

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 22	Suppl. No. 0	Contract No. 04 - 0120F4	Road SF-80-13.2/13.9	FED. AID LOC.:
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To: AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENT

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Lump Sum:

1. Revise Contract Plan Sheet Numbers 521, 629 and 651 (of 1204), with Contract Plan Sheet Numbers 521R1, 629R1 and 651R1 (of 1204), as shown in this change order.
2. Revise Item 3 of the fifth paragraph in Section 10-1.44, "CABLE TIE-DOWN", of the Special Provisions, as shown in this change order.
3. Revise the third paragraph of the Special Provisions, Section 10-1.59, "STEEL STRUCTURES", subsection "FABRICATION", subsection "Fabrication/Erection Procedure and Mock-Ups", by adding (2) new additional locations "R" and "S" requiring fabrication and erection procedures, as shown below:
 "R. Tower Saddle
 S. Hinge K Assembly"
4. Revise the nondestructive testing (NDT) table of the Special Provisions, Section 10-1.59, "STEEL STRUCTURES", subsection "INSPECTION AND TESTING", as shown in this change order (changes shown in bold italics).
5. Revise Note 9 and Add Note 14 to the NDT table shown in the Special Provisions, Section 10-1.59, "STEEL STRUCTURES", subsection "INSPECTION AND TESTING", as shown in this change order.

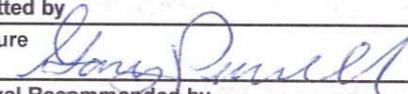
For this work, the contractor will be paid the sum of \$61,050.00. This sum constitutes full compensation, including markups, for this change.

Estimated cost of Extra Work at Lump Sum\$61,050.00

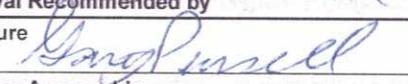
Estimated Cost: Increase Decrease \$61,050.00

By reason of this order the time of completion will be adjusted as follows: 0 days

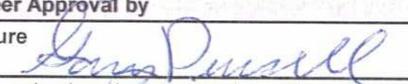
Submitted by

Signature 	Resident Engineer: Gary Pursell, P.E., Sup.T.E.	Date 1/23/07
---	---	--------------

Approval Recommended by

Signature 	Construction Engineer: Gary Pursell, P.E., Sup T.E.	Date 2/9/07
---	---	-------------

Engineer Approval by

Signature 	(Print name and title) Gary Pursell, P.E., Sup T.E. - Construction Engineer	Date 2/9/07
---	--	-------------

We the undersigned-contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature 	(Print name and title) Michael D. Flowers Project Director	Date 2-1-07
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CONTRACT CHANGE ORDER NO. 22 SUPPL. NO. ---

ROAD 04-SF-80-13.2, 13.9 SHEET 2 OF 8 SHEETS

FEDERAL NO.(S) _____ CONTRACT NO.: 04-0120F4

To American Bridge / Fluor Enterprises Inc., A Joint Venture, Contractor

You are hereby directed to make herein described changes from the plans and specifications or do the following described work not included in the plans and specifications of the contract.

NOTE: This change order is not effective until approved by The Chief Engineer.

Description of work to be done, estimate of quantities, and prices to be paid. Segregated between additional work at contract price and force account. Unless otherwise stated, rates for rental equipment cover only such time as equipment is actually used and no allowance will be made for idle time.

CHANGE REQUESTED BY THE ENGINEER

The last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

2. Replace the fifth paragraph of Section 10-1.44, "CABLE TIE-DOWN," with the following (changes shown in *bold italics*):

"In addition to the requirements in Section 50-1.02 "Drawings," of the Standard Specifications, cable tie-down anchor working drawings shall include, but are not limited to, the following:

1. Details of proposed corrosion protection measures.
2. Details and sequence of monostrand stressing operation to avoid mechanical interlocking between strands.
3. Details and sequence of operations for detensioning and replacing individual *tendons-strands within a tendon.*
4. Repair procedure for the sheathing.
5. Material specifications and calculations."

4. Replace the nondestructive testing table of the Special Provisions, Section 10-1.59, "STEEL STRUCTURES," subsection "INSPECTION AND TESTING," with the following (changes shown in *bold italics*):

COMPONENT	Weld Type			Extent & Type of Testing			Notes	
	CJP	PJP	Fillet	RT	UT	MT		
1. BOX GIRDER								
1.1 Box Shell								
Transverse splice weld (Deck plate: A)	shop field	X			5% 100%	100%		
Transverse splice weld (Side plate: B,F)	shop field	X			5% 100%	100%		
Transverse splice weld (Bottom plate: D)	shop field	X			5% 100%	100%		
Transverse splice weld (Side plate: C,E,G,H,I,L,M,N, "K" &"Vertical")	shop field	X			** **			
Longitudinal weld: Deck plate: A		X				100%		
Longitudinal splice weld (Bottom plate: D)		X				100%		
Longitudinal splice weld (Side plate: C,E,G,H,I,L,M,N, "K" &"Vertical")		X				100%	(B & F are n/a)	
Box corner welds		X	X	X		100%	100%	
Closed rib splice		X				100%		
Closed rib to shell plate:			X			15%	10%	UT Shall include at least 15% of the tack welds
Stiffener (open rib) to box plate				X			10%	

CONTRACT CHANGE ORDER NO. 22 SUPPL. NO. ---

ROAD 04-SF-80-13.2, 13.9 SHEET 3 OF 8 SHEETS

COMPONENT	Weld Type			Extent & Type of Testing			Notes
	CJP	PJP	Fillet	RT	UT	MT	
Floorbeam to Deck plate	X		X		100%	50%	
Floorbeam to other box shell plates At Crossbeam penetrations	X				100%		
Elsewhere		X	X			25%	
Longitudinal Shear Plate to Deck Plate			X			25%	
Longitudinal Shear Plate to other Box shell plates			X			10%	
Deck plate to drain plates	X				15%		
Deck plate transverse splice at Seismic Joint	X			5%	100%	100%	
		X			100%	100%	
1.2. Box Internal Stiffening							
Floorbeam splice:							
Bottom 1 m	X				100%		
Remainder of lower half	X				50%		
Upper half	X				15%		
Floorbeam web / Diaphragm to skin plate stiffener	X	X	X X		100%	25%	
						<u>100%</u>	
Floorbeam web to floorbeam web stiffener	X		X		100%	25%	
Diaphragm plate to closed rib	X				100%	100%	<u>See Note 14</u>
		X				100%	
Ground end of diaphragm to closed rib weld for full length of grinding plus 50mm each end	X	X	X			100%	Additional to NDT specified for weld
Longitudinal Shear Plate to Floorbeam	X	X	X		100%	15%	
Longitudinal Shear Plate Vertical splice	X				**		
Longitudinal Shear Plate to top and bottom plate	X		X			15%	
1.3. Girder at Piers							
All SPCM welds	X		X		100%	100%	
		X	X			100%	
Non-SPCM Welds	Per Sections 1.1, 1.2 & 1.5 of this Table						
Saddle Grillage welds	X		X		25%	25%	
		X	X				
Saddle welds	X		X		25%	25%	
		X	X				
1.4 Other box welds							
SPCM Cable Bracket welds	X		X		100%	100%	
		X	X			100%	
Deviation & Jacking Frame Saddles: Plates to Castings	X		X		100%	25%	
		X	X				
Deviation & Jacking Frame Saddles: Plate welds	X		X		100%	25%	
		X	X			100%	
Other Welds in SPCMs	X		X		100%	100%	
		X	X			100%	

CONTRACT CHANGE ORDER NO. 22 SUPPL. NO. ---

ROAD 04-SF-80-13.2, 13.9 SHEET 4 OF 8 SHEETS

COMPONENT	Weld Type			Extent & Type of Testing			Notes
	CJP	PJP	Fillet	RT	UT	MT	
Other welds	X	X	X		25%	10%	
Ends of welds at locations of required grinding for full length of grinding plus 50 mm each end	X	X	X			100%	Additional to NDT specified for weld
2. CROSSBEAM							
All SPCM Welds	X	X	X		100%	100%	
Other welds	X	X	X		25%	10%	
Ends of welds at locations of required grinding for full length of grinding plus 50 mm each end	X	X	X			100%	Additional to NDT specified for weld
3. TOWER							
Skin plate butt welds: Horizontal	X				100%	25%	
Skin plate butt welds: Vertical	X	X			100%	25%	
Longitudinal Stiffener butt welds	X				100%		
Longitudinal stiffener to skin plate	X	X	X		100%	25%	
Diaphragm butt welds	X				100%		
Diaphragm to Skin Plate	X	X	X		100%	25%	
Diaphragm to Longitudinal Stiffener (incl. Fit Lugs)	X	X	X		100%	100%	
Tower Strut Welds & Cross Bracing Welds	X	X	X		100%	100%	
Grillage welds	X	X	X		***	***	
Tower Saddle welds	X	X	X		100%	100%	
Skin Plate to Tower Base Plate	X	X			25%	50%	
Bearing Stiffener Welds at Tower Base Anchor Bolt Assemblies	X	X	X		25%	25%	
Other Tower welds	X	X	X		25%	10%	
Tower Base Shear Plates to the Skin Plate	X	X			****	****	
4. OTHER WELDS NOT SPECIFIED ABOVE							
Welds in SPCMs	X	X	X		100%	100%	
Other welds	X	X	X		25%	10%	

CONTRACT CHANGE ORDER NO. 22 SUPPL. NO. ---

ROAD 04-SF-80-13.2, 13.9 SHEET 5 OF 8 SHEETS

COMPONENT	Weld Type			Extent & Type of Testing			Notes
	CJP	PJP	Fillet	RT	UT	MT	
Ends of welds at locations of required grinding for full length of grinding plus 50mm each end	X	X	X			100%	Additional to NDT specified for weld

5. Revise Note 9 and add Note 14 to the Special Provisions, following the nondestructive testing table in Section 10-1.59, "STEEL STRUCTURES," subsection "INSPECTION AND TESTING," as follows:

Notes:

"9) No UT examination is required for PJP weld sizes up to 25 mm except for the closed rib PJP welds. For PJP weld sizes greater than 25 mm, UT examination shall confirm that the specified minimum weld size has been achieved. UT examination is not required provided all of the following conditions are met:

~~(a) Minimum weld size, excluding reinforcement, is increased by a minimum of 5 mm over that required by the contract plans; and the remaining root face still satisfies minimum requirement of the standard weld joint detail in AWS D1.5;~~

(b) (a) Specific inspection hold points are established after the root pass is completed and after the weld is completed, in which the QC inspector completes and documents 100% visual inspection and 100% magnetic particle testing. These hold points are in addition to the continuous QC inspections required elsewhere in these specifications. Visual Inspection and MT of the root pass shall be performed with the weld joint at the preheat temperature but not to exceed 287° C (550° F)."

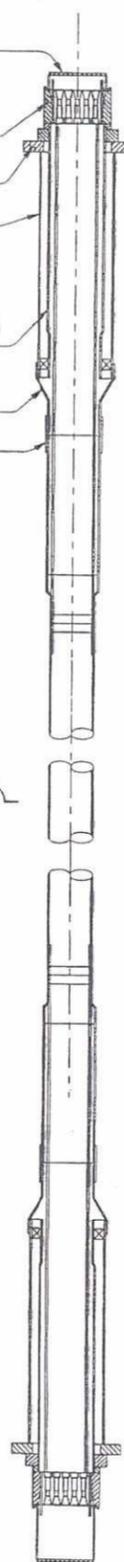
"14) With respect to the welds between the OBG diaphragm and the closed ribs, in addition to 100% MT of the completed and ground weld, the Contractor shall also MT the second side preparation after back gouging and before welding the second side."



Hot dip galvanized cable anchor head protection cap (filled with corrosion inhibiting grease)

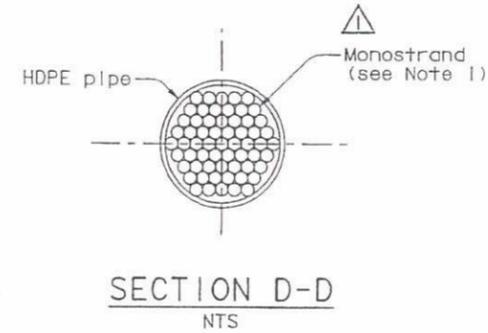
Anchor head
Bearing plate
Guide Pipe
Transition pipe (filled with corrosion inhibiting grease)
Boot
Connection sleeve

DEAD END



JACKING END

(For illustration only)
TIE-DOWN CABLE DETAILS
1:20



DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	521R	1204

REGISTERED ENGINEER - CIVIL

12-6-04
PLANS APPROVAL DATE

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FOR REVISIONS ONLY

MARK	DATE	DESCRIPTIONS	MN	NV
△	07/21/06	REMOVE EPOXY COATING		
			BY	CH'D

CONTRACT CHANGE ORDER NO. 22
SHEET 6 OF 8

LEGEND:

HDPE - High density polyethylene.

NOTES:

1. Each individual monostrand shall be fully coated with corrosion inhibiting grease and then encapsulated by a high-density polyethylene (HDPE) or high-density polypropylene (HDPP) smooth sheath.

R. Vallizadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Sign: [Signatures]
SIGN OFF DATE 07/21/06
Rev. Date: 5-18-08

DESIGN	BY J. Sun	CHECKED J. Straskl
DETAILS	BY S. Shi	CHECKED J. Straskl
QUANTITIES	BY J. Duxbury	CHECKED S. Shi

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)
CABLE TIE-DOWN DETAILS NO. 2



CU 04 EA 0120F1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 104R1
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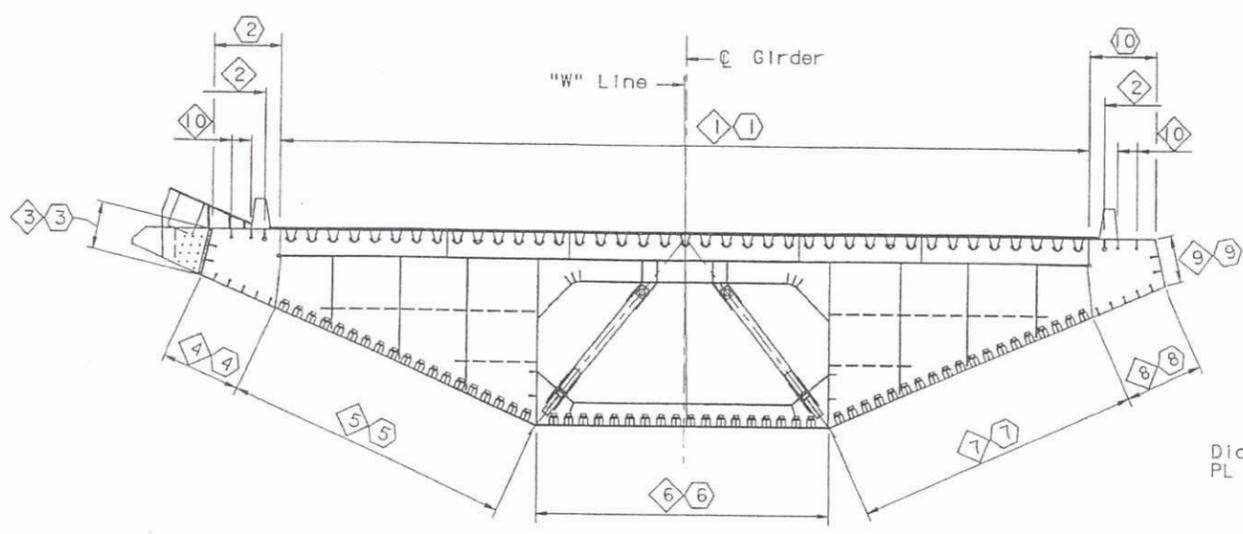
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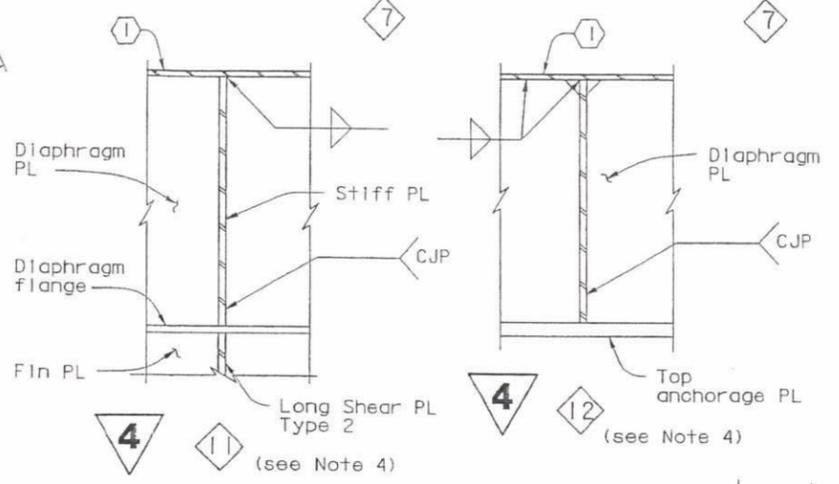
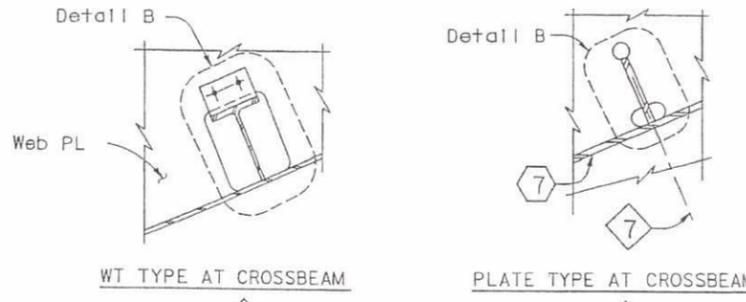
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04	SF	80	13.2/13.9	629R1	1204

George Baker
 REGISTERED ENGINEER - CIVIL
 No. C57112
 Exp. 12/31/07
 CIVIL
 STATE OF CALIFORNIA

12-6-04
 PLANS APPROVAL DATE
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 825 BATTERY STREET
 SAN FRANCISCO, CA 94111
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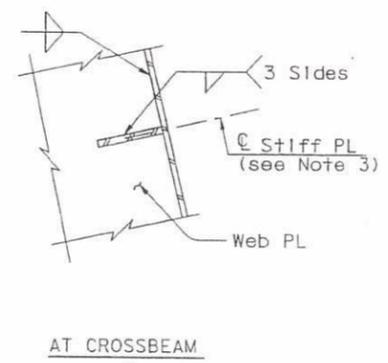
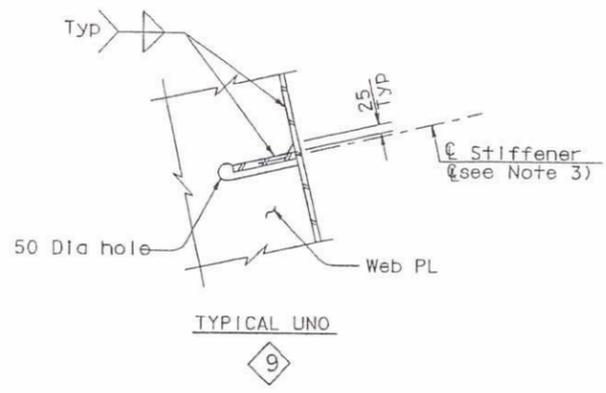
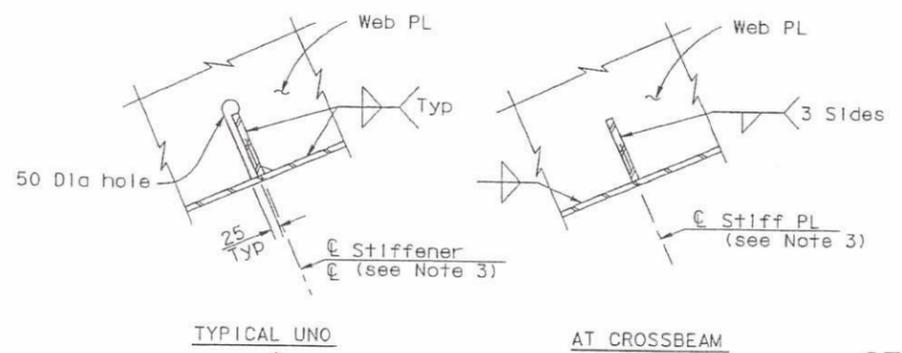
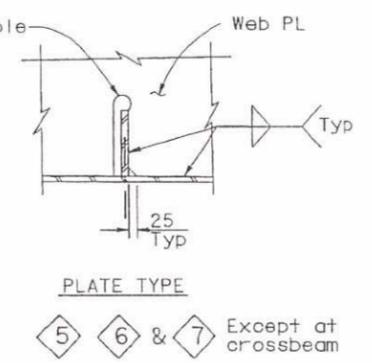
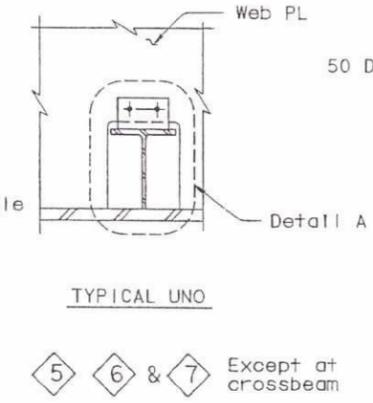
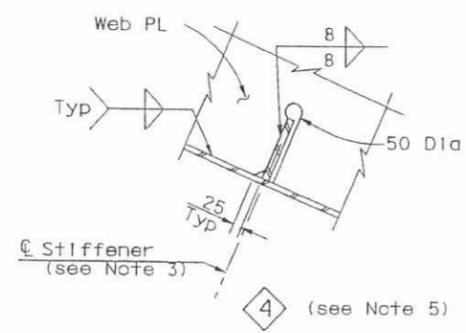
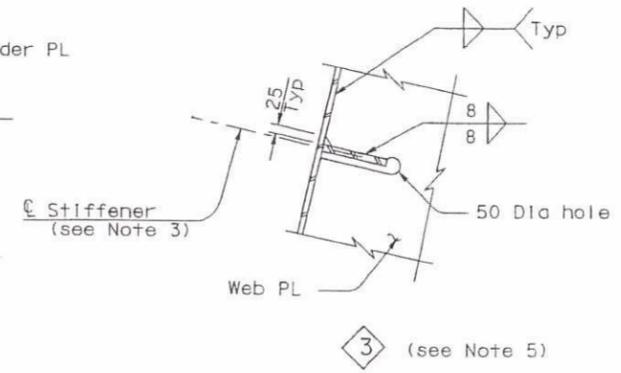
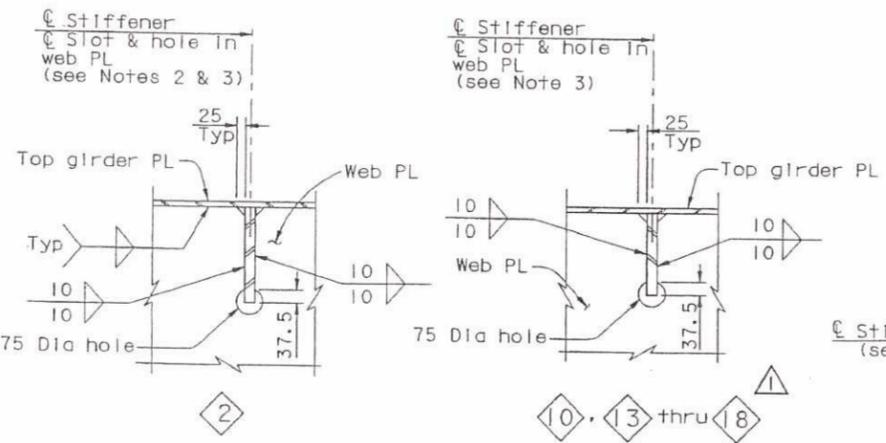


SECTION AT FLOORBEAM
 1:100



MARK	DATE	DESCRIPTIONS	BY	CH'D
▲	07/21/06	ADD STIFFENER TYPES 13 THRU 18	GB	NV
		REVISIONS		

CONTRACT CHANGE ORDER NO. 22
 SHEET 7 OF 8



NOTES:

- For Details A and B, see "Typical Girder Details No.6" sheet.
- For details at PPI17 to PPI21, see "Girder at East Transition Details No.1" and "Girder At Pier E2 No.9" sheets.
- All typical girder stiffeners are continuous through floorbeam web except for 8 and 9 at crossbeam, and 10 typically, and unless otherwise specified in the plans.
- For locations of stiffener types 10 thru 18, see "Girder at East Transition" sheets.
- Typical details for 3 and 4 shown. For details at suspender location, see "Typical Girder Details No.6" sheet.

STIFFENER DETAILS AT FLOORBEAM (see Note 3)
 1:10
 4 REVISED PER ADDENDUM NO. 4 DATED DECEMBER 9, 2005

R. Valizadeh/V. Toan/Y.L./W.L./F.C.
 DESIGN OVERSIGHT
 SIGN OFF DATE 07/21/06
 Rev. Date: 5-18-95

DESIGN	BY G. Baker	CHECKED P. Ritchie
DETAILS	BY S. Cano	CHECKED T. McMeans
QUANTITIES	BY G. Baker	CHECKED M. Roberts

PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 PROJECT ENGINEER
 R. Manzanarez

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)	
TYPICAL GIRDER DETAILS NO.5	



CU 04 EA 0120F1	DISREGARD PRINTS BEYOND EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 212R1 OF
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100% PS&E
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DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	651R1	1204

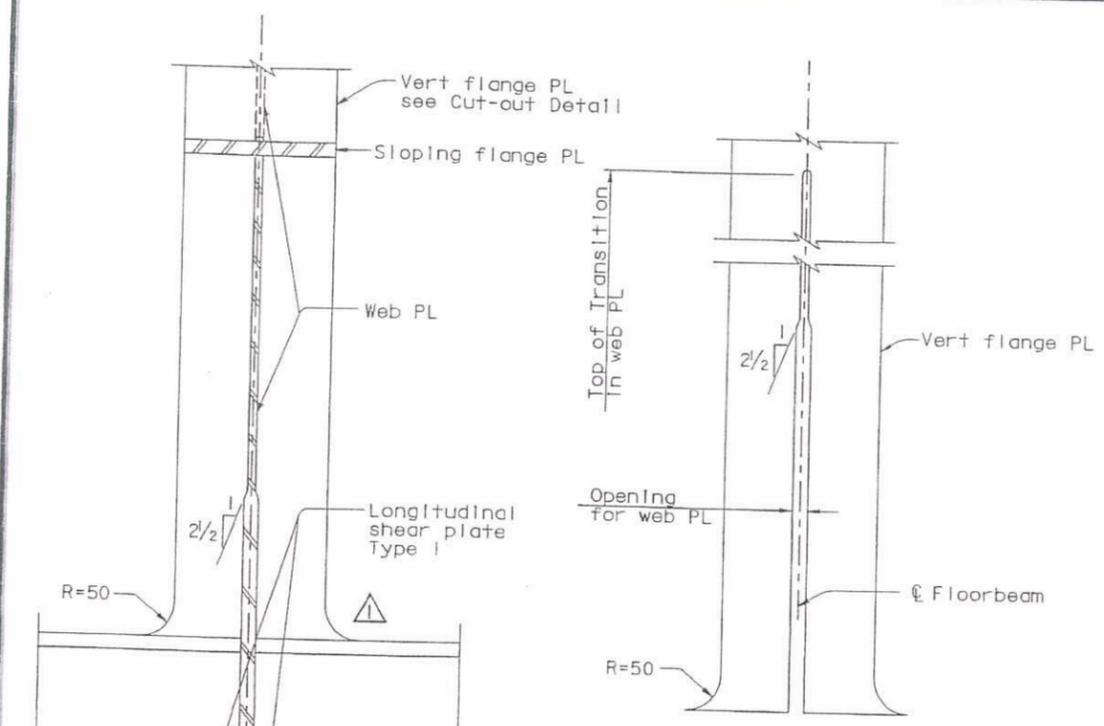
George Baker
REGISTERED ENGINEER - CIVIL
No. C57112
Exp. 12/31/07
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE
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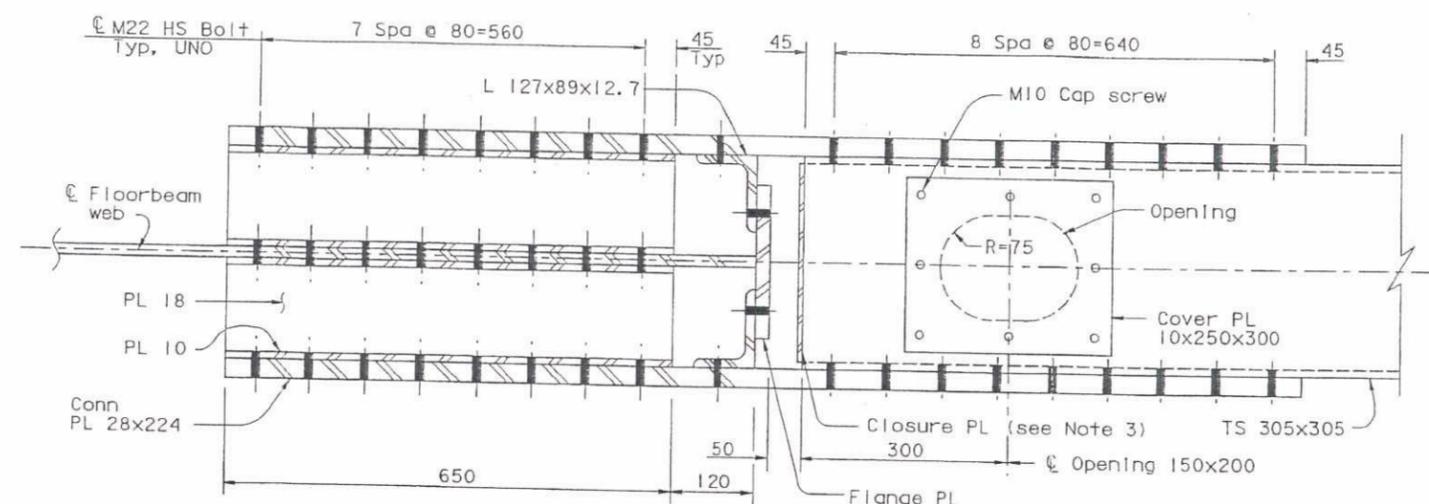
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MARK	DATE	DELETES WELD CALLOUT	GB	NV
		DESCRIPTIONS	BY	CH'D

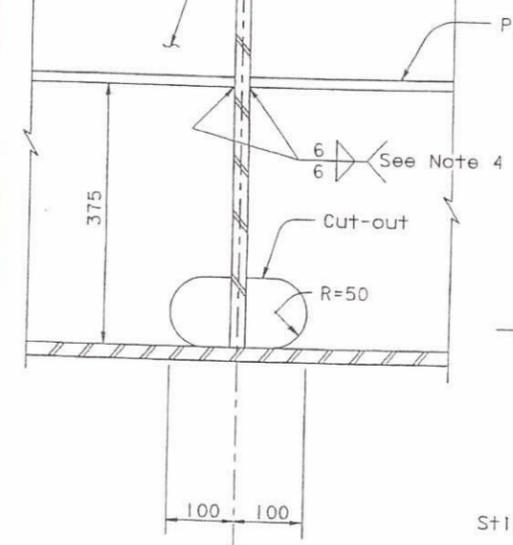
CONTRACT CHANGE ORDER NO. 22
SHEET 8 OF 8



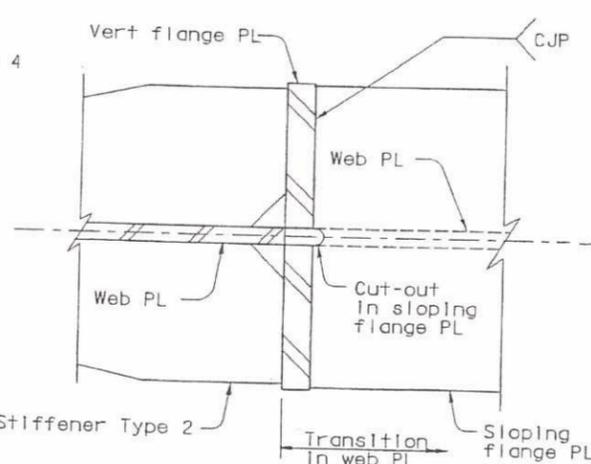
VERTICAL FLANGE PLATE CUT-OUT DETAIL
1:5



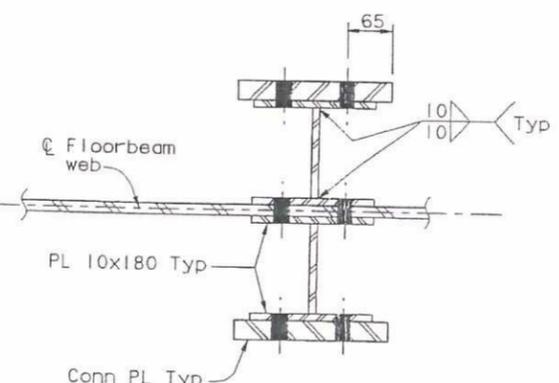
SECTION G-G
1:5



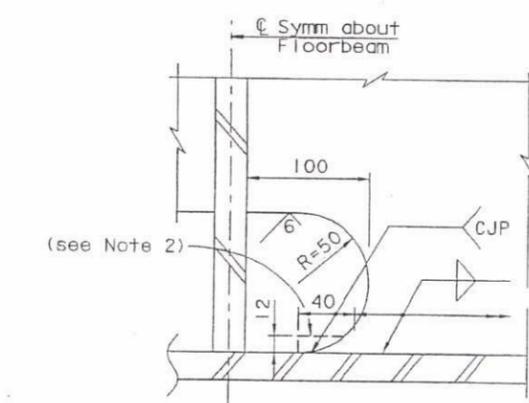
SECTION F-F
1:5



SECTION E-E
1:2.5



SECTION H-H
1:5



CUTOUT DETAIL
1:2.5

- NOTES:**
- For location of Sections E-E, F-F, G-G and H-H, see Detail D on "Typical Floorbeam Details No.5" sheet.
 - Grind off end of CJP welds. Provide 12 mm trailer with transition to cut-out. See similar Detail A on "Typical Girder Details No.4" sheet. Grind opening to 6 Micron finish in accordance with ANSI B46.1.
 - For closure plate details, see "Typical Floorbeam Details No.7" sheet.
 - Weld shall be CJP in SPCM zone.

4 REVISED PER ADDENDUM NO. 4 DATED DECEMBER 9, 2005

R. Vajzadeh/V. Toan/Y.L./W.L./F.C.
DESIGN OVERSIGHT
Rev. Date 5-18-05

DESIGN	BY G. Baker	CHECKED P. Ritchie
DETAILS	BY S. Camo	CHECKED T. McMeans
QUANTITIES	BY C. Mauch	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

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

TYPICAL FLOORBEAM DETAILS NO.6



CU 04	EA 0120F1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 234R
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