KFM
KIEWIT / FCI / MANSON, A JV

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LETTER OF SUBMITTAL
KFM Skyway Project # 04-012024

Run Date 03-Aug-06
Time #Name?

Dated: 03-Aug-2006

SUBMITTAL No: KFM-SUB-006970 **Rev:** 00

To: **Doug Coe**
Caltrans-Skyway Project
345 Burma Road
Oakland CA 94607
Phone: Fax:

Co/Job # 364-3726
Contract # 04-012024
Sub/Supplier: KIE
Sub/Supplier No:

Subject: Kie-Con NCR for fender module FP-1A-5 #16 rebar stick out

Special Provis. (SP) REF: 10-1.29
Standard Spec. (SS) REF:
RESUBMITTAL/SUPPLEMENTAL REF:

We are sending the following attached items: ☑ Attached ☐ Via Fax

☐ Contract Plans/Specs ☐ Certs of Compl./Samples ☐ Working Drawings
☐ Drawings/Calculations ☐ Schedule ☐ WQCP and/or Addenda
☐ Change Order ☐ Progress Estimate Request ☐ Weekly Weld Reports
☐ Copy of Letter ☐ Payroll Information ☐ CWR Procedure

Item	Date	Copies	Description	Drawing No	Rev	Status	Pages
01	03-Aug-06	1	Kie-Con NCR-302-002		0	Pending	4

These are transmitted as checked below:

☑ For Approval ☐ For Review/Comment ☐ Return For Correction
☐ For Your Use ☐ As Requested ☐ For Information

Remarks:

Please review and approve the attached Kie-Con NCR to repair/replace the 16PT04 bar on the precast fender. This repair is necessary provide the correct stick out to install the bar lock coupler.

CC:

Please review / approve by : 17-Aug-2006

Submitted By: Norman Gilbert
(KFM Staff Member – Originator of Transmittal)

Checked & Sent By: SBurke
Contract Admin/DCS Staff

Copy To: Job Office Files

An Equal Opportunity Employer

KIE-CON
A DIVISION OF KIEWIT PACIFIC COMPANY
Contractors License # 433176
An Equal Opportunity Employer

SFOBB SKYWAY PROJECT

Contract # 04-012024

Non Conformance Report

Name: FARSHAD MAZIDOM

Date: 7/25/06

Element ID Number: FP-1A-5

KC-NCR-302-002

Date deficiency Found: 7/25/06

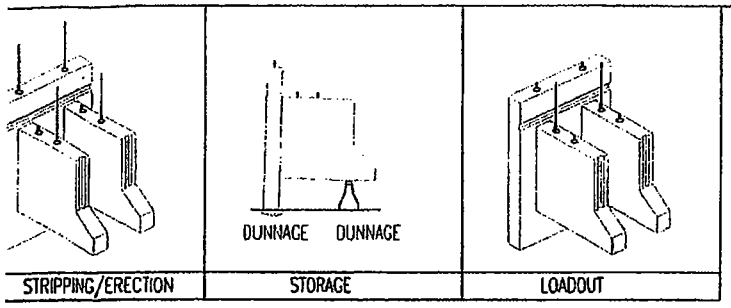
Description of deficiency:

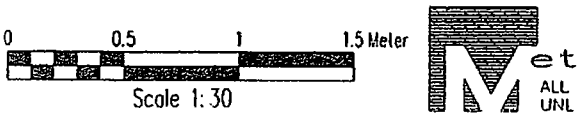
1 LEG OF IGPT04 IS ALMOST FLUSH WITH CONCRETE SURFACE LEAVING NO ROOM FOR COUPLER @ THE JOB SITE.
(SEE ATTACHE DRAWING)

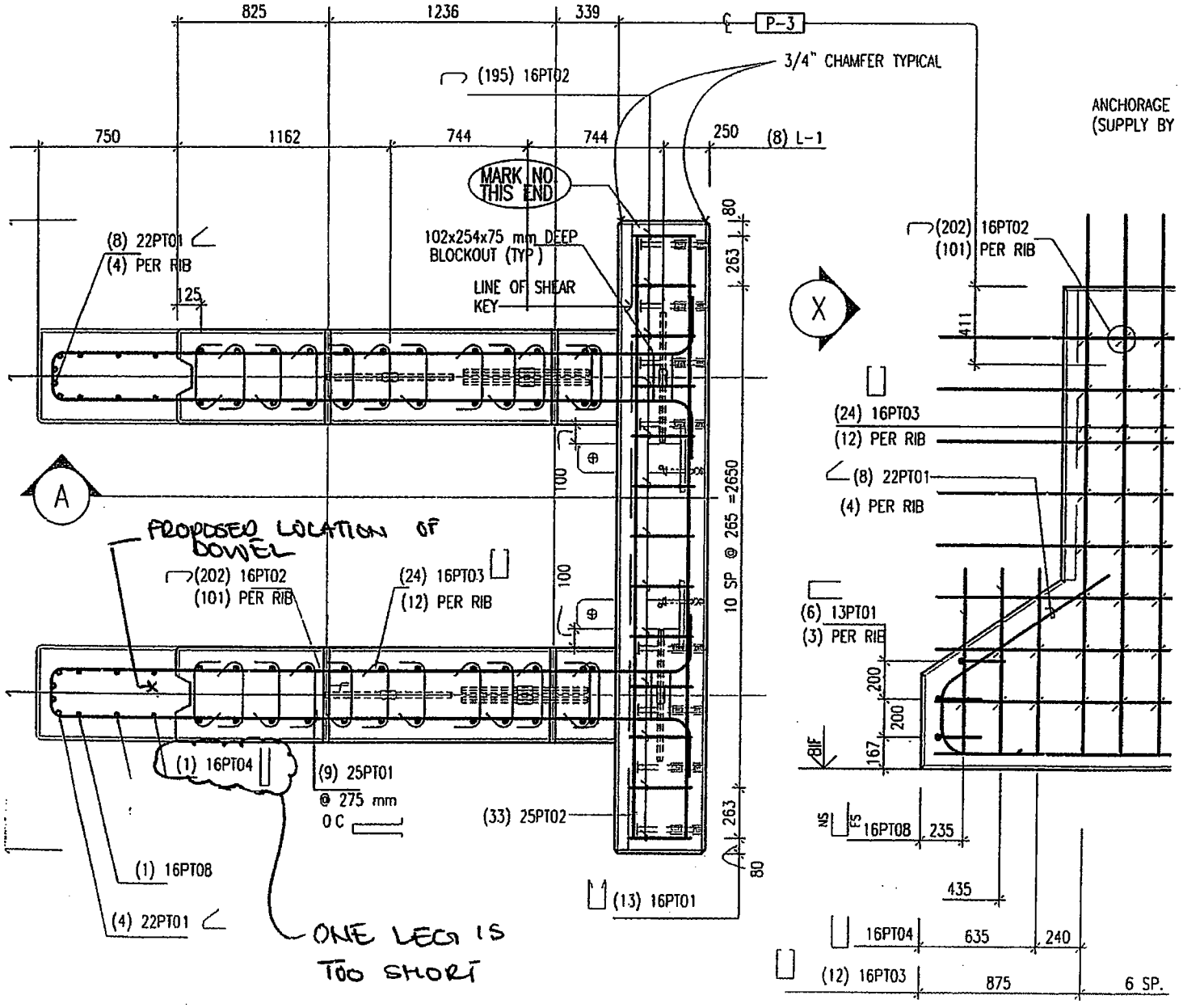
Schedule of deficiency corrections

Date	Deficiency corrections

Sign: Farshad Mazidom Title: Q.C. INSPECTOR Date: 7/25/06







1 FP-1c PLAN SCALE 1:30

(TYPE 1A) FP-1A REINFORCEMENT

2 FP-1c ELEVA SCALE

Resolution to KC-NCR #302-002

One leg of 16PT04 is almost flush with the concrete surface leaving no room for coupler at the job site (See attached Drawings).

1. A hole will be drilled adjacent to the existing bar and toward the center line of fender Rib with a roto-hammer. The hole diameter will be 19 mm.
2. The hole will be blown clean with compressed air and wire brush.
3. Simpson's Epoxy-Tie SET adhesive will be used to install the new dowel. The dowel will be installed per Simpson Strong-Tie's instruction for Epoxy-Tie Set.
4. #16 dowel will have a minimum of 140 mm embedment.

This procedure may be used for other fenders (on the same exact bar) if needed.

REGISTERED PROFESSIONAL ENGINEER
FARSHAD MAZLOOM
64113
EXP. 12/31/06
CIVIL
STATE OF CALIFORNIA

7/25/06

TECHNICAL BULLETIN

Epoxy-Tie® SET Adhesive - Rebar Yield and Tensile Strength Embedments

SIMPSON Strong-Tie ANCHOR SYSTEMS

Tests have been performed to establish load capacities for rebar dowels installed at multiple embedment depths with Epoxy-Tie SET adhesive. Using these results, the embedment depths required to develop the yield or tensile strengths of Grade 60 rebar have been calculated and are presented below.

Tension Loads and Development Lengths for Rebar Dowels in Normal-Weight Concrete

Rebar Size No. (mm)	Drill Bit Dia. in.	Embed. Depth in. (mm)	f'c >= 2000 psi (13.8 MPa) Concrete			f'c >= 4000 psi (27.6 MPa) Concrete			ASTM A615 Grade 60 Rebar	
			Ultimate Bond Strength lbs. (kN)	Embed. To Develop Yield Strength in. (mm)	Embed. To Develop Tensile Strength in. (mm)	Ultimate Bond Strength lbs. (kN)	Embed. To Develop Yield Strength in. (mm)	Embed. To Develop Tensile Strength in. (mm)	Yield Strength lbs. (kN)	Tensile Strength lbs. (kN)
#4 (12.7)	5/8	4 1/4 (108)	16,480 (73.3)	4 1/4 (108)	5 1/4 (133)	18,320 (81.5)	4 1/4 (108)	4 1/4 (108)	12,000 (53.4)	18,000 (80.1)
		6 (152)	19,360 (86.1)			19,360 (86.1)				
#5 (15.9)	3/4	5 (127)	24,600 (109)	5 (127)	5 3/4 (146)	26,040 (116)	5 (127)	5 1/2 (140)	18,600 (82.7)	27,900 (124)
		9 3/8 (238)	48,380 (215)			48,380 (215)				
#6 (19.1)	7/8	6 3/4 (171)	38,380 (171)	6 3/4 (171)	7 (178)	40,500 (180)	6 3/4 (171)	6 3/4 (171)	26,400 (117)	39,600 (176)
		11 1/4 (286)	65,020 (289)			65,020 (289)				
#7 (22.2)	1	7 3/4 (197)	47,760 (212)	7 3/4 (197)	8 3/4 (222)	47,760 (212)	7 3/4 (197)	8 3/4 (222)	36,000 (160)	54,000 (240)
		13 1/8 (333)	81,560 (363)			81,560 (363)				
#8 (25.4)	1 1/8	9 (229)	53,680 (239)	9 (229)	11 3/4 (298)	53,680 (239)	9 (229)	11 3/4 (298)	47,400 (211)	71,100 (316)
		15 (381)	94,240 (419)			94,240 (419)				
#9 (28.6)	1 1/4	10 1/8 (257)	53,680 (239)	11 (279)	14 1/2 (368)	53,680 (239)	11 (279)	14 1/2 (368)	60,000 (267)	90,000 (400)
		16 7/8 (429)	111,460 (496)			111,460 (496)				
#10 (31.8)	1 1/2	11 1/4 (286)	76,000 (338)	11 1/2 (292)	17 1/4 (438)	76,000 (338)	11 1/2 (292)	17 1/4 (438)	76,200 (339)	114,300 (509)
		18 3/4 (476)	125,840 (560)			125,840 (560)				
#11 (34.9)	1 5/8	12 3/8 (314)	87,500 (389)	13 3/4 (349)	—	87,500 (389)	13 3/4 (349)	—	93,600 (416)	140,400 (625)
		20 5/8 (524)	132,080 (588)			132,080 (588)				

1 Development lengths are based on comparison of average ultimate bond strengths from testing in unreinforced concrete to minimum yield and tensile strengths of rebar
2 Critical edge distance is 1.5 times embedment depth and critical spacing is 4 times embedment depth for unreinforced concrete. Refer to C-SAS-2005 for load adjustment factors for lesser spacings and edge distances. Critical edge distance and critical spacing may be reduced when anchoring into reinforced concrete members
3 Refer to catalog C-SAS-2005 for load adjustment factors for in-service temperature
4 Development lengths may be interpolated for concrete compressive strengths between 2,000 psi and 4,000 psi
5 Anchors are not permitted to support fire-resistive construction. Where not otherwise prohibited by code, anchors are permitted for installation in fire-resistive construction provided that at least one of the following conditions is fulfilled: a) Anchors are used to resist wind or seismic forces only. b) Anchors that support gravity load-bearing structural elements are within a fire-resistive envelope or a fire-resistive membrane, are protected by approved fire-resistive materials, or have been evaluated for resistance to fire exposure in accordance with recognized standards. c) Anchors are used to support nonstructural elements

This technical bulletin is effective until January 31, 2006, and reflects information available as of August 1, 2005. This information is updated periodically and should not be relied upon after January 31, 2006; contact Simpson for current information and limited warranty or see www.simpsonanchors.com.

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T-SAS-SETREBR05 8/05 exp. 1/06

DEPARTMENT OF TRANSPORTATION
SFOBB – Skyway Project
345 Burma Road
Oakland, CA 94607
Facsimile Number: (510) 622-5165

Flex Your Power
Be Energy Efficient!

September 12, 2006

KFM, a JV
220 Burma Road
Oakland, CA 94607

Contract: 04-012024
04-SF, Ala-80-13.9/14.3, 0.0/1.6
SFOBB Skyway Project
State Letter # 5.03.1-010394

Subject: Kie-Con NCR for Fender Module FP-1A-5 #16 Stick-out

Dear Mr. Zink,
Attention: Norman Gilbert,

We concluded our review of KFM-SUB-6970, received in our office on August 3, 2006.

This NCR, was issued in regards to the #16 reinforcing steel that was flush with concrete at the toe of fender module FP-1A-5.

We approve of the recommendation made by KFM in the Non-Conformance Report, which reflects the recommendation made by the manufacturer (Simpson anchors) for using this product called Epoxy-Tie Set Adhesive.

Please be advised, however, that the PCQCP report for Fender Module FP-1A-5 (KFM-Sub-6123) was approved on March 6, 2006 with the STL 9689. Thus, please revise and re-submit KFM-Sub-6970 to include this NCR.

Should you have any questions, please contact Saman Soheili at 286-0520.

Sincerely,

<<< ORIGINAL SIGNED >>>

Mark Woods
Foundation Structure Representative

For: Mr. Douglas Coe
Resident Engineer

cc: D. Coe
M. Modanlou, B. McDowell
file: 5.03.1