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4/22/04

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

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

Flex Your Power
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April 21, 2004

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.**I-004251***

Subject: ***USI NCR** No. 18 - Deficient Height of Diaphragm pa57*

Dear Mr. Skoro,
Attention: Paul Hegarty,

This Non-Conformance Report (NCR) is issued by the State to KFM **as** a result of your subcontractor, USI, for the following reason:

1. USI personnel discovered the height dimensions of pipe sleeve diaphragm pa57 were less than that detailed on the plans. The measured heights were **8** mm short on the left end and **7** mm short on the right end as viewed on the drawing.

This NCR will be tracked as USI NCR No. 18. USI was verbally notified of this NCR by Caltrans' METS on 04/15/04. Please review and address how you plan to resolve this NCR and bring your work back into compliance with our contract.

Sincerely,

David Wu
Senior Bridge Engineer

For Mr. Douglas Coe
Resident Engineer

cc: D. Coe, I. Khinsann, V. Iyer, D. Wu, S. Abbas, B. Chew, H. El Natur, P. Lowry, L. Kwong

file: 5.03.1, 9.07.8

April 28, 2004

KFM
220 Burma Road
Oakland, California 94623

Attn: Mr. Paul Hegarty

Re: State Letter #5.03.1-004251
Caltrains NCR No. 18
KFM NCR #32

Dear Mr. Hegarty:

The above subject state letter rejects pa57 until additional information is supplied that demonstrates the material conforms to the Contract documents. Please find the attached drawing that indicates the dimensions for the left and right side of the subject diaphragm. A sketch has also been supplied for pa84 as we can only assume that the same circumstances will apply. These dimensions indicate that all dimensions are currently within the 5mm. tolerance provided that the dimensions are measured from the centerline of the diaphragm. In the current fabrication procedure, Revision 8, which has been reviewed and discussed in a prior meeting, this issue is addressed under SUB- ASSEMBLY FABRICATION PROCEDURE FOR ASS'Y 1A. It states: *"Layout a "center of girder" line on all diaphragms. Layout a "center of girder" line on the soffit plate and also the center of the deck section. These centers on the plates need to be present at the end of the plates and the location of the diaphragms and T-stiffeners. From the centerline, an edge fit-up line will be indicated to assure accurate alignment. Following this procedure will assure the required alignment of girder section to girder section."* When this particular section was addressed in that prior meeting, no exceptions were noted.

Since the diaphragm is completely enclosed by the soffit, web and deck plates, maintaining centerline dimensions to fit the adjoining members is essential to the current method of assembly and therefore measurements should be measured from centerline to establish consistent results.

In addition, AWS D1.5-96 states in paragraph 3.3.2.1 *"The root opening between parts shall not exceed 5 mm [3/16 in.] except in cases involving rolled shapes or plates 75 mm [3 in.]..."* Since none of the root openings will exceed 4 mm., the

root opening is within the tolerance required by the Special Provisions and AWS D I.5-96.

AWS D1.5-96 also states in paragraph 3.3.4.1 *"Root openings wider than those allowed in 3.3.4, but not greater than twice the thickness of the thinner part or 20 mm [3/4 in.], whichever is* less, may *be corrected by welding to acceptable dimensions prior to joining the parts by welding."* **As** stated the diaphragm edges could be extended to bring them in as near contact as required. Although this is an acceptable repair procedure per AWS D1.5, we do not believe that extending the edges prior to welding the joint is practical. Adding an additional heat cycle to the joint would not serve its intended purpose. Paragraph 3.3.4.2 States: *" Root openings larger than those allowed in 3.3.4.1 may be corrected by welding only with the approval of the Engineer."* This would indicate that Engineer approval is not required for root openings that comply with paragraph 3.3.4.1. Since this repair would not require engineer approval and the subject diaphragms are not complete, rejection by Caltrains seems premature. Although the heads-up is most appreciated, USI should be allowed to finish the assemblies prior to rejection.

Sincerely,

Ralph Seeley
Plant Manager

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor
DEPARTMENT OF TRANSPORTATION
SFOBB – Skyway Project
345 Burma Road
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Facsimile Number: (510) 622-5165

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June 21, 2004

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 # 5.03.1-004588

Subject: Response to KFM-SUB-002298R00: USI Response to State Letter 4251 - Caltrans NCR 18 (KFM NCR #32)

Dear Mr. Skoro,
Attention: Mr. Rich Bienek,

The State has reviewed Response to KFM-SUB-002298R00: USI Response to State Letter 4251 - Caltrans NCR 18 (KFM NCR #32) and it is not approved.

USI's proposed method of measuring would double the tolerances allowed for many dimensional checks. While USI can theoretically account for the 8 mm discrepancy in length, it is unclear if USI can maintain the 5 mm tolerance between internal members. The Contract Special Provisions require all internal structure "be within 5 mm of the theoretical location shown on the plans at any point along the member in the as-installed condition." USI will be unable to maintain the Contract specified spacing between internal members using the proposed method of measurement. The tolerances shown in the Special Provisions should be applied to the absolute as well as the relative measurements in the orthotropic tub.

Diaphragm pa57 remains rejected and diaphragm pa84 is hereby rejected until a satisfactory proposal is received by the Contractor. Should you have any questions, please contact David Wu at (510) 622-5104.

Sincerely,

David Wu
Senior Bridge Engineer

For: Mr. Douglas Coe
Resident Engineer

cc: D. Coe, I. Khinsann, V. Iyer, D. Wu, S. Abbas, B. Chew, H. El-Natur, P. Lowry, I. Kwong
file: 5.03.1, 9.07.8