STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor
DEPARTMENT OF TRANSPORTATION
ESC/OE MS #43
1737 30TH. Street 2ND. Floor
SACRAMENTO, CA 95816

March 23, 2000

04-CC,Mrn-580-6.1/7.8,0.0/2.6
04-0438U4

Addendum No. 6

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in CONTRA COSTA AND MARIN COUNTIES IN AND NEAR RICHMOND AND SAN RAFAEL FROM 1.7 MILES EAST TO 2.6 MILES WEST OF CONTRA COSTA/MARIN COUNTY LINE.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

The bid opening date for this project is still postponed until sometime in late Spring 2000 by Addendum No. 5 dated February 8, 2000.

This addendum is being issued to revise the Project Plans, the Notice to Contractors and Special Provisions, and the Proposal and Contract.

Project Plan Sheets 270, 824, 826, 827, 844, 845, 850, 852, 853, 855, 860 and 1089 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

In the Special Provisions, Section 5-1.22, "FORCE ACCOUNT PAYMENT," is revised as attached.

In the Special Provisions, Section 5-1.23, "OVERHEAD," is revised as attached.

In the Special Provisions, Section 5-1.24, "PAYMENTS," second paragraph, the following item is added:

"Establish Marine Access $18,250,000"

In the Special Provisions, Section 5-1.47, "RELATIONS WITH THE CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY, DEPARTMENT OF TOXIC SUBSTANCES CONTROL," the sixth paragraph is revised as follows:

"The Contractor shall not perform any excavation work at locations containing material classified as hazardous until the Engineer provides written approval of the final Soil Management Plan, Transportation Plan, and the final Health, Safety and Work Plan."

In the Special Provisions, Section 8-1.03, "MANUFACTURING AND FABRICATION QUALIFICATION AUDIT FOR MATERIALS," is added as attached.

In the Special Provisions, Section 10-1.22, "TEMPORARY TWO-WAY TRAFFIC CHANNELIZATION DEVICES," the seventh paragraph is revised as follows:

"The above prices will be firm to all orders placed on or before December 31, 2000, provided delivery is acceptable within 90 days after the order is placed."

In the Special Provisions, Section 10-1.37, "MONUMENTS," the fifth paragraph is revised as follows:

"As part of the monument installation work, the Contractor shall perform the survey work to establish the horizontal coordinates (X and Y) and elevations on the installed monuments. The survey work shall be performed by a Land Surveyor licensed in the State of California. Monument surveys shall originate from and close on project control survey points. Project control survey work shall be done in accordance with the First Order Standards as defined in "Standards and Specifications for Geodetic Control Networks," published by the Federal Geodetic Control Committee, February 1991 reprint edition. Monument survey work shall be done in accordance with the Second-Order (Horizontal) "Total Station Survey System" (TSSS) Specifications as defined in the latest version of the Caltrans Survey Manual. Monument elevation survey work shall be done in accordance with the Second Order Differential Leveling Specifications as defined in the latest version of the Caltrans Survey Manual."

In the Special Provisions, Section 10-1A.03, "TEMPORARY FENDERING," sixth paragraph, the following product for floating rubber fenders is added to the table:

PRODUCT	MANUFACTURER
Marine Cushion™ Foam Filled Fender 8'-3" Dia. x 13'-0" Foam Filled Floating Fender or equal	Urethane Products Corporation 17007 South Broadway Gardena, California 90248 310/532-3662

In the Special Provisions, Section 10-1A.07, "TEST BORINGS," the following paragraph is added after the seventeenth paragraph:

"Individual test boring submittals to the Engineer shall contain not less than 4 nor more than 20 boring logs. The test boring submittals shall include data from a minimum of 4 adjacent piers. In the event that several submittals are made simultaneously, or a submittal is made before the review of a previous submittal has been completed, the Contractor shall designate the sequence in which the submittals are to be reviewed. In such event, the time to be provided for the review of any submittal in the sequence shall not be less than the review time specified elsewhere, plus two weeks for each submittal of higher priority which is still under review."

In the Special Provisions, Section 10-1A.14, "PRECAST CONCRETE JACKET ASSEMBLY" and Section 10-1B.14, "PRECAST CONCRETE PANEL," the subsection, "Concrete Coatings," is revised as attached.

In the Special Provisions, Section 10-1A.14, "PRECAST CONCRETE JACKET ASSEMBLY," the following paragraph is added at the end of the section:

"Full compensation for furnishing and applying concrete coatings and for services for the manufacturer's technical representative shall be considered as included in the contract price paid per unit for furnish precast concrete jacket assembly of the type shown on the plans and no separate payment will be allowed therefor."

In the Special Provisions, Section 10-1A.21, "WELDED HEADED BAR REINFORCEMENT," the subsection, "MEASUREMENT AND PAYMENT," is revised as follows:

"**MEASUREMENT AND PAYMENT.--**Full compensation for placing the completed welded headed bar reinforcement into the work shall be considered as included in the contract unit prices paid for furnish precast concrete pile cap assembly and furnish precast concrete jacket assembly and no additional compensation will be allowed therefor."

In the Special Provisions, Section 10-1A.24, "STEEL STRUCTURES," subsection, "BEARINGS AND ANCHORAGES," first paragraph, the first sentence of the first paragraph amending Section 55-3.19, "Bearings and Anchorages," of the Standard Specifications is revised to read:

"Grout to be placed below masonry plates or bearing plates of the bearing assemblies shall conform to the requirements in ASTM Designation: C1107."

In the Special Provisions, Section 10-1B.05, "PILING," subsection, "PILE DRIVING," under "Cast-In-Drilled-Hole Concrete Piling," the following paragraph is added after the fourth paragraph:

"Attention is directed to small clearances that exist between the steel casings during installation and the existing concrete trestle. The steel casings shall not come in contact with the existing concrete trestle at any time. The Contractor shall be responsible for providing a means for controlling the location of the steel casings to protect the existing concrete trestle from damage during initial steel casing placement and during driving operations."

In the Special Provisions, Section 10-1B.14, "PRECAST CONCRETE PANEL," the second to last paragraph is revised to read as follows:

"Full compensation for furnishing and applying concrete coatings and for services for the manufacturer's technical representative shall be considered as included in the contract unit price paid for furnish concrete panel of the type shown on the plans and no separate payment will be allowed therefor."

In the Special Provisions, Section 10-1B.24, "SEISMIC ISOLATION BEARING," subsection, "PROTOTYPE TESTING," fourth paragraph, criteria number 4 is revised to read as follows:

"4. The energy dissipated per cycle (EDC) for the first five cycles of Prototype Test 3 shall be no less than 85% of the value of EDC_{min} shown on plans. The EDC from 6th to 10th cycle shall be no less than 70% of the value of EDC_{min} shown on plans. The degradation of EDC of each consecutive cycle from 6th to 15th cycle shall be less than each previous cycle."

In the Proposal and Contract, the Engineer's Estimate, Items 192 and 193 are revised.

To Proposal and Contract book holders:

- REPLACE PAGE 12 OF THE ENGINEER'S ESTIMATE IN THE PROPOSAL WITH THE ATTACHED REVISED PAGE 12 OF THE ENGINEER'S ESTIMATE. THE REVISED ENGINEER'S ESTIMATE IS TO BE USED IN THE BID.

- INDICATE RECEIPT OF THIS ADDENDUM BY FILLING IN THE NUMBER OF THIS ADDENDUM IN THE SPACE PROVIDED ON THE SIGNATURE PAGE OF THE PROPOSAL.

- Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

- Inform subcontractors and suppliers as necessary.

This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it.

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

NICK YAMBAO, Chief
Office of Plans, Specifications & Estimates
Division of Office Engineer

Attachments

5-1.22 FORCE ACCOUNT PAYMENT

The second, third and fourth paragraphs of Section 9-1.03A, "Work Performed by Contractor," of the Standard Specifications, shall not apply.

Attention is directed to "Progress Schedule (Critical Path) of these special provisions.

To the total of the direct costs for work performed on a force account basis, computed as provided in Sections 9-1.03A(1), "Labor," 9-1.03A(2), "Materials," and 9-1.03A(3), "Equipment Rental," of the Standard Specifications, there will be added a markup of 25 percent to the cost of labor, 10 percent to the cost of materials, and 10 percent to the equipment rental. These markups shall be applied to all work performed on a force account basis, regardless of whether the work revises the current contract completion date.

The above markups, together with payments made for time related overhead pursuant to "Overhead" of these special provisions, shall constitute full compensation for all overhead costs for work performed on a force account basis. These overhead costs shall be deemed to include all items of expense not specifically designated as cost or equipment rental in Sections 9-1.03A(1), "Labor," 9-1.03A(2), "Materials," and 9-1.03A(3), "Equipment Rental," of the Standard Specifications. The total payment made as provided above and in the first paragraph of Section 9-1.03A, "Work Performed by Contractor," shall be deemed to be the actual cost of the work performed on a force account basis, and shall constitute full compensation therefor. Full compensation for all overhead costs for work performed on a force account basis, and for which no adjustment is made to the quantity of time related overhead pursuant to "Overhead" of these special provisions, shall be considered as included in the markups specified above, and no additional compensation will be allowed therefor.

When extra work to be paid for on a force account basis is performed by a subcontractor, approved in accordance with the provisions in Section 8-1.01, "Subcontracting," of the Standard Specifications, an additional markup of 5 percent will be added to the total cost of said extra work including all markups specified in this section "Force Account Payment". Said additional 5 percent markup shall reimburse the Contractor for additional administrative costs, and no other additional payment will be made by reason of performance of the extra work by a subcontractor.

5-1.23 OVERHEAD

The Contractor will be compensated for overhead in accordance with these special provisions.

Attention is directed to "Force Account Payment" and "Progress Schedule (Critical Path)" of these special provisions.

Section 9-1.08, "Adjustment of Overhead Costs," of the Standard Specifications shall not apply.

Time related overhead shall consist of those overhead costs, including field and home office overhead, that are in proportion to the time required to complete the work. Time related overhead costs shall not include costs that are not related to time, including but not limited to mobilization, licenses, permits, and any other charges incurred only once during duration of the contract.

The quantity of time related overhead to be measured for payment will be the number of working days specified in "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions, adjusted only as a result of suspensions and adjustments of time which revise the current contract completion date and which are also any of the following:

1) suspensions of work ordered in accordance with Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications, except:

a) suspensions ordered due to the failure on the part of the Contractor to carry out orders given, or to perform any provision of the contract; and

b) suspensions ordered due to unsuitable weather conditions;

2) extensions of time granted by the State in accordance with the provisions of the fifth paragraph of Section 8-1.07, "Liquidated Damages," of the Standard Specifications; or

3) reductions in contract time set forth in approved contract change orders, in accordance with Section 4-1.03, "Changes," of the Standard Specifications.

The contract price paid for time related overhead shall include full compensation for time related overhead measured for payment as specified above, incurred by the Contractor and by any joint venture partner, subcontractor, supplier or other party associated with the Contractor.

No adjustment in compensation will be made for any increase or decrease in the quantities of time related overhead required, regardless of the reason for the increase or decrease. The provisions in Sections 4-1.03B, "Increased or Decreased Quantities" and 4-1.03C, "Changes in Character of the Work," of the Standard Specifications, shall not apply to time related overhead.

For the purpose of making partial payments pursuant to Section 9-1.06, “Partial Payments,” of the Standard Specifications, the number of working days to be paid for time related overhead in each monthly estimate will be the number of working days specified above to be measured for payment that occurred during that monthly estimate period. The amount earned per day for time related overhead shall be the contract unit price for time related overhead, or 15 percent of the original contract amount divided by the number of working days specified in "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions, whichever is the lesser.

After acceptance of the contract pursuant to Section 7-1.17, “Acceptance of Contract,” of the Standard Specifications, the amount, if any, of the contract item price for time related overhead not yet paid will be included for payment in the first estimate made after acceptance of the contract in accordance with Section 9-1.07, “Payment after Acceptance,” of the Standard Specifications.

Full compensation for all overhead costs, including overhead costs for increases in the quantity of contract items of work; other than time related overhead measured and paid for as specified above, and other than overhead costs included in the markups specified in "Force Account Payment" of these special provisions, shall be considered as included in the various items of work and no additional compensation will be allowed therefor.

8-1.03 MANUFACTURING AND FABRICATION QUALIFICATION AUDIT FOR MATERIALS

The Contractor shall submit a complete list of the manufacturers' and fabricators' facilities to be used for preparing materials for the following items of work:

126" Cast-In-Steel Shell Concrete Piling
150" Cast-In-Steel Shell Concrete Piling
162" Cast-In-Steel Shell Concrete Piling
Column Restrainer Bracket
Miscellaneous Metal (Bridge)
Miscellaneous Metal (Bridge) (Fender) (Substructure)
Temporary Support
Structural Steel (Bridge) (Substructure)
Structural Steel (Bridge) (Superstructure)
Traveling Maintenance Scaffold (Superstructure)
Miscellaneous Metal (Restrainer-Cable Type) (Superstructure)
Miscellaneous Metal (Restrainer-Rod Type) (Superstructure)
High Strength Fasteners used for various bid items

The Contractor shall submit the list of facilities to the Engineer not later than the submittal of the written request for the first audit of a facility. The list shall designate the sequence in which the facilities are to be audited. If a fabricator or manufacturer has more than one facility where work will be performed, each facility shall be listed separately.

The Contractor shall submit to the Engineer a written request for an audit of each facility. The request shall include the following:

1) A "Manufacturing and Fabrication Qualification Audit" (MFQA) checklist completed by the fabricator or manufacturer as a self-evaluation, and that has been signed by both the Contractor's Quality Control Manager (QCM), as defined in “Welding Quality Control” of these special provisions, and the fabricator's or manufacturer's authorized quality control representative;
2) Documentation outlining the Contractor's quality control program, including the practices, procedures and methods used to meet the Quality Control/Quality Assurance (QC/QA) requirements as applicable, and to substantiate the responses in the MFQA checklist; and
3) A detailed description of the work the manufacturer or fabricator will be performing on this contract, by contract item.

As an option, the apparent successful bidder (low bidder) may submit the list of facilities, and written requests for audits of the facilities, after the proposals are opened, and the time specified for completion of the audits will start upon approval of the contract.

The Contractor shall allow 6 weeks to complete the audit of a fabricator’s or manufacturer’s facility after a written request for evaluation of that facility has been submitted to the Engineer. If audits of more than one fabricator or manufacturer facility are requested, the time to be allowed for completing each audit shall be not less than 6 weeks plus one week for each facility earlier in the sequence which is still subject to audit. Manufacturing or fabrication of materials shall not commence at a facility, nor will working drawings be accepted for submittal for those materials, prior to the Engineer issuing an audit report determining that the facility is in compliance with the MFQA and other contract requirements.

It shall be the Contractor’s responsibility to ensure that the Engineer is provided sufficient access and cooperation by the manufacturer or fabricator to complete the audit in a timely and effective manner.

The Engineer will conduct the audit at each listed manufacturer or fabricator facility. The Contractor's QCM and the fabricator's or manufacturer's authorized quality control representative shall be present and available during the audit to discuss the items listed in the MFQA checklist.

The audit will assess the accuracy of the manufacturer's or fabricator's responses to the questions in the MFQA, and of the documentation provided regarding the manufacturer's or fabricator's quality control program. Within 10 days of completing the audit, the Engineer will furnish an audit report assessing the facility's compliance with the MFQA and other contract requirements. A negative response to any question in the MFQA checklist during the audit will result in the determination that the facility is not in compliance with the MFQA requirements and shall be noted in the audit report.

Successful completion of the audit shall not operate to waive any of the requirements of the plans or specifications or relieve the Contractor of any obligation thereunder, and defective work, materials and equipment may be rejected, notwithstanding the successful completion of the audit.

If a fabricator or manufacturer does not meet the requirements in the MFQA checklist as determined by the Engineer, the Contractor may submit a written request for a re-audit of the facility. The Contractor shall include with the request for a re-audit, an explanation of how the deficiencies noted in the original audit have been addressed. The Contractor shall submit an updated audit sequence in which the remaining facilities, including the facility to be re-audited, are to be evaluated. The time allowed by the Contractor for the re-audit of any manufacturer or fabricator in the revised sequence shall not be less than the time specified above for the audit.

If the manufacturer or fabricator is determined to be in noncompliance after 3 audits, the Contractor will be notified that deductions as outlined below will be made for materials produced by the facility throughout the duration of the project. At the Contractor's option, another manufacturer or fabricator may be requested for an audit in place of the non-complying facility. The time allowed for the audit shall not be less than the time specified for an initial audit, and a revised audit sequence shall be submitted.

Should the Engineer fail to complete the audit within the time specified, and the delay revises the current contract completion date, in conformance with the provisions in "Progress Schedule (Critical Path)" of these special provisions, the delay will be considered a right of way delay as specified in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

If materials are to be manufactured or fabricated at facilities which have not been determined by the Engineer, by requested audit, to meet the requirements of the MFQA checklist, additional inspection and testing will be required by the State. This may include, but not be limited to, longer on-site State inspection and additional testing as required by the Engineer to assure compliance with the requirements. Whereas it is and will be impractical and extremely difficult to ascertain and determine the actual increase in such expenses, it is agreed that payment to the Contractor for furnishing materials from these facilities will be reduced by an amount computed at $0.08 per pound for each manufacturing or fabrication site located within 3,000 air line miles from both Sacramento and Los Angeles, or by an amount computed at $0.10 per pound for each manufacturing or fabrication site located 3,000 or more air line miles from both Sacramento and Los Angeles. This deduction is in addition to any other deductions specified in the Standard Specifications or elsewhere in these special provisions.

All costs incurred in complying with the requirements of the MFQA checklist and these special provisions shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefor.

The "Manufacturing and Fabrication Qualification Audit" (MFQA) checklist to be completed by each listed manufacturer or fabricator, and submitted by the Contractor, follows:

MANUFACTURING AND FABRICATION QUALIFICATION AUDIT

NAME OF COMPANY: _____

DATE: _____

LOCATION: CITY/STATE/COUNTRY: _____

FACILITY'S AUTHORIZED QUALITY CONTROL

REPRESENTATIVE: _____

CONTRACTOR'S QUALITY CONTROL

MANAGER: _____

ORIGINAL OR FOLLOW-UP VISIT: _____

NAME OF AUDITOR: _____

1. SELF EVALUATION AND REQUEST FOR AUDIT

Per section 8-1.03 of the contract special provisions, the attached "Manufacturing and Fabrication Qualification Audit" (MFQA) self-evaluation checklist shall be completed and submitted to the Engineer as part of the formal request for a facility audit.

Steel Manufacturers and Fabricators are only required to answer Sections A through L. Fastener Manufacturers and Fabricators are only required to answer Sections M through S.

A detailed explanation shall accompany every answer. The detailed information provided should either explain how the facility is currently meeting the requirements (if answered "Yes") or explain how the facility intends on meeting the requirements (if answered "No") or how this particular question is not applicable for this facility (if answered "NA"). Please attach additional sheets as needed to provide complete responses to the questions.

During the audit the same questions in the MFQA attached herein will be asked. Each Manufacturer and Fabricator will be evaluated per the requirements of section 8-1.03 of the contract special provisions.

We the undersigned have read and understand the "Manufacturing and Fabrication Qualification Audit" self-evaluation checklist and the contract specifications pertaining to this audit, and are providing the following information.

Contractor's Quality Control Manager:	Facility's Authorized Quality Control Representative
Date:	Date:

MANUFACTURING AND FABRICATION QUALIFICATION AUDIT

A. FABRICATION SPECIFICATIONS AND STANDARDS

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Fabricator/Manufacturer have a copy of CALTRANS specifications and are the Fabricator's personnel familiar with these specifications?				
2.	Does the Fabricator/Manufacturer have a copy of AWS D1.5-95 and 96, D1.1-96 and 98, and D1.4-92?				
3.	Does the Fabricator/Manufacturer have copies of all material specifications referenced in the contract (e.g. ASTM)?				
4.	Does the Fabricator/Manufacturer have personnel that are knowledgable and experienced with the material codes and specifications referenced in the contract?				
5.	Is there a written procedure in place to disseminate specification requirements and changes to appropriate personnel?				

B. READING / INTERPRETING SHOP DRAWINGS

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Fabricator/Manufacturer have personnel capable of supervising, evaluating and coordinating shop drawing preparation and review?				
2.	Do the shop drawings denote materials to be utilized in the final structure?				
3.	Do shop drawings identify fracture critical materials and welds, when applicable?				
4.	Do the materials and processes specified or indicated on the shop drawings agree with the contract documents material requirements for work ongoing in the shop?				

C. DRAWING CONTROL

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Fabricator or Manufacturer have a written procedure for tracking design drawings as follows. a. ____ receipt? b. ____ on file? c. ____ revisions?				
2.	Does the tracking procedure utilized trace each phase from drawing preparation, showing receipt, submittal for approval, approval, resubmittals and date sent to shop for fabrication?				
3.	Do the shop plans correspond to the latest revision?				

D. WORK ORDER – JOB CONTROL

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Fabricator/Manufacturer have an established job control number and identification system for all work completed and accepted by in-house QC?				
2.	Are all received correspondence marked with a distinguishable identifying mark?				
3.	Are correspondence files maintained and seggregated for each project?				
4.	Is received correspondence a. ____ stamped received? b. ____ dated? c. ____ initialed?				

E. MATERIAL PROCUREMENT AND SUBCONTRACTS

		YES	NO	NA	DETAILED INFORMATION
1.	Are purchase orders or any other type of materials procurement forms on file for verification and documentation of the orders?				
2.	Are all materials ordered or procured to the required standards and specifications specified in the corresponding contract documents?				
3.	Do the Fabricator's or Manufacturer's procurement documents require that his suppliers must furnish material testing reports (MTR's)?				
4.	Do the procurement documents state how the material should be marked and identified?				
5.	Are procedures in place to asssure that subcontracted fabrication is ordered to contract requirements?				

F. MATERIAL RECEIVING

		YES	NO	NA	DETAILED INFORMATION
1.	Is there an established written procedure for the reception of materials and subassemblies?				
2.	Are reception inspections done to all incoming materials and subassemblies arriving at this facility?				
3.	Does the materials and subassemblies receiving inspector confirms and documents the following: a. ____ proper grade of material? b. ____ proper material marking and identification? c. ____ proper material dimentions? d. ____ compliance with dimentional tolerances? e. ____heat numbers on material match heat numbers on corresponding mill certificates?				
4.	Are receiving inspections documented for: a. ____ acceptance and rejection of nonconforming materials and subassemblies? b. ____ corrective actions taken to deal with non-correctable and correctable nonconformities observed during the reception inspection?				
5.	Are acceptance tolerances available for reference at the receiving inspection station?				
6.	Does the Fabricator or Manufacturer have a material identification system to assure control of materials of different grade and size (as applicable)?				
7.	Does the Fabricator or Manufacturer segregate controlled materials by project?				
8.	Does the Fabricator/Manufacturer have mill test reports (MTR's) for all material currently in fabrication?				
9.	Are MTR's traceable to stored or stocked material?				
10.	Are materials stored or stocked so as to prevent damage to the raw materials or final fabricated pieces?				
11.	Are the stored or stocked materials clearly marked or identified?				

G. EQUIPMENT/FACILITIES, HANDLING AND STORAGE PROCEDURES

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Fabricator or Manufacturer have adequate equipment to fabricate to the units on the contract plans for this contract? Attach list of the available equipment.				
2.	Is the material handling equipment adequate for the type of work being done?				
3.	Does the Fabricator or Manufacturer have adequate written procedures that describe or illustrate the proper way to: a. ____ handle materials in the yard? b. ____ handle materials in the plant? c. ____ move inprocess materials and subassemblies? d. ____ provide correct bracing and blocking for materials and subassemblies? e. ____ prevent material and subassembly deterioration? f. ____ provide correct storage for fabricated products? g. ____ handle and shipping of fabricated products?				

H. WELDING AND WELDING CONSUMABLES

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Fabricator/Manufacturer have welding procedure specifications and procedure qualification records (if applicable) per contract documents?				
2.	Are the Fabricator's/Manufacturer's welders certified in conformance with CALTRANS and AWS requirements?				
3.	Do the Fabricator's/Manufacturer's procedures address the requirements of AWS D1.5, Sections 2 "Design of Welded Connections" and 3.4 "Control of Distortion and Shrinkage"?				
4.	Is the Fabricator/Manufacturer aware of the fracture critical requirements of AWS D1.5, chapter 12, and of a fracture control plan, if applicable?				
5.	Are approved welding procedures readily available or posted near all welding machines?				
6.	Do welders know and understand which WPS is to be used with each specific weld?				
7.	Are welded structures and and specific welds traceable to the welder(s) and or welding crew that completed the job?				
8.	Does the Fabricator/Manufacturer have and properly maintain appropriate equipment for preheat and interpass heating?				
9.	Are maximum interpass and minimum WPS preheat temperatures properly monitored?				
10.	Are flame cut edges inspected by quality control inspectors to verify compliance with AWS D1.5, D1.1, D1.4?				
11.	Do quality control inspectors verify and document joint fit-up before welding?				
12.	Do the quality control inspectors verify and document the utilization of WPSs?				
13.	Are meters and other devices used to record or display welding variables checked for accuracy every three months?				
14.	Is the equipment used for verifying meters and other devices certified annually?				

15.	Are welding consumables stored in accordance with AWS D1.5, D1.1, or D1.4?				
16.	Are welding consumables at the work station protected from contamination and damage?				
17.	Does the Fabricator or Manufacturer control the exposure time of low-hydrogen SMAW electrodes following removal from hermetically sealed containers, drying ovens, or storage ovens?				
18.	Are consumable manufacturer certification reports on file and available?				

I. HIGH-STRENGTH BOLTING

		YES	NO	NA	DETAILED INFORMATION
1.	Are copies of the current RCSC and all appropriate ASTM Specification available?				
2.	Does a written procedure exist for sampling, testing, and approving high-strength fasteners and fastener components prior to use by the Fabricator or Manufacturer?				
3.	Does the Fabricator or Manufacturer have copies of all required test reports for fastener components (i.e., bolts, nuts, washers, and DTIs according to requirements in appropriate ASTM specifications)?				
4.	For each fastener component, has the Fabricator or Manufacturer been prequalified by Caltrans?				
5.	Does the Fabricator or Manufacturer have manufacturer's installation instructions for TC bolts and DTIs, if applicable?				
6.	Are written procedures available to conduct high-strength bolting: a. Installation verification tests? b. Rotational capacity test? c. Job inspection torque determination? d. long and short bolts testing?				

7.	Are procedures in place to perform installation verification tests of each lot of fasteners at a frequency as required in the RCSC Specification?				
8.	Does the equipment on hand for high-strength bolting, include: a. a bolt tension measuring device with appropriate bushings? b. a set of tapered feeler gages for inspecting DTIs? c. a torque wrench with dial or digital readout? d. a pneumatic or electric wrench with a positive mechanism that activates when proper tension is reached?				
9.	Has the contractor's bolting equipment (torque wrench, calibrated wrench, bolt load meter, torque multiplier) been calibrated by an accredited testing lab?				
10.	Is the accredited testing lab's. calibration equipment traceable to NIST standards?				
11.	Has each piece of equipment been calibrated within the past year?				
12.	Are calibration curves and plots on hand and is the accuracy of the equipment within acceptable tolerances?				
13.	If the turn-of-nut installation procedure is being used, is the match-marking procedure properly understood and utilized?				
14.	Is the sealing compound used to seal sheared ends of TC bolts: a. of the type recommended by RSCS? b. Applied to the correct thickness? c. Applied as soon as TC bolts have been sheared?				
15.	Has the paint used in faying surfaces been tested and qualified for the maximum thickness and the minimum cure time specified in the contract specifications for bolting plates?				

16.	Are procedures available to ensure that hot-dip-galvanized faying surfaces are: a. flat and free from runs or globs? b. roughened by hand wire brushing?				
17.	Will bolt tension of all completed bolted joints be inspected and documented immediately after each joint has been completed using the arbitration method of the RCSC Specification?				
18.	Are all fastener components properly stored and handled to ensure that: a. components are covered and protected from moisture? b. unused components are returned to their original containers at the end of each shift? c. different lots are stored separately to maintainintegrety between lots?				
19.	Does the Fabricator or Manufacturer use drill templates with hardened bushings when drilling bolt holes?				

J. COATING PROCESS

		YES	NO	NA	DETAILED INFORMATION
1.	Are the facilities and equipment suitable for performing cleaning and painting in conformance with the specfications for this contract?				
2.	Does a written procedure exist that addresses: a. measuring and recording temperature? b. measuring and recording humidity? c. measuring and recording wet film thickness? d. measuring and recording dry film measurements?				
3.	Are the facilities and equipment suitable for performing galvanizing in conformance with appropriate ASTM specifications?				
4.	Are thickness measurements of galvanized surfaces performed and documented?				
5.	Does a written repair procedure exist for repair of galvanizing holidays?				

K. QUALITY CONTROL AND QUALITY CONTROL INSPECTORS

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Fabricator or Manufacturer have a written Quality Control Manual that describes the company policy, support and commitment to quality?				
2.	Does the Fabricator or Manufacturer have a written job description and an organizational chart that reflects its commitment to quality?				
3	Does the Quality control Manual include sections that deal with: a. Contract review? b. Documents and drawings control? c. Materials purchasing? d. Product identification and traceability? e. Process control? f. Inspection and testing? g. Control of inspection, measuring and test equipment? h. Control of nonconforming products? i. Corrective and preventive actions? j. Handling and storage? k. Packaging and delivery? l. Internal audits? m. Manual review and update?				
4.	Does the Fabricator have a registered Certified Welding Inspector (CWI) on his full time staff or on contract?				
5.	Were Quality Control personnel available in the plant during this inspection audit as required in the Contract documents?				
6.	Does the Fabricator have certified NDT personnel on his full time staff?				
7.	Does the Fabricator have sub-contracts for all or part of his NDT?				
8.	Are the subcontractor's qualifications verified by the Fabricator?				

9.	Does the Fabricator or Manufacturer have certifications for all inspection personnel (staff and subcontractor) on file and readily available?				
10.	Does the Fabricator or Manufacturer have a copy of the written practice for NDT on file?				
11.	Does the written practice meet or exceed the recommendations of SNT-TC-1A?				
12.	Does the Fabricator or Manufacturer maintain documentation for all quality control testing?				
13.	Do quality control inspectors have sufficient equipment to adequately perform their tasks a. ____tape line? b. ____calipers? c. ____tag systems? d. ____fillet weld gages? e. ____chipping hammer? f. ____magnifying glass? g. ____amp tongs? h. ____paint gages? i. ____ flashlight? j. ____preheat & interpass temperature measuring and testing devices? k. ____mirror?				
14.	Does the Fabricator or Manufacturer have written procedures for: a. ____ minor repairs? b.____ major repairs? c ____ documentation for reinspection of repairs?				
15.	Are quality control personnel conversant with the quality control requirements?				
16.	Does the Fabricator or Manufacturer maintain a quality control program that is independent from production?				

17.	Do the quality control inspectors have the responsibility of informing line foreman and superintendent when observing any non-conforming work processes and performances?				
18.	Is the CWI given sufficient authority to stop work in order to prevent unacceptable work from proceeding?				

L. COMPLETED MEMBER STORAGE AND FINAL INSPECTION

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Fabricator or Manufacturer understand that there is a 48-hr. notification for final Caltrans inspection?				
2.	Is the Fabricator or Manufacturer aware that he must provide complete paper work, including a certificate of compliance and weights, for final inspection?				
3.	Does the Fabricator or Manufacturer have the material located and identified for final inspection?				
4.	Are completed members properly stored to prevent damage?				
5.	Are all primary load-carrying components traceable to MTR's?				
6.	Does the Fabricator or Manufacturer understand that material release tags should be completed and attached only by the Engineer or his authorized representative?				

M. QUALIFICATION REQUIREMENTS FOR FASTENER MANUFACTURERS

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Manufacturer marks the fasteners, as required by ASTM specification, with a unique identification marking symbol that is registered with the U.S. Patent and Trademark Office?				
2.	Is the fastener Manufacturer currently certified to Quality System (QS) 9000?				
3.	Was the accreditation granted by an approved (Caltrans acknowledged) third party accreditation agency?				
4.	Was the Manufacturer certified using a (QS) 9000 Standard no older than the 3rd Edition?				
5.	Does the manufacturer have adequate facilities and machinery to manufacture the fastener components? Attach a list of the available equipment.				
6.	Does the manufacturer have adequate gages and quality control tools to evaluate the compliance of fastener components with specifications? Attach a list of the available equipment.				
7.	Have samples of all fastener components (or similar components) to be furnished for the contract been tested and approved by Caltrans prior to the Manufacturer producing fastener components for the contract?				
8.	Do appropriate personnel from the fastener manufacturer have a copy of the ASTM F1470 specification?				
9.	Did the Manufacturer personnel demonstrated knowledge and understanding of the ASTM F1470 specification?				
10.	Did the Manufacturer verify that all the Secondary Processors have detailed QC Plans and that they are certified to the QS 9000 standard?				
11.	Have all the Secondary Processors (including zinc coating processors and heat treaters) been audited by the fastener manufacturer to very compliance with Quality Control requirements??				

12.	Did the Manufacturer verify that the Secondary Processors have copies of all appropriate consensus standards for the product they are treating?				
13.	Are all fastener components and systems retested and recertified by the prime Manufacturer or Distributor after all secondary processing is completed?				
14.	Have all fastener components been tested by a testing laboratory acknowledge by Caltrans or recognized and approved by NIST?				
15.	Did the Manufacturer verify that the testing laboratory meets requirements of ISO/1EC Guides 25 and/or 58?				
16.	Did the Manufacturer verify that appropiate personnel from their testing laboratory have a copy of the ASTM F1470 specification?				
17.	Does the testing laboratory have testing procedures and copies of standard documents related to testing of fastener products?				
18.	Does the technician doing the testing have copies of the testing procedures?				
19.	Have samples of all test reports (as listed in appropriate ASTM specifications) been reviewed and approved by Caltrans?				
20.	Does the Manufacturer provides acceptable installation instructions for alternate fastener systems (i.e., TC bolts and DTI's) or fastener components?				
21.	Do lubricants used by manufacturer on zinc-coated products comply with Caltrans and ASTM requirements for: a. ___Cleanliness and Dryness to touch? b. ___Color and dye? c. ___Solubility in water?				
22.	What is type and model number of the lubricant?				

N. MATERIAL RECEIVING

		YES	NO	NA	DETAILED INFORMATION
1.	Is there an established written procedure for the reception of materials?				
2.	Are reception inspections done to all incoming materials arriving at this facility?				
3.	Does the manufacturer's inspector confirms and documents : a. ____ proper grade of material? b. ____ proper material marking and identification? c. ____ proper material dimentions? d. ____ compliance with dimentional tolerances? e. ____heat numbers on material match heat numbers on corresponding mill certificates?				
4.	Are receiving inspections documented for: a. ____ acceptance and rejection of nonconforming materials and subassemblies? b. ____ corrective actions taken to deal with non-correctable and correctable nonconformities observed during the reception inspection?				
5.	Are acceptance tolerances available for reference at the receiving inspection station?				
6.	Does the Manufacturer have a material identification system to assure control of materials of different heats, lots, and grade (as applicable)?				
7.	Does the Manufacturer keep each lot of material segregated and identify so as to maintain lot integrity of all metrials throughout the manufacturing process?				
8.	Does the Fabricator/Manufacturer have mill test reports (MTR's) for all material currently in fabrication?				
9.	Are MTR's traceable to stored or stocked material?				

10.	Are materials stored or stocked so as to prevent damage to the raw materials or completed fastener components?				
11.	Are the stored or stocked materials clearly segregated, and marked or identified by lot number?				

O. HANDLING AND STORAGE EQUIPMENT, FACILITIES, AND PROCEDURES OF MATERIALS AND MANUFACTURED PRODUCTS

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Manufacturer have adequate equipment to fabricate the to units on the contract plans for this contract? Attach list of the available equipment.				
2.	Is the material handling equipment adequate for the type of work being done?				
3.	Does the Manufacturer have adequate written procedures that describe or illustrate the proper way to: a. ____ handle materials in the yard? b. ____ handle materials in the plant? c. ____ move inprocess materials and subassemblies? d. ____ provide correct bracing and blocking for materials and subassemblies? e. ____ prevent material and subassembly deterioration? f. ____ provide correct storage for fabricated products? g. ____ handle and shipping of fabricated products?				

P. COATING PROCESS

		YES	NO	NA	DETAILED INFORMATION
1.	Are the facilities and equipment suitable for performing galvanizing in accordance with ASTM specifications?				
2.	Are thickness measurements of galvanized surfaces performed and documented?				
3.	Is the maximum coating thickness controlled so as not to be excessive?				
4.	Are suitable gages and instruments available to check various thread dimensions (thread pitch, major and minor diameters, etc.) after galvanizing?				

5.	Has lot integrety and segregation been maintained throughout the coating process? (i.e., each lot clearly marked and segregated before, during and after processing)				

Q. HEAT TREATING PROCESS

		YES	NO	NA	DETAILED INFORMATION
1.	Are the facilities and equipment suitable for performing heat treating in accordance with appropriate ASTM specifications?				
2.	Is the equipment adequate to produce a quality product with consistent hardness and a tight hardness range?				
3.	Is the equipment used for quenching and tempering adequate to control bath temperature, so as to produce fastener components with consistent hardness and metalurgical properties?				

R. QUALITY CONTROL AND QUALITY CONTROL INSPECTORS

		YES	NO	NA	DETAILED INFORMATION
1.	Does the Manufacturer have a written Quality Control Manual that describes the company policy, support and commitment to quality?				
2.	Does the Manufacturer have a written job description and an organizational chart that reflect its commitment to quality?				
3	Does the quality control manual include sections that deal with: a. Materials purchasing? b. Product identification and traceability? c. Process control? d. Inspection and testing? e. Control of inspection, measuring and test equipment? f. Control of nonconforming products? g. Corrective and preventive actions? h. Handling and storage? i. Packaging and delivery?				

4.	Is all quality control testing documented?				
5.	Are quality control personnel conversant in and understand the quality control requirements?				
6.	Is quality control independent from production?				

S. STORAGE AND FINAL INSPECTION OF COMPLETED FASTENER COMPONENTS

		YES	NO	NA	DETAILED INFORMATION
1.	Are manufactured products properly stored to prevent damage?				
2.	Are all components properly packaged and marked per ASTM requirements?				
3.	Are zinc-coated components of fastener systems properly packaged together as an assembly?				
4.	Has each assembly lot been tested as a rotational capacity lot and been given a Rocap lot number?				
5.	Is the Fabricator aware that he must provide complete paper work, including a certificate of compliance and weights, for final inspection?				

Concrete Coatings.--Concrete coatings shall be applied to precast concrete elements within the limits shown on the plans. The coating shall be a 100% solids polyurea and conform to the requirements specified herein. A polyurea coating is defined as the reaction product between a polyisocyanate and an amine. The coating system shall include a primer as recommended by the manufacturer to enhance adhesion and minimize outgassing from the concrete.

Polyurea Coating Properties	Requirement
Elongation (ASTM Designation: D 412)	Minimum 300 %
Tensile Strength (ASTM Designation: D 412)	2,500 psi
Surface Hardness (ASTM Designation: D 2240, Shore A)	90 to 98
Abrasion loss (Taber, 1 kg, H-18 wheel)	Maximum 200 mg
Water Absorption(ASTM Designation: D 471)	Maximum 1 % @ 24 hours

The coating system shall have the following properties:

System Properties	Requirement
Adhesion to Concrete (ASTM Designation: D 4541)	Minimum 300 psi
Dry Film Thickness (ASTM Designation: D 6132)	Minimum 60 mils
Color Stability (ASTM Designation: D 2565)	No visible color change after 500 hours

The same manufacturer shall supply all components of the coating system. The coating system shall be continuous and free from visible pinholes and holidays.

Each shipment of concrete coating shall be accompanied by the manufacturer's recommendations for application of concrete coating and a Certificate of Compliance conforming to Section 6-1.07, "Certificates of Compliance" of the Standard Specifications.

Concrete coatings shall be used in conformance with the manufacturer's written recommendations and these special provisions.

The color of the concrete coating shall match the color of the precast concrete elements.

A manufacturer's representative, as approved by the Engineer, shall provide technical assistance for the use of their product. The representative shall be present at the location of the mixing and application of concrete coating for the duration of the coating operation.

Coating shall be applied at least 30 days after fabrication of the precast elements. At least 48 hours prior to application of coating, the entire concrete surface to be coated shall be abrasive blast cleaned. Cleaning shall remove all dirt, debris and other deleterious materials including removal of existing cement matrix sufficient to expose the fine aggregates with minimal exposure of the coarse aggregates. After cleaning, the concrete surface shall be air blown to remove loose surface material.

Holes with a dimension greater than 0.125 inches shall be filled with epoxy mortar as recommended by the coating manufacturer. Cracks greater than 10 mils and less than 30 mils in width shall be repaired with epoxy prior to coating the member. Cracks with a width greater than 30 mils shall be repaired per manufacturer's recommendations.

The concrete surface shall be dry when coating is applied. The polyurea component of the concrete coating system shall be applied in one or more applications to a minimum dry film thickness of 60 mils.

Surface preparation and all coating operations shall be in accordance with the requirements of National Association of Corrosion Engineers recommendation RP-0892 for concrete coatings unless otherwise superceded by these special provisions or the coating manufacturer's written requirements.

An erection frame with at least four (4) lifting points shall be used to lift the precast segments. The lifting force shall be vertical without inducing lateral loads in the precast segments.

ENGINEER'S ESTIMATE
04-0438U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
181 (S)	047981	EXPANSION JOINT ASSEMBLY (SUPERSTRUCTURE)	LF	360		
182 (S-F)	047982	SEISMIC ISOLATION JOINT ASSEMBLY (SUPERSTRUCTURE)	LF	144		
183 (S-F)	047983	BAR REINFORCING STEEL (BRIDGE) (SUPERSTRUCTURE)	LB	3,023,000		
184 (S-F)	047984	BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE) (SUPERSTRUCTURE)	LB	3,494,000		
185 (S-F)	047985	ASPHALT MEMBRANE WATERPROOFING (SUPERSTRUCTURE)	SQFT	1,600		
186 (S-F)	047986	COLUMN CASING (SUPERSTRUCTURE)	LB	784,000		
187 (S-F)	047987	SHAFT CASING (SUPERSTRUCTURE)	LB	177,400		
188 (F)	047988	FURNISH STRUCTURAL STEEL (BRIDGE) (SUPERSTRUCTURE)	LB	10,441,200		
189 (S-F)	047989	ERECT STRUCTURAL STEEL (BRIDGE) (SUPERSTRUCTURE)	LB	10,441,200		
190 (S)	047990	RIVET REMOVAL AND HOLE REAMING (SUPERSTRUCTURE)	EA	243,600		
191	047991	TRAVELING MAINTENANCE SCAFFOLD (SUPERSTRUCTURE)	EA	7		
192 (F)	047992	FURNISH STRUCTURAL STEEL (RAIL LOWERING) (SUPERSTRUCTURE)	LB	21,420		
193 (S-F)	047993	ERECT STRUCTURAL STEEL (RAIL LOWERING) (SUPERSTRUCTURE)	LB	21,420		
194	047994	REMOVE EXISTING TRUSS SHOE PIN (SUPERSTRUCTURE)	EA	122		
195 (S-F)	047995	INSTALL STUD CONNECTORS (SUPERSTRUCTURE)	EA	1,256		
196 (S)	047996	VISCOUS DAMPING DEVICE (225 KIPS) (SUPERSTRUCTURE)	EA	20		
197 (S)	047997	VISCOUS DAMPING DEVICE (PIER 19) (SUPERSTRUCTURE)	EA	8		
198 (S)	047998	CLEAN AND PAINT STRUCTURAL STEEL (SUPERSTRUCTURE)	LS	LUMP SUM	LUMP SUM	
199 (S-F)	047999	SPOT BLAST CLEAN AND PAINT UNDERCOAT (SUPERSTRUCTURE)	SQFT	282,600		
200	048000	WORK AREA MONITORING (SUPERSTRUCTURE)	LS	LUMP SUM	LUMP SUM	