

**DEPARTMENT OF TRANSPORTATION
COUNTY OF EL DORADO, STATE OF CALIFORNIA**

**EL DORADO COUNTY SENIOR CENTER PEDESTRIAN
ACCESS IMPROVEMENTS
COUNTY CONTRACT NO. 99562**

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**DEPARTMENT OF TRANSPORTATION
COUNTY OF EL DORADO, CALIFORNIA**

**SPECIAL PROVISIONS
ANNEXED TO CONTRACT NO. 99562**

SECTION 1. SPECIFICATIONS AND PLANS

1-1.01 GENERAL

The work embraced herein shall be done in accordance with the California Department of Transportation (Caltrans) Standard Specifications dated May 2006, the Standard Plans, dated May 2006 insofar as the same may apply, and in accordance with the following special provisions.

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 such conflicting portions.

1-1.02 DEFINITIONS AND TERMS

As used in the Contract Documents, unless the context requires otherwise, the following terms have the following meanings:

CALTRANS – The State of California Department of Transportation.

COUNTY – The County of El Dorado, a political subdivision of the State of California.

DOT / DEPARTMENT / DEPARTMENT OF TRANSPORTATION / RECIPIENT – The Department of Transportation as created by the Board of Supervisors for the County of El Dorado.

US DOT – The United States of America Department of Transportation.

DEPUTY DIRECTOR – The Deputy Director of Engineering or Deputy Director of Transportation Planning and Land Development in the Department of Transportation for the County of El Dorado.

DIRECTOR OF TRANSPORTATION – The Director of Transportation for the County of El Dorado.

ENGINEER / STATE HIGHWAY ENGINEER – The Director of Transportation for the County of El Dorado, or his authorized representative (Resident Engineer).

LABORATORY – The established laboratory of the El Dorado County Department of Transportation or laboratories authorized by the Engineer to test materials and work involved in the contract.

PLANS – The improvement plans titled "EL DORADO COUNTY SENIOR CENTER PEDESTRIAN ACCESS IMPROVEMENTS" approved by the El Dorado County Department of Transportation, and the Standard Plans.

STANDARD PLANS – The May 2006 edition of the Standard Plans of the State of California, Department of Transportation (Caltrans).

STANDARD SPECIFICATIONS – The May 2006 edition of the Standard Specifications of the State of California, Department of Transportation (Caltrans).

STATE – County of El Dorado.

All other definitions and terms are in accordance with the Standard Specifications.

1-1.03 AMENDMENTS TO THE STANDARD SPECIFICATIONS

Attention is directed to Appendix A of these special provisions, containing Amendments to the Standard Specifications as issued by the State of California Department of Transportation. These Amendments are hereby incorporated into the Contract Documents to replace or supplement those sections of the Standard Specifications where an Amendment exists, and are to be treated the same as the Standard Specifications in relation to other Contract Documents.

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 it must observe in the preparation of the Proposal form and the submission of the bid.

The first sentence of the second paragraph in Section 2-1.05, "Proposal Forms," of the Standard Specifications is amended to read:

“The Proposal form is bound together with the Notice to Bidders, Special Provisions, Agreement and attendant documents.”

A Proposal shall be deemed “Non-Responsive” if the Proposal is submitted without the entire Contract Document package attached.

In addition to whom the bidder proposes to directly subcontract portions of the work as required in accordance with Section 2-1.054, “Required Listing of Proposed Subcontractors,” of the Standard Specifications, the list of subcontractors shall also set forth the percentage of work that will be done by each subcontractor listed. A sheet for listing the subcontractors is included in the Proposal.

The first sentence of the last paragraph in Section 2-1.07, "Proposal Guaranty," of the Standard Specifications is amended to read:

The bidder's bond shall conform to the bond form included in this Proposal for the project “El Dorado County Senior Center Pedestrian Access Improvements”, and shall be properly filled out and executed.”

(DO NOT DETACH THE FORM).

The Proposal shall be attached to and submitted with the Contract Documents bid package in its entirety.

The form of the bidder's Bond mentioned in the last paragraph in Section 2-1.07, “Proposal Guaranty,” of the Standard Specifications will be found in the Proposal.

In accordance 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.

2-1.02 REQUIRED LISTING OF PROPOSED SUBCONTRACTORS

Each Proposal shall have listed therein the name and address of each subcontractor including the percentage of each item that the subcontractor will work on to whom the bidder proposes to subcontract portions of the work in an amount in excess of 0.5 % of the total bid or \$10,000, whichever is greater, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code. The bidder's attention is directed to other provisions of said Act related to the imposition of penalties for failure to observe its provisions by using unauthorized subcontractors or by making unauthorized substitutions.

A sheet for listing the subcontractors, as required herein, is included in the Proposal.

SECTION 3. AWARD AND EXECUTION OF CONTRACT

3-1.01 GENERAL

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.

3-1.02 AWARD OF CONTRACT

Section 3-1.01, "Award of Contract," of the Standard Specifications is amended to read:

3-1.01 Award of Contract; The right is reserved to reject any and all Proposals. The award of the Contract, if it be awarded, will be to the lowest responsive responsible bidder whose Proposal complies with all the requirements prescribed. Such award, if made, will be made within sixty (60) days after the opening of the Proposals. This period will be subject to extension for such further period as may be agreed upon in writing between the Department and the bidder concerned.

All bids will be compared on the basis of the Proposal Pay Items and Bid Price Schedule of the quantities of work to be done.

The lowest responsive responsible bidder shall be the bidder submitting the lowest additive total of all the bid items. In the event of a discrepancy between the unit price bid and the extended unit total as stated on the Proposal, the amount bid for the unit price shall control and shall be utilized in calculating the additive total of the bid items for purposes of award, including revisions by Addenda, and as specified in the Proposal instructions.

3-1.03 EXECUTION OF CONTRACT

Attention is directed to the "Notice to Bidders" and "Proposal" for this Contract. Barring some unforeseen irregularity, Notice of Award will be sent to the lowest responsive responsible bidder after approval by the El Dorado County Board of Supervisors. The successful bidder shall return the signed Contract, a California Form 590-Withholding Exemption Certificate, a Federal Form W-9-Request for Taxpayer Identification Number and Certification, the Contract bonds, and certificates of insurance to the Office of the Department of Transportation **within eight (8) days, not including Sundays and legal holidays, after receiving the Notice of Award of Contract.** Priority delivery or mail of these documents should be to attention of the Project Engineer, El Dorado County Department of Transportation at 4505 Golden Foothill Parkway, El Dorado Hills, California 95762 .

The failure of the successful bidder to furnish any bond required of it by law or by this Agreement, or the failure to execute the Contract, or the failure to provide the required insurance documents within the time fixed for the execution of the Contract and return of the bonds and insurance constitutes a failure to execute and return the Contract as required herein. Upon such failure or refusal to return the executed Agreement, or to provide the bonds or insurance required herein, the bidder's security shall be forfeited to the County.

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

4-1.01 GENERAL

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

Section 8-1.03, "Beginning of Work," of the Standard Specifications shall not apply and shall be replaced with the following:

The Contactor shall begin work on the date stated in the Notice to Proceed issued by the County. The work shall be diligently prosecuted to completion before the expiration of **Thirty (30) WORKING DAYS.**

The Contractor shall notify the Engineer, in writing, of the Contractor's intent to begin work at least seventy-two (72) hours before work is begun. The notice shall be delivered to the Engineer at the Department of Transportation office in Placerville and shall specify the date the Contractor intends to start. If the project has more than one location of work, a separate notice shall be given for each location.

Should the Contractor begin work in advance of receiving the Notice to Proceed, any work performed by the Contractor in advance of the date stated in the Notice to Proceed shall be considered as having been done by the Contractor at the Contractor's own risk and as a volunteer.

The Contractor shall pay to the County of El Dorado the sum of **one thousand dollars (\$1,000.00)** for each calendar day, as liquidated damages and not as a penalty, for each and every calendar day's delay in finishing the Work in excess of the contract time prescribed herein

The Contractor shall furnish the Engineer with a statement from the vendor that the order for the electrical materials required for this contract has been received and accepted by the vendor; and the statement shall be furnished within fifteen (15) calendar days after the beginning of work date stated in the Notice to Proceed. The statement shall give the date that the electrical materials will be shipped. If the Contractor has the necessary materials on hand, the Contractor will not be required to furnish the vendor's statement.

It is anticipated that water will be available in sufficient quantities for the prosecution of the work. However, water shortages may occur during the life of the contract. Arrangements or commitments obtained by the Department are not a part of the contract. It is expressly understood and agreed that the Department assumes no responsibility to the bidder or Contractor whatsoever in respect to the arrangements made with the source. The Contractor shall assume all risks in connection with the use of the source and the terms upon which the use shall be made. There is no warranty or guaranty, either expressed or implied, to the quantity of water that can be obtained from the source. If the Department has compiled "Materials Information", as referred to in "Watering" of these special provisions, the Contractor is cautioned to make independent investigations and obtain the commitments or allocations as the Contractor deems necessary to verify the quantity of water available. The Contractor shall, at the Contractor's expense, make arrangements or obtain commitments or allocations necessary to provide water for the project.

During the progress of the work, if water becomes unavailable or unavailable in the quantities needed for prosecution of the work, the unavailability of water will be considered a "shortage of materials" in conformance with the provisions in Section 8-1.07, "Liquidated Damages," of the Standard Specifications except for compensation. The Contractor will be granted an extension of time and will not be assessed with liquidated damages for any portion of the delay in completion of the work beyond the time shown above for the completion of the work caused by the unavailability of water, provided the Contractor notifies the Engineer and furnishes proof of the "shortage of materials" as required in the third and fourth paragraphs in Section 8-1.07, "Liquidated Damages," of the Standard Specifications. If the Contractor sustains delay costs or damages which could not have been avoided by the judicious handling of forces, equipment and plant, there shall be paid to the Contractor the amount the Engineer may find to be a fair and reasonable compensation for the part of the Contractor's actual loss, as, in the opinion of the Engineer, was unavoidable, determined in the same manner as provided for right of way delays in Section 8-1.09, "Right of Way Delays," of the Standard Specifications. The Contractor shall be entitled to no other compensation for such delay. The provisions in Section 5-1.116, "Differing Site Conditions," of the Standard Specifications shall not apply to the unavailability of water.

4-1.02 CONSTRUCTION SCHEDULE

Daily working hours shall be between the hours of 7:00 a.m. to 10:00 p.m. weekdays, 8:00 a.m. to 7:00 p.m. on Saturdays, Sundays and legal holidays. The Contractor may conduct nighttime operations outside of these hours in accordance with the section entitled "Sound Control Requirements" and the section entitled "Night Time Lighting Requirements" elsewhere in these special provisions.

Attention is directed to section entitled "Closure Requirements and Conditions" of these special provisions regarding allowable times and frequencies of lane closures.

The contract time will be extended one (1) working day for each working day (Monday through Friday, excluding legal holidays) that the Contractor's operations are suspended due to weather condition. No time extensions will be allowed for weekends or holidays where the Contractor's operations are suspended due to weather condition, unless the Contractor's operations on the working day before and after the weekend or holiday are suspended due to weather condition. The Engineer has sole authority for determining time extensions pursuant to this section.

4-1.03 CONTRACTOR SUBMITTALS

Attention is directed to the sections entitled "Sound Control Requirements," "Order of Work," "Air Pollution Control," "Dust Control", "Cost Break down", "Warranty" and "Water Pollution Control, elsewhere in these special provisions.

The Contractor must comply with the following submittal requirements within five (5) calendar days of receipt of the Notice to Proceed:

The Contractor must submit a Construction Schedule for the Engineer's review and approval. If the initial Construction Schedule requires changes, the Contractor shall provide the Engineer with a revised schedule within twelve (12) calendar days of receipt of the Notice to Proceed. Subsequent schedules shall be updated and submitted to the Engineer at the weekly meetings. Contents of all schedules shall conform to Section 8-1.04 of the Standard Specifications.

Attention is directed to the sections entitled "Air Pollution Control" and "Dust Control" elsewhere in these special provisions. The Contractor must submit Fugitive Dust Mitigation Plan to the Engineer and obtain approval of the Fugitive Dust Mitigation Plan prior to start of any work.

Attention is directed to the section entitled "Water Pollution Control" elsewhere in these special provisions. The Contractor must submit a Storm Water Pollution Prevention Plan (SWPPP) to the Engineer and obtain approval of the SWPPP prior to start of any work having the potential to cause water pollution.

No mobilization payments will be made until all of the above submittals have been reviewed and approved by the Engineer. For weekly schedule update submittals, the provisions regarding these submittals and progress payments shall be in accordance with Section 8-1.04, "Progress Schedule," of the Standard Specifications.

The Engineer shall be furnished a cost break-down for each contract lump sum item of work described in Section 10-3.

The cost break-down shall be submitted to the Engineer for approval within ten (10) days of the date of the Notice to Proceed. The cost break-down shall be approved, in writing, by the Engineer before any partial payment for the items of electrical work will be made.

The Contractor must comply with the time frames listed in the applicable special provisions sections for the following submittals:

If nighttime operations are proposed, Contractor must submit a Sound Mitigation Plan in accordance with "Sound Control Requirements" of these special provisions

Contractor must submit all certificates of compliance in accordance with these special provisions and the Standard Specifications.

Approval of all submittals by the Engineer does not relieve the Contractor of its responsibility to perform the work in an acceptable manner and in accordance with the Plans, the Standard Specifications, and these special provisions.

4-1.04 PRE-CONSTRUCTION CONFERENCE AND WEEKLY MEETINGS

A pre-construction conference will be scheduled by the Resident Engineer after the project is awarded and prior to the issuance of the Notice to Proceed. The conference will be held at the Construction Office, 2441 Headington Road, Placerville to discuss important aspects of the project and all essential matters pertaining to the prosecution and the satisfactory completion of the project as required. The Contractor shall bring all required schedules and documents to the conference.

The Contractor's representatives at this conference shall include all major superintendents for the work and may include major Subcontractors. At this conference, the Contractor shall submit in writing, signed by the officers of the corporation, if applicable, the names of two employees who will be the superintendents on the project. The second name serves as an alternate in the absence of the first designee. The superintendent shall be on the site at all times that work is in progress.

Weekly meetings will be held to discuss construction issues and scheduling. The Contractor's (or designee's) attendance is mandatory.

Full compensation for the required attendance shall be considered as included in the various items of work and no additional compensation will be allowed therefor.

4-1.05 PROSECUTION AND PROGRESS

Attention is directed to the provisions of Section 8 of the Standard Specifications.

The Contractor shall notify the Engineer within five (5) working days of any occurrence, which in the Contractor's opinion, entitles it to an extension of time for completion. Such notice shall be in writing. The Engineer shall acknowledge, in writing, receipt of any such claim by the Contractor within five (5) working days of its receipt.

SECTION 5. GENERAL

SECTION 5-1 MISCELLANEOUS

5-1.01 DIFFERING SITE CONDITIONS

Attention is directed to Section 5-1.116, "Differing Site Conditions," of the Standard Specifications.

During the progress of the work, if subsurface or latent conditions are encountered at the site differing materially from those indicated in the "Materials Information," log of test borings, other geotechnical data obtained by the Department's investigation of subsurface conditions, or an examination of the conditions above ground at the site, the party discovering those conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.

The Contractor will be allowed fifteen (15) days from the notification of the Engineer's determination of whether or not an adjustment of the contract is warranted, in which to file a notice of potential claim in conformance with the provisions of Section 9-1.04, "Notice of Potential Claim," of the Standard Specifications and as specified herein; otherwise the decision of the Engineer shall be deemed to have been accepted by the Contractor as correct. The notice of potential claim shall set forth in what respects the Contractor's position differs from the Engineer's determination and provide any additional information obtained by the Contractor, including but not limited to additional geotechnical data. The notice of potential claim shall be accompanied by the Contractor's certification that the following were made in preparation of the bid: a review of the contract, a review of the "Materials Information," a review of the log of test borings and other records of geotechnical data to the extent they were made available to bidders prior to the opening of bids, and an examination of the conditions above ground at the site. Supplementary information, obtained by the Contractor subsequent to the filing of the notice of potential claim, shall be submitted to the Engineer in an expeditious manner.

5-1.02 LINES AND GRADES

Attention is directed to Section 5-1.07, "Lines and Grades," of the Standard Specifications. Stakes or marks will be set by the Engineer in conformance with the requirements in Chapter 12, "Construction Surveys," of the Caltrans Surveys Manual.

Contractor is responsible for setting the grades by a method acceptable to the Engineer and according to the Plans, Specifications and these special provisions; however, lines will be set by the Engineer

5-1.03 CONTRACT BONDS

Attention is directed to Section 3-1.02, "Contract Bonds," of the Standard Specifications and these special provisions.

The performance bond shall be in a sum not less than one hundred percent of the total amount payable by the terms of the contract.

The payment bond shall be in a sum not less than one hundred percent of the total amount payable by the terms of the contract.

5-1.04 COST REDUCTION INCENTIVE

Attention is directed to Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications.

Prior to preparing a written cost reduction proposal, the Contractor shall request a meeting with the Engineer to discuss the proposal in concept. Items of discussion will also include permit issues, impact on other projects, impact on the project schedule, peer reviews, overall merit of the proposal, and review times required by the Department and other agencies.

If a cost reduction proposal submitted by the Contractor, and subsequently approved by the Engineer, provides for a reduction in contract time, fifty percent (50%) of that contract time reduction shall be credited to the County by reducing the contract working days, not including plant establishment. Attention is directed to "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions regarding the working days.

If a cost reduction proposal submitted by the Contractor, and subsequently approved by the Engineer, provides for a reduction in traffic congestion or avoids traffic congestion during construction, sixty percent (60%) of the estimated net savings in construction costs attributable to the cost reduction proposal will be paid to the Contractor. In addition to the requirements in Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications, the Contractor shall provide detailed comparisons of the traffic handling between the existing contract and the proposed change, and estimates of the traffic volumes and congestion.

5-1.05 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 (GOVERNMENT CODE SECTION 12990)

Attention is directed 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.

5-1.06 PREVAILING WAGE

Attention is directed to Section 7-1.01A(2), "Prevailing Wage," of the Standard Specifications.

In accordance with the provisions of California Labor Code Sections 1770, 1773, 1773.1, 1773.2, 1773.6, and 1773.7, the general prevailing rate of wages in the county in which the Work is to be done has been determined by the Director of the California Department of Industrial Relations. These wage rates appear in the California Department of Transportation publication entitled General Prevailing Wage Rates. Interested parties can obtain the current wage information by submitting their requests to the Department of Industrial Relations, Division of Labor Statistics and Research, PO Box 420603, San Francisco, CA 94142-0603, Phone (415) 703-4774. This information is also available at the following address on the Internet: <http://www.dir.ca.gov/dlsr/PWD>. The rates at the time of the bid advertisement date of a project will remain in effect for the life of the project in accordance with the California Code of Regulations as modified and effective January 27, 1997.

Copies of the general prevailing rate of wages in the County in which the Work is to be done are also on file at the California Department of Transportation's principal office, and are available upon request.

In accordance with the provisions of Labor Code 1810, eight (8) hours of labor shall constitute a legal day's work upon all work done hereunder, and Contractor and any subcontractor employed under this Contract shall conform to and be bound by the provisions of Labor Code Sections 1810 through 1815.

5-1.07 APPRENTICES

Attention is directed to Sections 1777.5, 1777.6 and 1777.7 of the California Labor Code and Title 8, California Code of Regulations Section 200 et seq. To ensure compliance and complete understanding of the law regarding apprentices, and specifically the required ratio thereunder, each Contractor or subcontractor should, where some question exists, contact the Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, CA 94102, or one of its branch offices prior to commencement of work on the public works contract. Responsibility for compliance with this section lies with the Contractor.

It is County policy to encourage the employment and training of apprentices on public works contracts as may be permitted under local apprenticeship standards.

5-1.08 CERTIFIED PAYROLL

As required under the provisions of Labor Code Section 1776, the Contractor and any subcontractors shall keep accurate payroll records as follows:

1. The payroll records shall show 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 the Contractor or subcontractors in connection with this project.

2. A certified copy of all payroll records enumerated above shall be available for inspection at all reasonable hours at the principal office of the Contractor as follows:

- a. Make available or furnish to the employee or his or her authorized representative on request.
- b. Make available for inspection or furnished upon request to a representative of the County, the State Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the State Department of Industrial Relations.
- c. Make available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the County, the State Division of Labor Standards Enforcement, or the State Division of Apprenticeship Standards. The requesting party shall, prior to being provided the records, reimburse the costs of preparation by the Contractor, subcontractor, 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.

5-1.09 DISPUTES RESOLUTION

Attention is Directed to Section 9, "Measurement and Payment" of the Standard Specifications, and Article 7, "Disputes Resolution" of the Draft Agreement included in this booklet.

5-1.10 RECORDS

The Contractor shall maintain cost accounting records for the contract pertaining to, and in such a manner as to provide a clear distinction between the following six categories of costs of work during the life of the contract:

- A. Direct costs of contract item work.
- B. Direct costs of changes in character in conformance with Section 4-1.03C, "Changes in Character of Work," of the Standard Specifications.
- C. Direct costs of extra work in conformance with Section 4-1.03D, "Extra Work," of the Standard Specifications.
- D. Direct costs of work not required by the contract and performed for others.
- E. Direct costs of work performed under a notice of potential claim in conformance with the provisions in Section 9-1.04, "Notice of Potential Claim," of the Standard Specifications.
- F. Indirect costs of overhead.

Cost accounting records shall include the information specified for daily extra work reports in Section 9-1.03C, "Records," of the Standard Specifications. The requirements for furnishing the Engineer completed daily extra work reports shall only apply to work paid for on a force account basis.

The cost accounting records for the contract shall be maintained separately from other contracts, during the life of the contract, and for a period of not less than three (3) years after the date of acceptance of the Work. If the Contractor intends to file claims against the Department, the Contractor shall keep the cost accounting records specified above until complete resolution of all claims has been reached.

5-1.11 RECORDS EXAMINATION AND AUDIT REQUIREMENTS

All accounting records and other supporting papers of Contractor and any subcontractors connected with performance under this Contract shall be maintained for a minimum of three years from the date of final payment by County or all other pending matters are closed and shall be held open to inspection and audit by representatives of the County, the State Auditor, or any duly authorized representative of other government agencies, and copies thereof shall be furnished upon request.

Contractor and its subcontractors shall maintain all books, documents, papers, accounting records, and other evidence pertaining to the performance of the Contract, including but not limited to, the costs of administering the various aspects of the Contract. All of the above-referenced parties shall make such materials available at their respective offices at all reasonable times during the contract period and for three years from the date that final payment by County and all other pending matters are closed. Representatives of the County, the State Auditor, and any duly authorized representative of other government agencies shall have access to any books, documents, papers, and records that are pertinent to the Contract for audit, examination, excerpts, and transactions and copies thereof shall be furnished upon request.

5-1.12 SUBCONTRACTING

Attention is directed to the provisions in Section 8-1.01, "Subcontracting," of the Standard Specifications and these special provisions.

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/DLSE/Debar.html>.

5-1.13 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.

5-1.14 PAYMENTS

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

For the purpose of making partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications, the amount set forth for the contract items of work hereinafter listed shall be deemed to be the maximum value of the contract item of work for progress payment purposes:

Prepare Storm Water Pollution Prevention Plan	\$ 500.00
Clearing and Grubbing	\$3,000.00

After acceptance of the contract pursuant to the provisions in Section 7-1.17, "Acceptance of Contract," of the Standard Specifications, the amount, if any, payable for a contract item of work in excess of the maximum value for progress payment purposes hereinabove listed for the item, will be included for payment in the first estimate made after acceptance of the contract.

No partial payment will be made for any materials on hand which are furnished but not incorporated in the work.

5-1.15 PAYMENT OF WITHHELD FUNDS

Payment of withheld funds shall conform to Section 9-1.065, "Payment of Withheld Funds," of the Standard Specifications and these special provisions.

The phrase "...with the State Treasurer" is deleted from the first sentence of the second paragraph of Section 9-1.065, "Payment of Withheld Funds" of the Standard Specifications.

The Contractor may elect to receive one hundred percent (100%) of payments due under the Contract from time to time, without retention of any portion of the payment by the County, by depositing securities of equivalent value with the County in accordance with the provisions of Section 22300 of the California Public Contract Code. Securities eligible for

deposit hereunder shall be limited to those listed in Section 16430 of the Government Code, or bank or savings and loan certificates of deposit.

Funds withheld from progress payments to ensure performance of the contract that are eligible for payment into escrow or to an escrow agent pursuant to Section 22300 of the Public Contract Code do not include funds withheld or deducted from payment due to failure of the Contractor to fulfill a contract requirement.

5-1.16 INTEREST ON PAYMENTS

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

- A. Unpaid progress payments, payment after acceptance, and final payments shall begin to accrue interest thirty (30) days after the Engineer prepares the payment estimate.
- B. Unpaid extra work bills shall begin to accrue interest thirty (30) days after preparation of the first pay estimate following receipt of a properly submitted and undisputed extra work bill. To be properly submitted, the bill must be submitted within seven (7) days of the performance of the extra work and in conformance with the provisions in Section 9-1.03C, "Records," and Section 9-1.06, "Partial Payments," of the Standard Specifications. An undisputed extra work bill not submitted within seven (7) days of performance of the extra work will begin to accrue interest thirty (30) days after the preparation of the second pay estimate following submittal of the bill.
- C. The rate of interest payable for unpaid progress payments, payments after acceptance, final payments, and extra work payments shall be ten percent (10%) per annum.
- D. The rate of interest payable on a claim, protest or dispute ultimately allowed under this contract shall be six percent (6%) per annum. Interest shall begin to accrue sixty-one (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 six percent (6%) per annum in accordance with Public Contract Code Section 20104.6.

5-1.17 PUBLIC SAFETY

The Contractor shall provide for the safety of traffic and the public in conformance 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 a lane open to public traffic and an excavation, obstacle or storage area when the following conditions exist:

- A. Excavations. Whenever the near edge of the excavation is 12 feet or less from the edge of the lane, except for:
 1. Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.
 2. Excavations less than one foot deep.
 3. Trenches less than one foot wide for irrigation pipe or electrical conduit, or excavations less than one foot in diameter.
 4. Excavations parallel to the lane for the purpose of pavement widening or reconstruction.
 5. Excavations in side slopes, where the slope is steeper than 1:4 (vertical:horizontal).
 6. Excavations protected by existing barrier or railing.
- B. 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 the Contractor's 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.
- C. Storage Areas. Whenever material or equipment is that stored within 12 feet of the lane and the storage is not otherwise prohibited by the provisions of the Standard Specifications and these special provisions.

The approach end of temporary railing (Type K), installed in conformance with the provisions 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 2006 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.

Temporary crash cushion modules shall conform to the provisions 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 Standard Specifications and these special provisions:

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 a traffic lane, the line of cones or delineators shall be considered to be the edge of the traffic lane, however, the Contractor shall not reduce the width of an existing lane to less than 3 m { 10 feet} without written approval from the Engineer.

When work is not in progress on a trench or other excavation that requires 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 provisions 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.

5-1.18 TESTING

Testing of materials and work shall conform to the provisions in Section 6-3, "Testing," of the Standard Specifications and these special provisions.

Whenever the provisions of Section 6-3.01, "General," of the Standard Specifications refer to tests or testing, it shall mean tests to assure the quality and to determine the acceptability of the materials and work.

The Engineer will deduct the costs for testing of materials and work found to be unacceptable, as determined by the tests performed by the Department, and the costs for testing of material sources identified by the Contractor which are not used for the work, from moneys due or to become due to the Contractor. The amount deducted will be determined by the Engineer.

5-1.19 REMOVAL OF ASBESTOS AND HAZARDOUS SUBSTANCES

Attention is directed to the Sections entitled "Air Pollution Control" and "Dust Control" elsewhere in these special provisions.

When the presence of asbestos or hazardous substances is not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be asbestos as defined in Section 25914.1 of the Health and Safety Code or a hazardous substance as defined in Section 25117 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. The Contractor shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In conformance with Section 25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including 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 in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

It is brought to the Contractor's attention that some areas of El Dorado County may contain natural occurring asbestos (NOA) and asbestiform containing soils. The Contractor is required to provide a site specific Contingent Asbestos Hazard Dust Mitigation Plan approved by the El Dorado County Air Pollution Control Officer. The Contractor shall submit the approved plan to the Engineer prior to starting construction activities.

5-1.20 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.

Sound Level Criteria

The maximum allowable noise exposure shall be as specified in the following table for work within the community types and land use designations as follows:

The town of Cameron Park, California, is located in a Community Region with Higher-Density Residential, Commercial and Public Facility land use designations.

The Engineer may approve work that produces noise levels above the specified limits in accordance with the exceptions allowed in the El Dorado County 2004 General Plan.

MAXIMUM ALLOWABLE NOISE EXPOSURE FOR NONTRANSPORTATION NOISE SOURCES IN COMMUNITY REGIONS AND ADOPTED PLAN AREAS - CONSTRUCTION NOISE			
Land Use Designation¹	Time Period	Noise Level (dB)	
		L_{eq}	L_{max}
Higher-Density Residential (MFR, HDR, MDR)	7 am-7 pm	55	75
	7 pm-10 pm	50	65
	10 pm-7 am	45	60
Commercial and Public Facilities (C, R&D, PF)	7 am-7 pm	70	90
	7 pm-7 am	65	75
Industrial (I)	Any Time	80	90
Note: ¹ Adopted Plan areas should refer to those land use designations that most closely correspond to the similar General Plan land use designations for similar development.			

5-1.21 NIGHT TIME LIGHTING REQUIREMENTS

Nighttime operations

For the purposes of this contract, the Contractor shall provide nighttime lighting for operations that occur between sunset and sunrise that conform to the minimum illumination intensities established by California Division of Occupational Safety and Health Construction Safety Orders.

If nighttime operations are proposed by the Contractor, the following requirements shall apply:

Lighting shall be directed only onto the immediate area under construction;

Floodlights on light towers shall be angled no more than 45 degrees;

Floodlights on light towers shall be raised not more than 6 m (20 feet) above grade when adjacent to a residence;

Light shields shall be used to reflect lighting towards the work areas and away from traffic and residences.

Full compensation for complying with the requirements contained in this section shall be considered included in the various items of work and no separate compensation will be allowed therefor.

5-1.22 WATER CONSERVATION

Attention is directed to the various sections of the Standard Specifications and these special provisions which require the use of water for the construction of this project. Attention is directed to Section 7, "Legal Relations and Responsibility," of the Standard Specifications with regard to the Contractor's responsibilities for public convenience, public safety, preservation of property, indemnification and insurance.

Nothing in this section "Water Conservation" shall relieve the Contractor from furnishing an adequate supply of water required for the proper construction of this project in conformance with the provisions in the Standard Specifications or these special provisions or relieve the Contractor from the legal responsibilities defined in Section 7 of the Standard Specifications.

The Contractor shall, whenever possible and not in conflict with the above requirements, minimize the use of water during construction of the project. Watering equipment shall be kept in good working order; water leaks shall be repaired promptly; and washing of equipment, except when necessary for safety or for the protection of equipment, shall be discouraged.

Minor structures and miscellaneous concrete construction shall not be cured by using water.

Attention is directed to Section 17-1.025, "Chemical Additives," of the Standard Specifications. When ordered by the Engineer, a chemical additive shall be added to water used for compaction. The additive shall be approved by the Engineer and shall be used in conformance with instructions issued by the Engineer. Chemical additive ordered by the Engineer will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

The Contractor is advised to contact local water supply agencies in the area as to the availability of water sources for the Project work and mitigation. Temporary local water conservation measures may affect the supply of water during this project and it is the Contractor's responsibility to plan for such impacts and meet the requirements of the Contract Documents. Full compensation for planning and supplying water to conform to the requirements of the Plans and Contract Documents under such conditions shall be considered as included in the prices for the various contract items of work and no additional compensation will be allowed therefor.

The Contractor is advised to contact the El Dorado Irrigation District (EID) for availability of water and conditions set in place for potential water conservation periods and measures:

El Dorado Irrigation District
Dick Spangler (530/642-4015)
2890 Mosquito Road
Placerville, CA 95667

5-1.23 PROJECT APPEARANCE

The Contractor shall maintain a neat appearance to the work.

In areas visible to the public, the following shall apply:

- A. When practicable, broken concrete and debris developed during clearing and grubbing shall be disposed of concurrently with its removal. If stockpiling is necessary, the material shall be removed or disposed of weekly.
- B. Trash bins shall be furnished for debris from structure construction. Debris shall be placed in trash bins daily. Forms or falsework that are to be re-used shall be stacked neatly concurrently with their removal. Forms and falsework that are not to be re-used shall be disposed of concurrently with their removal.

Full compensation for conforming to the provisions in this section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

5-1.24 CONTRACTOR'S RESPONSIBILITY FOR MATERIALS

The Contractor shall be responsible for the condition of all materials, which it has furnished, and shall replace at its own expense all such material found to be defective or which has been damaged after delivery. This includes the replacement of material which is found to be defective at any time prior to expiration of the guarantee period.

5-1.25 AIR POLLUTION CONTROL

Attention is directed to the Section 7-1.01F, "Air Pollution Control" of the Standard Specifications and to the section entitled "Dust Control" in these special provisions.

The Contractor's attention is directed to the El Dorado County Air Quality Management District (AQMD) Rules and Regulations, Ordinances and other applicable statutes relating to pollution prevention or abatement.

In accordance with AQMD Rule 300 "Open Burning," a valid permit from an El Dorado County AQMD Officer is required when open burning of wood waste is proposed. A copy of the permit shall be filed with the Engineer prior to any burning.

The Contractor shall comply with applicable State and County Air Quality Management District (AQMD) rules and regulations regarding reduction of construction related impacts on air quality, including the implementation of the following measures, as well as measures found elsewhere in these special provisions and the Standard Specifications:

- Use low-emission onsite mobile construction equipment.
- Maintain equipment in tune per manufacturer's specifications.
- Retard diesel engine injection timing by two to four degrees unless not recommended by manufacturer (due to lower emission output in-place).
- Use reformulated, low-emission diesel fuel.
- Substitute electric and gasoline-powered equipment for diesel-powered equipment where feasible.
- Use catalytic converters on gasoline-powered equipment.
- Do not leave inactive construction equipment idling for prolonged periods (i.e., more than 2 minutes).

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

5-1.26 UTILITIES

Attention is directed to Section 8-1.10 "Utility and Non-Highway Facilities" of the Standard Specifications and these special provisions.

The Contractor shall determine by potholing or other means the exact utility locations in advance of performing the Contract items of work.

If the Contractor while performing the Contract, discovers utility facilities not identified by the Engineer in the Contract Plans or Specifications or if the utility located in the field by the Contractor is different than that shown on the Contract Plans, Contractor shall immediately notify the Engineer in writing. The Contractor shall schedule the project so as to allow the Engineer forty-eight (48) hours, excluding Saturdays, Sundays, and holidays, to determine the work to be done when a conflict exists. The County will not compensate the Contractor for idle equipment during potholing, nor will the County compensate the Contractor for right-of-way delays during the forty-eight (48) hours allotted for a decision to be reached. The owner of the utility facility shall have the sole discretion to perform the repairs or relocation work itself, or to permit the Contractor to do such repairs or relocation work at a reasonable price. In the event that the owner of the utility facility authorizes the Contractor to perform the work, the parties shall proceed with a written Change Order. Compensation to the Contractor for said cost shall be in accordance with Section 4215 of the Government Code and with Section 9-1.03 of the Standard Specifications.

Nothing herein shall be construed to require the County to locate the presence of any existing services not expressly included in Government Code Section 4215, nor limit the County's rights or remedies set forth therein.

The Contractor shall protect from damage existing utility and other non-highway facilities that are to remain in place. This protection may consist of shoring an existing utility. Damage due to the Contractor's failure to exercise reasonable care shall be repaired at its cost and expense.

Any damage to the facilities or damage cause by the failure of a facility due to the Contractor's operations shall be the responsibility of the Contractor. The Contractor shall contact the appropriate utility company listed below should any problems, concerns or questions arise during the construction.

Full compensation for working around said facilities, which are to remain whether shown on the Plans or not, and for potholing, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

The Contractor shall notify the following listed utility companies forty-eight (48) hours in advance of doing any work at the site of the project: **Underground Service Alert Phone: 1-800-642-2444**

El Dorado Irrigation District
Main # 24 hr: (530) 622-4513
Attn: Elizabeth Wells, Sewer Division
(530) 642-4146
Attn: Brian Mueller, Drinking Water Division
(530) 642-4029
(530) 642-4179
Fax (530) 622-8597
2890 Mosquito Road
Placerville, CA 95667

Comcast
Attn: Kip Miller
(916)-830-6758
Mobile (916)-919-6065
Fax (916)-564-1029
4350 Pell Drive
Sacramento Ca 95838

Pacific Gas and Electric Company
24 Hr # 1-800-743-5000
Attn: Brian Ritchie
(530) 621-7264
Fax (530) 621-7241
4636 Missouri Flat Road
Placerville, CA 95667

AT&T
Attn: Steve DePalma
(530) 621-6953
Mobile (916) 396-6168
Pager (916) 440-9069
281 Industrial Drive
Placerville CA 95667

5-1.27 FINAL INSPECTION

The Contractor shall notify the Engineer, in writing, of the completion of the work and the Engineer shall promptly inspect the work. The Contractor will be notified, in writing, of any defects or deficiencies to be remedied. Within five (5) working days of such notification, the Contractor shall proceed to correct such defects or deficiencies. The provisions of Section 4-1.01 of these special provisions regarding time of completion and liquidated damages shall apply. When notified that the work has been completed, the Engineer will again inspect the work to ensure that the work has been done in accordance with the Contract Documents and to recommend to the Board of Supervisors that the Project be accepted and the Notice of Completion be recorded.

5-1.28 REPAIR AND CORRECTION

For a period of **365 calendar days**, commencing on the date of recordation of the Notice of Completion, the Contractor shall, upon receipt of notice in writing from the County, promptly make all repairs arising out of defective materials, workmanship, or equipment. The County is hereby authorized to make such repairs, at the Contractor's expense, if ten (10) days after giving of such notice to the Contractor, the Contractor has failed to make or undertake the repairs with due diligence. In case of an emergency, where, in the opinion of the County, delay could cause serious loss or damage, repairs may be made without notice being sent to the Contractor and the expenses in connection therewith shall be charged to the Contractor.

5-1.29 ACCESS TO INSPECTION OF WORK

Representatives of the County, Engineer, El Dorado Irrigation District, Pacific Gas and Electric, AT&T and COMCAST shall at all times have full access for inspection and testing of the work accomplished under this contract and the Contractor shall provide proper and safe facilities for such access.

5-1.30 AREAS FOR CONTRACTOR'S USE

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

The County 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.

Areas available for the exclusive use of the Contractor are designated on the plans. Use of the Contractor's work areas and other County-owned property shall be at the Contractor's own risk, and the County shall not be held liable for damage to or loss of materials or equipment located within these areas.

The Contractor shall remove equipment, materials, and rubbish from the work areas and other County-owned property which the Contractor occupies. The Contractor shall leave the areas in a presentable condition in conformance with the provisions in Section 4-1.02, "Final Cleaning Up," of the Standard Specifications.

The Contractor shall secure, at the Contractor's own expense, areas required for plant sites, storage of equipment or materials or for other purposes, if sufficient area is not available to the Contractor within the contract limits, or at the sites designated on the plans outside the contract limits.

Attention is directed to the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications and these special provisions.

Before the Contractor makes use of any property owner's land where the Department has not made previous arrangements with the owner for the use of said land, the Contractor shall supply to the County a fully executed "Agreement" form. The "Agreement" form shall be a Department supplied form, available upon request.

5-1.31 SAFETY AND HEALTH PROVISIONS

Attention is directed to the Standard Specifications Section 7-1.06 and these special provisions.

In addition to other specifications, definitions and provisions, the Contractor is also hereby categorized and designated as the following types of employer for this project:

- **Exposing Employer** – the employer whose employees are exposed to a hazard
- **Creating Employer** – the employer who actually is creating a hazard
- **Controlling Employer** – the employer who is responsible and who has the authority for ensuring that a hazardous condition is corrected
- **Correcting Employer** - the employer who has the responsibility for actually correcting a hazard

The Contractor's Safety Officer(s) shall be certified as a competent person for controlling this project's workplace safety. A Contractor's Safety Officer shall be on the site, at a minimum, each and every day that work is in progress or periodically when work is not active and shall have the authority to correct any safety violation. In addition, the Contractor is required to develop a Safety Program specifically for this project, which will be available on site, at all times, and updated periodically during the project.

5-1.32 ARCHAEOLOGICAL DISCOVERIES

All articles of archaeological interest that may be uncovered by the Contractor during the progress of the work shall be reported immediately to the Engineer. The further operations of the Contractor with respect to the discovery shall be decided under the direction of the Engineer.

If archaeological materials, including but not limited to human skeletal material and disarticulated human bone, are discovered at the job site, protect and leave undisturbed and in place archaeological materials in accordance with the following codes and these special provisions:

1. California Public Resources Code, Division 5, Chapter 1.7 § 5097.5
2. California Public Resources Code, Division 5, Chapter 1.75 § 5097.98 and § 5097.99
3. California Administrative Code, Title 14 § 4308
4. California Penal Code, Part 1, Title 14 § 622-1/2
5. California Health and Safety Code, Division 7, Part 1, Chapter 2, § 7050.52

Archaeological materials are the physical remains of past human activity and include historic-period archaeological materials and prehistoric Native American archaeological materials. Nonhuman fossils are not considered to be archaeological except when showing direct evidence of human use or alteration or when found in direct physical association with archaeological materials as described in these special provisions.

Historic-period archaeological materials include cultural remains beginning with initial European contact in California, but at least 50 years old. Historical archaeological materials include:

1. Trash deposits or clearly defined disposal pits containing tin cans, bottles, ceramic dishes, or other refuse indicating previous occupation or use of the site
2. Structural remains of stone, brick, concrete, wood, or other building material found above or below ground or

3. Human skeletal remains from the historic period, with or without coffins or caskets, including any associated grave goods

Prehistoric Native American archaeological materials include:

1. Human skeletal remains or associated burial goods such as beads or ornaments
2. Evidence of tool making or hunting such as arrowheads and associated chipping debris of fine-grained materials such as obsidian, chert, or basalt
3. Evidence of plant processing such as pestles, grinding slabs, or stone bowls
4. Evidence of habitation such as cooking pits, stone hearths, packed or burnt earth floors or
5. Remains from food processing such as concentrations of discarded or burnt animal bone, shellfish remains, or burnt rocks used in cooking

Immediately upon discovery of archaeological materials, stop all work within a 60-foot radius of the archaeological materials and immediately notify the Engineer. Archaeological materials found during construction are the property of the County. Do not resume work within the 60-foot radius of the find until the Engineer gives you written approval. If, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of an archaeological find or investigation or recovery of archaeological materials, you will be compensated for resulting losses and an extension of time will be granted in the same manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The Department may use other forces to investigate and recover archaeological materials from the location of the find. When ordered by the Engineer furnish labor, material, tools and equipment, to secure the location of the find, and assist in the investigation or recovery of archaeological materials and the cost will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

Full compensation for immediately notifying the Engineer upon discovery of archaeological materials and leaving undisturbed and in place archaeological materials discovered on the job site shall be considered as included in the contract price paid for various items of work involved and no additional compensation will be allowed therefor.

SECTION 6. (BLANK)

SECTION 7. CONTRACTOR'S INSURANCE

7-1.01 GENERAL INSURANCE REQUIREMENTS

The Contractor shall provide proof of a policy of insurance satisfactory to the El Dorado County Risk Management Division and documentation evidencing that the Contractor maintains insurance that meets the following requirements:

1. Full Workers' Compensation and Employers' Liability Insurance covering all employees of the Contractor as required by law in the State of California.
2. Commercial General Liability (CGL) Insurance of not less than Two Million Dollars (\$2,000,000) combined single limit per occurrence for bodily injury and property damage, including but not limited to endorsements for the following coverage: Premises, personal injury, operations, products and completed operations, blanket contractual, and independent contractors liability. This insurance can consist of a minimum \$1 Million primary layer of CGL and the balance as an excess/umbrella layer, but only if the County is provided with written confirmation that the excess/umbrella layer "follows the form" of the CGL policy.
3. Automobile Liability Insurance of not less than One Million Dollars (\$1,000,000) is required in the event motor vehicles are used by the Contractor in performance of the Contract.
4. In the event Contractor is a licensed professional and is performing professional services under this Contract, Professional Liability Insurance is required with a limit of liability of not less than One Million Dollars (\$1,000,000).
5. Explosion, Collapse and Underground coverage is required when the scope of work includes XCU exposures. For the purpose of this Contract, XCU coverage is not required.

7-1.02 PROOF OF INSURANCE REQUIREMENTS

1. Contractor shall furnish proof of coverage satisfactory to the El Dorado County Risk Management Division as evidence that the insurance required herein is being maintained. The insurance will be issued by an insurance company acceptable to the Risk Management Division, or be provided through partial or total self-insurance likewise acceptable to the Risk Management Division.
2. The County of El Dorado, its officers, officials, employees, and volunteers shall be included as additional insured, but only insofar as the operations under this Contract are concerned. This provision shall apply to all general liability and excess liability policies. Proof that the County is named additional insured shall be made by providing the Risk Management Division with a certified copy, or other acceptable evidence, of an endorsement to Contractor's insurance policy naming the County additional insured.
3. In the event Contractor cannot provide an occurrence policy, Contractor shall provide insurance covering claims made as a result of performance of this Contract for not less than three (3) years following completion of performance of this Contract.
4. Any deductibles or self-insured retentions must be declared to and approved by the County. At the option of the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the County, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.
5. Contractor shall require each of its subcontractors to procure and maintain commercial general liability insurance and automobile liability insurance of the types and in the amounts specified above, or shall insure the activities of its subcontractors in its own policy in like amounts. Contractor shall also require each of its subcontractors to name Contractor and the County of El Dorado and any other additional insured listed above as additional insureds.

7-1.03 INSURANCE NOTIFICATION REQUIREMENTS

1. Contractor agrees no cancellation or material change in any policy shall become effective except upon thirty (30) days prior written notice to the County of El Dorado Project Manager at the office of the Department of Transportation, 2850 Fair Lane Court, Placerville, CA 95667.
2. Contractor agrees that the insurance required herein shall be in effect at all times during the term of this Contract. In the event said insurance coverage expires at any time or times during the term of this Contract, Contractor shall immediately provide a new certificate of insurance as evidence of the required insurance coverage. In the event Contractor fails to keep in effect at all times insurance coverage as herein provided, County may, in addition to any other remedies it may have, terminate this Contract upon the occurrence of such event. New certificates of insurance are subject to the approval of the Risk Management Division.

7-1.04 ADDITIONAL STANDARDS

Certificates shall meet such additional standards as may be determined by the Department either independently or in consultation with the Risk Management Division, as essential for protection of the County.

7-1.05 COMMENCEMENT OF PERFORMANCE

Contractor shall not commence performance of this Contract unless and until compliance with each and every requirement of the insurance provisions is achieved.

7-1.06 MATERIAL BREACH

Failure of Contractor to maintain the insurance required herein, or to comply with any of the requirements of the insurance provisions, shall constitute a material breach of the entire Contract.

7-1.07 REPORTING PROVISIONS

Any failure to comply with the reporting provisions of the policies shall not affect coverage provided to the County, its officers, officials, employees or volunteers.

7-1.08 PRIMARY COVERAGE

The Contractor's insurance coverage shall be primary insurance as respects the County, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the County, its officers, officials, employees or volunteers shall be in excess of the Contractor's insurance and shall not contribute with it.

7-1.09 PREMIUM PAYMENTS

The insurance companies shall have no recourse against the County of El Dorado its officers, agents, employees or any of them for payment of any premiums or assessments under any policy issued by any insurance company.

7-1.10 CONTRACTOR'S OBLIGATIONS

Contractor's indemnity and other obligations shall not be limited by the insurance required herein and shall survive the expiration of this Contract.

7-1.11 GOVERNING PRECEDENCE

To the extent that this Section 7, "Contractor's Insurance," is inconsistent with 7-1.12, "Indemnification and Insurance," of the Standard Specifications, this Section shall govern; otherwise each and every provision of such Section 7-1.12 shall be applicable to this Contract.

SECTION 8. MATERIALS

SECTION 8-1. MISCELLANEOUS

8-1.01 PREQUALIFIED AND TESTED SIGNING AND DELINEATION MATERIALS

The Department maintains the following list of Prequalified and Tested Signing and Delineation Materials. The Engineer shall not be precluded from sampling and testing products on the list of Prequalified and Tested Signing and Delineation Materials.

The manufacturer of products on the list of Prequalified and Tested Signing and Delineation Materials 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.

For those categories of materials included on the list of Prequalified and Tested Signing and Delineation Materials, only those products shown within the listing may be used in the work. Other categories of products, not included on the list of Prequalified and Tested Signing and Delineation Materials, may be used in the work provided they conform to the requirements of the Standard Specifications.

Materials and products may be added to the list of Prequalified and Tested Signing and Delineation Materials 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

Retroreflective With Abrasion Resistant Surface (ARS)

1. Apex, Model 921AR (4" x 4")
2. Ennis Paint, Models C88 (4" x 4"), 911 (4" x 4") and 953 (2.75" x 4.5")
3. Ray-O-Lite, Model "AA" ARS (4" x 4")
4. 3M Series 290 (3.5" x 4")
5. 3M Series 290 PSA, with pressure sensitive adhesive pad (3.5" x 4")

Retroreflective With Abrasion Resistant Surface (ARS)

(for recessed applications only)

1. Ennis Paint, Model 948 (2.3" x 4.7")
2. Ennis Paint, Model 944SB (2" x 4")*
3. Ray-O-Lite, Model 2002 (2" x 4.6")
4. Ray-O-Lite, Model 2004 ARS (2" x 4")*

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

Non-Reflective, 4-inch Round

1. Apex Universal (Ceramic)
2. Apex Universal, Models 929 (ABS) and 929PP (Polypropylene)
3. Glowlite, Inc. (Ceramic)
4. Hi-Way Safety, Inc., Models P20-2000W and 2001Y (ABS)
5. Interstate Sales, "Diamond Back" (Polypropylene)
6. Novabrite Models Cdot (White) Cdot-y (Yellow), Ceramic
7. Novabrite Models Pdot-w (White) Pdot-y (Yellow), Polypropylene
8. Three D Traffic Works TD10000 (ABS), TD10500 (Polypropylene)

PAVEMENT MARKERS, TEMPORARY TYPE

Temporary Markers For Long Term Day/Night Use (180 days or less)

1. Vega Molded Products "Temporary Road Marker" (3" x 4")

Temporary Markers For Short Term Day/Night Use (14 days or less)

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

1. Apex Universal, Model 932
2. Filtrona Extrusion, Models T.O.M., T.R.P.M., and "HH" (High Heat)
3. Hi-Way Safety, Inc., Model 1280/1281
4. Glowlite, Inc., Model 932

STRIPING AND PAVEMENT MARKING MATERIAL

Permanent Traffic Striping and Pavement Marking Tape

1. Advanced Traffic Marking, Series 300 and 400
2. Brite-Line, Series 1000
3. Brite-Line, "DeltaLine XRP"
4. Swarco Industries, "Director 35" (For transverse application only)
5. Swarco Industries, "Director 60"
6. 3M, "Stamark" Series 380 and 5730
7. 3M, "Stamark" Series 420 (For transverse application only)

Temporary (Removable) Striping and Pavement Marking Tape (180 days or less)

1. Advanced Traffic Marking, Series 200
2. Brite-Line, Series 100
3. Garlock Rubber Technologies, Series 2000
4. P.B. Laminations, Aztec, Grade 102
5. Swarco Industries, "Director-2"
6. Trelleborg Industries, R140 Series
7. 3M Series 620 "CR", and Series A750
8. 3M Series A145, Removable Black Line Mask
(Black Tape: for use only on Hot mix asphalt surfaces)
9. Advanced Traffic Marking Black "Hide-A-Line"
(Black Tape: for use only on Hot mix asphalt surfaces)
10. Brite-Line "BTR" Black Removable Tape
(Black Tape: for use only on Hot mix asphalt surfaces)
11. Trelleborg Industries, RB-140
(Black Tape: for use only on Hot mix asphalt surfaces)

Preformed Thermoplastic (Heated in place)

1. Flint Trading Inc., "Hot Tape"
2. Flint Trading Inc., "Premark Plus"
3. Ennis Paint Inc., "Flametape"

Ceramic Surfacing Laminate, 6" x 6"

1. Highway Ceramics, Inc.

CLASS 1 DELINEATORS

One Piece Driveable Flexible Type, 66-inch

1. Filtrona Extrusion, "Flexi-Guide Models 400 and 566"
2. Carsonite, Curve-Flex CFRM-400
3. Carsonite, Roadmarker CRM-375
4. FlexStake, Model 654 TM
5. GreenLine Model CGD1-66

Special Use Type, 66-inch

1. Filtrona Extrusion, Model FG 560 (with 18-inch U-Channel base)
2. Carsonite, "Survivor" (with 18-inch U-Channel base)
3. Carsonite, Roadmarker CRM-375 (with 18-inch U-Channel base)
4. FlexStake, Model 604

5. GreenLine Model CGD (with 18-inch U-Channel base)
6. Impact Recovery Model D36, with #105 Driveable Base
7. Safe-Hit with 8-inch pavement anchor (SH248-GP1)
8. Safe-Hit with 15-inch soil anchor (SH248-GP2) and with 18-inch soil anchor (SH248-GP3)

Surface Mount Type, 48-inch

1. Bent Manufacturing Company, Masterflex Model MF-180EX-48
2. Carsonite, "Channelizer"
3. FlexStake, Models 704, 754 TM, and EB4
4. Impact Recovery Model D48, with #101 Fixed (Surface-Mount) Base
5. Three D Traffic Works "Channelflex" ID No. 522248W

CHANNELIZERS

Surface Mount Type, 36-inch

1. Bent Manufacturing Company, Masterflex Models MF-360-36 (Round) and MF-180-36 (Flat)
2. Filtrona Extrusion, Flexi-Guide Models FG300PE, FG300UR, and FG300EFX
3. Carsonite, "Super Duck" (Round SDR-336)
4. Carsonite, Model SDCF03601MB "Channelizer"
5. FlexStake, Models 703, 753 TM, and EB3
6. GreenLine, Model SMD-36
7. Hi-way Safety, Inc. "Channel Guide Channelizer" Model CGC36
8. Impact Recovery Model D36, with #101 Fixed (Surface-Mount) Base
9. Safe-Hit, Guide Post, Model SH236SMA
10. Three D Traffic Works "Boomerang" ID No. 522053W

Lane Separation System

1. Filtrona Extrusion, "Flexi-Guide (FG) 300 Curb System"
2. Qwick Kurb, "Klemmfix Guide System"
3. Dura-Curb System

CONICAL DELINEATORS, 42-inch

(For 28-inch Traffic Cones, see Standard Specifications)

1. Bent Manufacturing Company "T-Top"
2. Plastic Safety Systems "Navigator-42"
3. Traffix Devices "Grabber"
4. Three D Traffic Works "Ringtop" TD7000, ID No. 742143
5. Three D Traffic Works, TD7500

OBJECT MARKERS

Type "K", 18-inch

1. Filtrona Extrusion, Model FG318PE
2. Carsonite, Model SMD 615
3. FlexStake, Model 701 KM
4. Safe-Hit, Model SH718SMA

Type "K-4" / "Q" Object Markers, 24-inch

1. Bent Manufacturing "Masterflex" Model MF-360-24
2. Filtrona Extrusion, Model FG324PE
3. Carsonite, "Channelizer"
4. FlexStake, Model 701KM
5. Safe-Hit, Models SH824SMA_WA and SH824GP3_WA
6. Three D Traffic Works ID No. 531702W and TD 5200
7. Three D Traffic Works ID No. 520896W

**CONCRETE BARRIER MARKERS AND
TEMPORARY RAILING (TYPE K) REFLECTORS**

Impactable Type

1. ARTUK, "FB"
2. Filtrona Extrusion, Models PCBM-12 and PCBM-T12
3. Duraflex Corp., "Flexx 2020" and "Electriflexx"
4. Hi-Way Safety, Inc., Model GMKRM100
5. Plastic Safety Systems "BAM" Models OM-BARR and OM-BWAR
6. Three D Traffic Works "Roadguide" Model TD 9304

Non-Impactable Type

1. ARTUK, JD Series
2. Plastic Safety Systems "BAM" Models OM-BITARW and OM-BITARA
3. Vega Molded Products, Models GBM and JD
4. Plastic Vacuum Forming, "Cap-It C400"

METAL BEAM GUARD RAIL POST MARKERS

(For use to the left of traffic)

1. Filtrona Extrusion, "Mini" (3" x 10")
2. Creative Building Products, "Dura-Bull, Model 11201"
3. Duraflex Corp., "Railrider"
4. Plastic Vacuum Forming, "Cap-It C300"

CONCRETE BARRIER DELINEATORS, 16-inch

(For use to the right of traffic)

1. Filtrona Extrusion, Model PCBM T-16
2. Safe-Hit, Model SH216RBM

CONCRETE BARRIER-MOUNTED MINI-DRUM (10" x 14" x 22")

1. Stinson Equipment Company "SaddleMarker"

GUARD RAILING DELINEATOR

(Place top of reflective element at 48 inches above plane of roadway)

Wood Post Type, 27-inch

1. Filtrona Extrusion, FG 427 and FG 527
2. Carsonite, Model 427
3. FlexStake, Model 102 GR
4. GreenLine GRD 27
5. Safe-Hit, Model SH227GRD
6. Three D Traffic Works "Guardflex" TD9100
7. New Directions Mfg, NDM27

Steel Post Type

1. Carsonite, Model CFGR-327

RETROREFLECTIVE SHEETING

Channelizers, Barrier Markers, and Delineators

1. Avery Dennison T-6500 Series (For rigid substrate devices only)
2. Avery Dennison WR-7100 Series
3. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
4. Reflexite, PC-1000 Metalized Polycarbonate
5. Reflexite, AC-1000 Acrylic
6. Reflexite, AP-1000 Metalized Polyester
7. Reflexite, Conformalight, AR-1000 Abrasion Resistant Coating
8. 3M, High Intensity

Traffic Cones, 4-inch and 6-inch Sleeves

1. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
2. Reflexite, Vinyl, "TR" (Semi-transparent) or "Conformalight"
3. 3M Series 3840
4. Avery Dennison S-9000C

Drums

1. Avery Dennison WR-6100
2. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
3. Reflexite, "Conformalight", "Super High Intensity" or "High Impact Drum Sheeting"
4. 3M Series 3810

Barricades: Type I, Medium-Intensity (Typically Enclosed Lens, Glass-Bead Element)

1. Nippon Carbide Industries, CN8117
2. Avery Dennison, W 1100 series
3. 3M Series CW 44

Barricades: Type II, Medium-High-Intensity (Typically Enclosed Lens, Glass-Bead Element)

1. Avery Dennison, W-2100 Series

Signs: Type II, Medium-High-Intensity (Typically Enclosed Lens, Glass-Bead Element)

1. Avery Dennison, T-2500 Series
2. Nippon Carbide Industries, Nikkalite 18000

Signs: Type III, High-Intensity (Typically Encapsulated Glass-Bead Element)

1. Avery Dennison, T-5500A and T-6500 Series
2. Nippon Carbide Industries, Nikkalite Brand Ultralite Grade II
3. 3M 3870 and 3930 Series

Signs: Type IV, High-Intensity (Typically Unmetallized Microprismatic Element)

1. Avery Dennison, T-6500 Series
2. Nippon Carbide Industries, Crystal Grade, 94000 Series
3. Nippon Carbide Industries, Model No. 94847 Fluorescent Orange
4. 3M Series 3930 and Series 3924S

Signs: Type VI, Elastomeric (Roll-Up) High-Intensity, without Adhesive

1. Avery Dennison, WU-6014
2. Novabrite LLC, "Econobrite"
3. Reflexite "Vinyl"
4. Reflexite "SuperBright"
5. Reflexite "Marathon"
6. 3M Series RS20

Signs: Type VII, Super-High-Intensity (Typically Unmetallized Microprismatic Element)

1. 3M Series 3924S, Fluorescent Orange
2. 3M LDP Series 3970

Signs: Type VIII, Super-High-Intensity (Typically Unmetallized Microprismatic Element)

1. Avery Dennison, T-7500 Series
2. Avery Dennison, T-7511 Fluorescent Yellow
3. Avery Dennison, T-7513 Fluorescent Yellow Green
4. Avery Dennison, W-7514 Fluorescent Orange
5. Nippon Carbide Industries, Nikkalite Crystal Grade Series 92800
6. Nippon Carbide Industries, Nikkalite Crystal Grade Model 92847 Fluorescent Orange

Signs: Type IX, Very-High-Intensity (Typically Unmetallized Microprismatic Element)

1. 3M VIP Series 3981 Diamond Grade Fluorescent Yellow
2. 3M VIP Series 3983 Diamond Grade Fluorescent Yellow/Green
3. 3M VIP Series 3990 Diamond Grade
4. Avery Dennison T-9500 Series
5. Avery Dennison, T9513, Fluorescent Yellow Green
6. Avery Dennison, W9514, Fluorescent Orange

SPECIALTY SIGNS

1. Reflexite "Endurance" Work Zone Sign (with Semi-Rigid Plastic Substrate)

ALTERNATIVE SIGN SUBSTRATES

Fiberglass Reinforced Plastic (FRP) and Expanded Foam PVC

1. Fiber-Brite (FRP)
2. Sequentia, "Polyplate" (FRP)
3. Inteplast Group "InteCel" (0.5 inch for Post-Mounted CZ Signs, 48-inch or less)(PVC)

Aluminum Composite, Temporary Construction Signs Only

1. Alcan Composites "Dibond Material, 80 mils"
2. Mitsubishi Chemical America, Alpolic 350

SECTION 8-2. CONCRETE

8-2.01 PORTLAND CEMENT CONCRETE

Portland cement concrete shall conform to the provisions in Section 90, "Portland Cement Concrete," of the Standard Specifications and these special provisions.

References to Section 90-2.01, "Portland Cement," of the Standard Specifications shall mean Section 90-2.01, "Cement," of the Standard Specifications.

Mineral admixture shall be combined with cement in conformance with the provisions in Section 90-4.08, "Required Use of Mineral Admixtures," of the Standard Specifications for the concrete materials specified in Section 56-2, "Roadside Signs," of the Standard Specifications.

The requirements of Section 90-4.08, "Required Use of Mineral Admixture," of the Standard Specifications shall not apply to Section 19-3.025C, "Soil Cement Bedding," of the Standard Specifications.

The Department maintains a list of sources of fine and coarse aggregate that have been approved for use with a reduced amount of mineral admixture in the total amount of cementitious material to be used. A source of aggregate will be considered for addition to the approved list if the producer of the aggregate submits to the Transportation Laboratory certified test results from a qualified testing laboratory that verify the aggregate complies with the requirements. Prior to starting the testing, the aggregate test shall be registered with the Department. A registration number can be obtained by calling (916) 227-7228. The registration number shall be used as the identification for the aggregate sample in correspondence with the Department. Upon request, a split of the tested sample shall be provided to the Department. Approval of aggregate will depend upon compliance with the specifications, based on the certified test results submitted, together with any replicate testing the Department may elect to perform. Approval will expire 3 years from the date the most recent registered and evaluated sample was collected from the aggregate source.

Qualified testing laboratories shall conform to the following requirements:

- A. Laboratories performing ASTM Designation: C 1293 shall participate in the Cement and Concrete Reference Laboratory (CCRL) Concrete Proficiency Sample Program and shall have received a score of 3 or better on all tests of the previous 2 sets of concrete samples.

- B. Laboratories performing ASTM Designation: C 1260 shall participate in the Cement and Concrete Reference Laboratory (CCRL) Pozzolan Proficiency Sample Program and shall have received a score of 3 or better on the shrinkage and soundness tests of the previous 2 sets of pozzolan samples.

Aggregates on the list shall conform to one of the following requirements:

- A. When the aggregate is tested in conformance with the requirements in California Test 554 and ASTM Designation: C 1293, the average expansion at one year shall be less than or equal to 0.040 percent; or
- B. When the aggregate is tested in conformance with the requirements in California Test 554 and ASTM Designation: C 1260, the average of the expansion at 16 days shall be less than or equal to 0.15 percent.

The amounts of cement and mineral admixture used in cementitious material shall be sufficient to satisfy the minimum cementitious material content requirements specified in Section 90-1.01, "Description," or Section 90-4.05, "Optional Use of Chemical Admixtures," of the Standard Specifications and shall conform to the following:

- A. The minimum amount of cement shall not be less than 75 percent by weight of the specified minimum cementitious material content.
- B. The minimum amount of mineral admixture to be combined with cement shall be determined using one of the following criteria:
 - 1. When the calcium oxide content of a mineral admixture is equal to or less than 2 percent by weight, the amount of mineral admixture shall not be less than 15 percent by weight of the total amount of cementitious material to be used in the mix.
 - 2. When the calcium oxide content of a mineral admixture is greater than 2 percent by weight, and any of the aggregates used are not listed on the approved list as specified in these special provisions, then the amount of mineral admixture shall not be less than 25 percent by weight of the total amount of cementitious material to be used in the mix.
 - 3. When the calcium oxide content of a mineral admixture is greater than 2 percent by weight and the fine and coarse aggregates are listed on the approved list as specified in these special provisions, then the amount of mineral admixture shall not be less than 15 percent by weight of the total amount of cementitious material to be used in the mix.
 - 4. When a mineral admixture that conforms to the provisions for silica fume in Section 90-2.04, "Admixture Materials," of the Standard Specifications is used, the amount of mineral admixture shall not be less than 10 percent by weight of the total amount of cementitious material to be used in the mix.
 - 5. When a mineral admixture that conforms to the provisions for silica fume in Section 90-2.04, "Admixture Materials," of the Standard Specifications is used and the fine and coarse aggregates are listed on the approved list as specified in these special provisions, then the amount of mineral admixture shall not be less than 7 percent by weight of the total amount of cementitious material to be used in the mix.
- C. The total amount of mineral admixture shall not exceed 35 percent by weight of the total amount of cementitious material to be used in the mix. Where Section 90-1.01, "Description," of the Standard Specifications specifies a maximum cementitious content in pounds per cubic yard, the total weight of cement and mineral admixture per cubic yard shall not exceed the specified maximum cementitious material content.

Unless otherwise specified, mineral admixture will not be required in portland cement concrete used for precast concrete girders.

The Contractor will be permitted to use Type III portland cement for concrete used in the manufacture of precast concrete members.

SECTION 9. DESCRIPTION OF WORK

The work to be done, in general consists of:

Installing a sidewalk on entire frontage of the El Dorado Hills Senior Center adjacent to Lassen Lane, installing a curb ramp, cross walk for the west leg, relocating a signal pole and count down pedestrian heads at the south west and north west corners of Lassen Lane at El Dorado Hills Blvd. Other items or details not mentioned above that are required are

shown or described in the Plans, Standard Specifications, or the Special Provisions, shall be performed, constructed or installed.

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.

The first order of work shall be to place the order for the traffic signal equipment, including the count down pedestrian heads equipment. The Engineer shall be furnished a statement from the vendor that the order for the traffic signal equipment has been received and accepted by the vendor.

Attention is directed to "Water Pollution Control" of these special provisions regarding the submittal and approval of the Storm Water Pollution Prevention Plan (SWPPP) prior to performing work having potential to cause water pollution.

Contractor should contact and coordinate with County General Services (GS) personnel Jordan Postlewait (530-621-5330) before removing lawn grass adjacent to Lassen Lane and also to request the shut down of water line and GS need for the grass, if any.

Attention is directed to Section 10-1.03 "Obstructions", of these special provisions regarding potholing for the cross conduit installation at Lassen Lane and the positive identification of any existing utilities.

Attention is directed to "Traffic Signal System Turn-On Procedures" elsewhere in these special provisions.

All the excess materials from excavations will be the property of the Contractor and shall be removed from County right of way at Contractor's expense as part of the excavation and no additional compensation will be allowed therefor.

At the end of each working day if a difference in excess of 0.15 foot exists between the elevation of the existing pavement and the elevation of excavations around curb ramps, material shall be placed and compacted against the vertical cuts adjacent to the shoulder or traveled way. During excavation operations, native material may be used for this purpose. The material shall be placed to the level of the elevation of the top of existing pavement and tapered at a slope of 1:4 (vertical: horizontal) or flatter to the bottom of the excavation. Treated base shall not be used for the taper. Full compensation for placing the material on a 1:4 slope, regardless of the number of times the material is required, and subsequent removing or reshaping of the material to the lines and grades shown on the plans shall be considered as included in the contract price paid for the materials involved and no additional compensation will be allowed therefor. No payment will be made for material placed in excess of that required for the structural section.

Prior to commencement of the traffic signal functional test at any location, all items of work related to rewiring and count down pedestrian heads shall be completed and all roadside signs, pavement delineation, and pavement markings shall be in place at that location.

10-1.02 WATER POLLUTION CONTROL

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

This project lies within the boundaries of the Central Valley (Sacramento) Regional Water Quality Control Board (RWQCB).

This project is subject to the current Statewide General Permit issued by the SWRCB entitled "Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Construction Activity," which regulates discharges of storm water and non-storm water from construction activities disturbing one acre or more of soil in a common plan of development. Copies of the Statewide General Permit and modifications thereto are available for review from the SWRCB, Storm Water Permit Unit, 1001 "I" Street, P.O. Box 1977, Sacramento, California 95812-1977,

Telephone: (916) 341-5254 and may also be obtained from the SWRCB Internet website at: <http://www.swrcb.ca.gov/stormwtr/construction.html>.

The Permit requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall be prepared in conformance with the requirements of the Permits and the document entitled "Storm Water Management Plan for Western El Dorado County" Updated May 2004 (SWMP) (available from the El Dorado County Department of Transportation, or from the County website at: <http://www.co.el-dorado.ca.us/emd/solidwaste/storm.html#SWMP>).

The Contractor shall know and fully comply with applicable provisions of the Permits and all modifications thereto, the SWMP, and Federal, State, and local regulations and requirements that govern the Contractor's operations and storm water and non-storm water discharges from the project site construction. Attention is directed to Sections 7-1.01, "Laws to be Observed," and 7-1.12, "Indemnification and Insurance," of the Standard Specifications.

The Contractor shall be responsible for penalties assessed or levied on the Contractor or the Department as a result of the Contractor's failure to comply with the provisions in this section "Water Pollution Control" including, but not limited to, compliance with the applicable provisions of the Permits, the SWMP, and Federal, State and local regulations and requirements as set forth therein.

Penalties as used in this section, "Water Pollution Control," shall include fines, penalties and damages, whether proposed, assessed, or levied against the Department or the Contractor, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Control Act, by governmental agencies or as a result of citizen suits. Penalties shall also include payments made or costs incurred in settlement for alleged violations of the Permits, the SWMP, or applicable laws, regulations, or requirements. Costs incurred could include sums spent instead of penalties, in mitigation or to remediate or correct violations.

RETENTION OF FUNDS

Notwithstanding any other remedies authorized by law, the Department may retain money due the Contractor under the contract, in an amount determined by the Department, up to and including the entire amount of Penalties proposed, assessed, or levied as a result of the Contractor's violation of the Permits, the SWMP, or Federal or State law, regulations or requirements. Funds may be retained by the Department until final disposition has been made as to the Penalties. The Contractor shall remain liable for the full amount of Penalties until such time as they are finally resolved with the entity seeking the Penalties.

Retention of funds for failure to conform to the provisions in this section, "Water Pollution Control," shall be in addition to the other retention amounts required by the contract. The amounts retained for the Contractor's failure to conform to provisions in this section will be released for payment on the next monthly estimate for partial payment following the date when an approved SWPPP has been implemented and maintained, and when water pollution has been adequately controlled, as determined by the Engineer.

When a regulatory agency identifies a failure to comply with the Permits and modifications thereto, the SWMP, or other Federal, State or local requirements, the Department may retain money due the Contractor, subject to the following:

- A. The Department will give the Contractor thirty (30) days notice of the Department's intention to retain funds from partial payments which may become due to the Contractor prior to acceptance of the contract. Retention of funds from payments made after acceptance of the contract may be made without prior notice to the Contractor.
- B. 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.
- C. If the Department has retained funds, and it is subsequently determined that the County is not subject to the entire amount of the Costs and Liabilities assessed or proposed in connection with the matter for which the retention was made, the Department shall be liable for interest on the amount retained for the period of the retention. The interest rate payable shall be six percent (6%) per annum.

During the first estimate period that the Contractor fails to conform to the provisions in this section, "Water Pollution Control," the Department may retain an amount equal to twenty-five percent (25%) of the estimated value of the contract work performed.

The Contractor shall notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to water pollution control work. The Contractor and the Department shall provide copies of correspondence, notices of violation, enforcement actions or proposed fines by regulatory agencies to the requesting regulatory agency.

STORM WATER POLLUTION PREVENTION PLAN PREPARATION, APPROVAL AND AMENDMENTS

As part of the water pollution control work, a Storm Water Pollution Prevention Plan (SWPPP) is required for this contract. The SWPPP shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications, the requirements in the SWMP, the requirements of the Permits, and these special provisions. Upon the Engineer's approval of the SWPPP, the SWPPP shall be considered to fulfill the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications for development and submittal of a Water Pollution Control Program.

No work having potential to cause water pollution, shall be performed until the SWPPP has been approved by the Engineer. Approval shall not constitute a finding that the SWPPP complies with applicable requirements of the Permits, the SWMP and applicable Federal, State and local laws, regulations, and requirements.

The SWPPP shall incorporate the water pollution control practices identified in Section 4.4.5, "Minimum Construction Site Practices" of the County's Storm Water Management Plan.

The Contractor shall develop a Water Pollution Control Schedule that describes the timing of grading or other work activities that could affect water pollution. The Water Pollution Control Schedule shall be updated by the Contractor to reflect changes in the Contractor's operations that would affect the necessary implementation of water pollution control practices.

Within twenty (20) working days after the approval of the contract, the Contractor shall submit three (3) copies of the draft SWPPP to the Engineer. The Engineer will have ten (10) working days to review the SWPPP. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the SWPPP within ten (10) working days of receipt of the Engineer's comments. The Engineer will have five (5) working days to review the revisions. Upon the Engineer's approval of the SWPPP, four (4) approved copies of the SWPPP, incorporating the required changes, shall be submitted to the Engineer. In order to allow construction activities to proceed, the Engineer may conditionally approve the SWPPP while minor revisions are being completed.

In the event the Engineer fails to complete the review within the time allowed, and if, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of the Engineer's delay in completing the review, the Contractor will be compensated for resulting losses, and an extension of time will be granted, in the same manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The Contractor shall prepare an amendment to the SWPPP when there is a change in construction activities or operations which may affect the discharge of pollutants to surface waters, ground waters, municipal storm drain systems, or when the Contractor's activities or operations violate a condition of the Permits, or when directed by the Engineer. Amendments shall identify additional water pollution control practices or revised operations, including those areas or operations not identified in the initially approved SWPPP. Amendments to the SWPPP shall be prepared and submitted for review and approval within a time approved by the Engineer, but in no case longer than the time specified for the initial submittal and review of the SWPPP. At a minimum, the SWPPP shall be amended annually and submitted to the Engineer 25 days prior to the rainy season.

The Contractor shall keep one (1) copy of the approved SWPPP and approved amendments at the project site. The SWPPP shall be made available upon request by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or the local storm water management agency. Requests by the public shall be directed to the Engineer.

SWPPP IMPLEMENTATION

Unless otherwise specified, upon approval of the SWPPP, the Contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting, maintaining, removing, and disposing of the water pollution control practices specified in the SWPPP and in the amendments. Unless otherwise directed by the Engineer, the Contractor's

responsibility for SWPPP implementation shall continue throughout temporary suspensions of work ordered in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. Requirements for installation, construction, inspection, maintenance, removal, and disposal of water pollution control practices shall conform to the requirements in the SWMP and these special provisions.

If the Contractor or the Engineer identifies a deficiency in the implementation of the approved SWPPP or amendments, the deficiency shall not be corrected immediately unless requested by the Contractor and approved by the Engineer in writing, but shall be corrected prior to the onset of precipitation. If the Contractor fails to correct the identified deficiency by the date agreed upon or prior to the onset of precipitation, the project shall be in nonconformance with this section, "Water Pollution Control." Attention is directed to Section 5-1.01, "Authority of Engineer," of the Standard Specifications, and to "Retention of Funds" of this section for possible nonconformance penalties.

If the Contractor fails to conform to the provisions of this section, "Water Pollution Control," the Engineer may order the suspension of construction operations until the project complies with the requirements of this section.

Implementation of water pollution control practices may vary by season. The SWMP and these special provisions shall be followed for control practice selection of year-round, rainy season and non-rainy season water pollution control practices.

Minimum Construction Site Storm Water Management Practices

The storm water management practices described below are the minimum required water quality protection measures applicable to all construction sites below 3000 feet in elevation within Western El Dorado County. This listing does not include the various inspection, record keeping, training and reporting requirements. Additionally, there will be instances where project and site conditions require supplementing or deviating from these minimum protection requirements. The Contractor is expected to deploy measures sufficient to achieve compliance with the with the State Water Resources Control Board's (SWRCB) NPDES General Permit for Storm Water Discharges Associated with Construction Activity.

Preservation of Existing Vegetation and Protect Environmentally Sensitive Areas

Prior to the commencement of soil-disturbing activities, areas of existing vegetation that are to remain and environmentally sensitive areas (i.e. wetlands, protected habitats, etc.) shall be fenced for protection.

Storm Water Run-On and Concentrated Flows

Existing watercourses shall be protected; and if diverted, handled in a non-eroding fashion. To the extent feasible, all concentrated water flows shall be channeled away from disturbed soil areas / stockpiles. Concentrated water flows shall be conveyed in a non-eroding fashion.

Stockpile Management

Stockpiles shall be managed as follows:

- Soil stockpiles
 - Rainy season:
 - Covered, or protected with soil stabilization measures and perimeter sediment barriers
 - Non-rainy season:
 - Covered or protected with perimeter sediment barriers
- Concrete/asphalt rubble, rock and aggregate base/sub-base
 - Covered or protected with perimeter sediment barriers
- "Cold mix" asphalt
 - Covered

Sediment Tracking Control

Appropriate measures shall be deployed to minimize any tracking of sediment off-site by vehicles and/or equipment. These measures include stabilized construction entrances/exits and roadways, and tire washing. Where tracking occurs, streets shall be swept using a pickup sweeper with water supply.

Non-Storm Water Management

Non-storm water discharges shall be minimized to the extent feasible. Sediment-laden non-storm water is required to be filtered (or equivalent treatment) prior to discharging. Measures required to manage non-storm water discharges include: water conservation practices, dust control, material storage practices, vehicle/equipment operation and maintenance requirements, waste management practices, and spill prevention/control measures.

Disturbed Soil Area Management

Disturbed soil areas (DSA) shall be protected with an "effective combination" of measures including soil stabilization, sediment barriers and basins / traps. There may be situations where "Sediment Basins" or "Treatment" are able to substitute as alternative control measures to the normally required "effective combination" of soil stabilization, sediment barriers and basins / traps. However, when substituting these measures, the Contractor must be prepared to demonstrate that the sediment load within storm water discharges from the construction site does not exceed natural or pre-construction levels.

Soil stabilization measures include:

- Hydraulic mulch (ref. CASQA BMP # EC-3)
- Hydroseeding (ref. CASQA BMP # EC-4)
- Suitably stabilized, non-polluting straw / wood / organic mulch (ref. CASQA BMP #'s EC-6 & EC-8)
- Geotextiles, mats, plastic covers and erosion control blankets (ref. CASQA BMP # EC-7)
- Stabilized construction roadways (ref. CASQA BMP # TC-2)

Sediment barriers include:

- Silt fences (ref. CASQA BMP # SE-1)
- Sand/gravel bag barriers (ref. CASQA BMP #'s SE-6 & SE-8)
- Straw bale barriers (ref. CASQA BMP # SE-9)
- Fiber rolls (ref. CASQA BMP # SE-5)

Basin / traps include:

- Desilting basins (ref. Caltrans BMPs)
- Sediment traps (ref. Caltrans BMPs)

On DSAs with slope lengths greater than 10 feet, the following measures shall be deployed:

Rainy season (Oct. 15th to May 1st):

- Non-active areas (no soil disturbing activities for 21 or more days)
- On slopes equal to or flatter than 1:20 (V/H), soil stabilization
- On slopes steeper than 1:20 (V/H), soil stabilization and sediment barriers

- Active areas
- On slopes steeper than 1:20 (V/H), sediment barriers
- On slopes steeper than 1:2 (V/H) with slope lengths greater than 50 feet: soil stabilization; sediment barriers; and where feasible, basins / traps

Non-rainy season:

- Non-active areas (no soil disturbing activities for 21 or more days)
- On slopes steeper than 1:2 (V/H), sediment barriers

General:

- Protection shall be deployed on non-active DSAs within 14 days from the cessation of soil-disturbing activities or one day prior to the predicted (40% or more chance) onset of significant precipitation, whichever occurs first. Protection shall be deployed on active DSAs prior to the predicted (40% or more chance) onset of significant precipitation.
- Properly drained terraces, at least 8 feet wide, shall be provided at intervals not more than every 25 feet in height on all permanent slopes and non-active DSAs exceeding 30 feet in height.
- "Sediment Basin:" A basin with a capacity equivalent to at least 3600 cubic feet of storage (as measured from the bottom of the basin to the principal outlet) per acre draining into the basin. The length of the basin shall be more than twice the basin's width (length is determined by measuring the distance between the inlet and the outlet). The depth of the basin must not be less than three feet nor greater than five feet.

- “Treatment”: A combination of basin and treatment engineered to capture and treat (to remove 0.01 mm sized particles and larger) the 10-year, 6-hour rain event using $Q=CxIxA$ where $C=0.5$ and I ranges from 0.286 (El Dorado Hills) to 0.500 (Sly Park).

General reference: El Dorado County “Storm Water Management Plan”, July 2003. Available online at: <http://www.co.el-dorado.ca.us/emd/solidwaste/storm.html>

Detailed references:

1. **California Stormwater Quality Association (CASQA) “Construction Handbook”, January 2003. Available online at: <http://www.cabmphandbooks.com/>**
2. **Caltrans “Statewide Storm Water Quality Practice Guidelines”, April 2003. Available online at: <http://www.dot.ca.gov/hq/env/stormwater/special/newsetup/index.htm>**

MAINTENANCE

To ensure the proper implementation and functioning of water pollution control practices, the Contractor shall regularly inspect and maintain the construction site for the water pollution control practices identified in the SWPPP.

REPORTING REQUIREMENTS

Report of Discharges, Notices or Orders

If the Contractor identifies discharges into surface waters or drainage systems in a manner causing, or potentially causing, a condition of pollution, or if the project receives a written notice or order from a regulatory agency, the Contractor shall immediately inform the Engineer. The Contractor shall submit a written report to the Engineer within seven (7) days of the discharge event, notice or order. The report shall include the following information:

- A. The date, time, location, nature of the operation, and type of discharge, including the cause or nature of the notice or order.
- B. The water pollution control practices deployed before the discharge event, or prior to receiving the notice or order.
- C. The date of deployment and type of water pollution control practices deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent reoccurrence.
- D. An implementation and maintenance schedule for affected water pollution control practices.

Report of First-Time Non-Storm Water Discharge

The Contractor shall notify the Engineer at least three (3) days in advance of first-time non-storm water discharge events, excluding exempted discharges. The Contractor shall notify the Engineer of the operations causing non-storm water discharges and shall obtain field approval for first-time non-storm water discharges. Non-storm water discharges shall be monitored at first-time occurrences and routinely thereafter.

Annual Certifications

By June 15 of each year, the Contractor shall complete and submit an Annual Certification of Compliance to the Engineer.

PAYMENT

The contract lump sum price paid for preparing the storm water pollution prevention plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in developing, preparing, obtaining approval of, revising, and amending the SWPPP, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The cost of implementing, maintaining and removing temporary water pollution control practices in accordance with these special provisions and as directed by the Engineer shall be addressed through written contract change order and shall be paid for as provided in Section 9-1.03, "Force Account Payment," of the Standard Specifications. Payment for

temporary water pollution control measures shall be limited to those measures contained in the March 2007 Caltrans Construction Site Best Management Practices (BMP) Manual, excluding Section 7, 'Non-Storm Water Best Management Practices.' If the Contractor elects to use BMPs, methods, or practices not included therein, the cost of implementation, maintenance, and removal of such BMPs shall be at expense of the Contractor.

The cost of cleanup, repair, removal, disposal, improper installation, and replacement of water pollution control practices damaged by the Contractor's negligence shall be born by the Contractor and no separate payment will be made therefor.

10-1.03 OBSTRUCTION

Attention is directed to Section 8-1.10, "Utility and Non-Highway Facilities," and Section 15, "Existing Highway Facilities," of the Standard Specifications and these special provisions.

Attention is directed to the existence of certain underground facilities that may require special precautions be taken by the Contractor to protect the health, safety and welfare of workers and of the public. Facilities requiring special precautions include, but are not limited to: underground electric supply system conductors or cables, with potential to ground of more than 300 V, either directly buried or in a duct or conduit which do not have concentric grounded or other effectively grounded metal shields or sheaths.

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least 2 working days, but not more than 14 calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. 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

The contractor shall also notify those Utility Company representatives listed in the section entitled "Utilities" elsewhere in these special provisions.

Some underground facilities are in close proximity to the work. If underground facilities are not located on the plans in both alignment and elevation, the contractor shall positively locate such facilities by potholing by hand or other non-destructive excavation methods prior to excavation with backhoe, auger or other mechanical methods. Positive location of existing underground facilities shall be to the extent necessary to perform the work shown on the plans and prior to excavation for signal pole foundations and underground structures, pipes or conduits.

In addition to the facilities shown on the plans to be relocated, removed or deactivated, the utility facilities listed in the following table are anticipated to be rearranged in advance of construction, to permit the construction of conduit on Lassen Lane. Should the Contractor desire to have any of the utility facilities rearranged or temporarily deactivated for his convenience, the Contractor shall make the necessary arrangements as provided in Section 8-1.10 of the Standard Specifications.

Utility Facility	Location
AT&T	STA 15+74, "C" LINE
PG &E	STA 15+74, "C" LINE
COMCAST-CABLE TV	STA 15+74, "C" LINE

Full compensation for positive location of existing underground facilities, shall be considered included in the various items of work and no separate payment will be made therefor.

10-1.04 DUST CONTROL

Dust control shall conform to the provisions in Section 10, "Dust Control," of the Standard Specifications, Rules 223, 223-1 and 223-2 (Dust Rules) of the Rules and Regulations of the El Dorado County Air Quality Management District (AQMD) and these special provisions.

Nothing in these special provisions shall be construed as relieving the Contractor of the responsibilities as set forth in Section 7, "Legal Relations and Responsibility" of the Standard Specifications.

The Dust Rules can be obtained from the AQMD, 2850 Fairlane Court, Placerville, CA, 95667, (530) 621-6662, and is available at:

http://www.co.el-dorado.ca.us/emd/apcd/construction_dust_rules.html.

The materials within the project limits are neither known nor suspected to contain naturally occurring asbestos and the project is not located within designated Naturally Occurring Asbestos Review Areas on the current El Dorado County Naturally Occurring Asbestos Review Area Map.

FUGITIVE DUST CONTROL PLAN PREPARATION, APPROVAL AND AMENDMENTS

The Contractor shall submit a site specific Fugitive Dust Control Plan / Fugitive Dust Plan (FDP) for all proposed work, meeting the requirements of Dust Rules and approved by AQMD, to the AQMD prior to start of any work. The Contractor shall provide the Engineer with four (4) copies of the AQMD approved FDP prior to starting any work that may generate dust.

The Contractor shall prepare an amendment to the FDP when there is a change in construction activities or operations not included in the FDP, when the Contractor's activities or operations violate a condition of AQMD, or when directed by the Engineer. Amendments shall identify additional dust control practices or revised operations, including those areas or operations not identified in the initially approved FDP. Amendments to the FDP shall be prepared and submitted for review and approval within a time approved by the Engineer. At a minimum, the FDP shall be amended annually.

The Contractor shall keep one (1) copy of the approved FDP and approved amendments at the project site. The FDP shall be made available upon request by a representative of the AQMD, California Air Resource Board, United States Environmental Protection Agency, or Caltrans. Requests by the public shall be directed to the Engineer.

The Contractor shall provide all notices to the AQMD and create and maintain all records as required by Dust Rules. Copies of all related records shall be submitted to the Engineer within thirty (30) calendar days of completion of the work.

DUST CONTROL

The Contractor shall implement the measures contained in the FDP to control dust in accordance with Dust Rules, the Standard Specifications and these special provisions, and as directed by the Engineer.

The Contractor is advised that significant dust control measures will be required during construction operations. In order to mitigate dust, past projects have required extensive pre-wetting to depths of cuts, the use of a dedicated water truck for each piece of earthmoving equipment (e.g., scrapers, dozers, excavators, loaders, haul trucks, backhoes, compactors, graders, etc.), and the use of rock track out pads and wheel wash stations at all points of egress from unpaved construction areas. These examples are not necessarily the exact mitigation measures needed on this project; rather, they have been listed to provide an idea of the extensive nature of dust control activities that may be necessary. The dust control measures that will be required to mitigate dust may impact the Contractor's productivity during construction activities. All impacts to productivity are considered included in the Contractor's bid price for the associated items of work and no additional compensation will be allowed therefor.

The Contractor shall know and fully comply with applicable provisions of the Permits and all modifications thereto, Dust Rules, and Federal, State, and local regulations and requirements that govern the Contractor's operations. Attention is directed to Sections 7-1.01, "Laws to be Observed," and 7-1.12, "Indemnification and Insurance," of the Standard Specifications.

The Contractor shall be responsible for penalties assessed or levied on the Contractor or the Department as a result of the Contractor's failure to comply with the provisions in this section "Dust Control" including, but not limited to, compliance with the applicable provisions of the Permits, Dust Rules, and Federal, State and local regulations and requirements as set forth therein.

Penalties as used in this section, "Dust Control," shall include fines, penalties and damages, whether proposed, assessed, or levied against the Department or the Contractor by governmental agencies or as a result of citizen suits. Penalties shall also include payments made or costs incurred in settlement for alleged violations of the Permits, Dust

Rules, or applicable laws, regulations, or requirements. Costs incurred could include sums spent instead of penalties, in mitigation or to remediate or correct violations.

RETENTION OF FUNDS

Notwithstanding any other remedies authorized by law, the Department may retain money due the Contractor under the contract, in an amount determined by the Department, up to and including the entire amount of Penalties proposed, assessed, or levied as a result of the Contractor's violation of the Permits, Dust Rules, or Federal or State law, regulations or requirements. Funds may be retained by the Department until final disposition has been made as to the Penalties. The Contractor shall remain liable for the full amount of Penalties until such time as they are finally resolved with the entity seeking the Penalties.

Retention of funds for failure to conform to the provisions in this section, "Dust Control," shall be in addition to the other retention amounts required by the contract. The amounts retained for the Contractor's failure to conform to provisions in this section will be released for payment on the next monthly estimate for partial payment following the date when an approved FDP has been implemented and maintained, and when dust has been adequately controlled, as determined by the Engineer.

When a regulatory agency identifies a failure to comply with the Permits and modifications thereto, Dust Rules, or other Federal, State or local requirements, the Department may retain money due the Contractor, subject to the following:

- A. The Department will give the Contractor thirty (30) days notice of the Department's intention to retain funds from partial payments which may become due to the Contractor prior to acceptance of the contract. Retention of funds from payments made after acceptance of the contract may be made without prior notice to the Contractor.
- B. 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.
- C. If the Department has retained funds, and it is subsequently determined that the County is not subject to the entire amount of the Costs and Liabilities assessed or proposed in connection with the matter for which the retention was made, the Department shall be liable for interest on the amount retained for the period of the retention. The interest rate payable shall be six percent (6%) per annum.

During the first estimate period that the Contractor fails to conform to the provisions in this section, "Dust Control," the Department may retain an amount equal to twenty five percent (25%) of the estimated value of the contract work performed.

The Contractor shall notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to dust control work. The Contractor and the Department shall provide copies of correspondence, notices of violation, enforcement actions or proposed fines by regulatory agencies to the requesting regulatory agency.

PAYMENT

The contract lump sum price paid for prepare fugitive dust plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in developing, preparing, obtaining approval, revising, and amending the FDP, for maintaining and submitting all dust control records, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

In the event naturally occurring asbestos is found within the project limits, the Contractor shall prepare an Asbestos Dust Mitigation Plan in accordance with the requirements of Rule 223-2 and implement dust control in accordance with the requirements of Rule 223-2. Preparing an Asbestos Dust Mitigation Plan will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

The cost of performing dust control in accordance with these special provisions and as directed by the Engineer shall be addressed through written contract change order and shall be paid for as provided in Section 9-1.03, "Force Account Payment," of the Standard Specifications.

10-1.05 MOBILIZATION

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

10-1.06 CONSTRUCTION AREA TRAFFIC CONTROL DEVICES

Flagging, signs, and temporary traffic control devices furnished, installed, maintained, and removed when no longer required shall conform to the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Category 1 temporary traffic control devices are defined as small and lightweight (less than 100 pounds) devices. These devices shall be certified as crashworthy by crash testing, crash testing of similar devices, or years of demonstrable safe performance. Category 1 temporary traffic control devices include traffic cones, plastic drums, portable delineators, and channelizers.

If requested by the Engineer, the Contractor shall provide written self-certification for crashworthiness of Category 1 temporary traffic control devices at least 5 days before beginning any work using the devices or within 2 days after the request if the devices are already in use. Self-certification shall be provided by the manufacturer or Contractor and shall include the following:

- A. Date,
- B. Federal Aid number (if applicable),
- C. Contract number, district, county, route and post mile of project limits,
- D. Company name of certifying vendor, street address, city, state and zip code,
- E. Printed name, signature and title of certifying person; and
- F. Category 1 temporary traffic control devices that will be used on the project.

The Contractor may obtain a standard form for self-certification from the Engineer.

Category 2 temporary traffic control devices are defined as small and lightweight (less than 100 pounds) devices that are not expected to produce significant vehicular velocity change, but may cause potential harm to impacting vehicles. Category 2 temporary traffic control devices include barricades and portable sign supports.

Category 2 temporary traffic control devices shall be on the Federal Highway Administration's (FHWA) list of Acceptable Crashworthy Category 2 Hardware for Work Zones. This list is maintained by FHWA and can be located at:

http://safety.fhwa.dot.gov/roadway_dept/road_hardware/listing.cfm?code=workzone

The Department also maintains this list at:

<http://www.dot.ca.gov/hq/traffops/signtech/signdel/pdf/Category2.pdf>

Category 2 temporary traffic control devices that have not received FHWA acceptance shall not be used. Category 2 temporary traffic control devices in use that have received FHWA acceptance shall be labeled with the FHWA acceptance letter number and the name of the manufacturer. The label shall be readable and permanently affixed by the manufacturer. Category 2 temporary traffic control devices without a label shall not be used.

If requested by the Engineer, the Contractor shall provide a written list of Category 2 temporary traffic control devices to be used on the project at least 5 days before beginning any work using the devices or within 2 days after the request if the devices are already in use.

Category 3 temporary traffic control devices consist of temporary traffic-handling equipment and devices that weigh 100 pounds or more and are expected to produce significant vehicular velocity change to impacting vehicles. Temporary traffic-handling equipment and devices include crash cushions, truck-mounted attenuators, temporary railing, temporary barrier, and end treatments for temporary railing and barrier.

Type III barricades may be used as sign supports if the barricades have been successfully crash tested, meeting the NCHRP Report 350 criteria, as one unit with a construction area sign attached.

Category 3 temporary traffic control devices shall be shown on the plans or on the Department's Highway Safety Features list. This list is maintained by the Division of Engineering Services and can be found at:

http://www.dot.ca.gov/hq/esc/approved_products_list/HighwaySafe.htm

Category 3 temporary traffic control devices that are not shown on the plans or not listed on the Department's Highway Safety Features list shall not be used.

Full compensation for providing self-certification for crashworthiness of Category 1 temporary traffic control devices and for providing a list of Category 2 temporary traffic control devices used on the project shall be considered as included in the prices paid for the various items of work requiring the use of the Category 1 or Category 2 temporary traffic control devices and no additional compensation will be allowed therefor.

10-1.07 CONSTRUCTION AREA SIGNS

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

Attention is directed to "Furnish Sign" of these special provisions.

Attention is directed to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions. Type II retroreflective sheeting shall not be used on construction area sign panels.

Repair to construction area sign panels will not be allowed, except when approved by the Engineer. At nighttime under vehicular headlight illumination, sign panels that exhibit irregular luminance, shadowing or dark blotches shall be immediately replaced at the Contractor's expense.

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 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)	(800) 642-2444 (800) 227-2600

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. The post hole diameter, if backfilled with portland cement concrete, shall be at least 4 inches greater than the longer dimension of the post cross section.

Construction area signs placed within 15 feet from the edge of the travel way shall be mounted on stationary mounted sign supports as specified in "Construction Area Traffic Control Devices" of these special provisions.

The Contractor shall maintain accurate information on construction area signs. Signs that are no longer required shall be immediately covered or removed. Signs that convey inaccurate information shall be immediately replaced or the information shall be corrected. Covers shall be replaced when they no longer cover the signs properly. The Contractor shall immediately restore to the original position and location any sign that is displaced or overturned, from any cause, during the progress of work.

10-1.08 MAINTAINING TRAFFIC

Maintaining traffic shall conform to the provisions in Sections 7-1.08, "Public Convenience," Section 7-1.09, "Public Safety," and Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications, "Public Safety" of these special provisions and these special provisions.

Closure is defined as the closure of a traffic lane or lanes, including shoulder, or connector lanes, within a single traffic control system.

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

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

The Contractor shall notify local authorities of the Contractor's 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 arrangements relative to keeping the working area clear of parked vehicles.

Whenever work vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed with fluorescent orange traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. A minimum of 9 traffic cones or portable delineators shall be used for the taper. A W20-1 (ROAD WORK AHEAD) or W21-5b (RIGHT/LEFT SHOULDER CLOSED AHEAD) or C24(CA) (SHOULDER WORK AHEAD) sign shall be mounted on a portable sign stand with flags. The sign shall be placed where designated by the Engineer. The sign shall be a minimum of 48" x 48" in size. The Contractor shall immediately restore to the original position and location a traffic cone or delineator that is displaced or overturned, during the progress of work.

A minimum of one paved traffic lane, not less than 11 feet wide, shall be open for use by public traffic in each direction of travel at all the times during construction on Lassen Lane with the exception of the following activities:

Concrete pouring activity for the sidewalk

During the above listed activity a minimum of one paved traffic lane, not less than 11 feet wide, shall be open for use by public traffic. When construction operations are not actively in progress, not less than 2 of these lanes shall be open to public traffic.

All lane closures associated with this work shall be in accordance with the lane closure charts in this section.

Lanes shall be closed only during the hours shown on the charts included in this section "Maintaining Traffic." Except work required under 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.

Designated legal holidays are: January 1st, the third Monday in February, the last Monday in May, July 4th, first Monday in September, Thanksgiving Day, and December 25th. When a designated legal holiday falls on a Sunday, the following Monday 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. These deviations shall not be adopted by the Contractor until the Engineer has approved the deviations in writing. Other modifications will be made by contract change order.

LANE CLOSURE CHART

Lassen Lane Chart Two-Lane Conventional Highway Lane Requirements																								
Location:																								
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
Mondays through Thursdays	R	R	R	R	R	R	R	2	2	2	2	2	2	2	2	2	2	2	2	R	R	R	R	R
Fridays	R	R	R	R	R	R	R	2	2	2	2	2	2	2	2									
Saturdays							R	R	R	R	2	2	2	2	2	R	R	R	R	R				
Day before designated legal holiday	R	R	R	R	R	R	R	2	2	2	2	2	2	2	2									
Legend:																								
R	Only for operations specifically allowed in these special provisions. A minimum of one paved traffic lane, not less than 11 feet wide, shall be open for use by public traffic (Reversing Control). Maximum time limit to hold traffic at Reverse traffic conditions shall be 5 minutes.																							
2	A minimum of two paved traffic lanes shall be open for use by public traffic. (One lane not less than 11 feet wide in each direction of travel) except as provided for in these special provisions.																							
	No work that interferes with public traffic will be allowed.																							

Portable changeable message signs (PCMS) will be in place and operational in advance of any work affecting public traffic. Additionally, PCMS units shall be in place and operational five (5) days in advance of any lane closures, to inform the public of upcoming contract work and related delays.

10-1.09 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 each 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. The Contractor shall use the Closure Schedule request forms furnished by the Engineer. Closure Schedules submitted to the Engineer with incomplete, unintelligible or inaccurate information will be returned for correction and resubmittal. 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 by no later than 8:00 a.m., 3 working days prior to the date on which the closure is to be made. Approval or denial of scheduled closures will be made no later than 4:00 p.m. 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 following 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 compensation for the suspension of work resulting from the late reopening of closures.

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 his 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.

Should the Engineer direct 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.

10-1.10 TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE

A traffic control system shall consist of closing traffic lanes in conformance with the details shown on the plans, the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications, the provisions under "Maintaining Traffic" and "Construction Area Signs" of these special provisions, and these special provisions.

The provisions in this section will not relieve the Contractor from the responsibility to provide additional devices or take measures as may be necessary to comply with the provisions in Section 7-1.09, "Public Safety," of the Standard Specifications.

During traffic stripe operations and concrete pouring traffic shall be controlled with stationary lane closures. Attention is directed to the provisions in Section 84-1.04, "Protection From Damage," and Section 85-1.06, "Placement," of the Standard Specifications.

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

PAYMENT

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. The 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.

10-1.11 PORTABLE CHANGEABLE MESSAGE SIGN

Portable changeable message signs shall be furnished, placed, operated, and maintained at locations shown on the plans or where designated 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. Messages displayed on the portable changeable message signs shall be as specified on the plans and shall conform to Section 12-3.12 "Portable Changeable Message Signs," of the Standard Specifications and "Maintaining Traffic" of these special provisions."

A portable changeable message sign shall be placed in advance of the first warning sign for each stationary lane closure.

A portable changeable message sign shall be placed during speed zone reductions. When used in conjunction with a lane closure, use one portable changeable message sign, with both the speed zone reduction and the lane closure messages.

Portable changeable message sign will be paid for per day price.

The contract lump sum price paid for portable changeable message signs shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved in furnishing, placing, operating, maintaining repairing, transporting from location to location and removing portable changeable message signs, complete in place as specified in the Standard Specifications and these special provisions, as shown in the plans and as directed by the Engineer.

10-1.12 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.

ADJUST FRAME AND COVER TO GRADE

Water valves or other facilities shall be adjusted to grade in conformance with the provisions in Section 15-2.05, "Reconstruction," of the Standard Specifications.

10-1.13 REMOVE CONCRETE

Concrete curb and curb and gutter, where shown on the plans to be removed, shall be saw cut to the limit shown on the plans and removed.

Removing concrete curb and curb & gutter will be measured by the linear foot, measured along the curb before removal operations and the location refinished with concrete.

Concrete removed shall be disposed of outside the County right of way in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

10-1.14 CLEARING AND GRUBBING

Clearing and grubbing shall conform to the provisions in Section 16, "Clearing and Grubbing," of the Standard Specifications and these special provisions.

Vegetation/landscaping shall be cleared and grubbed only within the excavation line. Damaged vegetation or irrigation lines must be restored at the Contractor's expense.

Existing vegetation outside the areas to be cleared and grubbed shall be protected from injury or damage resulting from the Contractor's operations.

Concrete curb to be removed and disposed of as shown on the plans, shall be removed, disposed of and the locations shall be refinished as shown on the plans. Price for disposing, saw cut and refinishing is included in the contract price paid for "remove concrete curb".

Activities controlled by the Contractor, except cleanup or other required work, shall be confined within the graded areas of the roadway.

Nothing herein shall be construed as relieving the Contractor of the Contractor's responsibility for final cleanup of the roadway as provided in Section 4-1.02, "Final Cleaning Up," of the Standard Specifications.

10-1.15 WATERING

Developing a water supply and applying watering shall conform to the provisions in Section 17, "Watering," of the Standard Specifications and these special provisions.

The Contractor is advised that construction water meters are required to obtain water from facilities owned and operated by the El Dorado Irrigation District (EID). The contractor is advised to contract EID, 2850 Mosquito Road, Placerville, Ca 95667, (530) 622-4513.

10-1.16 EARTHWORK

Earthwork shall conform to the provisions in Section 19, "Earthwork," of the Standard Specifications and these special provisions.

Where a portion of the existing surfacing is to be removed, the outline of the area to be removed shall be cut on a neat line with a power-driven saw to a minimum depth of 0.25-foot before removing the surfacing. Full compensation for cutting the existing surfacing shall be considered as included in the contract price paid per cubic yard for roadway excavation and no additional compensation will be allowed therefor.

10-1.17 AGGREGATE BASE

Aggregate base shall be Class 2 and shall conform to the provisions in Section 26, "Aggregate Bases," of the Standard Specifications and these special provisions.

The restriction that the amount of reclaimed material included in Class 2 aggregate base not exceed 50 percent of the total volume of the aggregate used shall not apply. Aggregate for Class 2 aggregate base may include reclaimed glass. Aggregate base incorporating reclaimed glass shall not be placed at locations where surfacing will not be placed over the aggregate base.

10-1.18 ASPHALT CONCRETE

Asphalt concrete shall be Type A, 1/2" maximum, medium gradation conforming to the provisions in Section 39, "Asphalt Concrete," of the Standard Specifications and these special provisions.

The grade of asphalt binder to be mixed with aggregate for Type "A" asphalt concrete shall be Grade PG 64-16 conforming to the provisions in Section 92, "Asphalts," of the Standard Specifications.

The asphalt content of the asphalt mixture will be determined in conformance with the requirements in California Test 379, or in conformance with the requirements in California Test 382.

Paint binder (tack coat) shall be applied to existing surfaces to be surfaced and between layers of asphalt concrete, except when eliminated by the Engineer.

Paint binder (tack coat) shall be, at the option of the Contractor, either slow-setting asphaltic emulsion, rapid-setting asphaltic emulsion or paving asphalt. Slow-setting asphaltic emulsion and rapid-setting asphaltic emulsion shall conform to the provisions in Section 39-4.02, "Prime Coat and Paint Binder (Tack Coat)," and the provisions in Section 94, "Asphaltic Emulsions," of the Standard Specifications. When paving asphalt is used for paint binder, the grade will be

determined by the Engineer. Paving asphalt shall conform to the provisions in Section 39-4.02, "Prime Coat and Paint Binder (Tack Coat)," and the provisions in Section 92, "Asphalts," of the Standard Specifications.

Paint binder (tack coat) shall be applied in the gallon per square yard range limits specified for the surfaces to receive asphalt concrete in the tables below. The exact application rate within the range will be determined by the Engineer.

Application Rates for Asphaltic Emulsion Paint Binder (Tack Coat) on Asphalt Concrete (except Open Graded) and on Portland Cement Concrete Pavement (PCCP)		
Type of surface to receive paint binder (tack coat)	Slow-Setting Asphaltic Emulsion Gal/SY(Note A)	Rapid-Setting Asphaltic Emulsion Gal/SY(Note B)
Dense, compact surfaces, between layers, and on PCCP	0.04 – 0.08	0.02 – 0.04
Open textured, or dry, aged surfaces	0.08 – 0.2	0.04 – 0.09

Note A: Slow-setting asphaltic emulsion is asphaltic emulsion diluted with additional water. Water shall be added and mixed with the asphaltic emulsion (containing up to 43 percent water) so the resulting mixture contains one part asphaltic emulsion and not more than one part added water. The water shall be added by the emulsion producer or at a facility that has the capability to mix or agitate the combined blend.

Note B: Undiluted rapid-setting asphaltic emulsion.

Application Rates for Paint Binder (Tack Coat) on Asphalt Concrete (except Open Graded) and on Portland Cement Concrete Pavement (PCCP)	
Type of surface to receive paint binder (tack coat)	Paving Asphalt gal/sq yd
Dense, compact surfaces, between layers, and on PCCP	0.01 – 0.02
Open textured, or dry, aged surfaces	0.02 – 0.06

When asphaltic emulsion is used as paint binder (tack coat), asphalt concrete shall not be placed until the applied asphaltic emulsion has completely changed color from brown to black.

The area to which paint binder has been applied shall be closed to public traffic. Care shall be taken to avoid tracking binder material onto existing pavement surfaces beyond the limits of construction.

The contract price paid for paint binder shall be included in the contract price paid for asphalt concrete and no separate payment shall be allowed therefor.

10-1.19 ASPHALT CONCRETE (MISCELLANEOUS AREAS)

Surfacing of miscellaneous areas with asphalt concrete shall conform to the provisions for miscellaneous areas in Section 39, "Asphalt Concrete," of the Standard Specifications and these special provisions.

Where a portion of the existing Asphalt Concrete is to be removed, the outline of the area to be removed shall be cut on a neat line with a power-driven saw to a minimum depth of 0.25-foot before removing the surfacing. Full compensation for cutting the existing Asphalt Concrete shall be considered as included in the contract price paid for Asphalt Concrete (Misc. Areas) and no additional compensation will be allowed therefor.

The miscellaneous areas to be paid for at the contract price per square yard for place asphalt concrete (miscellaneous area) in addition to the prices paid for the materials involved shall be limited to the areas listed on the plans.

10-1.20 ROADSIDE SIGNS

Roadside signs shall be furnished and installed at the locations shown on the plans or where designated by the Engineer and in conformance with the provisions in Section 56-2, "Roadside Signs," of the Standard Specifications and these special provisions.

The Contractor shall furnish roadside sign panels in conformance with the provisions in "Furnish Sign" of these special provisions.

10-1.21 FURNISH SIGN

Signs shall be fabricated and furnished in accordance with details shown on the plans, the Traffic Sign Specifications, and these special provisions.

Traffic Sign Specifications for California sign codes are available for review at:

<http://www.dot.ca.gov/hq/traffops/signtech/signdel/specs.htm>

Traffic Sign Specifications for signs referenced with Federal MUTCD sign codes can be found in Standard Highway Signs Book, administered by the Federal Highway Administration, which is available for review at:

<http://mutcd.fhwa.dot.gov/ser-pubs.htm>

Information on cross-referencing California sign codes with the Federal MUTCD sign codes is available at:

<http://www.dot.ca.gov/hq/traffops/signtech/signdel/specs.htm>

Temporary or permanent signs shall be free from blemishes that may affect the serviceability and detract from the general sign color and appearance when viewing during daytime and nighttime from a distance of 25 feet. The face of each finished sign shall be uniform, flat, smooth, and free of defects, scratches, wrinkles, gel, hard spots, streaks, extrusion marks, and air bubbles. The front, back, and edges of the sign panels shall be free of router chatter marks, burns, sharp edges, loose rivets, delaminated skins, excessive adhesive over spray and aluminum marks.

QUALITY CONTROL FOR SIGNS

The requirements of "Quality Control for Signs" in this section shall not apply to construction area signs.

The Contractor shall submit certificates of compliance in accordance with section 6-1.07, "Certificates of Compliance" of the standard specifications.

On multiple panel signs, legend shall be placed across joints without affecting the size, shape, spacing, and appearance of the legend. Background and legend shall be wrapped around interior edges of formed panel signs as shown on plans to prevent delamination.

The following notation shall be placed on the lower right side of the back of each sign where the notation will not be blocked by the sign post or frame:

1. PROPERTY OF COUNTY OF EL DORADO.
2. Name of the sign manufacturer.
3. Month and year of fabrication.
4. Type of retroreflective sheeting.
5. Manufacturer's identification and lot number of retroreflective sheeting.

The above notation shall be applied directly to the aluminum sign panels in 1/4-inch upper case letters and numerals by die-stamp and applied by similar method to the fiberglass reinforced plastic signs. Painting, screening, or engraving the notation will not be allowed. The notation shall be applied without damaging the finish of the sign.

Signs with a protective overlay film shall be marked with a dot of 3/8 inch in diameter. The dot placed on white border shall be black while the dot placed on black border shall be white. The dot shall be placed on the lower border of the sign before application of the protective overlay film and shall not be placed over the legend and bolt holes. The application method and exact location of the dot shall be determined by the manufacturer of the signs.

For sign panels that have a minor dimension of 48 inches or less, no splice will be allowed in the retroreflective sheet except for the splice produced during the manufacturing of the retroreflective sheeting. For sign panels that have a minor dimension greater than 48 inches, only one horizontal splice will be allowed in the retroreflective sheeting.

Unless specified by the manufacturer of the retroreflective sheeting, splices in retroreflective sheeting shall overlap by a minimum of one inch. Splices shall not be placed within 2 inches from edges of the panels. Except at the horizontal

borders, the splices shall overlap in the direction from top to bottom of the sign to prevent moisture penetration. The retroreflective sheeting at the overlap shall not exhibit a color difference under the incident and reflected light.

Signs exhibiting a significant color difference between daytime and nighttime shall be replaced immediately at the Contractor's expense.

Repairing sign panels will not be allowed except when approved by the Engineer.

The Department will inspect signs at the Contractor's facility and delivery location, and in accordance with Section 6, "Control of Materials," of the Standard Specifications. The Engineer will inspect signs for damage and defects before and after installation.

Regardless of kind, size, type, or whether delivered by the Contractor or by a common carrier, signs shall be protected by thorough wrapping, tarping, or other methods to ensure that signs are not damaged by weather conditions and during transit. Signs shall be dry during transit and shipped on palettes, in crates, or tier racks. Padding and protective materials shall be placed between signs as appropriate. Finished sign panels shall be transported and stored by method that protects the face of signs from damage. The Contractor shall replace wet, damaged, and defective signs at the Contractor's expense.

Signs shall be stored in dry environment at all times. Signs shall not rest directly on the ground or become wet during storage. Signs, whether stored indoors or outdoors, shall be free standing. When stored outdoor, signs shall be placed at a minimum spacing of 4 inches apart. In areas of high heat and humidity signs shall be stored in enclosed climate-controlled trailers or containers. Signs shall be stored indoors if duration of the storage will exceed 30 days.

Screen processed signs shall be protected, transported and stored as recommended by the manufacturer of the retroreflective sheeting.

When requested, the Contractor shall provide the Engineer test samples of signs and materials used at various stages of production. Sign samples shall be 12" x 12" in size with applied background, letter or numeral, and border strip.

The Contractor shall assume the costs and responsibilities resulting from the use of patented materials, equipment, devices, and processes for the Contractor's work.

SHEET ALUMINUM

Alloy and temper designations for sheet aluminum shall be in accordance with ASTM Designation: B 209.

The Contractor shall furnish the Engineer a Certificate of Compliance in conformance with Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for the sheet aluminum.

Sheet aluminum shall be pretreated in accordance to ASTM Designation: B 449. Surface of the sheet aluminum shall be cleaned, deoxidized, and coated with a light and tightly adherent chromate conversion coating free of powdery residue. The conversion coating shall be Class 2 with a weight between 10 milligrams per square foot and 35 milligrams per square foot, and an average weight of 25 milligrams per square foot. Following the cleaning and coating process, the sheet aluminum shall be protected from exposure to grease, oils, dust, and contaminants.

Sheet aluminum shall be free of buckles, warps, dents, cockles, burrs, and defects resulting from fabrication.

Base plate for standard route marker shall be die cut.

RETROREFLECTIVE SHEETING

The Contractor shall furnish retroreflective sheeting for sign background and legend in conformance with ASTM Designation: D 4956 and "Prequalified and Tested Signing and Delineation Materials" of these special provisions.

Retroreflective sheeting shall be applied to sign panels as recommended by the retroreflective sheeting manufacturer without stretching, tearing, and damage.

Class 1, 3, or 4 adhesive backing shall be used for Type II, III, IV, VII, VIII, and IX retroreflective sheeting. Class 2 adhesive backing may also be used for Type II retroreflective sheeting. The adhesive backing shall be pressure sensitive and fungus resistant.

When the color of the retroreflective sheeting determined from instrumental testing is in dispute, the Engineer's visual test will govern.

PROCESS COLOR AND FILM

The Contractor shall furnish and apply screened process color, non-reflective opaque black film, and protective overlay film of the type, kind, and product that are approved by the manufacturer of the retroreflective sheeting.

The Contractor shall furnish the Engineer a Certificate of Compliance in accordance to Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for the screened process color, non-reflective opaque black film, and protective overlay film.

The surface of the screened process color shall be flat and smooth. When the screened process colors determined from the instrumental testing in accordance to ASTM Designation: D 4956 are in dispute, the Engineer's visual test will govern.

The Contractor shall provide patterns, layouts, and set-ups necessary for the screened process.

The Contractor may use green, red, blue, and brown reverse-screened process colors for background and non-reflective opaque black film or black screened process color for legend. The coefficient of retroreflection for reverse-screened process colors on white retroreflective sheeting shall not be less than 70 percent of the coefficient of retroreflection specified in ASTM Designation: D 4956.

The screened process colors and non-reflective opaque black film shall have the same outdoor weatherability as that of the retroreflective sheeting.

After curing, screened process colors shall withstand removal when tested by applying 3M Company Scotch Brand Cellophane Tape No. 600 or equivalent tape over the color and removing with one quick motion at 90° angle.

SINGLE SHEET ALUMINUM SIGN

Single sheet aluminum signs shall be fabricated and furnished with or without frame. The Contractor shall furnish the sheet aluminum in accordance to "Sheet Aluminum" of these special provisions. Single sheet aluminum signs shall be fabricated from sheet aluminum alloy 6061-T6 or 5052-H38.

Single Sheet aluminum signs shall not have a vertical splice in the sheet aluminum. For signs with depth greater than 48 inches, one horizontal splice will be allowed in the sheet aluminum.

Framing for single sheet aluminum signs shall consist of aluminum channel or rectangular aluminum tubing. The framing shall have a length tolerance of $\pm 1/8$ inch. The face sheet shall be affixed to the frame with rivets of 3/16-inch diameter. Rivets shall be placed within the web of channels and shall not be placed less than 1/2 inch from edges of the sign panels. Rivets shall be made of aluminum alloy 5052 and shall be anodized or treated with conversion coating to prevent corrosion. The exposed portion of rivets on the face of signs shall be the same color as the background or legend where the rivets are placed.

Finished signs shall be flat within a tolerance of $\pm 1/32$ inch per linear foot when measured across the plane of the sign in all directions. The finished signs shall have an overall tolerance within $\pm 1/8$ inch of the detailed dimensions.

Aluminum channels or rectangular aluminum tubings shall be welded together with the inert gas shielded-arc welding process using E4043 aluminum electrode filler wires as shown on the plans. Width of the filler shall be equal to wall thickness of smallest welded channel or tubing.

MEASUREMENT AND PAYMENT

The contract price paid for roadside signs shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in fabricating and furnishing the signs, including

removable sign panel frame and fastening hardware, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.22 GRATED LINE DRAIN

This work shall consist of furnishing and installing precast grated line drain, with necessary fittings, coupling systems, frames, grates and associated items as shown on the plans and in conformance with these special provisions.

The interior surface of the grated line drain, below the level of the frame and grate and associated connections, shall be smooth. Grated line drain channel sections shall be manufactured of monolithic polymer concrete with no side extensions.

Monolithic polymer concrete shall be made from a composition of aggregate and polyester resin or vinylester resin and shall have the following properties when tested as follows:

PROPERTY	ASTM TEST METHOD	VALUE
Tensile Strength, psi	C 307	1,450 min.
Compressive Strength, psi	C 579	11,600 min.
Bending Strength, psi	C 580	2,900 min.
Moisture Absorption, %	C 140	0.5 max.
Chemical Resistance	C 267	Pass
Freeze/Thaw, number of cycles w/o weight loss	C 666	1,600 min.

The manufacturer of the grated line drain 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.

Grated line drain frames and grates shall be manufactured of ductile iron conforming to the provisions in Section 75-1.02, "Miscellaneous Iron and Steel," of the Standard Specifications. The frames and grates need not be galvanized or coated with asphalt paint. Bolts, nuts, frame anchors, and other connecting hardware shall conform to the provisions in Section 75-1.02, "Miscellaneous Iron and Steel," of the Standard Specifications.

Frames and grates, when installed in conformance with the manufacturer's recommendations and these special provisions, shall be classified as heavy duty 25,000 proof load when tested in accordance with Commercial Item Description A-A-60005 for "Frames, Covers, Gratings, Steps, Manhole, Sump and Catch Basin." Frames and grates shall be match marked in pairs before delivery to the work and grates shall fit into the frames without rocking.

Frames shall be secured to the surrounding concrete backfill with steel anchoring rods as shown on the plans. Other methods may be used to secure the frame to the concrete backfill or grated line drain wall provided that a minimum pullout resistance of 685 pounds per foot of length of grated line drain frame is maintained.

Grates and frames shall be one piece or the grates shall be removable. Removable grates shall be held in place by locking devices that are tamper resistant. Removable grates shall provide a minimum repetitive pullout resistance of 340 pounds per foot of length after completion of 1,000 hours of salt spray testing in conformance with the requirements in ASTM Designation: B 117. When a combination of one piece frame and grate and removable grates are used, the locations of the removable grates shall be shown on the plans.

Except for grates installed within designated pedestrian paths of travel, grates shall accept inflow of runoff through openings. The openings shall consist of a minimum of 60 percent of the total top surface area of the grate, with individual openings or slots having a dimension not greater than 2 inches measured in the direction of the grated line drain flow line. Grates installed within designated pedestrian paths of travel shall be certified as conforming to the requirements of the "Americans with Disabilities Act."

Grated line drains shall be installed in trenches excavated to the lines and grades established by the Engineer. The bottom of the trench shall be graded and prepared to provide a firm and uniform bearing throughout the entire length of the grated line drain.

Grated line drains shall be installed and jointed in conformance with the manufacturer's recommendations.

Grated line drains shall be installed to the lines and grades with sections closely jointed and secured to ensure that no separation of the line drains occurs during backfilling.

The frame or grate of the grated line drain shall not extend above the level of the surrounding concrete backfill.

Grated line drains shall be connected to new or existing drainage facilities as shown on the plans.

Excavation and backfill shall conform to the provisions in Section 19-3, "Structure Excavation and Backfill," of the Standard Specifications.

Backfill for the grated line drains shall be either minor concrete or Class 3 concrete conforming to the provisions in Section 90, "Portland Cement Concrete," of the Standard Specifications. Minor concrete shall contain not less than 506 pounds of cementitious material per cubic yard.

Concrete backfill shall be placed in the trench as shown on the plans. Concrete backfill shall be placed against undisturbed material at the sides and bottom of the trench and in a manner that will prevent floating or shifting of the grated line drain and voids in, or segregation of, the concrete. Foreign material which falls into the trench, before or during placement of the concrete, shall be immediately removed. Where necessary, earth plugs shall be constructed and compacted at the ends of the planned concrete backfill to contain the concrete within the trench.

Concrete backfill shall be finished flush with the adjacent surfacing.

The surface of the concrete shall be textured with a broom or burlap drag to produce a durable skid-resistant surface.

The length the grated line drain to be paid for will be the length measured by the linear foot along the pavement surface as designated by the Engineer. No payment will be made for grated line drain placed in excess of the designated length.

The contract price paid per linear foot for grated line drain shall include full compensation for furnishing all labor, materials (including frames and grates), tools, equipment, and incidentals, and for doing all the work involved in installing grated line drains, complete in place, including excavation and backfill, connecting grated line drains to new or existing facilities, concrete collars, reinforcement, and other connecting devices, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.23 MISCELLANEOUS CONCRETE CONSTRUCTION

Sidewalk, curb ramps, curbs and gutters shall conform to the provisions in Section 73, "Concrete Curbs and Sidewalks," of the Standard Specifications and these special provisions.

Curb ramp detectable warning surface shall consist of raised truncated domes constructed or installed on curb ramps in conformance with the details shown on the plans and these special provisions. At the option of the Contractor, the detectable warning surface shall be prefabricated, cast-in-place, or stamped into the surface of the curb ramp. The color of the detectable warning surface shall be yellow conforming to Federal Standard 595B, Color No. 33538.

Prefabricated detectable warning surface shall be in conformance with the requirements established by the Department of General Services, Division of State Architect and be attached in conformance with the manufacturer's recommendations.

Cast-in-place and stamped detectable warning surfaces shall be painted in conformance with the provisions in Section 59-6, "Painting Concrete," of the Standard Specifications.

The finished surfaces of the detectable warning surface shall be free from blemishes.

The manufacturer shall provide a written 5-year warranty for prefabricated detectable warning surfaces, guaranteeing replacement when there is defect in the dome shape, color fastness, sound-on-cane acoustic quality, resilience, or attachment. The warranty period shall begin upon acceptance of the contract.

Full compensation for conforming to the provisions in this section "Miscellaneous Concrete Construction" including constructing or furnishing and installing curb ramp detectable warning surfaces shall be considered as included in the contract price paid for minor concrete (curb ramp) and no additional compensation will be allowed therefor.

10-1.24 THERMOPLASTIC PAVEMENT MARKING

Thermoplastic traffic crosswalk stripes shall be applied in conformance with the provisions in Section 84, "Traffic Stripes and Pavement Markings," of the Standard Specifications and these special provisions.

Thermoplastic material shall be free of lead and chromium, and shall conform to the requirements in State Specification PTH-02ALKYD.

Retroreflectivity of the thermoplastic crosswalk traffic stripes shall conform to the requirements in ASTM Designation: D 6359-99. White thermoplastic crosswalk traffic stripes shall have a minimum initial retroreflectivity of 250 mcd m⁻² lx⁻¹.

Thermoplastic crosswalk traffic stripes shall be free of runs, bubbles, craters, drag marks, stretch marks, and debris.

At the option of the Contractor, permanent traffic crosswalk striping—tape conforming to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions may be placed instead of the thermoplastic crosswalk traffic stripes specified herein. Permanent tape, if used, shall be installed in conformance with the manufacturer's specifications.

If permanent tape is placed instead of thermoplastic crosswalk traffic stripes, the tape will be measured and paid for by the square foot as thermoplastic crosswalk and pavement marking.

SECTION 10-2. (BLANK)

SECTION 10-3. SIGNALS, LIGHTING AND ELECTRICAL SYSTEMS

10-3.01 DESCRIPTION

Traffic signals shall conform to the provisions in Section 86, "Signals, Lighting and Electrical Systems," of the Standard Specifications and these special provisions.

Payments for various items of electrical work shown on the Electrical Plans shall be paid as lump sum price paid as Traffic Signal Modifications work and no additional price shall be paid.

MEASUREMENT AND PAYMENT

The contract price paid for Traffic Signal Modifications shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in, including positive identifications of existing conduits (pot holing), conduits installations, relocating signal poles, installing pedestrian head count down (LED) and pull boxes, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer

10-3.02 COST BREAK-DOWN

Cost break-downs shall conform to the provisions in Section 86-1.03, "Cost Break-Down," of the Standard Specifications and these special provisions.

10-3.03 MAINTAINING EXISTING AND TEMPORARY ELECTRICAL SYSTEMS

Traffic signal system shall be put to red flashing mode, if necessary, to perform signal work between the hours of 9:00 a.m. and 3:00 p.m as approved by the Engineer.

10-3.04 STANDARDS, STEEL PEDESTALS, AND POSTS

Standards, steel pedestals, and posts for traffic signal and lighting standards shall conform to the provisions in Section 86-2.04, "Standards, Steel Pedestals and Posts," of the Standard Specifications, "Steel Structures" of these special provisions, and the following requirements.

Steel bolts not designated on the plans as high-strength (HS) or stainless steel shall be for general applications and shall conform to the requirements in ASTM Designation: A 307.

Where the plans refer to the side tenon detail at the end of the signal mast arm, the applicable tip tenon detail may be substituted.

The sign mounting hardware shall be installed at the locations shown on the plans.

Type 1 standards shall be assembled and set with the handhole on the downstream side of the pole in relation to traffic or as shown on the plans.

All ferrous metal parts of tubular sign structures shall be galvanized and shall not be painted.

10-3.05 FOUNDATIONS

Reinforced cast-in-drilled-hole concrete pile foundations for traffic signal and lighting standards shall conform to the provisions in "Piling" of these special provisions.

Where cast-in-drilled-hole concrete pile foundations are to be constructed in slag aggregate embankments, the diameter of the pile shall be increased to provide a minimum of 3 inches of concrete cover over the reinforcing steel.

Full compensation for the increased diameter of cast-in-drilled-hole concrete pile foundations in slag aggregate embankments, including additional portland cement concrete, and increased drilling and placement costs shall be considered as included in the contract lump sum price paid for the Traffic Signal Modifications and no additional compensation will be allowed therefor.

10-3.06 CONDUIT

Conduit to be installed underground shall be Type 3 unless otherwise specified. Detector termination conduits shall be Type 3.

When Type 3 conduit is placed in a trench (not in pavement or under portland cement concrete sidewalk), after the bedding material is placed and the conduit is installed, the trench shall be backfilled with commercial quality concrete, containing not less than 421 pounds of portland cement per cubic yard, to not less than 4 inches above the conduit before additional backfill material is placed.

Except for electrical service conduit, conduit runs shown on the plans to be located behind curbs may be installed in the street, within 3 feet of, and parallel with the face of the curb, by the "Trenching in Pavement Method" in conformance with the provisions in Section 86-2.05C, "Installation," of the Standard Specifications. Pull boxes shall be located behind the curb or at the locations shown on the plans.

Electrical service conduit between the service point and the service pedestal shall be laid to a depth of not less than 30" below finished grade and shall conform to Pacific Gas and Electric (PG&E) "Greenbook" standards for commercial electric services (current edition). Electrical Service Conduit shall not be placed by "Trenching in Pavement Method". "

After conductors have been installed, the ends of conduits terminating in pull boxes, service equipment enclosures, and controller cabinets shall be sealed with an approved type of sealing compound.

At those locations where conduit is required to be installed under pavement and existing underground facilities require special precautions in conformance with the provisions in "Obstructions" of these special provisions, conduit(except for electrical service runs) shall be placed by the "Trenching in Pavement Method" in conformance with the provisions in Section 86-2.05C, "Installation," of the Standard Specifications.

At other locations where conduit is required to be installed under pavement and if a delay to vehicles will not exceed 5 minutes, conduit (except for electrical service runs) may be installed by the "Trenching in Pavement Method."

10-3.07 PULL BOXES

Grout shall not be placed in the bottom of pull boxes.

All pull boxes shall be placed:

- a. Outside of sidewalk areas.
- b. Behind signal poles (away from traffic side).

All pull boxes located in drivable areas shall be traffic rated.

10-3.08 CONDUCTORS AND WIRING

Splices shall be insulated by "Method B".

Fused splice connectors for luminaries conductors shall be placed in the handhole of the standard in which the luminaries is located.

SIGNAL INTERCONNECT CABLE.

Signal Interconnect Cable (SIC) shall be the 6-pair type. SIC shall be continuous, without splices, between signal cabinets.

10-3.09 BONDING AND GROUNDING

Bonding and grounding shall conform to the provisions in Section 86-2.10, "Bonding and Grounding," of the Standard Specifications and these special provisions.

Bonding jumpers in standards with hand holes and traffic pull box lid covers shall be attached by a UL listed lug using 3/16-inch diameter or larger brass or bronze bolts and shall run to the conduit or bonding wire in the adjacent pull box. The grounding jumper shall be visible after the standard has been installed and the mortar pad and cap have been placed on the foundation.

Standards without hand holes shall have bonding accomplished by jumpers attached to UL listed ground clamps on each anchor bolt.

For slip base standards or slip base inserts, bonding shall be accomplished by jumpers attached to UL listed ground clamps on each anchor bolt, or a UL listed lug attached to the bottom slip base plate with a 3/16-inch diameter or larger brass or bronze bolt.

Equipment bonding and grounding conductors are required in conduits, except when the conduits contain combinations of loop lead-in cable, fiber optic cable, or signal interconnect cable. A No. 8 minimum, bare copper wire shall run continuously in circuits, except for series lighting circuits, where No. 6 bare copper wire shall run continuously. The bonding wire size shall be increased to match the circuit breaker size in conformance with the Code, or shall be as shown on the plans. Conduits to be installed for future conductors, may omit the copper wire.

Bonding of metallic conduits in metal pull boxes shall be by means of bonding bushings and bonding jumpers connected to the bonding wire running in the conduit system.

10-3.10 COUNTY-FURNISHED MATERIAL

Traffic signal pole "B" and signal head will be furnished by the County. Upon removal of the existing pole and signal head, it shall be delivered to the County yard on 2441 Headington Road in Placerville. Full compensation for delivering the pole shall be included in the contract lump sum price paid for Clearing and Grubbing and no additional compensation shall be allowed therefor.

10-3.11 VEHICLE SIGNAL FACES AND SIGNAL HEADS

Each signal section shall be provided with a tunnel visor.

All terminal compartments shall be bronze.

All signal housings shall be aluminum and furnished with aluminum back plates.

10-3.12 LIGHT EMITTING DIODE SIGNAL MODULE

All vehicle signal faces shall be 12-inch, Type I light emitting diode (LED) signal modules in conformance Section 86-4.02, "Light Emitting Diode Signal Module" of the Standard Specifications and these special provisions.

All LED modules shall have the appearance of incandescent fixtures with no visible pixilation. Dialight DuraLED and Gelcore Model GT1 modules are known to meet this specification.

Retrofit LED Modules installed in new sections will not be allowed.

10-3.13 LIGHT EMITTING DIODE PEDESTRIAN SIGNAL FACE MODULES

The Contractor shall furnish all Light Emitting Diode (LED) Pedestrian Signal Face (PSF) modules. All PSF modules shall be installed in standard Type A pedestrian signal housing. Standard module to be used shall be GT1, LED pedestrian Signals, GE manufactured with model number PS7-CFF1-26A or equal and consist of "UPRAISED HAND WITH COUNTDOWN" AND "WALKING PERSON". Both Dialight Pedestrian modules and GE Lumination GT1 modules are known to meet the necessary specifications.

WARRANTY

The manufacturer shall provide a written warranty against defects in materials and workmanship for the PSF modules for a period of five (5) years after installation of the pedestrian signal face (PSF) modules. Replacement PSF modules shall be provided within five (5) days after receipt of failed PSF modules at no cost to the County, except the cost of shipping the failed modules. All warranty documentation shall be given to the Engineer prior to installation. Replacement PSF modules shall be delivered to El Dorado County Department of Transportation Maintenance Electrical Shop at 2441 Headington Road, Placerville, CA 95667.

10-3.14 PEDESTRIAN PUSH BUTTONS

Pedestrian Push Buttons shall be ADA compliant and fully warranted against sticking.

10-3.15 TRAFFIC SYSTEM TURN-ON PROCEDURES

Some of the following procedures may be performed prior to the final turn-on as long as ALL tests are observed and/or accepted by the Engineer. All testing is the responsibility of the Contractor.

Final signal turn-on shall not occur during rainy or foggy weather, and shall not occur on Monday, Friday or within three (3) days prior to any holiday, unless otherwise specifically approved by the Engineer.

The signals MAY NOT be turned on unless all signs and markings are in place.

Unless otherwise noted, any changes to or modification of this standard turn-on procedure must be approved by the Engineer.

1. **Check all signal lighting circuits.** (Responsibility of Electrical Contractor. Engineer may request to be present at his discretion.)
 - a. Remove all load switches (model 200) and the flasher units (model 204). This must be done to assure their protection and to prevent feedback through the switch causing a possible misleading indication at the signals. The controller unit should be "off" during this test procedure.
 - b. Check each individual signal field circuit by applying 120 volts AC to the field terminal of each indication. This procedure is often called "flashing" the signal heads.
 - c. During "flashing" procedure, verify that all indications that should be "on" are "on" and that all indications that should be "off" remain "off". This verification may be accomplished through the use of small holes cut in the signal face coverings. **Signals must remain covered during this operation unless the Contractor provides manual traffic control (flagging) and that control has been approved by the Engineer.**
 - d. During "flashing" procedure, contractor shall specifically verify that the Arrow Heads and Solid Ball Heads are connected to the correct phase.
2. **Check luminaires (street lighting).** (Responsibility of the Electrical Contractor. The Engineer may request to be present at his discretion.)
 - a. Check power pedestal to assure that switch for luminaires is set to "AUTO".
 - b. Cover the photoelectric cell and verify that all luminaires come on. (This test will take a few minutes.)
 - c. Remove cover from photoelectric cell verifying that luminaires go dark.
 - d. Set switch in power pedestal to the "TEST" position and verify that all luminaires come on. (This test will take a few minutes.)
 - e. Set switch back to "AUTO". Signals may not be turned on unless all luminaires are functioning properly.
 - f. When all tests are complete, set switch to "TEST". This condition should remain for at least two weeks to allow "burn in" of luminaires. This period may occur after the signals have been turned on.
3. **Check all detector circuits.** Although these tests are the responsibility of the Electrical Contractor, some do require the cooperation and participation of the Engineer and appropriate coordination should be arranged.
 - a. All detector loops are to be tested for continuity and resistance to ground. Resistance to ground shall exceed 100 meg ohms. The Engineer, at his discretion, should be present during these tests and observe results.
 - b. The functionality of all vehicle detection shall be demonstrated by use of a contractor provided test vehicle while cabinet indications and responses are observed by the Engineer.
 - c. The Contractor shall demonstrate the functionality of the pedestrian push button circuits by activating the pedestrian push buttons while cabinet indications and responses are observed by the Engineer.
4. **Signs and pavement markings.**
 - a. There must be a minimum of three (3) days of dry pavement prior to the application of any pavement markings.

- b. Application of pavement markings should be coordinated so that the work is completed on Monday through Wednesday and at least five (5) business days prior to any County observed holiday.
 - c. All pavement markings and traffic control signs shall be in place the day prior to signal turn-on to accommodate coordination. Any signs associated with the signals shall be covered by the Contractor and remain covered until final turn-on.
 - d. Between the time the striping is complete and the signals are placed into operation, the Contractor shall install interim signing and traffic handling devices in accordance with section 7-1.09, "Public Safety" of the standard specifications. Payment for these interim measures shall be considered included in the lump sum price paid for signals and lighting and no separate payment will be made therefor.
 - e. The Engineer shall approve ALL pavement markings to assure that they are in place and comply with the plans prior to notifying involved or interested parties and/or agencies of planned turn-on schedule. (Example of parties to be notified, as needed: Caltrans, DOT Traffic Unit, CHP, Sheriff, prime contractor, electrical contractor, engineer, etc.)
 - f. On the day of the turn-on, the Engineer or his designee shall have the responsibility of determining the exact time of the turn-on based on safety and operational considerations.
 - g. Failure to complete all striping & signing the day prior to the signal Turn-On will make it necessary for the Contractor to coordinate and re-schedule the Signal Turn-On with the Engineer.
5. **Final turn-on procedure.** (Responsibility of the Contractor except as noted.)

Signals MAY NOT be turned on without prior approval of the Engineer.

Signals MAY NOT be turned on unless all signs and markings are in place.

Final signal turn-on shall not occur during rainy or foggy weather, and shall not occur on Monday, Friday or within three (3) days prior to any holiday, unless otherwise specifically approved by the Engineer.

- a. Remove the conflict monitor and verify that it has been tested and that the correct and properly tested diode board is installed. This is accomplished by reviewing the accompanying MT-180 test printout strip and assuring that the program board is properly configured for the indicated intersection. The test strip should be signed or initialed by the responsible technician. The intersection may not be turned on without the presence of an MT-180 test strip.
- b. Check to verify that the timing plan has been properly entered into the Controller.
- c. Remove covers from signal heads.
- d. Place signal into flashing operation.
- e. Remove all covers from signs. Also remove any interim signing or safety measures that may have been put in place.
- f. Remove all existing STOP signs.
- g. Place signals into automatic operation.
- h. Remove manual traffic control.
- i. Observe operations and make any adjustments to operations that are identified as necessary.