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Note: Addenda information is NOT included with the electronic documents available via electronic file transfer. Only bidder or non-bidder package holders listed with the Caltrans Plans and Bid Documents section as described above will receive addenda information.

Seismic Retrofit Project



STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

NOTICE TO CONTRACTORS AND

SPECIAL PROVISIONS

FOR CONSTRUCTION ON STATE HIGHWAY IN
CONTRA COSTA COUNTY IN WALNUT CREEK ON ROUTES 680 AND 24
AT WALNUT CREEK OVERCROSSING (BART)

DISTRICT 04, ROUTE 680,24

For Use in Connection with Standard Specifications Dated JULY 1992 and Labor Surcharge and Equipment Rental Rates.

CONTRACT NO. 04-148724
INFORMAL BIDS CONTRACT
04-CC-680,24-14.5,9.1

Bids Open: June 14, 2000
Dated: May 15, 2000

OSD

IMPORTANT SPECIAL NOTICES

- The bidder's attention is directed to the following special requirements for this project concerning submission of DVBE information, award and execution of contract, and beginning of work:

First-tier subcontractors that will be used for meeting DVBE goals must be listed in the "List of Subcontractors" form regardless of dollar amount of work to be performed. Second- and lower-tier subcontractors need not be listed on the "List of Subcontractors" form. Other, non-DVBE subcontractors are to be listed on the "List of Subcontractors" form in conformance with the requirements in Section 2-1.054 of the Standard Specifications and the Special Provisions.

Identify second- and lower-tier DVBE subcontractors on the "Caltrans Bidder DVBE Information" form.

DVBE information shall be submitted **with the bid proposal**. (See **Section 2-1.04** of the special provisions.) The evaluation of the effort to meet the DVBE goal will be based on the information provided with the bid proposal. If the goal was not met, Caltrans' determination of good faith effort will be based on the information provided with the bid, and the decision will be final. Bidders and all subcontractors listed in the DVBE Information shall be available, by phone, on the day following the bid opening.

The DVBE information shall include all DVBE partners.

It is anticipated that this contract will be awarded within **10 days after bid opening**.

If the Bidder submits cash or a cashier's check or a certified check as the form of bidder's security (see Section 2-1.07 of the Standard Specifications), the Bidder shall also include with the bid submittal a signed and notarized affidavit from an admitted surety insurer that contract bonds, as required by Section 3-1.02, "Contract Bonds," of the Standard Specifications, will be provided within the specified time for executing and returning the contract for approval.

If the bidder claims a mistake was made in his bid, the bidder shall give the Department written notice within 48-hours, not including Saturdays, Sundays and legal holidays, after the opening of bids of the alleged mistake in lieu of the 5 days specified in Section 2-1.095, "Relief of Bidders," in the Standard Specifications. (See Section 2-1.01 of the special provisions.) Caltrans' FAX number for submitting this information is (916)227-6282. Such information shall be submitted "Attention Office Engineer."

The contract shall be signed by the successful bidder and shall be received with contract bonds by the Office of Office Engineer within **4 days**, including Saturdays, Sundays and legal holidays, after the bidder has received notice that the contract has been awarded. (See Section 3 of the special provisions.)

If properly executed by the bidder, it is anticipated the contract will be approved within 24 hours of when the executed contract and contract bonds are received by the Department.

- The Contractor shall begin work within 5 calendar days after receiving notice that the contract has been approved. The contract work shall be completed before the expiration of **180 WORKING DAYS** beginning at **12:01 a.m. on the FIRST WORKING DAY AFTER CONTRACT AWARD.** (See Section 4 of the special provisions.)
- The Contractor shall begin work within 5 calendar days after receiving notice that the contract has been approved. The contract work shall be completed before the expiration of **180 WORKING DAYS** beginning at **12:01 a.m. on the DAY AFTER THE DAY OF CONTRACT AWARD.** The definition of a working day has been re-defined for this project. (See Section 4 of the special provisions.)
- The time limit specified in the Special Provisions for the completion of work contemplated herein is considered insufficient to permit completion of the work by the Contractor working a normal number of hours per day or week on a single shift basis. It is expected that additional shifts will be required throughout the life of the contract to the extent deemed necessary to ensure that the work will be completed within the time limit specified. (See Section 4 of the Special Provisions).

The following forms have been included at the end of the Proposal and Contract book to assist the successful bidder in early execution of the contract documents: Payment Bond, Performance Bond, Insurance, Payee Data Record.

SPECIAL NOTICE

Caltrans is conducting a pilot program in cooperation with Surety 2000, to test electronic bond verification systems. The purpose of the pilot program is to test the use of Surety 2000 for verifying a bidder's bond electronically.

Surety 2000 is an Internet-based surety verification and security system, developed by the surety industry. Surety agents may contact Surety 2000 at 1-800-660-3263.

Bidders are encouraged to participate in the pilot program. To participate, the bidder is asked to provide the "Authorization Code" provided by Surety 2000, on a separate sheet, together with the standard bidder's bond required by the specifications. The bidder's surety agent may obtain the "Authorization Code" from Surety 2000.

The Department will use the "Authorization Code" to access the Surety 2000 database, and independently verify the actual bidder's bond and document the functioning of the Surety 2000 system.

"Authorization Codes" will be used only to verify bidder's bonds, and only as part of the pilot program. The use of "Authorization Codes" will not be accepted in lieu of the bidder's bond or other bidder's security required in the specifications during the pilot study.

The function of the Surety 2000 system is to provide an easier way for Contractors to protect their bid security, and to discourage fraud. This system is available to all California admitted sureties and surety agents.

The results of the pilot study will be tabulated, and at some time in the future, the Department may consider accepting electronic bidder's bond verification in lieu of the bidder's bond specified.

Insert Seal Sheet Here

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DEPARTMENT OF TRANSPORTATION

NOTICE TO CONTRACTORS

THIS IS AN INFORMAL BIDS CONTRACT

CONTRACT NO. 04-148724

04-CC-680,24-14.5,9.1

Sealed proposals for the work shown on the plans entitled:

STATE OF CALIFORNIA; DEPARTMENT OF TRANSPORTATION; PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY IN CONTRA COSTA COUNTY IN WALNUT CREEK ON ROUTES 680 AND 24 AT WALNUT CREEK OVERCROSSING (BART)

will be received at the Department of Transportation, 1120 N Street, Room 0200, MS #26, Sacramento, CA 95814, until 2 o'clock p.m. on June 14, 2000, at which time they will be publicly opened and read in Room 0100 at the same address.

Proposal forms for this work are included in a separate book entitled:

STATE OF CALIFORNIA; DEPARTMENT OF TRANSPORTATION; PROPOSAL AND CONTRACT FOR CONSTRUCTION ON STATE HIGHWAY IN CONTRA COSTA COUNTY IN WALNUT CREEK ON ROUTES 680 AND 24 AT WALNUT CREEK OVERCROSSING (BART)

General work description: Seismic Retrofitting of existing bridge.

This project has a goal of 3 percent disabled veteran business enterprise (DVBE) participation.

No prebid meeting is scheduled for this project.

The time limit specified for the completion of the work contemplated herein is considered insufficient to permit completion of the work by the Contractor working a normal number of hours per day or week on a single shift basis. Should the Contractor fail to maintain the progress of the work in conformance with the "Progress Schedule" required in these special provisions, additional shifts will be required to the extent necessary to ensure that the progress conforms to the abovementioned schedule and that the work will be completed within the time limit specified.

Bids are required for the entire work described herein.

At the time this contract is awarded, the Contractor shall possess either a Class A license or a Class C-51 license.

The Contractor must also be properly licensed at the time the bid is submitted, except that on a joint venture bid a joint venture license may be obtained by a combination of licenses after bid opening but before award in conformance with Business and Professions Code, Section 7029.1.

This contract is subject to state contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990.

Preference will be granted to bidders properly certified as a "Small Business" as determined by the Department of General Services, Office of Small Business Certification and Resources at the time of bid opening in conformance with the provisions in Section 2-1.05, "Small Business Preference," of the special provisions, and Section 1896 et seq, Title 2, California Code of Regulations. A form for requesting a "Small Business" preference is included with the bid documents. Applications for status as a "Small Business" must be submitted to the Department of General Services, Office of Small Business Certification and Resources, 1531 "I" Street, Second Floor, Sacramento, CA 95814, Telephone No. (916) 322-5060.

A reciprocal preference will be granted to "California company" bidders in conformance with Section 6107 of the Public Contract Code. (See Sections 2 and 3 of the special provisions.) A form for indicating whether bidders are or are not a "California company" is included in the bid documents and is to be filled in and signed by all bidders.

Project plans, special provisions, and proposal forms for bidding this project can only be obtained at the Department of Transportation, Plans and Bid Documents, Room 0200, MS #26, Transportation Building, 1120 N Street, Sacramento, California 95814, FAX No. (916) 654-7028, Telephone No. (916) 654-4490. Use FAX orders to expedite orders for project plans, special provisions and proposal forms. FAX orders must include credit card charge number, card expiration date and authorizing signature. Project plans, special provisions, and proposal forms may be seen at the above Department of Transportation office and at the offices of the District Directors of Transportation at Irvine, Oakland, and the district in which the work is situated. Standard Specifications are available through the State of California, Department of Transportation, Publications Unit, 1900 Royal Oaks Drive, Sacramento, CA 95815, Telephone No. (916) 445-3520.

Cross sections for this project are not available.

The successful bidder shall furnish a payment bond and a performance bond.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in the county, or counties, in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are set forth in the General Prevailing Wage Rates for this project, available at the Labor Compliance Office at the offices of the District Director of Transportation for the district in which the work is situated, and available from the California Department of Industrial Relations' Internet Web Site at: <http://www.dir.ca.gov>. Future effective general prevailing wage rates which have been predetermined and are on file with the Department of Industrial Relations are referenced but not printed in the general prevailing wage rates.

DEPARTMENT OF TRANSPORTATION

Deputy Director Transportation Engineering

Dated May 15, 2000

ASF

COPY OF ENGINEER'S ESTIMATE
(NOT TO BE USED FOR BIDDING PURPOSES)

04-148724

| Item | Item Code | Item | Unit of Measure | Estimated Quantity | Unit Price | Item Total |
|----------|-----------|--------------------------------------|-----------------|--------------------|------------|------------|
| 1 (S) | 120090 | CONSTRUCTION AREA SIGNS | LS | LUMP SUM | LUMP SUM | |
| 2 (S) | 120100 | TRAFFIC CONTROL SYSTEM | LS | LUMP SUM | LUMP SUM | |
| 3 | 120165 | CHANNELIZER (SURFACE MOUNTED) | EA | 140 | | |
| 4 | 121161 | TEMPORARY TERMINAL SECTION (TYPE K) | EA | 2 | | |
| 5 | 129000 | TEMPORARY RAILING (TYPE K) | LF | 2940 | | |
| 6 | 129100 | TEMPORARY CRASH CUSHION MODULE | EA | 70 | | |
| 7 (F) | 550102 | STRUCTURAL STEEL (BRIDGE) | LB | 22 400 | | |
| 8 (S) | 590115 | CLEAN AND PAINT STRUCTURAL STEEL | LS | LUMP SUM | LUMP SUM | |
| 9 (S) | 590135 | SPOT BLAST CLEAN AND PAINT UNDERCOAT | SQFT | 552 | | |
| 10 | 590301 | WORK AREA MONITORING | LS | LUMP SUM | LUMP SUM | |
| 11 | 999990 | MOBILIZATION | LS | LUMP SUM | LUMP SUM | |

**STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

SPECIAL PROVISIONS

Annexed to Contract No. 04-148724

SECTION 1. SPECIFICATIONS AND PLANS

The work embraced herein shall conform to the provisions in the Standard Specifications dated July 1992, and these special provisions.

Amendments to the Standard Specifications set forth in these special provisions shall be considered as part of the Standard Specifications for the purposes set forth in Section 5-1.04, "Coordination and Interpretation of Plans, Standard Specifications and Special Provisions," of the Standard Specifications. Whenever either the term "Standard Specifications is amended" or the term "Standard Specifications are amended" is used in the special provisions, the indented text following said term shall be considered an amendment to the Standard Specifications. In case of conflict between such amendments and the Standard Specifications, the amendments shall take precedence over and be used in lieu of the conflicting portions.

In case of conflict between the Standard Specifications and these special provisions, the special provisions shall take precedence over and be used in lieu of the conflicting portions.

SECTION 2. PROPOSAL REQUIREMENTS AND CONDITIONS

2-1.01 GENERAL

The bidder's attention is directed to the provisions in Section 2, "Proposal Requirements and Conditions," of the Standard Specifications and these special provisions for the requirements and conditions which the bidder must observe in the preparation of the proposal form and the submission of the bid.

In addition to the subcontractors required to be listed in conformance with Section 2-1.054, "Required Listing of Proposed Subcontractors," of the Standard Specifications, each proposal shall have listed therein the name and address of each DVBE subcontractor to be used for credit in meeting the goal, and to whom the bidder proposes to directly subcontract portions of the work. The list of subcontractors shall also set forth the portion of work that will be performed by each subcontractor listed. A sheet for listing the subcontractors is included in the Proposal.

If the Bidder submits cash or a cashier's check or a certified check as the form of bidder's security (See said Section 2-1.07 of the Standard Specifications), the Bidder shall also include with the bid submittal a signed and notarized affidavit from an admitted surety insurer that contract bonds, as required by Section 3-1.02, "Contract Bonds," of the Standard Specifications, will be provided within the time specified elsewhere in these special provisions for executing and returning the contract for approval.

The Bidder's Bond form mentioned in the last paragraph in Section 2-1.07, "Proposal Guaranty," of the Standard Specifications will be found following the signature page of the Proposal.

In conformance with Public Contract Code Section 7106, a Noncollusion Affidavit is included in the Proposal. Signing the Proposal shall also constitute signature of the Noncollusion Affidavit.

If the bidder claims a mistake was made in his bid, the bidder shall give the Department written notice within 48 hours, not including Saturdays, Sundays and legal holidays, after the opening of bids of the alleged mistake, in lieu of the 5 days specified in Section 2-1.095, "Relief of Bidders," in the Standard Specifications. The notice of alleged mistake shall specify in detail how the mistake occurred.

Submit request for substitution of an "or equal" item, and the data substantiating the request to the Department of Transportation, Division Of Construction - Duty Senior, Mail Station: 3 - B, 111 Grand Avenue P. O. Box 23660, Oakland, Ca 94623-0660, so that the request is received by the Department by close of business on the fourth day, not including Saturdays, Sundays and legal holidays, following bid opening.

2-1.02 DISABLED VETERAN BUSINESS ENTERPRISE (DVBE)

Section 10115 of the Public Contract Code requires the Department to implement provisions to establish a goal for Disabled Veterans Business Enterprise (DVBE) in contracts.

It is the policy of the Department that Disabled Veteran Business Enterprise (DVBE) shall have the maximum opportunity to participate in the performance of contracts financed solely with state funds. The Contractor shall ensure that DVBEs have the maximum opportunity to participate in the performance of this contract and shall take all necessary and reasonable steps for this assurance. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts. Failure to carry out the requirements of this paragraph shall constitute a breach of contract and may result in termination of this contract or other remedy the Department may deem appropriate.

Bidder's attention is directed to the following:

- A. "Disabled Veteran Business Enterprise" (DVBE) means a business concern certified as a DVBE by the Office of Small Business Certification and Resources, Department of General Services.
- B. A DVBE may participate as a prime contractor, subcontractor, joint venture partner with a prime or subcontractor, or vendor of material or supplies.
- C. Credit for DVBE prime contractors will be 100 percent.
- D. A DVBE joint venture partner must be responsible for specific contract items of work, or portions thereof. Responsibility means actually performing, managing and supervising the work with its own forces. The DVBE joint venture partner must share in the ownership, control, management responsibilities, risks and profits of the joint venture. The DVBE joint venturer must submit the joint venture agreement with the Caltrans Bidder DVBE Information form required in Section 2-1.04, "Submission of DVBE Information," elsewhere in these special provisions.
- E. A DVBE must perform a commercially useful function, i.e., must be responsible for the execution of a distinct element of the work and must carry out its responsibility by actually performing, managing and supervising the work.
- F. Credit for DVBE vendors of materials or supplies is limited to 60 percent of the amount to be paid to the vendor for the material unless the vendor manufactures or substantially alters the goods.
- G. Credit for trucking by DVBEs will be as follows:
 - 1. One hundred percent of the amount to be paid when a DVBE trucker will perform the trucking with his/her own trucks, tractors and employees.
 - 2. Twenty percent of the amount to be paid to DVBE trucking brokers who do not have a "certified roster."
 - 3. One hundred percent of the amount to be paid to DVBE trucking brokers who have signed agreements that all trucking will be performed by DVBE truckers if credit is toward the DVBE goal, a "certified roster" showing that all trucks are owned by DVBEs, and a signed statement on the "certified roster" that indicates that 100 percent of revenue paid by the broker will be paid to the DVBEs listed on the "certified roster."
 - 4. Twenty percent of the amount to be paid to trucking brokers who are not a DVBE but who have signed agreements with DVBE truckers assuring that at least 20 percent of the trucking will be performed by DVBE truckers if credit is toward the DVBE goal, a "certified roster" showing that at least 20 percent of the number of trucks are owned by DVBE truckers, and a signed statement on the "certified roster" that indicates that at least 20 percent of the revenue paid by the broker will be paid to the DVBEs listed on the "certified roster."

The "certified roster" referred to herein shall conform to the requirements in Section 2-1.04, "Submission Of DVBE Information," elsewhere in these special provisions.

- H. DVBEs and DVBE joint venture partners must be certified DVBEs as determined by the Department of General Services, Office of Small Business Certification and Resources, 1531 "I" Street, Second Floor, Sacramento, CA 95814, on the date bids for the project are opened before credit may be allowed toward the DVBE goal. It is the Contractor's responsibility to verify that DVBEs are certified.
- I. Noncompliance by the Contractor with these requirements constitutes a breach of this contract and may result in termination of the contract or other appropriate remedy for a breach of this contract.

2-1.03 DVBE GOAL FOR THIS PROJECT

The Department has established the following goal for Disabled Veteran Business Enterprise (DVBE) participation for this project:

Disabled Veteran Business Enterprise (DVBE): 3 percent.

It is the bidder's responsibility to make a sufficient portion of the work available to subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DVBE subcontractors and suppliers, so as to assure meeting the goal for DVBE participation.

The Office of Small Business Certification and Resources, Department of General Services, may be contacted at (916) 322-5060 or visit their internet web site at <http://www.osmb.dgs.ca.gov/> for program information and certification status. The Department's Business Enterprise Program may also be contacted at (916) 227-9599 or the internet web site at <http://www.dot.ca.gov/hq/bep/>.

2-1.04 SUBMISSION OF DVBE INFORMATION

The required DVBE information shall be submitted WITH THE BID on the following "CALTRANS BIDDER - DVBE - INFORMATION" and "TELEPHONE LOG AND LIST OF REJECTED DVBEs."

It is the bidder's responsibility to meet the goal for DVBE participation or to establish that, prior to bidding, the bidder made good faith efforts to do so based on the information in the "CALTRANS BIDDER - DVBE - INFORMATION" and "TELEPHONE LOG AND LIST OF REJECTED DVBEs."

The information to show that the DVBE goal will be met on the "CALTRANS BIDDER - DVBE - INFORMATION" form shall include the names of DVBEs and DVBE joint venture partners to be used, with a complete description of work or supplies to be provided by each and the dollar value of each such DVBE transaction. When 100 percent of a contract item of work is not to be performed or furnished by a DVBE, a description of the exact portion of said work to be performed or furnished by that DVBE shall be included in the DVBE information, including the planned location of said work. DVBE prime contractors shall enter their Office of Small Business Certification and Resources (OSBCR) - DVBE reference number and/or DBA name, as listed with OSBCR, on the line provided. (Note: DVBE subcontractors to whom the bidder proposes to directly subcontract portions of the work are to be named in the bid. - See Section 2-1.054, "Required Listing of Proposed Subcontractors," of the Standard Specifications and Section 2-1.01, "General," of these special provisions, regarding listing of proposed subcontractors.)

If credit for trucking by a DVBE trucking broker is shown on the bidder's information as 100 percent of the revenue to be paid by the broker is to be paid to DVBE truckers, a "certified roster" of the broker's trucks to be used must be included with the bid. The "certified roster" must indicate that all the trucks are owned by certified DVBEs and must show the DVBE truck numbers, owner's name, Public Utilities Commission Cal-T numbers, and the DVBE certification numbers. The roster must indicate that all revenue paid by the broker will be paid to DVBEs listed on the "certified roster".

If credit for trucking by a trucking broker who is not a DVBE is shown in the bidder's information, a "certified roster" of the broker's trucks to be used must be included with the bid. The "certified roster" must indicate that at least 20 percent of the broker's trucks are owned by DVBEs and must show the DVBE truck numbers, owner's name, Public Utilities Commission Cal-T numbers, and the DVBE certification numbers. The roster must indicate that at least 20 percent of the revenue paid by the broker will be paid to DVBEs listed on the "certified roster".

Information necessary to establish the bidder's good faith efforts to meet the DVBE goals shall be included in the "TELEPHONE LOG AND LIST OF REJECTED DVBEs" form located in the Proposal and shall include:

- A. The names, dates and times of notices of all certified DVBEs solicited by telephone for this project and the dates, times and methods used for following up initial solicitations to determine with certainty whether the DVBEs were interested.
- B. The names of DVBEs who submitted bids which were not accepted and the reason for rejection of the DVBEs bid.

Bidders are cautioned that even though their submittal indicates they will meet the stated DVBE goal, their submittal should also include the telephone log and rejected DVBE information to protect their eligibility for award of the contract in the event the Department, in its review, finds that the goal has not been met.

It is the bidders responsibility to be available, by phone, both the day of and the day after the bid opening to answer questions and provide good faith effort clarification. The bidder shall also assure that listed DVBEs are available, by phone, on both days.

If it is found that the goal has not been met, the Department will review the information submitted with the bid to determine the bidder's good faith effort. In the event that the Department determines that a bidder has not made a good faith effort based on the information submitted with the bid and its independent investigation, the Department's decision will be final.

2-1.05 SMALL BUSINESS PREFERENCE

Attention is directed to "Award and Execution of Contract" of these special provisions.

Attention is also directed to the Small Business Procurement and Contract Act, Government Code Section 14835, et seq and Title 2, California Code of Regulations, Section 1896, et seq.

Bidders who wish to be classified as a Small Business under the provisions of those laws and regulations, shall be certified as Small Business by the Department of General Services, Office of Small Business Certification and Resources, 1531 "I" Street, Second Floor, Sacramento, CA 95814.

To request Small Business Preference, bidders shall fill out and sign the Request for Small Business Preference form in the Proposal and shall attach a copy of their Office of Small Business Certification and Resources (OSBCR) small business certification letter to the form. The bidder's signature on the Request for Small Business Preference certifies, under penalty of perjury, that the bidder is certified as Small Business at the time of bid opening and further certifies, under penalty of perjury, that under the following conditions, at least 50 percent of the subcontractors to be utilized on the project are either certified Small Business or have applied for Small Business certification by bid opening date and are subsequently granted Small Business certification.

The conditions requiring the aforementioned 50 percent level of subcontracting by Small Business subcontractors apply if:

- A. The lowest responsible bid for the project exceeds \$100,000; and
- B. The project work to be performed requires a Class A or a Class B contractor's license; and
- C. Two or more subcontractors will be used.

If the above conditions apply and Small Business Preference is granted in the award of the contract, the 50 percent Small Business subcontractor utilization level shall be maintained throughout the life of the contract.

2-1.06 CALIFORNIA COMPANY PREFERENCE

Attention is directed to "Award and Execution of Contract" of these special provisions.

In conformance with the requirements of Section 6107 of the Public Contract Code, a "California company" will be granted a reciprocal preference for bid comparison purposes as against a nonresident contractor from any state that gives or requires a preference to be given contractors from that state on its public entity construction contracts.

A "California company" means a sole proprietorship, partnership, joint venture, corporation, or other business entity that was a licensed California contractor on the date when bids for the public contract were opened and meets one of the following:

- A. Has its principal place of business in California.
- B. Has its principal place of business in a state in which there is no local contractor preference on construction contracts.
- C. Has its principal place of business in a state in which there is a local contractor construction preference and the contractor has paid not less than \$5000 in sales or use taxes to California for construction related activity for each of the five years immediately preceding the submission of the bid.

To carry out the "California company" reciprocal preference requirements of Section 6107 of the Public Contract Code, all bidders shall fill out and sign the California Company Preference form in the Proposal. The bidder's signature on the California Company Preference form certifies, under penalty of perjury, that the bidder is or is not a "California company" and if not, the amount of the preference applied by the state of the nonresident Contractor.

A nonresident Contractor shall disclose any and all bid preferences provided to the nonresident Contractor by the state or country in which the nonresident Contractor has its principal place of business.

Proposals without the California Company Preference form filled out and signed may be rejected.

SECTION 3. AWARD AND EXECUTION OF CONTRACT

The bidder's attention is directed to the provisions in Section 3, "Award and Execution of Contract," of the Standard Specifications and these special provisions for the requirements and conditions concerning award and execution of contract.

The award of contract, if it be awarded, will be to the lowest responsible bidder whose proposal complies with all the requirements prescribed and who has met the goal for DVBE participation or has demonstrated, to the satisfaction of the Department, adequate good faith efforts to do so. Meeting the goal for DVBE participation or demonstrating, to the satisfaction of the Department, adequate good faith efforts to do so is a condition for being eligible for award of contract.

It is anticipated that this contract will be awarded within 10 days after the bid opening.

The contract shall be signed by the successful bidder and shall be received with contract bonds by the Department within 4 days, including Saturdays, Sundays and legal holidays, after the bidder has received notice that the contract has been awarded. Failure to do so shall be just cause for forfeiture of the proposal guaranty. The executed contract documents shall be delivered to the following address: Department of Transportation, P.O. Box 942874, Sacramento, CA 94274-0001, Attn: Office Engineer (MS 43)- Contracts.

Within 2 days, not including Saturdays, Sundays and legal holidays, of return of the executed contract and bonds, the Department will notify the successful bidder of either approval of the contract by the Attorney General or the attorney appointed and authorized to represent the Department of Transportation, or disapproval of the submittal. Should the Department fail to provide notification within said 2 days, 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.

A "Payee Data Record" form will be included in the contract documents to be executed by the successful bidder. The purpose of the form is to facilitate the collection of taxpayer identification data. The form shall be completed and returned to the Department by the successful bidder with the executed contract and contract bonds. For the purposes of the form, vendor shall be deemed to mean the successful bidder. The form is not to be completed for subcontractors or suppliers. Failure to complete and return the "Payee Data Record" form to the Department as provided herein will result in the retention of 20 percent of payments due the contractor and penalties of up to \$20,000. This retention of payments for failure to complete the "Payee Data Record" form is in addition to any other retention of payments due the Contractor.

Attention is also directed to "Small Business Preference" of these special provisions. Any bidder who is certified as a Small Business by the Department of General Services, Office of Small Business Certification and Resources will be allowed a preference in the award of this contract, if it be awarded, under the following conditions:

- A. The apparent low bidder is not certified as a Small Business, or has not filled out and signed the Request for Small Business Preference included with the bid documents and attached a copy of their Office of Small Business Certification and Resources (OSBCR) small business certification letter to the form; and
- B. The bidder filled out and signed the Request for Small Business Preference form included with the bid documents and attached a copy of their Office of Small Business Certification and Resources (OSBCR) small business certification letter to the form.

The small business preference will be a reduction in the bid submitted by the small business contractor, for bid comparison purposes, by an amount equal to 5 percent of the amount bid by the apparent low bidder, the amount not to exceed \$50,000. If this reduction results in the small business contractor becoming the low bidder, then the contract will be awarded to the small business contractor on the basis of the actual bid of the small business contractor notwithstanding the reduced bid price used for bid comparison purposes.

Attention is also directed to "California Company Preference" of these special provisions.

The amount of the California company reciprocal preference shall be equal to the amount of the preference applied by the state of the nonresident contractor with the lowest responsive bid, except where the "California company" is eligible for a California Small Business Preference, in which case the preference applied shall be the greater of the two, but not both.

If the bidder submitting the lowest responsive bid is not a "California company" and with the benefit of the reciprocal preference, a "California company's" responsive bid is equal to or less than the original lowest responsive bid, the "California company" will be awarded the contract at its submitted bid price except as provided below.

Small business bidders shall have precedence over nonsmall business bidders in that the application of the "California company" preference for which nonsmall business bidders may be eligible shall not result in the denial of the award to a small business bidder.

SECTION 4. BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES

Attention is directed to the provisions in Section 8-1.03, "Beginning of Work," in Section 8-1.06, "Time of Completion," and in Section 8-1.07, "Liquidated Damages," of the Standard Specifications and these special provisions.

The Contractor shall begin work within 5 calendar days after the contract has been approved by the Attorney General or the attorney appointed and authorized to represent the Department of Transportation.

This work shall be diligently prosecuted to completion before the expiration of **180 WORKING DAYS** beginning at 12:01 a.m. on the **FIRST WORKING DAY AFTER CONTRACT AWARD**.

The Contractor shall pay to the State of California the sum of \$250 per day, for each and every calendar day's delay in finishing the work in excess of the number of working days prescribed above.

The 72 hours advance notice before beginning work as referred to in said Section 8-1.03 is changed to 24 hours advance notice for this project.

A working day as defined in said Section 8-1.06 is re-defined for this project. Subparagraph (a) of the second paragraph in said Section 8-1.06 shall not apply. Saturdays and Sundays, except legal holidays and days of inclement weather, will be counted as working days.

The time limit specified for the completion of the work contemplated herein is considered insufficient to permit completion of the work by the Contractor working a normal number of hours per day or week on a single shift basis. Should the Contractor fail to maintain the progress of the work in conformance with the "Progress Schedule" required in these special provisions, additional shifts will be required to the extent necessary to ensure that the progress conforms to the abovementioned schedule and that the work will be completed within the time limit specified.

Full compensation for any additional costs occasioned by compliance with the provisions in this section shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

SECTION 5. GENERAL

SECTION 5-1. MISCELLANEOUS

5-1.00 PLANS AND WORKING DRAWINGS

When the specifications require working drawings to be submitted to the Division of Structure Design, the drawings shall be submitted to: Division of Structure Design, Documents Unit, Mail Station 9, 1801 30th Street, Sacramento, CA 95816, Telephone (916) 227-8252.

5-1.002 LABORATORY

When a reference is made in the specifications to the "Laboratory," the reference shall mean the Division of Materials Engineering and Testing Services and the Division of Structural Foundations of the Department of Transportation, or established laboratories of the various Districts of the Department, or other laboratories authorized by the Department to test materials and work involved in the contract. When a reference is made in the specifications to the "Transportation Laboratory," the reference shall mean the Division of Materials Engineering and Testing Services and the Division of Structural Foundations, located at 5900 Folsom Boulevard, Sacramento, CA 95819, Telephone (916) 227-7000.

5-1.005 CONTRACT BONDS

Attention is directed to Section 3-1.02, "Contract Bonds," of the Standard Specifications and these special provisions. The payment bond shall be in a sum not less than the following:

1. One hundred percent of the total amount payable by the terms of the contract when the total amount payable does not equal or exceed five million dollars (\$5,000,000).
2. Fifty percent of the total amount payable by the terms of the contract when the total amount payable is not less than five million dollars (\$5,000,000) and does not exceed ten million dollars (\$10,000,000).
3. Twenty-five percent of the total amount payable by the terms of the contract when the total amount payable exceeds ten million dollars (\$10,000,000).

5-1.01 LABOR NONDISCRIMINATION

Attention is directed to the following Notice that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

NOTICE OF REQUIREMENT FOR NONDISCRIMINATION PROGRAM (GOV. CODE, SECTION 12990)

Your attention is called to the "Nondiscrimination Clause", set forth in Section 7-1.01A(4), "Labor Nondiscrimination," of the Standard Specifications, which is applicable to all nonexempt state contracts and subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth therein. The Specifications are applicable to all nonexempt state construction contracts and subcontracts of \$5,000 or more.

5-1.02 LABOR CODE REQUIREMENTS

Section 7-1.01A(1), "Hours of Labor," of the Standard Specifications is amended to read:

7-1.01A(1) Hours of Labor.— Eight hours labor constitutes a legal day's work. The Contractor or any subcontractor under the Contractor shall forfeit, as a penalty to the State of California, \$25 for each worker employed in the execution of the contract by the respective Contractor or subcontractor for each calendar day during which that worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of the Labor Code, and in particular, Section 1810 to Section 1815, thereof, inclusive, except that work performed by employees of Contractors in excess of 8 hours per day, and 40 hours during any one week, shall be permitted upon compensation for all hours worked in excess of 8 hours per day at not less than one and one-half times the basic rate of pay, as provided in Section 1815 thereof.

Section 7-1.01A(2), "Prevailing Wage," of the Standard Specifications is amended to read:

7-1.01A(2) Prevailing Wage.— The Contractor and any subcontractor under the Contractor shall comply with Labor Code Sections 1774 and 1775. Pursuant to Section 1775, the Contractor and any subcontractor under the Contractor shall forfeit to the State or political subdivision on whose behalf the contract is made or awarded a penalty of not more than fifty dollars (\$50) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the Director of Industrial Relations for the work or craft in which the worker is employed for any public work done under the contract by the Contractor or by any subcontractor under the Contractor in violation of the provisions of the Labor Code and in particular, Labor Code Sections 1770 to 1780, inclusive. The amount of this forfeiture shall be determined by the Labor Commissioner and shall be based on consideration of the mistake, inadvertence, or neglect of the Contractor or subcontractor in failing to pay the correct rate of prevailing wages, or the previous record of the Contractor or subcontractor in meeting their respective prevailing wage obligations, or the willful failure by the Contractor or subcontractor to pay the correct rates of prevailing wages. A mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages is not excusable if the Contractor or subcontractor had knowledge of the obligations under the Labor Code. In addition to the penalty and pursuant to Labor Code Section 1775, the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor or subcontractor. If a worker employed by a subcontractor on a public works project is not paid the general prevailing per diem wages by the subcontractor, the prime contractor of the project is not liable for the penalties described above unless the prime contractor had knowledge of that failure of the subcontractor to pay the specified prevailing rate of wages to those workers or unless the prime contractor fails to comply with all of the following requirements:

1. The contract executed between the contractor and the subcontractor for the performance of work on the public works project shall include a copy of the provisions of Sections 1771, 1775, 1776, 1777.5, 1813, and 1815 of the Labor Code.
2. The contractor shall monitor the payment of the specified general prevailing rate of per diem wages by the subcontractor to the employees, by periodic review of the certified payroll records of the subcontractor.
3. Upon becoming aware of the subcontractor's failure to pay the specified prevailing rate of wages to the subcontractor's workers, the contractor shall diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the subcontractor for work performed on the public works project.
4. Prior to making final payment to the subcontractor for work performed on the public works project, the contractor shall obtain an affidavit signed under penalty of perjury from the subcontractor that the subcontractor has paid the specified general prevailing rate of per diem wages to the subcontractor's employees on the public works project and any amounts due pursuant to Section 1813 of the Labor Code.

Pursuant to Section 1775 of the Labor Code, the Division of Labor Standards Enforcement shall notify the Contractor on a public works project within 15 days of the receipt by the Division of Labor Standards Enforcement of a complaint of the failure of a subcontractor on that public works project to pay workers the general prevailing rate of per diem wages. If the Division of Labor Standards Enforcement determines that employees of a subcontractor were not paid the general prevailing rate of per diem wages and if the Department did not retain sufficient money under the contract to pay those employees the balance of wages owed under the general prevailing rate of per diem wages, the contractor shall withhold an amount of moneys due the subcontractor sufficient to pay those employees the general prevailing rate of per diem wages if requested by the Division of Labor Standards Enforcement. The Contractor shall pay any money retained from and owed to a subcontractor upon receipt of notification by the Division of Labor

Standards Enforcement that the wage complaint has been resolved. If notice of the resolution of the wage complaint has not been received by the Contractor within 180 days of the filing of a valid notice of completion or acceptance of the public works project, whichever occurs later, the Contractor shall pay all moneys retained from the subcontractor to the Department. These moneys shall be retained by the Department pending the final decision of an enforcement action.

Pursuant to the provisions of Section 1773 of the Labor Code, the Department has obtained the general prevailing rate of wages (which rate includes employer payments for health and welfare, pension, vacation, travel time, and subsistence pay as provided for in Section 1773.8 of the Labor Code, apprenticeship or other training programs authorized by Section 3093 of the Labor Code, and similar purposes) applicable to the work to be done, for straight time, overtime, Saturday, Sunday and holiday work. The holiday wage rate listed shall be applicable to all holidays recognized in the collective bargaining agreement of the particular craft, classification or type of workmen concerned. The general prevailing wage rates and any applicable changes to these wage rates are available at the Labor Compliance Office at the offices of the District Director of Transportation for the district in which the work is situated. For work situated in District 9, the wage rates are available at the Labor Compliance Office at the offices of the District Director of Transportation for District 6, located at Fresno. General prevailing wage rates are also available from the California Department of Industrial Relations' Internet Web Site at: <http://www.dir.ca.gov>.

The wage rates determined by the Director of Industrial Relations for the project refer to expiration dates. Prevailing wage determinations with a single asterisk after the expiration date are in effect on the date of advertisement for bids and are good for the life of the contract. Prevailing wage determinations with double asterisks after the expiration date indicate that the wage rate to be paid for work performed after this date has been determined. If work is to extend past this date, the new rate shall be paid and incorporated in the contract. The Contractor shall contact the Department of Industrial Relations as indicated in the wage rate determinations to obtain predetermined wage changes.

Pursuant to Section 1773.2 of the Labor Code, general prevailing wage rates shall be posted by the Contractor at a prominent place at the site of the work.

Changes in general prevailing wage determinations which conform to Labor Code Section 1773.6 and Title 8 California Code of Regulations Section 16204 shall apply to the project when issued by the Director of Industrial Relations at least 10 days prior to the date of the Notice to Contractors for the project.

The State will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining the bid, and will not under any circumstances be considered as the basis of a claim against the State on the contract.

7-1.01A(2)(a) Travel and Subsistence Payments.— Attention is directed to the requirements of Section 1773.8 of the Labor Code. The Contractor shall make travel and subsistence payments to each workman, needed to execute the work, in accordance with the requirements in Labor Code Section 1773.8.

The first and second paragraphs of Section 7-1.01A(3), "Payroll Records," of the Standard Specifications are amended to read:

7-1.01A(3) Payroll Records.— Attention is directed to the provisions of Labor Code Section 1776, a portion of which is quoted below. Regulations implementing Labor Code Section 1776 are located in Sections 16016 through 16019 and Sections 16207.10 through 16207.19 of Title 8, California Code of Regulations.

"1776. (a) Each contractor and subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:

- (1) The information contained in the payroll record is true and correct.
- (2) The employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by his or her employees on the public works project.

"(b) The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the contractor on the following basis:

- (1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.
- (2) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the body awarding the contract, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.

(3) A certified copy of all payroll records enumerated in subdivision (a) shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through either the body awarding the contract, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the contractor, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the contractor.

"(c) The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the division.

"(d) A contractor or subcontractor shall file a certified copy of the records enumerated in subdivision (a) with the entity that requested the records within 10 days after receipt of a written request.

"(e) Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated in a manner so as to prevent disclosure of an individual's name, address, and social security number. The name and address of the contractor awarded the contract or the subcontractor performing the contract shall not be marked or obliterated.

"(f) The contractor shall inform the body awarding the contract of the location of the records enumerated under subdivision (a), including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.

"(g) The contractor or subcontractor shall have 10 days in which to comply subsequent to receipt of a written notice requesting the records enumerated in subdivision (a). In the event that the contractor or subcontractor fails to comply within the 10-day period, he or she shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit twenty-five dollars (\$25) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. A contractor is not subject to a penalty assessment pursuant to this section due to the failure of a subcontractor to comply with this section."

The penalties specified in subdivision (g) of Labor Code Section 1776 for noncompliance with the provisions of Section 1776 may be deducted from any moneys due or which may become due to the Contractor.

5-1.03 CONTRACTOR'S LICENSING LAWS

The third paragraph of Section 7-1.01C, "Contractor's Licensing Laws," of the Standard Specifications is amended to read:

Attention is also directed to the requirements in Public Contract Code Section 10164. In all projects where Federal funds are involved, the Contractor shall be properly licensed at the time the contract is awarded.

5-1.035 INDEMNIFICATION AND INSURANCE

Section 7-1.12, "Responsibility for Damage," of the Standard Specifications is deleted.

The Standard Specifications is amended by adding the following Section 7-1.121, "Indemnification," and Section 7-1.122, "Insurance," before Section 7-1.125, "Legal Action Against the Department."

7-1.121 Indemnification.—With the exception that this section shall in no event be construed to require indemnification by the Contractor to a greater extent than permitted by law, the Contractor shall defend, indemnify and save harmless the State, including its officers, directors, agents (excluding agents who are design professionals), and employees, and each of them (Indemnitees), from any and all claims, demands, causes of action, damages, costs, expenses, actual attorneys' fees, losses or liabilities, in law or in equity, of every kind and nature whatsoever (Claims), arising out of or in connection with the Contractor's performance of this contract for:

- A. Bodily injury including, but not limited to, bodily injury, sickness or disease, emotional injury or death to persons, including, but not limited to, the public, any employees or agents of the Contractor, State, Department, or any other contractor and;

B. Damage to property of anyone including loss of use thereof;

caused or alleged to be caused in whole or in part by any negligent or otherwise legally actionable act or omission of the Contractor or anyone directly or indirectly employed by the Contractor or anyone for whose acts the Contractor may be liable.

Except as otherwise provided by law, the indemnification provisions above shall apply regardless of the existence or degree of fault of Indemnitees. The Contractor, however, shall not be obligated to indemnify Indemnitees for Claims arising from conduct delineated in Civil Code section 2782. Further, the Contractor's indemnity obligation shall not extend to Claims to the extent they arise from any defective or substandard condition of the roadway which existed at or prior to the time the Contractor commenced work, unless this condition has been changed by the work or the scope of the work requires the Contractor to maintain existing Roadway facilities and the claim arises from the Contractor's failure to maintain. The Contractor's indemnity obligation shall extend to Claims arising after the work is completed and accepted only if these Claims are directly related to alleged acts or omissions of the Contractor which occurred during the course of the work. No inspection by the Department, its employees or agents shall be deemed a waiver by the Department of full compliance with the requirements of this section.

The Contractor's obligation to defend and indemnify shall not be excused because of the Contractor's inability to evaluate liability or because the Contractor evaluates liability and determines that the Contractor is not liable to the claimant. The Contractor will respond within 30 days to the tender of any claim for defense and indemnity by the State, unless this time has been extended by the State. If the Contractor fails to accept or reject a tender of defense and indemnity within 30 days, in addition to any other remedy authorized by law, so much of the money due the Contractor under and by virtue of the contract as shall reasonably be considered necessary by the Department, may be retained by the State until disposition has been made of the claim or suit for damages, or until the Contractor accepts or rejects the tender of defense, whichever occurs first.

With respect to third party claims against the Contractor, the Contractor waives any and all rights of any type to express or implied indemnity against the State, its directors, officers, employees, or agents (excluding agents who are design professionals).

7-1.122 Insurance.—Insurance shall conform to the following requirements:

7-1.122A Casualty Insurance.—The Contractor shall, at the Contractor's expense, procure and maintain insurance on all of its operations with companies acceptable to the Department as follows. All insurance shall be kept in full force and effect from the beginning of the work through final acceptance by the State. In addition, the Contractor shall maintain completed operations coverage with a carrier acceptable to the Department through the expiration of the patent deficiency in construction statute of repose set forth in Section 337.1 of the Code of Civil Procedure.

7-1.122A(1) Workers' Compensation and Employer's Liability Insurance.—Workers' Compensation insurance shall be provided as specified in Section 7-1.01A(6), "Workers' Compensation." Employer's Liability Insurance shall be provided in amounts not less than:

- (a) \$1,000,000 for each accident for bodily injury by accident.
- (b) \$1,000,000 policy limit for bodily injury by disease.
- (c) \$1,000,000 for each employee for bodily injury by disease.

If there is an exposure of injury to the Contractors' employees under the U.S. Longshoremen's and Harbor Workers' Compensation Act, the Jones Act or under laws, regulations or statutes applicable to maritime employees, coverage shall be included for such injuries or claims.

7-1.122A(2) Liability Insurance.—The Contractor shall carry General Liability and Umbrella or Excess Liability Insurance covering all operations by or on behalf of the Contractor providing insurance for bodily injury liability, and property damage liability for the limits of liability indicated below and including coverage for:

- (a) premises, operations and mobile equipment
- (b) products and completed operations
- (c) broad form property damage (including completed operations)

- (d) explosion, collapse and underground hazards
- (e) personal injury
- (f) contractual liability

7-1.122A(3) Liability Limits/Additional Insureds.—The limits of liability shall be at least:

- (a) \$1,000,000 for each occurrence (combined single limit for bodily injury and property damage).
- (b) \$2,000,000 aggregate for products-completed operations.
- (c) \$2,000,000 general aggregate. This general aggregate limit shall apply separately to the Contractor's work under this Agreement.
- (d) \$5,000,000 umbrella or excess liability. For projects over \$25,000,000 only, an additional \$10,000,000 umbrella or excess liability (for a total of \$15,000,000). Umbrella or excess policy shall include products liability completed operations coverage and may be subject to \$5,000,000 or \$15,000,000 aggregate limits. Further, the umbrella or excess policy shall contain a clause stating that it takes effect (drops down) in the event the primary limits are impaired or exhausted.

The State and the Department, including their officers, directors, agents (excluding agents who are design professionals), and State employees, shall be named as additional insureds under the General Liability and Umbrella Liability Policies with respect to liability arising out of or connected with work or operations performed by or on behalf of the Contractor under this contract. Coverage for such additional insureds shall not extend to liability:

- (1) arising from any defective or substandard condition of the Roadway which existed at or prior to the time the Contractor commenced work, unless such condition has been changed by the work or the scope of the work requires the Contractor to maintain existing Roadway facilities and the claim arises from the Contractor's failure to maintain; or
- (2) for claims occurring after the work is completed and accepted unless these claims are directly related to alleged acts or omissions of the Contractor which occurred during the course of the work; or
- (3) to the extent prohibited by Section 11580.04 of the Insurance Code.

The policy shall stipulate that the insurance afforded the additional insureds shall apply as primary insurance. Any other insurance or self insurance maintained by the Department or State will be excess only and shall not be called upon to contribute with this insurance. Such additional insured coverage shall be provided by a policy provision or by an endorsement providing coverage at least as broad as Additional Insured (Form B) endorsement form CG 2010, as published by the Insurance Services Office (ISO).

7-1.122B Automobile Liability Insurance.—The Contractor shall carry automobile liability insurance, including coverage for all owned, hired and non-owned automobiles. The primary limits of liability shall be not less than \$1,000,000 combined single limit each accident for bodily injury and property damage. The umbrella or excess liability coverage required under Section 7-1.122A(3), "Liability Limits/Additional Insureds," shall also apply to automobile liability.

7-1.122C Policy Forms, Endorsements and Certificates.—The Contractor's General Liability Insurance shall be provided under Commercial General Liability policy form no. CG0001 as published by the Insurance Services Office (ISO) or under a policy form at least as broad as policy form no. CG0001.

Evidence of insurance in a form acceptable to the Department, including the required "additional insured" endorsements, shall be furnished by the Contractor to the Department at or prior to the pre-construction conference. The evidence of insurance shall provide that there will be no cancellation, lapse, or reduction of coverage without thirty (30) days' prior written notice to the Department. Certificates of Insurance, as evidence of required insurance, for the General Liability, Auto Liability and Umbrella-Excess Liability policies shall set forth deductible amounts applicable to each policy and all exclusions which are added by endorsement to each policy. The Department may expressly allow deductible clauses, which it does not consider excessive, overly broad, or harmful to the interests of the State. Standard ISO form CG 0001 or similar exclusions will be allowed provided they are not inconsistent with the requirements of this section. Allowance of any additional exclusions is at the discretion of the Department. Regardless of the allowance of exclusions or deductions by the Department, the Contractor shall be responsible for any deductible amount and shall warrant that the coverage provided to the Department is consistent with the requirements of this section.

7-1.122D Enforcement.—The Department may take any steps as are necessary to assure Contractor's compliance with its obligations. Should any insurance policy lapse or be canceled during the contract period the Contractor shall, within thirty (30) days prior to the effective expiration or cancellation date, furnish the Department with evidence of renewal or replacement of the policy. Failure to continuously maintain insurance coverage as herein provided is a material breach of contract. In the event the Contractor fails to maintain any insurance coverage required, the Department may, but is not required to, maintain this coverage and charge the expense to the Contractor or terminate this Agreement. The required insurance shall be subject to the approval of Department, but any acceptance of insurance certificates by the Department shall in no way limit or relieve the Contractor of the Contractor's duties and responsibilities under the Contract to indemnify, defend and hold harmless the State, its officers, agents, and employees. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the Contractor for liability in excess of such coverage, nor shall it preclude the State from taking other actions as is available to it under any other provision of the contract or law. Failure of the Department to enforce in a timely manner any of the provisions of this section shall not act as a waiver to enforcement of any of these provisions at a later date.

7-1.122E Self-Insurance.—Self-insurance programs and self-insured retentions in insurance policies are subject to separate annual review and approval by the State of evidence of the Contractor's financial capacity to respond. Additionally, self-insurance programs or retentions must provide the State with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance.

7-1.122F Miscellaneous.—Nothing contained in the Contract is intended to make the public or any member thereof a third party beneficiary of the Insurance or Indemnity provisions of these Standard Specifications, nor is any term, condition or other provision of the Contract intended to establish a standard of care owed to the public or any member thereof.

5-1.04 ARBITRATION

The last paragraph in Section 9-1.10, "Arbitration," of the Standard Specifications is amended to read:

Arbitration shall be initiated by a Complaint in Arbitration made in compliance with the requirements of those regulations. A Complaint in Arbitration by the Contractor shall be made not later than 90 days after the date of service in person or by mail on the Contractor of the final written decision by the Department on the claim.

5-1.05 NOTICE OF POTENTIAL CLAIM

Section 9-1.04, "Notice of Potential Claim," of the Standard Specifications is amended to read:

9-1.04 Notice of Potential Claim.—The Contractor shall not be entitled to the payment of any additional compensation for any act, or failure to act, by the Engineer, including failure or refusal to issue a change order, or for the happening of any event, thing, occurrence, or other cause, unless he shall have given the Engineer due written notice of potential claim as hereinafter specified. Compliance with this Section 9-1.04 shall not be a prerequisite as to matters within the scope of the protest provisions in Section 4-1.03, "Changes," or Section 8-1.06, "Time of Completion," or the notice provisions in Section 5-1.116, "Differing Site Conditions," or Section 8-1.07, "Liquidated Damages," or Section 8-1.10, "Utility and Non-Highway Facilities," nor to any claim which is based on differences in measurements or errors of computation as to contract quantities.

The written notice of potential claim shall be submitted to the Engineer prior to the time that the Contractor performs the work giving rise to the potential claim for additional compensation, if based on an act or failure to act by the Engineer, or in all other cases within 15 days after the happening of the event, thing, occurrence, or other cause, giving rise to the potential claim.

The written notice of potential claim shall be submitted on Form CEM-6201 furnished by the Department and shall be certified with reference to the California False Claims Act, Government Code Sections 12650 - 12655. The notice shall set forth the reasons for which the Contractor believes additional compensation will or may be due and the nature of the costs involved. Unless the amount of the potential claim has been stated in the written notice, the Contractor shall, within 15 days of submitting said notice, furnish an estimate of the cost of the affected work and impacts, if any, on project completion. Said estimate of costs may be changed or updated by the Contractor when conditions have changed. When the affected work is completed, the Contractor shall submit substantiation of his actual costs. Failure to do so shall be sufficient cause for denial of any claim subsequently filed on the basis of said notice of potential claim.

It is the intention of this Section 9-1.04 that differences between the parties arising under and by virtue of the contract be brought to the attention of the Engineer at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. The Contractor hereby agrees that he shall have no right to additional compensation for any claim that may be based on any such act, failure to act, event, thing or occurrence for which no written notice of potential claim as herein required was filed.

Should the Contractor, in connection with or subsequent to the assertion of a potential claim, request inspection and copying of documents or records in the possession of the Department that pertain to the potential claim, Contractor shall make its records of the project, as deemed by the Department to be pertinent to the potential claim, available to the Department for inspection and copying.

5-1.06 PARTIAL PAYMENTS

The last paragraph of Section 9-1.06, "Partial Payments," of the Standard Specifications is amended to read:

Attention is directed to the prohibitions and penalties pertaining to unlicensed contractors as provided in Business and Professions Code Sections 7028.15(a) and 7031.

5-1.07 PAYMENT OF WITHHELD FUNDS

Section 9-1.065, "Payment of Withheld Funds," of the Standard Specifications, is amended by adding the following after the third paragraph:

Alternatively, and subject to the approval of the Department, the payment of retentions earned may be deposited directly with a person licensed under Division 6 (commencing with Section 17000) of the Financial Code as the escrow agent. Upon written request of an escrow agent that has not been approved by the Department under subdivision (c) of Section 10263 of the Public Contract Code, the Department will provide written notice to that escrow agent within 10 business days of receipt of the request indicating the reason or reasons for not approving that escrow agent. The payments will be deposited in a trust account with a Federally chartered bank or savings association within 24 hours of receipt by the escrow agent. The Contractor shall not place any retentions with the escrow agent in excess of the coverage provided to that escrow agent pursuant to subdivision (b) of Section 17314 of the Financial Code. In all respects not inconsistent with subdivision (c) of Section 10263 of the Public Contract Code, the remaining provisions of Section 10263 of the Public Contract Code shall apply to escrow agents acting pursuant to subdivision (c) of Section 10263 of the Public Contract Code.

5-1.08 FINAL PAYMENT AND CLAIMS

Section 9-1.07B, "Final Payment and Claims," of the Standard Specifications is amended to read:

9-1.07B Final Payment and Claims.--After acceptance by the Director, the Engineer will make a proposed final estimate in writing of the total amount payable to the Contractor, including therein an itemization of said amount, segregated as to contract item quantities, extra work and any other basis for payment, and shall also show therein all deductions made or to be made for prior payments and amounts to be kept or retained under the provisions of the contract. All prior estimates and payments shall be subject to correction in the proposed final estimate. The Contractor shall submit written approval of the proposed final estimate or a written statement of all claims arising under or by virtue of the contract so that the Engineer receives such written approval or statement of claims no later than close of business of the thirtieth day after receiving the proposed final estimate. If the thirtieth day falls on a Saturday, Sunday or legal holiday, then receipt of such written approval or statement of claims by the Engineer shall not be later than close of business of the next business day. No claim will be considered that was not included in the written statement of claims, nor will any claim be allowed as to which a notice or protest is required under the provisions in Sections 4-1.03, "Changes," 8-1.06, "Time of Completion," 8-1.07, "Liquidated Damages," 5-1.116, "Differing Site Conditions," 8-1.10, "Utility and Non-Highway Facilities," and 9-1.04, "Notice of Potential Claim," unless the Contractor has complied with the notice or protest requirements in said sections.

On the Contractor's approval, or if he files no claim within said period of 30 days, the Engineer will issue a final estimate in writing in accordance with the proposed final estimate submitted to the Contractor and within 30 days thereafter the State will pay the entire sum so found to be due. Such final estimate and payment thereon shall be conclusive and binding against both parties to the contract on all questions relating to the amount of work done and the compensation payable therefor, except as otherwise provided in Sections 9-1.03C, "Records," and 9-1.09, "Clerical Errors."

If the Contractor within said period of 30 days files claims, the Engineer will issue a semifinal estimate in accordance with the proposed final estimate submitted to the Contractor and within 30 days thereafter the State will pay the sum so found to be due. Such semifinal estimate and payment thereon shall be conclusive and binding against both parties to the contract on all questions relating to the amount of work done and the compensation payable therefor, except insofar as affected by the claims filed within the time and in the manner required hereunder and except as otherwise provided in Sections 9-1.03C, "Records," and 9-1.09, "Clerical Errors."

Claims filed by the Contractor shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of said claims. If additional information or details are required by the Engineer to determine the basis and amount of said claims, the Contractor shall furnish such further information or details so that the information or details are received by the Engineer no later than the fifteenth day after receipt of the written request from the Engineer. If the fifteenth day falls on a Saturday, Sunday or legal holiday, then receipt of such information or details by the Engineer shall not be later than close of business of the next business day. Failure to submit such information and details to the Engineer within the time specified will be sufficient cause for denying the claim.

The Contractor shall keep full and complete records of the costs and additional time incurred for any work for which a claim for additional compensation is made. The Engineer or any designated claim investigator or auditor shall have access to those records and any other records as may be required by the Engineer to determine the facts or contentions involved in the claims. Failure to permit access to such records shall be sufficient cause for denying the claims.

Claims submitted by the Contractor shall be accompanied by a notarized certificate containing the following language:

Under the penalty of law for perjury or falsification and with specific reference to the California False Claims Act, Government Code Section 12650 et. seq., the undersigned,

(name) _____ of
(title) _____

(company)

hereby certifies that the claim for the additional compensation and time, if any, made herein for the work on this contract is a true statement of the actual costs incurred and time sought, and is fully documented and supported under the contract between parties.

Dated _____

/s/ _____

Subscribed and sworn before me this _____ day

of _____

Notary Public
My Commission Expires _____

Failure to submit the notarized certificate will be sufficient cause for denying the claim.

Any claim for overhead type expenses or costs, in addition to being certified as stated above, shall be supported by an audit report of an independent Certified Public Accountant. Any such overhead claim shall also be subject to audit by the State at its discretion.

Any costs or expenses incurred by the State in reviewing or auditing any claims that are not supported by the Contractor's cost accounting or other records shall be deemed to be damages incurred by the State within the meaning of the California False Claims Act.

The District Director of the District which administers the contract will make the final determination of any claims which remain in dispute after completion of claim review by the Engineer. A board or person designated by said District Director will review such claims and make a written recommendation thereon to the District Director. The Contractor may meet with the review board or person to make a presentation in support of such claims.

Upon final determination of the claims, the Engineer will then make and issue his final estimate in writing and within 30 days thereafter the State will pay the entire sum, if any, found due thereon. Such final estimate shall be conclusive and binding against both parties to the contract on all questions relating to the amount of work done and the compensation payable therefor, except as otherwise provided in Sections 9-1.03C, "Records," and 9-1.09, "Clerical Errors."

5-1.09 INTEREST ON PAYMENTS

Interest shall be payable on progress payments, payments after acceptance, final payments, extra work payments and claim payments as follows:

1. Unpaid progress payments, payment after acceptance and final payments shall begin to accrue interest 30 days after the Engineer prepares the payment estimate.
2. Unpaid extra work bills shall begin to accrue interest 30 days after preparation of the first pay estimate following the receipt of a properly submitted and undisputed extra work bill. To be properly submitted, the bill must be submitted within 7 days of the performance of the extra work and in accordance with the requirements of Section 9-1.03C, "Records," and Section 9-1.06, "Partial Payments," of the Standard Specifications. An undisputed extra work bill not submitted within 7 days of performance of the extra work will begin to accrue interest 30 days after the preparation of the second pay estimate following submittal of the bill.
3. The rate of interest payable for unpaid progress payments, payments after acceptance, final payments and extra work payments shall be 10 percent per annum.
4. The rate of interest payable on a claim, protest or dispute ultimately allowed under this contract shall be 6 percent per annum. Interest shall begin to accrue 61 days after the Contractor submits to the Engineer information in sufficient detail to enable the Engineer to ascertain the basis and amount of said claim, protest or dispute.

The rate of interest payable on any award in arbitration shall be 6 percent per annum if allowed under the provisions of Civil Code Section 3289.

5-1.10 PUBLIC SAFETY

The Contractor shall provide for the safety of traffic and the public in accordance with the provisions in Section 7-1.09, "Public Safety," of the Standard Specifications and these special provisions.

The Contractor shall install temporary railing (Type K) between any lane carrying public traffic and any excavation, obstacle, or storage area when the following conditions exist:

- (1) Excavations.--Any excavation, the near edge of which is 12 feet or less from the edge of the lane, except:
 - (a) Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.
 - (b) Excavations less than one foot deep.
 - (c) Trenches less than one foot wide for irrigation pipe or electrical conduit, or excavations less than one foot in diameter.
 - (d) Excavations parallel to the lane for the purpose of pavement widening or reconstruction.
 - (e) Excavations in side slopes, where the slope is steeper than 4:1.
 - (f) Excavations protected by existing barrier or railing.
- (2) Temporarily Unprotected Permanent Obstacles.--Whenever the work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and the Contractor elects to install the obstacle prior to installing the protective system; or whenever the Contractor, for his convenience and with permission of the Engineer, removes a portion of an existing protective railing at an obstacle and does not replace such railing complete in place during the same day.
- (3) Storage Areas.--Whenever material or equipment is stored within 12 feet of the lane and such storage is not otherwise prohibited by the specifications.

The approach end of temporary railing (Type K), installed in accordance with the requirements in this section "Public Safety" and in Section 7-1.09, "Public Safety," of the Standard Specifications shall be offset a minimum of 15 feet from the edge of the traffic lane open to public traffic. The temporary railing shall be installed on a skew toward the edge of the traffic lane of not more than one foot transversely to 10 feet longitudinally with respect to the edge of the traffic lane. If the 15-foot minimum offset cannot be achieved, the temporary railing shall be installed on the 10 to 1 skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules shall be installed at the approach end of the temporary railing.

Temporary railing (Type K) shall conform to the provisions in Section 12-3.08, "Temporary Railing (Type K)," of the Standard Specifications. Temporary railing (Type K), conforming to the details shown on 1995 Standard Plan T3 or 1997 Standard Plan T3, may be used. Temporary railing (Type K) fabricated prior to January 1, 1993, and conforming to 1988 Standard Plan B11-30 may be used, provided the fabrication date is printed on the required Certificate of Compliance.

The fourteenth paragraph of Section 12-3.08, "Temporary Railing (Type K)," of the Standard Specifications is amended to read:

Each rail unit placed within 10 feet of a traffic lane shall have a reflector installed on top of the rail as directed by the Engineer. A Type P marker panel shall also be installed at each end of railing installed adjacent to a two-lane, two-way highway and at the end facing traffic of railing installed adjacent to a one-way roadbed. If the railing is placed on a skew, the marker shall be installed at the end of the skew nearest the traveled way. Type P marker panels shall conform to the provisions in Section 82, "Markers and Delineators," except that the Contractor shall furnish the marker panels.

Reflectors on temporary railing (Type K) shall conform to the provisions in "Prequalified and Tested Signing and Delineation Materials," of these special provisions.

Temporary crash cushion modules shall conform to the provisions in "Temporary Crash Cushion Module" elsewhere in these special provisions.

Except for installing, maintaining and removing traffic control devices, whenever work is performed or equipment is operated in the following work areas the Contractor shall close the adjacent traffic lane unless otherwise provided in the specifications:

| Approach speed of public traffic (Posted Limit) (Miles Per Hour) | Work Areas |
|---|--|
| Over 45 | Within 6 feet of a traffic lane but not on a traffic lane. |
| 35 to 45 | Within 3 feet of a traffic lane but not on a traffic lane. |

The lane closure provisions of this section shall not apply if the work area is protected by permanent or temporary railing or barrier.

When traffic cones or delineators are used to delineate a temporary edge of traffic lane, the line of cones or delineators shall be considered to be the edge of traffic lane, however, the Contractor shall not reduce the width of an existing lane to less than 10 feet without written approval from the Engineer.

When work is not in progress on a trench or other excavation that required closure of an adjacent lane, the traffic cones or portable delineators used for the lane closure shall be placed off of and adjacent to the edge of the traveled way. The spacing of the cones or delineators shall be not more than the spacing used for the lane closure.

Suspended loads or equipment shall not be moved nor positioned over public traffic or pedestrians.

Full compensation for conforming to the requirements in this section "Public Safety," including furnishing and installing temporary railing (Type K) and temporary crash cushion modules, 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.

5-1.11 SURFACE MINING AND RECLAMATION ACT

Attention is directed to the Surface Mining and Reclamation Act of 1975, commencing in Public Resources Code, Mining and Geology, Section 2710, which establishes regulations pertinent to surface mining operations.

Material from mining operations furnished for this project shall only come from permitted sites in compliance with the Surface Mining and Reclamation Act of 1975.

The requirements of this section shall apply to all materials furnished for the project, except for acquisition of materials in conformance with Section 4-1.05, "Use of Materials Found on the Work," of the Standard Specifications.

5-1.12 REMOVAL OF ASBESTOS AND HAZARDOUS SUBSTANCES

When the presence of asbestos or hazardous substances are not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be asbestos or a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, and the asbestos or hazardous substance has not been rendered harmless, the Contractor may continue work in unaffected areas reasonably believed to be safe, and shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In accordance with Section 25914.1 of the Health and Safety Code, all such removal of asbestos or hazardous substances including any exploratory work to identify and determine the extent of the asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for the delay as provided in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

5-1.13 FINAL PAY QUANTITIES

Section 9-1.015, "Final Pay Quantities," of the Standard Specifications is amended to read:

9-1.015 Final Pay Items.—When an item of work is designated as (F) or (S-F) in the Engineer's Estimate, the estimated quantity for that item of work shall be the final pay quantity, unless the dimensions of any portion of that item are revised by the Engineer, or the item or any portion of the item is eliminated. If the dimensions of any portion of the item are revised, and the revisions result in an increase or decrease in the estimated quantity of that item of work, the final pay quantity for the item will be revised in the amount represented by the changes in the dimensions, except as otherwise provided for minor structures in Section 51-1.22, "Measurement." If a final pay item is eliminated, the estimated quantity for the item will be eliminated. If a portion of a final pay item is eliminated, the final pay quantity will be revised in the amount represented by the eliminated portion of the item of work.

The estimated quantity for each item of work designated as (F) or (S-F) in the Engineer's Estimate shall be considered as approximate only, and no guarantee is made that the quantity which can be determined by computations, based on the details and dimensions shown on the plans, will equal the estimated quantity. No allowance will be made in the event that the quantity based on computations does not equal the estimated quantity.

In case of discrepancy between the quantity shown in the Engineer's Estimate for a final pay item and the quantity or summation of quantities for the same item shown on the plans, payment will be based on the quantity shown in the Engineer's Estimate.

5-1.14 YEAR 2000 COMPLIANCE

This contract is subject to Year 2000 Compliance for automated devices in the State of California. Year 2000 compliance is defined as follows:

Year 2000 compliance for automated devices in the State of California is achieved when embedded functions have or create no logical or mathematical inconsistencies when dealing with dates prior to and beyond 1999. The year 2000 is recognized and processed as a leap year. The product must also operate accurately in the manner in which it was intended for date operation without requiring manual intervention.

The Contractor shall provide the Engineer a Certificate of Compliance from the manufacturer in accordance with the provisions of Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for all automated devices furnished for the project.

5-1.15 SUBCONTRACTOR AND DVBE RECORDS

The Contractor shall maintain records of all subcontracts entered into with certified DVBE subcontractors and records of materials purchased from certified DVBE suppliers. The records shall show the name and business address of each DVBE subcontractor or vendor and the total dollar amount actually paid each DVBE subcontractor or vendor.

Upon completion of the contract, a summary of these records shall be prepared on Form CEM-2402 (S) and certified correct by the Contractor or the Contractor's authorized representative, and shall be furnished to the Engineer.

5-1.155 PERFORMANCE OF DVBE SUBCONTRACTORS AND SUPPLIERS

The DVBEs listed by the Contractor in response to the provisions in Section 2-1.04, "Submission of DVBE Information," and Section 3, "Award and Execution of Contract," of these special provisions, which are determined by the Department to be certified DVBEs, shall perform the work and supply the materials for which they are listed, unless the Contractor has received prior written authorization to perform the work with other forces or to obtain the materials from other sources.

Authorization to utilize other forces or sources of materials may be requested for the following reasons:

- A. The listed DVBE, after having had a reasonable opportunity to do so, fails or refuses to execute a written contract, when the written contract, based upon the general terms, conditions, plans and specifications for the project, or on the terms of the subcontractor's or supplier's written bid, is presented by the Contractor.
- B. The listed DVBE becomes bankrupt or insolvent.
- C. The listed DVBE fails or refuses to perform the subcontract or furnish the listed materials.
- D. The Contractor stipulated that a bond was a condition of executing a subcontract and the listed DVBE subcontractor fails or refuses to meet the bond requirements of the Contractor.
- E. The work performed by the listed subcontractor is substantially unsatisfactory and is not in substantial conformance with the plans and specifications, or the subcontractor is substantially delaying or disrupting the progress of the work.
- F. The listed DVBE subcontractor is not licensed pursuant to the Contractor's License Law.
- G. It would be in the best interest of the State.

The Contractor shall not be entitled to payment for the work or material unless it is performed or supplied by the listed DVBE or by other forces (including those of the Contractor) pursuant to prior written authorization of the Engineer.

5-1.16 SUBCONTRACTING

Attention is directed to the provisions in Section 8-1.01, "Subcontracting," of the Standard Specifications, Section 2, "Proposal Requirements and Conditions," Section 2-1.04, "Submission of DVBE Information," and Section 3, "Award and Execution of Contract," of these special provisions and these special provisions.

The second sentence in the third paragraph of said Section 8-1.01 is amended to read:

When items of work in the Engineer's Estimate are preceded by the letters (S) or (S-F), said items are designated as "Specialty Items."

Section 8-1.01 of the Standard Specifications is amended by adding the following before the sixth paragraph:

Pursuant to the provisions of Section 6109 of the Public Contract Code, the Contractor shall not perform work on a public works project with a subcontractor who is ineligible to perform work on the public works project pursuant to Section 1777.1 or 1777.7 of the Labor Code.

Pursuant to the provisions in Section 1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a list of contractors ineligible to perform work as a subcontractor on a public works project. This list of debarred contractors is available from the Department of Industrial Relations web site at:

http://www.dir.ca.gov/dir/Labor_law/DLSE/Debar.html.

The DVBE information furnished under Section 2-1.04, "Submission of DVBE Information," of these special provisions is in addition to the subcontractor information required to be furnished in Section 8-1.01, "Subcontracting," and Section 2-1.054, "Required Listing of Proposed Subcontractors," of the Standard Specifications.

Section 10115 of the Public Contract Code requires the Department to implement provisions to establish a goal for Disabled Veteran Business Enterprise (DVBE) participation in highway contracts that are State funded. As a part of this requirement:

1. No substitution of a DVBE subcontractor shall be made at any time without the written consent of the Department, and
2. If a DVBE subcontractor is unable to perform successfully and is to be replaced, the Contractor shall make good faith efforts to replace the original DVBE subcontractor with another DVBE subcontractor.

The provisions in Section 2-1.02, "Disabled Veteran Business Enterprise (DVBE)," of these special provisions that DVBEs shall be certified on the date bids are opened does not apply to DVBE substitutions after award of the contract.

5-1.162 PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS

Attention is directed to the provisions in Sections 10262 and 10262.5 of the Public Contract Code and Section 7108.5 of the Business and Professions Code concerning prompt payment to subcontractors.

5-1.17 AREAS FOR CONTRACTOR'S USE

Attention is directed to the requirements specified in Section 7-1.19, "Rights in Land and Improvements," of the Standard Specifications and these special provisions.

The highway right of way shall be used only for purposes that are necessary to perform the required work. The Contractor shall not occupy the right of way, or allow others to occupy the right of way, for purposes which are not necessary to perform the required work.

There are no State-owned parcels adjacent to the right of way for the exclusive use of the Contractor within the contract limits. The Contractor shall secure at his own expense any area required for plant sites, storage of equipment or materials, or for other purposes.

No area is available within the contract limits for the exclusive use of the Contractor. However, temporary storage of equipment and materials on State property may be arranged with the Engineer, subject to the prior demands of State maintenance forces and to all other contract requirements. Use of the Contractor's work areas and other State-owned property shall be at the Contractor's own risk, and the State shall not be held liable for any damage to or loss of materials or equipment located within such areas.

5-1.18 PAYMENTS

Attention is directed to Section 9-1.06, "Partial Payments," and 9-1.07, "Payment After Acceptance," of the Standard Specifications and these special provisions.

In determining the partial payments to be made to the Contractor, only the following listed materials will be considered for inclusion in said payment as materials furnished but not incorporated in the work:

Structural Steel

5-1.19 SOUND CONTROL REQUIREMENTS

Sound control shall conform to the provisions in Section 7-1.01I, "Sound Control Requirements," of the Standard Specifications and these special provisions.

The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 7:00 a.m., shall not exceed 86 dbA at a distance of 50 feet. This requirement in no way relieves the Contractor from responsibility for complying with local ordinances regulating noise level.

Said noise level requirement shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

5-1.20 SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT REQUIREMENTS

Portions of this project are located within the jurisdiction of the San Francisco Bay Area Rapid Transit District, referred to herein as BART. An agreement regarding work near BART has been entered into by the California Department of Transportation and BART. The Contractor shall fully inform himself of the requirements of this agreement and the rules, regulations, and conditions that may govern his operations in said areas and shall conduct his operations accordingly. A copy of that Cooperative Agreement may be obtained from Caltrans District Office at 111 Grand Avenue, P.O. Box 23660, Oakland, California 94263-0660. All work which affects BART shall be in accordance with these special provisions.

Attention is directed to "Work in the Vicinity of BART Facilities" of these special provisions.

The Contractor shall ensure that BART train operations are not interrupted and that the BART tracks and structures, its patrons, BART employees, the Contractor and other personnel are protected from injury or damage in accordance with the provisions in the "Track Allocation Procedure (TAP)" for BART furnished as "Materials Information" as provided in Section 2-1.03, "Examination of Plans, Specifications, Contract, and Site of Work," of the Standard Specifications.

The Contractor shall submit a Site Specific Work Plan (SSWP) in accordance with the Track Allocation Procedure for BART, for all construction activities within 100 feet of the BART operating envelope, as shown on the plans, or any construction activity having potential impact on BART train operations and BART structures for the following bridge:

Walnut Creek Overcrossing (BART), Bridge No. 28-0258

In addition, any work which may involve access into the operating envelope, including installation and removal of the protective sheathing, and all welding work, shall be restricted to non-revenue service hours as follows:

2:00 a.m. to 4:00 a.m. Monday through Saturday
2:00 a.m. to 7:00 a.m. Sunday

The Contractor's personnel will not be allowed on the BART structure except during non-revenue service hours. Work which does not affect BART train operations and is below track level may be performed at any time.

SAFETY AND HEALTH PROVISIONS.--Attention is directed to the provisions in Section 7-1.06, "Safety and Health Provisions," of the Standard Specifications and these special provisions.

No combustible material will be permitted to be stored under any BART aerial structure.

Before any construction begins in the vicinity of the BART aerial structure, the Contractor shall submit a fire analysis report identifying all possible fire sources and mitigating measures to the Engineer for approval. The Contractor shall allow 6 weeks after the complete report and all supporting data are submitted for review and approval. Attention is directed to the provisions of Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications.

SITE SPECIFIC WORK PLAN (SSWP).--SSWP is defined as a program, plan, and schedule prepared and submitted by the Contractor and approved by the Engineer, which accurately describes and illustrates the manner in which work within 100 feet of the operating envelope shall be accomplished.

The Contractor shall furnish all labor, materials, and equipment as required to perform and complete the work in the limited time available. The Contractor shall maintain the approved schedule in the SSWP.

The Contractor shall allow 6 weeks after the complete SSWP and all supporting data are submitted for review and approval.

Once the Plan is approved, the Contractor shall assemble the resources necessary to perform the Work, represented by the SSWP, so that the necessary resources are available and ready for use on the Saturday which begins the work week in which the Work is to be accomplished. At that time, the Engineer will make a final decision as to whether or not the Work is to proceed as planned or will be canceled. The prime consideration will be the stage of readiness of the Contractor, which the Contractor shall demonstrate to the Engineer. However, BART operation and maintenance plans may also affect the decision.

Work week is defined as the week starting with Saturday and the next 6 days of the proposed work schedule.

All Site Specific Work Plans (SSWP) which may impact the normal operation of any part of the BART operating system shall contain a schedule of activity. The schedule shall include a time at which all activities planned under the SSWP will be completed. Failure of the Contractor to complete the scheduled activities by the planned time or to put in place an approved contingency plan so that the system is available for operations at the approved completion time shall make the Contractor liable for liquidated damages for each hour or part of an hour that the operation of the system for passenger revenue service is delayed, as follows:

\$ 53,000.00 per hour for a.m. peak hours between 6:30 a.m. and 9:30 a.m.
\$ 16,000.00 per hour for off-peak hours between 9:30 a.m. and 3:30 p.m. and between 7:30 p.m. and 6:30 a.m.
\$ 25,000.00 per hour for p.m. peak hours between 3:30 p.m. and 7:30 p.m.

These liquidated damages are distinct and separate and additional to those liquidated damages which are specified in Section 4, "Beginning of Work, Time of Completion and Liquidated Damages," of these special provisions.

BART OPERATING RULES AND PROCEDURES.--All Contractor activity within BART's operating envelope shall comply with the Section VI, "BART OPERATING RULES AND SAFETY TRAINING," in the Track Allocation Procedure (TAP). Violations will subject the Contractor to prompt exclusion from the jobsite until the Contractor demonstrates proper compliance procedures to the satisfaction of BART. Such exclusion from the jobsite will not be grounds for any additional compensation nor for any extension of the completion time.

BART will provide extensive safety training and retraining every 12 months, for up to 4 supervisory level personnel. The Contractor shall have at least 2 supervisors on the project at all times, one of whom shall be the Contractor's Safety Representative for this Contract. Both supervisors shall have successfully completed BART provided training course within the previous 12 months. The course is 16 hours long, and students must pass the required exams to successfully complete the course.

All employees of the Contractor scheduled or expected to perform work within the operating system envelope are required to have successfully completed, within the last 12 months, BART's prescribed standard training program for performing work under Section VI, "BART OPERATING RULES AND SAFETY TRAINING," in the "Track Allocation Procedure (TAP)". The program is 4 hours in length. BART will provide materials for this training program. The Contractor shall keep records of those successfully completing the course. Records shall be made available to the Engineer or BART upon request.

Except as otherwise permitted in BART's Track Allocation Procedure (TAP), the Contractor shall not enter the BART operating right of way unless accompanied by authorized BART personnel.

INSURANCE.--The Contractor shall maintain in force, until completion and acceptance of the PROJECT, a policy of Contractual Liability Insurance which shall include: (A) Commercial General Liability coverage with a limit of at least ten million dollars (\$10,000,000) per occurrence on the broadest obtainable form, (B) Automobile Liability with a coverage of at least five million dollars (\$5,000,000) combined-single limit per occurrence for all owned, borrowed or hired vehicles, and (C) Statutory Workers' Compensation and Employers Liability coverage of at least two million dollars (\$2,000,000) for all employees engaged in services or operations under the construction contract. The Contractor's Commercial Liability policy shall be endorsed to name BART, its directors, officers, representatives and employees as additional insured. Coverage shall further be endorsed to acknowledge that the Contractor's insurance shall be primary insurance and that no insurance or self-insurance of BART or the STATE shall be called upon to contribute to a loss. The Contractor's Workers' Compensation Insurance policy shall be endorsed to provide the insurer's waiver of subrogation in favor of BART.

RESPONSIBILITY FOR DAMAGE.--In addition to the requirements in Section 7-1.12, "Responsibility for Damage," of the Standard Specifications, the Contractor shall provide in all contracts with subcontractors of any tier a requirement that those subcontractors shall defend, indemnify, and hold harmless BART, its directors, officers, agents or employees from all claims, demands, suits, loss, damages, injury and liability, direct or indirect, (including any and all costs and expenses in connection therewith), incurred by reason of any act, or failure to act, of the Contractor.

Full compensation for conforming to the requirements of this section, "San Francisco Bay Area Rapid Transit District Requirements," shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

SECTION 6. (BLANK)

SECTION 7. (BLANK)

SECTION 8. MATERIALS

SECTION 8-1. MISCELLANEOUS

8-1.01 PREQUALIFIED AND TESTED SIGNING AND DELINEATION MATERIALS

The Department maintains the following list of Approved Traffic Products. The Engineer shall not be precluded from sampling and testing products on the list of Approved Traffic Products .

The manufacturer of products on the list of Approved Traffic Products shall furnish the engineer a Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for each type of traffic product supplied. Materials and products may be added to the list of Approved Traffic Products if the manufacturer submits a New Product Information Form to the New Product Coordinator at the Transportation Laboratory. Upon a Departmental request for samples, sufficient samples shall be submitted to permit performance of required tests. Approval of materials or products will depend upon compliance with the specifications and tests the Department may elect to perform.

PAVEMENT MARKERS, PERMANENT TYPE

REFLECTIVE

Apex, Model 921 (4"x4")

Ray-O-Lite, Models SS (4"x4"), RS (4"x4") and AA (4"x4")
Stimsonite, Models 88 (4" x4"), 911 (4"x4"), 953 (2.75"x4.5")

3M Series 290 (3.5"x4")

REFLECTIVE WITH ABRASION RESISTANT SURFACE (ARS)

Ray-O-Lite "AA" ARS (4"x4")
Stimsonite, Models 911 (4"x4"), 953 (2.75"x4.5")

3M Series 290 (3.5"x4")

REFLECTIVE WITH ABRASION RESISTANT SURFACE (ARS)

(Used for recessed applications)

Stimsonite, Model 948 (2.3"x4.7")
Ray-O-Lite, Model 2002 (2.2"x4.7")
Stimsonite, Model 944SB (2"x4")*
Ray-O-Lite, Model 2004 ARS (2"x4")*

* For use only in 4.5-inch wide (older) recessed slots

NON-REFLECTIVE FOR USE WITH EPOXY ADHESIVE, 4" Round

Apex Universal (Ceramic)
Highway Ceramics, Inc. (Ceramic)

NON-REFLECTIVE FOR USE WITH BITUMEN ADHESIVE, 4" Round

Apex Universal (Ceramic)
Apex Universal, Model 929 (ABS)
Elgin Molded Plastics, "Empco-Lite" Model 900 (ABS)
Highway Ceramics, Inc. (Ceramic)
Hi-Way Safety, Inc., Models P20-2000W and 2001Y (ABS)
Interstate Sales, "Diamond Back" (ABS) and (Polypropylene)
Alpine Products, D-Dot (ABS) Road Creations, Model RCB4NR (Acrylic)

PAVEMENT MARKERS, TEMPORARY TYPE

TEMPORARY MARKERS FOR LONG TERM DAY/NIGHT USE (6 months or less)

Apex Universal, Model 924 (4"x4")
Davidson Plastics, Model 3.0 (4"x4")
Elgin Molded Plastics, "Empco-Lite" Model 901 (4" x4")

Road Creations, Model R41C (4"x4")
Vega Molded Products "Temporary Road Marker" (3"x4")

TEMPORARY MARKERS FOR SHORT TERM DAY/NIGHT USE (14 days or less)

(For seal coat or chip seal applications, clear protective covers are required)

Apex Universal, Model 932
Davidson Plastics, Models T.O.M., T.R.P.M. and "HH" (High Heat)
Hi-Way Safety, Inc., Model 1280/1281

STRIPING AND PAVEMENT MARKING MATERIALS

PERMANENT TRAFFIC STRIPING AND PAVEMENT MARKING TAPE

Advanced Traffic Marking, Series 300 and 400
Brite-Line, Series 1000
Swarco Industries, "Director 35" (For transverse application only)
Swarco Industries, "Director 60"
3M, "Stamark" Series 380 and 5730
3M, "Stamark" Series A420, A440, N420 and N440 (For transverse application only)

TEMPORARY (REMOVABLE) STRIPING AND PAVEMENT MARKING TAPE (6 months or less)

Brite-Line, Series 100
P.B. Laminations, Aztec, Grade 102
Swarco Industries, "Director-2"
3M, "Stamark" Series 620

3M Series A145 Removable Black Line Mask
(Black Tape: For use only on Asphalt Concrete Surfaces)
Advanced Traffic Marking Black "Hide-A-Line"
(Black Tape: For use only on Asphalt Concrete Surfaces)
PREFORMED THERMOPLASTIC (Heated in place)

Flint Trading, "Premark" and "Premark 20/20 Flex"
Pavemark, "Hotape"

REMOVABLE TRAFFIC PAINT

Belpro, Series 250/252 and No. 93 Remover

CLASS 1 DELINEATORS

ONE-PIECE DRIVEABLE FLEXIBLE TYPE, 66"

Carsonite, Curve-Flex CFRM-400
Carsonite, Roadmarker CRM-375
Davidson Plastics, "Flexi-Guide Models 400 and 566"

FlexStake, Model 654TM
GreenLine Model HWD1-66 and CGD1-66
J. Miller Industries, Model JMI-375 (with soil anchor)

SPECIAL USE FLEXIBLE TYPE, 66"

Carsonite, "Survivor" with 18" U-Channel anchor
FlexStake, Model 604
GreenLine Models HWD and CGD (with 18" U-Channel base)
Safe-Hit with 8" pavement anchor (SH248-GP1)
Safe-Hit with 15" soil anchor (SH248-GP2) and with 18" soil anchor (SH248-GP3)

SURFACE MOUNT FLEXIBLE TYPE, 48"

Bent Manufacturing Co., "Masterflex" Model MF-180EX-48"
Carsonite, "Super Duck II"
FlexStake, Surface Mount, Models 704 and 754TM

CHANNELIZERS

SURFACE MOUNT TYPE, 36"

Bent Manufacturing Co., "Masterflex" Models MF-360-36(Round) and MF-180-36(Flat)
Carsonite, "Super Duck" (Flat SDF-436, Round SDR-336)
Carsonite, Super Duck II Model SDCF203601MB "The Channelizer"
Davidson Plastics, Flex-Guide Models FG300LD and FG300UR
FlexStake, Surface Mount, Models 703 and 753TM
GreenLine, Model SMD-36
The Line Connection, "Dura-Post" Model DP36-3 (Permanent)
The Line Connection, "Dura-Post" Model DP36-3C (Temporary)
Repo, Models 300 and 400
Safe-Hit, Guide Post, Model SH236SMA

CONICAL DELINEATORS, 42"

(For 28" Traffic Cones, see Standard Specifications)

Bent Manufacturing Company "T-Top"
Plastic Safety Systems "Navigator-42"
Roadmaker Company "Stacker"
Traffix Devices "Grabber"

OBJECT MARKERS

TYPE "K", 18"

Bent Manufacturing "Masterflex" Model MF-360-24
Carsonite, Model SMD-615
FlexStake, Model 701KM
Repo, Models 300 and 400
Safe-Hit, Model SH718SMA
The Line Connection, Model DP21-4K

TYPE "K-4"/"Q", 24"
(Shown as "Q" in the Traffic Manual)

Carsonite, Super Duck II
FlexStake, Model 701KM
Repo, Models 300 and 400
Safe-Hit, Models SH8 24SMA_WA and SH8 24GP3_WA
The Line Connection, Model "DP21-4Q"

TEMPORARY RAILING (TYPE K) REFLECTORS AND CONCRETE BARRIER MARKERS

IMPACTABLE TYPE

ARTUK, "FB"

Davidson Plastics, Model PCBM-12

Duraflex Corp., "Flexx 2020" and "Electriflexx"

Hi-Way Safety, Inc., Model GMKRM100

NON-IMPACTABLE TYPE

ARTUK, JD Series

Stimsonite, Model 967 (with 3 1/4" Acrylic cube corner reflector)

Stimsonite, Model 967LS

Vega Molded Products, Models GBM and JD

THREE BEAM BARRIER MARKERS (For use to the left of traffic)

Duraflex Corp., "Railrider"

Davidson Plastics, "Mini" (3"x10")

CONCRETE BARRIER DELINEATORS, 16"

(For use to the right of traffic. When mounted on top of barrier, places top of reflective element at 48")

Davidson Plastics, Model PCBM T-16

Safe-Hit, Model SH216RBM

CONCRETE BARRIER-MOUNTED MINI-DRUM (10"x14"x22")

(Applied to a vertical surface. Top of reflective element at 48")

Stinson Equipment Company "SaddleMarker"

SOUND WALL DELINEATOR

(Applied to a vertical surface. Top of reflective element at 48")

Davidson Plastics, PCBM S-36

GUARD RAILING DELINEATOR

(Top of reflective element at 48" above plane of roadway)

WOOD POST TYPE, 27"

Carsonite, Model 427

Davidson Plastics FG 427 and FG 527

FlexStake, Model 102 GR

GreenLine GRD 27

J. Miller Model JMI-375G

Safe-Hit, Model SH227GRD

STEEL POST TYPE

Carsonite, Model CFGR-327 with CFGRBK300 Mounting Bracket

REFLECTIVE SHEETING

CHANNELIZERS, BARRIER MARKERS AND DELINEATORS

3M, High Intensity
Reflexite, PC-1000, Metalized Polycarbonate
Reflexite, AC-1000, Acrylic
Reflexite, AP-1000, Metalized Polyester
Reflexite, AR-1000, Abrasion Resistant Coating)
Stimsonite, Series 6200 (For rigid substrate devices only)

TRAFFIC CONES, 13" Sleeves

Reflexite SB (Polyester), Vinyl or "TR" (Semi-transparent)

TRAFFIC CONES, 4" and 6" Sleeves

3M Series 3840
Reflexite Vinyl or "TR" (Semi-transparent) or "Conformalite"

BARRELS AND DRUMS

Reflexite, "Super High Intensity" or "High Impact Drum Sheeting"
3M Series 3810

BARRICADES, Type I, Engineer Grade

American Decal, Adcolite
Avery Dennison, 1500 and 1600
3M, Scotchlite, Series CW

BARRICADES, Type II, Super Engineer Grade

Avery Dennison, "Fasign" 2500 Series
Kiwalite, Type II
Nikkalite 1800 Series

SIGNS, Type II, Super Engineering Grade

Avery Dennison, "Fasign" 2500 Series
Kiwalite, Type II
Nikkalite 1800 Series

SIGNS, Type III, High-Intensity Grade

3M, Series 3800

SIGNS, Type IV, High-Intensity Prismatic Grade

Stimsonite Series 6200

SIGNS, Type VII, High-Intensity Prismatic Grade

3M Series 3900

SIGNS, Type VI, Roll-Up Signs

Reflexite, Vinyl (Orange), Reflexite "SuperBright" (Fluorescent orange)
3M Series RS34 (Orange) and RS20 (Fluorescent orange)

Contract No. 04-148724

SIGN SUBSTRATE FOR CONSTRUCTION AREA SIGNS

ALUMINUM

FIBERGLASS REINFORCED PLASTIC (FRP)

Sequentia, "Polyplate"

Fiber-Brite

8-1.02 STATE-FURNISHED MATERIALS

Attention is directed to Section 6-1.02, "State-Furnished Materials," of the Standard Specifications and these special provisions.

The following materials will be furnished to the Contractor:

Valspar V75-A-1 Alumapoxy Aluminum

Valspar 54 Series V-Thane Hi-Solids Urethane

SECTION 8-2. (BLANK)

SECTION 8-3. WELDING

8-3.01 WELDING ELECTRODES

Flux core welding electrodes conforming to the requirements of AWS A5.20 E6XT-4 or E7XT-4 shall not be used to perform any type of welding for this project.

8-3.02 WELDING QUALITY CONTROL

Welding quality control shall conform to the requirements in the AWS welding codes, the Standard Specifications, and these special provisions.

Welding quality control shall apply when any work is welded in conformance with the provisions in Section 49, "Piling," Section 52, "Reinforcement," Section 55, "Steel Structures," Section 56-1, "Overhead Sign Structures," Section 75-1.035, "Bridge Joint Restrainer Units," or Section 86-2.04, "Standards, Steel Pedestals and Posts," of the Standard Specifications.

Wherever reference is made to the following AWS welding codes in the Standard Specifications, on the plans or in these special provisions, the year of adoption for these codes shall be as listed:

| AWS Code | Year of Adoption |
|----------|------------------|
| D1.1 | 1998 |
| D1.4 | 1992 |
| D1.5 | 1995 |

All requirements of the AWS welding codes shall apply unless specified otherwise in the Standard Specifications, on the plans or in these special provisions. Wherever the abbreviation AWS is used, it shall be equivalent to the abbreviations ANSI/AWS or ANSI/AASHTO/AWS.

The welding of all fracture critical members (FCMs) shall conform to the provisions specified in the Fracture Control Plan (FCP) and herein.

The Contractor shall designate in writing a welding Quality Control Manager (QCM). The QCM shall be responsible directly to the Contractor for the quality of welding, including materials and workmanship, performed by the Contractor and all subcontractors.

The QCM shall be the sole individual responsible to the Contractor for submitting, receiving, and approving all correspondence, required submittals, and reports to and from the Engineer.

The QCM shall not be employed or compensated by any subcontractor, or by other persons or entities hired by subcontractors, who will provide other services or materials for the project. The QCM may be an employee of the Contractor.

Welding inspection personnel or nondestructive testing (NDT) firms to be used in the work shall not be employed or compensated by any subcontractor, or by other persons or entities hired by subcontractors, who will provide other services or materials for the project, except for the following conditions:

1. The welding is performed at a permanent fabrication facility which is certified under the AISC Quality Certification Program, Category Cbr, Major Steel Bridges.
2. The welding is performed at a permanent fabrication facility which is certified under the AISC Quality Certification Program, Category Sbd, Conventional Steel Building Structures. This condition shall apply only for work welded in conformance with the provisions in Section 56-1, "Overhead Sign Structures" or Section 86-2.04, "Standards, Steel Pedestals and Posts," of the Standard Specifications.

For welding performed at such certified facilities, the inspection personnel or NDT firms may be employed or compensated by the fabrication facility performing the welding.

Prior to submitting the Welding Quality Control Plan (WQCP) required herein, a pre-welding meeting between the Engineer, Contractor and any welding subcontractors or entities hired by these subcontractors to be used in the work, shall be held to discuss the requirements for the WQCP.

Prior to performing any welding, the Contractor shall submit to the Engineer, in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications, 3 copies of a separate WQCP for each item of work for which welding is to be performed. As a minimum, each WQCP shall include the following:

1. The name of the welding firm and the NDT firm to be used;
2. A manual prepared by the NDT firm that shall include equipment, testing procedures, code of safe practices, the Written Practice of the NDT firm, and the names, qualifications and documentation of certifications for all personnel to be used;
3. The name of the QCM and the names, qualifications and documentation of certifications for all Quality Control (QC) Inspectors and Assistant Quality Control Inspectors to be used;
4. An organizational chart showing all QC personnel and their assigned QC responsibilities;
5. The methods and frequencies for performing all required quality control procedures, including QC inspection forms to be used, as required by the specifications including:
 - (a) all visual inspections;
 - (b) all NDT including radiographic geometry, penetrometer and shim selection, film quality, film processing, radiograph identification and marking system, and film interpretation and reports; and
 - (c) calibration procedures and calibration frequency for all NDT equipment;
6. A system for the identification and tracking of all welds, NDT and any required repairs, and a procedure for the reinspection of any repaired welds. The system shall have provisions for 1) permanently identifying each weld and the person who performed the weld, 2) placing all identification and tracking information on each radiograph and 3) a method of reporting nonconforming welds to the Engineer;
7. Standard procedures for performing noncritical repair welds. Noncritical repair welds are defined as welds to deposit additional weld beads or layers to compensate for insufficient weld size and to fill limited excavations that were performed to remove unacceptable edge or surface discontinuities, rollover or undercut. The depth of these excavations shall not exceed 65 percent of the specified weld size;
8. The welding procedure specification (WPS), including documentation of all supporting Procedure Qualification Record (PQR) tests performed, and the name of the testing laboratory who performed the tests, to verify the acceptability of the WPS. The submitted WPS shall be within the allowable period of effectiveness;
9. Documentation of all certifications for welders for each weld process and position that will be used. Certifications shall list the electrodes used, test position, base metal and thickness, tests performed, and the witnessing authority. All certifications shall be within the allowable period of effectiveness; and
10. One copy each of all AWS welding codes and the FCP which are applicable to the welding to be performed. These codes and the FCP shall become the permanent property of the Department.
11. Example forms to be used for Certificates of Compliance, daily production logs, and daily reports.

The Engineer shall have 10 working days to review the WQCP submittal after a complete plan has been received. No welding shall be performed until the WQCP is approved in writing by the Engineer. Should the Engineer fail to complete the review within this time allowance and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the WQCP, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

An amended WQCP or addendum shall be submitted to, and approved in writing by the Engineer, for any proposed revisions to the approved WQCP. An amended WQCP or addendum will be required for any revisions to the WQCP, including but not limited to a revised WPS, additional welders, changes in NDT firms or procedures, QC or NDT personnel, or updated systems for tracking and identifying welds. The Engineer shall have 3 working days to complete the review of the amended WQCP or addendum. Work that is affected by any of the proposed revisions shall not be performed until the amended WQCP or addendum has been approved. Should the Engineer fail to complete the review within this time allowance and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the amended WQCP or addendum, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

After final approval of the WQCP, amended WQCP, or addendum, the Contractor shall submit 7 copies to the Engineer each of these approved documents.

It is expressly understood that the Engineer's approval of the Contractor's WQCP shall not relieve the Contractor of any responsibility under the contract for the successful completion of the work in conformity with the requirements of the plans and specifications. The Engineer's approval shall not constitute a waiver of any of the requirements of the plans and specifications nor relieve the Contractor of any obligation thereunder, and defective work, materials and equipment may be rejected notwithstanding approval of the WQCP.

A daily production log for welding shall be kept by the QCM for each day that welding is performed. The log shall clearly indicate the locations of all welding, and shall include the welders' names, amount of welding performed, any problems or deficiencies discovered, and any testing or repair work performed, at each location. The daily report from each Quality Control Inspector shall also be included in the log.

The following items shall be included in a Welding Report that is to be submitted to the Engineer within 7 days following the performance of any welding:

1. Reports of all visual weld inspections and NDT;
2. Radiographs and radiographic reports, and other required NDT reports;
3. Documentation that the Contractor has evaluated all radiographs and other nondestructive tests, corrected all rejectable deficiencies, and all repaired welds have been reexamined by the required NDT and found acceptable; and
4. Daily production log.

All radiographic envelopes shall have clearly written on the outside of the envelope the following information: name of the QCM, name of the nondestructive testing firm, name of the radiographer, date, contract number, complete part description, and all included weld numbers or a report number, as detailed in the WQCP. In addition, all innerleaves shall have clearly written on them the part description and all included weld numbers, as detailed in the WQCP.

All reports regarding NDT, including radiographs, shall be signed by both the NDT technician and the person that performed the review, and then submitted directly to the QCM for review and signature prior to submittal to the Engineer. Corresponding names shall be clearly printed or typewritten next to all signatures.

The Engineer will review the Welding Report to determine if the Contractor is in conformance with the WQCP. Except for steel piling, the Engineer shall be allowed 7 days to review the report and respond in writing after a complete Welding Report has been received. The review time for steel piling shall be as specified in "Piling" of these special provisions. Prior to receiving notification from the Engineer of the Contractor's conformance with the WQCP, the Contractor may encase in concrete or cover any welds for which a Welding Report has been submitted. However, should the Contractor elect to encase or cover those welds prior to receiving notification from the Engineer, it is expressly understood that the Contractor shall not be relieved of the responsibility for incorporating material in the work that conforms to the requirements of the plans and specifications. Any material not conforming to these requirements will be subject to rejection. Should the Contractor elect to wait to encase or cover any welds pending notification by the Engineer, and should the Engineer fail to complete the review and provide notification within this time allowance, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in notification, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

Sections 6.1.2 through 6.1.4.3 of AWS D 1.1, Sections 7.1.1 and 7.1.2 of AWS D 1.4, and Sections 6.1.1.1 through 6.1.3.3 of AWS D 1.5 are replaced with the following:

Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing prior to welding, during welding and after welding as specified in this section and additionally as necessary to ensure that materials and workmanship conform to the requirements of the contract documents.

The Quality Control (QC) Inspector shall be the duly designated person who performs inspection, testing, and quality matters for all welding.

Quality Assurance (QA) is the prerogative of the Engineer. The QA Inspector is the duly designated person who acts for and on behalf of the Engineer.

All QC Inspectors shall be responsible for quality control acceptance or rejection of materials and workmanship, and shall be currently certified as AWS Certified Welding Inspectors (CWI) in conformance with the requirements in AWS QC1, "Standard and Guide for Qualification of Welding Inspectors."

The QC Inspector may be assisted by an Assistant QC Inspector provided that this individual is currently certified as an AWS Certified Associate Welding Inspector (CAWI) in conformance with the requirements in AWS QC1, "Standard and Guide for Qualification of Welding Inspectors," or has equivalent qualifications. The QC Inspector shall monitor the Assistant QC Inspector's work, and shall be responsible for signing all reports.

When the term "Inspector" is used without further qualification, it shall refer to the QC Inspector.

Section 6.14.6, "Personnel Qualification," of AWS D 1.1, Section 7.7.6, "Personnel Qualification," of AWS D 1.4 and Section 6.1.3.4, "Personnel Qualification," of AWS D 1.5 are replaced with the following:

Personnel performing NDT shall be qualified in conformance with the requirements in the current edition of the American Society for Nondestructive Testing (ASNT) Recommended Practice No. SNT-TC-1A and the Written Practice of the NDT firm. The Written Practice of the NDT firm shall meet or exceed the requirements of the current edition of the ANST Recommended Practice No. SNT-TC-1A. Only individuals who are 1) qualified for NDT Level II, or 2) Level III technicians who have been directly certified by the ASNT and are authorized to perform the work of Level II technicians, shall perform NDT, review the results, and prepare the written reports.

Section 6.5.4, "Scope of Examination," of AWS D 1.1 and Section 7.5.4 of AWS D 1.4 are replaced with the following:

The QC Inspector shall inspect and approve the joint preparation, assembly practice, welding techniques, and performance of each welder, welding operator, and tack welder to make certain that the applicable requirements of this code and the approved WPS are met.

Section 6.5.4 of AWS D 1.5 is replaced with the following:

The QC Inspector shall inspect and approve the joint preparation, assembly practice, welding techniques, and performance of each welder, welding operator, and tack welder to make certain that the applicable requirements of this code and the approved WPS are met. The QC Inspector shall examine the work to make certain that it meets the requirements of section 3 and 9.21. The size and contour of welds shall be measured using suitable gages. Visual inspection for cracks in welds and base metal, and for other discontinuities should be aided by strong light magnifiers, or such other devices as may be helpful. Acceptance criteria different from those specified in this code may be used when approved by the Engineer.

The Engineer shall have the authority to verify the qualifications or certifications of any welder, Quality Control Inspector, or NDT personnel to specified levels by retests or other means.

A sufficient number of QC Inspectors shall be provided to ensure continuous inspection when any welding is being performed. Continuous inspection, as a minimum, shall include (1) having QC Inspectors continually present on all shifts when any welding is being performed, or (2) having a QC Inspector within such close proximity of all welding operations that inspections by the QC Inspector of each operation, at each welding location, shall not lapse for a period exceeding 30 minutes.

Inspection and approval of the joint preparation, assembly practice, welding techniques, and performance of each welder, welding operator, and tack welder shall be documented by the QC Inspector on a daily basis for each day that welding is performed.

The QC Inspector shall provide reports to the QCM on a daily basis for each day that welding is performed.

Except for noncritical weld repairs, base metal repairs, or any other type of repairs not submitted in the WQCP, the Engineer shall be notified immediately in writing when any welding problems or deficiencies are discovered and also of the proposed repair procedures to correct them. The Engineer shall have 5 working days to review these procedures. No remedial work shall begin until the repair procedures are approved in writing by the Engineer. Should the Engineer fail to complete the review within this time allowance and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the proposed repair procedures, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

When joint details that are not prequalified by the applicable AWS codes are proposed for use in the work, all welders using these details shall perform a qualification test plate using the approved WPS variables and the joint detail to be used in production. The test plate shall be the maximum thickness to be used in production. The test plate shall be mechanically or radiographically tested as directed by the Engineer. Mechanical and radiographic testing and acceptance criteria shall be as specified in the applicable AWS codes.

The period of effectiveness for a welder's or welding operator's qualification shall be a maximum of 3 years for the same weld process, welding position, and weld type. A valid qualification at the beginning of work on a contract will be acceptable for the entire period of the contract, as long as the welder's work remains satisfactory.

All qualification tests for welders, welding operators, and WPSs used in welding operations will be witnessed by the Engineer.

Section 6.6.5, "Nonspecified Nondestructive Testing Other Than Visual," of AWS D 1.1, Section 6.6.5 of AWS D 1.4 and Section 6.6.5 of AWS D 1.5 shall not apply.

For any welding, the Engineer may direct the Contractor to perform NDT that is in addition to the visual inspection or NDT specified in the AWS welding codes, in the Standard Specifications or in these special provisions. Additional NDT required by the Engineer, will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications. Should any welding deficiencies be discovered by this additional NDT, the cost of the testing will not be paid for as extra work and shall be at the Contractor's expense.

All required repair work to correct welding deficiencies, whether discovered by the required visual inspection or NDT, or by additional NDT directed by the Engineer, and any associated delays or expenses caused to the Contractor by performing these repairs, shall be at the Contractor's expense.

At the completion of all welding, the QCM shall sign and furnish to the Engineer, a Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for each item of work for which welding was performed. The certificate shall state that all of the materials and workmanship incorporated in the work, and all required tests and inspections of this work, have been performed in conformance with the details shown on the plans and the provisions of the Standard Specifications and these special provisions.

Full compensation for conforming to the requirements of this section 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.

SECTION 9. DESCRIPTION OF BRIDGE WORK

The bridge work to be done consists, in general, of seismic retrofitting, as shown on the plans, of the following structure:

WALNUT CREEK OVERCROSSING (BART)
(Bridge No. 28-0258)

SECTION 10. CONSTRUCTION DETAILS

SECTION 10-1. GENERAL

10-1.01 ORDER OF WORK

Order of work shall conform to the provisions in Section 5-1.05, "Order of Work," of the Standard Specifications and these special provisions.

Attention is directed to "Maintaining Traffic" of these special provisions and to the stage construction sheets of the plans

Temporary railing (Type K) and temporary crash cushion shall be in place prior to start of work requiring temporary railing (Type K) and temporary crash cushion.

Work will be allowed at any time after the scaffolding and temporary railing (Type K) are in place.

The work shall be performed in conformance with the stages of construction shown on the plans. Nonconflicting work in subsequent stages may proceed concurrently with work in preceding stages, provided satisfactory progress is maintained in said preceding stages of construction.

Attention is directed to the provisions in "San Francisco Bay Area Rapid Transit District Requirements" of these special provisions.

Protective sheathing shall be installed before beginning work on the BART structure unless otherwise approved in writing by the Engineer.

All falsework, protective sheathing, and the protective cover shall be installed prior to opening traffic lanes.

The Contractor shall notify Chris Koukis, BART Special Services, at (510) 464-6445, not less than 15 days prior to performing any work on, adjacent to, or affecting BART structures.

The Contractor shall not work on adjacent bents simultaneously.

10-1.02 WORK IN THE VICINITY OF BART FACILITIES

The following additional requirements shall apply to the retrofit of the Walnut Creek Overcrossing (BART) (Bridge No. 28-0285):

Attention is directed to the provisions in Section 7-1.11, "Preservation of Property," of the Standard Specifications and these special provisions.

The Contractor shall exercise due care with all equipment when working near the BART structure to avoid damage to the structure in case of accident or equipment collapse. This shall include proper positioning of lifting equipment and their storage.

Operation of cranes and other hoisting equipment with booms capable of reaching the level of BART tracks are prohibited within 10 feet of the edge of BART aerial structures when trains are in operation. The operation of said equipment outside of the 10 foot zone which still has potential to impact train operations when trains are in service is permissible only if such operation is monitored by a BART inspector and the proposed details are satisfactory to BART.

Lifting operations of any equipment shall be done parallel to or away from the BART structure, so as to avoid any accident to occur that would interfere with the BART system.

The Contractor shall provide suitable devices to prevent any equipment operations from encroaching within the above specified zone.

Positive restraints shall be attached to the crane to prevent the equipment or construction material being lifted from accidentally falling into the BART structure or train on the structure. The Contractor shall submit to the Engineer details of the construction operations and the restraints to be used. The Contractor shall allow 2 weeks after details and support data are submitted for the review. The construction operations shall not start until the Engineer has reviewed and approved the proposed details.

The Contractor shall submit a complete equipment positioning and storage plan to the Engineer describing construction methods that utilize equipment, equipment positioning during construction and equipment storage. The equipment positioning and storage plan shall conform to the requirements in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications and these special provisions. The Contractor shall allow 6 weeks after complete drawings and all support data are submitted for the review and approval of equipment positioning and storage plan. Approval of the protective sheathing plan by the Engineer will be contingent upon the drawings being satisfactory to BART.

Full compensation for equipment positioning and storage plan shall be considered as included in the prices paid for the various items of work and no additional compensation will be allowed therefor.

10-1.03 WATER POLLUTION CONTROL

Water pollution control work shall conform to the requirements in Section 7-1.01G, "Water Pollution," of the Standard Specifications, and these special provisions.

Water pollution control work shall conform to the requirements in the Construction Contractor's Guide and Specifications of the Caltrans Storm Water Quality Handbooks, dated April 1997, and addenda thereto issued up to and including the date of advertisement of the project, hereafter referred to as the "Handbook." Copies of the Handbook may be obtained from the Department of Transportation, Material Operations Branch, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, Telephone: (916) 445-3520.

Copies of the Handbook are also available for review at 111 Grand Avenue Oakland, California 94601. Please call the Toll Bridge Duty Senior, telephone number (510) 286-5549, to reserve a copy of the documents at least 24 hours in advance..

The Contractor shall become fully informed of, and comply with the applicable provisions of the Handbook and Federal, State and local regulations that govern the Contractor's operations and storm water discharges from both the project site and areas of disturbance outside the project limits during construction.

Unless arrangements for disturbance of areas outside the project limits are made by the Department and made part of the contract, it is expressly agreed that the Department assumes no responsibility to the Contractor or property owner whatsoever with respect to any arrangements made between the Contractor and property owner to allow disturbance of areas outside the project limits.

The Contractor shall be responsible for the costs and for any liability imposed by law as a result of the Contractor's failure to comply with the requirements set forth in this section "Water Pollution Control" including, but not limited to, compliance with the applicable provisions of the Handbook and Federal, State and local regulations. For the purposes of this paragraph, costs and liabilities include but are not limited to fines, penalties and damages whether assessed against the State or the Contractor, including those levied under the Federal Clean Water Act and the State Porter Cologne Water Quality Act.

In addition to any remedy authorized by law, so much of the money due the Contractor under the contract that shall be considered necessary by the Department may be retained by the State of California until disposition has been made of the costs and liabilities.

The retention of money due the Contractor shall be subject to the following:

1. The Department will give the Contractor 30 days notice of its intention to retain funds from any partial payment which may become due to the Contractor prior to acceptance of the contract. Retention of funds from any payment made after acceptance of the contract may be made without prior notice to the Contractor.
2. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications.
3. If the Department has retained funds and it is subsequently determined that the State is not subject to the costs and liabilities in connection with the matter for which the retention was made, the Department shall be liable for interest on the amount retained at the legal rate of interest for the period of the retention.

Conformance with the requirements of this section "Water Pollution Control," shall not relieve the Contractor from the Contractor's responsibilities, as provided in Section 7-1.11, "Preservation of Property," and Section 7-1.12, "Responsibility for Damage," of the Standard Specifications.

WATER POLLUTION CONTROL PROGRAM PREPARATION, APPROVAL AND UPDATES.—As part of the water pollution control work, a Water Pollution Control Program, hereafter referred to as the "WPCP," is required for this contract. The WPCP shall conform to the requirements in Section 7-1.01G, "Water Pollution," of the Standard Specifications, the requirements in the Handbook, and these special provisions.

No work having potential to cause water pollution, as determined by the Engineer, shall be performed until the WPCP has been approved by the Engineer.

Within 30 days after the approval of the contract, the Contractor shall submit 3 copies of the WPCP to the Engineer. The Contractor shall allow 7 days for the Engineer to review the WPCP. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the WPCP within 7 days of receipt of the Engineer's comments and shall allow 7 days for the Engineer to review the revisions. Upon the Engineer's approval of the WPCP, 3 additional copies of the WPCP incorporating the required changes shall be submitted to the Engineer. Minor changes or clarifications to the initial submittal may be made and attached as amendments to the WPCP. In order to allow construction activities to proceed, the Engineer may conditionally approve the WPCP while minor revisions or amendments are being completed.

The objectives of the WPCP shall be to identify pollution sources that may adversely affect the quality of storm water discharges associated with the project and to identify, construct, implement and maintain water pollution control measures, hereafter referred to as control measures, to reduce to the extent feasible pollutants in storm water discharges from the construction site during construction under this contract.

The WPCP shall incorporate control measures in the following categories:

1. Soil stabilization practices;
2. Sediment control practices;
3. Sediment tracking control practices;
4. Wind erosion control practices; and
5. Nonstorm water management and waste management and disposal control practices.

Specific objectives and minimum requirements for each category of control measures are contained in the Handbook.

The Contractor shall consider the objectives and minimum requirements presented in the Handbook for each of the above categories. When minimum requirements are listed for any category, the Contractor shall incorporate into the WPCP and implement on the project, one or more of the listed minimum controls required in order to meet the pollution control objectives for the category. In addition, the Contractor shall consider other control measures presented in the Handbook and shall incorporate into the WPCP and implement on the project the control measures necessary to meet the objectives of the WPCP. The Contractor shall document the selection process in accordance with the procedure specified in the Handbook. The WPCP shall include, but not be limited to, the following items as described in the Handbook:

1. Project description and Contractor's certification;
2. Project information;
3. Pollution sources, control measures, and water pollution control drawings; and
4. Amendments, if any.

The Contractor shall amend the WPCP, graphically and in narrative form, whenever there is a change in construction activities or operations which may affect the discharge of significant quantities of pollutants to surface waters, ground waters, municipal storm drain systems, or when deemed necessary by the Engineer. The WPCP shall also be amended if the WPCP has not achieved the objective of reducing pollutants in storm water discharges. Amendments shall show additional control measures or revised operations, including those in areas not shown in the initially approved WPCP, which are required on the project to control water pollution effectively. Amendments to the WPCP shall be submitted for review and approval by the Engineer in the same manner specified for the initially approved WPCP. Amendments shall be dated and attached to the on-site WPCP document.

The Contractor shall keep a copy of the WPCP, together with updates, revisions and amendments at the project site.

WPCP IMPLEMENTATION.—Upon approval of the WPCP, the Contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting and maintaining the control measures included in the WPCP and any amendments thereto and for removing and disposing of temporary control measures. Unless otherwise directed by the Engineer or specified in these special provisions, the Contractor's responsibility for WPCP implementation shall continue throughout any temporary suspension of work ordered in accordance with Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. Requirements for installation, construction, inspection, maintenance, removal and disposal of control measures are specified in the Handbook and these special provisions.

Soil stabilization practices and sediment control measures, including minimum requirements, shall be provided throughout the winter season, defined as between October 1 and May 1.

Implementation of soil stabilization practices and sediment control measures for soil-disturbed areas of the project site shall be completed, except as provided for below, no later than 20 days prior to the beginning of the winter season or upon start of applicable construction activities for projects which begin either during or within 20 days of the winter season.

Throughout the winter season, the active, soil-disturbed area of the project site shall be no more than 4.9 acres. The Engineer may approve, on a case-by-case basis, expansions of the active, soil-disturbed area limit. The Contractor shall demonstrate the ability and preparedness to fully deploy soil stabilization practices and sediment control measures to protect soil-disturbed areas of the project site before the onset of precipitation. The Contractor shall maintain a quantity of soil stabilization and sediment control materials on site equal to 125 percent of that sufficient to protect unprotected, soil-disturbed areas on the project site and shall maintain a detailed plan for the mobilization of sufficient labor and equipment to fully deploy control measures required to protect unprotected, soil-disturbed areas on the project site prior to the onset of precipitation. The Contractor shall include a current inventory of control measure materials and the detailed mobilization plan as part of the WPCP.

Throughout the winter season, soil-disturbed areas of the project site shall be considered to be nonactive whenever soil disturbing activities are expected to be discontinued for a period of 20 or more days and the areas are fully protected. Areas that will become nonactive either during the winter season or within 20 days thereof shall be fully protected with soil stabilization practices and sediment control measures within 10 days of the discontinuance of soil disturbing activities or prior to the onset of precipitation, whichever is first to occur.

Throughout the winter season, active soil-disturbed areas of the project site shall be fully protected at the end of each day with soil stabilization practices and sediment control measures unless fair weather is predicted through the following work day. The weather forecast shall be monitored by the Contractor on a daily basis. The National Weather Service forecast shall be used, or an alternative weather forecast proposed by the Contractor may be used if approved by the Engineer. If precipitation is predicted prior to the end of the following work day, construction scheduling shall be modified, as required, and the Contractor shall deploy functioning control measures prior to the onset of the precipitation.

The Contractor shall implement, year-round and throughout the duration of the project, control measures included in the WPCP for sediment tracking, wind erosion, nonstorm water management and waste management and disposal.

The Engineer may order the suspension of construction operations which create water pollution if the Contractor fails to conform to the requirements of this section "Water Pollution Control" as determined by the Engineer.

MAINTENANCE.—To ensure the proper implementation and functioning of control measures, the Contractor shall regularly inspect and maintain the construction site for the control measures identified in the WPCP. The Contractor shall identify corrective actions and time frames to address any deficient measures or reinitiate any measures that have been discontinued.

The construction site inspection checklist provided in the Handbook shall be used to ensure that the necessary measures are being properly implemented, and to ensure that the control measures are functioning adequately. The Contractor shall submit one copy of each site inspection record to the Engineer.

Inspections of the construction site shall be conducted by the Contractor to identify deficient measures, as follows:

1. Prior to a forecast storm;
2. After each storm event ;
3. At 24 hour intervals during extended precipitation events; and
4. Routinely, on a weekly basis .

If the Contractor or the Engineer identifies a deficiency in the deployment or functioning of an identified control measure, the deficiency shall be corrected by the Contractor immediately, or by a later date and time if requested by the Contractor and approved by the Engineer in writing, but not later than the onset of subsequent precipitation events. The correction of deficiencies shall be at no additional cost to the State. When any deficiency is not corrected within the timeframe prescribed by the Engineer, then the project shall be in non-compliance.

PAYMENT.—Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

The Engineer will retain an amount equal to 25 percent of the estimated value of the contract work performed during estimate periods in which the Contractor fails to conform to the requirements of this section "Water Pollution Control" as determined by the Engineer.

Retentions for failure to conform to the requirements of this section "Water Pollution Control" shall be in addition to the other retentions provided for in the contract. The amounts retained for failure of the Contractor to conform to the requirements of this section will be released for payment on the next monthly estimate for partial payment following the date that a WPCP has been implemented and maintained, and water pollution is adequately controlled, as determined by the Engineer.

10-1.04 COOPERATION

Attention is directed to Sections 7-1.14, "Cooperation," and 8-1.10, "Utility and Non-Highway Facilities," of the Standard Specifications and these special provisions.

It is anticipated that the following Contract No.04-128204, a landscape project on Routes 680/24 Interchange, adjacent to or within the project limits, may be in progress during the life of this contract.

10-1.05 PROGRESS SCHEDULE

Progress schedules are required for this contract and shall be submitted in conformance with the provisions in Section 8-1.04, "Progress Schedule," of the Standard Specifications and these special provisions.

The Contractor shall submit a progress schedule within 5 working days of award of the contract and within 5 working days of the Engineer's written request at any other times.

10-1.06 MOBILIZATION

Mobilization shall conform to the provisions in Section 11, "Mobilization," of the Standard Specifications.

10-1.07 CONSTRUCTION AREA SIGNS

Construction area signs shall be furnished, installed, maintained, and removed when no longer required in accordance with the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

The Contractor shall notify the appropriate regional notification center for operators of subsurface installations at least 2 working days, but not more than 14 calendar days, prior to commencing any excavation for construction area sign posts. The regional notification centers include but are not limited to the following:

| Notification Center | Telephone Number |
|---|----------------------------------|
| Underground Service Alert-Northern California (USA) | 1-800-642-2444 1-800-227-2600 |
| Underground Service Alert-Southern California (USA) | 1-800-422-4133 1-800-227-2600 |

All excavations required to install construction area signs shall be performed by hand methods without the use of power equipment, except that power equipment may be used if it is determined there are no utility facilities in the area of the proposed post holes.

Sign substrates for stationary mounted construction area signs may be fabricated from fiberglass reinforced plastic as specified under "Prequalified and Tested Signing and Delineation Materials" elsewhere in these special provisions.

Type IV reflective sheeting for sign panels for portable construction area signs shall conform to the requirements specified under "Prequalified and Tested Signing and Delineation Materials" elsewhere in these special provisions.

10-1.08 MAINTAINING TRAFFIC

Attention is directed to Sections 7-1.08, "Public Convenience," 7-1.09, "Public Safety," and 12, "Construction Area Traffic Control Devices," of the Standard Specifications and to the Section entitled "Portable Changeable Message Sign" and "Public Safety" elsewhere in these special provisions, and these special provisions. Nothing in these special provisions shall be construed as relieving the Contractor from the responsibilities specified in Section 7-1.09.

The minimum size specified for Type II flashing arrow signs in the table following the second paragraph of Section 12-3.03, "Flashing Arrow Signs," of the Standard Specifications is amended to read "36 inches by 72 inches".

The second and third paragraphs of Section 12-3.10, "Traffic Cones," of the Standard Specifications are amended to read:

During the hours of darkness traffic cones shall be affixed with reflective cone sleeves. The reflective sheeting of sleeves on the traffic cones shall be visible at 1,000 feet at night under illumination of legal high beam headlights, by persons with vision of or corrected to 20/20.

Reflective cone sleeves shall conform to the following:

1. Removable flexible reflective cone sleeves shall be fabricated from the reflective sheeting specified in the special provisions, have a minimum height of 13 inches and shall be placed a maximum of 3 inches from the top of the cone. The sleeves shall not be in place during daylight hours.
2. Permanently affixed semitransparent reflective cone sleeves shall be fabricated from the semitransparent reflective sheeting specified in the special provisions, have a minimum height of 13 inches, and shall be placed a maximum of 3 inches from the top of the cone. Traffic cones with semitransparent reflective cone sleeves may be used during daylight hours.
3. Permanently affixed double band reflective cone sleeves shall have 2 white reflective bands. The top band shall be 6 inches in height, placed a maximum of 4 inches from the top of the cone. The lower band shall be 4 inches in height, placed 2 inches below the bottom of the top band. Traffic cones with double band reflective cone sleeves may be used during daylight hours.

The type of reflective cone sleeve used shall be at the option of the Contractor. Only one type of reflective cone sleeve shall be used on the project.

The C16 and C17 designations of the signs shown on the detail "Entrance Ramp Without Turning Pockets" of Standard Plan T14 are amended to designate the signs as R16 and R17, respectively.

Lane closures shall conform to the provisions in the section of these special provisions entitled "Traffic Control System for Lane Closure."

Personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders of local streets, including any section closed to public traffic.

Personal vehicles of the Contractor's employees shall not be parked within the freeway right of way

The Contractor shall notify local authorities of his intent to begin work at least 5 days before work is begun. The Contractor shall cooperate with local authorities relative to handling traffic through the area and shall make his own arrangements relative to keeping the working area clear of parked vehicles.

Whenever vehicles or equipment are parked on the freeway shoulder within 6 feet of a traffic lane, the shoulder area shall be closed as shown on the plans.

Except as otherwise provided in these special provisions, freeway lanes and freeway to freeway connector lanes shall be closed only during the hours shown on the Lane Closure charts included in this section "Maintaining Traffic." Except work required under said Sections 7-1.08 and 7-1.09, work that interferes with public traffic shall be performed only during the hours shown for lane closures.

Two lanes at a time may be closed during the erection and removal of scaffolding and placement of temporary railing (Type K), during the hours shown on the Lane Closure Charts unless otherwise permitted by the Engineer.

The Contractor shall notify the Engineer, in writing, 10 calendar days prior to closing the lanes on the freeway or connector. Special advance notice publicity signs, as shown on the plans, shall be posted as directed by the Engineer, a minimum of 7 days prior to the actual closure.

The Contractor shall furnish special freeway detour signs as shown on the plans to erect along the detour routes as directed by the Engineer.

Full compensation for furnishing, erecting, maintaining, and removing special signs for detour, and special advance notice publicity signs shall be considered as included in the contract lump sum price paid for construction area signs and no additional payment will be made therefor.

All aforementioned special signs shall become the property of the Contractor at the conclusion of this project and shall be removed from the worksite.

The Contractor shall provide the following minimum advance notification in writing to the Engineer for any closure:

| | |
|----------------|------------------------------|
| LOCATION | MINIMUM ADVANCE NOTIFICATION |
| Freeway Lane | 24 hours |
| Connector Lane | 24 hours |

Closures will not be allowed if the Contractor fails to provide the minimum advance notification to the Engineer as stated above. All closures shall conform to the requirements set forth elsewhere in these special provisions.

Designated legal holidays are: January 1st, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, November 11th, Thanksgiving Day, and December 25th. When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When November 11th falls on a Saturday, the preceding Friday shall be a designated legal holiday.

Minor deviations from the requirements of this section concerning hours of work which do not significantly change the cost of the work may be permitted upon the written request of the Contractor if in the opinion of the Engineer public traffic will be better served and the work expedited. Such deviations shall not be adopted until the Engineer has indicated his written approval. All other modifications will be made by contract change order.

| LANE CLOSURE CHART NO. 1 | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------|---|---|---|---|---|---|---|---|---|----|--|----|---|---|---|---|---|---|---|---|---|----|----|
| DIRECTION: Southbound - Westbound | | | | | | | | | | | | LOCATION: Connector from SB Route 680 to WB Route 24 | | | | | | | | | | | | |
| FROM HOUR TO HOUR | a.m. | | | | | | | | | | | p.m. | | | | | | | | | | | | |
| | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Mondays through Thursdays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 |
| Fridays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 |
| Saturdays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 |
| Sundays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 |
| Working Day before designated legal holiday | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 |
| Designated legal holidays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 |

Legend:

- 1 Two lanes maybe closed
- No lane closure permitted.

REMARKS:

Stage 1 Construction at Pier 10 on Walnut Creek OC (BART) Superstructure.

| LANE CLOSURE CHART NO. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----|---|---|---|---|---|---|---|---|---|----|--|----|---|---|---|---|------|---|---|---|---|----|----|----|--|--|--|--|
| DIRECTION: Northbound | | | | | | | | | | | | LOCATION: On Route 680-From Ygnacio Valley Rd. Off-ramp to Trinity Ave. UC | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | a.m. | | | | | | p.m. | | | | | | | | | | | |
| FROM HOUR TO HOUR | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | |
| Mondays through Thursdays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Fridays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Saturdays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Sundays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Working Day before designated legal holiday | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Designated legal holidays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |

Legend:

- Two lanes maybe closed
- No lane closure permitted.

REMARKS:
 Stage 1 Construction at Pier 14 on the Walnut Creek OC (BART) Superstructure.

| LANE CLOSURE CHART NO. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----|---|---|---|---|---|---|---|---|---|----|--|----|---|---|---|---|------|---|---|---|---|----|----|----|--|--|--|--|
| DIRECTION: Southbound - Westbound | | | | | | | | | | | | LOCATION: On Route 680-From Ygnacio Valley Rd. Off-ramp to Trinity Ave. UC | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | a.m. | | | | | | p.m. | | | | | | | | | | | |
| FROM HOUR TO HOUR | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | |
| Mondays through Thursdays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Fridays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Saturdays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Sundays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Working Day before designated legal holiday | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Designated legal holidays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |

Legend:

- Two lanes maybe closed
- No lane closure permitted.

REMARKS:
 Stage 2 Construction at Pier 11 on the Walnut Creek OC (BART) Superstructure.

| LANE CLOSURE CHART NO. 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----|---|---|---|---|---|---|---|---|---|----|---|----|---|---|---|---|------|---|---|---|---|----|----|----|--|--|--|--|
| DIRECTION: Southbound - Southbound | | | | | | | | | | | | LOCATION: Connector from SB Route 680 to SB Route 680 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | a.m. | | | | | | p.m. | | | | | | | | | | | |
| FROM HOUR TO HOUR | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | |
| Mondays through Thursdays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Fridays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Saturdays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Sundays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Working Day before designated legal holiday | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Designated legal holidays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |

Legend:

- 1 Two lanes maybe closed
- No lane closure permitted.

REMARKS:

Stage 2 Construction at Pier 11 on the Walnut Creek OC (BART) Superstructure.

Mainline and shoulder of Rte. 680 On-Ramp from Ygnacio Valley Rd. mat be closed simultaneously.

| LANE CLOSURE CHART NO. 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----|---|---|---|---|---|---|---|---|---|----|---|----|---|---|---|---|------|---|---|---|---|----|----|----|--|--|--|--|
| DIRECTION: Eastbound - Northbound | | | | | | | | | | | | LOCATION: Connector from SB Route 680 to SB Route 680 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | a.m. | | | | | | p.m. | | | | | | | | | | | |
| FROM HOUR TO HOUR | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | |
| Mondays through Thursdays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Fridays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Sundays | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Working Day before designated legal holiday | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Designated legal holidays | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | |

Legend:

- 1 Two lanes maybe closed
- No lane closure permitted.

REMARKS:

Stage 2 Construction at Pier 13 on the Walnut Creek OC (BART) Superstructure.

| LANE CLOSURE CHART NO. 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----|---|---|---|---|---|---|---|---|---|----|---|----|---|---|---|---|------|---|---|---|---|----|----|----|--|--|--|--|
| DIRECTION: Northbound - Northbound | | | | | | | | | | | | LOCATION: Connector from NB Route 680 to NB Route 680 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | a.m. | | | | | | p.m. | | | | | | | | | | | |
| FROM HOUR TO HOUR | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | |
| Mondays through Thursdays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Fridays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Saturdays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Sundays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Working Day before designated legal holiday | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Designated legal holidays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | |

Legend:

- 1 Two lanes maybe closed
- No lane closure permitted.

REMARKS:

Stage 2 Construction at Pier 13 on the Walnut Creek OC (BART) Superstructure.

| LANE CLOSURE CHART NO. 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----|---|---|---|---|---|---|---|---|---|----|---|----|---|---|---|---|------|---|---|---|---|----|----|----|--|--|--|--|
| DIRECTION: Southbound - Southbound | | | | | | | | | | | | LOCATION: Connector from NB Route 680 to NB Route 680 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | a.m. | | | | | | p.m. | | | | | | | | | | | |
| FROM HOUR TO HOUR | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | |
| Mondays through Thursdays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Fridays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Saturdays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Sundays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Working Day before designated legal holiday | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Designated legal holidays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |

Legend:

- 1 Two lanes maybe closed
- No lane closure permitted.

REMARKS:

Stage 3 Construction at Pier 12 on the Walnut Creek OC (BART) Superstructure.

| LANE CLOSURE CHART NO. 8 | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------|---|---|---|---|---|--|---|---|---|----|------|----|---|---|---|---|---|---|---|---|---|----|----|
| DIRECTION: Eastbound - Northbound | | | | | | | LOCATION: Connector from EB Route 24 to NB Route 680 | | | | | | | | | | | | | | | | | |
| FROM HOUR TO HOUR | a.m. | | | | | | | | | | | p.m. | | | | | | | | | | | | |
| | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Mondays through Thursdays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | 1 |
| Fridays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| Saturdays | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| Sundays | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | 1 |
| Working Day before designated legal holiday | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| Designated legal holidays | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | 1 |

Legend:

- 1 Two lanes maybe closed
- No lane closure permitted.

REMARKS:

Stage 3 Construction at Pier 12 on the Walnut Creek OC (BART) Superstructure.

10-1.09 TRAFFIC CONTROL SYSTEM FOR LANE CLOSURES

A traffic control system shall consist of closing lanes in accordance with the provisions of Section 12, "Construction Area Traffic Control", and the provisions under "Maintaining Traffic" and "Construction Area Signs" of the Standard Specifications.

The provisions in this section will not relieve the Contractor of the responsibility to take such measures as may be necessary to comply with the provisions in Section 7-1.02, "Traffic Safety," of the Standard Specifications.

Each vehicle used to place, maintain and remove components of a traffic control system on multilane highways shall be equipped with a Type II flashing arrow sign which shall be in operation when the vehicle is being used for placing, maintaining, or removing the components. Vehicles equipped with Type II flashing arrow sign not involved in placing, maintaining, or removing the components when operated within a stationary type lane closure shall only display the caution display mode. The sign shall be controllable by the operator of the vehicle while the vehicle is in motion. The flashing arrow sign shown on the plans shall not be used on the vehicles which are doing the placing, maintaining, and removing, of components of a traffic control system, and shall be in place before a lane closure requiring its use is completed.

The traffic cones shown to be placed transversely across closed traffic lanes and shoulders on the plans entitled "Traffic Control System for Lane Closures on Freeways and Expressways" and "Traffic Control System for Lane and Complete Closures on Freeways and Expressways" shall not be placed.

If any component in the traffic control system is displaced, or ceases to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair the component to its original condition or replace the component and shall restore the component to its original location.

When lane closures are made for work periods only, at the end of each work period, all components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way, shall be removed from the traveled way and shoulder. If the Contractor so elects, the components may be stored at selected central locations, approved by the Engineer, within the limits of the highway right of way.

The contract lump sum price paid for traffic control system shall include full compensation for furnishing all labor, materials (including signs), tools, equipment and incidentals, and for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing and disposing of the components of the traffic control system as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The adjustment provisions in Section 4-1.03, "Changes," of the Standard Specifications, shall not apply to the item of traffic control system. Adjustments in compensation for traffic control system will be made only for increased or decreased traffic control system required by changes ordered by the Engineer and will be made on the basis of the cost of the increased or decreased traffic control necessary. Such adjustment will be made on a force account basis as provided in Section 9-1.03, "Force Account Payment," of the Standard Specifications for increased work, and estimated on the same basis in the case of decreased work.

Traffic control system required by work which is classed as extra work, as provided in Section 4-1.03D of the Standard Specifications, will be paid for as a part of the extra work.

10-1.10 CLOSURE REQUIREMENTS AND CONDITIONS

Lane closures shall conform to the provisions in "Maintaining Traffic" of these special provisions and these special provisions.

The term closure, as used herein, is defined as the closure of a traffic lane or lanes, including ramp or connector lanes, within a single traffic control system.

CLOSURE SCHEDULE

By noon Monday, the Contractor shall submit a written schedule of planned closures for the following week period, defined as Friday noon through the following Friday noon.

The Closure Schedule shall show the locations and times when the proposed closures are to be in effect and a contingency plan that addresses handling public traffic if a closure is not reopened by the specified time. Closure schedule request forms are available for this purpose. Closure schedules submitted with incomplete, unintelligible or inaccurate information will be returned for correction. The Contractor will be notified of disapproved closures or closures that require coordination with other parties as a condition of approval.

Amendments to the Closure Schedule, including adding additional closures, shall be submitted to the Engineer, in writing, at least 3 working days in advance of a planned closure. Approval of amendments to the Closure Schedule will be at the discretion of the Engineer.

The Contractor shall confirm, in writing, scheduled closures at least 3 working days prior to the date on which the closure is to be made. Approval or denial of scheduled closures will be made not less than 2 working days prior to the date on which the closure is to be made. Closures not confirmed or approved will not be allowed.

Confirmed closures that are cancelled due to unsuitable weather may be rescheduled at the discretion of the Engineer for the next working day.

CONTINGENCY PLAN

The Contractor shall prepare a contingency plan for reopening closures to public traffic. The Contractor shall submit the contingency plan for a given operation to the Engineer within one working day of the Engineer's request.

LATE REOPENING OF CLOSURES

If a closure is not reopened to public traffic by the specified time, work shall be suspended in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. The Contractor shall not make further closures until the Engineer has accepted a work plan, submitted by the Contractor, that will insure that future closures will be reopened to public traffic at the specified time. The Engineer will have 2 working days to accept or reject the Contractor's proposed work plan. The Contractor will not be entitled to any compensation for the suspension of work resulting from the late reopening of closures.

For each 10-minute interval, or fraction thereof past the time specified to reopen the closure, the Department will deduct \$5,175.00 per interval from moneys due or that may become due the Contractor under the contract.

COMPENSATION

The Contractor shall notify the Engineer of delay in the Contractor's operations due to the following conditions, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of those conditions, and the Contractor's loss due to that delay could not have been avoided by rescheduling the affected closure or by judicious handling of forces, equipment and plant, the delay will be considered a right of way delay within the meaning of Section 8-1.09, "Right of Way Delays," and compensation for the delay will be determined in conformance with the provisions in Section 8-1.09:

- A. The Contractor's proposed Closure Schedule is denied and planned closures are within the time frame allowed for closures in "Maintaining Traffic" of these special provisions, except that the Contractor will not be entitled to compensation for amendments to the Closure Schedule that are not approved.
- B. The Contractor is denied a confirmed closure.

If the Engineer directs the Contractor to remove a closure prior to the time designated in the approved Closure Schedule, delay to the Contractor's schedule due to removal of the closure will be considered a right of way delay within the meaning of Section 8-1.09, "Right of Way Delays," and compensation for the delay will be determined in conformance with the provisions in Section 8-1.09.

10-1.11 PORTABLE CHANGEABLE MESSAGE SIGN

Two each portable changeable message signs shall be furnished, placed, operated, and maintained at locations as determined by the Engineer and shall conform to the provisions of Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Attention is directed to "Maintaining Traffic" of these special provisions concerning the use of the portable changeable message signs.

Full compensation for portable changeable message sign shall be considered as included in the contract lump sum price paid for traffic control system and no additional compensation will be made therefor.

10-1.12 CHANNELIZERS

Channelizers shall be surface mounted type and shall be furnished, placed and maintained at the locations shown on the plans and shall conform to the provisions in Sections 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Channelizers shall conform to the provisions in "Prequalified and Tested Signing and Delineation Materials," elsewhere in these special provisions.

Channelizer posts shall be orange in color.

10-1.13 TEMPORARY RAILING

Temporary railing (Type K) shall be placed at the locations shown on the plans, specified in these special provisions or in the Standard Specifications or ordered by the Engineer, and shall conform to the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Approaching ends of temporary railing (Type K) shall be protected with temporary crash cushion modules.

The fourth paragraph of Section 12-4.01, "Measurement and Payment," of the Standard Specifications is amended to read:

When the Engineer's Estimate includes a contract item for temporary railing (Type K), the temporary railing (Type K) will be measured by the linear foot along the top of the railing, at each location shown on the plans, specified, or ordered by the Engineer. If the Engineer orders a lateral move of the temporary railing (Type K), and the repositioning is not shown on the plans, moving the temporary railing will be paid for as extra work as provided in Section 4-1.03D and the temporary railing will not be measured in the new position. Temporary railing (Type K) placed in excess of the length shown, specified, or ordered will not be paid for. The contract price paid per linear foot for temporary railing (Type K) shall include full compensation for furnishing all labor, materials (including reinforcement and Type P marker panels), tools, equipment and incidentals, and for doing all the work involved in furnishing, placing, maintaining, repairing, replacing, and removing the temporary railing, including excavation and backfill, drilling holes and bonding threaded rods or dowels when required, removing threaded rods or dowels and filling the drilled holes with mortar, furnishing and installing reflectors, and moving and replacing removable panels as required, complete in place, as shown on the plans, as specified in these specifications and the special provisions, and as directed by the Engineer.

Reflectors and adhesives on temporary railing (Type K) shall conform to the provisions in "Prequalified and Tested Signing and Delineation Materials," of these special provisions.

Full compensation for reflectors and adhesive for temporary railing shall be considered as included in the contract price paid per linear foot for temporary railing (Type K) and no additional compensation will be made therefor.

Temporary railing (Type K), conforming to the details shown on 1995 Standard Plan T3 or 1997 Standard Plan T3, may be used. Temporary railing (Type K) fabricated prior to January 1, 1993, and conforming to 1988 Standard Plan B11-30 may be used, provided the fabrication date is printed on the required Certificate of Compliance.

The Contractor's attention is directed to the provisions in "Public Safety" and "Order of Work" elsewhere in these special provisions.

Temporary railing (Type K) placed in accordance with the provisions in "Public Safety" elsewhere in these special provisions will not be measured nor paid for.

Temporary terminal section (Type K) for connecting temporary railing (Type K) to Type 50 concrete barrier shall consist of either new or undamaged used precast units, as shown on the plans. Fabricating, placing, painting and removal of the units shall conform to the requirements specified for temporary railing (Type K).

Closure plate for the temporary terminal section (Type K) shall be of a good commercial quality steel shaped to conform to cross section of the barriers. Mechanical expansion anchors for connecting closure plate to railings shall conform to the requirements specified for concrete anchorage devices in Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications.

Temporary terminal section (Type K) will be measured and paid for by the unit from actual count.

The contract unit price paid for temporary terminal section (Type K) shall include full compensation for furnishing all labor, materials (including reinforcement and concrete anchorage devices), tools, equipment, and incidentals, and for doing all the work involved in furnishing, placing, maintaining, repairing, replacing, and removing temporary terminal section (Type K), complete in place, including excavation, backfill, grout and concrete, and connecting to concrete barrier, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.14 TEMPORARY CRASH CUSHION MODULE

This work shall consist of furnishing, installing, and maintaining sand filled temporary crash cushion modules in groupings or arrays at each location shown on the plans, as specified in these special provisions or where designated by the Engineer. The grouping or array of sand filled modules shall form a complete sand filled temporary crash cushion in conformance with the details shown on the plans and these special provisions.

Attention is directed to "Public Safety", "Order of Work", and "Temporary Railing" of these special provisions.

GENERAL

Whenever the work or the Contractor's operations establishes a fixed obstacle, the exposed fixed obstacle shall be protected with a sand filled temporary crash cushion. The sand filled temporary crash cushion shall be in place prior to opening the lanes adjacent to the fixed obstacle to public traffic.

Sand filled temporary crash cushions shall be maintained in place at each location, including times when work is not actively in progress. Sand filled temporary crash cushions may be removed during a work period for access to the work provided that the exposed fixed obstacle is 15 feet or more from a lane carrying public traffic and the temporary crash cushion is reset to protect the obstacle prior to the end of the work period in which the fixed obstacle was exposed. When no longer required, as determined by the Engineer, sand filled temporary crash cushions shall be removed from the site of the work.

MATERIALS

At the Contractor's option, the modules for use in sand filled temporary crash cushions shall be either Energite III Inertial Modules, Fitch Inertial Modules or Traffix Sand Barrels manufactured after March 31, 1997, or equal:

- A. Energite III Inertial Modules, manufactured by Energy Absorption Systems, Inc., One East Wacker Drive, Chicago, IL 60601-2076, Telephone 1-312-467-6750, FAX 1-800-770-6755.
 - 1. Distributor (Northern): Traffic Control Service, Inc., 8585 Thys Court, Sacramento, CA 95828, Telephone 1-800-884-8274, FAX 1-916-387-9734
 - 2. Distributor (Southern): Traffic Control Service, Inc., 1881 Betmor Lane, Anaheim, CA 92805, Telephone 1-800-222-8274, FAX 1-714-937-1070.
- B. Fitch Inertial Modules, manufactured by Roadway Safety Service, Inc., 1050 North Rand Road, Wauconda, IL 60084, Telephone 1-800-426-0839, FAX 1-847-487-9820.
 - 1.. Distributor (Northern): Traffic Control Service, Inc., 8585 Thys Court, Sacramento, CA 95828, Telephone 1-800-884-8274, FAX 1-916-387-9734
 - 2. Distributor (Southern): Traffic Control Service, Inc., 1881 Betmor Lane, Anaheim, CA 92805, Telephone 1-800-222-8274, FAX 1-714-937-1070.

- C. Traffix Sand Barrels, manufactured by Traffix Devices, Inc., 220 Calle Pintoresco, San Clemente, CA 92672, Telephone 1-949-361-5663, FAX 1-949-361-9205.
1. Russ Enterprises, Inc., 1533 Berger Drive, San Jose, CA 95112, Telephone 1-408-287-4303, FAX 1-408-287-1929.
2. Statewide Safety, P.O. Box 1440, Pismo Beach, CA 93448, Telephone 1-800-559-7080, FAX 1-805-929-5786.

Modules contained in each temporary crash cushion shall be of the same type at each location. The color of the modules shall be the standard yellow color, as furnished by the vendor, with black lids. The modules shall exhibit good workmanship free from structural flaws and objectionable surface defects. The modules need not be new. Good used undamaged modules conforming to color and quality of the types specified herein may be utilized. If used Fitch modules requiring a seal are furnished, the top edge of the seal shall be securely fastened to the wall of the module by a continuous strip of heavy duty tape.

Modules shall be filled with sand in conformance with the manufacturer's directions, and to the sand capacity in pounds for each module shown on the plans. Sand for filling the modules shall be clean washed concrete sand of commercial quality. At the time of placing in the modules, the sand shall contain not more than 7 percent water as determined by California Test 226.

Modules damaged due to the Contractor's operations shall be repaired immediately by the Contractor at the Contractor's expense. Modules damaged beyond repair, as determined by the Engineer, due to the Contractor's operations shall be removed and replaced by the Contractor at the Contractor's expense.

INSTALLATION

Temporary crash cushion modules shall be placed on movable pallets or frames conforming to the dimensions shown on the plans. The pallets or frames shall provide a full bearing base beneath the modules. The modules and supporting pallets or frames shall not be moved by sliding or skidding along the pavement or bridge deck.

A Type R or P marker panel shall be attached to the front of the crash cushion as shown on the plans, when the closest point of the crash cushion array is within 12 feet of the traveled way. The marker panel, when required, shall be firmly fastened to the crash cushion with commercial quality hardware or by other methods determined by the Engineer.

At the completion of the project, temporary crash cushion modules, sand filling, pallets or frames, and marker panels shall become the property of the Contractor and shall be removed from the site of the work. Temporary crash cushion modules shall not be installed in the permanent work.

MEASUREMENT AND PAYMENT

Temporary crash cushion modules will be measured by the unit as determined from the actual count of modules used in the work or ordered by the Engineer at each location. Temporary crash cushion modules placed in conformance with the provisions in "Public Safety" of these special provisions and modules placed in excess of the number specified or shown will not be measured nor paid for.

Repairing modules damaged by public traffic will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications. Modules damaged beyond repair by public traffic, when ordered by the Engineer, shall be removed and replaced immediately by the Contractor. Modules replaced due to damage by public traffic will be measured and paid for as temporary crash cushion module.

If the Engineer orders a lateral move of the sand filled temporary crash cushions and the repositioning is not shown on the plans, moving the sand filled temporary crash cushion will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications and these temporary crash cushion modules will not be counted for payment in the new position.

The contract unit price paid for temporary crash cushion module shall include full compensation for furnishing all labor, materials (including sand, pallets or frames and marker panels), tools, equipment, and incidentals, and for doing all the work involved in furnishing, installing, maintaining, moving, and resetting during a work period for access to the work, and removing from the site of the work when no longer required (including those damaged by public traffic) sand filled temporary crash cushion modules, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.15 EXISTING HIGHWAY FACILITIES

The work performed in connection with various existing highway facilities shall conform to the provisions in Section 15, "Existing Highway Facilities," of the Standard Specifications and these special provisions.

Plans of the existing bridges may be requested by fax from the Office of Structure Maintenance and Investigations, 1801 30th Street, Sacramento, CA, Fax (916) 227-8357.

Plans of existing BART bridges, including boring logs, are available for inspection between the hours of 9:00 a.m. and 4:00 p.m. at the following location:

BART Metro Building
101 8th Street, Room 002
Oakland, California

Arrangements for inspecting existing plans shall be made in advance with Jackie Edwards at (510) 464-6848.

Plans of existing bridges available to the Contractor are reproductions of the original contract plans with significant changes noted and working drawings and do not necessarily show normal construction tolerances and variances. Where dimensions of new construction required by this contract are dependent on the dimensions of the existing bridges, the Contractor shall verify the controlling field dimensions and shall be responsible for adjusting dimensions of the work to fit existing conditions.

The existing paint systems on Bridge Number 28-0258, containing lead, have been removed under a previous contract. However, if paint containing lead is encountered, any work that disturbs the existing paint system shall conform to the following provisions.

Any work that disturbs the existing paint system will expose workers to health hazards and will (1) produce debris containing heavy metal in amounts that exceed the thresholds established in Titles 8 and 22 of the California Code of Regulations or (2) produce toxic fumes when heated. All debris produced when the existing paint system is disturbed shall be contained.

DEBRIS CONTAINMENT AND COLLECTION PROGRAM.—Prior to starting work, the Contractor shall submit a debris containment and collection program to the Engineer in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The program shall identify materials, equipment and methods to be used when the existing paint system is disturbed and shall include working drawings of any containment system, loads applied to the bridge by any containment structure, and provisions for ventilation and air movement for visibility and worker safety.

If the measures being taken by the Contractor are inadequate to provide for the containment and collection of debris produced when the existing paint system is disturbed, the Engineer will direct the Contractor to revise the operations and the debris containment and collection program. The directions will be in writing and will specify the items of work for which the Contractor's debris containment and collection program are inadequate. No further work shall be performed on the items until the debris containment and collection programs are adequate and, if required, a revised program has been approved for the containment and collection of debris produced when the existing paint system is disturbed.

The Engineer will notify the Contractor of the approval or rejection of any submitted or revised debris containment and collection program within 2 weeks of submittal of the Contractor's program or revised program.

The State will not be liable to the Contractor for failure to approve all or any portion of an originally submitted or revised debris containment and collection program, nor for any delays to the work due to the Contractor's failure to submit acceptable programs.

SAFETY AND HEALTH PROVISIONS.—Attention is directed to Section 7-1.06, "Safety and Health Provisions," of the Standard Specifications. Work practices and worker health and safety shall conform to the Construction Safety Orders Title 8, of the California Code of Regulations including Section 1532.1, "Lead."

The Contractor shall furnish the Engineer a written Code of Safe Practices and shall have an Injury and Illness Prevention Program and a Hazard Communication Program in conformance with the provisions of Construction Safety Orders 1509 and 1510.

Prior to starting work that disturbs the existing paint system and at such times when revisions to the program are required by Section 1532.1, "Lead," the Contractor shall submit the compliance programs required in subsection (e)(2), "Compliance Program," of Section 1532.1, "Lead," of the Construction Safety Orders to the Engineer in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The compliance programs shall include the data specified in subsections (e)(2)(B) and (e)(2)(C) of Section 1532.1, "Lead." Approval of the compliance programs by the Engineer will not be required. The compliance programs shall be reviewed and signed by a Certified Industrial Hygienist (CIH) who is certified in comprehensive practice by the American Board of Industrial Hygiene (ABIH). Copies of all air monitoring or jobsite inspection reports made by or under the direction of the CIH in conformance with Section 1532.1, "Lead," shall be furnished to the Engineer within 10 days after date of monitoring or inspection.

DEBRIS HANDLING.—Debris produced when the existing paint system is disturbed shall not be temporarily stored on the ground. Debris accumulated inside the containment system shall be removed before the end of each work shift. Debris shall be stored in approved leak proof containers and shall be handled in such a manner that no spillage will occur.

Disposal of debris produced when the existing paint system is disturbed shall be performed in accordance with all applicable Federal, State and Local hazardous waste laws. Laws that govern this work include:

1. Health and Safety Code, Division 20, Chapter 6.5 (California Hazardous Waste Control Act).
2. Title 22; California Code of Regulations, Chapter 30 (Minimum Standard for Management of Hazardous and Extremely Hazardous Materials).
3. Title 8, California Code of Regulations.

Except as otherwise provided herein, debris produced when the existing paint system is disturbed shall be disposed of by the Contractor at an approved Class 1 disposal facility in conformance with the requirements of the disposal facility operator. The debris shall be hauled by a transporter currently registered with the California Department of Toxic Substances Control using correct manifesting procedures and vehicles displaying current certification of compliance. The Contractor shall make all arrangements with the operator of the disposal facility and perform any testing of the debris required by the operator.

At the option of the Contractor, the debris produced when the existing paint system is disturbed may be disposed of by the Contractor at a facility equipped to recycle the debris, subject to the following requirements:

Copper slag abrasive blended by the supplier with a calcium silicate compound shall be used for blast cleaning.

The debris produced when the existing paint system is disturbed shall be tested by the Contractor to confirm that the solubility of the heavy metals is below regulatory limits and that the debris may be transported to the recycling facility as a non-hazardous waste.

The Contractor shall make all arrangements with the operator of the recycling facility and perform any testing of the debris produced when the existing paint system is disturbed that is required by the operator.

WORK AREA MONITORING.—The Contractor shall perform work area monitoring of the ambient air and soil in and around the work area at the bridge site to verify the effectiveness of the containment system. The work area monitoring shall consist of collecting, analyzing and reporting of air and soil test results, and recommending any required corrective action when specified exposure levels are exceeded. The work area monitoring shall be carried out under the direction of a CIH. The samples shall be collected at locations designated by the Engineer.

Air samples shall be collected and analyzed in accordance with National Institute for Occupational Safety and Health (NIOSH) methods. Lead air samples shall be collected and analyzed in conformance with NIOSH Method 7082, with a limit of detection of at least $0.5 \mu\text{g}/\text{m}^3$. Air samples for other metals shall be collected and analyzed in conformance with NIOSH Method 7300, with a limit of detection of at least one percent of the appropriate Permissible Exposure Limits (PELs) of California/Occupational Safety and Health Administration (Cal/OSHA). Alternative methods of sample collection and analysis, with equivalent limits of detection, may be used at the option of the Contractor.

The airborne metals exposure, outside either the containment system or work areas, shall not exceed the lower of either: (1) 10 percent of the Action Level specified for lead by Section 1532.1, "Lead," or (2) 10 percent of the appropriate PELs specified for other metals by Cal/OSHA.

The air samples shall be collected at least once per week during progress of work that disturbs the existing paint system. All air samples shall be analyzed within 48 hours at a facility accredited by the Environmental Lead Laboratory Accreditation Program of the American Industrial Hygiene Association (AIHA). When corrective action is recommended by the CIH, additional samples may be required by the Engineer to be taken, at the Contractor's expense.

Six soil samples shall be collected prior to start of work, and 6 soil samples shall be collected within 36 hours following completion of cleaning operations of existing structural steel. Where the cleaning operations extend over large areas of soil or many separate areas of soil at each bridge site, the samples shall be collected at various times during the contract when determined by the Engineer. A soil sample shall consist of 5 plugs, each 3/4 inch in diameter and 1/2 inch deep, taken at each corner and center of a one foot square area. Soil samples shall be analyzed for total lead in conformance with Method 3050 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846 published by the United States Environmental Protection Agency.

There shall be no increase in the concentrations of heavy metal in the soil in the area affected when the existing paint system is disturbed. When soil sampling, after completion of work that disturbs the existing paint system, shows an increase in the concentrations of heavy metal, the area affected shall be cleaned and resampled at the Contractor's expense until soil sampling and testing shows concentrations of heavy metal less than or equal to the concentrations collected prior to start of work.

In areas where there is no exposed soil, there shall be no visible increase in the concentrations of heavy metal on the area affected when the existing paint system is disturbed. Any visible increase in the concentrations of heavy metal, after completion of work that disturbs the existing paint system, shall be removed at the Contractor's expense.

Air and soil sample laboratory analysis results, including results of additional samples taken after corrective action as recommended by the CIH, shall be submitted to the Engineer. The results shall be submitted both verbally within 48 hours after sampling and in writing with a copy to the Contractor, within 5 days after sampling. Sample analysis reports shall be prepared by the CIH as follows:

For both air and soil sample laboratory analysis results, the date and location of sample collection, sample number, contract number, bridge number, full name of the structure as shown on the contract plans, and District-County-Route-Post mile will be required.

For air sample laboratory analysis results, the following will be required:

1. List of emission control measures in place when air samples were taken.
2. Air sample results shall be compared to the appropriate PELs.
3. Chain of custody forms.
4. Corrective action recommended by the CIH to ensure airborne metals exposure, outside either the containment system or work areas, is within specified limits.

For soil sample laboratory analysis results, the concentrations of heavy metal expressed as parts per million will be required.

CONTAINMENT SYSTEM.—The containment system shall consist of, at the option of the Contractor, (1) a ventilated containment structure, (2) vacuum shrouded surface preparation equipment and drapes, tarps or other materials, or (3) equivalent containment system. The containment system shall contain all water, resulting debris, and visible dust produced when the existing paint system is disturbed.

The containment system shall provide a vertical clearance of 16 feet 6 inches and a horizontal clearance of 32 feet for the passage of public traffic.

Falsework or supports for the ventilated containment structure shall not extend below the vertical clearance level nor to the ground line at any location within the roadbed.

The ventilated containment structure shall conform to the provisions for falsework in Section 51-1.06, "Falsework," of the Standard Specifications.

The minimum total design load of the ventilated containment structure shall consist of the sum of the dead and live vertical loads. Dead load shall consist of the actual load of the ventilated containment structure. Live loads shall consist of a uniform load of not less than 45 pounds per square foot, which includes 20 pounds per square foot of sand load, applied over the area supported, and in addition, a moving 1000 pound concentrated load shall be applied to produce maximum stress in the main supporting elements. Assumed horizontal loads need not be included in the design of the ventilated containment structure.

The ventilated containment structure shall be supported with either rigid or flexible supports. The rigid or flexible containment materials on the containment structure shall retain air borne particles but may allow air flow through the containment materials. Flexible materials shall be supported and fastened to prevent escape of abrasive and blast materials due to whipping from traffic or wind and to maintain the clearances.

All mating joints between the ventilated containment structure and the bridge shall be sealed. Sealing may be by overlapping of seams when using flexible materials or by using tape, caulking, or other sealing measures.

Multiple flap overlapping door tarps shall be used at entry ways to the ventilated containment structure to prevent dust or debris from escaping.

Baffles, louvers, flapper seals or ducts shall be used at make-up air entry points to the ventilated containment structure to prevent escape of abrasives and resulting surface preparation debris.

The ventilated containment structure shall be properly maintained while work is in progress and shall not be changed from the approved working drawings without prior approval of the Engineer.

The ventilation system in the ventilated containment structure shall be of the forced input air flow type with fans or blowers.

Negative air pressure shall be employed within the ventilated containment structure and will be verified by visual methods by observing the concave nature of the containment materials while taking into account wind effects, or by using smoke or other visible means to observe air flow. The input air flow shall be properly balanced with the exhaust capacity throughout the range of operations.

The exhaust air flow of the ventilation system in the ventilated containment structure shall be forced into dust collectors (wet or dry) or bag houses.

PROTECTIVE WORK CLOTHING AND HYGIENE FACILITIES.—Wherever there is exposure or possible exposure to heavy metals or silica dust at the bridge site, the Contractor shall, for not more than 3 State personnel: (1) furnish, clean and replace protective work clothing and (2) provide access to hygiene facilities. The furnishing, cleaning and replacement of protective work clothing, and hygiene facilities shall conform to the provisions of subsections (g), "Protective work clothing and equipment," and (i), "Hygiene facilities and practices," of Section 1532.1, "Lead," of the Construction Safety Orders.

The protective work clothing and access to hygiene facilities shall be provided during exposure or possible exposure to heavy metals or silica dust at the bridge site and application of the undercoats of paint.

Protective work clothing and hygiene facilities shall be inspected and approved by the Engineer before being used by State personnel.

The protective work clothing shall remain the property of the Contractor at the completion of the contract.

PAYMENT.—Full compensation for the containment system, protective work clothing and access to hygiene facilities for State personnel; and handling of debris produced when the existing paint system is disturbed, including testing, hauling, treatment, disposal fees and local taxes, shall be considered as included in the contract price paid for the item of work requiring the disposal of the debris produced when the existing paint system is disturbed and no additional compensation will be allowed therefor.

Work area monitoring will be paid for on the basis of a lump sum price.

The contract lump sum price paid for work area monitoring shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in collecting and analyzing of samples of ambient air and soil for heavy metals, complete in place, including reporting the test results, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.15A PROTECTIVE COVER AND PROTECTIVE SHEATHING

A protective cover shall be constructed at Walnut Creek Overcrossing (BART) in areas where the construction of the bridge retrofit is performed over traffic.

Two conduits located between girders G2 and G3 contain high voltage cables. The conduits shall not be disturbed or damaged by the Contractor's operations. The Contractor shall not suspend equipment or falsework from the conduits, nor use the conduits for support. The Contractor's operations shall conform to the provisions of California/Occupational Safety and Health Administration (Cal/OSHA) and the National Electric Code (NEC) for safety.

A protective cover supported by falsework or members of the existing structure shall be constructed before beginning bridge retrofit work.

The construction and removal of the protective cover shall conform to the requirements under "San Francisco Bay Area Transit District Requirements" of these special provisions and Section 7-1.09, "Public Safety," of the Standard Specifications.

The protective cover shall prevent any materials, equipment or debris from falling onto the traffic or interfering with the operation of BART trains. The protective cover shall have a minimum strength equivalent to that provided by good, sound Douglas fir planking having a nominal thickness of 2 inches. Additional layers of material shall be furnished as necessary to prevent fine materials or debris from sifting down upon the traveled way and shoulders.

The protective cover shall extend at least 5 feet beyond the outside face of the existing superstructure bridge railing.

The plywood protective sheathing shall be installed to protect BART trains and workers, and shall prevent any material or equipment from interfering with the operation of BART trains.

The materials used in the protective sheathing construction shall be continuous fire retardant plywood. Steel supports within 10 feet of the electrified third rail shall be insulated.

The protective cover and protective sheathing, including shoring and falsework, shall conform to the provisions for falsework in "Falsework" of these special provisions.

The Contractor shall be responsible for designing and constructing a safe and adequate protective cover and protective sheathing, and shoring and falsework needed to support the protective cover and protective sheathing, all with sufficient strength and rigidity to support the entire load to be imposed.

Before removal, the protective cover and protective sheathing shall be cleaned of all debris and fine material.

Falsework or supports for the protective cover shall not extend below the vertical clearance level nor to the ground line at any location within the roadbed.

The construction of the protective cover and protective sheathing as specified herein shall not relieve the Contractor of his responsibilities as specified in Section 7-1.12, "Responsibility for Damage," of the Standard Specifications.

The Contractor shall submit to the Engineer, for approval, working drawings, design calculations, including structural analysis of the BART structure if falsework loads are imparted to the structure, and erection and removal procedures for the falsework, protective cover, and protective sheathing. Calculations shall include dead and live load values assumed in design of the falsework, protective cover, and protective sheathing. Such drawings and design calculations shall be signed by an engineer who is registered as a Civil Engineer in the State of California. The Contractor shall allow 6 weeks after complete drawings and all support data are submitted for the review of any falsework, protective cover, and protective sheathing plans. Approval by the Engineer of the falsework, protective cover, and protective sheathing plans will be contingent upon the drawings being satisfactory to BART.

Bridge retrofit work methods shall be described in the working drawings and calculations in sufficient detail to substantiate live loads used in the protective cover design.

The falsework, protective cover, and protective sheathing plan shall conform to the requirements in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The number of sets of drawings and design calculations for falsework, protective cover, and protective sheathing plans shall be the same as specified for falsework working drawings in Section 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications.

When footing type foundations are to be used that require minor excavation and do not affect BART facilities and structures, the Contractor shall submit to the Engineer, for approval, methods of excavation and backfill, equipment to be used, shoring plans, and methods to restore site to its original condition.

Full compensation for the protective cover and the protective sheathing shown on the plans, including any falsework required to support the protective cover and protective sheathing, shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-1.16 FALSEWORK

Falsework shall be designed and constructed in conformance with the requirements in Section 51-1.06, "Falsework," of the Standard Specifications and these special provisions.

Attention is directed to "Railroad Relations and Insurance" of these special provisions for additional requirements for falsework over railroads.

The first paragraph of Section 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications is amended to read:

The Contractor shall submit to the Engineer working drawings and design calculations for falsework proposed for use at bridges. For bridges where the height of any portion of the falsework, as measured from the ground line to the soffit of the superstructure, exceeds 14 feet; where any individual falsework clear span length exceeds 16 feet; or where provision for vehicular, pedestrian, or railroad traffic through the falsework is made; the drawings shall be signed by an engineer who is registered as a Civil Engineer in the State of California. Six sets of the working drawings and 2 copies of the design calculations shall be furnished. Additional working drawings and design calculations shall be submitted when specified in "Railroad Relations and Insurance" of the special provisions.

The falsework drawings shall include details of the falsework removal operations showing the methods and sequences of removal and equipment to be used.

The seventeenth paragraph of Section 51-1.06A is amended to read:

Temporary bracing shall be provided, as necessary, to withstand all imposed loads during erection, construction and removal of any falsework. The falsework drawings shall show provisions for such temporary bracing or methods to be used to conform to this requirement during each phase of erection and removal. Wind loads shall be included in the design of such bracing or methods.

The fifth paragraph of Section 51-1.06A(1), "Design Loads," of the Standard Specifications is amended to read:

The minimum horizontal load to be allowed for wind on heavy-duty steel shoring or steel pipe column falsework having a vertical load carrying capacity exceeding 30 kips per leg or column shall be the sum of the products of the wind impact area, shape factor, and the applicable wind pressure value for each height zone. The wind impact area is the total projected area of all the elements in the tower face or falsework bent normal to the direction of the applied wind. The shape factor shall be taken as 2.2 for heavy-duty shoring and 1.0 for pipe column falsework. Wind pressure values shall be determined from the following table:

| Height Zone (Feet above ground) | Wind Pressure Value | |
|---------------------------------------|--|-----------------------|
| | Shores or Columns Adjacent to Traffic | At Other Locations |
| 0 to 30 | 20 psf | 15 psf |
| 30 to 50 | 25 psf | 20 psf |
| 50 to 100 | 30 psf | 25 psf |
| Over 100 | 35 psf | 30 psf |

The first 2 sentences of the sixth paragraph of Section 51-1.06A(1), "Design Loads," of the Standard Specifications are amended to read:

The minimum horizontal load to be allowed for wind on all other types of falsework, including falsework supported on heavy-duty shoring or pipe column falsework, shall be the sum of the products of the wind impact area and the applicable wind pressure value for each height zone. The wind impact area is the gross projected area of the falsework and any unrestrained portion of the permanent structure, excluding the areas between falsework bents or towers where diagonal bracing is not used.

The second entry under "Timber" in the second paragraph of Section 51-1.06A(2), "Design Stresses, Loadings, and Deflections," of the Standard Specifications is amended to read:

Compression parallel to the grain $\frac{480,000}{(L/d)^2}$ psi, but not to exceed 1,600 psi.

The third entry under "Timber" in the second paragraph of Section 51-1.06A(2), "Design Stresses, Loadings, and Deflections," of the Standard Specifications is amended to read:

Flexural stress 1,800 psi, 1,500 psi for members with a nominal depth of 8 inches or less.

The last paragraph under "Timber" in the second paragraph of Section 51-1.06A(2), "Design Stresses, Loadings, and Deflections," of the Standard Specifications is amended to read:

Timber connections shall be designed in conformance with the procedures, stresses and loads permitted in the Falsework Manual as published by the Department of Transportation, Division of Structures, Office of Structure Construction.

The third paragraph of Section 51-1.06B "Falsework Construction" of the Standard Specifications is amended to read:

When falsework is supported on piles, the piles shall be driven and the actual bearing value assessed in conformance with Section 49, "Piling," as specified in these specifications.

For falsework piles with a calculated loading capacity greater than 100 tons, the contractor shall conduct dynamic monitoring of pile driving and conduct penetration and bearing analyses based on a wave equation analysis. Said analysis shall be signed by an engineer who is registered as a Civil Engineer in the State of California and submitted to the Engineer prior to completion of falsework erection.

The first paragraph of Section 51-1.06C, "Removing Falsework," of the Standard Specifications is amended to read:

Falsework supporting any span of a simple span bridge shall not be released before 10 days after the last concrete, excluding concrete above the bridge deck, has been placed. Unless otherwise permitted by the Engineer, falsework supporting any span of a continuous or rigid frame bridge shall not be released before 10 days after the last concrete, excluding concrete above the bridge deck, has been placed in that span and in the adjacent portions of each adjoining span for a length equal to at least 1/2 the length of the span where falsework is to be released.

Section 51-1.06C, "Removing Falsework," of the Standard Specifications is amended by adding the following after the seventh paragraph:

Unless otherwise specified, removing falsework supporting any span of structural members subject to bending, shall conform to the requirements for removing falsework supporting any span of a simple span bridge.

Temporary crash cushion modules, as shown on the plans and conforming to the provisions in "Temporary Crash Cushion Module," elsewhere in these special provisions, shall be installed at the approach end of temporary railings which are located less than 15 feet from the edge of a traffic lane. For two-way traffic openings, temporary crash cushion modules shall be installed at the departing end of temporary railings which are located less than 6 feet from edge of a traffic lane.

The installation of temporary crash cushion modules, if required, shall be complete before falsework erection is begun. Temporary crash cushion modules at falsework shall not be removed until such removal is approved by the Engineer.

Temporary crash cushion modules installed as specified above will be measured and paid for as provided in "Temporary Crash Cushion Module," of these special provisions except that when the Engineer's Estimate does not include a contract item for temporary crash cushion modules, full compensation for furnishing, placing, maintaining, repairing, replacing and removing the temporary crash cushion modules at falsework locations as specified in these special provisions shall be considered as included in the contract prices paid for the various items of work requiring falsework and no separate payment will be made therefor.

10-1.17 STEEL STRUCTURES

Construction of steel structures shall conform to the provisions in Section 55, "Steel Structures," of the Standard Specifications and these special provisions.

GENERAL

Magnesium phosphate concrete to patch concrete after welding shall conform to the provisions in Section 83-2.02D(1), "General," of the Standard Specifications.

Attention is directed to "Welding Quality Control" of these special provisions.

The Contractor shall allow 6 weeks after complete drawings and all support data are submitted for the review of any falsework plan.

Approval by the Engineer of the falsework plans will be contingent upon the drawings being satisfactory to BART.

The first paragraph in Section 55-1.02, "Drawings," of the Standard Specifications is amended to read:

55-1.02 Drawings.—The Contractor shall submit working drawings for structural steel to the Office of Structure Design (OSD) for approval in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings." For initial review, 6 sets of the drawings shall be submitted for highway bridges and 10 sets shall be submitted for railroad bridges. After review, between 6 and 12 sets, as requested by the Engineer, shall be submitted to OSD for final approval and for use during construction.

Paragraphs 7 through 9 of Section 55-1.02, "Drawings," of the Standard Specifications are amended to read:

At the completion of each structure on the contract, one set of reduced prints on 20 pound (minimum) bond paper, 11 inches by 17 inches in size, of the corrected original tracings of all working drawings for each structure shall be furnished to the Engineer. Reduced prints that are common to more than one structure shall be submitted for each structure. An index prepared specifically for the drawings for each structure containing sheet numbers and titles shall be included on the first reduced print in the set for each structure. Reduced prints for each structure shall be arranged in the order of drawing numbers shown in the index.

The edge of the corrected original tracing image shall be clearly visible and visually parallel with the edges of the page. A clear, legible symbol shall be provided on the upper left side of each page to show the amount of reduction and a horizontal and vertical scale shall be provided on each reduced print to facilitate enlargement to original scale.

For railroad bridges, in addition to the reduced prints of the working drawings, the Contractor shall furnish to the Engineer one set of working drawings consisting of either ink tracings on cloth, ink tracings on polyester base drafting film, silver sensitized cloth duplicate tracings, or silver sensitized polyester based reproduction films with matte surface on both sides.

The first sentence of the second paragraph in Section 55-1.03, "Inspection," of the Standard Specifications is amended to read:

The Contractor shall furnish to the Engineer a copy of mill orders, certified mill test reports, Certificates of Compliance for all fabricated structural steel to be used in the work, other than steel which is to be used under the provisions in Section 55-2.07, "Unidentified Stock Material, " and other reports or certificates required by the specifications.

Additional certified test reports for fastener assemblies will be required as specified in "Fabrication" of this specification.

MATERIALS

The first paragraph, including the material table, in Section 55-2.01, "Description," of the Standard Specifications is amended to read:

55-2.01 Description.—The various materials shall conform to the specifications of ASTM as listed in the following tabulation with certain modifications and additions as specified:

| MATERIAL | SPECIFICATION |
|---|---|
| Structural steel | ASTM Designation: A 709/A 709M, Grade 36 [250] or A 36/A 36M ^(a) |
| High strength low alloy columbium vanadium steel | ASTM Designation: A 709/A 709M, Grade 50 [345] or A 572/A 572M, Grade 50 [345] ^(a) |
| High strength low alloy structural steel | ASTM Designation: A 709/A 709M, Grade 50W [345 W] or A 588/A 588M ^(a) |
| High-yield strength, quenched and tempered alloy steel plate suitable for welding | ASTM Designation: A 709/A 709M, Grade 100 [690] and Grade 100W [690W] or A 514/A 514M ^(a) |
| Steel fastener components for general applications: Bolts and studs Headed anchor bolts Nonheaded anchor bolts | ASTM Designation: A 307 ASTM Designation: A 307, Grade B, including S1 supplementary requirements ASTM Designation: A 307, Grade C, including S1 supplementary requirements and S1.6 |

| | |
|---|---|
| <p>High-strength bolts and studs which include threaded rods and high-strength nonheaded anchor bolts</p> <p>Nuts</p> <p>Washers</p> | <p>of AASHTO Designation: M 314 supplementary requirements or AASHTO Designation: M 314, Grade 36 or 55, including S1 supplementary requirements</p> <p>ASTM Designation: A 449, Type 1</p> <p>ASTM Designation: A 563 including Appendix X1^(b)</p> <p>ASTM Designation: F 844</p> |
| <p>Components of high strength steel fastener assemblies for use in structural steel joints:</p> <p>Bolts</p> <p>Tension control bolts</p> <p>Nuts</p> <p>Hardened washers</p> <p>Direct tension indicators</p> | <p>ASTM Designation: A 325, Type 1</p> <p>ASTM Designation: F 1852, Type 1</p> <p>ASTM Designation: A 563 including Appendix X1^(b)</p> <p>ASTM Designation: F 436, Type 1, Circular, including S1 supplementary requirements</p> <p>ASTM Designation: F 959, Type 325, zinc-coated</p> |
| <p>Carbon steel for forgings, pins and rollers</p> | <p>ASTM Designation: A 668/A 668M, Class D</p> |
| <p>Alloy steel for forgings</p> | <p>ASTM Designation: A 668/A 668M,</p> |

| | |
|--|---|
| | Class G |
| Pin nuts | ASTM Designation: A 36/A 36M |
| Carbon-steel castings | ASTM Designation: A 27/A 27M, Grade 65-35 [450-240], Class 1 |
| Malleable iron castings | ASTM Designation: A 47, Grade 32510 or A 47M, Grade 22010 |
| Gray iron castings | ASTM Designation: A 48, Class 30B |
| Carbon steel structural tubing | ASTM Designation: A 500, Grade B or A 501 |
| Steel pipe (Hydrostatic testing will not apply) | ASTM Designation: A 53, Type E or S, Grade B; A 106, Grade B; or A 139, Grade B |
| Stud connectors | ASTM Designation: A 108 and ANSI/AASHTO/AWS D1.5 |
| <p>(a) Grades that may be substituted for the equivalent ASTM Designation: A 709 steel, at the Contractor's option, subject to the modifications and additions specified and to the requirements of A 709.</p> <p>(b) Zinc-coated nuts that will be tightened beyond snug or wrench tight shall be furnished with a dry lubricant conforming to Supplementary Requirement S2 in ASTM Designation: A 563.</p> | |

The second paragraph in Section 55-2.01, "Description," of the Standard Specifications is deleted.
The fifth paragraph in Section 55-2.01, "Description," of the Standard Specifications is amended to read:

All structural steel plate used for the fabrication of tension members, tension flanges, eyebars and hanger plates and for splice plates of tension members, tension flanges and eyebars shall meet the longitudinal Charpy V-notch impact value requirements specified herein. Sampling procedures shall conform to the provisions in ASTM Designation: A 673/A 673M. The H (Heat) frequency of testing shall be used for structural steels conforming to ASTM Designations: A 709/A 709M, Grades 36, 50 and 50W. The P (Piece) frequency of testing shall be used for structural steel conforming to ASTM Designation: A 709/A 709M, Grades 100 and 100W. Charpy V-notch impact values shall be determined in accordance with ASTM Designation: E 23.

The first paragraph in Section 55-2.02, "Structural Steel," of the Standard Specifications is amended to read:

55-2.02 Structural Steel.—Unless otherwise specified or shown on the plans, all structural steel plates, shapes and bars shall conform to ASTM Designation: A 709/A 709M, Grade 36.

Rotational capacity tests prior to shipment to the job site shall be performed as specified in "Fabrication" of these special provisions.

FABRICATION

The first paragraph of Section 55-3.05, "Facing and Bearing Surfaces," of the Standard Specifications is amended to read:

55-3.05 Flatness of Faying and Bearing Surfaces.—Surfaces of bearing and base plates and other metal bearing surfaces that are to come in contact with each other or with ground concrete surfaces or with asbestos sheet packing shall be flat to within 1/32 inch tolerance in 12 inches and to within 1/16 inch tolerance overall. Surfaces of bearing and base plates and other metal bearing surfaces that are to come in contact with preformed fabric pads, elastomeric bearing pads or portland cement mortar shall be flat to within 1/8 inch tolerance in 12 inches and to within 3/16 inch tolerance overall.

Paragraphs 1 through 5, excluding Section 55-3.14A, of Section 55-3.14, "Bolted Connections," of the Standard Specifications are amended to read:

55-3.14 Bolted Connections.—Bolted connections in structural steel joints, unless otherwise shown on the plans or specified in the special provisions, shall be made with high-strength steel fastener assemblies. These fastener assemblies shall consist of either 1) a high-strength steel bolt, nut and hardened washer or 2) a tension control bolt, nut and hardened washer. A direct tension indicator (DTI) may be used with the high-strength bolt, nut and hardened washer assembly.

Bolted connections using fastener assemblies shall conform to the requirements in "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" (RCSC Specification) approved by the Research Council on Structural Connections of the Engineering Foundation, and these special provisions.

When reference is made to the RCSC Specification, the "Allowable Stress Design" version shall be used when allowable stress design is shown on the plans and the "Load and Resistance Factor Design" version shall be used when load factor design or load and resistance factor design is shown on the plans.

All connections made with fastener assemblies shall be tensioned as a slip critical connection, whether classified as a slip critical or bearing type connection, unless otherwise designated on the plans.

The hardened washer shall be installed under the nut or bolt head, whichever is the element turned in tightening. Nuts shall be located, wherever practicable, on the side of the member that will not be visible from the traveled way. Nuts for bolts that will be partially embedded in concrete shall be located on the side of the member that will be encased in concrete.

When the bolt head is used as the turned element, all tension testing and tension verification, including determining job inspecting torque, shall be performed by turning the bolt head.

Each length and diameter of fastener assemblies used in any one joint of a high-strength bolted connection shall be from the same rotational capacity lot. The Contractor shall keep a record of which rotational capacity lots are used in each joint.

The Contractor shall provide, calibrate and maintain the equipment and tools necessary for the preliminary testing, installation and inspection of all fasteners.

Bolt tension measuring devices and calibrated wrenches shall be calibrated within one year prior to first being used on the job, and a minimum of once each year thereafter. This calibration shall be done by a qualified independent laboratory or authorized warranty repair and calibration center recognized by the tool manufacturer. Bolt tension measuring devices shall be calibrated, to within one percent of the actual tension value, with a minimum of 4 verification readings evenly spaced over a range of 20 to 80 percent of full scale. Calibrated wrenches shall be calibrated to within 2 percent of the actual torque value, with a minimum of 4 verification readings evenly spaced over a range of 20 to 100 percent of full scale. Test equipment used for certification and calibration standards shall be traceable to the National Institute of Standards and Technology.

If a torque multiplier is used in conjunction with a calibrated wrench as a method for tightening fastener assemblies to the required tension, both the multiplier and the wrench shall be calibrated together as a system. The same length input and output sockets and extensions that will be used in the work shall also be included in the calibration of the system. The manufacturer's torque multiplication ratio shall be adjusted during calibration of the system, such that when this adjusted ratio is multiplied by the actual input calibrated wrench reading, the product is a calculated output torque that is within 2 percent of the true output torque. When this system is used in the work to perform any installation tension testing, rotational capacity testing, fastener tightening, or tension verification, it shall be used, intact as calibrated.

Prior to the use of bolt tension measuring devices or calibrated wrenches, the Contractor shall furnish to the Engineer certificates of calibration with plots of verification readings for each device or wrench.

In addition to the submittals required in Section 55-1.03, "Inspection," the Contractor shall furnish certified test reports of tests on fastener components and fastener assemblies performed prior to shipment to the job-site. Certified test reports for fastener components and fastener assemblies shall be furnished to the Engineer prior to use of the fastener assembly. The certified test reports shall include the rotational capacity lot numbers for fastener assemblies supplied and all test reports specified in the "Certification," "Report," "Number of Tests and Retests," and "Certification and Test Report" sections in the appropriate ASTM specifications for the fastener components. For ASTM Designation A307, Grade B or Grade C anchor bolts, the chemical composition and calculated carbon equivalent of each heat of steel shall be furnished.

All bolted connection surfaces shall be prepared before assembly in conformance with the requirements in the special provisions.

Section 55-3.14, "Bolted Connections," of the Standard Specifications is amended by adding the following paragraphs:

55-3.14B Installation.—If any components of fastener assemblies are furnished with water soluble lubricants, fastener installation will not be permitted when surface moisture is present at any high-strength bolted connection. If fastener assemblies are furnished with other than water soluble lubricants, the Engineer may require the Contractor to perform additional fastener testing if any fastener work or testing is performed when surface moisture is present.

Manual torque wrenches shall have either a dial gage or digital read out. Any electric, pneumatic or hydraulic calibrated wrench used to tension fasteners shall have an adjustable control unit that can be set to positively shut off at the desired torque.

Wrenches used for snugging tension control bolts in a connection prior to final tensioning shall not apply torsion to the splined end of the bolt.

The threaded ends of fastener assemblies projecting past the outer face of the nut (thread stickout), where first full formed threads are present, shall be at least flush with, but not extend more than 1/4-inch beyond, the outer face of the nut. A maximum of one hardened washer, in addition to the single washer required under the turned element, may be installed under the non-turning element of the fastener assembly. The thread stickout of studs, rods and anchor bolts, shall be at least 1/8-inch, and there shall be a minimum of 3 full threads located within the grip of the connection. In addition, a minimum of 3 full threads shall be located between the bearing surfaces of the bolt head and nut. The total stickout shall not be excessive.

Larger bolts, having diameters up to 1/4-inch greater than the diameter of the bolt shown on the plans, may be used if approved by the Engineer provided that spacing and edge distance requirements for the larger bolt are met and the net section is adequate.

When DTIs are used, one DTI shall be installed under each bolt head with the DTI protrusions contacting the bearing surface of the bolt head. To tension the bolt, the bolt head shall be held stationary and the nut turned. Unless otherwise specified, manufacturer's installation procedures shall be followed. Each bolt shall be tensioned in at least 2 tightening stages until at least 50 percent of the gaps on each DTI are greater than zero and less than 0.005 inch. Complete crushing of all DTI protrusions (0 gaps) on any given DTI and will be cause for rejection.

The same head orientation shall be used within any one high-strength bolted connection.

55-3.14C Rotational Capacity Testing Prior to Shipment to Job Site.—Rotational capacity tests on fastener assemblies shall be performed as specified in the special provisions.

55-3.14D Installation Tension Testing and Rotational Capacity Testing After Arrival to Job Site.—Installation tension tests and rotational capacity tests on fastener assemblies shall be performed as specified in the special provisions.

55-3.14E Tension Verification of Fastener Assemblies.—Minimum fastener tension in all completed high-strength bolted connections shall be verified.

For each type of fastener assembly, at least 10 percent, but no fewer than 2 assemblies used in each high-strength bolted connection shall be checked for minimum tension, by the Contractor, in conformance with the procedure described in Section 9(b), "Arbitration Inspection," of the RCSC Specification. For determining the job inspecting torque for short bolts, the procedure described in steps 1 through 9 of the "Arbitration of Disputes, Inspection Torque Method-Short Bolts," section of the "Structural Bolting Handbook," published by the Steel Structures Technology Center, Incorporated shall replace Section 9(b)(2) of the RCSC Specification. A separate inspecting torque shall be determined and used for each different rotational capacity lot of fasteners.

The verification for minimum tension shall be performed 1) no longer than 48 hours after all fasteners in the connection have been tensioned, 2) on fastener assemblies selected by the Engineer, 3) in the presence of the Engineer, and 4) in such a manner that the Engineer can read the torque wrench gage or access the DTI gaps during inspection.

Rotational Capacity Testing Prior to Shipment to Job Site

Rotational capacity tests shall be performed on all lots of high-strength fastener assemblies prior to shipment of these lots to the job site. Zinc-coated assemblies shall be tested after all fabrication, coating and lubrication of components have been completed. One hardened washer shall be used under each nut for the tests.

Each combination of bolt production lot, nut lot and washer lot shall be tested as an assembly.

A rotational capacity lot number shall be assigned to each combination of lots tested. Each shipping unit of fastener assemblies shall be plainly marked with the rotational capacity lot number.

Two fastener assemblies from each rotational capacity lot shall be tested.

The following equipment, procedure and acceptance criteria shall be used to perform rotational capacity tests on, and determine acceptance of long bolts. Fasteners are considered to be long bolts when full nut thread engagement can be achieved when installed in a bolt tension measuring device.

Long Bolt Test Equipment:

1. Calibrated bolt tension measuring device with adequate tension capacity for the bolts being tested.
2. Calibrated dial or digital torque wrench. Other suitable tools will be required for performing Steps 7 and 8 of this procedure. A torque multiplier may be required for large diameter bolts.
3. Spacer washers or bushings.. When spacer washers or bushings are required, they shall have the same inside diameter and equal or larger outside diameter as the appropriate hardened washers conforming to the requirements of ASTM Designation: F436.
4. Steel beam or member, such as a girder flange or cross frame, to which the bolt tension measuring device will be attached. The device shall be accessible from the ground.

Long Bolt Test Procedure:

1. Measure the bolt length. The bolt length is defined as the distance from the end of the threaded portion of the shank to the underside of the bolt head.
2. Install the nut on the bolt so that 3 to 5 full threads of the bolt are located between the bearing face of the nut and the underside of the bolt head. Measure and record the thread stickout of the bolt. Thread stickout is determined by measuring the distance from the outer face of the nut to the end of the threaded portion of the shank.
3. Insert the bolt into the bolt tension measuring device and install the required number of washers, and additional spacers as needed, directly beneath the nut to produce the thread stickout measured in Step 2.
4. Tighten the nut using a hand wrench to a snug-tight condition. The snug tension shall not be less than the Table A value but may exceed the Table A value by a maximum of 2 kips.

Table A

| High-Strength Fastener Assembly Tension Values to Approximate Snug-Tight Condition | |
|--|---------------------|
| Bolt Diameter (inches) | Snug Tension (kips) |
| 1/2 | 1 |
| 5/8 | 2 |
| 3/4 | 3 |
| 7/8 | 4 |
| 1 | 5 |
| 1 1/8 | 6 |
| 1 1/4 | 7 |
| 1 3/8 | 9 |
| 1 1/2 | 10 |

5. Match-mark the assembly by placing a heavy reference start line on the face plate of the bolt tension measuring device which aligns with 1) a mark placed on one corner of the nut, and 2) a radial line placed across the flat on the end of the bolt, or on the exposed portions of the threads of tension control bolts. Place an additional mark on the outside of the socket that overlays the mark on the nut corner such that this mark will be visible while turning the nut. Make an additional mark on the face plate, either 2/3 of a turn, one turn, or 1 1/3 turn clockwise from the heavy reference start line, depending on the bolt length being tested as shown in Table B.

Table B

| Required Nut Rotation for Rotational Capacity Tests (a,b) | |
|---|--------------------------|
| Bolt Length (measured in Step 1) | Required Rotation (turn) |
| 4 bolt diameters or less | 2/3 |
| Greater than 4 bolt diameters but no more than 8 bolt diameters | 1 |
| Greater than 8 bolt diameters, but no more than 12 bolt diameters (c) | 1 1/3 |
| <p>(a) Nut rotation is relative to bolt, regardless of the element (nut or bolt) being turned. For bolts installed by 1/2 turn and less, the tolerance shall be plus or minus 30 degrees; for bolts installed by 2/3 turn and more, the tolerance shall be plus or minus 45 degrees.</p> <p>(b) Applicable only to connections in which all material within grip of the bolt is steel.</p> <p>(c) When bolt lengths exceed 12 diameters, the required rotation shall be determined by actual tests in a suitable tension device simulating the actual conditions.</p> | |

- Turn the nut to achieve the applicable minimum bolt tension value listed in Table C. After reaching this tension, record the moving torque, in foot-pounds, required to turn the nut, and also record the corresponding bolt tension value in pounds. Torque shall be measured with the nut in motion. Calculate the value, T (in ft-lbs), where $T = [(the\ measured\ tension\ in\ pounds) \times (the\ bolt\ diameter\ in\ inches) / 48\ in/ft]$.

Table C

| Minimum Tension Values for High-Strength Fastener Assemblies | |
|--|------------------------|
| Bolt Diameter (inches) | Minimum Tension (kips) |
| 1/2 | 12 |
| 5/8 | 19 |
| 3/4 | 28 |
| 7/8 | 39 |
| 1 | 51 |
| 1 1/8 | 56 |
| 1 1/4 | 71 |
| 1 3/8 | 85 |
| 1 1/2 | 103 |

- Turn the nut further to increase bolt tension until the rotation listed in Table B is reached. The rotation is measured from the heavy reference line made on the face plate after the bolt was snug-tight. Record this bolt tension.
- Loosen and remove the nut and examine the threads on both the nut and bolt.

Long Bolt Acceptance Criteria:

An assembly shall pass all of the following requirements to be acceptable: 1) the measured moving torque (Step 6) shall be less than or equal to the calculated value, T (Step 6), 2) the bolt tension measured in Step 7 shall be greater than or equal to the applicable turn test tension value listed in Table D, 3) the nut shall be able to be removed from the bolt without signs of thread stripping or galling after the required rotation in Step 7 has been achieved, 4) the bolt does not shear from torsion or fail during the test and 5) the assembly does not seize before the final rotation in Step 7 is reached. Elongation of the bolt in the threaded region between the bearing face of the nut and the underside of the bolt head is expected and will not be considered a failure. Both fastener assemblies tested from one rotational capacity lot shall pass for the rotational capacity lot to be acceptable.

Table D

| Turn Test Tension Values | |
|---------------------------|-----------------------------|
| Bolt Diameter (inches) | Turn Test Tension (kips) |
| 1/2 | 14 |
| 5/8 | 22 |
| 3/4 | 32 |
| 7/8 | 45 |
| 1 | 59 |
| 1 1/8 | 64 |
| 1 1/4 | 82 |
| 1 3/8 | 98 |
| 1 1/2 | 118 |

The following equipment, procedure and acceptance criteria shall be used to perform rotational capacity tests on and determine acceptance of short bolts. Fasteners are considered to be short bolts when full nut thread engagement cannot be achieved when installed in a bolt tension measuring device.

Short Bolt Test Equipment:

1. Calibrated dial or digital torque wrench. Other suitable tools will be required for performing Steps 7 and 8 of this procedure. A torque multiplier may be required for large diameter bolts.
2. Spud wrench or equivalent.
3. Spacer washers or bushings. When spacer washers or bushings are required, they shall have the same inside diameter and equal or larger outside diameter as the appropriate hardened washers conforming to the requirements of ASTM Designation: F436.
4. Steel plate or girder with a hole to install bolt. The hole size shall be 1/16 inch greater than the nominal diameter of the bolt to be tested. The grip length, including any plates, washers, and additional spacers as needed, shall provide the proper number of threads within the grip, as required in Step 2 below, may be used.

Short Bolt Test Procedure:

1. Measure the bolt length. The bolt length is defined as the distance from the end of the threaded portion of the shank to the underside of the bolt head.
2. Install the nut on the bolt so that 3 to 5 full threads of the bolt are located between the bearing face of the nut and the underside of the bolt head. Measure and record the thread stickout of the bolt. Thread stickout is determined by measuring the distance from the outer face of the nut to the end of the threaded portion of the shank.
3. Install the bolt into a hole on the plate or girder and install the required number of washers, and additional spacers as needed, between the bearing face of the nut and the underside of the bolt head to produce the thread stickout measured in Step 2.
4. Tighten the nut using a hand wrench to a snug-tight condition. The snug condition shall be the full manual effort applied to the end of a 12-inch long wrench. This applied torque shall not exceed 20 percent of the maximum allowable torque in Table E.

Table E

| Maximum Allowable Torque for High-Strength Fastener Assemblies | |
|--|-----------------|
| Bolt Diameter (inches) | Torque (ft-lbs) |
| 1/2 | 145 |
| 5/8 | 285 |
| 3/4 | 500 |
| 7/8 | 820 |
| 1 | 1220 |
| 1 1/8 | 1500 |
| 1 1/4 | 2130 |
| 1 3/8 | 2800 |
| 1 1/2 | 3700 |

- Match-mark the assembly by placing a heavy reference start line on the steel plate or girder which aligns with 1) a mark placed on one corner of the nut, and 2) a radial line placed across the flat on the end of the bolt, or on the exposed portions of the threads of tension control bolts. Place an additional mark on the outside of the socket that overlays the mark on the nut corner such that this mark will be visible while turning the nut. Make 2 additional small marks on the steel plate or girder, one 1/3 of a turn and one 2/3 of a turn clockwise from the heavy reference start line on the steel plate or girder.
- Using the torque wrench, tighten the nut to the rotation value listed in Table F. The rotation is measured from the heavy reference line described in Step 5 made after the bolt was snug-tight. A second wrench shall be used to prevent rotation of the bolt head during tightening. Measure and record the moving torque after this rotation has been reached. The torque shall be measured with the nut in motion.

Table F

| Nut Rotation Required for Turn-of-Nut Installation ^(a,b) | |
|--|--------------------------|
| Bolt Length (measured in Step 1) | Required Rotation (turn) |
| 4 bolt diameters or less | 1/3 |
| (a) Nut rotation is relative to bolt, regardless of the element (nut or bolt) being turned. For bolts installed by 1/2 turn and less, the tolerance shall be plus or minus 30 degrees. | |
| (b) Applicable only to connections in which all material within grip of the bolt is steel. | |

- Tighten the nut further to the 2/3 turn mark as indicated in Table G. The rotation is measured from the heavy reference start line made on the plate or girder when the bolt was snug-tight. Verify that the radial line on the bolt end, or on the exposed portions of the threads of tension control bolts, is still in alignment with the start line.

Table G

| Required Nut Rotation for Rotational Capacity Test | |
|--|--------------------------|
| Bolt Length (measured in Step 1) | Required Rotation (turn) |
| 4 bolt diameters or less | 2/3 |

- Loosen and remove the nut and examine the threads on both the nut and bolt.

Short Bolt Acceptance Criteria:

An assembly shall pass the following requirements to be acceptable: 1) the measured moving torque from Step 6 shall be less than or equal to the maximum allowable torque from Table E, 2) the nut shall be able to be removed from the bolt without signs of thread stripping or galling after the required rotation in Step 7 has been achieved, 3) the bolt does not shear from torsion or fail during the test and 4) the assembly does not seize before the final rotation in Step 7 is reached. Elongation of the bolt in the threaded region between the bearing face of the nut and the underside of the bolt head will not be considered a failure. Both fastener assemblies tested from one rotational capacity lot shall pass for the rotational capacity lot to be acceptable.

Installation Tension Testing and Rotational Capacity Testing After Arrival to Job Site.—Installation tension tests and rotational capacity tests on high-strength fastener assemblies shall be performed by the Contractor prior to acceptance or installation, and after arrival of the fastener assemblies on the job-site. The installation tension tests and rotational capacity tests shall be performed at the job-site, in the presence of the Engineer, on each rotational capacity lot of fastener assemblies.

Installation tension tests shall be performed on 3 representative fastener assemblies in conformance with Section 8, "Installation and Tightening," of the RCSC Specification. For short bolts, Section 8(d), "Joint Assembly and Tightening of Slip-Critical and Direct Tension Connections," of the RCSC Specification shall be replaced by the "Pre-Installation Testing Procedures," of the "Structural Bolting Handbook," published by the Steel Structures Technology Center, Incorporated.

The rotational capacity tests shall be performed in conformance with the requirements for rotational capacity tests in "Rotational Capacity Testing Prior to Shipment to Job Site" of these special provisions.

At the Contractor's expense, additional installation tension tests, tests required to determine job inspecting torque and rotational capacity tests shall be performed by the Contractor on each rotational capacity lot, in the presence of the Engineer, if 1) any fastener is not used within 3 months after shipment to the jobsite, 2) fasteners are improperly handled, stored, or subjected to inclement weather prior to final tightening, 3) significant changes are noted in original surface condition of threads, washers or nut lubricant or 4) the Contractor's required inspection is not performed within 48 hours after all fasteners in a joint have been tensioned.

Failure of a job-site installation tension test or a rotational capacity test will be cause for rejection of unused fasteners which are part of the rotational capacity lot.

When DTIs are used, installation verification tests shall be performed in conformance with appendix section X1.4 of ASTM Designation: F959, except that bolts shall be initially tensioned to a value 5 percent greater than the minimum required bolt tension.

Surface Preparation

For all bolted connections the new contact surfaces shall be cleaned and coated before assembly in conformance with the provisions for cleaning and painting structural steel of these special provisions.

The third paragraph of Section 55-3.17, "Welding," of the Standard Specifications is amended to read:

In addition to the nondestructive testing requirements in ANSI/AASHTO/AWS D1.5, 25 percent of all main member tension groove welds, in material in excess of 1/2 inch thickness, shall be ultrasonically tested.

The flat side of all butt welded joints shall not deviate from flatness by more than 3/16 inch in a length of 2 feet centered over the weld joint.

Backing for welds that are subject to computed stress which are left in place in the completed structure shall be a single length. Backing shall be of the same material as the structural steel being welded. Single lengths of backing shall be obtained by using a continuous strip, or may consist of lengths of backing joined by full penetration butt welds. Butt welds in the backing material shall be subject to the same kind and frequency of testing as specified for the type of joint in the material being joined. Butt welds in backing material shall be ground flush as necessary to obtain proper inspection and for proper fit-up in the weld joint with which the backing is to be used.

The last three paragraphs in Section 55-3.19, "Bearings and Anchorages," of the Standard Specifications are amended to read:

Mortar to be placed below masonry plates or bearing plates of the bearing assemblies and in anchor bolt sleeves or canisters shall conform to the requirements in Section 51-1.135, "Mortar," of the Standard Specifications except that the proportion of cement to sand shall be one to 3.

The embedded end of anchor bolts shall be either headed or with a nut and washer, and anchor bolts shall be installed with or without either pipe sleeves or corrugated metal canisters, as detailed on the plans. The anchor bolts shall be carefully installed to permit true positioning of the bearing assemblies.

When anchor bolts are installed in pipe sleeves or metal canisters, the pipes or canisters shall be completely filled with mortar. Such mortaring and the construction of mortar pads under masonry plates, if required, shall be done after erection of girders and before placing deck concrete.

MEASUREMENT AND PAYMENT.--Measurement and payment for steel structures shall conform to the provisions in Sections 55-4.01, "Measurement," and 55-4.02, "Payment," of the Standard Specifications and these special provisions.

Structural steel will be paid for at the contract price per pound for structural steel (bridge).

The contract price paid per pound for structural steel (bridge) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in furnishing and erecting structural steel, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The sixth paragraph in Section 55-4.02, "Payment," of the Standard Specifications is amended to read:

If a portion or all of the welded structural steel is fabricated more than 300 air line miles from both Sacramento and Los Angeles, additional shop inspection expenses will be sustained by the State. Whereas it is and will be impracticable and extremely difficult to ascertain and determine the actual increase in such expenses, it is agreed that payment to the Contractor for furnishing said structural steel from each fabrication site located more than 300 air line miles from both Sacramento and Los Angeles will be reduced \$5,000 or by an amount computed at \$0.020 per pound of structural steel fabricated, whichever is greater, or in the case of each fabrication site located more than 3,000 air line miles from both Sacramento and Los Angeles, payment will be reduced \$8,000 or by \$0.036 per pound of structural steel fabricated, whichever is greater.

If a portion or all of check samples are removed at a mill more than 300 air line miles from both Sacramento and Los Angeles, shop inspection expenses will be sustained by the State which are in addition to expenses incurred for fabrication site inspection. Payment to the Contractor for furnishing structural steel will be reduced \$2,000 for each mill located more than 300 air line miles from both Sacramento and Los Angeles.

Full compensation for chipping existing concrete to expose the existing steel flange shall be considered as included in the contract price paid per pound for structural steel (bridge) and no additional compensation will be allowed therefor.

Full compensation for magnesium phosphate concrete patches shall be considered as included in the contract price paid per pound for structural steel (bridge) and no additional compensation will be allowed therefor.

10-1.18 CLEAN AND PAINT STRUCTURAL STEEL

Exposed new metal surfaces and connections to existing steel, except where galvanized, shall be cleaned and painted in conformance with the provisions in Sections 59-2, "Painting Structural Steel," and 91, "Paint," of the Standard Specifications and these special provisions.

Attention is directed to "State-Furnished Materials" of these special provisions regarding the Valspar paint system.

The existing paint systems consist of materials listed in "Existing Highway Facilities" of these special provisions.

The fifth paragraph in Section 59-1.03, "Application," of the Standard Specifications is amended to read:

Unless otherwise specified, should 7 days elapse between paint applications, the painted surface shall be water rinsed prior to the next paint application. Water rinsing shall be defined as a pressurized water rinse with a minimum nozzle pressure of 300 psi. During rinsing, the tip of the pressure nozzle shall be placed between 12 and 18 inches from the surface to be rinsed. The nozzle shall have a maximum fan tip angle of 30°.

The ninth paragraph in Section 59-1.03, "Application," of the Standard Specifications is amended to read:

Runs, sags, thin and excessively thick areas in the paint film, skips and holidays, or areas of non-uniform appearance shall be considered as evidence that the work is unsatisfactory, and the Contractor may be required to blast clean the areas and reapply the paint.

The first subparagraph of the first paragraph in Section 59-2.12, "Painting," of the Standard Specifications is amended to read:

Structures, other than sign structures, shall be blast cleaned and painted with the total thickness of undercoats before erection. Finish coats and final coats shall be applied after erection. If concrete deck is to be placed on a steel member to be painted, finish coats and final coats shall be applied after concrete deck placement. After erection and deck placement, but before applying subsequent paint, areas where paint has been damaged or has deteriorated and exposed unpainted surfaces shall be thoroughly cleaned, foreign substances shall be removed, and surfaces shall be spot painted with undercoats to the specified thickness. Damaged areas of undercoat paint shall be blast cleaned and painted as specified in the special provisions.

The third paragraph in Section 59-2.12, "Painting," of the Standard Specifications is amended to read:

Contact surfaces of stiffeners, railings, built up members, or any open seam exceeding 6 mils in width that would retain moisture, shall be caulked with non-silicone type sealing compound conforming to the requirements in Federal Specification TT-S-230, Type II, or other approved material. The sealing compound shall be applied no sooner than 72 hours after the last application of undercoat. The sealing compound shall be allowed to cure as recommended by the manufacturer prior to water rinsing and application of the first finish coat. When no finish coats are applied, the sealing compound shall be gray in color.

The fourth paragraph in Section 59-2.12, "Painting," of the Standard Specifications is amended to read:

The dry film thickness of the paint will be measured in place with a calibrated Type 2 magnetic film thickness gauge in conformance with the requirements in Steel Structure Painting Council Specification SSPC-PA2.

CLEANING.--Exposed new metal surfaces and areas of connections to existing steel, except where galvanized, shall be dry blast cleaned and dry spot blast cleaned, respectively, in conformance with the requirements in Surface Preparation Specification No. 10, "Near White Blast Cleaning," of the Steel Structures Painting Council. Blast cleaning shall leave surfaces with a dense, uniform, angular, anchor pattern of no less than 1 1/2 mils nor more than 3 mils as measured in conformance with the requirements in ASTM Designation: D 4417.

The areas of connections to existing steel to be dry spot blast cleaned shall consist of, as a minimum: (1) new and existing contact surfaces and existing member surfaces under bolt heads, nuts or washers of high-strength bolted connections, (2) exposed bare surfaces of existing steel remaining after trimming, cutting, drilling or reaming, and (3) areas of existing steel within a 4-inch radius measured in any direction from the point of application of heat for welding or flame cutting.

Mineral and slag abrasives used for blast cleaning steel shall conform to the requirements in Abrasive Specification No. 1, "Mineral and Slag Abrasives," of the Steel Structures Painting Council and shall not contain hazardous material. Mineral and slag abrasives shall comply with the requirements for Class A, Grade 2 to 3 as defined therein.

A Certificate of Compliance conforming to the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications and a Material Safety Data Sheet shall be furnished prior to use for each shipment of blast cleaning material for existing steel.

PAINTING.--Blast cleaned surfaces shall receive a single undercoat consisting of an epoxy primer coating.

Application of epoxy primer coating shall conform to manufacturer's instructions.

Coats of paint shall not be applied when the atmospheric or surface temperature is less than 45° F nor more than 85° F, nor when the relative humidity exceeds 85 percent.

The single undercoat of epoxy primer coating shall be applied to the required dry film thickness in 2 or more applications within 4 hours after blast cleaning.

The minimum dry film thickness of all applications of epoxy primer coating shall be 8 mils.

Areas where mudcracking occurs in the epoxy primer coating shall be blast cleaned and repainted with epoxy primer coating to the specified thickness.

The epoxy primer coating shall be tested for adhesion and cure. The locations of the tests will be determined by the Engineer. The sequence of the testing operations shall be determined by the Contractor. The testing for adhesion and cure will be performed no sooner than 72 hours after application of the single undercoat of epoxy primer coating. At the Contractor's expense, satisfactory access shall be provided to allow the Engineer to determine the location of the tests and to test the epoxy primer coating cure. The epoxy primer coating shall pass both of the following tests:

The epoxy primer coating shall have a minimum adhesion to steel of 600 psi when measured at no more than one location per rolled steel shapes and plates using a self-aligning adhesion tester in conformance with the requirements in ASTM Designation: D 4541. The Contractor, at the Contractor's expense, shall: (1) verify compliance with the adhesion requirements, (2) furnish test results to the Engineer, and (3) repair the coating after testing.

The epoxy primer coating shall exhibit a solid, hard and polished metal surface when firmly scraped with the knurled edge of a quarter. Epoxy primer coating that is powdery, soft or does not exhibit a polished metal surface, as determined by the Engineer, shall be repaired by the Contractor, at the Contractor's expense, by blast cleaning and repainting with epoxy primer coating to the specified thickness.

Except as approved by the Engineer, a minimum drying time of 72 hours shall be allowed between applications of epoxy primer coats.

Exposed areas of epoxy primer coating shall receive a polyurethane finish coat. Application of polyurethane finish coat shall conform to manufacturer's instructions.

Except as approved by the Engineer, the minimum drying time between finish coats shall be as recommended by the manufacturer.

The finish coat color shall match the existing color.

The finish coat shall be applied to a minimum dry film thickness of 3 mils.

MEASUREMENT AND PAYMENT.--Dry spot blast cleaning and undercoat painting of blast cleaned areas of existing surfaces will be measured by the square foot of spot blast cleaned areas, and will be paid for as spot blast clean and paint undercoat.

The contract price paid per square foot for spot blast clean and paint undercoat shall include full compensation for furnishing all labor, materials (excluding state-furnished paint), tools, equipment, and incidentals, and for doing all the work involved in dry spot blast cleaning and painting undercoat on the existing surfaces, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The contract lump sum price paid for clean and paint structural steel shall include full compensation for furnishing all labor, materials (excluding state-furnished paint), tools, equipment, and incidentals, and for doing all the work involved in cleaning and painting the exposed surfaces of the new structural steel and finish coat on undercoated areas of existing metal, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.