DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91,405	Var	101	110

José L. Higareda 3-28-14
REGISTERED CIVIL ENGINEER DATE

06-16-14
PLANS APPROVAL DATE

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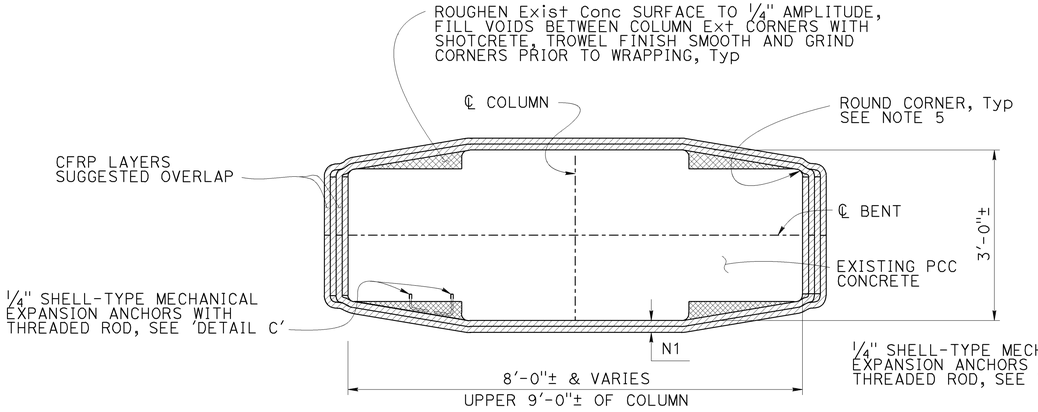
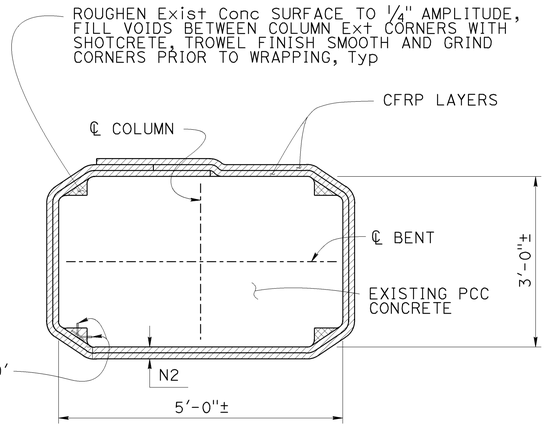
REGISTERED PROFESSIONAL ENGINEER
JOSE L. HIGAREDA
No. 62338
Exp. 9-30-15
CIVIL
STATE OF CALIFORNIA



SECTION A-A

3/4" = 1'-0"

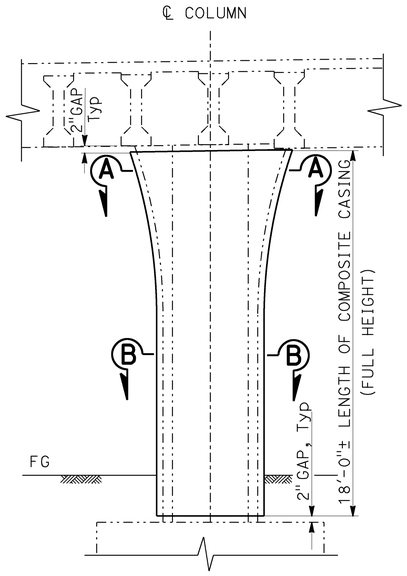


SECTION B-B

3/4" = 1'-0"

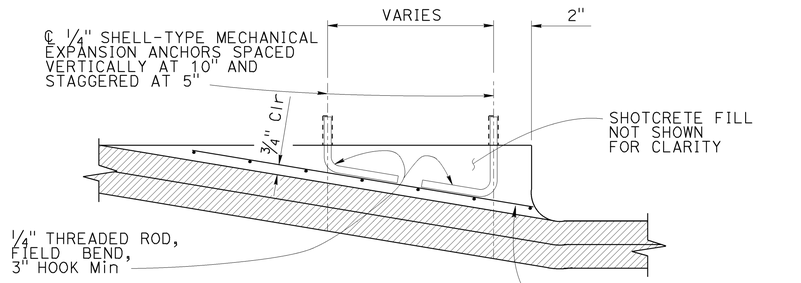
N1 = 2 LAYERS FOR SYSTEM 5, 8 OR 9

N2 = 2 LAYERS FOR SYSTEM 5, 8 OR 9



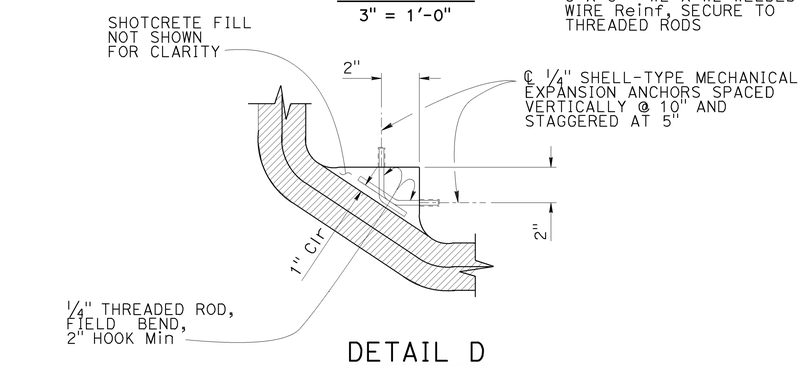
COLUMN RETROFIT

No Scale



DETAIL C

3" = 1'-0"



DETAIL D

3" = 1'-0"

CARBON FRP SYSTEM NOTES:

1. For all subsequent notes, surfaces must be defined as the surface to receive the composite. Fabric refers to the unidirectional or bi-directional fiber. Fiber Reinforced Polymer (FRP) composite is Carbon fiber and Epoxy resin
2. Minimum number of layers for Carbon System is based on minimum effective fiber layer thickness of 0.0065 inches. Fewer number of layers can be installed for effectively thicker (fiber) layers provided that an equivalent stiffness is maintained

LEGEND:

- INDICATES EXISTING STRUCTURE
- INDICATES NEW CONSTRUCTION
- INDICATES SHORTCRETE CONCRETE
- INDICATES CFRP LAYERS

	BY	CHECKED
DESIGN	Jose Higareda	A. Logus
DETAILS	Loren Goldthwait	A. Logus
QUANTITIES	J. Higareda	A. Logus

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 15

BRIDGE NO. 55-0303
POST MILE 2.61

ROUTE 91/39 SEPARATION RETROFIT
COMPOSITE COLUMN CASING-CFRP SYSTEM

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3604
PROJECT NUMBER & PHASE: 1213000001
CONTRACT NO.: 12-0M7204

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
2-14-14	3-11-14	3-28-14		3	3

FILE => 55-0303-d-colcasing1.dgn

USERNAME => s120177 DATE PLOTTED => 16-JUN-2014 TIME PLOTTED => 16:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91,405	Var	102	110

José L. Higareda 3-28-14
REGISTERED CIVIL ENGINEER DATE

06-16-14
PLANS APPROVAL DATE

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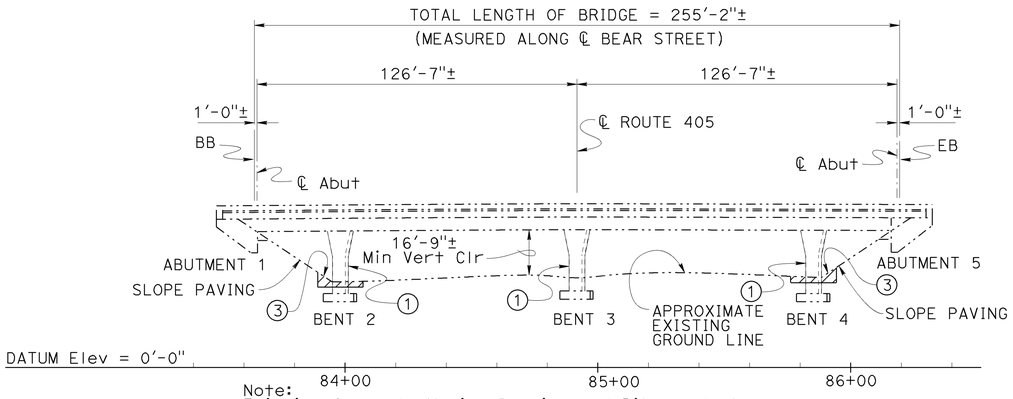
REGISTERED PROFESSIONAL ENGINEER — JOSE L. HIGAREDA — No. 62338 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

NOTES:

1. Steel Column Casing Retrofit.
2. Remove Existing Concrete Barrier and place New Concrete Barrier Type 60 and Type 60R at Bent 3.
3. Remove and Replace portion of Existing Slope Paving at Bent 2 and Bent 4 retrofit locations.

LEGEND:

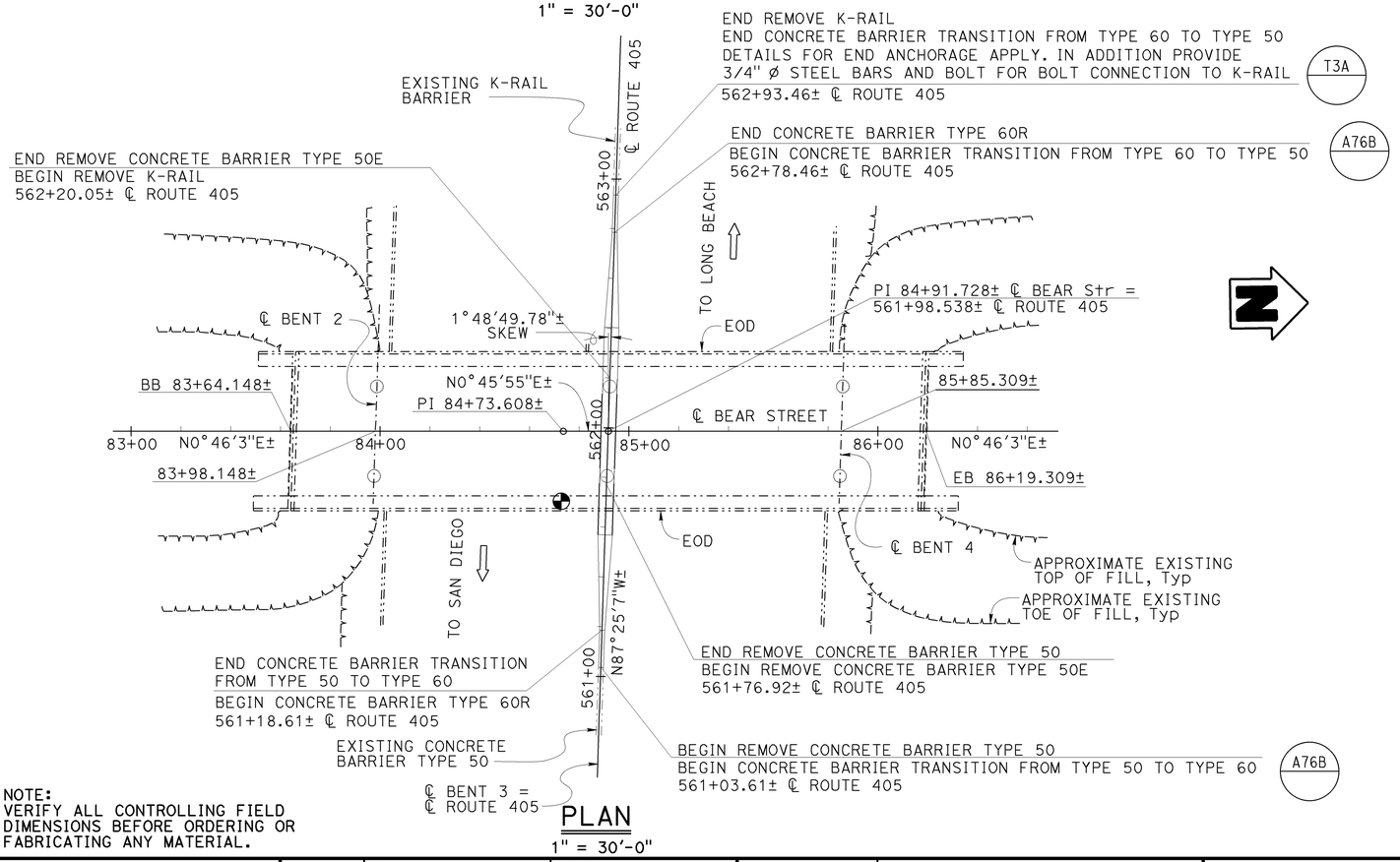
- Indicates Point of Minimum Vertical Clearance
- Indicates Existing Structure
- Indicates Bridge Removal, Portion



Note:
Existing Concrete Median Barrier and Piles not shown.

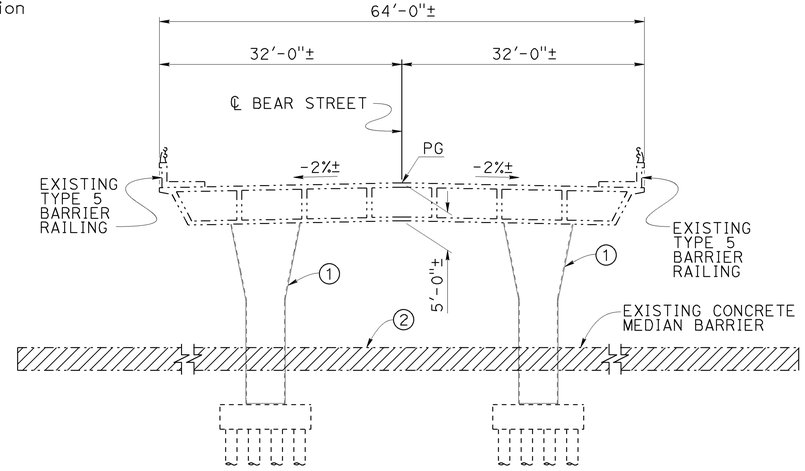
ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"

QUANTITIES

BRIDGE REMOVAL (PORTION), LOCATION C	LUMP	SUM
STRUCTURE EXCAVATION (BRIDGE)	126	CY
STRUCTURE BACKFILL (BRIDGE)	114	CY
ASPHALT MEMBRANE WATERPROOFING	459	SQFT
COLUMN CASING	39,946	LB
SLOPE PAVING	15	CY
CONCRETE BARRIER (TYPE 60)	30	LF
CONCRETE BARRIER (TYPE 60R)	160	LF

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

DESIGN	BY J. Higareda	CHECKED A. Logus	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE			
DETAILS	BY Herman Mauroschadt	CHECKED A. Logus	LAYOUT	BY J. Higareda	CHECKED A. Logus		
QUANTITIES	BY J. Higareda	CHECKED A. Logus	SPECIFICATIONS	BY Xiahong Li	PLANS AND SPECS COMPARED Xiahong Li		

Traci Menard
DESIGN ENGINEER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 15

BRIDGE NO. 55-0433
POST MILE 9.89

BEAR STREET OC RETROFIT
GENERAL PLAN

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3604
PROJECT NUMBER & PHASE: 1213000001 CONTRACT NO.: 12-0M7204

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
11-25-13	2-3-14	3-28-14		1	5

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

FILE => 55-0433-b-gp.dgn

USERNAME => s120177 DATE PLOTTED => 16-JUN-2014 TIME PLOTTED => 16:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91,405	Var	103	110

José L. Higareda 3-28-14
REGISTERED CIVIL ENGINEER DATE

06-16-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSE L. HIGAREDA — No. 62338 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

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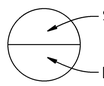
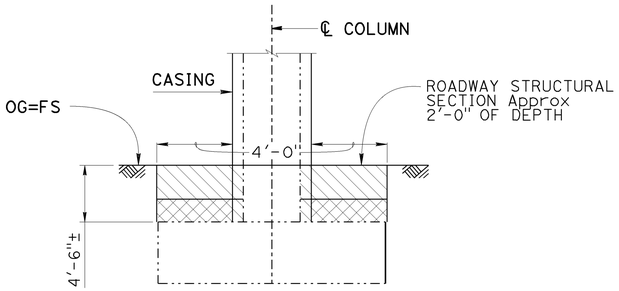
INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	INDEX TO PLANS
3	COLUMN STEEL CASING DETAILS
4	CONCRETE BARRIER TYPE 60R TRANSITION AT BRIDGE COLUMN-DETAILS NO.1
5	CONCRETE BARRIER TYPE 60R TRANSITION AT BRIDGE COLUMN-DETAILS NO.2

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
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)
A76B	CONCRETE BARRIER TYPE 60
T3A	TEMPORARY RAILING (TYPE K)





NOTE:

FOR REPLACEMENT OF ROADWAY STRUCTURAL SECTION, SEE ROADWAY PLANS

LEGEND:

Indicates Structure Excavation

Indicates Structure Backfill

LIMITS OF EXCAVATION AND BACKFILL AT BENT 3 COLUMNS

No Scale

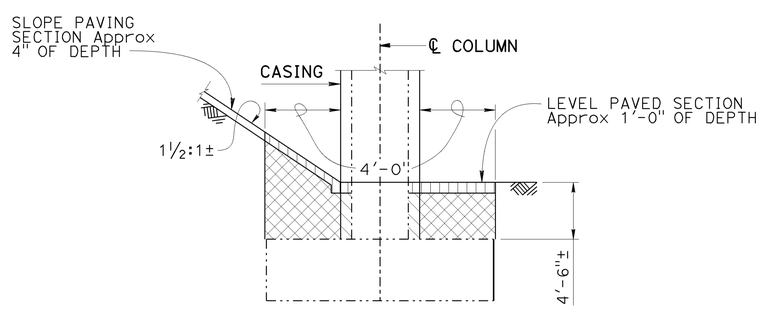
GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications, 4th edition and the Caltrans Amendments.

SEISMIC DESIGN:
Caltrans Seismic Design Criteria (SDC), Version 1.7 dated March 2013.

SEISMIC LOADING:
Site specific ARS Curve (See "ARS Curve")
ARS Online Version 2.2.06, V_{s30} = 310 m/s

STRUCTURAL STEEL:
fy = ASTM A709 Grade 36



LEGEND:

Indicates Structure Excavation

Indicates Structure Backfill

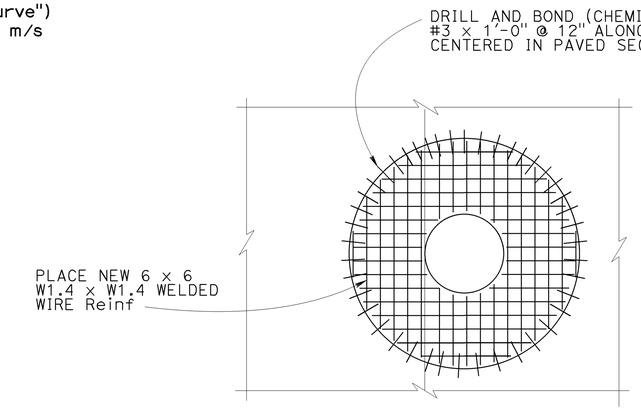
Indicates Slope Paving Removal

NOTE:

FOR REPLACEMENT OF SLOPE PAVING, SEE 'SLOPE PAVING REPLACEMENT DETAIL' THIS SHEET

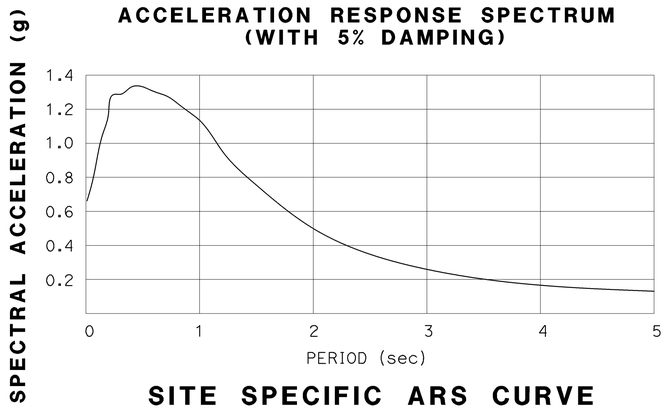
LIMITS OF EXCAVATION AND BACKFILL AT BENT 2 & 4 COLUMNS

No Scale



Notes:
NEW PAVED THICKNESS TO MATCH Existing PAVED THICKNESS.
MATCH existing ARCHITECTURAL TREATMENT and Conc FINISH.
Place 1" expansion joint filler between column casing and new concrete.

SLOPE PAVING REPLACEMENT DETAIL - PLAN



SITE SPECIFIC ARS CURVE

DESIGN	BY J. Higareda	CHECKED A. Logus	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 15	BRIDGE NO. 55-0433 POST MILE 9.89	BEAR STREET OC RETROFIT INDEX TO PLANS
DETAILS	BY H. Mauroschadt / L. Goldthwait	CHECKED A. Logus				
QUANTITIES	BY J. Higareda	CHECKED A. Logus				

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3604
PROJECT NUMBER & PHASE: 1213000001
CONTRACT NO.: 12-0M7204

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-13-14	3-06-14	3-13-14	3-28-14	2	5

FILE => 55-0433-c-itp.dgn

USERNAME => s120177 DATE PLOTTED => 16-JUN-2014 TIME PLOTTED => 16:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91,405	Var	104	110

José L. Higareda 3-28-14
REGISTERED CIVIL ENGINEER DATE

06-16-14
PLANS APPROVAL DATE

JOSE L. HIGAREDA No. 62338 Exp. 9-30-15 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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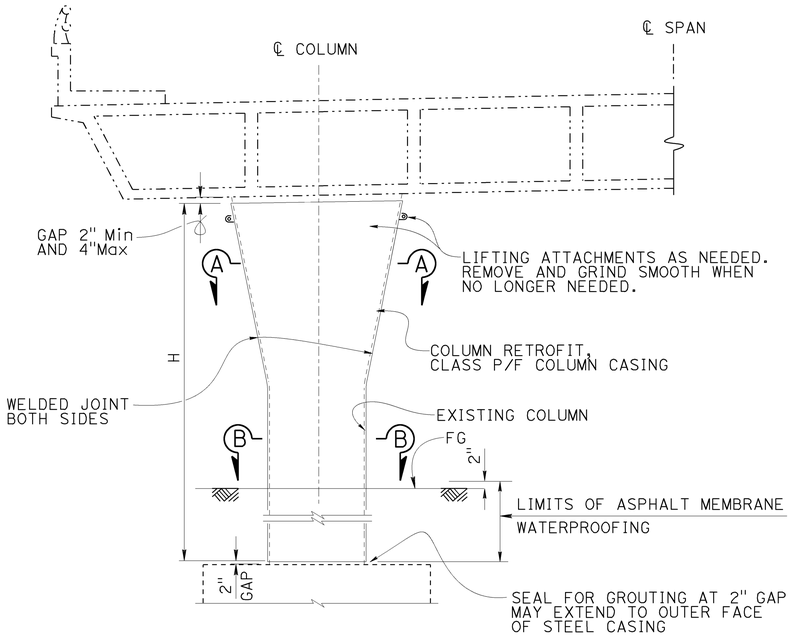
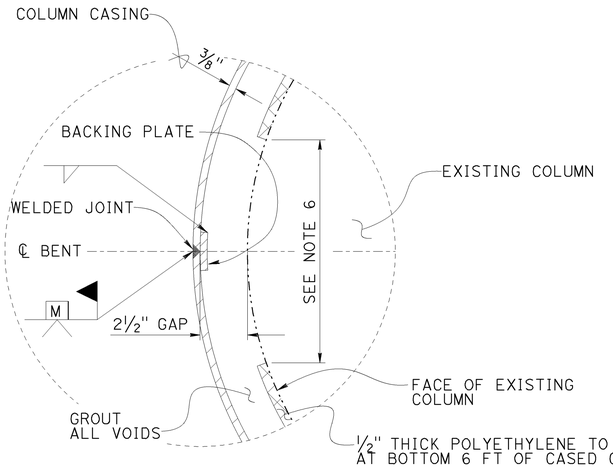


PART ELEVATION

1/4" = 1'-0"



LEGEND:

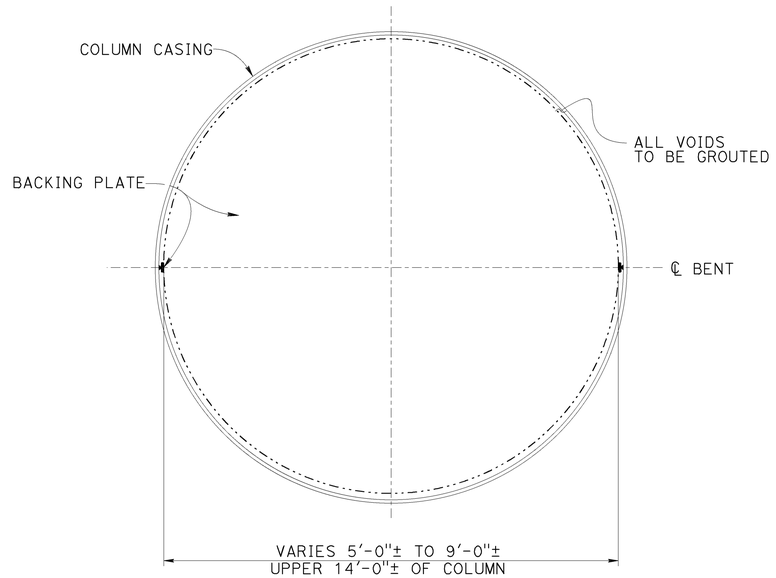
Indicates Existing Structure

Indicates New Construction

BENT DATA TABLE *

BENT NO.	APPROX. CASING HEIGHT "H" (ft)	SUPERSTRUCTURE SOFFIT Elev. (ft)	TOP OF PILE CAP Elev. (ft)
BENT 2	22.0	51.60	29.25
BENT 3	21.5	52.09	30.25
BENT 4	22.0	51.73	29.25

* Elevations and dimensions are approximate and as per As-Built Plans.

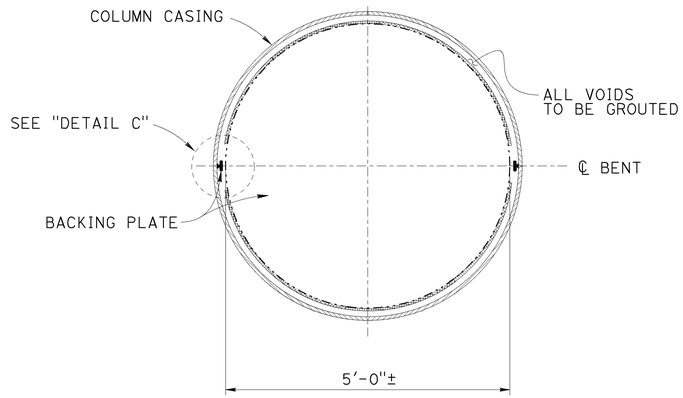


SECTION A-A

3/4" = 1'-0"

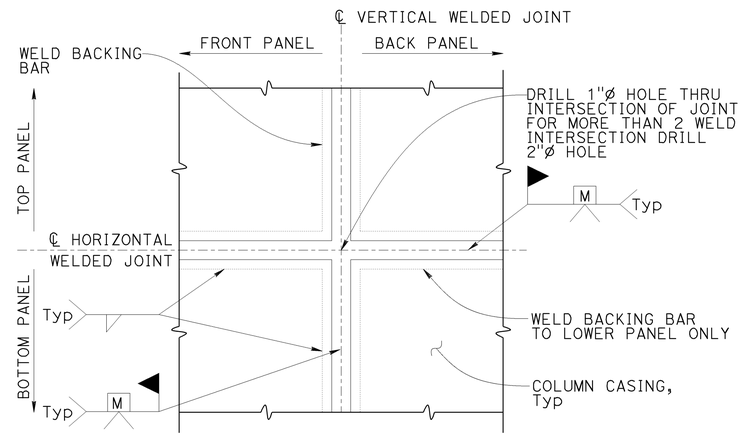
DETAIL C

3" = 1'-0"



SECTION B-B

3/4" = 1'-0"



(TWO WELDED INTERSECTION JOINT)

WELDED JOINT DETAIL

1 1/2" = 1'-0"

NOTES:
1. All exterior welds to be ground flush with surface.
2. Appropriate injection nozzles to be provided on casing, but removed and ground flush following completion of grouting operation.
3. All voids between steel casing and column to be pressure grouted from bottom to top.
4. All grouting must be performed in two stages for all columns.
5. Location and number of welds to be determined by the Contractor, and subject to approval by the Engineer. No skip welds allowed.
6. Contractor shall remove 12" polyethylene strip behind backing plate.

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

DESIGN	BY J. Higareda	CHECKED A. Logus	
DETAILS	BY L. Goldthwait	CHECKED A. Logus	
QUANTITIES	BY J. Higareda	CHECKED A. Logus	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 15

BRIDGE NO. 55-0433
POST MILE 9.89

BEAR STREET OC RETROFIT
COLUMN STEEL CASING DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3604
PROJECT NUMBER & PHASE: 1213000001
CONTRACT NO.: 12-0M7204

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
2-4-14	3-13-14	3-28-14		3	5

FILE => 55-0433-d-colcase.dgn

USERNAME => s120177 DATE PLOTTED => 16-JUN-2014 TIME PLOTTED => 16:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91,405	Var	105	110

José L. Higareda 3-28-14
REGISTERED CIVIL ENGINEER DATE

06-16-14
PLANS APPROVAL DATE

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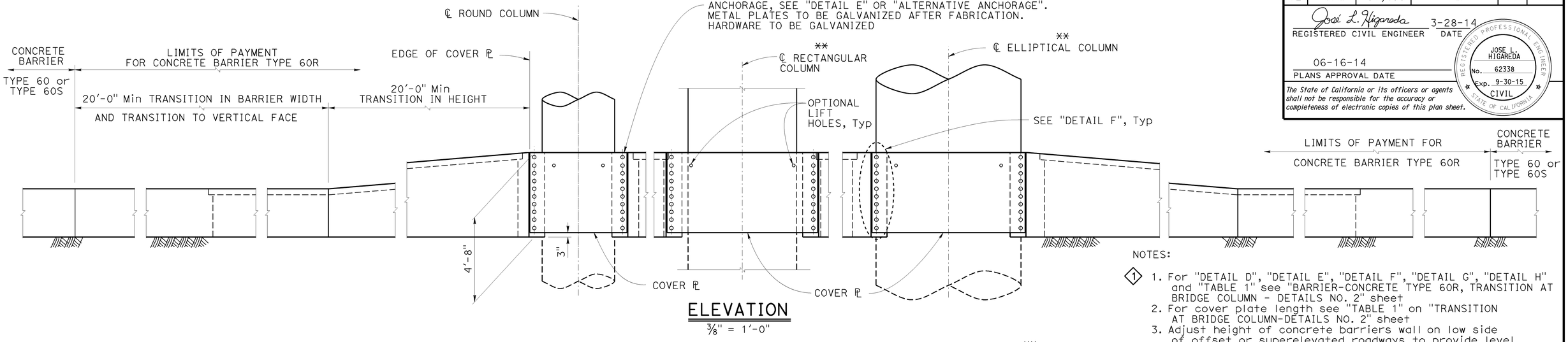
REGISTERED PROFESSIONAL ENGINEER — JOSE L. HIGAREDA — No. 62338 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA



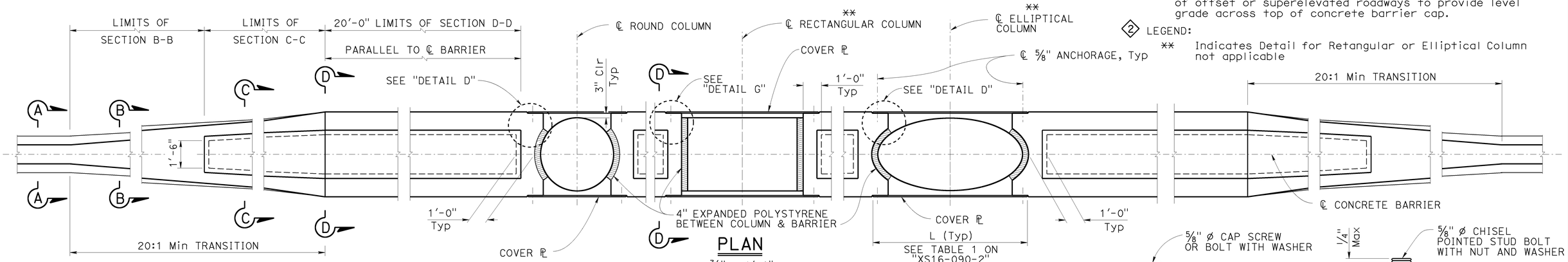
ELEVATION
3/8" = 1'-0"

NOTES:

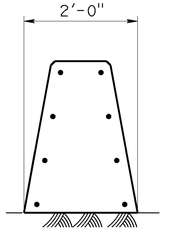
1. For "DETAIL D", "DETAIL E", "DETAIL F", "DETAIL G", "DETAIL H" and "TABLE 1" see "BARRIER-CONCRETE TYPE 60R, TRANSITION AT BRIDGE COLUMN - DETAILS NO. 2" sheet
2. For cover plate length see "TABLE 1" on "TRANSITION AT BRIDGE COLUMN-DETAILS NO. 2" sheet
3. Adjust height of concrete barriers wall on low side of offset or superelevated roadways to provide level grade across top of concrete barrier cap.

LEGEND:

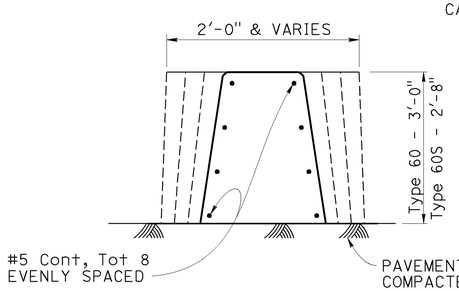
** Indicates Detail for Retangular or Elliptical Column not applicable



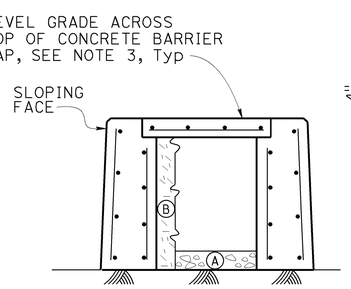
PLAN
3/8" = 1'-0"



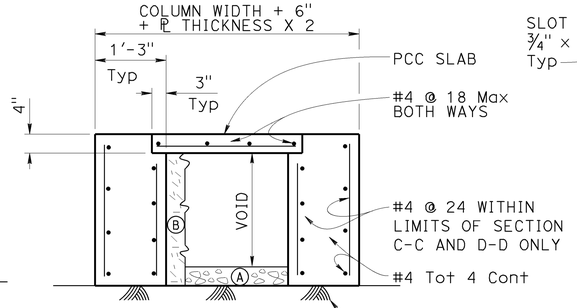
SECTION A-A
3/4" = 1'-0"



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



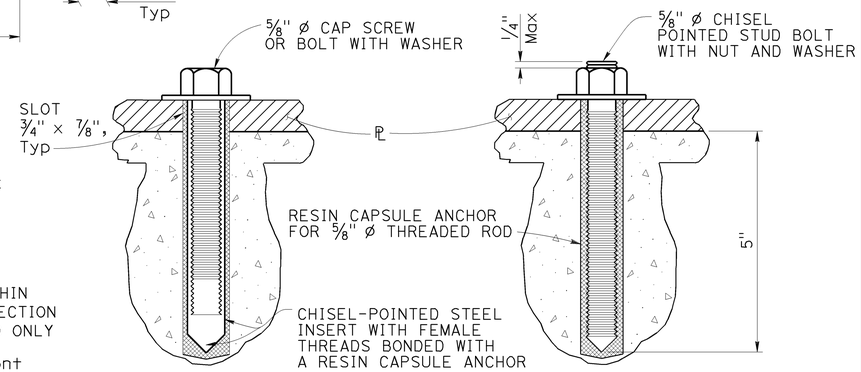
SECTION C-C
3/4" = 1'-0"



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

NOTES:

1. Contractor options for fill between barrier walls
   - Ⓐ Place 4" PCC at base between barrier walls
   - Ⓑ Place granular material from base to bottom of 4" cap



ALTERNATIVE ANCHORAGE
NO SCALE

SPECIAL DETAILS
BEAR STREET OC RETROFIT
CONCRETE BARRIER TYPE 60R
TRANSITION AT BRIDGE COLUMN-DETAILS NO. 1

REVISED STANDARD DRAWING

FILE NO. xs16-090-1

APPROVAL DATE July 2012

1 Modified Note
2 Added Legend

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 55-0433
POST MILE 9.89

DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. (02-02-11)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3604
PROJECT NUMBER & PHASE: 1213000001
CONTRACT NO.: 12-0M7204

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
6-05-12	7-18-12	3-28-14	4	5

FILE => 55-0433-e-xs16-090-1.dgn

USERNAME => s1132486 DATE PLOTTED => 05-JUN-2014 TIME PLOTTED => 11:15

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91,405	Var	106	110

José L. Higareda 3-28-14
REGISTERED CIVIL ENGINEER DATE

06-16-14
PLANS APPROVAL DATE

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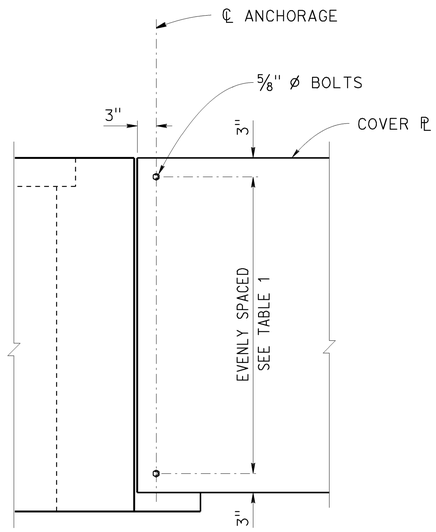
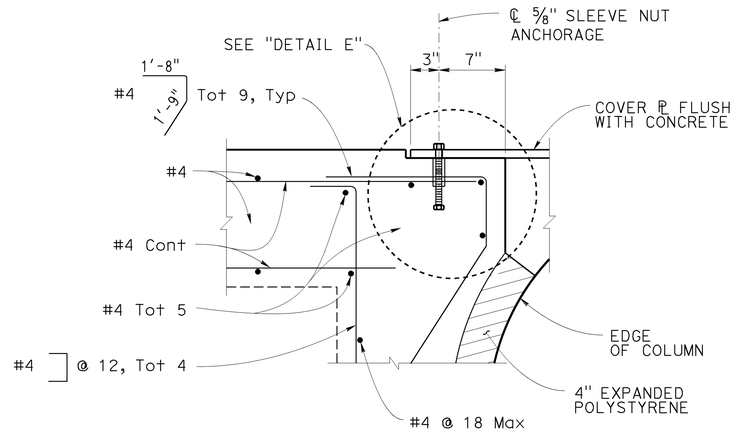
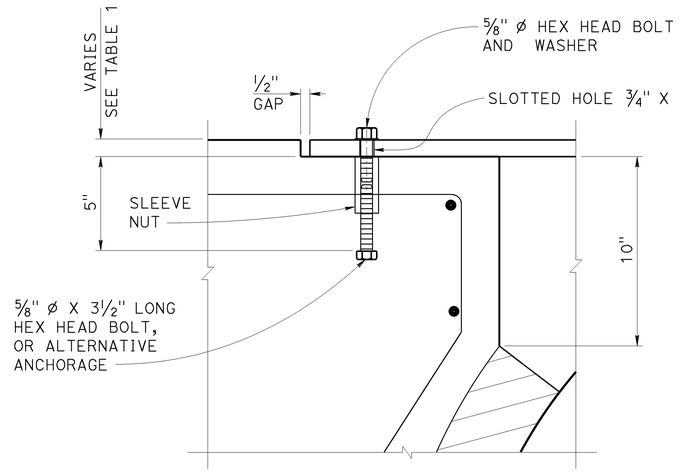
REGISTERED PROFESSIONAL ENGINEER — JOSE L. HIGAREDA No. 62338 Exp. 9-30-15 CIVIL — STATE OF CALIFORNIA



DETAIL F
1" = 1'-0"



DETAIL D
1½" = 1'-0"

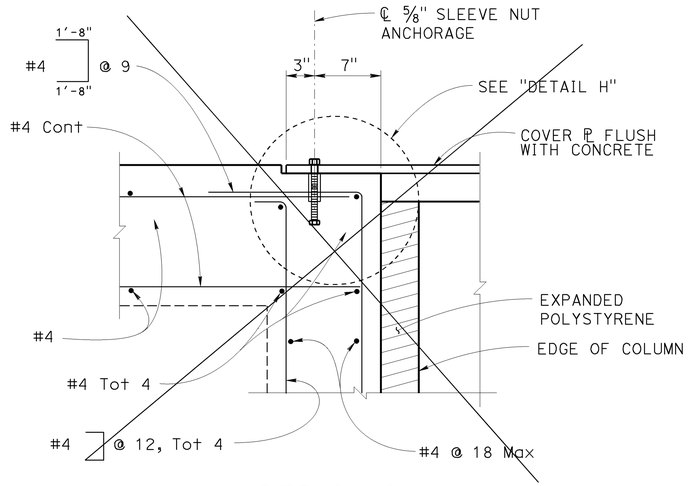


DETAIL E
3" = 1'-0"

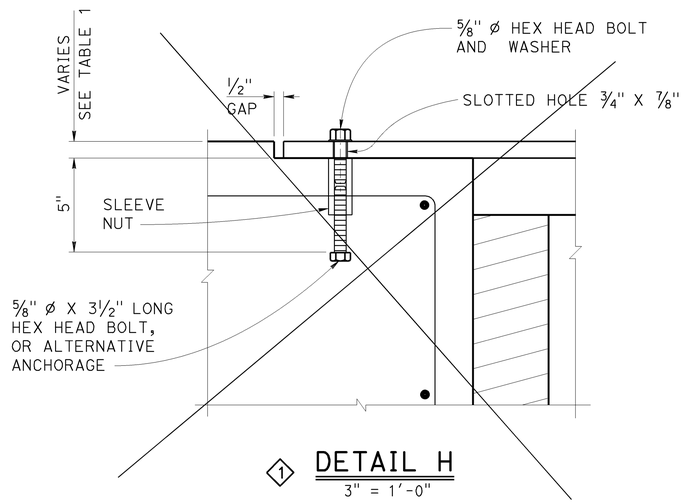
TABLE 1		
L (ft)	PLATE THICKNESS (in)	TOTAL NO. OF BOLTS
8'-6" Max	7/8	10
6'-6" Max	11/16	7
4'-6" Max	7/16	5

NOTE:

Structural steel, fy = 50,000 psi
Unless otherwise noted



① DETAIL G
1½" = 1'-0"



① DETAIL H
3" = 1'-0"

SPECIAL DETAILS

REVISED STANDARD DRAWING

FILE NO. xs16-090-2

APPROVAL DATE July 2012

① Detail Not Used

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 55-0433
POST MILE 9.89

BEAR STREET OC RETROFIT
CONCRETE BARRIER TYPE 60R
TRANSITION AT BRIDGE COLUMN-DETAILS NO. 2

DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. (02-02-11)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3604
PROJECT NUMBER & PHASE: 1213000001
CONTRACT NO.: 12-0M7204

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
3-28-14	6-06-12	1-24-12	3-19-14	5	5

FILE => 55-0433-e-xs16-090-2.dgn

USERNAME => s1332486 DATE PLOTTED => 05-JUN-2014 TIME PLOTTED => 11:15

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91,405	Var	107	110

José L. Higareda — REGISTERED CIVIL ENGINEER — 3-28-14 DATE

06-16-14 — PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSE L. HIGAREDA — No. 62338 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

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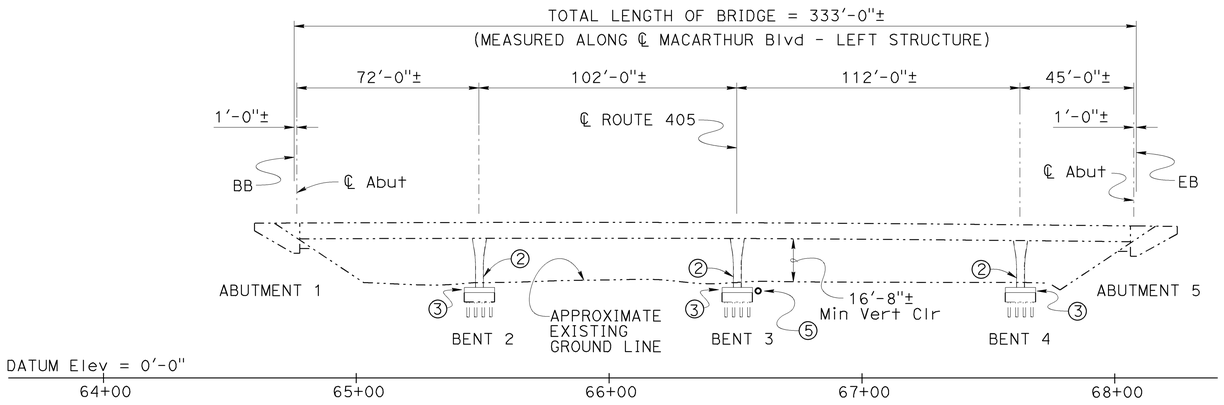
NOTES:

1. Remove and Replace Concrete Barriers at Bent 2 and Bent 3
2. Steel Column Casing Retrofit
3. Footing Retrofit
4. Electrolier (See "Roadway Plans")
5. Existing 24" RCP to be protected in place (See "Roadway Plans")

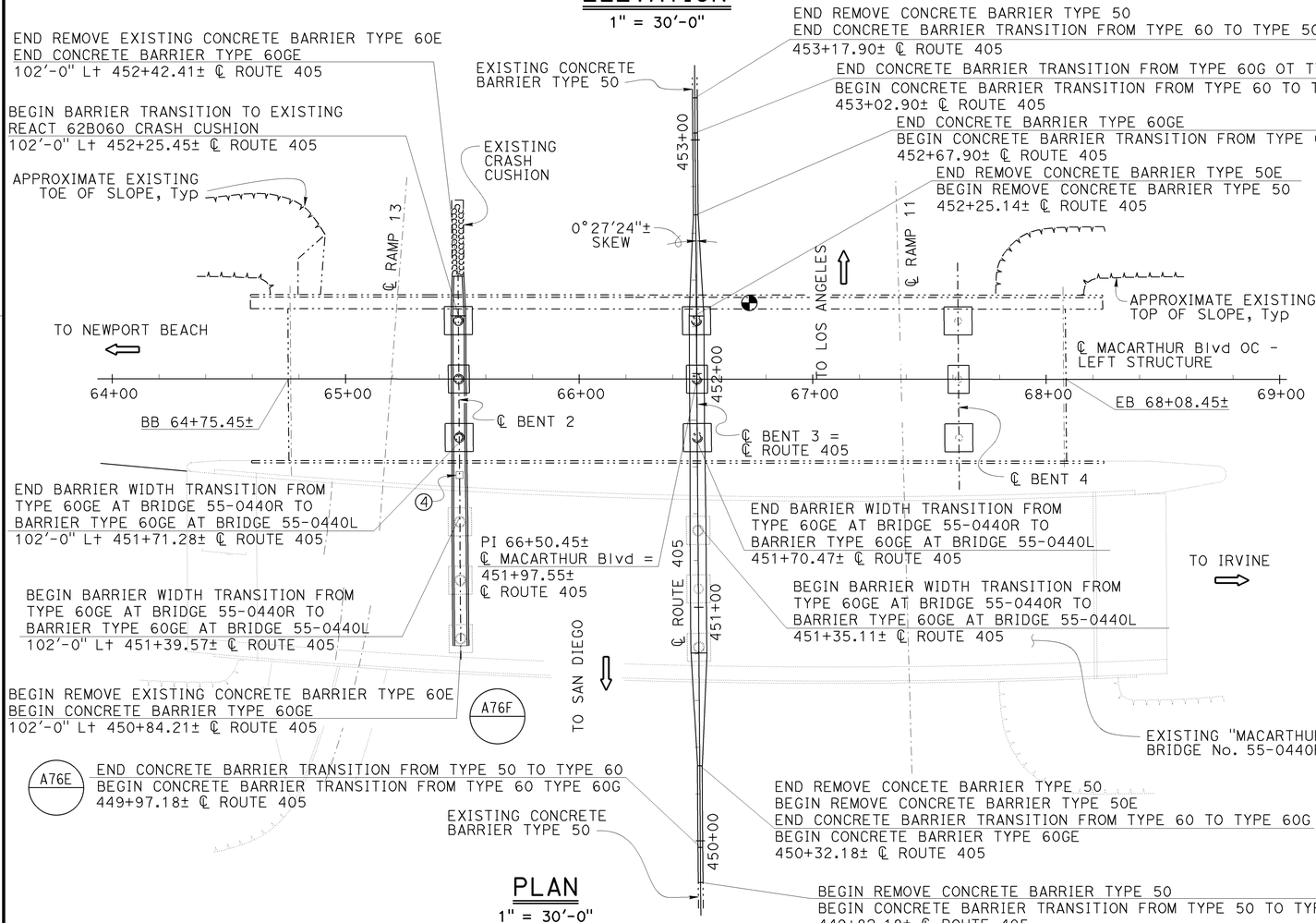
LEGEND:

- Indicates Point of Minimum Vertical Clearance
- Indicates Existing
- Indicates New Construction
- Indicates Bridge Removal Portion



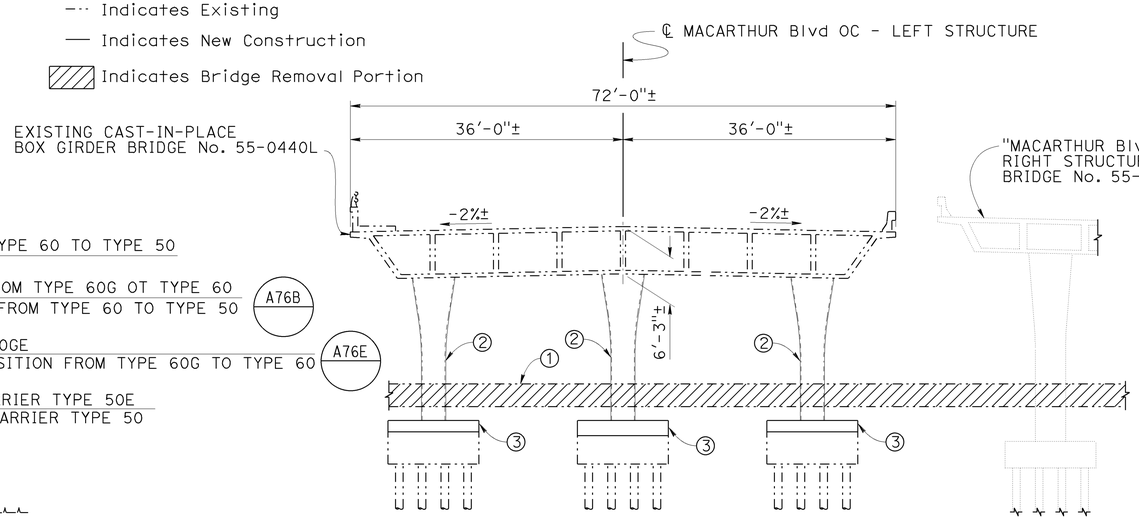
ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"

QUANTITIES

BRIDGE REMOVAL (PORTION), LOCATION D	LUMP	SUM
STRUCTURE EXCAVATION (BRIDGE)	183	CY
STRUCTURE BACKFILL (BRIDGE)	115	CY
STRUCTURAL CONCRETE, BRIDGE FOOTING	68	CY
DRILL AND BOND DOWEL	567	LF
BAR REINFORCING STEEL (BRIDGE)	18,909	LB
ASPHALT MEMBRANE WATERPROOFING	155	SQFT
COLUMN CASING	31,995	LB
CONCRETE BARRIER (TYPE 60)	30	LF
CONCRETE BARRIER (TYPE 60G)	70	LF
CONCRETE BARRIER (TYPE 60GE)	394	LF

Traci Menard
DESIGN ENGINEER

	BY	CHECKED
DESIGN	J. Higareda	A. Logus
DETAILS	Herman Mauroschadt	A. Logus
QUANTITIES	J. Higareda	A. Logus

LOAD & RESISTANCE FACTOR DESIGN — LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE

	BY	CHECKED
LAYOUT	J. Higareda	A. Logus
SPECIFICATIONS	Xiahong Li	PLANS AND SPECS COMPARED: Xiahong Li

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 15

BRIDGE NO. 55-0440L
POST MILE 7.8

MACARTHUR Blvd. OC RETROFIT
GENERAL PLAN

UNIT: 3604
PROJECT NUMBER & PHASE: 1213000001
CONTRACT NO.: 12-0M7204

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
12-1-13	3-5-14	3-28-14	2-26-14	1	4

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

FILE => 55-0440l-b-gp.dgn

USERNAME = s120777 DATE PLOTTED => 16-JUN-2014 TIME PLOTTED => 16:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91,405	Var	108	110

José L. Higareda 3-28-14
REGISTERED CIVIL ENGINEER DATE

06-16-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSE L. HIGAREDA — No. 62338 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

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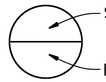
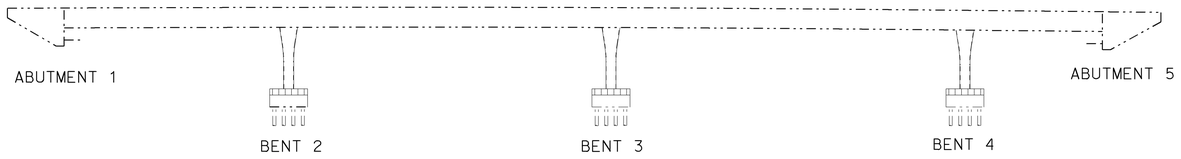
INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	INDEX TO PLANS
3	FOOTING DETAILS
4	COLUMN STEEL CASING DETAILS

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
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)
A76B	CONCRETE BARRIER TYPE 60
A76G	CONCRETE BARRIER TYPE 60S
A76F	CONCRETE BARRIER TYPE 60GE





LEGEND:

Structural Concrete, Bridge Footing (4 KSI at 28 days)

Indicates Existing Structure

CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

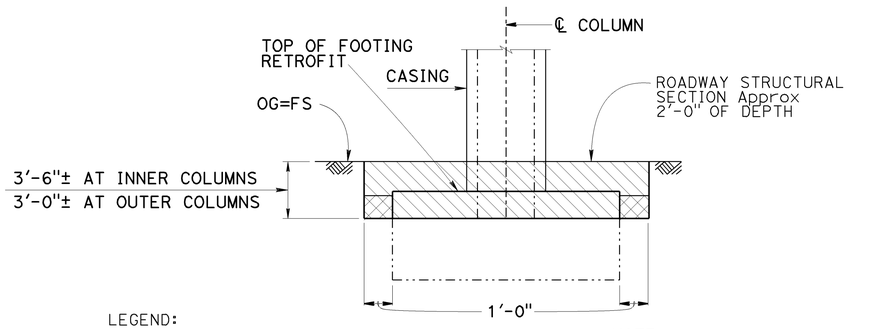
DESIGN:
AASHTO LRFD Bridge Design Specifications, 4th edition and the Caltrans Amendments.

SEISMIC DESIGN:
Caltrans Seismic Design Criteria (SDC), Version 1.7 dated March 2013.

SEISMIC LOADING:
Site specific ARS Curve (See "ARS Curve")
ARS Online Version 2.2.06, V_{s30} = 250 m/s

REINFORCED CONCRETE:
fy = 60 KSI
f'c = 4 KSI

STRUCTURAL STEEL:
fy = ASTM A709 Grade 36



LEGEND:

Indicates Structure Excavation

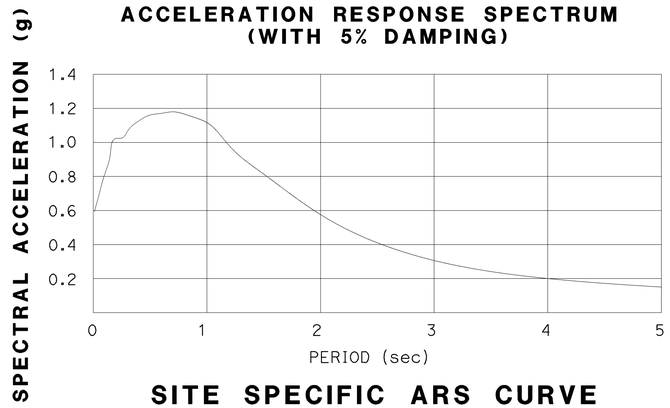
Indicates Structure Backfill

Indicates Existing Structure

NOTE:
FOR REPLACEMENT OF ROADWAY STRUCTURAL SECTION, SEE ROADWAY PLANS

LIMITS OF EXCAVATION AND BACKFILL

No Scale



SITE SPECIFIC ARS CURVE

DESIGN	BY J. Higareda	CHECKED A. Logus	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 15	BRIDGE NO. 55-0440L	MACARTHUR Blvd. OC RETROFIT
DETAILS	BY Herman Mauroschadt	CHECKED A. Logus			POST MILE 7.8	INDEX TO PLANS
QUANTITIES	BY J. Higareda	CHECKED A. Logus				

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3604
PROJECT NUMBER & PHASE: 1213000001
CONTRACT NO.: 12-0M7204

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-13-14	3-06-14	3-28-14		2	4

FILE => 55-0440l-c-itp.dgn

USERNAME => s120177 DATE PLOTTED => 16-JUN-2014 TIME PLOTTED => 16:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91,405	Var	109	110

José L. Higareda 3-28-14
REGISTERED CIVIL ENGINEER DATE

06-16-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSE L. HIGAREDA — No. 62338 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

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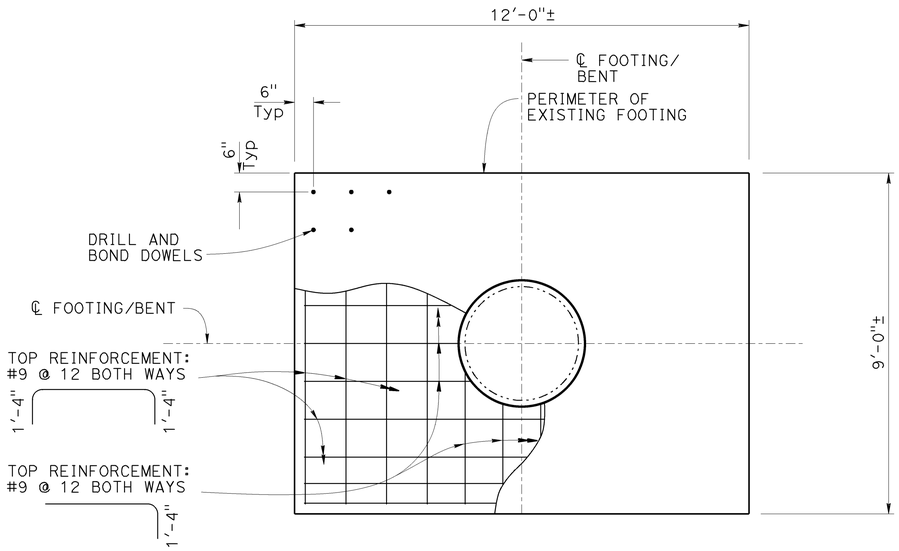
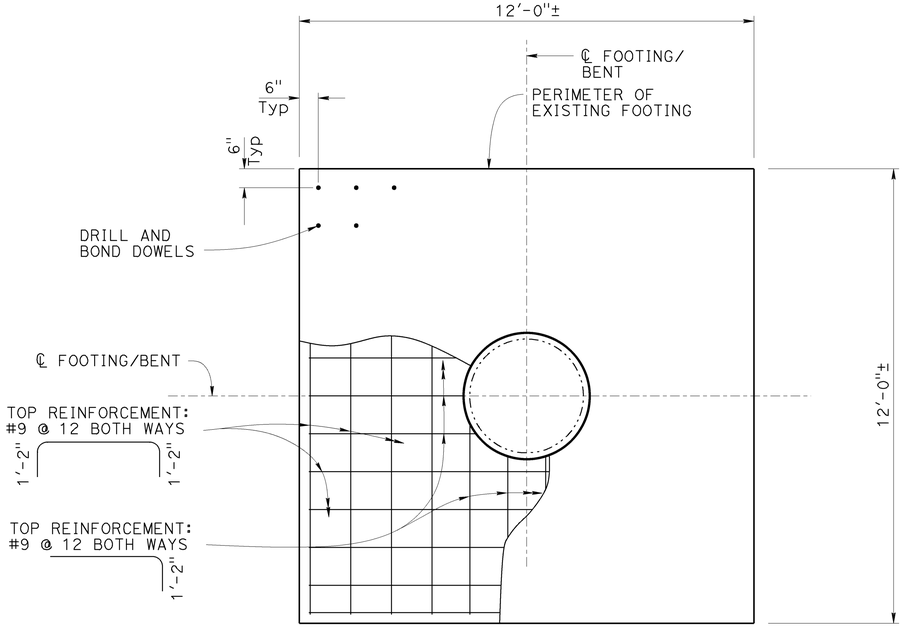
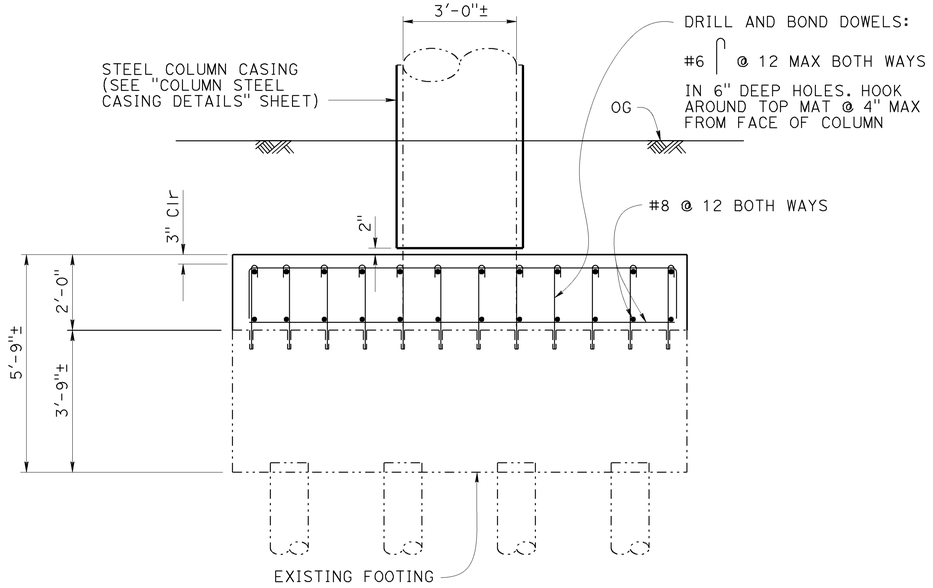


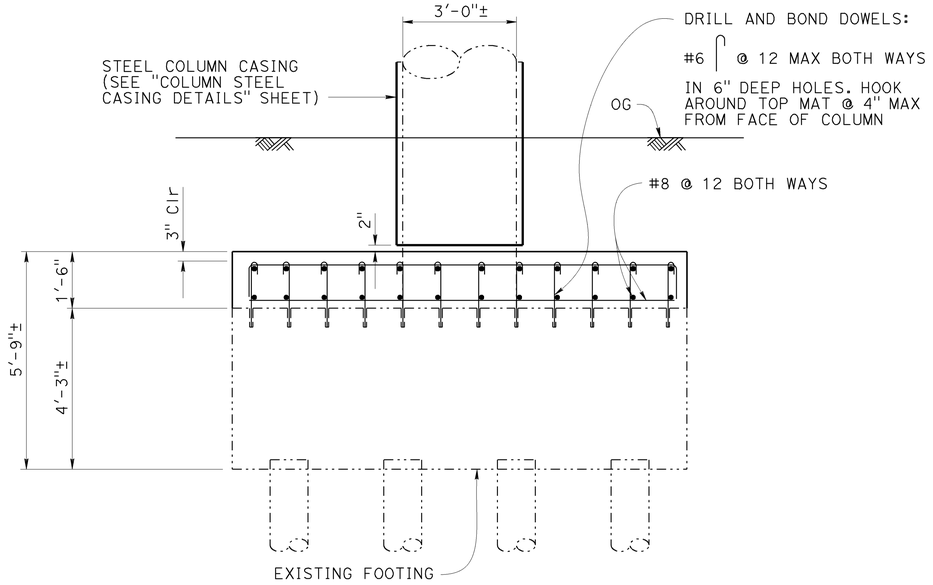
FOOTING PLAN
½" = 1'-0"



FOOTING PLAN
½" = 1'-0"



ELEVATION
½" = 1'-0"



ELEVATION
½" = 1'-0"

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

NOTE:

Footing Retrofit at Bent 2 columns shown, other locations similar.
No splicing allowed.

LEGEND:

——— Indicates New Construction

·—·—·—·— Indicates Existing Structure

DESIGN	BY J. Higareda	CHECKED A. Logus	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY H. Mauroschadt	CHECKED A. Logus	
QUANTITIES	BY J. Higareda	CHECKED A. Logus	

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH 15

BRIDGE NO. 55-0440L
POST MILE 7.8

MACARTHUR Blvd. OC RETROFIT
FOOTING DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

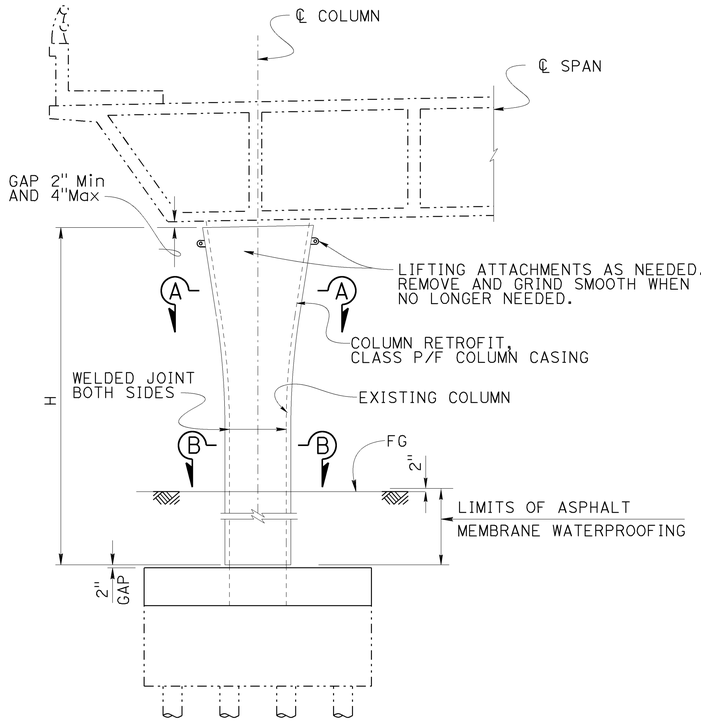
UNIT: 3604
PROJECT NUMBER & PHASE: 1213000001 CONTRACT NO.: 12-0M7204

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-14-14	3-28-14			3	4

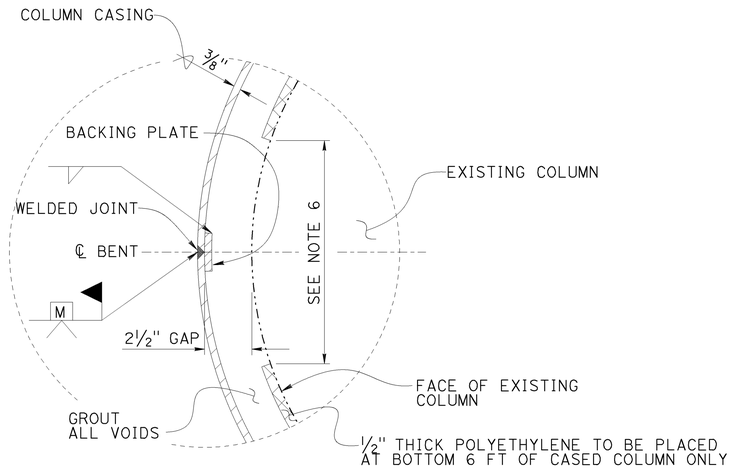
FILE => 55-0440l-d-ftgdet.dgn

USERNAME => s120177 DATE PLOTTED => 16-JUN-2014 TIME PLOTTED => 16:29



PART ELEVATION

1/4" = 1'-0"



DETAIL C

3" = 1'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91,405	Var	110	110

José L. Higareda 3-28-14
REGISTERED CIVIL ENGINEER DATE

06-16-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSE L. HIGAREDA — No. 62338 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

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LEGEND:

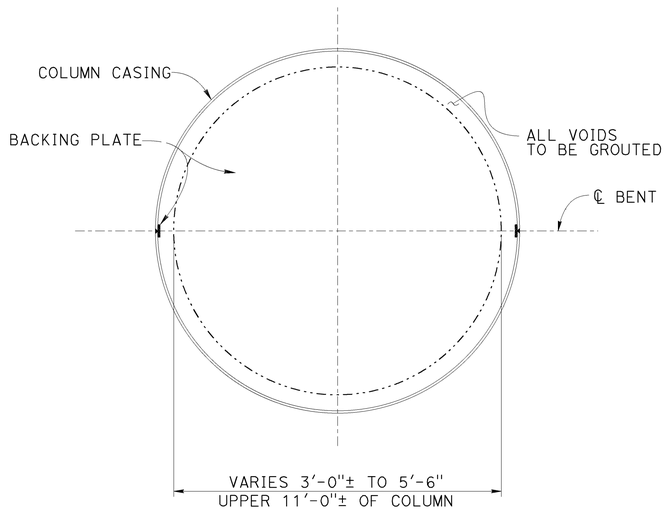
---·---·--- Indicates Existing Structure

——— Indicates New Construction

BENT DATA TABLE *

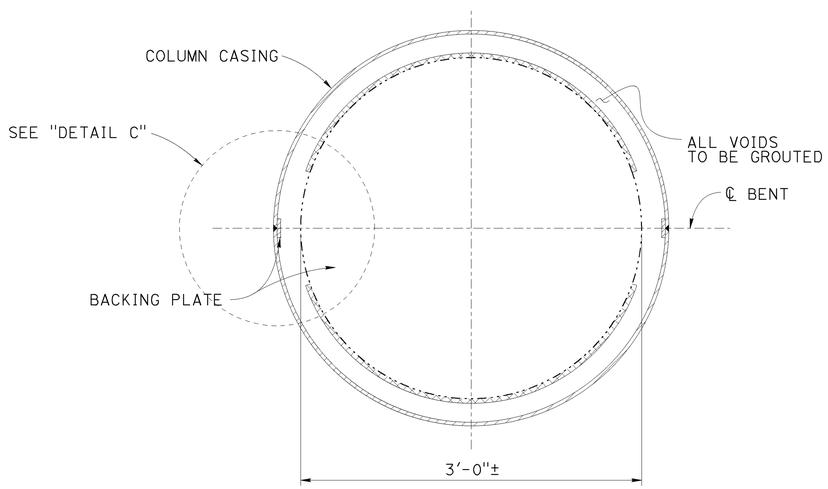
BENT NO.	APPROX. CASING HEIGHT "H" (ft)	SUPERSTRUCTURE SOFFIT Elev. (ft)	TOP OF PILE CAP Elev. (ft)
BENT 2	19.25	55.0	35.75
BENT 3	19.15	54.9	35.75
BENT 4	18.35	54.1	35.75

* Elevations and dimensions are approximate and as per As-Built Plans.



SECTION A-A

1" = 1'-0"



SECTION B-B

1½" = 1'-0"

(TWO WELDED INTERSECTION JOINT)

WELDED JOINT DETAIL

1½" = 1'-0"

NOTES:
1. All exterior welds to be ground flush with surface.
2. Appropriate injection nozzles to be provided on casing, but removed and ground flush following completion of grouting operation.
3. All voids between steel casing and column to be pressure grouted from bottom to top.
4. All grouting must be performed in two stages for all columns.
5. Location and number of welds to be determined by the Contractor, and subject to approval by the Engineer. No skip welds allowed.
6. Contractor shall remove 12" polyethylene strip behind backing plate.

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

DESIGN	BY J. Higareda	CHECKED A. Logus	
DETAILS	BY H. Mauroschadt	CHECKED A. Logus	
QUANTITIES	BY J. Higareda	CHECKED A. Logus	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 15

BRIDGE NO. 55-0440L
POST MILE 7.8

MACARTHUR Blvd. OC RETROFIT
COLUMN STEEL CASING DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3604
PROJECT NUMBER & PHASE: 1213000001
CONTRACT NO.: 12-0M7204

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-14-14	3-28-14			4	4

FILE => 55-0440l-e-casing.dgn

USERNAME => s120177 DATE PLOTTED => 16-JUN-2014 TIME PLOTTED => 16:29