DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	5R2	1204

Gene V. Lusherovich 12/19/02
REGISTERED CIVIL ENGINEER DATE

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Gene V. Lusherovich No. C54338 Exp. 12/31/03 CIVIL STATE OF CALIFORNIA

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
303 Second St., Suite 700N
San Francisco, CA 94107-1317

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REGISTERED PROFESSIONAL ENGINEER Brian M. Wood No. 76959 Exp. 12-31-14 CIVIL STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER Mark Grodal No. C65594 Exp. 9/31/07 CIVIL STATE OF CALIFORNIA

FOR REVISION 2 ONLY

Brian M. Wood

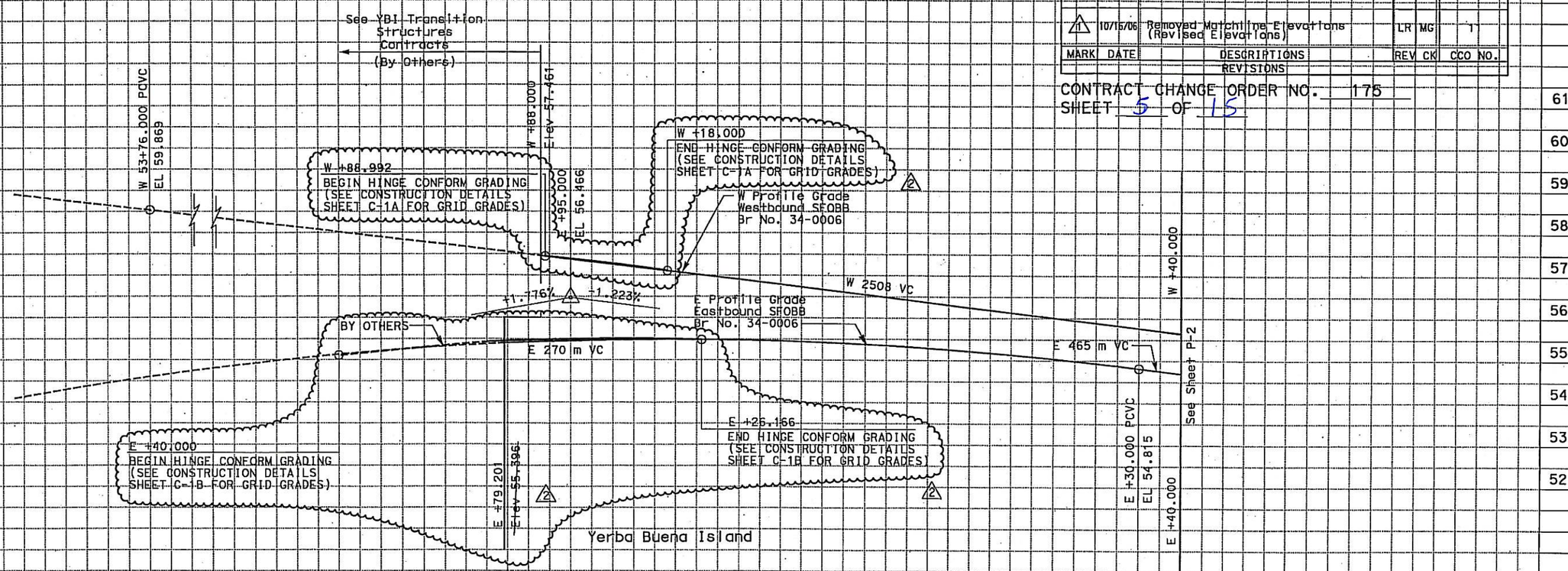
Mark Grodal

MARK	DATE	DESCRIPTIONS REVISIONS	REV	CK	CCO NO.
2	05/10/13	Conform Grading at Hinge A & K	BW	TL	175
1	10/15/06	Removed Matchline Elevations (Revised Elevations)	LR	MG	1

CONTRACT CHANGE ORDER NO. 175
SHEET 5 OF 15

NOTE:

1. Elevation is based on 1929 National Geodetic Vertical Datum (NGVD).



W LINE AND E LINE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE
SCALE: 1:500 HORIZ
1:50 VERT

P-1

Station	+80	56+00	+20	+40	+60	+80	57+00	+20	+40	+60
Cu.										
M. Exc.			0							
M. Emb.			0							

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DESIGN OVERSIGHT: Bob Zandipour

CALCULATED/DESIGNED BY: GVL
CHECKED BY: KR

DATE REVISED: 11/02 11/02

REVISED BY / DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 10-MAY-2013
TIME PLOTTED => 16:45

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME =>s133768
DGN FILE =>04-0120f1_0005R02.cco

CU 04251 | EA 0120F1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	7R2	1204

Gene V. Lusherovich 12/19/02
REGISTERED CIVIL ENGINEER DATE

12-6-04
PLANS APPROVAL DATE

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
303 Second St., Suite 700N
San Francisco, CA 94107-1317

REGISTERED PROFESSIONAL ENGINEER Gene V. Lusherovich No. C54338 Exp. 12/31/03 CIVIL STATE OF CALIFORNIA

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Caltrans Metric

NOTE:

1. Elevation is based on 1929 National Geodetic Vertical Datum (NGVD).

LEGEND: (FOR THIS SHEET ONLY)

AS-BUILT SURVEY DATA (WITH 50-MM OVERLAY) 2

REGISTERED PROFESSIONAL ENGINEER Brian M. Wood No. 76969 Exp. 12-31-14 CIVIL STATE OF CALIFORNIA

FOR REVISION 2 ONLY

Brian M Wood

REGISTERED PROFESSIONAL ENGINEER Mark Brocki No. C65594 Exp. 9/31/07 CIVIL STATE OF CALIFORNIA

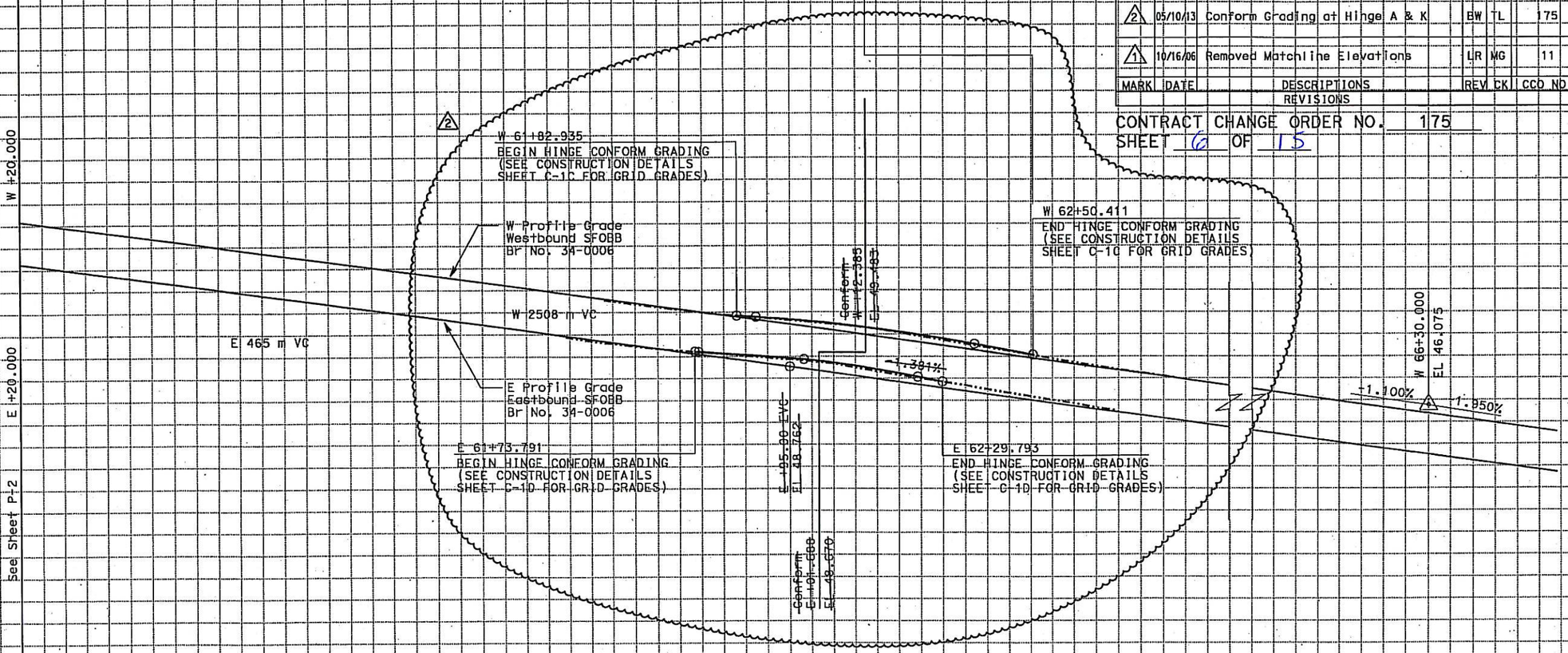
1

By Others
See Contract No. 04-012024

MARK	DATE	DESCRIPTIONS	REV	CK	CCO NO.
2	05/10/13	Conform Grading at Hinge A & K	BW	TL	175
1	10/16/06	Removed Matchline Elevations	LR	MG	11

REVISIONS

CONTRACT CHANGE ORDER NO. 175
SHEET 6 OF 15



W LINE AND E LINE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE

SCALE: 1:500 HORIZ
1:50 VERT

P-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DESIGN OVERSIGHT
Bob Zandipour

CALCULATED/DESIGNED BY GVL
CHECKED BY KR
DATE 11/02
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 10-MAY-2013
TIME PLOTTED => 16:45

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME =>s133768
DGN FILE =>04-0120f1_0007R02.cco

CU 04251

EA 0120F1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	SF	80	13.2/13.9	8R1	1204

Gene V. Lusherovich 12/19/02
REGISTERED CIVIL ENGINEER DATE

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Gene V. Lusherovich No. C54338 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
303 Second St., Suite 700N
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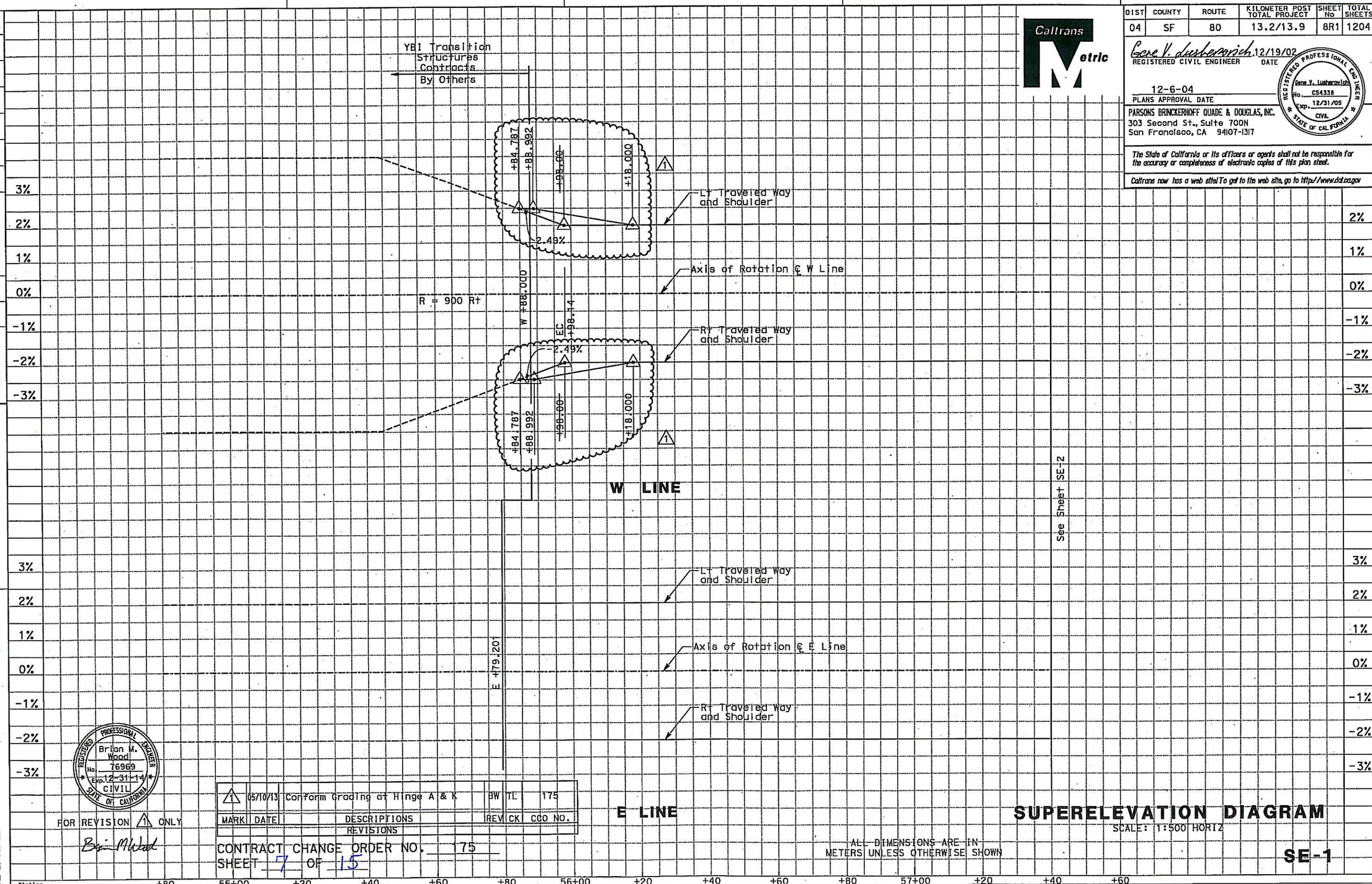


DESIGN OVERSIGHT
Bob Zandipour

CALCULATED/DESIGNED BY GVL DATE 11/02
CHECKED BY KR 11/02

REVISED BY
DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

REGISTERED PROFESSIONAL ENGINEER Brian M. Wood No. 76969 Exp. 12-31-14 CIVIL STATE OF CALIFORNIA

FOR REVISION ⚠1 ONLY
Brian Michael

MARK	DATE	DESCRIPTIONS	REV	CK	CCO NO.
⚠1	05/10/13	Conform Grading at Hinge A & K	BW	TL	175

REVISIONS

CONTRACT CHANGE ORDER NO. 175
SHEET 7 OF 15

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SUPERELEVATION DIAGRAM

SCALE: 1:500 HORIZ

SE-1

LAST REVISION DATE PLOTTED => 10-MAY-2013
12-12-12 TIME PLOTTED => 16:46

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME =>s133768
DGN FILE =>04-0120f1_0008R01.cco

CU 04251

EA 0120F1

MARK	DATE	DESCRIPTIONS	REV	CK	CCO NO.
1	05/10/13	Conform Grading at Hinge A & K	BW	TL	175

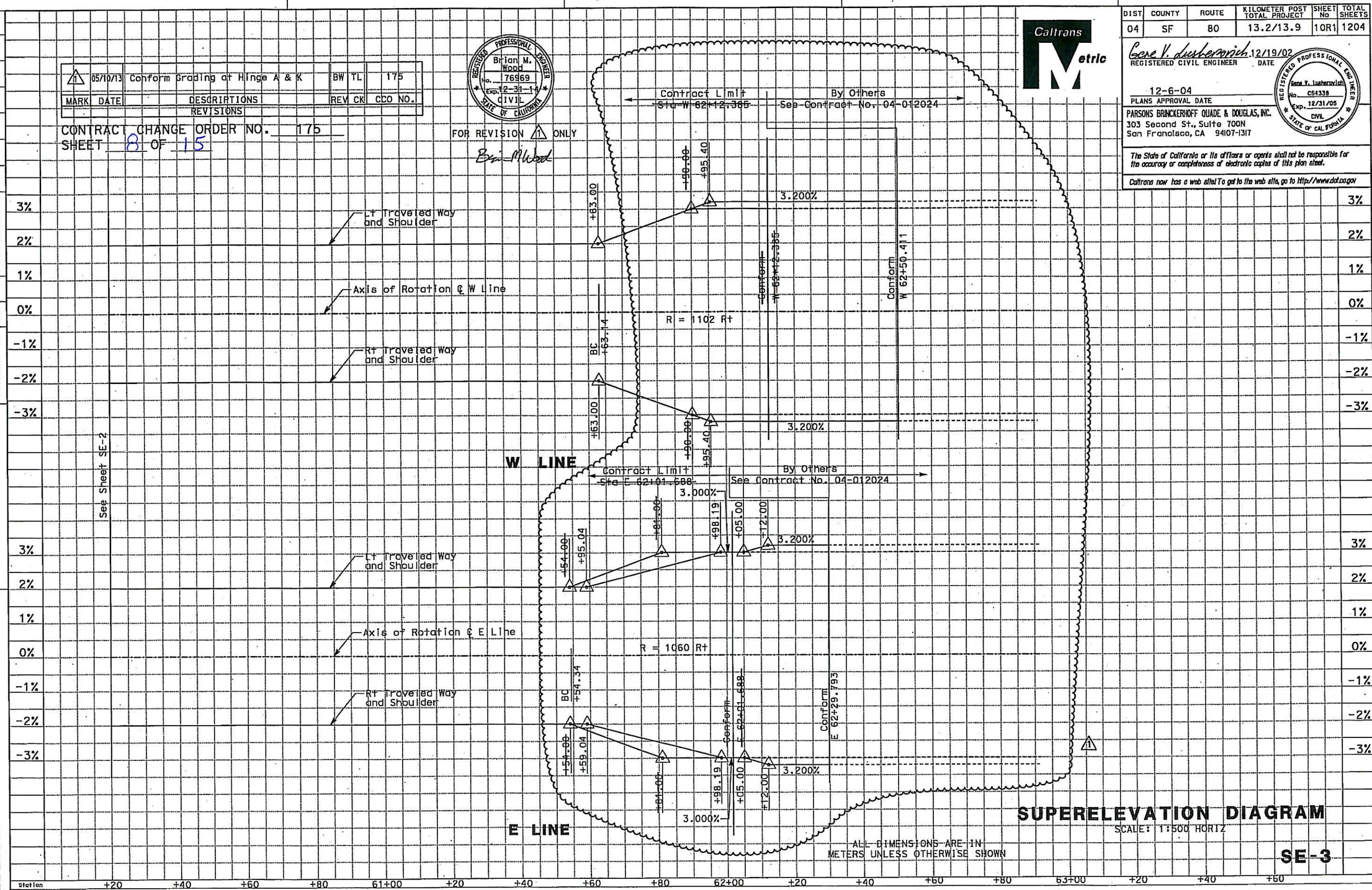
REVISIONS

CONTRACT CHANGE ORDER NO. 175
SHEET 8 OF 15

FOR REVISION 1 ONLY

Brian Wood

REGISTERED PROFESSIONAL ENGINEER Brian M. Wood No. 76969 Exp. 12-31-14 CIVIL STATE OF CALIFORNIA



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SUPERELEVATION DIAGRAM

SCALE: 1:500 HORIZ

SE-3

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	10R1	1204

Gene V. Lusherovich 12/19/02
REGISTERED CIVIL ENGINEER DATE

12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Gene V. Lusherovich No. C54338 Exp. 12/31/05 CIVIL STATE OF CALIFORNIA

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.
303 Second St., Suite 700N
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Caltrans Metric

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN OVERSIGHT: Bob Zandipour

CALCULATED/DESIGNED BY: GVL — CHECKED BY: KR

DATE REVISED: 11/02 — DATE REVISED: 11/02

LAST REVISION 00-00-00 — DATE PLOTTED => 10-MAY-2013 — TIME PLOTTED => 16:46

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS: 0 20 40 60 80

USERNAME =>s133768
DGN FILE =>04-0120f1_0010R01.cco

CU 04251 | EA 0120F1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	SF	80	13.2/13.9	11 S1	1204

REGISTERED CIVIL ENGINEER — DATE 05-10-13

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Brian M. Wood No. 76969 Exp. 12-31-14 CIVIL STATE OF CALIFORNIA

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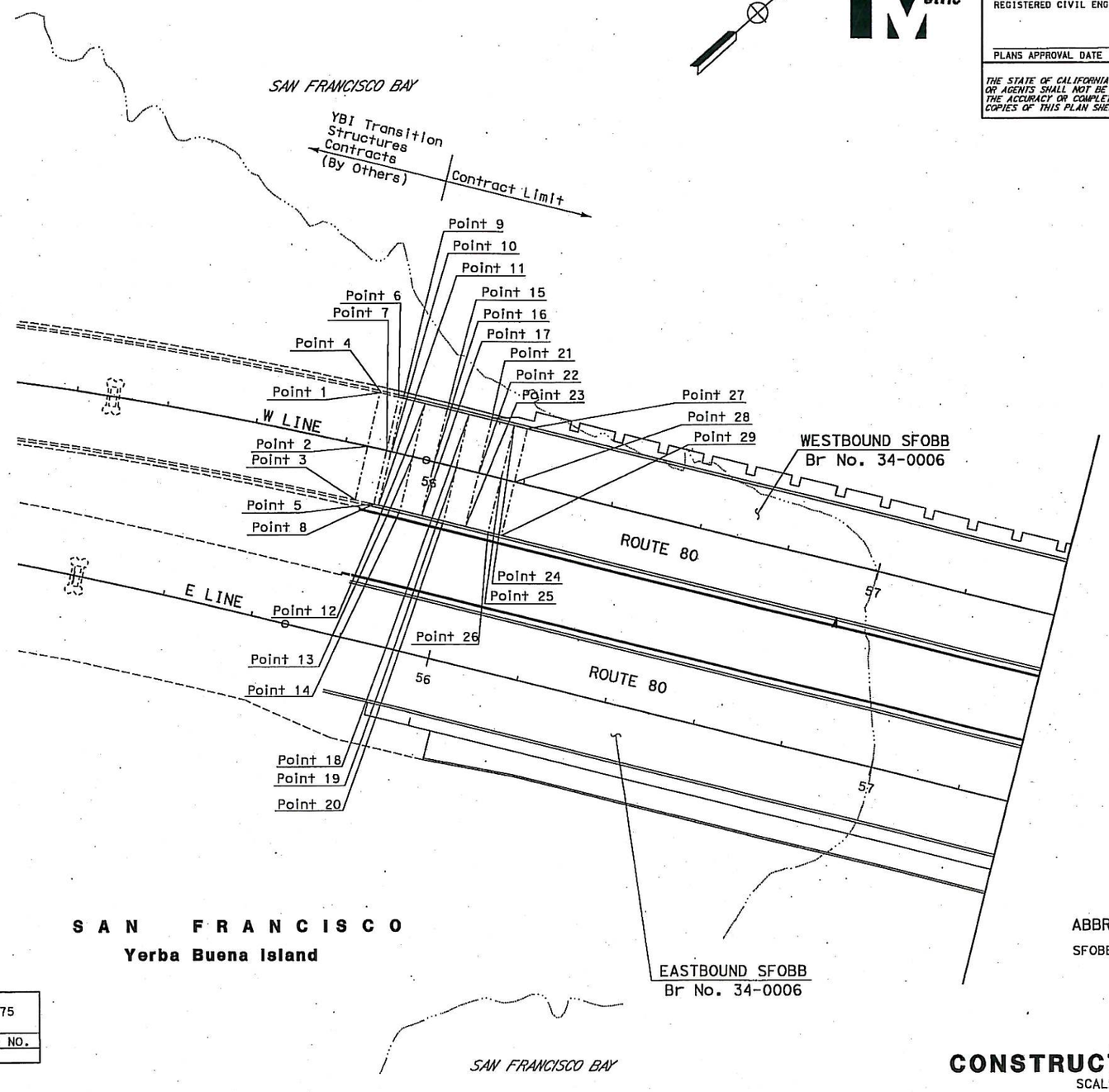
Caltrans Metric

Point No.	LOCATION	Elev
1	12.000 m Lt W 55+84.787	57.800
2	0.000 m Lt W 55+84.787	57.501
3	12.000 m Rt W 55+84.787	57.202*
4	12.000 m Lt W 55+85.138	57.795*
5	12.000 m Rt W 55+88.745	57.155*
6	12.000 m Lt W 55+88.992	57.751*
7	0.000 m Lt W 55+88.992	57.452
8	12.000 m Rt W 55+88.992	57.153
9	12.000 m Lt W 55+90.000	57.736
10	0.000 m Lt W 55+90.000	57.440
11	12.000 m Rt W 55+90.000	57.144
12	12.000 m Lt W 55+95.000	57.668
13	0.000 m Lt W 55+95.000	57.381
14	12.000 m Rt W 55+95.000	57.094
15	12.000 m Lt W 56+00.000	57.598
16	0.000 m Lt W 56+00.000	57.322
17	12.000 m Rt W 56+00.000	57.046
18	12.000 m Lt W 56+05.000	57.529
19	0.000 m Lt W 56+05.000	57.263
20	12.000 m Rt W 56+05.000	56.997
21	12.000 m Lt W 56+10.000	57.460
22	0.000 m Lt W 56+10.000	57.204
23	12.000 m Rt W 56+10.000	56.948
24	12.000 m Lt W 56+15.000	57.391
25	0.000 m Lt W 56+15.000	57.145
26	12.000 m Rt W 56+15.000	56.899
27	12.000 m Lt W 56+18.000	57.349
28	0.000 m Lt W 56+18.000	57.109
29	12.000 m Rt W 56+18.000	56.869

NOTE:
* DENOTES CORNER OF HINGE PLATE



S A N F R A N C I S C O

Yerba Buena Island

ABBREVIATIONS:

SFOBB San Francisco Oakland Bay Bridge

MARK	DATE	DESCRIPTIONS	REV	CK	CCO NO.
0	05/10/13	Conform Grading at Hinge A & K	BW	TL	175

REVISIONS

CONTRACT CHANGE ORDER NO. 175
SHEET 9 OF 15

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

CONSTRUCTION DETAIL

SCALE: 1:500

C-1A

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN OVERSIGHT: Bob Zandipour

CALCULATED/DESIGNED BY: BW — DATE 12/12 — REVISED BY: BW — DATE REVISED: 01/13

CHECKED BY: TL — 12/12

LAST REVISION 12-12-12 — DATE PLOTTED => 10-MAY-2013 — TIME PLOTTED => 16:46

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

DGN FILE => 04-0120f1_0011501.cco
USERNAME => s133768

CU 04251 — EA 0120F1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	11 S2	1204

Brian M Wood
REGISTERED CIVIL ENGINEER 05-10-13 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Brian M. Wood No. 76969 Exp. 12-31-14 CIVIL STATE OF CALIFORNIA

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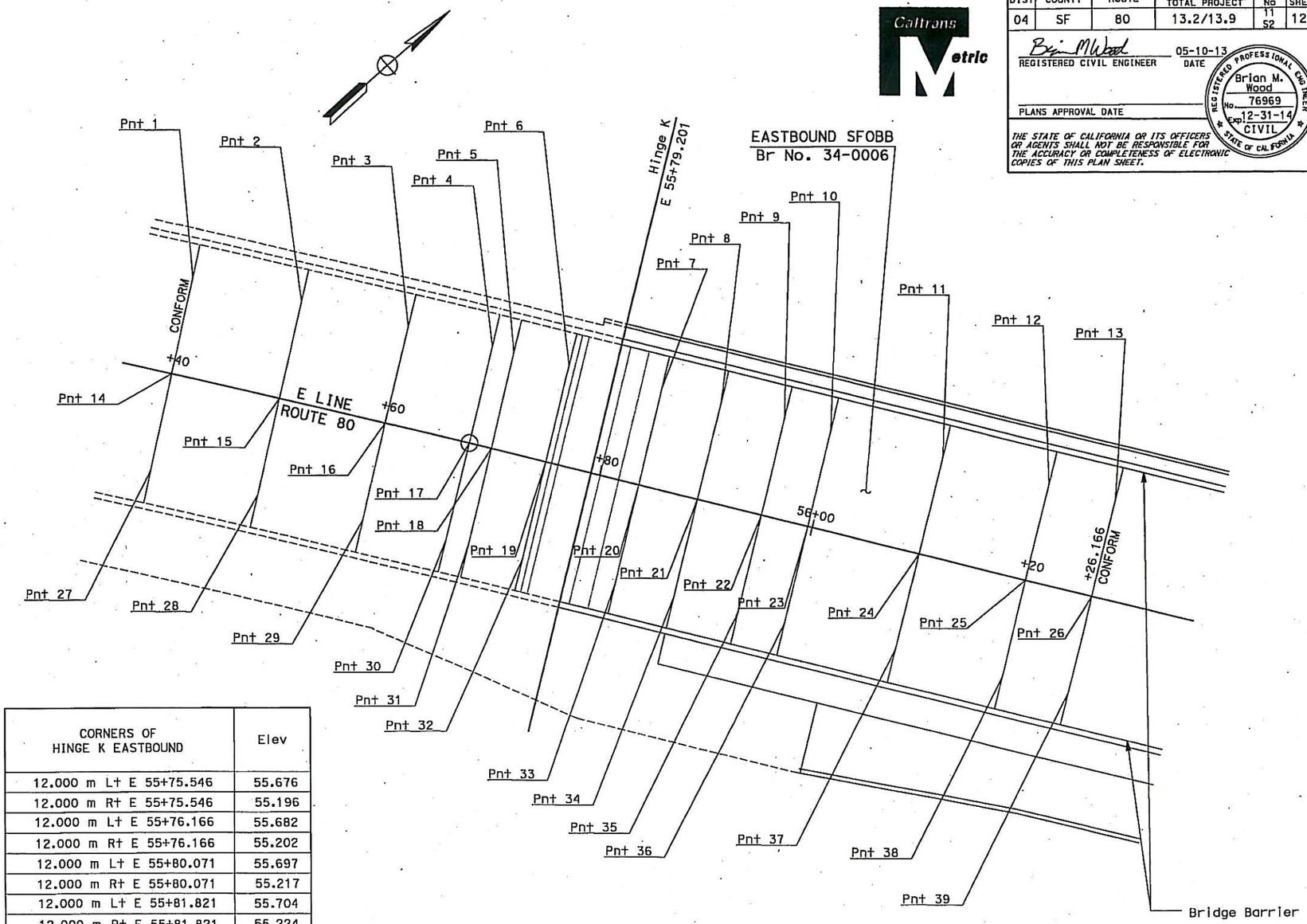
Caltrans Metric



Point No.	LOCATION	Elev
1	9.000 m Lt E 55+40.000	55.293
2	9.000 m Lt E 55+50.000	55.387
3	9.000 m Lt E 55+60.000	55.481
4	9.000 m Lt E 55.67.762	55.549
5	9.000 m Lt E 55+69.837	55.565
6	9.000 m Lt E 55+75.000	55.611
7	9.000 m Lt E 55+83.701	55.650
8	9.000 m Lt E 55+89.201	55.666
9	9.000 m Lt E 55+95.201	55.679
10	9.000 m Lt E 55+99.581	55.686
11	9.000 m Lt E 56+10.000	55.690
12	9.000 m Lt E 56+20.000	55.682
13	9.000 m Lt E 56+26.166	55.669
14	0.000 m Lt E 55+40.000	55.113
15	0.000 m Lt E 55+50.000	55.207
16	0.000 m Lt E 55+60.000	55.301
17	0.000 m Lt E 55.67.762	55.369
18	0.000 m Lt E 55+69.837	55.385
19	0.000 m Lt E 55+75.000	55.431
20	0.000 m Lt E 55+83.701	55.470
21	0.000 m Lt E 55+89.201	55.486
22	0.000 m Lt E 55+95.201	55.499
23	0.000 m Lt E 55+99.581	55.506
24	0.000 m Lt E 56+10.000	55.510
25	0.000 m Lt E 56+20.000	55.502
26	0.000 m Lt E 56+26.166	55.489
27	9.000 m Rt E 55+40.000	54.933
28	9.000 m Rt E 55+50.000	55.027
29	9.000 m Rt E 55+60.000	55.121
30	9.000 m Rt E 55.67.762	55.189
31	9.000 m Rt E 55+69.837	55.205
32	9.000 m Rt E 55+75.000	55.251
33	9.000 m Rt E 55+83.701	55.290
34	9.000 m Rt E 55+89.201	55.306
35	9.000 m Rt E 55+95.201	55.319
36	9.000 m Rt E 55+99.581	55.326
37	9.000 m Rt E 56+10.000	55.330
38	9.000 m Rt E 56+20.000	55.322
39	9.000 m Rt E 56+26.166	55.309

CORNERS OF HINGE K EASTBOUND	Elev
12.000 m Lt E 55+75.546	55.676
12.000 m Rt E 55+75.546	55.196
12.000 m Lt E 55+76.166	55.682
12.000 m Rt E 55+76.166	55.202
12.000 m Lt E 55+80.071	55.697
12.000 m Rt E 55+80.071	55.217
12.000 m Lt E 55+81.821	55.704
12.000 m Rt E 55+81.821	55.224

ABBREVIATIONS:

SFOBB San Francisco Oakland Bay Bridge

MARK	DATE	DESCRIPTIONS	REV	CK	CCO NO.
		REVISIONS			
0	05/10/13	Conform Grading at Hinge A & K	BW	TL	175

CONTRACT CHANGE ORDER NO. 175
SHEET 10 OF 15

CONSTRUCTION DETAIL

SCALE: 1:200

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

C-1B

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DESIGN OVERSIGHT: Bob Zandipour

CALCULATED/DESIGNED BY: BW DATE 04/13 REVISED BY
CHECKED BY: TL DATE REVISED

LAST REVISION 04-08-13
DATE PLOTTED => 10-MAY-2013
TIME PLOTTED => 17:15

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

DGN FILE => 04-0120f1_0011S02.cco
USERNAME => s133768

CU 04251 EA 0120F1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	11 S3	1204

REGISTERED CIVIL ENGINEER — DATE 05-10-13

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Brian M. Wood — No. 76969 — Exp. 12-31-14 — CIVIL — STATE OF CALIFORNIA

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Caltrans Metric

Point No.	LOCATION	Elev
1	9.000 m Lt W 61+82.935	50.171
2	9.000 m Lt W 61+85.000	50.158
3	9.000 m Lt W 61+90.000	50.141
4	9.000 m Lt W 61+95.000	50.118
5	9.000 m Lt W 62+00.000	50.075
6	9.000 m Lt W 62+05.000	50.025
7	9.000 m Lt W 62+10.000	49.969
8	9.000 m Lt W 62+15.000	49.907
9	9.000 m Lt W 62+20.000	49.839
10	9.000 m Lt W 62+25.000	49.765
11	9.000 m Lt W 62+30.000	49.685
12	9.000 m Lt W 62+35.000	49.599
13	9.000 m Lt W 62+40.000	49.508
14	9.000 m Lt W 62+45.000	49.417
15	9.000 m Lt W 62+50.000	49.326
16	9.000 m Lt W 62+50.411	49.318
17	0.000 m Lt W 61+82.935	49.918
18	0.000 m Lt W 61+85.000	49.904
19	0.000 m Lt W 61+90.000	49.871
20	0.000 m Lt W 61+95.000	49.832
21	0.000 m Lt W 62+00.000	49.787
22	0.000 m Lt W 62+05.000	49.737
23	0.000 m Lt W 62+10.000	49.681
24	0.000 m Lt W 62+15.000	49.619
25	0.000 m Lt W 62+20.000	49.551
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29	0.000 m Lt W 62+40.000	49.220
30	0.000 m Lt W 62+45.000	49.129
31	0.000 m Lt W 62+50.000	49.038
32	0.000 m Lt W 62+50.411	49.030
33	9.000 m Rt W 61+82.935	49.665
34	9.000 m Rt W 61+85.000	49.650
35	9.000 m Rt W 61+90.000	49.601
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39	9.000 m Rt W 62+10.000	49.393
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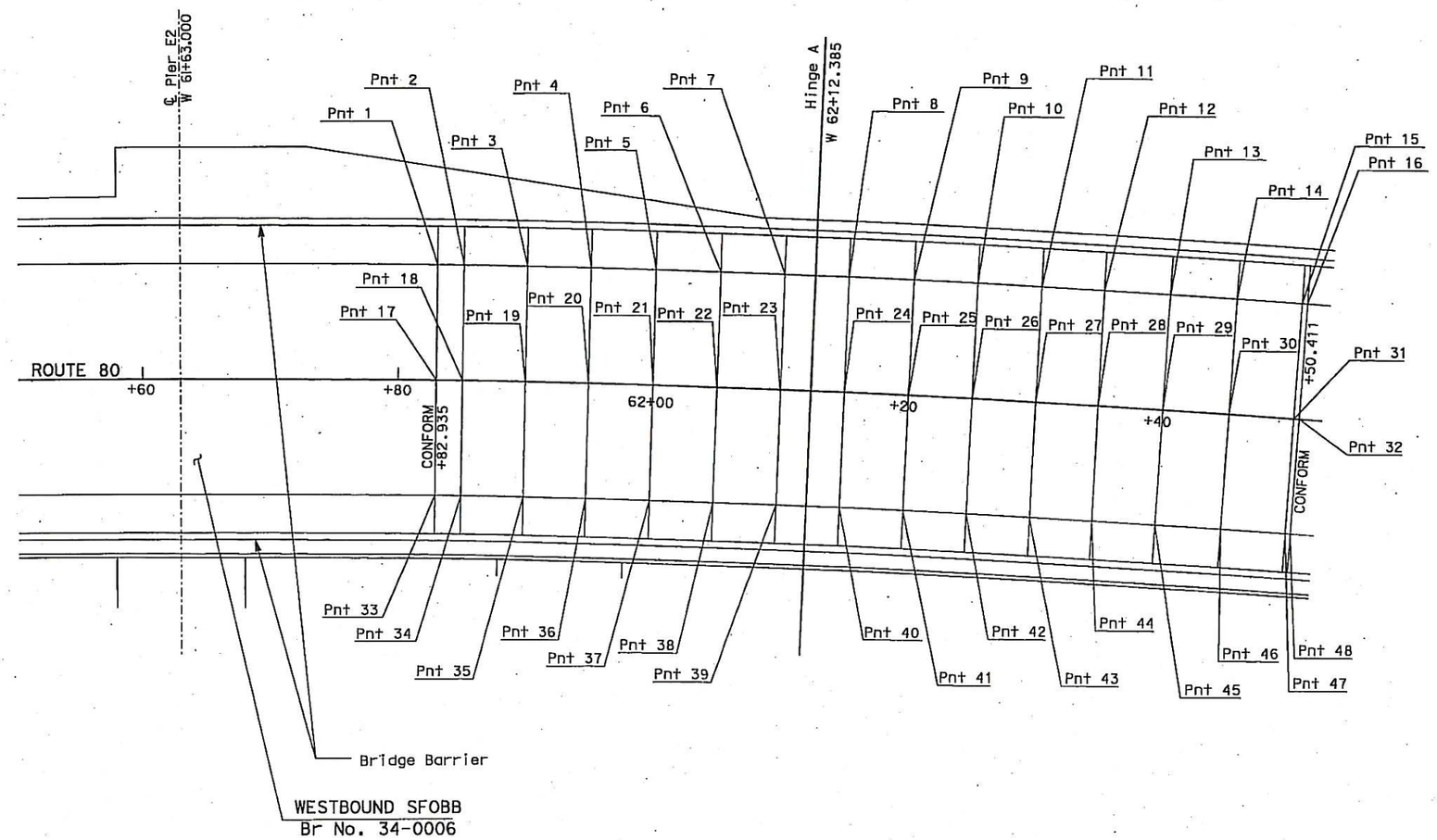
41	9.000 m Rt W 62+20.000	49.263
42	9.000 m Rt W 62+25.000	49.189
43	9.000 m Rt W 62+30.000	49.109
44	9.000 m Rt W 62+35.000	49.023
45	9.000 m Rt W 62+40.000	48.932
46	9.000 m Rt W 62+45.000	48.841
47	9.000 m Rt W 62+50.000	48.750
48	9.000 m Rt W 62+50.411	48.742

CORNERS OF HINGE A WESTBOUND	Elev
12.000 m Lt W 62+09.630	50.069
12.000 m Rt W 62+09.630	49.301
12.000 m Lt W 62+13.435	50.023
12.000 m Rt W 62+13.435	49.255



MARK	DATE	DESCRIPTIONS	REV	CK	CCO NO.
0	05/10/13	Hinge A Grading	BW	TL	175

REVISIONS

CONTRACT CHANGE ORDER NO. 175
SHEET 11 OF 15

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

CONSTRUCTION DETAILS

SCALE: 1:200

C-1C

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

DESIGN OVERSIGHT: Bob Zandipour

CALCULATED/DESIGNED BY: BW — CHECKED BY: TL — DATE 02/13 — REVISED BY — DATE REVISED

LAST REVISION 02-22-13 — DATE PLOTTED => 10-MAY-2013 — TIME PLOTTED => 17:06

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS: 0 20 40 60 80

DGN FILE => 04-0120f1_0011S03.cco
USERNAME => s133768

CU 04251 — EA 0120F1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	11 S4	1204

Caltrans Metric

Brian M Wood 05-10-13
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Brian M. Wood No. 76969 Exp. 12-31-14 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.

Point No.	LOCATION	Elev
1	9.000 m Lt E 61+73.371	49.321
2	9.000 m Lt E 61+75.000	49.315
3	9.000 m Lt E 61+80.000	49.294
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5	9.000 m Lt E 61+90.000	49.245
6	9.000 m Lt E 61+95.000	49.220
7	9.000 m Lt E 62+00.000	49.181
8	9.000 m Lt E 62+05.000	49.119
9	9.000 m Lt E 62+10.000	49.062
10	9.000 m Lt E 62+15.000	48.988
11	9.000 m Lt E 62+20.000	48.901
12	9.000 m Lt E 62+25.000	48.805
13	9.000 m Lt E 62+29.793	48.710
14	0.000 m Lt E 61+73.371	49.108
15	0.000 m Lt E 61+75.000	49.098
16	0.000 m Lt E 61+80.000	49.065
17	0.000 m Lt E 61+85.000	49.030
18	0.000 m Lt E 61+90.000	48.994
19	0.000 m Lt E 61+95.000	48.957
20	0.000 m Lt E 62+00.000	48.911
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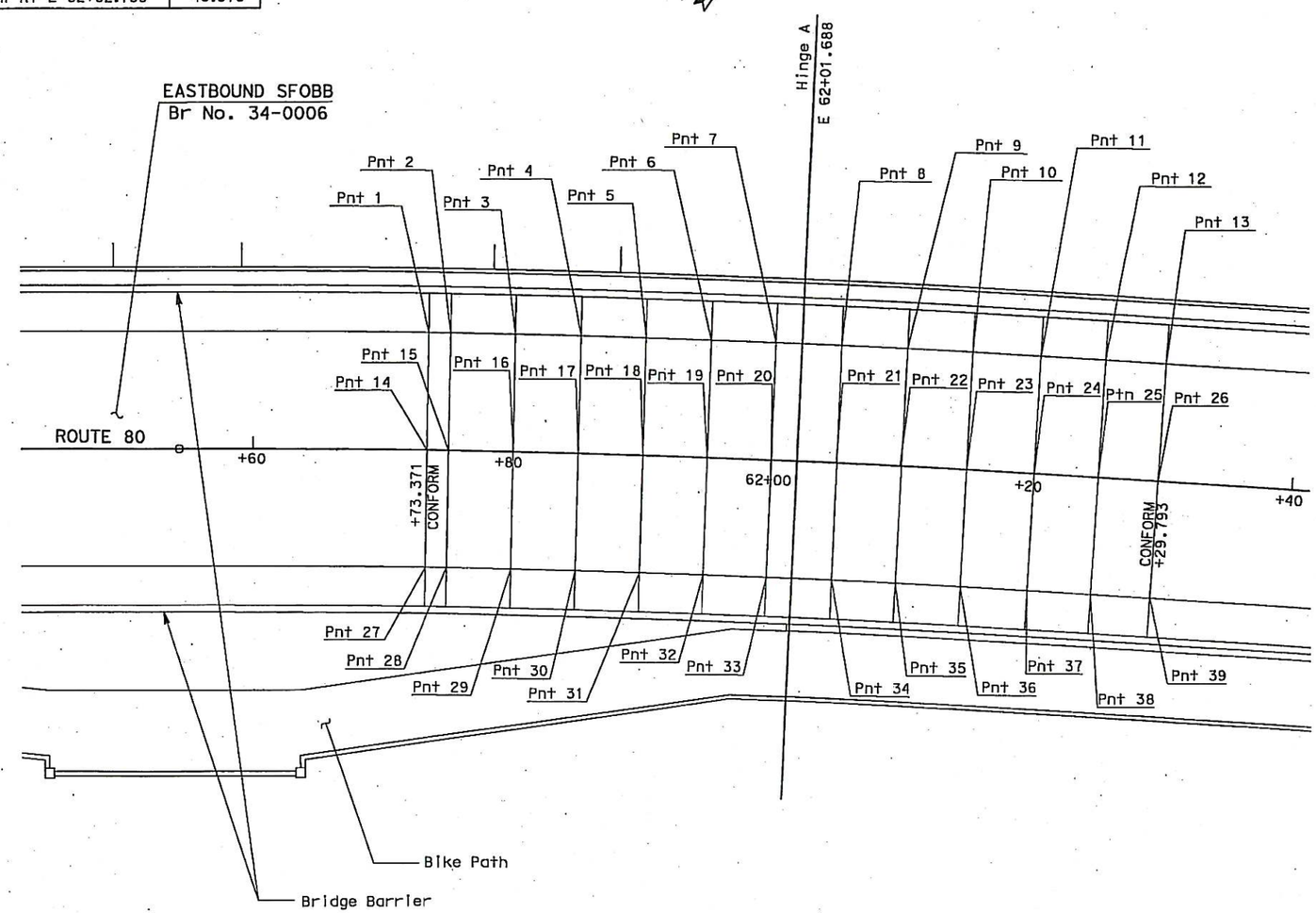
23	0.000 m Lt E 62+15.000	48.700
24	0.000 m Lt E 62+20.000	48.613
25	0.000 m Lt E 62+25.000	48.517
26	0.000 m Lt E 62+29.793	48.422
27	9.000 m Rt E 61+73.371	48.895
28	9.000 m Rt E 61+75.000	48.881
29	9.000 m Rt E 61+80.000	48.836
30	9.000 m Rt E 61+85.000	48.791
31	9.000 m Rt E 61+90.000	48.743
32	9.000 m Rt E 61+95.000	48.694
33	9.000 m Rt E 62+00.000	48.641
34	9.000 m Rt E 62+05.000	48.579
35	9.000 m Rt E 62+10.000	48.496
36	9.000 m Rt E 62+15.000	48.412
37	9.000 m Rt E 62+20.000	48.325
38	9.000 m Rt E 62+25.000	48.229
39	9.000 m Rt E 62+29.793	48.134

CORNERS OF HINGE A EASTBOUND	Elev
12.000 m Lt E 61+98.933	49.283
12.000 m Rt E 61+98.933	48.563
12.000 m Lt E 62+02.738	49.238
12.000 m Rt E 62+02.738	48.518



MARK	DATE	DESCRIPTIONS	REV	CK	CCO NO.
0	05/10/13	Conform Grading at Hinge A & K	BW	TL	175

REVISIONS

CONTRACT CHANGE ORDER NO. 175
SHEET 12 OF 15

CONSTRUCTION DETAILS

SCALE: 1:200

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

C-1D

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN OVERSIGHT: Bob Zandipour

CALCULATED/DESIGNED BY: BW
CHECKED BY: TL
REVISED BY
DATE REVISED
DATE 03/13

LAST REVISION 03-12-13
DATE PLOTTED => 10-MAY-2013
TIME PLOTTED => 16:47

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

DGN FILE => 04-0120f1_0011S04.cco
USERNAME => s133768

CU 04251

EA 0120F1

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	860S7	1204

REGISTERED ENGINEER - CIVIL

08-26-11

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Marwan N. Nader No. C 054426 Exp. 12/31/11 CIVIL STATE OF CALIFORNIA

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T.Y. LIN / MOFFATT & NICHOL
825 BATTERY STREET
SAN FRANCISCO, CA 94111

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Caltrans Metric

THEORETICAL CROSS-SLOPE ADJUSTMENT BASED ON THE LOWERED SKYWAY SURVEY-DEC 2009 AND THE THEORETICAL SAS CROSS SLOPE OF 3%

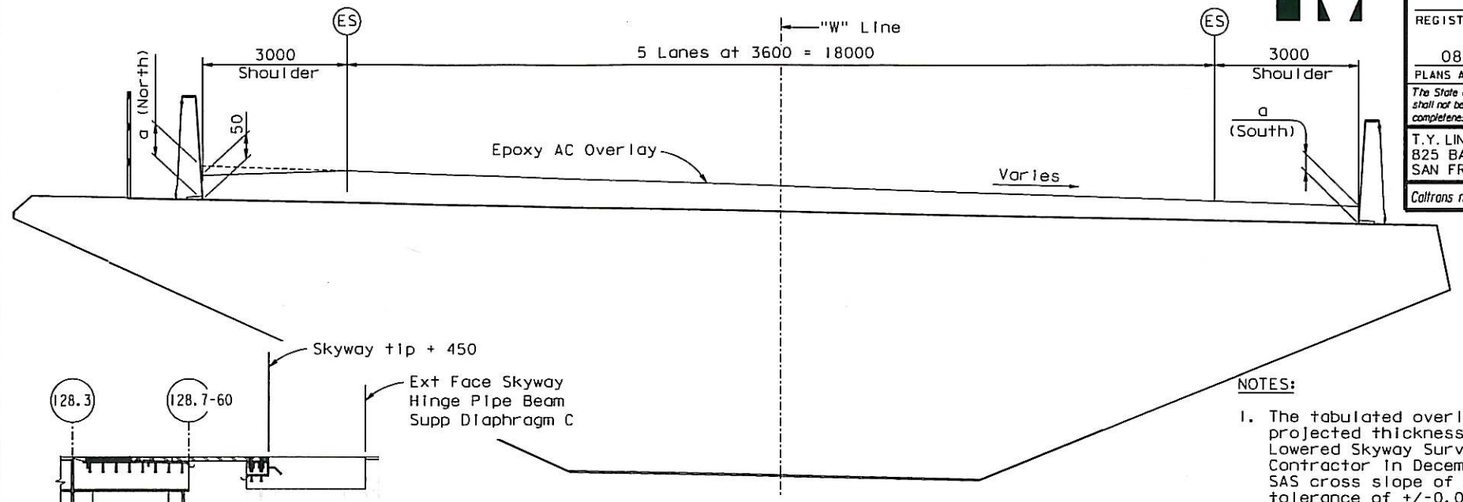
PP		OVERLAY THICKNESS E Line "a" (mm)	OVERLAY THICKNESS W Line "a" (mm)	CROSS SLOPE E Line %	CROSS SLOPE W Line %
St 62+15 'E' Line / St 62+26 'W' Line	N	50	50	-	-
	S	50	50		
CL Skyway Hinge Pipe Beam Supp Dia D †	N	35	43	3.21	3.09
	S	50	59		
Ext Face Skyway Hinge Pipe Beam Supp Dia C *	N	35	32	3.15	3.04
	S	62	60		
Skywaytip +450 mm *	N	34	31	3.15	3.03
	S	61	52		
128.7 - 60 mm *	N	55	57	3.15	3.03
	S	19	51		
128.3 *	N	57	60	3.15	3.03
	S	20	51		
128 †	N	57	59	3.15	3.04
	S	21	51		
127 †	N	56	55	3.14	3.04
	S	24	48		
125 †	N	50	50	3.00	3.00
	S	50	50		

THEORETICAL CROSS-SLOPE ADJUSTMENT BASED ON THE LOWERED SKYWAY SURVEY-DEC 2009 AND THE CROSS SLOPE OF 3.09% (+ 0.09% FROM THEORETICAL VALUE)

PP		OVERLAY THICKNESS E Line "a" (mm)	OVERLAY THICKNESS W Line "a" (mm)	CROSS SLOPE E Line %	CROSS SLOPE W Line %
St 62+15 'E' Line / St 62+26 'W' Line	N	50	50	-	-
	S	50	50		
CL Skyway Hinge Pipe Beam Supp Dia D †	N	45	50	3.23	3.14
	S	55	55		
Ext Face Skyway Hinge Pipe Beam Supp Dia C *	N	53	48	3.18	3.14
	S	73	50		
Skywaytip +450 mm *	N	54	48	3.18	3.15
	S	75	40		
128.7 - 60 mm *	N	66	64	3.18	3.15
	S	44	49		
128.3 *	N	70	67	3.18	3.15
	S	46	49		
128 †	N	70	66	3.18	3.15
	S	47	50		
127 †	N	67	62	3.18	3.15
	S	46	50		
125 †	N	50	50	3.08	3.08
	S	50	50		

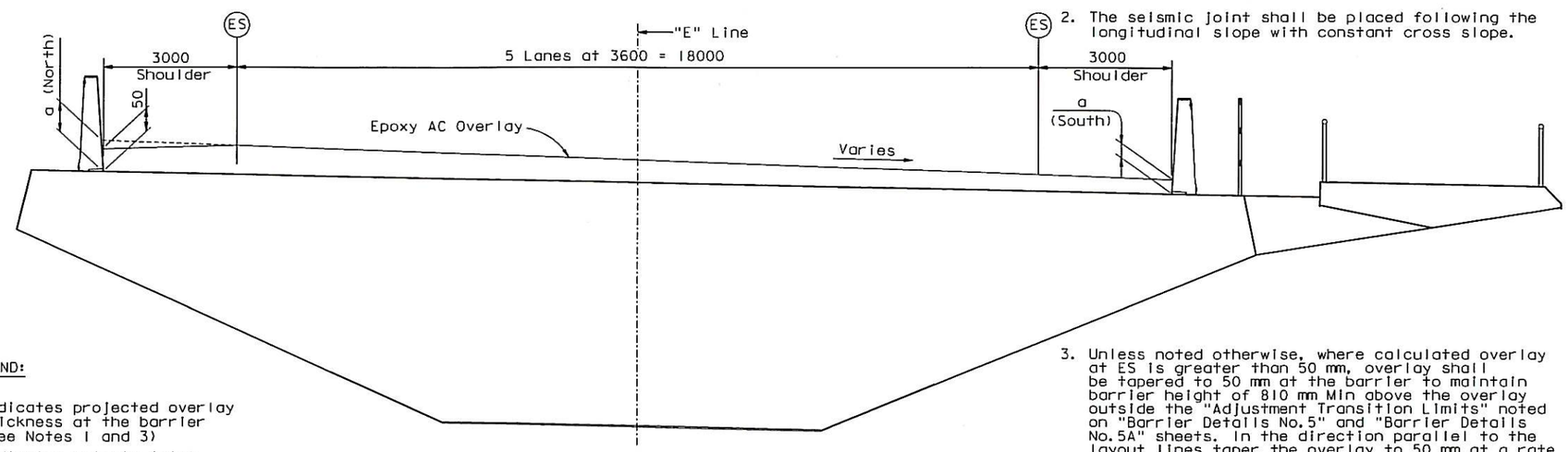
THEORETICAL CROSS-SLOPE ADJUSTMENT BASED ON THE LOWERED SKYWAY SURVEY-DEC 2009 AND THE CROSS SLOPE OF 2.91% (- 0.09% FROM THEORETICAL VALUE)

PP		OVERLAY THICKNESS E Line "a" (mm)	OVERLAY THICKNESS W Line "a" (mm)	CROSS SLOPE E Line %	CROSS SLOPE W Line %
St 62+15 'E' Line / St 62+26 'W' Line	N	50	50	-	-
	S	50	50		
CL Skyway Hinge Pipe Beam Supp Dia D †	N	30	38	3.15	3.04
	S	58	65		
Ext Face Skyway Hinge Pipe Beam Supp Dia C *	N	21	22	3.04	2.97
	S	76	65		
Skywaytip +450 mm *	N	18	19	3.02	2.97
	S	78	55		
128.7 - 60 mm *	N	49	54	3.02	2.97
	S	26	43		
128.3 *	N	52	55	3.02	2.97
	S	27	42		
128 †	N	51	53	3.02	2.97
	S	28	42		
127 †	N	47	47	3.00	2.96
	S	30	40		
125 †	N	50	50	2.92	2.91
	S	50	50		



PP ID
NTS

OVERLAY AT CROSS SLOPE TRANSITION
"W" LINE
NTS
(Barriers and overlay shown at larger vertical scale for clarity)



OVERLAY AT CROSS SLOPE TRANSITION
"E" LINE
NTS
(Barriers and overlay shown at larger vertical scale for clarity)

NOTES:

1. The tabulated overlay thickness is the theoretical projected thickness at the barrier based on the Lowered Skyway Survey Data Performed by the Contractor in December 2009 and the theoretical SAS cross slope of 3% and allows for a cross-slope tolerance of +/-0.09%. The tabulated thicknesses also allow for a roadway profile elevated by up to 120 mm above the theoretical elevation at Hinge A. The Contractor shall survey SAS and Skyway deck surfaces after installing Hinge A pipe beams. Based on this survey data and the following criteria, the overlay thickness shall be calculated and approved by the Engineer.
   - Min overlay thickness at barrier = 19 mm
   - Max overlay thickness at ES = 80 mm
   - Rate of change of cross slope = 0.2% /m
   - Longitudinal grade break shall be less than 0.5%
2. The seismic joint shall be placed following the longitudinal slope with constant cross slope.
3. Unless noted otherwise, where calculated overlay at ES is greater than 50 mm, overlay shall be tapered to 50 mm at the barrier to maintain barrier height of 810 mm Min above the overlay outside the "Adjustment Transition Limits" noted on "Barrier Details No.5" and "Barrier Details No.5A" sheets. In the direction parallel to the layout lines taper the overlay to 50 mm at a rate no steeper than 1:100 in the shoulders beyond the "Adjustment Transition Limits" noted on "Barrier Details No.5" and "Barrier Details No.5A" sheets.
4. ES - Edge of shoulder

LEGEND:

† Indicates projected overlay thickness at the barrier (See Notes 1 and 3)

* Indicates seismic joint elevation at the barrier (See Note 2)

CONTRACT CHANGE ORDER NO. 175
SHEET 13 OF 15

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

R. Vallizadeh/V. Toan/Y. L./W. L./F. C.
DESIGN OVERSIGHT
SIGN OFF DATE 08/26/11

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
0	08/26/11	EPOXY AC OVERLAY	GB	MN	175

REVISIONS

DESIGN	BY G. Baker	CHECKED	M. Nader
DETAILS	BY H. Patel	CHECKED	J. Duxbury
QUANTITIES	BY H. Patel	CHECKED	J. Duxbury

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

HINGE A EPOXY OVERLAY

Rev. Date: 5-18-98

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES 08/26/11

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 443S7 OF

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USERNAME => DMinrow DATE PLOTTED => 26 AUG 2011 TIME PLOTTED => 13:15:44

100 % PS&E

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80/SAS	13.2/13.9	1166R1	1204
		80/YBITS	12.7/13.2	K550A	806

Caltrans Metric

REGISTERED ENGINEER - CIVIL
01-20-12
PLANS APPROVAL DATE
REGISTERED PROFESSIONAL ENGINEER A.L. ELY No. 18880 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA
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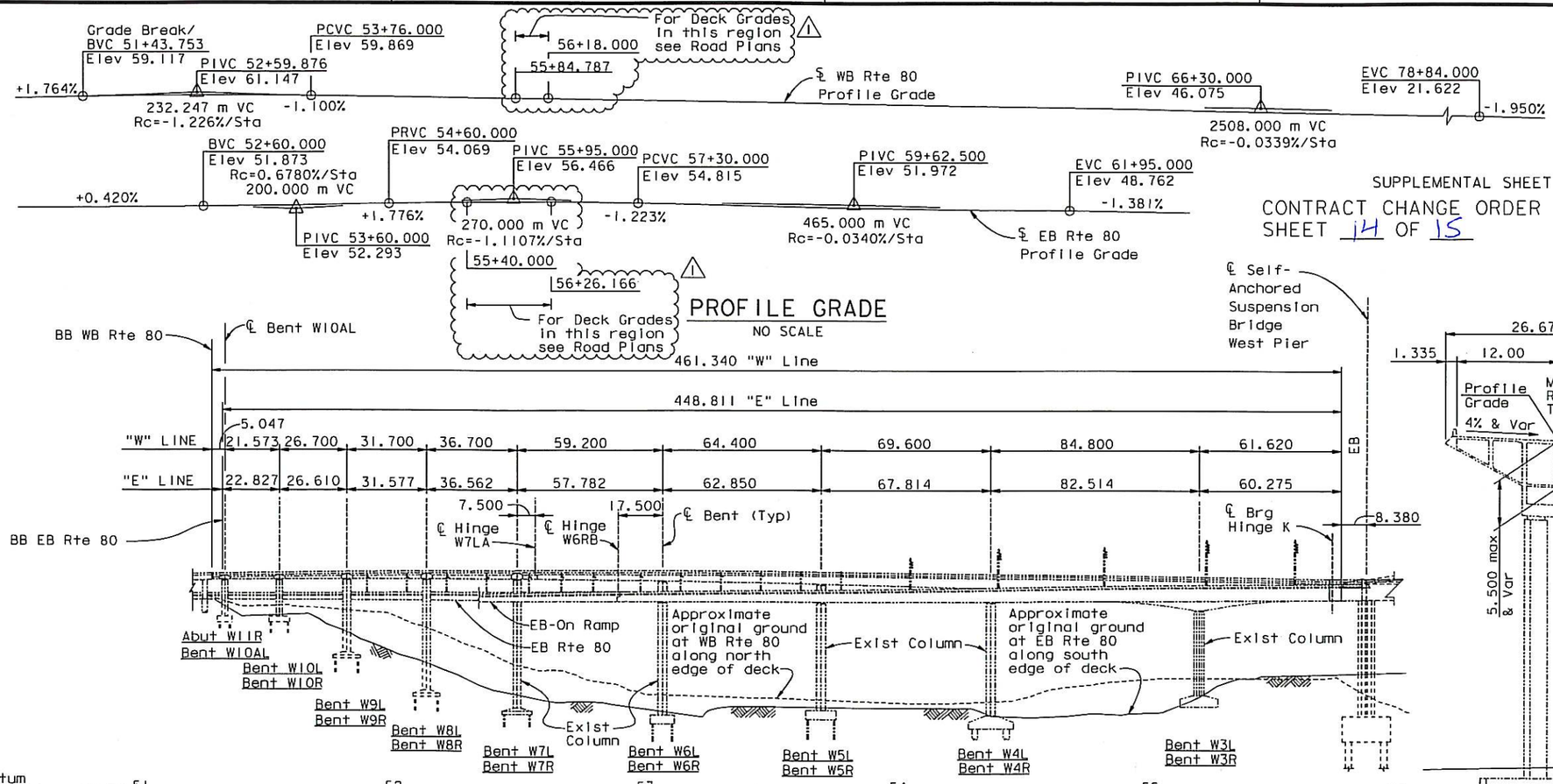
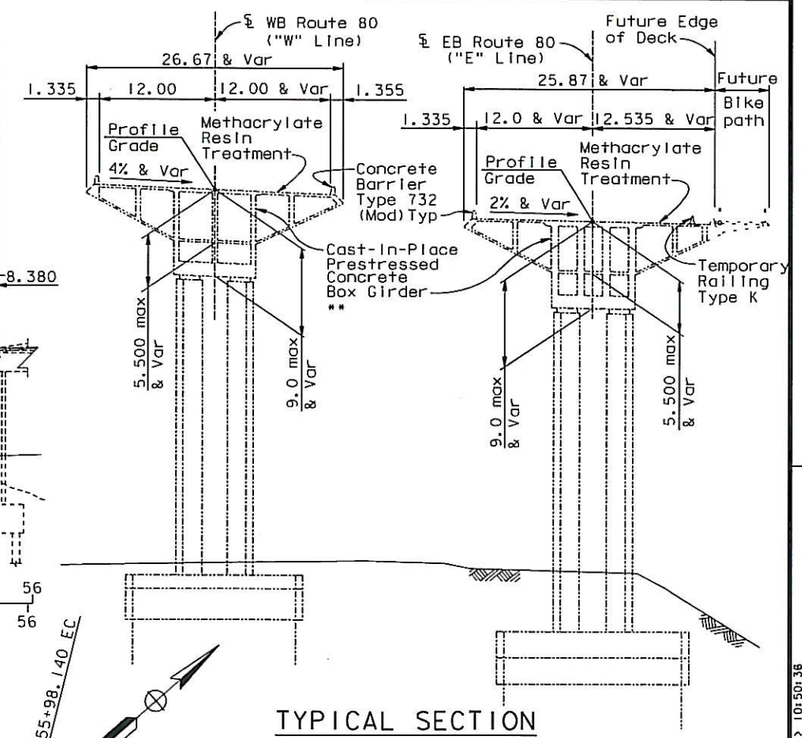
TWO HARRISON STREET
SAN FRANCISCO, CA 94105

SUPPLEMENTAL SHEET
CONTRACT CHANGE ORDER NO. 175
SHEET 14 OF 15



PROFILE GRADE
NO SCALE

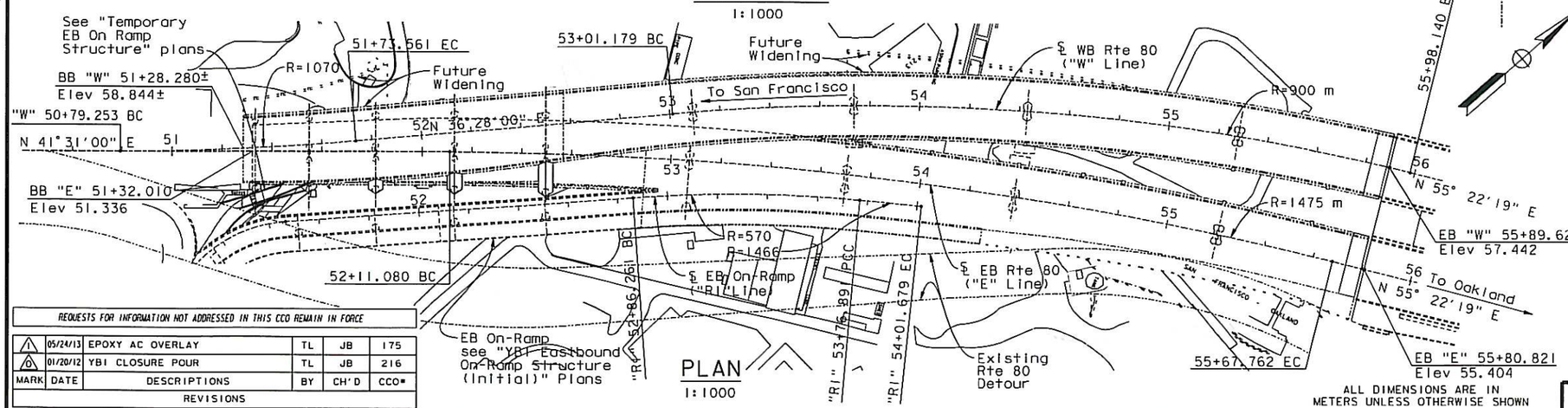
ELEVATION
1:1000



TYPICAL SECTION
(Bent W3L & W3R Shown)
1:300

** Note WB Superstructure is a Cast-in-Place conventionally reinforced concrete box girder from Bent W10AL to Hinge W7LA

Notes:
For approximate bridge quantities see "Foundation Plan" sheet.
For Index to Bridge Plans see "Structure Plan" sheet.



PLAN
1:1000

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

Indicates existing structures.

Standard Plan Sheet No.
Detail No.

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
1	05/24/13	EPOXY AC OVERLAY	TL	JB	175
0	01/20/12	YBI CLOSURE POUR	TL	JB	216

REVISIONS

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT

YBI TRANSITION STRUCTURES - HINGE K

GENERAL PLAN

DESIGN OVERSIGHT ADE AKINSANYA
SIGN OFF DATE

	BY	CHECKED
DESIGN	Desai	Jain
DETAILS	van Ryn/Zucchi/Mal	Jain
QUANTITIES	Liao	E. Nichol

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
LAYOUT BY Desai CHECKED Alcaraz
SPECIFICATIONS BY J.Ely PLANS AND SPECS COMPARED Jain

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Jal Birdy
PROJECT ENGINEER

BRIDGE NO. 34-0006 L/R
KILOMETER POST 12.8

CU 04
EA 0120F1

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REVISION DATES (PRELIMINARY STAGE ONLY)
SHEET KIA OF 209

Rev. Date: 5-18-98
ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

FILE => I:\bb\04-012001\sas\contract plans and cco\cco\cco#175\3-revision 05-24-13\dgn\ybits-a-gp01.dgn

Jan 6, 2012
USERNAME => DMIrrow DATE PLOTTED => 24 MAY 2013 TIME PLOTTED => 10:50:38

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80/SAS	13.2/13.9	116652R1	1204
		80/YBITS	12.7/13.2	K558A	806

REGISTERED ENGINEER - CIVIL

01-20-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A.L. ELY No. 18880 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA

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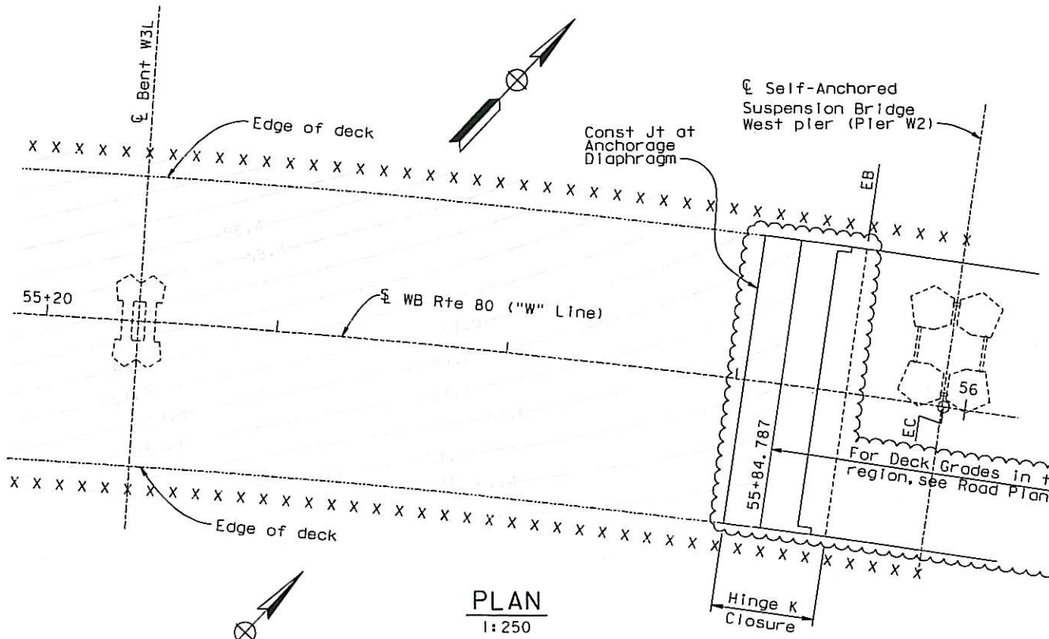
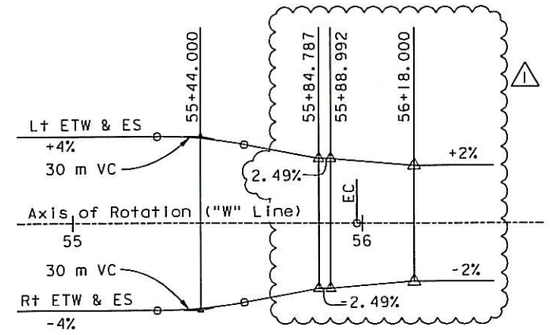
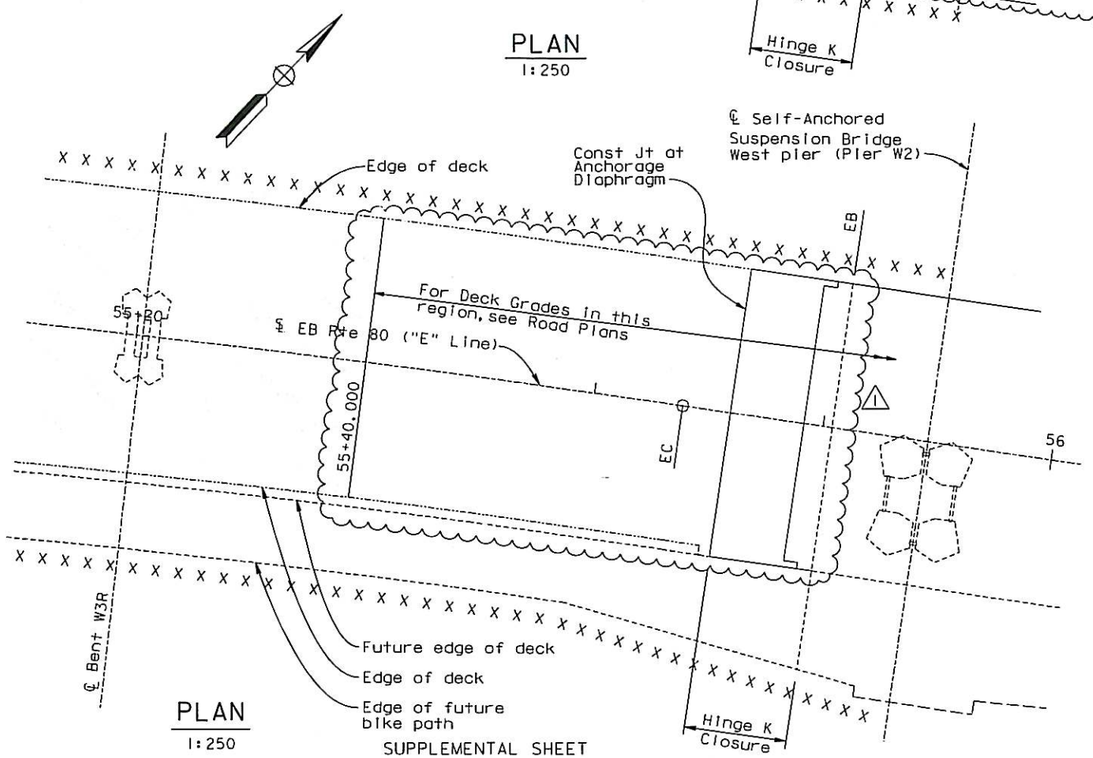
TWO HARRISON STREET
SAN FRANCISCO, CA 94105



PLAN
1:250

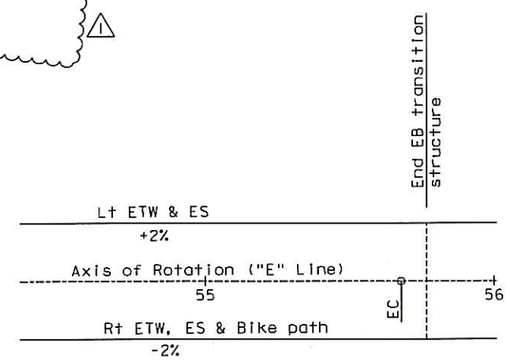


WESTBOUND SUPERELEVATION DIAGRAM
No Scale



PLAN
1:250

SUPPLEMENTAL SHEET



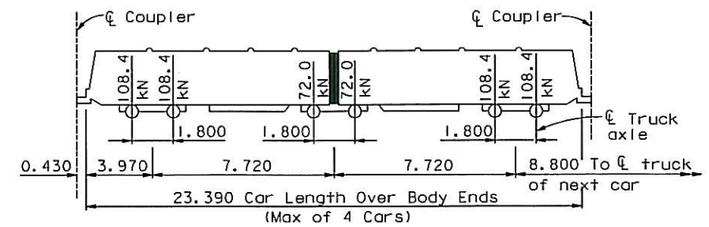
EASTBOUND SUPERELEVATION DIAGRAM
No Scale

NOTES:
Contours shown do not include camber.
X Indicates 2 meter interval along "W" or "E" Line
Contour interval shown is 0.1 m.

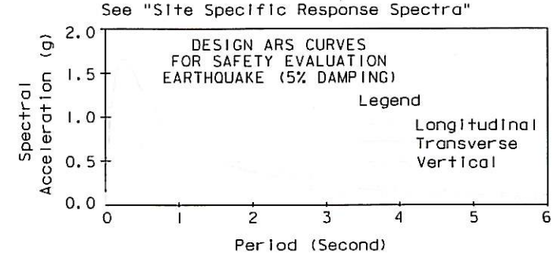
GENERAL NOTES

Load Factor Design

Design: Caltrans Design Specifications-April 2000 (LFD)
(1996 AASHTO with Interims and revisions by Caltrans)
Dead Load: Includes 1675 N/m2 for future wearing surface on roadbed
Live Load: HS20-44 and alternative and permit design load
Bike Path Live Load: 4000 N/m2
Future Mass Transit Loading:



Seismic Loading: Refer to project specific seismic design criteria
for San Francisco Oakland Bay Bridge
East Span Seismic Safety Project Dated 01-08-00
See "Site Specific Response Spectra"



SITE SPECIFIC RESPONSE SPECTRA

Reinforced Concrete: Fy = 420 MPa
F'c = 46 MPa
N = 8

Transverse Deck Slabs
(Working Stress Design)
Fs = 140 MPa
Fc = 8 MPa
N = 10

CONTRACT CHANGE ORDER NO. 175
SHEET 15 OF 15

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

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DESIGN OVERSIGHT: ADE AKINSANYA
SIGN OFF DATE

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
1	05/24/13	EPOXY AC OVERLAY	TL	JB	175
0	01/20/12	YBI CLOSURE POUR	TL	JB	216

REVISIONS

	BY	CHECKED
DESIGN	Alcaraz	Desai
DETAILS	van Ryn/Zucchi/Mai	Jain
QUANTITIES	Liao	E. Nichol

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Jal Birdy
PROJECT ENGINEER

BRIDGE NO. 34-0006 L/R
KILOMETER POST 12.8

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT

YBI TRANSITION STRUCTURES - HINGE K

DECK CONTOURS

Rev. Date: 5-18-08

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

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REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET K9A OF 209

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