APPENDIX A

August 23, 2007

PROJECT INFORMATION

04-0120F4

SFOBB Self Anchor Suspension (SAS) Bridge

SUBJECT

Office of Structural Materials (OSM) performed a Follow-up Department Audit of the Shanghai Zhenhua Port Machinery Company, Ltd. (ZPMC) for the deck and tower fabrication Facilities.

OVERVIEW

The Office of Structural Materials (OSM) performed a follow-up audit of ZPMC, Changxing Island facility, in Shanghai, China on August 9, 2007. The follow-up audit was required to clear the "Conditional Pass" received in the pre-award audit performed between February 15 and 17, 2006. The audit team included Mr. Phil Stolarski, P.E., Mr. Jim Merrill, P.E., and Mr. John Kinsey from OSM and Mr. Pete Siegenthaler, P.E. of Office of Structures Construction (OSC).

AUDIT SUMMARY

The main objective of the initial Department audit was to evaluate the overall capability of ZPMC to fabricate the Self Anchored Suspension Bridge (SAS) Orthotropic Box Girder (OBG) and tower, including the cross and link beams for the SAS. The Department utilized the written responses to the MFSQA provided by ZPMC as a basis for the audit. The main objective of the follow-up audit was to focus on the items found to be deficient in the initial audit without revisiting the areas determined to be adequate in the initial audit. Some of the related topics that were discussed with ZPMC during both audits were their fabrication processes, material control and traceability, material transport and storage capabilities, understanding of the contract documents, and their quality control programs. A facility meeting and plant tour was conducted at the Changxing Base plant facility. The following sections highlight the Department audit of the facility.

ZPMC (Changxing Facility):

On the morning of August 9th, 2007 the audit team traveled to Changxing Base facility. The facility is on an island about 20-minutes east of Pudong Port in the Yangtze River. During the opening meeting the audit team met with ZPMC senior managers and representatives of American Bridge/Flour Joint Venture (ABF) to outline the audit process and to discuss the previous audit findings.

Caltrans

A Power Point slide presentation was given to the audit team profiling ZPMC's fabrication/inspection plan and construction activities to address the initial audit findings. Key presentation slides are attached to this report to demonstrate the CWI inspection coverage plan for the new fabrication facility.

Discussions were held regarding ZPMC's written responses to address each section of the initial MFSQA audit where the audit team reported a finding. A summary of the main issues as noted by the audit team during the review of the MFSQA with ZPMC personnel are presented in the summary section of this report.

ZPMC personnel gave the audit team a plant tour of Changxing Base facility during the afternoon. Photographs of tour are shown in appendix A of this report.

SUMMARY OF INTIAL AUDIT FINDINGS

The following summarizes the concerns expressed in the initial OSM audit report:

The audit team found that ZPMC was well qualified in fabricating port cranes of all kinds and sizes; however, to date they have no comparable bridge experiences. In addition, the ZPMC Changxing facility appeared to be very busy and congested with crane fabrication. The audit team was quite concerned with an apparent lack of available space to fabricate and assemble the deck and the tower for the SAS project. ZPMC informed the audit team they will be building an entirely new facility where they will be moving some of the crane fabrication operation. This transfer of work would enable the Changxing facility to have sufficient capacity for the fabrication and assembly of the SAS project. The new facility was supposed to be completed by May 2007. Subsequently, ZPMC modified their plan to build the new facility to perform the Tower fabrication rather than move the port crane operations.

The other main concern of the audit team was that ZPMC does not have the required experience in fabrication similar types of bridges. The newly awarded project, Incheon Bridge in South Korea, the first orthotropic steel bridge ZPMC will fabricate. The audit team expressed their concern regarding having the necessary equipment, and also the knowledge to fabricate such complicated structures.

In the initial audit, ZPMC was found to be capable of fabricating and assembling the OBG and tower lift sections. The audit team noted that the facility had enough shop area for the preparation and fabrication of each of the subcomponents including the necessary cutting, drilling, and machining, welding, and painting facilities. The audit team noted the lack of knowledge and experience the technical and shop personnel had with bridge experience, specifically this type of bridge. Based on discussions with technical staff at the facility, there were an inadequate number of QC personnel (CWI or NDT) currently available to meet the

"continuous inspection" requirements of the SAS. Furthermore, specific QC procedures (i.e., NDT written practice) required by this contract had not yet been developed.

Based on the findings outlined above, the following Items of Concern (IOC) were noted regarding ZPMC's capability to fabricate components for the SAS:

1. *Inadequate number of qualified welding inspectors* – ZPMC initially had 4 AWS CWI QC inspectors available.

2. *Inadequate number of qualified nondestructive testing (NDT) personnel* – ZPMC initially had one ASNT UT Level III technician available and the written practice for the qualification and certification of NDT personnel was under development.

3. *Lack of NDT written practice in accordance with ASNT* – ZPMC did not have an NDT written practice in accordance with the ASNT Recommended Practice No. SNT-TC-1A. The written practice presented to the audit team during the initial Department audit was not acceptable for this project.

4. *Lack of experience with the fabrication and assembly of similar types of bridges* – ZPMC did not have any experience in fabricating similar types of structures.

5. *Inadequate quality of welds as observed by the audit team* - such as welding in the rain.

6. *Inadequate experience with welding U-rib welding* – The audit team was informed that ZPMC would be purchasing the U-rib welding machines.

7. *Inadequate U-rib forming capacity* – The audit team could not verify U-rib forming capabilities.

SUMMARY OF FOLLOW-UP AUDIT OBSERVATIONS

The initial audit found ZPMC Changxing facility to be very busy and congested with crane fabrication and reported concern with an apparent lack of available space to fabricate and assemble the deck and the tower for the SAS project. ZPMC's response to that concern was to build an entirely new facility for the tower fabrication operation. This enables the Changxing facility to have sufficient capacity for the fabrication and assembly of the SAS project. The new fabrication facility is nearing completion (90%) with a projected utilization date of late September 2007. The construction of the Heavy Lift Pier has not yet started, but the estimated completion date is March 2008. The audit team noted this remaining construction of the Heavy Lift Pier and the completion of the Tower Fabrication facility as an item of concern. However, the rapid pace of construction observed on the Tower Fabrication facility indicates that ZPMC

can reasonably complete construction of the Heavy Lift Pier prior to impacting the schedule of the SAS fabrication and delivery date.

The concern of the initial audit team with regard to ZPMC's apparent lack of experience in fabrication of similar type of bridges was reasonably addressed by the near completion Incheon Bridge for South Korea. The concern regarding ZPMC having the necessary equipment fabricate such complicated structures was greatly reduced by the purchase of new equipment. The concern of ZPMC possessing adequate knowledge was reduced by their demonstration of equipment utilization and the development of fabrication plans that were submitted and approved with comments in the WQCP.

In response to the initial OSM audit report ABF generated a request for a subsequent review of ZPMC and detailed the corrective actions taken to address the States concerns in submittal number ABF-CAL-LTR-000239 dated August 2nd 2007. OSM evaluated the written response generated by ABF/ZPMC and focused specific questions regarding these concerns during the subsequent audit. The following is a summary of the observations noted in the audit to address the concerns indicated in the initial audit:

1. *Inadequate number of qualified welding inspectors* – ZPMC initially had 4 AWS CWI QC inspectors available.

   Audit Observations: Currently ZPMC employs twenty-two CWI's and twenty-one CAWI. It was indicated that ZPMC plans to hire additional certified personnel or train additional personnel with the goal of them passing the AWS CWI examination. ZPMC representatives stated that their goal is to maintain a ratio of less than five CAWI's to every one CWI. The audit team noted the first utilization of this CWI/CAWI supervision program would be for the fabrication of the SAS. The concern remains of the effectiveness of this CWI/CAWI supervision program and the apparent lack of practical application. The audit team was not able to verify the successful utilization of this conceptual program and therefore found its successful utilization as an item of concern.

   The plan for Lead QC coverage as defined by AWS D1.5-2002, Section 12.16.1.1 (see below) for the joining of FCM to non-FCM components was not sufficiently detailed in the ZPMC slide presentation illustrating Lead CWI staffing and coverage. This Lead QC coverage for the welding of FCM to non-FCM components appears to be an oversight that ZPMC must modify in their staffing plan to meet the contract documents. Therefore, this Lead QC coverage plan is listed as an item of concern.

   12.16.1.1 Inspectors. *Inspectors shall be qualified as specified in 6.1.3. Lead QC and QA Inspectors shall have a minimum of three years experience in steel bridge fabrication inspection. A lead inspector shall be defined as the leader of the QA or QC inspection team at a specific work location, one who assigns other inspectors as necessary and supervises their work. The lead inspector shall be familiar with and shall have seen each*

FCM that he or she has inspection responsibility for and may accept as described in 12.16.5.2. All inspectors shall have the authority to accept or reject materials and workmanship subject to review by the lead inspector.

2. *Inadequate number of qualified nondestructive testing (NDT) personnel* – ZPMC initially had one ASNT UT Level III technician available and the written practice for the qualification and certification of NDT personnel was under development.

   Audit Observations: ZPMC has prepared a new Written Practice and certified forty-three Level II technicians for this project. The Written Practice and personnel certifications were submitted in the Welding Quality Control Plan (WQCP) and were approved with comments.

3. *Lack of NDT written practice in accordance with ASNT* – ZPMC did not have an NDT written practice in accordance with the ASNT Recommended Practice No. SNT-TC-1A. The written practice presented to the audit team during the initial Department audit was not acceptable for this project.

   Audit Observations: ZPMC has prepared a new Written Practice that meets the contract requirements and ASNT Recommended Practice No. SNT-TC-1A. The Written Practice was submitted in the WQCP and was approved with comments. At the time of the audit, ZPMC had not yet indicated the acceptance of Caltrans approved as noted comments on ZPMC's written practice for the qualification of NDT personnel. Subsequently, ZPMC submitted an email to Jim Merrill indicating that they accept the approved as noted comments regarding the Written Practice.

4. *Lack of experience with the fabrication and assembly of similar types of bridges* – ZPMC did not have any experience in fabricating similar types of structures.

   Audit Observations: ZPMC is nearing completion of the Incheon Bridge and professes to have gained significant experience in fabrication of bridge components.

5. *Inadequate quality of welds as observed by the audit team* - such as welding in the rain.

   Audit Observations: ZPMC acknowledged the States concerns and indicated that the proposed CWI/CAWI welding inspection program will improve the overall welding quality and will result in AWS Code compliant workmanship. In addition, new fabrication facilities will eliminate or reduce the amount of welding performed outside. When it is necessary to weld outside, ZPMC indicated that adequate protection or shelter will be provided.

6. *Inadequate experience with welding U-rib welding* – The audit team was informed that ZPMC would be purchasing the U-rib welding machines.

Audit Observations: ZPMC is nearing completion of the Incheon Bridge and has gained significant experience in welding U-rib components. ZPMC acknowledged Caltrans concern with this issue. ZPMC indicated that they are aware of the stringent Caltrans requirements for U-Rib welding and is currently practicing welding techniques to gain approval prior to fabrication of U-Rib to deck fabrication.

7. *Inadequate U-rib forming capacity* – The audit team could not verify U-rib forming capabilities.

   Audit Observations: ZPMC has acquired U-Rib machining, beveling, fanning and welding equipment for this contract and is currently practicing techniques related to each piece of equipment. In addition, ZPMC has successfully completed the U-rib forming demonstration required by the contact documents.

There are three additional issues that were observed or discussed in the audit that resulted in documentation as items of concern. The first is in response to question K-16 of the MFSQA, which addresses whether or not QC personnel clearly indicate on welded components the status of various inspection check points. This item was noted in the initial audit checklist as being deficient, but was not listed as a finding in the body of the report. The item was discussed in the opening meeting and ZPMC representatives indicated that the marking system could be observed in the shop on the ABF mock-up. Review of the ABF mock-up revealed the system and shop practice of marking welds to identify inspection status on the parts being joined is still deficient. The only markings visible were notations of completion of NDT.

The second issue that resulted in an item of concern is ZPMC's ability perform radiographic nondestructive testing (RT) of complete joint penetration welds with through thickness grater than 45mm on Changxing Island. The project requires RT on several joints that exceed 45mm, such as the 60mm transition weld shown on sheet 625 of 1204. The requirements and activates associated with the transportation of a radioactive source to Changxing Island was discussed at length. This issue is an item of concern due the logistics associated with the transportation of a radioactive source or the need for the purchase of additional equipment capable of completing the task.

The third issue that resulted in an item of concern is the need for the correction of the mill test reports to address fine grain practice requirements. The material test reports (MTR's) for the majority of the material onsite does not clearly indicate compliance with the fine grain practice requirement of ASTM A709. ZPMC/ABF indicated that the purchase orders for future material orders would contain the requirement for indicating compliance with the fine grain practice requirements and documents would be provide to address the material onsite.

CONCLUSION

The audit team concluded the following:

- **Fabrication Ability:** ZPMC generally demonstrated to the audit team they have the, engineering support and transportation capacity to perform the fabrication of the Orthotropic Box Girder (OBG), cross beams, and steel tower (ST). However, ZPMC must complete the construction of the new fabrication facility and Heavy Lift Pier in order to make room for the fabrication of the SAS.

- **Sense of Commitment to Quality:** During our audits the team sensed the company has a strong commitment to producing a quality product.

- **Management Team:** ZPMC has committed to building a team and a specific project quality manual.

- **Items of Concern:** The seven items of concern noted in this report were discussed in the audit exit meeting. ZPMC acknowledged OSM's concerns and indicated the desire to address the concerns to the States satisfaction.

- **Audit Completion:** Based upon the capital outlay and management's concentrated efforts, it is clear to the audit team that ZPMC is fully committed to the successful completion of the SAS project. The audit team believes that ZPMC has demonstrated a superior good faith effort to address all previously reported concerns and that there is no need for additional audits of the Changxing Island facility, in Shanghai, China for the SAS project.

RECOMMENDATIONS

Based upon our Department follow-up audit of the Shanghai Zhenhua Port Machinery Company, Ltd. (ZPMC) facility in shanghai, China and the corrective actions demonstrated by ZPMC, OSM recommends that follow-up audit be considered as a "Pass" with seven noted items of concern. However, item of concern number 7 should now be considered closed based upon receipt of written confirmation from ZPMC indicating acceptance of OSM's approved as noted comments specific to the Written Practice for the Qualification and Certification of NDT Personnel. The seven items of concern discussed in the audit exit meeting include the following:

1. Systems and procedures for American Welding Society, Certified Welding Inspector (CWI) to supervise Certified Associate Welding Inspectors (CAWI).

2. System and practice of marking welds to identify inspection status on the parts being joined.

3. Lead CWI inspection coverage for fracture critical material (FCM) being joined to non-FCM material.

4. The ability perform nondestructive testing of complete joint penetration welds with through thickness grater than 45mm on Changxing Island facility by the transportation of a radioactive source or purchase of additional equipment capable of completing the task.

5. Correction of mill test reports to address fine grain practice requirements.

6. Completion of the Heavy Lift station and commissioning of the Tower Fabrication facility.

7. Acceptance of Caltrans approved as noted comments on ZPMC's written practice for the qualification of NDT personnel. Note that ZPMC provided written documentation in the form of an email indicating their acceptance of the approved as noted comments with regard to the Written Practice. Therefore, this item of concern is now considered closed and a copy of this email is attached to this report.

It is the recommendation of OSM that this follow-up audit be the final audit of the Changxing Island facility, in Shanghai, China for the SAS project. If you have any questions, please call Jim Merrill at 805-340-0008, or Keith Hoffman at (510) 450-7765.

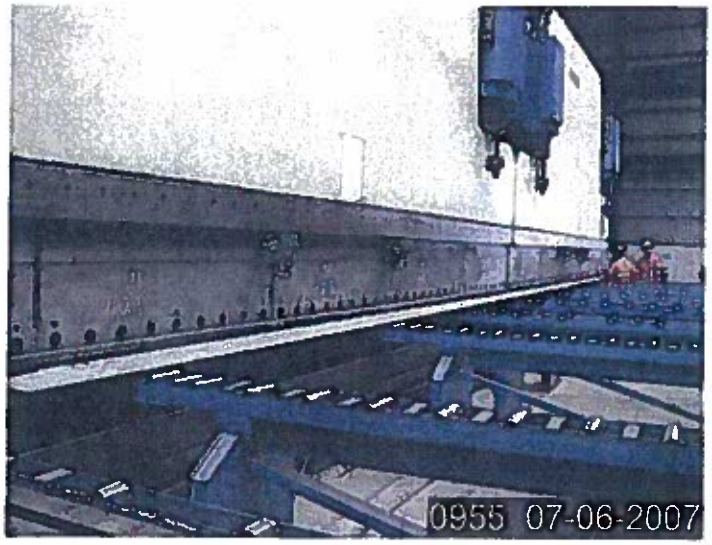
SIGNATURE ON FILE

James Merrill, P.E.
Senior Principal
Division of Engineering Services
Materials, Engineering and Testing Services
Office of Structural Materials

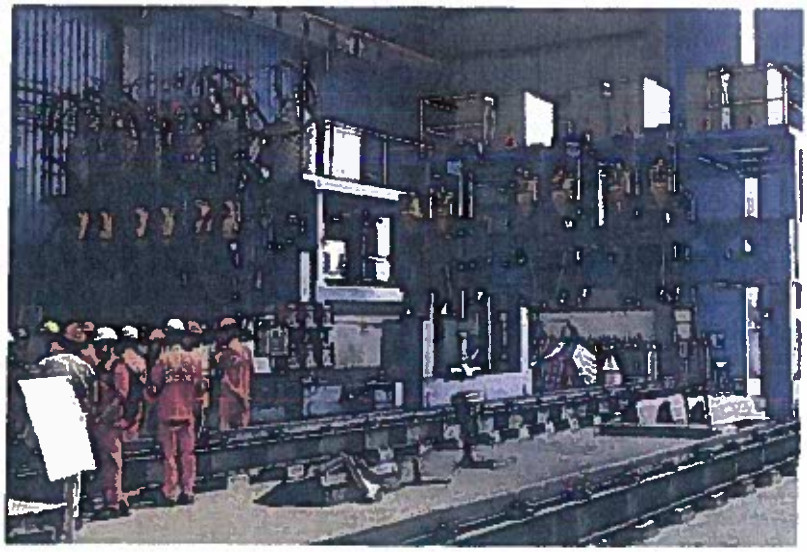
cc: Dan Speer, Keith Hoffman

Photograph 1: Overall view of the exterior of the new Tower Fabrication facility.

Photograph 2: Overall interior view of the new Tower Fabrication facility.



Photograph 3: View of the new U-rib bending machine.



Photograph 4: View of the two new closed rib welding machines.

Photograph 5: View of the weld status markings noted on the ABF mock-up.

Photograph 6: View of the typical signage used in the material storage area.

Photograph 7: View of the tracking document for SAS material.

Photograph 8: View of the typical plate material markings for the SAS plate.

APPENDIX B

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

A&E AMENDMENT PREAPPROVAL

ADM-2042 Rev. 11/09/06 (Page 1)

DATE	
4/21/2008	
REQUESTER TRACKING NO.	

DISTRICT	PROGRAM	CONTRACT NO.	
04	Toll Bridge Program	59A0429	
OFFICE/BRANCH	REQUESTER	PHONE NO.	MAIL STATION
Consultant Services Unit	Prakash Siva	510-286-6114	7B

CONSULTANT NAME MacTec Engineering, Inc.

APPROVAL ROUTE SLIP

EXPEDITE

	Route	Attention (Name)	Mail Station	Initials	Date
1	District Director/Division Chief	Tony Anziano		TA	4/24/08
2	Chief, Division of Procurement and Contracts	Jan Smelser for	65	mr	4/23/08
3	Legal Division	Jose Aguirre	57	JA	4/29/08
4	Chief Financial Officer	Cindy McKim	49	cm	4/29/08
5	Chief Engineer	Rick Land	49	RL	4/30/08
6	Requester	Prakash Siva			

Attached for your review and approval is an A&E Amendment Preapproval form. Questions concerning this request should be directed to the requester shown above.

approval predicated upon the decision outlined in Jose Aguirre's attached note. Amendment only to extend time period to permit expeditious competitive bid process.

mck

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

A&E AMENDMENT PREAPPROVAL

ADM-2042 Rev. 11/09/06 (Page 2)

DATE
4/21/2008
REQUESTER TRACKING NO:

DISTRICT	PROGRAM	CONTRACT NO.	
04	Toll Bridge Program	59A0429	
OFFICE/BRANCH	REQUESTER	PHONE NO.	MAIL STATION
Consultant Services Unit	Prakash Siva	510-286-6114	7B

CONSULTANT NAME

MACTEC Engineering, Inc

CONTRACT	CONTRACT TERM FROM	CONTRACT TERM TO	AMOUNT	PERCENT BY FUNDING SOURCE STATE	FEDERAL	LOCAL/OTHER
NEW						
ORIGINAL	4/1/2005	3/31/2009	$39,000,000	4.87%	10%	85.13%
AMENDMENT 1	4/1/2005	3/31/2009	$12,000,000	5%	10%	85%
AMENDMENT 2	4/1/2005	3/31/2009	$12,000,000	5%	10%	85%
TOTAL			$63,000,000			

*→Continue on Additional Sheets if Necessary

DESCRIPTION OF WORK

Provide a brief description of services. Provide for amendments: 1) a brief description of the scope of work and 2) identify what circumstances have changed since the original contract was executed that require an increase of funding, time, or both.

This amendment is the second amendment request for contract 59A0429. This amendment request is for increased funding only, in the amount of $12,000,000. No time extension is requested. This additional funding provides for six months of services so that either a Non Competitive Bid (NCB) contract will be finalized or a new contract put into place to provide continued Materials Engineering and Testing Quality Assurance (QA) Services for the Toll Program projects.

The original contract, 59A0429, is an on-call contract to provide Materials Engineering and Testing Quality Assurance (QA) Services for District 4 projects. This on-call contract was awarded to Mac Tec Engineering, Inc, for $39,000,000. The performance period of this contract is from April 1st, 2005, to April 1st, 2009. Currently, the contract is expected to exhaust funds by the end of April 2008.

On November 16th, 2007, the Department approved the first amendment in the amount of $12,000,000 to allow for continuity of QA services for an estimated six months so that District could pursue a new contract. On November 29, 2007, District submitted the request for a NCB contract with the current consultant Mactec. Reassessment of the pursuit of a NCB contract is necessary at this time due to a number of recently identified risk factors associated with the NCB procurement. The Department, while negotiating with Mactec on other professional services contracts, has identified issues with Mactec's accounting and charging practices. The Department is performing a pre-award audit and investigations. The findings of the audit and investigation may have an adverse impact on future negotiations for the NCB contract with Mactec. It is anticipated that an additional three months beyond the original six months (Amendment 1) will be required to finalize this assessment, negotiate terms and conditions with the consultant, and to execute the NCB contract.

In the event circumstances arise which may adversely affect the NCB contract procurement, an additional three months would also allow time to advertise and procure a new contract.

JUSTIFICATION

What alternatives to this amendment were considered? What are the consequences to the Caltrans program if this request is not approved? If additional work is being requested in an amendment, justify why the work must be completed under the current contract.

District has considered the "do nothing" alternative. This alternative will result in the discontinuation of the source inspection services and delay project delivery. The adverse impacts to the construction schedule of the SFOBB would result in substantial claims by the contractor.

As stated above, additional funds provided by the first amendment on the existing contract will exhaust by the end of April 2008. The consequence of the rejection of this amendment request is the stoppage of all inspection work on the East Span Seismic Safety Project. Delays in the inspection of materials for the new SFOBB would result in compromises to the quality, contract non-compliance and losses to the State. As an example, the SAS project, which provides for the construction of the bridge's signature span, stipulates a Time-Relate Overhead rate of $86,000 per day.

District is pursuing a NCB contract and a new A&E contract to replace existing contract 59A0429. This amendment would provide the existing contract with enough funds to continue services for an additional six months while the new contracts are processed.

I certify that this request is consistent with program goals, Departmental policy, and within program budget.

Tony Anziano –Toll Bridge Program Manager — Date: 4/22

DIVISION OF PROCUREMENT AND CONTRACTS

for Jan Smelser, Chief — Date: 4/24/08

LEGAL DIVISION

Jose Aguirre, Assistant Chief Counsel — Date:

CHIEF FINANCIAL OFFICER

Cindy McKim, Chief Financial Officer — Date: 4/29/08

~~Supp~~ Extension only to cover competitive bid process; new contract to be in place by 10/08.

APPROVED - I certify that this request is consistent with program goals and Departmental policy.

Rick Land, Chief Engineer — Date: 4/30/08

APPENDIX C

SIGNIFICANT ISSUE REPORT

TO: Dan C. Dunmoyer, Cabinet Secretary

FROM: Dale E. Bonner, Secretary
Business, Transportation and Housing Agency

Will Kempton, Director
California Department of Transportation

PREPARED BY: Tony Anziano
(415) 310-4507
Tony_Anziano@dot.ca.gov

DATE: March 20, 2008

SUBJECT: Issuance of Architectural and Engineering Contract to Provide Materials Inspection and Engineering Services for the Toll Bridge Seismic Retrofit Program

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__X__ For Secretary's Information

____ For Governor's Information

SUMMARY:
Presently, materials engineering and source inspection services for the Toll Bridge Program are being provided via an on-call contract that provides services for both toll and non-toll projects in the California Department of Transportation's (Department) District 4. The existing contract will expire at the end of April 2008.

A new non-competitive bid on-call contract to provide continuity for source inspections and materials engineering services for the Toll Bridge Seismic Retrofit Program and other Toll-funded projects will be processed. The contract will provide inspection services including fabricator auditing, materials engineering, and quality assurance inspection and testing of welding, structural steel members, seismic bearings, isolators and dampers, and reinforcing steel fabricated off construction project sites, as well as field welding inspection at construction sites. These tasks require individuals with expertise and certifications not presently available within the State's resources.

The non-competitive bid contract request is pursuant to current law as it applies to the Toll Bridge Program per Assembly Bill 144.

- The Department has a need for services to provide quality assurance inspections and engineering services in the fabrication of key components of the new San Francisco-Oakland Bay Bridge East Span Project. The resources required to provide these services involve personnel with qualifications and certifications, classifications currently unavailable within the State.

- As previously stated, currently these services have been supplied through the use of an Architectural and Engineering (A&E) contract (Contract No. 59A0429) which was acquired through a qualifications-based competitive selection process. MACTEC Engineering, Inc. (Consultant), has been on site for a number of years as the prime consultant on the contract. Implementing the use of consultants that are already on site minimizes the delays that otherwise would be present with the integration of new consultants.

- Utilizing existing consultants already on site also allows the State to retain the extensive historical and institutional knowledge the Consultant acquired as a result of being on the project for a number of years. This knowledge includes detailed knowledge and understanding of the highly detailed specifications for the various contracts. This Consultant assisted with the preparation of many of these specifications. The loss of this historical knowledge would result in substantial delays in the provision of quality assurance, which in turn would result in substantial costs to the State.

- The length of time the Consultant has been on the project provides the State with a level of continuity that would be lost should another consultant's services be used. There are significant learning curves associated with the services being sought. Continuity on these issues is vital for success. The relationships and knowledge developed over the years is invaluable in the effort to ensure a timely inspection and resolution of issues.

- The Consultant is familiar with all fabrication shops being used and has established relationships as a result of their involvement with audits conducted to date. Some of these shops are located in foreign countries. The Consultant's established credibility and working relationships are vital for success and would not be transferable to other consultants. Delays resulting from the employment of another consulting firm with less experience and historical knowledge would result in costly delays to the State.

- Since the Department's need for the highly specialized service of steel bridge inspection is mostly limited to the Toll Bridge Seismic Retrofit Program, the use of an A&E consultant is appropriate. Upon completion of the Toll Bridge Program, the need for steel bridge inspection services will be dramatically reduced. The use of an A&E consultant provides the Department with the flexibility to reduce staffing needs as these projects wind down.

The services provided by this new contract will be required through June 30, 2015, and is estimated at about $48 million to complete. The existing contract is insufficient due to the extended schedule (the existing contract was awarded prior to the funding delays that have extended the schedule). In addition, one contract now includes overseas fabrication at a large number of locations. The extent of overseas fabrication was not anticipated under the existing contract.

APPROVED:

WILL KEMPTON, Director
California Department of Transportation

Date

DALE E. BONNER, Secretary
Business, Transportation and Housing Agency

Date

APPENDIX D

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Mactec

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	8	16
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	8.2	24.6
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	8	24
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	8	8
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	72.6

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: [signature] Date: 8/27/08

Printed Name of Evaluator: K. Nagatsu

Checked by: [signature] Date: 08/27/08

Final Scores for Contract No. 04A3144 - Source Inspection and Material Engineering Services for the Toll Bridge Program Projects

Rank Summary	Consultant Firm	Andrew Fremier	Stephen Maller	Brian Maroney	Peter Siegenthaler	Prakash Siva	Phil Stolarski	Ken Terpstra	Rank
10	CALTROP Corporation	1	2	2	1	1	2	1	1
11	MACTEC Engineering and Consulting, Inc.	2	1	1	2	2	1	2	2
21	Lim and Nascimento Engineering Corp. (LAN)	3	3	3	3	3	3	3	3

CHECK THE APPROPRIATE BOX BELOW

[x] Rankings include a numeric score for reference checks.

[ ] Rankings include a "zero" numeric score for reference checks because either time did not allow for reference checks or reference checks were not completed on all Consultants interviewed.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION

(Qualifications-Based Selection)

ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Caltrop

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	9	18
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	8	24
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	7.8	23.4
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	9	9
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	74.4

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: [signature] Date: 8/7/08

Printed Name of Evaluator K Tarpstra

Checked by: [signature] Date: 08/07/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Lim and Nacimento Engineering (LAN)

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	7	14
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	7	21
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	6	18
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	7.5	7.5
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	60.5

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: K. Leyd Date: 8/27/08

Printed Name of Evaluator K. Tompstra

Checked by: Ang K. Singh Date: 08/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Lim and Nacimento Engineering (LAN)

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	5	10
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	6	18
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	3	9
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	5	5
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	ϕ	ϕ
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	42

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: S. V. Malla Date: 8/27/08

Printed Name of Evaluator Stephen V. Malla

Checked by: S. Duryea Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2026 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Mactec

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	9	18
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	9	27
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	9	27
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	9	9
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	81

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: [signature] Date: 8/27/08

Printed Name of Evaluator Stephen V. Malla

Checked by: [signature] Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Caltrop

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	6	12
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	7	21
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	7	21
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	6	6
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	ϕ	ϕ
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	60

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: [signature] Date: 8/27/08

Printed Name of Evaluator Stephen V. Maller

Checked by: [signature] Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Mactec

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	8	16
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	8	24
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	7	21
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	7	7
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	68

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Peter E. Siegenthaler Date: 8/27/08

Printed Name of Evaluator PETER E. SIEGENTHALER

Checked by: S. Pratt Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Caltrop

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	8	16
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	8	24
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	8	24
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	7	7
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	71

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Peter E. Siegenthaler Date: 8/27/08

Printed Name of Evaluator: PETER E. SIEGENTHALER

Checked by: S. Drayer Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Lim and Nacimento Engineering (LAN)

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	6	12
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	6	18
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	5	15
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	7	7
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	52

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Peter E. Siegenthaler Date: 8/27/08

Printed Name of Evaluator PETER E. SIEGENTHALER

Checked by: S. Dragan Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Lim and Nacimento Engineering (LAN)

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	6.5	13
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	7	21
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	6	18
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	6.5	6.5
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	58.5

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: S. Prakash Date: 08/27/08

Printed Name of Evaluator PRAKASH SIVA

Checked by: Amrik Singh Date: 08/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Mactec

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	7	14
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	8	24
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	7.5	22.5
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	6	6
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	66.5

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: S Dr[illegible] Date: 08/27/08

Printed Name of Evaluator: PRAKASH SIVA

Checked by: [illegible] Date: 08/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION

(Qualifications-Based Selection)

ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Caltrop

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	7	14
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	7.5	22.5
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	8	24
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	8	8
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	68.5

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: S. Dreyfuss Date: 08/27/08

Printed Name of Evaluator PRAKASH SIVA

Checked by: [signature] Date: 08/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Lim and Nacimento Engineering (LAN)

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	3	6
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	3	9
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	3	9
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	3	3
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	27

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Philip J. Stolarski Date: 8/27/08

Printed Name of Evaluator PHILIP J. STOLARSKI

Checked by: S. Pryor Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Mactec

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	6	12
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	6	18
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	7	21
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	6	6
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	57

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Philip J. Stolarski Date: 8/27/08

Printed Name of Evaluator PHILIP J. STOLARSKI

Checked by: S. Nagaraj Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Caltrop

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	4	8
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	5	15
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	5	15
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	5	5
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	~~1.0~~ 0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	~~48~~ 43

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Philip J Stolarski Date: 8/27/08

Printed Name of Evaluator PHILIP J STOLARSKI

Checked by: S. Dreyer Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Lim and Nacimento Engineering (LAN)

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	6	12
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	5	15
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	5	15
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	5	5
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	47

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Andrew Fremier Date: 8/27/08

Printed Name of Evaluator Andrew Fremier

Checked by: S. Prefontaine Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Mactec

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	7	14
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	8	24
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	9	27
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	7	7
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	72

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Andrew Fremier Date: 8/27/08

Printed Name of Evaluator Andrew Fremier

Checked by: S. Dyal Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Caltrop

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	8	16
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	9	27
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	8	24
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	9	8
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0	0	0
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on <u>all</u> the Consultants.		Total	75

Comments (continue on reverse if necessary):

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Andy Fremier Date: 8/27/08

Printed Name of Evaluator Andrew Fremier

Checked by: S. Bryan Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Mactec

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	8	16 ✓
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	8	24 ✓
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	9	27 ✓
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	8	8 ✓
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0		
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	75 ✓

Comments (continue on reverse if necessary):
put focus on tower
recognized this is a significant challenge coming up
strong in D1.5
- very good team

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Brian Mahoney Date: 8/27/08

Printed Name of Evaluator Brian Mahoney

Checked by: S. Dreyer Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Caltrop

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	8	16
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	8	24
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	8	24
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	8	8
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0		
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	72

Comments (continue on reverse if necessary):

- very good team
- their expert weld person was D1.1 not D1.5

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Brian K Maroney Date: 9/27/08

Printed Name of Evaluator Brian Maroney

Checked by: S. Dreyer Date: 8/27/08

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ARCHITECTURAL & ENGINEERING (A&E) CONSULTANT EVALUATION FORM/FINAL EVALUATION
(Qualifications-Based Selection)
ADM-2028 (Rev. 07/06/04)

Contract No.: 04A3144 Consultant: Lim and Nacimento Engineering (LAN)

Criteria	(a) Weight	(b) Score (0-10)	(a) x (b) Weighted Score
1. PROJECT TEAM • Qualifications and relevant individual experience • Unique qualification of key personnel • Time commitment of key members • Organization Chart	2.0	6	12
2. FIRM'S CAPABILITIES • Demonstrated capability on similar or related projects • Management and scheduling abilities • Other on-going projects and priorities • Quality and cost control • Staff availability	3.0	7	21
3. PROJECT UNDERSTANDING AND APPROACH • Demonstrated knowledge of the work required • Explanation of the project • Knowledge of general engineering processes • Innovative approaches and internal measures for timely completion of project	3.0	5	15
4. FEASIBILITY OF OVERSIGHT • Ability and willingness to respond to Department requirements • Accessibility to Department reviewers	1.0	8	8
5. REFERENCES* • Record of producing a quality product on similar projects on time and within budget	1.0		
*All panel members must enter a zero (0) for all interviewed Consultants if time did not allow for reference checks or if the reference checks were not completed on all the Consultants.		Total	56

Comments (continue on reverse if necessary):
I really appreciated PM (Peter Lim's) excitement & heart
- exper. seemed more in line with construction inspection
- Davenport not present and seemed key to team
- some practical good support, but lacking in some areas

I certify that I have performed an independent evaluation of the above named consultant. I further certify that I have not engaged in discussions within the last year with the above-named consultant regarding my future employment with said consultant.

Signature of Evaluator: Brian Maroney Date: 9/27/08

Printed Name of Evaluator Brian Maroney

Checked by: S. Dreyer Date: 9/27/08

APPENDIX E

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: PRAKASH SIVA GNANASUNDA
District 04 Consultant Services Unit
Contract Manager, Contract 04A3144

Date: December 15, 2008

From: STEVE ALTMAN
Chief, Office of Structural Materials
Materials Engineering and Testing Services
Division of Engineering Services

Subject: Contract 04A3144–NDT Evaluation of Personnel

Attached is the final report on the Caltrop Quality Assurance (QA) Personnel Review conducted with the assistance of Mayes Testing Engineers, Inc. The report provides the background on the procedures, the personnel conducting the review, the findings on each individual evaluated, and a summary. During the course of the Caltrop nondestructive testing (NDT) personnel evaluations, Division of Engineering Services, Materials Engineering and Testing Services (METS) and Toll Construction management met with Caltrop management daily to review the findings of the day. With the exception of one individual, all individuals were found to have the skill and certification for a place within the Caltrop organization chart. A revised organization chart was provided by Caltrop on November 29, 2008. See attached.

As pointed out in the final report, the one issue that needs to be finalized with Caltrop is determining who will be the Caltrans Outside Level III. This individual will be responsible to ensure all current and future NDT staff, not already evaluated by our recent efforts, will be evaluated by the Caltrop written practice. The Caltrans Level III will be responsible to provide oversight of the NDT personnel, ensure an effective on-going training program, and keep documentation to verify that certifications are kept current. In addition to providing the staff member that will be acting in this capacity, a final organization chart from Caltrop needs to be provided to verify the placement of personnel. Also, it was requested previously with Caltrop management that duty statements accompany the organization chart to assist in defining roles and responsibilities.

At this time you can forward the attached report to Caltrop along with the comments made within this memo. If you have any questions do not hesitate to contact me at (916) 227-7016.

MAYES TESTING ENGINEERS, INC.

Lynnwood Office
20225 Cedar Valley Road
Suite 110
Lynnwood, WA 98036
ph 425.742.9360
fax 425.745.1737

Tacoma Office
10029 S. Tacoma Way
Suite E-2
Tacoma, WA 98499
ph 253.584.3720
fax 253.584.3707

Portland Office
7911 NE 33rd Drive
Suite 190
Portland, OR 97211
ph 503.281.7515
fax 503.281.7579

December 8, 2008

Steve Altman
Department of Transportation
DES – Materials Engineering & Testing Services
5900 Folsom Blvd, Room 101
Sacramento, CA 95819

Re: Caltrop QA Personnel Review
November/December 2008
HNTB Work Order No. 46218 –CN-005
Task Order No. 1
MTE Project No. S08093

Dear Mr. Altman,

Over the past few weeks we have reviewed personnel proposed by Caltrop for contract quality assurance services for the new Bay Bridge project. To assist Caltrans with this review we prepared interview sheets and interview questions. Test questions were designed to determine candidate knowledge of welding, nondestructive evaluation (NDE) and bridge inspection, specifically on Fracture Critical Members (FCMs). Interview form and list of questions are attached. We also designed a practical ultrasonic examination, which was based on the AWS D1.8 Seismic Welding Code. We acquired welded test plates with known flaws for the practical ultrasonic examination. We utilized Mayes Testing Engineers Level II NDE personnel to assure that the test plate flaws could be successfully located and evaluated.

Michael Mayes attended a meeting on November 21, 2008, at the Caltrans field office in Oakland, California. This meeting was attended by Steve Altman, Keith Hoffman and Phil Stolarski of DES-METS, Peter Seigenthaler and Mark Woods of Caltrans and Mazen Wahbeh and David Saber of Caltrop. Test protocol and interview procedures were discussed. In accordance with Caltrans "Written Practice for the qualification and Certification of Nondestructive Testing Personnel Assigned to Quality assurance and Source Inspection", Michael Mayes has been designated "Outside Level III" by the current Caltrans Certifying Authority, Steve Altman. This is meant to be a temporary assignment until Caltrop is able to fill this position to the satisfaction of the Caltrans Certifying Authority.

Mayes and Mike Virgilio returned to Oakland on November 23 and 24 and December 1, 2 and 3 to interview and test Caltrop personnel. Mike Virgilio, a Mayes Testing Engineers NDE Level II, setup and proctored the ultrasonic practical exam (see attached). Mayes interviewed personnel along with Keith Hoffman and Mark Woods (Brian Boal replaced Mark Woods for interviews on December 1 and 2). Caltrop provided a project organization charts, personnel resumes, certifications and references. The following is a summary of personnel interviewed, test results and interview panel recommendations:

Steve Pacheco: Pacheco (an employee of sub consultant Signet) was shown on the original organization chart as "Lead Inspector – China". It became clear during the interview that Pacheco had no intention of working in China. His role on this project would apparently be

inspection at shops in the Pacific Northwest as he was moving to Washington State in the near future. Based on our interview, Pacheco was found to have good NDE experience but very limited bridge experience. He passed the Caltrans Ultrasonic Practical Examination. It was the interview panel's opinion that Pacheco was not qualified to be a Lead Inspector for this project. He would be well suited as an NDE inspector working under a Lead Inspector.

Randy Riegler: Riegler (an employee of sub consultant NDT Group) was shown on the original organization chart as "ASNT Level III". After talking with him, we understand that his role will actually be "Lead Inspector" for U.K. casting inspection. Based on our interview, we found that Reigler had limited bridge inspection experience. It was the interview panel's opinion that he would not be qualified as a Lead Inspector for typical bridge fabrication assignments. He has good experience with castings and would be a good choice for Lead Inspector for U. K. Castings. Riegler passed the Caltrans Ultrasonic Practical Examination. He also has excellent experience for NDE consulting and troubleshooting but would not be appropriate for Caltrans Outside Level III for this project.

James Cook: Cook (an employee of sub consultant Consolidated Engineering) was shown on the organization chart as "ASNT Level III". Based on our interview, we found that Cook had very limited bridge inspection experience with very little knowledge of FCMs. Cook did not pass the Caltrans Ultrasonic Practical Examination. It was the interview panel's opinion that he would not be qualified as a "Lead Inspector" or "Caltrans Outside Level III" for this project.

Johnny Thompson: Thompson (a Caltrop employee) was shown on the original organization chart as "ASNT Level III" although he indicated that he would have overall responsibility for all NDE personnel for the project. Based on our interview, we found that Thompson had very limited bridge inspection experience with little knowledge of FCMs. Thompson passed the Caltrans Ultrasonic Practical Examination. Thompson also indicated that he would not be traveling overseas for this project. Although Thompson appears to have a solid NDE background, it was the interview panel's opinion that he would not be qualified as the "Caltrans Outside Level III" due to his lack of experience with bridge fabrication.

Neil Brown: Brown (a Caltrop employee) was shown on the original organization chart as "OBG Task Leader" in China. Based on our interview, we found that Brown had excellent bridge experience with good knowledge of FCMs. He previously worked for Mactec, in China, on this project. We found him to be confident, a good communicator and a good choice for Task Leader. Brown did not pass the Caltrans Ultrasonic Practical Examination. We recommend that Brown receive additional UT training or that his project position be revised to not include ultrasonic testing responsibility.

Mahlon Lindenmuth: Lindenmuth (a Caltrop employee) was shown on the original organization chart as "Tower Task Leader" in China. Based on our interview, we found that Lindenmuth had excellent bridge experience with good knowledge of FCMs. He also previously worked for Mactec, in China, on this project. Lindenmuth passed the Caltrans Ultrasonic Practical Examination. We found him to be very knowledgeable of Caltrans procedures, a good communicator and a good choice for "Task Leader" for both welding inspection and NDE.

Dean Fonceca: Fonceca (an employee of sub consultant Consolidated Engineering) was shown on the original organizational chart as a "Lead Inspector" in China. Based on our

interview, Fonceca was found to have good NDE experience but very limited bridge experience. Fonceca passed the Caltrans Ultrasonic Practical Examination. It was the interview panel's opinion that Fonceca was not currently qualified to be a Lead Inspector for this project. He would be well suited as an NDE inspector working under a Lead Inspector. He could potentially function as a "Lead Inspector" with additional training and supervision.

Richard Bettencourt: Bettencourt (an employee of sub consultant Richard Brady & Associates) was shown on the original organization chart as a United States "Task Leader". The revised 11-29-08 organization chart shows him as a China "Lead Inspector. Based on our interview, we found that Bettencourt had excellent bridge experience with good knowledge of FCMs. He is also currently working on this project. Bettencourt passed the Caltrans Ultrasonic Practical Examination. Although he doesn't appear to have extensive experience, the interview panel felt that Bettencourt would be a good choice for "Lead Inspector" for both welding inspection and NDE.

Joe Adame: Adame (a Caltrop employee) was not shown on either of the organization charts, but we understand that his proposed role will be United States "Task Leader". Based on our interview, we found that Adame had excellent bridge experience with good knowledge of FCMs. He also previously worked for Mactec on this project. Adame passed the Caltrans Ultrasonic Practical Examination. We found him to be very knowledgeable of Caltrans procedures, a good communicator and a good choice for "Task Leader" for both welding inspection and NDE.

Scott Croff: Croff (an employee of sub consultant Richard Brady & Associates) was shown on the 11-29-08 organization chart as a China "NDT Tech" but we understand that he is being considered as a "Lead Inspector". Based on our interview, we found that Croff had limited bridge experience but has adequate knowledge of FCMs. He has spent the last 4 years working on this project and has good knowledge of project requirements. Croff passed the Caltrans Ultrasonic Practical Examination. Although he doesn't appear to have extensive experience the interview panel felt that Croff would be well suited as "NDT Tech". He could function as "Lead Inspector" if properly supervised and further trained.

Robert Mertz: Mertz (a Caltrop employee) was not shown on either of the organization charts, but we understand that his proposed role will be United States "Task Leader". Based on our interview, we found that Mertz had excellent bridge experience with good knowledge of FCMs. He also previously worked for Mactec on this project. Mertz did not pass the Caltrans Ultrasonic Practical Examination. We found him to be very knowledgeable of Caltrans procedures, a good communicator and a good choice for "Task Leader" for welding inspection. We recommend that Mertz receive additional UT training or that his project position be revised to not include ultrasonic testing responsibility.

Craig Hager: Hager (a Caltrop employee) was shown on the 11-29-08 organization chart as "Lead Inspector" in China. Based on our interview, we found that Hager had excellent bridge experience with good knowledge of FCMs. He also previously worked for Mactec, on this project. Hager passed the Caltrans Ultrasonic Practical Examination. We found him to be very knowledgeable of Caltrans procedures, a good communicator and a good choice for "Lead Inspector" for both welding inspection and NDE.

Bill Levell: Levell (a Caltrop employee) was not shown on either of the organization charts, but we understand he is proposed to be "Task Leader" in the United States. Based on our interview, we found that Levell had excellent bridge experience with good knowledge of FCMs. He also previously worked for Mactec, on this project. Levell has not taken the Caltrans Ultrasonic Practical Examination. We found him to be very knowledgeable of Caltrans procedures, a good communicator and a good choice for "Task Leader" for both welding inspection and NDE.

Ed Trotter: Trotter (a Caltrop employee) was shown on the original organization chart as "ASNT Level III" for China. The 11-29-08 organization chart shows Trotter as "Task Leader" for China. Based on our interview, we found that Trotter had very limited bridge inspection experience with no experience with FCMs. He has spent time in China on other types of fabrication projects and speaks Mandarin Chinese. Trotter initially failed the Caltrans Ultrasonic Practical Examination on 12-1-08 but subsequently passed the examination on 12-3-08. Although Trotter appears to have a solid NDE background, it was the interview panel's opinion that he may not be qualified as the "Caltrans Outside Level III" due to his lack of experience with bridge fabrication.

In summary we interviewed proposed personnel with a wide variety of knowledge and skills. We were concerned that Caltrop doesn't appear to have a procedure in place to evaluate sub consultant personnel. Several of the proposed personnel did not appear to be qualified for the assignments shown on the original Caltrop organizational chart. The 11-29-08 organization chart for China changed most of the lead positions. However, the interview panel was still concerned that Caltrop will not have a strong NDE Level III with bridge experience that will be based in China. At this time Caltrop does not appear to have an individual that would be qualified to be the "Caltrans Outside Level III". It is recommended that Caltrop provide a final organization chart, showing all current proposed personnel with position descriptions for each position. Caltrop should also clarify how NDE inspectors in China and other locations will be tested to determine their qualifications to do quality assurance for this project.

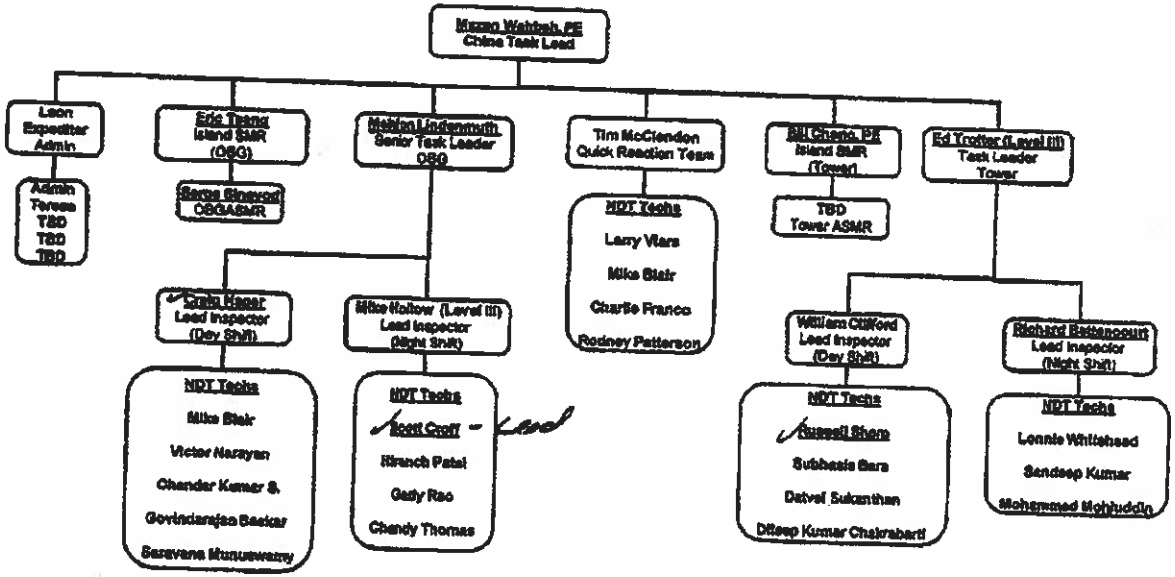
Respectfully Submitted,

Michael J. Mayes, P.E.
Welding Engineer/NDE Level III

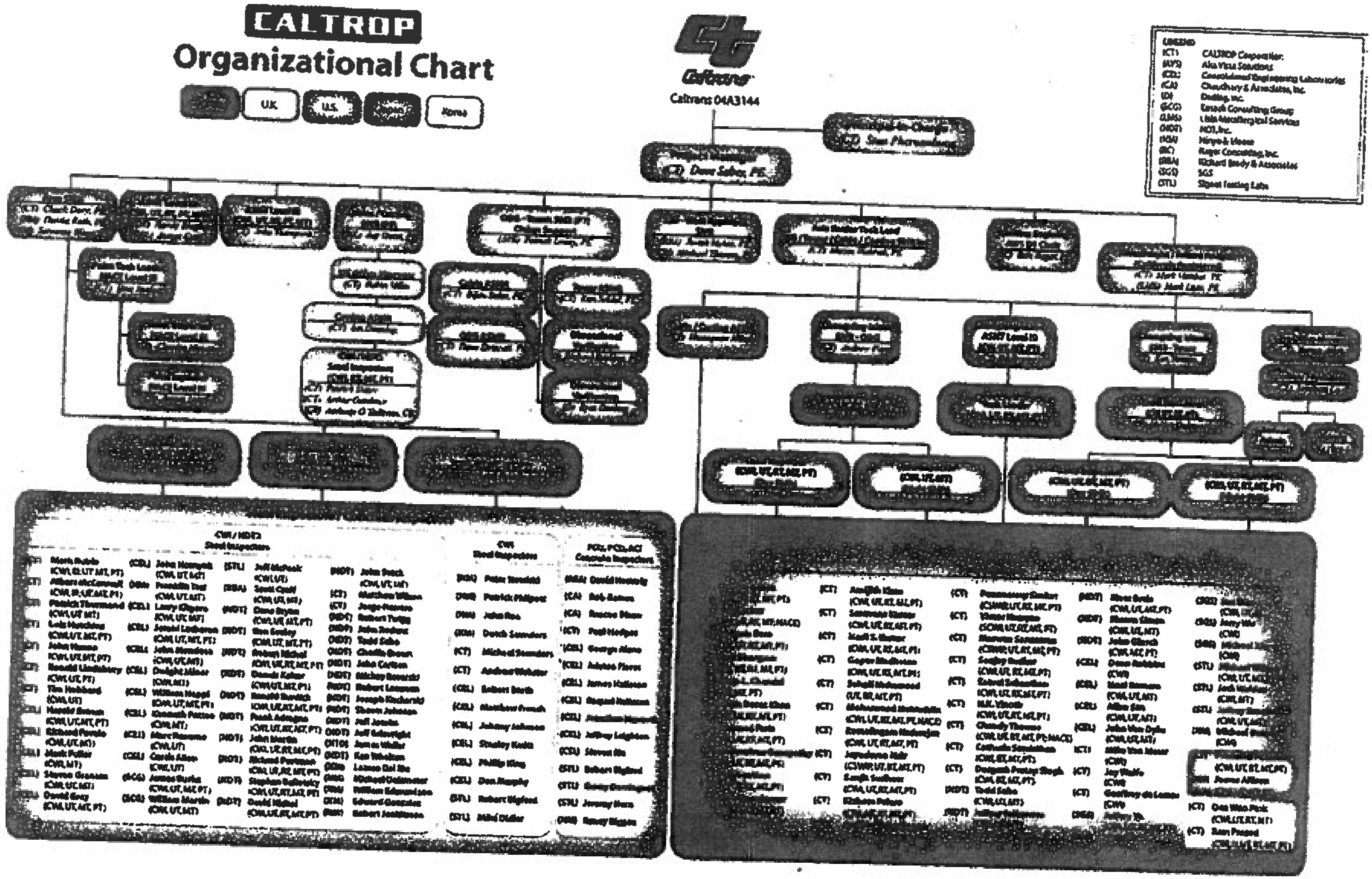
Attachments:
Caltrop Original Organizational Chart
Caltrop 11-29-08 Organizational Chart – China
Caltrans NDE/Welding Personnel Verification Form
Caltrans Interview Questions
Caltrans Ultrasonic Practical Examination Instructions
Caltrans Ultrasonic Practical Examination Results

CALTROP

DRAFT Organization Chart
China



Contract 04A3314
Rev 11/29/06


CALTROP
Organizational Chart
U.K.
U.S.
Korea
Caltrans
Caltrans 04A3144
LEGEND
(CT) CALTROP Corporation
(AVS) Alta Vista Solutions
(CEL) Consolidated Engineering Laboratories
(CA) Chaudhary & Associates, Inc.
(D) Dodling, Inc.
(ECG) Emsch Consulting Group
(LMS) Lisle Metallurgical Services
(NDT) NDT, Inc.
(NM) Ninyo & Moore
(RC) Rager Consulting, Inc.
(RBA) Richard Brady & Associates
(SGS) SGS
(STL) Signet Testing Labs
CWI / NDT2
Steel Inspectors
CWI
Steel Inspectors
PCIs, PCEs, ACI
Concrete Inspectors

APPENDIX F

Tony Anziano Email

Tony Anziano/D04/Caltrans/CAGov
11/21/2009 03:21 PM

To "Pete Siegenthaler" <peter.siegenthaler@dot.ca.gov>
cc "Ken Terpstra" <Ken.Terpstra@dot.ca.gov>
bcc
Subject Re: requested letter

Pete

Never mind. I tracked down some e-mail that answers the question of who did our tower testing.

The e-mail is interesting in making one thing clear - we need to be very careful in our use of terminology. In the e-mail both Sang and Doug announce that transverse "cracks" have been found in the tower, when in fact only transverse indications were found. The ABF/CT follow up established that these indications were not cracks. It may be worthwhile to remind everyone that words do matter and we need to make sure we stick to the facts.

Tony
Tony Anziano
Toll Bridge Program Manager
(415) 310-4507
Tony Anziano

---- Original Message ----
From: Tony Anziano
Sent: 11/21/2009 03:04 PM PST
To: Peter Siegenthaler
Subject: Re: requested letter

Pete
Question on TC letter 24 - who did the inspection for us that is described in the letter?
Tony
Tony Anziano
Toll Bridge Program Manager
(415) 310-4507
Peter Siegenthaler

---- Original Message ----
From: Peter Siegenthaler
Sent: 11/20/2009 10:17 AM ZE8
To: Tony Anziano
Cc: Ken Terpstra
Subject: requested letter

Tony,
attached are 3 items

1) State letter TC#24 dated September 4, 2009 - Indications in Tower

[attachment "TC Letter 05.03.08-0000xx draft 091120.doc" deleted by Tony Anziano/D04/Caltrans/CAGov]

2) ABF letter #1247 responding to #24 - Results of Exploration of Transverse and Long Indications in Tower Shafts

[attachment "ABF-CAL-LTR-001247.pdf" deleted by Tony Anziano/D04/Caltrans/CAGov]

3) Draft letter directing ABF to grind transverse joints in obg lifts 3 and 4

[attachment "TC Letter 05.03.08-000024.pdf" deleted by Tony Anziano/D04/Caltrans/CAGov]

Background Email Relevant to the Tony Anziano Email

Gary Pursell/D02/Caltrans/CAGov
09/01/2009 05:03 PM

To "Tony Anziano" <tony_anziano@dot.ca.gov>
cc
bcc
Subject Fw: Transverse Indications - Tower 9/1/09

Sent from my BlackBerry Wireless Device
Doug Coe

----- Original Message -----
From: Doug Coe
Sent: 09/01/2009 04:54 PM PDT
To: Gary Pursell; Rick Morrow; Jason Tom; Peter.Siegenthaler@dot.ca.gov
Cc: kdevonport@sasoverseasteam.com; mwahbeh@sasbridge.com; Sang Le
Subject: Fw: Transverse Indications - Tower 9/1/09

Gentlemen, transverse cracks have been found in the tower leg welds. (See the spreadsheet below.) These transverse cracks were discovered using MT by METS at my direction yesterday. This direction was based on the visit of Don Raygor and Dave McQuaid of AWS two weeks ago, who concluded that the transverse cracks in the OBG's where the result of poor workmanship and not the FCAW wire used in the welding process. I thought it prudent to investigate the tower legs before the legs were painted, or access denied, to either verify or deny the assumption that similar workmanship in the OBG's would produce similar defects in the tower, i.e., transverse cracking. Thomas said ABF would have started "overchecks" in the towers in a couple of weeks anyway, once ABF's NDT was done in OBG lift 6, but I thought it would be better to know sooner than later. It's important to note, that this information will not in any way delay shipment No. 1.

Best Regards,
Doug
---- Forwarded by Doug Coe/D04/Caltrans/CAGov on 09/02/2009 07:27 AM ----

Sang Le/HQ/Caltrans/CAGov
09/01/2009 04:56 PM

To Doug Coe/D04/Caltrans/CAGov@DOT
cc mwahbeh@sasbridge.com, Keith Hoffman/HQ/Caltrans/CAGov@DOT, Scott Kennedy/D05/Caltrans/CAGov@DOT, ssinevod@sasbridge.com, jkinsey@sasbridge.com
Subject Transverse Indications - Tower 9/1/09

Doug,

On August 31, 2009, METS began over-checking Tower Shaft welds due to concern with delayed hydrogen induced cracking, as observed in the OBG. East Tower, Lift 2 was checked first. All accessible welds were inspected with Magnetic Particle Testing (MT) around the 53 meter diaphragm elevation, including diaphragm to skin, diaphragm to longitudinal stiffener, fit lug to diaphragm/stiffener, diagonal stiffener, diaphragm plate to flange, and longitudinal stiffener to skin plate welds. Out of the approximately 119 welds tested, 9 transverse indications were found in 7 welds. West Tower, Lift 1 was also inspected at the 43 and 47.6 meter diaphragm elevations. Out of the 127 welds tested at the 43m elevation, 25 transverse indications were found in 12 welds. 13 transverse indications were found in 8 welds out of the 78 welds tested at the 47.6m elevation. Attached below is a spreadsheet tabulating the findings.

METS met with Construction on September 1, 2009 to present the findings and discuss possible steps

forward with the Contractor. It was agreed that further investigation needs to be performed with a grinding team to identify the root cause of the cracking, whether it be lack of fusion from weld pass start/stop, or hydrogen embrittlement related cracking that extends towards the root of the weld.

ABF's Thomas Nilsson was notified by phone call of the transverse cracks discovered in the Tower Shafts. A subsequent meeting with ABF was held. Caltrans was informed that ABF's NDT personnel would start over-checking Tower welds as the resources become available.

Following the meeting, John Kinsey met with Steve Lawton, ABF QCM, to arrange ZPMC grinders to accompany CT and ABF staff and grind down the discovered indications. METS will keep you abreast of any further developments.

Tower Transverse Indications.xls

Sang Le
METS-Office of Structural Materials
California Department of Transportation
916.764.5650 US Mobile
011.86.150.2691.0253 China Mobile

Location				Weld					Indications		Inspection	Notes
Tower	Lift	Skin	Diaphragm	Weld ID	Weld Type	Description	WPS	Process	#	Type	QC Requirement	
East	2	B	53	ESD1-TL7C/L-23	Fillet	Fitlug to Diaphragm	WPS-B-T-4113-2	SMAW	2	Transverse	25% MT	
East	2	B	53	ESD1-TL7C/L-33	Fillet	Fitlug to Diaphragm	WPS-B-T-4113-2	SMAW	1	Transverse	25% MT	
East	2	B	53	ESD1-TL7C/L-132	Fillet	Fitlug to Diaphragm	WPS-B-T-4113-2	SMAW	1	Transverse	25% MT	
East	2	A	53	ESD1-TL7C/L-121	PJP	Fitlug to Stiffener	WPS-B-T-2333-TC-P4-F	FCAW	2	Transverse	100% MT	
East	2	E	53	ESD1-TL7C/L-208	Fillet	Fitlug to Stiffener	WPS-B-T-2113	FCAW	1	Transverse	25% MT	
East	2	A	53	ESD1-SA300D/F-17A/B	PJP	Longitudinal Stiff. to Skin	WPS-B-T-2332-Tc-P5-F	FCAW	1	Transverse	25% UT, 25% MT	Approx 119 welds tested.
East	2	C	53	ESD1-SA388	PJP	Longitudinal Stiff. to Skin	WPS-B-T-2332-Tc-P5-F	FCAW	1	Transverse	25% UT, 25% MT	
West	1	E	47.6	WSD1-A115A/J-44	PJP	Fitlug to Stiffener	WPS-B-T-2333-TC-P4-F	FCAW	2	Transverse	100% MT	
West	1	A	47.6	WSD1-A115A/J-58	PJP	Stiffener to Diaphragm	WPS-B-T-2331-TC-P4-F	FCAW	1	Transverse	100% MT	
West	1	A	47.6	WSD1-A115A/J-59	PJP	Fitlug to Stiffener	WPS-B-T-2333-TC-P4-F	FCAW	1	Transverse	100% MT	
West	1	A	47.6	WSD1-A115A/J-65	PJP	Stiffener to Diaphragm	WPS-B-T-2331-TC-P4-F	FCAW	1	Transverse	100% MT	
West	1	B	47.6	WSD1-A115A/J-67	PJP	Fitlug to Stiffener	WPS-B-T-2333-TC-P4-F	FCAW	1	Transverse	100% MT	
West	1	B	47.6	WSD1-A115A/J-72	PJP	Fitlug to Stiffener	WPS-B-T-2333-TC-P4-F	FCAW	1	Transverse	100% MT	
West	1	C	47.7	WSD1-A115A/J-99	Fillet	Fitlug to Diaphragm	WPS-B-T-4113-2	SMAW	1	Transverse	25% MT	Approx 78 welds tested
West	1	E	47.6	WSD1-A115A/J-114	PJP	Diaphragm to Skin	WPS-B-T-2331-TC-P4-F	FCAW	5	Transverse	25% UT, 25% MT	
West	1	A	43	Note #1	PJP	Diaphragm to Skin	WPS-B-T-2331-TC-P5-F	FCAW	1	Transverse	25% UT, 25% MT	Note #1 - *Between stiffener 4 and B/C.*
West	1	B	43	WSD1-A115H/J-179	Fillet	Fitlug to Diaphragm	WPS-B-T-4113-2	SMAW	2	Transverse	25% MT	
West	1	B	43	WSD1-A115H/J-192	Fillet	Fitlug to Diaphragm	WPS-B-T-4113-2	SMAW	3	Transverse	25% MT	Note #2 - *Between stiffener 5 and D/E.*
West	1	B	43	WSD1-SA49A/D-27A/B	PJP	Longitudinal Stiff. To Skin	WPS-B-T-2332-Tc-P5-F	FCAW	4	Transverse	25% UT, 25% MT	
West	1	C	43	WSD1-A115H/J-211	Fillet	Fitlug to Diaphragm	WPS-B-T-4113-2	SMAW	1	Transverse	25% MT	Note #3 - *Between stiffener 1 and stiffener 2.*
West	1	C	43	WSD1-A115H/J-214	Fillet	Fitlug to Diaphragm	WPS-B-T-4113-2	SMAW	1	Transverse	25% MT	
West	1	C	43	WSD1-A115H/J-220	Fillet	Fitlug to Diaphragm	WPS-B-T-4113-2	SMAW	1	Transverse	25% MT	
West	1	E	43	Note #2	PJP	Diaphragm to Skin	WPS-B-T-2331-TC-P5-F	FCAW	4	Transverse	25% UT, 25% MT	
West	1	E	43	Note #3	PJP	Diaphragm to Skin	WPS-B-T-2331-TC-P4-F	FCAW	2	Transverse	25% UT, 25% MT	
West	1	E	43	WSD1-A115H/J-196	PJP	Diaphragm to Skin	WPS-B-T-2331-TC-P4-F	FCAW	3	Transverse	25% UT, 25% MT	
West	1	A	43	WSD1-A115H/J-177/178	PJP	Stiffener to Diaphragm	WPS-B-T-2331-TC-P5-F	FCAW	1	Transverse	100% MT	Approx 127 welds tested.
West	1	C	43	WSD1-A115H/J-227	PJP	Fitlug to Stiffener	WPS-B-T-2331-TC-P4-F	FCAW	2	Transverse	100% MT	

Note: Supercore 71 filler metal used for FCAW
E7018 electrode used for SMAW

Background Letter Relevant to the Tony Anziano Email

American Bridge / FLUOR
A JOINT VENTURE

375 Burma Road
Oakland, CA 94607 USA
Phone 510-808-4600
Fax 510-808-4601

28-Sep-2009

ABF-CAL-LTR-001247

Mr. Gary Pursell
Resident Engineer
California Department of Transportation
333 Burma Road
Oakland, CA 94607

PROJECT: **San Francisco Oakland Bay SAS Bridge Superstructure**
Caltrans Contract No. 04-0120F4
ABF Job No. 660110

SUBJECT: **RESULTS OF EXPLORATION OF TRANSVERSE AND LONGITUDINAL INDICATIONS IN TOWER SHAFTS**

Gentlemen:

American Bridge / Fluor Enterprises Inc., A Joint Venture (ABFJV) is writing to inform the Department of the results of the exploratory testing of linear and transverse indications in the Tower shafts. On September 24, 2009, representatives from ABFJV, Zhenhua Port Machinery Co., LTD (ZPMC) and the Department conducted joint examination and exploration of indications described in State Letter No. 05.03.08-000024 dated September 04, 2009 and as well as similar indications identified during ABFJV's testing. Six of the indications explored were located in the West Shaft, Lift 1 of the Tower. These indications were discovered by ABFJV's testing. The remaining five indications explored were located in the East Shaft, Lift 2 of the Tower and found by the Department. A summary of the indication is included within the attached spreadsheet entitled "Results of Exploration of Indications – September 24, 2009". Also included are eighteen photographs of the indications, labeled by location.

In each shaft, representative samples of both linear and transverse indications were tested. The attached spreadsheet provides further details about the indications and welds. All parties agreed on the methodology of the testing. The indication was identified using magnetic particle testing (MT), once identified, the indication was ground incrementally and MT was performed after each grinding pass until the root cause of the indication was clear. All parties were given the opportunity to examine the indication before the next grinding pass was performed and concurred that all eleven indications were not cracks.

At the conclusion of testing all parties agreed that the root cause of all eleven indications examined was slag or porosity mainly attributable to insufficient inter-pass cleaning.

The results of this testing show that the indications in the Tower shafts are mainly the result of insufficient inter-pass cleaning and do not represent a significant systemic problem related to the FCAW and SMAW weld processes or hydrogen embrittlement as speculated in the State Letter No. 05.03.08-000024. To address this issue and demonstrate the soundness of the welds, ABFJV is currently performing over-checks of several types of welds to investigate the extent of these indications and to determine if an increased level of inspection will be required.

American Bridge / FLUOR
A JOINT VENTURE

375 Burma Road
Oakland, CA 94607 USA
Phone 510-808-4600
Fax 510-808-4601

Sincerely,

AMERICAN BRIDGE/FLUOR ENTERPRISES, INC. A JOINT VENTURE

Michael D. Flowers
Project Director

File: 02.01

Results of Exploration of Indications-September 24, 2009

Indication	Tower	Lift	Elevation	Weld ID	Weld Type	Description	Process	Identified Indication Type	Identified By	Root Cause of Indication
1	West	1	9M	WSD1-A423E/H-78	Fillet	Fit Lug to Diaphragm	SMAW	Longitudinal Linear Indication	ABFJV	Slag
2	West	1	9M	WSD1-A423E/H-63	Fillet	Fit Lug to Stiffener	FCAW	Transverse Linear Indication	ABFJV	Slag
3	West	1	9M	WSD1-A423E/H-63	Fillet	Fit Lug to Stiffener	FCAW	Longitudinal Linear Indication	ABFJV	Slag
4	West	1	9M	WSD1-A423E/H-63	Fillet	Fit Lug to Stiffener	FCAW	Crack	ABFJV	Slag
5	West	1	9M	WSD1-A423E/H-63	Fillet	Fit Lug to Stiffener	FCAW	Longitudinal Linear Indication	ABFJV	Slag
6	West	1	47.6M	WSD1-A115H/J-56	PJP	Diaphragm to Skin	FCAW	Crack	ABFJV	Slag
7	East	2	53M	ESD1-TL7C/L-23	Fillet	Fit Lug to Diaphragm	SMAW	Transverse Linear Indication	CT	Slag
8	East	2	53M	ESD1-TL7C/L-23	Fillet	Fit Lug to Diaphragm	SMAW	Transverse Linear Indication	CT	Slag
9	East	2	53M	ESD1-TL7C/L-33	Fillet	Fit Lug to Diaphragm	SMAW	Transverse Linear Indication	CT	Slag
10	East	2	53M	ESD1-SA300D/F-17A/B	PJP	Stiffener to Skin	FCAW	Transverse Linear Indication	CT	Slag
11	East	2	53M	ESD1-SA388	PJP	Stiffener to Skin	FCAW	Transverse Linear Indication	CT	Slag

APPENDIX G

NCR – September 5, 2008

STATE OF CALIFORNIA--BUSINESS,TRANSPORTACTION AND HOUSING AGENCY Arnold Schwarzenegger, Governor

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 76.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Monnig Industries--Glasgow, Missouri **Report No:** NCR-000198
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 05-Sep-2008
Submitting Contractor: Dyson Corp. & Subs **NCR #:** DYSN-0004

Type of problem:

Welding	☐	**Concrete**	☐	**Other**	☑	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:** E2 Shear Key Anchor Rod Assemblies
Procedural	☐	**Procedural**	☐	**Descripton:** Shipment without release after late procurement		

Reference Description: ABF shipped E2 Shear Key Anchor Rod Assemblies without QA testing or release due to time constraints from late ordering

Description of Non-Conformance:
ABF procured ASTM A 354 BD anchor rod assemblies too late to allow normal release procedures. As a result, QA sampling and shipment occurred simultaneously, and A 354 Grade BD anchor rods and A 563 hex nuts for the E2 Shear Key were shipped to the jobsite without QA testing results or METS release. Time was constrained because these components were ordered on a schedule that led to completion of fabrication only several days before anticipated installation.

In addition, documentation was either missing or incomplete.

Applicable reference:
Caltrans Standard Specifications, July 1999, (SS) Section 5-1.13, "Final Inspection," p.28: "When the work has been completed, the Engineer will make the final inspection."

SS, Section 6-1.07, "Certificates of Compliance," para. 1, p. 33: "A Certificate of Compliance shall be furnished..."

Who discovered the problem: Edward Leach, METS QA Inspector
Name of individual from Contractor notified: Robert (Bob) Kick,
Time and method of notification: 1600, 9/16/08, personal conversation with ASMR
Name of Caltrans Engineer notified: Brian Boal
Time and method of notification: 1400, 9/16/08, personal conversation with SMR
QC Inspector's Name: Unknown
Was QC Inspector aware of the problem: ☐ Yes ☑ No
Contractor's proposal to correct the problem:
None at this time.
Comments:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

Inspected By:	Petrina,Markian	SMR
Reviewed By:	Iyer,Venkatesh	SMR

NCR – September 16, 2008

STATE OF CALIFORNIA--BUSINESS,TRANSPORTACTION AND HOUSING AGENCY Arnold Schwarzenegger, Governor

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 76.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Dyson Corporation, Painesville, OH
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Submitting Contractor: Dyson Corp. & Subs

Report No: NCR-000199
Date: 16-Sep-2008
NCR #: DYSN-0005

Type of problem:

Welding	☐	**Concrete**	☐	**Other**	☑	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:** E2 Shear Key Bearing Anchor Rod Assemblies
Procedural	☐	**Procedural**	☐	**Descripton:** Nonconforming Material		

Reference Description: E2 Shear Key A 354 BD Bearing Anchor Rods, A 563 DH Nuts
Description of Non-Conformance:
Trans Lab QA testing determined that Dyson Corporation provided nonconforming material:

1) Anchor rods: 2 heats (of 7 total) did not meet ASTM A 354 Grade BD requirements for elongation, 14% in 2 inches required. Heat Treatment Lot MJF 26 two-sample average: 13.45% (one 14.4%, one 12.5%); Lot MJF 30 two-sample average: 13.45% (one 13.6%, one 13.3%).
2) Nuts: Spherical nuts fabricated to ASTM A 563 material standards had insufficient hardness. A 563 Grade DH nuts require hardness between 24 and 38 on the Rockwell C hardness scale (C24 to C38). The three-nut average hardness was approximately C20, with one as low as C18.07.

This is the third such instance with Dyson since November, 2007.
Applicable reference:
ASTM A 354
ASTM A 563
Who discovered the problem: Trans Lab
Name of individual from Contractor notified: Robert (Bob) Kick
Time and method of notification: 0910, 9/17/2008, telepohne call
Name of Caltrans Engineer notified: Brian Boal
Time and method of notification: 1500, 9/17/2008, face-to-face meeting
QC Inspector's Name: Unknown
Was QC Inspector aware of the problem: ☐ Yes ☑ No
Contractor's proposal to correct the problem:
Submit RFI to accept rods and nuts "as is." Design approved incorporation of rods with noncompliant elongation; nuts pass tensile test, which overrides the hardness test.
Comments:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer,(510) 808-4542, who represents the Office of Structural Materials for your project.

Inspected By:	Petrina,Markian	SMR
Reviewed By:	Iyer,Venkatesh	SMR

NCR – October 8, 2008

STATE OF CALIFORNIA--BUSINESS,TRANSPORTACTION AND HOUSING AGENCY Arnold Schwarzenegger, Governor

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: xx.25A

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

Location: Monnig Industries--Glasgow, Missouri
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Submitting Contractor: Dyson Corp. & Subs

Report No: NCS-000103
Date: 08-Oct-2008
NCR #: DYSN-0004

Type of problem:

Welding	☐	**Concrete**	☐	**Other**	☑	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:**
Procedural	☐	**Procedural**	☐	**Descripton:**		

Date the Non-Conformance Report was written: 05-Sep-2008

Description of Non-Conformance:

ABF procured ASTM A 354 BD anchor rod assemblies too late to allow normal release procedures. As a result, QA sampling and shipment occurred simultaneously, and A 354 Grade BD anchor rods and A 563 hex nuts for the E2 Shear Key were shipped to the jobsite without QA testing results or METS release. Time was constrained because these components were ordered on a schedule that led to completion of fabrication only several days before anticipated installation.

In addition, documentation was either missing or incomplete.

Contractor's proposal to correct the problem:

Contractor states that the Department is responsible for schedule difficulties, citing response times for ABF-RFI-1233. Contractor to provide documentation once it is complete.

Corrective action taken:

None taken for lateness; however, METS review of Department response times for ABF-RFI-1233 does not bear out ABF's assertions. ABF aggregate time lapse between completion of Department reviews and ABF follow-up revisions total almost 3 months, including a 63-day lapse between Department return of R01 (4/11/08) and ABF submission of R02 (6/13/08). During the June-July period, ABF submitted R02 through R05, with three one-day and one four-day deadlines; in aggregate, the Department was only one (1) day late during this period, compared to the 17 days of lapses between Department responses and follow-on ABF RFIs. ABF's version of events was refuted in discussions between METS, Construction, and ABF.

ABF provided complete COC packages for all material several weeks following delivery of the components to the job site.

Did corrective action require Engineer's approval?

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

☑ Yes ☐ No

If so, name of Engineer providing approval: Brian Boal **Date:**

Is Engineer's approval attached? ☐ Yes ☑ No

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

Inspected By:	Petrina,Markian	Quality Assurance Inspector
Reviewed By:	Iyer,Venkatesh	QA Reviewer

NCR – October 15, 2008

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: xx.25A

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

Location: Dyson Corporation, Painesville, OH
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Submitting Contractor: Dyson Corp. & Subs

Report No: NCS-000104
Date: 15-Oct-2008
NCR #: DYSN-0005

Type of problem:

Welding	☐	**Concrete**	☐	**Other**	☑	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:**
Procedural	☐	**Procedural**	☐	**Descripton:**		

Date the Non-Conformance Report was written: 16-Sep-2008

Description of Non-Conformance:

Trans Lab QA testing determined that Dyson Corporation provided nonconforming material:

1) Anchor rods: 2 heats (of 7 total) did not meet ASTM A 354 Grade BD requirements for elongation, 14% in 2 inches required. Heat Treatment Lot MJF 26 two sample average: 13.45% (one 14.4%, one 12.5%); Lot MJF 30 two-sample average: 13.45% (one 13.6%, one 13.3%).
2) Nuts: Spherical nuts fabricated to ASTM A 563 material standards had insufficient hardness. A 563 Grade DH nuts require hardness between 24 and 38 on the Rockwell C hardness scale (C24 to C38). The three-nut average hardness was approximately C20, with one as low as C18.07.

This is the third such instance with Dyson since November, 2007.

Contractor's proposal to correct the problem:

Submit RFI to accept rods and nuts "as is."

Corrective action taken:

ABF responded in writing, requesting Department approval of non-conforming material. Design approved incorporation of rods with noncompliant elongation; METS was able to perform tensile test, which the nuts passed, overriding the hardness test per ASTM.

Did corrective action require Engineer's approval? ☑ Yes ☐ No

If so, name of Engineer providing approval: Brian Boal **Date:** 16-Sep-2008

Is Engineer's approval attached? ☐ Yes ☑ No

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ryan Smith, (858) 232-6799, who represents the Office of Structural Materials for your project.

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Inspected By:	Petrina,Markian	Quality Assurance Inspector
Reviewed By:	Iyer,Venkatesh	QA Reviewer

T.Y. Lin Acceptance

Ron Matin/D04/Caltrans/CAGov
10/14/2008 01:06 PM

To Timothy Daszko/D04/Caltrans/CAGov@DOT
cc
bcc
Subject Fw: NCR, Dyson--Nonconforming Products

Tim:

Please attach to RFI-1524R0. Thanks.

---- Forwarded by Ron Matin/D04/Caltrans/CAGov on 10/14/2008 01:05 PM ----

Ajay Sehgal/D04/Caltrans/CAGov
10/14/2008 11:20 AM

To Ron Matin/D04/Caltrans/CAGov@DOT
cc
Subject Fw: NCR, Dyson--Nonconforming Products

FYI, per your request!

AJAY SEHGAL, PE(CIVIL)
SELF ANCHORED SPAN
510-286-0308 (PH) 510-286-0550 (FAX)
510-385-8195

---- Forwarded by Ajay Sehgal/D04/Caltrans/CAGov on 10/14/2008 11:19 AM ----

"James Duxbury" <jduxbury@tylin.com>
09/24/2008 04:02 AM

To "Ajay Sehgal" <ajay_sehgal@dot.ca.gov>
cc "Brian Boal" <brian_boal@dot.ca.gov>, "Marwan Nader" <marwan.nader@tylin.com>
Subject RE: NCR, Dyson--Nonconforming Products

Ajay,

The DJV has reviewed the attached NCR.

With regards to the elongation of the ASTM A354 Grade BD rods, please note that based on the results, the rods are deemed fit for purpose.

With regards to the nuts, please note that the DJV defers to Caltrans / METS to determine if the nuts are fit for purpose.

Regards,

James

-----Original Message-----
From: Ajay Sehgal [mailto:ajay_sehgal@dot.ca.gov]
Sent: Monday, September 22, 2008 2:21 PM
To: TYLIN@dot.ca.gov
Cc: Brian Boal
Subject: Fw: NCR, Dyson--Nonconforming Products

Hi James,

Brian Boal asked me to find out if the contractor can send NPR (with your consent) to accept the rods and the nuts as is without sending an RFI. If so, send us your written recommendation to accept the subject rods and nuts as fit for purpose.

Attached with this email is the NCR for your perusal.

AJAY SEHGAL, PE(CIVIL)
SELF ANCHORED SPAN
510-286-0308 (PH) 510-286-0550 (FAX)
510-385-8195

----- Forwarded by Ajay Sehgal/D04/Caltrans/CAGov on 09/22/2008 02:11 PM -----

"Markian Petrina" <mpetrina@mactecqa.com>
09/19/2008 02:28 PM

To: "'Ajay Sehgal'" <ajay_sehgal@dot.ca.gov>
cc: "'Warren Collins'" <Warren_Collins@dot.ca.gov>, "'Bob Brignano'" <bob_brignano@dot.ca.gov>, "'Brian Boal'" <brian_boal@dot.ca.gov>, "'Venkatesh Iyer'" <viyer.smr@gmail.com>, "'Keith Hoffman'" <Keith.Hoffman@dot.ca.gov>
Subject: NCR, Dyson--Nonconforming Products

This is an advance copy "draft" because of a PMIV glitch. The NCR number should be DYSN-005.

Markian B. Petrina
Materials Engineering and Testing Services

Office of Structural Materials
690 Walnut Ave., Suite 200
Vallejo, CA 94592
o: 707-552-7715 x285
c: 858-232-7083

(See attached file: Dyson NCR-005 (Final), Nonconf Matl, 9.16.08.pdf)

Dyson NCR-005 (Final), Nonconf Matl, 9.16.08.pdf