DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	1120R6	1204

George Baker
REGISTERED ENGINEER - CIVIL
12-6-04
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — George S. Baker — No. C 57112 — Exp. 12/31/05 — CIVIL — STATE OF CALIFORNIA

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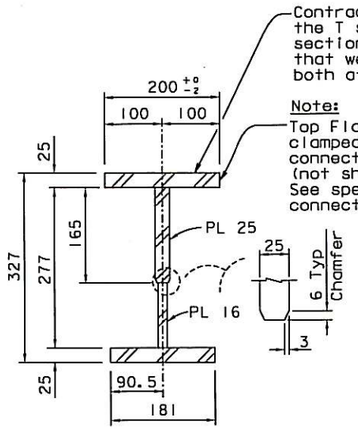
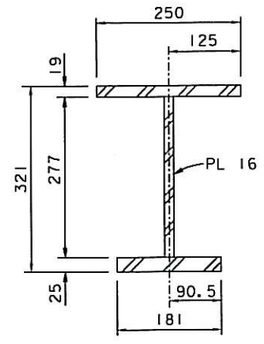
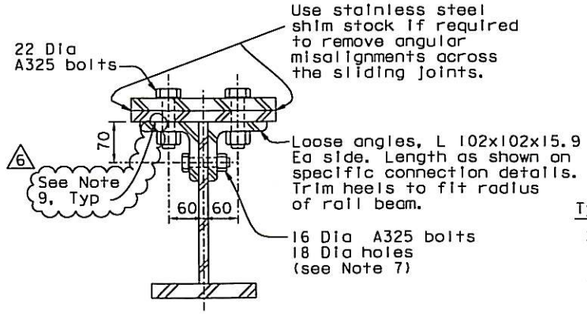


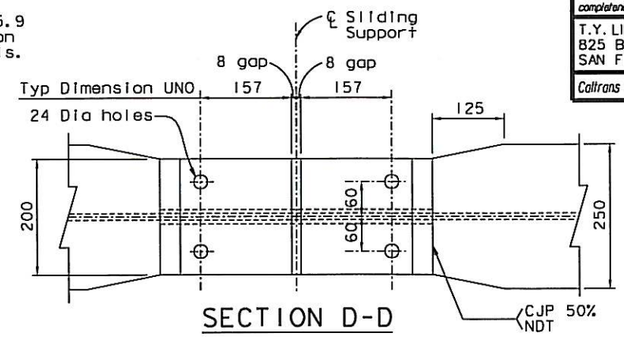
RAIL SECTION
AT SLIDING JOINTS
SECTION A-A
1:5



TYPICAL RAIL SECTION
SECTION B-B
1:5



RAIL SECTION
AT FIXED JOINTS
SECTION C-C
1:5



SECTION D-D
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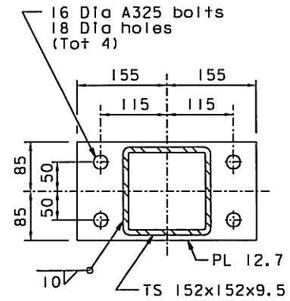

SECTION F-F
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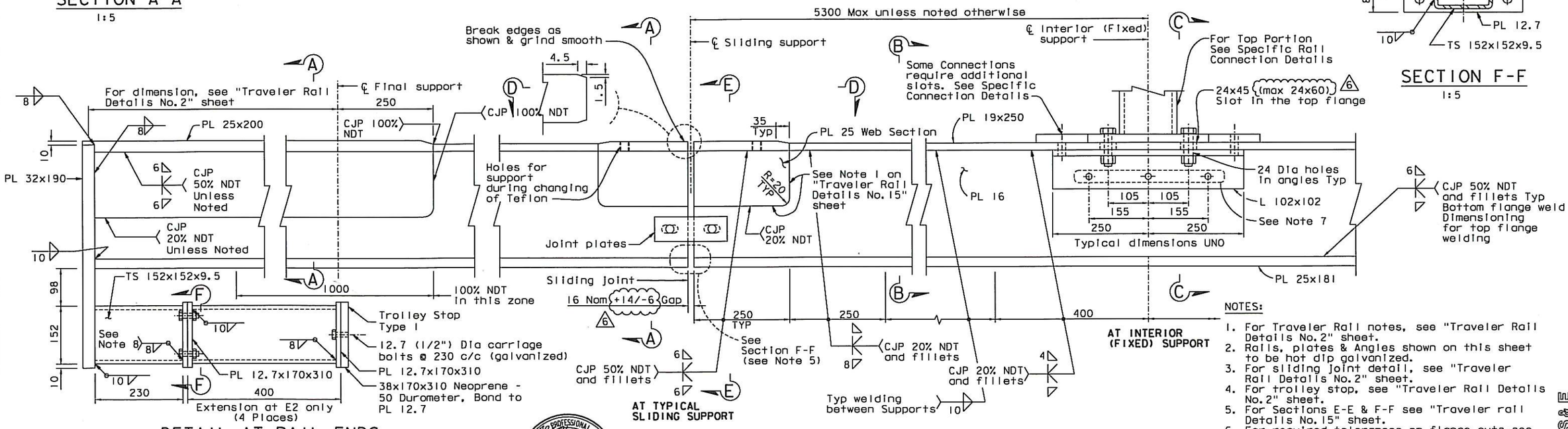

DETAIL AT RAIL ENDS

TRAVELER RAIL TYPICAL FABRICATION
1:5

NOTES:
1. For Traveler Rail notes, see "Traveler Rail Details No.2" sheet.
2. Rails, plates & Angles shown on this sheet to be hot dip galvanized.
3. For sliding joint detail, see "Traveler Rail Details No.2" sheet.
4. For trolley stop, see "Traveler Rail Details No.2" sheet.
5. For Sections E-E & F-F see "Traveler rail Details No.15" sheet.
6. For required tolerances on flange cuts see "Traveler Rail Details No.2" sheet.
7. At the Contractor's option, an 18x55 slotted hole may be used on the web of the traveler rail at the fixed supports.
8. Increase weld to 10, sides and bottom.
6 9. Gaps between rail top flange and L102 shall be caulked.

CONTRACT CHANGE ORDER NO. 379
SHEET 5 OF 7

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
6	08/18/14	TRAVELER RAIL GAPS	AA	WL	379
5	07/25/13	PIER E2 PLANS	AS	MN	331
4	09/15/10	TRAVELER RAIL TOLERANCES	MN	GB	168
3	05/18/09	TRAVELER RAIL MODIFICATIONS	MN	GB	2450
2	07/20/07	RAIL CHANGE & MISCELLANEOUS DETAILS	GB	NV	24
1	08/04/06	TRAVELER RAILS	GB	NV	24

REVISIONS

REGISTERED PROFESSIONAL ENGINEER — Marwan N. Nader — No. C 054426 — Exp. 12/31/13 — CIVIL — STATE OF CALIFORNIA
FOR REVISIONS ONLY

REGISTERED PROFESSIONAL ENGINEER — Ade Akinsanya — No. C 036044 — Exp. 6/30/16 — CIVIL — STATE OF CALIFORNIA
FOR REVISION 6 ONLY

REVISION 3 SUPERSEDES REVISIONS 1 & 2

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN	BY J. Otter	CHECKED C. Baker
DETAILS	BY J. Otter	CHECKED M. Roberts
QUANTITIES	BY J. Otter	CHECKED M. Roberts

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 08/18/14

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)

TRAVELER RAIL DETAILS NO. 1

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 → REVISION DATES (PRELIMINARY STAGE ONLY) 04/25/12 07/27/12 12/19/12

SHEET 703R6 OF

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MAIN TRAVELERS - RAIL JOINT LOCATIONS GIVEN BY PANEL POINT (PP) NUMBERS

Rail Section No.	Sliding Connection	Fixed Connection	Sliding Connection
** 1	Near PP A 5	PP 9	PP 10
2	PP 10	PP 11	PP 12
3	PP 12	PP 13	PP 14
4	PP 14	PP 15	PP 16
5	PP 16	PP 17	PP 18
6	PP 18	PP 19	PP 20
7	PP 20	PP 21	PP 22
8	PP 22	PP 23	PP 24
9	PP 24	PP 25	PP 26
10	PP 26	PP 27	PP 28
11	PP 28	PP 29	PP 30
12	PP 30	PP 31	PP 32
13	PP 32	PP 33	PP 34

Rail Section No.	Sliding Connection	Fixed Connection	Sliding Connection
14	PP 34	PP 35	PP 36
15	PP 36	PP 37	PP 38
16	PP 38	PP 39	PP 40
17	PP 40	PP 41	PP 42
18	PP 42	PP 43	PP 44
19	PP 44	PP 45	PP 46
20	PP 46	PP 47	PP 48
21	PP 48	PP 49	PP 50
22	PP 50	PP 51	PP 52
23	PP 52	PP 53	PP 54
24	PP 54	PP 55	PP 56
25	PP 56	PP 57	PP 58
26	PP 58	PP 59	PP 60

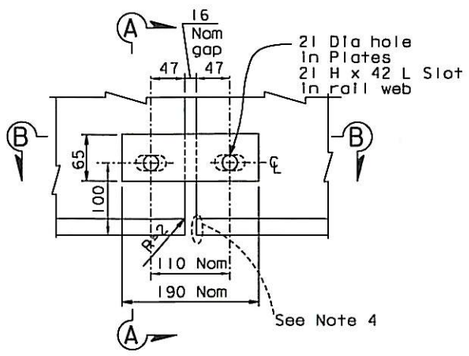
Rail Section No.	Sliding Connection	Fixed Connection	Sliding Connection
27	PP 60	PP 61	PP 62
28	PP 62	PP 63	PP 64
29	PP 64	PP 65	PP 66
30	PP 66	PP 67	PP 68
31	PP 68	PP 69	PP 70
32	PP 70	PP 71	PP 72
33	PP 72	PP 73	PP 74
34	PP 74	PP 75	PP 76
35	PP 76	PP 77	PP 78
36	PP 78	PP 79	PP 80
37	PP 80	PP 81	PP 82
38	PP 82	PP 83	PP 84
39	PP 84	PP 85	PP 86

Rail Section No.	Sliding Connection	Fixed Connection	Sliding Connection
40	PP 86	PP 87	PP 88
41	PP 88	PP 89	PP 90
42	PP 90	PP 91	PP 92
43	PP 92	PP 93	PP 94
44	PP 94	PP 95	PP 96
45	PP 96	PP 97	PP 98
46	PP 98	PP 99	PP 100
47	PP 100	PP 101	PP 102

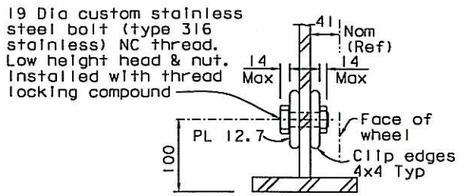
Rail Section No.	Sliding Connection	Fixed Connection	Sliding Connection
48	PP 102	PP 103	PP 104
49	PP 104	PP 105	PP 106
50	PP 106	PP 107	PP 108
51	PP 108	PP 109 (K)	PP 110 (K)
52	PP 110 (K)	PP 111 (K)	PP 112
53	PP 112	PP 113	PP 114
54	PP 114	PP 115	PP 116
** 55	PP 116	PP 117	PP 118 & PP 118.35
** 56	PP 119.65 & PP 120	PP 121	PP 122
57	PP 122	none	PP 123
58	PP 123	PP 124	PP 125
59	PP 125	PP 126	PP 127
** 60	PP 127	PP 128	see schematic

K denotes kinked rail at these panel points.
See "Traveler Rail Details No. 15" sheet.

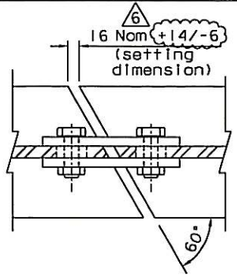
**Denotes Special Rail End Details



SLIDING JOINT DETAIL
1:4



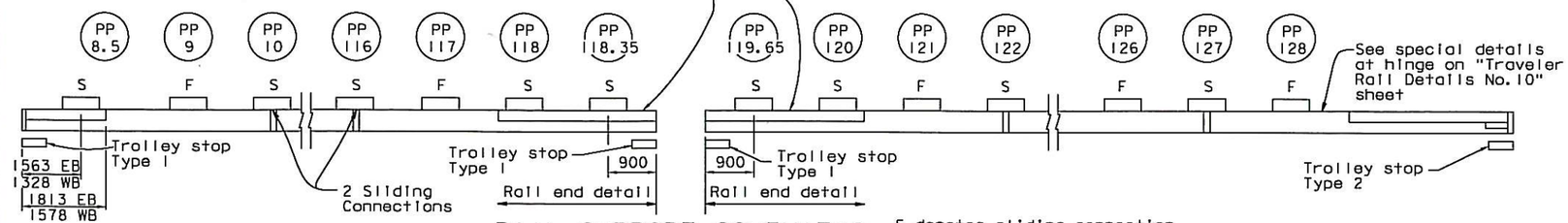
SECTION A-A
1:4



SECTION B-B
1:4

TRAVELER RAIL NOTES - SAS & E2/E3 TRAVELER RAILS

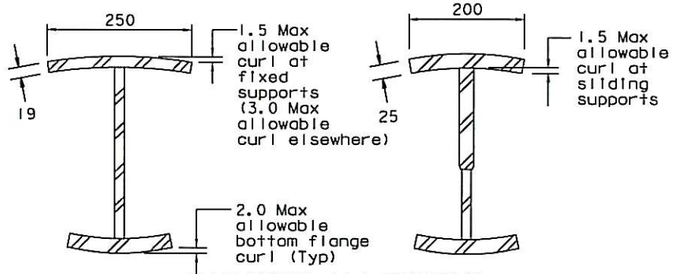
1. Rail material (flange plates & web plates) to be ASTM A572 or A709 grade 50 (Fy= 345 MPa).
2. Rail, boss plates & angles to be hot dip galvanized per specification.
3. The Nominal 16 mm gap between rail sections is to allow for slippage movement between rail and box in major seismic event.
4. Rail gaps to be set only after all dead load is in place on the structure. Tolerances across gaps to be per "Traveler Rail Details No.15" sheet.
5. Rail to be fabricated in one to three span units as called out on this sheet.
6. Rail to be supported at panel points of the box structure at 5300 maximum c/c supports, unless noted otherwise.
7. Traveler rail and mounting on the Skyway structure is by Others except as noted below:
   - The Inner (SAS) rail set (which crosses the Hinge A joint) is to be supplied and installed under this contract. It will be mounted to brackets on the Skyway structure which will be supplied and installed by Others.
   - The outer (transition span) rail set bolts are to be tightened under this contract after the connection of the transition span to the SAS and all dead load is in place on the structure.
8. Fabricator is to select a connection from types as appropriate to the geometry and to detail the connection within the permissible ranges of variation shown on the details.
9. For details of the various connection types, see "Traveler Rail Details" sheets.
10. Location of traveler rails is described on the "Traveler Operating Ranges" sheets.
11. All bolts to be ASTM A325 unless otherwise noted on the plans.
12. For special support details, see "Traveler Rail Details No.14" sheet.



RAIL SUPPORT SCHEMATIC
NTS

S denotes sliding connection
F denotes fixed connection

Rail End Detail
See also Traveler Operating Ranges Drawings for vertical deviations of rails.



MAXIMUM ALLOWABLE FLANGE DEFORMATIONS
NTS

CONTRACT CHANGE ORDER NO. 379
SHEET 6 OF 7

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
		REVISIONS			
6	08/18/14	TRAVELER RAIL GAPS	AA	WL	379
5	08/23/11	MISCELLANEOUS TRAVELER MODIFICATIONS	TH	MN	183
4	09/15/10	TRAVELER RAIL TOLERANCES	MN	GB	168
3	06/05/09	TRAVELER RAIL MODIFICATIONS	MN	GB	2450
2	07/20/07	RAIL CHANGE & MISCELLANEOUS DETAILS	GB	NV	24
1	08/04/06	TRAVELER RAILS	GB	NV	24

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

Ade Akinsanya, No. C 036044, Exp. 6/30/16, CIVIL, REGISTERED PROFESSIONAL ENGINEER, STATE OF CALIFORNIA
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REVISION 3 SUPERSEDES REVISIONS 1 & 2

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DESIGN	BY J. Otter	CHECKED G. Baker
DETAILS	BY J. Otter	CHECKED M. Roberts
QUANTITIES	BY J. Otter	CHECKED M. Roberts

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

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

R. Vallzadeh/Y. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 08/18/14

Rev. Date: 5-18-98

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

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DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 04/25/12 07/27/12 12/13/12

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

TRAVELER RAIL DETAILS NO. 2

SHEET 704R6 OF

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	112IR6	1204

George Baker
REGISTERED ENGINEER - CIVIL
12-6-04
PLANS APPROVAL DATE
George S. Baker, No. C 57112, Exp. 12/31/05, CIVIL, REGISTERED PROFESSIONAL ENGINEER, STATE OF CALIFORNIA

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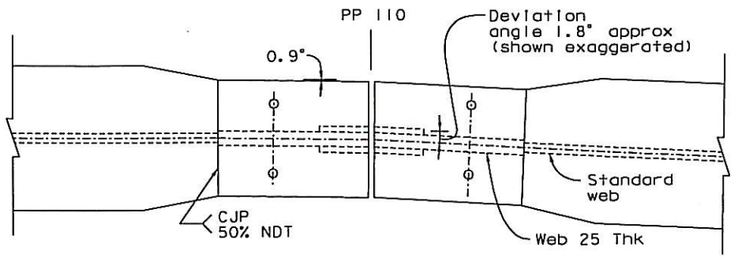
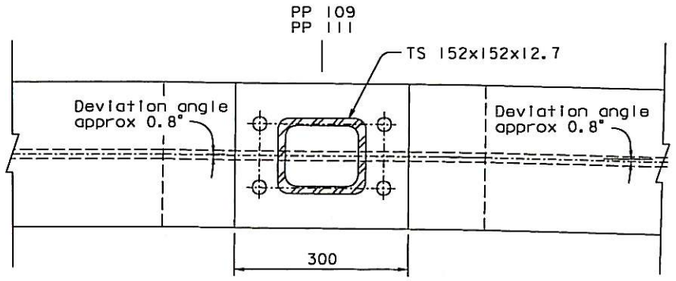
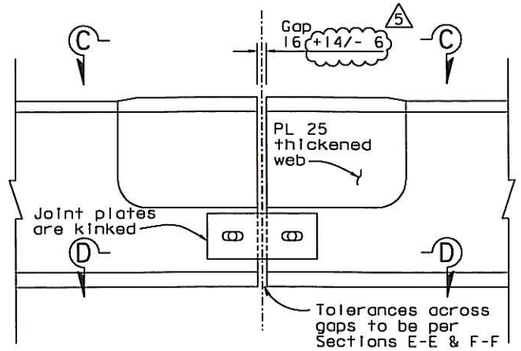


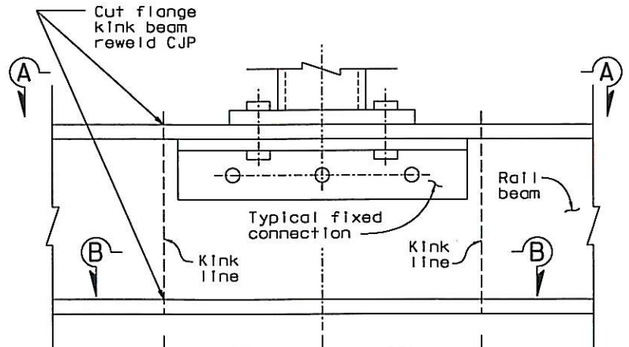
SECTION C-C

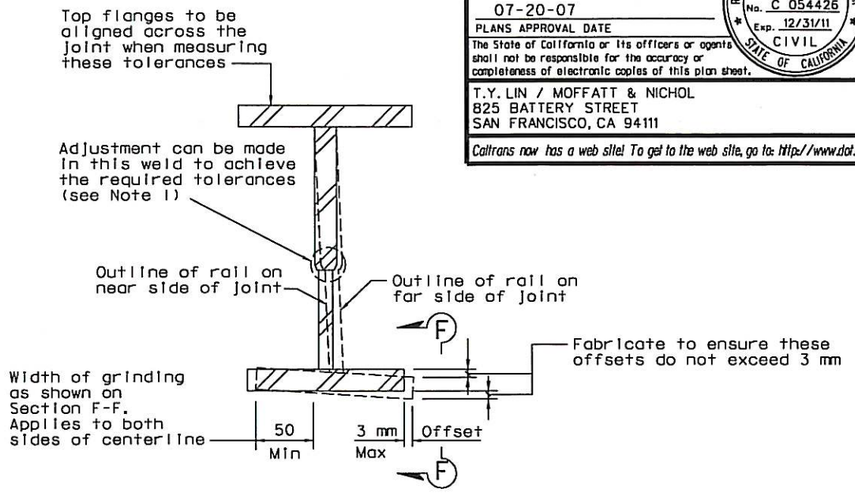


SECTION A-A



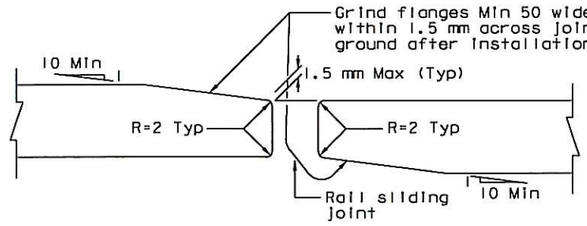
Connection details are standard (not shown for clarity)





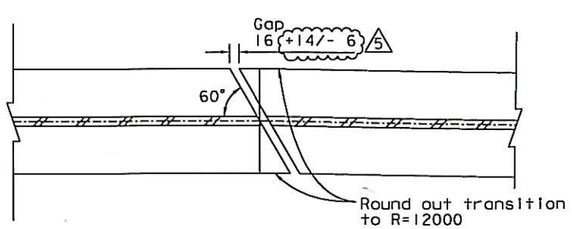
SECTION E-E

NTS



SECTION F-F (Tolerances at rail sliding joints)

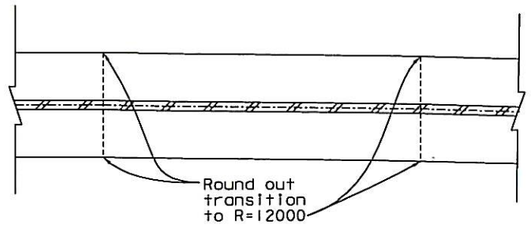
NTS



SECTION D-D

DETAIL AT PP 110

1:5



SECTION B-B

DETAIL AT PP 109 & 111

1:5

NOTES:

1. Adjust within the welds to the Tee section in order to achieve the required tolerances at the rail joints. Match mark for installation if necessary to achieve the tolerances shown after installation.

SPECIAL RAIL DETAILS AT DEVIATION

REVISION 2 SUPERSEDES REVISIONS 0 & 1

CONTRACT CHANGE ORDER NO. 379

SHEET 7 OF 7

REQUESTS FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
		REVISIONS			
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0	08/04/06	TRAVELER RAILS	GB	NV	24

FOR REVISION 5 ONLY

Ade Akinsanya, No. C 036044, Exp. 6/30/16, CIVIL, REGISTERED PROFESSIONAL ENGINEER, STATE OF CALIFORNIA

DISTRICT	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	1133SIR5	1204

REGISTERED ENGINEER - MECHANICAL

07-20-07

PLANS APPROVAL DATE

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

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	BY	CHECKED
DESIGN	J. Otter	G. Baker
DETAILS	J. Otter	G. Baker
QUANTITIES	J. Otter	N. Roberts

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)

TRAVELER RAIL DETAILS NO. 15

R. Vallzadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
STGN OFF DATE 08/18/14

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

REVISION DATES (PRELIMINARY STAGE ONLY): 07/20/07

SHEET 716SIR5 OF

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