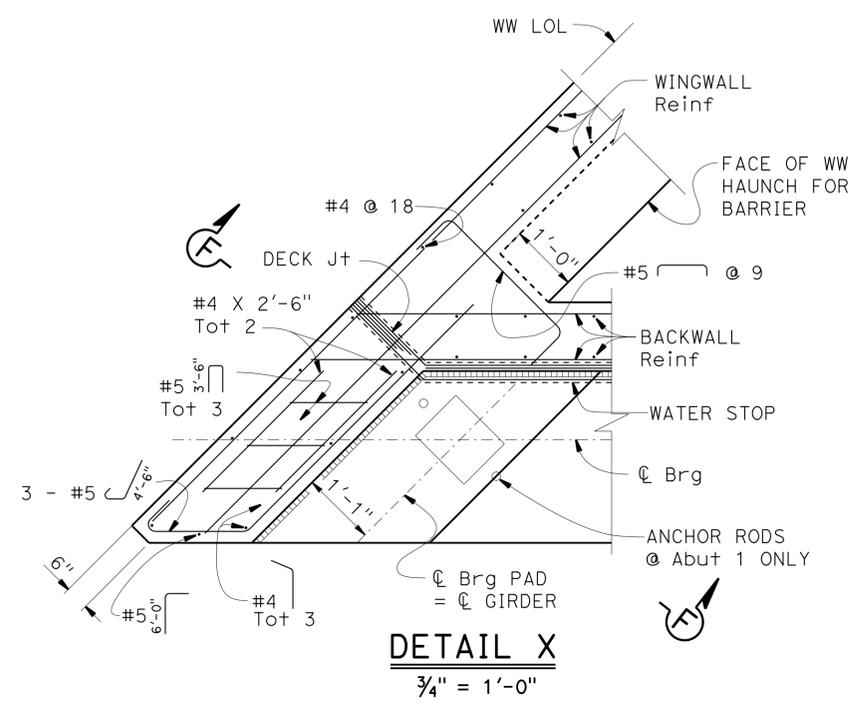
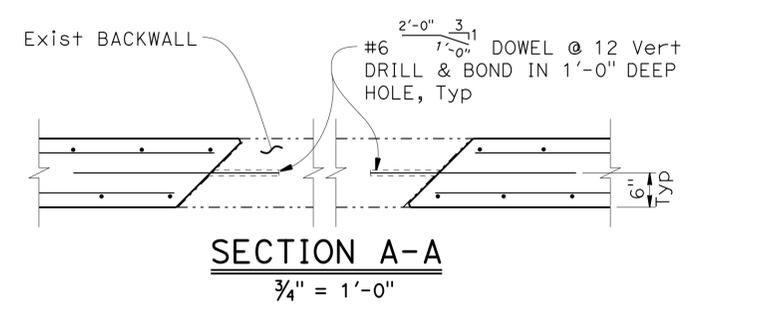
06-15-16
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REGISTERED PROFESSIONAL ENGINEER
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

- LEGEND:**
- Indicates limits of Bridge Removal (portion)
 - Indicates existing structure
 - * Indicates epoxy coated reinforcement

- NOTES:**
1. For location of "SECTION A-A" & "SECTION D-D", see "ABUTMENT 1 LAYOUT" & "ABUTMENT 8 LAYOUT" sheets.
 2. For location of "SECTION E-E" & "SECTION B-B" and "DETAIL X", see "ABUTMENT 1 LAYOUT" sheet.
 3. Roughen top of existing back wall to 1/4" minimum amplitude.

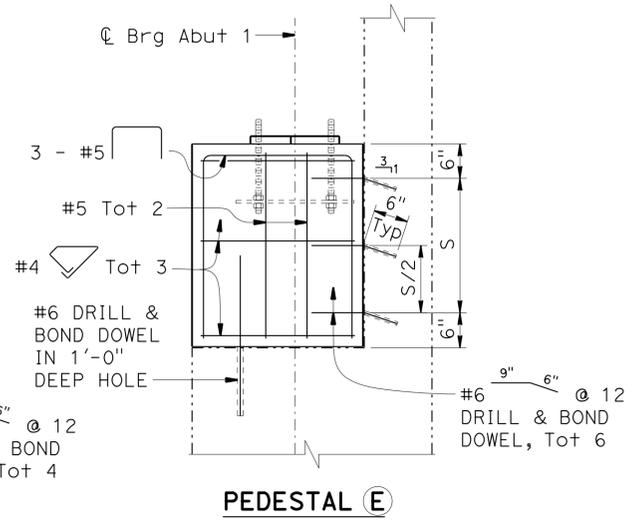
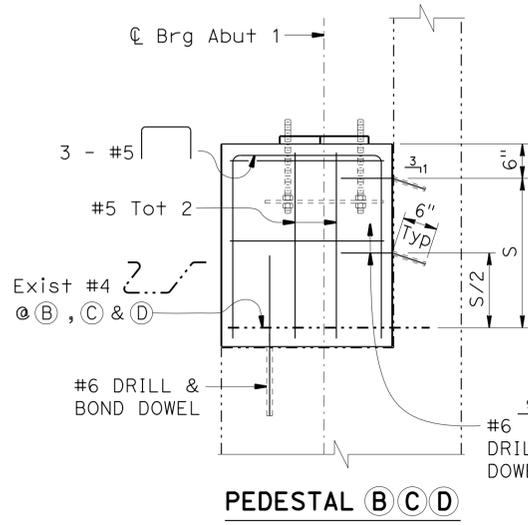
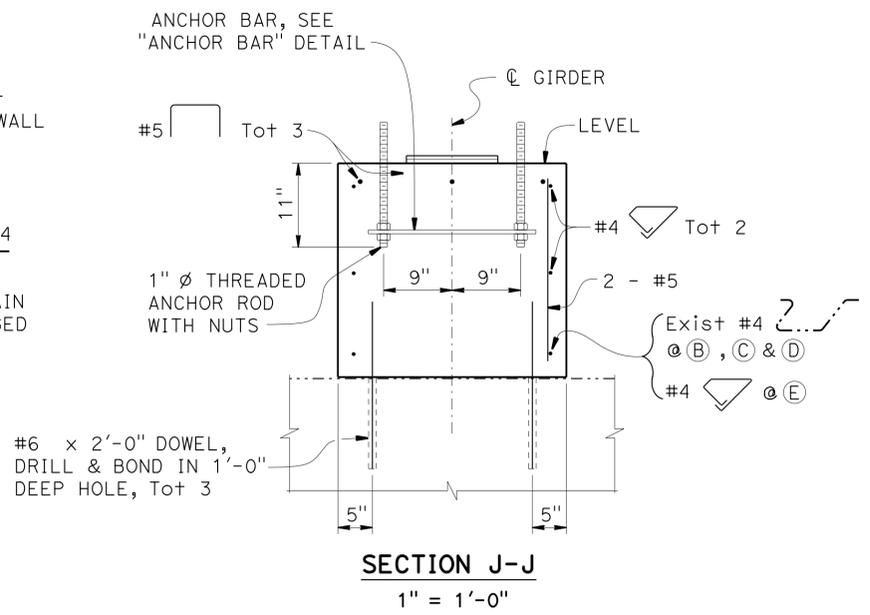
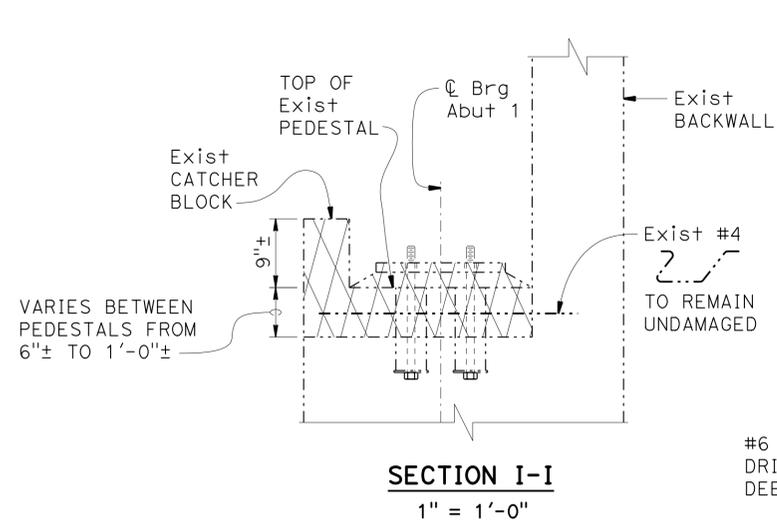


NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NOTE: Stirrup details at exterior corners similar.

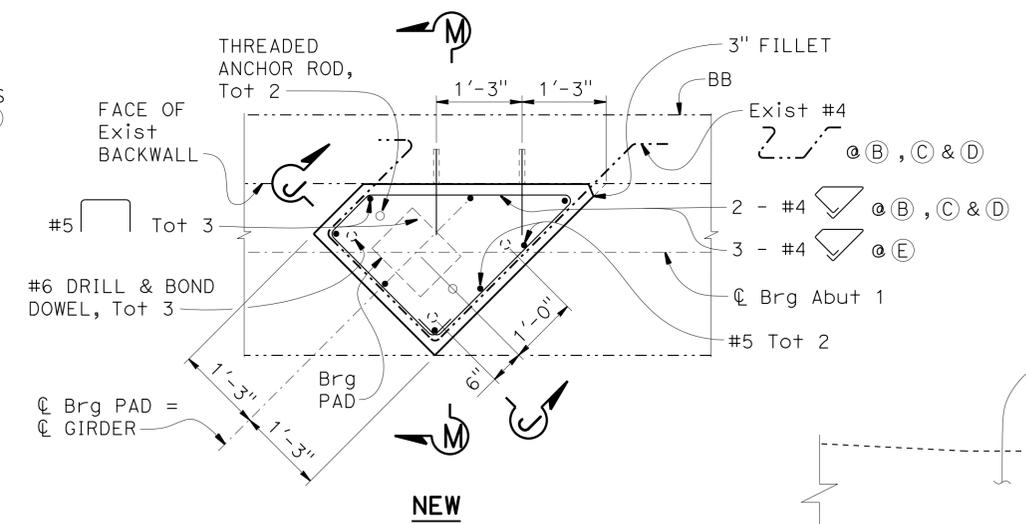
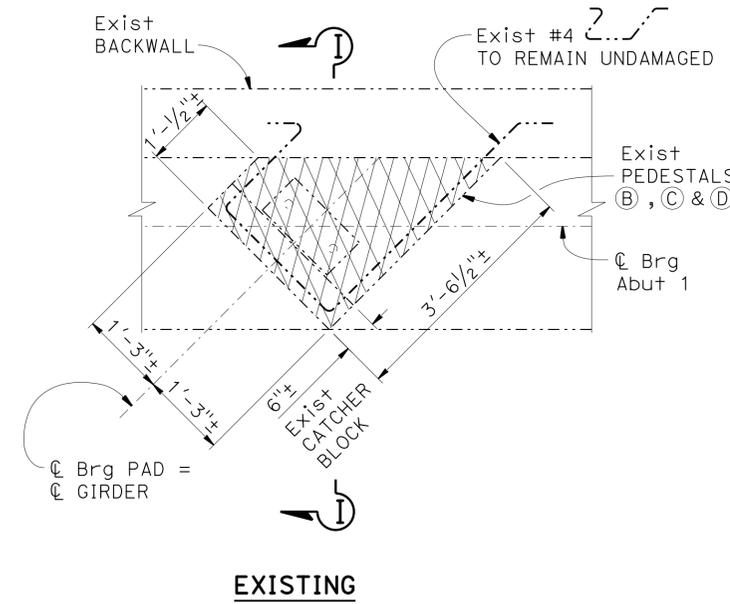
NOTE:
Roughen top of existing backwall to 1/4" amplitude.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	09-0062	SPRING GARDEN BRIDGE & OVERHEAD (WIDEN) ABUTMENT DETAILS NO. 2
	DETAILS	BY Bob Huddleston	CHECKED Kevin Harper			POST MILE	51.21	
	QUANTITIES	BY Gerald Dickerson	CHECKED Eric Chaffee			UNIT: 3576 PROJECT NUMBER & PHASE: 02000001611	CONTRACT NO.: 02-2C0904	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3		REVISION DATES		SHEET 8 OF 41



NOTE: For details not shown, see "SECTION J-J" detail.

SECTION M-M
 3/4 inch = 1 foot 0 inch

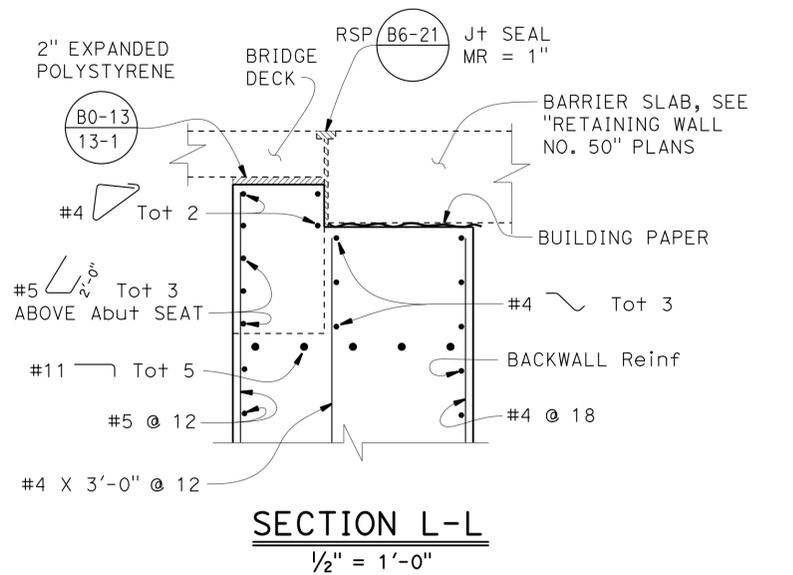
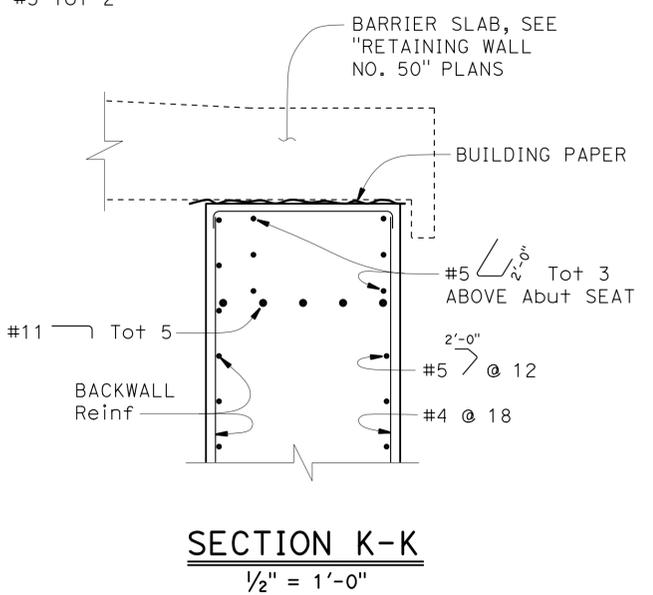
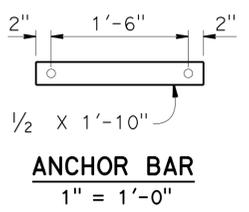


DETAIL A
 3/4 inch = 1 foot 0 inch

- NOTES:
- For location of "DETAIL A", see ABUTMENT 1 LAYOUT" sheet.
 - For location of SECTIONS K-K & L-L, see "ABUTMENT DETAILS NO. 3" sheet.

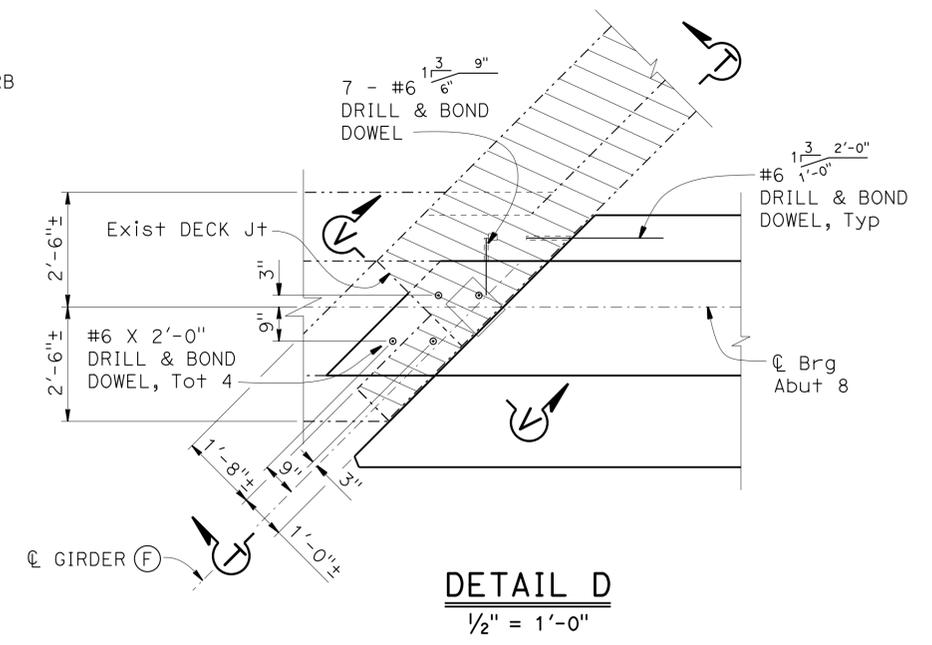
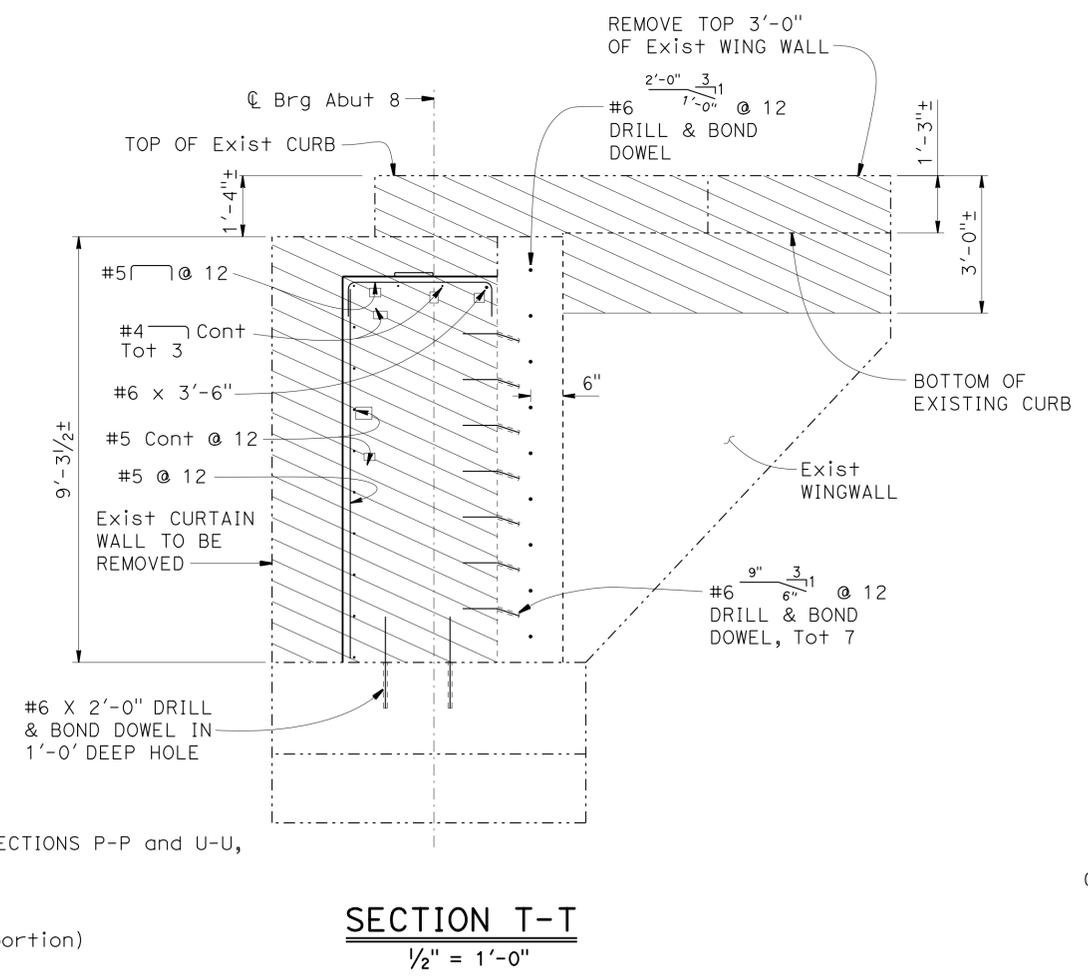
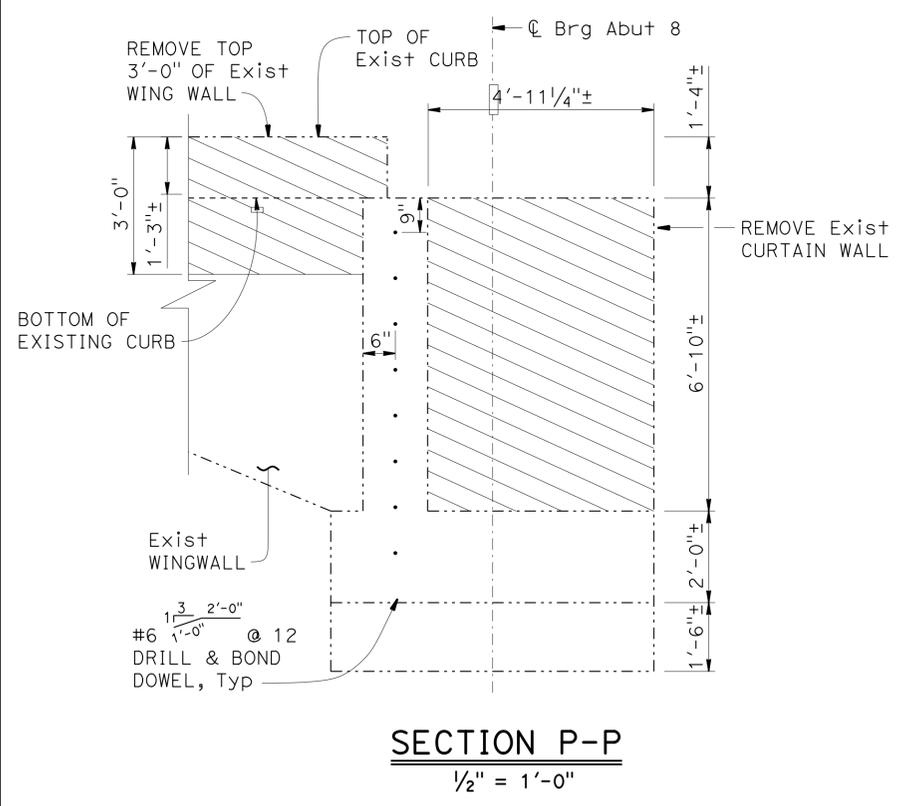
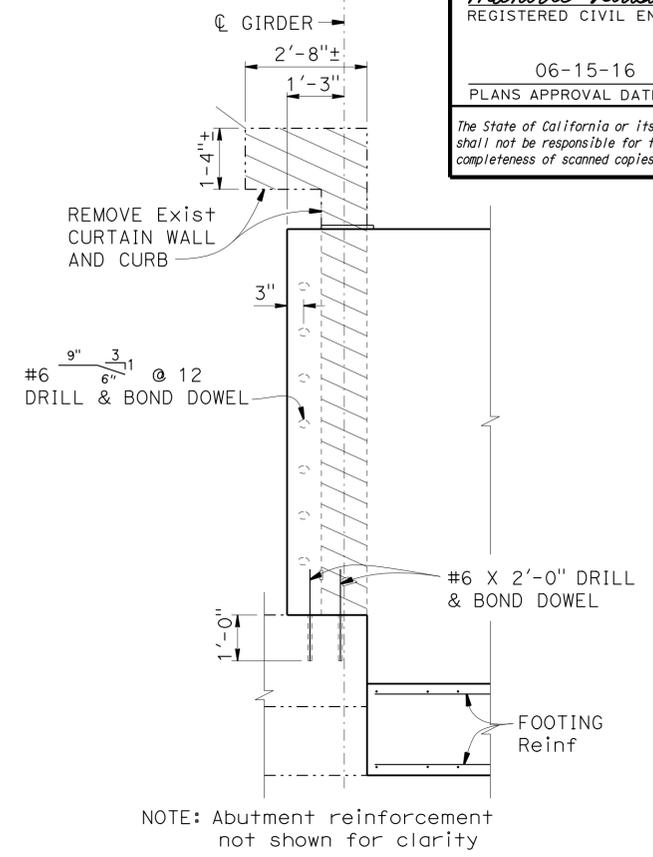
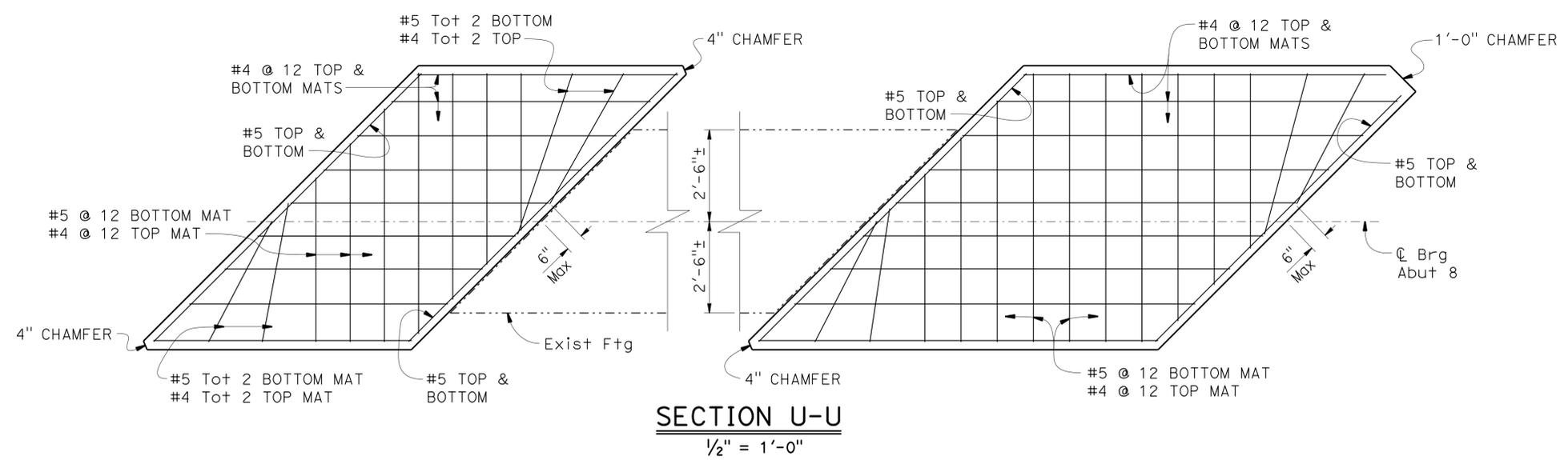
- LEGEND:
- Indicates existing structure
 - ▨ Indicates Bridge Removal (portion)
 - ⊗ Girder designation

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



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	136	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 06-15-16
 PLANS APPROVAL DATE
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NOTES:
1. For location of "DETAIL D" and SECTIONS P-P and U-U, see ABUTMENT 8 LAYOUT" sheet.

LEGEND:
 Indicates Bridge Removal (portion)
 - - - - - Indicates existing structure

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

DESIGN	BY	Manode Kodsuntie	CHECKED	Kevin Harper	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	09-0062	SPRING GARDEN BRIDGE & OVERHEAD (WIDEN) ABUTMENT DETAILS NO. 5				
	DETAILS	BY	Bob Huddleston	CHECKED			Kevin Harper	POST MILE		51.21			
QUANTITIES	BY	Gerald Dickerson	CHECKED	Eric Chaffee	UNIT: 3576	PROJECT NUMBER & PHASE: 02000001611	CONTRACT NO.: 02-2C0904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF		
					0	1	2	3	04-01-15	11-18-15	12-01-15	11	41

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS UNIT: 3576 PROJECT NUMBER & PHASE: 02000001611 CONTRACT NO.: 02-2C0904 DISREGARD PRINTS BEARING EARLIER REVISION DATES

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	137	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

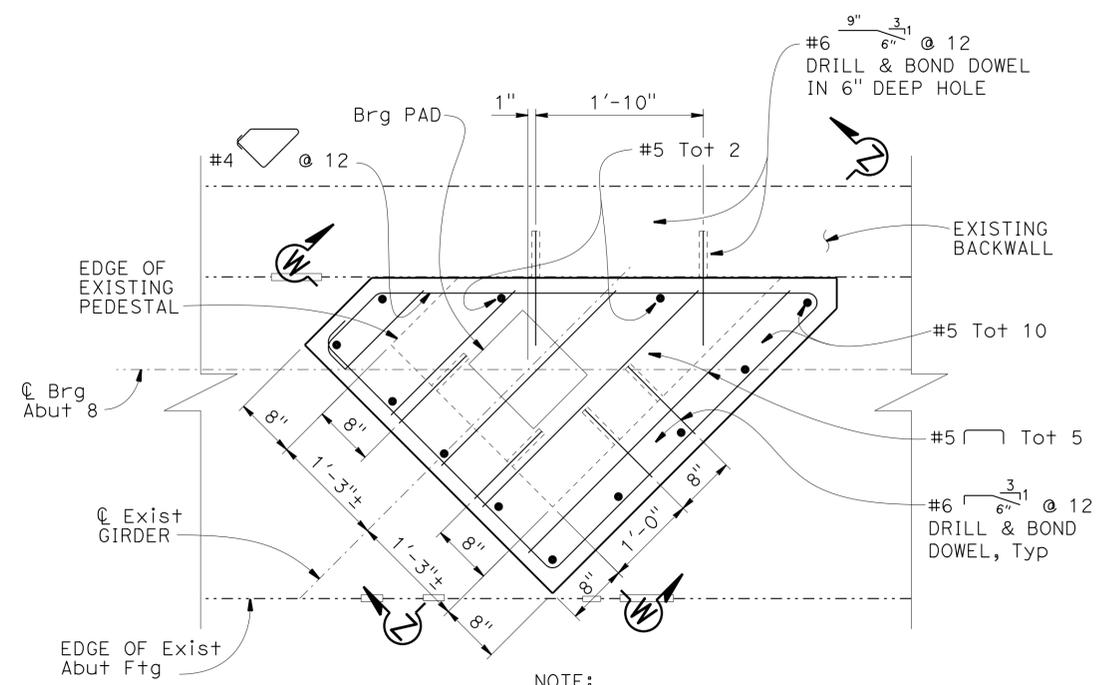
06-15-16
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

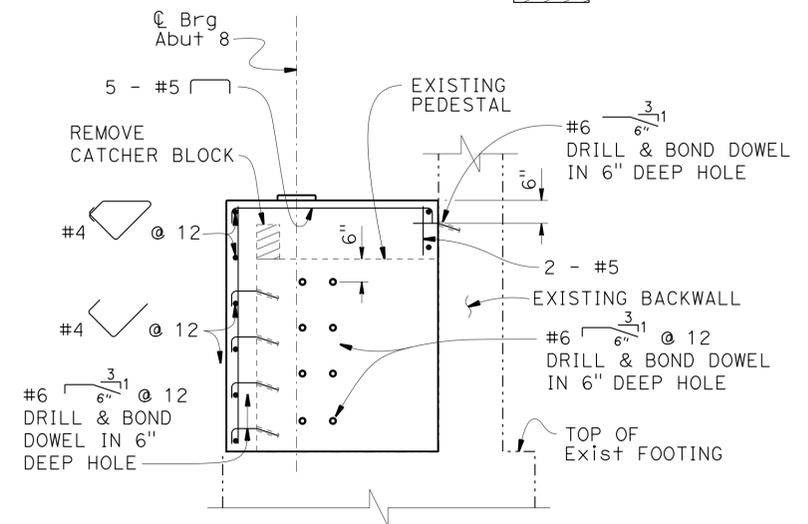
NOTES:
 1. For location of "DETAIL F" and "DETAIL G", see "ABUTMENT 8 LAYOUT" sheet.

LEGEND:
 Indicates Bridge Removal (portion)

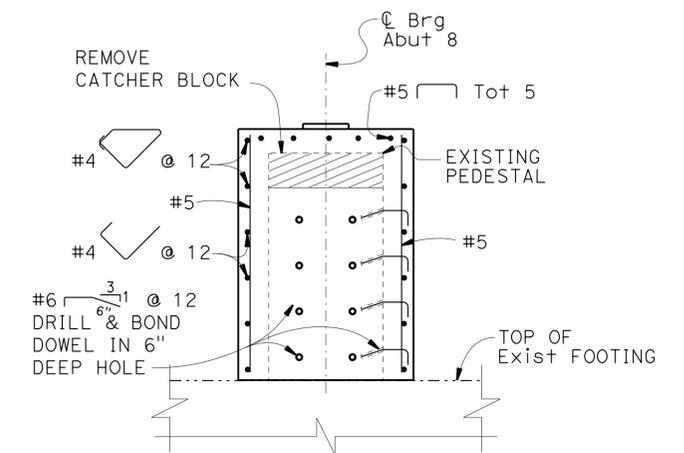


NOTE:
 Existing Catcher Block not shown.

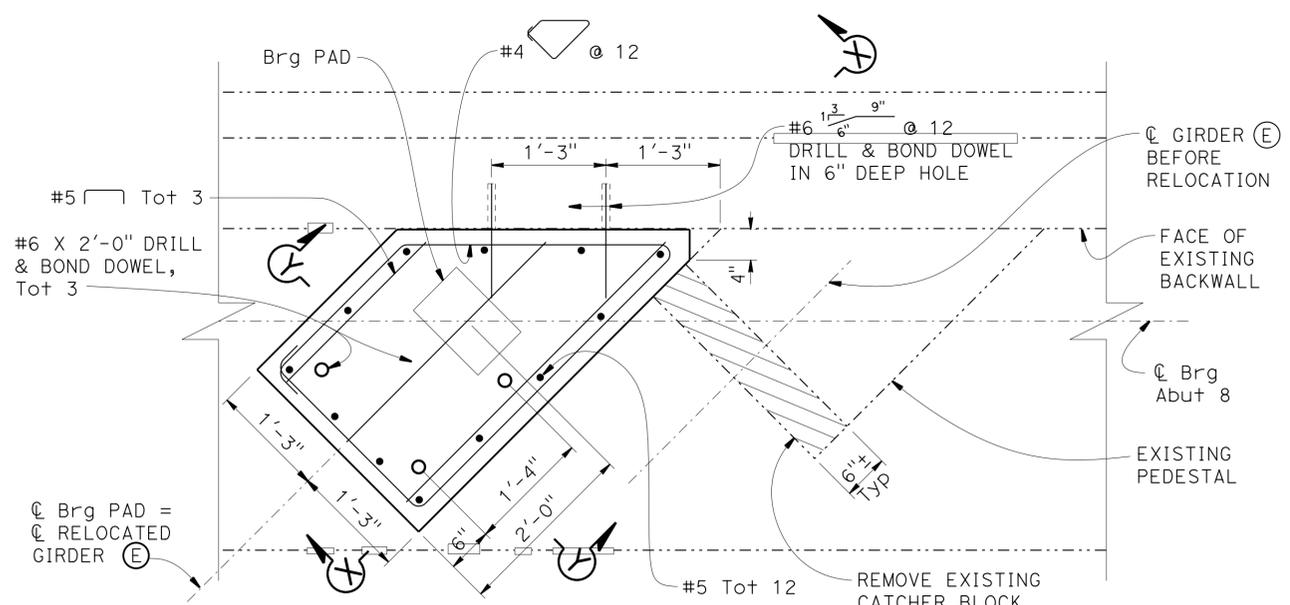
DETAIL G
 1" = 1'-0"



SECTION Z-Z
 1/2" = 1'-0"

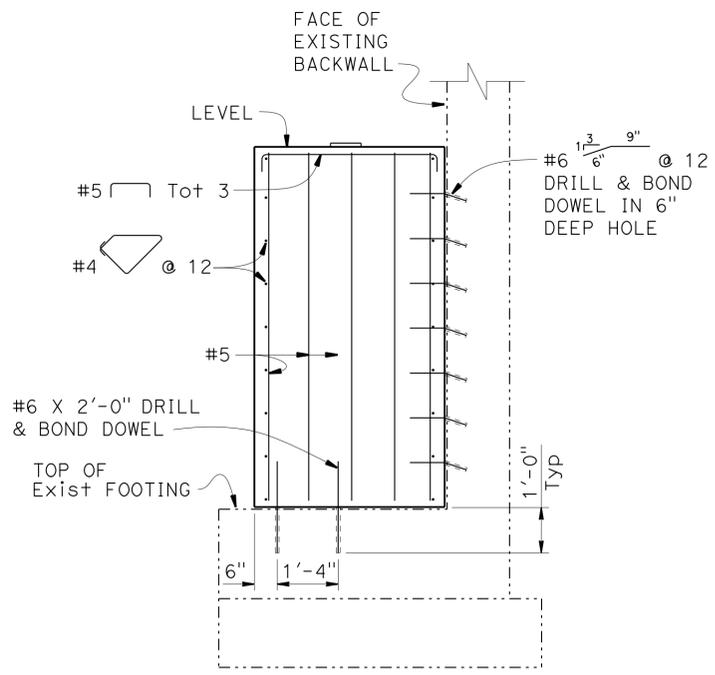


SECTION W-W
 1/2" = 1'-0"

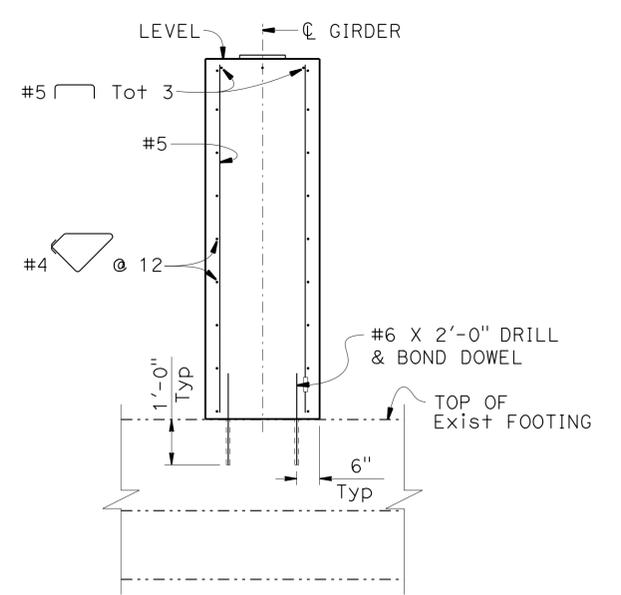


NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DETAIL F
 1" = 1'-0"



SECTION X-X
 1/2" = 1'-0"



SECTION Y-Y
 1/2" = 1'-0"

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Jin Zhou/B.Huddleston	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Chaffee

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.21

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
ABUTMENT DETAILS NO. 6

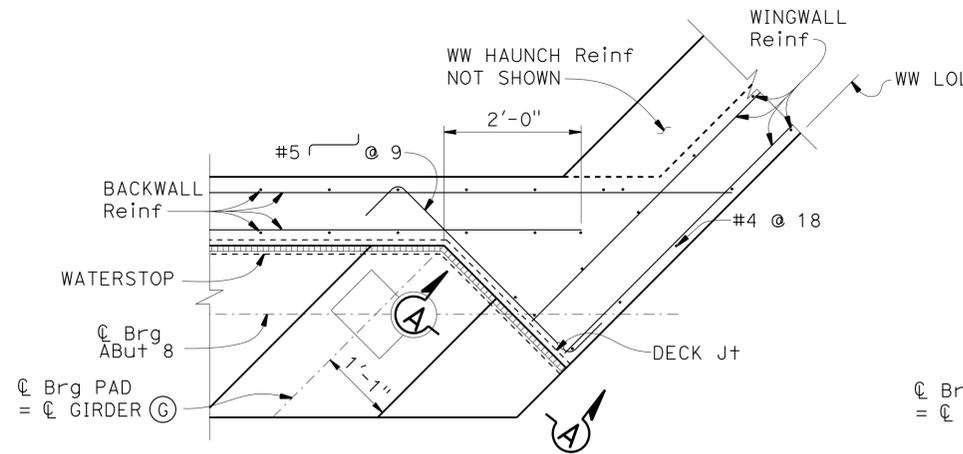
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	138	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

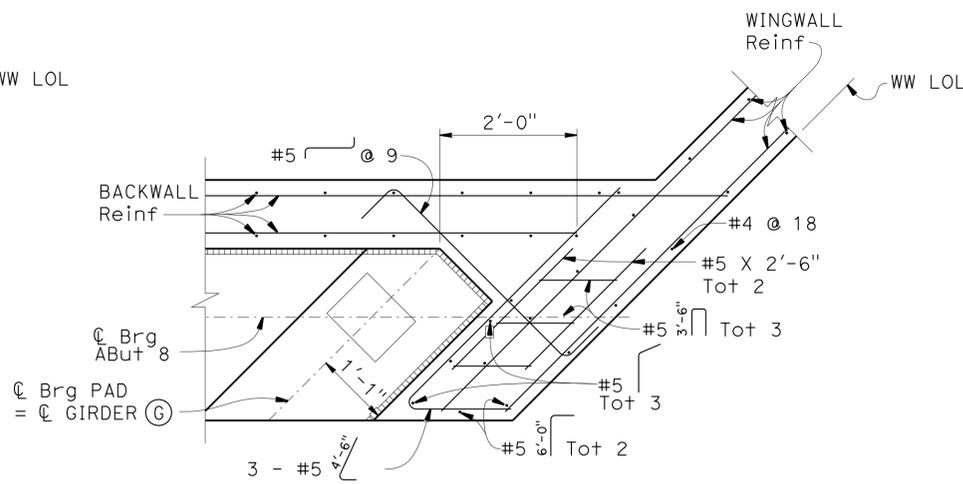
06-15-16
 PLANS APPROVAL DATE

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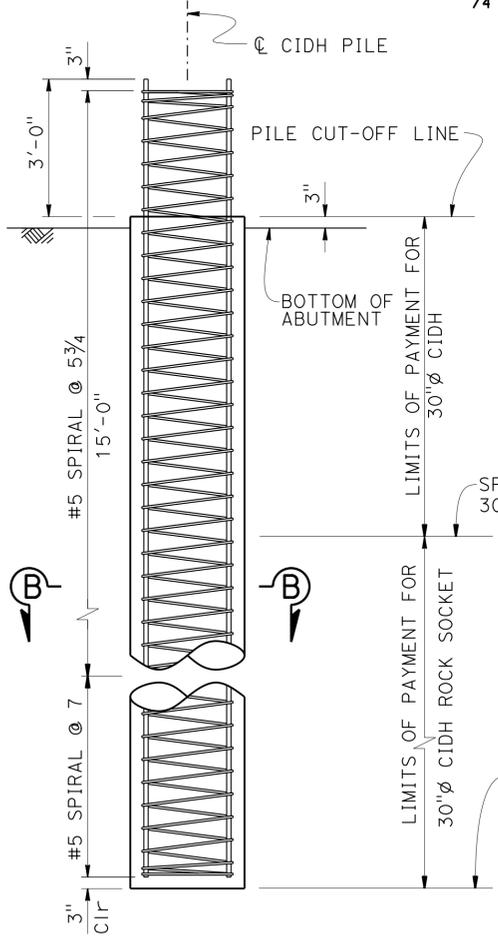
REGISTERED PROFESSIONAL ENGINEER
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA



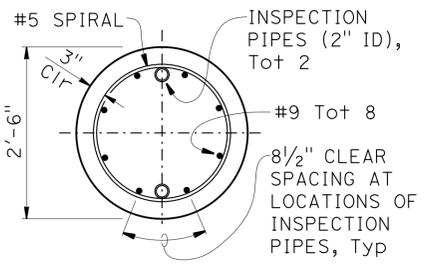
DETAIL W
3/4" = 1'-0"



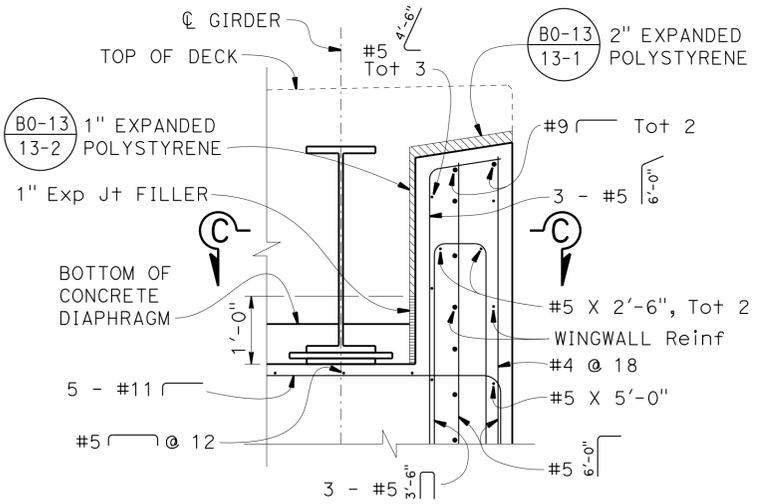
SECTION C-C
3/4" = 1'-0"



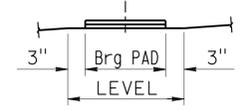
CIDH PILE ELEVATION
1/2" = 1'-0"



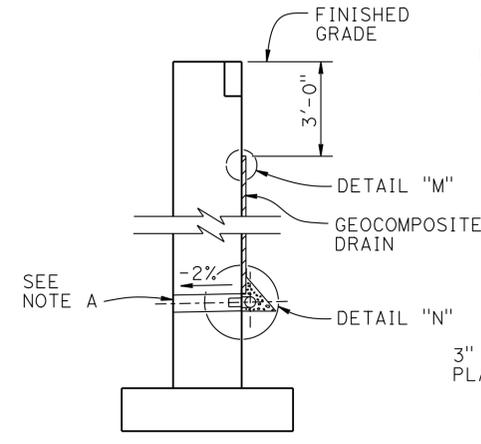
SECTION B-B
3/4" = 1'-0"



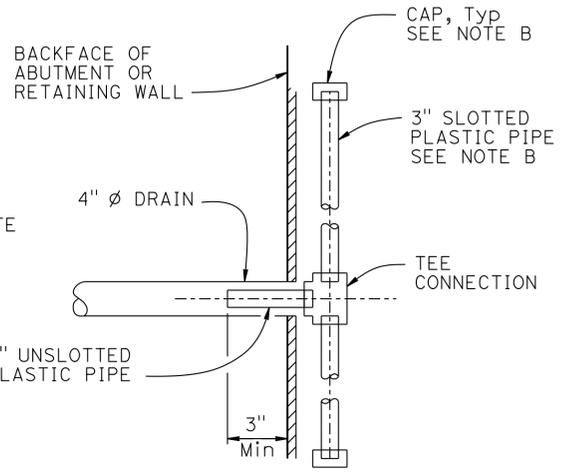
SECTION A-A
3/4" = 1'-0"



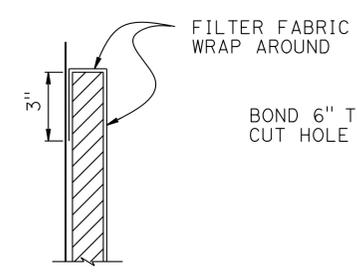
BEARING PAD DETAIL
NO SCALE



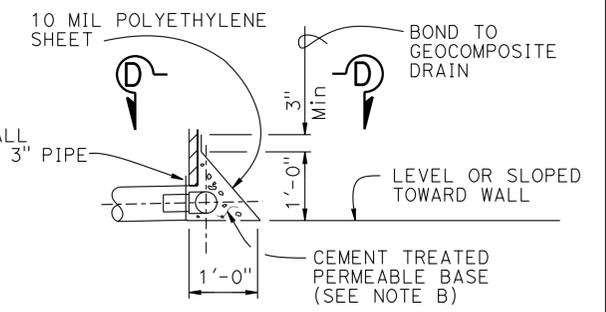
WALL SECTION



SECTION D-D



DETAIL M



DETAIL N

WEEP HOLE AND GEOCOMPOSITE DRAIN

NO SCALE

ALTERNATIVE TO BRIDGE DETAIL (B0-3/3-1)

NOTES:

- 4" diameter drains at 25' maximum center to center. Exposed wall drains shall be located 3"± above finished grade.
- Geocomposite drain, cement treated permeable base, and 3" diameter slotted plastic pipe continuous behind abutment. Cap ends of pipe. Provide "Tee" connection at each 4" diameter drain.

- NOTES:**
- No splices allowed in main pile reinforcement.
 - Lapped splices in spiral pile reinforcement shall be lapped at least 80 bar diameters. Spiral reinforcement at splices and at ends shall be terminated with a 135° hook with a 6" tail hooked around a longitudinal bar.
 - For location of "DETAIL W", see "ABUTMENT 8 LAYOUT" sheet.
 - For pile specified tip elevations, see "PILE DATA TABLE" on "DECK CONTOURS" sheet.

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Bob Huddleston	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Chaffee

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.21

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
ABUTMENT DETAILS NO. 7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	139	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

06-15-16
 PLANS APPROVAL DATE

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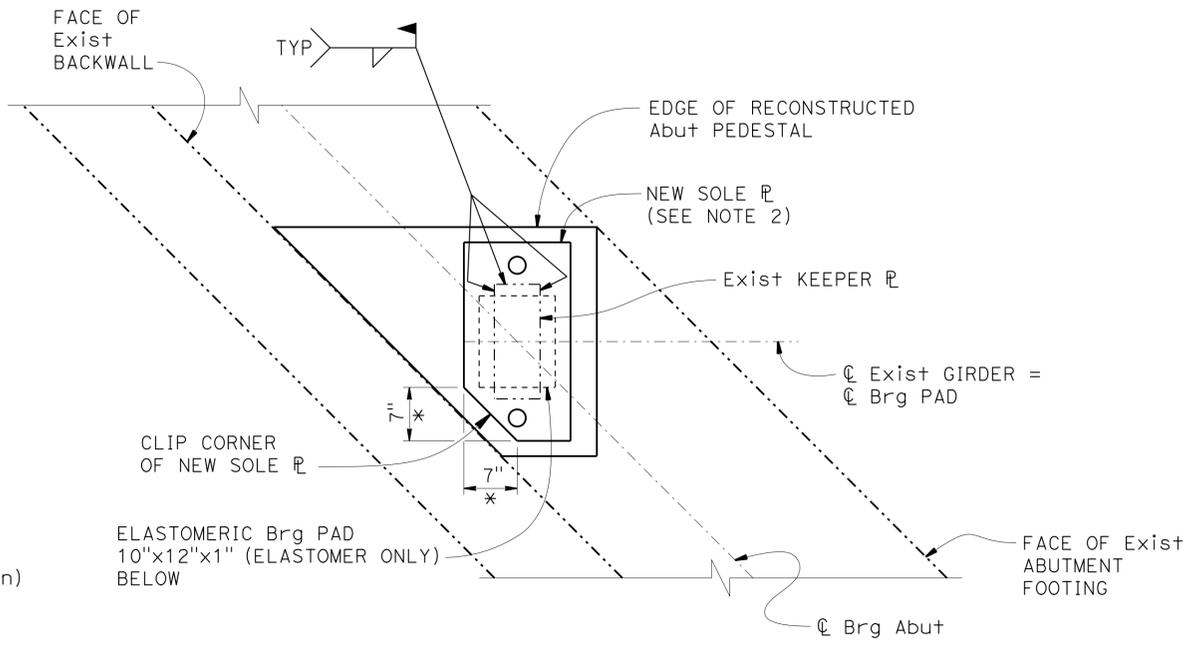
REGISTERED PROFESSIONAL ENGINEER
Manode Kodsuntie
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

- NOTES:**
- Abutment 1 fixed bearing shown, Abutment 8 similar except with expansion bearing.
 - For sole plate details, see "BENT BEARING DETAILS NO. 2" sheet.
 - Anchor rods may be cast in place without formed hole.
 - For "SECTION B-B", see "BENT BEARING DETAILS NO. 1" sheet.

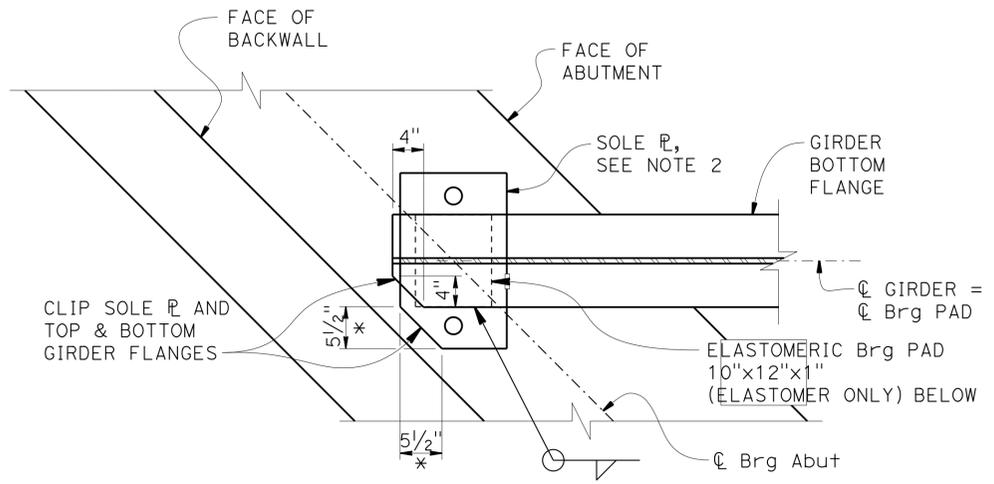
LEGEND:

 Indicates Bridge Removal (portion)

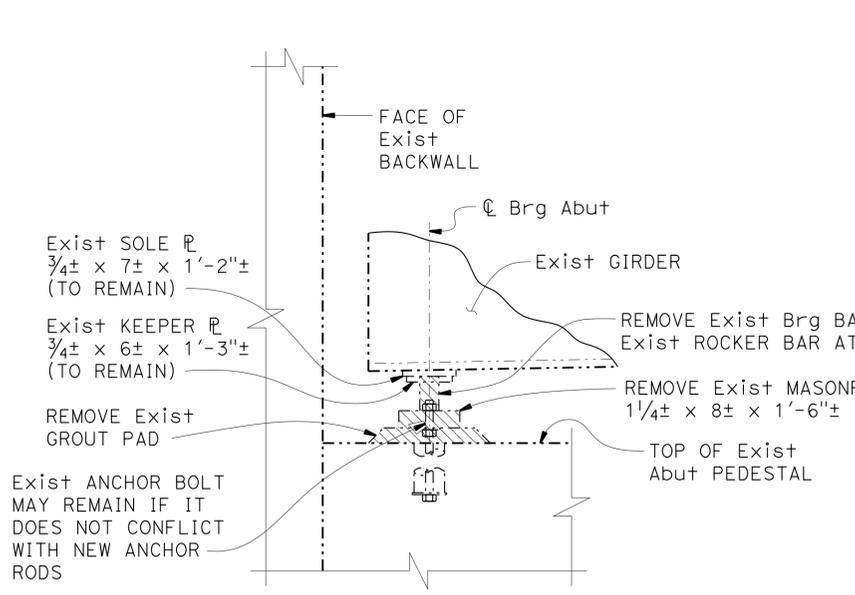
 Indicates existing structure



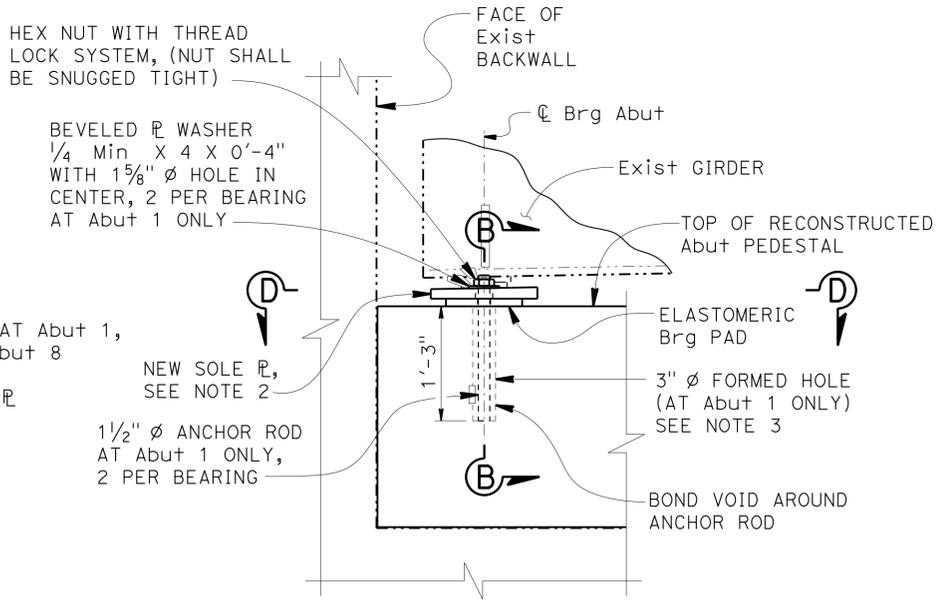
SECTION D-D



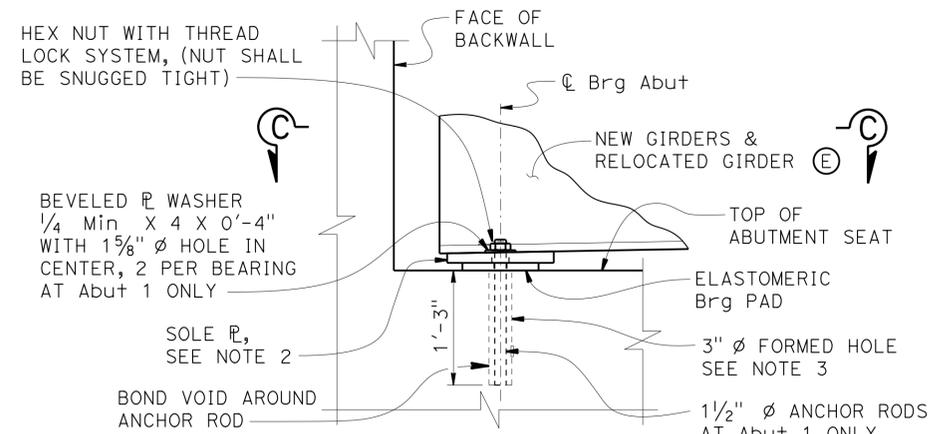
SECTION C-C



EXISTING ELEVATION



NEW ELEVATION



ELEVATION

NEW GIRDER BEARING DETAILS

BEARING REPLACEMENT DETAILS

1" = 1'-0"

1" = 1'-0"

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

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY B. Huddleston/G. Dickerson	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Watson

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

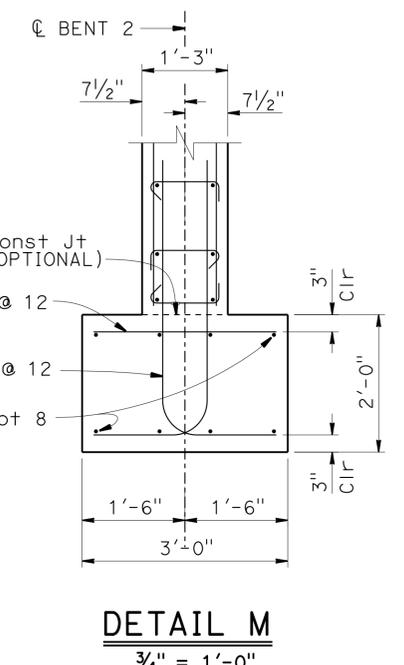
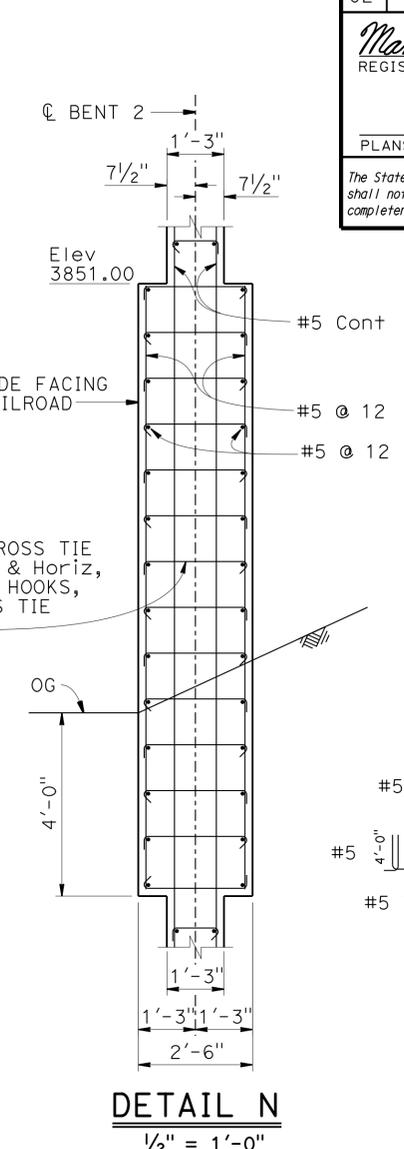
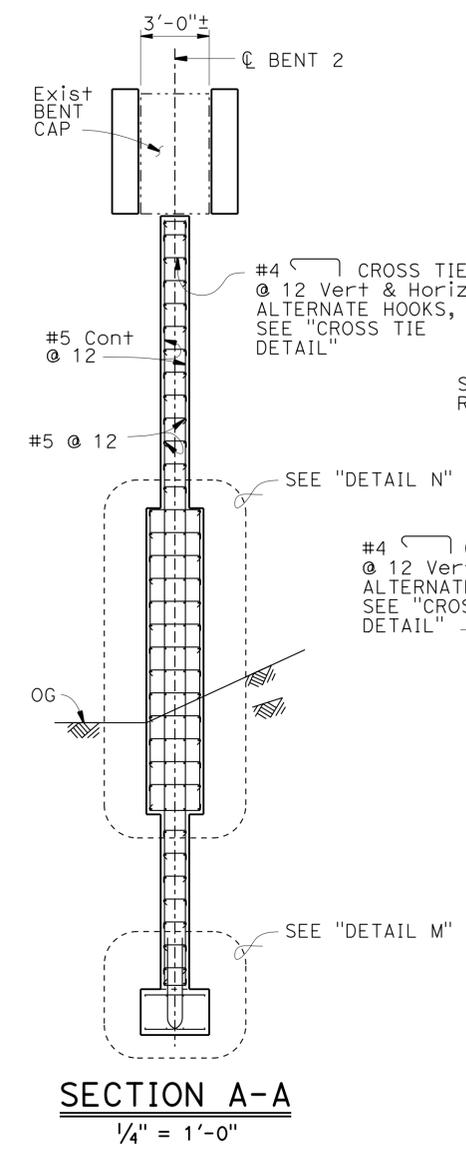
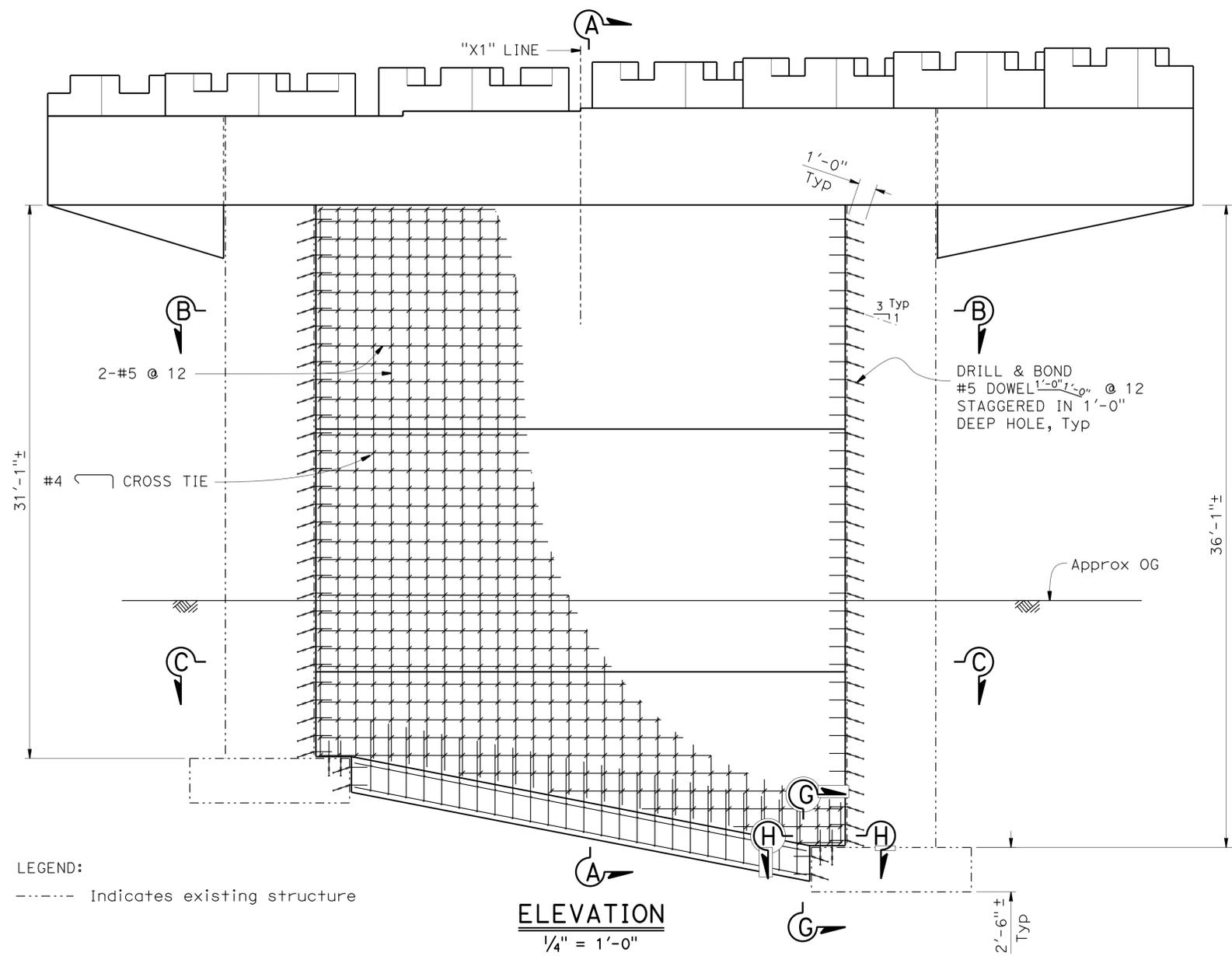
BRIDGE NO.	09-0062
POST MILE	51.21

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
ABUTMENT BEARING DETAILS

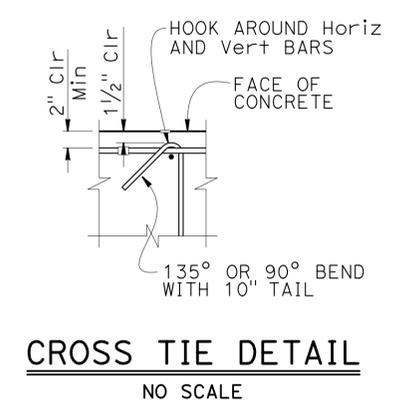
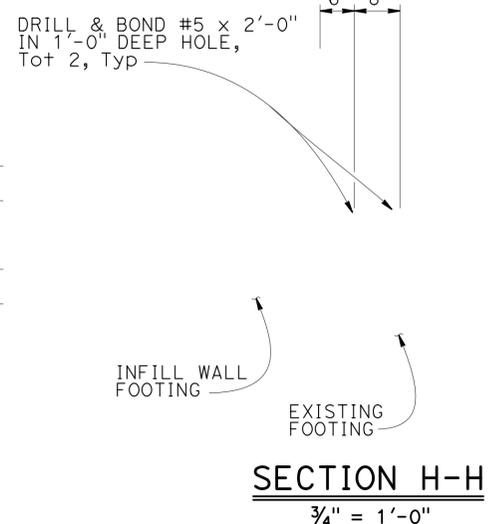
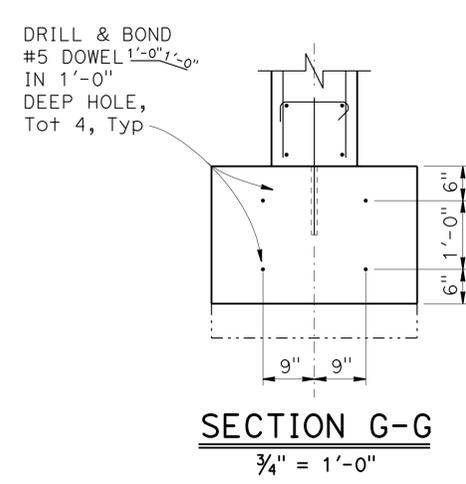
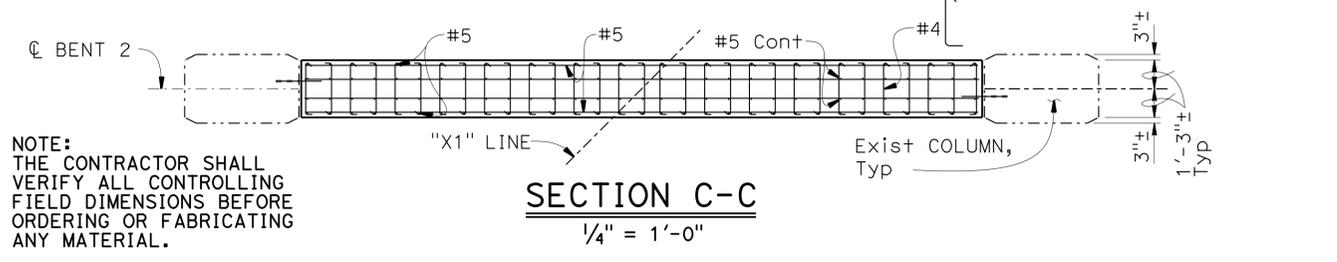
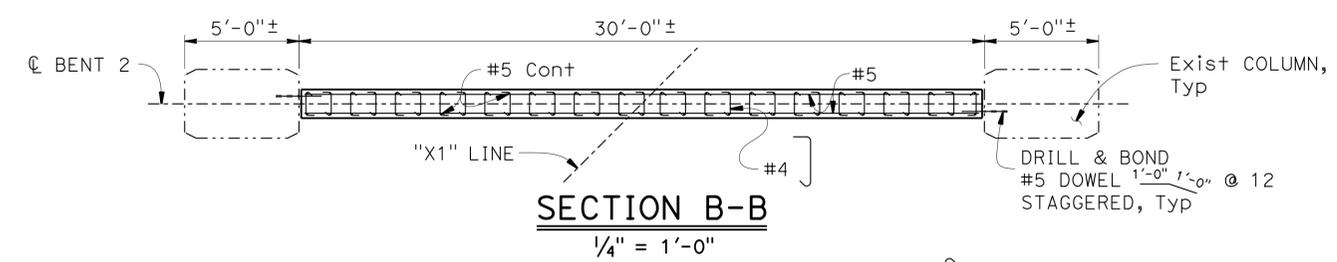
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	140	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 06-15-16
 PLANS APPROVAL DATE
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 No. 56671
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 CIVIL
 STATE OF CALIFORNIA



LEGEND:
 - - - - - Indicates existing structure



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

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Jie Tang/G. Dickerson	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Chaffee

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 1

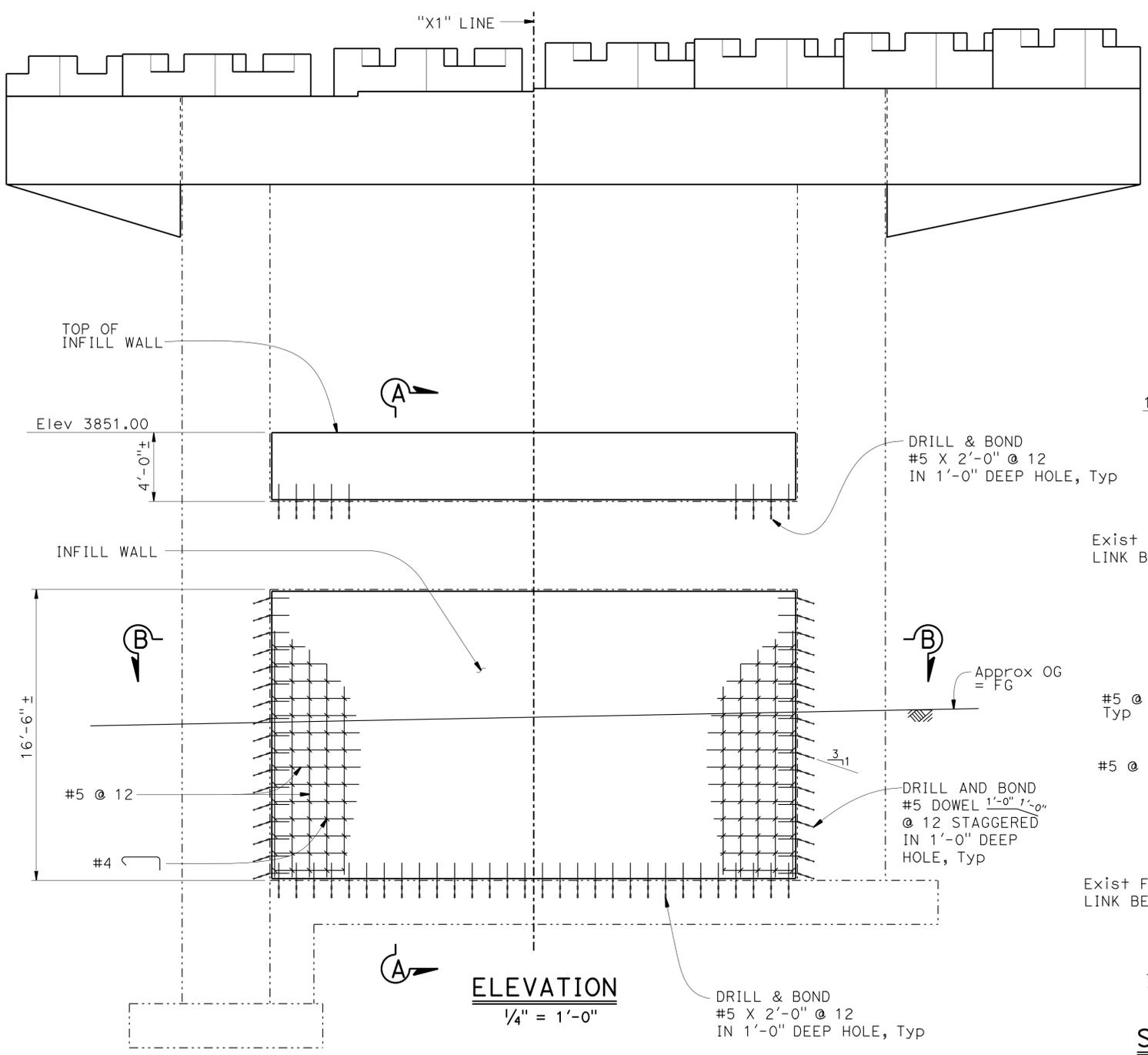
BRIDGE NO.	09-0062
POST MILE	51.2

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
INFILL WALL BENT 2

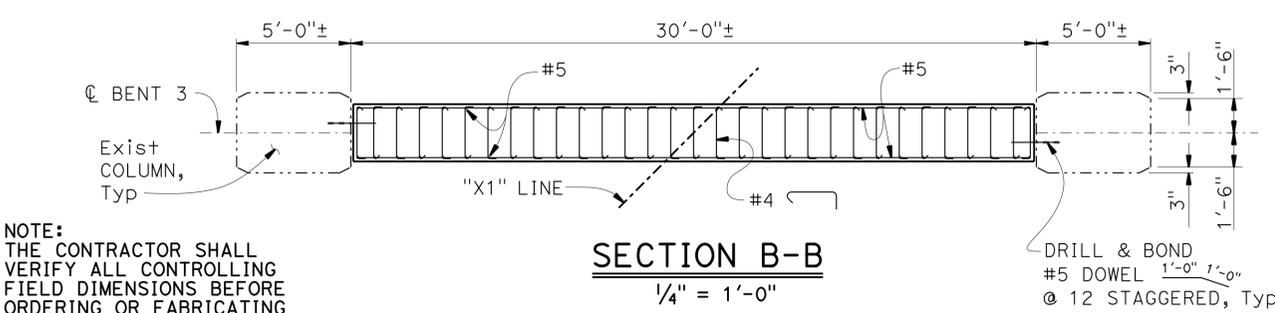
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	141	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 06-15-16
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REGISTERED PROFESSIONAL ENGINEER
Manode Kodsuntie
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA



ELEVATION
1/4" = 1'-0"

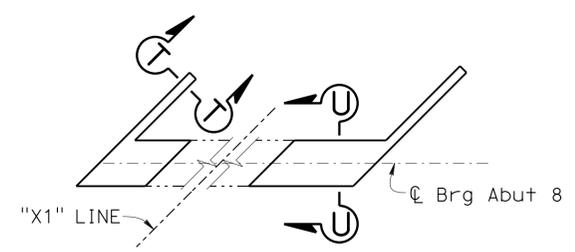


SECTION B-B
1/4" = 1'-0"

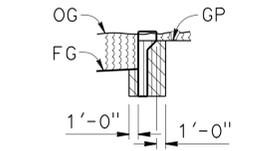
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NOTE:
1. See "CROSS TIE DETAIL" on "INFILL WALL BENT 2" sheet

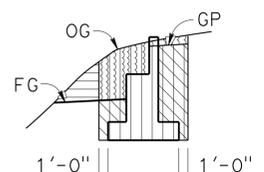
- LEGEND:
- Indicates existing structure
 - [Hatched] Structure Excavation, Bridge
 - [Hatched] Structure Backfill, Bridge
 - [Hatched] Structure Excavation (Naturally Occurring Asbestos)
 - [Hatched] Stripping Excavation (Naturally Occurring Asbestos)
 - [Hatched] Roadway Excavation



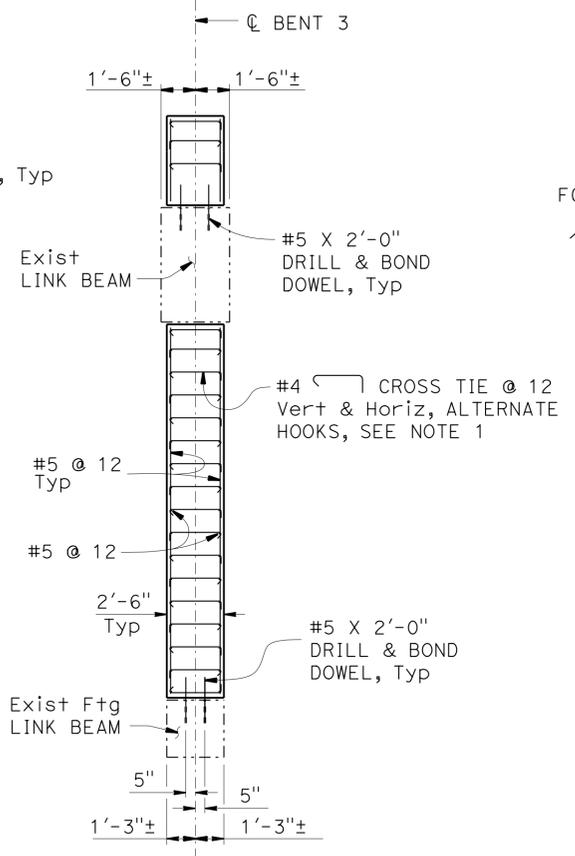
PLAN ABUTMENT 8



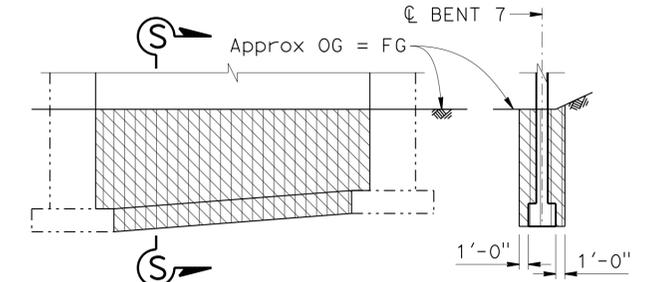
SECTION T-T



SECTION U-U

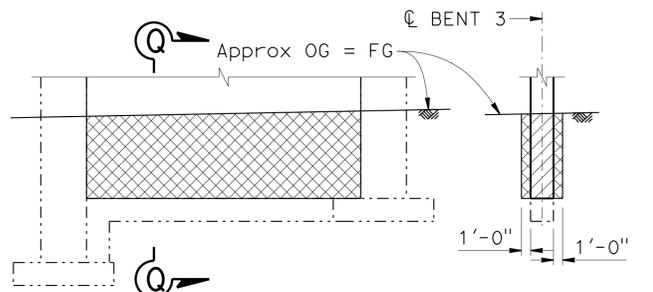


SECTION A-A
1/4" = 1'-0"



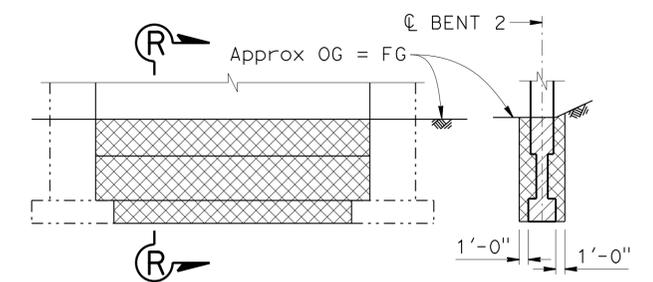
PART ELEVATION BENT 7

SECTION S-S



PART ELEVATION BENT 3

SECTION Q-Q



PART ELEVATION BENT 2

SECTION R-R

LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL AT BENTS 2, 3, 7 & ABUTMENT 8

No Scale

NOTE:
For limits of payment for excavation and backfill at Abutment 1, see Standard Plan A62C.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	09-0062	SPRING GARDEN BRIDGE & OVERHEAD (WIDEN) INFILL WALL BENT 3	
	DETAILS	BY Bob Huddleston/Jie Tang	CHECKED Kevin Harper			POST MILE	51.2		
	QUANTITIES	BY Gerald Dickerson	CHECKED Eric Chaffee			UNIT: 3576	PROJECT NUMBER & PHASE: 02000001611		CONTRACT NO.: 02-2C0904
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 16 OF 41

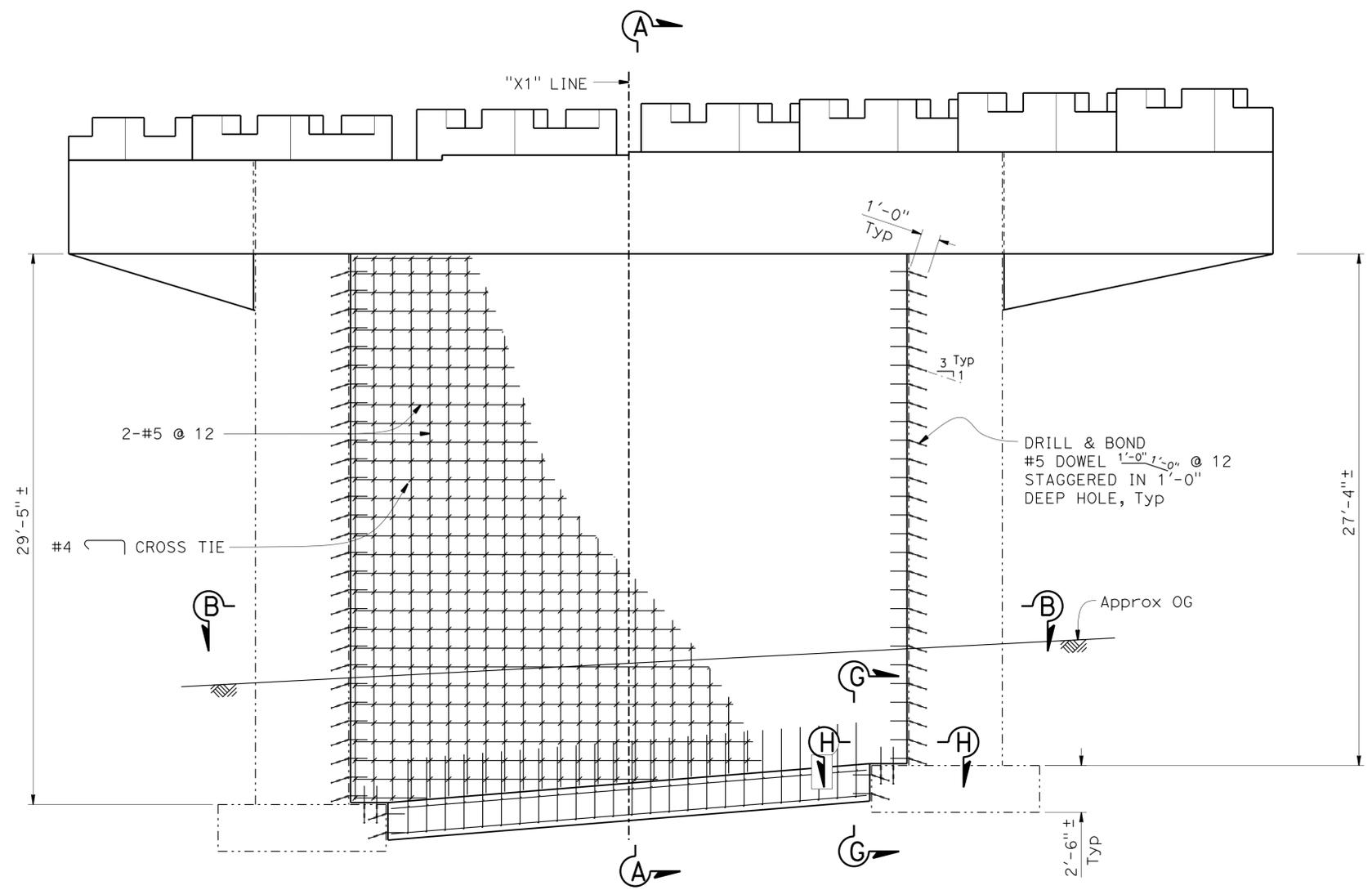
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	142	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

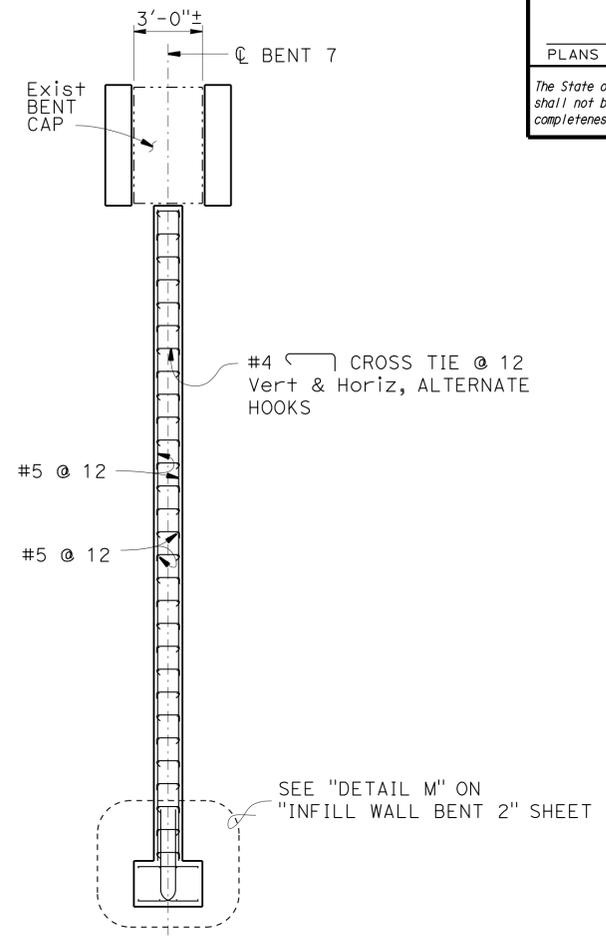
06-15-16
 PLANS APPROVAL DATE

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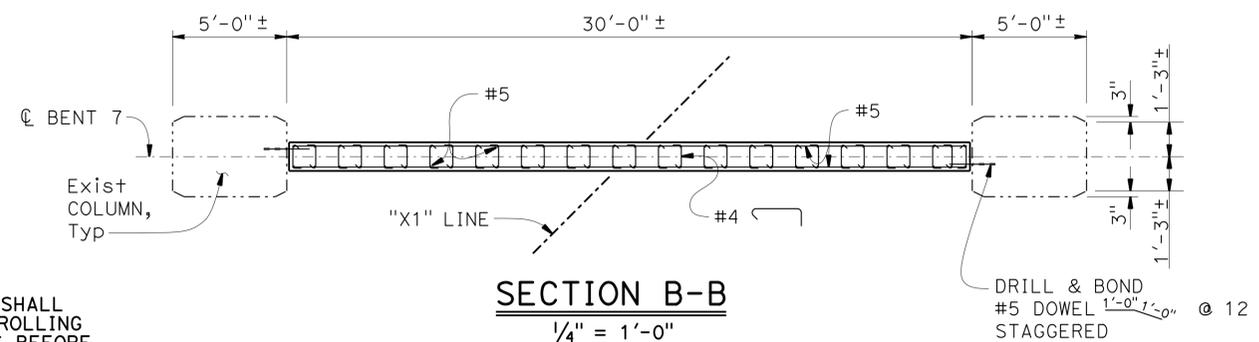
REGISTERED PROFESSIONAL ENGINEER
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA



ELEVATION
 1/4" = 1'-0"



SECTION A-A
 1/4" = 1'-0"



SECTION B-B
 1/4" = 1'-0"

NOTE:
 For "SECTIONS G-G and H-H", see "INFILL WALL BENT 2" sheet.

LEGEND:
 - - - - - Indicates existing structure

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

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Bob Huddleston/Jie Tang	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Chaffee

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 1

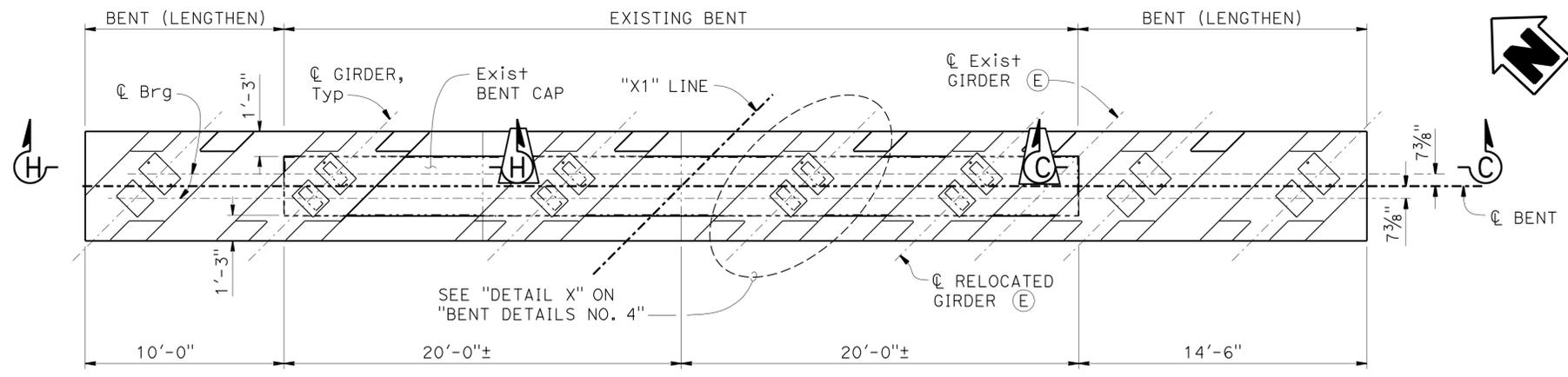
BRIDGE NO.	09-0062
POST MILE	51.2

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
INFILL WALL BENT 7

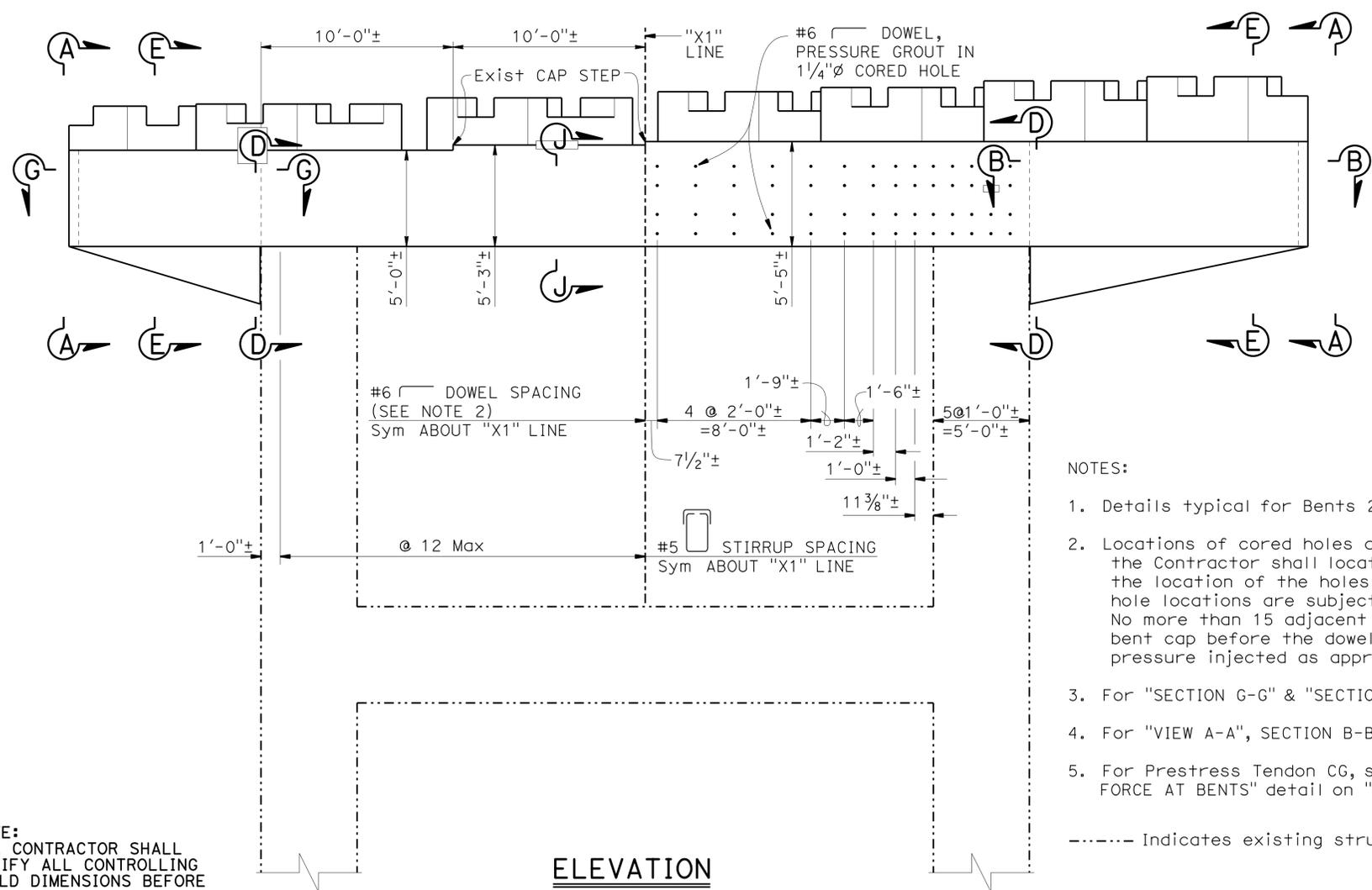
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	143	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 PLANS APPROVAL DATE 06-15-16
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

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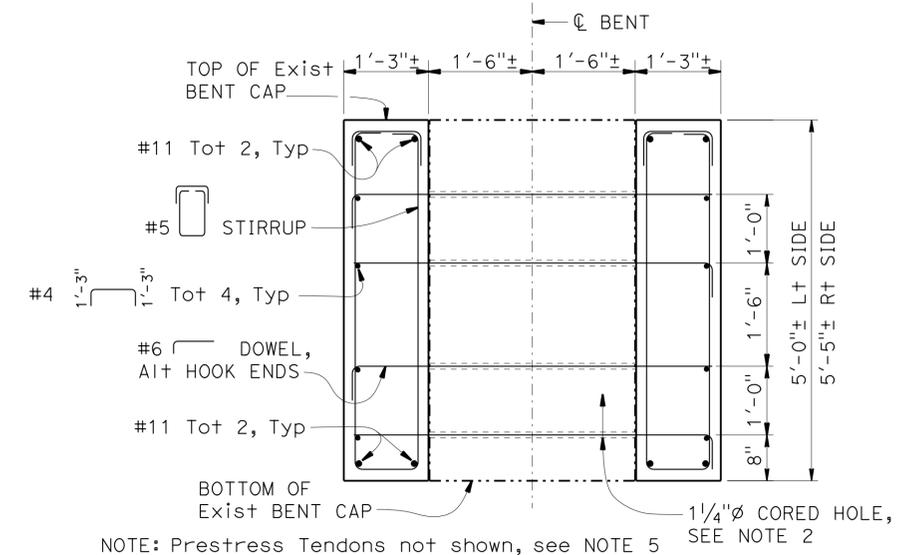


PLAN
 1/4" = 1'-0"
 NOTE: Girders not shown.

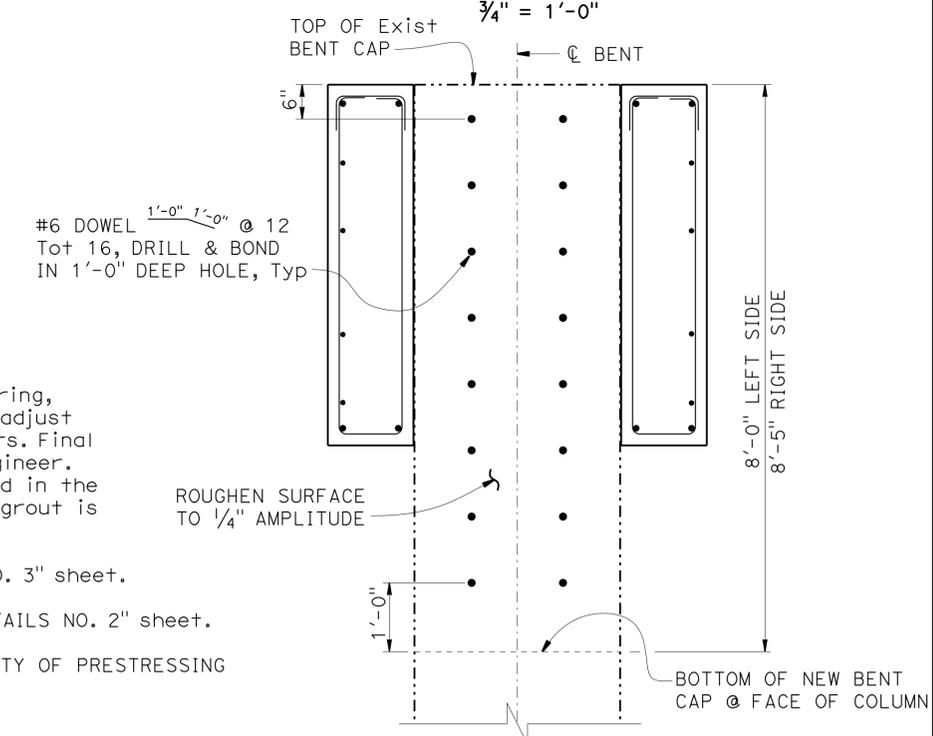


ELEVATION
 1/4" = 1'-0"

- NOTES:
- Details typical for Bents 2 through 7.
 - Locations of cored holes are approximate. Prior to coring, the Contractor shall locate all reinforcing steel and adjust the location of the holes to clear all reinforcing bars. Final hole locations are subject to the approval of the Engineer. No more than 15 adjacent open cored holes are allowed in the bent cap before the dowel bars have been placed and grout is pressure injected as approved by the Engineer.
 - For "SECTION G-G" & "SECTION H-H", see "BENT DETAILS NO. 3" sheet.
 - For "VIEW A-A", SECTION B-B, C-C and E-E, see "BENT DETAILS NO. 2" sheet.
 - For Prestress Tendon CG, see "PATH OF CENTER OF GRAVITY OF PRESTRESSING FORCE AT BENTS" detail on "BENT DETAILS NO. 3" sheet.
- Indicates existing structure



SECTION J-J
 3/4" = 1'-0"



SECTION D-D
 3/4" = 1'-0"

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

DESIGN	BY	Manode Kodsuntie	CHECKED	Kevin Harper	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	09-0062	SPRING GARDEN BRIDGE & OVERHEAD (WIDEN) BENT DETAILS NO. 1	
	DETAILS	BY	Bob Huddleston	CHECKED			Kevin Harper	POST MILE		51.21
	QUANTITIES	BY	Gerald Dickerson	CHECKED			Eric Chaffee	UNIT: 3576 PROJECT NUMBER & PHASE: 02000001611		CONTRACT NO.: 02-2C0904

REVISION DATES	SHEET	OF
02-11-15 02-14-15 09-28-15 12/01/15	18	41

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

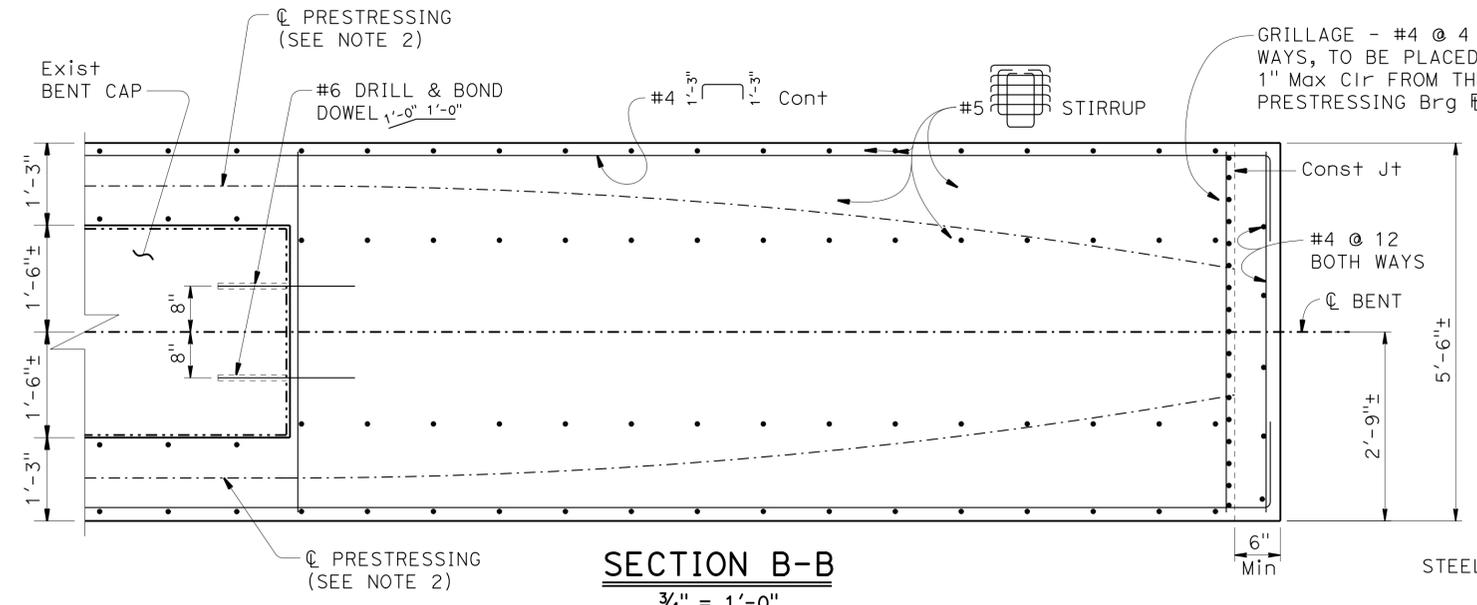
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	144	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

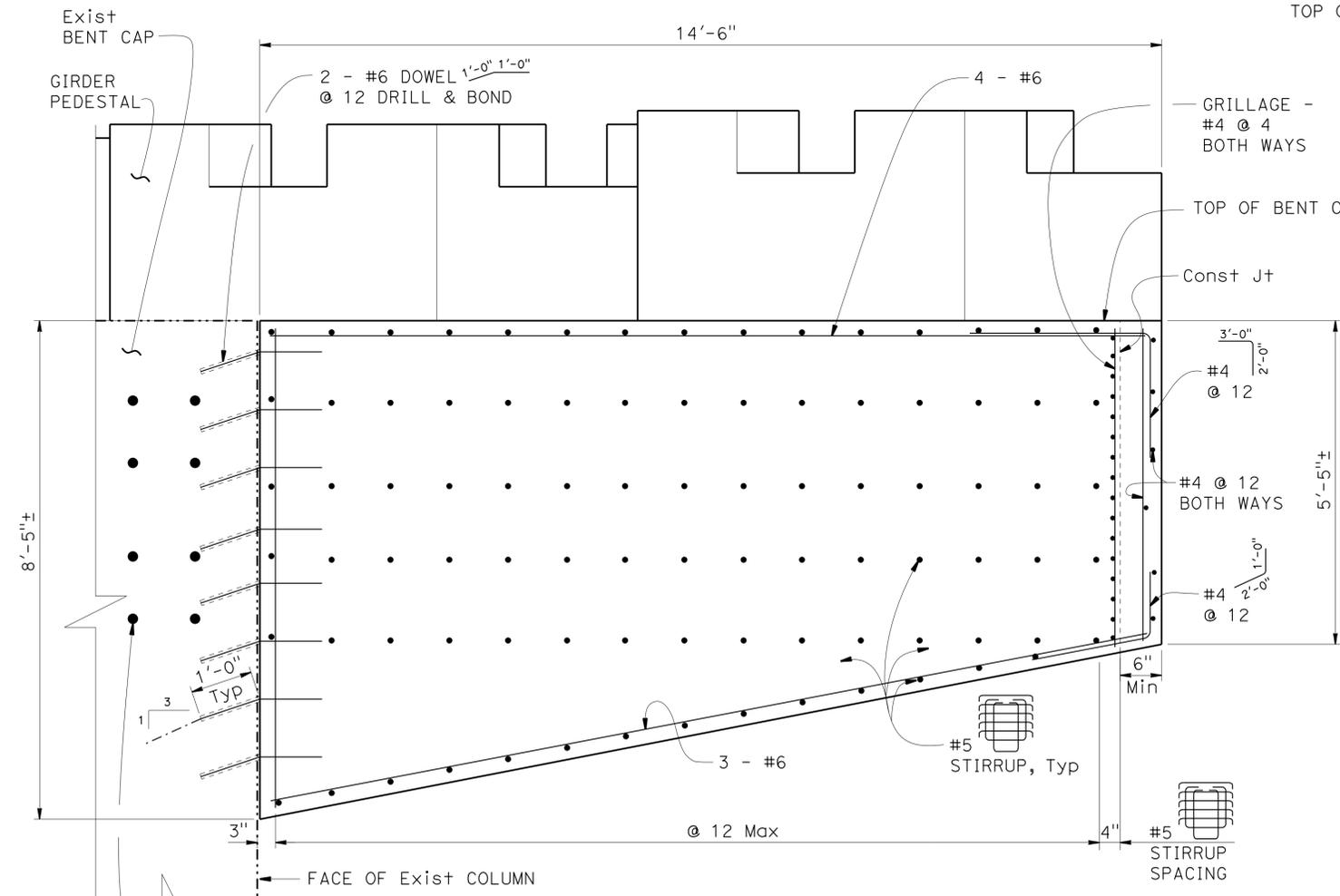
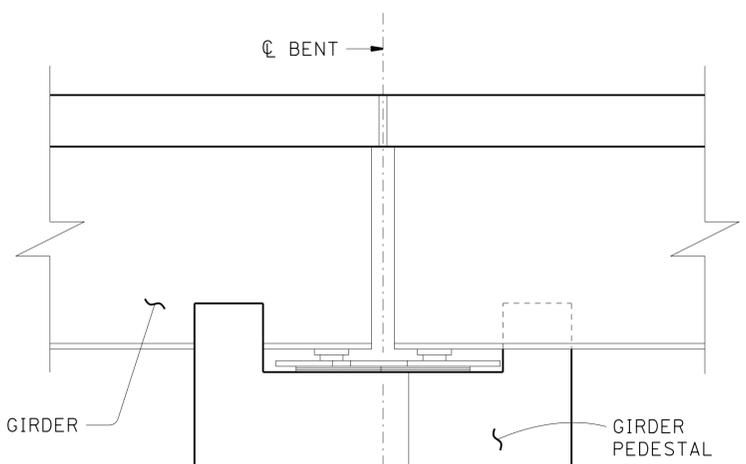
06-15-16
 PLANS APPROVAL DATE

No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

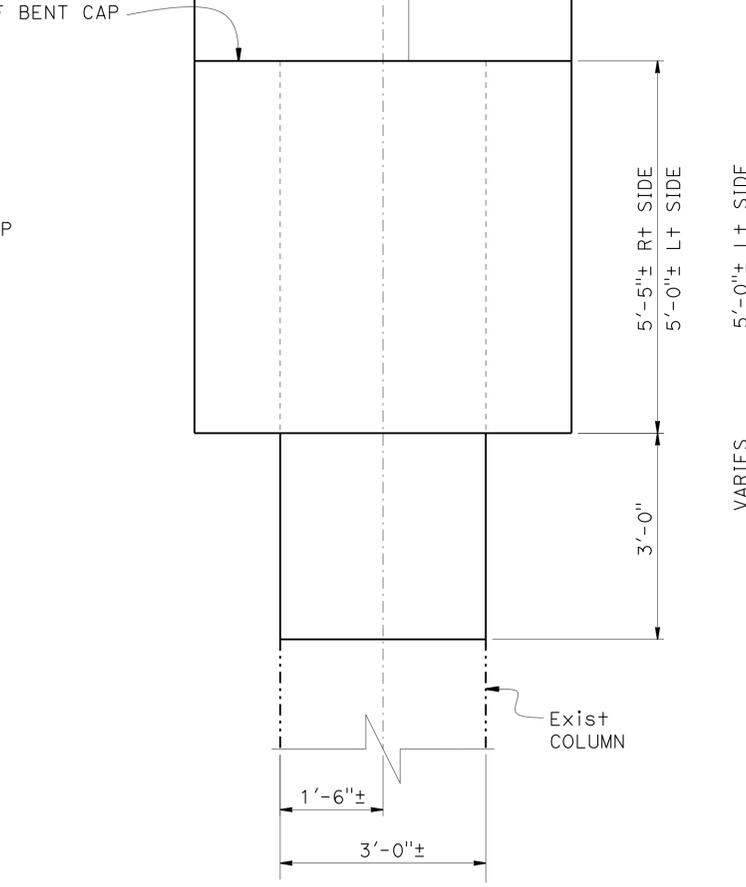
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.



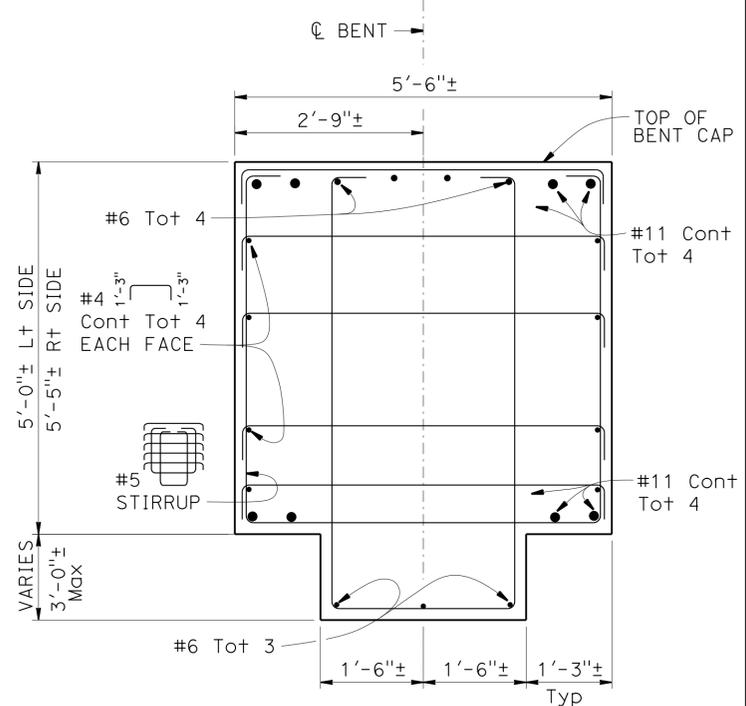
SECTION B-B
 $\frac{3}{4}'' = 1'-0''$



SECTION C-C
 $\frac{3}{4}'' = 1'-0''$



VIEW A-A
 $\frac{3}{4}'' = 1'-0''$



SECTION E-E
 $\frac{3}{4}'' = 1'-0''$

- NOTES:
- For location of all sections & views, see "BENT DETAILS NO. 1" sheet.
 - For Prestress Tendon CG, see "PATH OF CENTER OF GRAVITY OF PRESTRESSING FORCE AT BENTS" on "BENT DETAILS NO. 3" sheet.

NOTE: Prestress Tendons not shown, see NOTE 2

LEGEND:
 - - - - - Indicates existing structure

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

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Bob Huddleston	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Chaffee

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.21

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
BENT DETAILS NO. 2

REVISION DATES	SHEET	OF
02-18-15	19	41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	145	181

Manode Kodsuntie		6/2/16
REGISTERED CIVIL ENGINEER	DATE	
06-15-16		
PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.		

PRESTRESSING NOTES

270 ksi Low Relaxation Strand or 150 ksi Bar

WORKING FORCE P_f :

$P_f = 890$ kips total force per bent cap after losses

The total losses due to creep, shrinkage and elastic shortening of concrete and relaxing of prestressing steel assumed to be 21.0 ksi.

CONCRETE:

$f'_c = 4$ ksi @ 28 days
 $f'_{ci} = 3.5$ ksi @ time of stressing

STRESSING SEQUENCE:

Tendons on each side of the C Bent shall be stressed simultaneously (no eccentricity about the vertical axis is allowed). Stressing sequence about the horizontal axis shall minimize eccentricity.

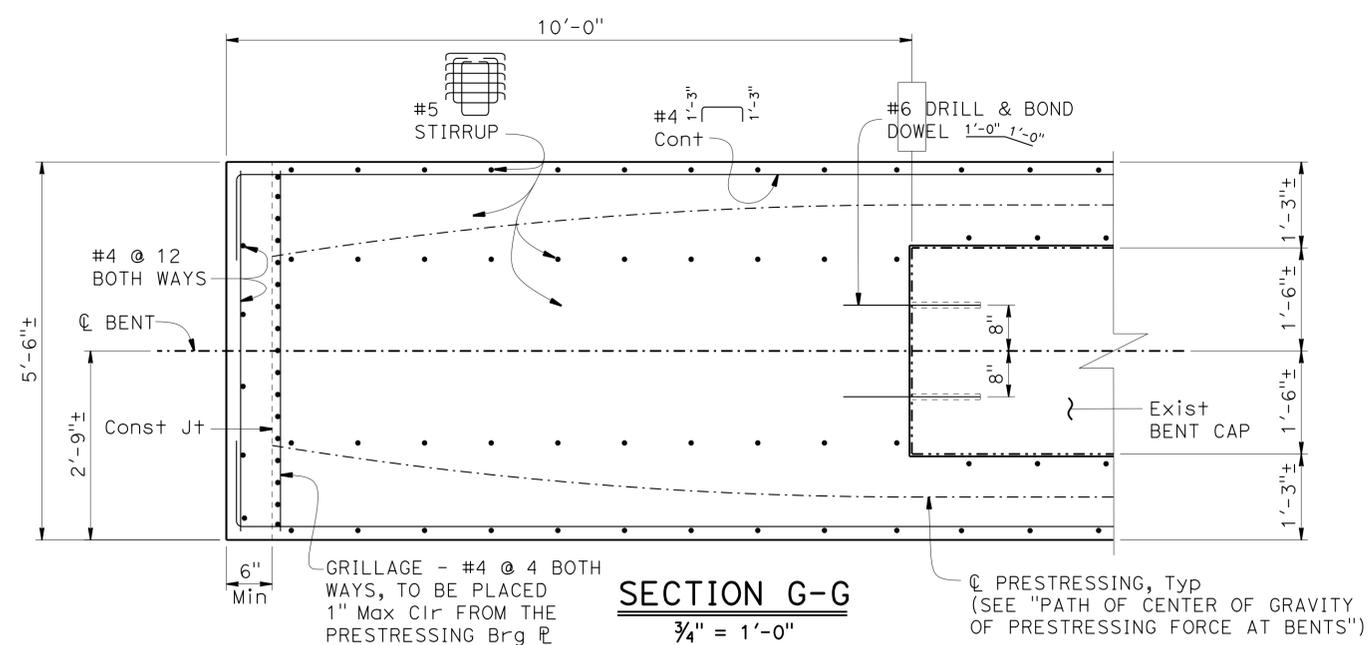
Stressing shall be performed from the right side.

Girder pedestals and girders shall not be placed on the lengthened bent caps until the bent cap prestressing has been stressed and grouted.

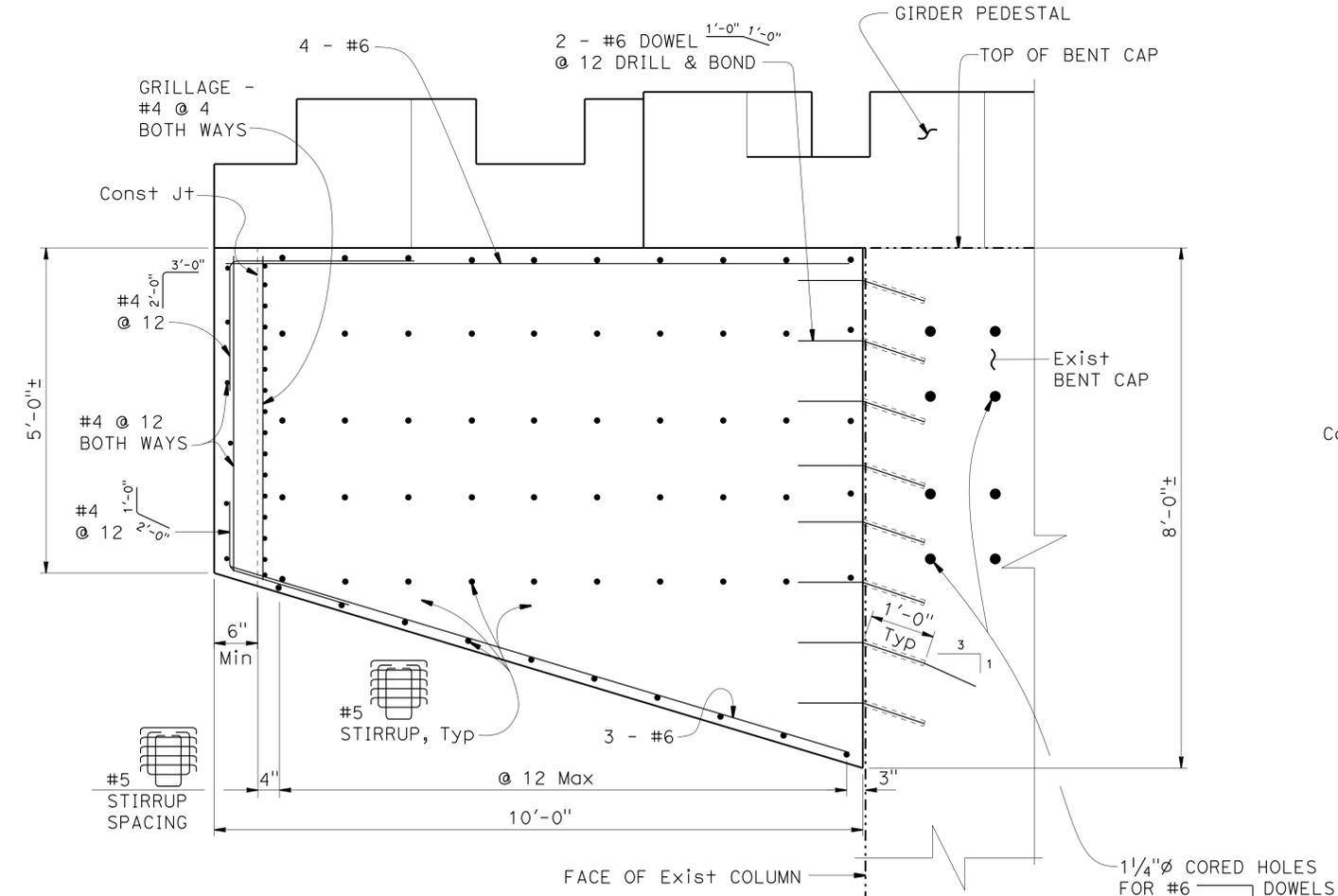
NOTES:

For location of Sections, see "BENT DETAILS NO. 1" sheet.

----- Indicates existing structure

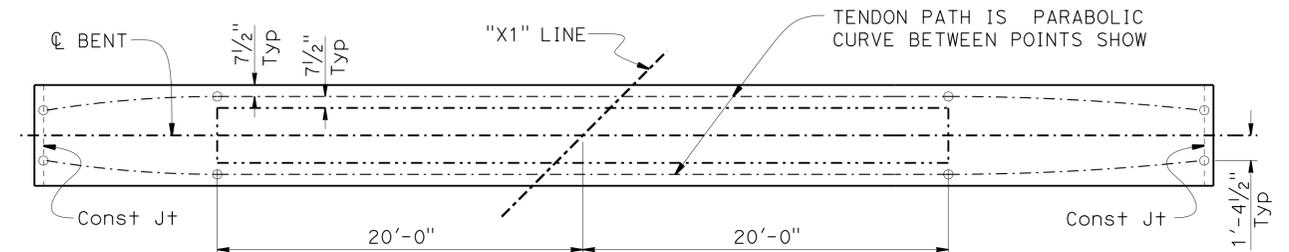


SECTION G-G
 $\frac{3}{4}'' = 1'-0''$

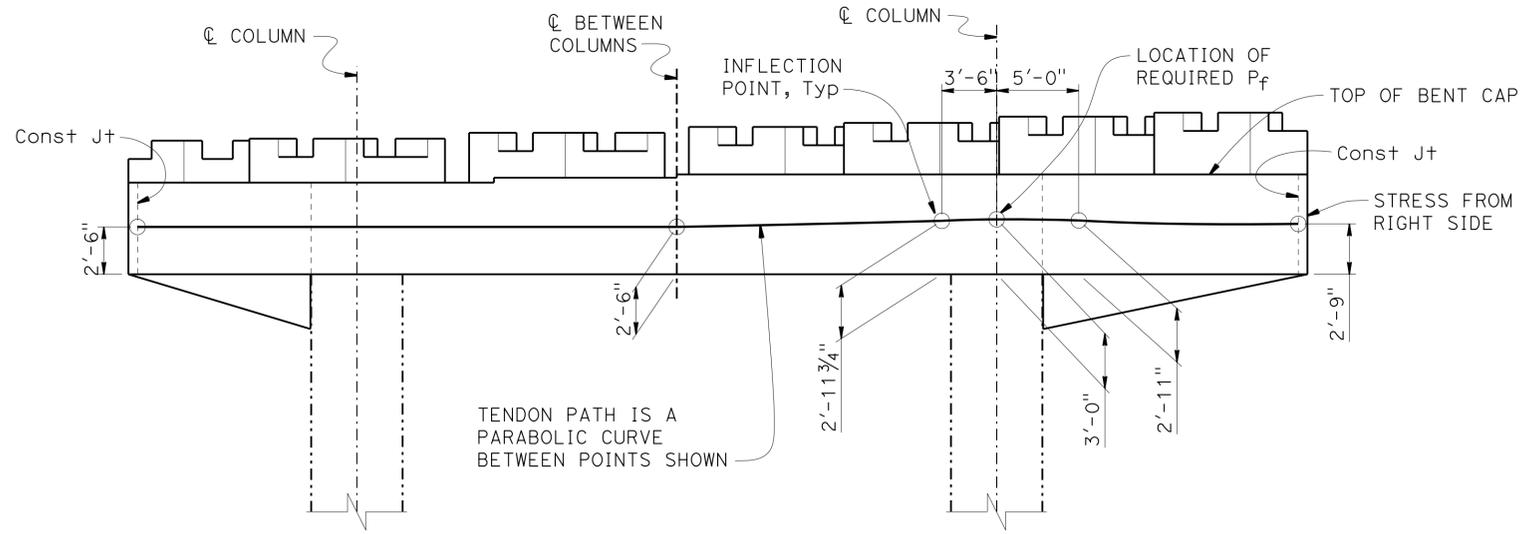


SECTION H-H
 $\frac{3}{4}'' = 1'-0''$

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



PLAN



ELEVATION

PATH OF CENTER OF GRAVITY OF PRESTRESSING FORCE AT BENTS

NO SCALE

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Bob Huddleston	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Chaffee

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.21

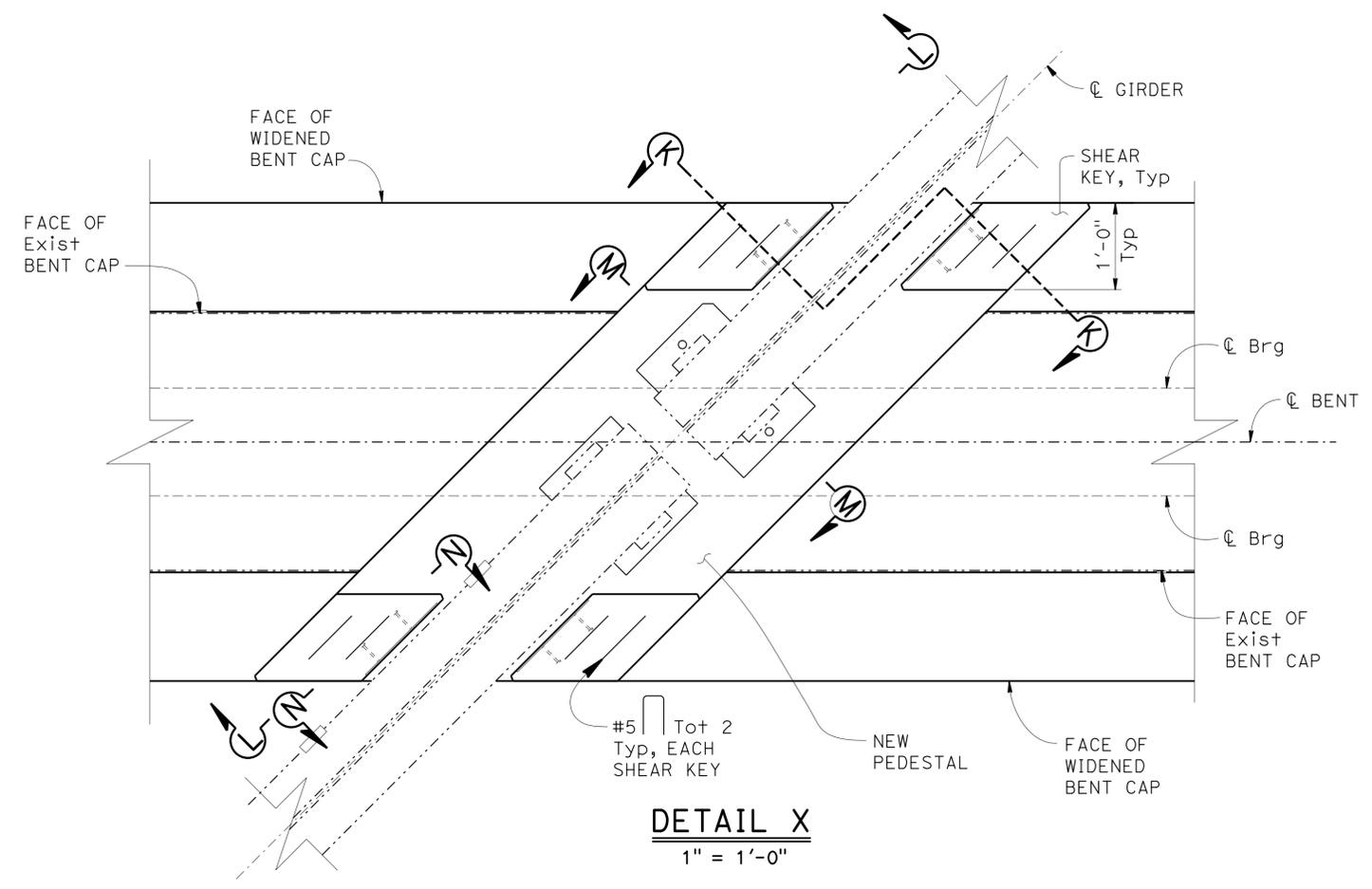
SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
BENT DETAILS NO. 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	146	181

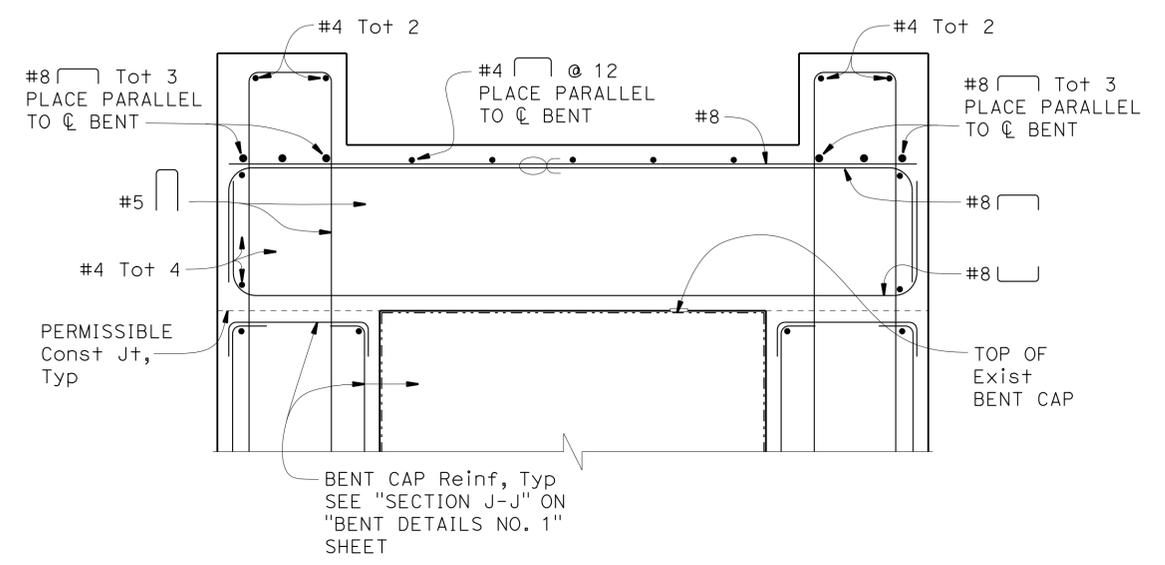
Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 06-15-16
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

NOTE: For location of "DETAIL X", See "BENT DETAILS NO. 1" sheet.

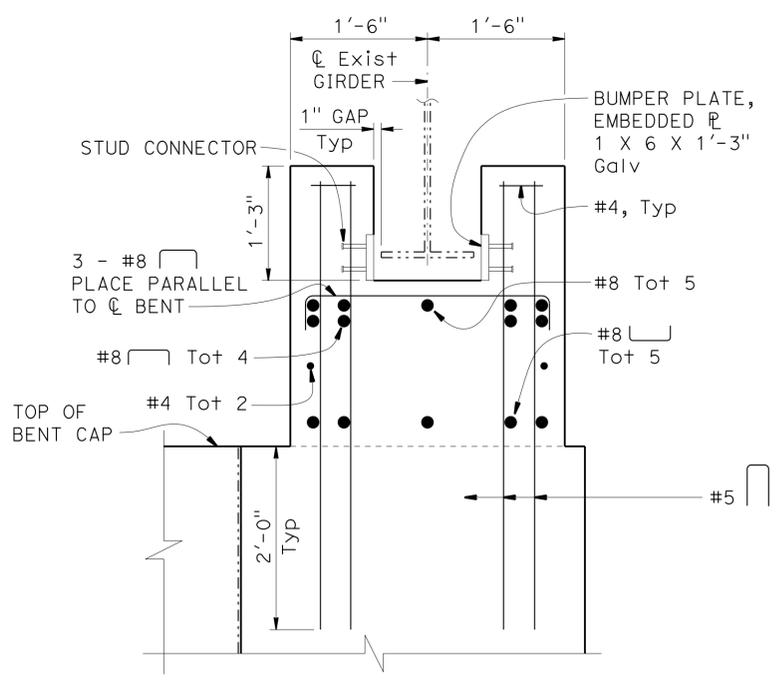
LEGEND:
 - - - - - Indicates existing structure
 ⊕ ⊕ ⊕ Indicates bundled bars



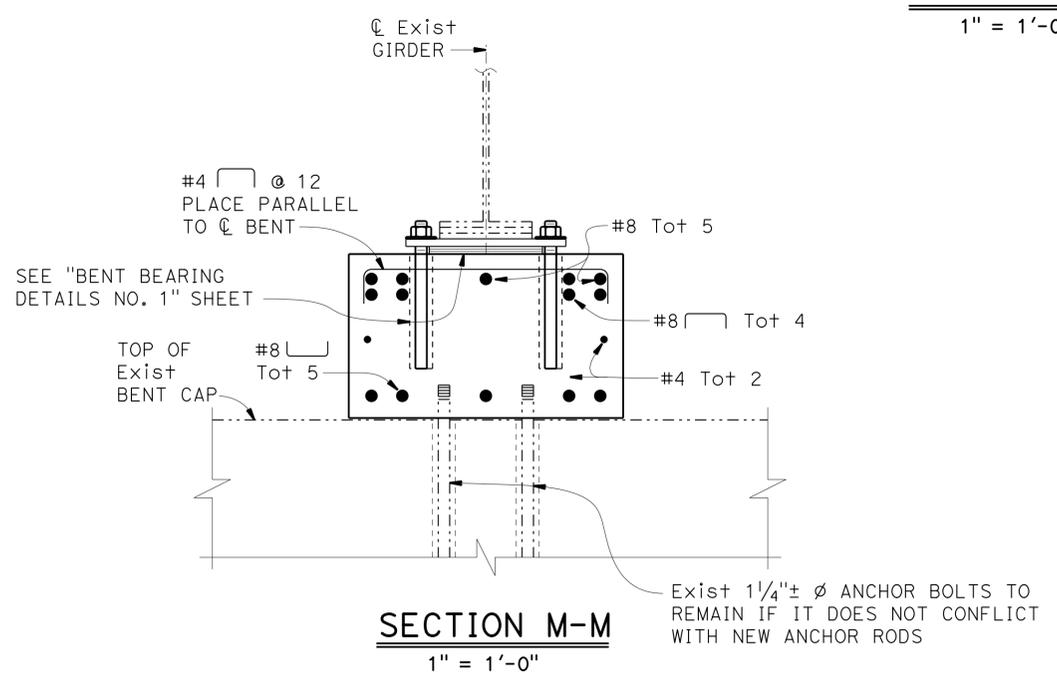
DETAIL X
 1" = 1'-0"



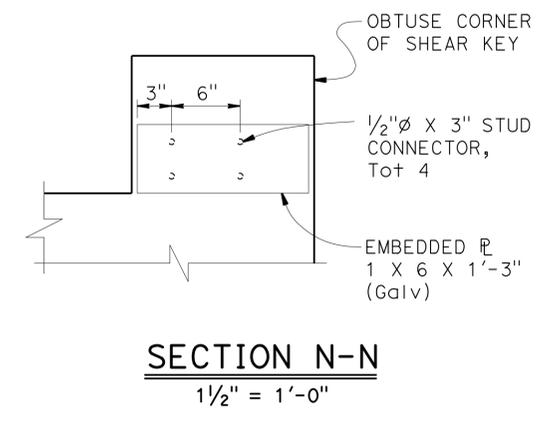
SECTION L-L
 1" = 1'-0"



SECTION K-K
 1" = 1'-0"



SECTION M-M
 1" = 1'-0"



SECTION N-N
 1 1/2" = 1'-0"

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Gerald Dickerson	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED E. Chaffee / E. Watson

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.21

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
BENT DETAILS NO. 4

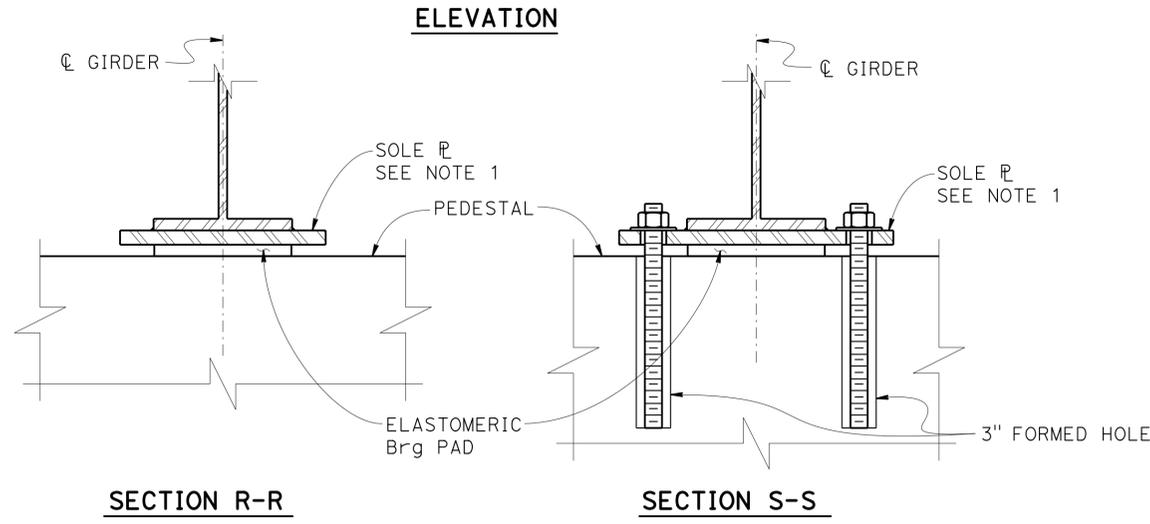
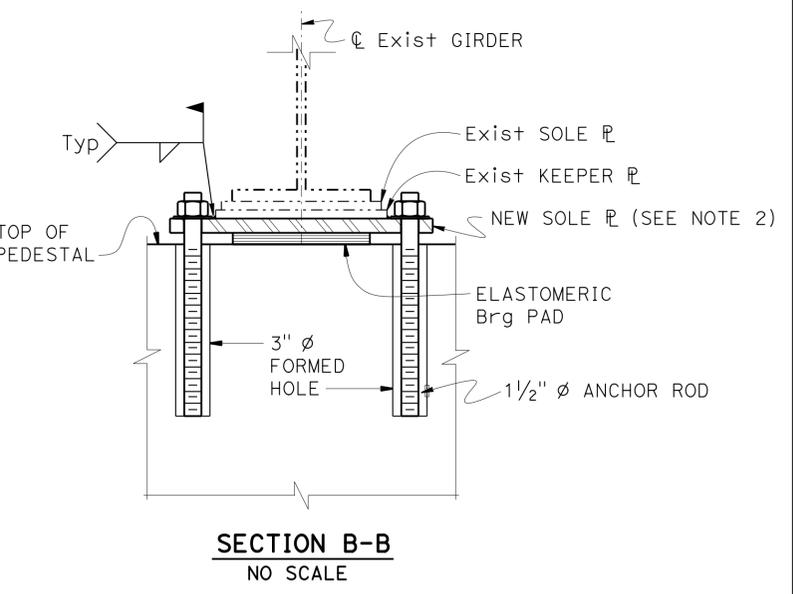
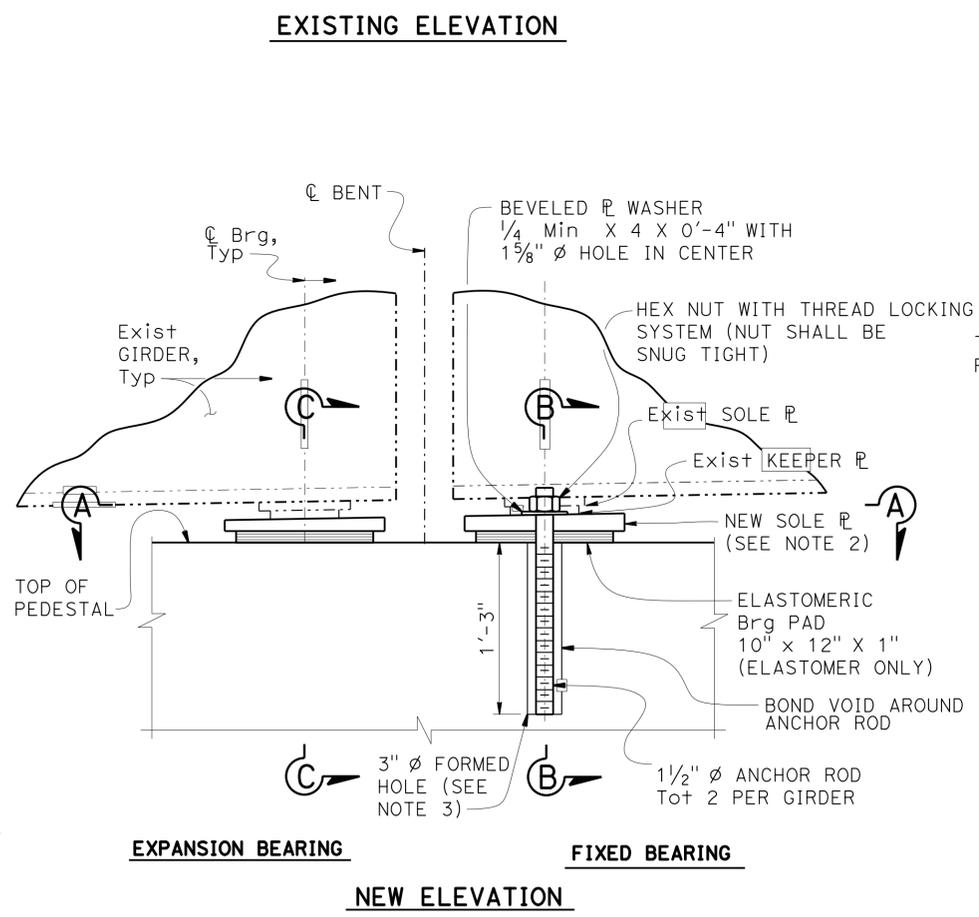
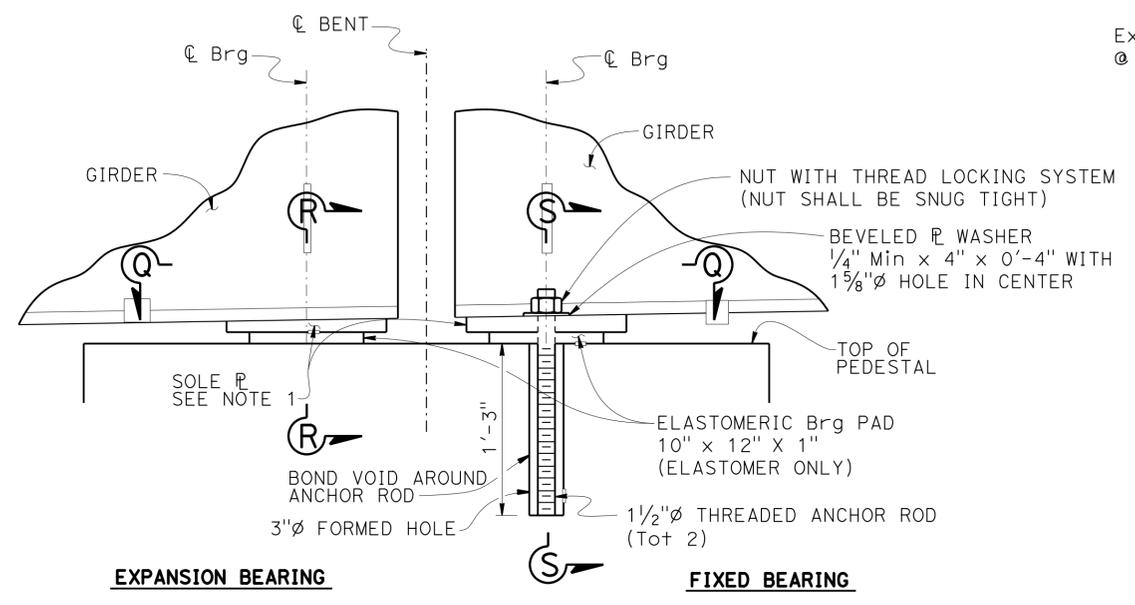
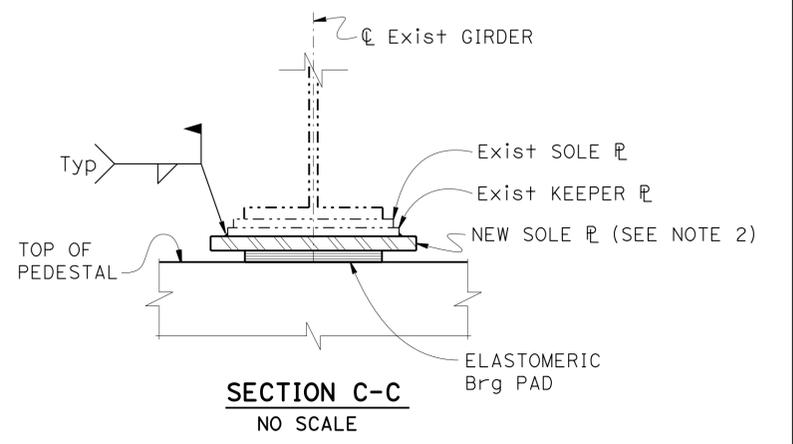
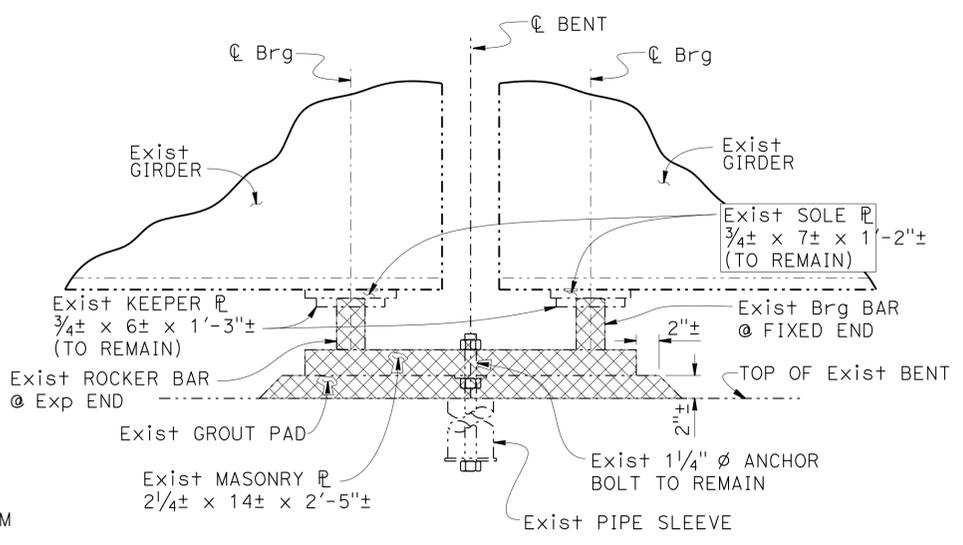
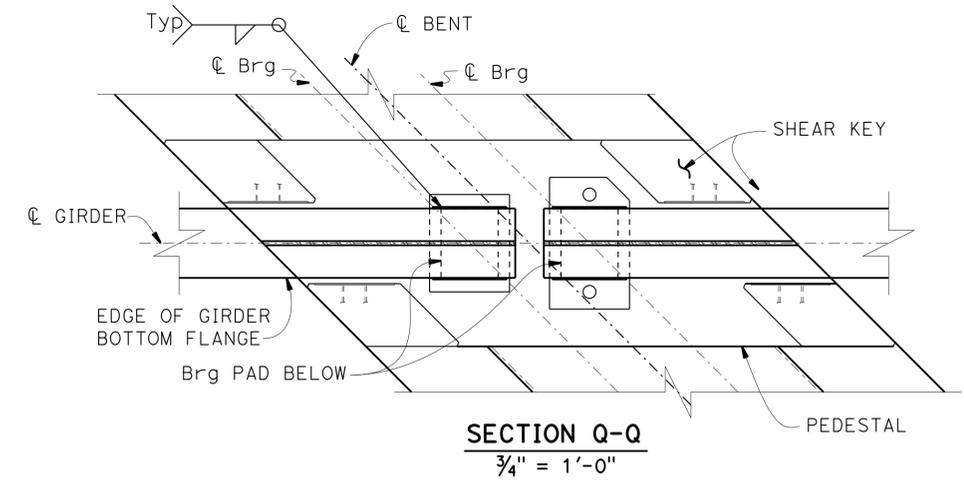
REVISION DATES	SHEET	OF
02-28-15	21	41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	147	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 PLANS APPROVAL DATE 06-15-16
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

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LEGEND:
 [Hatched Box] Indicates bridge removal (portion)
 - - - - Indicates existing structure



- NOTES:
- For "NEW GIRDER SOLE PLATE DETAILS", see "BENT BEARING DETAILS NO. 3" sheet.
 - For "EXISTING GIRDER SOLE PLATE DETAILS", see "BENT BEARING DETAILS NO. 2" sheet.
 - Anchor rod may be cast in place without formed hole.
 - For "SECTION A-A", see "BENT BEARING DETAILS NO. 2" sheet.

NEW GIRDER BEARING DETAILS
 1/2" = 1'-0" UNLESS OTHERWISE SHOWN

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

BEARING REPLACEMENT DETAILS
 1/2" = 1'-0" UNLESS OTHERWISE SHOW

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Gerald Dickerson	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Watson

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO. 09-0062
 POST MILE 51.2
SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
BENT BEARING DETAILS NO. 1

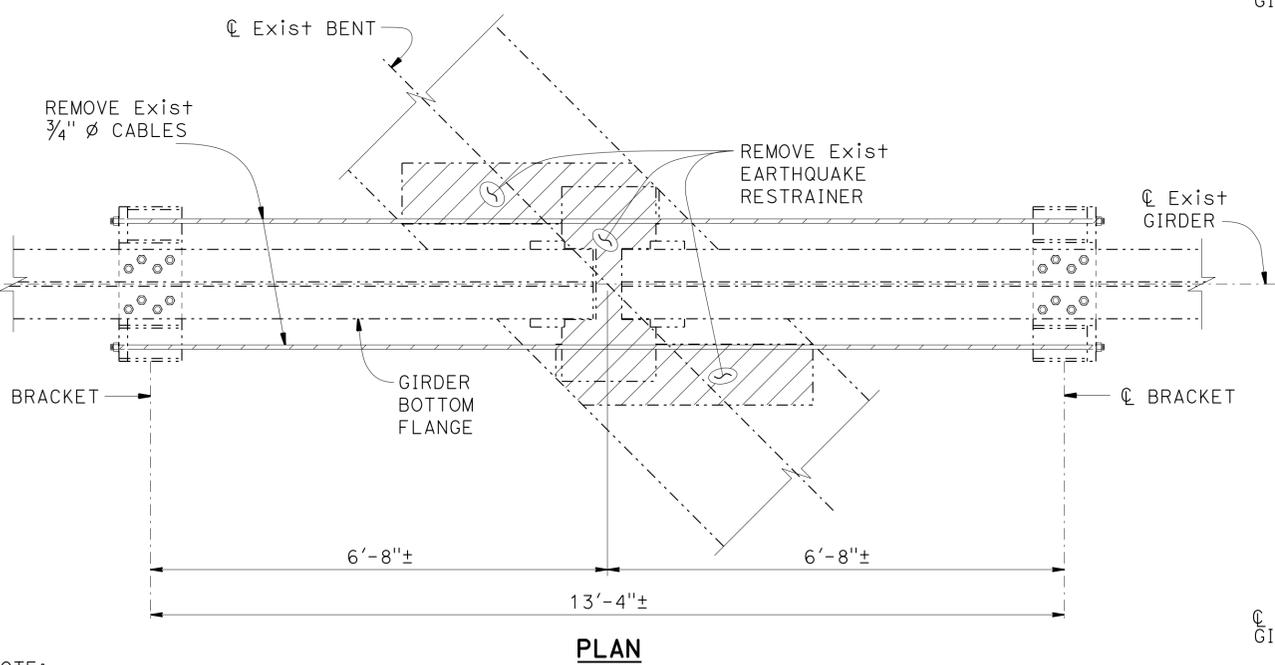
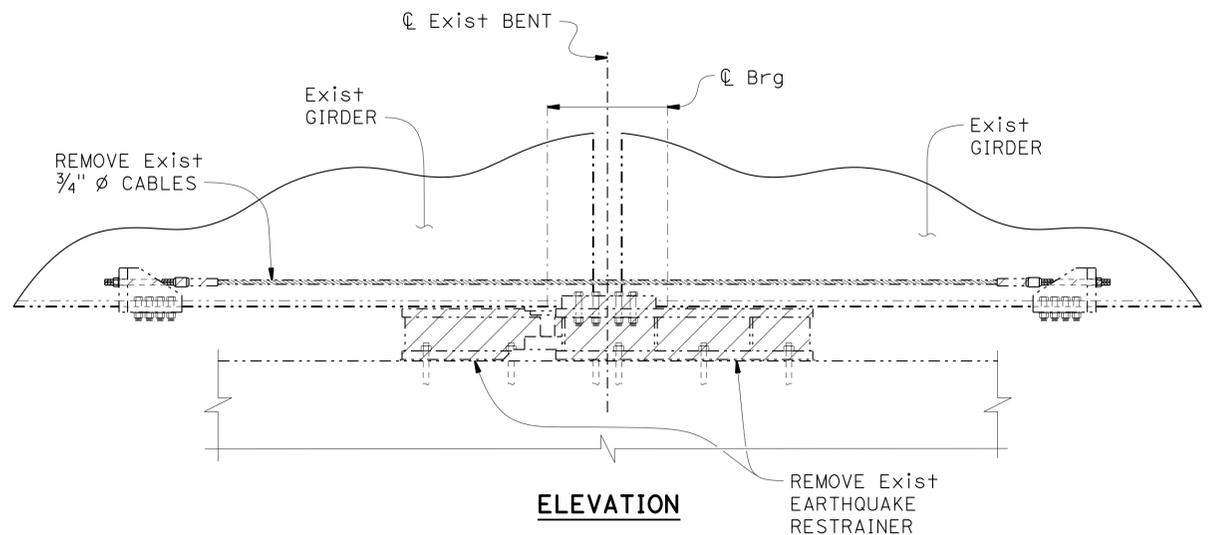
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	148	181

<i>Manode Kodsuntie</i> 6/2/16	
REGISTERED CIVIL ENGINEER	DATE
06-15-16	
PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.	

REGISTERED PROFESSIONAL ENGINEER	
Manode Kodsuntie	
No. 56671	Exp. 6/30/17
CIVIL	
STATE OF CALIFORNIA	

LEGEND:
 Indicates Bridge Removal (portion)
 Indicates existing structure

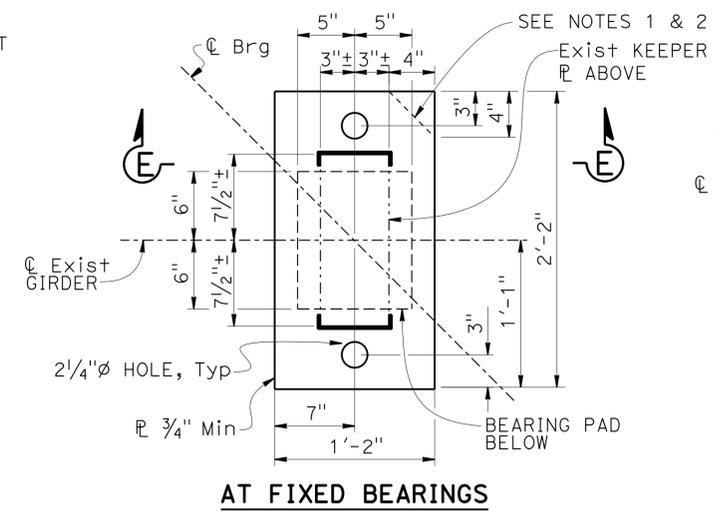
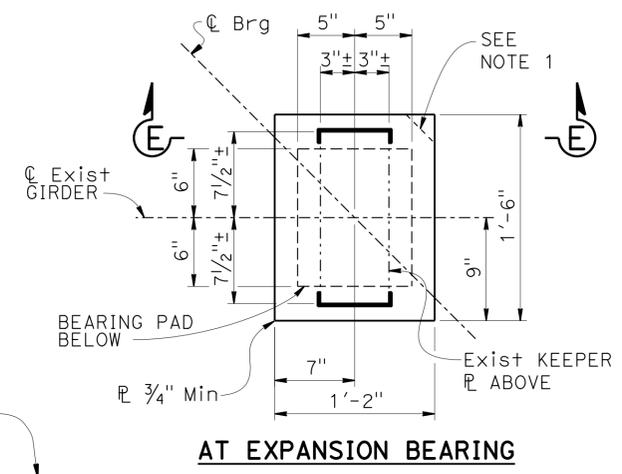
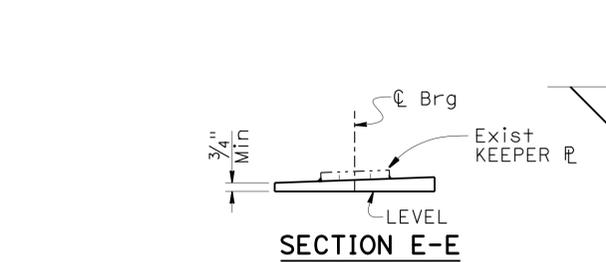
NOTES:
1. Clip corner at Abutments, see "ABUTMENT BEARING DETAILS" sheets.
2. Clip corner dimensions shown for bent locations. For dimensions at abutments, see "ABUTMENT BEARING DETAILS" sheets.
3. For location of "SECTION A-A", see "BENT BEARING DETAILS NO. 1" sheet.



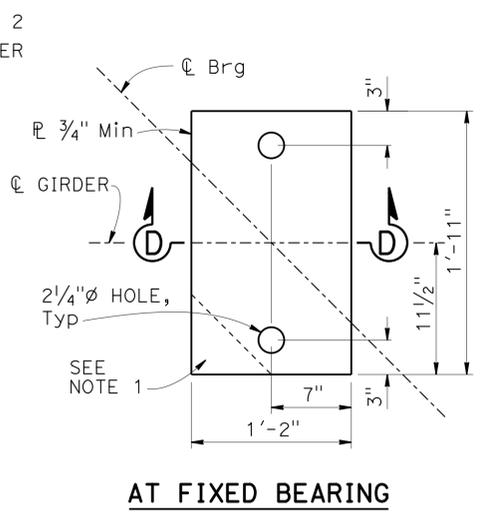
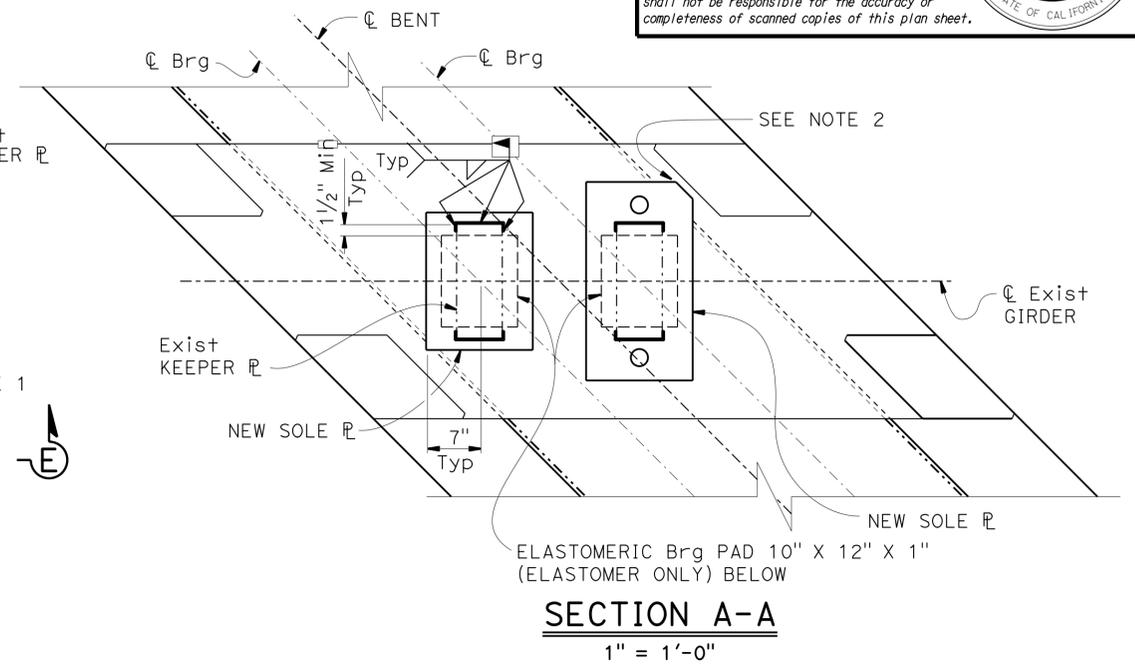
NOTE:
Remove existing $\frac{3}{4}$ " O cables from Girders (B), (C), (D), and (E), and existing earthquake restrainers from Girders (C) and (D) at all bents.

EXISTING EARTHQUAKE RESTRAINER REMOVAL
 $\frac{3}{4}$ " = 1'-0"

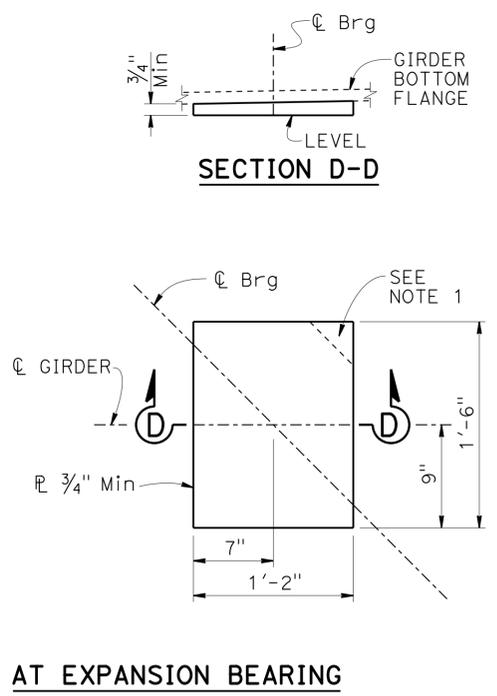
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



EXISTING GIRDER SOLE PLATE DETAILS
 $\frac{1}{2}$ " = 1'-0"



NEW GIRDER SOLE PLATE DETAILS
 $\frac{1}{2}$ " = 1'-0"



DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Gerald Dickerson	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Watson

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

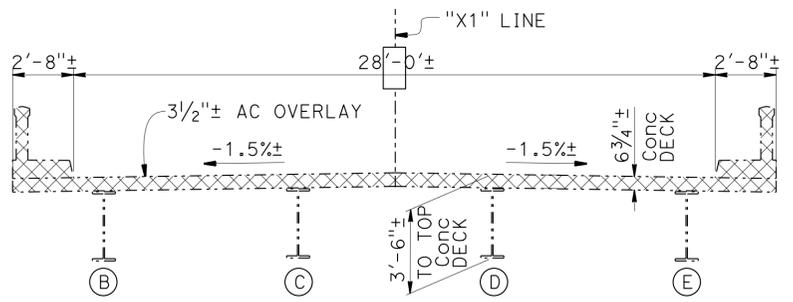
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.2

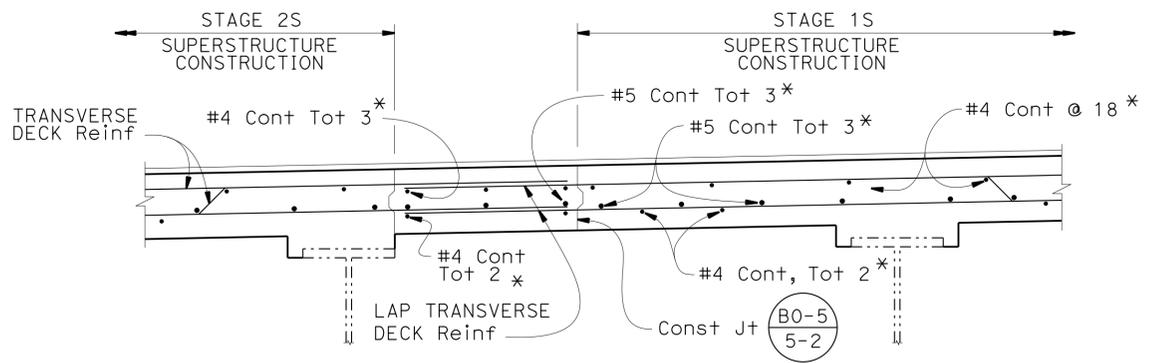
SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
BENT BEARING DETAILS NO. 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	149	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 06-15-16
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

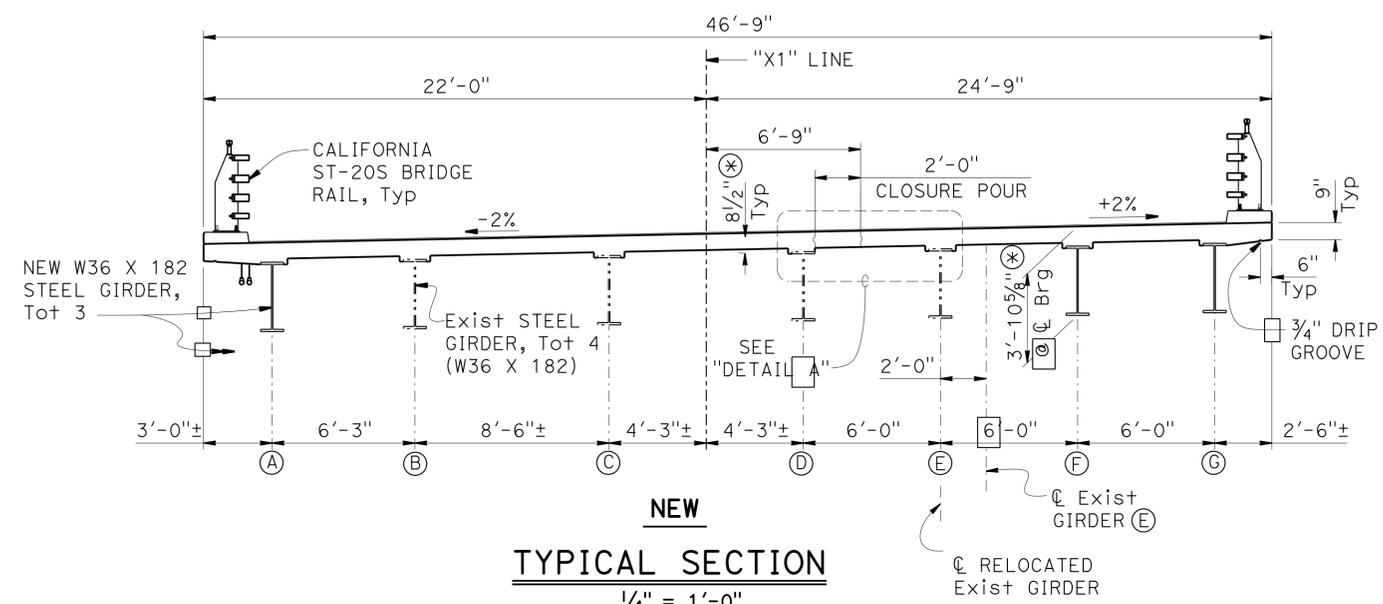


EXISTING



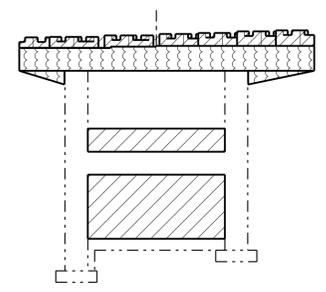
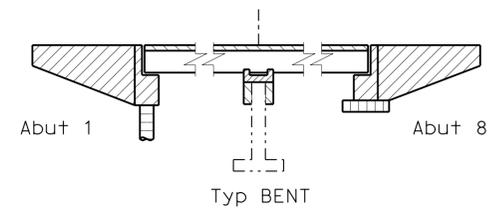
DETAIL A

1" = 1'-0"

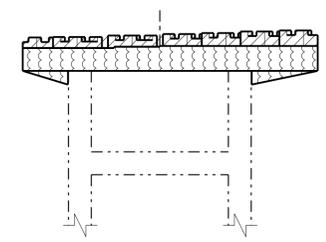


NEW TYPICAL SECTION

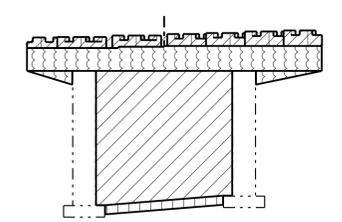
1/4" = 1'-0"



BENT 3



BENTS 4, 5 & 6



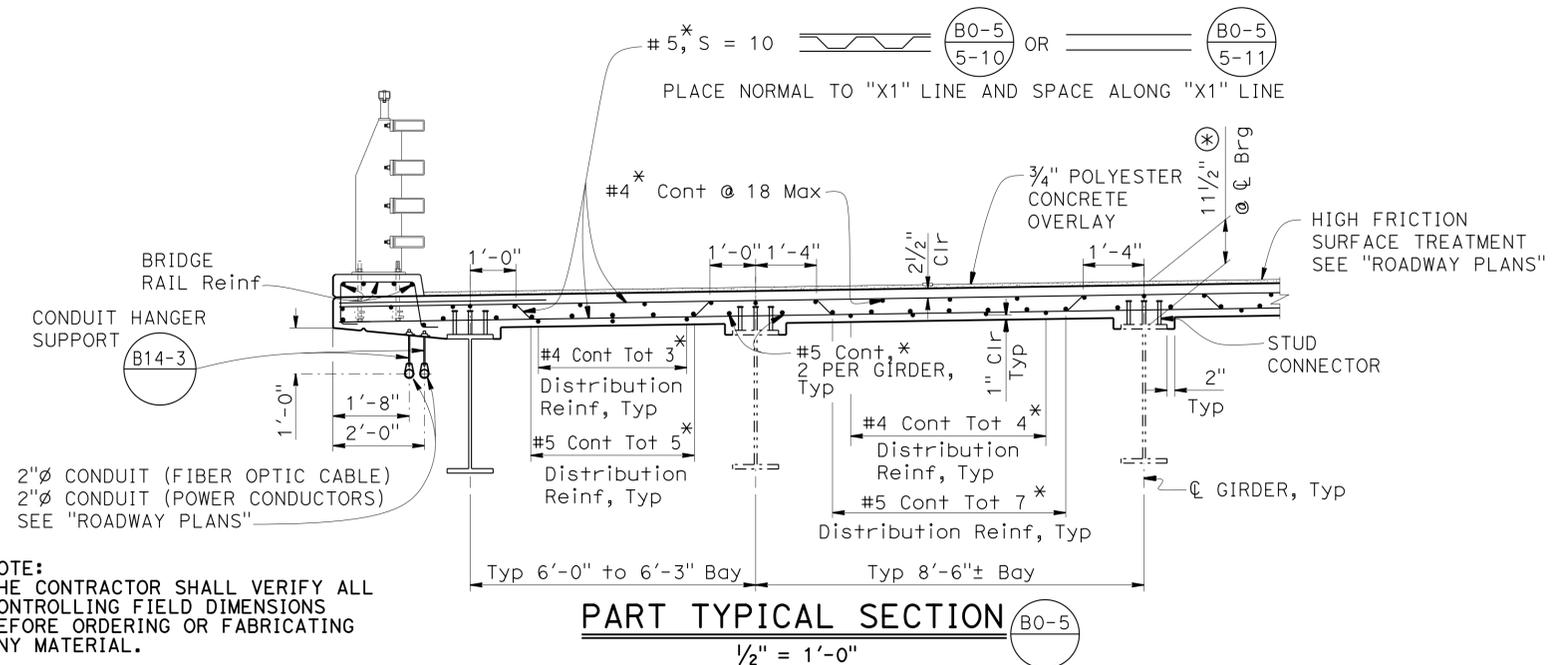
BENTS 2 & 7

CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

LEGEND:

- Structural Concrete, Bridge
- Structural Concrete, Bridge (Polymer Fiber)
- Structural Concrete, Bridge (f'c = 4000 psi)
- Structural Concrete, Bridge Footing
- CIDH Concrete Pile
- Indicates existing structure
- Dimension does not include 3/4" polyester concrete overlay
- Indicates epoxy coated reinforcement
- Indicates existing deck and railing removal limits
- Girder designation



PART TYPICAL SECTION

1/2" = 1'-0"

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

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Bob Huddleston	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED E. Watson/J. Tang

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO. 09-0062
POST MILE 51.2

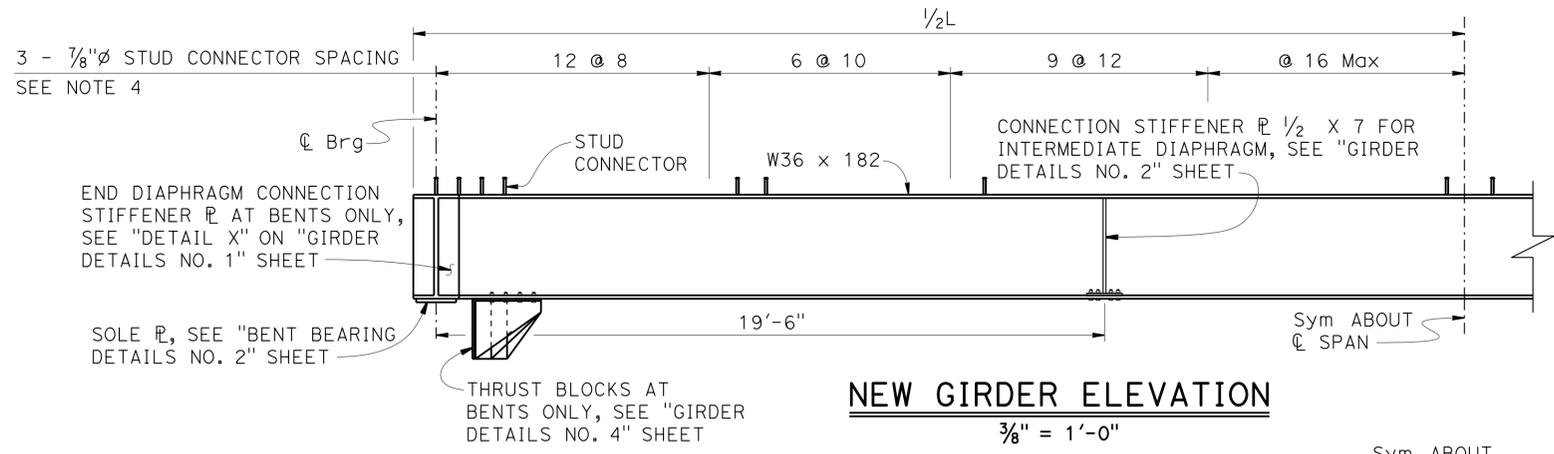
SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
TYPICAL SECTION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	150	181

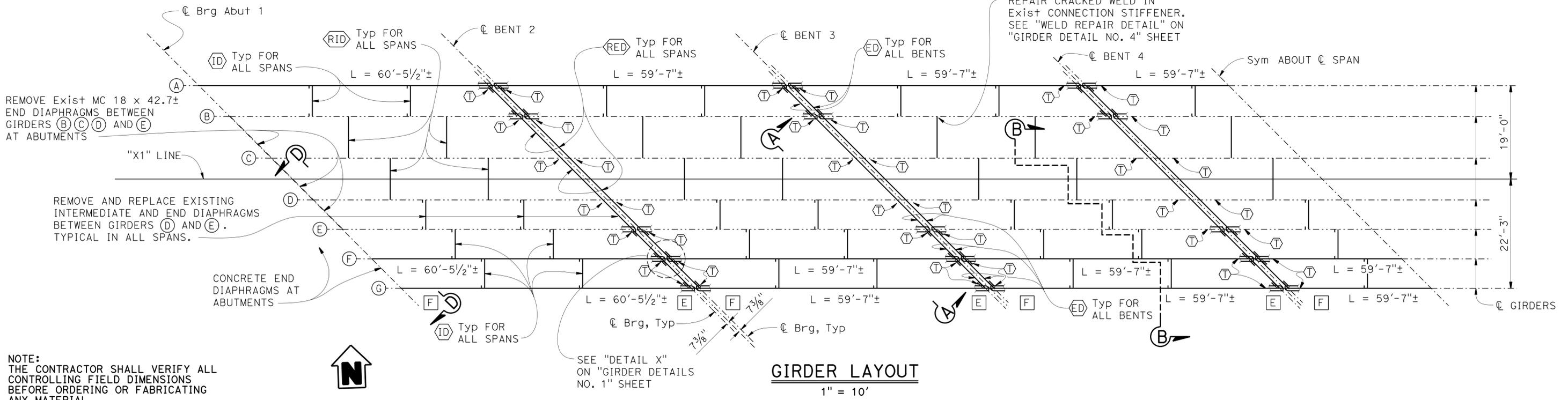
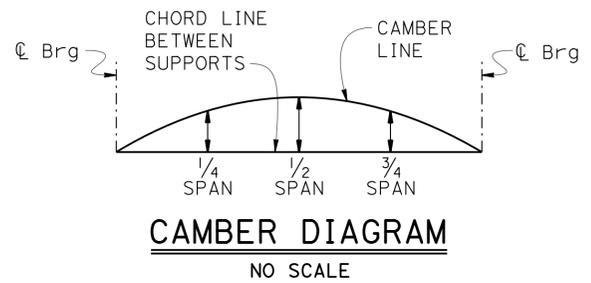
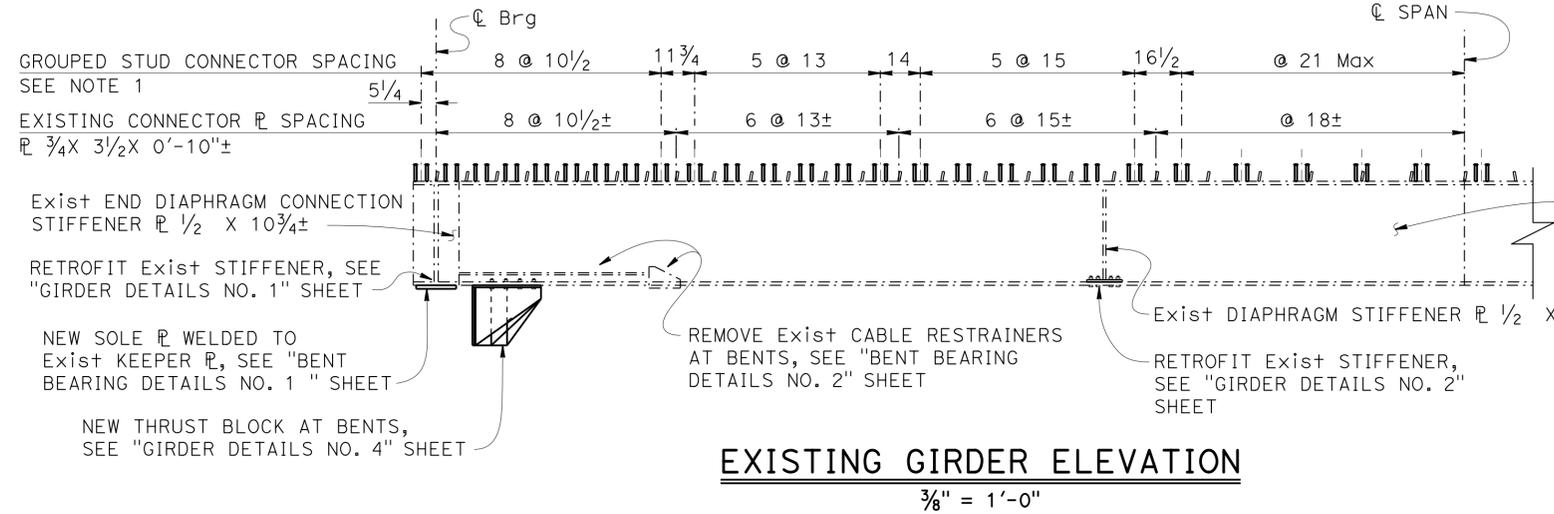
Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 06-15-16
 PLANS APPROVAL DATE
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

- LEGEND:
- Indicates existing structure
 - (G) Girder designation
 - (E) Expansion end of girder
 - (F) Fixed end of girder
 - (T) Thrust Block locations. For Thrust Block Details, see "GIRDER THRUST BLOCK ELEVATION" on "GIRDER DETAILS NO. 4" sheet.
 - (ID) New intermediate diaphragm
 - (ED) New end diaphragm
 - (RED) Replace existing MC 18x 42.7± end diaphragm with new MC 18x42.7
 - (RID) Replace existing bent R intermediate diaphragm with new MC 18x42.7, see "GIRDER DETAILS NO. 1" sheet.

- NOTES:
- Adjust location of stud connectors as required to clear existing connector plates. For Group Stud Connector Detail, see "GIRDER DETAILS NO. 1" sheet.
 - For "SECTION A-A", "SECTION B-B" and "DETAIL X", see "GIRDER DETAILS NO. 1" sheet.
 - For "VIEW D-D", see "GIRDER DETAILS NO. 3" sheet.
 - For stud connector details, see "GIRDER DETAILS NO. 1" sheet.



GIRDER CAMBER TABLE			
Camber Components	Span		
	1/4	1/2	3/4
Deck Slab Dead Load (ft)	0.04	0.05	0.04
Steel Girder Dead Load (ft)	0.01	0.02	0.01
Added Dead Load (ft)	0.01	0.01	0.01
Total Camber (ft)	0.06	0.08	0.06



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

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Gerald Dickerson	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Watson

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

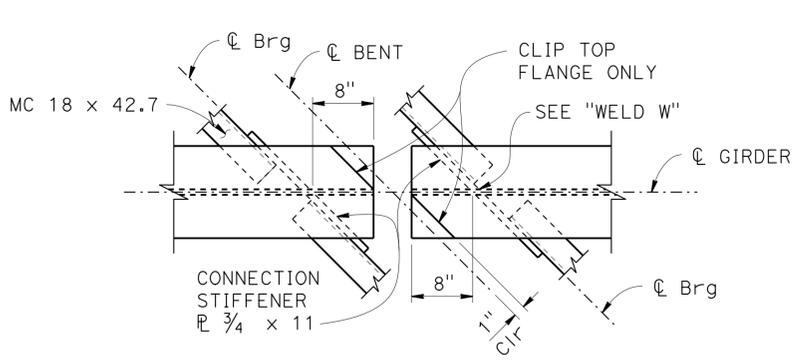
DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.21

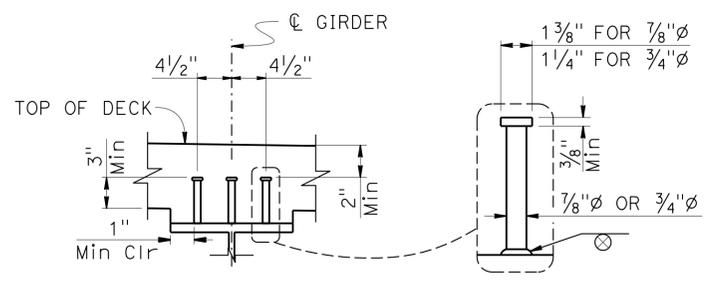
SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
 GIRDER LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	151	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 06-15-16
 PLANS APPROVAL DATE
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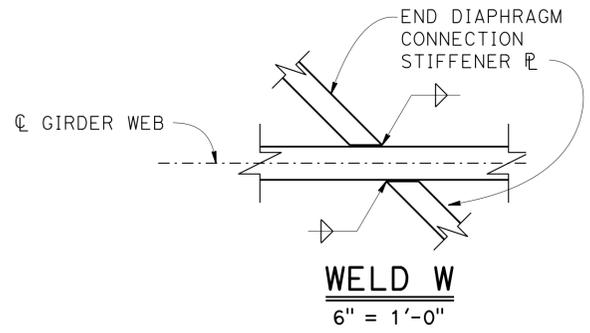


DETAIL X
1" = 1'-0"

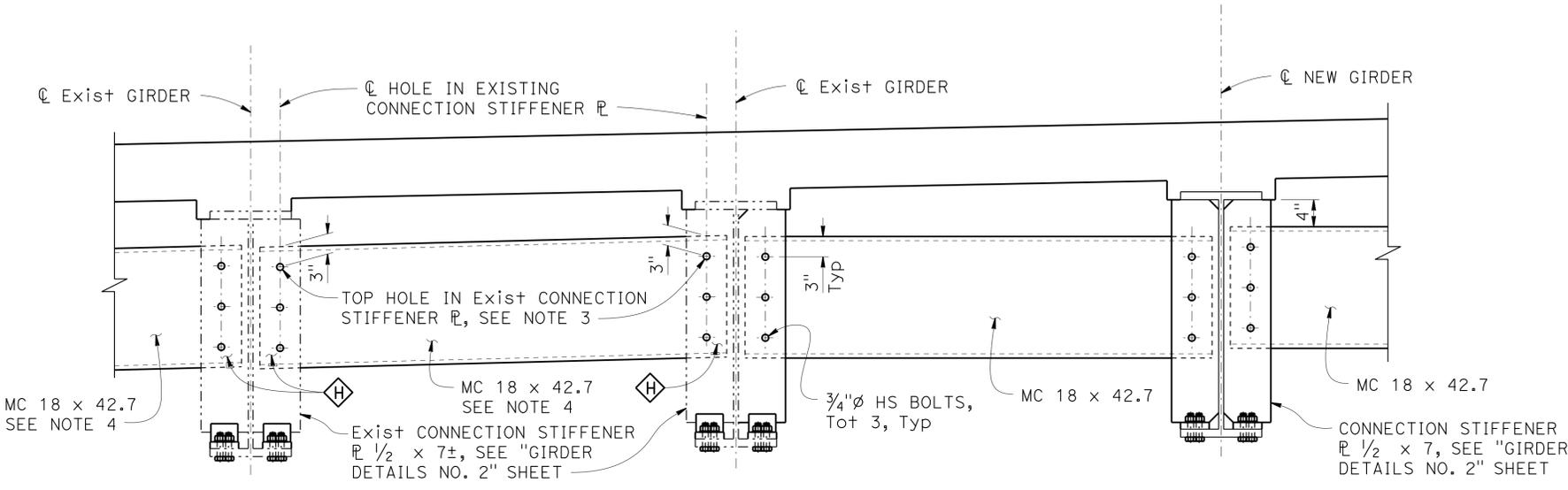


NOTE: Length to be determined by contractor.
Minimum length = 6"

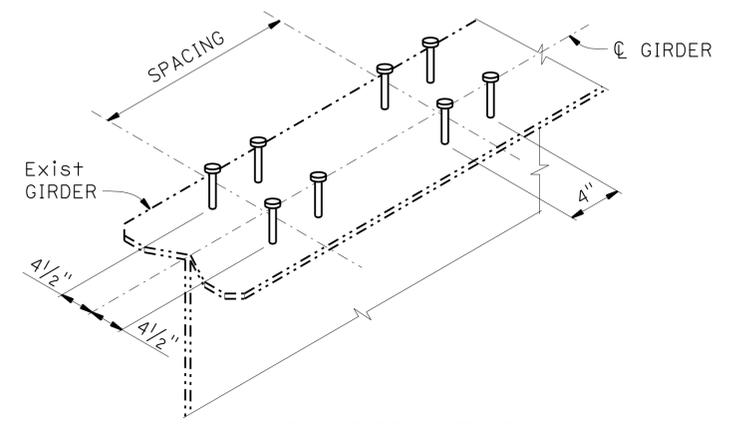
STUD CONNECTORS
NO SCALE



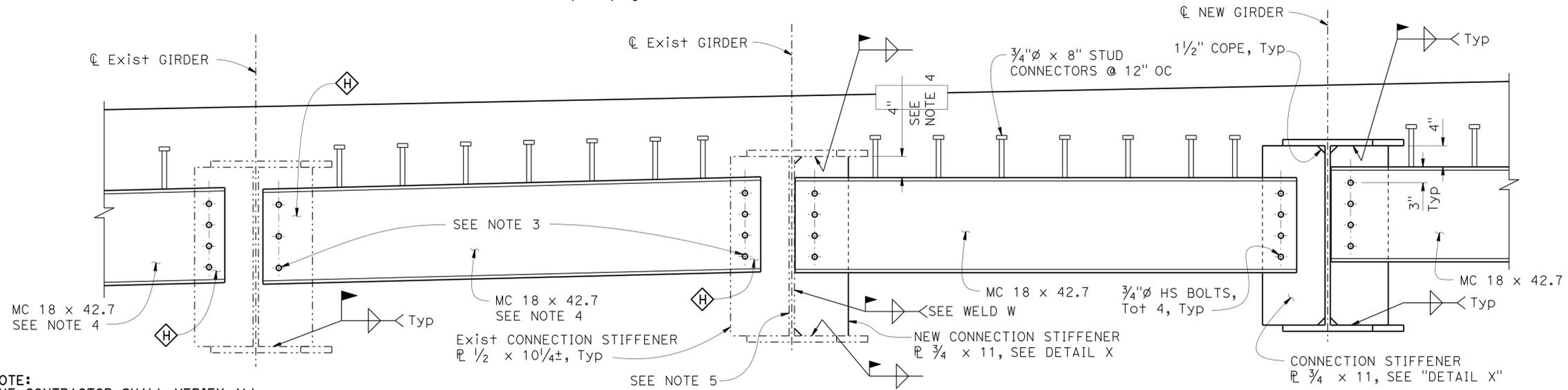
WELD W
6" = 1'-0"



SECTION B-B (INTERMEDIATE DIAPHRAGM)
1" = 1'-0"



GROUPED STUD CONNECTOR DETAIL
NO SCALE



SECTION A-A (BENT END DIAPHRAGM)
1" = 1'-0"

- NOTES:
- For location of "SECTION A-A", "SECTION B-B" and "DETAIL X", see "GIRDER LAYOUT" SHEET.
 - For Connection Stiffener details, see "GIRDER DETAILS NO. 2" sheet.
 - Holes in new MC 18 x 42.7 to match holes in existing connection stiffener PL.
 - New MC 18 x 42.7 diaphragm need not be horizontal when connected to existing connection stiffener PLs.
 - Clean and spot blast clean and paint undercoat both sides of girder web 4" beyond both sides of new connection stiffener plates.

LEGEND:
 - - - - - Indicates existing structure
 ◊ Clean faying areas between new diaphragms and existing connection stiffener plates

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

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY G. Dickerson / J. Tang	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Watson

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.21

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
GIRDER DETAILS NO. 1

NOTES:

1. For Stud Connector details, see "GIRDER DETAILS NO. 1" sheet.
2. Place Concrete End Diaphragm at least 5 days before placing deck concrete.
3. For location of "VIEW D-D", see "GIRDER LAYOUT" sheet.
4. Abutment 1 shown, Abutment 8 similar.

LEGEND:

- Indicates existing structure
- * Indicates epoxy coated reinforcement
- Ⓜ Clean and spot blast clean and paint undercoat both sides of existing girder webs

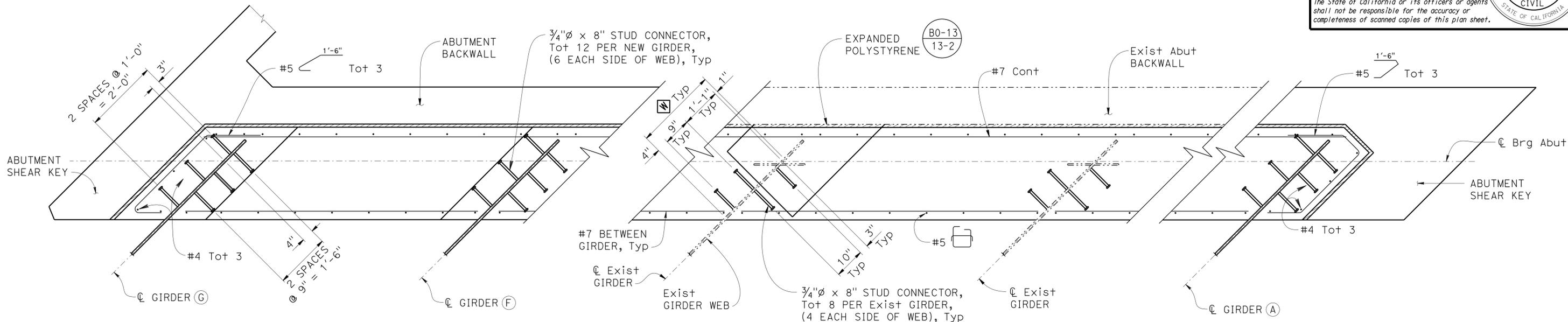
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	153	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

06-15-16
 PLANS APPROVAL DATE

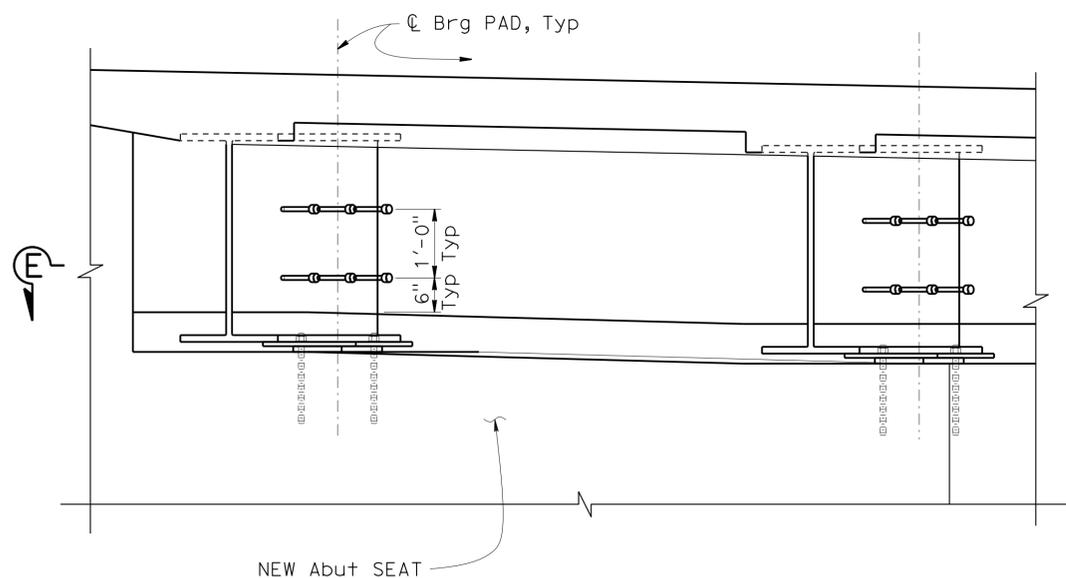
Manode Kodsuntie
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

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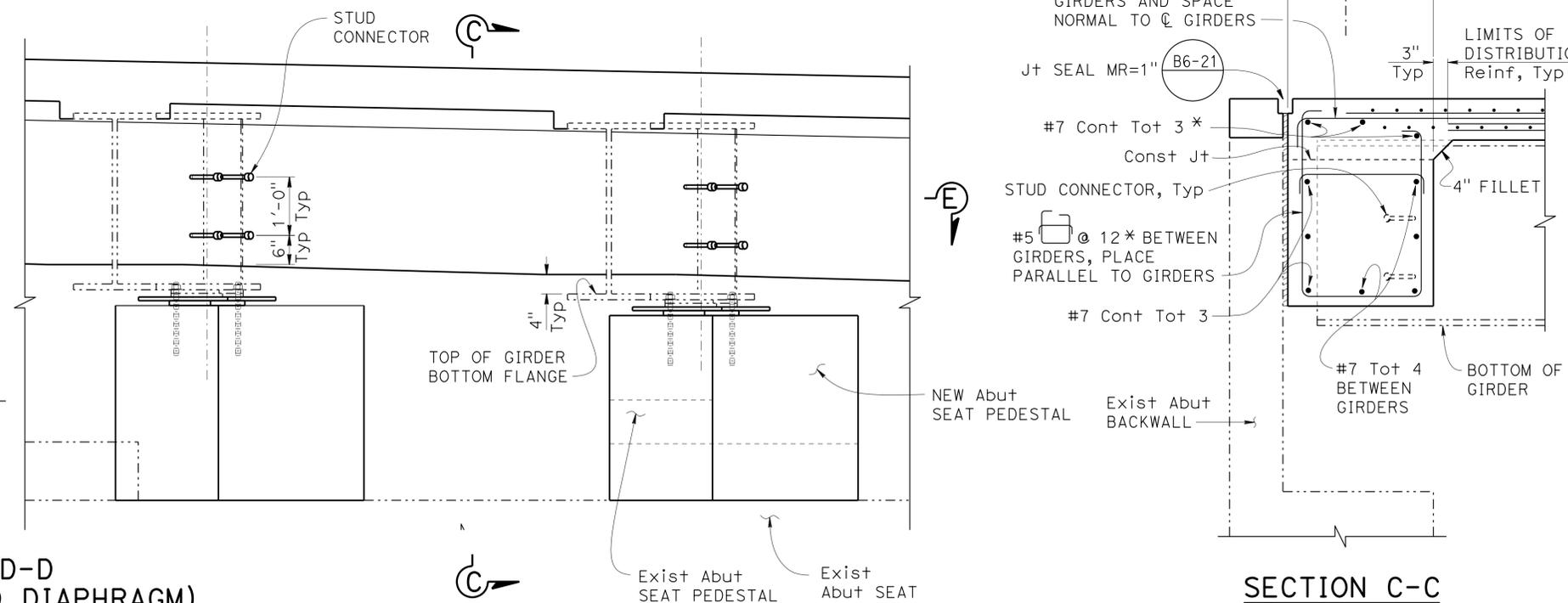
SECTION E-E

3/4" = 1'-0"



**VIEW D-D
 (ABUTMENT END DIAPHRAGM)**

3/4" = 1'-0"



SECTION C-C

3/4" = 1'-0"

DESIGN	BY	Manode Kodsuntie	CHECKED	Kevin Harper	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	09-0062	SPRING GARDEN BRIDGE & OVERHEAD (WIDEN) GIRDER DETAILS NO. 3	
	DETAILS	BY	G. Dickerson/J. Zhou/J. Tang	CHECKED			Kevin Harper	POST MILE		51.21
	QUANTITIES	BY	Gerald Dickerson	CHECKED			E. Watson / J. Tang	PROJECT NUMBER & PHASE:		02000001611

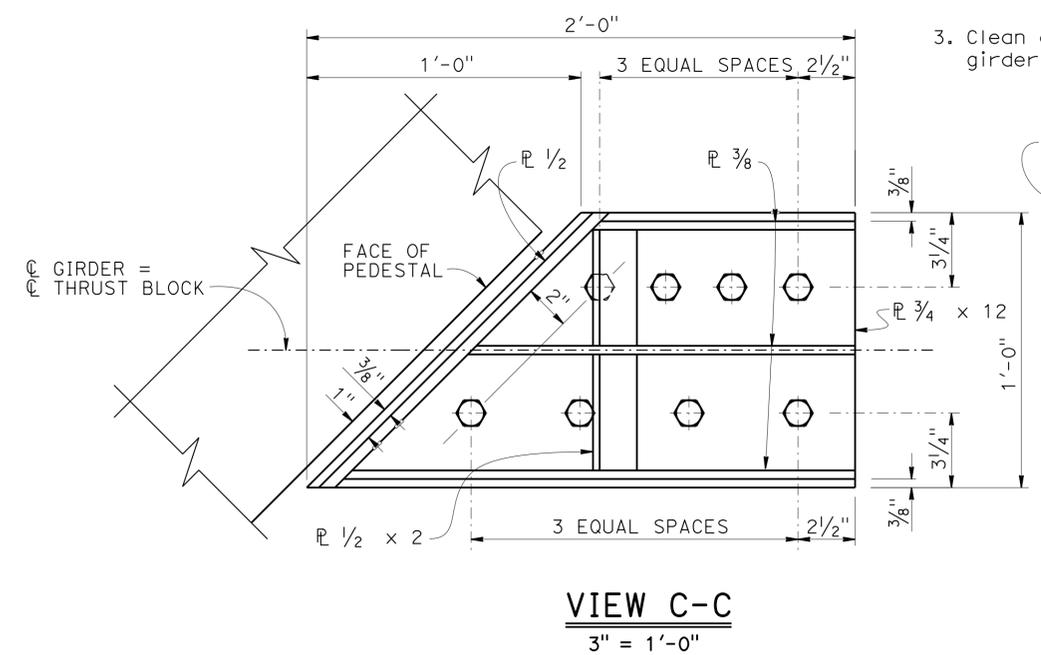
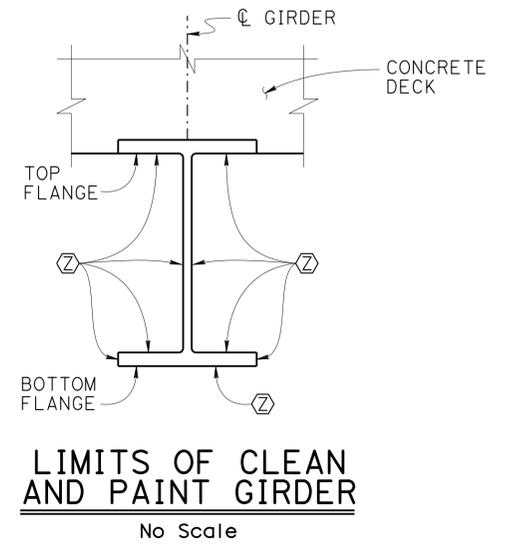
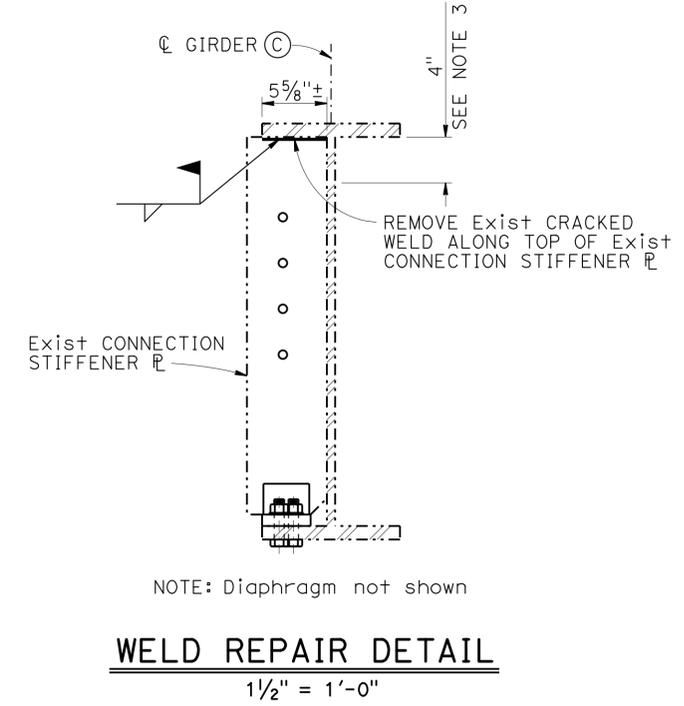
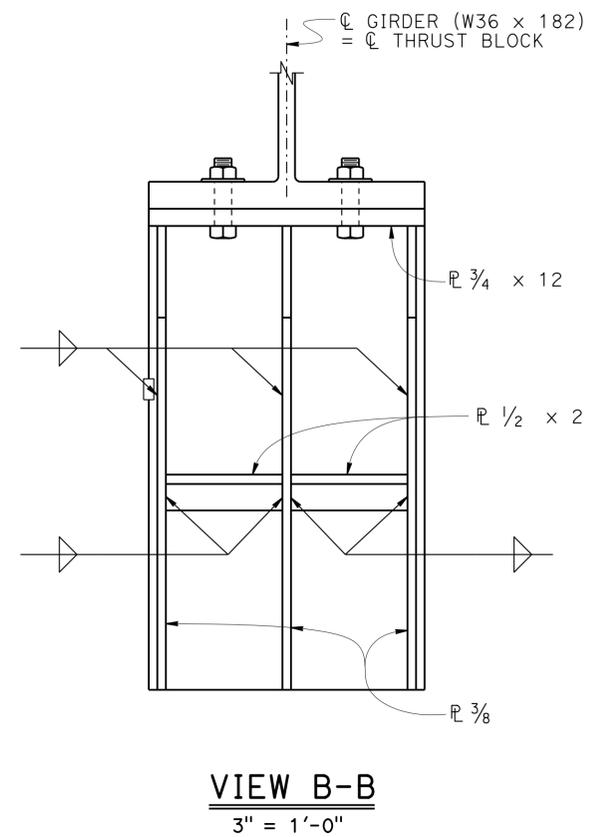
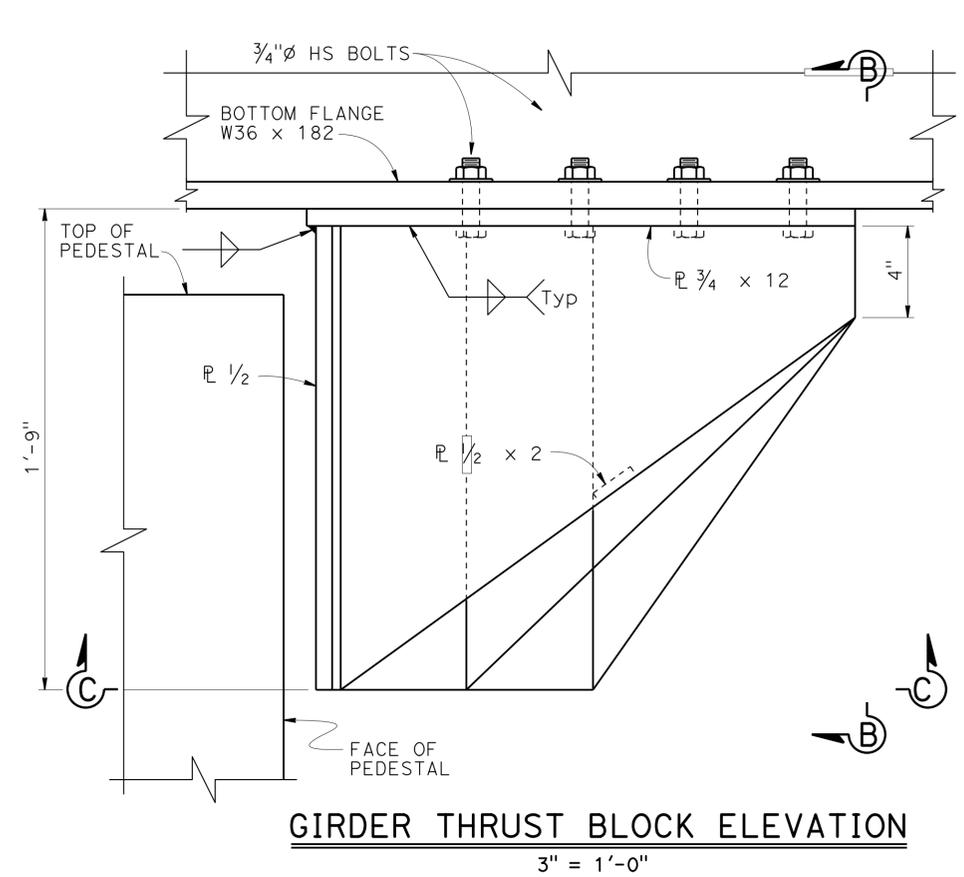
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3576

DISREGARD PRINTS BEARING EARLIER REVISION DATES

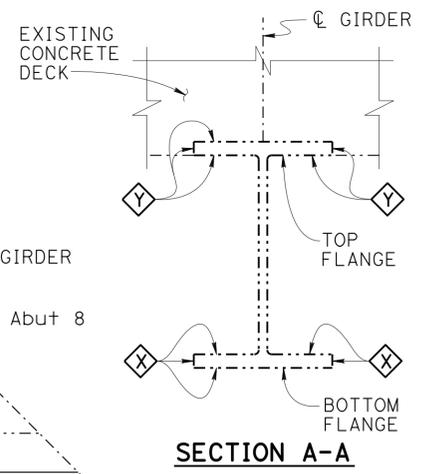
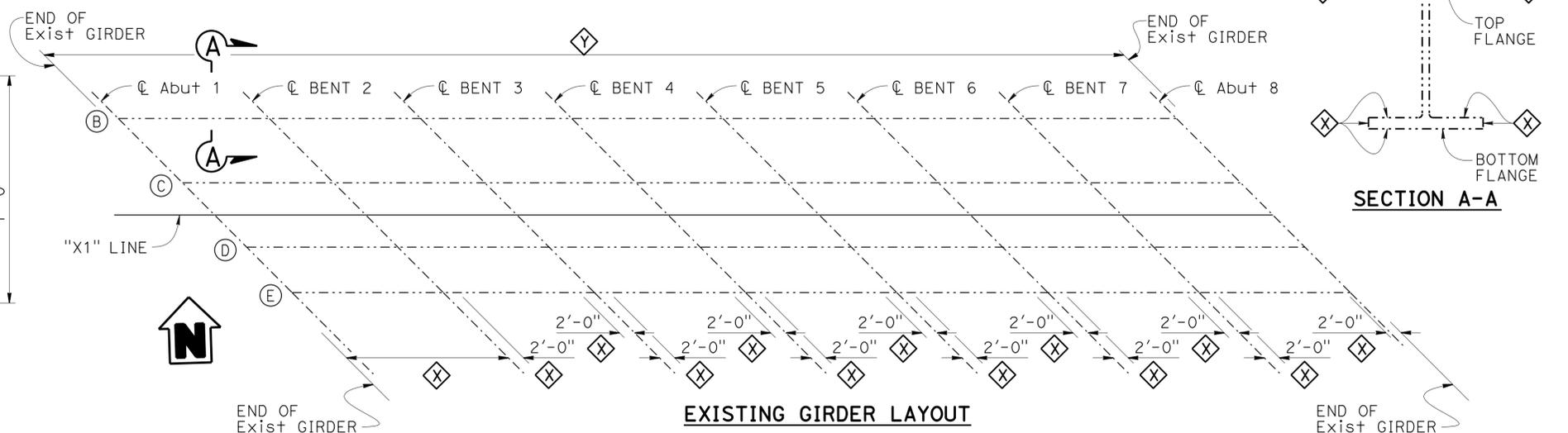
REVISION DATES	SHEET	OF
03-18-15	28	41

FILE => 09-0062-m-gd103.dgn



- NOTES:
- For Thrust Block locations, see "GIRDER LAYOUT" sheet.
 - Galvanize after fabrication.
 - Clean and spot blast clean and paint undercoat both sides of girder webs 4" beyond both sides of existing stiffener plates.

- LEGEND:
- Ⓢ Girder designation
 - ⊠ Clean and spot blast clean and paint undercoat exposed surfaces of bottom flanges and retained sole and keeper plates of existing girders.
 - ⊡ Clean and spot blast clean and paint undercoat at top flange of existing girders.
 - ⊞ Clean and Paint all exposed surfaces of new girders.
 - Indicates existing structure



LIMITS OF SPOT BLAST EXISTING GIRDERS
No Scale

DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Gerald Dickerson	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Watson

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO. 09-0062
POST MILE 51.21

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
GIRDER DETAILS NO. 4

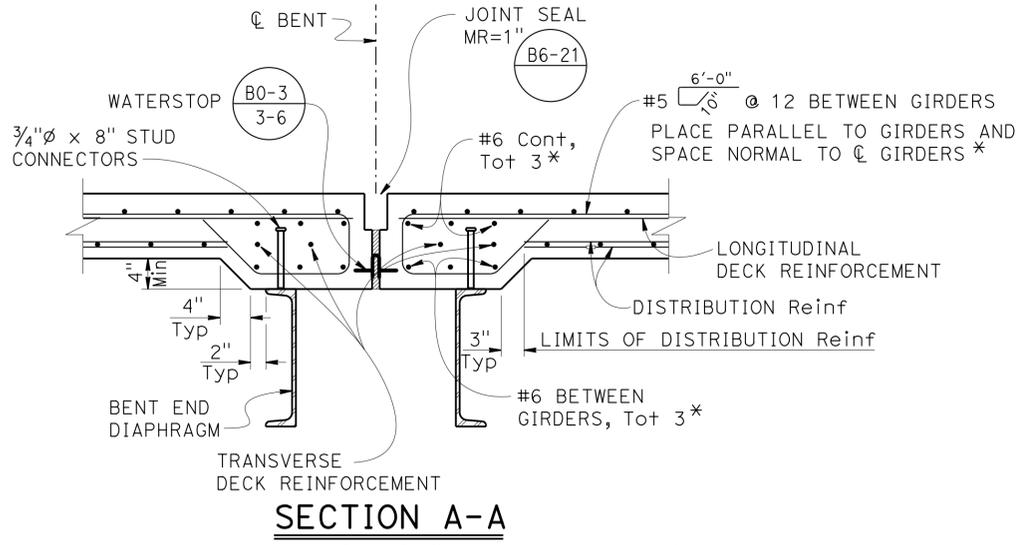
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	155	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

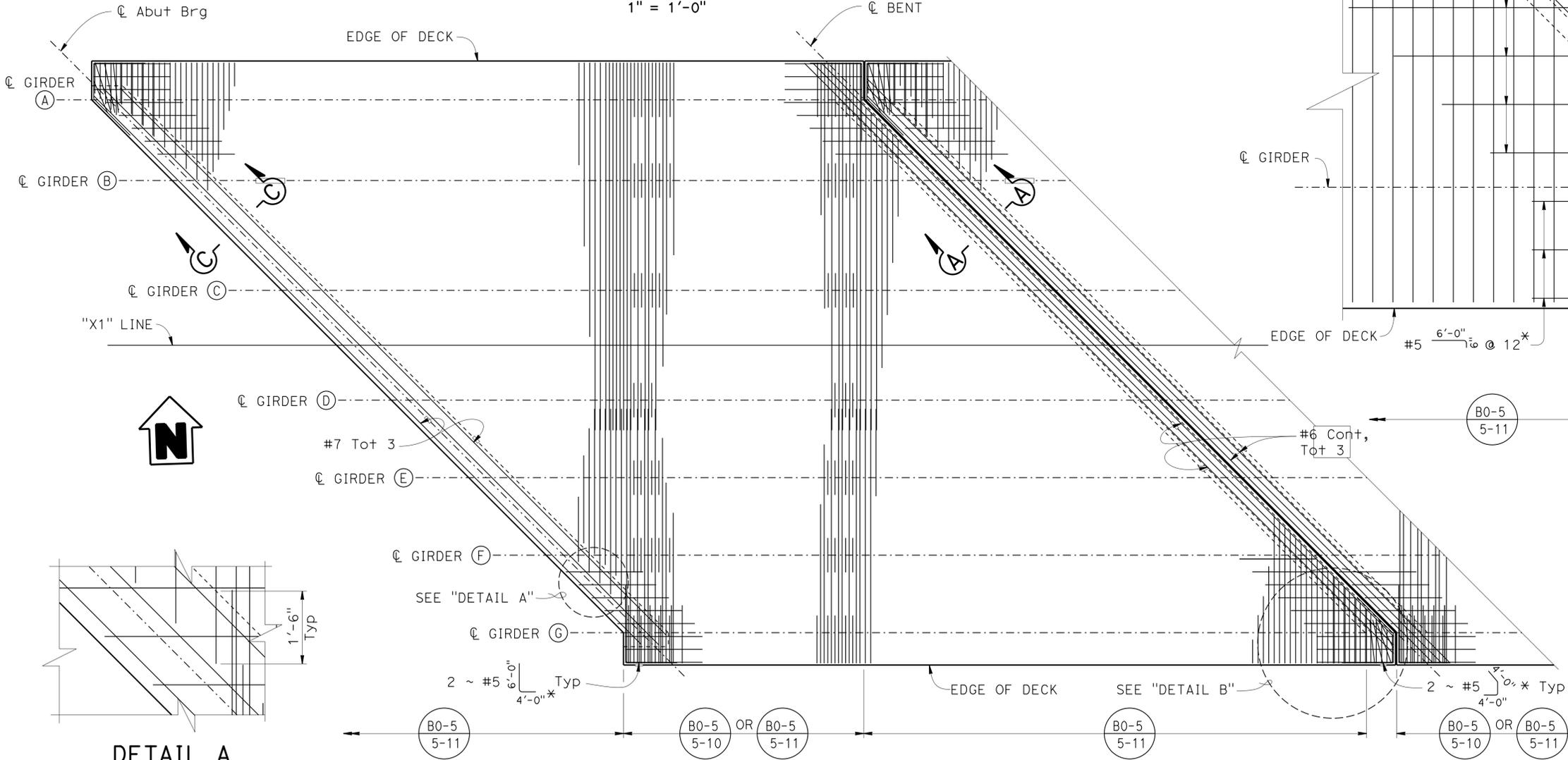
06-15-16
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

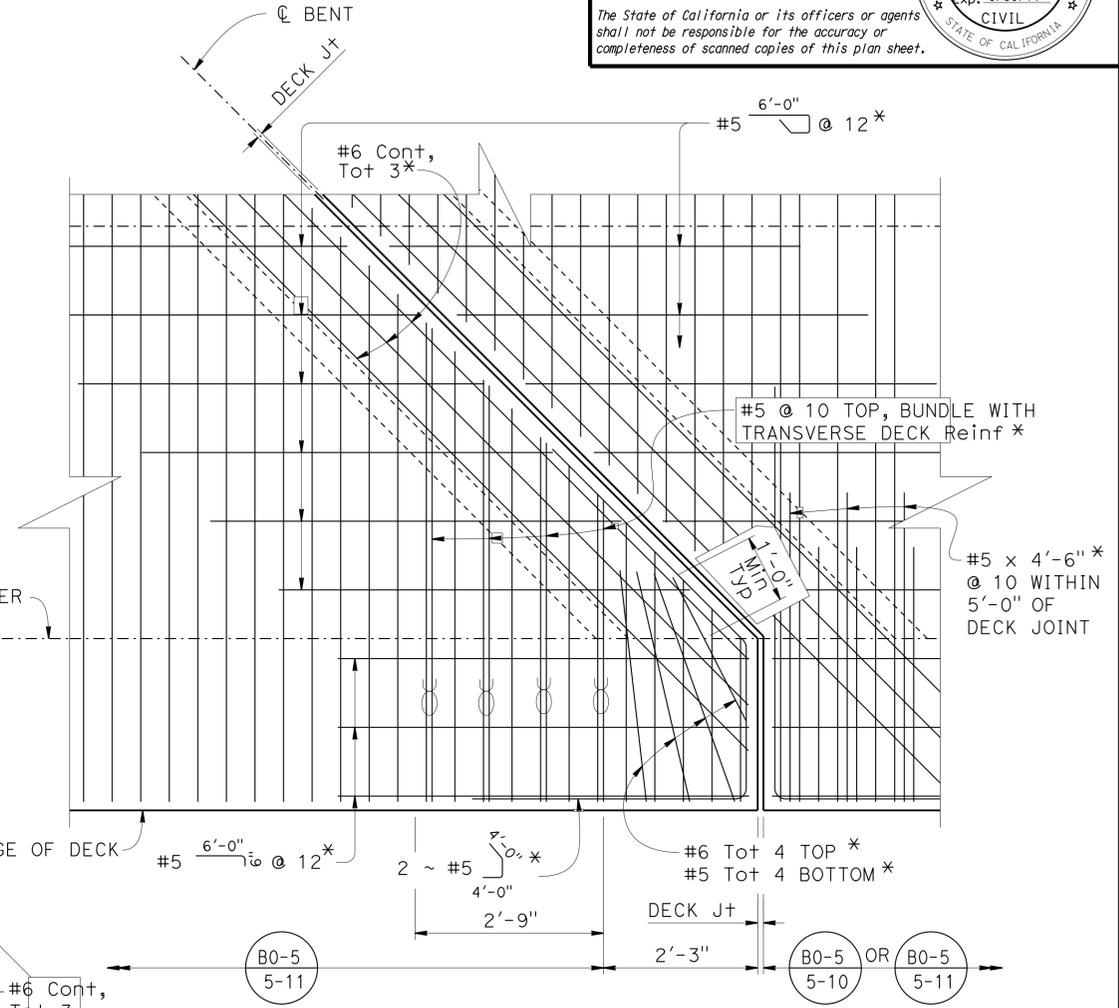


SECTION A-A
1" = 1'-0"



DETAIL A
3/4" = 1'-0"

PLAN
1" = 5'



DETAIL B
3/4" = 1'-0"

- NOTES:
- Deck at Bent shown, Abutment similar
 - Bundled bars shown thus:
- LEGEND:
- * Indicates epoxy coated reinforcement

NOTE:
For "SECTION C-C", see "GIRDER DETAILS NO. 3" sheet

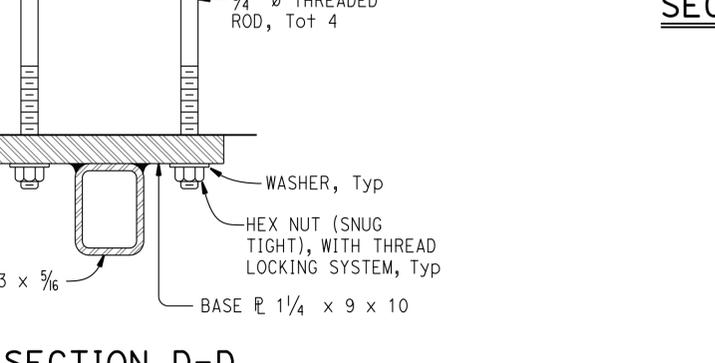
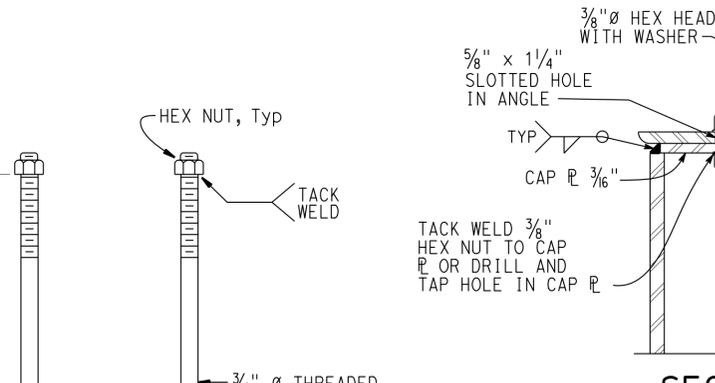
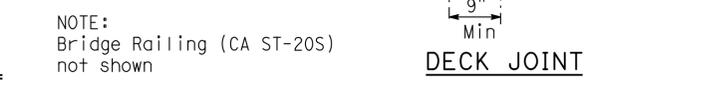
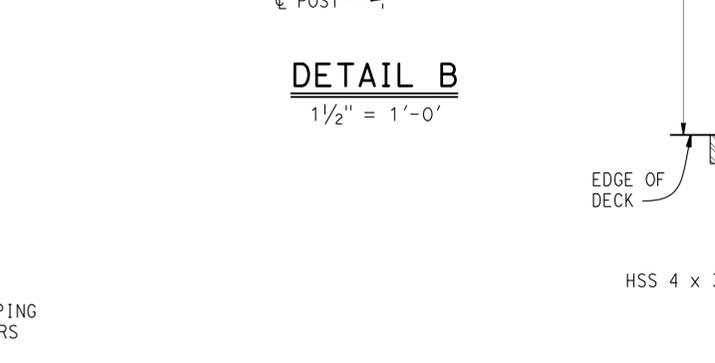
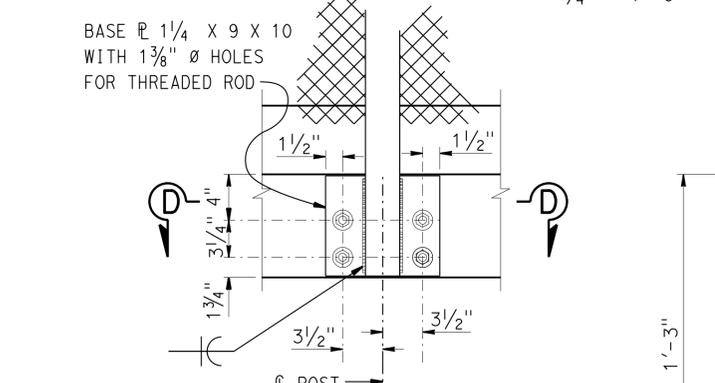
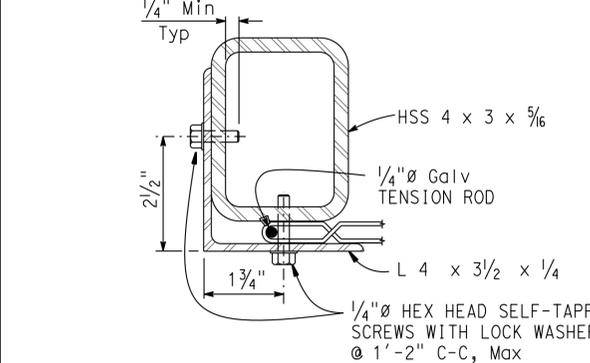
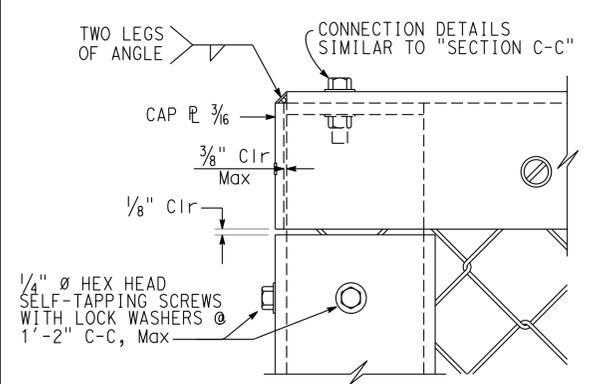
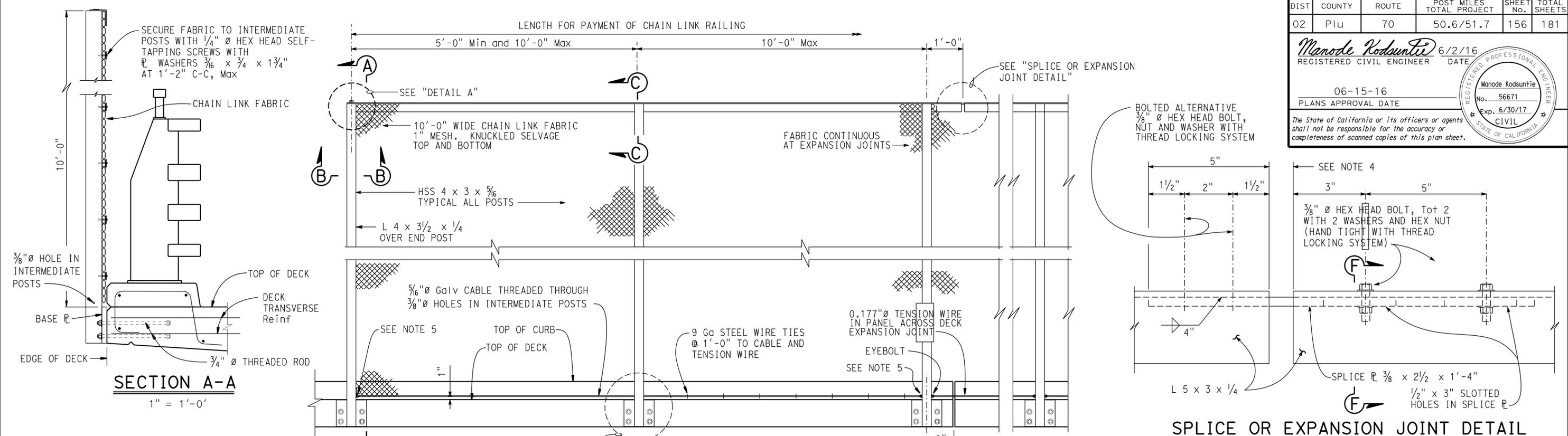
DESIGN	BY Manode Kodsuntie	CHECKED Kevin Harper
DETAILS	BY Gerald Dickerson	CHECKED Kevin Harper
QUANTITIES	BY Gerald Dickerson	CHECKED Eric Watson/Jie Tang

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

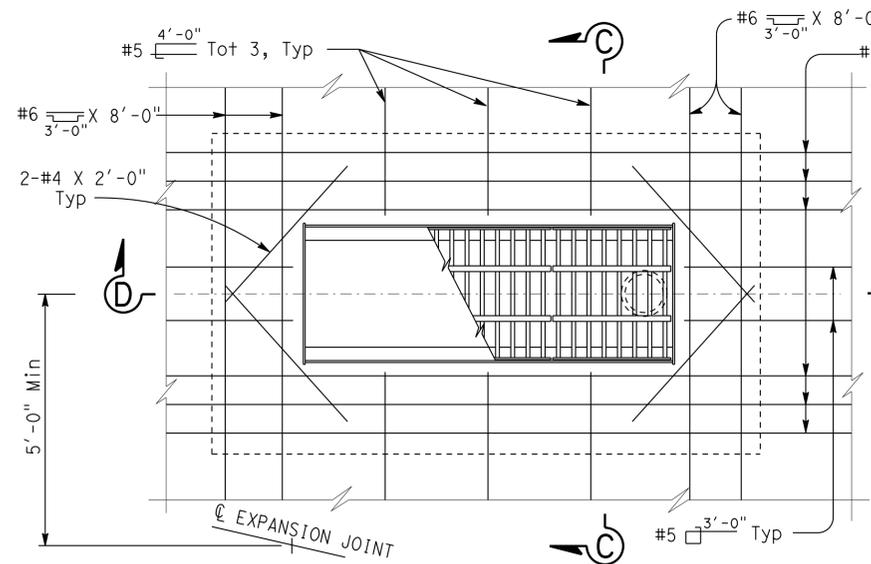
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09-0062
POST MILE	51.21

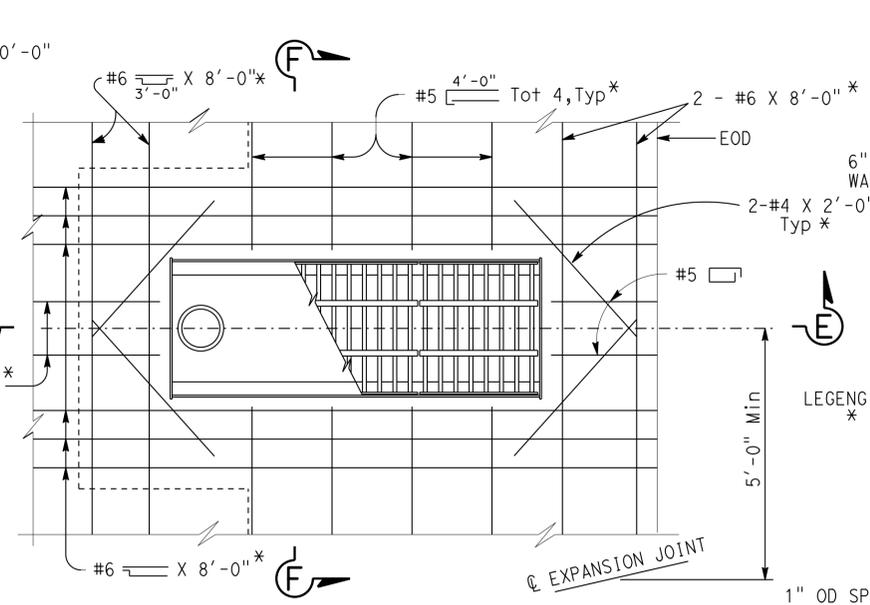
SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)
DECK DETAILS



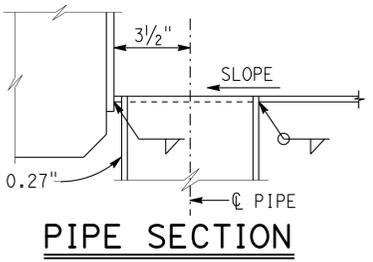
- NOTES:
- Railing assembly to be galvanized after fabrication.
 - Railing shall conform to the horizontal and vertical alignment. Posts shall be vertical. Place fabric parallel to slope.
 - Provide thimbles at all cable loops.
 - Expansion joint same dimension as expansion joint in curb.
 - Anchor 5/16" galvanized cable at end post and posts adjacent to deck joints with stud socket assembly or 1/2" Ø welded eyebolt and crimped sleeve clamp. Provide 1 1/2" minimum take-up at each anchorage.



PLAN - MEDIAN INSTALLATION



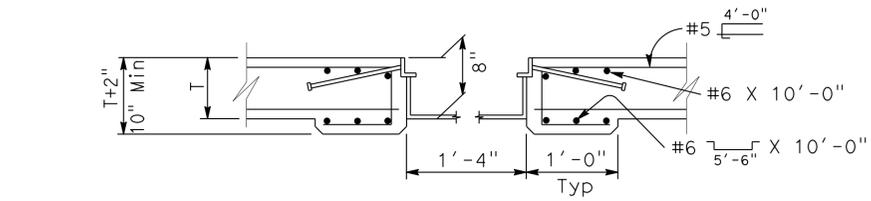
PLAN - CURB INSTALLATION



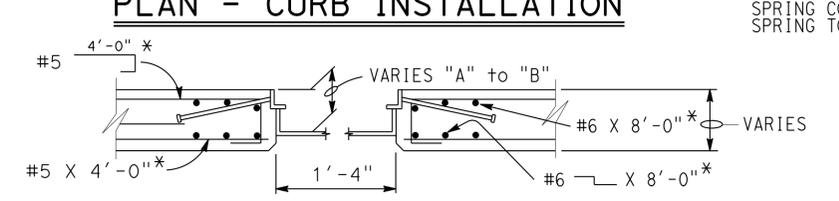
PIPE SECTION

NOTE:
Galvanize deck drain assembly after fabrication. Reinforcement shown at drains is to be placed in addition to typical slab reinforcement. Typical slab reinforcement not shown.

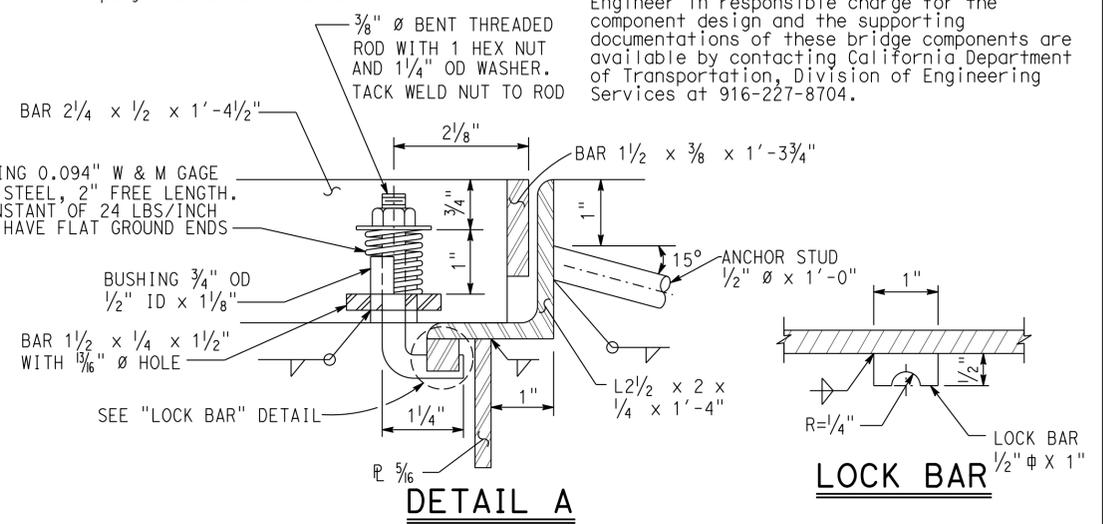
LEGEND:
* Indicates epoxy coated reinforcement



SECTION C-C

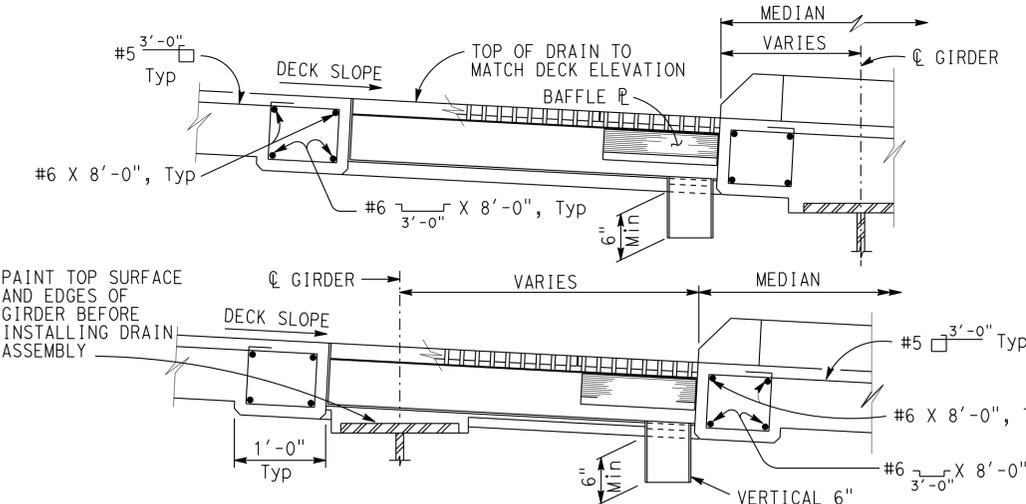


SECTION F-F

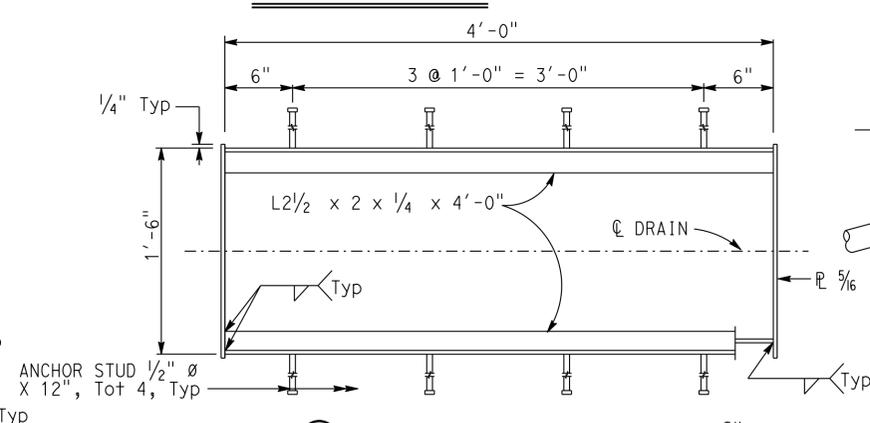


DETAIL A

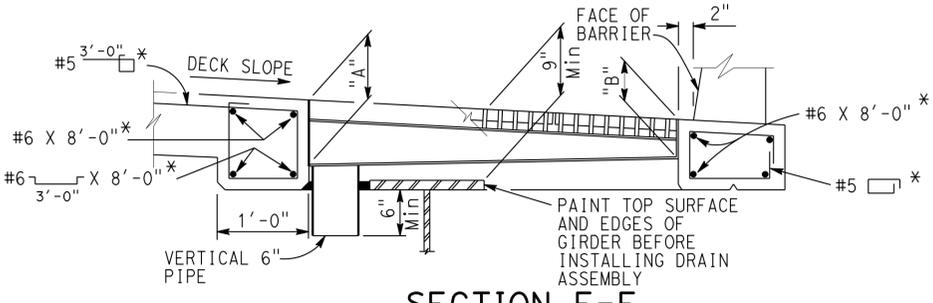
LOCK BAR



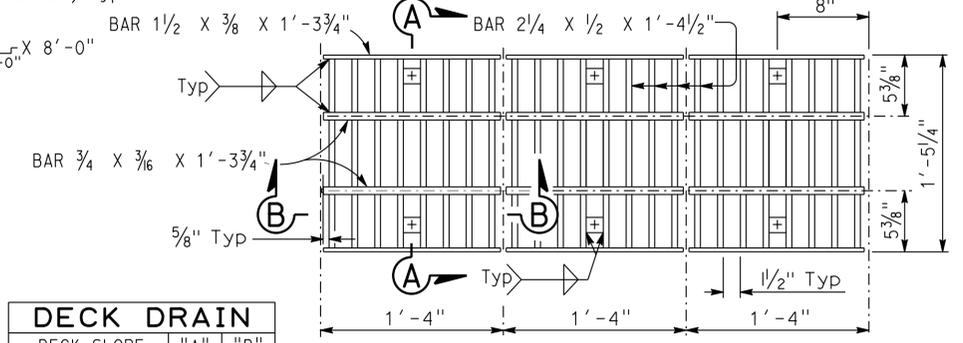
SECTION D-D



SECTION A-A (FRAME & GRATE)



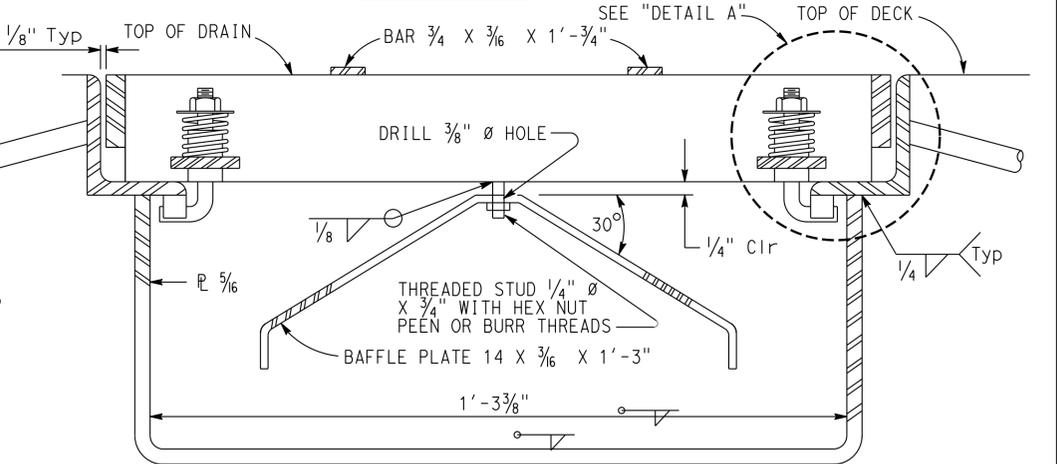
SECTION E-E



PLAN - FRAME & GRATE

DECK DRAIN		
DECK SLOPE	"A"	"B"
0% TO 6%	9"	5"
7% TO 9%	10"	5"
10% TO 12%	10 1/2"	4"

NOTE:
Grating consists of 3 identical units except for baffle plate. Baffle plate is required only for the grate over the 6" diameter pipe.



SECTION B-B

NO SCALE

STANDARD DRAWING

FILE NO. **xs10-010**

APPROVAL DATE January 2015

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 09-0062

POST MILE 51.21

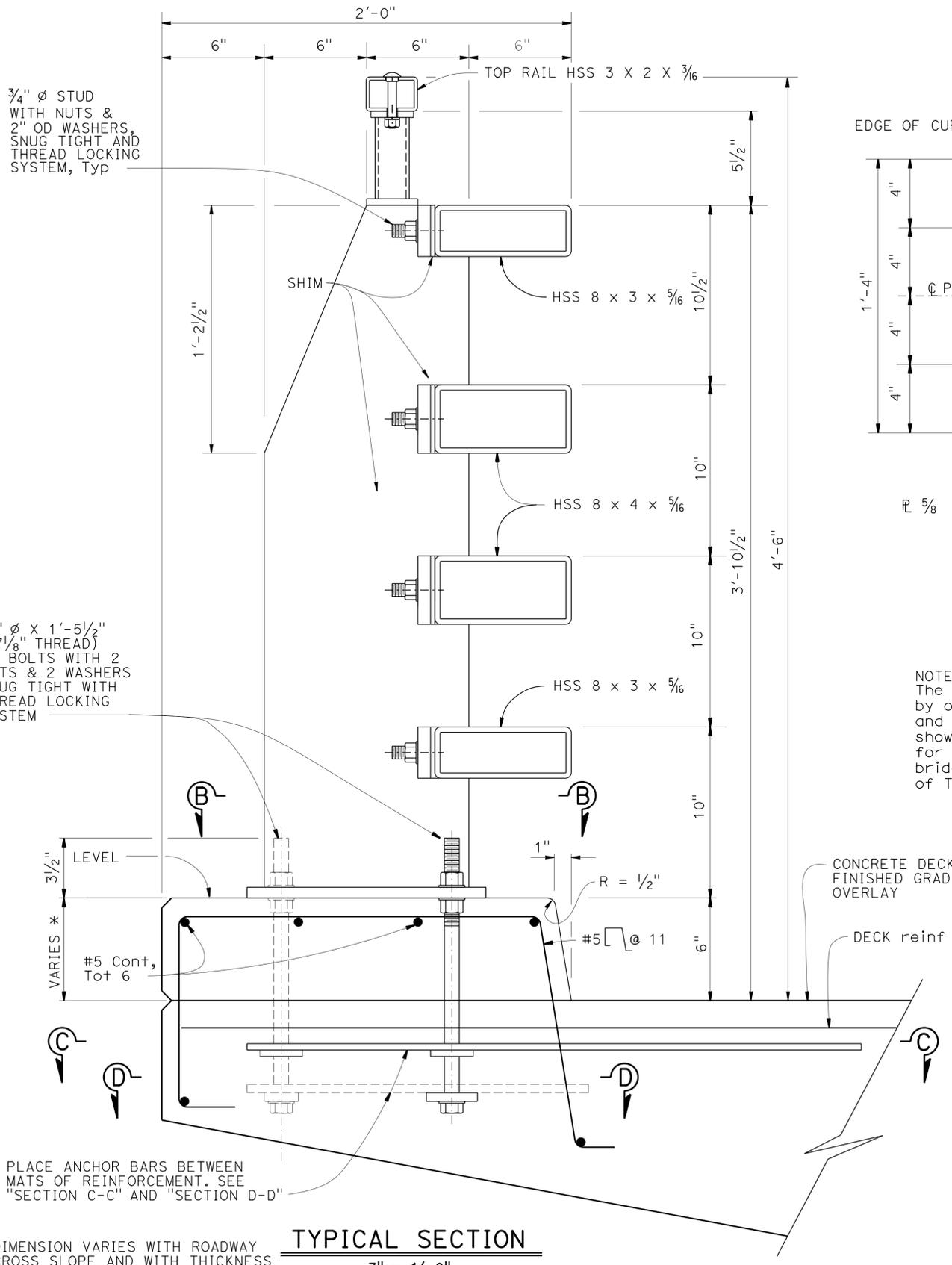
SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)

DECK DRAIN - TYPE C

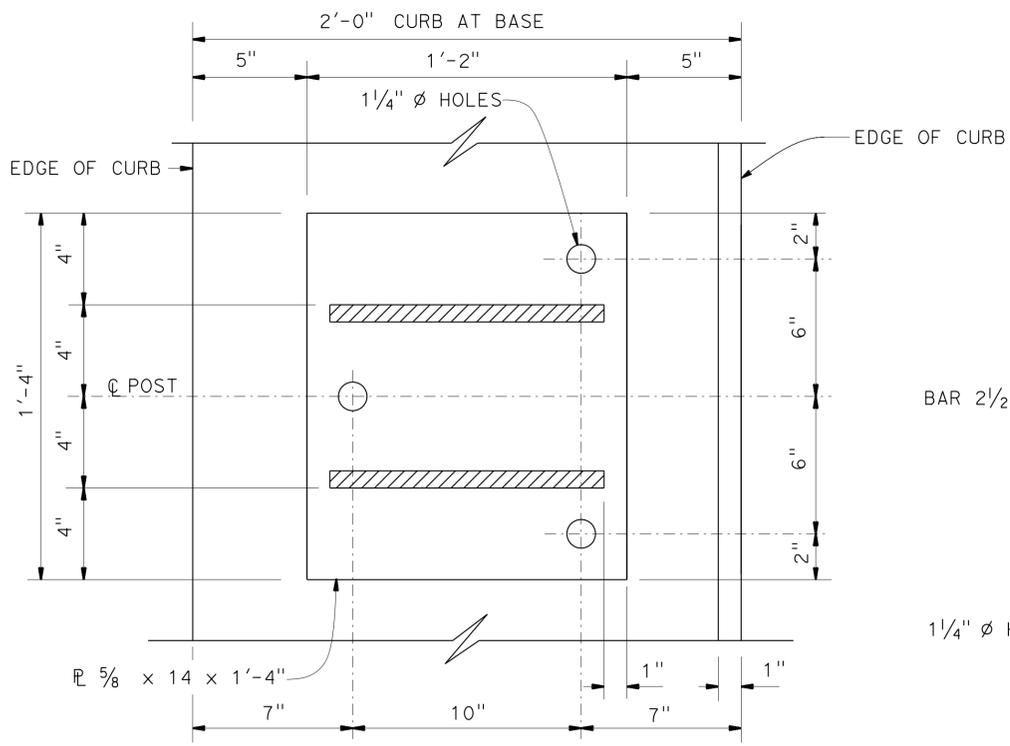
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	158	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 06-15-16
 PLANS APPROVAL DATE
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

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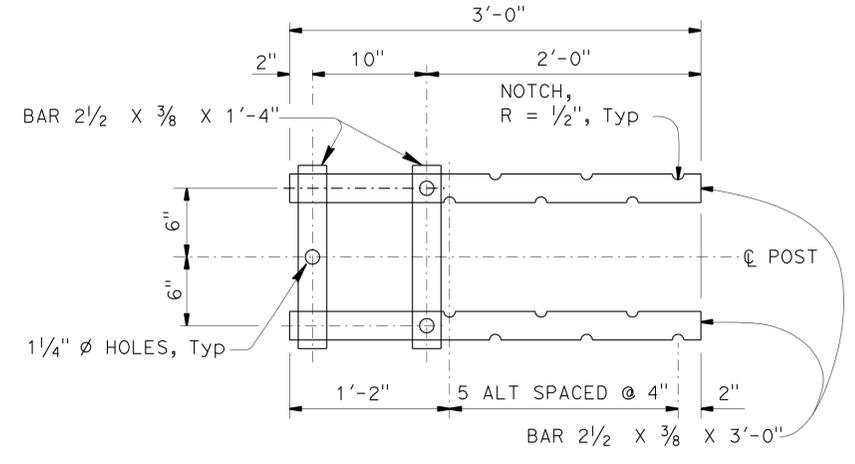


TYPICAL SECTION
3" = 1'-0"

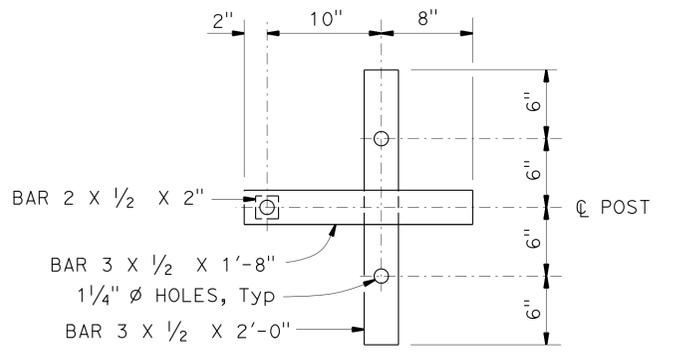


SECTION B-B
3' = 1'-0"

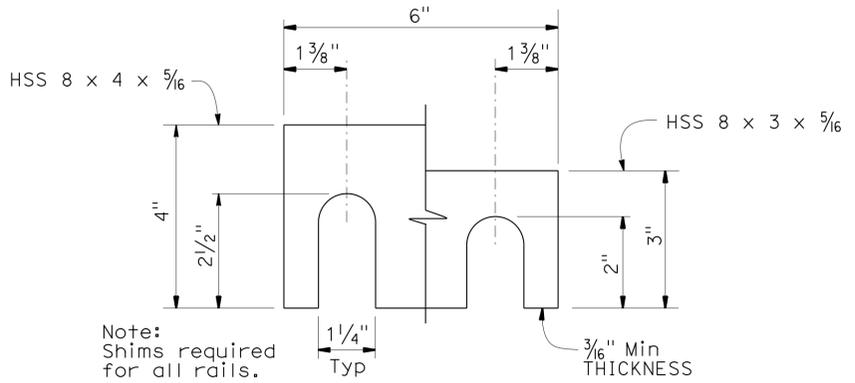
NOTE:
 The structural components on this drawing have been designed by others. The Engineer of Record is responsible for the selection and proper application of the component design and any changes shown. The seal and signature of the Engineer in responsible charge for the component design and the supporting documentations of these bridge components are available by contacting California Department of Transportation, Division of Engineering Services at 916-227-8704.



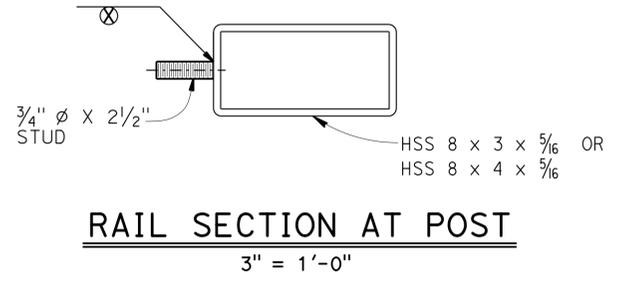
SECTION C-C
1 1/2" = 1'-0"



SECTION D-D
1 1/2" = 1'-0"



SHIM DETAIL
6" = 1'-0"



RAIL SECTION AT POST
3" = 1'-0"

STANDARD DRAWING	
FILE NO. xs16-120-1	APPROVAL DATE <u>January 2015</u>

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 09-0062
		POST MILE 51.21

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)	
CALIFORNIA ST-20S BRIDGE RAIL	
DETAILS NO. 1	

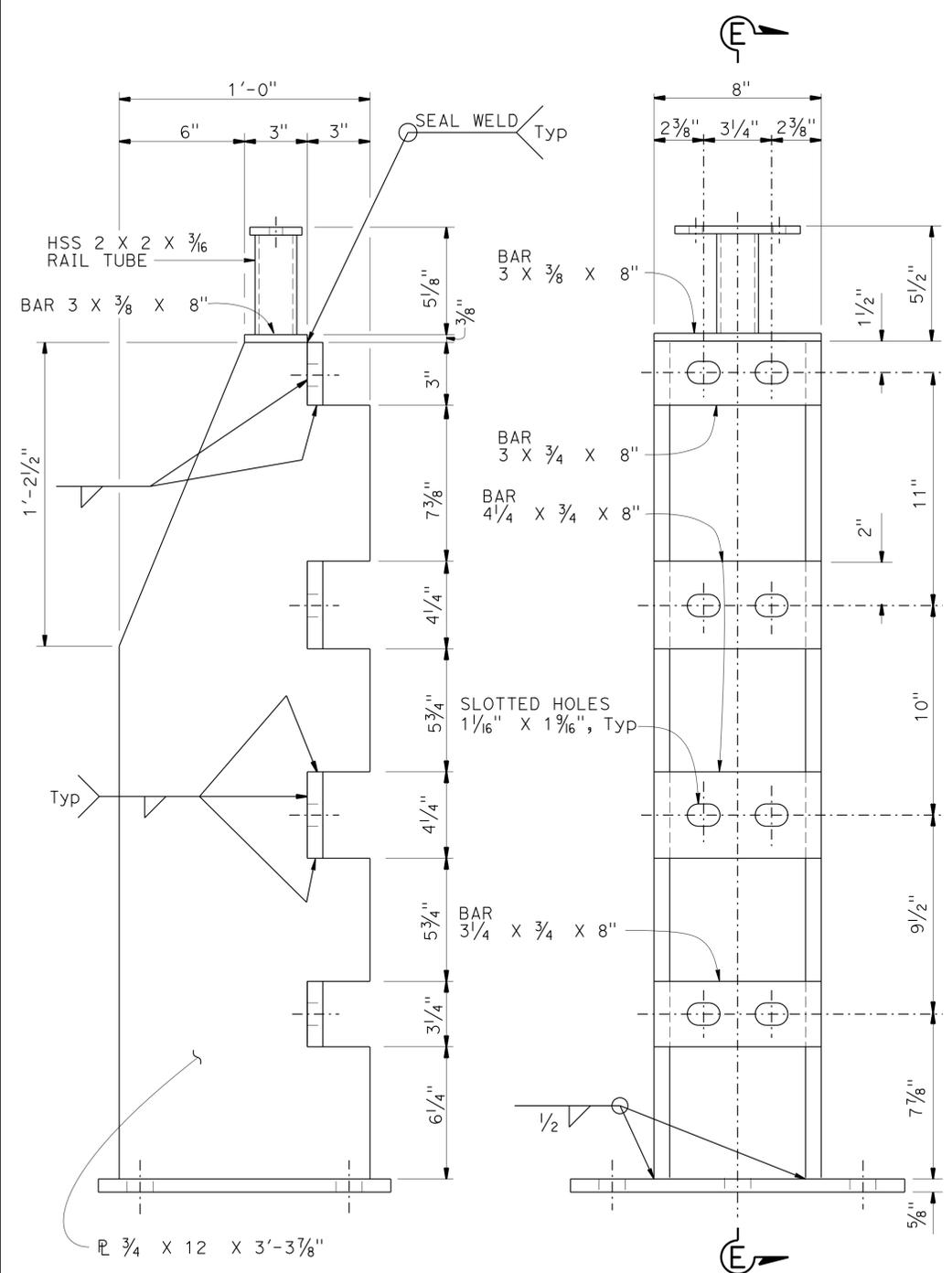
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	159	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

06-15-16
 PLANS APPROVAL DATE

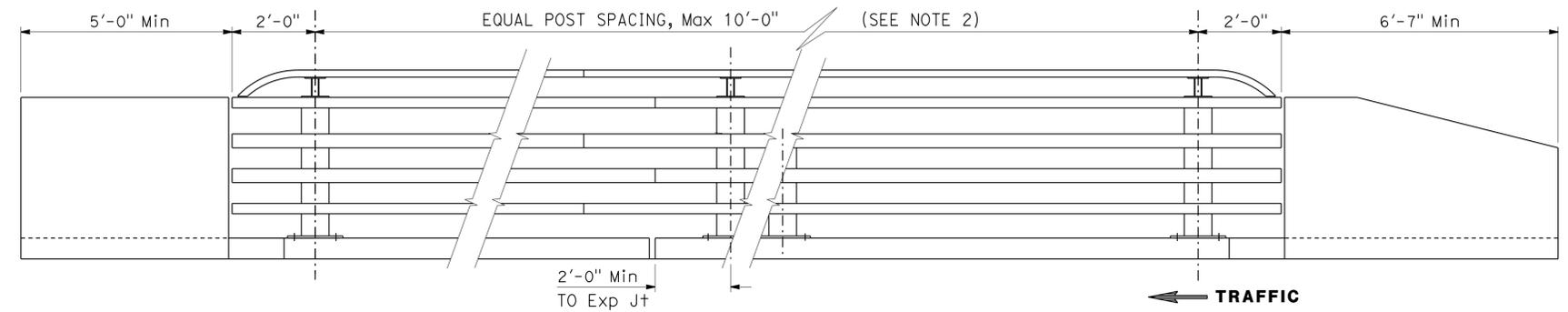
Manode Kodsuntie
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

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.



SECTION E-E
 3" = 1'-0"

ELEVATION
 3" = 1'-0"



ELEVATION
 1/2" = 1'-0"

NOTE:
 The structural components on this drawing have been designed by others. The Engineer of Record is responsible for the selection and proper application of the component design and any changes shown. The seal and signature of the Engineer in responsible charge for the component design and the supporting documentations of these bridge components are available by contacting California Department of Transportation, Division of Engineering Services at 916-227-8704.

- NOTES:
1. For approach and departure end details, see "DETAILS No. 3" sheet.
 2. Post spacing and/or block length to be adjusted to fit bridge length or wingwall length.
 3. All horizontal members are parallel to longitudinal profile grade of deck.
 4. Posts are normal to profile grade of structure.
 5. Posts are vertical to the transverse cross section.

STANDARD DRAWING		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 09-0062		CALIFORNIA ST-20S BRIDGE RAIL	
FILE NO. xs16-120-2	APPROVAL DATE <u>January 2015</u>	DIVISION OF ENGINEERING SERVICES		POST MILE 51.21		DETAILS NO. 2	
DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. (02-02-11))		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3576 PROJECT NUMBER & PHASE: 02000001611		CONTRACT NO.: 02-2C0904	
		0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 6/14/14 10/18/15 11/16/15	
						SHEET 34 OF 41	

FILE => 09-0062-t-st-20s-2.dgn

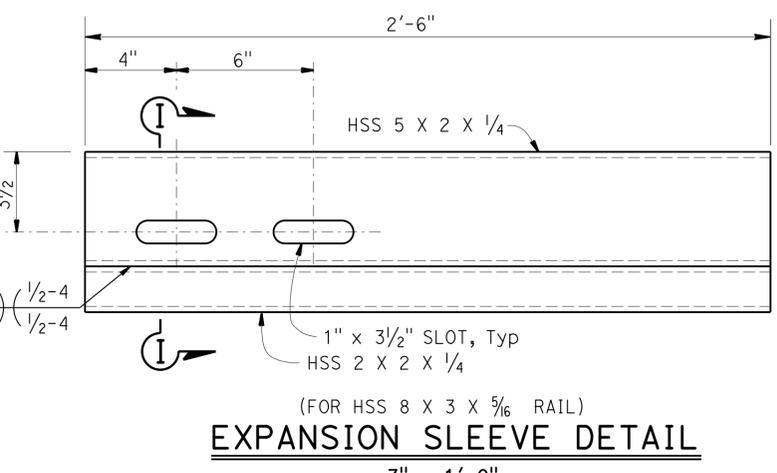
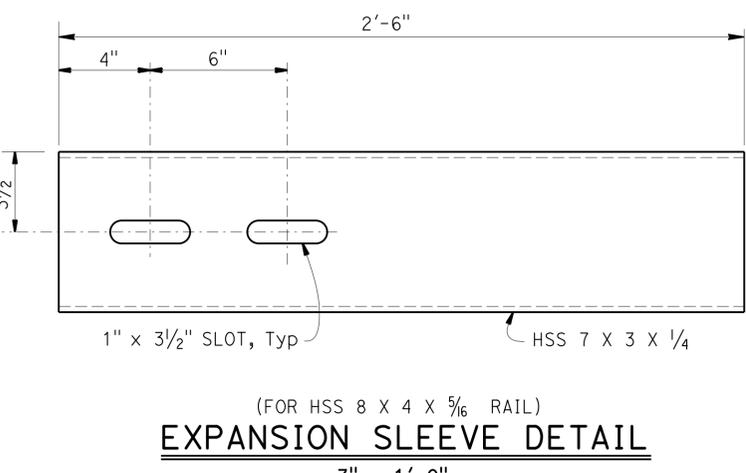
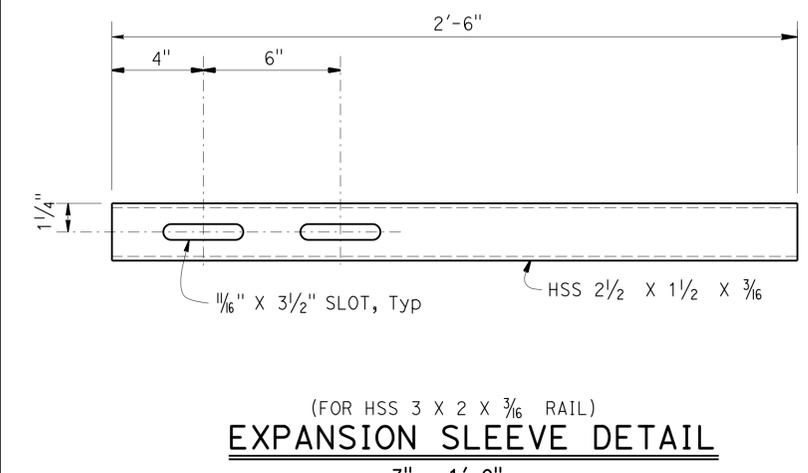
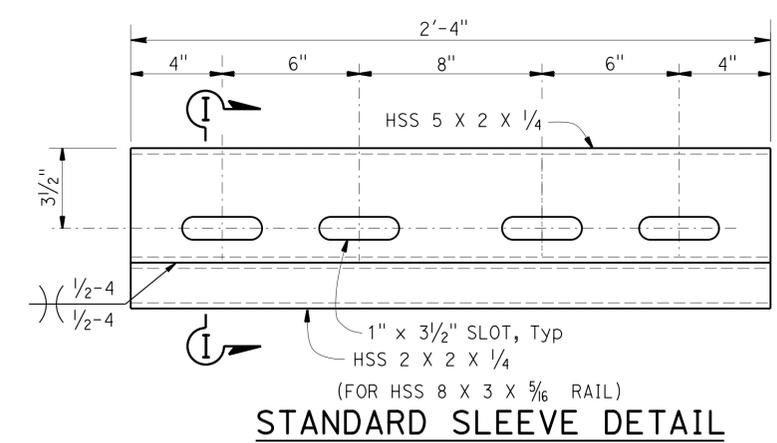
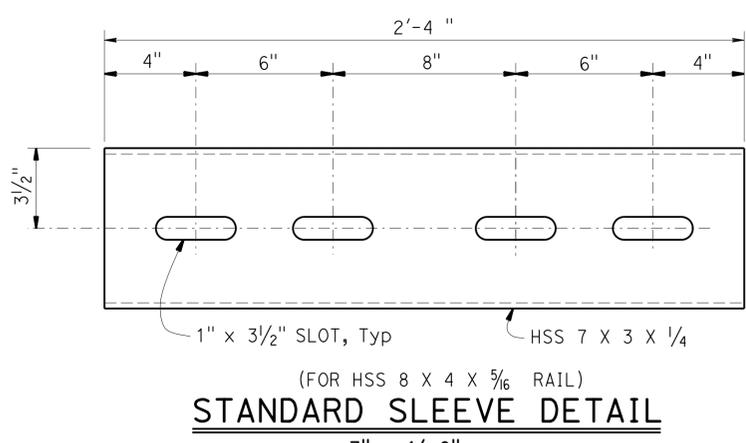
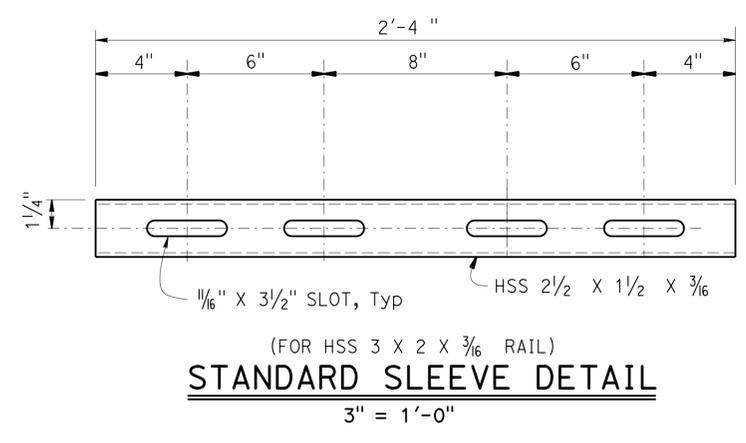
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	161	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

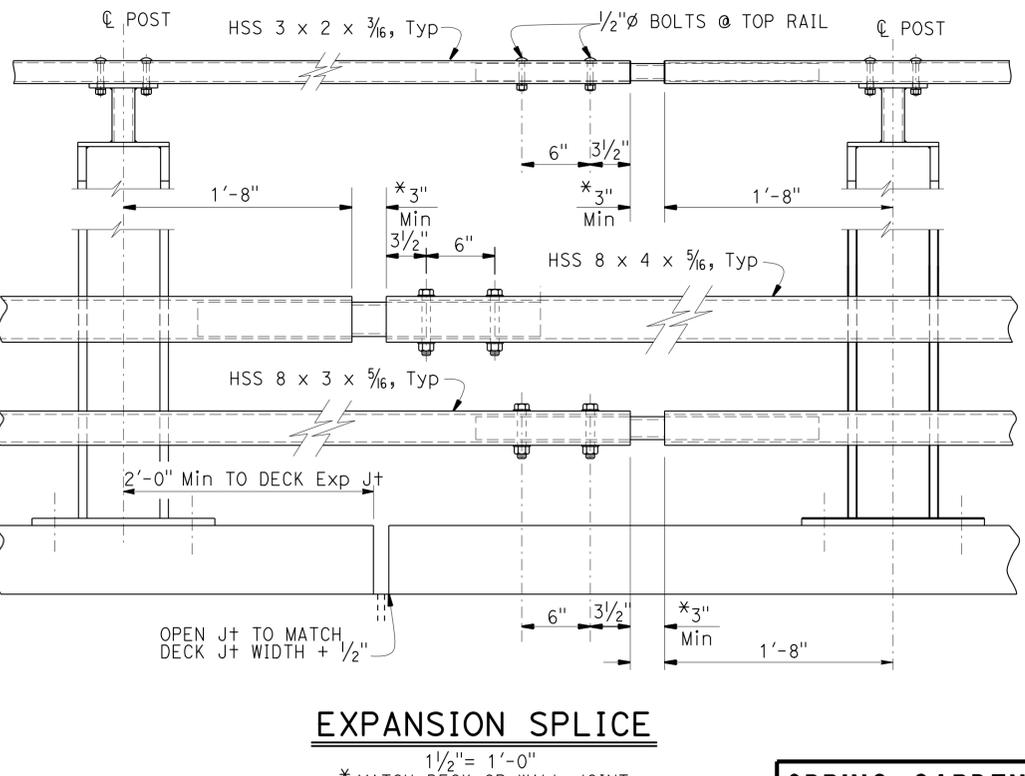
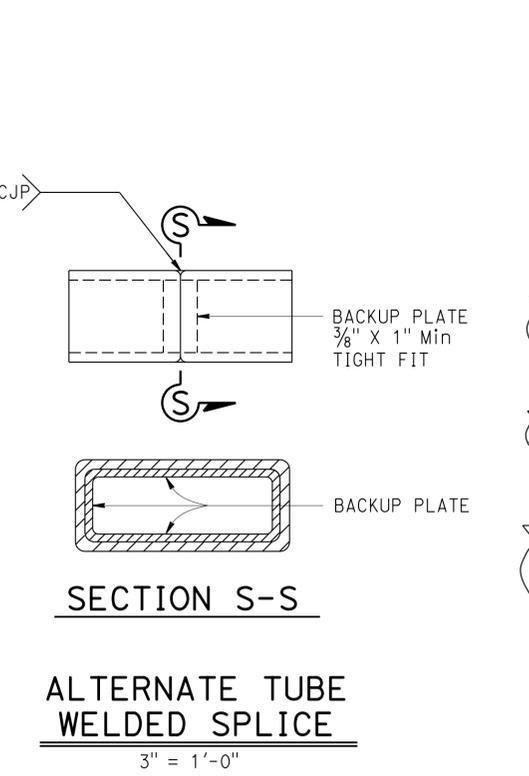
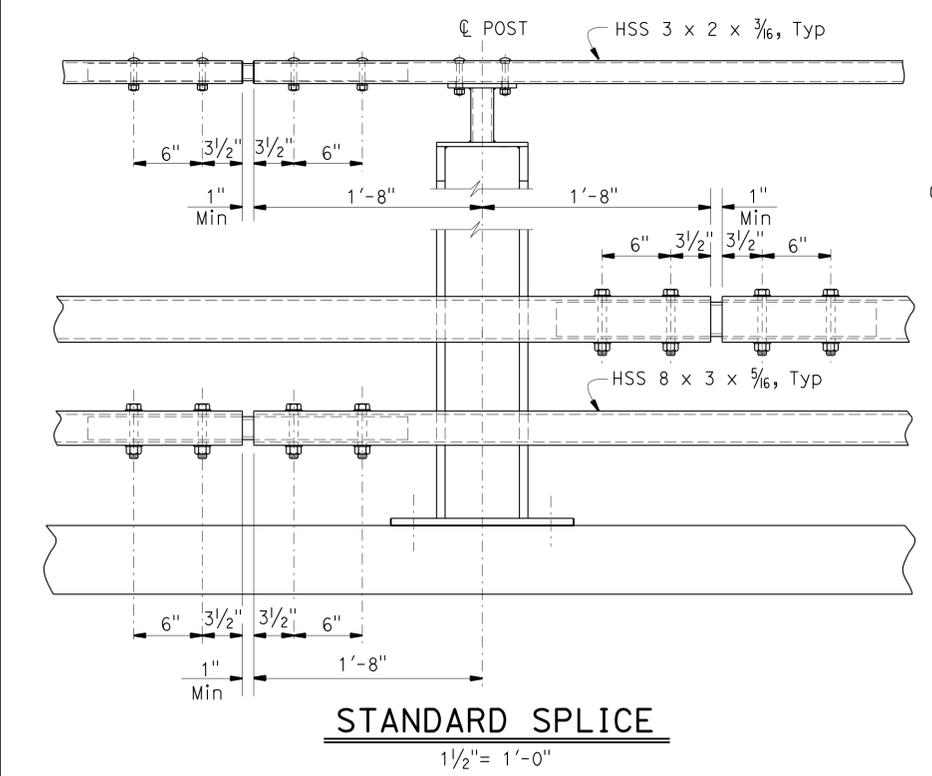
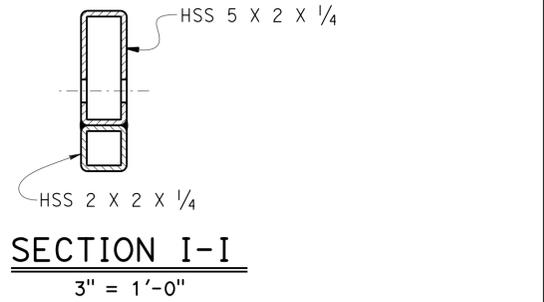
06-15-16
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA



NOTE:
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- NOTES:
1. HS bolts with nut and washers, snug tightened, and thread locking system.
 2. Use 1/2"Ø X 3 3/16 (HSS 8 X 2 X 3/16)
 Use 3/4"Ø X 4 5/16 (HSS 8 X 3 X 5/16)
 Use 3/4"Ø X 5 5/16 (HSS 8 X 4 X 5/16)

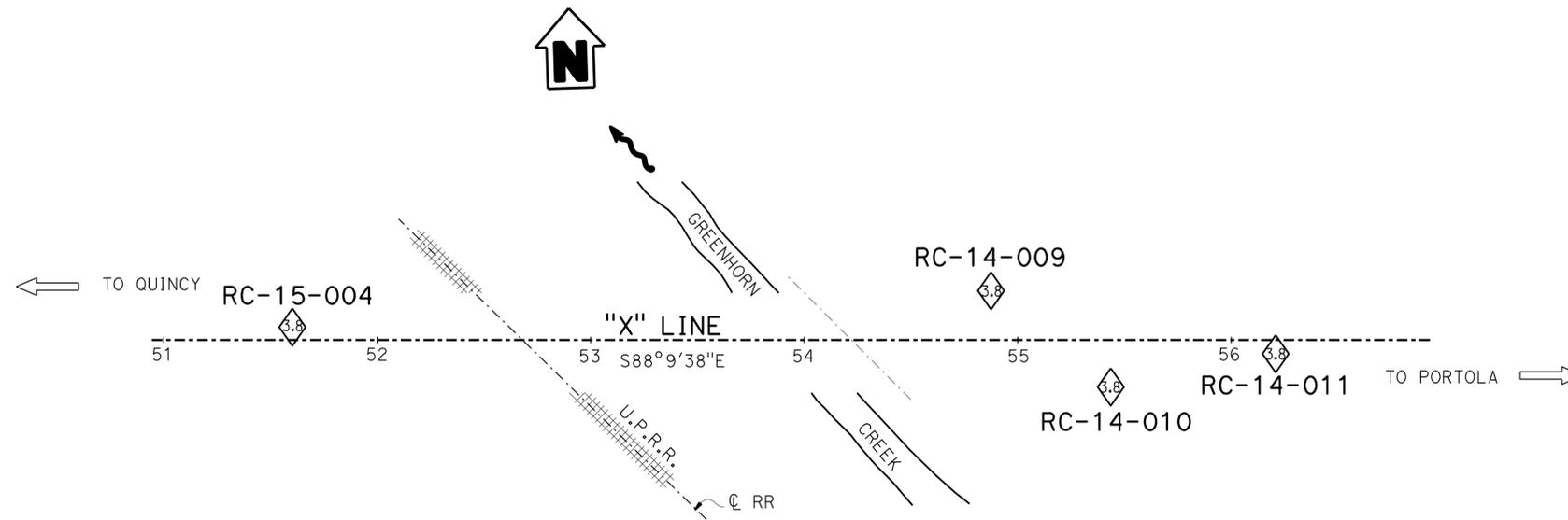
STANDARD DRAWING		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES		BRIDGE NO. 09-0062		CALIFORNIA ST-20S BRIDGE RAIL	
FILE NO. xs16-120-4	APPROVAL DATE <u>January 2015</u>					POST MILE 51.21		DETAILS NO. 4	
DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. (02-02-11))		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3576 PROJECT NUMBER & PHASE: 02000001611		CONTRACT NO.: 02-2C0904		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
								REVISION DATES	
								SHEET 36 OF 41	

USERNAME => s115152 DATE PLOTTED => 04-AUG-2016 TIME PLOTTED => 12:30

BENCH MARK

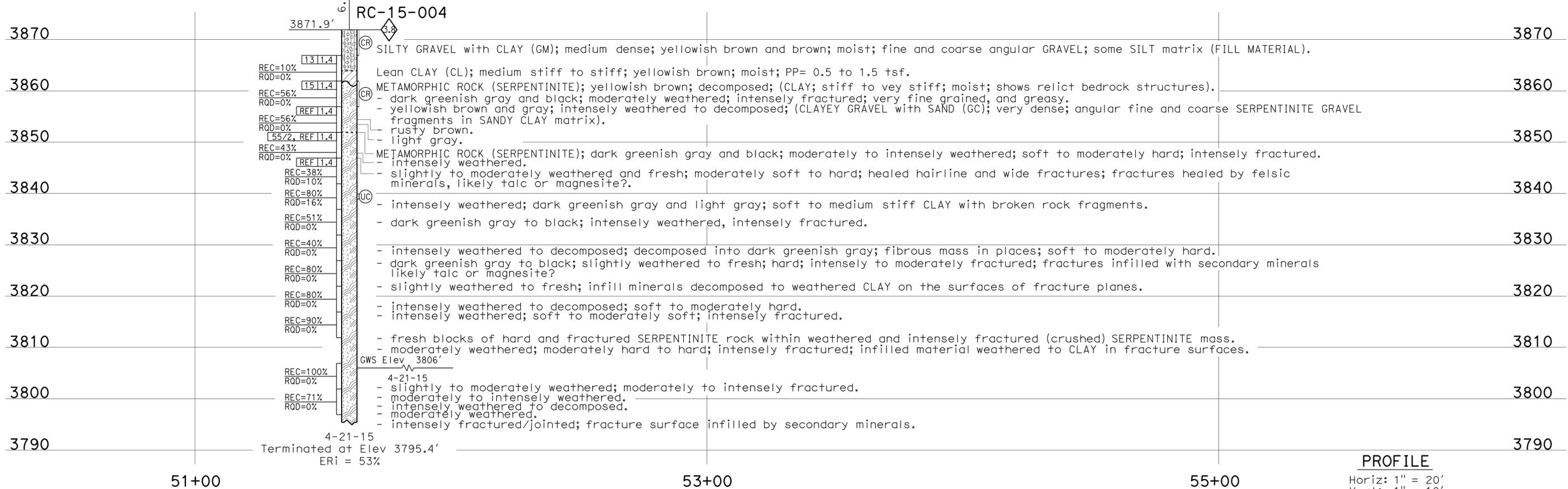
Cal-Trans 6 (NOT SHOWN ON PLAN).
 Fnd 3/4 Rebar w/ Alum Cap
 96.18 Ft S75°40'17"E Rte 70
 Sta 64+73.22
 N 1,853,551.45
 E 6,895,909.27
 Elev = 3902.61'
 Vertical Datum: NGVD29
 Horizontal Datum: NAD83 (1991.35)

Note: Based on Foundation Plan dated 5/14/15



PLAN
1" = 40'

Note: Groundwater was estimated at Elev 3806.0' in Boring RC-15-004 but not measured.



PROFILE

Horiz: 1" = 20'
 Vert: 1" = 10'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	PLU	70	50.6/51.7	162	181

10-29-15
 CERTIFIED ENGINEERING GEOLOGIST
 Reid Buell
 No. 1481
 Exp. 4-30-17
 CERTIFIED ENGINEERING GEOLOGIST
 STATE OF CALIFORNIA

06-15-16
 PLANS APPROVAL DATE

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 1

SPRING GARDEN BRIDGE & OVERHEAD (WIDEN)

LOG OF TEST BORINGS 1 OF 5

FUNCTIONAL SUPERVISOR
 NAME: Tracy Menard

DRAWN BY: F. Nguyen
 CHECKED BY: J. Thorne

FIELD INVESTIGATION BY:
 A. Barrie

BRIDGE NO.
 09-0062
 POST MILE
 51.2

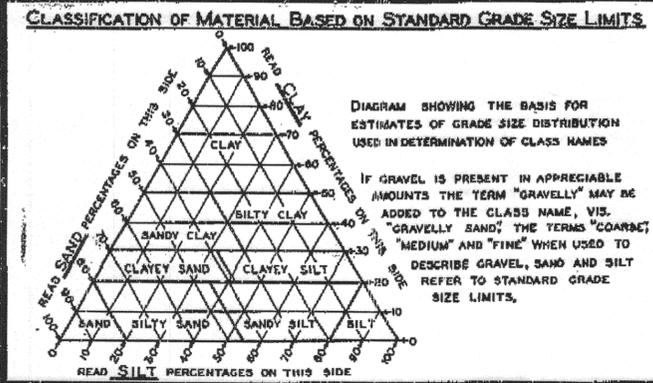
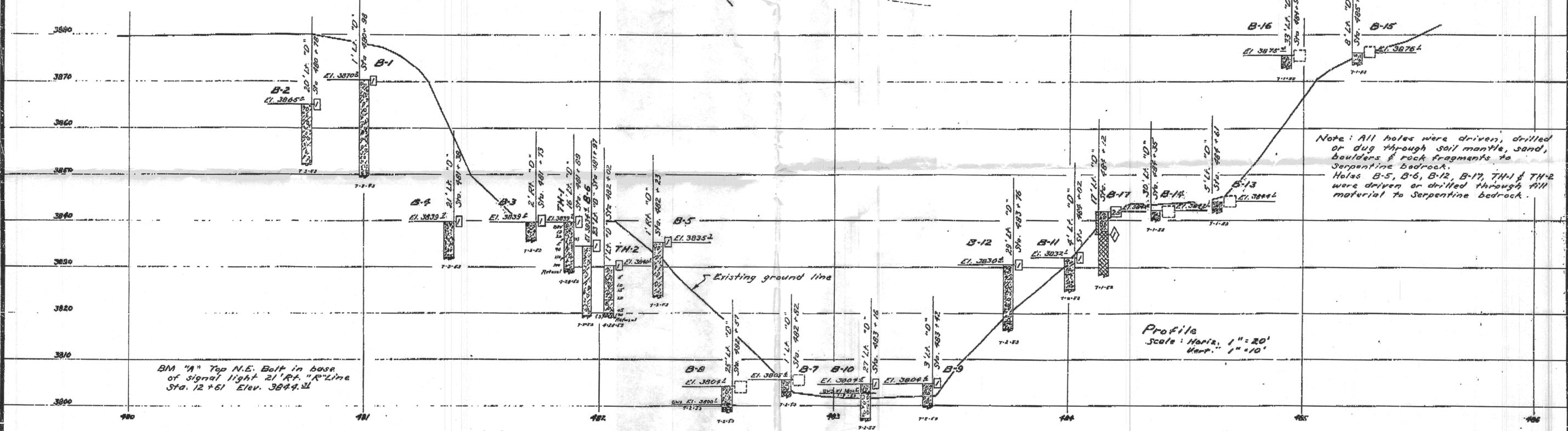
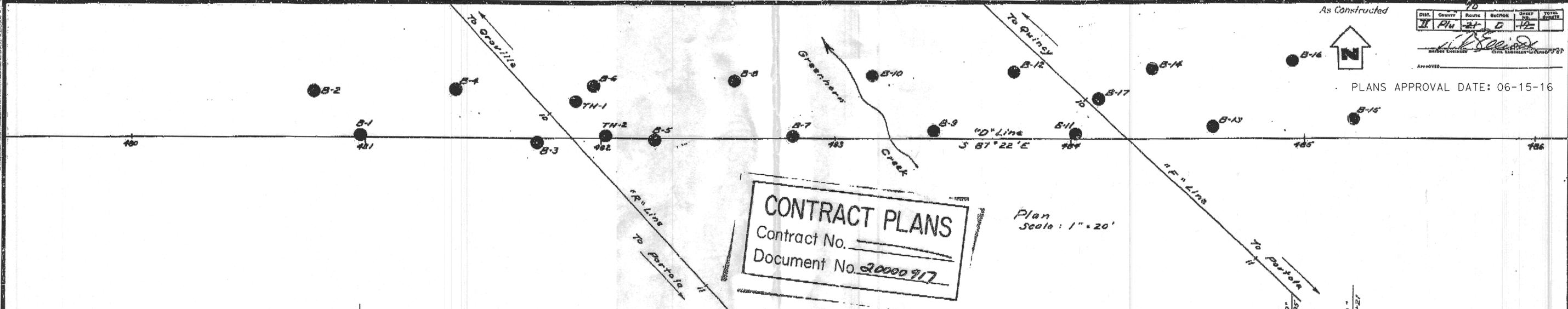
UNIT: 3650
 PROJECT NUMBER & PHASE: 0200000161 1
 CONTRACT NO.: 02-2C0904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
06-09-15 10-08-15 10-14-15 10-23-15	37	41

USERNAME => s1115152 DATE PLOTTED => 04-AUG-2016 TIME PLOTTED => 12:30

PLANS APPROVAL DATE: 06-15-16



LEGEND OF EARTH MATERIALS

	GRAVEL		SILTY CLAY OR CLAYEY SILT
	SAND		PEAT AND/OR ORGANIC CLAY
	SILT		FILLED MATERIAL
	CLAY		IGNEOUS ROCK
	SANDY CLAY OR CLAYEY SAND		SEDIMENTARY ROCK
	SANDY SILT OR SILTY SAND		METAMORPHIC ROCK

- PLAN OF ANY BORING
- PENETROMETER
- 2 1/2" CONE PENETROMETER
- SAMPLER BORING (DRY)
- ROTARY BORING (WET)
- AUGER BORING (DRY)
- JET BORING
- CORE BORING
- TEST PIT

DIVISION OF ENGINEERING SERVICES - MATERIALS AND 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. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
02	PLU	70	50.6/51.7	166	181

CERTIFIED ENGINEERING GEOLOGIST *[Signature]* DATE: 10/23/2015

SPRING GARDEN BOH (WIDEN)
LOG OF TEST BORINGS 5 OF 5

UNIT: 3650	CONTRACT No. 02-2C0904	BRIDGE No. 09-0062
PROJ. No. & PHASE: 0200000161 1		
AS-BUILT VERT DATUM: CONVERSION:	Sheet 41	of 41

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

NOTES

THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 2, ARTICLE (C) OF THE STANDARD SPECIFICATIONS AND TO THE SPECIAL PROVISIONS ACCOMPANYING THIS SET OF PLANS. CLASSIFICATION OF EARTH MATERIAL AS SHOWN ON THIS SHEET IS BASED UPON FIELD INSPECTION AND IS NOT TO BE CONSTRUED TO IMPLY MECHANICAL ANALYSIS. PENETROMETER BORINGS HAVING A RATE OF PENETRATION MEASURED IN SECONDS PER FOOT ARE DRIVEN WITH A #2 MIERNAN-TERRY AIR HAMMER AT 115 PSI.

STATE OF CALIFORNIA
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

SPRING GARDEN BRIDGE & OVERHEAD

LOG OF TEST BORINGS

SCALE: Horiz. 1" = 20', Vert. 1" = 10'

BRIDGE 9-62 FILE DRAWING 33

PHIL DRAWING NO. P. 3318 2032

BRIDGE DEPARTMENT
 Checked by C933 1057

Approval Recommended by *[Signature]*
 Checked by *[Signature]*

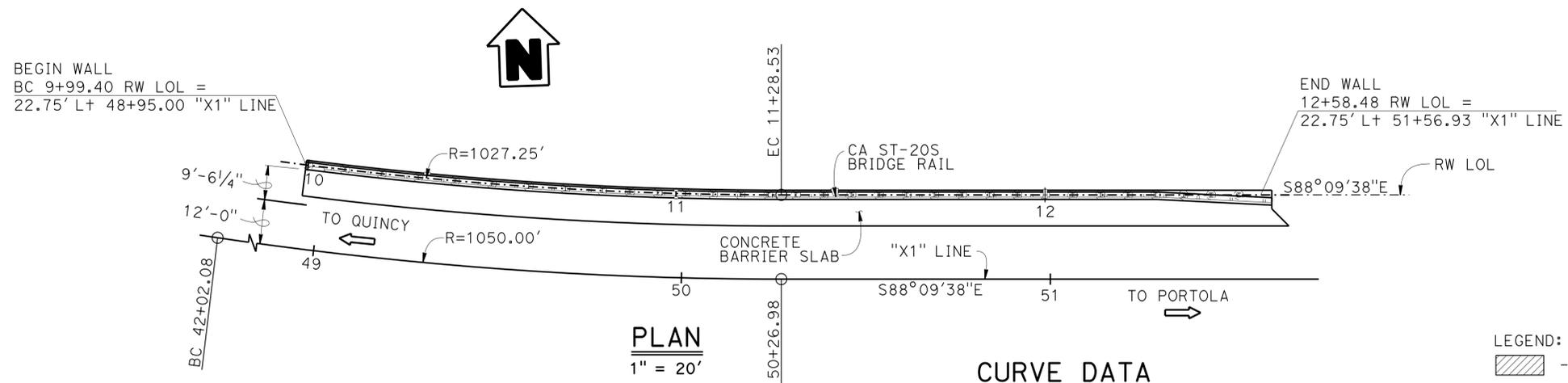
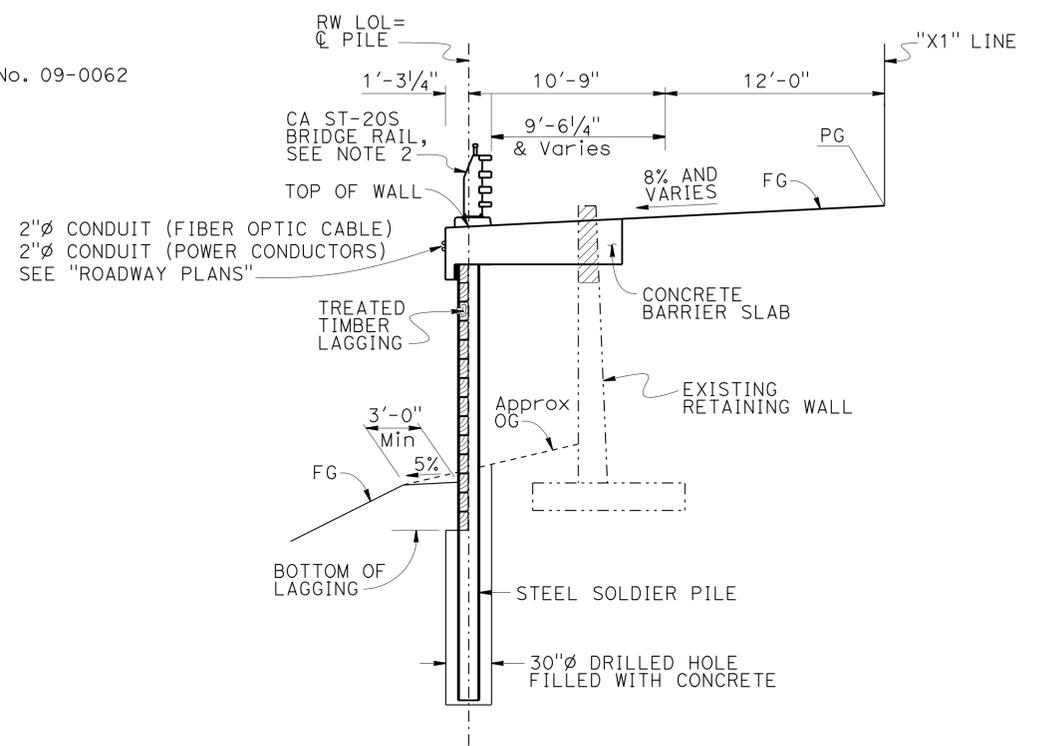
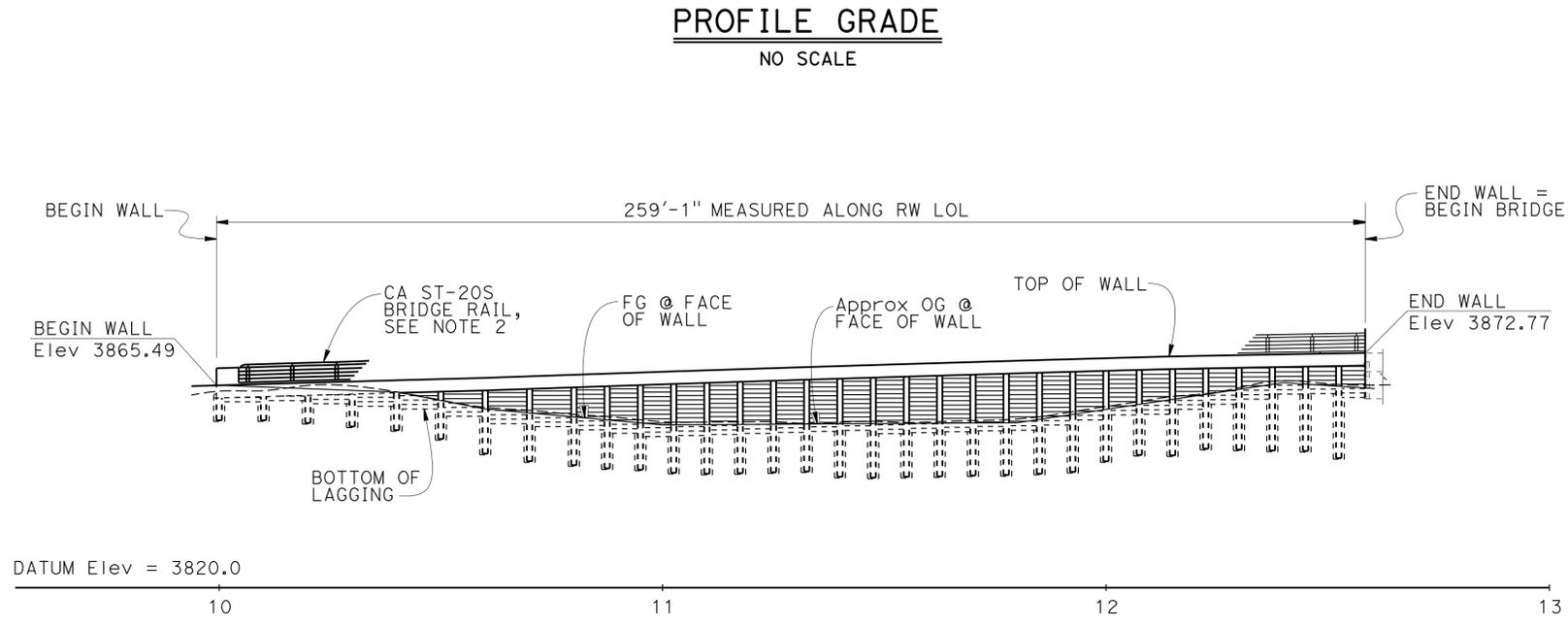
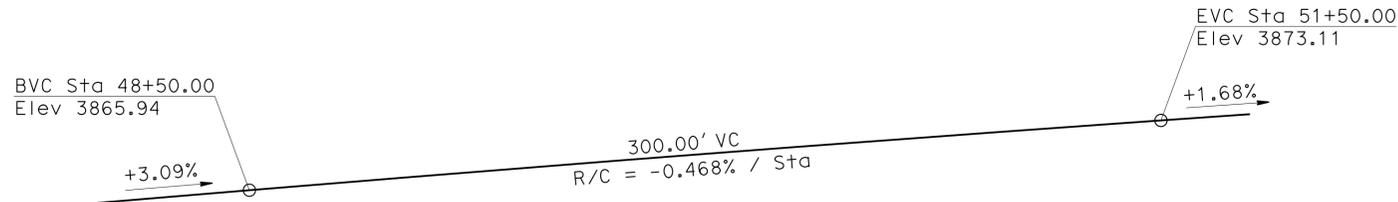
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	167	181

Manode Kodsuntie 6/2/16
REGISTERED CIVIL ENGINEER DATE

06-15-16
PLANS APPROVAL DATE

Manode Kodsuntie
No. 56671
Exp. 6/30/17
CIVIL
STATE OF CALIFORNIA

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CURVE DATA

"X1" LINE	RW LOL
R = 1050.00'	R = 1027.25'
Δ = 45°00'47"	Δ = 7°12'09"
T = 435.06'	T = 64.65'
L = 824.91'	L = 129.13'

LEGEND:
 - Indicates Bridge Removal (portion)

- NOTES:**
- For "INDEX TO PLANS", "GENERAL NOTES", and "QUANTITIES", see "INDEX TO PLANS" sheet.
 - Natina Stain shall be applied to the exposed metal surfaces of the bridge rail.

DESIGN ENGINEER Jeff Sims	DESIGN	BY Manode Kodsuntie	CHECKED Keith Stillmunkes	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: 2' LEVEL SURCHARGE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	RETAINING WALL NO. 50		
	DETAILS	BY Gerald Dickerson	CHECKED Keith Stillmunkes	LAYOUT	BY Manode Kodsuntie			CHECKED Keith Stillmunkes		09E0006	GENERAL PLAN
	QUANTITIES	BY Eric Watson	CHECKED Bob Huddleston	SPECIFICATIONS	BY Sirisha Nelapatia			PLANS AND SPECS COMPARED Sirisha Nelapatia		POST MILE 51.2	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						UNIT: 3576	PROJECT NUMBER & PHASE: 02000001611	CONTRACT NO.: 02-2C0904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 1 OF 15

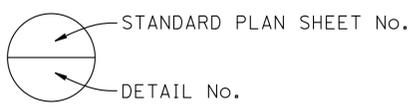
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10) FILE => 09e0006-a-gp01.dgn

INDEX TO PLANS

SHEET NO.	TITLE
1.	GENERAL PLAN
2.	INDEX TO PLANS
3.	STRUCTURE PLAN NO. 1
4.	STRUCTURE PLAN NO. 2
5.	FOUNDATION PLAN
6.	WALL DETAILS
7.	CONCRETE BARRIER SLAB DETAILS
8.	CALIFORNIA ST-20S BRIDGE RAIL DETAILS NO. 1
9.	CALIFORNIA ST-20S BRIDGE RAIL DETAILS NO. 2
10.	CALIFORNIA ST-20S BRIDGE RAIL DETAILS NO. 3
11.	CALIFORNIA ST-20S BRIDGE RAIL DETAILS NO. 4
12.	LOG OF TEST BORINGS 1 OF 4
13.	LOG OF TEST BORINGS 2 OF 4
14.	LOG OF TEST BORINGS 3 OF 4
15.	LOG OF TEST BORINGS 4 OF 4

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
RSP A10F	LEGEND - SOIL (SHEET 1 OF 2)
RSP A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK



QUANTITIES	
STRUCTURE EXCAVATION (SOLDIER PILE WALL)	44 CY
STRUCTURE BACKFILL (SOLDIER PILE WALL)	380 CY
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	0.6 CY
CONCRETE BACKFILL (SOLDIER PILE WALL)	51 CY
LEAN CONCRETE BACKFILL	17 CY
STEEL SOLDIER PILE (W 14 X 68)	266 LF
STEEL SOLDIER PILE (W 14 X 99)	347 LF
30" DRILLED HOLE	379 LF
STRUCTURAL CONCRETE, BARRIER SLAB	225 CY
TIMBER LAGGING	14 MFBM
CLEAN AND PAINT STEEL SOLDIER PILING	LUMP SUM
STAIN GALVANIZED SURFACES	LUMP SUM
CALIFORNIA ST-20S BRIDGE RAIL	259 LF

GENERAL NOTES LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications 2012, 6th edition and the Caltrans Amendments preface dated January 2014

LIVE LOAD:
2 feet level surcharge

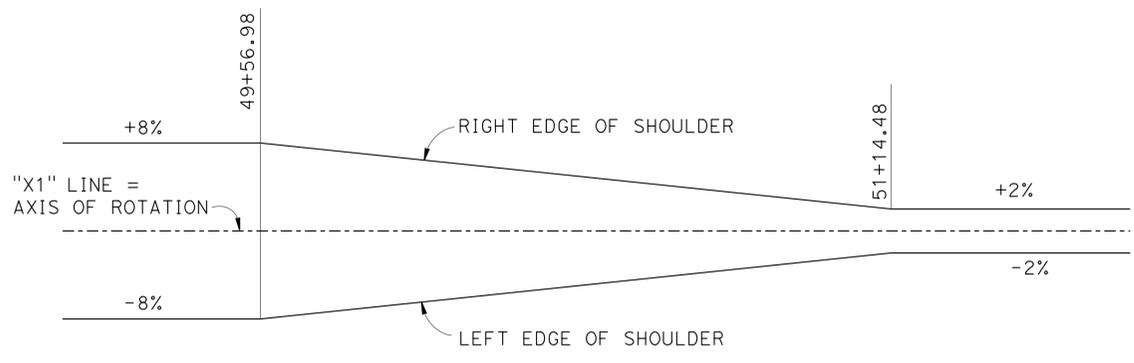
SOIL PARAMETERS:
(For determination of design lateral earth pressures)
Fill: $\phi = 32^\circ$ $\gamma = 140$ pcf $c = 0$
Fractured and weathered rock:
 $\phi = 0^\circ$ $\gamma = 150$ pcf $c = 2000$ pcf

SEISMIC LOADING:
Seismic active pressure = 8 psf/ft

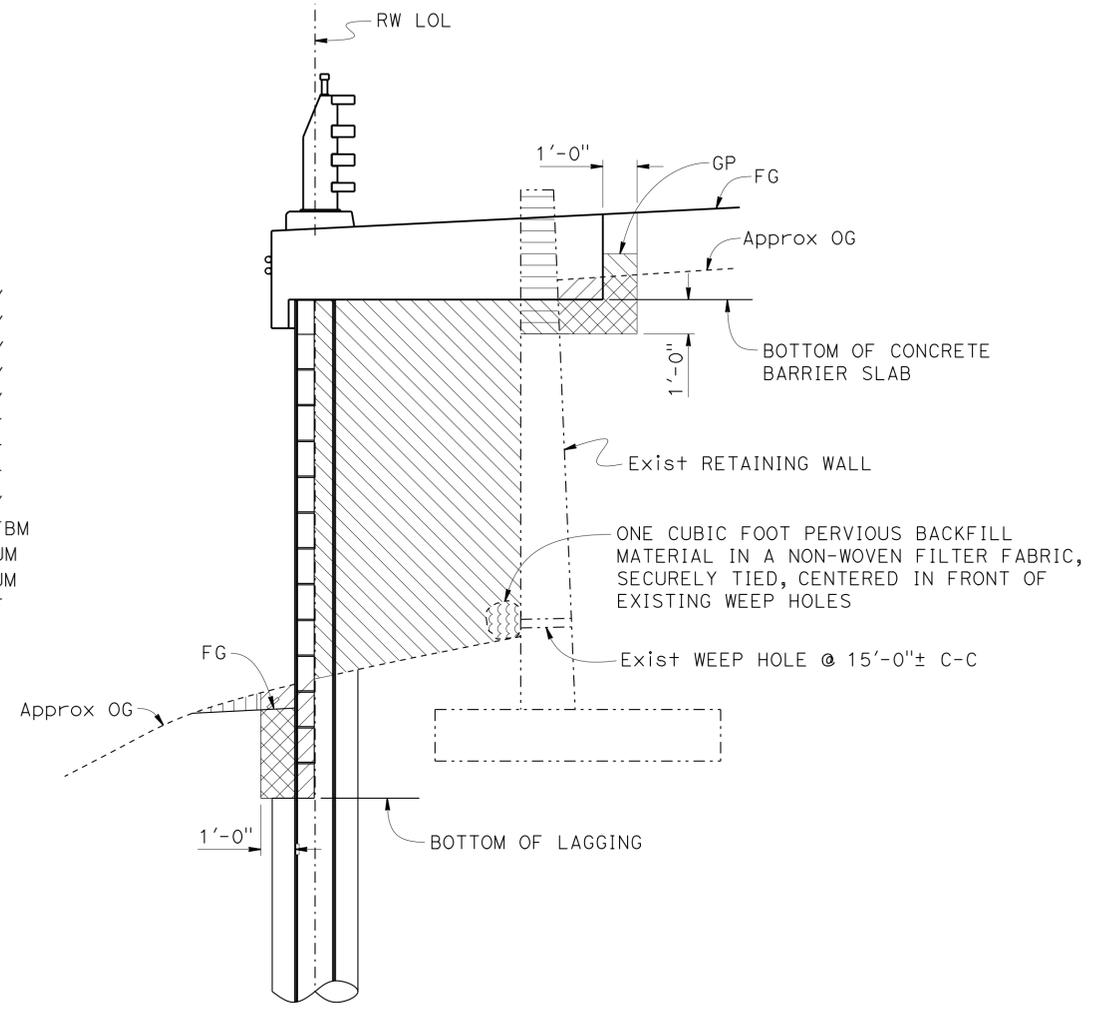
STEEL SOLDIER PILES:
 $F_y = 50$ ksi

REINFORCED CONCRETE:
 $f'_c = 3.6$ ksi
 $f_y = 60$ ksi
 $n = 8$

STRUCTURAL TIMBER:
Treated Douglas Fir Grade No. 1 or better.
Timber to be full sawn.



NOTE: Stationing shown along "X1" line.
SUPERELEVATION DIAGRAM
NO SCALE



LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL
NO SCALE

LEGEND:

	Structure Excavation
	Structure Backfill
	Concrete removal
	Roadway Excavation
	Pervious Backfill Material

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	169	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

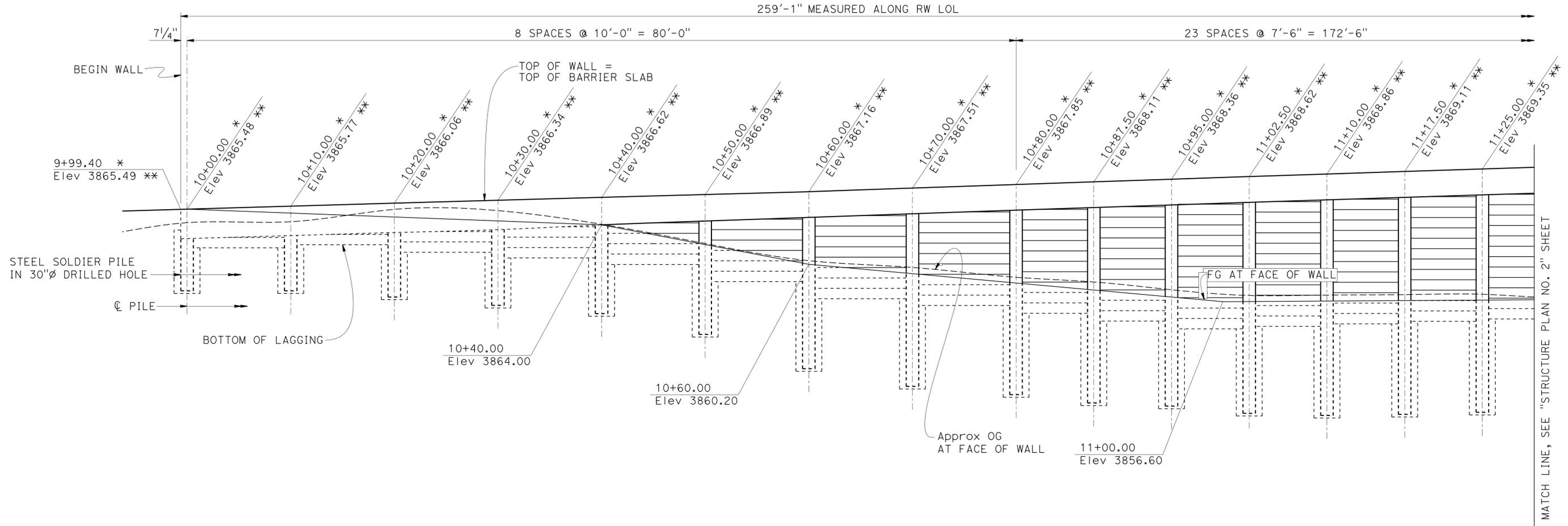
06-15-16
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 No. 56671
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 CIVIL
 STATE OF CALIFORNIA

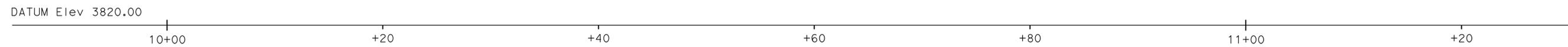
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NOTE:
 Barrier Rail not shown.

LEGEND:
 * - Indicates station along RW LOL.
 ** - Indicates Top of Wall elevation.



PILE No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PILE TYPE	W14 x 68	W14 x 99													
PILE TIP Elev (ft)	3857.40	3857.40	3856.80	3856.00	3855.20	3853.10	3849.90	3848.20	3847.30	3846.60	3846.30	3845.60	3845.40	3845.50	3845.70
No. LAGGING MEMBERS	2	2	3	4	5	7	9	10	11	12	13	13	13	13	13



DEVELOPED MIRRORED ELEVATION
 1" = 5'

DESIGN	BY Manode Kodsuntie	CHECKED Keith Stillmunkes
DETAILS	BY Gerald Dickerson	CHECKED Keith Stillmunkes
QUANTITIES	BY Eric Watson	CHECKED Bob Huddleston

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09E0006
POST MILE	51.2

RETAINING WALL NO. 50
STRUCTURE PLAN NO. 1

REVISION DATES	SHEET	OF
04-07-15	3	15

USERNAME => s115152 DATE PLOTTED => 04-AUG-2016 TIME PLOTTED => 12:31

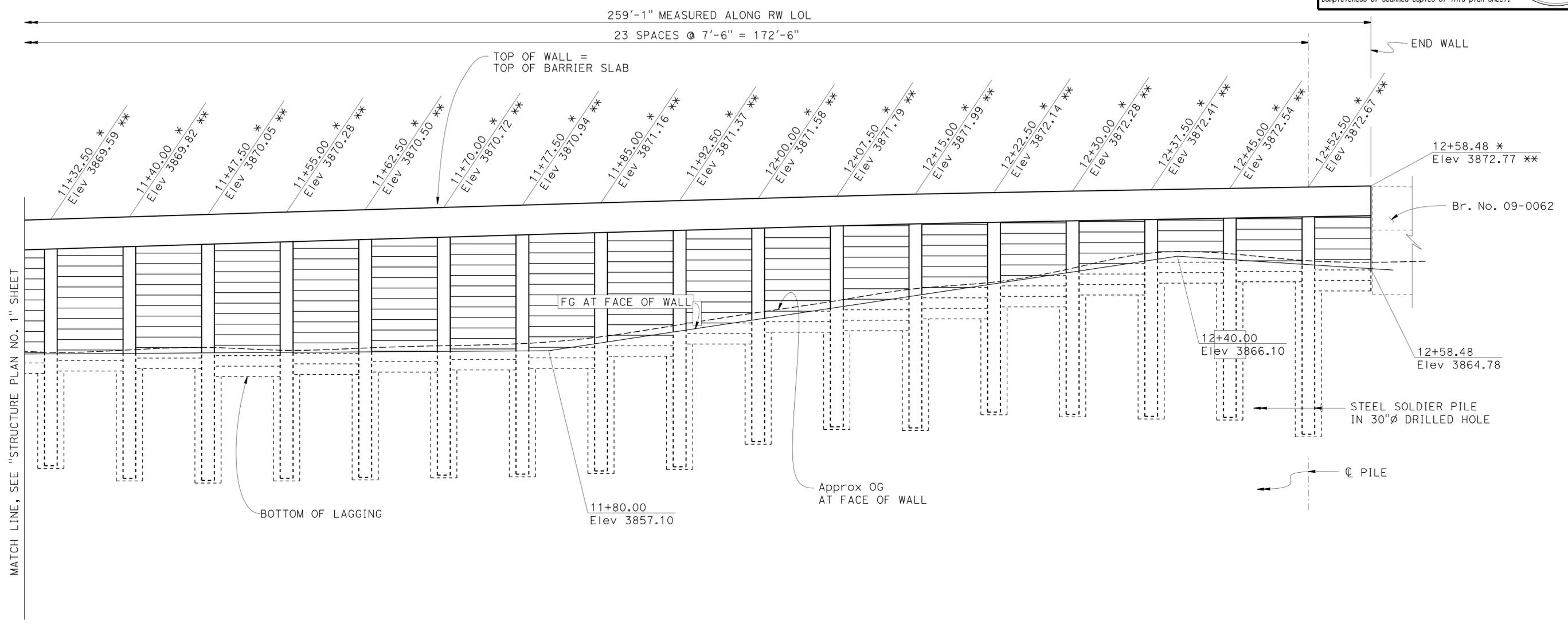
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	170	181

Manode Kodsuntie 6/2/16
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NOTE:
Barrier Rail not shown.

LEGEND:
* - Indicates station along RW LOL.
** - Indicates Top of Wall elevation.



16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	PILE No.	
W14 x 99	W14 x 68	PILE TYPE																
3845.90	3844.70	3844.50	3844.70	3844.80	3845.00	3845.10	3845.40	3845.80	3848.20	3849.60	3849.50	3851.00	3850.80	3850.60	3850.50	3848.90	PILE TIP Elev (ft)	
13	14	14	14	14	14	14	14	14	13	12	11	10	9	8	7	7	8	No. LAGGING MEMBERS

DEVELOPED MIRRORED ELEVATION
1" = 5'

DESIGN BY Manode Kodsuntie CHECKED BY Keith Stillmunkes DETAILS BY Gerald Dickerson CHECKED BY Keith Stillmunkes QUANTITIES BY Eric Watson CHECKED BY Bob Huddleston	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO. 09E0006	RETAINING WALL NO. 50 STRUCTURE PLAN NO. 2
			POST MILE 51.2	
			UNIT: 3576 PROJECT NUMBER & PHASE: 02000001611 CONTRACT NO.: 02-2C0904	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			DISREGARD PRINTS BEARING EARLIER REVISION DATES	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			REVISION DATES 04-07-15 11-09-15 08-31-15	SHEET OF 4 15

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	171	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

06-15-16
 PLANS APPROVAL DATE

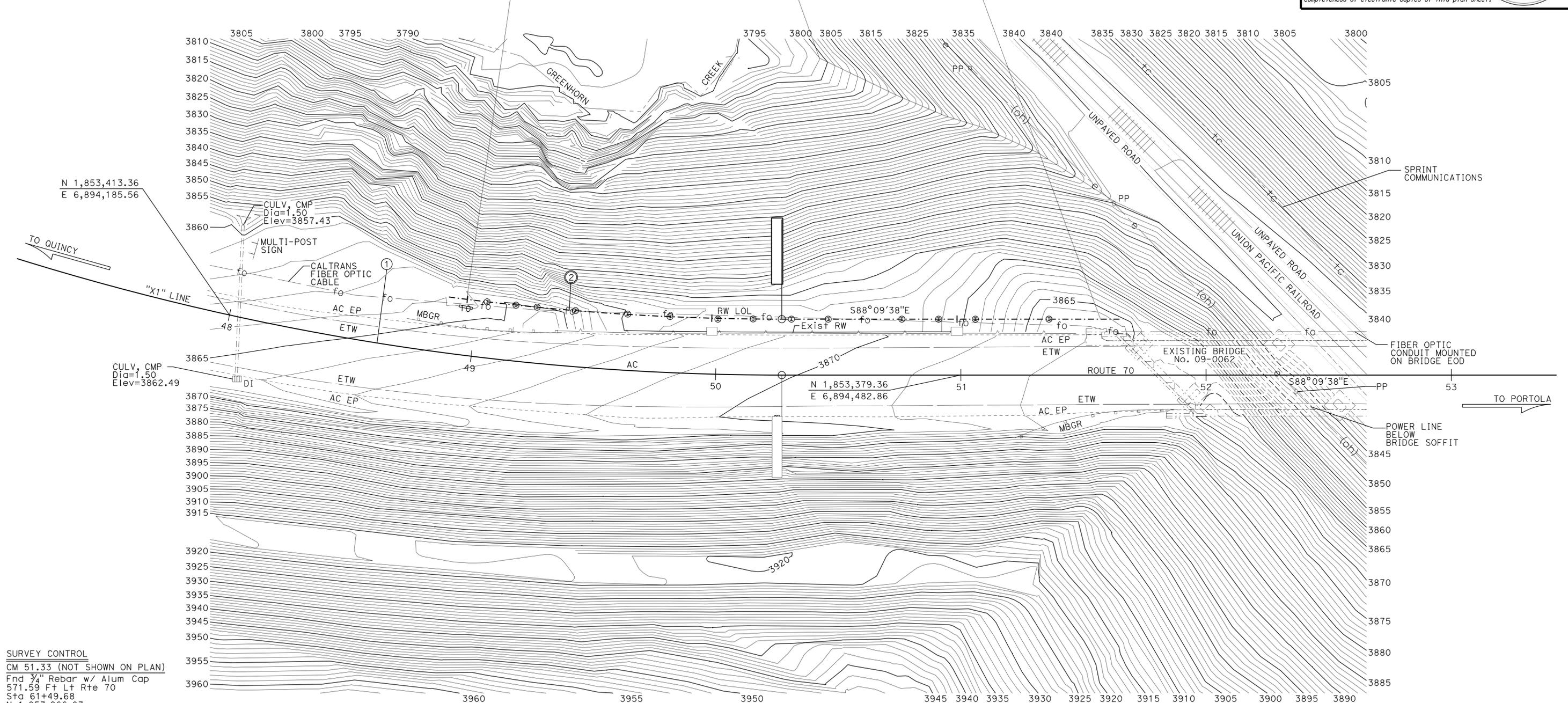
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REGISTERED PROFESSIONAL ENGINEER
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA



No.	R	Δ	T	L
①	1050.00'	45°00'47"	435.06'	824.91'
②	1027.25'	07°12'09"	64.65'	129.13'

BEGIN WALL BC 9+99.40 RW LOL = 22.75' Lt 48+95.00 "X1" LINE
 END WALL 12+58.48 RW LOL = 22.75' Lt 51+56.93 "X1" LINE



SURVEY CONTROL
 CM 51.33 (NOT SHOWN ON PLAN)
 Fnd 3/4" Rebar w/ Alum Cap
 571.59 Ft Lt Rte 70
 Sta 61+49.68
 N 1,853,966.03
 E 6,895,294.19
 Elev = 4063.44

Cal-Trans 6 (NOT SHOWN ON PLAN)
 Fnd 3/4" Rebar w/ Alum Cap
 96.18 Ft S75°40'17"E Rte 70
 Sta 64+73.72
 N 1,853,551.45
 E 6,895,909.27
 Elev = 3902.61

LEGEND:
 ⊙ - Indicates Soldier Pile, not all soldier piles shown.

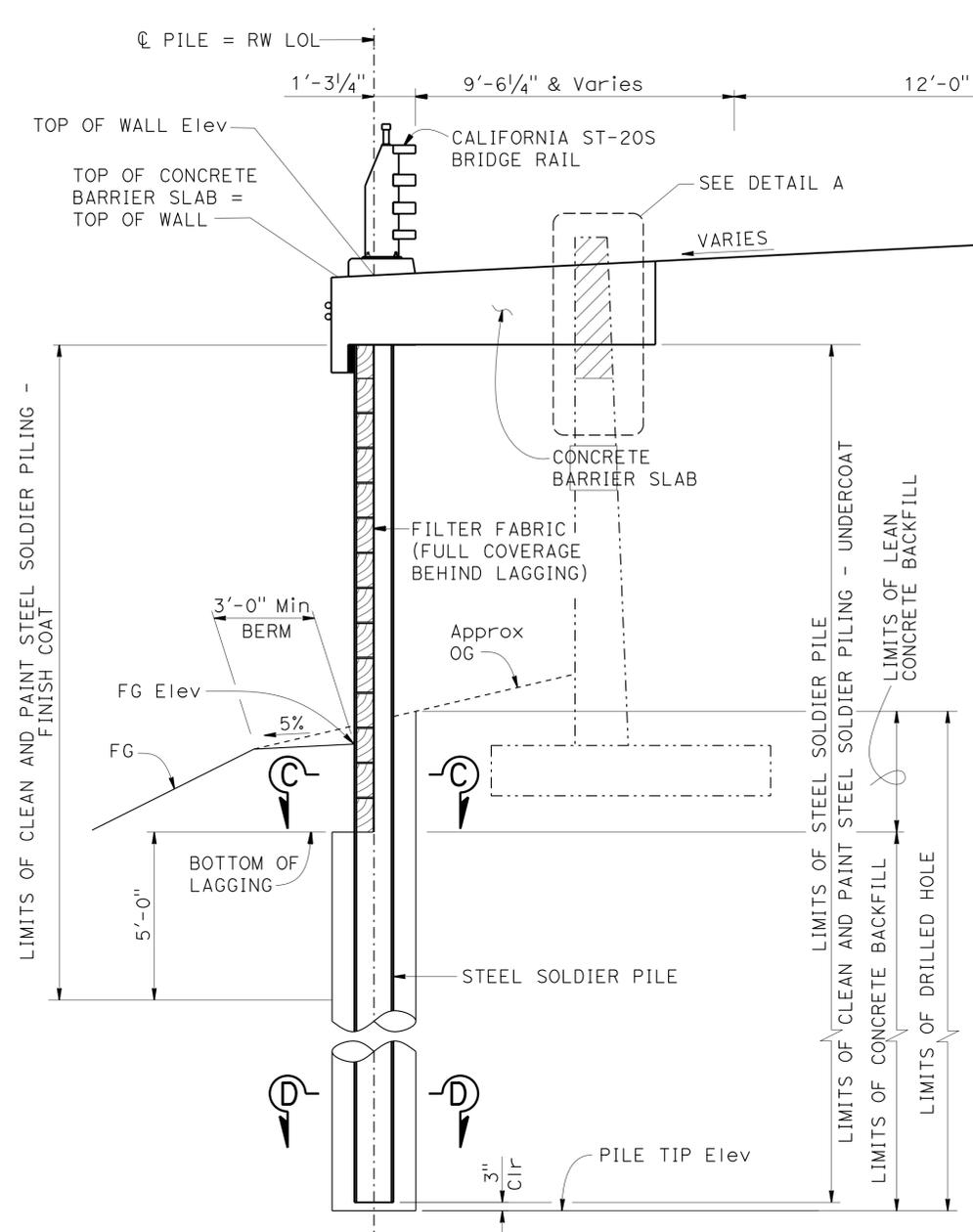
PRELIMINARY INVESTIGATION SECTION				DESIGN BY Manode Kodsuntie	CHECKED Keith Stillmunkes	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO. 09E0006	RETAINING WALL NO. 50 FOUNDATION PLAN			
SCALE 1"=20'	VERT.DATUM NGVD29	PHOTOGRAMMETRY AS OF: X	DETAILS BY Gerald Dickerson	CHECKED Keith Stillmunkes	POST MILE 51.21							
ALIGNMENT TIES Dist TRAVERSE SHEET	DRAFTED BY L. YOUNG	CHECKED BY S. SOU	QUANTITIES BY Eric Watson	CHECKED Bob Huddleston								
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3646	PROJECT NUMBER & PHASE: 0200000161	CONTRACT NO.: 02-2c0904	SUBMITTAL DATE 5/14/2015	REVISION DATES 7/27/15, 04/04/16	SHEET 5 OF 15

USERNAME => s115152 DATE PLOTTED => 04-AUG-2016 TIME PLOTTED => 12:32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	172	181

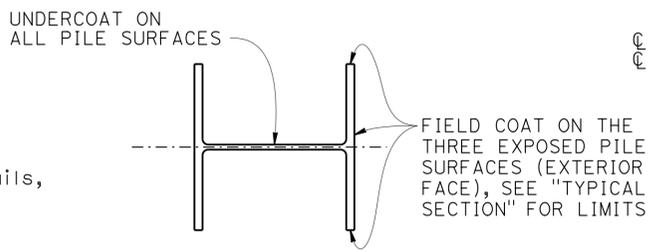
Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 06-15-16
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA

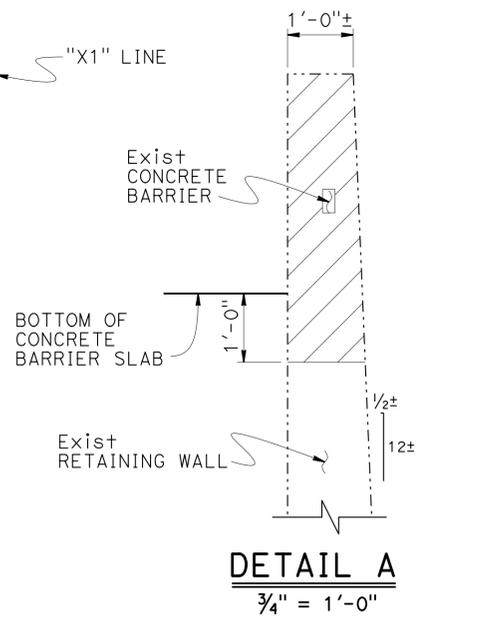


TYPICAL SECTION
3/8" = 1'-0"

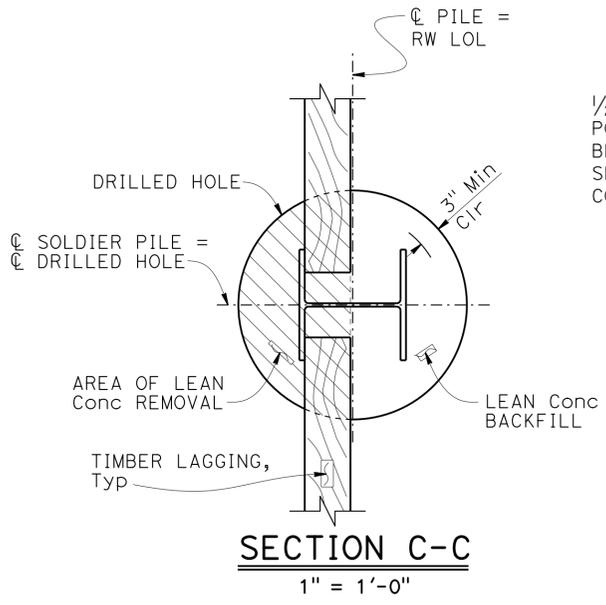
- NOTES:
- For Top of Wall and Pile Tip Elevations, see "STRUCTURE PLAN NO. 1 and NO. 2" sheets
 - For California ST-20S Bridge Rail details, see "CALIFORNIA ST-20S BRIDGE RAIL DETAILS NO.1 through NO. 4" sheets.
 - No clipping of timber lagging corners allowed.
 - Spikes shall not be bent.



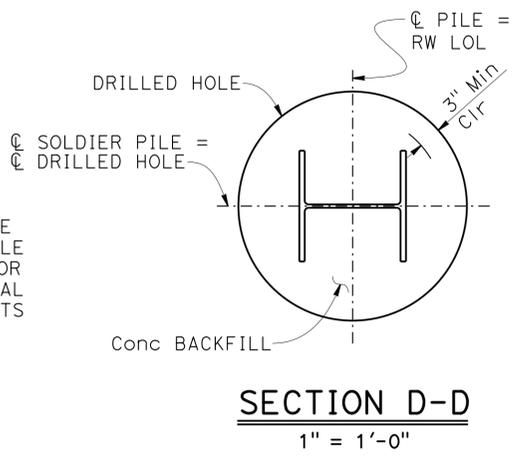
LIMITS OF CLEAN & PAINT STEEL SOLDIER PILE
1/2" = 1'-0"



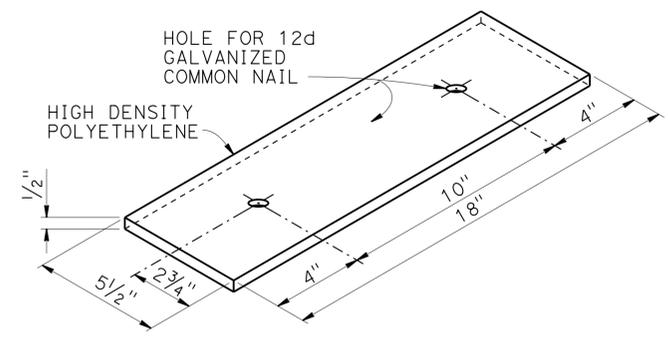
DETAIL A
3/4" = 1'-0"



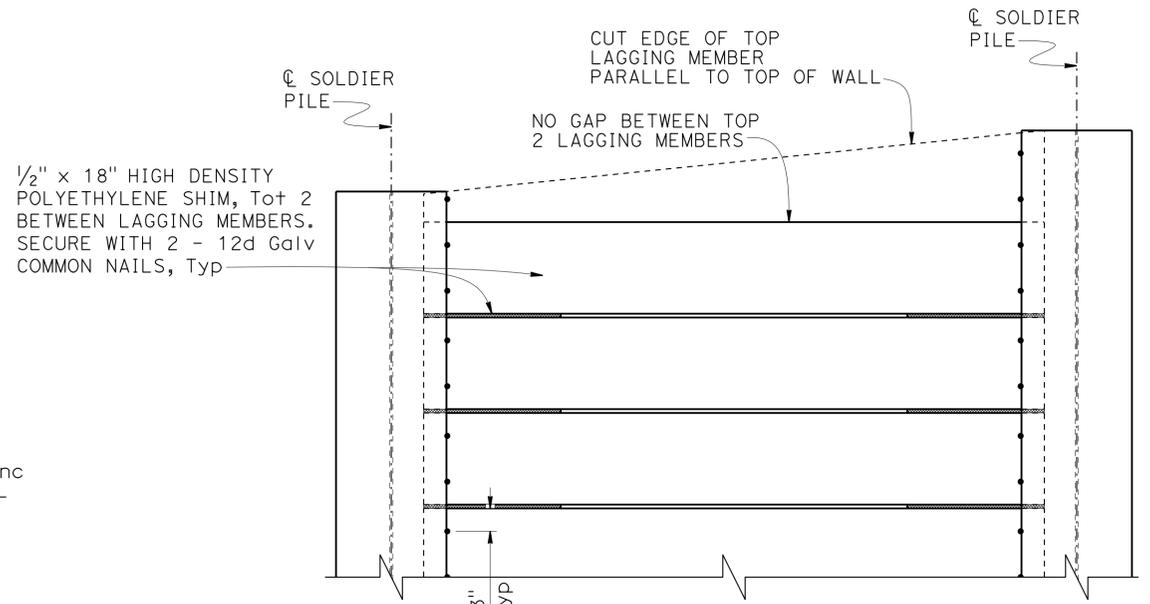
SECTION C-C
1" = 1'-0"



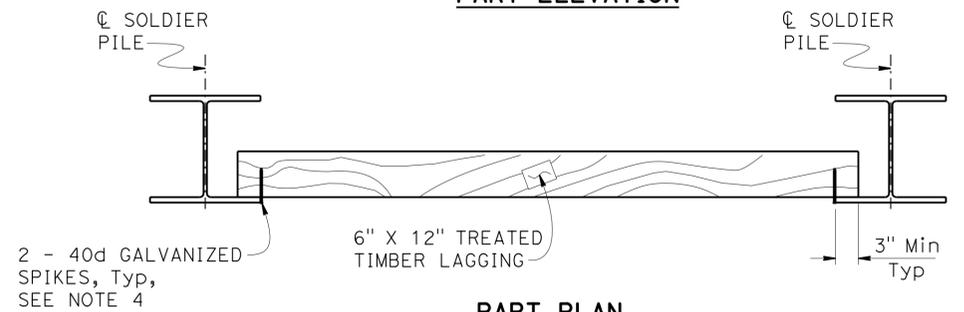
SECTION D-D
1" = 1'-0"



SHIM DETAIL
3" = 1'-0"



PART ELEVATION



PART PLAN
LAGGING DETAILS
1" = 1'-0"

- LEGEND:
- Indicates Bridge Removal (portion)
 - Indicates lean concrete removal

DESIGN	BY Manode Kodsuntie	CHECKED Keith Stillmunkes
DETAILS	BY Gerald Dickerson	CHECKED Keith Stillmunkes
QUANTITIES	BY Eric Watson	CHECKED Bob Huddleston

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	09E0006
POST MILE	51.2

RETAINING WALL NO. 50
WALL DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	173	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

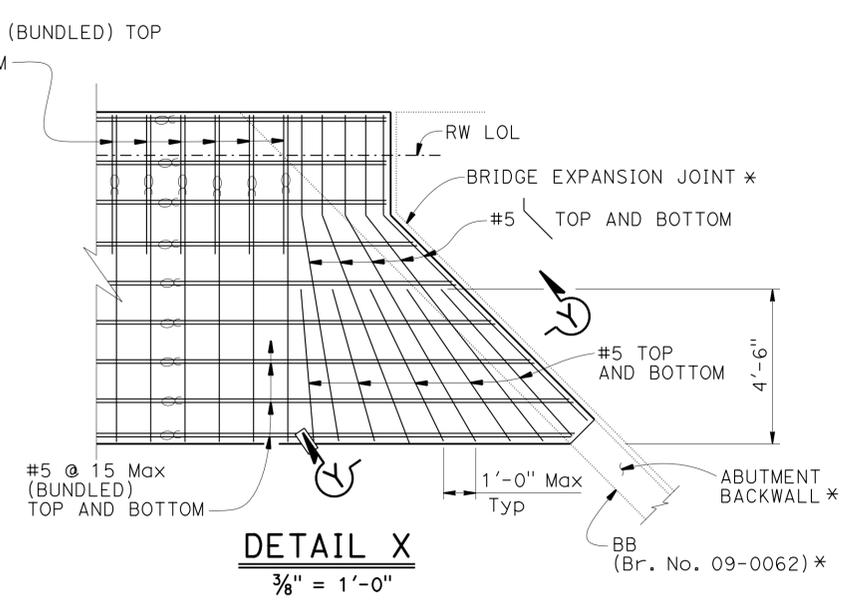
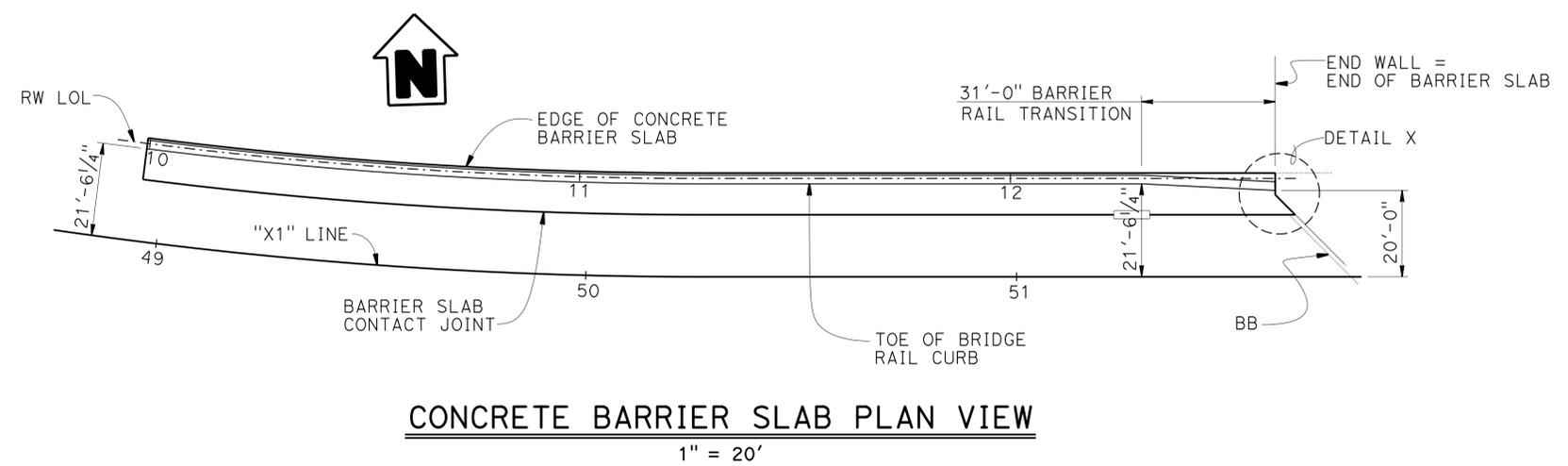
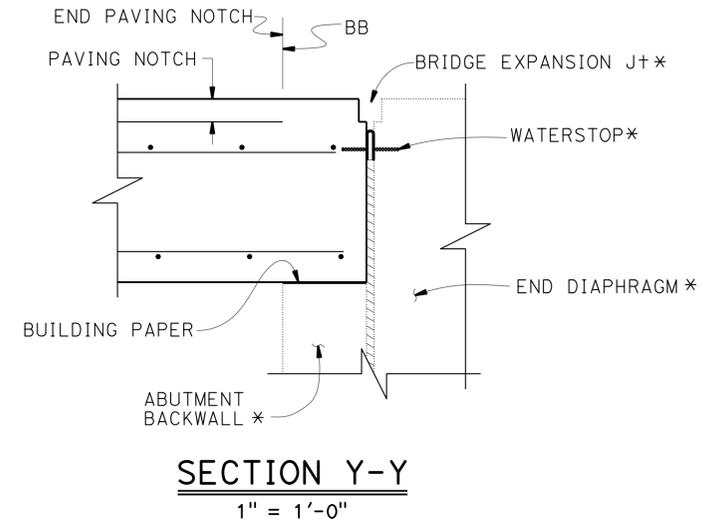
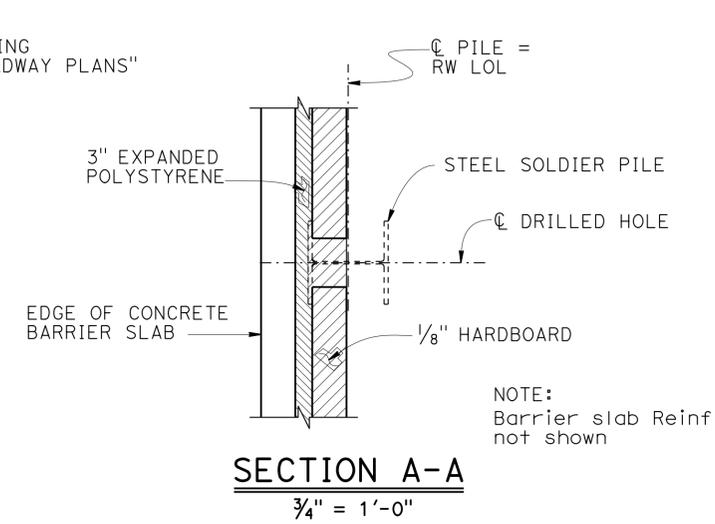
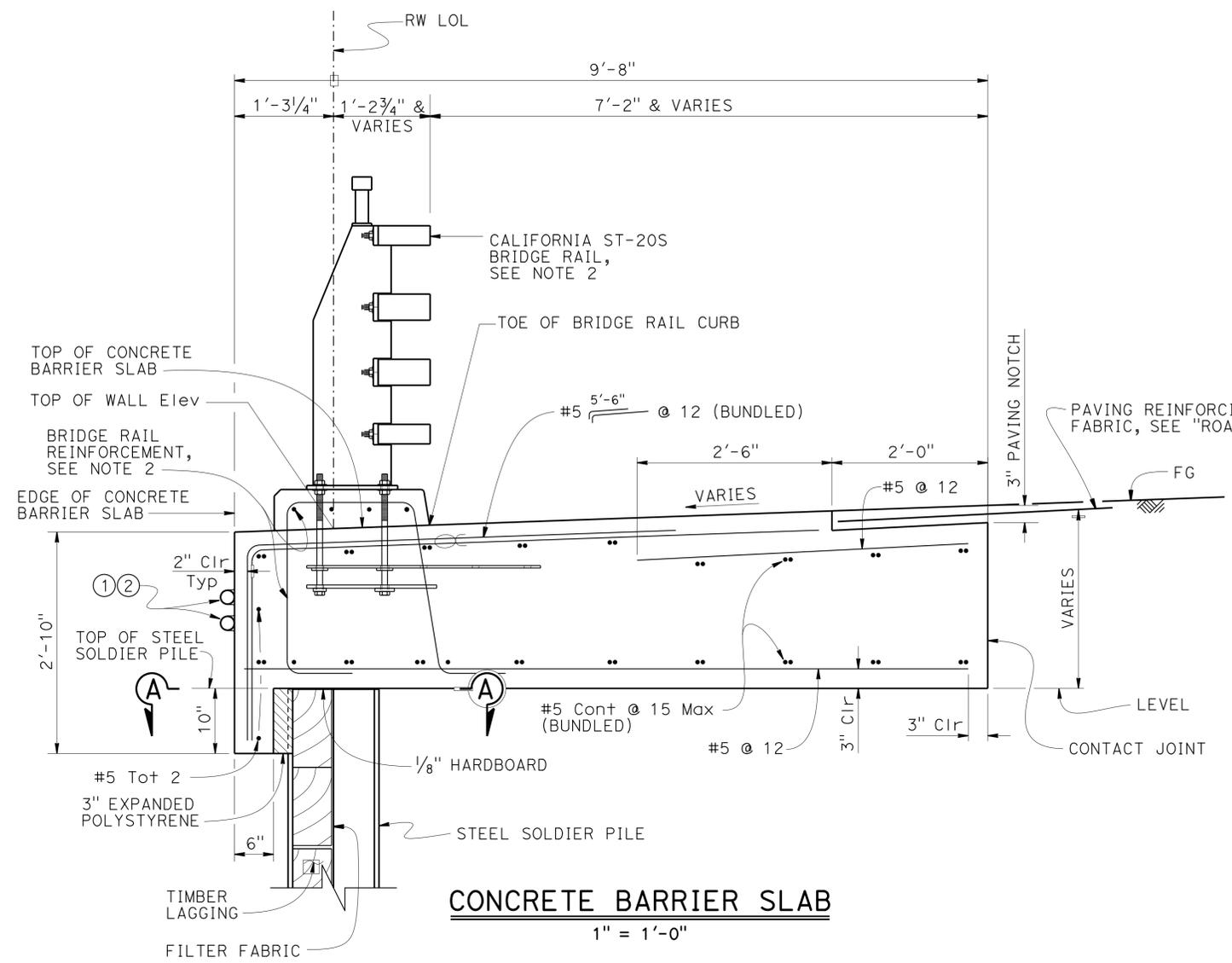
06-15-16
 PLANS APPROVAL DATE

Manode Kodsuntie
 No. 56671
 Exp. 6/30/17
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- LEGEND:
- - Indicates bundled bars
 - ▨ - Indicates expanded polystyrene
 - ▩ - Indicates hardboard

- NOTES:
- ① 2"Ø conduit (fiber optic cable), see "ROADWAY PLANS".
 - ② 2"Ø conduit (power conductors), see "ROADWAY PLANS".
- No expansion joints in barrier slab within wall limits.
 - For California ST-20S Bridge Rail details, see "CALIFORNIA ST-20S BRIDGE RAIL DETAILS NO. 1 through NO. 4" sheets
- * See Bridge Plans (Br. No. 09-0062)



DESIGN	BY Manode Kodsuntie	CHECKED Keith Stillmunkes
DETAILS	BY Gerald Dickerson	CHECKED Keith Stillmunkes
QUANTITIES	BY Eric Watson	CHECKED Bob Huddleston

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 1

BRIDGE NO.	09E0006
POST MILE	51.2

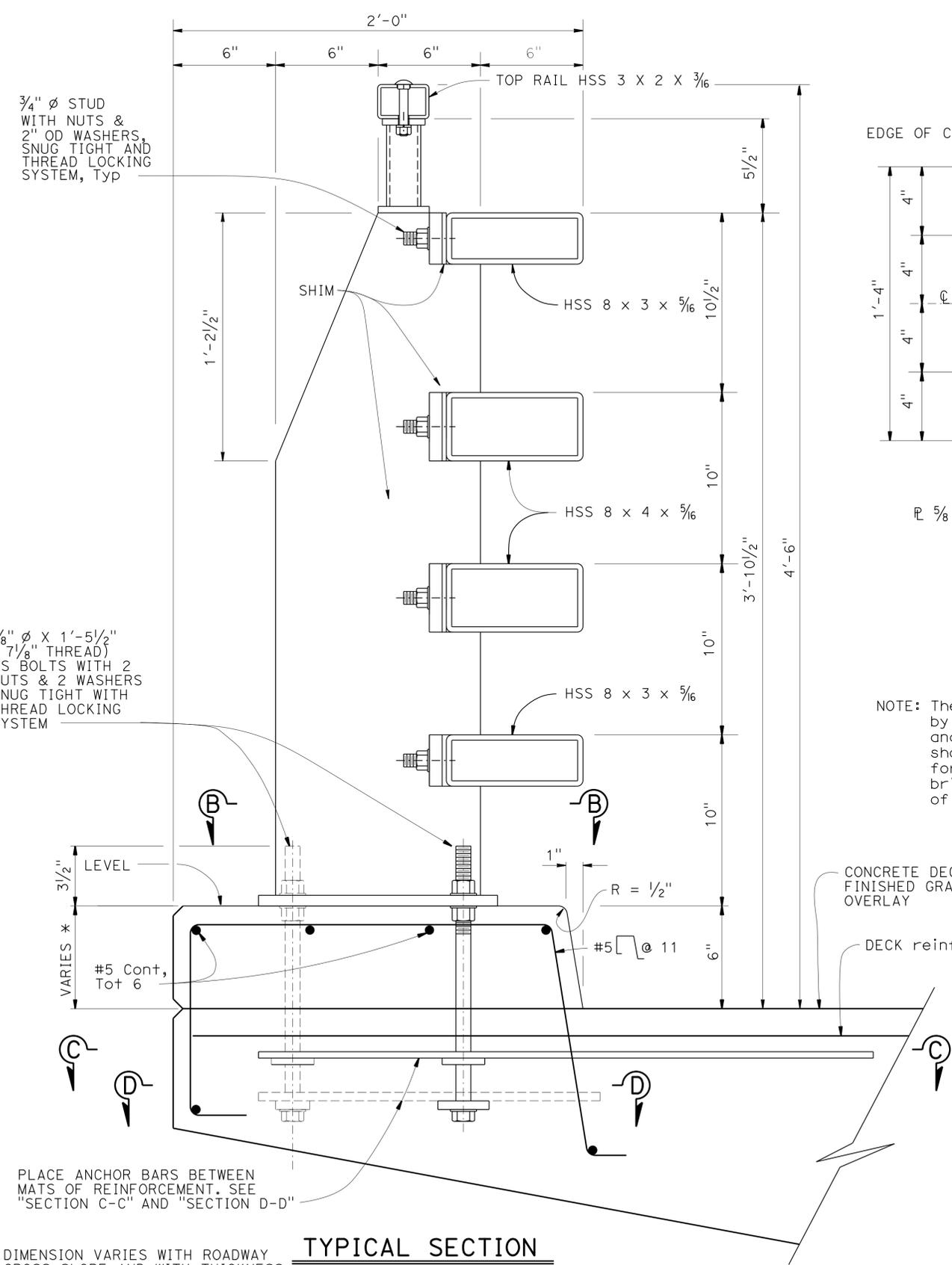
RETAINING WALL NO. 50
 CONCRETE BARRIER SLAB DETAILS

REVISION DATES	SHEET	OF
04-09-15	7	15

USERNAME => s115152 DATE PLOTTED => 04-AUG-2016 TIME PLOTTED => 12:32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	174	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE
 06-15-16
 PLANS APPROVAL DATE
 No. 56671
 Exp. 6/30/17
 CIVIL
 STATE OF CALIFORNIA



TYPICAL SECTION
3" = 1'-0"

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

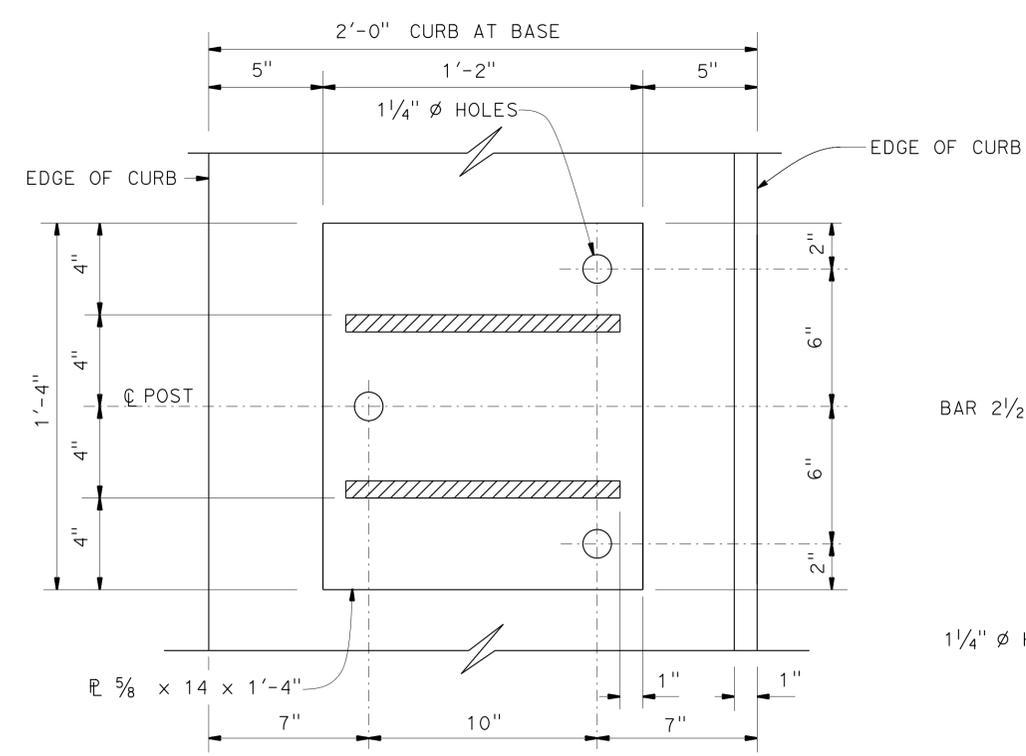
PLACE ANCHOR BARS BETWEEN MATS OF REINFORCEMENT. SEE "SECTION C-C" AND "SECTION D-D"

VARIES *
#5 Cont, Tot 6

3/2" LEVEL

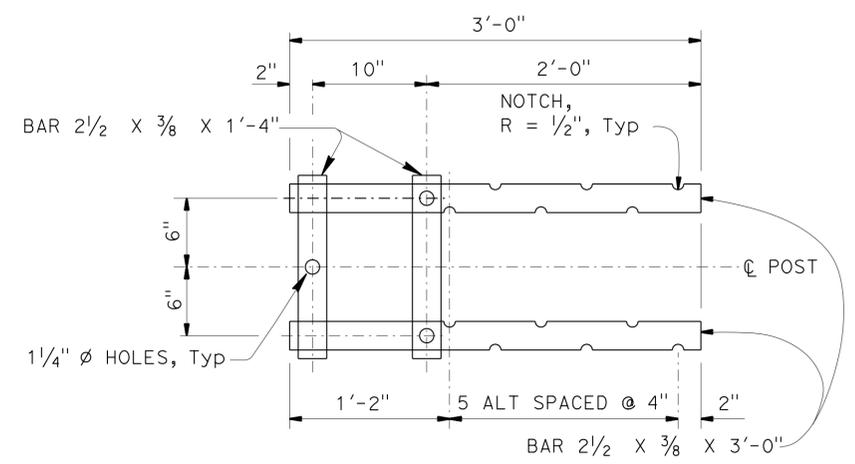
7/8" Ø X 1'-5 1/2" (7/8" THREAD) HS BOLTS WITH 2 NUTS & 2 WASHERS SNUG TIGHT WITH THREAD LOCKING SYSTEM

3/4" Ø STUD WITH NUTS & 2" OD WASHERS, SNUG TIGHT AND THREAD LOCKING SYSTEM, Typ

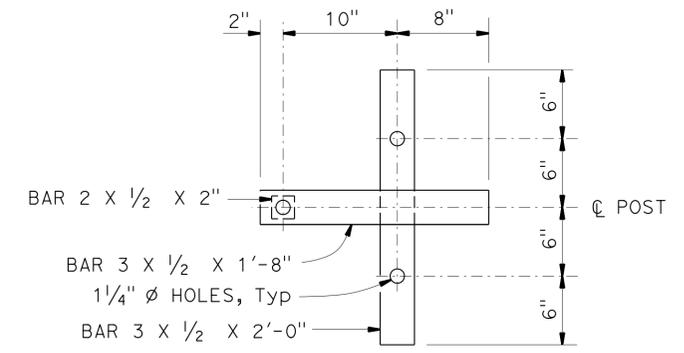


SECTION B-B
3' = 1'-0"

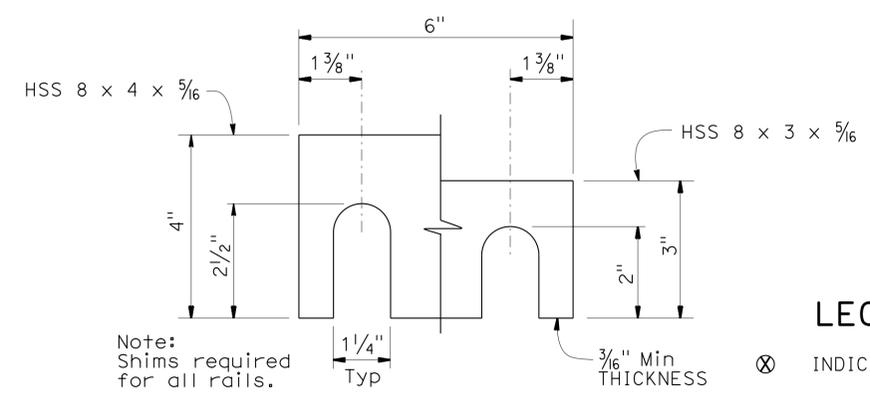
NOTE: The structural components on this drawing have been designed by others. The Engineer of Record is responsible for the selection and proper application of the component design and any changes shown. The seal and signature of the Engineer in responsible charge for the component design and the supporting documentations of these bridge components are available by contacting California Department of Transportation, Division of Engineering Services at 916-227-8704.



SECTION C-C
1/2" = 1'-0"



SECTION D-D
1/2" = 1'-0"



SHIM DETAIL
6" = 1'-0"

Note: Shims required for all rails.

LEGEND:
⊗ INDICATES STUD WELD

RAIL SECTION AT POST
3" = 1'-0"

RETAINING WALL NO. 50
CALIFORNIA ST-20S BRIDGE RAIL
DETAILS NO. 1

STANDARD DRAWING	BRIDGE NO. 09E0006
FILE NO. xs16-120-1	POST MILE 51.2
APPROVAL DATE January 2015	

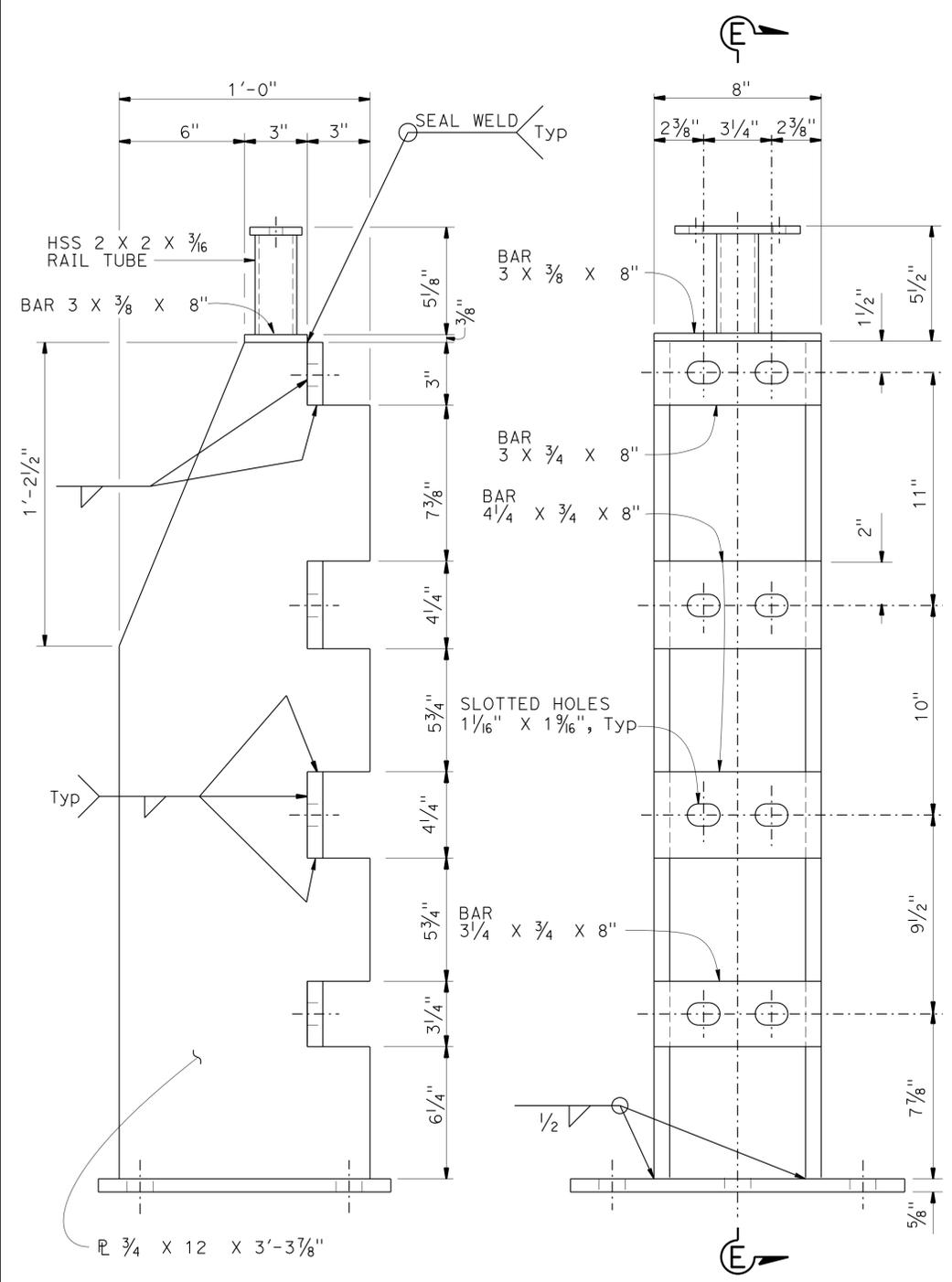
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	175	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

06-15-16
 PLANS APPROVAL DATE

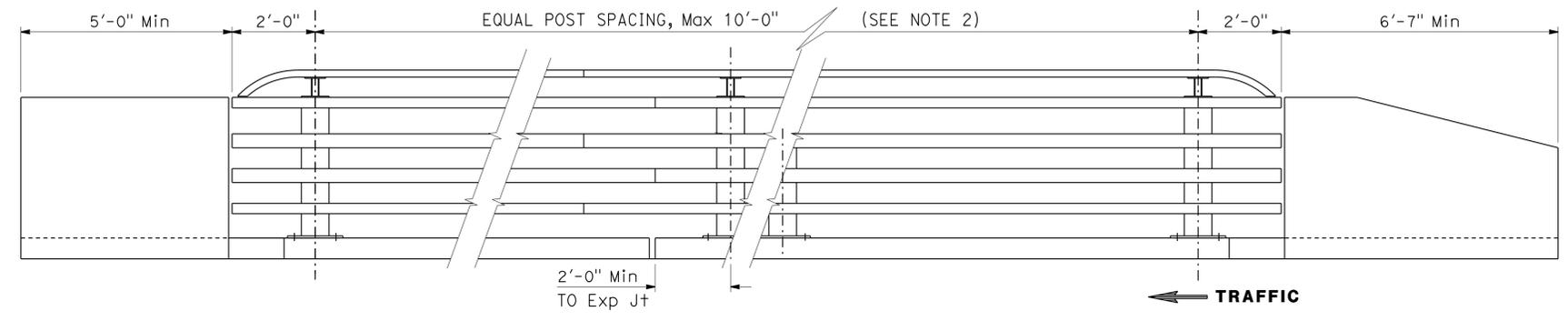
Manode Kodsuntie
 No. 56671
 Exp. 6/30/17
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 STATE OF CALIFORNIA

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SECTION E-E
 3" = 1'-0"

ELEVATION
 3" = 1'-0"



ELEVATION
 1/2" = 1'-0"

NOTE: The structural components on this drawing have been designed by others. The Engineer of Record is responsible for the selection and proper application of the component design and any changes shown. The seal and signature of the Engineer in responsible charge for the component design and the supporting documentations of these bridge components are available by contacting California Department of Transportation, Division of Engineering Services at 916-227-8704.

NOTES:

1. For approach and departure end details, see "DETAILS No. 3" sheet.
2. Post spacing and/or block length to be adjusted to fit bridge length or wingwall length.
3. All horizontal members are parallel to longitudinal profile grade of deck.
4. Posts are normal to profile grade of structure.
5. Posts are vertical to the transverse cross section.

STANDARD DRAWING	
FILE NO. xs16-120-2	APPROVAL DATE <u>January 2015</u>

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	
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DIVISION OF ENGINEERING SERVICES	
BRIDGE NO. 09E0006	POST MILE 51.2

RETAINING WALL NO. 50	
CALIFORNIA ST-20S BRIDGE RAIL	
DETAILS NO. 2	

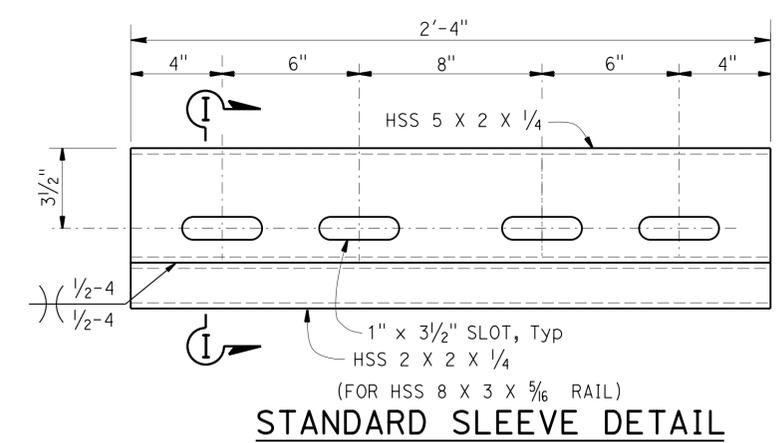
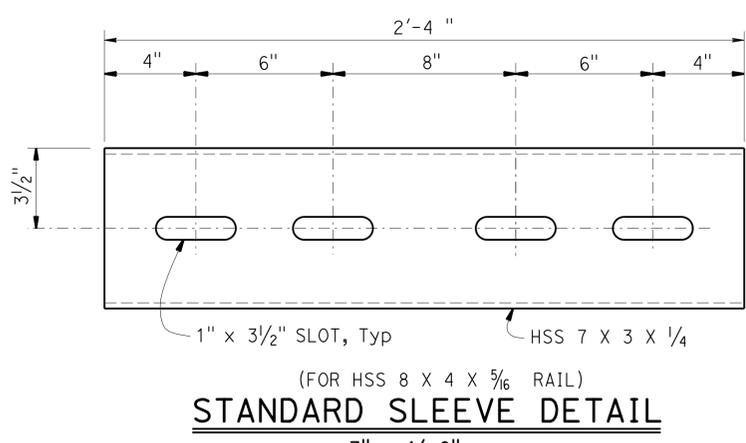
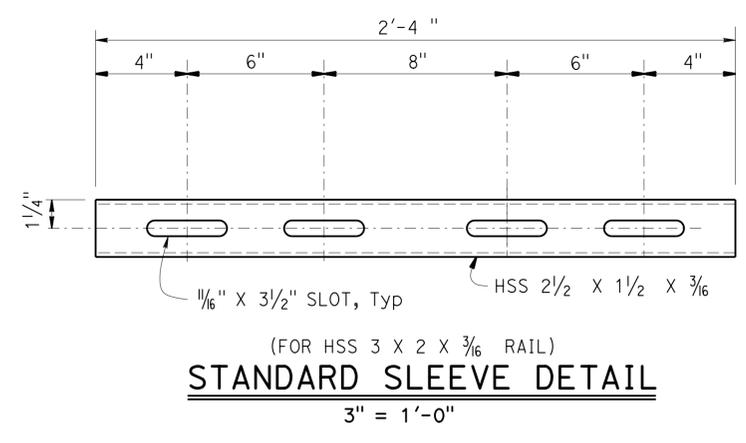
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70	50.6/51.7	177	181

Manode Kodsuntie 6/2/16
 REGISTERED CIVIL ENGINEER DATE

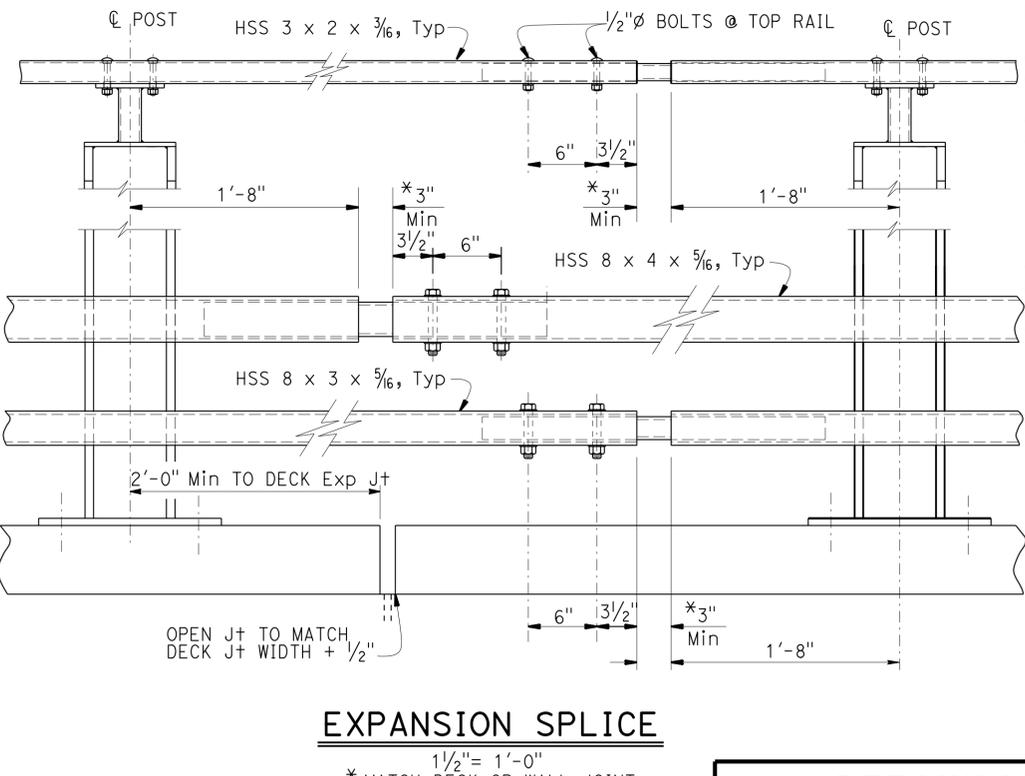
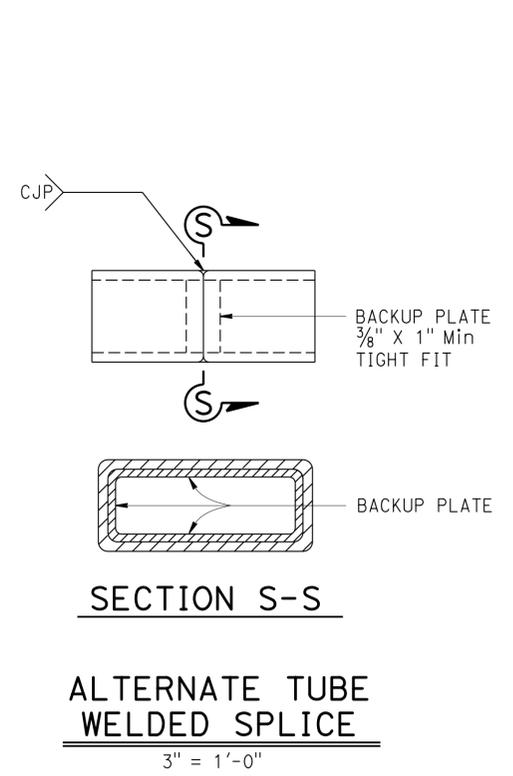
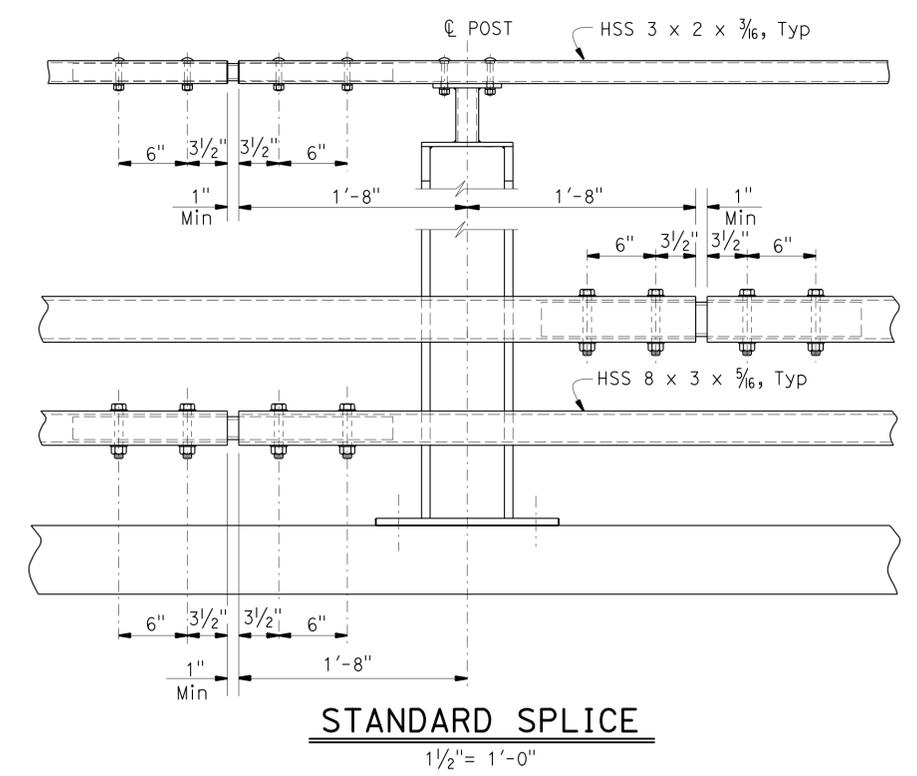
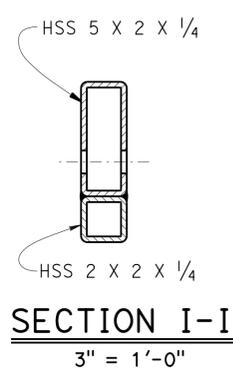
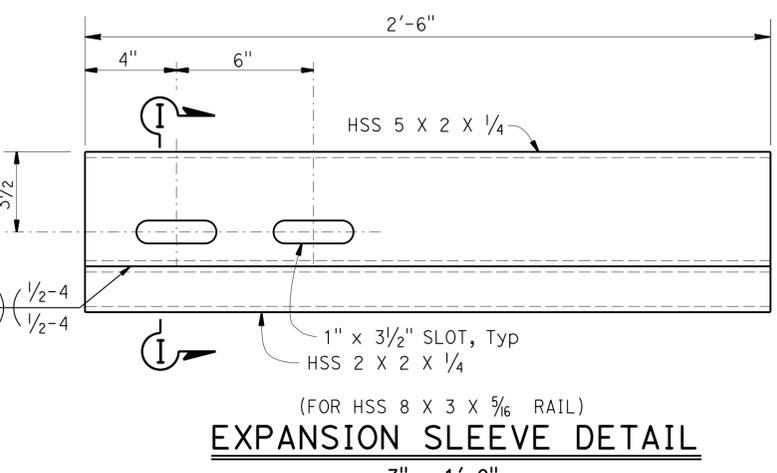
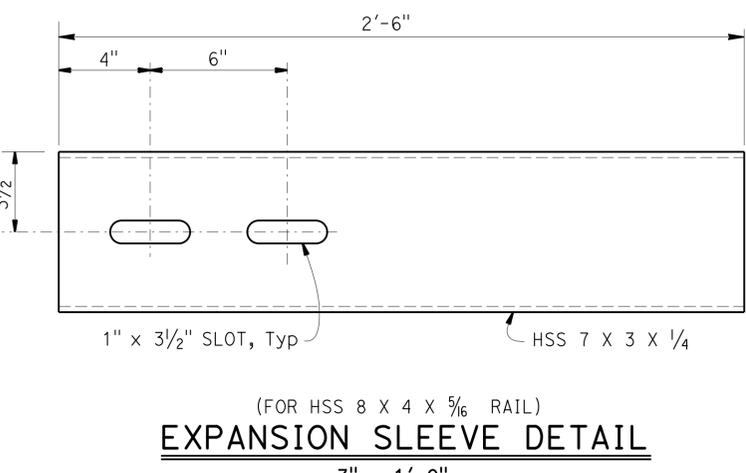
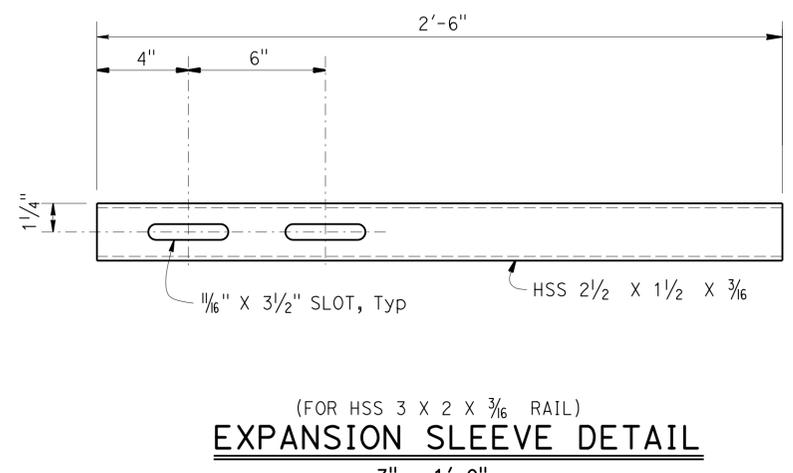
06-15-16
 PLANS APPROVAL DATE

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



NOTE:
 The structural components on this drawing have been designed by others. The Engineer of Record is responsible for the selection and proper application of the component design and any changes shown. The seal and signature of the Engineer in responsible charge for the component design and the supporting documentations of these bridge components are available by contacting California Department of Engineering Services at 916-227-8704.

STANDARD DRAWING	APPROVAL DATE January 2015
FILE NO. xs16-120-4	

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 09E0006 POST MILE 51.2
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RETAINING WALL NO. 50	
CALIFORNIA ST-20S BRIDGE RAIL	
DETAILS NO. 4	

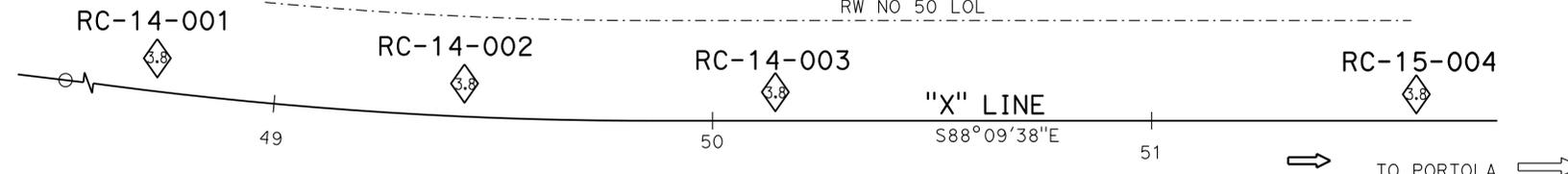
BENCH MARK

Cal-Trans 6 (NOT SHOWN ON PLAN).
 Fnd 3/4 Rebar w/ Alum Cap
 96.18 Ft S75°40'17"E Rte 70
 Sta 64+73.22
 N 1,853,551.45
 E 6,895,909.27
 Elev = 3902.61'
 Vertical Datum: NGVD29
 Horizontal Datum: NAD83 (1991.35)

Note: Based on Foundation Plan dated 5/14/15



← TO QUINCY



PLAN
1" = 20'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	PLU	70	50.6/51.7	178	181

10-29-15
 CERTIFIED ENGINEERING GEOLOGIST
 Reid Buell
 No. 1481
 Exp. 4-30-17
 CERTIFIED ENGINEERING GEOLOGIST
 STATE OF CALIFORNIA

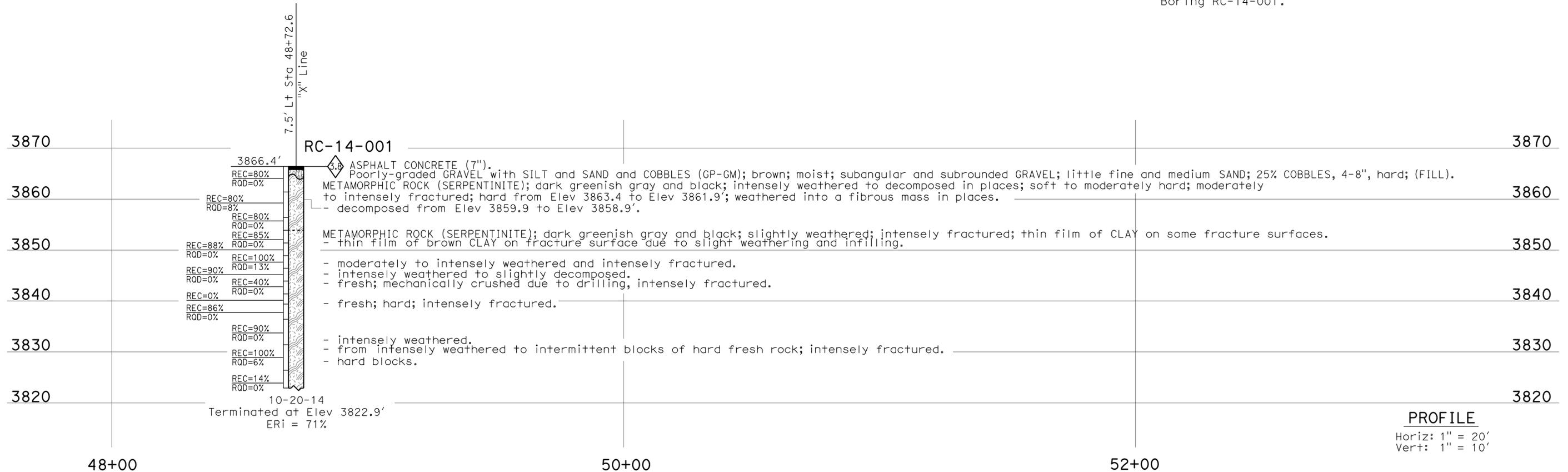
06-15-16
 PLANS APPROVAL DATE

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

Note: Groundwater was not encountered in Boring RC-14-001.



PROFILE
 Horiz: 1" = 20'
 Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		RETAINING WALL NO. 50	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		09E0006		LOG OF TEST BORINGS 1 OF 4	
NAME: Tracy Menard		CHECKED BY: J. Thorne		FIELD INVESTIGATION BY: A. Barrie		DESIGN BRANCH 1		POST MILE			
								51.2			
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3650		PROJECT NUMBER & PHASE: 0200000161 1		CONTRACT NO.: 02-2C0904		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3						REVISION DATES	
										10-27-15 10-31-15	
										SHEET 12 OF 15	

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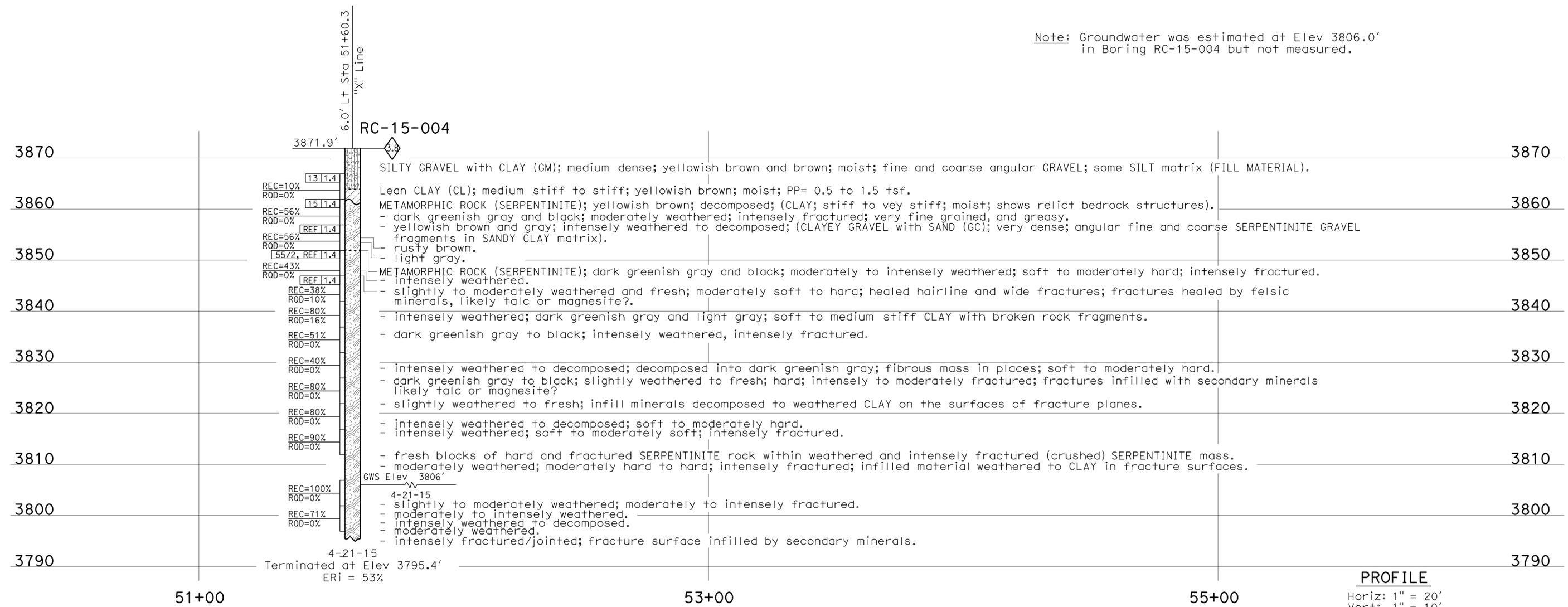
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	Plu	70	50.6/51.7	181	181

10-29-15
 CERTIFIED ENGINEERING GEOLOGIST
 Reid Buell
 No. 1481
 Exp. 4-30-17
 CERTIFIED ENGINEERING GEOLOGIST
 STATE OF CALIFORNIA
 PLANS APPROVAL DATE 06-15-16
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FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 4"

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).
See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

Note: Groundwater was estimated at Elev 3806.0' in Boring RC-15-004 but not measured.



ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		RETAINING WALL NO. 50	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		FIELD INVESTIGATION BY:		DEPARTMENT OF TRANSPORTATION		09E0006		LOG OF TEST BORINGS 4 OF 4	
NAME: Tracy Menard		CHECKED BY: J. Thorne		A. Barrie		DESIGN BRANCH 1		POST MILE			
								51.2			
OGS CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3650		PROJECT NUMBER & PHASE: 0200000161 1		CONTRACT NO.: 02-2C0904		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3						REVISION DATES	
										SHEET OF	
										15 15	

FILE => 09e0006-z-1otb04.dgn